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KTC[®]

SELECT THE No.1 TOOL

No. **36**

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KTC[®]
KYOTO TOOL



SELECT THE No.1 TOOL
OF THE WORLD
36

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MECHANIC STANDARD

As the professional mechanic strives for excellence, we are putting all effort into improving standard tools.

The quality of tool elevates its status above world standards.

When a mechanic holds this tool, he feels happy, capable, comfortable and proud.

We aim to satisfy all the senses of the professional mechanic.

We are challenged with the pursuit of technological innovation and quality.

With passion and enthusiasm and through inherited DNA, we have strived to develop tools which earn the 'Mechanic Standard' mark.

After 60 years, we continue to forge ahead with no end in sight.





KTC Brand story

A legacy of pursuing high quality handed down from the men who drew their passion from making tools to service Zero fighter planes

To trace the source of the passion that is inside KTC tools, one must return to 1939, before KTC was founded.

At that time, "Kyoto Machinery", a textile machinery maker that could be considered the forerunner of KTC, was taking the initiative in making high performance, highquality tools for servicing Zero fighter planes which had clearly surpassed world standards. A passion for tool making in response to the mission to "produce high quality tools" - this could be called the true source of KTC manufacturing.

However, it was not only the Zero fighter planes that drove their passion for the tools.

They were amazed by the superior functionality of the American made socket wrench that they had been shown as a war trophy from the battle of Midway, making them firmly determined to catch up and surpass its quality of it.

This lead to their stubborn insistence on pursuing only high quality steel materials, even in the times of scarcity that followed immediately after the war.

Then in 1950, the "KYOTO TOOL CO., LTD." was established by the three men who acquired a heart for uncompromising research for technological innovation and a spirit of craftsmanship that pursued the highest levels of quality, while they were forming their passionate ideas about tool making.

The turning point came in the month following the company's establishment, before they had even had time to organize their production system.

There was an enquiry regarding a delivery of tools to be included with vehicles from Toyota Automotive Sales, which had just become independent from Toyota Motor Co. Ltd. As the delivery of onboard vehicle tools to Toyota started, the production volume of automobiles, mainly trucks, grew rapidly and so did the production volume of tools.

After that KTC rode a wave of motorization and won the rank of No.1 in Japan for number of items and volume of production.



About KTC's after sales service system

After sales service

KTC provides the following after sales service and information service, allowing customers to purchase and use our products with confidence.

1 For inquiries regarding our products Contact details for product inquiries

Customer center

TEL+81-774-46-3717
FAX+81-774-46-3768
e-mail:support@kyototool.co.jp

* Telephone inquiries: 9:00 am to 12:00 pm, 1:00 pm to 5:00 pm
 (excluding Saturdays, Sundays, public holidays and company holidays)

KTC home page

<http://en.ktc.co.jp/>

Introducing new product information, product catalogs, instruction manuals, sales information and product dealers. For more information, please visit our website.

2 After sales service

Parts supply service Sales of maintenance parts that can be replaced and repaired by customers.

Repair service Charged repair service for goods to be repaired in accordance with our company regulations. (Parts cost, repair cost, freight cost will be charged.)

Calibration service We calibrate measurement instruments such as a torque wrench and issue certificates of calibration for a fee.
 For more information, please refer to P.159.

*1 Requests to be made at the product dealer's store.

*2 Supply of some parts may be restricted due to safety / quality control reasons.

3 Quality assurance

In case if our product with the KTC or NEPROS mark has lost functionality due to material or manufacturing problems, or where the plating has come off other than by wear, we will repair or replace the product with an equivalent product.

* The following items are not eligible for our quality assurance

- Consumables - Products that use wearable parts, such as the inward turning tools (screw driver, hexagon head screw driver and TORX® driver), pliers (nippers, pliers and pinchers), and gears. Also other products that constantly wear as they age.
- Damage that is caused by any other factors than problems in the product material and manufacturing process. Damage that is caused by inappropriate use or negligence.
- Wear, breakage or deformation of the product caused by hard hitting with a hammer or the like.
- Damage that is caused by repairs or modifications made by the user or a third party.
- Damage that is caused by application of an excessive load beyond the one that the product is designed for.
- Damage that is caused by fire or natural disaster.
- Damage that is caused by wear as a result of use in a production line.
- Differences due to product model change or design change

<Examples of inappropriate use>

- Wear, breakage or deformation caused by use of hand tools with power tools such as an impact wrench.
- Breakage or deformation caused by the use of couplings or pipes.

<Contact desk for quality assurance>

Please lodge your inquiry through the dealer you purchased the product from.

TOOL SETS

1. TOOL SETS

TOOL SETS



CAUTION

TOOL SETS

- READ THE INSTRUCTION MANUAL REGARDING THE TOOLS CONTAINED AND THE CASE. BEFORE USING
- LOCK THE COVER AND DRAWERS WHEN MOVING.

●HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET

The SK5600XA High Mechanic Tool Set is the most comprehensive in the KTC TOOL SET series and contains a wide assortment of tools to suit the most discerning tradesman.

■Main Contents

- 1/4"~1/2"sq. tool
- TORX® Wrench (T-Type, E-Type)
- Hex. Wrench
- Box End Wrench
- Open End Wrench
- Combination Wrench
- Adjustable Wrench
- Pipe Wrench
- Hammer
- T Shape Wrench
- Snap Ring Pliers
- Pliers and Bolt Clippers
- Screwdriver
- Scraper
- Vernier Caliper
- Other Tools, Conventional Tools and Automotive Special Tools



■Main Feature



1.2mm thick steel plates and the double-wall construction of the side panels make this product rugged and durable.



The drawer can be pulled out. No blind corners. The double suspension rails allow smooth drawer movement.

Up direction



Down direction



Can be attached to either right, left or back of cabinets for bigger work surface.



ø 125x50 hard rubber caster for quiet and smooth moving.

*Please check the merchandise inventory for a product that is marked by before placing an order.

HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET

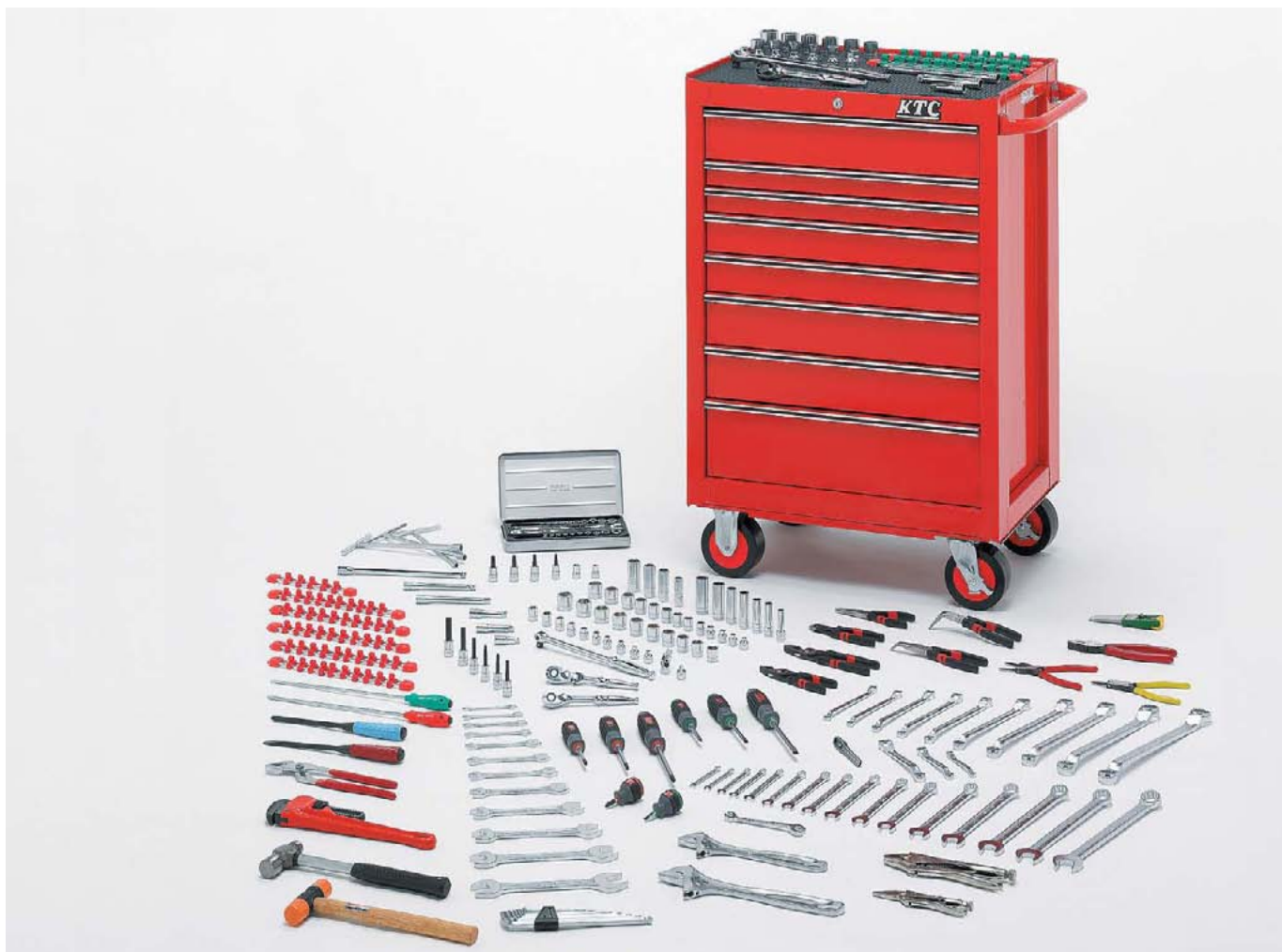
No. SK5600XA			
Total 426 pcs.		▼kg 166	☞ 1 (7 Cartons)
• SK5600X	- T1 Tools	x1	
	- T2 Tools	x1	
	- T3 Tools	x1	
	- T4 Tools	x1	
• SKX5205	Chest	x1	
• SKX5708	Roller Cabinet	x1	
Contents			
1/4"sq.Socket Wrench Set	TB2X20B		
1/4"sq.Deep Socket	B2L-06, 07, 08, 09, 10, 11, 12, 13, 14		
1/4"sq.Tilt Extension Bar	BE2-050JW, 075JW		
1/4"sq.Universal Joint	BJ2		
3/8"sq.Socket	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24		
3/8"sq.Socket	B3-08W, 10W, 12W, 13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W		
3/8"sq.Socket	B3-1/4, 9/32, 5/16, 3/8, 7/16		
3/8"sq.Socket	B3-1/2W, 17/32W, 19/32W, 5/8W, 21/32W, 3/4W, 13/16W, 7/8W		
3/8"sq.Deep Socket	B3L-055, 07, 08, 09, 10, 12, 13, 14, 17, 19		
3/8"sq.Spark Plug Wrench	B3A-13P, 16P, 18P, 20.8P		
3/8"sq.Long Hex. Wrench	BT3-05, 06, 08, 10		
3/8"sq.Hex. Wrench	BT3-6M, 2P		
3/8"sq.E-Type TORX® Wrench	B3-E10, E12		
3/8"sq.T-Type TORX® Wrench	BT3-T30S, T40S, T45S, T50S		
3/8"sq.T-Type Long TORX® Wrench	BT3-T25L, T30L, T40L, T50L		
3/8"sq.Socket Holder	EHB305 (1 piece), EHB310 (8 pieces)		
3/8"sq.Ratchet Handle	BR3E, BRM3SC, BRG3, BR3F		
3/8"sq.Spinner Handle	BS3E		
3/8"sq.Extension Bar	BE3-030, 050, 075, 150, 200, 270		
3/8"sq.Flexible Extension Bar	BES21-200		
3/8"sq.Tilt Extension Bar	BE3-030JW, 050JW, 075JW, 150JW, 270JW		
3/8"sq.Universal Joint	BJ3		
1/2"sq.Socket	B4-08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 26, 27, 29, 30, 32		
1/2"sq.Socket	B4-08W, 10W, 12W, 13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W, 25W, 26W, 27W, 28W, 29W, 30W, 31W, 32W		
1/2"sq.Deep Socket	B4L-08, 10, 12, 13, 14, 17, 19, 21, 22, 24		
1/2"sq.Socket Holder	EHB405 (1 piece), EHB410 (6 pieces)		
1/2"sq.Ratchet Handle	BR4E		
1/2"sq.Spinner Handle	BS4E		
1/2"sq.Extension Bar	BE4-075, 150, 270		
1/2"sq.Stud Bolt Remover Set	BSR354		
1/2"sq.Universal Joint	BJ4		
Adaptor	BA23, BA32, BA34, BA43		
45° × 6° Long Box End Wrench	M5-0607, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427		
45° Short Box End Wrench	M5S-0708, 0810, 1012, 1113, 1214, 1417		
15° Long Box End Wrench Set	M1513 (M151-10×12, 12×14, 14×17)		
Flat Type Long Box End Wrench Set	M1505 (M150-8×10, 10×12, 11×13, 12×14, 14×17)		
Flat Type Short Box End Wrench Set	M1004 (M100-7×8, 10×12, 12×14, 14×17)		
Hex. Offset Wrench Set	M274 (M27-8H, 10H, 12H, 14H)		
Double-Flex Ratchet Box End Wrench	MR1-0810F, 1012F, 1214F, 1315F, 1417F		
Insert Changeable Flat Ratchet Screwdriver	RM22		
Standard Combination Wrench	MS2-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27		
Standard Combination Wrench	MS2-1/4, 5/16, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4, 13/16, 7/8, 15/16, 1, 1-1/16		

Open End Wrench	S2-0607, 0708, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2123, 2224, 2326, 2427
Profit Tool Open End Wrench	S30-10, 12, 13, 14, 17, 19
Profit Tool Box End Wrench	M30-10, 12, 13, 14, 17, 19
Slim Type Open End Wrench Set	S206 (S20-10×12, 12×10, 12×14, 14×12, 17×19, 19×17)
Adjustable Wrench	MW-150, 200, 250, 300
Pipe Wrench	PWA-150, 250, 350
Hammer	PH45-323
Plastic Hammer	K9-6
T Shape Wrench With Short Handle	TH-8N, 10N, 12N
Pliers	PJ-150, 200, 250
Heavy Duty Waterpump Pliers	WPD1-250
Long Nose Pliers	LP-150
Internal Snap Ring Pliers	SCP-171
Bent Internal Snap Ring Pliers	SCP-172L
External Snap Ring Pliers	SOP-171
Flat Type External Snap Ring Plier	SOP-173
Side Cutting Pliers (Coated Handle)	SPD-175C, 200C
Needle Nose Plier	PSL-150
Needle Nose Plier (Bent Nose Type)	PSL-200BN
Diagonal Cutting Pliers	PN1-150, 175
All Purpose Shears	AP-175
Impact Screwdriver Set	SD6
Palm Screwdriver Set	MDEA-75, 100, 150, PDEA-1, 2, 3
Palm Screwdriver	MDEA-M, PDEA-P
Plastic Grip Screwdriver Set	D1M2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2
Mini Stubby Screwdriver	SD3-M, P
Short Stubby Screwdriver	SD4-P
Heavy Duty Screwdriver	FD-250, FPD-250
Magnet Hand	VL2-HD
Rolling Wedge Bar	LZ1-450
Flex T Shape Spark Plug Wrench	PHF-16H
High Grade L Shape Long Ball	HLD2509(1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Point Hex.-Key Wrench Set	
Locking Pliers	10CR, 6LN
Carburetor Screwdriver Set	CDZ-165
Plastic Grip Long Screwdriver	MDDZ-400, PDDZ-2
Thickness Gauge	TGZ-1818
Vernier Caliper	GMN-20
Knock Pin Punch	PK8 (2, 3, 4, 4.5, 5, 6, 7, 8)
Hub Cap Pliers	HP-350S
1/2"sq.Aluminum Socket Set For Polished Nut	B35A-17H, 19H, 21H
Brake Shoe Adj. Tool	ABX301, 304
Screwdriver For Brake Drum Screw	AB-5
Flare Nut Wrench	MZ10-10×12, MZ1-10
Disc-brake Spreader	AB-10
Clip Clamp Tool	AP203-6A, 10A
Stainless Scraper	KZ1-22, 30
Sticker Scraper DX.	KZSS-25
Chest	SKX5205
(L665×W405×H500)	Incl. Divider 4 pcs., Drawer Liner 5 pcs., Inner Tray 1 pcs.
Roller Cabinet	SKX5708
(L675×W460×H1045)	Incl. 4 Drawer Dividers, 1 Top Liner and 8 Drawer Liners

*The numbers of contents are not including holders.

● HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET



No. SK5100X

Total 202 pcs. ▼kg 94 1 (3 Cartons)

• SK5500AX - T1 Tools	x1
- T2 Tools	x1
• SKX5708 Roller Cabinet	x1

Contents

1/4"sq.Socket Wrench Set	TB2X20B
3/8"sq.Socket	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
3/8"sq.Socket	B3-1/4, 9/32, 5/16, 3/8, 7/16
3/8"sq.Socket	B3-1/2w, 17/32w, 19/32w, 5/8w, 21/32w, 3/4w, 13/16w, 7/8w
3/8"sq.Deep Socket	B3L-08, 10, 12, 13, 14, 17, 19
3/8"sq.Spark Plug Wrench	B3A-13P, 16P, 18P, 20.8P
3/8"sq.Hex. Bit Socket	BT3-05, 06, 08, 10
3/8"sq.Cross. Flat Bit Socket	BT3-6M, 2P
3/8"sq.E-Type TORX® Wrench	B3-E10, E12
3/8"sq.T-Type Short TORX® Bit Socket	BT3-T30S, T40S, T45S, T50S
3/8"sq.Socket Holder	EBH305 (1 piece), EBH310 (5 pieces)
3/8"sq.Ratchet Handle	BR3E, BR3F
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-050, 075, 150, 270
3/8"sq.Tilt Extension Bar	BE3-075JW, 150JW
3/8"sq.Universal Joint	BJ3
1/2"sq.Socket	B4-08, 09, 10, 11, 12, 13, 14, 17, 19, 21, 22, 23, 24, 26, 27, 29, 30, 32
1/2"sq.Socket Holder	EBH405 (1 piece), EBH410 (2 pieces)
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Spinner Handle	BS4E
1/2"sq.Extension Bar	BE4-075, 150, 270
Adaptor	BA32, BA43
45° × 10° Long Box End Wrench	M5-0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427

45° × 6° Short Offset Wrench	M5S-0708, 1012, 1417
Standard Combination Wrench	MS2-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22, 24
Open End Wrench	S2-0607, 0708, 0809, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427
Adjustable Wrench	WM-250, 300
Pipe Wrench	PWA-350
Hammer	PH45-323
Plastic Hammer	K9-6
T Shape Wrench With Short Handle	TH-8N, 10N, 12N
Combination Plier (Soft Grip)	PJ-150, 200
Heavy Duty Waterpump Pliers	WPD1-250
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Side Cutter Pliers (Coated Handle)	SPD-200C
Needle Nose Plier	PSL-150
Needle Bent Nose Plier	PSL-200BN
Diagonal Cutting Pliers	PN1-150
Plastic Grip Screwdriver	D1M2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2
Plastic Grip Long Screwdriver	MDDZ-400, PDDZ-2
Insert Changeable Flat Ratchet Screwdriver	RM22
Sticker Scraper DX	KZSS-25
Heavy Duty Screwdriver	FD-250, FPD-250
High Grade L Shape Long Ball Point Hex.-Key Wrench	HLD2509 (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Locking Pliers	10CR, 6LN
Flare Nut Wrench	MZ10-10×12
Roller Cabinet	SKX5708
(L675×W460×H1045)	Incl. 4 Drawer Dividers, 1 Top Liner and 8 Drawer Liners

• Set of various tools in wide range with roller cabinet for efficient operation.

*The numbers of contents are not including holders.

●HIGH MECHANIC TOOL SET

HIGH MECHANIC TOOL SET

No. **SK100X**

Total 136 pcs. ▼kg 54 ☑ 1 (2 Cartons)

• SK5600X-T1 Tools x1
• SKX5205 Chest x1

Contents

1/4"sq.Socket Wrench Set	TB2X20B
3/8"sq.Socket	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24
3/8"sq.Deep Socket	B3L-08, 10, 12, 13, 14, 17, 19
3/8"sq.Spark Plug Wrench	B3A-13P, 16P, 18P, 20.8P
3/8"sq.Hex. Bit Socket	BT3-05, 06, 08, 10
3/8"sq.Cross. Flat Bit Socket	BT3-6M, 2P
3/8"sq.E-Type TORX® Wrench	B3-E10, E12
3/8"sq.T-Type Short TORX® Bit Socket	BT3-T30S, T40S, T45S, T50S
3/8"sq.Socket Holder	EHB305 (1 piece), EHB310 (3 pieces)
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-050, 075, 150
3/8"sq.Tilt Extension Bar	BE3-075JW, 150JW
3/8"sq.Universal Joint	BJ3
Adaptor	BA32
45° × 10° Long Box End Wrench	M5-0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Standard Combination Wrench	MS2-08, 10, 12, 13, 14, 17, 19, 21, 22, 24,
Open End Wrench	S2-0607, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Adjustable Wrench	WM-250, 300
Pipe Wrench	PWA-350
Ball-Peen Hammer	PH45-323
Combination Plier (Soft Grip)	PJ-200
Heavy Duty Waterpump Pliers	WPD1-250
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171

Side Cutter Pliers (Coated Handle)	SPD-200C
Needle Nose Plier	PSL-150
Needle Bent Nose Plier	PSL-200BN
Diagonal Cutting Pliers	PN1-150
Plastic Grip Screwdriver	DM2-5, 6, 8, D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2
Plastic Grip Screwdriver	MDDZ-400, PDDZ-2
Heavy Duty Screwdriver	FD-250, FPD-250
T Shape Wrench With Short Handle	TH-8N, 10N, 12N
Locking Pliers	10CR, 6LN
Flare Nut Wrench	MZ10-10×12
Sticker Scraper DX.	KZSS-25
Chest	SKX5205
(L665×W405×H500)	Incl. 4 Drawer Dividers & 5 Drawer Liners, Inner Tray 1 pcs.

- This set comes with an SKX5000 series chest.
- This durable case is a 5-drawer type with plenty of storage capacity, and it is easy to use.
- A number of practical types and sizes are included in the set.
- It is good for a wide range of vehicle servicing from car inspection to heavy machinery servicing.

*The numbers of contents are not including holders.

3/8"
sq.

● TOOL STATION® SET

TOOL STATION® SET



SK3486T

3/8"
sq.No. **SK7006**

Total 48 pcs. ▼kg 45.5 1 (2 Cartons)

- SK3486T Tools ×1
- SKR703A Tool Station ×1<with key>

MODEL CHANGE Replacement for SK7004

- Tool Station is designed for a new servicing environment. (Movable 3 drawer type with shutters)
- 3/8"sq. Socket wrenches and Drive tools.

3/8"
sq.No. **SK6006**

Total 48 pcs. ▼kg 36.5 1 (2 Cartons)

- SK3486T Tools ×1
- SKR602A Tool Station ×1

MODEL CHANGE Replacement for SK6004

- Tool station for ease of use and better workability (Movable 2 drawer type)
- 3/8"sq. Socket wrenches and Drive tools.

3/8"
sq.No. **SK5006**

Total 48 pcs. ▼kg 32.5 1 (2 Cartons)

- SK3486T Tools ×1
- SKR502A Tool Station ×1

MODEL CHANGE Replacement for SK5004

- Basic type Tool Station with improved mobile efficiency. (Fixed 2 drawer type)
- 3/8"sq. Socket wrenches and Drive tools.

Common Items

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket	POWERFIT	B3L-10, 12, 14
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
45° x 10" Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver		D1M2-5, 6
Plastic Grip Screwdriver		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Adjustable Wrench		WM-250
Combination Plier (Soft Grip)		PJ-200
Needle Nose Plier		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
L Shape Longball Point Hex-Key Wrench Set (9pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)



SKR703A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions · with key




SKR602A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions



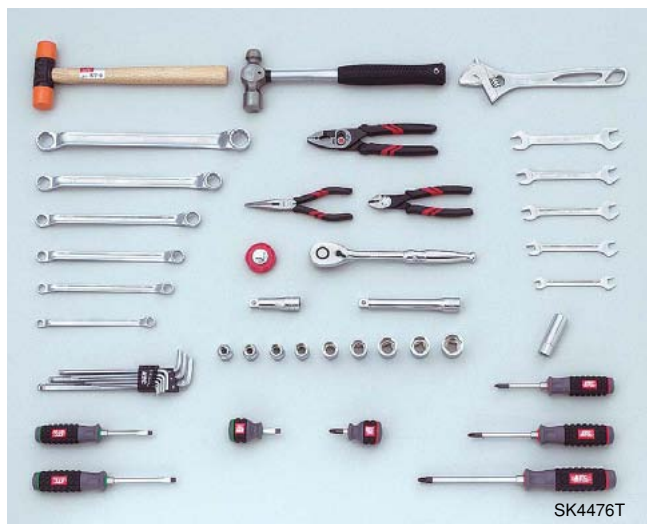
SKR502A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions

* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by  before placing an order.

TOOL STATION® SET

TOOL STATION® SET

1
TOOL SETS

SK4476T

No. SK7016

Total 47 pcs. ▼kg 46 1 (2 Cartons)

- SK4476T Tools ×1
- SKR703A Tool Station ×1<with key>



Replacement for SK7014

- Tool station is designed for a new servicing environment. (Movable 3 drawer type with shutters)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.



SKR703A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions · with key



TOOL SETS

No. SK6016

Total 47 pcs. ▼kg 37 1 (2 Cartons)

- SK4476T Tools ×1
- SKR602A Tool Station ×1



Replacement for SK6014

- Tool station for ease of use and better workability (Movable 2 drawer type)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.



SKR602A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions

No. SK5016

Total 47 pcs. ▼kg 33 1 (2 Cartons)

- SK4476T Tools ×1
- SKR502A Tool Station ×1



Replacement for SK5014

- Basic type Tool Station with improved mobile efficiency. (Fixed 2 drawer type)
- 1/2"sq. Socket wrenches and Drive tools.

1/2" sq.



SKR502A
(Tool Station)
L670×W420×H900
1 Top Liner · 8 Partitions

* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

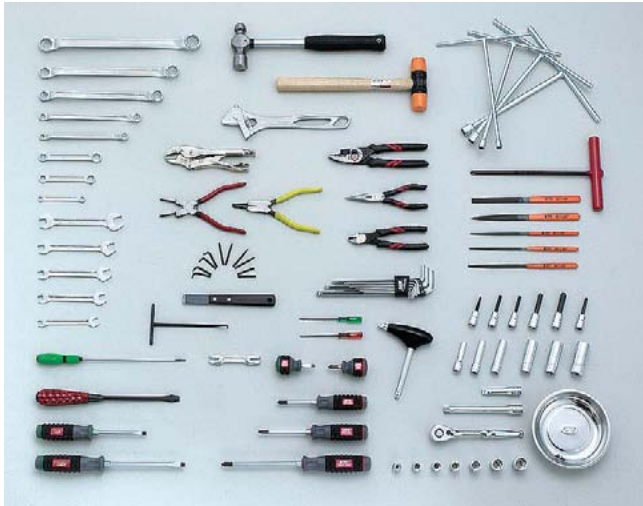
Common Items

1/2"sq.Socket	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24
1/2"sq.Spark Plug Wrench	POWERFIT	B4A-16P
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Quick Spinner	POWERFIT	BE4-Q
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150
45° × 10° Long Box End Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver		D1M2-5, 6
Plastic Grip Screwdriver		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Adjustable Wrench		WM-250
Combination Plier (Soft Grip)		PJ-200
Needle Nose Plier		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		KH-6
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

● MOTORCYCLE TOOL STATION® SET

MOTORCYCLE TOOL STATION® SET



No. SK7006B

Total 80 pcs. ▼kg 50.5 1 (2 Cartons)
 • SK7006BT Tools ×1
 • SKR703A Tool Station ×1<with key>

Contents

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-150
3/8"sq.Tilt Extension Bar	POWERFIT	BE3-075JW
3/8"sq.Hex.Bit Socket		BT3-04, 05, 06, 08, 10
3/8"sq.Cross Bit Wrench		BT3-2P
45° × 6" Long Offset Wrench	POWERFIT	M5-0810, 1012, 1417, 1719, 2224
Flat Type Short Box End Wrench	POWERFIT	M100-7×8, 10×12, 12×14
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver		D1M2-6, 8
Plastic Grip Screwdriver		D1P2-1, 2, 3
Heavy Duty Screwdriver (-)		FD-250
Soft Grip Screwdriver		D7SM-420
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Baby Screwdriver		BAD-75, 0
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
Spark Plug Wrench	POWERFIT	B3A-16P, 18P, 20.8P
Nipple Wrench		MCS2-100
Bent Internal Snap Ring Pliers		SCP-171
External Snap Ring Pliers		SOP-171
Spare Tips For Snap Ring Plier		SPC5
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
T Shape Wrench		TH-8, 10, 12, 14
Set of Small File		TZKF105 (Half, Half Circle, Circle, Angle, Triangle)
Screwdriver For Brake Drum		AB-5
Tension Spring Tool		AB-7
High Class Scraper		KZ3-18
3/8"sq.Handle		ABX101
Locking Plier-Curved Jaw		7CR
Magnet Parts Tray		YKPT-RM
Tool Station		SKR703A
(L670×W420×H900)		1 Top Liner 8 Partitions · With key

MODEL CHANGE Replacement for SK7004B

- Set of wide range of motorcycle tools with Tool Station.

SKR703A
 (Tool Station)
 L670×W420×H900
 1 Top Liner · 8 Partitions · With key



* TOOL STATION is a registered trademark of Kyoto Tool Co., Ltd.

No. SK6006B

Total 69 pcs. ▼kg 39.5 1 (2 Cartons)
 • SK6006BT Tools ×1
 • SKR602A Tool Station ×1

Contents

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-150
3/8"sq.Tilt Extension Bar	POWERFIT	BE3-075JW
3/8"sq.Hex.Bit Socket		BT3-04, 05, 06, 08, 10
3/8"sq.Cross Bit Wrench		HB20-2P
45° × 6" Long Offset Wrench	POWERFIT	M5-0810, 1012, 1417, 1719, 2224
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417
Plastic Grip Screwdriver		D1M2-6, 8
Plastic Grip Screwdriver		D1P2-1, 2, 3
Heavy Duty Screwdriver (-)		FD-250
Soft Grip Screwdriver		D7SM-420
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Baby Screwdriver		BAD-75, 0
Adjustable Wrench		WM-250
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
Spark Plug Wrench	POWERFIT	B3A-16P, 18P, 20.8P
Nipple Wrench		MCS2-100
Internal Snap Ring Pliers		SCP-171
External Snap Ring Pliers		SOP-171
Spare Tips For Snap Ring Pliers		SPC5
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
T Shape Wrench		TH-8, 10, 12, 14
File Half-Round		FIS-100HM
3/8"sq.Handle		ABX101
Locking Plier-Curved Jaw		7CR
Tool Station		SKR602A
(L670×W420×H900)		1 Top Liner 8 Partitions

MODEL CHANGE Replacement for SK6004B

- A new motor cycle tool set included in Tool Station.

SKR602A
 (Tool Station)
 L670×W420×H900
 1 Top Liner · 8 Partitions



●MECHANIC DESK SET

MECHANIC DESK SET

●EASY BUGGY TOOL SET

EASY BUGGY TOOL SET

3/8" sq.
1/2" sq.

No. SK200A

Total 77 pcs. ▼kg 65 1 (2 Cartons)

- SK200AT Tools ×1
- SK200-M Mechanic Desk Case ×1

Contents

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12, 14, 17
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP, B25P-20.8H
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Universal Joint		BJ3
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
1/2"sq.Socket	POWERFIT	B4-14, 17, 19, 21, 22, 24, 26, 27, 30, 32
1/2"sq.Ratchet Handle		BR4E
1/2"sq.Spinner Handle		BS4E
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150
Adaptor	POWERFIT	BA43
45° × 6° Long Offset Wrench	POWERFIT	M5-1012, 1113, 1214, 1417, 1921, 2224
45° Short Box End Wrench	POWERFIT	M20-8×10, 10×12, 12×14
Open End Wrench		S2-05507, 0810, 1012, 1113, 1214, 1417, 1719
Plastic Grip Screwdriver		D1M2-5, 6, 8
Plastic Grip Screwdriver		D1P2-1, 2, 3
Heavy Duty Screwdriver (-)		FD-250
Plastic Grip Stubby Screwdriver		D1MS-6, D1PS-2
Baby Screwdriver		BAD-75, 0
Plastic Grip Long Screwdriver		MDDZ-400
Plastic Grip Screwdriver		PDDZ-2
Adjustable Wrench		MW-300
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Heavy Duty Waterpump Pliers		WPD1-250
Combination Hammer		UD7-10
Stainless Scraper		KZ1-22
Sticker Scraper DX		KZSS-25
Sticker Scraper DX Spare Blade		KZS-2510 (10 pcs.)
File Half-Round & Round		FIS-100HM, 100M
Rolling Wedge Bar		LZ1-450
Flare Nut Wrench		MZ1-10×12
Thickness Gauge Set (18 pcs.)		TGZ-1818
Screwdriver For Brake Drum Screw		AB-5
Magnet Hand		VL2-HD
Mechanic Desk Case		SK200-M
(L575×W485×H880)		1 Top Liner · Partitions (L4-M6-S5) · With Key



Replacement for SK200

- The content includes everything needed for automobile servicing.
- A useful tray is housed inside. (only in the top drawer)



3/8" sq.

No. SKT231A

Total 40 pcs. ▼kg 36.5 1 (2 Cartons)

- SK231AT Tools ×1
- SK23-M Easy Buggy Case ×1

Contents

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket	POWERFIT	B3L-10, 12, 14
3/8"sq.Spark Plug Wrench	POWERFIT	B25P-16H, 20.8H
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
45° × 6° Long Offset Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1921, 2224
Open End Wrench		S2-0607, 0810, 1012, 1113, 1214, 1417, 1719
Plastic Grip Screwdriver		D1M2-5, 6
Plastic Grip Screwdriver		D1P2-1, 2, 3
Plastic Stubby Screwdriver		D1MS-6
Plastic Stubby Screwdriver		D1PS-2
Adjustable Wrench		MW-300
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
Ball-Peen Hemmer		PH45-323
Easy Buggy Case (L680×W405×H900)		SKT23-M
		1 Top Liner · Partitions 8 pcs · With Key

- The content includes everything needed for automobile servicing.

SK200-M
(Mechanic Desk Case)SKT23-M
(Easy Buggy Case)

* Mechadesk is a registered trademark of Kyoto Tool Co., Ltd.

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

TRUCK MECHANIC TOOL SET

TRUCK MECHANIC TOOL SET



1/2" sq.

No. SK300A

Total 52 pcs. ▼kg 54 1 (2 Cartons)

- SK300AT Tools x1
- SK300-M Work Truck Case x1

Contents

1/2"sq.Socket	B4-08, 10, 12, 13, 14, 17, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq.Deep Socket	B4L-10, 12, 14, 17
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-075, 150
1/2"sq.Spinner Handle	BS4E
45° × 10° Long Box End Wrench	M5-0810, 1012, 1214, 1417, 1921, 2224, 2427
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719, 2224, 2427
Plastic Grip Screwdriver	D1M2-5, 6, 8
Plastic Grip Screwdriver	D1P2-1, 2, 3
Heavy Duty Screwdriver	FD-250
Stubby Screwdriver	D1MS-6, D1PS-2
Adjustable Wrench	MW-200, 300
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Side Cutting Plier (Coated Handle)	SPD-200C
Ball-Peen Hammer	PH68-344
Stainless Scraper	KZ1-22
Work Truck Case (L700×W450×H890)	SK300-M 7 Partitions · With Key

- This is a set with case suitable for servicing large vehicles.
- The case has been developed with an emphasis on storage and ease of use.



1/2" sq. 3/4" sq.

No. SK301A

Total 57 pcs. ▼kg 58 1 (2 Cartons)

- SK301AT Tools x1
- SK300-M Work Truck Case x1

Contents

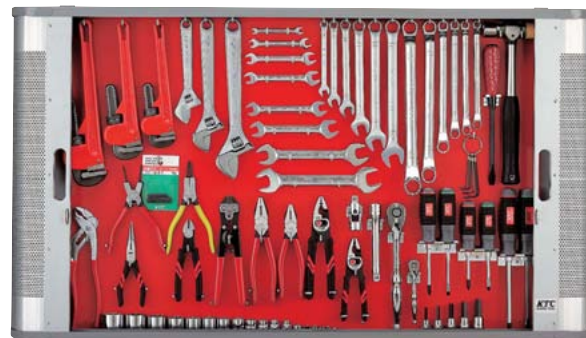
1/2"sq.Socket	B4-08, 10, 12, 13, 14, 17, 19W, 22W, 24W, 27W
1/2"sq.Deep Socket	B4L-10, 12, 14, 17
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-075, 150
1/2"sq.Spinner Handle	BS4E
3/4"sq.Socket	B40-30, 32, 36, 38, 41
3/4"sq.Ratchet Handle	BR41
3/4"sq.Extension Bar	BE40-200
45° × 6° Long Offset Wrench	M5-0810, 1012, 1214, 1417, 1921, 2224, 2427
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719, 2224, 2427
Plastic Grip Screwdriver	D1M2-5, 6, 8
Plastic Grip Screwdriver	D1P2-1, 2, 3
Heavy Duty Screwdriver (-)	FD-250
Stubby Screwdriver	D1MS-6, D1PS-2
Adjustable Wrench	MW-200, 300
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Side Cutting Pliers (Coated Handle)	SPD-200C
Ball-Peen Hammer	PH68-344
Stainless Scraper	KZ1-22
Work Truck Case (L700×W450×H890)	SK300-M 7 Partitions · With Key

- This is a set that includes 3/4"sq sockets and driving tools in an SK300.

SK300-M
(Work Truck Case)

MECHANIC KIT

MECHANIC KIT



MECHANIC KIT (AUTOMOTIVE)

No. **MK91A**

Total 79 pcs. ▼kg 31.5 1 (2 Cartons)

- MK91AT Tools ×1
- MK91A-M Mechanic Desk Case ×1

Contents

3/8"sq.Socket	B3-055, 07, 08, 10, 12, 13W
3/8"sq.Ratchet Handle	BR3E
3/8"sq.Spinner Handle	BS3E
3/8"sq.Extension Bar	BE3-075, 150, 270
3/8"sq.Universal Joint	BJ3
3/8"sq.Spark Plug Wrench	B3A-16P, 20.8P
1/2"sq.Socket	B4-14W, 17W, 19W, 21W, 22W, 24W, 27W
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Spinner Handle	BS4E
1/2"sq.Extension Bar	BE4-075, 150
Adaptor	BA43, 34
45° × 6° Long Offset Wrench	M5-1012, 1214, 1417, 1719, 1921, 2224
45° Short Box End Wrench	M5C-0708, 1012, 1417
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 17, 19
Plastic Grip Screwdriver	D1M2-5, 6, 8
Plastic Grip Screwdriver	D1P2-1, 2, 3
Heavy Duty Screwdriver	FD-250
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2
Baby Screwdriver (-)	BAD-50
Adjustable Wrench	WM-200, 300
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers (Coated Handle)	WPD1-250
Side Cutting Pliers (Coated Handle)	SPD-200C
Combination Hammer	UD7-10
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips For Snap Ring Pliers	SPC5
T Shape Wrench	TH-10, 12
Oil Filter Cartridge Wrench	FF-8095
Cross Rim Wrench	XH-14-21
Mechanic Case (L1125×W145×H630)	MK91A-M (with Shutter & Screen printed shadow pictures)



Replacement for MK91

- Important tools are protected by a slide shutter (lockable).
- This efficient kit neatly hangs the tools needed in the workshop reducing time spent hunting around for them when they are needed.
- The shapes of the tools are printed on the case so they are easily returned to the correct position, and it can be used as a retail display kit that allows you to see at a glance what is missing after purchasing.

MECHANIC KIT (INDUSTRIAL)

No. **MK81A**

Total 76 pcs. ▼kg 32 1 (2 Cartons)

- MK81AT Tools ×1
- MK81A-M Mechanic Case ×1

Contents

1/4"sq.Socket	B2-05, 055, 07, 08, 10, 12
1/4"sq.Ratchet Handle	BR2E
1/2"sq.Socket	B4-10, 12
1/2"sq.Hex. Bit Socket	BT4-05, 06, 08, 10, 12
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-150
1/2"sq.Universal joint	BJ4
45° × 6° Long Offset Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1921, 2224
Combination Wrench	MS2-10, 12, 14, 17, 19, 21
Plastic Grip Screwdriver	D1M2-5, 6, 8
Plastic Grip Screwdriver	D1P2-1, 2, 3
Heavy Duty Screwdriver (-)	FD-250
Adjustable Wrench	WM-200, 250, 300
Pipe Wrench	PWA-250, 300, 350
Mini Clipper	BPZ2-215C
Combination Pliers (Soft Grip)	PJ-150, 200
Side Cutting Pliers (Coated Handle)	SPD-175C, 200C
Needle Nose Pliers	PSL-150
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers (Coated Handle)	WPD1-250
Combination Hammer	UD7-10
6pt.Wrench	HL4 (2, 2.5, 3, 4)
Internal Snap Ring Pliers	SCP-171
External Snap Ring Pliers	SOP-171
Spare Tips For Snap Ring Pliers	SPC5
Mechanic Case (L1125×W145×H630)	MK81A-M (with Shutter & Screen printed shadow pictures)



Replacement for MK81

- Hang-on-wall type tool set for industrial use.
- It is perfect for use in maintenance and inspections.
- The shapes of the tools are printed on the case so they are easily returned to the correct position, and it can be used as a retail display kit that allows you to see at a glance what is missing after purchasing.

3/8"
sq.

MECHANIC TOOL SET (CHEST + ROLLER CABINET TYPE, CHEST TYPE)

3/8"
sq.

SKX3206



SKX3206+SKX3705

MECHANIC TOOL SET

No. **SK3686XX**

Total 68 pcs.	▼kg 75	📦 1 (4 Cartons)
• SK3686XT1	Tools	×1
• SK3686XT2	Tray	×1
• SKX3206	Chest	×1
• SKX3705	Roller Cabinet	×1

No. **SK3686X**

Total 68 pcs.	▼kg 28	📦 1 (3 Cartons)
• SK3686XT1	Tools	×1
• SK3686XT2	Tray	×1
• SKX3206	Chest	×1

Common Items

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12, 14
3/8"sq.Semi-Deep Socket	POWERFIT	B3M-08, 10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Extension Bar		BE3-050, 075, 150
3/8"sq.Universal Joint	POWERFIT	BJ3
45° × 6° Long Offset Wrench		M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver		D1M2-5, 6, 8
Plastic Grip Screwdriver		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
Adjustable Wrench		WM-250
Ball-Peen Hammer		PH45-323
Plastic Hammer		K9-6
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnet Parts Tray		YKPT-RM



SK3686XX is the replacement model for SK3614XX.



SK3686X is the replacement model for SK3614X.

MECHANIC TOOL SET (CHEST)

MECHANIC TOOL SET



SK3666X



SKX0213



SKX0213S



SKX0213BK

No. SK3666X

Total 66 pcs. ▼kg 18 1 (3 Cartons)

- SK3666T1 Tools ×1
- SK3666XT2 Tray ×1
- SKX0213 Chest (Solid Red) ×1

No. SK3666XS

Total 66 pcs. ▼kg 18 1 (3 Cartons)

- SK3666T1 Tools ×1
- SK3666XT1 Tray ×1
- SKX0213S Chest (Metallic Silver) ×1

No. SK3666XBK

Total 66 pcs. ▼kg 18 1 (3 Cartons)

- SK3666T1 Tools ×1
- SK3666XT1 Tray ×1
- SKX0213BK Chest (Solid Black) ×1

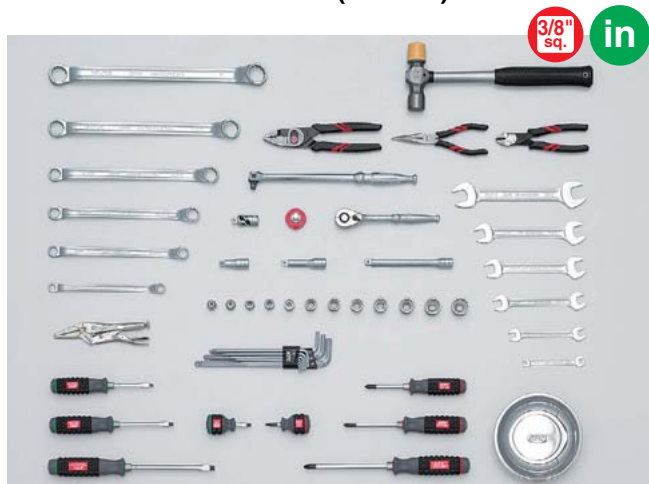
Contents

3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19, 21, 22
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12, 14
3/8"sq.Semi-Deep Socket	POWERFIT	B3M-08, 10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Spinner Handle		BS3E
3/8"sq.Extension Bar	POWERFIT	BE3-050, 075, 150
3/8"sq.Universal Joint		BJ3
3/8"sq.Spark Plug Wrench	POWERFIT	B3A-16SP
45° × 6° Long Offset Wrench	POWERFIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver		D1M2-5, 6, 8
Plastic Grip Screwdriver		D1P2-1, 2, 3
Plastic Grip Stubby Screwdriver		D1MS-6
Plastic Grip Stubby Screwdriver		D1PS-2
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
Combination Hammer		UD7-10
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Magnet Parts Tray		YKPT-RM



SK3666X is the replacement model for SK3604X.

MECHANIC TOOL SET (CHEST)



MECHANIC TOOL SET

No. SK3546BX

Total 54 pcs.		▼kg 18.5	📦 1 (3 Cartons)
• SK3546BTXT1	Tools	x1	
• SK3546BTXT2	Tray	x1	
• SKX0213	Chest	x1	
Contents			
3/8"sq.Socket	POWERIT	B3-1/4 w, 5/16w, 3/8 w, 7/16w, 1/2 w, 9/16w, 19/32w, 5/8w, 11/16w, 3/4 w, 13/16w, 7/8w	
3/8"sq.Ratchet Handle		BR3E	
3/8"sq.Spinner Handle		BS3E	
3/8"sq.Extension Bar	POWERIT	BE3-050, 075, 150	
3/8"sq.Universal Joint		BJ3	
45° × 6° Long Offset Wrench		M5-3/8 × 7/16, 1/2 × 9/16, 19/32 × 11/16, 5/8 × 3/4, 13/16 × 7/8, 15/16 × 1	
Open End Wrench		S2-1/4 × 5/16, 3/8 × 7/16, 1/2 × 9/16, 19/32 × 11/16, C-5/8 × 3/4, 13/16 × 7/8	
Plastic Grip Screwdriver		D1M2-5, 6, 8	
Plastic Grip Screwdriver		D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver		D1MS-6	
Plastic Grip Stubby Screwdriver		D1PS-2	
Combination Pliers (Soft Grip)		PJ-200	
Needle Nose Pliers		PSL-150	
Diagonal Cutting Pliers		PN1-150	
Combination Hammer		UD7-10	
3/8"sq.Quick Spinner	POWERIT	BE3-Q	
Locking Plier-Curved Jaw		6LN	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259BSP 1/16, 5/64, 3/32, 1/8, 5/32, 3/16, 1/4, 5/16, 3/8	
Magnet Parts Tray		YKPT-RM	



Replacement for SK3554BX

- The ballpoint L-shaped hexagonal wrenches (9 included) are set in millimeter size.

No. SK4586X

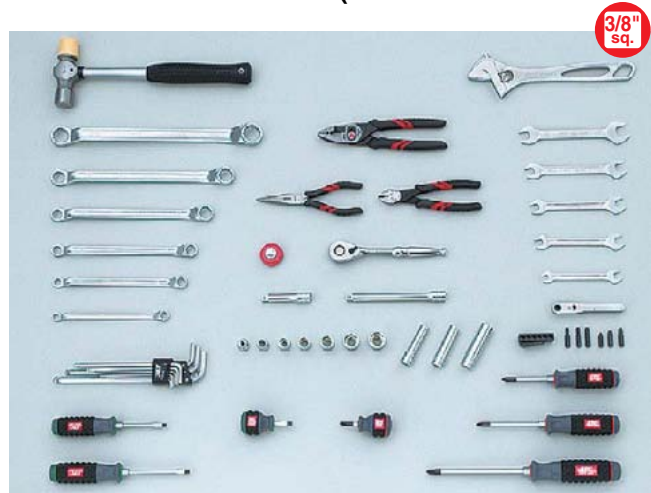
Total 58 pcs.		▼kg 19	📦 1 (3 Cartons)
• SK4586T1	Tools	x1	
• SK4586XT2	Tray	x1	
• SKX0213	Chest	x1	
Contents			
1/2"sq.Socket	POWERIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24, 27	
1/2"sq.Ratchet Handle		BR4E	
1/2"sq.Spinner Handle		BS4E	
1/2"sq.Extension Bar	POWERIT	BE4-075, 150	
1/2"sq.Universal Joint		BJ4	
45° × 6° Long Offset Wrench	POWERIT	M5-0810, 1012, 1113, 1214, 1417, 1719, 2224	
Plastic Grip Screwdriver		D1M2-5, 6, 8	
Plastic Grip Screwdriver		D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver		D1MS-6	
Plastic Grip Stubby Screwdriver		D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8	
Combination Wrench	POWERIT	MS2-08, 10, 12, 13, 14, 17	
Combination Pliers (Soft Grip)		PJ-200	
Needle Nose Pliers		PSL-150	
Diagonal Cutting Pliers		PN1-150	
Combination Hammer		UD7-10	
1/2"sq.Quick Spinner	POWERIT	BE4-Q	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	
Magnet Parts Tray		YKPT-RM	



Replacement for SK4524X

- It includes 1/2"sq. sockets and drive tool.

MECHANIC TOOL SET (SPLIT OPEN METAL CASE)



No. SK3536W			
Total 53 pcs.		▼kg 14.5	📦 1
• Split Open Metal Case		EK-1	
[Contents]			
3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19	
3/8"sq.Deep Socket	POWERFIT	B3L-10, 12, 14	
3/8"sq.Ratchet Handle		BR3E	
3/8"sq.Quick Spinner	POWERFIT	BE3-Q	
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150	
45° × 6" Long Offset Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver		D1M2-5, 6	
Plastic Grip Screwdriver		D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver		D1MS-6	
Plastic Grip Stubby Screwdriver		D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8	
Adjustable Wrench		WM-250	
Combination Pliers (Soft Grip)		PJ-200	
Needle Nose Pliers		PSL-150	
Diagonal Cutting Pliers		PN1-150	
Combination Hammer		UD7-10	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	

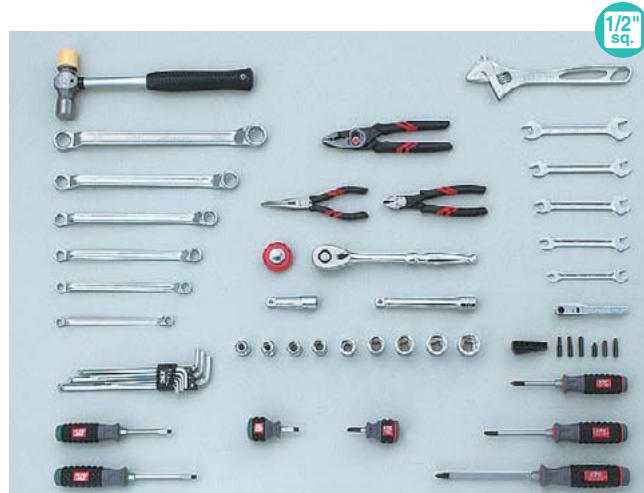
- MODEL CHANGE** Replacement for SK3474W
- 3/8"sq. Socket wrenches and Drive tools.
 - Comes with a useful storage tray.

OPTIONAL TOOL SET FOR THE SPLIT OPEN METAL CASE

No. SK306M-S			
Total 6 pcs.		▼kg 1	📦 1
• Metal Carrying Tray (L390×W100×H45)		EK-1-10	
[Contents]			
45° Short Offset Wrench		MS5-0810, 1012, 1214	
3/8"sq.Spark Plug Wrench		B3A-16SP	
Plastic Grip Screwdriver		D1M2-8	
Locking Pliers		6LN	

- MODEL CHANGE** Replacement for SK06M-S
- Comes with a useful storage tray.

MECHANIC TOOL SET (METAL CASE)



No. SK4526W			
Total 52 pcs.		▼kg 15	📦 1
• Split Open Metal Case		EK-1	
[Contents]			
1/2"sq.Socket	POWERFIT	B4-10, 12, 13, 14, 17, 19, 21, 22, 24	
1/2"sq.Ratchet Handle		BR4E	
1/2"sq.Spinner Handle	POWERFIT	BE4-Q	
1/2"sq.Extension Bar	POWERFIT	BE4-075, 150	
45° × 6" Long Offset Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench		S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver		D1M2-5, 6	
Plastic Grip Screwdriver		D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver		D1MS-6	
Plastic Grip Stubby Screwdriver		D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set		TMDB8	
Adjustable Wrench		WM-250	
Combination Pliers (Soft Grip)		PJ-200	
Needle Nose Pliers		PSL-150	
Diagonal Cutting Pliers		PN1-150	
Combination Hammer		UD7-10	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)		HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	

- MODEL CHANGE** Replacement for SK4464W
- 1/2"sq. Socket wrenches and Drive tools.
 - Comes with a useful storage tray.



• Tray • Carrying Tray (Metal)

Assembled example



SK3536W + SK306M-S



●MECHANIC TOOL SET (SPLIT OPEN HARD PLASTIC CASE)

MECHANIC TOOL SET (PLA-HARD CASE)



No. SK3536P

Total 53 pcs.	▼kg 11	📦 1
• Plastic Case	SK30P-M	
[Contents]		
3/8"sq.Socket	POWERFIT B3-08, 10, 12, 13, 14, 17, 19	
3/8"sq.Deep Socket	POWERFIT B3L-10, 12, 14	
3/8"sq.Ratchet Handle	BR3E	
3/8"sq.Extension Bar	BE3-075, 150	
45° × 6° Long Offset Wrench	M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver	D1M2-5, 6	
Plastic Grip Screwdriver	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver	D1MS-6	
Plastic Grip Stubby Screwdriver	D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set	TMDB8	
Adjustable Wrench	WM-250	
Combination Pliers (Soft Grip)	PJ-200	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
3/8"sq.Quick Spinner	POWERFIT BE3-Q	
Combination Hammer	UD7-10	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	



Replacement for SK3474P

- This is a set including 3/8"sq. sockets.
- Comes with a useful storage tray.

No. SK4526P

Total 52 pcs.	▼kg 11.5	📦 1
• Plastic Case	SK330P-M	
[Contents]		
1/2"sq.Socket	POWERFIT B4-10, 12, 13, 14, 17, 19, 21, 22, 24	
1/2"sq.Ratchet Handle	BR4E	
1/2"sq.Quick Spinner	POWERFIT BE4-Q	
1/2"sq.Extension Bar	BE4-075, 150	
45° × 6° Long Offset Wrench	M5-0810, 1012, 1214, 1417, 1719, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417	
Plastic Grip Screwdriver	D1M2-5, 6	
Plastic Grip Screwdriver	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver	D1MS-6	
Plastic Grip Stubby Screwdriver	D1PS-2	
Insert Changeable Flat Ratchet Screwdriver Set	TMDB8	
Adjustable Wrench	WM-250	
Combination Pliers (Soft Grip)	PJ-200	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
Combination Hammer	UD7-10	
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)	



Replacement for SK4464P

- The set includes 1/2"sq. sockets.
- Comes with a useful storage tray.

●OPTIONAL TOOL SET FOR THE SPLIT OPEN HARD PLASTIC CASE

No. SK306P-S

Total 6 pcs.	▼kg 1	📦 1
• Plastic Carrying Tray (L385×W100×H40)	SKP3-2-B	
[Contents]		
45° short Offset Wrench	M5S-0810, 1012, 1214	
3/8"sq.Spark Plug Wrench	POWERFIT B3A-16SP	
Plastic Grip Screwdriver	D1M2-8	
Locking Pliers	6LN	



Replacement for SK3303P-S



Carrying Plastic Tray

- SK306P-S does not come with a tray.

●MECHANIC TOOL SET (BASIC MODEL)

MECHANIC TOOL SET



3/8" sq.



No. SK3434S

Total 43 pcs.	▼kg 10	📦 1
• Open Top Metal Case	SK120-M	
Contents		
3/8"sq.Socket	POWERFIT	B3-08, 10, 12, 13, 14, 17, 19
3/8"sq.Deep Socket	POWERFIT	B3L-08, 10, 12, 14
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
3/8"sq.Quick Spinner	POWERFIT	BE3-Q
45° x 6° Long Offset Wrench	POWERFIT	M5-0810, 1012, 1214, 1417, 1719, 2224
Combination Wrench	POWERFIT	MS2-08, 10, 12, 13, 14, 17
Plastic Grip Screwdriver		D1M2-5, 6
Plastic Grip Screwdriver		D1P2-1, 2, 3
Short Stubby Screwdriver		SD4-P
Combination Pliers (Soft Grip)		PJ-200
Needle Nose Pliers		PSL-150
Diagonal Cutting Pliers		PN1-150
L Shape Kex-Key Wrench Set (7 pcs.)		HL107 (2.5, 3, 4, 5, 6, 8, 10)



Replacement for SK1203

- The case is of an easy-to-carry compact size.
- It includes a well-designed, useful parts tray and a carrying tray.
- Comes with a useful storage tray.

●MECHANIC TOOL SET



3/8" sq.



No. SK322P

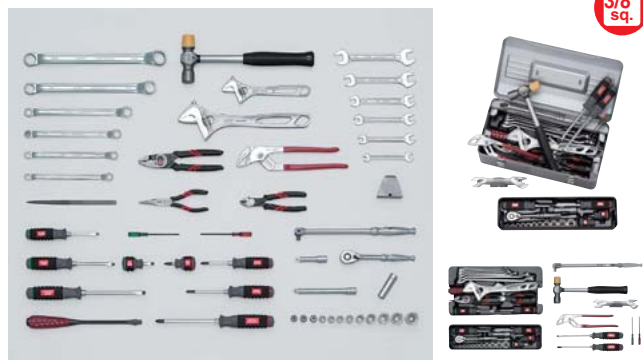
Total 22 pcs.	▼kg 3.2	📦 1
• Plastic Case	TCP1-1	
Contents		
3/8"sq.Socket	POWERFIT	B3-055, 07, 08, 10, 12, 13, 14, 17, 19, 22
3/8"sq.Ratchet Handle		BR3E
3/8"sq.Extension Bar	POWERFIT	BE3-075, 150
3/8"sq.Spinner Handle		BS3E
3/8"sq.Universal Joint		BJ3
Combination Wrench	POWERFIT	MS2-08, 10, 12, 14
Plastic Grip Screwdriver		D1M2-6
Plastic Grip Screwdriver		D1P2-2
Combination Pliers (Soft Grip)		PJ-200



Replacement for SK23P

- Comes in a compact, light resin molded case.
- With a careful selection of frequently used tools, the content is perfect for the weekend mechanic.
- Comes with a useful storage tray.

MECHANIC TOOL SET



3/8" sq.

No. SK348S

Total 48 pcs.	▼kg 11	📦 1
• Open Top Metal Case	EK-3	
[Contents]		
3/8"sq.Socket	B3-055, 07, 08, 10, 11, 12, 13, 14, 17, 19, 21, 22	
3/8"sq.Spark Plug Wrench	B3A-16SP	
3/8"sq.Ratchet Handle	BR3E	
3/8"sq.Extension Bar	BE3-075, 150	
3/8"sq.Spinner Handle	BS3E	
45° × 6" Long Offset Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719	
Plastic Grip Screwdriver	D1M2-5, 6, 8	
Plastic Grip Screwdriver	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver	D1MS-6	
Plastic Grip Stubby Screwdriver	D1PS-2	
Baby Screwdriver	BAD-75	
Baby Screwdriver	BAD-0	
Heavy Duty Screwdriver	FD-250	
Adjustable Wrench	WM-200, 300	
Combination Pliers (Soft Grip)	PJ-200	
Heavy Duty Waterpump Pliers	WPD1-250	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
Combination Hammer	UD7-10	
File Half-Round	FIS-100HM	
Open End Wrench Holder	EHS-1	

MODEL CHANGE Replacement for SK41

- *The numbers of contents are not including holders.
- Comes with a useful storage tray.



3/8" sq.

No. SK324S

Total 24 pcs.	▼kg 5.5	📦 1
• Open Top Metal Case	KC-1	
[Contents]		
3/8"sq.Socket	B3-08, 10, 12, 13, 14, 17, 19	
3/8"sq.Ratchet Handle	BR3E	
3/8"sq.Extension Bar	BE3-150	
45° × 6" Long Offset Wrench	M5-1012, 1113, 1214, 1417, 1719	
Open End Wrench	S2-0810, 1012, 1214, 1417	
Plastic Grip Screwdriver	D1M2-6	
Plastic Grip Screwdriver	D1P2-1, 2	
Baby Screwdriver	BAD-0	
Adjustable Wrench	WM-250	
Combination Pliers (Soft Grip)	PJ-200	
Needle Nose Pliers	PSL-150	
Combination Hammer	UD7-10	
3/8"sq. Socket Holder	EHB310	

MODEL CHANGE Replacement for SK20

- *The numbers of contents are not including holders.
- The content has been carefully pared down to cover the necessities.

MECHANIC TOOL SET



1/2" sq.

No. SK444S

Total 44 pcs.	▼kg 12	📦 1
• Open Top Metal Case	EK-3	
[Contents]		
1/2"sq.Socket	B4-10, 12, 13, 14, 17, 19, 21, 22, 24	
1/2"sq.Spark Plug Wrench	B4A-16P	
1/2"sq.Ratchet Handle	BR4E	
1/2"sq.Extension Bar	BE4-150	
1/2"sq.Spinner Handle	BS4E	
45° × 6" Long Offset Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719	
Plastic Grip Screwdriver	D1M2-5, 6, 8	
Plastic Grip Screwdriver	D1P2-1, 2, 3	
Plastic Grip Stubby Screwdriver	D1MS-6	
Plastic Grip Stubby Screwdriver	D1PS-2	
Baby Screwdriver	BAD-75	
Baby Screwdriver	BAD-0	
Heavy Duty Screwdriver (-)	FD-250	
Adjustable Wrench	WM-200, 300	
Combination Pliers (Soft Grip)	PJ-200	
Heavy Duty Waterpump Pliers	WPD1-250	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
Combination Hammer	UD7-10	
File Half-Round	FIS-100HM	
Open End Wrench Holder	EHS-1	

MODEL CHANGE Replacement for SK40

- Comes with a useful storage tray.



3/8" sq.

No. SK031S

Total 31 pcs.	▼kg 9.5	📦 1
• Open Top Metal Case	EK-3	
[Contents]		
45° × 6" Long Offset Wrench	M5-1012, 1113, 1214, 1417, 1921, 2224	
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719	
Plastic Grip Screwdriver	D1M2-5, 6, 8	
Plastic Grip Screwdriver	D1P2-1, 2, 3	
Heavy Duty Screwdriver (-)	FD-250	
Plastic Grip Stubby Screwdriver	D1MS-6, D1PS-2	
Baby Screwdriver	BAD-75, 0	
Adjustable Wrench	WM-200, 300	
Combination Pliers (Soft Grip)	PJ-200	
Heavy Duty Waterpump Pliers	WPD1-250	
Needle Nose Pliers	PSL-150	
Diagonal Cutting Pliers	PN1-150	
Combination Hammer	UD7-10	
File Half-Round	FIS-100HM	
Open End Wrench Holder	EHS-1	

MODEL CHANGE Replacement for SK30

- *The numbers of contents are not including holders.
- The perfect set for those who already own driving tools or who wish to select their own driving tools.
- Comes with a useful storage tray.

MECHANIC TOOL SET (INDUSTRIAL TOOL SET)

INDUSTRIAL TOOL SET



1/2" sq.



No. SK4518M

Total 51 pcs.

▼kg 12.5

1

• Metal Case

SKC-M

[Contents]

1/2"sq.Socket	B4-10, 12, 13W, 14W, 17W, 19W, 22W, 24W, 27W, 30W, 32W
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-150
1/2"sq.Hex. Wrench	BT4-05, 06, 08, 10, 12
45° × 6° Long Offset Wrench	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench	S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver	MDD1-75, 100, 150
Plastic Grip Screwdriver	PDD1-1, 2, 3
Adjustable Wrench	WM-250
Combination Pliers (Soft Grip)	PJ-200
Needle Nose Pliers	PSL-150
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer	UD6-10
Side Cutting Pliers (Coated Handle)	SPD-175C
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers	WPD1-250C
Open End Wrench Holder	EHS-1
Key	KAG-300



Replacement for SK451M

- This is a valuable set for maintenance and inspection of every type of machine, also useful for installation and dispatch services.
- Comes with a useful storage tray.
- * The included item count dose not include the spanner holder and key.



1/2" sq.



No. SK4418M

Total 41 pcs.

▼kg 10.5

1

• Metal Case

SKC-M

[Contents]

1/2"sq.Socket	B4-10, 12, 13W, 14W, 17W, 19W, 22W, 24W, 27W
1/2"sq.Ratchet Handle	BR4E
1/2"sq.Extension Bar	BE4-150
45° × 6° Long Offset Wrench	M5-1012, 1113, 1417, 1719, 2224
Open End Wrench	S2-0607, 0810, 1012, 1113, 1214, 1719
Plastic Grip Screwdriver	MDD1-100, 150
Plastic Grip Screwdriver	PDD1-2, 3
Adjustable Wrench	WM-250
Combination Pliers (Soft Grip)	PJ-200
Side Cutting Pliers	SPD-175C
Diagonal Cutting Pliers	PN1-150
Waterpump Pliers With Slotted Handle-End	WPD1-250C
L Shape Longball Point Hex-Key Wrench Set (9 pcs.)	HL259SP (1.5, 2, 2.5, 3, 4, 5, 6, 8, 10)
Combination Hammer	UD6-10
Open End Wrench Holder	EHS-1
Key	KAG-300



Replacement for SK441M

- It is a perfect set for maintenance and inspections.
- Comes with a useful storage tray.
- * The included item count dose not include the spanner holder and key.



ZTB311

Voltage tester that can check 0V (zero volt) before work is available.



ZTB311V

Voltage measurement before work is specified in the vehicle manufacturer's manual.

NEW

INSULATION TOOL SET A

No. ZTB311

Total 11 pcs.

▼kg 2.9

1

• Open Top Metal Case

[Contents]

3/8"sq.Socket	ZB3-08, 10, 12
3/8"sq.Deep Socket	ZB3L-08, 10, 12
3/8"sq.Ratchet Handle	ZBR3
3/8"sq.Extension Bar	ZBE3-125, 250
3/8"sq.T Shape Wrench	ZTH3
Flat-blade Screwdriver	ZD1M-100



Double layer insulation film which is highly safe



"Fall prevention screw" to prevent loss of socket



Warning • If the red part is worn off and a yellow part is exposed, stop use of the tool immediately.

NEW

INSULATION TOOL SET B

No. ZTB311V

Total 12 pcs.

▼kg 3.1

1

• Open Top Metal Case

[Contents]

3/8"sq.Socket	ZB3-08, 10, 12
3/8"sq.Deep Socket	ZB3L-08, 10, 12
3/8"sq.Ratchet Handle	ZBR3
3/8"sq.Extension Bar	ZBE3-125, 250
3/8"sq.T Shape Wrench	ZTH3
Flat-blade Screwdriver	ZD1M-100
Voltage Tester	ZGEV-750

Application • Hybrid vehicle (HV)

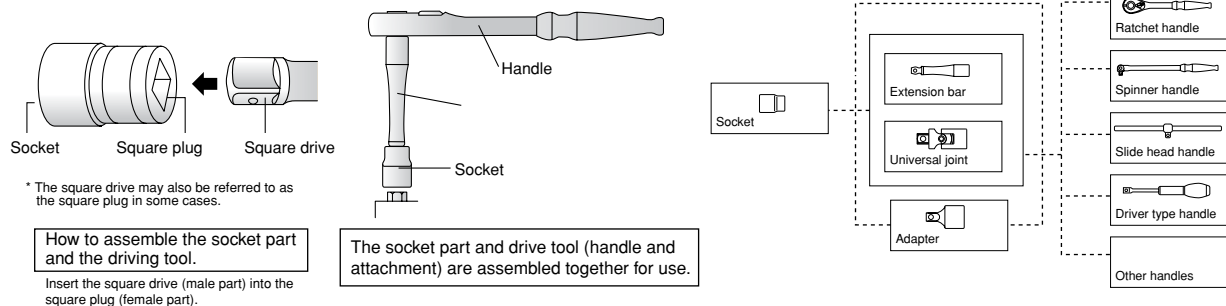
• Electric vehicle (EV)

Features

- Products conforming to IEC60900: 2004 which is the only international standard for insulation tools.
- The set is most suitable for service of hybrid vehicles (HV) and electric vehicles (EV).
- The socket bore has POWERFIT® prevents concentration of stress and are easy on bolts and nuts.
- To prevent fall of the socket (*), the ratchet handle uses a union mechanism and the extension bar and the T-shaped handle use "fall prevention screws".
- Proprietary trays are available in a plastic case in red which stands out at a site.
- * Standard IEC60900:2004 requires "Mechanical lock retaining system".

Socket for socket wrench, Drive tool

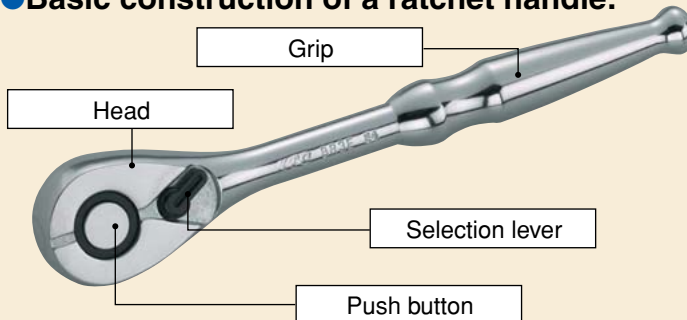
A socket wrench is a tool used when tightening or loosening a hexagonal bolt or nut, or a bolt with a hexagonal hole in it. It comprises a socket part (socket for a socket wrench) and a driving tool (handle and adapter), and these are used in combination. A socket used by a socket wrench has a box shape and, different from a spanner or monkey wrench, it completely encloses the bolt or nut in use, so that it is difficult for slippage to occur. It is therefore suited to the application of great torque. By using various adapters in conjunction with the sockets and driving tool, it becomes possible to work easily even in narrow spaces where the hand cannot easily enter or deep spaces.



Drive tool

The drive tool has a handle that drives the socket and an attachment for connecting the socket and the handle. The most suitable combination of these is selected based on the operation and the work space. Handles and attachments include the following kinds.

● Basic construction of a ratchet handle.



The ratchet handle contains a gear wheel and claws, and repeated handle movement can rotate the socket. It is good for fast turning as the operation can be performed with the socket holding the bolt or nut. Also, a left or right toggle switch allows easy change of the direction of rotation. Ratchet handles come in "oval type", "round type", and "wobbling type". There is also a "socket holder type" (at KTC this is known as the Union Ratchet Handle), which can easily attach to and detach from the socket with the operation of a one-touch button.

Tool basics

The ratchet handle is a useful tool that can be used in various operations by combining it with sockets and attachments, and enables you to work efficiently.

● Types of ratchet handle

Ratchet handles are classified according into oval type and round type ratchet mechanisms, handle length, and whether or not they are of a flexible type.



Oval type

This is a general type of ratchet mechanism with about 20 gear teeth and a repeating angle of about 10 to 20°. The selection is operated easily.



Round type

The characteristic feature of the round type is the repeating angle of about 5° - smaller than that of the oval type.



Flexible type

As the head part can bend, it becomes possible to operate in confined spaces.

● Spinner handle



The square drive can bend left or right up to 90° about a pin in the center of the head part of the shank and stop at a given angle. When turning quickly to temporarily tighten and so on, the handle can be held straight and used like a screw driver (Fig. 1), and when tightening securely, a strong torque can be generated by holding the handle to the side (Fig. 2).



Fig. 1

Tool basics

The longer the handle, the larger the torque. However, care must be taken not to apply excessive torque.

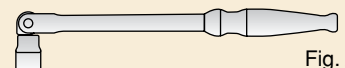
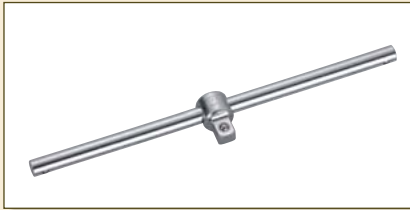


Fig. 2

● Slide head handle



The drive head can be stopped at any place on the handle, and it can be used either as an L shaped wrench or a T shaped wrench. When using as an L shaped wrench (Fig. 1), first pull towards you, and when you have turned 180°, slide the handle and pull the handle towards you again. When using as a T shaped wrench (Fig. 2), set the square drive in the center of the handle and turn with both hands. To make a T wrench with a longer axis, the extension bar is connected (Fig. 3).

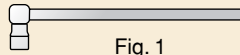


Fig. 1

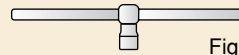


Fig. 2

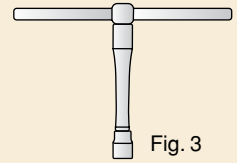


Fig. 3

Tool basics

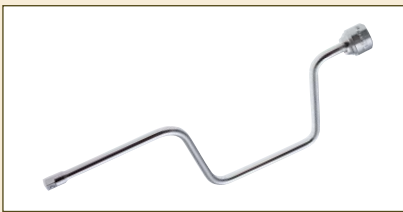
Spanners and offset wrenches require a great variety of wrenches to suit the target of the operation, however, a socket wrench requires only one handle, which allows you to purchase only the sockets to deal with different bolts and nuts. Also, by using an attachment, the range of use is widened. This full expandability makes it a recommended choice for novice workmen.

● Other drive tools



L handle

This type has a square drive at the end of an L shaped handle.



Speeder handle

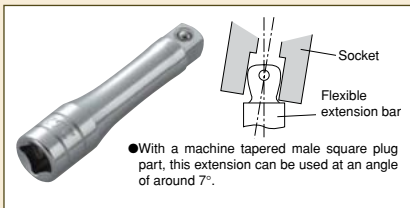
Pressing the gripping part lightly with one hand, the other hand turns the crank. This handle is good for fast turning.



Screwdriver type handle

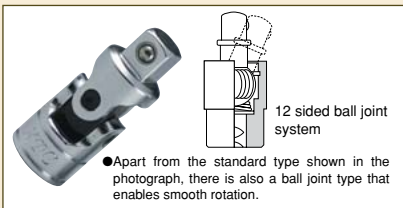
This handle has a square drive on the end of a screwdriver and is used as a box driver.

Types of attachment



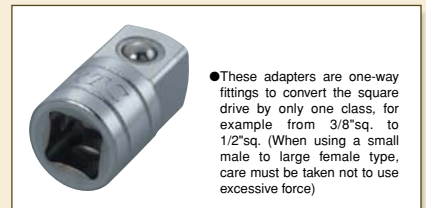
Extension bar

When working in a recessed, narrow place, this adapter is used to extend the socket to reach the site. There is the "standard type" and the "wobbling type".



Universal joint

Connecting between the socket and handle, this attachment facilitates operation on oblique angles. It allows operation at a maximum angle of 45°.



Adapter

These adapters connect sockets and handles with square drives of different sizes. There are ones for enabling small handles to turn big sockets, and vice-versa.

Tool basics

Regarding ratchet handle union mechanism and push-cancel mechanisms.

With ratchet mechanisms, the push-cancel mechanism and KTC's union mechanism are often confused. However, their purposes are quite different. Their respective purposes are explained below...

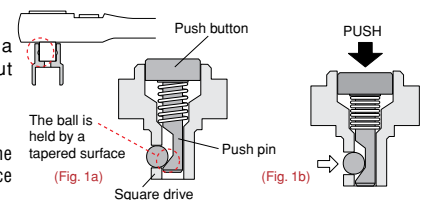
1 Push-cancel mechanism The purpose of this mechanism is to facilitate the disengaging of the socket.

Holding the socket (Fig. 1a)

The ball of the square drive is supported by the bias of a spring pushing against a pushpin. As the ball is held by a tapered surface, the ball can be pushed in without operating the pushpin for socket attachment and detachment.

Attaching and detaching the socket (Fig. 1b)

When the push button is pressed, the pushpin goes down, the ball drops into a groove and the socket can be attached and detached. With this structure, if the socket is forced so that a force greater than the spring force pressing the ball is applied, the socket may detach unexpectedly.



2 KTC's union mechanism This mechanism is designed to hold the socket securely to the ratchet.

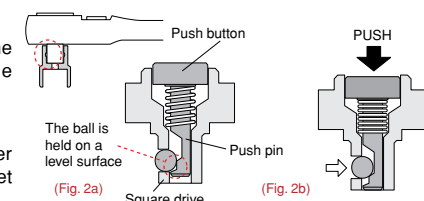
Holding the socket (Fig. 2a)

The ball of the square drive stops on the shallow platform of the pushpin and holds the socket. The ball is being held on a level surface, so that even if you try to detach the socket, the ball is not pulled in and the socket cannot be removed.

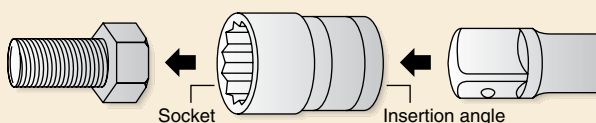
Socket attachment and detachment (Fig. 2b)

When the push button is pressed, the pushpin lowers, the ball drops down to the lower platform and the socket can be attached or detached. With this mechanism, the socket does not come off unexpectedly as long as the push button is not operated.

(Note) With the union mechanism, it is necessary to operate the button, while attaching the socket.

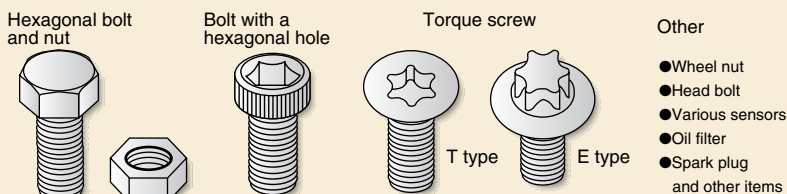


Sockets for socket wrenches



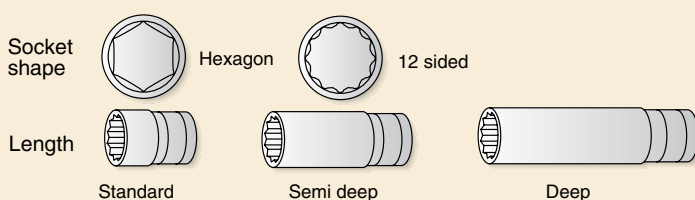
The socket of a socket wrench is used with the box shaped socket part completely enclosing the bolt or nut. The square plug insertion angle on the other side is for inserting various drive tools, such as a ratchet inserted during use. There are various types of sockets for different types of bolts and nuts with different square plugs and sizes.

●Socket classification by bolt type



Sockets for socket wrenches ("Socket" below) are selected according to the type of nut or bolt. Generally there are two types: hexagonal nuts and bolts, and bolts with a hexagonal hole. Hexagonal nuts and bolts take 6 or 12-sided sockets, and bolts with a hexagonal hole use hexagonal bit sockets. There are also special sockets for dealing with TORX® screws or turning oil filters and spark plugs.

●Socket classification by socket shape and length



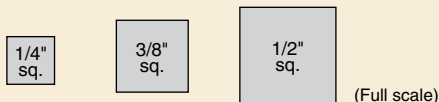
There are two types of the hexagonal bolt/nut sockets: the 12 sided socket allows the fitting of nuts and bolts at half the angle required for the hexagonal socket, making operation easy. Also three types of socket depths are available; standard, semi-deep and deep to suit different working environments. The KTC semi-deep is only set for 3/8"sq.)

●Classifying sockets according to insertion angle and size

Socket (hexagon / 12 sided type)	Insertion angle (square hole)
3.2~14.0mm	6.3sq. (1/4in)
5.5~24.0mm	9.5sq. (3/8in)
8.0~36.0mm	12.7sq. (1/2in)
19.0~60.0mm	19.0sq. (3/4in)
36.0~85.0mm	25.4sq. (1in)

The size is set for either hexagon or 12 sided for some sockets.

Insertion angle size comparison

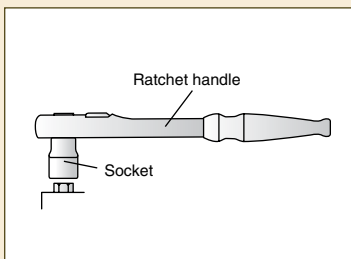


Tool basics

Most bolts used in automotive maintenance are within the 5.5 ~ 24mm size range. It is recommended that the tool with the 3/8"sq. insertion angle is obtained first. The 1/4"sq. is useful for working within the bonnet and other confined spaces. The 1/2"sq. is suitable for areas that require high torque, such as the suspension setting.

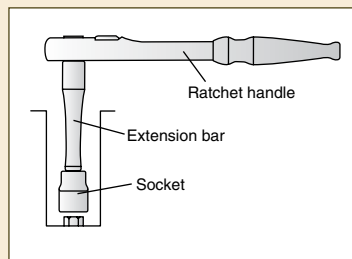
How to use a socket wrench

The socket wrench allows the user to select the best way of use for different working environments, such as inner areas or where it is hard to insert the socket straight through from the handle, by combining the socket with the handle that drives it and the attachment that connects the socket to the handle.



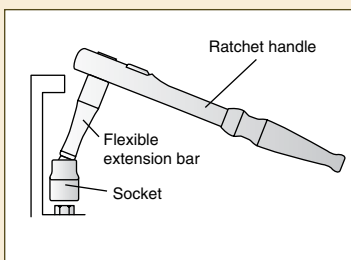
Ratchet handle + socket

The most standard method of use incorporating the socket and the ratchet handle. Turn the bolt/nut by inserting the socket into the drive angle and changing the rotation direction of the gears.



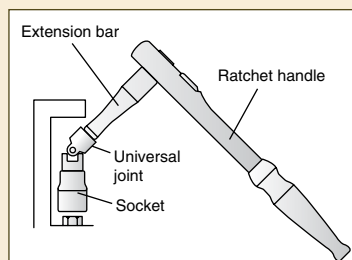
Ratchet handle + Extension bar + Socket

The extension bar allows easy tightening and loosening of bolts and nuts positioned in areas that are hard to reach.



Ratchet handle + Flexible extension bar + Socket

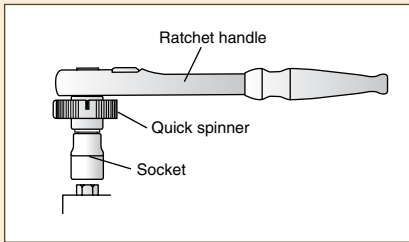
The flexible extension bar allows the mechanic to work from an angle of about 7 degrees in order to reach the bolts and nuts that are hard to reach using the ratchet handle directly.



Ratchet handle + Extension bar + Universal joint + Socket

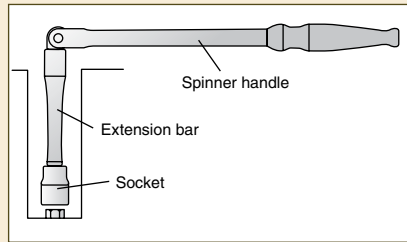
The universal joint allows the mechanic to work from the maximum angle of 45 degrees in order to reach the bolts and nuts that are hard to reach using the ratchet handle directly.

Ratchet handle + Quick spinner + Socket



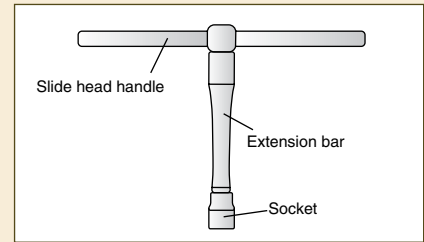
The quick spinner allows the fast turning of the socket through turning the disk-shaped grip without using the ratchet handle. This is useful where the handle fails to operate the ratchet mechanism to turn the bolt/nut (when under light loads).

Spinner handle + Extension bar + Socket



The spinner handle is used most commonly when a high level of torque is required. The spinner handle is usually combined with the socket, but can be combined with the extension bar, as can the ratchet.

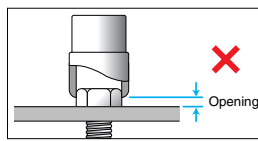
Slide head handle + Extension bar + Socket



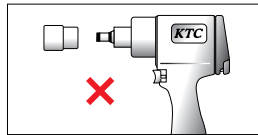
The slide head handle can be used as a "T shaped handle" in combination with an extension bar. By adding a ratchet adapter between the slide head handle and the extension bar, it can be used as a "T shaped ratchet".

<Proper use of the tools>

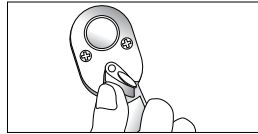
- Use sockets that correspond to the bolt/nut size being worked on.
- Completely cover the nut with the socket, when loosening/tightening.



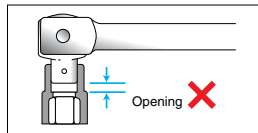
- Do not use with power tools such as the impact wrench.



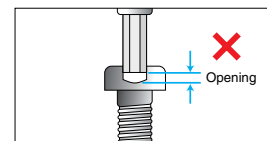
- Slowly and firmly operate the left/right switch levers of the ratchet handle.



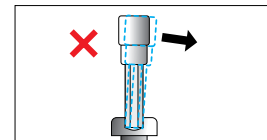
- Fully insert the angle drive to the end.



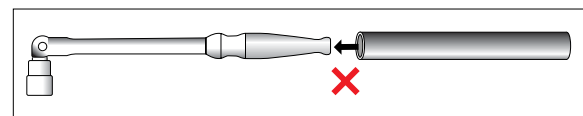
- Fully insert the hexagon socket to the end of the hexagon cavity and tighten or loosen while applying pressure.



- Apply force toward the direction of the bolt turning. Applying pressure in a manner that bends the shaft downwards can damage the tip of the tool.



- The joints are delicate towards impact torque; do not handle in a rough manner.
- Use handle adapters that correspond to the socket-inserting-angle size being worked on.
- Do not use the handle by adding piping or by hitting with a hammer.



Tool basics

Strength and limit

① Soft impact wrench sockets?

The impact wrench sockets are durable as they are usable for the impact wrench as well as a normal tool. This implies that the impact wrench sockets are harder than normal sockets. This is a common misunderstanding. The impact wrench sockets are actually lesser in hardness. This means that the impact wrench sockets are softer than normal sockets.

As the name suggests, the impact wrench is a tool that uses impact to turn, so the sockets will also be affected by impact.

Generally speaking, the hard materials are strong. In reality, it is strong only against a still load when the force is applied slowly. It lacks in elasticity and it can be brittle, therefore it is weak against strong impact and twists.

For this reason, the socket for the impact wrench is softer than usual to absorb the impact and twist. Also, the impact wrench sockets are not galvanized, as the hard coating is vulnerable to impacts and twists.

② Drive angle limit and hexagonal socket limit

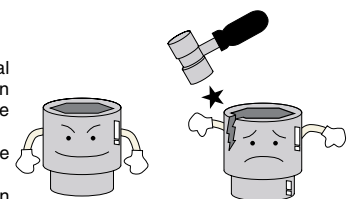
Steels that are used for tools (carbon steels or special steels) are hard and strong materials. However, it will break if you apply over a certain amount of load. Take drive tools, for example. The strength of a drive angle of a 3/8"sq. spinner handle is set around 260 N/m (*1). On the other hand, the strength of a socket's hexagonal socket varies in size. As the caliber size increases, the strength will also increase, and when the size is over 17mm, the strength set will exceed the drive angle strength. (*2)

Therefore, if a socket larger than 17mm is used, the drive angle of a 3/8"sq. spinner handle may not be sufficient. Although the 3/8"sq. sockets are set to 24mm, the hexagonal shape may be durable enough but the square may not hold under excessive force. If a socket larger than 17mm is going to be used, it is safer to use a spinner handle one size larger with an insertion angle socket of 1/2"sq.

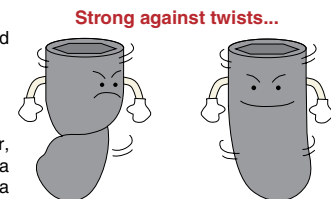
As the tightening torque of the 17mm bolt is 158.4N·m (*3), tightening under normal torque will not damage the drive angle (caution: rust can cause the bolt to tighten excessively).

*1 For KTCBX3E *2 The strength will vary among different products.

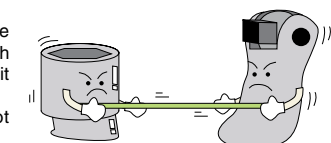
*3 These are values for your reference. Refer to the tightening torque value data at the end of the volume for details.



Strong, however brittle...



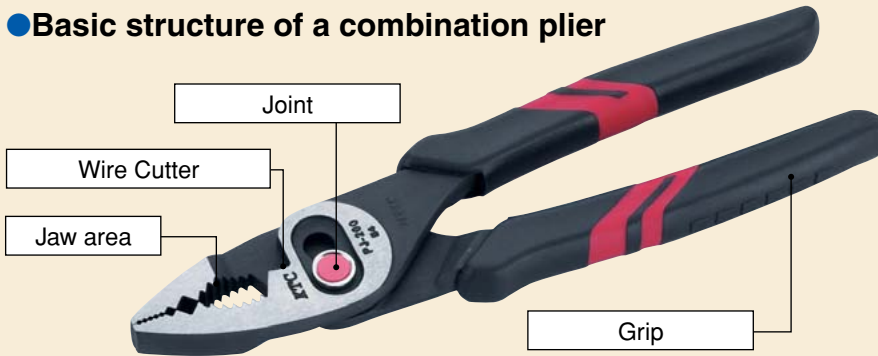
Strong against twists...



Pliers

Pliers are used for holding, turning pipes, cutting wires, and a variety of other tasks. The term “plier” usually refers to the combination plier. However, there are other types of pliers, such as the long nose pliers, etc., which allow the user to select the tool according to purpose.

Basic structure of a combination plier



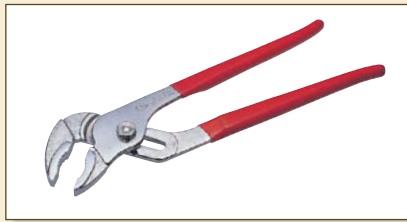
The head is of a curved shape, and a wave-shaped tooth inside to prevent materials from slipping. The tip of the jaw area is flat, and the center is curved to ease the gripping of poles and pipes. The mouth size can be adjusted by shifting the joint area (fulcrum).

Types of pliers



Long nosed plier

Gripping area at the tip is thin and long which suits more detailed work.



Water pump plier

The opening of the mouth can be adjusted to different levels, so pipes with large diameters can be gripped. These pliers are often used in pipe fitting work.

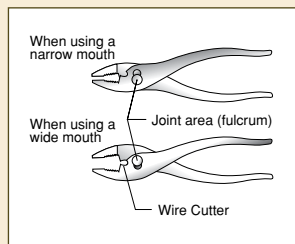


Snap ring plier

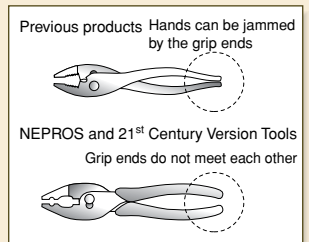
These pliers are often used for attaching and detaching a snap ring. There are two types of snap ring pliers: for cavity use, where the tip closes with the grip and for shaft use, where the tip opens when the grip is closed.

How to use the pliers

For combination pliers, open the grip to approx. 90 degrees and shift the joint area to adjust the opening of the mouth to suit the material size. Use the tip of the jaw to grip flat materials and use the center of the jaw for shaped fitted materials. A wire cutter is equipped to the back of the jaw.



Large force can be applied by gripping the rear end of the handle. However, gripping small objects may cause your hand to become jammed between both ends of the handle. The NEPROS and 21st Century Version Tool pliers have a safety mechanism that prevents your hand from being jammed through disallowing full length closure.



The combination pliers is a convenient tool for various purposes. However, it is important to use the correct tools for specific operations. Using the combination pliers for the tightening/loosening of nuts and bolts and the cutting of large, hard wires may cause damage. Use the offset wrench or socket wrench for tightening/loosening nuts and bolts, and the nippers or wire cutters for cutting hard wires. It is important to use the correct tool to suit each of the operations detailed here.

<Correct use of tools>

- Do not use on items that may be electrically charged.
- Do not use this tool as a hammer.
- Do not apply impact through hitting with hammers, etc.
- Take care not to get hands or fingers caught between the grips.
- Carefully carry out opening adjustment.

2. CONVENTIONAL TOOLS

SOCKETS and DRIVE TOOLS
IMPACT SOCKETS and DRIVE TOOLS
HEXAGONAL WRENCHES
TORX® WRENCHES
OFFSET WRENCHES
OPEN END WRENCHES and COMBINATION WRENCHES
PROFIT® TOOLS
HANDLE WRENCHES
SCREWDRIVERS
PLIERS, CUTTING PLIERS, SHEARS
VISE-GRIP®
PROSNIP®
HAMMERS
ADJUSTABLE WRENCHES, PIPE WRENCHES and GEAR PULLERS

Relentless pursuit of the mechanic standard tool



The "standard model for the 21st Century" has inherited its DNA from the world's highest standard tools "Nepros", and is polished using the latest technology.

That is the "21st Century Version Tool".

21ST CENTURY VERSION TOOLS

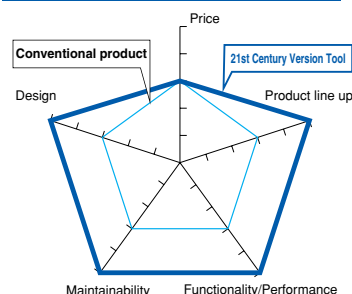
A new standard model, with over 50 years of history and technology, is designed with completely new concepts. Aiming for better service, better price, and better quality, we have completely revised our source materials, designs, construction and manufacturing process in order to achieve both high specs and reasonable prices.

An all out challenge to the senses of the pro-mechanic

Tools are for use by mechanics at the site of maintenance. In order to get closer than ever to the senses of the pro-mechanic, we have repeatedly carried out uncompromising practical research and testing to achieve all of the requirements of the workplace at a higher level.

With DNA inherited from NEPROS, comes a beautiful design, improved maintainability, a richness of variation indispensable for a standard model that realize the world's highest class quality, functionality and evolution - and a reasonable price. The summation of KTC's technology, you'll understand why the "Tool that lasts 100 years" should rightly be called the mechanic standard when you use it.

21st Century Version Tool Concept



Newly designed silver case

We have painstakingly sought to perfect the trinity of functionality, endurance, and design. With beautiful lines and clean catches, every part of this beautiful all compact case has a futuristic feel. (Material: Steel)

■ Metal case D.PAT.

No.	Size	
EKB-1	L270×W145×H50mm	
EKB-2	L450×W185×H60mm	
EKB-3	L270×W145×H35mm	



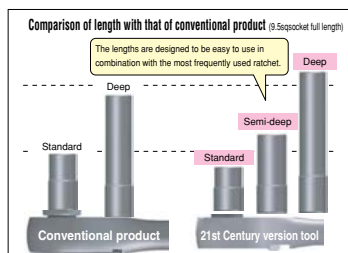
SOCKET

▶ P.34

Wide variation of sizes

Sockets are designed in shapes and lengths taking into account small working spaces. The standard is shorter and more compact than conventional products. The total length of the deep socket is designed longer, to make work in recessed areas easier. Furthermore, with the addition of the semi-deep sockets, which perform the middle role, a total of 3 lengths have been designed.

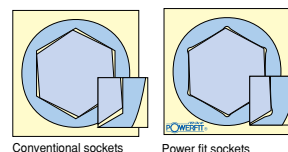
(The semi-deep design is only for 3/8"sp.)



6 point and 12 point sockets for each size from 1/4" to 1/2"sq. Furthermore the "N-Power fit shape" using NEPROS technology is used anew at both the square drive and socket ends, so that as to be more gentle on the bolt and nut, and to improve the strength of the wrench than conventional Power fit*. The size variation is also rich, and milli size varies in millimeter increments. The inch sizes are also 5 times greater in variation than conventional products. We have achieved a truly full line up.

*What is POWERFIT?

When tightening and loosening bolts and nuts with a normal wrench the force is concentrated because the inside face of the wrench and the ridge of the bolt or nut contact in a line, giving rise to burring. With POWERFIT the wrench changes to surface contact and concentration of force is prevented.



Conventional sockets Power fit sockets



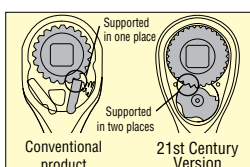
RATCHET HANDLE

▶ P.34

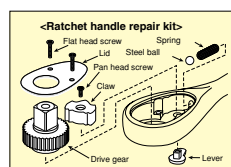
High functionality, high performance ratchet handle

Based on a slim form for the overall shape, the head in particular uses the same "unified claw" as the NEPROS to achieve a 20% reduction in thickness compared with a conventional product, and greater compactness. A 36 tooth gear is used to realize a narrow feed angle, and the gear is supported by claws in 2 places to achieve a 30% increase in strength over conventional products.

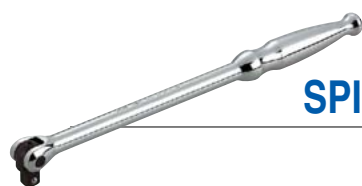
In addition, the area from the head to the grip is designed on the key concept of R, so that it is easy to apply force no matter which part of the handle is grasped. A union mechanism whereby the socket cannot accidentally separate from the ratchet unless a push button is pushed is used as standard (except for BR3A). This enables smooth release, and reduces roughness when attaching a socket.



Conventional products have an 18 tooth gear supported in one place with a claw. The 21st Century Version makes use of NEPROS technology and has a 36 tooth gear supported by claws in 2 places. In this way, even in the case of a very fine gear, there is a 30% increase in strength over a conventional product.



We have provided a repair kit to enable customers to care for and maintain their ratchet for a life time of use.



SPINNER HANDLE

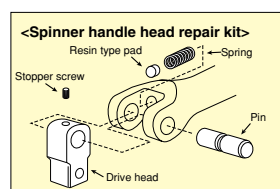
▶ P.34

Strong, long design

Uses a thick round grip that is easy to grasp and apply force to. In addition, we have achieved a 20% increase in strength over a conventional product by revising the materials and optimizing the design.

By using a resin pad for the joint part, a smooth movement can be continued without the deep socket disengaging. Furthermore, we have been able to set the head height lower by using a new joint mechanism.

This has resulted in improved workability in confined spaces.



Please use the repair kit on the head part. This will ensure life long use of the tool.



SLIDE HEAD HANDLE

▶ P.34

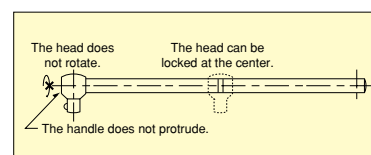
Functions designed for easier use

As the groove provided in the bar prevents the head from rotating, operation is made easier when, for example, an extension bar is attached.

The head can be locked in the center position. Furthermore, stoppers are provided at both ends of the bar, and when the head is at one end of the bar the head becomes almost flat with the bar so that the length of the bar, can be used effectively to apply force. Also, it is easier to work in confined spaces.



The head and bar become almost flat.





▶ P.34

EXTENSION BAR

Wide variation of sizes

A newly designed form and revised materials make for maximum strength, 30 to 40% stronger than conventional products. (1/2"sq head turning type) Also, as with other accessories, the socket male side has had the form and ball position revised compared with conventional products. In addition, the socket female side also has a revised form and position for the ball groove, resulting in a design that reduces looseness.

Standard and head turning types are provided for all socket sizes, and the number of items is up 1.5 times compared with conventional product size variation.



▶ P.34

UNIVERSAL JOINT

Smooth movement and compact design

The performance of the universal joints, at what angles it can swing and how smoothly it can move, is determined by the "pin gap" between the joints.

The new model of the universal joints has been shortened to the extreme.

The maximum swing angle to one side is set to 45°, which is very useful, and this enables smooth movement with 80 % conveyance efficiency (3/8"sq.).

The length is set to be 8 millimeters shorter than the previous models, which enables it to cope with work in tight spaces.

The "Pin Corking Method" is employed to prevent pins from falling off the joint, this improves strength and durability.



▶ P.34

SOCKET ADAPTOR

The design that minimizes any loosening.

The socket adaptor connects the sockets, which have different drive sizes, to the driving tool. A new socket adaptor was produced after a thorough review of the form and material of the old mode.

As in other accessories, the socket is designed to stop looseness, i.e. by placing the ball that pulls the socket toward the adaptor. This gives greater stability.



▶ P.65

IMPACT SOCKET

In pursuit of user-friendliness

The three different lengths (standard, semi-deep and deep) are available for different work places and purposes. It is made thin so it can be used in narrow spaces (not available in standard models).

In addition to the usual engraved seal, the large, easy-to-read size indication is displayed.

Also, "AMBAC system"*, a brand new system, is employed in order to prevent pins flying out when an impact wrench is used.



Easy-to-read
size indication

* "AMBAC system"...Refer to P83



▶ P.81

HEX. BIT SOCKET & DRIVER

Wide variation of sizes

The new bit socket is a screw-down type that is easy to replace when the bit is worn. 3 different lengths (3/8" sq. only) for different operations along with the long ballpoint type are available. Imperial sizes are also added making a greatly increased line-up. The square form is employed for the grip of the hexagon driver, as it can easily produce large torque and it is also effective for pushing. An emblem is fitted to each grip-end so that the type and the size can be easily recognized.

Left: Standard
Right: Ball point



▶ P.93

TORX® BIT SOCKET & DRIVER

Functions designed for easier use

TORX® is the standard for screws and is developed by Camcar Co. in the United States. Cam Out (a tendency to escape to the outer side) that was happening in Phillips screws occurs less as the screws torque is conveyed more efficiently. This is now internationally widespread.

The new TORX® wrench, as in other tools, has achieved wider variation, improved strength, easier maintenance and improved performance.

The driver's grip-end is more recognizable.
Left: Standard
Right: Tamper Resistant





▶ P.105

OFFSET WRENCH

Off-set angle $45^{\circ} \times 6^{\circ}$ that brings maximum power.

A new type of off-set wrench that pursues operation performance in conveying torque into hard to reach areas. In order to convey force more efficiently to the bolts & nuts, the height and the length of the Off-set areas are kept to a minimum and the rising angle of the handle is of a low design.

The head is small but devised; it can easily reach onto bolts or nuts in hollow areas and can also be used in the opposite way around.



Former product 21st Century version tool



▶ P.111

OPEN END WRENCH

"New spear-shape" head has the width that is one of the smallest in the world

The new spanner head has employed KTC original "new spear-shaped head" that has a much smaller head-width than the previous spear-shaped head but some parts are wider where force applies. The head width is Recognized as one of the smallest in the world. The corner of the caliber is R processed in order to prevent stress from accumulating. Satin and polished finishing brings out a beautiful form.



Former product 21st Century version tool



▶ P.114

COMBINATION WRENCH

Simple form with real ability

New type combination wrench that exhibits real ability in extremely small spaces with simple form.

The spanner has the "new spear shaped head" which is one of the world's smallest. The handle is of a light and flexible I-shaped cross section design. In order to spread the load over the entire length, the setting has been extended further than in previous models.



I-shaped cross section design



▶ P.120

SCREWDRIVER

Wide variation of sizes

The end is shaped to fit exactly in relation to the screw, the gap between the screws is less and cam out (tendency to escape to the side) is reduced. Perfect catch with the screw through the use of magnets.

Fitted with square grips that are hard wearing with finger positions built into the design.

The outer surface is less slippery and easy to grip with bare hands, gloved hands or even oily hands with its curved design, this allows for a 30% preparation torque improvement on previous models.

The materials of the grip are a 3 layered compound of environmentally friendly propylene and easy fit elastomer resin. In order to easily identify the + and the -, the grip ends are colored as Red (+) and Green (-)

The axle is of a hexagon design. It is effective when high torque is required, as it has a bolster attached (except in stubby versions) and an off-set wrench or spanner can also be used.



Fitted with finger positioning indents, hexagon axis & a bolster.



The grip is made of elastomer resin and is soft in the hand. The convex surface prevents slippage and can be used even with oily hands.



▶ P.133

PLIERS

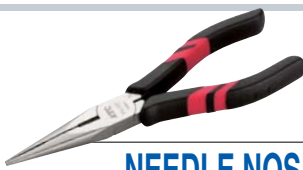
The "three-step form" can handle from thin to thick operations.

Combination pliers that have widely improved basic performance such as catching, gripping, rotating and cutting. The gripping area is made up of 3 separate toothed shaped areas that allow easy extraction of small to large items. The necessary cutting load required is 10% less than on previous models with a 20-30% improvement for gripping power.

The safety design to help prevent catching hands, etc. when selecting the wider mouthed option is a function that has been inherited from NEPROS.



3 toothed shaped areas of the pliers



▶ P.133

NEEDLE NOSE PLIERS

The blade shape has improved the fundamental performance greatly.

On reviewing the previous blade shape, the cutting load has been reduced on the new model by 15%. 4 new variations of the previous model have been added: standard, long, slim, and bent nose. Choose the appropriate operation to suit oneself and one's working environment. The convex shape helps prevent slippage with a soft grip that fits the hand perfectly. (Common points for scissor types)



Soft grip with a convex surface



▶ P.133

CUTTING PLIERS

The cutting function for both soft and hard wires has been achieved in the one pair of pliers.

Generally speaking, when talking about nippers, 2 types of pliers were required for when cutting soft and hard wires. The new design has allowed for the 2 type of pliers to be combined into 1. The blade is designed to easily cut bronze and other soft wires at the tip end and harder wires such as piano wires and other much thicker wires at the base of the blade. This design has allowed for a reduction of around 15% in cutting load.

Standard shape has been fitted to the wide type. The blade angle on the end of the blade is 75° while at the base it is 90° .

2. CONVENTIONAL TOOLS

SOCKETS and DRIVE TOOLS



CAUTION

SOCKET WRENCH SETS

- READ THE CAUTION MESSAGE CAREFULLY FOR EACH TOOL.
- LOCK THE STOPPER SECURELY WHEN CARRYING.

DRIVE TOOLS

- DO NOT EXTEND THE HANDLE OR BAR BY USING A PIPE.
- INSERT THE SQUARE DRIVE TO THE END.
- DO NOT USE A DRIVE TOOL AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT TO A DRIVE TOOL BY HITTING WITH A HAMMER, ETC.
- DO NOT USE A DRIVE TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH.



SOCKETS

- USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.
- FIT THE BOLT HEAD OR NUT COMPLETELY INTO THE DEEP PART OF THE SOCKET.
- FIT THE DRIVE SECTION TO COVER COMPLETELY THE BOLT HEAD OR NUT.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.
- DO NOT USE A SOCKET WITH A POWER TOOL SUCH AS AN IMPACT WRENCH.

1/4" sq.

● 1/4"sq. SOCKET WRENCH SET (13pcs.)



SOCKET WRENCH SET (13pcs.)			mm · in
No. TB210	▼g 400	 1	
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14		
No. TB210B	▼g 400	 1	
Socket (6pt.) in	B2- $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$		
Common Items			
Ratchet Handle	BR2E		
Extension Bar	50	BE2-050	
	100	BE2-100	

• with Plastic Tray (L264×W82×H30mm)

POWERFIT (Except 5mm and 3/16in)

● 1/4"sq. SOCKET WRENCH SET (17pcs.)




SOCKET WRENCH SET (17pcs.)			mm
No. TB214	▼g 440	☞ 1	
Socket (6pt.)	B2-032, 04, 045, 05, 055, 06, 07, 08, 09, 10, 11, 12, 13, 14		
Ratchet Handle	BR2E		
Extension Bar	50	BE2-050	
	100	BE2-100	

• with Plastic Tray (L264×W82×H30mm)

POWERFIT (Except the following from 5mm)

● 1/4"sq. SOCKET WRENCH SET (25pcs.)




SOCKET WRENCH SET (25pcs.)		mm · in
No. TB2X20B	▼kg 1.3	 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Socket (6pt.) in	B2- $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{9}{32}$, $\frac{5}{16}$, $\frac{11}{32}$, $\frac{3}{8}$, $\frac{7}{16}$, $\frac{1}{2}$, $\frac{9}{16}$	
Ratchet Handle	BR2E	
Spinner Handle	BS2E	
Extension Bar	50	BE2-050
	100	BE2-100
Wobble Extension Bar 30	BE2-030JW	
Metal Case	EKB-3 L270×W145×H35mm	

• with Plastic Tray (L264×W144×H30mm)

POWERFIT (Except 5mm and 3/16in)

● 1/4"sq. SOCKET WRENCH SET (25pcs.)




SOCKET WRENCH SET (25pcs.)		mm
No. TB2X20	▼kg 1.3	 1
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14	
Ratchet Handle	BR2E	
Spinner Handle	BS2E	
Extension Bar	50	BE2-050
	100	BE2-100
Wobble Extension Bar 30	BE2-030JW	
Metal Case	EKB-3 L270×W145×H35mm	

• with Plastic Tray (L264×W144×H30mm)

POWERFIT (Except 5mm)


DEEP SOCKET WRENCH SET (15pcs.)			mm
No. TB2L10	▼kg1.3	📦 1	
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14		
Ratchet Handle	BR2E		
Spinner Handle	BS2E		
Extension Bar	50	BE2-050	
	100	BE2-100	
Wobble Extension Bar 30	BE2-030JW		
Metal Case	EKB-3 L270×W145×H35mm		
• with Plastic Tray (L264×W144×H30mm)			POWERIT (Except 5mm)

• with Plastic Tray (L264×W144×H30mm)  (Except 5mm)


●1/4"sq. DEEP SOCKET WRENCH SET (15pcs.)



SOCKET SET (5pcs.) • (10pcs.)			mm
No. TB205E	▼g 120	📦 1	
Socket (6pt.)	B2-06, 07, 08, 10, 12		
Socket Holder (5pcs.)	EHB205		



No. TB210E	▼g 430	📦 1	
Socket (6pt.)	B2-05, 055, 06, 07, 08, 10, 11, 12, 13, 14		
Socket Holder (10pcs.)	EHB210		

 (Except 5mm)

●1/4"sq. SOCKET WRENCH SET (5pcs.) • (10pcs)



TB205E

TB210E

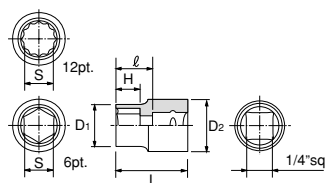
SOCKET										mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	📦	
B2 -032		3.2	6.5	12	2.5	16	8	9	10	
-04		4	7	12	3	16	8	9	10	
-045		4.5	7.5	12	3	16	8	9	10	
-05		5	8.5	12	3	16	8	9	10	
-055	B2 -055W	5.5	9	12	5	18	10	9	10	
-06	-06 W	6	10	12	5	18	10	10	10	
-07	-07 W	7	11	12	5	18	10	10	10	
-08	-08 W	8	12	13	5.5	18.5	10.5	12	10	
-09	-09 W	9	13.5	13	5.5	18.5	10.5	13	10	
-10	-10 W	10	14.5	13.5	5.5	18.5	10.5	13	10	
-11	-11 W	11	16	14.5	6	19	11	16	10	
-12	-12 W	12	17	15	6.5	20.5	12.5	19	10	
-13	-13 W	13	18.5	16.5	6.5	20.5	12.5	22	10	
-14	-14 W	14	0	17.5	7	21.5	13.5	27	10	

 (Except the following from 5mm)


SOCKET										in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	📦	
B2 -1/8		3.1	6.5	12	2.5	16	8	9	10	
-5/32		3.9	7	12	3	16	8	9	10	
-3/16		4.7	8.5	12	3	16	8	9	10	
-7/32	B2 -7/32 W	5.5	9	12	5	18	10	9	10	
-1/4	-1/4 W	6.3	10	12	5	18	10	10	10	
-9/32	-9/32 W	7.1	11	12	5	18	10	10	10	
-5/16	-5/16 W	7.9	12	13	5.5	18.5	10.5	12	10	
-11/32	-11/32 W	8.7	13.5	13	5.5	18.5	10.5	13	10	
-3/8	-3/8 W	9.5	14.5	13.5	5.5	18.5	10.5	13	10	
-7/16	-7/16 W	11.1	16	14.5	6	19	11	16	10	
-1/2	-1/2 W	12.7	18.5	16.5	6.5	20.5	12.5	24	10	
-17/32	-17/32 W	13.4	20	17.5	7	21.5	13.5	28	10	
-9/16	-9/16 W	14.2	20	17.5	8	22.5	14.5	29	10	

 (Except the following from 3/16in)

●1/4"sq. SOCKET



DEEP SOCKET SET (5pcs.) • (10pcs.)			mm
No. TB2L05	▼g 270	📦 1	
Deep Socket (6pt.)	B2L-07, 08, 10, 12, 14		
Socket Holder (5pcs.)	EHB205		



No. TB2L10E	▼g 450	📦 1	
Deep Socket (6pt.)	B2L-05, 055, 06, 07, 08, 10, 11, 12, 13, 14		
Socket Holder (10pcs.)	EHB210		

 (Except 5mm)

●1/4"sq. DEEP SOCKET SET (5pcs.) • (10pcs)

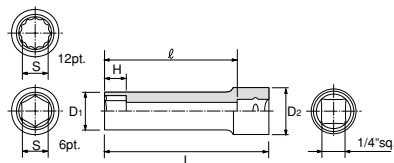


TB2L05

TB2L10E

1/4" sq.

● 1/4"sq. DEEP SOCKET



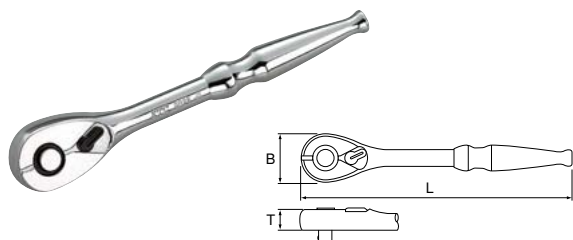
DEEP SOCKET										mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▽g		
B2L-032		3.2	6.5	12	5	50	42	17	5	
-04		4	7	12	5	50	42	19	5	
-045		4.5	7.5	12	5	50	42	18	5	
-05		5	8.5	12	5	50	42	20	5	
-055	B2L -055W	5.5	9	12	6	50	42	24	5	
-06	-06 W	6	10	12	6	50	42	28	5	
-07	-07 W	7	11	12	8	50	42	27	5	
-08	-08 W	8	12	13	9	50	42	33	5	
-09	-09 W	9	13.5	13	10	50	42	41	5	
-10	-10 W	10	14.5	13.5	11	50	42	36	5	
-11	-11 W	11	16	14.5	12	50	42	46	5	
-12	-12 W	12	17	15	14	50	42	52	5	
-13	-13 W	13	18.5	16.5	14	50	42	59	5	
-14	-14 W	14	20	17.5	17	50	42	67	5	

POWERFIT (Except the following from 5mm)

DEEP SOCKET										in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▽g		
B2L -1/8		3.1	6.5	12	5	50	42	17	5	
-5/32		3.9	7	12	5	50	42	19	5	
-3/16		4.7	8.5	12	5	50	42	21	5	
-7/32		5.5	9	12	6	50	42	24	5	
-1/4	B2L -1/4 W	6.3	10	12	6	50	42	28	5	
-9/32	-9/32 W	7.1	11	12	8	50	42	27	5	
-5/16	-5/16 W	7.9	12	13	9	50	42	33	5	
-11/32	-11/32 W	8.7	13.5	13	10	50	42	41	5	
-3/8	-3/8 W	9.5	14.5	13.5	11	50	42	39	5	
-7/16	-7/16 W	11.1	16	14.5	12	50	42	46	5	
-1/2	-1/2 W	12.7	18.5	16.5	14	50	42	66	5	
-17/32	-17/32 W	13.4	20	17.5	17	50	42	71	5	
-9/16	-9/16 W	14.2	20	17.5	17	50	42	66	5	

POWERFIT (Except the following from 3/16in)

● 1/4"sq. RATCHET HANDLE D.PAT.

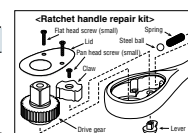


RATCHET HANDLE						
No.	Feed	B	T	L	▽g	
BR2E	10°	22	10	125	100	5

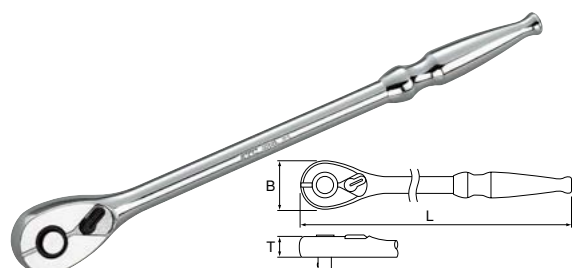
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



● 1/4"sq. LONG RATCHET HANDLE D.PAT.



LONG RATCHET HANDLE						
No.	Feed	B	T	L	▽g	
BR2L	10°	22	10	190	125	5

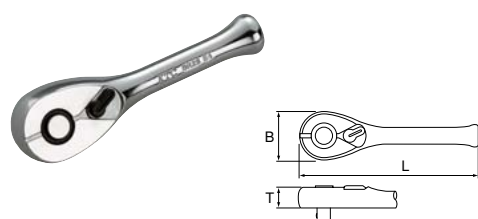
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
• BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■ REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



● 1/4"sq. SHORT RATCHET HANDLE D.PAT.



SHORT RATCHET HANDLE						
No.	Feed	B	T	L	▽g	
BR2S	10°	22	10	80	90	5

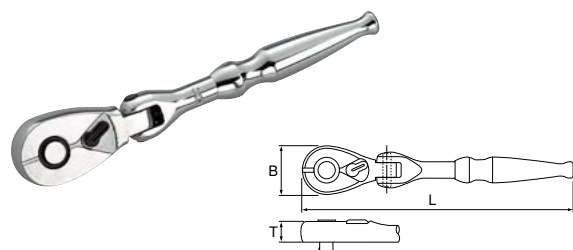
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



● 1/4"sq. FLEX RATCHET HANDLE D.PAT.



FLEX RATCHET HANDLE						
No.	Feed	B	T	L	▽g	
BR2F	10°	22	10	125	140	5

CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

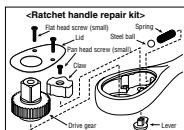
FLEX LONG RATCHET HANDLE

No.	Feed	B	T	L	▼g		
BR2FL	10°	22	10	190	170	5	

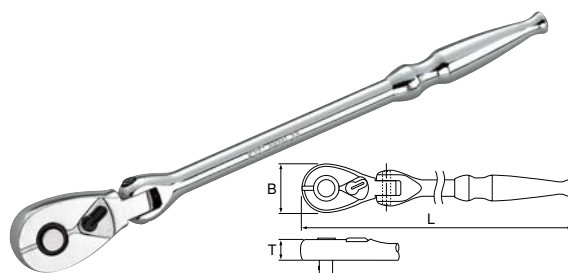
- CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



●1/4"sq. FLEX LONG RATCHET HANDLE D.PAT.



FLEX SHORT RATCHET HANDLE

No.	Feed	B	T	L	▼g		
BR2FS	10°	22	10	80	130	5	

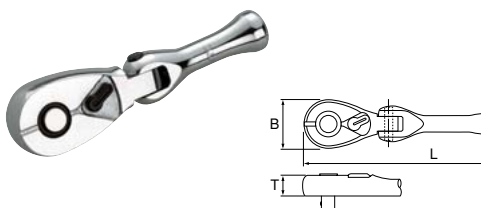
- CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

REPAIR KIT FOR 1/4"sq. RATCHET HEAD

No.	Drive	Contents
BR2E-K	1/4"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid ×1, Flat head screw (small) ×2



●1/4"sq. FLEX SHORT RATCHET HANDLE D.PAT.



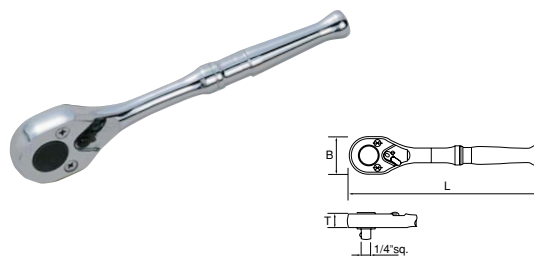
RATCHET HANDLE

No.	Type	Feed	B	T	L	▼g	
BR10	Oval Head	15°	25	11	125	82	10

*Replacement parts are available. Check with your dealer for details.

- CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●1/4"sq. RATCHET HANDLE



RATCHET HANDLE (GRIP TYPE)

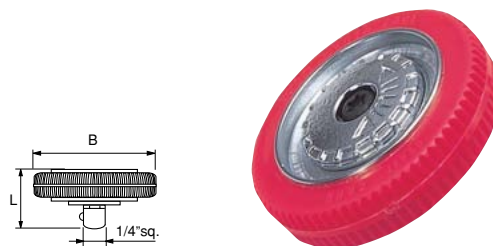
No.	Type	Feed	B	L	▼g		
BRG2	Round Head	5°	44	22.5	100	10	

• 72teeth gear with small 5° increments.

*Replacement parts are available. Check with your dealer for details.

- CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●1/4"sq. RATCHET HANDLE (GRIP TYPE)



ROUND HEAD RATCHET HANDLE

No.	Type	Feed	B	T	L	▼g	
BRM10	Round Head	6°	26	15.5	130	100	10

*Replacement parts are available. Check with your dealer for details.

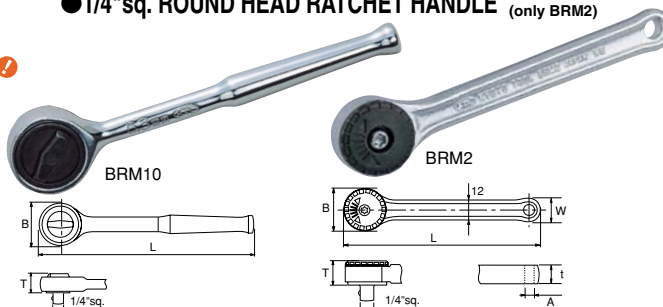
ROUND HEAD RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g		
BRM2	Round Head	5°	23.5	14.5	115	14	6	6	90	10	

*Replacement parts are available. Check with your dealer for details.

- CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●1/4"sq. ROUND HEAD RATCHET HANDLE D.PAT. (only BRM2)



FLEX ROUND HEAD SHORT RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g		
BRM2FS	Round Head	5°	23.5	14.5	100	14	6	6	95	10	

• 72teeth gear with small 5° increments.

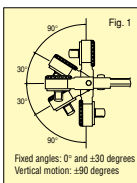
• The head moves steplessly up and down, up to 90 degrees. (Figure 1)

• The holding power is strong enough to hold a deep socket (maximum weight: No.15-14H, 54g) without falling out.

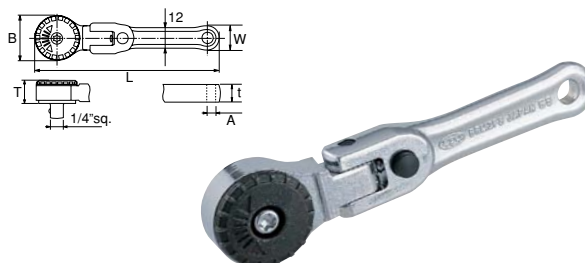
• Locking mechanism enables fixing/releasing of the head with a single action. (Three fixed angles: 0, ±30 degrees)

*Replacement parts are available. Check with your dealer for details.

- CAUTION** • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

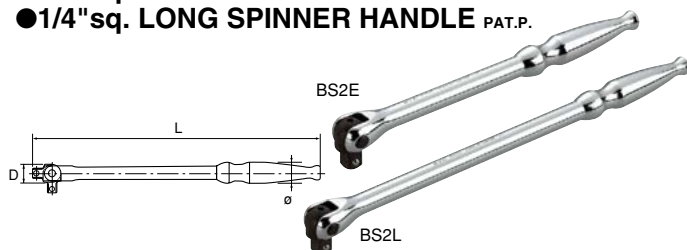


●1/4"sq. FLEX ROUND HEAD SHORT RATCHET HANDLE D.PAT.



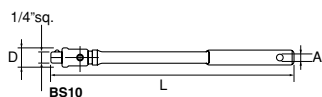
1/4" sq.

● 1/4"sq. SPINNER HANDLE PAT.P.
● 1/4"sq. LONG SPINNER HANDLE PAT.P.



CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
• BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 1/4"sq. SPINNER HANDLE



SPINNER HANDLE

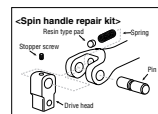
No.	D	Handle (ø)	L	▼g	📦
BS2E	12	12	150	90	5

LONG SPINNER HANDLE

No.	D	Handle (ø)	L	▼g	📦
BS2L	12	12	200	110	5

● 1/4"sq. Spinner handle head repair kit PAT.P.

No.	Insertion angle	Contents
BS2E-K	1/4"sq.	Drive head · Pin · Pad · Spring · Stopper screw x1

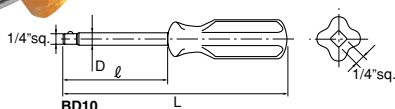
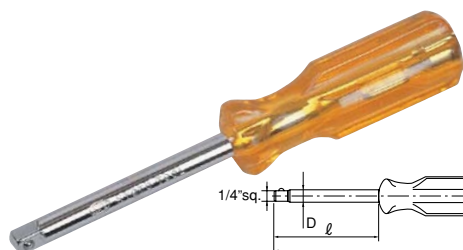


SPINNER HANDLE

No.	D	L	A	▼g	📦
BS10	12	145	5	90	10

CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
• BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 1/4"sq. SCREWDRIVER TYPE HANDLE



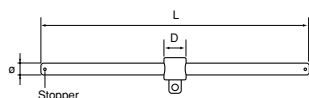
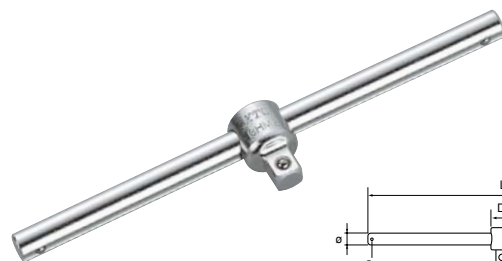
DRIVER TYPE HANDLE

No.	D	L	ℓ	▼g	📦
BD10	8	150	70	60	5

• Grip end has an opening. Usable as extension bar.

CAUTION • DO NOT USE MULTIPLE EXTENSION.

● 1/4"sq. SLIDE HEAD HANDLE

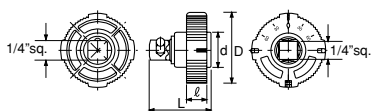


SLIDE HEAD HANDLE

No.	D	ø	L	▼g	📦
BHM2	13	7	120	70	5

• In the workplace (car maintenance, etc.), whether quick turning or strong tightening, this tool is faster than a ratchet handle.
• A track has been fitted to the handle to prevent the head from turning.

● 1/4"sq. QUICK SPINNER® D.PAT.



QUICK SPINNER®

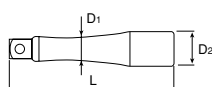
No.	D	d	L	ℓ	▼g	📦
BE2-Q	28	12	19.5	8	25	10

• Specially for quick turning for effective use with Ratchet handle or Extension bar.
• Grip has angle (90°) indication by groove with 30° indication on surface.
• Grip is made of resin for light weight.

CAUTION • DO NOT USE MULTIPLE EXTENSION.

*Quick Spinner is a registered trademark of the Kyoto Tool Co., Ltd.

● 1/4"sq. EXTENSION BAR




EXTENSION BAR


No.	D ₁	D ₂	L	▼g	📦
BE2 -030	9	12	30	17	5
-050	9	12	50	27	5
-075	8	12	75	38	5
-100	8	12	100	48	5
-150	8	12	150	70	5
-200	8	12	200	90	5
-270	8	12	270	118	5
-600	9	12	600	300	5

CAUTION • DO NOT USE MULTIPLE EXTENSION.

POWERIT

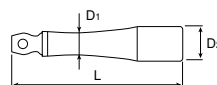
WOBBLE EXTENSION BAR

No.	D ₁	D ₂	L	▼g		
BE2 -030JW	9	12	30	17	5	
-050JW	9	12	50	27	5	
-075JW	8	12	75	38	5	
-100JW	8	12	100	48	5	
-150JW	8	12	150	70	5	
-200JW	8	12	200	90	5	
-270JW	8	12	270	118	5	

CAUTION • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT APPLY EXCESSIVE POWER OR IMPACT. 


• DO NOT USE MULTIPLE EXTENSION.


● 1/4"sq. WOBBLE EXTENSION BER



BE2-075JW

EXTENSION BAR - WOBBLE EXTENSION BAR

No.	D ₁	D ₂	L	▼g		
BE10 - 75	8	12.5	75	38	10	
-150	8	12.5	150	62	10	
-400	8	12.5	400	160	5	
-600	8	12.5	600	240	5	

No.	D ₁	D ₂	L	▼g		
BEJ10 - 50	8.2	12.3	50	26	5	
- 75	8.2	12.3	75	33	5	

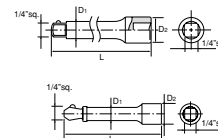
● 1/4"sq. EXTENSION BER

● 1/4"sq. WOBBLE EXTENSION BER



BE10

BEJ10



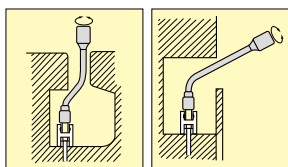
CAUTION • DO NOT USE MULTIPLE EXTENSION.
• COMPARED WITH ORDINARY EXTENSION BAR, WOBBLE EXTENSION BAR ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT APPLY EXCESSIVE POWER OR IMPACT.

FLEXIBLE EXTENSION BAR

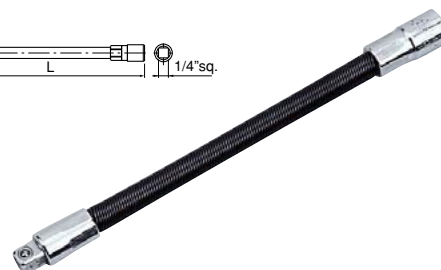
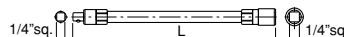
No.	L	N-m	▼g		
BES10 -150	150	9	50	10	

• This is a handy tool when tightening or loosening nuts & bolts when the angle is difficult or the area is confined. (e.g. bolts inside the dash).

CAUTION • FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.
• DO NOT USE MULTIPLE EXTENSIONS.



● 1/4"sq. FLEXIBLE EXTENSION BAR

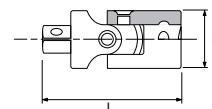


UNIVERSAL JOINT


No.	D	L	▼g		
BJ2	13	33	20	5	

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE FLEX PART. 

● 1/4"sq. UNIVERSAL JOINT

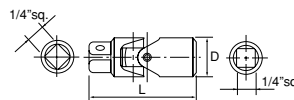


UNIVERSAL JOINT


No.	D	L	▼g		
BJ10	13	32	20	10	


CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE FLEX PART.

● 1/4"sq. UNIVERSAL JOINT

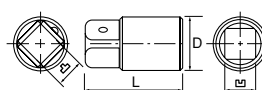


SOCKET ADAPTOR

No.	sq.		D	L	▼g		
	Indent	Projection					
BA23	1/4"	3/8"	13	22	15	10	

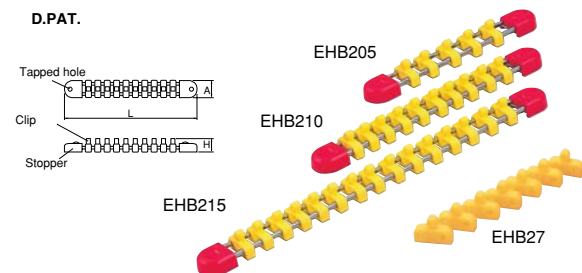
CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER. 

● 1/4"sq. ADAPTOR





● 1/4"sq. SOCKET HOLDER • CLIP SET (7pcs.)



SOCKET HOLDER • CLIP SET (7pcs.)

No.		H	A	L	▼g	☞	
EHB205	5	19	25	165	55	10	
EHB210	10	19	25	215	60	10	
EHB215	15	19	25	315	80	10	

- Change of holder shape enables easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying). • Different colors for different sizes



- REVERSING HOLDER MAY MAKE SOCKETS FALLING.

No. EHB27	▼g 25	☞ 10
CLIP	7pcs.	

- Spare clip for EHB205, 210 and 215.
- Can be used for EHB305 - 315 and 405 - 410.

● 3/8"sq. SOCKET WRENCH SET (12pcs.)



SOCKET WRENCH SET (12pcs.)

mm • in

No. TB308	▼kg 1.7	☞ 1
Socket (6pt.)	B3-07, 08, 10, 12, 13, 14, 17, 19	
No. TB308X	▼kg 1.7	☞ 1
Socket (6pt.)	B3-07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 17W, 19W	
No. TB308BX	▼kg 1.7	☞ 1
Socket (6pt.) in	B3- $\frac{3}{8}$, $\frac{1}{2}$	
Socket (12pt.) in	B3- $\frac{1}{2}$ W, $\frac{5}{16}$ W, $\frac{1}{2}$ W, $\frac{5}{8}$ W, $\frac{1}{2}$ W, $\frac{3}{4}$ W	
[Common Items]		
Ratchet Handle	BR3E	
Extension Bar	50 BE3-050	
	100 BE3-100	
Universal Joint	BJ3	
Socket Holders (5pcs.)	EHB305	
Metal Case	EKB-1 L270×W145×H50mm	

- with Plastic Tray (L265×W145×H38mm)

POWERFIT

● 3/8"sq. SOCKET WRENCH SET (19pcs.)



SOCKET WRENCH SET (19pcs.)

mm

No. TB312X	▼kg 3.8	☞ 1
Socket (6pt.)	B3-055, 07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 15W, 17W, 19W, 21W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450×W185×H60mm	

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 3/8"sq. SOCKET WRENCH SET (21pcs.)



SOCKET WRENCH SET (21pcs.)

No. TB314	▼kg 3.8	☞ 1
Socket (6pt.)	B3-055, 07, 08, 09, 10, 11, 12, 13, 14, 15, 17, 19, 21, 22	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450×W185×H60mm	

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 3/8"sq. SOCKET WRENCH SET (25pcs.)



SOCKET WRENCH SET (25pcs.)

mm

No. TB317X	▼kg 3.9	☞ 1
Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12	
Socket (12pt.)	B3-13W, 14W, 15W, 16W, 17W, 19W, 20W, 21W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450×W185×H60mm	

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 3/8"sq. SOCKET WRENCH SET (26pcs.)



SOCKET WRENCH SET (26pcs.)

mm

No. TB318	▼kg 4	☞ 1
Socket (6pt.)	B3-055, 06, 07, 08, 09, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar	30 BE3-030	
	75 BE3-075	
	150 BE3-150	
	270 BE3-270	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450×W185×H60mm	

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

DEEP SOCKET WRENCH SET (17pcs.)

No. TB3L11X	▼kg 4	☞ 1
Deep Socket (6pt.)	B3L-06, 08, 10, 11, 12	
Deep Socket (12pt.)	B3L-13W, 14W, 15W, 17W, 19W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar 30	BE3-030	
75	BE3-075	
Wobble Extension Bar 50	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (5pcs.)	EHB305	
Metal Case	EKB-2 L450×W185×H60mm	
• with Plastic Tray (L445×W185×H52mm)		

POWERFIT®

●3/8"sq. DEEP SOCKET WRENCH SET (17pcs.)**SOCKET WRENCH SET (26pcs.)**

mm

No. TB3X20	▼kg 4.3	☞ 1
Socket (6pt.)	B3-055, 07, 08, 10, 12	
Socket (12pt.)	B3-13W, 14W, 15W, 17W, 19W	
Deep Socket (6pt.)	B3L-07, 08, 10, 12	
Deep Socket (12pt.)	B3L-13W, 14W, 15W, 17W, 19W, 22W	
Ratchet Handle	BR3E	
Spinner Handle	BS3E	
Extension Bar 30	BE3-030	
75	BE3-075	
Wobble Extension Bar	BE3-050JW	
Universal Joint	BJ3	
Socket Holders (10pcs.)	EHB310	
Metal Case	EKB-2 L450×W185×H60mm	
• with Plastic Tray (L445×W185×H52mm)		

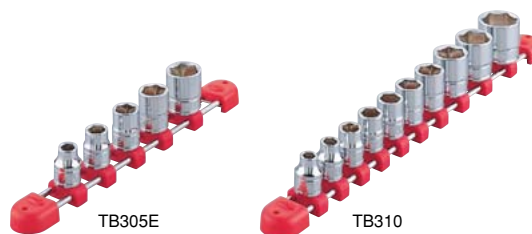
POWERFIT®

●3/8"sq. SOCKET WRENCH SET (26pcs.)**SOCKET SET (5pcs.) • (10pcs.)**

mm

No. TB305E	▼g 500	☞ 1
Socket (6pt.)	B3-08, 10, 12, 14, 17	
Socket Holder (5pcs.)	EHB305	

POWERFIT®

●3/8"sq. SOCKET SET (5pcs.) • (10pcs.)

TB305E

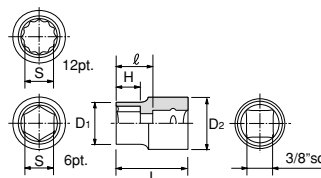
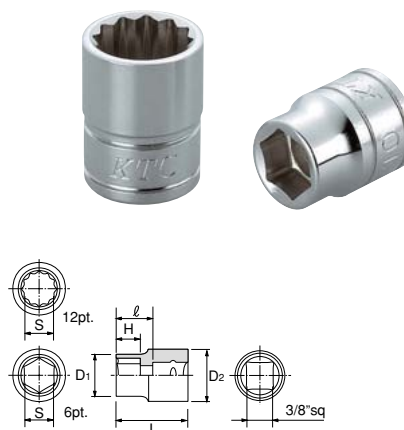
TB310

SOCKET

mm

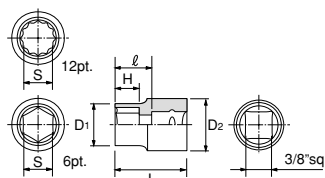
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	☞	
B3 -055	B3 -055 W	5.5	9	17	5	22	10.5	19	5	
-06	-06 W	6	10	17	5	22	10.5	20	5	
-07	-07 W	7	11	17	5	22	10.5	20	5	
-08	-08 W	8	12	17	5.5	22	10.5	20	5	
-09	-09 W	9	13.5	17	5.5	22	10.5	21	5	
-10	-10 W	10	14.5	17	5.5	22	10.5	20	5	
-11	-11 W	11	16	17	6	23	11.5	23	5	
-12	-12 W	12	17	18	7.5	24	12.5	26	5	
-13	-13 W	13	18.5	18	7.5	24	12.5	28	5	
-14	-14 W	14	20	19	8.5	25	13.5	34	5	
-15	-15 W	15	21	20	8.5	26	14.5	35	5	
-16	-16 W	16	22	21	9	26	14.5	41	5	
-17	-17 W	17	24	22	10	27	15.5	51	5	
-18	-18 W	18	25	23	10	27	15.5	58	5	
-19	-19 W	19	26	24	10.5	27	15.5	62	5	
-20	-20 W	20	27.5	25	11	28	16.5	71	5	
-21	-21 W	21	28.5	26.5	11.5	28	16.5	81	5	
-22	-22 W	22	30	27.5	11.5	28	16.5	86	5	
-23	-23 W	23	31	28.5	12	29	17.5	94	5	
-24	-24 W	24	32.5	30	12	29	17.5	115	5	

POWERFIT®

●3/8"sq. SOCKET

3/8" sq.

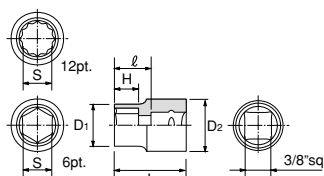
● 3/8"sq. SOCKET



SOCKET											in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	☞		
B3 - 1/4	B3 - 1/4 W	6.3	10	17	5	22	10.5	20	5		
- 9/32	- 9/32 W	7.1	11	17	5	22	10.5	20	5		
- 5/16	- 5/16 W	7.9	12	17	5.5	22	10.5	20	5		
- 11/32	- 11/32 W	8.7	13.5	17	5.5	22	10.5	21	5		
- 3/8	- 3/8 W	9.5	14	17	5.5	22	10.5	21	5		
- 7/16	- 7/16 W	11.1	16	17	6	23	11.5	23	5		
- 1/2	- 1/2 W	12.7	18.5	18	7.5	24	12.5	28	5		
- 17/32	- 17/32 W	13.4	20	19	7.5	24	12.5	35	5		
- 9/16	- 9/16 W	14.2	20	19	8.5	25	13.5	34	5		
- 19/32	- 19/32 W	15	21	20	8.5	26	14.5	35	5		
- 5/8	- 5/8 W	15.8	22	21	9	26	14.5	42	5		
- 21/32	- 21/32 W	16.6	24	22	10	27	15.5	51	5		
- 11/16	- 11/16 W	17.4	24	22	10	27	15.5	51	5		
- 3/4	- 3/4 W	19	26	24	10.5	27	15.5	62	5		
- 25/32	- 25/32 W	19.8	27.5	25	11	28	16.5	73	5		
- 13/16	- 13/16 W	20.6	28.5	26.5	11.5	28	16.5	80	5		
- 7/8	- 7/8 W	22.2	30	27.5	11.5	28	16.5	84	5		

POWERFIT

● 3/8"sq. SOCKET



SOCKET											mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	☞		
B20 - 5.5 H		5.5	9	17	5	26	14	20	10		
- 6 H		6	10	17	5	26	14	25	10		
- 7 H		7	11	17	6	26	14	25	10		
- 8 H	B20 - 8	8	12	17	7	26	14	25	10		
- 9 H		9	13	17	8	27	15	30	10		
- 10 H	-10	10	14	17	8	27	15	30	10		
- 11 H		11	16	17	8	27	15	30	10		
- 12 H	-12	12	16	17	9	28	16	30	10		
- 13 H	-13	13	18	18	9	28	16	30	10		
- 14 H	-14	14	20	20	9	28	16	35	10		
- 15 H	-15	15	21	20	10	28	16	42	10		
- 16 H	-16	16	22	21	11	30	18	50	10		
- 17 H	-17	17	24	22	12	30	18	53	10		
- 18 H	-18	18	25	23	12	30	18	60	10		
- 19 H	-19	19	26	24	12	30	18	65	10		
- 20 H		20	27	25	13	32	20	79	10		
- 21 H	-21	21	28	25	14	32	20	83	10		
- 22 H	-22	22	30	27	14	32	20	91	10		
- 23 H	-23	23	31	27	14	34	22	112	10		
- 24 H	-24	24	32	28	14	34	22	119	10		
	-25	25	34	29	14	34	22	122	10		
	-26	26	35	30	14	34	22	132	10		

SOCKET											in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	☞		
BB20 - 1/4 H		6.3	10	17	5	26	14	25	10		
- 9/32 H		7.1	11	17	6	26	14	25	10		
- 5/16 H		7.9	12	17	7	26	14	25	10		
- 3/8 H		9.5	14	17	8	27	15	25	10		
- 7/16 H		11.1	16	17	8	27	15	29	10		
	BB20 - 1/2	12.7	18	18	9	28	16	36	10		
	- 17/32	13.4	20	19	9	28	16	40	10		
	- 9/16 H	14.2	20	20	9	28	16	40	10		
	- 19/32	15.0	21	20	10	28	16	40	10		
	- 5/8	15.8	22	21	11	30	18	53	10		
	- 21/32	16.6	24	22	12	30	18	60	10		
	- 11/16 H	17.4	24	23	12	30	18	59	10		
	- 3/4	19.0	26	24	12	30	18	68	10		
	- 13/16	20.6	28	25	13	32	20	80	10		
	- 7/8	22.2	30	27	14	32	20	90	10		

POWERFIT (except inch sizes)

● 3/8"sq. SEMI-DEEP SOCKET SET (5pcs.)



SEMI-DEEP SOCKET SET (5pcs.)										mm
No. TB3M05		▼g 500		☞ 1						
Semi-Deep Socket (6pt.)		B3M-08, 10, 12, 14, 17								
Socket Holder (5pcs.)		EHB305								

POWERFIT

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by  before placing an order.

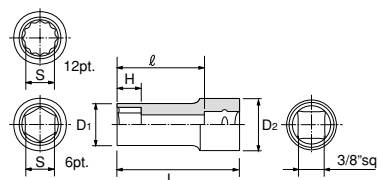
SEMI-DEEP SOCKET

mm

6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B3M-055	B3M -055 W	5.5	9	17	6	40	28.5	29	5	
-06	-06 W	6	10	17	6	40	28.8	31	5	
-07	-07 W	7	11	17	8	40	28.5	30	5	
-08	-08 W	8	12	17	9	40	28.5	33	5	
-09	-09 W	9	13.5	17	10	40	28.5	37	5	
-10	-10 W	10	14.5	17	11	40	28.5	34	5	
-11	-11 W	11	16	17	12	40	28.5	39	5	
-12	-12 W	12	17	18	14	40	28.5	45	5	
-13	-13 W	13	18.5	18	14	50	38.5	61	5	
-14	-14 W	14	20	19	17	50	38.5	71	5	
-15	-15 W	15	21	20	17	50	38.5	74	5	
-16	-16 W	16	22	21	17	50	38.5	79	5	
-17	-17 W	17	24	22	17	50	38.5	95	5	
-18	-18 W	18	25	23	21	50	38.5	108	5	
-19	-19 W	19	26	24	21	50	38.5	111	5	
-20	-20 W	20	27.5	25	21	50	38.5	124	5	
-21	-21 W	21	28.5	26.5	21	50	38.5	141	5	
-22	-22 W	22	30	27.5	21	50	38.5	151	5	
-23	-23 W	23	31	28.5	21	50	38.5	155	5	
-24	-24 W	24	32.5	30	21	50	38.5	176	5	

POWERFIT

3/8"sq. SEMI-DEEP SOCKET



DEEP SOCKET SET (5pcs.) • (10pcs.)

mm

No. TB3L05	▼kg1	1
Deep Socket (6pt.)	B3L-08, 10, 12, 14, 17	
Socket Holder (5pcs.)	EHB305	

POWERFIT

No. TB3L10	▼kg 1.2	1
Deep Socket (6pt.)	B3L-07, 08, 10, 12, 13, 14, 15, 17, 19, 22	
Socket Holder (10pcs.)	EHB310	

POWERFIT

3/8"sq. DEEP SOCKET SET (5pcs.) • (10pcs.)



DEEP SOCKET

mm

6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B3L-055	B3L -055 W	5.5	9	17	6	60	48.5	40	5	
-06	-06 W	6	10	17	6	60	48.5	44	5	
-07	-07 W	7	11	17	8	60	48.5	44	5	
-08	-08 W	8	12	17	9	60	48.5	49	5	
-09	-09 W	9	13.5	17	10	60	48.5	57	5	
-10	-10 W	10	14.5	17	11	65	53.5	56	5	
-11	-11 W	11	16	17	12	65	53.5	67	5	
-12	-12 W	12	17	18	14	65	53.5	78	5	
-13	-13 W	13	18.5	18	14	70	58.5	87	5	
-14	-14 W	14	20	19	17	70	58.5	92	5	
-15	-15 W	15	21	20	17	70	58.5	95	5	
-16	-16 W	16	22	21	17	70	58.5	102	5	
-17	-17 W	17	24	22	17	70	58.5	130	5	
-18	-18 W	18	25	23	21	70	58.5	147	5	
-19	-19 W	19	26	24	21	70	58.5	150	5	
-20	-20 W	20	27.5	25	23	70	58.5	165	5	
-21	-21 W	21	28.5	26.5	23	70	58.5	188	5	
-22	-22 W	22	30	27.5	23	70	58.5	203	5	
-23	-23 W	23	31	28.5	27	70	58.5	200	5	
-24	-24 W	24	32.5	30	27	70	58.5	229	5	

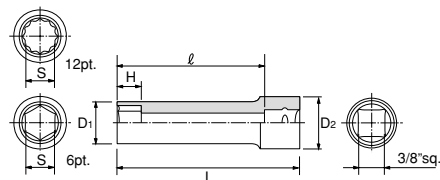
DEEP SOCKET

in

6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B3L -1/4	B3L -1/4 W	6.3	10	17	6	60	48.5	42	5	
-5/32	-5/32 W	7.1	11	17	8	60	48.5	44	5	
-11/32	-11/32 W	7.9	12	17	9	60	48.5	45	5	
-3/8	-3/8 W	8.7	13.5	17	10	60	48.5	50	5	
-7/16	-7/16 W	9.5	14	17	11	65	53.5	55	5	
-1/2	-1/2 W	11.1	16	17	12	65	53.5	61	5	
-9/16	-9/16 W	12.7	18.5	18	14	70	58.5	80	5	
-5/8	-5/8 W	13.4	20	19	14	70	58.5	92	5	
-11/8	-11/8 W	14.2	20	19	17	70	58.5	92	5	
-1 1/16	-1 1/16 W	15	21	20	17	70	58.5	95	5	
-1 1/8	-1 1/8 W	15.8	22	21	17	70	58.5	102	5	
-1 3/16	-1 3/16 W	16.6	24	22	17	70	58.5	123	5	
-1 1/2	-1 1/2 W	17.4	24	22	17	70	58.5	123	5	
-1 5/8	-1 5/8 W	19	26	24	21	70	58.5	142	5	
-1 7/8	-1 7/8 W	19.8	27.5	25	23	70	58.5	165	5	
-2	-2 W	20.6	28.5	26.5	23	70	58.5	180	5	
-2 1/8	-2 1/8 W	22.2	30	27.5	23	70	58.5	186	5	

POWERFIT

3/8"sq. DEEP SOCKET



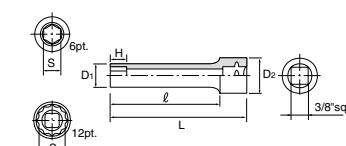
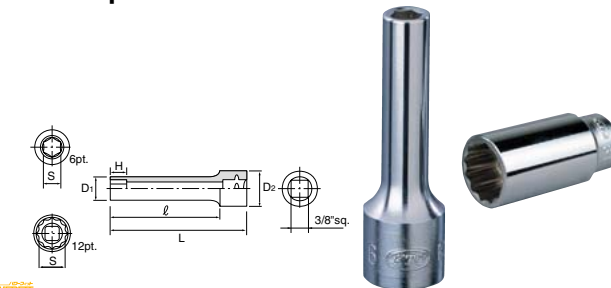
DEEP SOCKET

mm

6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B25 - 5.5H		5.5	9	17	5	55	43.5	35	5	
- 6 H		6	10	17	5	55	43.5	40	5	
- 7 H		7	11	17	6	55	43.5	40	5	
- 8 H		8	12	17	7	55	43.5	42	5	
- 9 H		9	13	17	8	55	43.5	50	5	
-10 H		10	14	17	10	55	43.5	50	5	
-11 H		11	16	17	12	55	43.5	60	5	
-12 H		12	16	17	12	55	43.5	60	5	
-13 H	B25 -13	13	18	18	12	55	43.5	80	5	
-14 H	-14	14	20	19	12	55	43.5	80	5	
	-15	15	21	20	14	55	43.5	86	5	
	-16	16	22	21	14	55	43.5	100	5	
-17 H	-17	17	24	21	14	55	43.5	110	5	
	-18	18	25	21	14	55	43.5	120	5	
-19 H	-19	19	26	21	14	55	43.5	123	5	
	-21	21	28	25	15	65	53.5	190	5	
	-22	22	30	27	16	65	53.5	190	5	
	-23	23	31	27	16	65	53.5	190	5	
	-24	24	32	28	16	65	53.5	220	5	
	-26	26	35	30	18	65	53.5	250	5	

POWERFIT

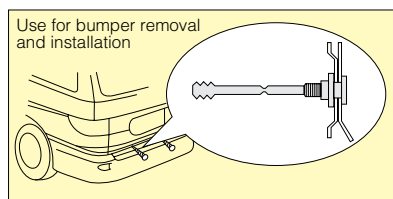
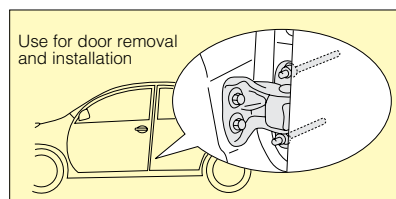
3/8"sq. DEEP SOCKET





Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by  before placing an order.

3/8" sq.

●3/8"sq. LONG DEEP SOCKET • SET



LONG DEEP SOCKET · SET										mm
No. B3TLL2		▼g 255				 1				
Long Deep Socket (6pt.) B3LL-10, 12										
No.	S	D ₁	D ₂	d	H	L	ℓ	▼g		
B3LL -10	10	14.5	18	8	11	130	113	115	5	
-12	12	17.7	18	9	12	130	113	140	5	

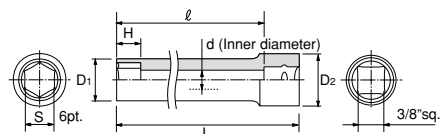
POWERFIT

■Usage

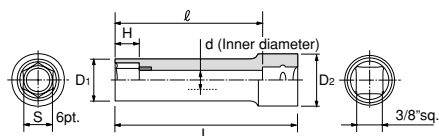
- Tightening & loosening of bolts and nuts that are either long and jut out or are in hard to reach areas.

■Application

- Rear bumper cover installation bolt, Door knob inner installation bolt, Door hinge bolt, side louver installation bolt
- Bumper reinforcement installation bolt, Air bag adjusting bolt, Tension pulley adjustment bolt
- Installation bolts and nuts of the under carriage
- Use where Spanners, Off-set wrenches, Deep sockets, etc., are difficult to use in hard to reach areas



●3/8"sq. MAGNET DEEP SOCKET • SET (6pcs.)



MAGNET DEEP SOCKET · SET			mm
No. TB3L06MG	▼g 520	📖 1	
Magnet Deep Socket (6pt.)	B3L-08MG, 10MG, 11MG, 12MG, 13MG, 14MG		
Socket Holder (6pt.)	EHB306		

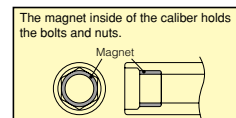
No.	S	D ₁	D ₂	d	H	L	ℓ	▼g			
B3L -08MG	8	12	17	6	2.9	60	48.5	49	5		
-10MG	10	14.5	17	8	3.3	65	53.5	56	5		
-11MG	11	16	17	9	3.8	65	53.5	67	5		
-12MG	12	17	18	9	4.3	65	53.5	78	5		
-13MG	13	18.5	18	10	4.3	70	58.5	87	5		
-14MG	14	20	19	11	5.8	70	58.5	92	5		

POWERFIT

- Is effective in preventing bolts and nuts dropping to the ground because of a magnetized application that allows work in confined, or hard to reach areas.




• THE MAGNET MAY BREAK IF THE PRODUCT IS DROPPED.



●3/8"sq. TWIST SOCKET • SET (6pcs.)

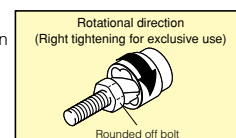


TWIST SOCKET - SET			mm
No. TB3TW06	▼g 430	 1	
Twist Socket	B3TW-12, 13, 14, 15, 16, 17		
Socket Holder (10pcs.)	EHB310		

- For loosening bolts which are rounded off and stud bolts.
- Easy to remove because of twist configuration.
- * Removed bolt and nut are nonrecyclable.
- * Using sizes differ depending on the damaged condition on bolt and nut.
- Choose the size after seeing the actual stuff.



• Do not use a socket with a power tool such as an impact wrench.



●3/8"sq. TWIST SOCKET • SET (10pcs.)

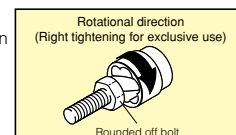


TWIST SOCKET - SET										mm
No. TB3TW10		▼g 590	📦 1							
Twist Socket		B3TW-08, 09, 10, 11, 12, 13, 14, 15, 16, 17								
Socket Holder (10pcs.)		EHB310								

- For loosening bolts which are rounded off and stud bolts.
- Easy to remove because of twist configuration.
- * Removed bolt and nut are nonrecyclable.
- * Using sizes differ depending on the damaged condition on bolt and nut.
- Choose the size after seeing the actual stuff.



• Do not use a socket with a power tool such as an impact wrench.

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by  before placing an order.

TWIST SOCKET									mm
No.	S	D ₁	D ₂	H	L	▽g			
B3TW-08	8	13	19	8	32	40	5		
-09	9	14.5	19	8	32	45	5		
-10	10	16	19	10	32	47	5		
-11	11	17.5	19	10	32	49	5		
-12	12	18.5	19	12	32	50	5		
-13	13	20	19	12	32	51	5		
-14	14	21	19	14	32	53	5		
-15	15	22.5	19	14	32	55	5		
-16	16	24	22	14	32	65	5		
-17	17	26	22	16	35	70	5		

CAUTION • Do not use a socket with a power tool such as an impact wrench.

SPARK PLUG WRENCH									mm
No.	S ₁	S ₂	D	L	Application plug (Type)		▽g		
					NGK	ND			
B3A-14SP	14	—	18.5	62			65	5	
-16SP	16	—	20	65			65	5	
B3A-13P	13	17	18	56	ER	r	72	5	
-16P	16	17	21.5	62	BC,C	PQ,U	100	5	
-18P	18	19	23.5	62	D	X	140	5	
-20.8P	20.8	24	26.5	62	B	W	200	5	

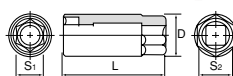
- Magnet is attached for operations in hard-to-reach areas.
- B3A-14SP can be used in NISSAN new engine models (HR15DE, MR18DE, MR20DE)
- B3A-16SP can be used in 4 valve engines like Mitsubishi light vehicles because of its thinner form than in the Previous types of plug wrench.

POWERFIT

●3/8"sq. TWIST SOCKET



●3/8"sq. SPARK PLUG WRENCH

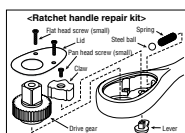


RATCHET HANDLE							
No.	Feed	B	T	L	▽g		
BR3E	10°	33	13.5	180	260	5	

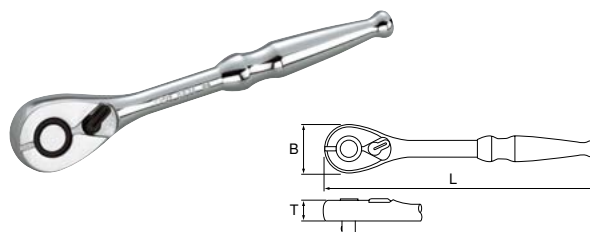
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



●3/8"sq. RATCHET HANDLE D.PAT.



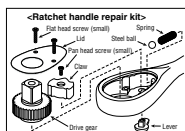
RATCHET HANDLE							
No.	Feed	B	T	L	▽g		
BR3A	10°	33	13.5	180	260	5	

- Slippage is prevented by using the ratchet while pressing down on the anti-slip area of the central part of the head.

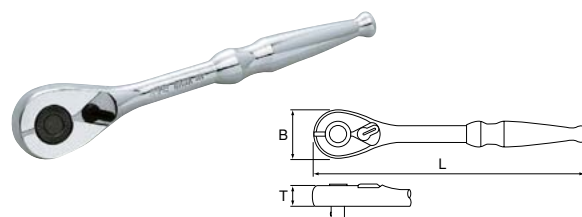
CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



●3/8"sq. RATCHET HANDLE D.PAT.



LONG RATCHET HANDLE							
No.	Feed	B	T	L	▽g		
BR3L	10°	33	13.5	275	320	5	

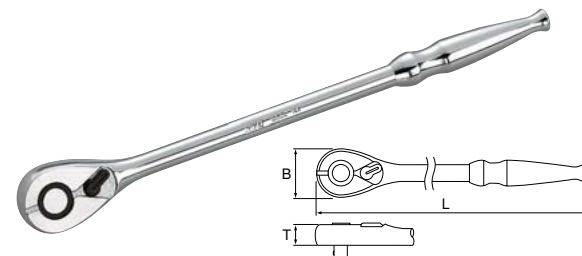
CAUTION • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



●3/8"sq. LONG RATCHET HANDLE D.PAT.

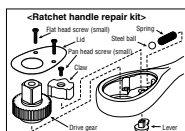


FLEX RATCHET HANDLE							
No.	Feed	B	T	L	▽g		
BR3F	10°	33	13.5	180	280	5	

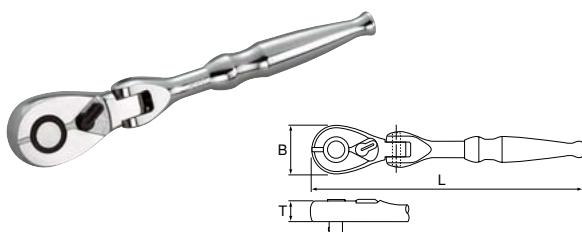
CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2

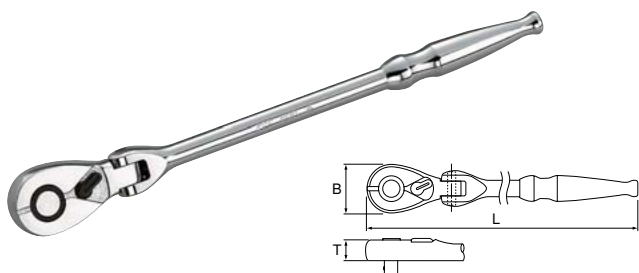


●3/8"sq. FLEX RATCHET HANDLE D.PAT.



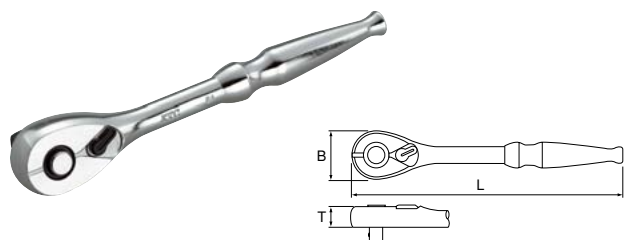
3/8" sq.

● 3/8"sq. FLEX LONG RATCHET HANDLE D.PAT.

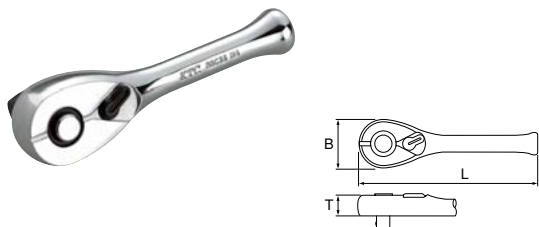


● 3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.

Scheduled to be on sale from July 2005

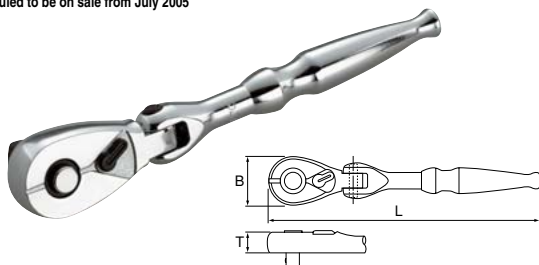


● 3/8"sq. COMPACT SHORT RATCHET HANDLE D.PAT.

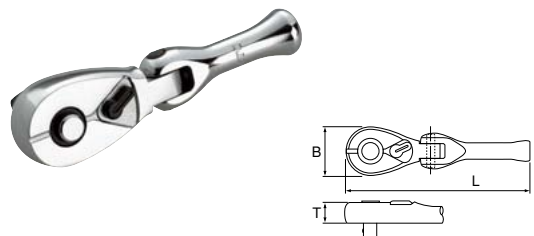


● 3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.

Scheduled to be on sale from July 2005



● 3/8"sq. COMPACT FLEX SHORT RATCHET HANDLE D.PAT.



● 3/8"sq. RATCHET HEAD REPAIR KIT



FLEX LONG RATCHET HANDLE

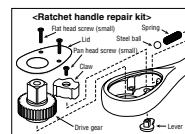
No.	Feed	B	T	L	▽g		
BR3FL	10°	33	13.5	275	360	5	



• IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■ 3/8"sq. Ratchet head repair kit

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



COMPACT SHORT RATCHET HANDLE

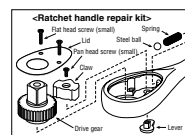
No.	Feed	B	T	L	▽g		
BRC3E	10°	22	10	125	100	5	



• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



COMPACT SHORT RATCHET HANDLE

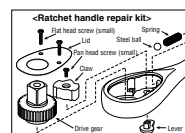
No.	Feed	B	T	L	▽g		
BRC3S	10°	22	10	80	90	5	



• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



COMPACT FLEX SHORT RATCHET HANDLE

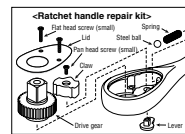
No.	Feed	B	T	L	▽g		
BRC3F	10°	22	10	125	140	5	



• IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



COMPACT FLEX SHORT RATCHET HANDLE

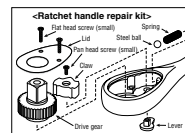
No.	Feed	B	T	L	▽g		
BRC3FS	10°	22	10	80	90	5	



• IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 3/8"sq. Ratchet head repair kit (for the compact type)

No.	Drive	Contents
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



RATCHET HEAD REPAIR KIT

No.	Drive	Contents
BR3E-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2

• 3/8"sq. Ratchet head repair kit (for BR3E, BR3L, BR3F, BR3FL)

* See BR3A-K for no Union Mechanism type (BR3A)

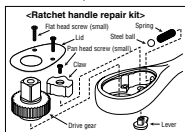
* See BRC3-K for the compact type type (BRC3E, BRC3S, BRC3F, BRC3FS)



RATCHET HEAD REPAIR KIT

No.	Drive	Contents	
BR3A-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2	

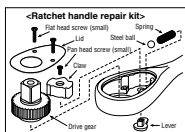
- 3/8"sq. Ratchet head repair kit (for no Union Mechanism type) (BR3A)
- * See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- * See BRC3-K for the compact type type (BRC3E, BRC3S, BRC3F, BRC3FS)



RATCHET HEAD REPAIR KIT

No.	Drive	Contents	
BRC3-K	3/8"sq.	Drive gear · Claw · Steel ball · Spring · Lever Pan head screw (small) · Lid x1 Flat head screw (small) x2	

- 3/8"sq. Ratchet head repair kit for the compact type (BRC3E, BRC3S, BRC3F, BRC3FS)
- * See BR3E-K for Union Mechanism type (BR3E, BR3L, BR3F, BR3FL)
- * See BR3A-K for no Union Mechanism type (BR3A)



● 3/8"sq. RATCHET HEAD REPAIR KIT (NO UNION MECHANISM TYPE)



● 3/8"sq. RATCHET HEAD REPAIR KIT (COMPACT TYPE)



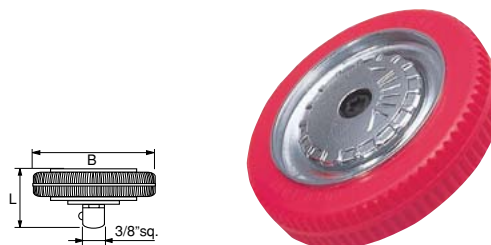
No.	Type	Feed	B	L	▼g		
BRG3	Grip Type	5°	55	27.5	170	10	

- 72teeth gear with small 5° increments.
- * Replacement parts are available. Check with your dealer for details.



- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/8"sq. RATCHET HANDLE (GRIP TYPE)



RATCHET HANDLE

No.	Type	Feed	B	T	L	▼g	
BR20	Oval Head	20°	35	14.5	175	260	10

- * Replacement parts are available. Check with your dealer for details.



- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/8"sq. RATCHET HANDLE



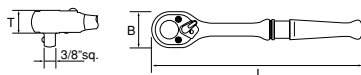
RATCHET HANDLE (COMPACT TYPE)

No.	Type	Feed	B	T	L	▼g	
BRU20	Oval Head · Union	15°	29.5	18	175	270	10
BRC20J	Oval Head · Flex	15°	29	18	200	305	10

- * Replacement parts are available. Check with your dealer for details.



- IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



● 3/8"sq. RATCHET HANDLE (COMPACT TYPE)



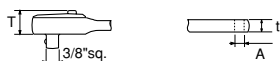
RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g	
BR3	Oval Head	15°	33	19	175	18	9	8	230	10
BR3UN	Oval Head · Union	15°	33	19	175	18	9	8	240	10

- * Replacement parts are available. Check with your dealer for details.



- IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



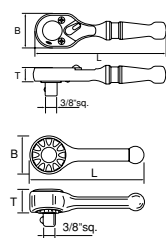
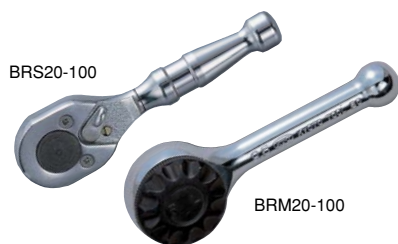
● 3/8"sq. COMPACT ROUND HEAD SHORT RATCHET HANDLE D.PAT. (only BR3)



3/8" sq.

● 3/8"sq. SHORT RATCHET HANDLE

● 3/8"sq. ROUND HEAD SHORT RATCHET HANDLE



SHORT RATCHET HANDLE

No.	Type	Feed	B	T	L	▼g	📦	
BRS20-100	Oval Head	15°	28	12	105	130	10	

*Replacement parts are available. Check with your dealer for details.

ROUND HEAD SHORT RATCHET HANDLE

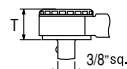
No.	Type	Feed	B	T	L	▼g	📦	
BRM20-100	Handy Type	6°	35	22.5	105	210	10	

- 60teeth gear with small 6° increments. • The length has been shortened to 105mm, which is effective for working in confined spaces and when a fast action is required.

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/8"sq. COMPACT ROUND HEAD SHORT RATCHET HANDLE D.PAT.



COMPACT ROUND HEAD SHORT RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g	📦	
BRM3SC	Round Head	5°	23.5	14.5	100	14	6	6	90	10	

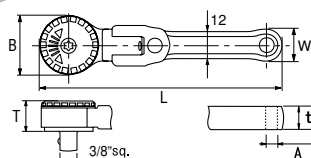
- 72teeth gear with small 5° increments.

- Head designed to be compact.

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/8"sq. FLEX ROUND HEAD SHORT RATCHET HANDLE D.PAT.



FLEX ROUND HEAD SHORT RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g	📦	
BRM3FSC	Round Head	5°	23.5	14.5	100	14	6	6	95	10	

- 72teeth gear with small 5° increments.

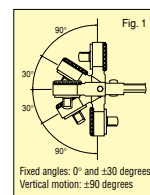
- The head moves steplessly up and down, up to 90 degrees. (Fig. 1)

- The holding power is strong enough to hold a deep socket (maximum weight: No. B25-14H, 80g) without falling out.

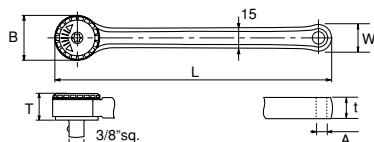
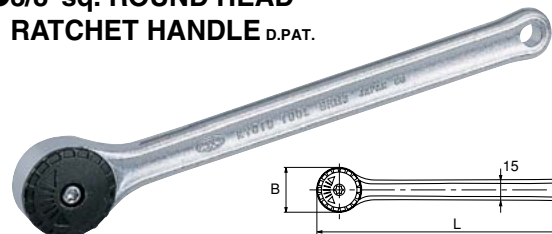
- Locking mechanism enables fixing/releasing of the head with a single action. (Three fixed angles: 0, ±30 degrees)

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



● 3/8"sq. ROUND HEAD RATCHET HANDLE D.PAT.



ROUND HEAD RATCHET HANDLE

No.	Type	Feed	B	T	L	W	t	A	▼g	📦	
BRM3	Round Head	5°	29	16.5	180	17	7.5	7	200	10	

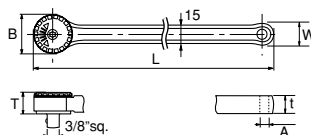
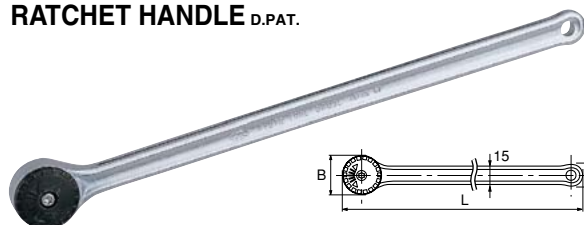
- 72teeth gear with small 5° increments.

- Easier to handle for compact head (smaller by 6mm in diameter and by 6mm in thickness) with strength increased by 20%. (compared with our previous model)

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/8"sq. ROUND HEAD LONG RATCHET HANDLE D.PAT.



ROUND HEAD LONG RATCHET HANDLE

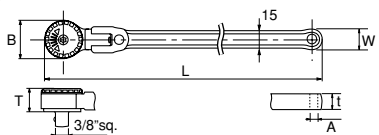
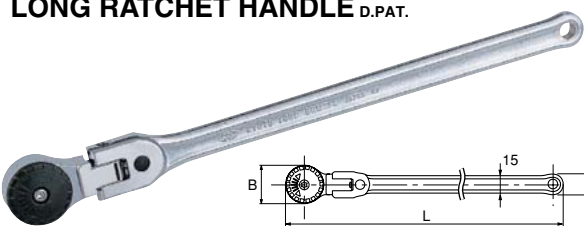
No.	Type	Feed	B	T	L	W	t	A	▼g	📦	
BRM3L	Round Head	5°	29	16.5	275	17	7.5	7	250	10	

- 72teeth gear with small 5° increments.

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 3/8"sq. FLEX ROUND HEAD LONG RATCHET HANDLE D.PAT.



FLEX ROUND HEAD LONG RATCHET HANDLE

No.	Type	Feed	W	t	A	B	T	L	▼g	📦	
BRM3FL	Round Head	5°	17	7.5	7	29	16.5	275	275	10	

- 72teeth gear with small 5° increments.

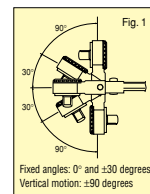
- The head moves steplessly up and down, up to 90 degrees. (Fig. 1)

- The holding power is strong enough to hold a deep socket (maximum weight: No. B25-14H, 80g) without falling out.

- Locking mechanism enables fixing/releasing of the head with a single action. (Three fixed angles: 0, ±30 degrees)

*Replacement parts are available. Check with your dealer for details.

⚠️ CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.



*Please check the merchandise inventory for a product that is marked by ⚠️ before placing an order.

RATCHET ADAPTOR

No.	Feed	D ₁	D ₂	L	▼g		
BRA21	6°	31	17.7	51	140	10	

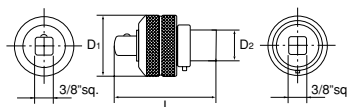
• 60teeth gear with small 6° increments.

*Replacement parts are available. Check with your dealer for details.



• ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

●3/8"sq. RATCHET ADAPTOR



SPINNER HANDLE

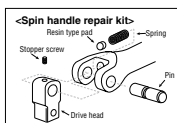
No.	D	ø	L	▼g		
BS3E	18	21	300	410	5	

LONG SPINNER HANDLE

No.	D	ø	L	▼g		
BS3L	18	21	400	510	5	

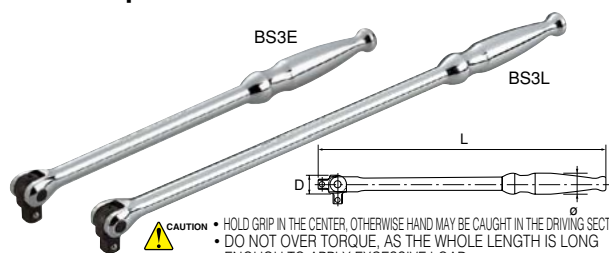
●3/8"sq. Spinner handle head repair kit PAT.P.

No.	Insertion angle	Contents
BS3E-K	3/8"sq.	Drive head · Pin · Pad Spring · Stopper screw x1



●3/8"sq. SPINNER HANDLE PAT.P.

●3/8"sq. LONG SPINNER HANDLE PAT.P.



• HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

SPINNER HANDLE

No.	D	L	A	▼g		
BS20	19	250	9	285	10	

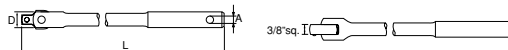
• Strong head supports even heavy deep socket such as B25-26 (240g) securely.

• Flex part is made of durable resin for smooth flexibility.

• Forged handle with ergonomics design.



• HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

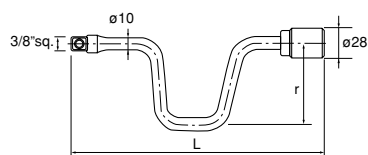


●3/8"sq. SPINNER HANDLE



SPEEDER HANDLE

No.	r (turning)	L	▼g		
BSD20	100	350	400	1	



●3/8"sq. SPEEDER HANDLE



SLIDE HEAD HANDLE

No.	D	Handle (ø)	L	▼g		
BHM3	17	9	200	120	5	

• For faster operation from quick turning to fastening

• A groove on the handle prevents head turning

●3/8"sq. SLIDE HEAD HANDLE



SLIDE HEAD HANDLE

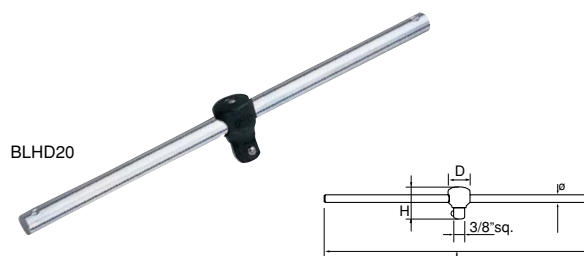
No.	D	H	ø	L	▼g		
BLHD20	17	28	9	200	120	10	

• For faster operation from quick turning to fastening

(BLHD20).

• A groove on the handle prevents head turning (BLHD20).

●3/8"sq. SLIDE HEAD HANDLE

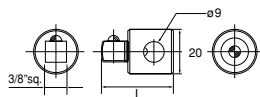


3/8" sq.

● 3/8"sq. HEAD



BH20



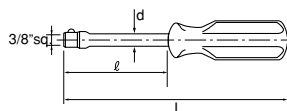
HEAD

No.	sq.	L	▼g	☞
BH20	9.5	31	88	10



• ALWAYS USE THE DESIGNATED BAR (No. BL20).

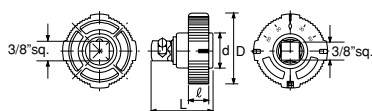
● 3/8"sq. SCREWDRIVER TYPE HANDLE



DRIVER TYPE HANDLE

No.	d	L	ℓ	▼g	☞
BD20	8	150	63	70	5

● 3/8"sq. QUICK SPINNER® D.PAT.



QUICK SPINNER®

No.	D	d	L	ℓ	▼g	☞
BE3-Q	36	17	31	10	40	10

POWERFIT

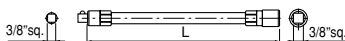
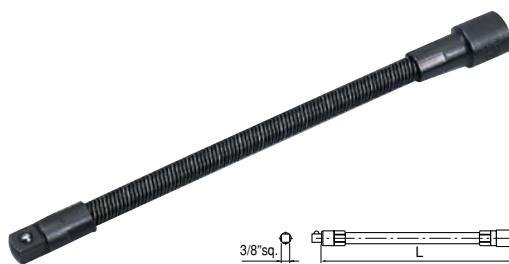
- Specially for quick turning for effective use with Ratchet handle or Extension bar.
- Grip has angle (90°) indication by groove with 30° indication in surface.
- Grip is made of resin for light weight.



• DO NOT USE MULTIPLE EXTENSIONS.

*Quick Spinner is the registered trademark of the Kyoto Tool Co., LTD.

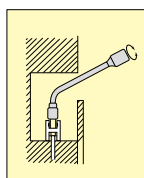
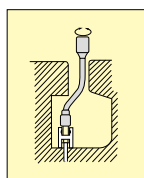
● 3/8"sq. FLEXIBLE EXTENSION BAR



FLEXIBLE EXTENSION BAR

No.	L	N • m	▼g	☞
BES21-200	200	20	110	10

- Convenient for fastening & loosening bolts and nuts in narrow quarters.

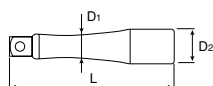


- FOR TEMPORARY FASTENING ONLY. DO NOT APPLY EXCESSIVE POWER.
- DO NOT USE MULTIPLE EXTENSIONS.

● 3/8"sq. EXTENSION BAR



BE3-075



EXTENSION BAR

No.	D ₁	D ₂	L	▼g	☞
BE3-030	13	17	30	30	5
-050	13	17	50	50	5
-075	12	17	75	75	5
-100	12	17	100	95	5
-150	12	17	150	140	5
-200	12	17	200	190	5
-270	12	17	270	250	5
-600	13	17	600	530	1
-1000	13	17	990	700	1



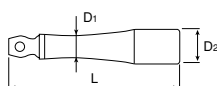
• DO NOT USE MULTIPLE EXTENSIONS.

POWERFIT

● 3/8"sq. WOBBLE EXTENSION BAR



BE3-075JW



WOBBLE EXTENSION BAR

No.	D ₁	D ₂	L	▼g	☞
BE3-030JW	13	17	30	30	5
-050JW	13	17	50	50	5
-075JW	12	17	75	75	5
-100JW	12	17	100	95	5
-150JW	12	17	150	140	5
-200JW	12	17	200	190	5
-270JW	12	17	270	250	5
-600JW	13	17	600	530	1
-1000JW	13	17	990	700	1



- DO NOT PUT PRESS TOO HARD, AS ITS STRUCTURE HAS LESS WEIGHT RESISTANCE THAN THE NORMAL EXTENSION BAR.
- DO NOT USE MULTIPLE EXTENSIONS.

POWERFIT

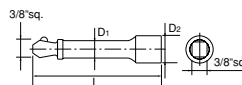
*Please check the merchandise inventory for a product that is marked by before placing an order.

EXTENSION BAR

No.	D ₁	D ₂	L	▽g	📦
BEJ20 -150	12	17	150	100	10

- CAUTION** • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT TO APPLY EXCESSIVE POWER.
• DO NOT USE MULTIPLE EXTENSIONS.

●3/8"sq. EXTENSION BAR

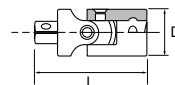


UNIVERSAL JOINT

No.	D	L	▽g	📦
BJ3	18	46	50	5

- CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

●3/8"sq. UNIVERSAL JOINT

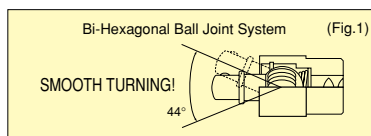
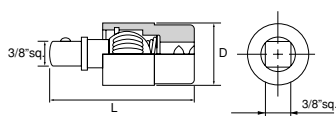


FLEX BALL JOINT

No.	D	L	▽g	📦
BJF20	22	50	86	5

- 12pt. ball joint system for smooth 44° turning (Fig.-1)

- CAUTION** • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



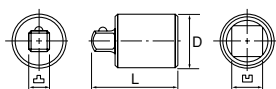
●3/8"sq. FLEX BALL JOINT



SOCKET ADAPTOR

No.	sq.		D	L	▽g	📦
	Indent	Projection				
BA32	9.5	6.3	17	25	20	5
BA34	9.5	12.7	17	29.5	38	5

- CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



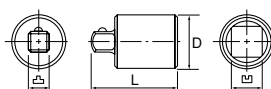
●3/8"sq. SOCKET ADAPTOR



SOCKET ADAPTOR

No.	sq.		D	L	▽g	📦
	Indent	Projection				
BA2010	9.5	6.3	17	27.5	30	10

- CAUTION** • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/8"sq. SOCKET ADAPTOR



QUICK SPINNING ADAPTOR - SET

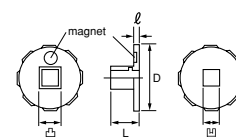
No. BAE234	▽g 50	📦1
Quick Spinning Adaptor BAE23, 34		

QUICK SPINNING ADAPTOR

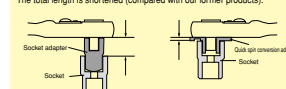
No.	sq.		D	L	ℓ	▽g	📦
	Indent	Projection					
BAE23	6.3	9.5	28	13	2.5	20	10
BAE34	9.5	12.7	37	17	3	30	10

- This product is different from the socket adaptor as it can be rotated quickly as it is.
• The length can be shortened and used, as the concave and the convex are set at the same place, compared with the socket adaptor.(See the left figure.)
• It is easy to hold and to remove the socket because of the magnet force.
• The grip shape prevents slipping and makes it easy to rotate.

●QUICK SPINNING ADAPTOR • SET D.PAT.



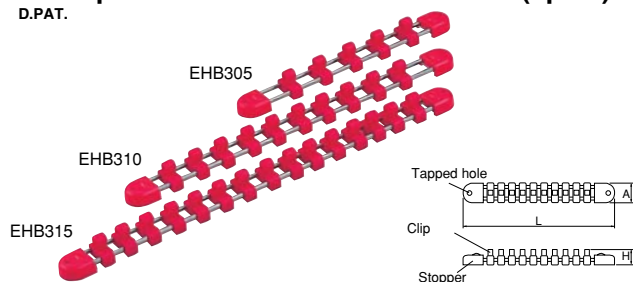
The total length is shortened (compared with our former products).





● 3/8"sq. SOCKET HOLDER • CLIP SET (5pcs.)

D.PAT.



SOCKET HOLDER • CLIP SET (5pcs.)

No.	No. of clips	H	A	L	▼g	📦
EHB305	5	23	25	215	80	10
EHB310	10	23	25	315	120	10
EHB315	15	23	25	365	140	10

- Change of holder shape easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carrying)
- Different colors for different sizes.



• REVERSING HOLDER MAY ALLOW SOCKETS TO GET DISLODGED.

No. EHB35	▼g 25	📦 10
Clip	5pcs.	

- Spare clip for EHB305, 310 and EHB315.
- Can be used for EHB205-215 and 405-410.

● 1/2"sq. SOCKET WRENCH SET (14pcs.)



TB410

SOCKET WRENCH SET (14pcs.)

No.	mm
No. TB410	▼kg 3.4 📦 1
Socket (6pt.)	B4-08, 10, 12, 13, 14, 17, 19, 21, 22, 24
No. TB410X	▼kg 3.5 📦 1
Socket (6pt.)	B4-08, 10, 12
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W

Common Items

Ratchet Handle	BR4E
Extension Bar	75 BE4-075
	150 BE4-150
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450×W185×H60mm

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 1/2"sq. SOCKET WRENCH SET (19pcs.)



TB413

SOCKET WRENCH SET (19pcs.)

No.	mm
No. TB413	▼kg 4.9 📦 1
Socket (6pt.)	B4-08, 10, 11, 12, 13, 14, 17, 19, 21, 22, 24, 26, 27
No. TB413X	▼kg 4.9 📦 1
Socket (6pt.)	B4-08, 10, 11, 12
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W

Common Items

Ratchet Handle	BR4E
Spinner Handle	BS4E
Extension Bar	75 BE4-075
	150 BE4-150
Wobble Extension Bar	BE4-100JW
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450×W185×H60mm

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 1/2"sq. SOCKET WRENCH SET (21pcs.)



TB415X

SOCKET WRENCH SET (21pcs.)

No.	mm • in
No. TB415X	▼kg 5.4 📦 1
Socket (6pt.)	B4-08, 10, 11, 12
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W, 26W, 27W, 30W, 32W
No. TB415BX	▼kg 5.4 📦 1
Socket (6pt.) in	B4- $\frac{7}{16}$
Socket (12pt.) in	B4- $\frac{7}{8}$ W, $\frac{9}{16}$ W, $\frac{19}{32}$ W, $\frac{5}{8}$ W, $\frac{11}{16}$ W, $\frac{3}{4}$ W, $\frac{25}{32}$ W, $\frac{13}{16}$ W, $\frac{7}{8}$ W, $\frac{15}{16}$ W, 1W, 1- $\frac{1}{16}$ W, 1- $\frac{1}{8}$ W, 1- $\frac{1}{4}$ W

Common Items

Ratchet Handle	BR4E
Spinner Handle	BS4E
Extension Bar	75 BE4-075
	150 BE4-150
Wobble Extension Bar	BE4-100JW
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450×W185×H60mm

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 1/2"sq. SOCKET WRENCH SET (26pcs.)



SOCKET WRENCH SET (26pcs.)

No.	mm
No. TB420X	▼kg 5.8 📦 1
Socket (6pt.)	B4-08, 10, 11, 12
Socket (12pt.)	B4-13W, 14W, 15W, 16W, 17W, 18W, 19W, 21W, 22W, 23W, 24W, 26W, 27W, 29W, 30W, 32W

Ratchet Handle	BR4E
Spinner Handle	BS4E
Extension Bar	75 BE4-075
	150 BE4-150
Wobble Extension Bar	BE4-100JW
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450×W185×H60mm

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

● 1/2"sq. DEEP SOCKET WRENCH SET (15pcs.)



DEEP SOCKET WRENCH SET (15pcs.)

No.	mm
No. TB4L10X	▼kg 5 📦 1
Deep Socket (6pt.)	B4L-08, 10, 12
Deep Socket (12pt.)	B4L-13W, 14W, 17W, 19W, 21W, 22W, 24W

Ratchet Handle	BR4E
Extension Bar	75 BE4-075
	150 BE4-150
Wobble Extension Bar	BE4-100JW
Universal Joint	BJ4
Socket Holder (5pcs.)	EHB405
Metal Case	EKB-2 L450×W185×H60mm

- with Plastic Tray (L445×W185×H52mm)

POWERFIT

SOCKET SET (5pcs.)				mm
No. TB405	▼g 500	1		
Socket (6pt.)	B4-10, 12, 14, 17, 19			
Socket Holder (5pcs.)	EHB405			

POWERFIT

● 1/2"sq. SOCKET SET (5pcs.)



SOCKET SET (10pcs.)				mm
No. TB410E	▼kg 1	1		
Socket (6pt.)	B4-08, 10, 12, 13, 14, 17, 19, 21, 22, 24			
Socket Holder (10pcs.)	EHB410			

POWERFIT

● 1/2"sq. SOCKET SET (10pcs.)



TB410E

TB410XE

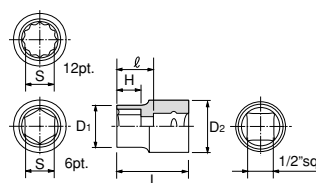
No. TB410XE	▼kg 1	1		
Socket (6pt.)	B4-08, 10, 12			
Socket (12pt.)	B4-13W, 14W, 17W, 19W, 21W, 22W, 24W			
Socket Holder (10pcs.)	EHB410			

POWERFIT

SOCKET											mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	1		
B4 -08	B4 -08W	8	12	22	5.5	28.5	12.5	29	5		
-09	-09W	9	13.5	22	5.5	28.5	12.5	30	5		
-10	-10W	10	14.5	22	5.5	28.5	12.5	38	5		
-11	-11W	11	16	22	6	29	13	41	5		
-12	-12W	12	17	22	7.5	30.5	14.5	44	5		
-13	-13W	13	18.5	22	7.5	30.5	14.5	45	5		
-14	-14W	14	20	22	8.5	31.5	15.5	49	5		
-15	-15W	15	21	22	8.5	31.5	15.5	50	5		
-16	-16W	16	22.5	22	9	33	17	55	5		
-17	-17W	17	24	22	10	34	18	61	5		
-18	-18W	18	25	23	10	34	18	69	5		
-19	-19W	19	26	24	10.5	34.5	18.5	75	5		
-20	-20W	20	27.5	25	11	35	19	83	5		
-21	-21W	21	28.5	26	11.5	35.5	19.5	91	5		
-22	-22W	22	30	27	11.5	35.5	19.5	104	5		
-23	-23W	23	31	27.5	12	36	20	108	5		
-24	-24W	24	32.5	28.5	12	36	20	117	5		
-25	-25W	25	34	30.5	13	37	21	140	5		
-26	-26W	26	35	31.5	14	38	22	149	5		
-27	-27W	27	36.5	33	15	39	23	171	5		
-28	-28W	28	38	34.5	16	40	24	190	5		
-29	-29W	29	39	35.5	17	41	25	206	5		
-30	-30W	30	40	36	17	42	26	214	5		
-31	-31W	31	42	37.5	18	43	27	248	5		
-32	-32W	32	43	38.5	18	43	27	256	5		
-33	-33W	33	44	40	19	44	28	278	5		
-34	-34W	34	45	41	19	44	28	286	5		
-35	-35W	35	46	41.5	19	44	28	297	5		
-36	-36W	36	47	42.5	19	44	28	305	5		

POWERFIT

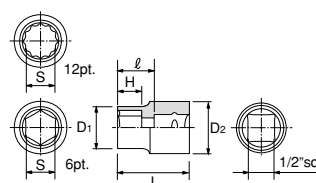
● 1/2"sq. SOCKET



SOCKET											in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g	1		
B4 -3/8	B4 -3/8 W	9.5	14.5	22	5.5	28.5	12.5	38	5		
-7/16	-7/16 W	11.1	16	22	6	29	13	41	5		
-1/2	-1/2 W	12.7	18.5	22	7.5	30.5	14.5	46	5		
-17/32	-17/32 W	13.4	20	22	8.5	31.5	15.5	50	5		
-9/16	-9/16 W	14.2	20	22	8.5	31.5	15.5	49	5		
-19/32	-19/32 W	15.0	21	22	8.5	31.5	15.5	50	5		
-5/8	-5/8 W	15.8	22.5	22	9	33	17	56	5		
-21/32	-21/32 W	16.6	24	22	10	34	18	61	5		
-11/16	-11/16 W	17.4	24	22	10	34	18	62	5		
-3/4	-3/4 W	19.0	26	24	10.5	34.5	18.5	75	5		
-25/32	-25/32 W	19.8	27.5	25	11	35	19	86	5		
-13/16	-13/16 W	20.6	28.5	26.5	11.5	35.5	19.5	94	5		
-7/8	-7/8 W	22.2	30	27.5	11.5	35.5	19.5	107	5		
-15/16	-15/16 W	23.8	32.5	30	12	36	20	131	5		
-31/32	-31/32 W	24.6	34	30.5	13	37	21	139	5		
-1	-1 W	25.4	35	31.5	14	38	22	152	5		
-1-1/16	-1-1/16 W	26.9	36.5	33	15	39	23	171	5		
-1-1/8	-1-1/8 W	28.5	39	35.5	17	41	25	204	5		
-1-3/16	-1-3/16 W	30.1	40	36	17	42	26	214	5		
-1-1/4	-1-1/4 W	31.7	43	38.5	18	43	27	262	5		
-1-5/16	-1-5/16 W	33.3	44	40	19	44	28	282	5		
-1-3/8	-1-3/8 W	34.9	46	41.5	19	44	28	297	5		

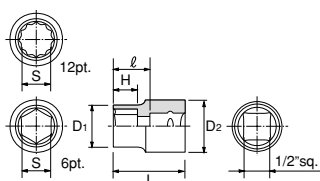
POWERFIT

● 1/2"sq. SOCKET



1/2" sq.

● 1/2"sq. SOCKET SET (6pcs.) • (10pcs.)



SOCKET		JIS (Except B30-6H, 7H) mm									
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▽g	⊕		
B30 - 6H		6	10	22	8	36	21	49	10		
- 7H		7	11	23	8	36	21	49	10		
- 8H	B30 - 8	8	12	24	8	36	21	50	10		
- 9H		9	13	25	8	36	21	51	10		
- 10H	-10	10	14	26	8	36	21	52	10		
- 11H		11	15	27	8	36	21	53	10		
- 12H	-12	12	16	28	8	36	21	54	10		
- 13H	-13	13	17	29	8	36	21	55	10		
- 14H	-14	14	18	30	8	36	21	56	10		
- 15H	-15	15	19	31	8	36	21	57	10		
- 16H	-16	16	20	32	8	36	21	58	10		
- 17H	-17	17	21	33	8	36	21	59	10		
- 18H	-18	18	22	34	8	36	21	60	10		
- 19H	-19	19	23	35	8	36	21	61	10		
- 20H		20	24	36	8	36	21	62	10		
- 21H	-21	21	25	37	8	36	21	63	10		
- 22H	-22	22	26	38	8	36	21	64	10		
- 23H	-23	23	27	39	8	36	21	65	10		
- 24H	-24	24	28	40	8	36	21	66	10		
- 25H	-25	25	29	41	8	36	21	67	10		
- 26H	-26	26	30	42	8	36	21	68	10		
- 27H	-27	27	31	43	8	36	21	69	10		
- 28H	-28	28	32	44	8	36	21	70	10		
- 29H	-29	29	33	45	8	36	21	71	10		
- 30H		30	34	46	8	36	21	72	10		
- 31H	-31	31	35	47	8	36	21	73	10		
- 32H	-32	32	36	48	8	36	21	74	10		
- 36H	-36	36	40	52	8	36	21	78	10		

SOCKET		in									
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▽g	⊕		
BB30 - 7/16H		11.1	16	22	12	36	21	49	10		
	BB30 - 9/16	14.2	20	22	12	37	22	53	10		
	- 1 1/32	16.6	24	22	14	39	24	68	10		
	- 1 1/16	17.5	24	22	14	39	24	70	10		
	- 3/4	19	26	24	14	39	24	80	10		
	- 25/32	19.8	27	26	14	39	24	98	10		
	- 1 3/32	20.6	28	26	15	39	24	100	10		
	- 7/8	22.2	30	27	16	41	26	108	10		
	- 1 5/16	23.8	32	28	17	42	27	132	10		
	- 1	25.4	34	30	19	42	27	140	10		
	- 1 1/16	26.9	36	31	19	43	28	168	10		
	- 1 1/8	28.5	39	32	19	43	28	198	10		
	- 1 1/4	31.7	43	35	22	47	32	245	10		

POWERFIT (except inch sizes)

● 1/2"sq. DEEP SOCKET SET (5pcs.) • (10pcs.)



TB4L05



TB4L10E

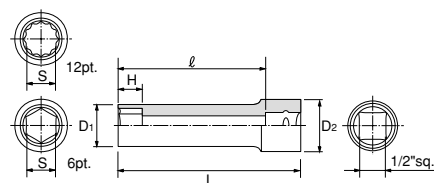
DEEP SOCKET SET (5pcs.) • (10pcs.)			mm
No. TB4L05	▽g 820	⊕ 1	
Deep Socket (6pt.)	B4L-10, 12, 14, 17, 19		
Socket Holder (5pcs.)	EHB405		
			POWERFIT
No. TB4L10E	▽g 1.8	⊕ 1	
Deep Socket (6pt.)	B4L-08, 10, 12, 13, 14, 17, 19, 21, 22, 24		
Socket Holder (10pcs.)	EHB410		
			POWERFIT

DEEP SOCKET										mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B4L-08	B4L -08W	8	12	22	9	90	74	81	5	
-09	-09W	9	13.5	22	10	90	74	97	5	
-10	-10W	10	14.5	22	11	90	74	90	5	
-11	-11W	11	16	22	12	90	74	107	5	
-12	-12W	12	17	22	13	90	74	120	5	
-13	-13W	13	18.5	22	14	90	74	126	5	
-14	-14W	14	20	22	17	90	74	138	5	
-15	-15W	15	21	22	17	90	74	144	5	
-16	-16W	16	22.5	22	17	90	74	160	5	
-17	-17W	17	24	22	17	100	84	195	5	
-18	-18W	18	25	23	21	100	84	216	5	
-19	-19W	19	26	24	21	100	84	218	5	
-20	-20W	20	27.5	25	22	100	84	230	5	
-21	-21W	21	28.5	26.5	23	100	84	259	5	
-22	-22W	22	30	27.5	23	100	84	302	5	
-23	-23W	23	31	28.5	24	100	84	301	5	
-24	-24W	24	32.5	30	27	100	84	316	5	
-25	-25W	25	34	30.5	27	100	84	360	5	
-26	-26W	26	35	31.5	30	100	84	356	5	
-27	-27W	27	36.5	33	30	100	84	409	5	
-28	-28W	28	38	34.5	30	100	84	431	5	
-29	-29W	29	39	35.5	30	100	84	466	5	
-30	-30W	30	40	36	30	100	84	460	5	
-31	-31W	31	42	37.5	30	100	84	541	5	
-32	-32W	32	43	38.5	32	100	84	538	5	
-33	-33W	33	44	40	32	100	84	595	5	
-34	-34W	34	45	41	32	100	84	634	5	
-35	-35W	35	46	41.5	32	100	84	669	5	
-36	-36W	36	47	42.5	32	100	84	710	5	

●1/2"sq. DEEP SOCKET

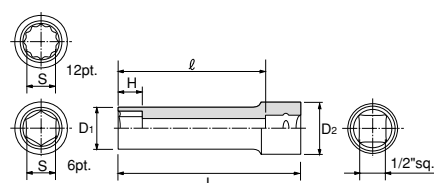


DEEP SOCKET										in
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B4L- ³ / ₈	B4L- ³ / ₈ W	9.5	14.5	22	11	90	74	93	5	
- ⁷ / ₁₆	- ⁷ / ₁₆ W	11.1	16	22	12	90	74	107	5	
- ¹ / ₂	- ¹ / ₂ W	12.7	18.5	22	14	90	74	136	5	
- ¹⁷ / ₃₂	- ¹⁷ / ₃₂ W	13.4	20	22	17	90	74	146	5	
- ⁹ / ₁₆	- ⁹ / ₁₆ W	14.2	20	22	17	90	74	138	5	
- ¹⁹ / ₃₂	- ¹⁹ / ₃₂ W	15.0	21	22	17	90	74	144	5	
- ⁵ / ₈	- ⁵ / ₈ W	15.8	22.5	22	17	90	74	170	5	
- ²¹ / ₃₂	- ²¹ / ₃₂ W	16.6	24	22	17	100	84	195	5	
- ¹¹ / ₁₆	- ¹¹ / ₁₆ W	17.4	24	22	17	100	84	195	5	
- ³ / ₄	- ³ / ₄ W	19.0	26	24	21	100	84	218	5	
- ²⁵ / ₃₂	- ²⁵ / ₃₂ W	19.8	27.5	25	22	100	84	243	5	
- ¹³ / ₁₆	- ¹³ / ₁₆ W	20.6	28.5	26.5	23	100	84	245	5	
- ⁷ / ₈	- ⁷ / ₈ W	22.2	30	27.5	23	100	84	273	5	
- ¹⁵ / ₁₆	- ¹⁵ / ₁₆ W	23.8	32.5	30	27	100	84	330	5	
- ³¹ / ₃₂	- ³¹ / ₃₂ W	24.6	34	30.5	27	100	84	344	5	
-1	-1 W	25.4	35	31.5	30	100	84	371	5	
-1- ¹ / ₁₆	-1- ¹ / ₁₆ W	26.9	36.5	33	30	100	84	409	5	
-1- ¹ / ₈	-1- ¹ / ₈ W	28.5	39	35.5	30	100	84	448	5	
-1- ³ / ₁₆	-1- ³ / ₁₆ W	30.1	40	36	30	100	84	460	5	
-1- ¹ / ₄	-1- ¹ / ₄ W	31.7	43	38.5	32	100	84	556	5	
-1- ⁵ / ₁₆	-1- ⁵ / ₁₆ W	33.3	44	40	32	100	84	593	5	
-1- ³ / ₈	-1- ³ / ₈ W	34.9	46	41.5	32	100	84	669	5	



DEEP SOCKET										mm
6pt.	12pt.	S	D ₁	D ₂	H	L	ℓ	▼g		
B35 -11H	B35 -11H	11	16	22	12	85	70	110	5	
-15	-15	15	21	22	15	85	70	150	5	
-17H	-17H	17	24	23	16	85	70	150	5	
-18	-18	18	25	23	16	85	70	160	5	
-19H	-19H	19	26	24	16	85	70	175	5	
-21H	-21H	21	28	26	16	85	70	217	5	
-22H	-22H	22	30	27	18	85	70	230	5	
-23	-23	23	31	27	18	85	70	250	5	
-24H	-24H	24	32	28	18	85	70	270	5	
-26	-26	26	35	30	20	85	70	305	5	
-27H	-27H	27	36	31	20	85	70	340	5	
-29	-29	29	39	33	20	85	70	383	5	
-30	-30	30	40	34	22	85	70	390	5	
-32	-32	32	43	37	24	85	70	450	5	

●1/2"sq. DEEP SOCKET



• Convenient for installing and removing bolts & nuts in hard to reach areas. Operation is easy even when longer bolts are used. POWERFIT.

● 1/2"sq. SOCKET FOR ALUMINUM WHEEL

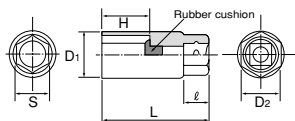
● 1/2"sq. WHEEL NUT SOCKET

● 1/2"sq. LONG WHEEL NUT SOCKET



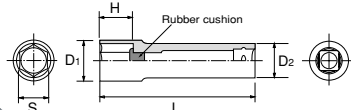
B35A-

■ 1/2"sq. Special socket designed for aluminum (thin walled type).



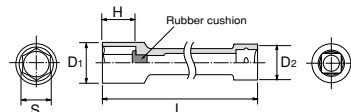
B38Z-

■ 1/2"sq. Special wheel nut socket



B38ZL-

■ 1/2"sq. Special wheel nut long socket



SOCKET FOR ALUMINUM WHEEL

mm

No.	S	D ₁	D ₂	H	L	ℓ	▽g	📦	
B35A -17H	17	24	21	22	60	15	140	10	
-19H	19	26	21	24	60	15	140	10	
-21H	21	27.5	21	27	60	15	145	10	

- The outer radius of the socket designed for aluminum wheels has been reduced.
- A protective rubber cushion has been fitted for chrome or painted nuts.

POWERFIT

WHEEL NUT SOCKET

mm

No.	S	D ₁	D ₂	H	L	▽g	📦	
B38Z -17H	17	24	22	22	100	200	5	
-19H	19	26	22	24	100	200	5	
-21H	21	27.5	22	26	100	200	5	
-22H	22	29.5	22	27	100	200	5	

- A setting with a 100mm length has been designed to fit the wheel exclusively.
- Operation has been improved with addition of the unit being able to be used as a torque wrench.
- A protective rubber cushion has been fitted for chrome or painted nuts.

POWERFIT

LONG WHEEL NUT SOCKET

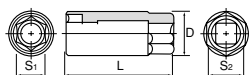
mm

No.	S	D ₁	D ₂	H	L	▽g	📦	
B38ZL -17H	17	24	24	22	180	330	5	
-19H	19	26	24	24	180	340	5	
-21H	21	27.5	24	26	180	350	5	

- An optimum long size designed for RV vehicles.
- Operation has been improved with addition of the unit being able to be used as a torque wrench.
- A protective rubber cushion has been fitted for chrome or painted nuts.

POWERFIT

● 1/2"sq. SPARK PLUG WRENCH



SPARK PLUG WRENCH

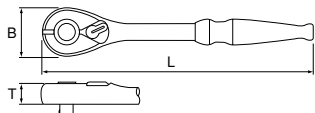
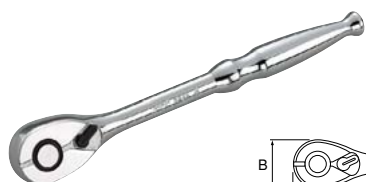
mm

No.	S ₁	S ₂	D	L	Application plug (Type)		▽g	📦	
					NGK	ND			
B35P-16H	16	—	22	63.5	BC,C	PQ,U	110	5	
-19H	19	—	25	62	BM	WM	200	5	
-20.8H	20.8	24	26.5	65	B	W	200	5	

- A magnet is fitted to facilitate work in confined spaces.
- The B35P-19H is a plug compatible with chain saws, lawn mowers, small electric generators, etc.

POWERFIT

● 1/2"sq. RATCHET HANDLE D.PAT.



RATCHET HANDLE

No.	Feed	B	T	L	▽g	📦	
BR4E	10°	39.5	18	250	580	5	



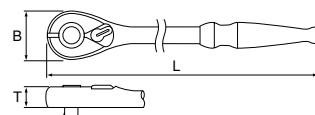
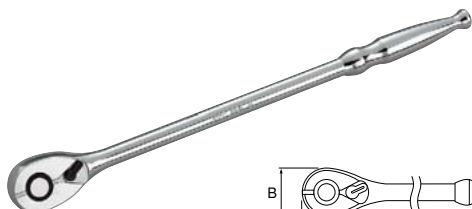
- CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



● 1/2"sq. LONG RATCHET HANDLE D.PAT.



LONG RATCHET HANDLE

No.	Feed	B	T	L	▽g	📦	
BR4L	10°	39.5	18	375	730	5	



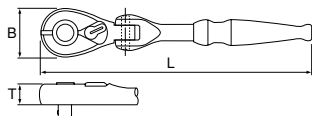
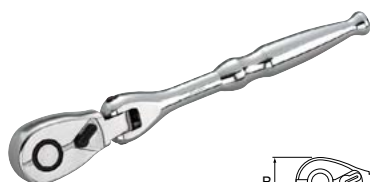
- CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
- DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

■ 1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



● 1/2"sq. FLEX RATCHET HANDLE D.PAT.



FLEX RATCHET HANDLE

No.	Feed	B	T	L	▽g	📦	
BR4F	10°	39.5	18	250	700	5	



- CAUTION • IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

■ 1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small)x2



FLEX LONG RATCHET HANDLE

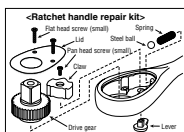
No.	Feed	B	T	L	▼g	
BR4FL	10°	39.5	18	375	870	5



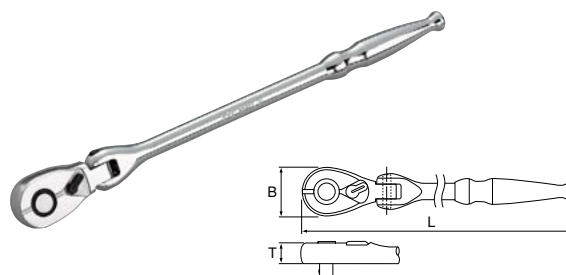
- IN FLEXIBLE PART, TOO MUCH FORCE MAKES MOVEMENT UNSTABLE.
 • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

1/2"sq. Ratchet head repair kit

No.	Drive	Contents
BR4E-K	1/2"sq.	Drive gear · Claw · Steel ball · Coil spring · Lever · Pan head screw (small) · Lid x1, Flat head screw (small) x2



1/2"sq. FLEX LONG RATCHET HANDLE D.PAT.



RATCHET HANDLE

JIS

No.	Type	Feed	B	T	L	W	A	▼g	
BR30F	Oval Head	18°	45	18	255	22	8.5	505	10

RATCHET HANDLE (COMPACT TYPE)

JIS

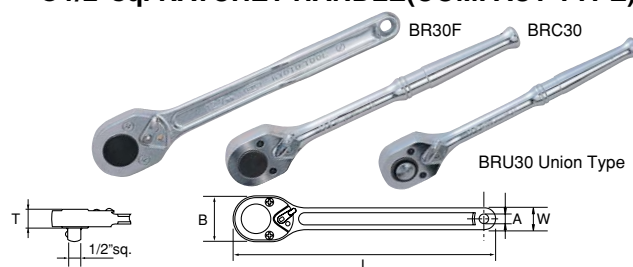
No.	Type	Feed	B	T	L	▼g	
BRC30	Oval Head	15°	40	19.5	255	595	10
BRU30	Oval Head · Union	15°	40	24.5	255	580	10

- The BRU30 has a union mechanism fitted to it.

- *Replacement parts are available. Check with your dealer for details.



- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

 1/2"sq. RATCHET HANDLE
 1/2"sq. RATCHET HANDLE (COMPACT TYPE)


SPINNER HANDLE

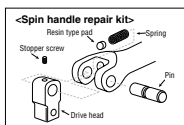
No.	D	Grip (ø)	L	▼g	
BS4E	22	21	400	700	5

LONG SPINNER HANDLE

No.	D	Grip (ø)	L	▼g	
BS4L	22	21	600	1,100	1

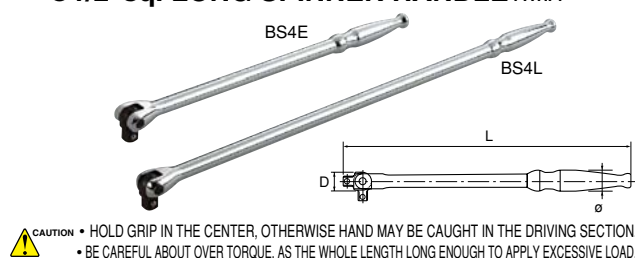
1/2"sq. Spinner handle head repair kit . PAT.P.

No.	Drive	Contents
BS4E-K	1/2"sq.	Drive · head · Pin · Pad · Spring · Stopper screw x1



1/2"sq. SPINNER HANDLE PAT.P.

1/2"sq. LONG SPINNER HANDLE PAT.P.



- HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
 • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.

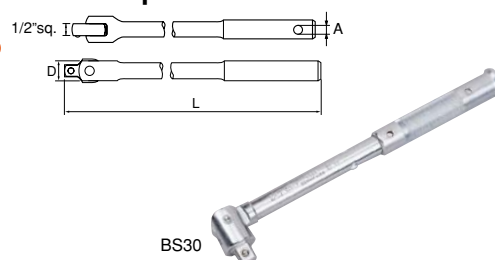
SPINNER HANDLE

No.	D	L	A	▼g	
BS30	27	300~380	12	650	5



- HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

1/2"sq. SPINNER HANDLE



EXTRA-LONG SPINNER HANDLE

No.	D	L	A	▼kg	
BS4-780	20	787	10	1.5	10

- Is optimal for crank pulley bolts, and hub centre bolt operations, etc., where heavy torque is necessary.

- The handle is hollow and light. • The unit has a knurl grip to help prevent slippage.

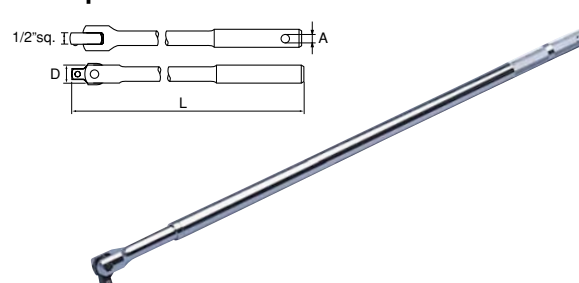


- HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
 • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

Drive set PAT.P.

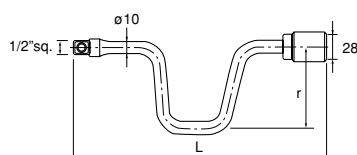
No.	Drive	Contents
BS4-780-1	1/2"sq.	Drive head ASSY · Pin · Steel ball · Spring · Hexagon shaped stopper screw x1

1/2"sq. EXTRA-LONG SPINNER HANDLE PAT.P.



SPEEDER HANDLE

No.	r (turning)	L	▼g	
BSD30	110	350	590	1

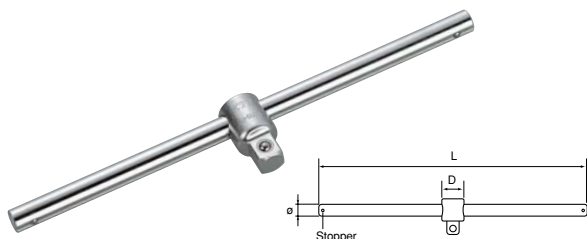


1/2"sq. SPEEDER HANDLE





1/2" sq.

● 1/2"sq. SLIDE HEAD HANDLE

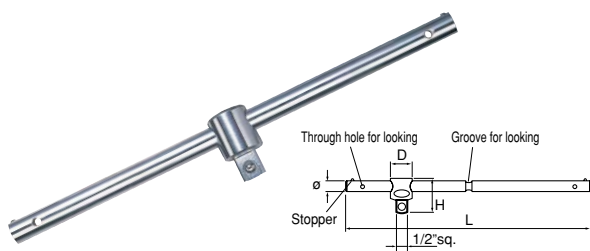


SLIDE HEAD HANDLE

No.	D	Handle (ø)	L	▼g	📦	
BHM4	22	12	250	275	5	



- From quick turning  to fastening&loosening  faster operation than using ratchet handle for some application.
- The head is unable to rotate as there is a groove placed into the handle.

● 1/2"sq. SLIDE HEAD HANDLE

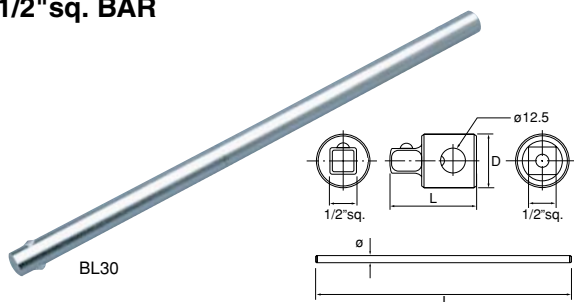


SLIDE HEAD HANDLE

No.	D	H	ø	L	▼g	📦	
BLHD30	22	39	12	250	280	10	

- From quick turning  to fastening&loosening  faster operation than using ratchet handle for some application.
- Sustaining sockets at certain angle by locking a ball in the head with holes on both ends of the handle.
- Groove on the handle easily locks head for quick turning.

● 1/2"sq. BAR

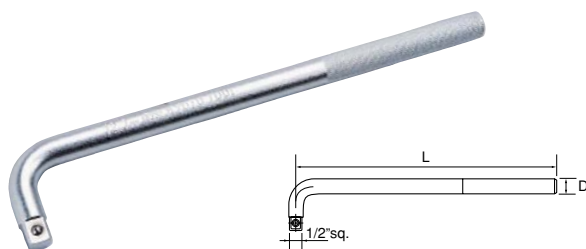


BAR

No.	L	ø	▼g	📦	
BL30	250	12	225	10	

- Handle used with BH30

● 1/2"sq. OFFSET HANDLE

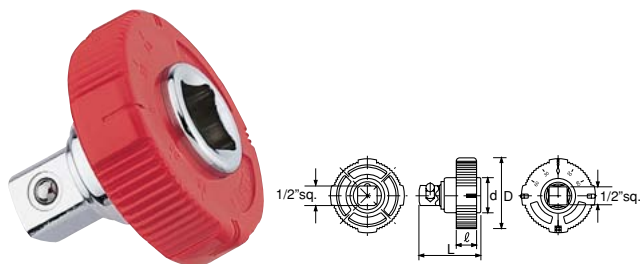


L SHAPE OFFSET HANDLE

No.	D	L	▼g	📦	
BO30-280	16	280	500	2	

- CAUTION** • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 1/2"sq. QUICK SPINNER® D.PAT.



QUICK SPINNER®

No.	D	d	L	ℓ	▼g	📦	
BE4-Q	46	24	34.5	11	100	10	

- Specially for quick turning for effective use with Ratchet handle or Extension bar. Grip has angle (90°) indication by groove with 30° indication in surface.
- Grip is made of resin for light weight.

- CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.

*Quick Spinner is the registered trademark of the Kyoto Tool Co., LTD.

● 1/2"sq. EXTENSION BAR




EXTENSION BAR

No.	D ₁	D ₂	L	▼g	📦	
BE4- 050	17	22	50	90	5	
- 075	17	22	75	140	5	
- 100	17	22	100	170	5	
- 150	17	22	150	250	5	
- 200	17	22	200	330	5	
- 270	17	22	270	440	5	
- 600	17	22	600	1050	1	
-1000	17	22	1000	1800	1	

- CAUTION** • DO NOT USE MULTIPLE EXTENSIONS.

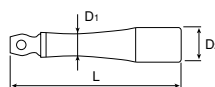
WOBBLE EXTENSION BAR

No.	D ₁	D ₂	L	▼g		
BE4-050JW	17	22	50	90	5	
-075JW	17	22	75	140	5	
-100JW	17	22	100	170	5	
-150JW	17	22	150	250	5	
-200JW	17	22	200	330	5	
-270JW	17	22	270	440	5	

CAUTION • COMPARED WITH ORDINARY EXTENSION BAR, IT ENDURES LOWER LOAD FOR ITS MECHANISM. DO NOT TO APPLY EXCESSIVE POWER.
• DO NOT EXTEND WITH ANOTHER


POWERFIT

●1/2"sq. WOBBLE EXTENSION BAR



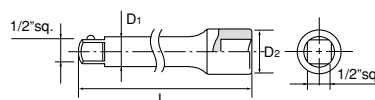
BE4-075JW

EXTENSION BAR

No.	D ₁	D ₂	L	▼g		
BE30 - 75	16	24	75	130	10	
- 150	16	24	150	240	10	
- 250	16	24	250	400	10	
- 600	16	24	600	940	5	
- 1000	16	24	990	1,600	5	

CAUTION • DO NOT EXTEND WITH ANOTHER

●1/2"sq. EXTENSION BAR



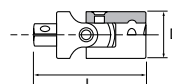
UNIVERSAL JOINT

No.	D	L	▼g		
BJ4	25	67	140	5	

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

POWERFIT

●1/2"sq. UNIVERSAL JOINT

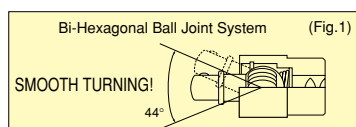


FLEX BALL JOINT

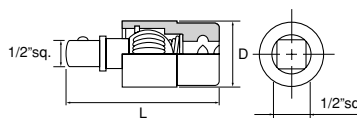
No.	D	L	▼g		
BJF30	29	65	170	5	

• 12pt. Ball Joint system works for 44° smooth turning.
• Short length for effective use in narrow space. (Fig.1)


CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



●1/2"sq. FLEX BALL JOINT

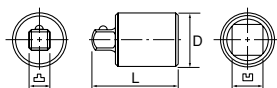


SOCKET ADAPTOR

No.	sq.		D	L	▼g		
	Indent	Projection					
BA43	1/2"	3/8"	22	35	45	5	

CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.


POWERFIT



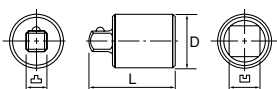
●1/2"sq. SOCKET ADAPTOR



SOCKET ADAPTOR

No.	sq.		D	L	▼g		
	Indent	Projection					
BA3040	1/2"	3/4"	26	40	110	10	

CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE DO NOT APPLY EXCESSIVE POWER.



●1/2"sq. SOCKET ADAPTOR



BA43

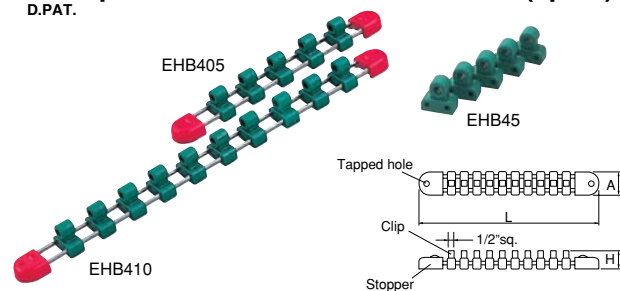


BA3040



● 1/2"sq. SOCKET HOLDER • CLIP SET (5pcs.)

D.PAT.



SOCKET HOLDER-CLIP SET (5pcs.)

No.	No. of clips	H	A	L	▼g	📦
EHB405	5	26.5	25	215	120	10
EHB410	10	26.5	25	365	150	10

- Change of holder shape enables easier insertion/removal of socket and increased holding strength compared with previous model. (Does not fall off so easily while carving)
- The insertion angle has its own holder coloring setting.

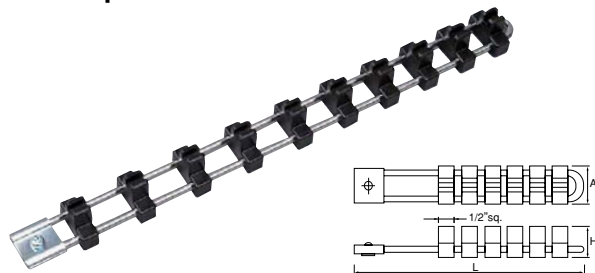


• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

No. EHB45	▼g 30	📦 10
Clip	5pcs.	

- Spare clip for EHB405, 410.
- Can be used for EHB205-215 and 305-315.

● 1/2"sq. SOCKET HOLDER



SOCKET HOLDER

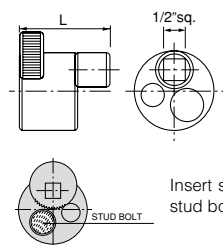
No.	No. of clips	H	A	L	▼g	📦
B30 - 6R	6	24	35	195	90	5
-10R	10	24	35	320	145	5

- For managing sockets in 6pcs(B30-6R)or 10pcs(B30-10R).



• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 1/2"sq. STUD REMOVER



Insert stud remover in stud bolt.

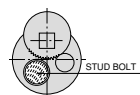
STUD REMOVER

No.	Bolt Diameter		L	▼g	📦
	Max.	Min.			
BSR30	ø19	ø6	56	400	1

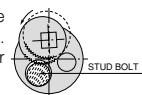
- For use on stud bolts.
- *Replacement parts are available. Check with your dealer for details.



• USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.



Insert the drive of atoll in the stud removerand turning. (The teeth of stud remover bite the bolt)



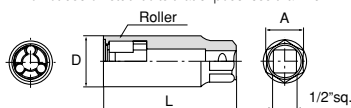
Continue to turn the tool for fastening oloosening the stud bolt,rand the bolt.

● 1/2"sq. STUD BOLT REMOVER • SET (4pcs.)



- Usage
- Removal & installation of stud bolts (Can be used on round ones as well).
- Characteristics
- For fastening/loosening stud bolts.
 - Usable either for fastening or loosening. Ratchet mechanism enables continuous operation.

*Do not use on stud bolts that expose less than 20mm.



*The A is a wrench that is shaped like a hexagon.

STUD BOLT REMOVER • SET(4pcs.)

No. BSR354	▼kg 1.1	📦 1
Stud Bolt Remover	BSR35-6, 8, 10, 12	
Metal Case	L215×W82×H50mm	

No.	D	L	S	Applicable Size	▼g	📦
BSR35 - 6	24	65	21	M 6	150	1
- 8	24	65	21	M 8	150	1
-10	28	75	21	M10	220	1
-12	28	75	21	M12	220	1



• USE A SOCKET APPROPRIATE TO THE SIZE OF A BOLT OR NUT.
• CHECK THE STUD BLOT FIRMLY CONNECTED WITH THE TOOL BEFORE APPLYING ANY POWER.

● 3/4"sq. SOCKET WRENCH SET (10pcs.)



SOCKET WRENCH SET (10pcs.)

No.	▼kg	📦
B408	10	1
Socket (12pt.)	B40-22, 24, 27, 30, 32, 36, 41, 46	
Ratchet Handle	BR41	
Extension Bar	200 BE40-200	
Metal Case	B410-M L535×W175×H85mm	

*Contents may be changed according to the purpose of usage.

● 3/4"sq. SOCKET WRENCH SET (13pcs.)



SOCKET WRENCH SET (13pcs.)

No.	▼kg	📦
B4008R	13.5	1
Socket (12pt.)	B40-27, 30, 32, 36, 41, 46, 50, 55	
No. B4108R	▼kg 12.5	📦 1
Socket (12pt.)	B40-26, 29, 32, 35, 38, 41, 46, 50	
Common Items		
Ratchet Handle	BR41	
Extension Bar	BE40-200, 400	
Bar	BL40	
Head	BH40	
Metal Case	B4110-M L535×W175×H85mm	

*Equivalent to Japanese Machine Tool Standards Catalog 608ISO, however, the contents may be subject to slight differences.


POWERFIT

SOCKET WRENCH SET (14pcs.)			mm
No. B410	▼kg 13.2	📦 1	
Socket (12pt.)	B40-22, 24, 27, 30, 32, 35, 36, 38, 41, 46		
Ratchet Handle	BR41		
Spinner Handle	BS40-500		
Extension Bar	130	BE40-130	
	200	BE40-200	
Metal Case	B410-M L535×W175×H85mm		

POWERFIT

●3/4"sq. SOCKET WRENCH SET (14pcs.)





SOCKET WRENCH SET (15pcs.)			mm
No. B4110	▼Kg 16.6	 1	
Socket (12pt.)	B40-23, 26, 29, 32,35, 38, 41, 46, 50, 54		
Ratchet Handle	BR41		
Spinner Handle	BS40-500		
Extension Bar	200	BE40-200	
	400	BE40-400	
Bar	BL40-500		
Head	BH40		
Metal Case	B4110-M L535×W175×H85mm		

POWERFIT (Delete unless over B40- 46)

●3/4"sq. SOCKET WRENCH SET (15pcs.)



SOCKET WRENCH SET (18pcs.)			in
No. BB413R	▼kg 15.5	 1	
Socket (12pt.) 	BB40-1-1/16, 1-1/8, 1-3/16, 1-1/4, 1-5/16, 1-3/8, 1-7/16, 1-1/2, 1-5/8, 1-3/4, 1-13/16, 1-7/8, 2		
Ratchet Handle	BR41		
Extension Bar	200	BE40-200	
	400	BE40-400	
Bar	BL40		
Head	BH40		
Metal Case	B408R-MA L535×W175×H85mm		

*Equivalent to Japanese Machine Tool Standards Catalog 613, however, the contents may be subject to slight differences.

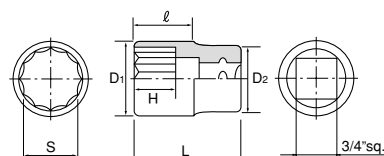
●3/4"sq. SOCKET WRENCH SET (18pcs.)



SOCKET										mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g	📦		
B40 -17	17	26	33	12	46	25	160	5		
-18	18	27	33	13	46	25	160	5		
-19	19	27.5	33	14	46	25	160	5		
-20	20	29.5	33	14	47	26	170	5		
-21	21	30	33	15	47	26	170	5		
-22	22	31	33	16	49	28	170	5		
-23	23	32.5	33	16	49	28	170	5		
-24	24	34	33	18	50	29	180	5		
-25	25	35	34	19	51	30	200	5		
-26	26	36.5	34	19	51	30	210	5		
-27	27	38	34	19	51	30	220	5		
-28	28	39	34	20	52	31	230	5		
-29	29	40	34	21	53	32	240	5		
-30	30	42	36	22	54	33	270	5		
-31	31	43	38	23	55	34	300	5		
-32	32	44	38	24	56	35	310	5		
-33	33	46	38	24	57	36	340	5		
-34	34	47	38	25	57	36	350	5		
-35	35	48	38	26	59	38	370	5		
-36	36	50	40	27	60	39	410	5		
-37	37	51	40	28	61	40	430	5		
-38	38	52	40	29	62	41	440	5		
-39	39	54	40	30	63	42	470	5		
-40	40	55	40	31	64	43	490	5		
-41	41	56	40	32	65	44	500	5		
-42	42	57.5	38	35	66	45	540	5		
-43	43	59	40	36	67	46	590	5		
-44	44	60	42	37	68	47	630	5		
-45	45	62	44	37	69	48	710	5		
-46	46	63	44	35	70	49	750	2		
-47	47	64	44	39	71	50	780	2		
-48	48	65.5	44.5	39	72	51	810	2		
-50	50	68	46	42	74	53	880	2		
-52	52	71	48	47	75	54	920	2		
-54	54	73	48	48	76	55	950	2		
-55	55	75	48	51	79	58	1,040	2		
-56	56	76	48	52	80	59	1,060	2		
-57	57	77	48	53	81	60	1,080	2		
-58	58	79	48	53	82	61	1,180	2		
-60	63	83.5	58	53	84	63	1,390	2		
-63	56	76	48	52	80	59	1,060	2		
-65	65	88	58	52	84	63	1,520	2		
-70	70	92	58	52	84	63	1,580	2		
-75	75	98.5	58	56	86	65	1,720	2		
-80	80	104.5	63	59	90	69	2,040	2		
-85	85	111	63	59	90	69	2,220	2		

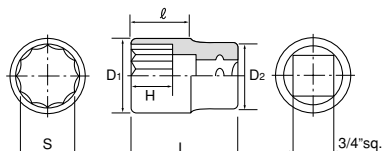
POWERFIT (Except below B40-46)

●3/4"sq. SOCKET



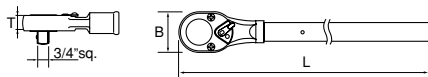
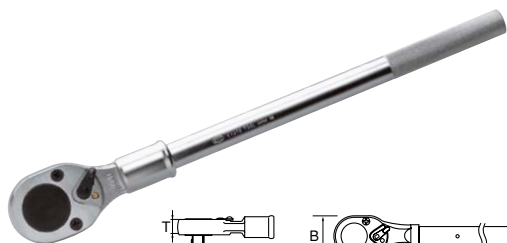
3/4" sq.

● 3/4"sq. SOCKET



SOCKET									in
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
BB40 -1-1/16	26.9	38	34	20	51	28	230	5	
-1-1/8	28.5	40	34	21	53	30	250	5	
-1-3/16	30.1	42	36	22	54	31	280	5	
-1-1/4	31.7	44	38	24	56	33	300	5	
-1-5/16	33.3	47	38	25	58	34	338	5	
-1-3/8	34.9	48	38	26	59	36	340	5	
-1-7/16	36.5	50	40	27	60	37	360	5	
-1-1/2	38.1	52	40	29	62	39	480	5	
-1-5/8	41.2	56	37	32	65	44	500	5	
-1-3/4	44.4	61	43	34	68	47	660	5	
-1-13/16	46.0	63	44	35	70	49	740	5	
-1-7/8	47.6	65	44	36	71	50	780	5	
-2	50.8	69	47	38	75	54	960	5	

● 3/4"sq. RATCHET HANDLE



RATCHET HANDLE									
No.	Type	Feed	B	T	L	▼kg			
BR41	Oval Head	15°	69	25.5	500	2.2	1		

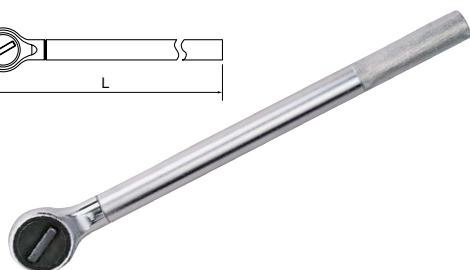
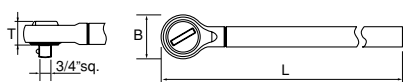
• Standard flat head type ratchet handle.

• 24 teeth gear with 15° increments.

*Replacement parts are available. Check with your dealer for details.

CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/4"sq. RATCHET HANDLE (ROUND HEAD)



RATCHET HANDLE (ROUND HEAD)									
No.	Type	Feed	B	T	L	▼kg			
BRM40	Round Head	6°	67	36	500	2.37	1		

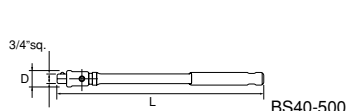
• Round head with compact design.

• 60 teeth gear with small 6° increments.

*Replacement parts are available. Check with your dealer for details.

CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● 3/4"sq. SPINNER HANDLE • L SHAPE HANDLE



BS40-500



BO40-320



SPINNER HANDLE									
No.	D	L	▼kg						
BS40-500	40	500	2	1					

CAUTION • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
• DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

L SHAPE HANDLE									
No.	D	L	▼kg						
BO40-320	24	315	1.5	2					

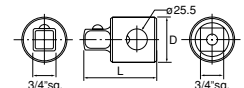
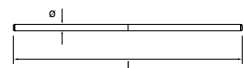
CAUTION • DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

● 3/4"sq. HEAD • BAR

BH40



BL40



BL40-500

HEAD									
No.	D	L	▼g						
BH40	40	71	300	1					

CAUTION • ALWAYS USE THE DESIGNATED BAR (No. BL40, BL40-500).

BAR									
No.	L	ø	▼kg						
BL40	500	25	1.38	1					
BL40-500	500	25	1.9	1					

• For use with BH40.

• The BL40 employs a succession system which makes it compact after use.

EXTRA-LONG SPINNER HANDLE

No.	D	L	A	▼kg	☒	
BS6-1050	38	1000	10	3.7	1	

- Is suitable for construction machinery and in large sized vehicles where high torque is necessary.
- CAUTION** • HOLD GRIP IN THE CENTER, OTHERWISE HAND MAY BE CAUGHT IN THE DRIVING SECTION.
- DO NOT OVER TORQUE, AS THE WHOLE LENGTH IS LONG ENOUGH TO APPLY EXCESSIVE LOAD.

Drive set PAT.P.

No.	Drive	Contents
BS6-K	3/4"sq.	Drive head ASSY · Pin · Steel ball · Spring · Hexagon shaped hole fitted stop screw · Exchangeable jig · Exchangeable 6 hexagon shaped pole wrench x1

EXTENSION BAR

No.	D ₁	D ₂	L	▼g	☒	
BE40 - 75	25	34	75	230	1	
- 130	25	34	130	500	1	
- 200	25	34	200	800	1	
- 400	25	34	400	1,600	1	



- DO NO EXTEND WITH 2 OR MORE BARS.

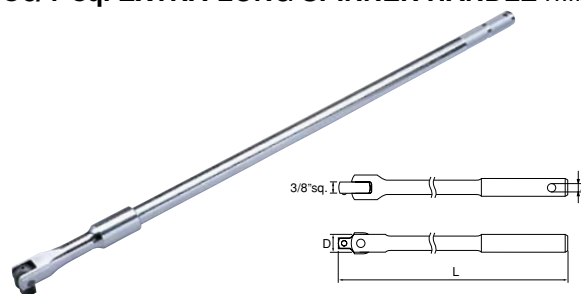
SOCKET ADAPTOR

No.	sq.		D	L	▼g	☒	
	☐	☐					
BA4030	19.0	12.7	34	43	154	10	

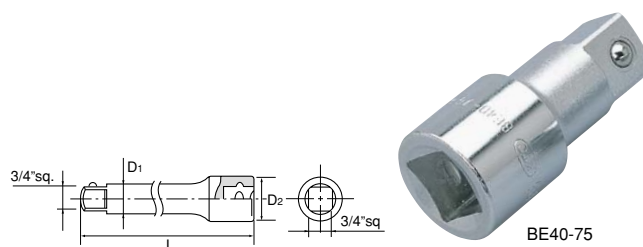


- FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE, DO NOT APPLY EXCESSIVE POWER. DO NOT APPLY EXCESSIVE PRESSURE.

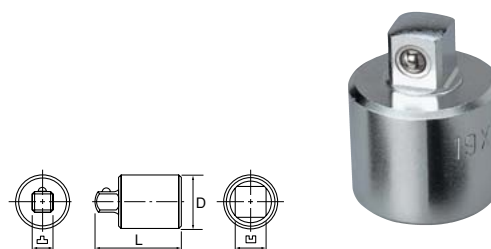
3/4"sq. EXTRA-LONG SPINNER HANDLE PAT.P.



3/4"sq. EXTENSION BAR



3/4"sq. SOCKET ADAPTOR

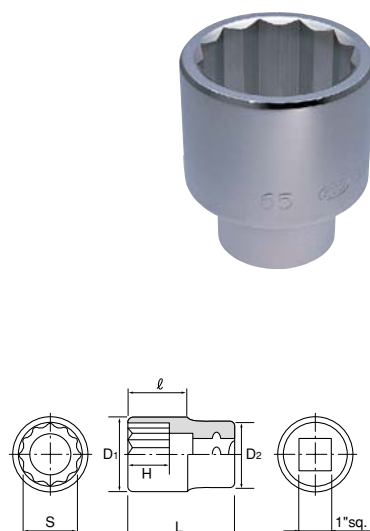


SOCKET

mm

No.	S	D ₁	D ₂	H	L	ℓ	▼g	☒	
B50 -27	27	40.5	44	19	60	31	370	1	
-30	30	44	44	21	65	36	410	1	
-32	32	46.5	44	23	65	36	430	1	
-33	33	48	48	23.5	65	36	510	1	
-35	35	50.5	48	24.5	65	36	530	1	
-36	36	54	52	30	72	43	720	1	
-38	38	54	52	32	74	45	710	1	
-40	40	56.5	52	33	76	47	750	1	
-41	41	60	52	34	77	48	850	1	
-42	42	59	56	35	79	50	810	1	
-46	46	66	52	40	82	53	980	1	
-50	50	71	56	43	86	57	1,200	1	
-54	54	74	56	46	90	61	1,270	1	
-55	55	78	56	48	92	63	1,430	1	
-58	58	79	56	50	94	65	1,370	1	
-60	60	84	56	52	98	69	1,660	1	
-63	63	88	60	56	103	74	1,980	1	
-65	65	91	60	58	103	74	2,170	1	
-67	67	94	60	59	108	79	2,360	1	
-68	68	94	60	59	109	80	2,410	1	
-70	70	97	60	60	111	82	2,480	1	
-71	71	97	65	63	113	84	2,500	1	
-75	75	104	65	66	118	89	3,050	1	
-77	77	107	65	67	120	91	3,260	1	
-80	80	110	65	70	124	95	3,450	1	
-83	83	110.5	65	72	127	98	3,610	1	
-85	85	117	70	75	130	101	4,170	1	
-90	90	119	75	78	130	101	4,370	1	
-95	95	125.5	85	76	130	101	4,800	1	
-100	100	131.5	85	75	130	101	5,200	1	

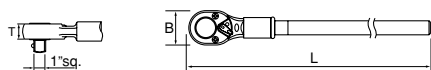
1"sq. SOCKET



RATCHET HANDLE

No.	Type	B	T	L	Feed	▼kg	☒	
BR50	Oval Head	68	31.5	715	15°	3.13	1	

- Standard flat head type ratchet handle.
- 24 teeth gear with 15° increments for smooth movement.
- *Replacement parts are available. Check with your dealer for details.
- CAUTION** • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



1"sq. RATCHET HENDLE



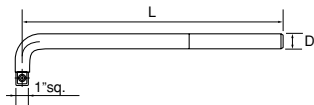


●1"sq. L SHAPE HANDLE



L SHAPE HANDLE					
No.	D	L	▼kg	📦	
BO50-600	28.5	600	3.0	1	

⚠ CAUTION • BE CAREFUL ABOUT OVER TORQUE, AS THE WHOLE LENGTH LONG ENOUGH TO APPLY EXCESSIVE LOAD.



●1"sq. EXTENSION BAR

BE50-400



BE50-200



EXTENSION BAR					
No.	D ₁	D ₂	L	▼kg	📦
BE50 - 200	32	44	200	1.3	1
- 400	32	44	400	2.6	1

• You can choose from both 200mm length and 400mm in accordance with your working environment.
• Suitable for tightening for Hub nut of heavy trucks.

⚠ CAUTION • DO NOT EXTEND WITH 2 OR MORE BARS.

2. CONVENTIONAL TOOLS

IMPACT SOCKETS and ACCESSORIES



CAUTION Socket for impact wrench and accessories

- Make sure that you read the User's manual carefully before use.
- Use the impact wrench socket and the impact wrench accessories.
- Make sure that all users are wearing safety glasses, ear plugs, hard hat, dust mask, and safety boots while working.
- Do not allow impact wrench to make contact with the nut.
- Do not connect more than one attachment.
- Do not freely turn while sockets or attachments are attached.

- Check the turning direction before use.
- Be sure to remove the air hose before replacing the socket.
- Check that the socket is correctly attached before commencing operation.
- It is dangerous to touch the socket during operation.
- Never use a non-conforming pin or ring. If the correct pin and ring is not used, there is a danger the pin may pop out when the tool is being turned freely.

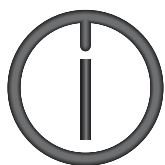


The pursuit of a user friendly socket for the 21st Century Version Tool impact wrench

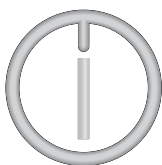
- 3 different lengths can be set according to use. (Standard, Semi-deep, Deep)
- The semi-deep and the deep type are of a thin wall design that can be used in confined spaces.
- In addition to the usual engraved stamp, the large easy-to-read size indication is displayed.



Easy-to-read size indication



Pins and rings are differentiated for use by color.



Standard Semi-deep (BP4)



Semi-deep (BP4M)

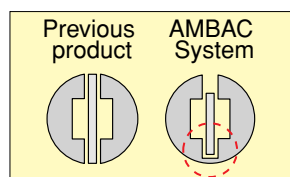


Deep (BP4L)

- Pins and rings are differentiated by color and easily matched.
- By employing a new type ring, pins and rings are easily attached. (Refer to P.137 for attachment procedure)

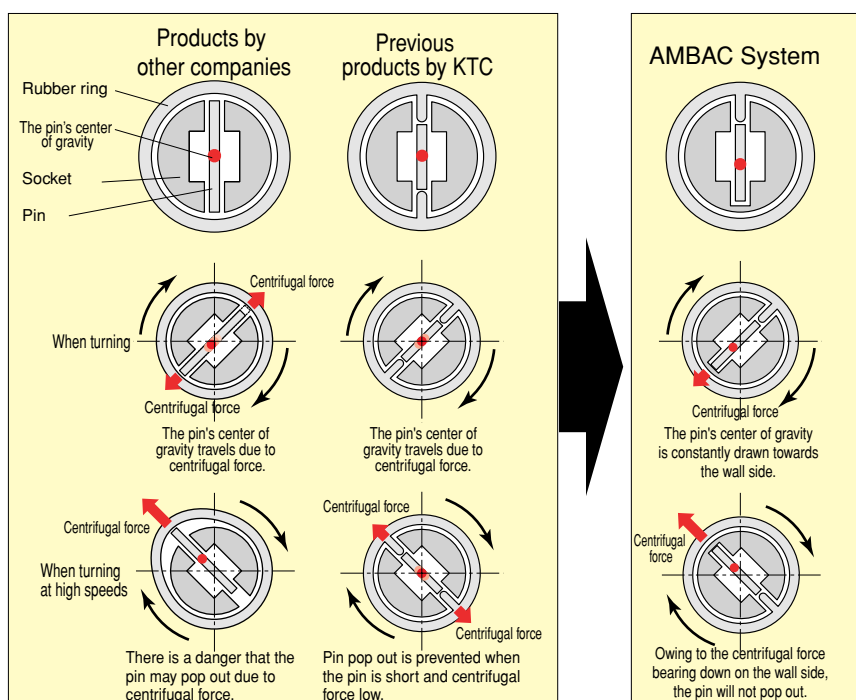
A new pin pop-out prevention mechanism [AMBAC system] ^{*(PAT.P.)} is employed by the 21st Century Version Tool.

*AMBAC: Anti-disconnect Mechanism By Availing of Centrifugal force



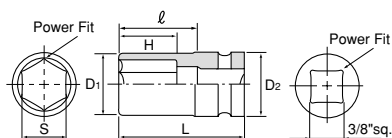
Half of the pin hole has been used as a wall, and by shortening the length of the pin, the centrifugal force that occurs when the tool is being turned constantly bears down upon the wall side, preventing the pin from popping out. Refer to the diagram on the right.

By employing the AMBAC System, the pin is prevented from popping out when the impact wrench is being used.



3/8" sq.

● 3/8"sq. IMPACT SOCKET (SEMI-DEEP)

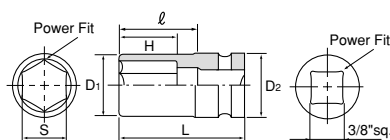
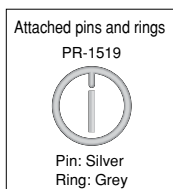


IMPACT SOCKET (SEMI-DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
BP3M-07T	7	11.5	22	6	34	21	47	5	
-08T	8	13	22	7	34	21	50	5	
-09T	9	14	22	8	34	21	52	5	
-10T	10	15.5	22	8	34	21	52	5	
-12T	12	18	22	9	34	21	58	5	
-13T	13	19	22	9	34	21	58	5	
-14T	14	20.5	22	9	36	23	64	5	
-17T	17	25	22.5	12	36	23	80	5	
-19T	19	27.5	25	12	39	26	108	5	
-21T	21	29	25	14	39	26	108	5	
-22T	22	31	25	14	41	28	130	5	

* Pins and rings are sold separately.

POWERFIT

● 3/8"sq. IMPACT SOCKET (LONG)

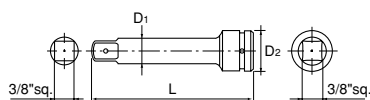
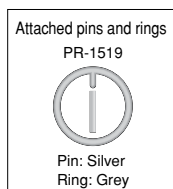


IMPACT SOCKET (LONG)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
BP3L-06T	6	10	22	5	55	42	57	5	
-07T	7	11.5	22	6	55	42	60	5	
-08T	8	13	22	7	55	42	68	5	
-09T	9	14	22	8	55	42	73	5	
-10T	10	15.5	22	10	55	42	73	5	
-11T	11	17	22	12	55	42	82	5	
-12T	12	18	22	12	55	42	88	5	
-13T	13	19	22	12	55	42	88	5	
-14T	14	20.5	22	12	80	67	137	5	
-17T	17	25	22.5	14	80	67	195	5	
-19T	19	27.5	25	14	80	67	223	5	
-21T	21	29	25	15	80	67	237	5	
-22T	22	31	25	16	80	67	281	5	

* Pins and rings are sold separately.

POWERFIT

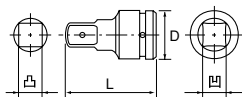
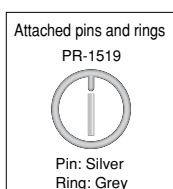
● 3/8"sq. IMPACT EXTENSION BAR



IMPACT EXTENSION BAR							
No.	D ₁	D ₂	L	▼g			
BEP3-075	12.7	22	75	100	5		
-100	12.7	22	100	120	5		

⚠ CAUTION • DO NOT USE MULTIPLE EXTENSIONS.
• Match the black pin with the black ring, and the silver pin with the grey ring.

● 3/8"sq. IMPACT ADAPTOR



IMPACT ADAPTOR							
No.	sq.		D	L	▼g		
	凹	凸					
BAP34	9.5	12.7	22	42	70	5	

⚠ CAUTION • FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER. DO NOT APPLY EXCESSIVE POWER OR IMPACT.
• Match the black pin with the black ring, and the silver pin with the grey ring.

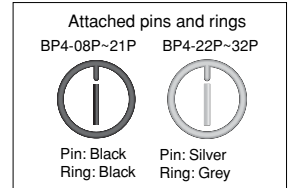
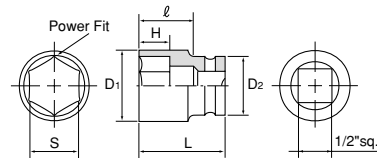
*Please check the merchandise inventory for a product that is marked by before placing an order.

IMPACT SOCKET									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4-08P	8	15	25	6	33	15	65	5	
-09P	9	16	25	6.5	33.5	15.5	68	5	
-10P	10	17	25	7	34	16	68	5	
-11P	11	18.5	25	7.5	34.5	16.5	72	5	
-12P	12	20	25	8	35	17	77	5	
-13P	13	21.5	25	9	36	18	81	5	
-14P	14	22.5	25	9.5	36.5	18.5	83	5	
-15P	15	24	25	10.5	37.5	19.5	89	5	
-16P	16	26	25	11	39	21	103	5	
-17P	17	27.5	25	12	39	21	110	5	
-19P	19	30	25	13	40	22	123	5	
-21P	21	32.5	25	14	41	23	135	5	
-22P	22	34	29	15	42	24	173	5	
-23P	23	35	29	16	43	25	178	5	
-24P	24	36.5	29	16.5	43.5	25.5	186	5	
-26P	26	38	29	18	45	27	193	5	
-27P	27	40	29	18.5	45	27	212	5	
-28P	28	42	29	19	46	28	233	5	
-29P	29	43	29	19.5	46.5	28.5	243	5	
-30P	30	44	29	20	47	29	246	5	
-32P	32	46	29	21	48	30	261	5	

POWERFIT

⚠ CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 1/2"sq. IMPACT SOCKET (STANDARD) PAT.P. WITH PINS & RINGS



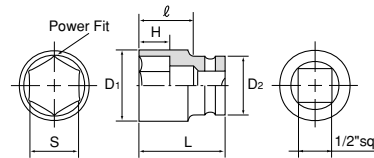
IMPACT SOCKET									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4-08	8	15	25	6	33	15	65	5	
-09	9	16	25	6.5	33.5	15.5	68	5	
-10	10	17	25	7	34	16	68	5	
-11	11	18.5	25	7.5	34.5	16.5	72	5	
-12	12	20	25	8	35	17	77	5	
-13	13	21.5	25	9	36	18	81	5	
-14	14	22.5	25	9.5	36.5	18.5	83	5	
-15	15	24	25	10.5	37.5	19.5	89	5	
-16	16	26	25	11	39	21	103	5	
-17	17	27.5	25	12	39	21	110	5	
-19	19	30	25	13	40	22	123	5	
-21	21	32.5	25	14	41	23	135	5	
-22	22	34	29	15	42	24	173	5	
-23	23	35	29	16	43	25	178	5	
-24	24	36.5	29	16.5	43.5	25.5	186	5	
-26	26	38	29	18	45	27	193	5	
-27	27	40	29	18.5	45	27	212	5	
-28	28	42	29	19	46	28	233	5	
-29	29	43	29	19.5	46.5	28.5	243	5	
-30	30	44	29	20	47	29	246	5	
-32	32	46	29	21	48	30	261	5	

POWERFIT

● 1/2"sq. IMPACT SOCKET (STANDARD) PAT.P.

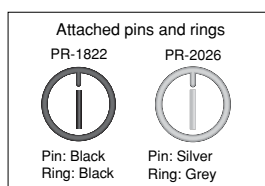


* Pins and rings are sold separately.

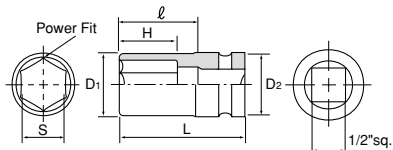




● 1/2"sq. IMPACT SOCKET (SEMI-DEEP) PAT.P. WITH PINS & RINGS



PR-1822 for BP4M-08TP~21TP
PR-2026 for BP4M-22TP~36TP



IMPACT SOCKET (SEMI-DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4M-08TP	8	13.5	25	16	52	34	77	5	
-09TP	9	14.5	25	16	52	34	81	5	
-10TP	10	15.5	25	20	52	34	79	5	
-11TP	11	17	25	20	52	34	86	5	
-12TP	12	18	25	20	52	34	89	5	
-13TP	13	19	25	20	52	34	90	5	
-14TP	14	20.5	25	20	52	34	96	5	
-15TP	15	22	25	20	52	34	102	5	
-16TP	16	23	25	20	52	34	105	5	
-17TP	17	25	25	24	52	34	116	5	
-18TP	18	26	25	24	52	34	120	5	
-19TP	19	27.5	25	24	52	34	127	5	
-20TP	20	28	25	24	52	34	119	5	
-21TP	21	29	25	24	52	34	124	5	
-22TP	22	31	29	25	52	34	166	5	
-23TP	23	32.5	29	25	52	34	173	5	
-24TP	24	34	29	25	52	34	179	5	
-25TP	25	35	29	25	52	34	184	5	
-26TP	26	36.5	29	25	75	57	285	5	
-27TP	27	38	29	25	75	57	307	5	
-28TP	28	40	29	25	75	57	336	5	
-29TP	29	41	29	25	75	57	346	5	
-30TP	30	42	29	25	75	57	349	5	
-31TP	31	43	29	25	75	57	359	5	
-32TP	32	44	29	25	75	57	362	5	
-33TP	33	45	29	28	75	57	377	5	
-34TP	34	46	29	28	75	57	396	5	
-35TP	35	47	29	28	75	57	414	5	
-36TP	36	48	29	28	75	57	433	5	

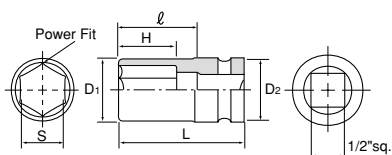
POWERFIT

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 1/2"sq. IMPACT SOCKET (SEMI-DEEP) PAT.P.



* Pins and rings are sold separately.



IMPACT SOCKET (SEMI-DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4M-08T	8	13.5	25	16	52	34	77	5	
-09T	9	14.5	25	16	52	34	81	5	
-10T	10	15.5	25	20	52	34	79	5	
-11T	11	17	25	20	52	34	86	5	
-12T	12	18	25	20	52	34	89	5	
-13T	13	19	25	20	52	34	90	5	
-14T	14	20.5	25	20	52	34	96	5	
-15T	15	22	25	20	52	34	102	5	
-16T	16	23	25	20	52	34	105	5	
-17T	17	25	25	24	52	34	116	5	
-18T	18	26	25	24	52	34	120	5	
-19T	19	27.5	25	24	52	34	127	5	
-20T	20	28	25	24	52	34	119	5	
-21T	21	29	25	24	52	34	124	5	
-22T	22	31	29	25	52	34	166	5	
-23T	23	32.5	29	25	52	34	173	5	
-24T	24	34	29	25	52	34	179	5	
-25T	25	35	29	25	52	34	184	5	
-26T	26	36.5	29	25	75	57	285	5	
-27T	27	38	29	25	75	57	307	5	
-28T	28	40	29	25	75	57	336	5	
-29T	29	41	29	25	75	57	346	5	
-30T	30	42	29	25	75	57	349	5	
-31T	31	43	29	25	75	57	359	5	
-32T	32	44	29	25	75	57	362	5	
-33T	33	45	29	28	75	57	377	5	
-34T	34	46	29	28	75	57	396	5	
-35T	35	47	29	28	75	57	414	5	
-36T	36	48	29	28	75	57	433	5	

POWERFIT

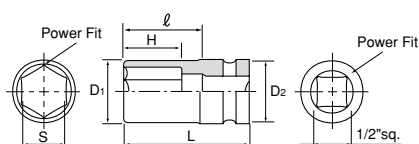
● 1/2"sq. IMPACT SOCKET (SEMI-LONG)



IMPACT SOCKET (SEMI-LONG)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
PB32-10H	10	15	25	20	52	34	80	5	
-12H	12	18	25	20	52	34	86	5	
-13H	13	19	25	20	52	34	87	5	
-14H	14	20	25	20	52	34	110	5	
-17H	17	25	25	24	52	34	140	5	
-19H	19	28	26	24	52	34	160	5	
-21H	21	29	26	24	52	34	180	5	
-22H	22	31	29	25	52	34	180	5	
-23H	23	32	29	25	52	34	190	5	
-24H	24	34	29	25	52	34	200	5	
-26H	26	36	29	25	75	57	210	5	
-27H	27	38	29	25	75	57	220	5	
-30H	30	42	29	25	75	57	350	5	
-32H	32	44	29	25	75	57	370	5	

* Pins and rings are sold separately.

POWERFIT

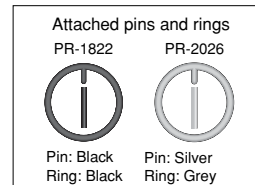
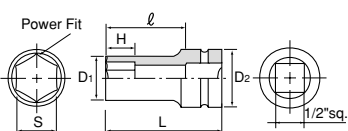


IMPACT SOCKET (DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4L -10TP	10	15.5	25	20	75	57	101	5	
-12TP	12	18	25	20	75	57	124	5	
-13TP	13	19	25	20	75	57	124	5	
-14TP	14	20.5	25	20	80	62	144	5	
-17TP	17	25	24.5	24	80	62	187	5	
-19TP	19	27.5	25	24	80	62	195	5	
-21TP	21	29	25	24	80	62	193	5	
-22TP	22	31	29	25	80	62	250	5	
-23TP	23	32.5	29	25	80	62	264	5	
-24TP	24	34	29	25	80	62	280	5	
-26TP	26	36.5	29	25	100	82	391	5	
-27TP	27	38	29	25	100	82	424	5	
-30TP	30	42	29	25	100	82	487	5	
-32TP	32	44	29	25	100	82	508	5	



CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT®



PR-1822 for BP4L-10TP~21TP
PR-2026 for BP4L-22TP~32TP

●1/2"sq. IMPACT SOCKET (DEEP) PAT.P. WITH PINS & RINGS



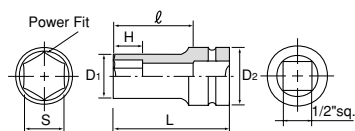
IMPACT SOCKET (DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP4L -10T	10	15.5	25	20	75	57	101	5	
-12T	12	18	25	20	75	57	124	5	
-13T	13	19	25	20	75	57	124	5	
-14T	14	20.5	25	20	80	62	144	5	
-17T	17	25	24.5	24	80	62	187	5	
-19T	19	27.5	25	24	80	62	195	5	
-21T	21	29	25	24	80	62	193	5	
-22T	22	31	29	25	80	62	250	5	
-23T	23	32.5	29	25	80	62	264	5	
-24T	24	34	29	25	80	62	280	5	
-26T	26	36.5	29	25	100	82	391	5	
-27T	27	38	29	25	100	82	424	5	
-30T	30	42	29	25	100	82	487	5	
-32T	32	44	29	25	100	82	508	5	

POWERFIT®

●1/2"sq. IMPACT SOCKET (DEEP) PAT.P.



* Pins and rings are sold separately.



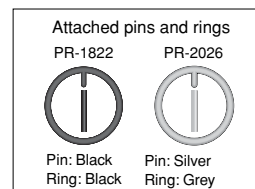
IMPACT SOCKET (LONG)									mm
No.	S	D ₁	D ₂	d	H	L	ℓ	▽g	
BP4LL-12TP	12	18	25	10	20	150	132	230	5
-13TP	13	19	25	11.5	20	150	132	240	5
-14TP	14	20.5	25	12	20	150	132	260	5
-17TP	17	25	25	14	24	150	132	380	5
-19TP	19	27.5	25	17	24	150	132	410	5
-21TP	21	29	25	19	24	150	132	420	5
-22TP	22	31	29	20	25	150	132	500	5

POWERFIT®

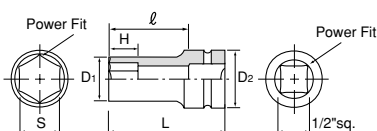


CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

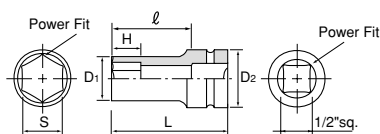
●1/2"sq. IMPACT SOCKET (LONG)



PR-1822 for BP4LL-12TP~21TP
PR-2026 for BP4LL-22TP



● 1/2"sq. IMPACT SOCKET (LONG)

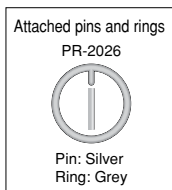


IMPACT SOCKET (LONG)										mm
No.	S	D ₁	D ₂	d	H	L	ℓ	▼g		
BP4LL-12T	12	18	25	10	20	150	132	230	5	
-13T	13	19	25	11.5	20	150	132	240	5	
-14T	14	20.5	25	12	20	150	132	260	5	
-17T	17	25	25	14	24	150	132	380	5	
-19T	19	27.5	25	17	24	150	132	410	5	
-21T	21	29	25	19	24	150	132	420	5	
-22T	22	31	29	20	25	150	132	500	5	

* Pins and rings are sold separately.

POWERFIT

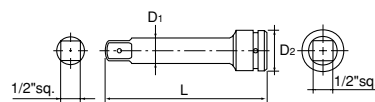
● 1/2"sq. IMPACT EXTENSION BAR. PAT.P.



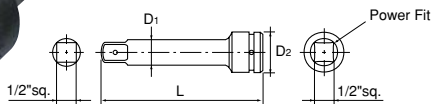
IMPACT EXTENSION BAR						
No.	D ₁	D ₂	L	▼g		
BEP4-075	18	29	75	180	1	
-100	18	29	100	230	1	
-150	18	29	150	300	1	



• DO NOT USE MULTIPLE EXTENSIONS.



● 1/2"sq. IMPACT EXTENSION BAR.



IMPACT EXTENSION BAR						
No.	D ₁	D ₂	L	▼g		
PBE30- 75	18	29	75	180	1	
-100	18	29	100	230	1	
-150	18	29	150	300	1	

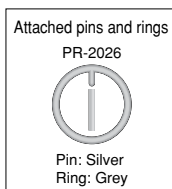
• PBE30-75 is not a Power Fit®.

POWERFIT



• DO NOT USE MULTIPLE EXTENSIONS.

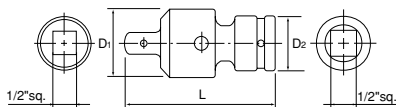
● 1/2"sq. IMPACT UNIVERSAL JOINT PAT.P.



IMPACT UNIVERSAL JOINT						
No.	D ₁	D ₂	L	▼g		
BJP4	38	29	82.5	340	1	



• DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



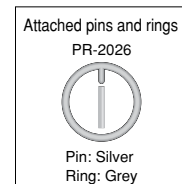
● 1/2"sq. IMPACT ADAPTOR PAT.P.



BAP43



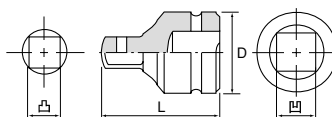
BAP46



IMPACT ADAPTOR						
No.	sq.		D	L	▼g	
	凹	凸				
BAP43	12.7	9.5	28.5	41.7	110	1
BAP46	12.7	19.0	28.5	50	160	1



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



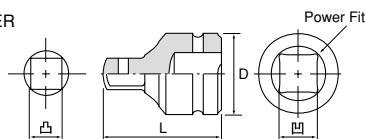
IMPACT ADAPTOR

No.	sq.		D	L	▽g		
	凹	凸					
PBA3020	12.7	9.5	28.5	42	110	1	
PBA3040	12.7	19.0	28.5	50	160	1	



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

POWERFIT®



●1/2"sq. IMPACT ADAPTOR

UNIVERSAL JOINT SOCKET

mm

No.	S	D ₁	D ₂	H	L	▽g		
BP4L-17JUP	17	27	29	18	194	470	5	
-19JUP	19	28.5	29	18	194	470	5	
-24JUP	24	36.5	29	18	194	510	5	

*Comes with pin and ring.

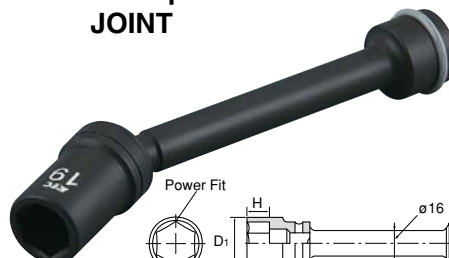
*Replacement parts are specified. Check with your dealer for details.

POWERFIT®



• DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
• Match the black pin with the black ring, and the silver pin with the grey ring.

●1/2"sq. IMPACT SOCKET FOR UNIVERSAL JOINT

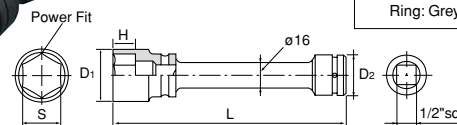


Attached pins and rings

PR-2026



Pin: Silver
Ring: Grey



ALUMINUM SOCKET SET FOR POLISHED NUT (3pcs.)

mm

No.	S	D ₁	D ₂	H	L	ℓ	▽g	
ABP4-17ALP	17	26	28	21	49	31	50	1
-19ALP	19	28	29	24	52	34	60	1
-21ALP	21	31	30	27	55	37	70	1

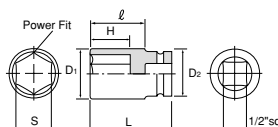
- The socket will not damage aluminum wheel or decorative wheel nuts. POWERFIT®
- A thin type with minimal external diameter.
- A newly developed special aluminum alloy has been uniquely heat-treated for superior durability.

*Tighten the aluminum wheel nut in accordance with the torque specified by each maker.



• Only use on aluminum wheel nuts as the durability of the socket of this impact wrench is lower than in normal types.

●1/2"sq. ALUMINUM SOCKET SET FOR POLISHED NUT (3pcs.)



IMPACT SOCKET SET FOR WHEEL NUT

mm

No.	S	D ₁	D ₂	H	L	ℓ	▽g	
TBP4803	17	24.0	25	22	100	82	180	5

Impact Socket (Long) For Wheel Nut BP48-17, 19, 21

- Set of the three sizes that are most frequently used (17, 19, 21). POWERFIT®



• Specially designed for use on private vehicles.
• Owing to the thin wall design the socket may crack if too much force is applied.

●1/2"sq. IMPACT SOCKET (LONG) SET FOR WHEEL NUT PAT.P.



IMPACT SOCKET FOR WHEEL NUT

mm

No.	S	D ₁	D ₂	H	L	ℓ	▽g	
BP48-17	17	24.0	25	22	100	82	180	5
-19	19	26.0	25	24	100	82	200	5
-21	21	27.5	25	26	100	82	200	5
-22	22	29.5	25	27	100	82	200	5

- Is compatible with socket and impact wrenches designed exclusively for the purpose of tightening and loosening wheel nuts on cars. POWERFIT®

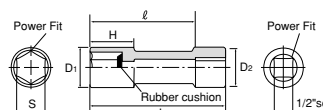
- Exclusive sockets for aluminum wheels.

- A protective rubber cushion has been fitted for galvanized/painted nuts.



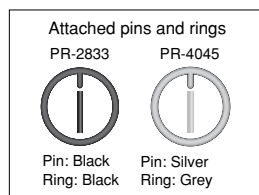
• Specially designed for use on private vehicles.
• Owing to the thin wall design the socket may crack if too much force is applied.

●1/2"sq. IMPACT SOCKET (LONG) FOR WHEEL NUT PAT.P.

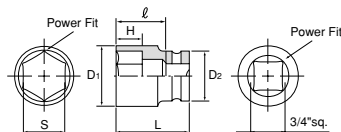


3/4" sq.

● 3/4"sq. IMPACT SOCKET (STANDARD)



PR-2833 for BP6-17P~32P
PR-4045 for BP6-35P~46P

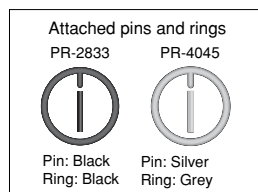


IMPACT SOCKET									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP6-17P	17	28.5	38	12	51	26	251	5	
-19P	19	31	38	13	51	26	259	5	
-21P	21	34	38	14	51	26	270	5	
-22P	22	35	38	15	51	26	274	5	
-23P	23	36.5	38	16	51	26	277	5	
-24P	24	38	38	16	51.5	26.5	284	5	
-26P	26	40	38	18	53	28	299	5	
-27P	27	42	38	18.5	53.5	28.5	322	5	
-28P	28	43	38	19	54	29	328	5	
-29P	29	44	38	19	54	29	336	5	
-30P	30	46	38	20	55	30	361	5	
-32P	32	48	38	21	56	31	369	5	
-35P	35	52	50	24	60.5	35.5	633	5	
-36P	36	54	50	24	61	36	672	5	
-38P	38	56	50	25	62	37	704	5	
-41P	41	60	50	26	63	38	764	2	
-46P	46	67	50	28	65	40	875	2	

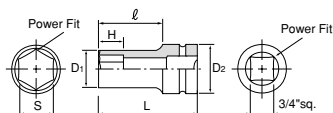
CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT

● 3/4"sq. IMPACT SOCKET (DEEP)



PR-2833 for BP6L-19TP~34TP
PR-4045 for BP6L-35TP~46TP

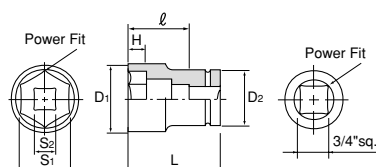
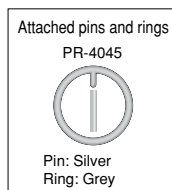


IMPACT SOCKET (DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▽g		
BP6L-19TP	19	29	38	24	100	75	410	5	
-21TP	21	32	38	24	100	75	455	5	
-22TP	22	33	38	25	100	75	474	5	
-23TP	23	35	38	25	100	75	502	5	
-24TP	24	36	38	25	100	75	479	5	
-26TP	26	38	38	25	100	75	496	5	
-27TP	27	40	38	25	100	75	546	5	
-29TP	29	43	38	25	100	75	609	5	
-30TP	30	44	38	25	100	75	617	5	
-32TP	32	46	38	28	100	75	638	5	
-33TP	33	48	38	28	100	75	693	5	
-34TP	34	49	38	28	100	75	714	5	
-35TP	35	50	50	28	100	75	901	5	
-36TP	36	52	50	28	100	75	964	5	
-38TP	38	55	50	30	100	75	1,056	5	
-41TP	41	58	50	32	100	75	1,092	2	
-46TP	46	65	50	38	100	75	1,399	2	

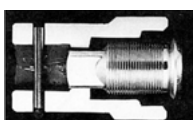
CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT

● 3/4"sq. IMPACT COMBINATION SOCKET FOR WHEEL NUT



IMPACT COMBINATION SOCKET FOR WHEEL NUT									mm
No.	S ₁ Hexagonal	S ₂ Square	D ₁	D ₂	H	L	ℓ	▽g	
ABP6-3217TP	32	17	46.5	50	12	76	51	780	2
-3517TP	35	17	50	50	13	78	53	840	2
-3820TP	38	20	55	50	14	75	50	850	2
-4119TP	41	19	58	50	14	80	55	900	2
-4120TP	41	20	58	50	14	80	55	900	2
-4121TP	41	21	58	50	14	80	55	900	2



- A single, labor-saving wrench can be used to tighten or loosen both the outer and inner nuts.
- Is very effective for vehicles that have limited wheel and nut clearance due to the thin wall design.
- All the tools necessary for working on medium size (2t class) to large size (4t class) vehicles are provided.



• Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT

IMPACT INNER SOCKET

mm

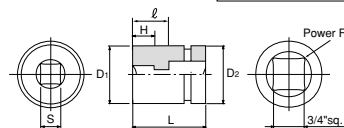
No.	S	D ₁	D ₂	H	L	ℓ	▽g	⊞	
ABP6-17SQP	17	40	38	18.5	56.5	31.5	370	5	
-19SQP	19	40	38	18.5	56.5	31.5	322	5	
-20SQP	20	40	38	20.5	58.5	33.5	346	5	
-21SQP	21	40	38	22.5	60.5	35.5	350	5	

POWERFIT®



• Match the black pin with the black ring, and the silver pin with the grey ring.

●3/4"sq. IMPACT INNER SOCKET



Attached pins and rings

PR-2833

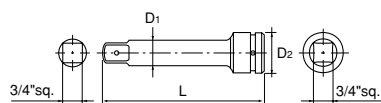
Pin: Black
Ring: Black

IMPACT EXTENSION BAR

No.	D ₁	D ₂	L	▽g	⊞	
BEP6-100	25	38	100	490	1	
-150	25	38	150	680	1	
-250	25	38	250	1,070	1	



• DO NOT USE MULTIPLE EXTENSIONS.



●3/4"sq. IMPACT EXTENSION BAR



BEP6-100

Attached pins and rings

PR-2833

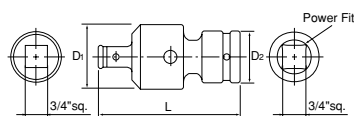
Pin: Black
Ring: Black

IMPACT UNIVERSAL JOINT

No.	D ₁	D ₂	L	▽g	⊞	
BJP6	48	38	111.5	775	1	



• DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.



●3/4"sq. IMPACT UNIVERSAL JOINT



Attached pins and rings

PR-2833

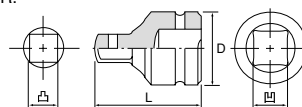
Pin: Black
Ring: Black

IMPACT ADAPTOR

No.	sq.		D	L	▽g	⊞	
BAP64	19.0	12.7	38	60	270	1	
BAP68	19.0	25.4	38	68	480	1	



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.



●3/4"sq. IMPACT ADAPTOR



BAP64

Attached pins and rings

PR-2833

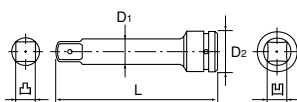
Pin: Black
Ring: Black

IMPACT LONG ADAPTOR

No.	sq.		D ₁	D ₂	L	▽g	⊞	
BAP64-150	19.0	12.7	20	40	150	500	1	



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

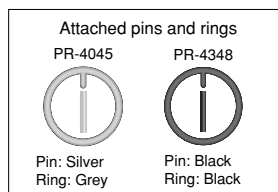


●3/4"sq. IMPACT LONG ADAPTOR

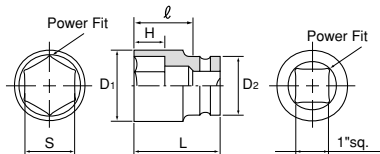




●1"sq. IMPACT SOCKET (STANDARD)



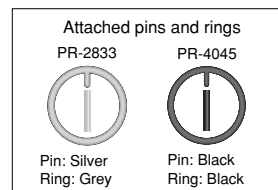
PR-4045 for BP8-21P~35P
PR-4348 for BP8-36P~70P



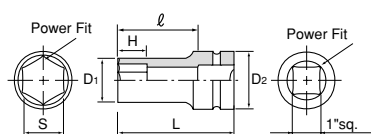
IMPACT SOCKET									mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
BP8-21P	21	36	50	16	58	28	483	2	
-22P	22	38	50	16	58	28	490	2	
-23P	23	38.5	50	16	58	28	496	2	
-24P	24	40	50	16.5	58	28	502	2	
-26P	26	42.5	50	18	60	30	525	2	
-27P	27	44	50	18.5	60	30	538	2	
-28P	28	45	50	19	60	30	535	2	
-29P	29	46.5	50	19	60	30	549	2	
-30P	30	48	49.5	22	70	40	633	2	
-32P	32	50	49.5	25	70	40	641	2	
-33P	33	52	50	25	70	40	686	2	
-35P	35	54	50	25	70	40	701	2	
-36P	36	56	53	25	70	40	790	2	
-38P	38	58	53	30	80	50	939	2	
-41P	41	63	53	35	80	50	1,045	2	
-46P	46	70	53	41.2	80	50	1,130	1	
-50P	50	76	53	37.4	80	50	1,273	1	
-54P	54	81	53	35.2	82	52	1,434	1	
-55P	55	82.5	53	35.2	82	52	1,481	1	
-58P	58	86	53	35.2	82	52	1,569	1	
-60P	60	88	53	35.2	82	52	1,604	1	
-65P	65	94	53	37.4	87	57	1,926	1	
-70P	70	101	53	35.4	87	57	2,235	1	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●1"sq. IMPACT SOCKET (DEEP)



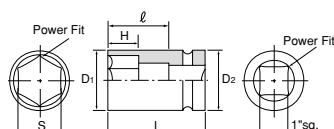
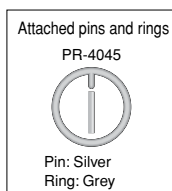
PR4050 for BP8L-22TP~35TP
PR4348 for BP8L-36TP~70TP



IMPACT SOCKET (DEEP)									mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
BP8L-22TP	22	35	50	25	100	70	696	2	
-24TP	24	38	50	25	100	70	723	2	
-27TP	27	42	50	25	100	70	794	2	
-29TP	29	44.5	49.5	25	100	70	822	2	
-30TP	30	46	49.5	25	100	70	836	2	
-32TP	32	48	49.5	25	100	70	858	2	
-33TP	33	50	49.5	25	100	70	924	2	
-35TP	35	52	50	25	100	70	924	2	
-36TP	36	54	53	30	100	70	1,034	2	
-38TP	38	56	53.5	30	100	70	1,080	2	
-41TP	41	60	53	35	100	70	1,170	2	
-46TP	46	68	53	35	100	70	1,534	1	
-50TP	50	74	53	37.2	100	70	1,636	1	
-55TP	55	79	53	51.4	110	80	1,866	1	
-60TP	60	85.5	53	51.4	110	80	2,135	1	
-65TP	65	92	53	65.4	120	90	2,630	1	
-70TP	70	99	53	65.4	120	90	3,073	1	

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

●1"sq. IMPACT SOCKET FOR WHEEL NUT



IMPACT SOCKET FOR WHEEL NUT									mm
No.	S	D ₁	D ₂	H	L	ℓ	▼g		
ABP8-32TP	32	46.5	50	25	80	50	680	2	
-35TP	35	50	50	25	80	50	710	2	
-38TP	38	55	50	30	80	50	800	2	
-41TP	41	58	50	35	80	50	840	2	

- A tool with the thin wall design that can be used for car types with lesser clearance between the wheel hub and wheel nut.
- The outer diameter has been reduced by 94% in comparison with the previous products.

Usage

- Tightening and loosening wheel nuts (outer nut) for middle size vehicles (2 t~4 t) and large vehicles (4 t and above, such as buses).

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

WHEEL NUT COMBINATION SOCKET FOR IMPACT USE

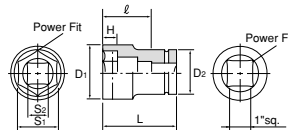
mm

No.	S ₁ Hexagonal	S ₂ Square	D ₁	D ₂	H	L	ℓ	▽g	📦	
ABP8-3517TP	35	17	50	50	13	83	53	830	2	
-3820TP	38	20	55	50	14	80	50	840	2	
-4119TP	41	19	58	50	14	85	55	890	2	
-4121TP	41	21	58	50	14	87	57	900	2	



• Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT



●1"sq. WHEEL NUT COMBINATION SOCKET FOR IMPACT USE



Attached pins and rings

PR-4045

Pin: Silver
Ring: Grey

IMPACT INNER SOCKET

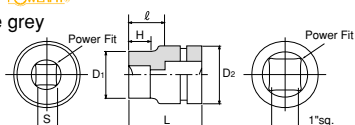
mm

No.	S	D ₁	D ₂	H	L	ℓ	▽g	📦	
ABP8-17SQP	17	40	50	18.5	61.5	31.5	600	5	
-19SQP	19	42	50	18.5	61.5	31.5	595	5	
-20SQP	20	43	50	20.5	63.5	33.5	630	5	
-21SQP	21	44	50	22.5	65.5	33.5	680	5	



• Match the black pin with the black ring, and the silver pin with the grey ring.

POWERFIT



●1"sq. IMPACT INNER SOCKET



Attached pins and rings

PR-4045

Pin: Silver
Ring: Grey

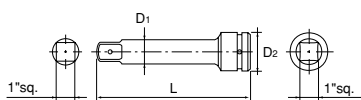
IMPACT EXTENSION BAR

No.	D ₁	D ₂	L	▽g	📦	
BEP8-150	33	50	150	1,065	1	
-200	33	50	200	1,380	1	
-250	33	50	250	1,750	1	



• DO NOT USE MULTIPLE EXTENSIONS.

• Match the black pin with the black ring, and the silver pin with the grey ring.



●1"sq. IMPACT EXTENSION BAR



Attached pins and rings

PR-4045

Pin: Silver
Ring: Grey

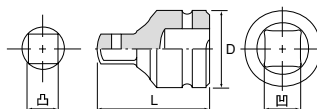
IMPACT ADAPTOR

No.	sq.		D	L	▽g	📦	
BAP86	25.4	19.0	50	75	510	1	



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

• Match the black pin with the black ring, and the silver pin with the grey ring.



●1"sq. IMPACT ADAPTOR



Attached pins and rings

PR-4045

Pin: Silver
Ring: Grey

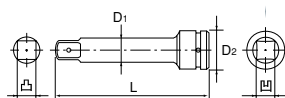
IMPACT LONG ADAPTOR

No.	sq.		D ₁	D ₂	L	▽g	📦	
BAP86-150	25.4	19.0	28	50	150	900	1	



• FOR MAXIMUM TORQUE OF THE ADAPTOR, REFER TO THE SMALLER SIZE. DO NOT APPLY EXCESSIVE POWER.

• Match the black pin with the black ring, and the silver pin with the grey ring.



●1"sq. IMPACT LONG ADAPTOR



Attached pins and rings

PR-4045

Pin: Silver
Ring: Grey

IMPACT HEX. WRENCH SET (6pcs.)

No.	▽g	📦	
TBTP306P	432	1	
Impact Hex. Wrench			BTP3-04P, 05P, 06P, 08P, 10P, 12P
Socket Holder			EHB306

* Pins and rings are sold separately.



• Match the black pin with the black ring, and the silver pin with the grey ring.

●3/8"sq. IMPACT HEX. WRENCH SET (6pcs.)



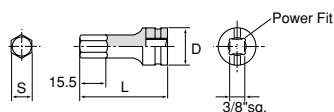
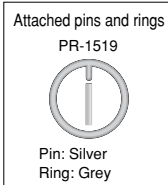
Attached pins and rings

PR-1519

Pin: Silver
Ring: Grey



● 3/8"sq. IMPACT HEX. WRENCH



IMPACT HEX. WRENCH

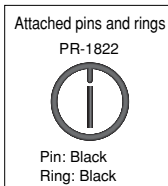
No.	S	D	L	▼g	📦
BTP3-04P	4	22	45	51	10
-05P	5	22	45	53	10
-06P	6	22	45	55	10
-08P	8	22	45	60	10
-10P	10	22	52	74	10
-12P	12	22	52	84	10

* Pins and rings are sold separately.

- The tool can sufficiently withstand the use of the impact wrench due to **KTC** unique design.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 1/2"sq. IMPACT HEX. WRENCH SET (6pcs.)



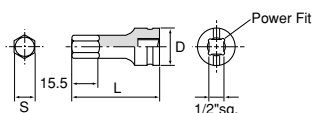
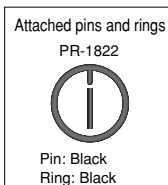
IMPACT HEX. WRENCH SET (6pcs.)

No. TBTP406P	▼g 768	📦 1
Impact Hex. Wrench	BTP4-06P, 08P, 10P, 12P, 14P, 17P	
Socket Holder	EHB4108	

* Pins and rings are sold separately.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 1/2"sq. IMPACT HEX. WRENCH



IMPACT HEX. WRENCH

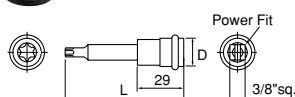
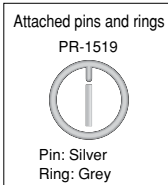
No.	S	D	L	▼g	📦
BTP4-06P	6	25	60	78	10
-08P	8	25	60	87	10
-10P	10	25	60	97	10
-12P	12	25	60	109	10
-14P	14	25	60	124	10
-17P	17	25	60	149	10

* Pins and rings are sold separately.

- The tool can sufficiently withstand the use of the impact wrench due to **KTC** unique design.

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

● 3/8"sq. T-TYPE IMPACT TORX® WRENCH & SET (5pcs.)



IMPACT TORX® WRENCH • SET (5pcs.)

No. TBTP305T		▼g 395	📦 1	
T-Type Impact TORX® Wrench (3/8"sq.)			BTP3-T20, T25, T30, T40, T45	
No.	Fastener	L	▼g	📦
BTP3-T20	T20	75	77	1
-T25	T25	75	78	1
-T30	T30	75	79	1
-T40	T40	75	80	1
-T45	T45	75	81	1

CAUTION • Match the black pin with the black ring, and the silver pin with the grey ring.

• **TORX®** is a registered trademark for the Textron Fastening Systems.



List of applied pin/ring sets for the 21st Century Version Tool impact socket (5 pins and rings included).

To be released in September 2005

Caution: there is no compatibility with tools other than the 21st Century Version Tools.

BP4-

Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4-08	BP4-08P	PR-1822
-09	-09P	-1822
-10	-10P	-1822
-11	-11P	-1822
-12	-12P	-1822
-13	-13P	-1822
-14	-14P	-1822
-15	-15P	-1822
-16	-16P	-1822
-17	-17P	-1822
-19	-19P	-1822
-21	-21P	-1822
-22	-22P	PR-2026
-23	-23P	-2026
-24	-24P	-2026
-26	-26P	-2026
-27	-27P	-2026
-28	-28P	-2026
-29	-29P	-2026
-30	-30P	-2026
-32	-32P	-2026

BP4M-

Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4M-08T	BP4M-08TP	PR-1822
-09T	-09TP	-1822
-10T	-10TP	-1822
-11T	-11TP	-1822
-12T	-12TP	-1822
-13T	-13TP	-1822
-14T	-14TP	-1822
-15T	-15TP	-1822
-16T	-16TP	-1822
-17T	-17TP	-1822
-18T	-18TP	-1822
-19T	-19TP	-1822
-20T	-20TP	-1822
-21T	-21TP	-1822
-22T	-22TP	PR-2026
-23T	-23TP	-2026
-24T	-24TP	-2026
-25T	-25TP	-2026
-26T	-26TP	-2026
-27T	-27TP	-2026
-28T	-28TP	-2026
-29T	-29TP	-2026
-30T	-30TP	-2026
-31T	-31TP	-2026
-32T	-32TP	-2026
-33T	-33TP	-2026
-34T	-34TP	-2026
-35T	-35TP	-2026
-36T	-36TP	-2026

BP4L-

Applied product number Without pins/rings	Applied product number With pins/rings	Pin/ring set product number
BP4L-10T	BP4L-10TP	PR-1822
-12T	-12TP	-1822
-13T	-13TP	-1822
-14T	-14TP	-1822
-17T	-17TP	-1822
-19T	-19TP	-1822
-21T	-21TP	-1822
-22T	-22TP	PR-2026
-23T	-23TP	-2026
-24T	-24TP	-2026
-26T	-26TP	-2026
-27T	-27TP	-2026
-30T	-30TP	-2026
-32T	-32TP	-2026

BEP4-

Applied product number	Pin/ring set product number
BEP4-075	PR-2026
-100	-2026
-150	-2026

BJP

Applied product number	Pin/ring set product number
BJP4	PR-2026

BAP

Applied product number	Pin/ring set product number
BAP43	PR-2026
43	-2026

PR-1822



Pin: Black (length 18, diameter 2.5)
Ring: Black (length 28)

PR-2026



Pin: Silver (length 20, diameter 2.5)
Ring: Grey (length 32)

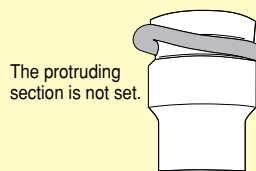


CAUTION

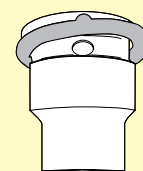
- Never use pieces inappropriately as this is dangerous.
- Match the black ring with the black pin, and the silver ring with the grey pin.

<Front>

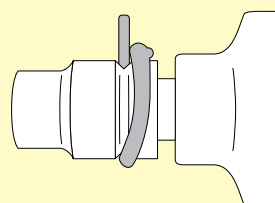
<Side>



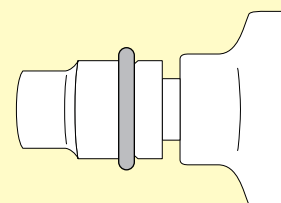
The protruding section is not set.



- ① The ring is set in the ring-groove after matching the protruding section within the inner side of the ring and the pin hole.



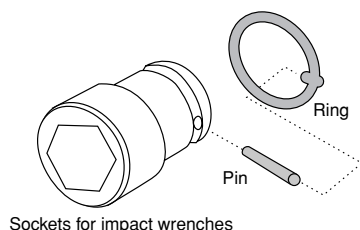
- ② Set the socket to the impact wrench and insert the pin into the pin hole.



- ③ Insert the protruding section into the pin hole while moving the ring and firmly set the whole ring into the ring-groove.

Attaching the pin/ring

The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.



A protruding section is provided on the exterior of the ring in order to indicate the position of the hole while the ring is set.

List of applied pin/ring sets for the impact socket (5 pins and rings included).

*Caution: there is no compatibility with the 21st Century Version Tools.

■ PB

Applied product number	Pin/ring set product number	
PB22 - 7H	BPYPR-215	
- 8H	-215	
- 9H	-215	
-10H	-215	
-12H	-215	
-13H	BPYPR-219	
-14H	-219	
-17H	-219	
-19H	BPYPR-222	
-21H	-222	
-22H	-222	
PB25 - 6H	BPYPR-215	
- 7H	-215	
- 8H	-215	
- 9H	-215	
-10H	-215	
-11H	-215	
-12H	-215	
-13H	BPYPR-219	
-14H	-219	
-17H	-219	
-19H	BPYPR-222	
-21H	-222	
-22H	-222	
PB30 - 8H	BPYPR-321	
- 9H	-321	
-10H	-321	
-11H	-321	
-12H	-321	
-13H	-321	
-14H	-321	
-15H	-321	
-16H	BPYPR-322	
-17H	-322	
-19H	BPYPR-324B	
-21H	-324B	
-22H	-324B	
-23H	-324B	
-24H	-324B	
-26H	-324B	
-27H	-324B	
-28H	-324B	
-29H	-324B	
-30H	-324B	
-32H	-324B	
PB31A-17H	BPYPR-324A	
-19H	BPYPR-324C	
-21H	-324C	
PB32 -10H	BPYPR-321	
-12H	-321	
-13H	-321	
-14H	-321	
-17H	-321	
-19H	BPYPR-322	
-21H	-322	
-22H	BPYPR-324B	
-23H	-324B	
-24H	-324B	
-26H	-324B	
-27H	-324B	
-30H	-324B	
-32H	-324B	
PB35 -10H	BPYPR-321	
-12H	-321	
-13H	-321	
-14H	-321	
-17H	-321	
-19H	BPYPR-322	
-21H	-322	
-22H	BPYPR-324B	
-23H	-324B	
-24H	-324B	
-26H	-324B	
-27H	-324B	
-30H	-324B	
-32H	-324B	

Applied product number	Pin/ring set product number	
PB40 -17H	BPYPR-433	
-19H	-433	
-21H	-433	
-22H	-433	
-23H	-433	
-24H	-433	
-26H	BPYPR-435	
-27H	-435	
-28H	-435	
-29H	-435	
-30H	-435	
-32H	-435	
-35H	BPYPR-442	
-36H	-442	
-38H	-442	
-41H	BPYPR-444	
-46H	-444	
PB42Z-14	BPYPR-434	
-17	-434	
-19	-434	
-22	-434	
PB43 -3217	BPYPR-444	
-3517	-444	
-3820	-444	
-4119	-444	
-4120	-444	
-4121	-444	
PB45 -19H	BPYPR-433	
-21H	-433	
-22H	-433	
-23H	-433	
-24H	-433	
-26H	-433	
-27H	BPYPR-435	
-29H	-435	
-30H	-435	
-32H	-435	
-34H	-435	
-35H	BPYPR-444	
-36H	-444	
-38H	-444	
-41H	-444	
-46H	-444	
PB50 -21H	BPYPR-544	
-22H	-544	
-23H	-544	
-24H	-544	
-26H	-544	
-27H	-544	
-28H	-544	
-29H	-544	
-30H	-544	
-32H	-544	
-33H	-544	
-35H	BPYPR-547	
-36H	-547	
-38H	-547	
-41H	-547	
-46H	-547	
-50H	-547	
-54H	BPYPR-554	
-55H	-554	
-58H	-554	
-60H	-554	
-65H	-554	
-70H	-554	
PB53 -3517	BPYPR-544	
-3820	-544	
-4119	-544	
-4121	-544	

List of applied pin/ring sets for the impact socket (5 pins and rings included).

*Caution: there is no compatibility with the 21st Century Version Tools.

Applied product number	Pin/ring set product number	
PB54 -32H	BPYPR -544	
-35H	-544	
-38H	-544	
-41H	-544	
PB55 -22H	-544	
-24H	-544	
-27H	-544	
-29H	-544	
-30H	-544	
-32H	-544	
-35H	-544	
-36H	BPYPR -547	
-38H	-547	
-41H	BPYPR -544	
-46H	BPYPR -547	
-50H	-547	
-55H	BPYPR -554	
-60H	-554	
-65H	-554	
-70H	-554	

ABP

Applied product number	Pin/ring set product number	
ABP6 -17Y	BPYPR -435	
-19Y	-435	
-20Y	-435	
-21Y	-435	
ABP8 -17Y	BPYPR -544	
-19Y	-544	
-20Y	-544	
-21Y	-544	

PBA

Applied product number	Pin/ring set product number	
PBA2030	BPYPR-219	
PBA3020	BPYPR-324A	
PBA3040	-324A	
PBA4030	BPYPR-434	
PBA4030-150	BPYPR-435	
PBA4050	BPYPR-434	
PBA5040	BPYPR-544	
PBA5040-150	-544	

PBE

Applied product number	Pin/ring set product number	
PBE20 -75	BPYPR -219	
-100	-219	
PBE30 -75	BPYPR -324B	
-100	-324B	
-150	-324B	
PBE40 -100	BPYPR -435	
-150	-435	
-250	-435	
PBE50 -150	BPYPR -544	
-200	-544	
-250	-544	

PBJ

Applied product number	Pin/ring set product number	
PBJ30	BPYPR-324B	
PBJ40	BPYPR-435	
PBJ31L-17H	BPYPR-324B	
-19H	-324B	
-24H	-324B	

PHB

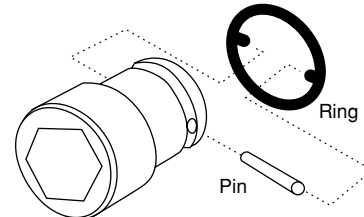
Applied product number	Pin/ring set product number	
PHB20-4	BPYPR-214	
-5	-214	
-6	-214	
-8	-214	
-10	BPYPR-219	
-12	-219	
PHB30-6	BPYPR-322	
-8	-322	
-10	-322	
-12	-322	
-14	-322	
-17	-322	

S6

Applied product number	Pin/ring set product number	
S6T20	BPYPR-214	
S6T25	-214	
S6T30	-214	
S6T40	-214	
S6T45	-214	

Attaching the pin/ring

The protruding section within the inner side of the ring must be set so that it enters the pin hole of the socket.

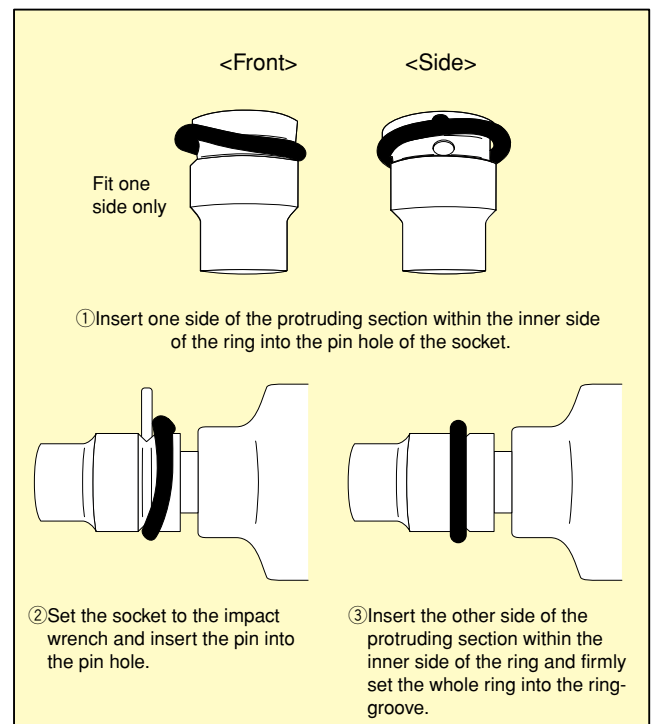


Sockets for impact wrenches

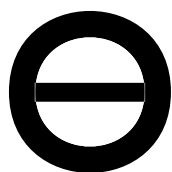


CAUTION

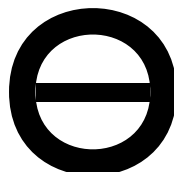
• Never use pieces inappropriately as this is dangerous.



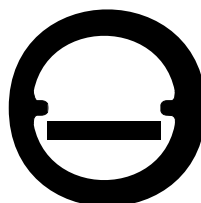
Impact socket pin/rubber ring size checker

BPYPR-214


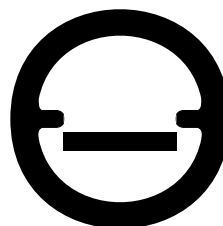
Pin : $\varnothing 2.5 \times 14.6$
Ring inner diameter : $\varnothing 14.45$

BPYPR-215


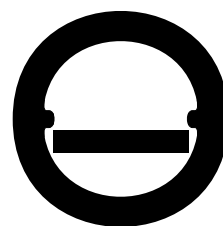
Pin : $\varnothing 2.5 \times 15$
Ring inner diameter : $\varnothing 15.2$

BPYPR-219


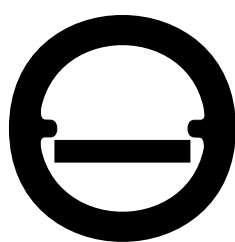
Pin : $\varnothing 2.5 \times 15$
Ring inner diameter : $\varnothing 19.1$

BPYPR-222


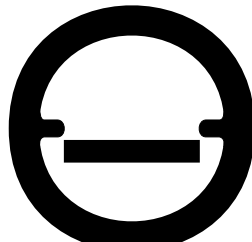
Pin : $\varnothing 2.5 \times 15$
Ring inner diameter : $\varnothing 22.05$

BPYPR-321


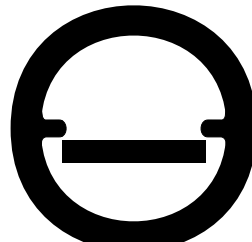
Pin : $\varnothing 3 \times 18$
Ring inner diameter : $\varnothing 20.6$

BPYPR-322


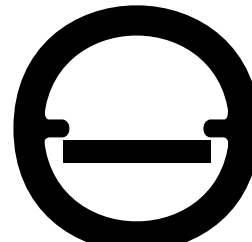
Pin : $\varnothing 3 \times 18$
Ring inner diameter : $\varnothing 22.05$

BPYPR-324A


Pin : $\varnothing 3 \times 18$
Ring inner diameter : $\varnothing 24.2$

BPYPR-324B


Pin : $\varnothing 3 \times 19$
Ring inner diameter : $\varnothing 24.2$

BPYPR-324C


Pin : $\varnothing 3 \times 19.5$
Ring inner diameter : $\varnothing 24.2$

BPYPR-444


Pin : $\varnothing 4 \times 32.5$
Ring inner diameter : $\varnothing 43.9$

BPYPR-435


Pin : $\varnothing 4 \times 25.5$
Ring inner diameter : $\varnothing 35.2$

BPYPR-544


Pin : $\varnothing 5 \times 32$
Ring inner diameter : $\varnothing 43.9$

BPYPR-433


Pin : $\varnothing 4 \times 25.5$
Ring inner diameter : $\varnothing 33.2$

BPYPR-434


Pin : $\varnothing 4 \times 25.5$
Ring inner diameter : $\varnothing 34.2$

BPYPR-547


Pin : $\varnothing 5 \times 32$
Ring inner diameter : $\varnothing 47.4$

BPYPR-442


Pin : $\varnothing 4 \times 25.5$
Ring inner diameter : $\varnothing 41.5$

BPYPR-554


Pin : $\varnothing 5 \times 38$
Ring inner diameter : $\varnothing 54.2$

*There is no protruding section on the ring on the BPYPR-214 and 215.

*Please check the merchandise inventory for a product that is marked by  before placing an order.

2. CONVENTIONAL TOOLS

HEXAGONAL WRENCHES



CAUTION

HEXAGONAL WRENCH SETS

- READ THE CAUTION MESSAGE CAREFULLY FOR EACH TOOL.
- LOCK THE STOPPER SECURELY WHEN CARRYING.

HEXAGONAL WRENCHES

- USE A WRENCH APPROPRIATE TO THE SIZE OF A BOLT.
- INSERT A WRENCH DEEPLY INTO A BOLT.
- INSERT THE SQUARE DRIVE OF A DRIVE TOOL DEEPLY TO THE END.
- DO NOT GIVE ANY IMPACT BY HITTING WITH HAMMERS, ETC.
- DO NOT APPLY ANY POWER TOOL SUCH AS IMPACT WRENCH

1/4" sq.

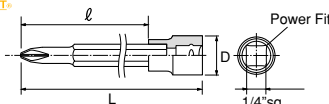
CROSS · FLAT BIT SOCKET

No.	Number	D	L	ℓ	▼g	📦	
BT2-1P	No.1	16	54.5	32	36	10	
-2P	No.2	16	59.5	37	38	10	

No.	a	b	D	L	ℓ	▼g	📦	
BT2-6M	1.0	6	16	59.5	37	38	10	

• Bit replacement is possible. (Refer to P.92)

POWERFIT®



●1/4"sq. CROSS · FLAT BIT SOCKET

HEX. BIT SOCKET SET (5pcs.) · (6pcs.)

mm · in

No.	TBT205H	▼g 245	📦 1
Hexagon bit socket (1/4"sq.)	BT2-03, 04, 05, 06		
Cross bit socket (1/4"sq.)	BT2-2P		
Socket holder	EHB205		
No.	TBT206BH	▼g 280	📦 1
Hexagon bit socket (1/4"sq.)	BT2-1/8, 9/64, 5/32, 3/16, 7/32, 1/4		
Socket holder	EHB210		

HEX. BIT SOCKET

mm

No.	S	D	L	ℓ	▼g	📦	
BT2-03	3	16	54.5	32	36	10	
-04	4	16	54.5	32	36	10	
-05	5	16	59.5	37	39	10	
-06	6	16	59.5	37	39	10	

POWERFIT®

HEX. BIT SOCKET

in

No.	S	D	L	ℓ	▼g	📦	
BT2-1/8	3.1	16	54.5	32	36	10	
-9/64	3.5	16	54.5	32	36	10	
-5/32	3.9	16	54.5	32	36	10	
-3/16	4.7	16	54.5	32	36	10	
-7/32	5.5	16	59.5	37	39	10	
-1/4	6.3	16	59.5	37	39	10	

• Bit replacement is possible. (Refer to P.92)

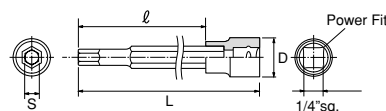
POWERFIT®

●1/4"sq. HEX. BIT SOCKET SET (5pcs.) · (6pcs.)



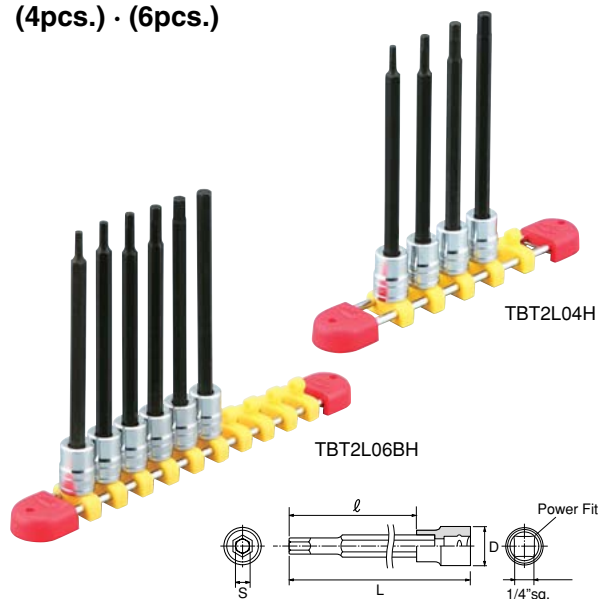
TBT205H

TB206BH





● 1/4"sq. LONG HEX. BIT SOCKET SET (4pcs.) · (6pcs.)



LONG HEX. BIT SOCKET SET (4pcs.) · (6pcs.) mm · in

No.	TBT2L04H	▼g 275	☞ 1
Long hexagon bit socket (1/4"sq.)	BT2-03L, 04L, 05L, 06L		
Socket holder	EHB205		

No.	TBT2L06BH	▼g 390	☞ 1
Long hexagon bit socket (1/4"sq.)	in BT2-1/8L, 9/64L, 5/32L, 3/16L, 7/32L, 1/4L		
Socket holder	EHB210		

LONG HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	☞
BT2-03L	3	16	121.5	99	54	10
-04L	4	16	121.5	99	54	10
-05L	5	16	121.5	99	55	10
-06L	6	16	121.5	99	56	10

POWERFIT

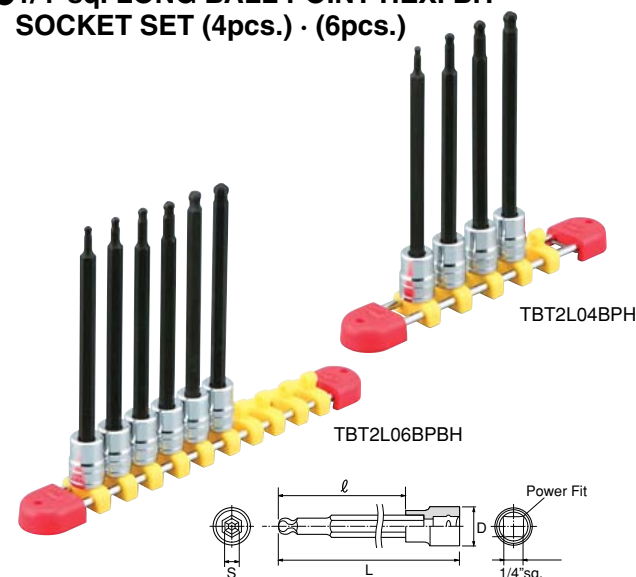
LONG HEX. BIT SOCKET in

No.	S	D	L	ℓ	▼g	☞
BT2-1/8 L	3.1	16	121.5	99	54	10
9/64 L	3.5	16	121.5	99	54	10
5/32 L	3.9	16	121.5	99	54	10
3/16 L	4.7	16	121.5	99	55	10
7/32 L	5.5	16	121.5	99	56	10
1/4 L	6.3	16	121.5	99	56	10

• Bit replacement is possible. (Refer to P.92)

POWERFIT

● 1/4"sq. LONG BALL POINT HEX. BIT SOCKET SET (4pcs.) · (6pcs.)



LONG BALL POINT HEX. BIT SOCKET SET (4pcs.) · (6pcs.) mm · in

No.	TBT2L04BPH	▼g 275	☞ 1
Long ball point hexagon bit socket (1/4"sq.)	BT2-03BPL, 04BPL, 05BPL, 06BPL		
Socket holder	EHB205		

No.	TBT2L06BPBH	▼g 390	☞ 1
Long ball point hexagon bit socket (1/4"sq.)	in BT2-1/8BPL, 9/64BPL, 5/32BPL, 3/16BPL, 7/32BPL, 1/4BPL		
Socket holder	EHB210		

LONG BALL POINT HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	☞
BT2-03BPL	3	16	121.5	99	54	10
-04BPL	4	16	121.5	99	54	10
-05BPL	5	16	121.5	99	55	10
-06BPL	6	16	121.5	99	56	10

POWERFIT

LONG BALL POINT HEX. BIT SOCKET in

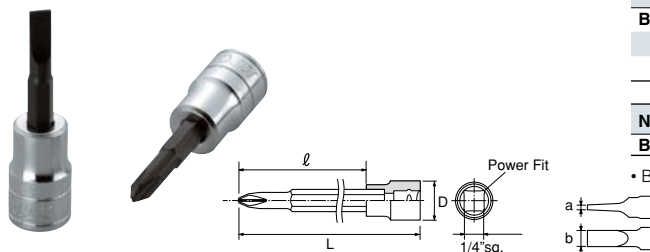
No.	S	D	L	ℓ	▼g	☞
BT2-1/8 BPL	3.1	16	121.5	99	54	10
9/64 BPL	3.5	16	121.5	99	54	10
5/32 BPL	3.9	16	121.5	99	54	10
3/16 BPL	4.7	16	121.5	99	55	10
7/32 BPL	5.5	16	121.5	99	56	10
1/4 BPL	6.3	16	121.5	99	56	10

• Bit replacement is possible. (Refer to P.92)

POWERFIT

CAUTION • Care should be taken not to force this piece as the torque limit of the ball point is low.

● 3/8"sq. CROSS · FLAT BIT SOCKET



CROSS · FLAT BIT SOCKET

No.	Number	D	L	ℓ	▼g	☞
BT3 -1P	No.1	17	61	32	43	10
-2P	No.2	17	66	37	45	10
-3P	No.3	18.5	71	42	63	10

No.	a	b	D	L	ℓ	▼g	☞
BT3-6M	1.0	6	17	66	37	45	10

• Bit replacement is possible. (Refer to P.92)

POWERFIT

SHORT HEX. BIT SOCKET SET (9pcs.) mm . in

No. TBT3SS09H	▼ g 562	1
Stubby hexagon bitsocket	BT3-03SS, 04SS, 05SS, 06SS, 07SS, 08SS, 09SS, 10SS, 12SS	
Socket holder	EHB310	

• Bit replacement is possible.

POWERFIT

3/8"sq. SHORT HEX. BIT SOCKET SET (9pcs.)

NEW

**SHORT HEX. BIT SOCKET** mm

No.	S	D	L	ℓ	▼g	1	
BT3-03SS	3	17	34	5	36	1	
-04SS	4	17	34	5	36	1	
-05SS	5	17	34	5	37	1	
-06SS	6	17	35.5	6.5	37	1	
-07SS	7	18.5	36	7	49	1	
-08SS	8	18.5	37	8	49	1	
-09SS	9	18.5	39.5	9.5	55	1	
-10SS	10	18.5	39.5	9.5	56	1	
-12SS	12	22	42	10	87	1	

• Bit replacement is possible.

POWERFIT

3/8"sq. SHORT HEX. BIT SOCKET

NEW

**SHORT HEX. BIT SOCKET SET (9pcs.)** mm . in

No. TBT3S09H	▼ g 620	1
Short hexagon bit socket (3/8"sq.)	BT3-03S, 04S, 05S, 06S, 07S, 08S, 09S, 10S, 12S	
Socket holder	EHB310	

No. TBT3S09BH	▼ g 580	1
Short hexagon bit socket (3/8"sq.) in	BT3-1/8S, 9/64S, 5/32S, 3/16S, 7/32S, 1/4S, 5/16S, 3/8S, 7/16S	
Socket holder	EHB310	

SHORT HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	1	
BT3-03S	3	17	48	19	40	10	
-04S	4	17	48	19	40	10	
-05S	5	17	50	21	41	10	
-06S	6	17	50	21	42	10	
-07S	7	18.5	50	21	56	10	
-08S	8	18.5	50	21	56	10	
-09S	9	18.5	52	22	62	10	
-10S	10	18.5	52	22	62	10	
-12S	12	22	54	22	99	10	

POWERFIT

SHORT HEX. BIT SOCKET in

No.	S	D	L	ℓ	▼g	1	
BT3-1/8 S	3.1	17	48	19	40	10	
-9/64 S	3.5	17	48	19	40	10	
-5/32 S	3.9	17	48	19	40	10	
-3/16 S	4.7	17	48	19	40	10	
-7/32 S	5.5	17	50	21	42	10	
-1/4 S	6.3	17	50	21	42	10	
-5/16 S	7.9	18.5	50	21	56	10	
-3/8 S	9.5	18.5	52	22	62	10	
-7/16 S	11.1	22	54	22	99	10	

• Bit replacement is possible. (Refer to P.92)

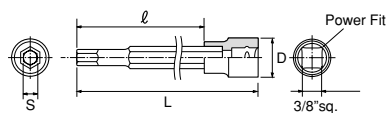
POWERFIT

3/8"sq. SHORT HEX. BIT SOCKET SET (9pcs.)

TBT3S09H



TBT3S09BH



3/8" sq.

● 3/8"sq. HEX. BIT SOCKET SET (6pcs.) · (9pcs.) · (10pcs.)



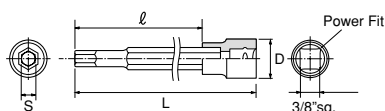
TBT306H



TBT310H



TBT309BH



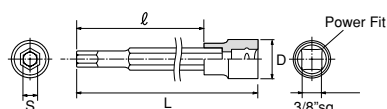
● 3/8"sq. LONG HEX. BIT SOCKET SET (9pcs.)



TBT3L09H



TBT3L09BH



HEX. BIT SOCKET SET (6pcs.) · (9pcs.) · (10pcs.) mm · in

No. TBT306H	▼g 405	1
Hexagon bit socket (3/8"sq.)	BT3-04,05,06,08,10,2P	
Socket holder	EHB306	

No. TBT310H	▼g 745	1
Hexagon bit socket (3/8"sq.)	BT3-03,04,05,06,07,08,09,10,12,2P	
Socket holder	EHB310	

No. TBT309BH	▼g 645	1
Hexagon bit socket (3/8"sq.) in	BT3-1/8, 9/64, 5/32, 3/16, 7/32, 1/4, 5/16, 3/8, 7/16	
Socket holder	EHB310	

HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	1	
BT3-03	3	17	61	32	43	10	
-04	4	17	61	32	43	10	
-05	5	17	66	37	46	10	
-06	6	17	66	37	46	10	
-07	7	18.5	71	42	65	10	
-08	8	18.5	71	42	65	10	
-09	9	18.5	73	43	76	10	
-10	10	18.5	73	43	76	10	
-12	12	22	76	44	121	10	

POWERFIT

HEX. BIT SOCKET in

No.	S	D	L	ℓ	▼g	1	
BT3-1/8	3.1	17	61	32	43	10	
9/64	3.5	17	61	32	43	10	
5/32	3.9	17	61	32	43	10	
3/16	4.7	17	61	32	43	10	
7/32	5.5	17	66	37	46	10	
1/4	6.3	17	66	37	46	10	
5/16	7.9	18.5	71	42	65	10	
3/8	9.5	18.5	73	43	76	10	
7/16	11.1	22	76	44	121	10	

• Bit replacement is possible. (Refer to P.92)

POWERFIT

LONG HEX. BIT SOCKET SET (9pcs.) mm · in

No. TBT3L09H	▼g 945	1
Long hexagon bit socket (3/8"sq.)	BT3-03L,04L,05L,06L,07L,08L,09L,10L,12L	
Socket holder	EHB310	

No. TBT3L09BH	▼g 865	1
Long hexagon bit socket (3/8"sq.) in	BT3-1/8L, 9/64L, 5/32L, 3/16L, 7/32L, 1/4L, 5/16L, 3/8L, 7/16L	
Socket holder	EHB310	

LONG HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	1	
BT3-03L	3	17	128	99	61	10	
-04L	4	17	128	99	61	10	
-05L	5	17	128	99	62	10	
-06L	6	17	128	99	63	10	
-07L	7	18.5	128	99	89	10	
-08L	8	18.5	128	99	89	10	
-09L	9	18.5	128	98	113	10	
-10L	10	18.5	128	98	113	10	
-12L	12	22	128	96	172	10	

POWERFIT

LONG HEX. BIT SOCKET in

No.	S	D	L	ℓ	▼g	1	
BT3-1/8L	3.1	17	128	99	61	10	
9/64L	3.5	17	128	99	61	10	
5/32L	3.9	17	128	99	61	10	
3/16L	4.7	17	128	99	62	10	
7/32L	5.5	17	128	99	63	10	
1/4L	6.3	17	128	99	63	10	
5/16L	7.9	18.5	128	99	89	10	
3/8L	9.5	18.5	128	98	113	10	
7/16L	11.1	22	128	96	172	10	

• Bit replacement is possible. (Refer to P.92)

POWERFIT

LONG BALL POINT HEX. BIT SOCKET SET (6pcs.) · (7pcs.) mm · in

No.	TBT3L06BPH	▼g 510	1
Long ball point hexagon bit socket (3/8"sq.) BT3-03BPL, 04BPL, 05BPL, 06BPL, 07BPL, 08BPL			
Socket holder		EHB306	

No.	TBT3L07BPH	▼g 580	1
Long ball point hexagon bit socket (3/8"sq.) BT3-1/8BPL, 9/64BPL, 5/32BPL, 3/16BPL, 7/32BPL, 1/4BPL, 5/16BPL, in			
Socket holder		EHB310	

LONG BALL POINT HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	10
BT3-03BPL	3	17	128	99	61	10
-04BPL	4	17	128	99	61	10
-05BPL	5	17	128	99	62	10
-06BPL	6	17	128	99	63	10
-07BPL	7	18.5	128	99	89	10
-08BPL	8	18.5	128	99	89	10

POWERFIT®

LONG BALL POINT HEX. BIT SOCKET in

No.	S	D	L	ℓ	▼g	10
BT3-1/8 BPL	3.1	17	128	99	61	10
-9/64 BPL	3.5	17	128	99	61	10
-5/32 BPL	3.9	17	128	99	61	10
-3/16 BPL	4.7	17	128	99	62	10
-7/32 BPL	5.5	17	128	99	63	10
-1/4 BPL	6.3	17	128	99	63	10
-5/16 BPL	7.9	18.5	128	99	89	10

• Bit replacement is possible. (Refer to P.92)

POWERFIT®

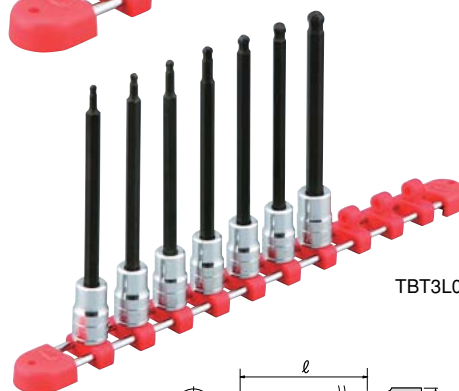


• Care should be taken not to force this piece as the torque limit of the ball point is low.

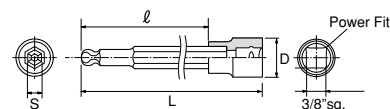
3/8"sq. LONG BALL POINT HEX. BIT SOCKET SET (6pcs.) · (7pcs.)



TBT3L06BPH



TBT3L07BPH



3/8"sq. IMPACT HEX. WRENCH SET (6pcs.)

IMPACT HEX. WRENCH SET (6pcs.) mm

No.	TBTP306P	▼g 340	1
Impact hex. Wrench Set (3/8"sq.) BTP3-04P, 05P, 06P, 08P, 10P, 12P			
Socket Holder		EHB306	

• pins and rings are sold separately.

No.	S	D	L	▼g	10
BTP3-04P	4	22	45	51	10
-05P	5	22	45	53	10
-06P	6	22	45	55	10
-08P	8	22	45	60	10
-10P	10	22	52	74	10
-12P	12	22	52	84	10

• Pins and rings are sold separately. Impact wrench can be used owing to the KTC's original design.



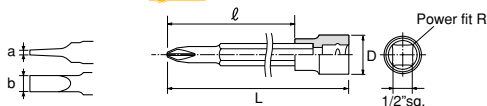
CROSS · FLAT BIT SOCKET

No.	Number	D	L	ℓ	▼g	10
BT4-2P	No.2	22	70	37	73	10
-3P	No.3	22	75	42	82	10

No.	a	b	D	L	ℓ	▼g	10
BT4-6M	1.0	6	22	70	37	73	10

• Bit replacement is possible. (Refer to P.92)

POWERFIT®



1/2"sq. CROSS · FLAT BIT SOCKET



1/2" sq.

● 1/2"sq. HEX. BIT SOCKET SET (7pcs.) · (9pcs.) · (10pcs.)



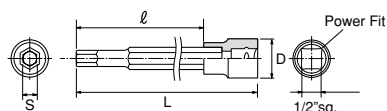
TBT407H



TBT410H



TBT409BH



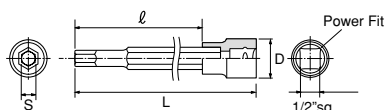
● 1/2"sq. LONG HEX. BIT SOCKET SET (9pcs.)



TBT4L09H



TBT4L09BH



HEX. BIT SOCKET SET (7pcs.) · (9pcs.) · (10pcs.)

mm · in

No. TBT407H	▼g 765	1
Hexagon bit socket (1/2"sp.)	BT4-05,06,08,10,12,14	
Cross bit socket (1/2"sp.)	BT4-2P	
Socket holder	EHB410	

No. TBT410H	▼kg 1.3	1
Hexagon bit socket (1/2"sp.)	BT4-05,06,07,08,09,10,12,14,17, 2P	
Socket holder	EHB410	

No. TBT409BH	▼kg 1.3	1
Hexagon bit socket (1/2"sp.)	in BT4- ³ / ₁₆ , ⁷ / ₃₂ , ¹ / ₄ , ⁵ / ₁₆ , ³ / ₈ , ⁷ / ₁₆ , ¹ / ₂ , ⁹ / ₁₆ , ⁵ / ₈	
Socket holder	EHB410	

HEX. BIT SOCKET

mm

No.	S	D	L	ℓ	▼g	1	
BT4-05	5	22	70	37	74	10	
-06	6	22	70	37	74	10	
-07	7	22	75	42	84	10	
-08	8	22	75	42	84	10	
-09	9	22	77	43	98	10	
-10	10	22	77	43	98	10	
-12	12	22	79	44	121	10	
-14	14	24	85	47	164	10	
-17	17	25	90	49	216	10	

POWERFIT

HEX. BIT SOCKET

in

No.	S	D	L	ℓ	▼g	1	
BT4- ³ / ₁₆	4.7	22	65	32	71	10	
- ⁷ / ₃₂	5.5	22	70	37	74	10	
- ¹ / ₄	6.3	22	70	37	74	10	
- ⁵ / ₁₆	7.9	22	75	42	84	10	
- ³ / ₈	9.5	22	76	43	98	10	
- ⁷ / ₁₆	11.1	22	80	44	121	10	
- ¹ / ₂	12.7	24	85	47	164	10	
- ⁹ / ₁₆	14.2	25	90	49	216	10	
- ⁵ / ₈	15.8	25	90	49	216	10	

• Bit replacement is possible. (Refer to P.92)

POWERFIT

LONG HEX. BIT SOCKET SET (9pcs.)

mm · in

No. TBT4L09H	▼kg 1.5	1
Long hexagon bit socket (1/2"sp.)	BT4-05L,06L,07L,08L,09L,10L,12L,14L,17L	
Socket holder	EHB410	

No. TBT4L09BH	▼kg 1.7	1
Long hexagon bit socket (1/2"sp.)	in BT4- ³ / ₁₆ L, ⁷ / ₃₂ L, ¹ / ₄ L, ⁵ / ₁₆ L, ³ / ₈ L, ⁷ / ₁₆ L, ¹ / ₂ L, ⁹ / ₁₆ L, ⁵ / ₈ L	
Socket holder	EHB410	

LONG HEX. BIT SOCKET

mm

No.	S	D	L	ℓ	▼g	1	
BT4-05L	5	22	132	99	90	10	
-06L	6	22	132	99	91	10	
-07L	7	22	132	99	108	10	
-08L	8	22	132	99	108	10	
-09L	9	22	132	98	135	10	
-10L	10	22	132	98	135	10	
-12L	12	22	132	96	172	10	
-14L	14	24	132	94	227	10	
-17L	17	25	132	91	298	10	

POWERFIT

LONG HEX. BIT SOCKET

in

No.	S	D	L	ℓ	▼g	1	
BT4- ³ / ₁₆ L	4.7	22	132	99	90	10	
- ⁷ / ₃₂ L	5.5	22	132	99	91	10	
- ¹ / ₄ L	6.3	22	132	99	91	10	
- ⁵ / ₁₆ L	7.9	22	132	99	108	10	
- ³ / ₈ L	9.5	22	132	98	135	10	
- ⁷ / ₁₆ L	11.1	22	132	96	172	10	
- ¹ / ₂ L	12.7	24	132	94	227	10	
- ⁹ / ₁₆ L	14.2	25	132	91	298	10	
- ⁵ / ₈ L	15.8	25	132	91	298	10	

• Bit replacement is possible. (Refer to P.92)

POWERFIT

LONG BALL POINT HEX. BIT SOCKET SET mm . in

No. TBT4L04BPH	▼ g 520	1
Long ball point hexagon bit socket (1/2"sq.)	BT4-05BPL, 06BPL, 07BPL, 08BPL	
Socket holder	EHB405	

No. TBT4L04BPHB	▼ g 500	1
Long ball point hexagon bit socket (1/2"sq.)	BT4-3/16 BPL, 7/32 BPL, 1/4 BPL, 5/16 BPL	
Socket holder	EHB405	

LONG BALL POINT HEX. BIT SOCKET mm

No.	S	D	L	ℓ	▼g	1	
BT4-05BPL	5	22	132	99	90	10	
-06BPL	6	22	132	99	91	10	
-07BPL	7	22	132	99	108	10	
-08BPL	8	22	132	99	108	10	

POWERFIT®

LONG BALL POINT HEX. BIT SOCKET in

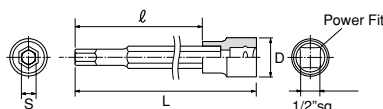
No.	S	D	L	ℓ	▼g	1	
BT4-3/16 BPL	4.7	22	132	99	90	10	
-7/32 BPL	5.5	22	132	99	91	10	
-1/4 BPL	6.3	22	132	99	91	10	
-5/16 BPL	7.9	22	132	99	108	10	

* Bit replacement is possible. (Refer to P.92)

POWERFIT®



• Care should be taken not to force this piece as the torque limit of the ball point is low.

**1/2"sq. LONG BALL POINT HEX. BIT SOCKET SET (4pcs.)**

TBT4L04BPH



TBT4L04BPHB

HIGH GRADE L SHAPE STANDARD HEX-KEY WRENCH SET (8pcs.) - (9pcs.) mm

No. HLD1009	▼g 260	5
High Grade L Shape Standard Hex-key Wrench	HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10	
No. HLD1008	▼g 150	5
High Grade L Shape Standard Hex-key Wrench	HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8	
Common Items		
Holder		

- High grade hard chrome plating for better feeling, appearance and rust-resistance
- Made of special alloy steel for better wear-resistance & torque strength.
- Can apply high torque due to balanced hardness and flexibility processed by "state of the art" heat-treatment technique.
- With original holder for carrying and tool management.

* The holder is provided as a replaceable part. Check with your dealer for details.

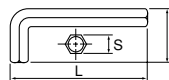
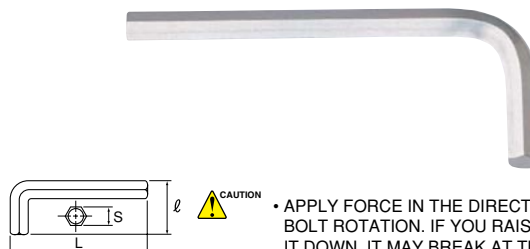
HIGH GRADE L SHAPE STANDARD HEX-KEY WRENCH SET (8 · 9pcs.)

HLD1009

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

HIGH GRADE L SHAPE STANDARD HEX-KEY WRENCH mm

No.	S	L	ℓ	▼g	1	
HLD100- 1.5	1.5	53	13	1	10	
- 2	2	60	14	1	10	
- 2.5	2.5	62	17	3	10	
- 3	3	68	23	5	10	
- 4	4	76	29	10	10	
- 5	5	85	33	17	10	
- 6	6	96	38	30	10	
- 8	8	110	44	60	10	
-10	10	120	50	105	10	
-12	12	135	57	170	10	
-14	14	155	69	270	10	

HIGH GRADE L SHAPE STANDARD HEX-KEY WRENCH

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

HIGH GRADE L SHAPE LONG HEX-KEY WRENCH SET (8pcs.) - (9pcs.) mm

No. HLD1509	▼g 450	5
High Grade L Shape Long Hex-key Wrench	HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10	
No. HLD1508	▼g 245	5
High Grade L Shape Long Hex-key Wrench	HLD150-1.5, 2, 2.5, 3, 4, 5, 6, 8	
Common Items		
Holder		

- High grade hard chrome plating for better feeling, appearance and rust-resistance
- Made of special alloy steel for better wear-resistance & torque strength.
- Can apply high torque due to balanced hardness and flexibility processed by "state of the art" heat-treatment technique.
- With original holder for carrying and tool management.

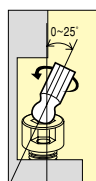
* The holder is provided as a replaceable part. Check with your dealer for details.

HIGH GRADE L SHAPE LONG HEX-KEY WRENCH SET (8 · 9pcs.)

HLD1509

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)



NEW

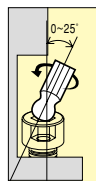
HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.) mm

No.	HLD2009	▼g 250	5
High Grade L Shape Standard Hex-key Wrench HLD100-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10			
Holder			

- Made of special alloy steel for better wear-resistance & torque strength.
- With original holder for carrying and tool management.
- The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
- The holder is provided as a replaceable part. Check with your dealer for details.

CAUTION • Care should be taken not to force this piece as the torque limit of the ball point is low.
 • Oscillation angle of ball point depends on the size of bolts
 • Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

● HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH



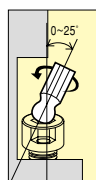
NEW

HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH mm

No.	S	L	ℓ	▼g	5
HLD200- 1.5	1.5	53.5	13.5	1	10
- 2	2	60	14	1	10
- 2.5	2.5	62.5	17.5	3	10
- 3	3	68	23	5	10
- 4	4	76	29	8	10
- 5	5	85	33	18	10
- 6	6	96	38	30	10
- 8	8	108	44	60	10
-10	10	122	50	100	10

CAUTION • Care should be taken not to force this piece as the torque limit of the ball point is low.
 • Oscillation angle of ball point depends on the size of bolts
 • Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

● HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.)



NEW

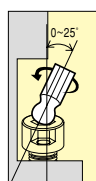
HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH SET (9pcs.) mm

No.	HLDS2009	▼g 220	5
High Grade L Shape Standard Hex-key Wrench HLDS200-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10			
Holder			

- Made of special alloy steel for better wear-resistance & torque strength.
- With original holder for carrying and tool management.
- The hexagon ends fit into hexagon bolts more tightly for less wear & tear.
- The holder is provided as a replaceable part. Check with your dealer for details.

CAUTION • Care should be taken not to force this piece as the torque limit of the ball point is low.
 • Oscillation angle of ball point depends on the size of bolts
 • Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

● HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH



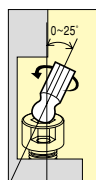
NEW

HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH mm

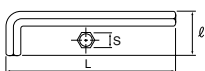
No.	S	L	ℓ	▼g	5
HLDS200- 1.5	1.5	53.5	7.5	1	10
- 2	2	60	9	1	10
- 2.5	2.5	62.5	10.5	2.5	10
- 3	3	68	12	4	10
- 4	4	76	15	7	10
- 5	5	85	17	16	10
- 6	6	96	20	25	10
- 8	8	108	24	55	10
-10	10	122	29	95	10

CAUTION • Care should be taken not to force this piece as the torque limit of the ball point is low.
 • Oscillation angle of ball point depends on the size of bolts
 • Apply force in the direction of the bolt rotation. If you raise it or push it down, it may break at the bend.

● HIGH GRADE L SHAPE LONG HEX-KEY WRENCH



• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



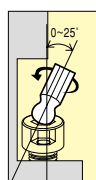
HIGH GRADE L SHAPE LONG HEX-KEY WRENCH mm

No.	S	L	ℓ	▼g	5
HLD150- 1.5	1.5	81	17	1	10
- 2	2	97	19	3	10
- 2.5	2.5	115	20	5	10
- 3	3	130	23	8	10
- 4	4	145	29	18	10
- 5	5	165	33	30	10
- 6	6	185	38	50	10
- 8	8	210	44	105	10
-10	10	235	50	185	10
-12	12	260	57	290	10
-14	14	295	69	460	10

● HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH SET (8 · 9pcs.)



HLD2509



HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH SET (8pcs.) · (9pcs.)

No.	HLD2509	▼g 445	5
Hexagon Wrench HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8, 10			

No.	HLD2508	▼g 245	5
Hexagon Wrench HLD250-1.5, 2, 2.5, 3, 4, 5, 6, 8			

Holder			
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- Made of special alloy steel for better wear-resistance & torque strength.
- With original holder for carrying and tool management.

CAUTION • DO NOT EXTEND WITH PIPES, ETC.
 • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH

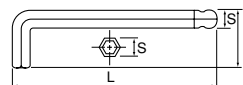
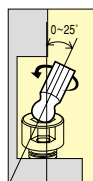
mm

No.	S	L	ℓ	▼g	📦
HLD250-1.5	1.5	81	18	1	10
- 2	2	97	19	3	10
- 2.5	2.5	113	21	5	10
- 3	3	130	23	8	10
- 4	4	145	29	17	10
- 5	5	165	33	30	10
- 6	6	185	38	50	10
- 8	8	210	44	105	10
-10	10	235	50	180	10

• The hexagon ends fit into hexagon bolts more tightly for less wear & tear.

CAUTION • DO NOT EXTEND WITH PIPES, ETC.
• DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

●HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH



HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH . SET (9pcs.)

in

No.	HLD2509B	▼g 400	📦 10
Hexagon Wrench	in	HLD250- $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$	

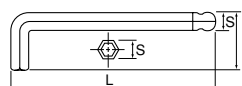
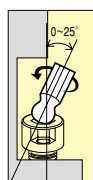
Holder

No.	S	L	ℓ	▼g	📦
HLD250- $\frac{1}{16}$	1.5	81	17	1	10
- $\frac{5}{64}$	1.9	95	19	3	10
- $\frac{3}{32}$	2.3	110	20	5	10
- $\frac{7}{64}$	2.7	119	21	7	10
- $\frac{1}{8}$	3.1	129	23	8	10
- $\frac{9}{64}$	3.5	134	27	15	10
- $\frac{5}{32}$	3.9	144	29	17	10
- $\frac{3}{16}$	4.7	163	33	30	10
- $\frac{7}{32}$	5.5	174	36	40	10
- $\frac{1}{4}$	6.3	184	38	50	10
- $\frac{5}{16}$	7.9	206	44	105	10
- $\frac{3}{8}$	9.5	232	50	180	10

- The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined spaces.
- The tool with a new and unique design that can be employed for the tightening process.
- Anti-wear and warping characteristics have been improved through employing a special steel alloy.
- The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

●HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH. SET (9pcs.)



HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH . SET (9pcs.)

in

No.	HLD2009B	▼g 235	📦 10
Hexagon Wrench	in	HLD200- $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{1}{4}$, $\frac{5}{16}$, $\frac{3}{8}$	

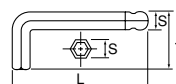
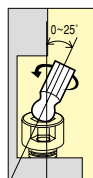
Holder

No.	S	L	ℓ	▼g	📦
HLD200- $\frac{1}{16}$	1.5	48	15	1	10
- $\frac{5}{64}$	1.9	52	16	1	10
- $\frac{3}{32}$	2.3	58	19	1	10
- $\frac{7}{64}$	2.7	61	21	3	10
- $\frac{1}{8}$	3.1	63	23	3	10
- $\frac{9}{64}$	3.5	69	26	5	10
- $\frac{5}{32}$	3.9	72	28	10	10
- $\frac{3}{16}$	4.7	80	30	15	10
- $\frac{7}{32}$	5.5	87	33	20	10
- $\frac{1}{4}$	6.3	94	36	30	10
- $\frac{5}{16}$	7.9	106	42	60	10
- $\frac{3}{8}$	9.5	120	47	105	10

- The tool allows a diagonal rotating operation up to 25 degrees, facilitating access in confined spaces.
- The tool with a new and unique design that can be employed for the tightening process.
- Anti-wear and warping characteristics have been improved through employing a special steel alloy.
- The high quality chrome galvanized finish provides a good texture while being aesthetically attractive and rust resistant.

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.

●HIGH GRADE L SHAPE STANDARD BALL POINT HEX-KEY WRENCH. SET (9pcs.)



L SHAPE HEX-KEY WRENCH SET (7pcs.)

mm

No.	HL107	▼g 250	📦 10
L Shape Hex-key Wrench		2.5, 3, 4, 5, 6, 8, 10	

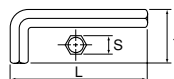
Holder

• These products are not sold individually.

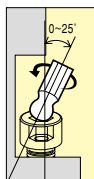
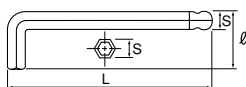
S	L	ℓ
2.5	57	20
3	65	23
4	77	27
5	83	32
6	95	38
8	100	42
10	122	50

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

●L SHAPE HEX-KEY WRENCH SET (7pcs.)



● L SHAPE LONG BALL POINT HEX-KEY WRENCH SET (9pcs.)



L SHAPE LONG BALL POINT HEX-KEY WRENCH SET (9pcs.) mm

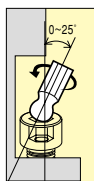
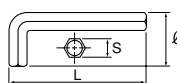
No.	HL259SP	▼g 420	10
L Shape Long Ball point Hex-key Wrench Set (9pcs.) 1.5, 2, 2.5, 3, 4, 5, 6, 8, 10			
Holder			

S	L	ℓ
1.5	92	16
2	105	17
2.5	115	20
3	128	22
4	142	26
5	165	31
6	188	37
8	205	45
10	230	50

- Convenient for attaching and removing hexagon hole bolts in hard to reach areas.
- Diagonal rotating-operation is possible.
- These products are not sold individually.

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.
• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● HIGH GRADE L SHAPE LONG BALL POINT HEX-KEY WRENCH SET



L SHAPE LONG BALL POINT HEX-KEY WRENCH SET (7pcs.) mm

No.	HL257	▼g 360	10
L Shape Long Ball point Hex-key Wrench 2.5, 3, 4, 5, 6, 8, 10			
Holder			

- For use on hexagon bolts in confined spaces.
- Possible for tilt turning.
- The wrenches in this set are not sold separately.

S	L	ℓ
2.5	89	20
3	98	23
4	110	27
5	125	32
6	140	38
8	160	42
10	180	50

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE BALL POINTS.
• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● FOLDING HEX-KEY WRENCH



FOLDING HEX-KEY WRENCH mm

No.	HLH8	▼g 220	5
Size 1.5, 2, 2.5, 3, 4, 5, 6, 8			

- For 1.5~8mm sizes.
- Plastic body which is light and helps your grasp.
- Replaceable parts are provided. Check with your dealer for details.

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● T SHAPE HEX. WRENCH



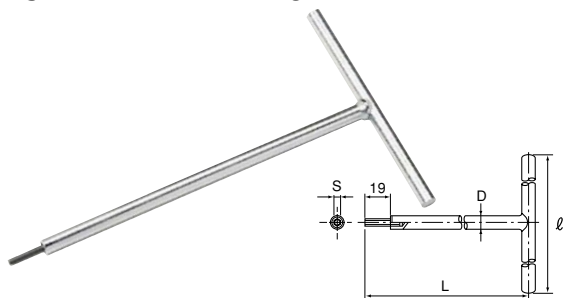
T SHAPE HEX. WRENCH mm

No.	S	L	ℓ ₁	ℓ ₂	▼g	10
HT10- 2.5	2.5	150	105	86	22	10
- 3	3	150	105	86	25	10
- 4	4	190	135	105	40	10
- 5	5	190	135	105	50	10
- 6	6	230	165	130	80	10
- 8	8	230	165	130	115	10
-10	10	230	165	130	170	10

- For use on hexagon bolts in confined spaces.
- Suitable for quick turning.

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● T SHAPE HEX. WRENCH



T SHAPE HEX. WRENCH mm

No.	S	ℓ	L	D	▼g	10
HTH-4	4	130	225	9	160	10
-5	5	160	230	11	265	10
-6	6	180	230	11	280	10
-8	8	180	235	13	395	10

- For use on hexagon bolts in confined spaces.
- Suitable for quick turning.

CAUTION • APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

PLASTIC GRIP HEX. DRIVER SET				mm . in
No. TD1H5	▼g 650	☞ 1		
Plastic Grip Hex. Driver Set (5pcs.)		D1H-025, 03, 04, 05, 06		
No. TD1H8	▼kg 1.1	☞ 1		
Plastic Grip Hex. Driver Set (8pcs.)		D1H-015,02,025,03,04,05,06,08		
No. TD1H10B	▼kg 1.3	☞ 1		
Plastic Grip Hex. Driver Set (10pcs.)		D1H- $\frac{1}{16}$, $\frac{5}{64}$, $\frac{3}{32}$, $\frac{1}{8}$, $\frac{9}{64}$, $\frac{5}{32}$, $\frac{3}{16}$, $\frac{7}{32}$, $\frac{1}{4}$, $\frac{5}{16}$		

PLASTIC GRIP HEX. DRIVER									mm
No.	S ₁	S ₂	D	L	ℓ	▼g	☞		
D1H-015	1.5	10	29.6	172	75	100	5		
-02	2	10	29.6	172	75	100	5		
-025	2.5	10	32	209	100	130	5		
-03	3	10	32	209	100	130	5		
-04	4	10	32	209	100	130	5		
-05	5	10	32	209	100	130	5		
-06	6	10	32	209	100	130	5		
-08	8	12	33.8	282	150	190	5		

PLASTIC GRIP HEX. DRIVER									in
No.	S ₁	S ₂	D	L	ℓ	▼g	☞		
D1H-$\frac{1}{16}$	1.5	10	29.6	172	75	100	5		
-$\frac{5}{64}$	1.9	10	29.6	172	75	100	5		
-$\frac{3}{32}$	2.3	10	32	209	100	130	5		
-$\frac{1}{8}$	3.1	10	32	209	100	130	5		
-$\frac{9}{64}$	3.5	10	32	209	100	130	5		
-$\frac{5}{32}$	3.9	10	32	209	100	130	5		
-$\frac{3}{16}$	4.7	10	32	209	100	130	5		
-$\frac{7}{32}$	5.5	10	32	209	100	130	5		
-$\frac{1}{4}$	6.3	10	32	209	100	130	5		
-$\frac{5}{16}$	7.9	12	33.8	282	150	190	5		

PLASTIC GRIP BALL POINT HEX. DRIVER SET				mm . in
No. TD1HBP5	▼g 650	☞ 1		
Plastic Grip Ball Point Hex. Driver Set (5pcs.)		D1H-025BP,03BP,04BP,05BP,06BP		
No. TD1HBP8	▼kg 1.1	☞ 1		
Plastic Grip Ball Point Hex. Driver Set (8pcs.)		D1H-015BP, 02BP, 025BP, 03BP, 04BP, 05BP, 06BP, 08BP		
No. TD1HBP10B	▼kg 1.3	☞ 1		
Plastic Grip Ball Point Hex. Driver Set (10pcs.)		D1H- $\frac{1}{16}$ BP, $\frac{5}{64}$ BP, $\frac{3}{32}$ BP, $\frac{1}{8}$ BP, $\frac{9}{64}$ BP, $\frac{5}{32}$ BP, $\frac{3}{16}$ BP, $\frac{7}{32}$ BP, $\frac{1}{4}$ BP, $\frac{5}{16}$ BP		

PLASTIC GRIP BALL POINT HEX. DRIVER									mm
No.	S ₁	S ₂	D	L	ℓ	▼g	☞		
D1H-015BP	1.5	10	29.6	172	75	100	5		
-02BP	2	10	29.6	172	75	100	5		
-025BP	2.5	10	32	209	100	130	5		
-03BP	3	10	32	209	100	130	5		
-04BP	4	10	32	209	100	130	5		
-05BP	5	10	32	209	100	130	5		
-06BP	6	10	32	209	100	130	5		
-08BP	8	12	33.8	282	150	190	5		

PLASTIC GRIP BALL POINT HEX. DRIVER									in
No.	S ₁	S ₂	D	L	ℓ	▼g	☞		
D1H-$\frac{1}{16}$BP	1.5	10	29.6	172	75	100	5		
-$\frac{5}{64}$BP	1.9	10	29.6	172	75	100	5		
-$\frac{3}{32}$BP	2.3	10	32	209	100	130	5		
-$\frac{1}{8}$BP	3.1	10	32	209	100	130	5		
-$\frac{9}{64}$BP	3.5	10	32	209	100	130	5		
-$\frac{5}{32}$BP	3.9	10	32	209	100	130	5		
-$\frac{3}{16}$BP	4.7	10	32	209	100	130	5		
-$\frac{7}{32}$BP	5.5	10	32	209	100	130	5		
-$\frac{1}{4}$BP	6.3	10	32	209	100	130	5		
-$\frac{5}{16}$BP	7.9	12	33.8	282	150	190	5		

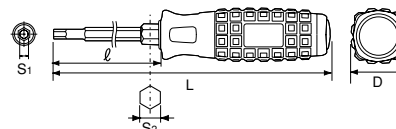
●PLASTIC GRIP HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D PAT.



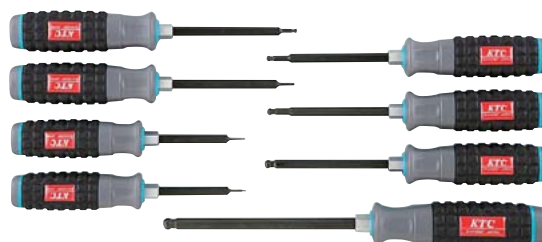
TD1H8



- The size is displayed on the grip end.



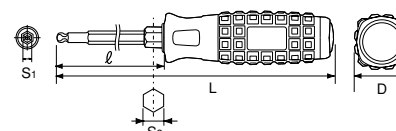
●PLASTIC GRIP BALL POINT HEX. DRIVER SET (5pcs.) (8pcs.) (10pcs.) D. PAT.



TD1HBP8



- The size is displayed on the grip end.

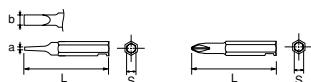




List of applications for 21st Century Version Tool-bit socket replacement bit

*Caution: there is no compatibility with tools other than the 21st Century Version Tools.

NEW

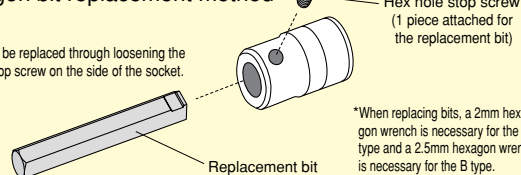


■Cross, slotted bit

Applied product number			Replacement bit product number	Number	a	b	S	L	Type
1/4" sq.	3/8" sq.	1/2" sq.							
BT2-1P		BT4-1P	T-1P	No.1	—	—	6.3	41	A
-2P	BT3-2P	-2P	-2P	No.2	—	—	6.3	46	A
	-3P	-3P	-3P	No.3	—	—	7.9	51	B
BT2-6M	-6M	-6M	-6M	Slotted	1.0	6	6.3	46	A

Hexagon bit replacement method

The bit can be replaced through loosening the hex hole stop screw on the side of the socket.



■Hexagon bit (stubby)

Applied product number	Replacement bit product number	S ₁	S ₂	L	Type
3/8" sq.					
BT3-03SS	T-03SS	3	6.3	14	A
-04SS	-04SS	4	6.3	14	A
-05SS	-05SS	5	6.3	15	A
-06SS	-06SS	6	6.3	15.5	A
-07SS	-07SS	7	8	16	B
-08SS	-08SS	8	8	17	B
-09SS	-09SS	9	10	19.5	B
-10SS	-10SS	10	10	19.5	B
-12SS	-12SS	12	12	22	B




■Hexagon bit (short)

Applied product number	Replacement bit product number	S ₁	S ₂	L	Type
3/8" sq.					
BT3-03S	T-03S	3	6.3	28	A
-04S	-04S	4	6.3	28	A
-05S	-05S	5	6.3	30	A
-06S	-06S	6	6.3	30	A
-07S	-07S	7	8	30	B
-08S	-08S	8	8	30	B
-09S	-09S	9	10	32	B
-10S	-10S	10	10	32	B
-12S	-12S	12	12	34	B

■Hexagon bit (short)

Applied product number	Replacement bit product number	S ₁	S ₂	L	Type
3/8" sq.					
BT3-1/8 S	T-1/8 S	3.1	6.3	28	A
-9/64 S	-9/64 S	3.6	6.3	28	A
-5/32 S	-5/32 S	3.9	6.3	28	A
-3/16 S	-3/16 S	4.7	6.3	28	A
-7/32 S	-7/32 S	5.5	6.3	30	A
-1/4 S	-1/4 S	6.3	6.3	30	A
-5/16 S	-5/16 S	7.9	8	30	B
-3/8 S	-3/8 S	9.5	10	32	B
-7/16 S	-7/16 S	11.1	12	34	B

■Hexagon bit (standard)

Applied product number			Replacement bit product number	S ₁	S ₂	L	Type	
 1/4" sq.	 3/8" sq.	 1/2" sq.						
BT2-03	BT3-03		T-03	3	6.3	41	A	
-04	-04		-04	4	6.3	41	A	
-05	-05	BT4-05	-05	5	6.3	46	A	
-06	-06	-06	-06	6	6.3	46	A	
	-07	-07	-07	7	8	51	B	
	-08	-08	-08	8	8	51	B	
	-09	-09	-09	9	10	53	B	
	-10	-10	-10	10	10	53	B	
	-12	-12	-12	12	12	56	B	
		-14	-14	14	14	61	B	
		-17	-17	17	17	66	B	



■Hexagon bit (standard)

Applied product number			Replacement bit product number	S ₁	S ₂	L	Type
1/4" sq.	3/8" sq.	1/2" sq.					
BT2- ¹ / ₈	BT3- ¹ / ₈	BT4- ³ / ₁₆	T- ¹ / ₈	3.1	6.3	41	A
⁹ / ₆₄	⁹ / ₆₄		⁹ / ₆₄	3.6	6.3	41	A
⁵ / ₃₂	⁵ / ₃₂		⁵ / ₃₂	3.9	6.3	41	A
³ / ₁₆	³ / ₁₆		³ / ₁₆	4.7	6.3	41	A
⁷ / ₃₂	⁷ / ₃₂		⁷ / ₃₂	5.5	6.3	46	A
¹ / ₄	¹ / ₄		¹ / ₄	6.3	6.3	46	A
	⁵ / ₁₆		⁵ / ₁₆	7.9	7.9	51	B
	³ / ₈		³ / ₈	9.5	10	53	B
	⁷ / ₁₆		⁷ / ₁₆	11.1	12	56	B
	¹ / ₂		¹ / ₂	12.7	14	61	B
	⁹ / ₁₆	⁹ / ₁₆	14.2	17	66	B	
	⁵ / ₈	⁵ / ₈	15.8	17	66	B	




■Hexagon bit (long)

Applied product number			Replacement bit product number	S ₁	S ₂	L	Type
1/4" sq.	3/8" sq.	1/2" sq.					
BT2-03L	BT3-03L		T-03L	3	6.3	108	A
-04L	-04L		-04L	4	6.3	108	A
-05L	-05L	BT4-05L	-05L	5	6.3	108	A
-06L	-06L	-06L	-06L	6	6.3	108	A
	-07L	-07L	-07L	7	8	108	B
	-08L	-08L	-08L	8	8	108	B
	-09L	-09L	-09L	9	10	108	B
	-10L	-10L	-10L	10	10	108	B
	-12L	-12L	-12L	12	12	108	B
		-14L	-14L	14	14	108	B
		-17L	-17L	17	17	108	B




■Hexagon bit (long)

Applied product number		Replacement bit product number	S ₁	S ₂	L	Type	
 1/4" sq.	 3/8" sq.						
BT2- ¹ / ₈ L	BT3- ¹ / ₈ L	BT4- ³ / ₁₆ L	T- ¹ / ₈ L	3.1	6.3	108	A
⁹ / ₆₄ L	⁹ / ₆₄ L		⁹ / ₆₄ L	3.6	6.3	108	A
⁵ / ₃₂ L	⁵ / ₃₂ L		⁵ / ₃₂ L	3.9	6.3	108	A
³ / ₁₆ L	³ / ₁₆ L		³ / ₁₆ L	4.7	6.3	108	A
⁷ / ₃₂ L	⁷ / ₃₂ L		⁷ / ₃₂ L	5.5	6.3	108	A
¹ / ₄ L	¹ / ₄ L		¹ / ₄ L	6.3	6.3	108	A
	⁵ / ₁₆ L		⁵ / ₁₆ L	7.9	7.9	108	B
	³ / ₈ L		³ / ₈ L	9.5	10	108	B
	⁷ / ₁₆ L		⁷ / ₁₆ L	11.1	12	108	B
	¹ / ₂ L		¹ / ₂ L	12.7	14	108	B
	⁹ / ₁₆ L	⁹ / ₁₆ L	14.2	17	108	B	
	⁵ / ₈ L	⁵ / ₈ L	15.8	17	108	B	

■Long ball point hexagon bit socket

Applied product number		Replacement bit product number	S ₁	S ₂	L	Type	
							
BT2-03BPL	BT3-03BPL		T-03BPL	3	6.3	108	A
-04BPL	-04BPL		-04BPL	4	6.3	108	A
-05BPL	-05BPL	BT4-05BPL	-05BPL	5	6.3	108	A
-06BPL	-06BPL		-06BPL	6	6.3	108	A
-07BPL	-07BPL		-07BPL	7	8	108	B
-08BPL	-08BPL	-08BPL	-08BPL	8	8	108	B

■Long ball point hexagon bit socket

Applied product number			Replacement bit product number	S ₁	S ₂	L	Type	
 1/4" sq.	 3/8" sq.	 1/2" sq.						
BT2-1/8 BPL	BT3-1/8 BPL		T-1/8 BPL	3.1	6.3	108	A	
-9/64 BPL	-9/64 BPL		-9/64 BPL	3.6	6.3	108	A	
-5/32 BPL	-5/32 BPL		-5/32 BPL	3.9	6.3	108	A	
-3/16 BPL	-3/16 BPL	BT4-3/16 BPL	-3/16 BPL	4.7	6.3	108	A	
-7/32 BPL	-7/32 BPL	-7/32 BPL	-7/32 BPL	5.5	6.3	108	A	
-1/4 BPL	-1/4 BPL	-1/4 BPL	-1/4 BPL	6.3	6.3	108	A	
	-5/16 BPL	-5/16 BPL	-5/16 BPL	7.9	7.9	108	B	

*Please check the merchandise inventory for a product that is marked by before placing an order.

2. CONVENTIONAL TOOLS

TORX® WRENCHES

TORX® is a registered trademark for the Textron Fastening Systems.



CAUTION

TORX® wrench sets

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.

TORX® wrenches

- Use wrenches that conform to the size of the tip standards.
- Do not use by adding on pipes, etc.
- Make sure that the bolt is fully inserted.
- Do not expose this tool to impact by hitting it with a hammer, etc.
- Fully insert the angle drive.

- Do not use with power tools, such as impact wrenches, etc.
- Do not twist using the tip.
- Take care to avoid over-applying force for the smaller sizes.
- Do not drop or expose to strong impact.

The TORX® Standards

The TORX® standards were developed by the American firm Camcar. The curved bolt head and tool contact surface is the main characteristic, and is mainly divided into the T type and E type. standardized for their exceptional performance. They are employed globally for automobiles and industrial machines, and in Japan, the tools are widely distributed in each field as the necessary tool for the discerning professional.

As the name TORX® is a registered trademark of Textron Fastening Systems, the tools are generally called "hex-lobe" (meaning 6 ear lobes) wrenches.

KTC receives licensing and technological training from Textron Fastening Systems, enabling the approved, formal usage of the product name TORX®.

T type TORX® screw



T type TORX® wrench



E type TORX® screw



E type TORX® wrench

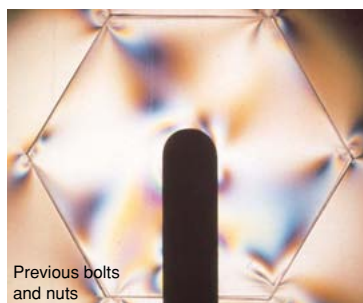
Functions

High durability and torque transmission efficiency

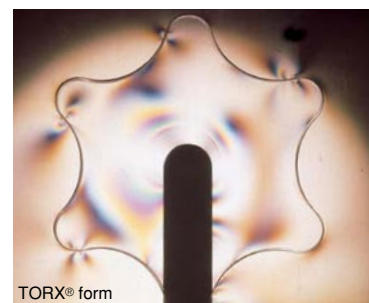
Torque transmission is improved through greater facial contact of the tool with bolt heads compared to previous bolt head styles. Durability is increased through a lower concentration of stress, which reduces wear and breakage.

High operational performance

When tightening Phillips screws, the screw must not only be turned but also pushed in (a force that sustains the screw in the set position). However, the TORX® design allows for stabilizing of the bolt head and the contact surface of the tool, enabling the screw to be tightened through turning only and without applying force. This reduces the physical stress of the user, increases operational efficiency, and increases tool and screw durability.



Previous bolts and nuts

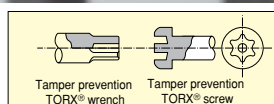
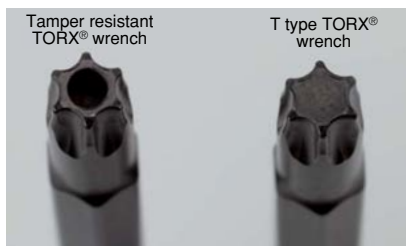


TORX® form

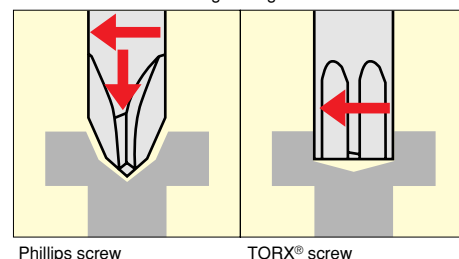
TORX® Wrenches

The tamper resistant TORX®

The screw with the round protrusion of the T type TORX® screw is called the "tamper resistant TORX® screw". The "tamper resistant TORX® screw" is used in places where disassembly should be avoided by non-professionals. This screw is widely employed for internal components of mobile phones and computers. Recently, this screw has been used in automobile applications, such as air bags and seat belts.



• Force distribution when tightening



Phillips screw





TORX® screw

List of TORX® wrench sizes

*The "A" dimensions and "bolt diameter" within the table below are guidelines that indicate the size of the TORX® screw and the corresponding TORX® tool. Select the most appropriate (tightly matching and without space for movement) TORX® tool for the TORX® screw before use.




*The "A" dimensions are the tool standards indicated by Textron Fastening Systems which do not completely match the actual dimensions of the product. Also, the corresponding "bolt diameter" with the "designation" are examples illustrating general TORX® screws.

T type TORX® wrench

		Designation	T6	T8	T9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
		"A" dimensions	1.65	2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
Designation symbols	Drive	Bolt diameter	M2	M2.5	—	M3	M3.5	M4	M5	M5	M6	M8	M8	M10	M12 · 14	M16	M18
T type TORX® bit socket	BT2-T★		●	●	●	●	●	●	●	●	●						
T type TORX® bit socket	BT3-T★							●	●	●	●	●	●	●	●		
T type TORX® bit socket	BT4-T★										●	●	●	●	●	●	●
T type TORX® impact wrench	S6T★							●	●		●	●	●				
T type TORX® L handle wrench	LT★		●	●		●	●	●	●	●	●	●	●	●	●		
T type TORX® driver	D1T-T★		●	●	●	●	●	●	●	●	●	●	●	●			




The ★ sign within the product number is allocated for the size (designation) number.

E type TORX® wrench

		Designation	E4	E5	E6	E7	E8	E10	E11	E12	E14	E16	E18	E20	E24
		"A" dimensions	3.83	4.72	5.69	6.17	7.47	9.37	10.03	11.12	12.85	14.71	16.64	18.41	22.10
Designation symbols	Drive	Bolt diameter	—	—	M5	—	M6	M8	—	M10	M12	—	M14	M16	M18
E type TORX® wrench	B2-E★		●	●	●	●	●	●							
E type TORX® wrench	B3-E★			●	●	●	●	●	●	●	●	●			
E type TORX® wrench	B4-E★						●	●	●	●	●	●	●	●	●
E type TORX® long-straight offset wrench	WEE★X★L				●	●	●	●		●	●				

The ★ sign within the product number is allocated for the size (designation) number.

T type tamper resistant TORX® wrench

		Designation	T8	T9	T10	T15	T20	T25	T27	T30	T40	T45	T50	T55	T60	T70
		"A" dimensions	2.30	2.48	2.72	3.26	3.84	4.40	4.96	5.49	6.60	7.77	8.79	11.17	13.20	15.49
Designation symbols	Drive	Bolt diameter	M2.5	—	M3	M3.5	M4	M5	M5	M6	M8	M8	M10	M12	M16	M18
T type tamper resistant TORX® bit socket	BT2-T★H		●	●	●	●	●	●	●	●						
T type tamper resistant TORX® bit socket	BT3-T★H						●	●	●	●	●	●	●	●		
T type tamper resistant TORX® bit socket	BT4-T★H									●	●	●	●	●	●	●
T type tamper resistant TORX® L handle wrench	LT★H		●		●	●	●	●	●	●	●	●	●	●		
T type tamper resistant TORX® driver	D1T-T★H		●	●	●	●	●	●	●	●	●	●	●			

The ★ sign within the product number is allocated for the size (designation) number.

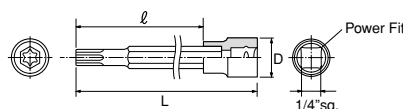
T-TYPE TORX® BIT SOCKET SET (9pcs.)

No. TBT209T	▼g 390	1
T-TYPE TORX® BIT SOCKET (1/4"sq.) BT2-T6,T8,T9,T10,T15,T20,T25,T27,T30		
Socket Holder EHB210		

No.	Fastener	D	L	ℓ	▼g	1	
BT2-T 6	T 6	16	54.5	32	35	10	
-T 8	T 8	16	54.5	32	35	10	
-T 9	T 9	16	54.5	32	35	10	
-T10	T10	16	54.5	32	36	10	
-T15	T15	16	59.5	37	37	10	
-T20	T20	16	59.5	37	37	10	
-T25	T25	16	59.5	37	37	10	
-T27	T27	16	59.5	37	38	10	
-T30	T30	16	59.5	37	38	10	

• Bit replacement is possible. (Refer to P.104)

POWERFIT®

1/4"sq. T-TYPE TORX® BIT SOCKET SET (9pcs.)

T-TYPE LONG TORX® BIT SOCKET · SET (9pcs.)

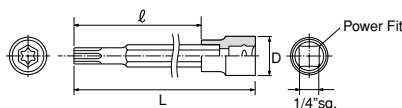
No. TBT2L09T	▼g 550	1
T-TYPE LONG TORX® BIT SOCKET (1/4"sq.) BT2-T6L,T8L,T9L,T10L,T15L,T20L,T25L,T27L,T30L		
Socket Holder EHB210		

No.	Fastener	D	L	ℓ	▼g	1	
BT2 -T 6L	T 6	16	121.5	99	53	10	
-T 8L	T 8	16	121.5	99	53	10	
-T 9L	T 9	16	121.5	99	53	10	
-T10L	T10	16	121.5	99	54	10	
-T15L	T15	16	121.5	99	54	10	
-T20L	T20	16	121.5	99	54	10	
-T25L	T25	16	121.5	99	54	10	
-T27L	T27	16	121.5	99	55	10	
-T30L	T30	16	121.5	99	55	10	

• Bit replacement is possible. (Refer to P.104)

• The long type that is useful for replacing air bags.

POWERFIT®

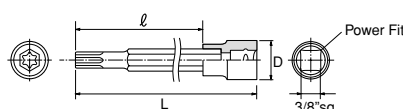
1/4"sq. T-TYPE LONG TORX® BIT SOCKET · SET (9pcs.)

T-TYPE SHORT TORX® BIT SOCKET · SET (8pcs.)

No. TBT3S08T	▼g 610	1
T-TYPE SHORT TORX® BIT SOCKET · SET (3/8"sq.) BT3-T20S,T25S,T27S,T30S,T40S,T45S,T50S,T55S		
Socket Holder EHB310		

No.	Fastener	D	L	ℓ	▼g	1	
BT3-T20S	T20	17	50	21	44	10	
-T25S	T25	17	50	21	44	10	
-T27S	T27	17	50	21	45	10	
-T30S	T30	17	50	21	45	10	
-T40S	T40	18.5	52	23	63	10	
-T45S	T45	18.5	52	23	65	10	
-T50S	T50	18.5	52	23	65	10	
-T55S	T55	22	58	26	119	10	

• Bit replacement is possible. (Refer to P.104)

POWERFIT®

3/8"sq. T-TYPE SHORT TORX® BIT SOCKET · SET (8pcs.)


3/8" sq.

● 3/8"sq. T-TYPE TORX® BIT SOCKET · SET (8pcs.)



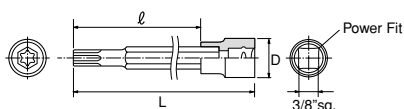
T-TYPE TORX® BIT SOCKET · SET (8pcs.)

No. TBT308T	▼g 610	1
T-TYPE TORX® BIT SOCKET · SET (3/8"sq.) BT3-T20,T25,T27,T30,T40,T45,T50,T55		
Socket Holder		EHB310

No.	Fastener	D	L	ℓ	▼g	1	
BT3-T20	T20	17	66	37	44	10	
-T25	T25	17	66	37	44	10	
-T27	T27	17	66	37	45	10	
-T30	T30	17	66	37	45	10	
-T40	T40	18.5	71	42	63	10	
-T45	T45	18.5	71	42	65	10	
-T50	T50	18.5	71	42	65	10	
-T55	T55	22	76	44	119	10	

• Bit replacement is possible. (Refer to P.104)

POWERFIT



● 3/8"sq. T-TYPE LONG TORX® BIT SOCKET · SET (8pcs.)



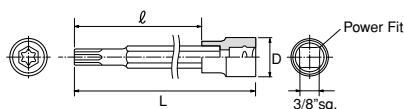
T-TYPE LONG TORX® BIT SOCKET · SET(8pcs.)

No. TBT3L08T	▼g 800	1
T-TYPE LONG TORX® BIT SOCKET · SET (3/8"sq.) BT3-T20L,T25L,T27L,T30L,T40L,T45L,T50L,T55L		
Socket Holder		EHB310

No.	Fastener	D	L	ℓ	▼g	1	
BT3-T20L	T20	17	128	99	61	10	
-T25L	T25	17	128	99	61	10	
-T27L	T27	17	128	99	62	10	
-T30L	T30	17	128	99	62	10	
-T40L	T40	18.5	128	99	87	10	
-T45L	T45	18.5	128	99	89	10	
-T50L	T50	18.5	128	99	89	10	
-T55L	T55	22	128	96	170	10	

• Bit replacement is possible. (Refer to P.104)
• The long type that is useful for replacing air bags.

POWERFIT



● 3/8"sq. T-TYPE IMPACT TORX® WRENCH & SET (5pcs.)



T-TYPE IMPACT TORX® WRENCH-SET (5pcs.)

No. TBTP305T	▼g 395	10
T-Type Impact TORX® Wrench (3/8"sq.) BTP3-T20P, T25P, T30P, T40P, T45P		

No.	Fastener	D	L	▼g	1	
BTP3-T20P	T20	18	75	60	1	
-T25P	T25	18	75	60	1	
-T30P	T30	18	75	60	1	
-T40P	T40	18	75	60	1	
-T45P	T45	18	75	60	1	

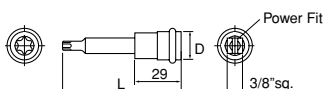
POWERFIT

Attached pins and rings

PR-1519



Pin: Silver
Ring: Grey

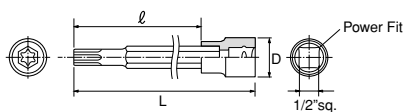


T-TYPE TORX® BIT SOCKET · SET (7pcs.)

No. TBT407T ▼g 965 1						
T-TYPE TORX® BIT SOCKET (1/2"sq.) BT4-T30, T40, T45, T50, T55, T60, T70						
Socket Holder EHB410						
No.	Fastener	D	L	ℓ	▼g	
BT4-T30	T30	22	70	37	73	10
-T40	T40	22	75	42	82	10
-T45	T45	22	75	42	84	10
-T50	T50	22	75	42	84	10
-T55	T55	22	80	44	119	10
-T60	T60	24	85	47	161	10
-T70	T70	25	90	49	211	10

• Bit replacement is possible. (Refer to P.104)

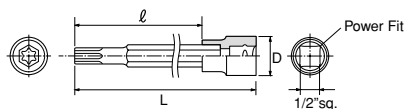
POWERFIT®

● 1/2"sq. T-TYPE TORX® BIT SOCKET · SET (7pcs.)**LONG T-TYPE TORX® BIT SOCKET · SET (7pcs.)**

No. TBT4L07T ▼kg 1.3 1						
Long T-Type TORX® Bit Socket (1/2" sq) BT4-T30L, T40L, T45L, T50L, T55L, T60L, T70L						
Socket Holder EHB410						
No.	Fastener	D	L	ℓ	▼g	
BT4-T30L	T30	22	132	99	90	10
-T40L	T40	22	132	99	106	10
-T45L	T45	22	132	99	108	10
-T50L	T50	22	132	99	108	10
-T55L	T55	22	132	96	170	10
-T60L	T60	24	132	94	224	10
-T70L	T70	25	132	91	293	10

• Bit replacement is possible. (Refer to P.104)
• The long type that is useful for replacing air bags.

POWERFIT®

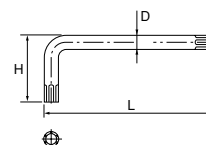
● 1/2"sq. LONG T-TYPE TORX® BIT SOCKET SET (7pcs.)**T-TYPE TORX® L HANDLE WRENCH SET (12pcs.)**

No. LTX12 ▼g 350 1						
T-Type TORX® L Handle Wrench LT6, T8, T10, T15, T20, T25, T27, T30, T40, T45, T50, T55						

• The pack can be used as a tray.

● T-TYPE TORX® L HANDLE WRENCH SET (12pcs.)**T-TYPE TORX® L HANDLE WRENCH**

No.	Fastener	D	L	H	▼g	
LT 6	T 6	3	50	17	3	10
LT 8	T 8	3	53	19	3.5	10
LT10	T10	3	56	20	4	10
LT15	T15	3.5	60	22	6	10
LT20	T20	4	64	24	8	10
LT25	T25	4.5	68	25	11	10
LT27	T27	5	72	27	14	10
LT30	T30	6	80	30	21	10
LT40	T40	7	87	33	30	10
LT45	T45	8	95	37	44	10
LT50	T50	9	109	41	65	10
LT55	T55	11.5	125	47	120	10

● T-TYPE TORX® L HANDLE WRENCH

• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.



● T-TYPE TORX® DRIVER · SET (5pcs.) (12pcs.)

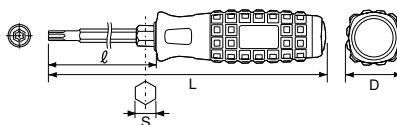


TD1T5



TORX® driver
Tamper resistant
TORX® driver

The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.



T-TYPE TORX® DRIVER · SET (5pcs.) · (12pcs.)

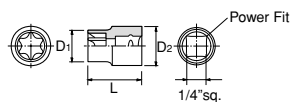
No.	Fastener	S	D	L	ℓ	▼g	📦
No. TD1T5	▼g 650						1
T-Type TORX® Driver D1T-T10, T15, T20, T25, T30							
No. TD1T12	▼kg 1.7						1
T-Type TORX® Driver D1T-T6, T8, T9, T10, T15, T20, T25, T27, T30, T40, T45, T50							

No.	Fastener	S	D	L	ℓ	▼g	📦
D1T-T 6	T 6	10	29.6	172	75	100	5
-T 8	T 8	10	29.6	172	75	100	5
-T 9	T 9	10	32	209	100	130	5
-T10	T10	10	32	209	100	130	5
-T15	T15	10	32	209	100	130	5
-T20	T20	10	32	209	100	130	5
-T25	T25	10	32	209	100	130	5
-T27	T27	10	32	209	100	130	5
-T30	T30	10	32	209	100	130	5
-T40	T40	12	33.8	282	150	190	5
-T45	T45	12	33.8	282	150	190	5
-T50	T50	12	33.8	282	150	190	5

● 1/4"sq. E-TYPE TORX® WRENCH · SET (6pcs.)



TB2E06



E-TYPE TORX® WRENCH · SET (6pcs.)

No.	Fastener	D ₁	D ₂	L	▼g	📦
No. TB2E06	▼g 125					1
E-Type TORX® Wrench (1/4"sq.) B2-E4, E5, E6, E7, E8, E10						
Socket Holder EHB210						

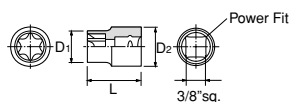
No.	Fastener	D ₁	D ₂	L	▼g	📦
B2-E 4	E 4	5.8	12	18	8	10
-E 5	E 5	7	12	18.5	9	10
-E 6	E 6	8	12	19	9	10
-E 7	E 7	9	12	20.5	10	10
-E 8	E 8	10	12	21	11	10
-E10	E10	13	13.5	22	17	10

POWERFIT

● 3/8"sq. E-TYPE TORX® WRENCH · SET (9pcs.)



TB3E09



E-TYPE TORX® WRENCH · SET (9pcs.)

No.	Fastener	D ₁	D ₂	L	▼g	📦
No. TB3E09	▼g 355					1
E-Type TORX® Wrench (3/8"sq.) B3-E5, E6, E7, E8, E10, E11, E12, E14, E16						
Socket Holder EHB310						

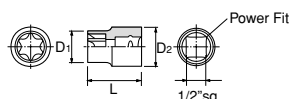
No.	Fastener	D ₁	D ₂	L	▼g	📦
B3-E 5	E 5	7	17	22.5	18	10
-E 6	E 6	8	17	23	18	10
-E 7	E 7	9	17	24	20	10
-E 8	E 8	10	17	25	20	10
-E10	E10	13	17	26	24	10
-E11	E11	14.5	17	26.5	27	10
-E12	E12	15.5	17	27	28	10
-E14	E14	18	17	28	34	10
-E16	E16	20	19	30	47	10

POWERFIT

E-TYPE TORX® WRENCH · SET (9pcs.)

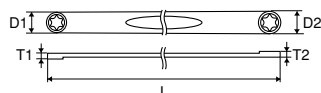
No. TB4E09 ▼ g 705 1							
E-Type TORX® Wrench (1/2"sq.)				B4-E8, E10, E11, E12, E14, E16, E18, E20, E24			
Socket Holder				EHB410			
No.	Fastener	D ₁	D ₂	L	▼g	1	
B4-E 8	E 8	10	22	30	38	10	
-E10	E10	13	22	31	42	10	
-E11	E11	14.5	22	32	46	10	
-E12	E12	15.5	22	33	48	10	
-E14	E14	18	22	34.5	55	10	
-E16	E16	20	22	36	61	10	
-E18	E18	21	22	37	62	10	
-E20	E20	24	22	38.5	77	10	
-E24	E24	28.5	26.5	41	127	10	

POWERFIT®

● 1/2"sq. E-TYPE TORX® WRENCH · SET (9pcs.)**E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)**

No. TWEE3L ▼ g 350 1										
E-Type TORX® Long Boxend Wrench				WEE6×7L, 8×10L, 12×14L						
No.	Fastener	D ₁	D ₂	T ₁	T ₂	L	▼g	1		
WEE 6× 7L	E 6×E 7	9.0	9.5	5.5	6.0	240	50	10		
WEE 8×10L	E 8×E10	10.5	12.0	6.5	7.0	300	100	10		
WEE12×14L	E12×E14	15.0	16.5	8.0	8.5	330	200	10		

- The substantial length and single-sided hilt-offset enable the tightening and loosening of E type TORX® pieces in hard to reach areas.
- This can be used for the tensioner pulleys of imported vehicles (American/European cars) and the stud bolt E TORX® of domestic vehicles.

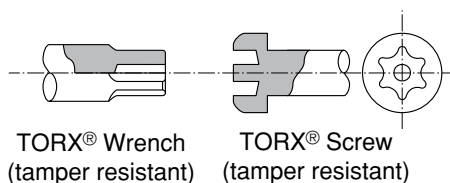
● E-TYPE TORX® LONG BOXEND WRENCH SET (3pcs.)

**WARNING****TORX® WRENCHES FOR TAMPER RESISTANT FASTENERS**

These are restricted tools and the sale of these wrenches is limited to professional mechanics and other authorized users.

Handling Instructions

- It is prohibited to use these tools for unauthorized use and they may not be modified in any respect.
- "Tamper Resistant Fasteners" are used so the equipment may not be easily dissembled. These tools are designed to loosen or fasten tamper resistant fasteners and must be used in a responsible, professional manner.
- Please refer to the equipment manufacturers manual, or seek approval from the equipment manufacturers, prior to commencing work on any piece of equipment protected by tamper resistant fasteners.
- Please ensure the security of this tool and do not allow unauthorized access to it.



1/4" sq.

● 1/4"sq. T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)

**T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

No.	TBT208TH	▼g 355	1
T-Type TORX® Bit Socket for Tamper Resistant Fastener (1/4" sq.)		BT2-T8H, T9H, T10H, T15H, T20H, T25H, T27H, T30H	
Socket Holder		EHB210	

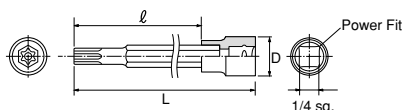
No.	Fastener	D	L	ℓ	▼g	10	
BT2 -T 8H	T 8	16	54.5	32	35	10	
-T 9H	T 9	16	54.5	32	35	10	
-T10H	T10	16	54.5	32	36	10	
-T15H	T15	16	59.5	37	37	10	
-T20H	T20	16	59.5	37	37	10	
-T25H	T25	16	59.5	37	37	10	
-T27H	T27	16	59.5	37	38	10	
-T30H	T30	16	59.5	37	38	10	

• Bit replacement is possible. (Refer to P.126)

POWERFIT®



CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (9pcs.)

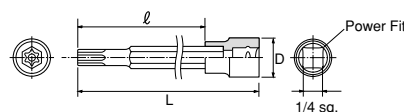
No.	TBT2L08TH	▼g 975	1
Long T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (1/4" sq.)			
		BT2-T8HL, T9HL, T10HL, T15HL, T20HL, T25HL, T27HL, T30HL	
Socket Holder		EHB210	

No.	Fastener	D	L	ℓ	▼g	1	
BT2-T 8HL	T 8	16	121.5	99	53	10	
-T 9HL	T 9	16	121.5	99	53	10	
-T10HL	T10	16	121.5	99	54	10	
-T15HL	T15	16	121.5	99	54	10	
-T20HL	T20	16	121.5	99	54	10	
-T25HL	T25	16	121.5	99	54	10	
-T27HL	T27	16	121.5	99	55	10	
-T30HL	T30	16	121.5	99	55	10	

- Bit replacement is possible. (Refer to P.104)
- The long type that is useful for replacing air bags.

POWERFIT®

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

1/4"sq. LONG T-TYPE TORX® BIT SOCKET FOR TAMPER RESISTANT FASTENERS (9pcs.)**SHORT T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

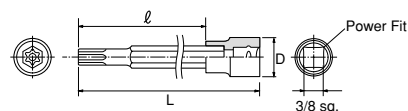
No.	TBT3S08TH	▼g 610	1
Short T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (3/8" sq.)			
		BT3-T20HS, T25HS, T27HS, T30HS, T40HS, T45HS, T50HS, T55HS	
Socket Holder		EHB310	

No.	Fastener	D	L	ℓ	▼g	1	
BT3-T20HS	T20	17	50	21	44	10	
-T25HS	T25	17	50	21	44	10	
-T27HS	T27	17	50	21	45	10	
-T30HS	T30	17	50	21	45	10	
-T40HS	T40	18.5	52	23	63	10	
-T45HS	T45	18.5	52	23	65	10	
-T50HS	T50	18.5	52	23	65	10	
-T55HS	T55	22	58	26	119	10	

- Bit replacement is possible. (Refer to P.104)

POWERFIT®

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

3/8"sq. SHORT T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)**T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)**

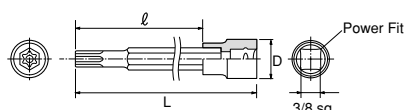
No.	TBT308TH	▼g 610	1
T-Type TORX® Bit Socket Socket for Tamper Resistant Fastener (3/8" sq.)			
		BT3-T20H, T25H, T27H, T30H, T40H, T45H, T50H, T55H	
Socket Holder		EHB310	

No.	Fastener	D	L	ℓ	▼g	1	
BT3-T20H	T20	17	66	37	44	10	
-T25H	T25	17	66	37	44	10	
-T27H	T27	17	66	37	45	10	
-T30H	T30	17	66	37	45	10	
-T40H	T40	18.5	71	42	63	10	
-T45H	T45	18.5	71	42	65	10	
-T50H	T50	18.5	71	42	65	10	
-T55H	T55	22	76	44	119	10	

- Bit replacement is possible. (Refer to P.104)

POWERFIT®

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

3/8"sq. T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)



● 3/8"sq. LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)



LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (8pcs.)

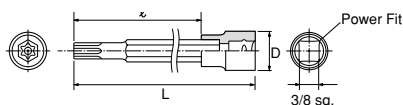
No.	TBT3L08TH	▼g 800	1
Long T-Type TORX® Bit Socket Set for Tamper Resistant Fastener (3/8" sq.)		BT3-T20HL, T25HL, T27HL, T30HL, T40HL, T45HL, T50HL, T55HL	
Socket Holder		EHB310	

No.	Fastener	D	L	ℓ	▼g	10
BT3-T20HL	T20	17	128	99	61	10
-T25HL	T25	17	128	99	61	10
-T27HL	T27	17	128	99	62	10
-T30HL	T30	17	128	99	62	10
-T40HL	T40	18.5	128	99	87	10
-T45HL	T45	18.5	128	99	89	10
-T50HL	T50	18.5	128	99	89	10
-T55HL	T55	22	128	96	170	10

- Bit replacement is possible. (Refer to P.104)
- The long type that is useful for replacing air bags.

POWERFIT

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



● 1/2"sq. T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)



T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)

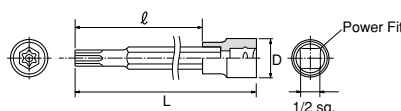
No.	TBT407TH	▼g 965	1
T-Type TORX® Bit Socket · Set for Tamper Resistant Fastener (1/2" sq.)		BT4-T30H, T40H, T45H, T50H, T55H, T60H, T70H	
Socket Holder		EHB410	

No.	Fastener	D	L	ℓ	▼g	10
BT4-T30H	T30	22	70	37	73	10
-T40H	T40	22	75	42	82	10
-T45H	T45	22	75	42	84	10
-T50H	T50	22	75	42	84	10
-T55H	T55	22	80	44	119	10
-T60H	T60	24	85	47	161	10
-T70H	T70	25	90	49	211	10

- Bit replacement is possible. (Refer to P.104)

POWERFIT

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



● 1/2"sq. LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)



LONG T-TYPE TORX® BIT SOCKET · SET FOR TAMPER RESISTANT FASTENERS (7pcs.)

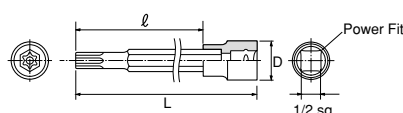
No.	TBT4L07TH	▼kg 1.1	1
Long T-Type TORX® Bit Socket · Set for Tamper Resistant Fastener (1/2" sq.)		BT4-T30HL, T40HL, T45HL, T50HL, T55HL, T60HL, T70HL	
Socket Holder		EHB410	

No.	Fastener	D	L	ℓ	▼g	10
BT4-T30HL	T30	22	132	99	90	10
-T40HL	T40	22	132	99	106	10
-T45HL	T45	22	132	99	108	10
-T50HL	T50	22	132	99	108	10
-T55HL	T55	22	132	96	170	10
-T60HL	T60	24	132	94	224	10
-T70HL	T70	25	132	91	293	10

- Bit replacement is possible. (Refer to P.104)
- The long type that is useful for replacing air bags.

POWERFIT

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.



T-TYPE TORX® L HANDLE WRENCH SET FOR TAMPER RESISTANT FASTENERS (11pcs.)

No. LTXH11

▼g 330

☞ 1

T-Type TORX® L Handle Wrench
LT8H, T10H, T15H, T20H, T25H, T27H,
T30H, T40H, T45H, T50H, T55H

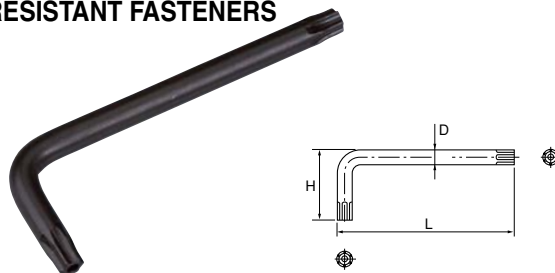
• The pack can be used as a tray.

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● T-TYPE TORX® L HANDLE WRENCH SET FOR TAMPER RESISTANT FASTENERS (11pcs.)**T-TYPE TORX® L HANDLE WRENCH FOR TAMPER RESISTANT FASTENERS**

No.	Fastener	D	L	H	▼g	☞
LT 8H	T 8H	3	53	19	3.5	10
LT10H	T10H	3	56	20	4	10
LT15H	T15H	3.5	60	22	6	10
LT20H	T20H	4	64	24	8	10
LT25H	T25H	4.5	68	25	11	10
LT27H	T27H	5	72	27	14	10
LT30H	T30H	6	80	30	21	10
LT40H	T40H	7	87	33	30	10
LT45H	T45H	8	95	37	44	10
LT50H	T50H	9	109	41	65	10
LT55H	T55H	11.5	125	47	120	10

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.
• APPLY FORCE IN THE DIRECTION OF THE BOLT ROTATION. IF YOU RAISE IT OR PUSH IT DOWN, IT MAY BREAK AT THE BEND.

● T-TYPE TORX® L HANDLE WRENCH FOR TAMPER RESISTANT FASTENERS**T-TYPE TORX® DRIVER - SET FOR TAMPER RESISTANT FASTENERS (11pcs.)**

No. TD1TH11

▼kg 1.6

☞ 1

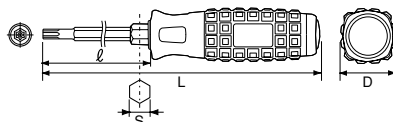
T-Type TORX® Driver Set for Tamper Resistant Fastener (11pcs.)
D1T-T8H, T9H, T10H, T15H, T20H, T25H,
T27H, T30H, T40H, T45H, T50H

No.	Fastener	S	D	L	ℓ	▼g	☞
D1T-T 8H	T 8	10	29.6	172	75	100	10
T 9H	T 9	10	32	209	100	130	10
T10H	T10	10	32	209	100	130	10
T15H	T15	10	32	209	100	130	10
T20H	T20	10	32	209	100	130	10
T25H	T25	10	32	209	100	130	10
T27H	T27	10	32	209	100	130	10
T30H	T30	10	32	209	100	130	10
T40H	T40	12	33.8	282	150	190	10
T45H	T45	12	33.8	282	150	190	10
T50H	T50	12	33.8	282	150	190	10

CAUTION • COMPARED WITH AN ORDINARY TORX® WRENCH, THE TAMPER RESISTANT TORX® WRENCH CAN ENDURE LOWER TORQUE. BE CAREFUL NOT TO APPLY EXCESSIVE PRESSURE.

● T-TYPE TORX® DRIVER SET FOR TAMPER RESISTANT FASTENERS (11pcs.)

The display on the grip end enables the distinction between the TORX® driver and the tamper resistant TORX® driver.



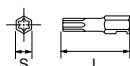
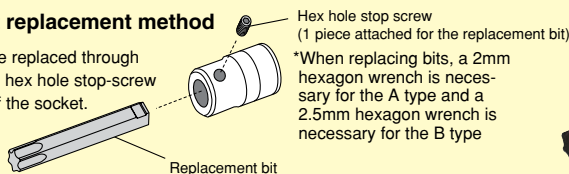
List of applications for the 21st Century Version Tool-bit socket replacement bit.

*Caution: there is no compatibility with tools other than the 21st Century Version Tools.

NEW

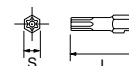
TORX® bit replacement method

The bit can be replaced through loosening the hex hole stop-screw on the side of the socket.



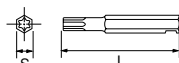
T type TORX® bit (short)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
	BT3 -T20S		T-T20S	T20	6.3	30	A	
	-T25S		-T25S	T25	6.3	30	A	
	-T27S		-T27S	T27	6.3	30	A	
	-T30S		-T30S	T30	6.3	30	A	
	-T40S		-T40S	T40	7.9	32	B	
	-T45S		-T45S	T45	7.9	32	B	
	-T50S		-T50S	T50	7.9	32	B	
	-T55S		-T55S	T55	12	38	B	



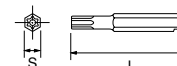
T type tamper resistant TORX® bit (short)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
	BT3 -T20HS		T-T20HS	T20	6.3	30	A	
	-T25HS		-T25HS	T25	6.3	30	A	
	-T27HS		-T27HS	T27	6.3	30	A	
	-T30HS		-T30HS	T30	6.3	30	A	
	-T40HS		-T40HS	T40	7.9	32	B	
	-T45HS		-T45HS	T45	7.9	32	B	
	-T50HS		-T50HS	T50	7.9	32	B	
	-T55HS		-T55HS	T55	12	38	B	



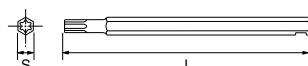
T type TORX® bit (standard)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
BT2 -T 6			T -T 6	T 6	6.3	41	A	
-T 8			-T 8	T 8	6.3	41	A	
-T 9			-T 9	T 9	6.3	41	A	
-T10			-T10	T10	6.3	41	A	
-T15			-T15	T15	6.3	46	A	
-T20	BT3 -T20		-T20	T20	6.3	46	A	
-T25	-T25		-T25	T25	6.3	46	A	
-T27	-T27		-T27	T27	6.3	46	A	
-T30	-T30	BT4 -T30	-T30	T30	6.3	46	A	
	-T40	-T40	-T40	T40	7.9	51	B	
	-T45	-T45	-T45	T45	7.9	51	B	
	-T50	-T50	-T50	T50	7.9	51	B	
	-T55	-T55	-T55	T55	12	56	B	
		-T60	-T60	T60	14	61	B	
		-T70	-T70	T70	17	66	B	



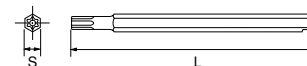
T type tamper resistant TORX® bit (standard)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
BT2 -T 8H			T -T 8H	T 8	6.3	41	A	
-T 9H			-T 9H	T 9	6.3	41	A	
-T10H			-T10H	T10	6.3	41	A	
-T15H			-T15H	T15	6.3	46	A	
-T20H	BT3 -T20H		-T20H	T20	6.3	46	A	
-T25H	-T25H		-T25H	T25	6.3	46	A	
-T27H	-T27H		-T27H	T27	6.3	46	A	
-T30H	-T30H	BT4 -T30H	-T30H	T30	6.3	46	A	
	-T40H	-T40H	-T40H	T40	7.9	51	B	
	-T45H	-T45H	-T45H	T45	7.9	51	B	
	-T50H	-T50H	-T50H	T50	7.9	51	B	
	-T55H	-T55H	-T55H	T55	12	56	B	
		-T60H	-T60H	T60	14	61	B	
		-T70H	-T70H	T70	17	66	B	



T type TORX® bit (long)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
BT2 -T 6L			T -T 6L	T 6	6.3	108	A	
-T 8L			-T 8L	T 8	6.3	108	A	
-T 9L			-T 9L	T 9	6.3	108	A	
-T10L			-T10L	T10	6.3	108	A	
-T15L			-T15L	T15	6.3	108	A	
-T20L	BT3 -T20L		-T20L	T20	6.3	108	A	
-T25L	-T25L		-T25L	T25	6.3	108	A	
-T27L	-T27L		-T27L	T27	6.3	108	A	
-T30L	-T30L	BT4 -T30L	-T30L	T30	6.3	108	A	
	-T40L	-T40L	-T40L	T40	7.9	108	B	
	-T45L	-T45L	-T45L	T45	7.9	108	B	
	-T50L	-T50L	-T50L	T50	7.9	108	B	
	-T55L	-T55L	-T55L	T55	12	108	B	
		-T60L	-T60L	T60	14	108	B	
		-T70L	-T70L	T70	17	108	B	



T type tamper resistant TORX® bit (long)

Applied product number			Replacement bit product number	Designation	S	L	type	
1/4" sq.	3/8" sq.	1/2" sq.						
BT2 -T 8HL			T -T 8HL	T 8	6.3	108	A	
-T 9HL			-T 9HL	T 9	6.3	108	A	
-T10HL			-T10HL	T10	6.3	108	A	
-T15HL			-T15HL	T15	6.3	108	A	
-T20HL	BT3 -T20HL		-T20HL	T20	6.3	108	A	
-T25HL	-T25HL		-T25HL	T25	6.3	108	A	
-T27HL	-T27HL		-T27HL	T27	6.3	108	A	
-T30HL	-T30HL	BT4 -T30HL	-T30HL	T30	6.3	108	A	
	-T40HL	-T40HL	-T40HL	T40	7.9	108	B	
	-T45HL	-T45HL	-T45HL	T45	7.9	108	B	
	-T50HL	-T50HL	-T50HL	T50	7.9	108	B	
	-T55HL	-T55HL	-T55HL	T55	12	108	B	
		-T60HL	-T60HL	T60	14	108	B	
		-T70HL	-T70HL	T70	17	108	B	

2. CONVENTIONAL TOOLS

OFFSET WRENCHES



CAUTION





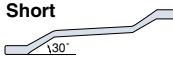
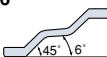
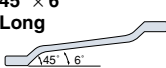

Offset wrench sets

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.

Offset wrenches

- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipe, etc.
- Insert the bolts and nuts fully.
- Do not use this tool as a hammer.
- Do not expose this tool to impact by hitting it with a hammer, etc.

List of offset wrench sizes

Product number Type Tilt angle	Diameter mm																																					
	5.5 7	6 × 7	6 × 8	7 × 8	8 × 9	8 × 10	10 × 11	10 × 12	10 × 13	10 × 14	11 × 13	12 × 14	13 × 15	13 × 17	14 × 17	16 × 18	17 × 19	17 × 21	19 × 21	19 × 22	20 × 22	21 × 23	21 × 26	22 × 24	23 × 26	24 × 27	25 × 28	26 × 32	27 × 30	27 × 32	29 × 32	30 × 32	32 × 36	35 × 38	36 × 38	41 × 46		
M100 Straight-short 				●				●				●			●		●								●													
M150 Straight-long 						●		●			●	●			●		●								●													
M160 Super long-straight 						●		●				●	●		●		●								●				●									
M151 15° Long 								●				●			●																							
M15 30° Short 																													●	●	●	●	●		●	●	●	
M5S 45° × 6° Short 	●			●	●	●		●			●	●	●		●	●	●		●																			
M5 45° × 6° Long 	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
M25 45° Long 	●	●			●	●		●	●	●	●	●		●	●		●	●	●	●			●		●	●	●											

Diameter mm	8	10	12	14
Product number Type Tilt angle				
M27(hex diameter) 45° × 10° Long 	●	●	●	●

Diameter in	1/4	5/16	3/8	13/32	7/16	1/2	9/16	19/32	5/8	5/8	11/16	3/4	3/4	25/32	13/16	15/16	1	1-1/8
Product number Type Tilt angle	5/16	3/8	7/16	1/2	1/2	9/16	5/8	11/16	11/16	3/4	3/4	25/32	13/16	7/8	7/8	1	1-1/16	1-1/4
M5 45° × 6° Long 	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
MB25 45° Long 			●			●			●			●			●	●		

*Please check the merchandise inventory for a product that is marked by before placing an order.

● OFFSET WRENCH SET (6pcs.) (8pcs.) (10pcs.)




TM506



TM508



TM510

OFFSET WRENCH SET (6pcs.) · (8pcs.) · (10pcs.)			mm
No. TM506	▼kg 1.3	 1	
Offset wrench	M5-0810, 1012, 1113, 1417, 1921, 2224		
• Resin form tray (L444xW184xH48mm) attached.			

• Resin form tray (L444xW184xH48mm) attached.

POWERIT

No. TM508	▼kg 1.6	📦 1
Offset Wrench	M5-0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224	

• Resin form tray (L444xW184xH48mm) attached.

POWERIT

No. TM510	▼kg 2.3	📦 1
Offset Wrench	M5-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427	

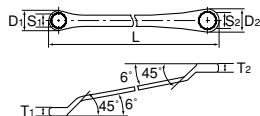
• Resin form tray (L444xW184xH48mm) attached.

POWERIT

OFFSET WRENCH SET (6pcs.)				in
No. TM506B	▼kg 1.7	📦 1		
Offset Wrench in	M5- $\frac{3}{8} \times \frac{7}{16}$, $\frac{1}{2} \times \frac{9}{16}$, $\frac{5}{8} \times \frac{11}{16}$, $\frac{3}{4} \times \frac{25}{32}$, $\frac{13}{16} \times \frac{7}{8}$, $\frac{15}{16} \times 1$			

• Resin form tray (L444xW184xH48mm) attached.

● 45°×6° LONG OFFSET WRENCH



45°×6° LONG OFFSET WRENCH										mm
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
M5 -05507	5.5× 7	10	12	4.5	5	151	20	5		
-0607	6× 7	10.5	12	4.5	5	151	20	5		
-0608	6× 8	10.5	13	4.5	5.5	157	27	5		
-0708	7× 8	12	13	5	5.5	167	30	5		
-0809	8× 9	13	14.5	5.5	6	174	40	5		
-0810	8×10	13	16	5.5	6.5	179	45	5		
-1011	10×11	16	17.5	6.5	7	197	60	5		
-1012	10×12	16	18.5	6.5	7.5	207	70	5		
-1013	10×13	16	19.5	6.5	8.5	208	70	5		
-1014	10×14	16	21	6.5	9.5	218	82	5		
-1113	11×13	17.5	19.5	7	8.5	218	80	5		
-1214	12×14	18.5	21	7.5	9.5	226	100	5		
-1315	13×15	19.5	23	8.5	10	236	115	5		
-1317	13×17	19.5	25.5	8.5	10.5	252	135	5		
-1417	14×17	21	25.5	9.5	10.5	253	140	5		
-1618	16×18	24	27	10.5	11.5	265	180	5		
-1719	17×19	25.5	28	10.5	12	287	220	5		
-1721	17×21	25.5	31	10.5	13	308	250	5		
-1921	19×21	28	31	12	13	309	270	5		
-1922	19×22	28	32.5	12	13.5	320	280	5		
-2022	20×22	30	32.5	12	13.5	321	300	5		
-2123	21×23	31	34	13	14.5	322	335	5		
-2126	21×26	31	38	13	16	354	405	5		
-2224	22×24	32.5	35.5	13.5	15	334	380	5		
-2326	23×26	34	38	14.5	16	356	410	5		
-2427	24×27	35.5	39	15	16.5	367	440	5		
-2528	25×28	36.5	41	15.5	17	379	525	5		
-2632	26×32	38	47	16	18	412	630	5		
-2730	27×30	39.5	44	16.5	18	412	640	5		
-2732	27×32	39.5	47	16.5	18	413	675	5		
-2932	29×32	44	47	18	18	460	795	5		
-3032	30×32	44	47	18	18	460	795	5		
-3236	32×36	47	52.5	18	21	490	950	5		
-3538	35×38	52.5	55	21	22	519	1150	5		
-3638	36×38	52.5	55	21	22	519	1150	5		
-4146	41×46	59.5	66.5	24.5	26	593	1760	2		

POWERIT

45°×6° LONG OFFSET WRENCH										in
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
M5 - $\frac{1}{4} \times \frac{5}{16}$	6.3× 7.9	10.5	13	4.5	5.5	157	27	5		
- $\frac{5}{16} \times \frac{3}{8}$	7.9× 9.5	13	16	5.5	6.5	179	45	5		
- $\frac{3}{8} \times \frac{7}{16}$	9.5×11.1	16	17.5	6.5	7	197	60	5		
- $\frac{13}{32} \times \frac{1}{2}$	10.3×12.7	16	19.5	6.5	8.5	208	70	5		
- $\frac{7}{16} \times \frac{1}{2}$	11.1×12.7	17.5	19.5	7	8.5	218	80	5		
- $\frac{1}{2} \times \frac{9}{16}$	12.7×14.2	19.5	21	8.5	9.5	235	111	5		
- $\frac{9}{16} \times \frac{5}{8}$	14.2×15.8	21	24	9.5	10.5	252	139	5		
- $\frac{19}{32} \times \frac{11}{16}$	15 ×17.4	23	25.5	10	10.5	254	146	5		
- $\frac{5}{8} \times \frac{11}{16}$	15.8×17.4	24	25.5	10.5	10.5	265	171	5		
- $\frac{5}{8} \times \frac{3}{4}$	15.8×19	24	28	10.5	12	286	207	5		
- $\frac{11}{16} \times \frac{3}{4}$	17.4×19	25.5	28	10.5	12	287	220	5		
- $\frac{3}{4} \times \frac{25}{32}$	19 ×19.8	28	30	12	12	309	263	5		
- $\frac{3}{4} \times \frac{13}{16}$	19 ×20.6	28	31	12	13	309	270	5		
- $\frac{25}{32} \times \frac{7}{8}$	19.8×22.2	30	32.5	12	13.5	321	300	5		
- $\frac{13}{16} \times \frac{7}{8}$	20.6×22.2	31	32.5	13	13.5	322	324	5		
- $\frac{15}{16} \times 1$	23.8×25.4	35.5	36.5	15	15.5	366	464	5		
-1 ×1 - $\frac{1}{16}$	25.4×26.9	36.5	39	15.5	16.5	378	515	5		
-1 - $\frac{1}{8} \times 1$ - $\frac{1}{4}$	28.5×31.7	44	47	18	18	460	795	5		

45° LONG OFFSET WRENCH SET (6pcs.)				mm · in
No. M256	▼kg 2.1	📦 1		JIS
45° Long OFFSET Wrench M25-10×12, 12×14, 14×17, 17×19, 19×21, 23×26				
No. M2506	▼kg 2.1	📦 1		JIS
45° Long OFFSET Wrench M25- 8×10, 11×13, 12×14, 17×19, 22×24, 24×27				
Common Items				
Metal Case M256-M L385×W100×H45mm				
POWERFIT				
No. MB256	▼kg 2	📦 1		
45° Long OFFSET Wrench in MB25- $\frac{3}{8} \times \frac{7}{16}$, $\frac{1}{2} \times \frac{9}{16}$, $\frac{5}{8} \times \frac{11}{16}$, $\frac{3}{4} \times \frac{25}{32}$, $\frac{13}{16} \times \frac{7}{8}$, $\frac{15}{16} \times 1$				
Metal Case MB256-M L385×W100×H45mm				

● 45° LONG OFFSET WRENCH SET (6pcs.)



M256

45° LONG OFFSET WRENCH SET (8pcs.) · (10pcs.)				mm
No. M258	▼kg 2.5	📦 1		JIS
45° Long OFFSET Wrench M25- 8×10, 10×12, 11×13, 12×14, 14×17, 17×19, 19×21, 22×24				
No. M2510	▼kg 3	📦 1		JIS
45° Long OFFSET Wrench M25-5.5×7, 8×10, 10×12, 11×13, 12×14, 14×17, 17×19, 19×21, 22×24, 24×27				
Common Items				
Metal Case M258-M L370×W180×H55mm				
POWERFIT				

● 45° LONG OFFSET WRENCH SET (8pcs.) (10pcs.)



M258

OFFSET WRENCH SET (14pcs.)				mm
No. M215P	▼kg 1.9	📦 1		
Flat Type Short OFFSET Wrench M100-7×8, 10×12, 12×14, 14×17				
Flat Type Long OFFSET Wrench M150-10×12, 12×14, 14×17				
15° Long OFFSET Wrench M151-10×12, 12×14, 14×17				
OFFSET Wrench M27-8H, 10H, 12H, 14H				
Hard Plastic Case TCP1-1 L385×W190×H65mm				
• Mixed set of Flat Type Short OFFSET Wrench (M100), Flat Type Long OFFSET Wrench (M150), 15° Long Offset Wrench and Hex OFFSET Wrench.				
• With Hard Plastic Case for light weight and durability.				

● OFFSET WRENCH SET (14pcs.)



45° LONG OFFSET WRENCH SET (3pcs.)				mm · in
No. M253	▼g 345	📦 1		JIS
Long OFFSET Wrench M25-10×12, 12×14, 14×17				
POWERFIT				
No. MB253	▼g 350	📦 1		
Long OFFSET Wrench in MB25- $\frac{3}{8} \times \frac{7}{16}$, $\frac{1}{2} \times \frac{9}{16}$, $\frac{5}{8} \times \frac{11}{16}$				

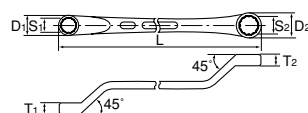
● 45° LONG OFFSET WRENCH SET (3pcs.)



45° LONG OFFSET WRENCH										mm
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
M25-5.5×7	5.5×7	9.5	12	4.5	5	150	26	10		
- 6×7	6×7	11	12	4.5	5	150	26	10		
- 8×9	8×9	14	15	5.5	6	175	50	10		
- 8×10	8×10	14	17	5.5	6.5	175	50	10		
- 10×12	10×12	17	19	6.5	7.5	200	70	10		
- 10×13	10×13	17	21	6.5	8.5	200	72	10		
- 10×14	10×14	17	22	6.5	9	220	100	10		
- 11×13	11×13	18	21	7	8.5	200	74	10		
- 12×14	12×14	19	22	7.5	9	220	110	10		
- 13×17	13×17	21	26	8.5	10.5	245	145	10		
- 14×17	14×17	22	26	9	10.5	245	155	10		
- 17×19	17×19	26	29	10.5	12	270	210	10		
- 17×21	17×21	26	31	10.5	13	310	270	10		
- 19×21	19×21	29	31	12	13	310	275	10		
- 19×22	19×22	29	33	12	13.5	310	280	10		
- 21×23	21×23	31	34	13	14.5	310	340	5		
- 22×24	22×24	33	35	13.5	15	315	350	5		
- 23×26	23×26	34	38	14.5	16	355	410	5		
- 24×27	24×27	35	39	15	16.5	360	460	5		

45° LONG OFFSET WRENCH										in
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
MB25-$\frac{3}{8} \times \frac{7}{16}$	9.5×11.1	16	18	6	7	195	80	10		
- $\frac{1}{2} \times \frac{9}{16}$	12.7×14.2	20	22	8	8	220	115	10		
- $\frac{5}{8} \times \frac{11}{16}$	15.8×17.4	24	26	10	10	245	105	10		
- $\frac{3}{4} \times \frac{25}{32}$	19 ×19.8	29	30	11	11	275	210	10		
- $\frac{13}{16} \times \frac{7}{8}$	20.6×22.2	31	33	12	13	310	280	5		
- $\frac{15}{16} \times 1$	23.8×25.4	35	37	15	15.5	355	400	5		

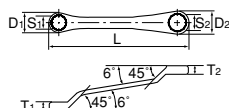
● 45° LONG OFFSET WRENCH



JIS (M25-5.5×7, 6×7, 10×14, excludes inch size)

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

● 45°×6° SHORT OFFSET WRENCH · SET (5pcs.)



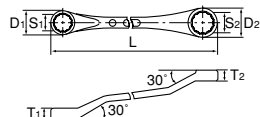
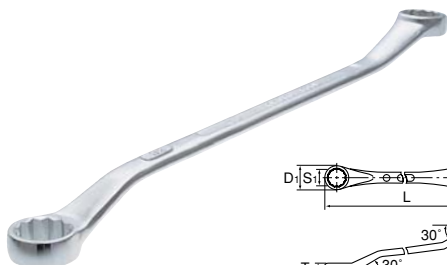
45°×6° SHORT OFFSET WRENCH · SET (5pcs.) mm

No. TM5S05	▼g 310	1
45°×6° Short Offset Wrench	M5S-0810, 1012, 1113, 1214, 1417	

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	1	
M5S -05507	5.5×7	9.8	11.8	4.3	4.8	96	15	10	
-0708	7×8	11.8	12.8	4.8	5.3	102	20	10	
-0809	8×9	12.8	14.3	5.3	5.8	104	25	10	
-0810	9×10	12.8	15.8	5.3	6.3	109	30	10	
-1012	10×12	15.8	18.3	6.3	7.3	127	50	10	
-1113	11×13	17.3	19.3	6.8	8.3	138	55	10	
-1214	12×14	18.3	20.8	7.3	9.3	145	70	10	
-1315	13×15	19.3	22.8	8.3	9.8	156	85	10	
-1417	14×17	20.8	25.3	9.3	10.3	168	105	10	
-1618	16×18	23.8	26.8	10.3	11.3	170	130	10	
-1719	17×19	25.3	27.8	10.3	11.8	177	160	10	
-1921	19×21	27.8	30.8	11.8	12.8	179	185	10	

POWERFIT

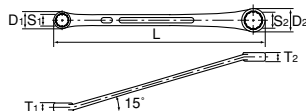
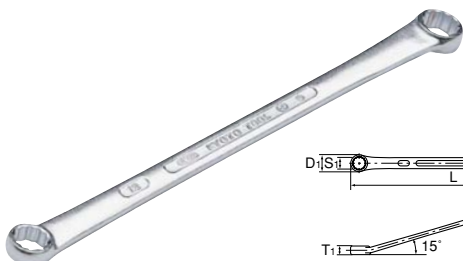
● 30° OFFSET WRENCH



30° OFFSET WRENCH mm

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	1	
M15-26×32	26×32	39	48	17	18	415	560	5	
-27×30	27×30	39	44	17	18	410	570	5	
-27×32	27×32	39	48	17	18	415	630	5	
-29×32	29×32	44	48	18	19	460	910	5	
-30×32	30×32	44	48	18	19	460	840	5	
-35×38	35×38	52	56	21	22	520	1,520	5	
-36×38	36×38	52	56	21	22	520	1,360	5	
-41×46	41×46	61	68	24.5	26	600	2,100	2	

● 15° LONG OFFSET WRENCH · SET (3pcs.)



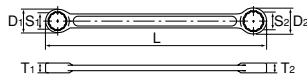
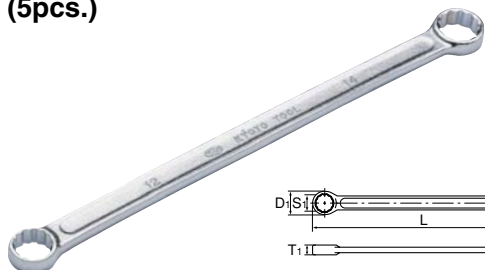
15° LONG OFFSET WRENCH · SET (3pcs.) mm

No. M1513	▼g 340	10
15° Long OFFSET Wrench	M151-10×12, 12×14, 14×17	

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	1	
M151-10×12	10×12	17	19	6.5	7.5	200	50	10	
-12×14	12×14	19	22	7.5	9	220	100	10	
-14×17	14×17	22	26	9	10.5	245	140	10	

POWERFIT

● FLAT TYPE LONG OFFSET WRENCH · SET (5pcs.)



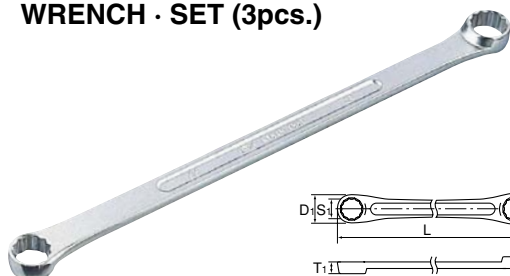
FLAT TYPE LONG OFFSET WRENCH · SET (5pcs.) mm

No. M1505	▼g 380	10
Flat Type Long OFFSET Wrench	M150-8×10, 10×12, 11×13, 12×14, 14×17	

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	1	
M150- 8×10	8×10	13	16	5.5	6.5	185	44	10	
-10×12	10×12	16	18	6.5	7.5	200	56	10	
-11×13	11×13	17	19	7	8	200	60	10	
-12×14	12×14	18	21	7.5	8	220	80	10	
-14×17	14×17	21	25	8	8.5	245	125	10	
-17×19	17×19	25	28	8.5	9	285	148	10	
-22×24	22×24	32	35	9.5	10	335	240	10	

POWERFIT

● FLAT TYPE EXTRA-LONG OFFSET WRENCH · SET (3pcs.)



FLAT TYPE EXTRA-LONG OFFSET WRENCH · SET (3pcs.) mm

No. M1603	▼g 545	1
Flat Type Extra-Long OFFSET Wrench · Set (3pcs.)	M160-8×10, 12×14, 17×19	

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	1	
M160- 8×10	8×10	14	17	7.3	7.6	235	60	10	
-10×12	10×12	17	19	8.2	8.8	295	84	10	
-12×14	12×14	19	22	9.4	10	330	120	10	
-13×15	13×15	21	24	9.9	10.5	355	197	10	
-14×17	14×17	22	26	10.6	11.5	370	240	10	
-17×19	17×19	26	29	12.3	12.9	405	365	10	
-22×24	22×24	33	35	15.2	15.8	435	540	10	
-27×30	27×30	39	44	19.8	20.7	550	1118	10	

POWERFIT

*Please check the merchandise inventory for a product that is marked by  before placing an order.

FLAT TYPE SHORT OFFSET WRENCH · SET (4pcs.)

mm

No. M1004

▼g 170

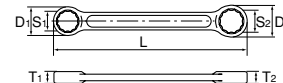
1

Flat Type Short OFFSET Wrench · Set (4pcs.) M100-7×8, 10×12, 12×14, 14×17

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g		
M100- 7× 8	7× 8	12	13	5	5.5	95	18	10	
-10×12	10×12	16	18	6.5	7.5	115	34	10	
-12×14	12×14	18	21	7.5	8	130	50	10	
-14×17	14×17	21	25	8	8.5	145	72	10	
-17×19	17×19	25	28	8.5	9	180	95	10	
-22×24	22×24	32	35	9.5	10	230	120	10	

POWERBIT

● FLAT TYPE SHORT OFFSET WRENCH · SET (4pcs.)



HEX OFFSET WRENCH · SET (4pcs.)

mm

No. M274

▼g 330

5

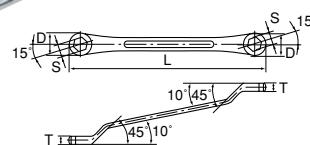
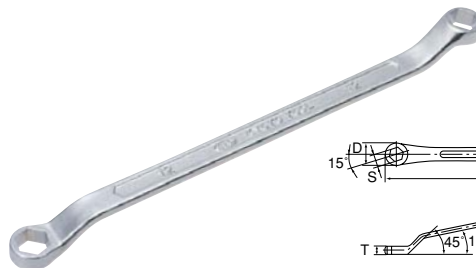
Hex OFFSET Wrench Set (4pcs.) M27-8H, 10H, 12H, 14H

Hexagonal

No.	S	D	T	L	▼g		
M27- 8H	8	13	5	175	40	10	
-10H	10	16	6	195	57	10	
-12H	12	18	7	220	86	10	
-14H	14	21	8	240	120	10	

- 15° symmetric angle can enable this wrench used as Bi-hexagonal wrench.
- No chamfering on hexagonal end for bigger contact between bolts and the wrenches.
- Comfortable grip for applying torque easily.

● HEX OFFSET WRENCHES · SET (4pcs.)



DOUBLE-FLEX RATCHET OFFSET WRENCH · SET (2pcs.)

mm

No. MTRW02A

▼g 230

5

Double-Flex Ratchet OFFSET Wrench MRW-0810F, 1214F

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g		
MRW-0810F	8×10	17.0	21.0	7.5	8.5	160	90	10	
-1012F	10×12	21.0	24.0	8.5	8.5	180	110	10	
-1214F	12×14	23.5	26.5	8.5	8.5	200	140	10	

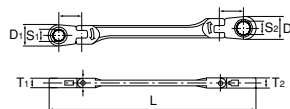
Special Feature

- Tight fastening possible in double heads.
- The pitch between the ratchet offset section and the hinge section is shortened while the thickness is designed as a thin-flat type, allowing smooth continuous operation in narrow areas.
- Fine adjustments and operation can be conducted due to the 5° ratchet feed angle.
- The operating direction is easy to grasp as the overall form is asymmetrical and the tightening/loosening direction is indicated using arrows.
- The shape of the handle makes it easy to grip.



- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● DOUBLE-FLEX RATCHET OFFSET WRENCH · SET (2pcs.)



SHORT RATCHET BOX END WRENCH SET

mm

No. TMR1S05

▼g 580

1

Flex Ratchet OFFSET Wrench MR1S-0810F, 1012F, 1214F, 1315F, 1417F

POWERBIT

* Ratchet head is available as replacement part.



- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
- THE RATCHET END IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENING.

SHORT RATCHET BOX END WRENCH

mm

No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g		
MR1S-0810F	8×10	18	21	7.5	8.5	107	38	5	
-1012F	10×12	21	23	8.5	8.5	129	91	5	
-1113F	11×13	22	25	8.5	8.5	135	105	5	
-1214F	12×14	23.5	26.5	8.5	8.5	149	117	5	
-1315F	13×15	25	28	8.5	8.5	155	133	5	
-1417F	14×17	26.5	30.5	8.5	10	168	162	5	
-1618F	16×18	29	32	10	11.5	170	210	5	
-1719F	17×19	30.5	34	10	11.5	180	233	5	

POWERBIT

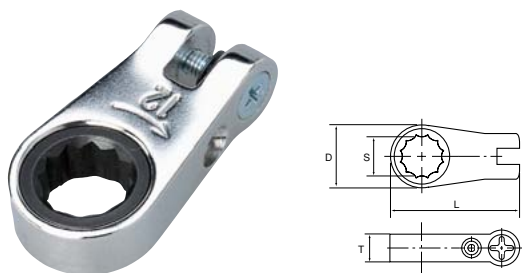


- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● SHORT RATCHET BOX END WRENCH · SET



● FLEX RATCHET OFFSET WRENCH HEAD

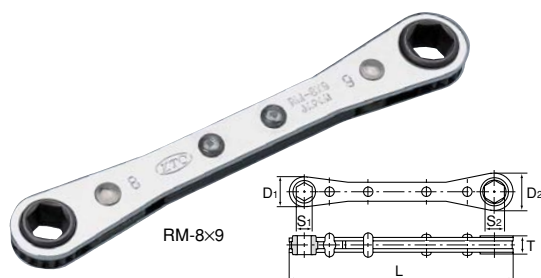


FLEX RATCHET OFFSET WRENCH HEAD mm

No.	S	D	T	L	▼g	📦	
MRF- 8K	8	17	8	38.5	25	1	
-10K	10	19	8	39	28	1	
-12K	12	23	9	46	43	1	
-13K	13	24	9	47	45	1	
-14K	14	26	10	52	50	1	
-17K	17	31	12	62	105	1	
-19K	19	34	13	68	135	1	

- CAUTION**
- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
 - THE RATCHET END IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENING.

● RATCHET OFFSET WRENCH · SET (3pcs.)



RATCHET OFFSET WRENCH · SET (3pcs.) mm

No. RM03	▼g 640	📦 10
Ratchet OFFSET Wrench RM-10×12, 12×14, 14×17		

No.	S ₁ ×S ₂ *	D ₁	D ₂	T	L	▼g	📦	
RM- 8× 9	8× 9	17	19	10	120	70	10	
- 8×10	8×10	17	22	10	120	70	10	
-10×12	10×12	22	24	11	150	130	10	
-12×14	12×14	24	29	14	165	230	10	
-14×17	14×17	29	33	14	195	280	10	

* When the diameter is 14mm or larger, the socket has 12 points.

- Smooth ratcheting operation.
- Thin and round shaped head for use in confined spaces.
- For light-load operation.
- The feed angle is 20°.

- CAUTION**
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 - THIS IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENINGS.

● 4SIZE STANDARD RATCHET BOXEND WRENCH



4SIZE STANDARD RATCHET OFFSET WRENCH mm

No.	S ₁ ×S ₂	D ₁	D ₂	T	L	▼g	📦	
MR-0813	8×12 · 10×13	21	25	15	143	130	10	
-1014	10×13 · 12×14	25	28	15	166	160	10	

- The socket is thin enough to operate in narrow quarters.
- The grip, with its wave form, is easy to hold and apply load.
- The green color is distinguishable in the workplace. it is also lightweight because it is made of plastic.

- CAUTION**
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 - THIS IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENINGS.

● 4SIZE LONG RATCHET BOXEND WRENCH



4SIZE LONG RATCHET OFFSET WRENCH mm

No.	Nominal Size	h ₁	h ₂	h ₃	h ₄	D ₁	D ₂	T ₁	T ₂	L	▼g	📦	
MR-0813L	8×12 · 10×13	10	17.5	15	17.5	21	25	34.5	44.5	143	180	10	
-1014L	10×13 · 12×14	15	18	15	30	25	28	39.5	57.5	166	230	10	

- The socket is long enough to operate in deep quarters.
- The grip, with its wave form, is easy to hold and apply load.
- The green color is distinguishable in the workplace. It is also lightweight because it is made of plastic.

- CAUTION**
- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.
 - THIS IS ONLY FOR TEMPORARY FASTENINGS. DO NOT USE IT FOR PERMANENT FASTENINGS.

2. CONVENTIONAL TOOLS

OPEN END WRENCHES and COMBINATION WRENCHES



CAUTION

Open end wrench/combination wrench sets

- Carefully read the individual safety warnings for the items included within the set.
- When carrying the set, make sure the metal fasteners are locked on.
- If the set includes a holder, take care to avoid jamming your hands when taking tools from the holder.

Open end wrench/combination wrenches

- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
- Firmly hold the bolts and nuts using the end of the tool mouth.
- The open end wrench can come loose when too much force is applied.
- Take care not to allow the tool to slip off.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

OPEN END WRENCH SET(8pcs.) · (10pcs.)

mm

No.	TS208	▼kg 1.1	📦 1
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1921, 2224		

- Resin forming tray (L444xW184xH48mm) attached.

No.	TS210	▼kg 1.6	📦 1
Open End Wrench	S2-05507, 0810, 1012, 1113, 1214, 1417, 1719, 1921, 2224, 2427,		

- Resin forming tray (L444xW184xH48mm) attached.

● OPEN END WRENCH SET (8pcs.) · (10pcs.)



TS208



TS210

OPEN END WRENCH SET (6pcs.)

mm

No.	TS206	▼g 550	📦 1
Open End Wrench	S2-0810, 1012, 1113, 1214, 1417, 1719		
Holder	EHS-1		

No.	TS206A	▼g 450	📦 1
Open End Wrench	S2-05507, 0810, 1113, 1214, 1719, 2224		
Holder	EHS-1		

● OPEN END WRENCH SET (6pcs.)



TS206



TS206A

OPEN END WRENCH SET (6pcs.)

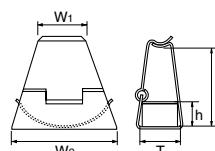
in

No.	TS206B	▼g 700	📦 1
Open End Wrench	in S2- $\frac{5}{16} \times \frac{3}{8}$, $\frac{13}{32} \times \frac{1}{2}$, $\frac{1}{2} \times \frac{9}{16}$, $\frac{19}{32} \times \frac{11}{16}$, $\frac{5}{8} \times \frac{3}{4}$, $\frac{25}{32} \times \frac{7}{8}$		
Holder	EHS-1		

OPEN END WRENCH HOLDER

No.	H	h	W ₁	W ₂	T	▼g	📦
EHS-1	42	14	27	60	24	55	1

● OPEN END WRENCH HOLDER



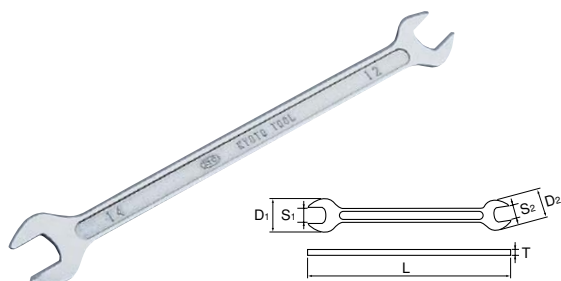
● OPEN END WRENCH



OPEN END WRENCH										mm
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
S2-05507	5.5×7	12.5	15.5	3.5	3.5	102	15	5		
-0607	6×7	13	15.5	3.5	3.5	102	15	5		
-0608	6×8	13	17.5	4	4	107	18	5		
-0708	7×8	15.5	17.5	4	4	112	20	5		
-0809	8×9	17.5	19.5	4.5	4.5	118	30	5		
-0810	8×10	17.5	21.5	4.5	4.5	122	40	5		
-1011	10×11	21.5	23.5	5	5	133	45	5		
-1012	10×12	21.5	25.5	5.5	5.5	138	60	5		
-1013	10×13	21.5	27.5	6	6	143	60	5		
-1014	10×14	21.5	29.5	6.5	6.5	148	65	5		
-1113	11×13	23.5	27.5	6	6	147	65	5		
-1214	12×14	25.5	29.5	6.5	6.5	157	75	5		
-1315	13×15	27.5	31.5	7	7	164	90	5		
-1317	13×17	27.5	36	7	7	168	100	5		
-1417	14×17	29.5	36	7	7	173	105	5		
-1618	16×18	33.5	38	8	8	188	135	5		
-1719	17×19	36	40	7.5	7.5	195	145	5		
-1721	17×21	36	44	8	8	203	170	5		
-1921	19×21	40	44	8	8	218	195	5		
-1922	19×22	40	46	8.5	8.5	223	205	5		
-2022	20×22	42	46	8.5	8.5	228	215	5		
-2123	21×23	44	48	8.5	8.5	233	240	5		
-2126	21×26	44	54	8.5	8.5	238	260	5		
-2224	22×24	46	50	9	9	244	260	5		
-2326	23×26	48	54	9	9	248	300	5		
-2427	24×27	50	55.5	9	9	253	320	5		
-2528	25×28	52	57.5	9.5	9.5	263	365	5		
-2632	26×32	54	65.5	10.5	10.5	273	460	5		
-2730	27×30	55.5	61.5	10	10	274	430	5		
-2732	27×32	55.5	65.5	10.5	10.5	284	480	5		
-2932	29×32	60	65.5	10.5	10.5	288	510	5		
-3032	30×32	61.5	65.5	10.5	10.5	294	525	5		
-3236	32×36	65.5	74	12	12	318	710	5		
-3538	35×38	72	78	13.5	13.5	334	905	5		
-3638	36×38	74	78	13.5	13.5	354	945	5		
-4146	41×46	84	94	14	14	399	1315	5		

OPEN END WRENCH										in
No.	S ₁ ×S ₂	D ₁	D ₂	T ₁	T ₂	L	▼g	📦		
S2-1/4×5/16	6.3×7.9	13	17.5	4	4	107	18	5		
-5/16×3/8	7.9×9.5	17.5	21.5	4.5	4.5	122	40	5		
-3/8×1/2	9.5×11.1	21.5	23.5	5	5	133	45	5		
-13/32×1/2	10.3×12.7	21.5	27.5	6	6	143	60	5		
-7/16×1/2	11.1×12.7	23.5	27.5	6	6	147	65	5		
-1/2×9/16	12.7×14.2	27.5	29.5	6.5	6.5	160	74	5		
-9/16×5/8	14.2×15.8	29.5	33.5	7	7	169	97	5		
-19/32×11/16	15×17.4	31.5	36	7	7	175	106	5		
-5/8×11/16	15.8×17.4	33.5	36	7	7	177	110	5		
-5/8×3/4	15.8×19	33.5	40	7.5	7.5	192	133	5		
-11/16×3/4	17.4×19	36	40	7.5	7.5	195	145	5		
-3/4×25/32	19×19.8	40	42	8	8	216	177	5		
-3/4×13/16	19×20.6	40	44	8	8	218	195	5		
-25/32×7/8	19.8×22.2	42	46	8.5	8.5	228	215	5		
-13/16×7/8	20.6×22.2	44	46	8.5	8.5	231	224	5		
-15/16×1	23.8×25.4	50	52	9	9	249	300	5		
-1×1-1/16	25.4×26.9	52	55.5	9	9	256	327	5		
-1-1/8×1-1/4	28.5×31.7	60	65.5	10.5	10.5	288	510	5		

● SLIM TYPE OPEN END WRENCH · SET (6pcs.)



SLIM TYPE OPEN END WRENCH (S20)·SET (6pcs.)

mm

No. S206

▼g 544

📦 1

Slim Type Open End Wrench (mm)

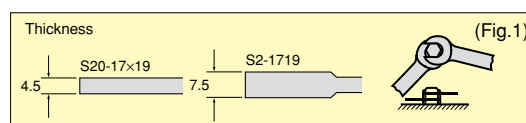
S20-10×12, 12×10, 12×14, 14×12, 17×19, 19×17

• Set of each 2 pcs. of same size combination with different angles.

No.	S ₁ ×S ₂	D ₁	D ₂	T	L	▼g	📦	
S20-10×12	10×12	21	26	4	210	64	5	
-12×10	12×10	26	21	4	210	64	5	
-12×14	12×14	26	30	4	215	75	5	
-14×12	14×12	30	26	4	215	75	5	
-17×19	17×19	36	40	4.5	235	120	5	
-19×17	19×17	40	36	4.5	235	120	5	

• Fit to use in small spaces for tightening/loosening double nuts (Fig.1)

• Fit to use in small spaces for tightening/loosening double nuts (Fig.1)



FLEX-SOCKET SPANNER-SET (6pcs.) mm

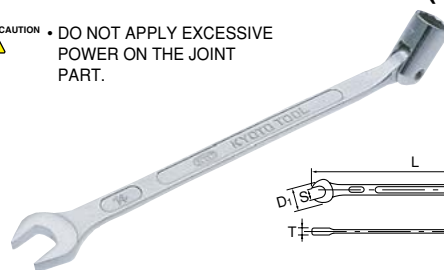
No. FBS6		▼g 800			1			
Flex-Socket Spanner		FBS-10, 12, 13, 14, 17, 19						
No.	S	D ₁	D ₂	T	L	▼g	1	
FBS-10	10	22	14	6	180	66	5	
-12	12	26	17	6.5	205	100	5	
-13	13	28	18	6.5	210	105	5	
-14	14	29	19	6.5	230	140	5	
-17	17	36	23	7	250	200	5	
-19	19	40	26	7.5	265	230	5	

- Quick turning at open end side and tight fastening at socket side.

POWERFIT

● FLEX-SOCKET SPANNER · SET (6pcs.)

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

**FLEX-HEAD SOCKET-SET (3pcs.)** mm

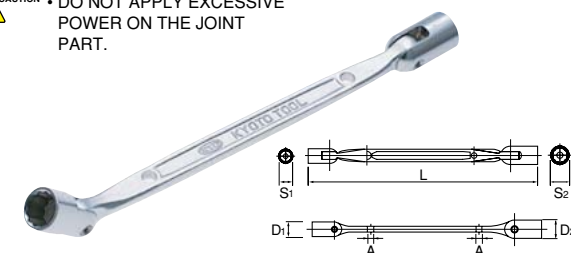
No. FBH103		▼g 370		1			
Flex-Head Socket		FBH1-8×9, 10×12, 13×14					
No.	S ₁ ×S ₂	D ₁	D ₂	A	L	▼g	1
FBH1 - 8× 9	8× 9	12	13.5	5.5	200	80	10
- 8×10	8×10	12	14.5	5.5	200	90	10
-10×12	10×12	14.5	17	5.5	215	120	10
-12×14	12×14	17	20	6.5	230	160	10
-13×14	13×14	18.5	20	6.5	230	170	10
-14×17	14×17	20	23.5	7.5	245	220	10
-17×19	17×19	23.5	26	7.5	250	250	10


- Convenient for use in narrow space and for quick turning.

POWERFIT

● FLEX-HEAD SOCKET · SET (3pcs.)

CAUTION • DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

**COMBINATION WRENCH SET (8pcs.) · (10pcs.) · (12pcs.)** mm

No. TMS208	▼kg 1	 1
Combination Wrench	MS2-07, 08, 10, 12, 13, 14, 17, 19	

- Pla. tray (L444×W184×H48mm)

POWERFIT

No. TMS210	▼kg 1.1	1
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 15, 17, 19	

- Pla. tray (L444×W184×H48mm)

POWERFIT

No. TMS212	▼kg 1.6	1
Combination Wrench	MS2-055, 07, 08, 10, 12, 13, 14, 15, 17, 19, 21, 22	

- Pla. tray (L444×W184×H48mm)

POWERFIT

COMBINATION WRENCH SET (8pcs.) in

No. TMS208B		▼kg 1	📦 1		
Combination Wrench	in	MS2- 1/4, 3/8, 7/16, 1/2, 9/16, 5/8, 11/16, 3/4			

- Pla. tray (L444×W184×H48mm)

● COMBINATION WRENCH SET (8pcs.) (10pcs.) (12pcs.)

TMS208

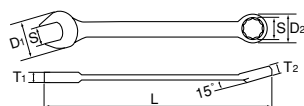


TMS210



TMS212

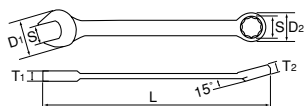
● COMBINATION WRENCH



COMBINATION WRENCH									mm
No.	S*	D ₁	D ₂	T ₁	T ₂	L	▼g		
MS2- 032	3.2	8	7.5	3	3	75	6	5	
- 04	4	9	8.5	3	4	80	8	5	
- 045	4.5	10	9	3	4	85	10	5	
- 05	5	11	9.5	3	4.5	90	11	5	
- 055	5.5	12.5	10	3	4.5	96	13	5	
- 06	6	13	10.5	3	4.5	96	14	5	
- 07	7	15.5	12	3.5	5	111	20	5	
- 08	8	17.5	13	4	5.5	126	28	5	
- 09	9	19.5	14.5	4.5	6	136	36	5	
- 10	10	21.5	16	4.5	6.5	151	42	5	
- 11	11	23.5	17	5	7	161	55	5	
- 12	12	25.5	18	5.5	7.5	170	65	5	
- 13	13	27.5	19	6	8.5	188	85	5	
- 14	14	29.5	20.5	6	9.5	190	98	5	
- 15	15	31.5	22.5	7	10	200	119	5	
- 16	16	33.5	23.5	7	10.5	215	134	5	
- 17	17	36	25	7	10.5	225	153	5	
- 18	18	38	26.5	8	11.5	241	184	5	
- 19	19	40	27.5	7.5	12	256	205	5	
- 20	20	42	29.5	8	12	271	234	5	
- 21	21	44	30.5	8	13	289	267	5	
- 22	22	46	32	8.5	13.5	304	305	5	
- 23	23	48	33.5	8.5	14.5	311	331	5	
- 24	24	50	35	9	15	337	380	5	
- 25	25	52	36	9	15.5	351	423	5	
- 26	26	54	37.5	9	16	371	466	5	
- 27	27	55.5	39	9	16.5	381	502	5	
- 28	28	57.5	40.5	9.5	17	401	561	5	
- 29	29	60	43.5	10	18	421	650	1	
- 30	30	61.5	43.5	10	18	446	687	1	
- 31	31	63.5	45.5	10.5	18	462	790	1	
- 32	32	65.5	46.5	10.5	18	471	836	1	
- 33	33	67.5	47.5	11	20	477	904	1	
- 34	34	69.5	52	11	21	480	1030	1	
- 35	35	72	52	12	21	481	1070	1	
- 36	36	74	52	12	21	501	1155	1	
- 38	38	78	54.5	13.5	22	521	1382	1	
- 41	41	84	59	14	24.5	542	1680	1	
- 46	46	94	66	14	26	562	2142	1	

* 5mm and below the offset side is the hexagonal diameter. **POWERFIT** (Except the following from 5mm)

● COMBINATION WRENCH



COMBINATION WRENCH									in
No.	S*	D ₁	D ₂	T ₁	T ₂	L	▼g		
MS2-1/8	3.1	8	7.5	3	3	75	6	5	
-5/32	3.9	9	8.5	3	4	80	8	5	
-3/16	4.7	10	9	3	4	85	10	5	
-13/64	5.1	11	9.5	3	4.5	90	11	5	
-7/32	5.5	12.5	10	3	4.5	96	13	5	
-15/64	5.9	13	10.5	3	4.5	96	14	5	
-1/4	6.3	13	10.5	3	4.5	96	14	5	
-9/32	7.1	15.5	12	3.5	5	111	20	5	
-5/16	7.9	17.5	13	4	5.5	126	28	5	
-11/32	8.7	19.5	14.5	4.5	6	136	36	5	
-3/8	9.5	21.5	16	4.5	6.5	151	42	5	
-7/16	11.1	23.5	17	5	7	161	55	5	
-1/2	12.7	27.5	19	6	8.5	188	85	5	
-9/16	14.2	29.5	20.5	6	9.5	190	98	5	
-19/32	15	31.5	22.5	7	10	200	119	5	
-5/8	15.8	33.5	23.5	7	10.5	215	134	5	
-11/16	17.4	36	25	7	10.5	225	153	5	
-3/4	19	40	27.5	7.5	12	256	205	5	
-25/32	19.8	42	29.5	8	12	271	234	5	
-13/16	20.6	44	30.5	8	13	289	267	5	
-7/8	22.2	46	32	8.5	13.5	304	305	5	
-15/16	23.8	50	35	9	15	337	380	5	
-1	25.4	52	36	9	15.5	351	423	5	
-1-1/16	26.9	55.5	39	9	16.5	381	502	5	
-1-1/8	28.5	60	43.5	10	18	421	650	5	
-1-3/16	30.1	61.5	43.5	10	18	446	687	5	
-1-1/4	31.7	65.5	46.5	10.5	18	471	836	5	
-1-5/16	33.3	67.5	47.5	11	20	477	904	5	
-1-3/8	34.9	72	52	12	21	481	1070	1	
-1-7/16	36.5	74	52	12	21	501	1155	1	
-1-1/2	38.1	78	54.5	13.5	22	521	1382	1	

* 13/64in and below the offset side is the hexagonal diameter.

2. CONVENTIONAL TOOLS

PROFIT® TOOLS



CAUTION

PROFIT® tools

- The durability is lower than that of the standard type due to the thin wall type design.
- Take care to not over-apply force.
- Use wrenches that conform to the size of the bolts and nuts.
- Do not use by adding on pipes, etc.
- Make sure that bolts and nuts are inserted correctly and fully into the tool. (Open end wrenches)

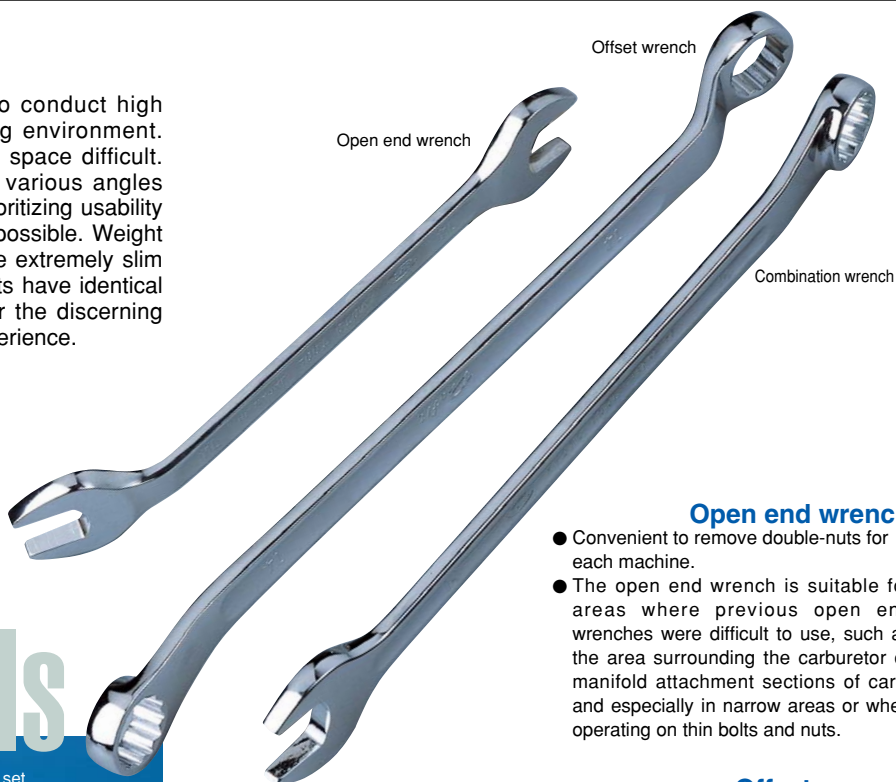
- Insert the bolts and nuts fully. (Offset wrenches)
- The open end wrench can come loose when too much force is applied.
- Take care not to allow the tool to slip off.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

PROFIT® tool

The professional mechanic is expected to conduct high quality work in a confined space operating environment. Previous tools make working in a confined space difficult. Mechanics prefer to be able to work from various angles without changing the tool. Precision tools prioritizing usability have been developed in order to make this possible. Weight and excessive mass has been shed from the extremely slim tool body and open end wrenches and offsets have identical diameters with differing angles. The tool for the discerning professional who can feel the torque with experience.



"Profit" Tools



Open end wrench

- Convenient to remove double-nuts for each machine.
- The open end wrench is suitable for areas where previous open end wrenches were difficult to use, such as the area surrounding the carburetor or manifold attachment sections of cars, and especially in narrow areas or when operating on thin bolts and nuts.

Offset wrench

- Removal and attachment of bolts and nuts in narrow areas, such as the flange joints or tight spaces in industrial machines.
- Suitable for the differential propeller shaft joint section of cars, drive shaft and clutch overhaul for front drive vehicles, carburetor and manifold related attachment and removal operations during engine overhaul.
- Operations that require deep reach in narrow areas, such as bumpers and inside panels during vehicle maintenance.

●PROFIT® TOOL OFFSET WRENCH & OPEN END WRENCH SET (6pcs.)



PROFIT® TOOL OFFSET WRENCH & OPEN END WRENCH SET (6pcs.)			mm
No. SM306	▼ g 320	5	
Open End Wrenches		S 30-10, 12, 14	
Box-End Wrenches		M30-10, 12, 14	

- Each set includes Box-End and Open-End wrenches.

*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL OPEN END WRENCH • SET (S30 • 5pcs.)



PROFIT® TOOL OPEN END WRENCH • SET (5pcs.) mm

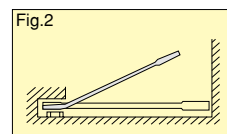
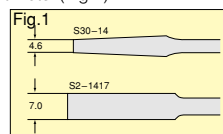
No. TS305	▼g 380	1
Profit Tool™ Open End Wrench S30-8, 10, 12, 13, 14		
Plastic Case L215×W120×H45mm		

- Placed in the tray and housed in a transparent plastic case.

No.	S	D	T	L	▼g	1	
S30- 8	8	19	3	120	30	10	
-10	10	22	3.5	130	35	10	
-12	12	27	4.3	140	53	10	
-13	13	29	4.5	150	60	10	
-14	14	30	4.6	160	68	10	
-15	15	33	4.7	170	80	10	
-17	17	36	4.8	185	105	10	
-19	19	40	5	200	125	10	

- Extra thin type open end wrench with one bent end and one tapered edge end. (Fig.1)
- The diameter is limited to one size and set with a 25 degree tilt angle on one end only.
- Convenient for use on double nuts on various machineries.
- Effective in places where it's difficult to use conventional wrenches, such as near surroundings of automobile carburetors and manifolds. Particularly effective in tight spaces or with thin bolts and nuts. (Fig.2)

COMPARISON OF TAPERED SHAPE ON THE TIP (to the KTC's conventional shape)



*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL OFFSET WRENCH • SET (M30 • 5pcs.)



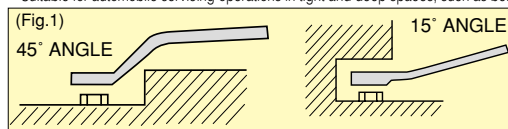
PROFIT® TOOL OFFSET WRENCH • SET (5pcs.) mm

No. TM305	▼g 460	1
PROFIT® Tool Offset Wrench M30-8, 10, 12, 13, 14		
Plastic Case L187×W190×H44mm		

- Placed in the tray and housed in a transparent plastic case.

No.	S	D	T	L	▼g	1	
M30- 8	8	12	4.5	155	30	10	
-10	10	15	5.5	175	40	10	
-12	12	18	6.5	200	60	10	
-13	13	19	7	210	70	10	
-14	14	21	7.5	225	80	10	
-15	15	22	8	231	90	10	
-17	17	25	9	244	100	10	
-19	19	27	10	270	120	10	

- Smaller diameter of box-ends and thinner body angled 45°×15°. (Fig.1)
- Convenient for use on bolts and nuts used in flange joints of industrial machineries or between narrow gaps. (Fig.1)
- Effective for automobile parts including differentials, propeller shafts, joints and drive shafts of front-drive vehicles, as well as for clutch overhauling. Also convenient for attaching or removing carburetors and manifolds during engine overhauls.
- Suitable for automobile servicing operations in tight and deep spaces, such as behind bumpers or inside panels.



*PROFIT is a registered trademark of KYOTO TOOL CO., LTD.

●PROFIT® TOOL COMBINATION WRENCH • SET (M30 • 5pcs.)



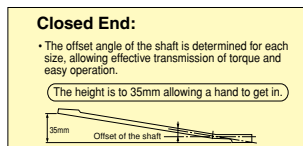
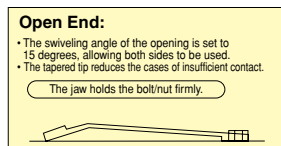
PROFIT® TOOL COMBINATION WRENCH • SET (5pcs.) mm

No. TMS305	▼g 440	1
Open-End Wrenches MS30-8, 10, 12, 13, 14		
Plastic Case L187×W190×H44mm		

- Placed in the tray and housed in a transparent plastic case.

No.	S	D ₁	D ₂	T ₁	T ₂	L		▼g	1	
MS30- 8	8	18	11.5	2.5	4.5	125	18°	20	10	
-10	10	21.5	14.5	3	5.5	150	15°	30	10	
-12	12	26	17.5	3.8	6.5	170	13°	50	10	
-13	13	28.5	18.5	4	7	185	12°	60	10	
-14	14	29.5	20	4.1	7.5	200	11°	80	10	
-15	15	32	21	4.2	8	215	10°	90	10	
-17	17	36	24	4.3	9	240	9°	125	10	
-19	19	40	26.5	4.5	10	260	9°	155	10	

- The closed end is designed to have Power Fit®.
- Slim in form: designed in pursuit of thin lightweight wrenches.
- Shaft designed to be tapered for good torque transmission and ductility.
- Shaft length designed to be optimal for sufficient fastening torque.



*PROFIT® is a registered trademark of KYOTO TOOL CO., LTD.

2. CONVENTIONAL TOOLS HANDLE WRENCHES



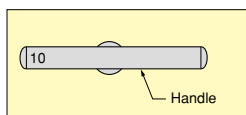
CAUTION HANDLE WRENCHES

- DO NOT EXTEND A WRENCH BY CONNECTING A PIPE, ETC.
- FIT THE BOLT OR NUT COMPLETELY INTO THE DEEP PART OF THE SOCKET.
- DO NOT USE A WRENCH AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.

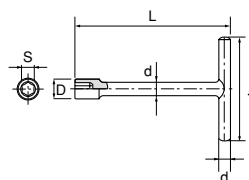
T SHAPE WRENCH

No.	S (Hexagonal)	D	d	ℓ	L	▽g	📦	
TH- 8	8	12	8	200	255	300	10	
- 9	9	14	8	200	255	300	10	
-10	10	14	9	200	255	300	10	
-11	11	16	9	200	255	330	10	
-12	12	17	10	250	255	430	10	
-13	13	19	10	250	255	440	10	
-14	14	20	11	250	255	440	10	
-17	17	24	12	300	305	540	10	
-19	19	29	14	300	305	680	10	
-21	21	31	14	300	305	780	10	
-22	22	32	15	300	310	800	10	
-23	23	33	15	300	310	880	10	!
-24	24	35	15	300	310	920	10	
-26	26	37	15	300	310	940	10	!
-27	27	39	15	300	310	960	10	!

• Size marked on the top of the handle for easy recognition.



● T SHAPE WRENCH

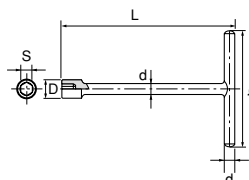
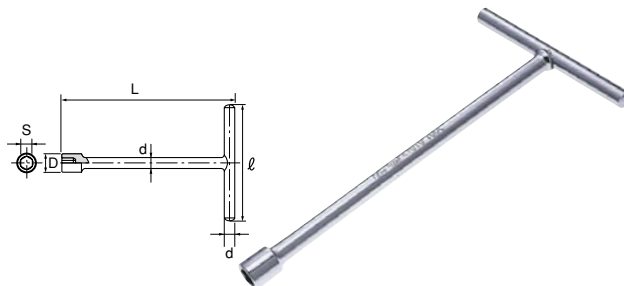


T SHAPE WRENCH WITH SHORT HANDLE

No.	S (Hexagonal)	D	d	ℓ	L	▽g	📦	
TH- 8N	8	12	8	130	250	300	1	
-10N	10	14	9	130	250	300	1	
-12N	12	17	10	130	250	430	1	

• Short handle for quick turning.

● T SHAPE WRENCH WITH SHORT HANDLE



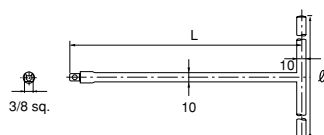
T SHAPE HANDLE

No.	ℓ	L	▽g	📦	
TH20	200	250	275	10	

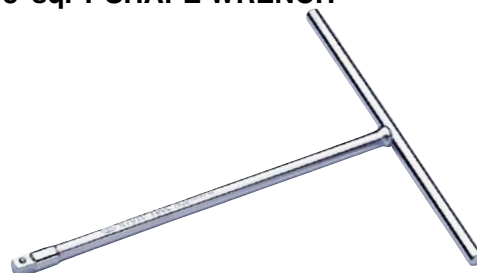
• With 3/8"sq. dr. for use on Sockets, Hexagon Wrenches, etc.



CAUTION • INSERT THE DRIVE SQUARE DEEPLY TO THE END.

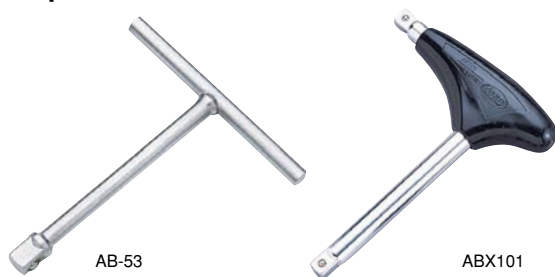


● 3/8"sq. T SHAPE WRENCH



*Please check the merchandise inventory for a product that is marked by ! before placing an order.

● 3/8"sq. HANDLE



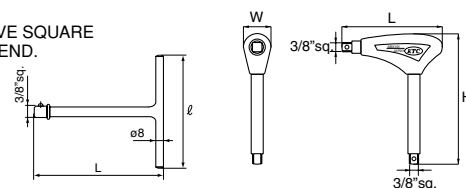
HANDLE

No.	H	W	ℓ	L	▼g	📦	
ABX101	135	28	—	105	250	10	
AB-53	—	—	100	115	90	1	

- This can be used for sockets and hexagon wrenches due to the 3/8"sq drive.



- INSERT THE DRIVE SQUARE DEEPLY TO THE END.



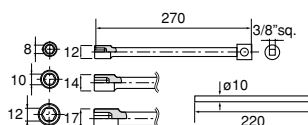
● 3/8"sq. EXCHANGEABLE T SHAPE WRENCH SET



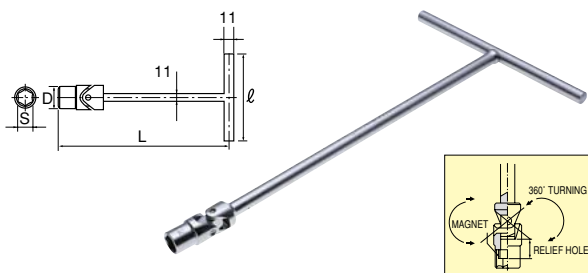
EXCHANGEABLE T SHAPE WRENCH SET

No.	BTH204	▼g	595	📦	1
T Shape Wrench	8, 10, 12				
Handle	ø10X220				

- Can be used as T Shape Wrench with removable handle.
- Top square drive for using with 3/8"sq. dr. ratchet handle or torque wrench.
- Removable handle for easy storing.



● FLEX T SHAPE WRENCH (Socket is magnetised)



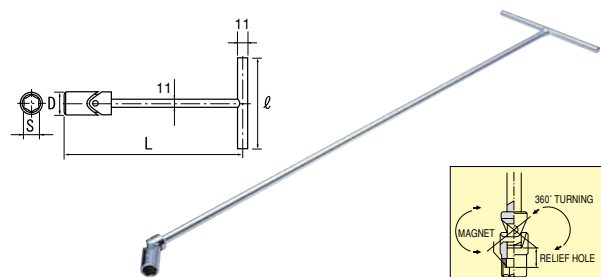
FLEX T SHAPE WRENCH

No.	S (Hexagonal)	D	ℓ	L	▼g	📦	
THF2-10	10	15	180	330	400	10	
-12	12	17	180	330	405	10	
-13	13	19	180	330	410	10	
-14	14	20	180	335	410	10	
-17	17	24	180	335	430	10	



- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● FLEX T SHAPE WRENCH (LONG) (Socket is magnetised)



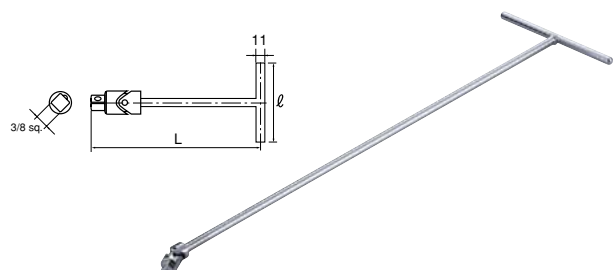
FLEX T SHAPE WRENCH (LONG)

No.	S (Hexagonal)	D	ℓ	L	▼g	📦	
THF2-10L	10	15	180	700	680	10	
-12L	12	17	180	700	680	10	
-13L	13	19	180	700	690	10	
-14L	14	20	180	705	690	10	
-17L	17	24	180	705	700	10	



- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.

● FLEX T SHAPE WRENCH (LONG)



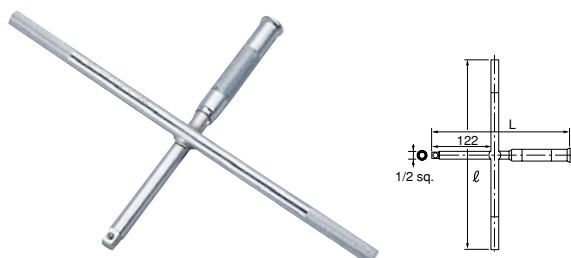
FLEX T SHAPE WRENCH (LONG)

No.	EDGE	ℓ	L	▼g	📦	
THF20-700	3/8"sq.	180	705	700	10	



- DO NOT APPLY EXCESSIVE POWER ON THE JOINT PART.
- INSERT THE DRIVE SQUARE DEEPLY TO THE END.

● 1/2"sq. SPEEDING CROSS WRENCH



SPEEDING CROSS WRENCH

No.	ℓ	L	▼kg	📦	
XH30	400	285	1.5	5	

- For quick turning.

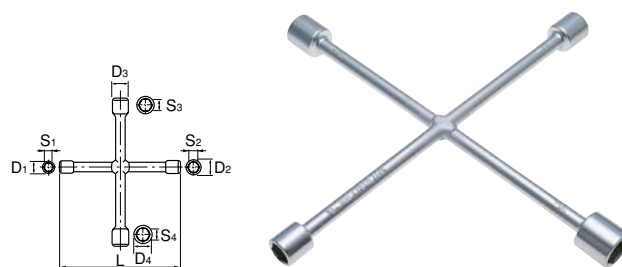


- INSERT THE DRIVE SQUARE DEEPLY TO THE END.

CROSS RIM WRENCH

No.	S ₁ ×S ₂ ×S ₃ ×S ₄ (Hexagonal)	D ₁ ×D ₂ ×D ₃ ×D ₄	L	▼kg	☐	
XH-10-17	10×12×14×17	16×18×20×25	300	1.3	10	
-14-21	14×17×19×21	20×25×29×31	400	1.3	10	
-17-23	17×19×21×23	25×29×31×33	400	1.5	10	
-19-26	19×21×23×26	29×31×33×37	400	1.5	10	
-19-27	19×22×24×27	29×32×35×39	400	1.6	10	

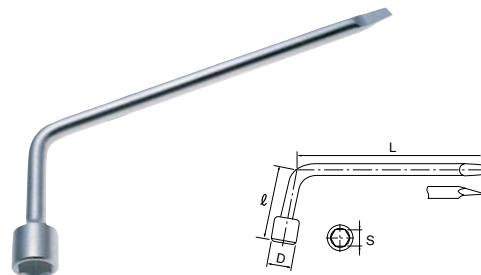
●CROSS RIM WRENCH



TIRE WRENCH

No.	S (Hexagonal)	D	L	ℓ	▼g	☐	
OH-17	17	25	250	80	410	10	
-19	19	28	280	90	460	10	
-21	21	31	280	110	660	10	
-23	23	33	300	125	720	10	
-26	26	37	300	155	740	10	

●TIRE WRENCH



HUB NUT WRENCH

No.	S1 (sq.) × S2 (Hex)	L	A	▼kg	☐	
WH-17×32	17×32	330	25	3.8	1	
-17×35	17×35	330	25	4.0	1	
-19×41	19×41	435	25	4.3	1	
-20×38	20×38	440	25	4.3	1	
-21×38	21×38	440	25	4.3	1	
-21×41	21×41	440	25	4.4	1	

• With handle for turning.



• USE THE HANDLE FOR HUB NUT WRENCHES.

●HUB NUT WRENCH

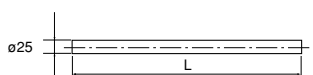


HUB NUT WRENCH BAR

No.	L	Dia. of Bar	▼kg	☐	
WHL-L	600	ø25	2.3	1	

• Handle for Hub Nut Wrench.

●HUB NUT WRENCH BAR



HUB NUT WRENCH FOR LOW FLOOR VAN

FOR DOUBLE TIRES OF LOW FLOOR VANS

No.	S1 (Hex) × S2 (Hex)	L	A	▼kg	☐	
WH-21×23	21×23	220	16	1.0	1	
-22×26	22×26	220	16	1.5	1	
-21×27	21×27	220	16	1.5	1	

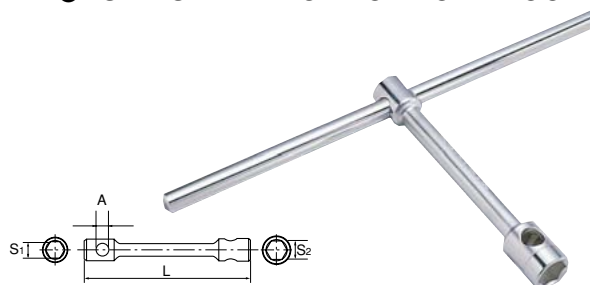
- With handle for turning.
- Hub nut wrench for double tires of low-floor van.
- Double Hexagon ends.



• USE THE HANDLE FOR HUB NUT WRENCH FOR LOW FLOOR VANS.



●HUB NUT WRENCH FOR LOW FLOOR VAN



HUB NUT WRENCH BAR FOR LOW FLOOR VAN

No	L	Dia. of Bar	▼kg	☐	
WHL-300	300	ø16	0.5	1	

• Handle for Hub Nut Wrench. for Low Floor Van.

●HANDLE FOR HUB NUT WRENCH FOR LOW FLOOR VAN



2. CONVENTIONAL TOOLS

SCREWDRIVERS



WARNING

Screwdrivers

- Do not use if there is a live electric current. The plastic on the grip does not provide insulation against electrical current.



CAUTION

- Use screwdrivers that conform to the size of the screws.
- Do not use the screwdriver as a lever, scraper, punch, or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- The use of protective goggles is recommended.
- Do not use screwdrivers with chipped, worn, or cracked heads.
- Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.



Through type



Magnet type

■ Screwdriver line up



■ New plastic grip screwdriver (21st Century Version Tools) ▶ P.122

The square shaft allows for easy delivery of high torque while being effective in the direction it is being pushed in. A double format consisting of environmentally friendly polypropylene and elastomer, which provides a soft, comfortable grip. A hexagonal bolster is attached when extra power is needed. (Excluding stubby screwdrivers)

■ Palm screwdriver ▶ P.123

A soft grip that reduces fatigue.
A hexagonal bolster is attached when high torque for larger sizes is needed.

■ Plastic grip screwdriver ▶ P.124

Acetyloid plastic grip with high durability. A powerful piercing type screwdriver with a black finish using special steel in the shaft.

■ Deluxe screwdriver ▶ P.123,124

A plastic grip with an hexagonal shaped handle. The square shaft allows for the use of the adjustable wrench when high torque is required.

■ Soft grip screwdriver ▶ P.129~131

The screwdriver employs a handle that is easy to grip and turn while applying force in pursuit of user-friendliness. Careful consideration has been provided in selecting grip material by using environmentally-friendly wood and plastic.

■ Wooden grip screwdriver ▶ P.132

Conventional screwdriver using natural timber for a soft, gentle grip. Wide grooves have been designed in 4 sections for the purpose of improved grip, concentrating the application of strength by the thumb and little finger, facilitating gripping and greater power for use.

■ Other screwdrivers

Insulated screwdriver ▶ P.128

Heavy duty handled screwdriver ▶ P.124

Anti-slip screwdriver ▶ P.125

Flat ratchet screwdriver ▶ P.126

Short stubby screwdriver ▶ P.125



*Except special screwdrivers

Chart of KTC screwdrivers

● = with magnetic type

Grip		Through type				Non-through type		
		Rounded shaft		Square shaft		Rounded shaft		Thin shaft (Rounded shaft)
		Bolster		Bolster		Bolster		
Material	Shape	Yes	No	Yes	No	Yes	No	No
Plastic	Square		●D10P2 / D10M2				PDDZ / MDDZ ●D10P / D10M	●D10SP / D10SM
	Hexagon				●DPD / DMD			
	Rounded		●PDD1 / MDD1					
Soft	Round		●D8P2 / D8M2				●D8P / D8M	
	Square		●D7P2 / D7M2	●D1P2 / D1M2		●ND2P / ND2M	●D7P / D7M	●D7SP / D7SM
	Hexagon							
Wooden	Rounded					●PDEA / MDEA*	●D6P / D6M	MDEA1
	Hexagon	●ND3P / ND3M						
	Rounded		●D12P2 / D12M2 PD / MD					

*Only PDEA-2, 3, MDEA-100, 150

Selecting screwdrivers

●As there is a great variety of screwdriver makes available, how do you select the appropriate type?

Here, we will show you ways of selecting screwdrivers more suited to your purpose while showing you screwdriver types and functions.

1 Select the grip

Firstly, the grip is a very important factor when selecting a screwdriver. Select the material that it is best suited to your project. Every effort has been carried out to improve the grip but as users all have differently shaped hands, it is important that you try gripping the tool before purchase. Try this in the store in front of the sales staff.


① Material

a. Plastic (hard)




Mainly made from hard durable materials that do not get dirty easily, such as Acetylloid.

b. Plastic (Soft)



The elasticity of the surface provides a soft grip.


c. Wooden



A conventional, familiar screwdriver that uses wooden materials. The screwdriver provides good grip even for greasy hands.

② Shape

a. Round type



The round grip that allows for the hand to firmly grasp the tool is shaped for easier use when pushing and turning action is required. The ratio of pushing and turning for a basic screwdriver is said to be 7:3. This shape is often used for wooden screws that especially require the pushing and turning action. It is also suitable for women and when the application of strength by the user is difficult.

b. Square - hexagonal - rounded type



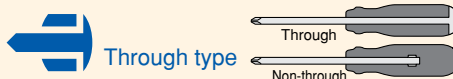
A standard shape held using the basic side-grip method allows for easy use when turning rapidly or hitting the washer.

2 Select the shaft

The shaft is an important component as well as the grip. Select the correct shaft from the 5 points provided below.


① Through and non-through

The through type shaft can also be used as a shock screwdriver for hitting washers. (However, the tool will quickly deteriorate.) The piercing type shaft is identified in the catalog by this symbol.




② Shape

a. Rounded shaft

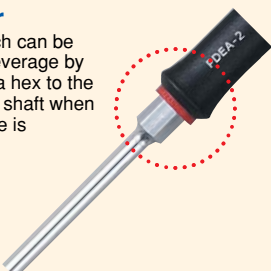
A common shape that is easy to use when turning while supporting the shaft with the hand.

b. Square shaft

Open end wrenches can be used for leverage when high turning torque is needed.

③ Bolster



The wrench can be used for leverage by attaching a hex to the root of the shaft when high torque is needed.

④ Material

a. Cr-V (Chrome vanadium copper)

A special steel that has anti-wear properties that are desired in screwdrivers. The steel is often used in high-grade models.

b. SWRH62A (Hard drawn steel wired material)

A common steel material used for screwdrivers regulated by JIS standards.

c. S55C, S45C (Carbon steel)

A common steel material used for screwdrivers regulated by JIS standards.

⑤ Magnetic tip

These tools have magnetized tips. The magnetic type is identified in the catalog by this symbol.

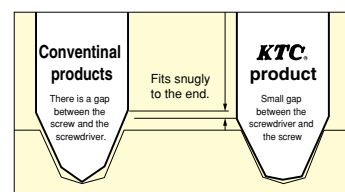


Magnet type



New plastic grip screwdriver A new design that embodies a new concept.

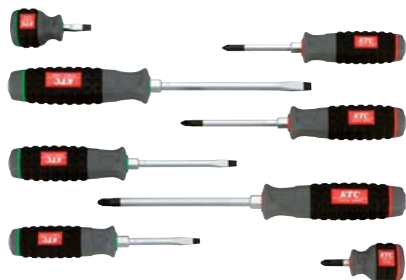
- The design of the edges of the screwdriver has been modified in order to produce a new type of screwdriver.
- The square form (shape) allows for easy delivery of high torque while being effective in the direction it is being pushed in.
- A triple format consisting of environmentally friendly polypropylene and elastomer which provides a soft, comfortable grip.
- The grip end is color coded with red ⊕ (Cross head) and green ⊖ (Flat head) for easy distinction.
- Improved ease of use due to the tip shape that snugly fits the screw.
- The axle is of a hexagon design. The attached bolster is effective when high torque is needed.
(Excluding stubby screwdrivers)
- The cross screwdriver reduces the gap with the screw and prevents cam out (the applied force from being forced outwards).



*Cam out

This refers to the force of the screwdriver that escapes when turning the screw.

NEW PLASTIC GRIP SCREWDRIVER SET (8pcs.) D.PAT.

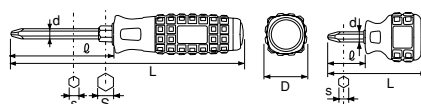


NEW PLASTIC GRIP SCREWDRIVER SET (8pcs.)

No.	TPMD18	▼kg	1.2	📦	1
Plastic grip screwdriver piercing type (cross)	D1P2-1, 2, 3				
Plastic grip screwdriver piercing type (flat)	D1M2-5, 6, 8				
Plastic grip stubby screwdriver (cross)	D1PS-2				
Plastic grip stubby screwdriver (flat)	D1MS-6				
<ul style="list-style-type: none"> • With hexagonal bolster. (Excluding stubby screwdrivers) • The tip is magnetized. • Cr-V is used for shaft material. 					

*The stubby screwdriver is a non-through type shaft.

NEW PLASTIC GRIP SCREWDRIVER · STUBBY SCREWDRIVER D.PAT.



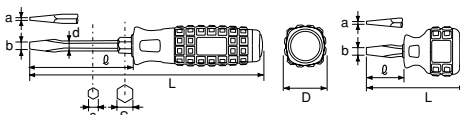
NEW PLASTIC GRIP SCREWDRIVER · STUBBY SCREWDRIVER

No.	Type	d	D	S	s	L	ℓ	▼g	📦
D1P2-1	No.1	7.1	29.6	10	6.3	170	75	120	10
-2	No.2	7.1	32	10	6.3	210	100	150	10
-3	No.3	8.9	33.8	12	7.9	280	150	250	5
D1PS-2	No.2	7.1	35.5	—	6.3	75	25	70	10

- The tip is magnetized.
- Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

NEW PLASTIC GRIP SCREWDRIVER · STUBBY SCREWDRIVER D.PAT.



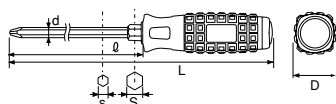
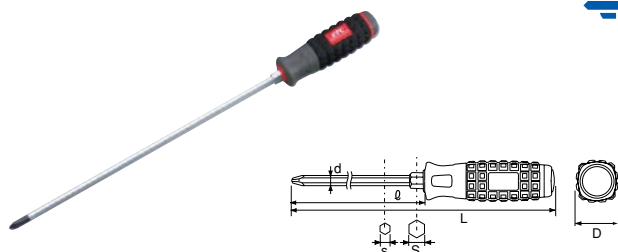
NEW PLASTIC GRIP SCREWDRIVER · STUBBY SCREWDRIVER

No.	a	b	d	D	S	s	L	ℓ	▼g	📦
D1M2-5	0.8	5.5	7.1	29.6	10	6.3	170	75	120	10
-6	1.0	6.3	7.1	32	10	6.3	210	100	150	10
-8	1.2	8	8.9	33.8	12	7.9	280	150	250	5
D1MS-6	1.0	6.3	7.1	35.5	—	—	75	25	70	10

- The tip is magnetized.
- Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

NEW PLASTIC GRIP LONG SCREWDRIVER D.PAT.

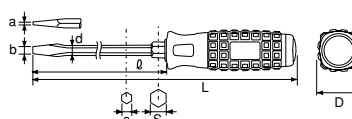
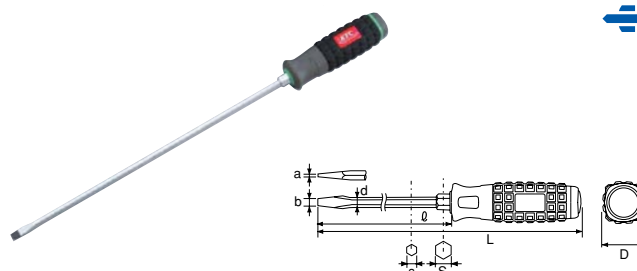


NEW PLASTIC GRIP LONG SCREWDRIVER

No.	Type	d	D	S	s	L	ℓ	▼g	📦
D1P2-130	No.1	7.1	29.6	10	6.3	400	300	180	5
-230	No.2	7.1	32	10	6.3	410	300	200	5
-330	No.3	8.9	33.8	12	7.9	430	300	310	5

- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines.
- With hexagonal bolster.
- Cr-V is used for shaft material.
- The tip is magnetized.

NEW PLASTIC GRIP LONG SCREWDRIVER D.PAT.



NEW PLASTIC GRIP LONG SCREWDRIVER

No.	a	b	d	D	S	s	L	ℓ	▼g	📦
D1M2-530	0.8	5.5	7.1	29.6	10	6.3	400	300	180	5
-630	1.0	6.3	7.1	32	10	6.3	410	300	200	5
-830	1.2	8.0	8.9	33.8	12	7.9	430	300	310	5

- With a long neck (length 300mm), the six sided type is useful in hard to reach areas around engines.
- With hexagonal bolster.
- Cr-V is used for shaft material.
- The tip is magnetized.

*Please check the merchandise inventory for a product that is marked by ⚡ before placing an order.

PALM SCREWDRIVER SET (8pcs.)

No.	PMDEA8	▼g	740	1
Palm screwdriver cross	No.1 PDEA-1			
	No.2 PDEA-2			
	No.3 PDEA-3			
Palm screwdriver flat	5.5×100 MDEA-75			
	6.5×125 MDEA-100			
	8 ×150 MDEA-150			
Stubby screwdriver cross	No.2 PDEA-P			
Stubby screwdriver flat	6 × 30 MDEA-M			

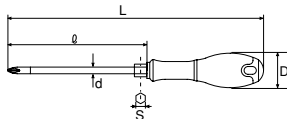
MODEL CHANGE This model succeeds the PMDE8.

●PALM SCREWDRIVER SET (8pcs.)**PALM SCREWDRIVER**

No.	Type	d	D	S	L	ℓ	▼g	5
PDEA-00	No.00	3	20	—	148	50	20	5
-0	No. 0	4	27	—	177	75	40	5
-1	No. 1	5	32	—	205	100	70	5
-2	No. 2	6	32	10	230	125	95	5
-3	No. 3	8	40	12	266	150	165	5
-P	No. 2	6	32	—	89	30	40	5

- The large size comes attached with a hexagonal bolster. (Only PDEA-2, 3)
- The tip is magnetized.

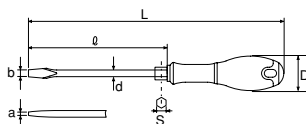
MODEL CHANGE This model succeeds the PDE-.

**● PALM SCREWDRIVER****PALM SCREWDRIVER**

No.	a	b	d	D	S	L	ℓ	▼g	5
MDEA-75	0.8	5.5	5	32	—	205	100	70	5
-100	0.9	6.5	6	32	10	230	125	95	5
-150	1.1	8	8	40	12	266	150	165	5
MDEA-M	0.9	6	6	32	—	89	30	40	5

- The large size comes attached with a hexagonal bolster. (Only MDEA-100, 150)
- The tip is magnetized.

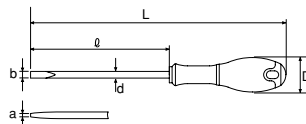
MODEL CHANGE This model succeeds the MDE.

**● PALM SCREWDRIVER****PALM THIN BLADE SCREWDRIVER**

No.	a	b	d	D	L	ℓ	▼g	5
MDE1A-50	0.4	3	3	20	148	50	20	5
-75	0.45	4	4	27	177	75	40	5
-150	0.9	5	5	32	255	150	75	5
-200	0.9	6	6	32	305	200	100	5

- This screwdriver is especially useful for operating on meters/gauges and electrical systems.

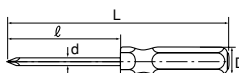
MODEL CHANGE This model succeeds the MDE1-.

**●PALM THIN BLADE SCREWDRIVER****DELUXE SCREWDRIVER**

No.	Type	d	D	L	ℓ	▼g	5
DPD -1	No.1	4.5	21	173	75	75	10
-2	No.2	6	23	208	100	130	10
-3	No.3	8	27	272	150	210	5
DSD -P	No.2	6	29	73	25	40	10

- Durable square shank can be used with wrenches for higher torque.
- Hexagonal grip for applying torque easily.
- The tip is magnetized.
- Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

**●DELUX SCREWDRIVER (DPD)**

● DELUXE SCREWDRIVER (DMD)



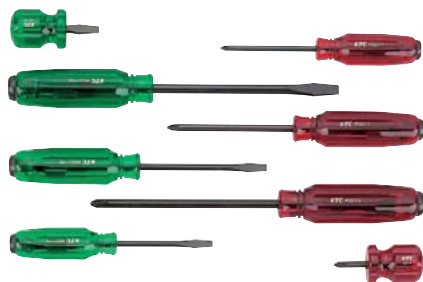
DELUXE SCREWDRIVER

No.	a	b	d	D	L	l	▼g	☞	
DMD - 75	0.7	4.5	4.5	21	173	75	75	10	
-100	0.9	6	6	23	208	100	130	10	
-150	1.0	8	8	27	272	150	210	5	
DSD - M	0.9	6	6	29	73	25	40	10	

- Durable square shank can be used with wrenches for higher torque.
- Hexagonal grip for applying torque easily.
- The tip is magnetized.
- Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

● PLASTIC GRIP SCREWDRIVER SET (8pcs.)



PLASTIC GRIP SCREWDRIVER SET (8pcs.)

No.	PMD18	▼g 910	☞ 1
Flat Screwdriver	75	MDD1-75	
	100	MDD1-100	
	150	MDD1-150	
Cross Screwdriver	No.1	PDD1-1	
	No.2	PDD1-2	
	No.3	PDD1-3	
Stubby Screwdriver	Flat	SD1-M	
	Cross	SD1-P	

- The tip is magnetized. (Except SD1-M, P)
- Cr-V is used for shaft material.

*The stubby screwdriver is a non-through type shaft.

● PLASTIC GRIP SCREWDRIVER (PDD1)



PLASTIC GRIP SCREWDRIVER

No.	Type	D	d	L	l	▼g	☞	
PDD1 -1	No.1	27	5	160	75	75	10	
-2	No.2	30	6.3	205	100	130	10	
-3	No.3	33	8	265	150	210	5	

- The tip is magnetized.
- Cr-V is used for shaft material.

● PLASTIC GRIP SCREWDRIVER (MDD1)



PLASTIC GRIP SCREWDRIVER

No.	a	b	d	D	L	l	▼g	☞	
MDD1 - 75	0.7	5.5	5.5	27	160	75	75	10	
-100	0.8	6	6	30	205	100	130	10	
-150	1.0	8	8	33	265	150	210	5	

- The tip is magnetized.
- Cr-V is used for shaft material.

● PLASTIC GRIP LONG SCREWDRIVER

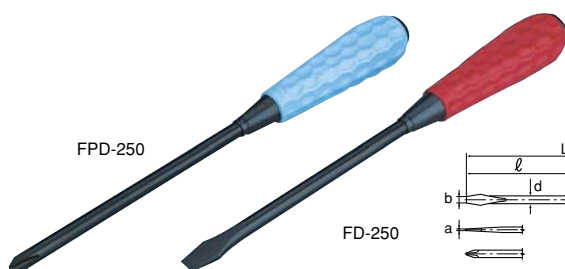


PLASTIC GRIP LONG SCREWDRIVER

No	Type	a	b	d	D	L	l	▼g	☞	
PDDZ -2	Cross No.2	—	—	5.5	27	383	288	100	5	
MDDZ-400	Flat	0.7	5.5	5.5	27	383	288	90	5	

- Convenient for adjusting carburetors, etc.
- S55C is used for shaft material.

● HEAVY DUTY SCREWDRIVER (FD · FPD)



HEAVY DUTY SCREWDRIVER

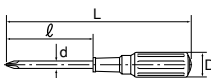
No.	Type	a	b	d	D	L	l	▼g	☞	
FPD-250	Cross	—	—	9	32	275	150	210	5	
FD -250	Flat	1.2	10	9	32	275	150	210	5	

- The screwdriver has increased durability through widening and lengthening the shaft.
- The shaft and the handle are strongly fixed.
- SWRH62A is used for shaft material.

WOODEN GRIP SCREWDRIVER

No.	Type	D	L	ℓ	▼g	☞	
PD-1	No.1	5	24	170	75	60	10
-2	No.2	6	28	220	100	110	10
-3	No.3	8	33	285	150	190	5
-4	No.4	9	34	350	200	260	5

- Traditional wooden grip.
- S55C (PD-1, 2, 3), S45C (PD-4) is used for shaft material.



● WOODEN GRIP SCREWDRIVER (PD)



WOODEN GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞
MD - 50	0.6	4.5	5	24	145	50	55	10
- 75	0.7	5.5	5	24	170	75	55	10
-100	0.9	6	6	28	220	100	110	10
-125	0.9	7	7	33	260	125	160	10
-150	1.0	8	8	33	285	150	190	5
-200	1.1	9	9	34	350	200	250	5
-250	1.2	10	9	34	400	250	280	5
-300	1.2	10	9	34	450	300	310	5

- Traditional wooden grip.
- S55C (MD-50~150), S45C (MD-200~300) is used for shaft material.

● WOODEN GRIP SCREWDRIVER (MD)



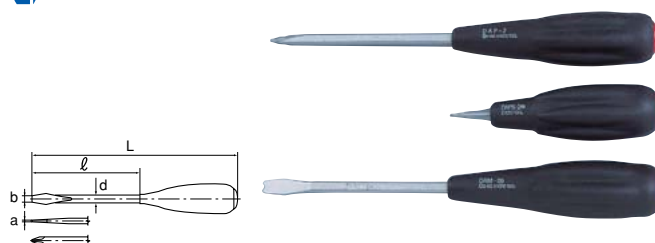
ANTI-SLIP SCREWDRIVER - SET

No. TDA03	▼g 290	☞ 10
Cross	DAP-2	
	DAPS-2	
Flat	DAM-06	

- Effective for use on screws with worn cross or flat grooves.
- Specially shaped edge for good biting.
- Cr-V is used for shaft material.

No.	Type	a	b	d	D	L	ℓ	▼g	☞
DAP-2	Cross	No.2	—	6	34	230	100	100	10
DAPS-2	Cross	No.2	—	6	34	115	25	70	10
DAM-06	Flat	0.8	6	6	34	230	100	100	10

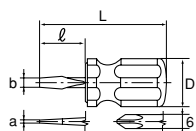
● ANTI-SLIP SCREWDRIVER SET



STUBBY SCREWDRIVER

No.	Type	a	b	D	L	ℓ	▼g	☞
SD1 - P	Cross No.2	—	—	32	72	26	40	10
- M	Flat	0.8	6	32	72	26	40	10

- Convenient for attaching / detaching screws in narrow spaces.
- SWRH62A is used for shaft material.



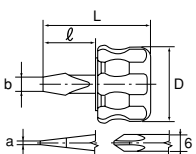
● STUBBY SCREWDRIVER (SD1)



MINI STUBBY SCREWDRIVER

No	Type	a	b	D	L	ℓ	▼g	☞
SD3-P	Cross No.2	—	—	29	40	20	25	10
-M	Flat	0.7	6	29	40	20	25	10

- With improved function of Stubby Screwdriver.
- SWRH62A is used for shaft material.



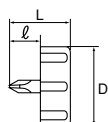
● MINI STUBBY SCREWDRIVER (SD3)



SHORT STUBBY SCREWDRIVER

No	Type	D	L	ℓ	▼g	☞
SD4-P	Cross No.2	40	30	15	20	10

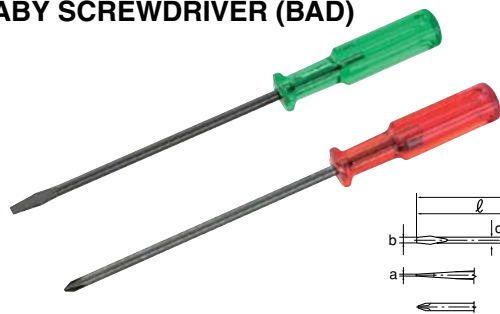
- Total length : 30mm for use in narrow space.
(Ex. attaching/detaching mud guards, console boxes, installment panels)
- ø40 grip for applying higher torque.
- SWRH62A is used for shaft material.



● SHORT STUBBY SCREWDRIVER (SD4)



● BABY SCREWDRIVER (BAD)



BABY SCREWDRIVER

No	Type	a	b	d	D	L	ℓ	▼g	☞
BAD- 0	Cross	—	—	3	11	120	75	10	50
-50	Flat	0.4	3	3	11	95	50	10	50
-75	Flat	0.4	2.5	3	11	120	75	10	50

- For adjusting meters and other precision equipments.
- SWRH62A is used for shaft material.

● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER SET

No. TMDB8	▼g 105	☞1
Body		
Cross Bit	No.2 22mm, No.2 30mm, No.3 25mm	
Hexagon Bit	4 · 5 · 6mm	
Bit Holder for 6units	EHDB06	

- SWRH62A is used for shaft material.
- *The screwdriver is not sold individually.

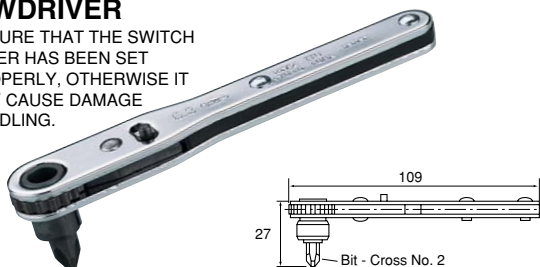


- ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.

● INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER



- CAUTION • ENSURE THAT THE SWITCH LEVER HAS BEEN SET PROPERLY, OTHERWISE IT MAY CAUSE DAMAGE OR IDLING.



INSERT CHANGEABLE FLAT RATCHET SCREWDRIVER-BIT SET

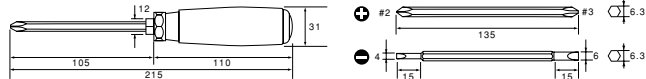
No. RM22	▼g 60	☞ 10
Body RM2-110 Bit (BT52P)		
Bit Set		
No. BT52P	Cross Bit (⊕ No.2 Length22)5pcs.	▼g 40 ☞ 10
No. TD52P	Cross Bit (⊕ No.2 Length30)5pcs.	▼g 40 ☞ 10
No. BT53P	Cross Bit (⊕ No.3 Length25)5pcs.	▼g 40 ☞ 10
No. TD5100M	Flat Bit (⊖ 100 Length30) 5pcs.	▼g 40 ☞ 10
No. TDH5	Hexagon Bit (3, 4, 5, 6 Length20) adapter (△1/4"sq. Length30)each 1 unit	▼g 50 ☞ 10
No. EHDB06	Bit Holder	1 unit ▼g 10 ☞ 10

- Cr-V is used for bit material.

● INTERCHANGEABLE SCREWDRIVER SET



This model succeeds the KD4



INTERCHANGEABLE SCREWDRIVER SET

No. DB4	▼g 180
Cross-bit for the interchangeable screwdriver (No.2×No.3)	DB4-P
Flat bit (tip width 4 × tip width 6)	-M
Handle	-H

- Cr-V is used for shaft material.

Characteristics

- 1 bit fits 2 sizes. One-touch operated through inserting and removing.
- A soft grip that prevents slipping.
- The shaft is hexagonal (each side of the hexagonal shaft is 6.3 mm). The attached bolster (hexagonal width-across flat 12 mm) allows the use of an open end wrench for tightening.
- Screwdriver bits that are readily available can also be used. (Where each side of the shaft is 6.3 mm and full length is 65 mm and over)

Replacement parts For the interchangeable screwdriver

No.	Product name	
DB4-P	Cross bit (No.2×No.3)	
-M	Flat bit (tip width 4 × tip width 6)	
-H	Handle	

IMPACT SCREWDRIVER SET

No. SD6	▼kg 1.1	6
Body	SD30-B	
Bit Holder (Opposite side 8mm)	SD30-8H	
Cross Bit	No.1 SDP-1	
	No.2 SDP-2	
	No.3 SDP-3	
Flat Bit	(Tip Thickness 1) SDM-1.0	
	(Tip Thickness 1.6) SDM-1.6	
	(Tip Thickness 1.8) SDM-1.8	
Metal Case L170×W50×H33	SD6-M	

- Light & easy to use and especially effective for loosening tightly fastened bolts or rusted bolts.
- Cr-V is used for shaft material.

Body

No.	sq.	D	L	▼kg	6
SD30-B	12.7	30	142.5	1	1

Bit Holder

No.	sq.	D	L	▼g	6
SD30-8H	12.7	22	36	10	1

Cross Bit

No.	Type	d	L	▼g	6
SDP-1	No.1	8	80	10	10
-2	No.2	8	80	10	10
-3	No.3	8	80	10	10

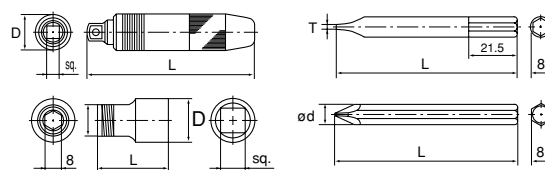
Flat Bit

No.	T	L	▼g	6
SDM-1.0	1.0	80	10	10
-1.6	1.6	80	10	10
-1.8	1.8	80	10	10

● IMPACT SCREWDRIVER SET



- GRIP THE CENTER SECURELY. • HIT THE CENTER SECURELY.
- USE EXCLUSIVE BITS. • USE APPROVED EYE PROTECTION.

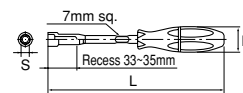


NUT DRIVER

No.	S (Hexagon)	D	L	▼g	6
ND- 7	7	29	200	125	10
- 8	8	34	215	125	10
- 9	9	29	200	130	10
-10	10	34	215	130	10
-11	11	29	200	135	10
-12	12	29	200	140	10

- Convenient when a long section of bolt shaft projects after the nut has been tightened as the bore has a recess of 33 to 35 mm for accommodating the bolt shaft.
- Center of the shaft has a 7 mm square cross-section for applying a larger torque by using an open-end or adjustable wrench.

● NUT DRIVER



Palm screwdriver series Insulated screwdrivers

Designed with reliability and safety in mind in consideration for the working environment.

An insulated screwdriver with excellent functionality that snugly fits the hand.

- The grip end is color coded with red ⊕ (Cross) and green ⊖ (Flat) for easy distinction.
- The grip end has a useful hole for hanging the tool.
- A soft, triple plastic layered grip that allows for easy familiarization is employed.



WARNING

Insulated screwdriver types 1000V

The screwdrivers comply with EN60900 (European Regulation Standardization Committee).
This screwdriver withstands up to AC (alternating current) 1000V and DC (direct current) 1500V.

- Disconnect the live wires of the electrical circuit before starting work.
- Insulation is only provided on the grip and the orange-covered section of the shaft.
- Always wear insulated gloves when using this tool.
- Do not use this tool when damage can be seen on the insulation covering or the tool itself.

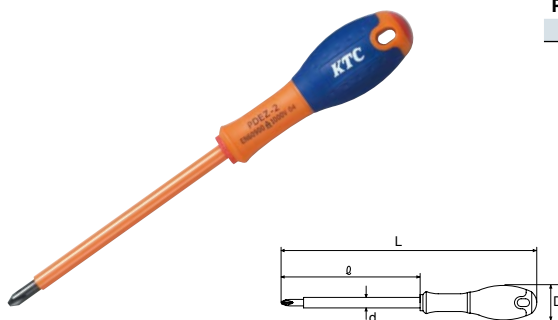
● INSULATED SCREWDRIVER SET (4pcs.)



INSULATED SCREWDRIVER SET (4pcs.)

No. PMDEZ4	▼g 270	1
Insulated screwdriver (cross)	No.1 PDEZ-1	
	No.2 PDEZ-2	
Insulated screwdriver (flat)	4×100 MDEZ-4	
	5.5×150 MDEZ-5	

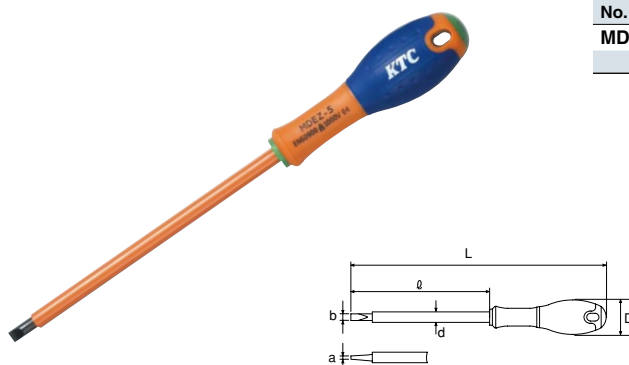
● INSULATED SCREWDRIVER



INSULATED SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	
PDEZ-1	No.1	7	32	205	100	65	
-2	No.2	8	32	230	125	85	

● INSULATED SCREWDRIVER



INSULATED SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	
MDEZ-4	0.45	4	6	27	202	100	40	
-5	0.9	5.5	7.5	32	255	150	80	

SOFT GRIP SCREWDRIVER SET (8pcs.)

No. TD798	▼kg 1	10
Cross Soft Grip Screwdriver	No.1	D7P-1
	No.2	D7P-2
	No.3	D7P-3
Flat Soft Grip Screwdriver	75	D7M-5
	100	D7M-6
	150	D7M-8
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The orange grip color indicates "cross".
- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- The package can be used as a tray.
- Cr-V is used for shaft material.

No. TD2798	▼kg 1	10
Cross Soft Grip Screwdriver Through type	No.1	D7P2-1
	No.2	D7P2-2
	No.3	D7P2-3
Flat Soft Grip Screwdriver Through type	75	D7M2-5
	100	D7M2-6
	150	D7M2-8
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
 - The orange grip color indicates "cross".
 - The green color of the grip indicates "flat".
 - The shaft is through-type and the tip is magnetized.
 - The package can be used as a tray.
 - Cr-V is used for shaft material.
- *The stubby screwdriver is a non-through type shaft.

SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)

SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)

No. TD902	Soft Stubby Screwdriver Set	
Cross Soft Stubby Screwdriver	No.2	D9P-225
Flat Soft Stubby Screwdriver	25	D9M-625

No. TD702	Soft Grip Screwdriver Set	
Cross Soft Grip Screwdriver	No.2	D7P-2
Flat Soft Grip Screwdriver	100	D7M-6

- Cr-V is used for shaft material.
- Best for gift-giving**
 - Pleasing as a gift, Convenient set of two pieces.
 - Operable in narrow spaces; good appearance.
 - Necessities, popular at home and office.

SOFT GRIP SCREWDRIVER SET (8pcs.)



SOFT GRIP SCREWDRIVER GIFT SET (2pcs.)



SOFT GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	10
D7P2-1	No.1	5.5	29	195	75	90	10
-110	No.1	5.5	29	220	100	95	10
-2	No.2	6.3	31	225	100	110	10
-215	No.2	6.3	31	275	150	120	10
-3	No.3	8	33	280	150	170	10

- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The orange grip color indicates "cross".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	10
D7M2-5	0.75	5.5	5.5	29	195	75	90	10
-510	0.75	5.5	5.5	29	220	100	95	10
-6	0.95	6	6.3	31	225	100	110	10
-615	0.95	6	6.3	31	275	150	120	10
-8	1.1	8	8	33	280	150	170	10

- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	10
D7P-1	No.1	5.5	29	200	75	80	10
-110	No.1	5.5	29	225	100	85	10
-115	No.1	5.5	29	275	150	95	10
-120	No.1	5.5	29	325	150	105	10
-2	No.2	6.3	31	230	100	105	10
-215	No.2	6.3	31	280	150	110	10
-220	No.2	6.3	31	330	200	130	10
-230	No.2	6.3	31	430	300	155	10
-3	No.3	8	33	285	150	160	10

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

SOFT GRIP SCREWDRIVER



● SOFT GRIP SCREWDRIVER

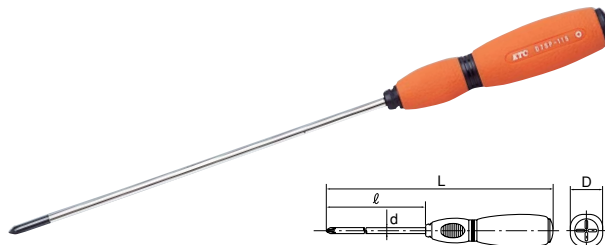


SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	📦	
D7M-5	0.75	5.5	5.5	29	200	75	80	10	
-510	0.75	5.5	5.5	29	225	100	85	10	
-515	0.75	5.5	5.5	29	275	150	95	10	
-520	0.75	5.5	5.5	29	325	200	105	10	
-6	0.95	6	6.3	31	230	100	105	10	
-615	0.95	6	6.3	31	280	150	115	10	
-620	0.95	6	6.3	31	330	200	130	10	
-630	0.95	6	6.3	31	430	300	155	10	
-8	1.1	8	8	33	285	150	160	10	

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER

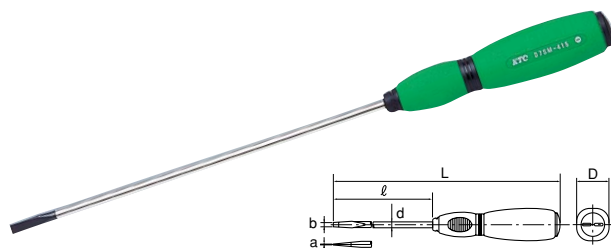


SOFT GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	📦	
D7SP-0075	No.00	4	20	165	75	35	10	
-0010	No.00	4	20	190	100	35	10	
-075	No.0	4	20	165	75	35	10	
-010	No.0	4	20	190	100	35	10	
-175	No.1	4	20	165	75	35	10	
-110	No.1	4	20	190	100	35	10	
-115	No.1	4	20	240	150	40	10	

- The shaft is thin and non-through type.
- Cr-V is used for shaft material.

● SOFT GRIP SCREWDRIVER



SOFT GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	📦	
D7SM-450	0.5	4	4	20	140	50	30	10	
-475	0.5	4	4	20	165	75	35	10	
-410	0.5	4	4	20	190	100	35	10	
-412	0.5	4	4	20	215	125	40	10	
-415	0.5	4	4	20	240	150	40	10	
-420	0.5	4	4	20	290	200	45	10	

- The shaft is thin and non-through type.
- Cr-V is used for shaft material.

● SOFT STUBBY SCREWDRIVER



SOFT STUBBY SCREWDRIVER

Cross

No.	Type	d	D	L	ℓ	▼g	📦	
D9P-125	No.1	6	35	75	25	40	10	
-225	No.2	6	35	75	25	40	10	

Flat

No.	a	b	d	D	L	ℓ	▼g	📦	
D9M-625	0.8	6	6	35	75	25	40	10	

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.

● LONG STUBBY SCREWDRIVER · SET (2pcs.)



LONG STUBBY SCREWDRIVER · SET (2pcs.)

No.	TD13P22	▼g	110	📦	10	
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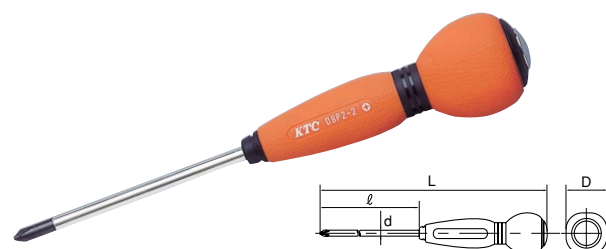
Long Stubby Screwdriver D13P2-01, 02

No.	Type	D	d	L	ℓ	▼g	📦	
D13P2-01	No.2	35	6	130	80	50	10	
02	No.2	35	6	150	100	60	10	

Characteristics

- As the screwdriver has a short grip and long shaft, the screwdriver can be used in places where the stubby screwdrivers and normal No. 2 screwdrivers cannot.
- The shaft is hexagonal (width across flat 6 mm). Open end wrenches and adjustable wrenches can be used.
- The tip is magnetized for convenience.
- Two types of shaft lengths are available according to use.
- Cr-V is used for shaft material.

● SOFT ROUND SCREWDRIVER



SOFT ROUND SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	📦	
D8P2-1	No.1	5.5	32	170	75	65	10	
-2	No.2	6.3	40	215	100	120	10	
-215	No.2	6.3	40	265	150	130	10	

- Round grip end, good for "push and turn" without palm pain.
- Elastomer used as grip materials ; lightweight, environment friendly, not sticky.
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.

SOFT ROUND SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g		
D8M2-5	0.75	5.5	5.5	32	170	75	65	10	
-6	0.95	6	6.3	40	215	100	120	10	
-615	0.95	6	6.3	40	265	150	130	10	

- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.



● SOFT ROUND SCREWDRIVER



SOFT ROUND SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g			
D8P-1	No.1	5.5	32	170	75	55	10		
-110	No.1	5.5	32	195	100	60	10		
-115	No.1	5.5	32	245	150	70	10		
-2	No.2	6.3	40	215	100	100	10		
-215	No.2	6.3	40	265	150	110	10		
-220	No.2	6.3	40	315	200	125	10		

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.



● SOFT ROUND SCREWDRIVER



SOFT ROUND SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g		
D8M-5	0.75	5.5	5.5	32	170	75	55	10	
-510	0.75	5.5	5.5	32	195	100	60	10	
-515	0.75	5.5	5.5	32	245	150	70	10	
-6	0.95	6	6.3	40	215	100	100	10	
-615	0.95	6	6.3	40	265	150	110	10	
-620	0.95	6	6.3	40	315	200	125	10	

- The shaft is non-through type and the tip is magnetized.
- Cr-V is used for shaft material.



● SOFT ROUND SCREWDRIVER



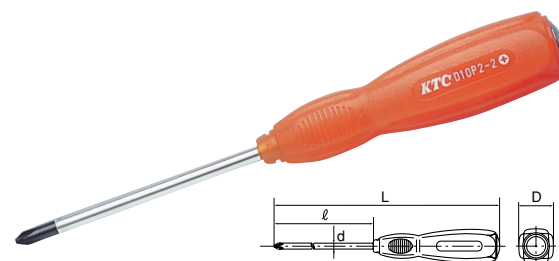
PLASTIC GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g			
D10P2-1	No.1	5.5	29	190	75	80	10		
-110	No.1	5.5	29	215	100	85	10		
-2	No.2	6.3	31	220	100	100	10		
-215	No.2	6.3	31	270	150	110	10		
-3	No.3	8	33	275	150	160	10		

- Solid touch for plastic grip. Made of environment friendly materials.
- The shaft is through type and the tip is magnetized.
- The orange color of the grip indicates "Cross".
- Cr-V is used for shaft material.



● PLASTIC GRIP SCREWDRIVER



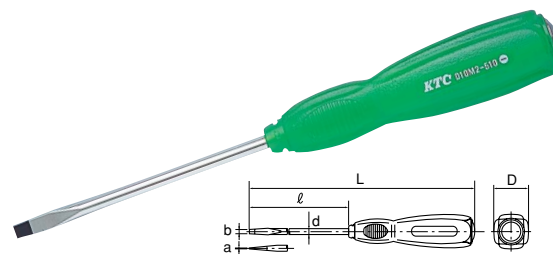
PLASTIC GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g		
D10M2-5	0.75	5.5	5.5	29	190	75	80	10	
-510	0.75	5.5	5.5	29	215	100	85	10	
-6	0.95	6	6.3	31	220	100	100	10	
-615	0.95	6	6.3	31	270	150	110	10	
-8	1.1	8	8	33	275	150	160	10	

- The green color of the grip indicates "flat".
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.



● PLASTIC GRIP SCREWDRIVER



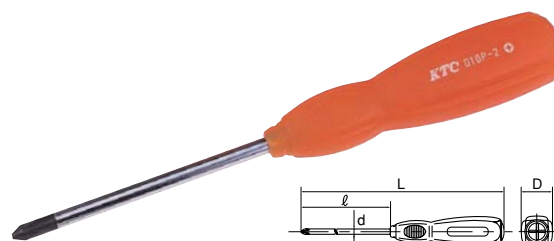
PLASTIC GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g			
D10P-1	No.1	5.5	29	190	75	70	10		
-110	No.1	5.5	29	215	100	75	10		
-115	No.1	5.5	29	265	150	85	10		
-120	No.1	5.5	29	315	200	95	10		
-2	No.2	6.3	31	220	100	95	10		
-215	No.2	6.3	31	270	150	105	10		
-220	No.2	6.3	31	320	200	120	10		
-3	No.3	8	33	275	150	150	10		

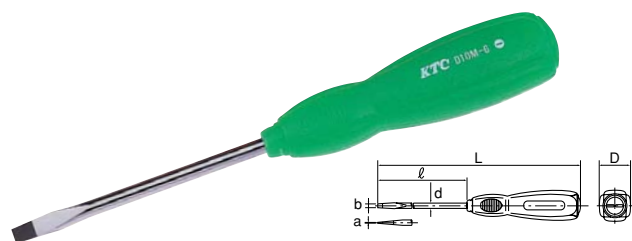
- The shaft is through type and the tip is magnetized.
- Cr-V is used for shaft material.



● PLASTIC GRIP SCREWDRIVER



● PLASTIC GRIP SCREWDRIVER (FLAT)

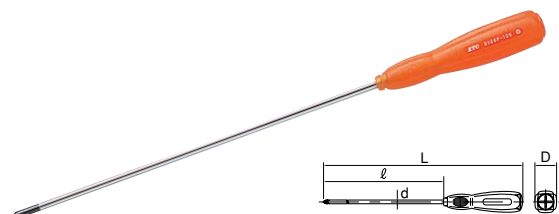


PLASTIC GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞	
D10M-4	0.6	4.5	5	29	165	50	65	10	
-5	0.75	5.5	5.5	29	190	75	70	10	
-510	0.75	5.5	5.5	29	215	100	75	10	
-515	0.75	5.5	5.5	29	265	150	85	10	
-520	0.75	5.5	5.5	29	315	200	95	10	
-6	0.95	6	6.3	31	220	100	95	10	
-615	0.95	6	6.3	31	270	150	105	10	
-620	0.95	6	6.3	31	320	200	120	10	
-8	1.1	8	8	33	275	150	150	10	

• The shaft is through type and the tip is magnetized. • Cr-V is used for shaft material.

● PLASTIC GRIP SCREWDRIVER (CROSS)



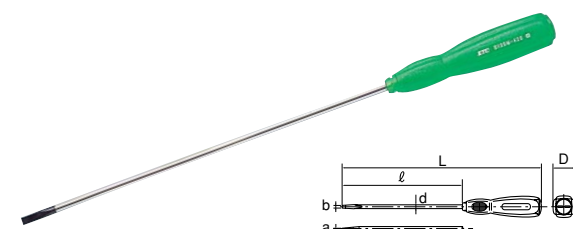
• The shaft is thin and non-through-type.

PLASTIC GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	☞	
D10SP-0075	No.00	4	20	165	75	30	10	
-075	No.0	4	20	165	75	30	10	
-010	No.0	4	20	190	100	30	10	
-015	No.0	4	20	240	150	35	10	
-020	No.0	4	20	290	200	40	10	
-175	No.1	4	20	165	75	30	10	
-110	No.1	4	20	190	100	30	10	
-115	No.1	4	20	240	150	35	10	
-120	No.1	4	20	290	200	40	10	
-220	No.2	4	20	290	200	40	10	
-225	No.2	4	20	340	250	45	10	

• Cr-V is used for shaft material.

● PLASTIC GRIP SCREWDRIVER (FLAT)



PLASTIC GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞	
D10SM-450	0.5	4	4	20	140	50	25	10	
-475	0.5	4	4	20	165	75	30	10	
-410	0.5	4	4	20	190	100	30	10	
-412	0.5	4	4	20	215	125	35	10	
-415	0.5	4	4	20	240	150	35	10	
-420	0.5	4	4	20	290	200	40	10	

• The shaft is thin and non-through type.
• Cr-V is used for shaft material.

● PLASTIC GRIP STUBBY SCREWDRIVER (CROSS FLAT)



PLASTIC GRIP STUBBY SCREWDRIVER

CROSS

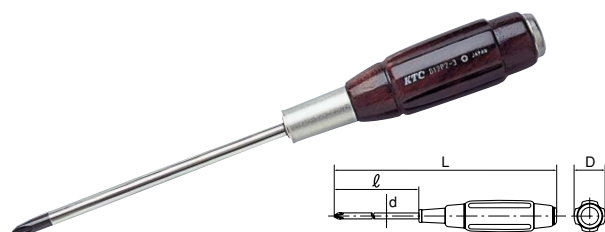
No.	Type	d	D	L	ℓ	▼g	☞	
D11P-125	No.1	6	35	75	25	40	10	
-225	No.2	6	35	75	25	40	10	

FLAT

No.	a	b	d	D	L	ℓ	▼g	☞	
D11M-625	0.8	6	6	35	75	25	40	10	

• The shaft is non-through type and the tip is magnetized.
• Cr-V is used for shaft material.

● WOODEN GRIP SCREWDRIVER



WOODEN GRIP SCREWDRIVER

No.	Type	d	D	L	ℓ	▼g	☞	
D12P2-1	No.1	5.5	30	195	75	60	10	
-2	No.2	6.3	32	230	100	120	10	
-215	No.2	6.3	32	280	150	130	10	
-3	No.3	8	35	290	150	200	10	

• Palm-friendly native wood is used for grip.
• The shaft is through type and the tip is magnetized.
• Cr-V is used for shaft material.

● WOODEN GRIP SCREWDRIVER D.PAT



WOODEN GRIP SCREWDRIVER

No.	a	b	d	D	L	ℓ	▼g	☞	
D12M2-5	0.75	5.5	5.5	30	195	75	60	10	
-6	0.95	6	6.3	32	230	100	120	10	
-7	0.95	7	7	35	265	125	180	10	
-8	1.1	8	8	35	290	150	200	10	

• Palm-friendly native wood is used for grip.
• The shaft is through type and the tip is magnetized.
• Cr-V is used for shaft material.

2. CONVENTIONAL TOOLS

PLIERS, CUTTING PLIERS, SHEARS

**WARNING****Pliers, cutting pliers, shears**

- Do not use if there is a live electric current. The plastic on the grip does not provide insulation against electrical current.

**CAUTION****Pliers**

- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Take care not to get hands or fingers caught between the grips.
- Take care when adjusting the width of the mouth.

Water pump pliers

- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

- Firmly hold the pliers perpendicular to the pipe and hold firmly at the center.
- Do not twist or apply force sideways.
- Take care when adjusting the width of the mouth.

Snap rings

- Do not use except for snap rings.
- Use pliers that conform to the size of the snap rings.
- The pliers can loosen when too much force is applied.
- The snap ring may pop out if the tool loses its grasp.
- Wipe off any grease from the hole of the snap ring and tip of the pliers before use.

- Use protective goggles when working.

Pliers and nippers

- Check the direction the cut piece is likely to travel before cutting.
- Use protective goggles when working.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Close the blade and store when the tool is not going to be used.

Shears and bolt clippers

- Check the direction the cut piece is likely to travel before cutting.
- Use protective goggles when working.
- Close the blade and store when the tool is not going to be used.
- Do not twist or hit using the blade tip.
- Take care not to cut the hand holding the tool.

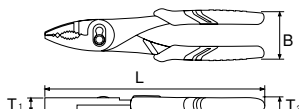
COMBINATION PLIERS (SOFT GRIP)

No.	Is able to cut through large diameter wires (Steel wire)	L	B	T ₁	T ₂	▽g	Box
PJ-150	φ2	163	47	11	15	200	5
-200	φ2.6	200	52	11	16	300	5
-250	φ3.5	250	58	11	16	380	5

- A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
- Each blade of the "three stage form" allows the tool to grasp thin and thick objects.



The three stage form of the pliers

**COMBINATION PLIERS (SOFT GRIP) PAT.P.**

PJ-200

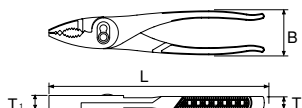
COMBINATION PLIERS

No.	Is able to cut through large diameter wires (Steel wire)	L	B	T ₁	T ₂	▽g	Box
PJ-150A	φ2	158	40	11	10	190	5
-200A	φ2.6	195	45.5	11	11	270	5
-250A	φ3.5	245	50	11	11	350	5

- A safe design that prevents the hand from getting jammed when changing to the wide-sized width.
- Each blade of the "three stage form" allows the tool to grasp thin and thick objects.



The three stage form of the pliers

**COMBINATION PLIERS**

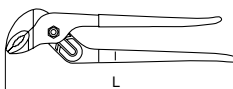
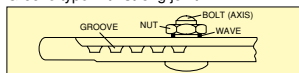
PJ-200A

HEAVY DUTY WATERPUMP PLIERS

No.	Nominal	Applicable Dia	L	▽g	Box
WPD1-250	250	φ6~32	265	360	10
-300	300	φ6~50	295	500	5

- The left and right teeth feature special design which become engaged in a unique way when the pliers turn in the direction of engagement.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- The joint replacement section is fixed firmly in order to prevent accidental changes in size.

Groove type with strong joint.

**HEAVY DUTY WATERPUMP PLIERS**

WPD1-250

●WATERPUMP PLIERS WITH SLOTTED HANDLE-END

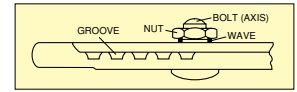


WATERPUMP PLIERS WITH SLOTTED HANDLE-END

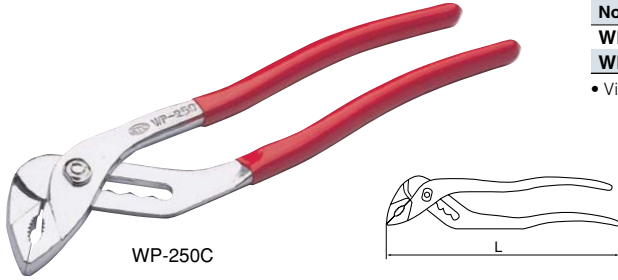
No.	Nominal	Applicable Dia.	L	▼g	📦	
WPDA-250	250	ø6~32	260	380	10	

- The shape of the teeth facilitates the grasp when the pliers are turned towards the lower jaw.
- The grooves are worked with a high-precision dedicated machine to eliminate virtually all rattle, and reduce slippage and deformation.
- Screwdriver-shaped grip end is handy for turning screws and prying.

Groove type with strong joint.



●WATERPUMP PLIERS



WP-250C

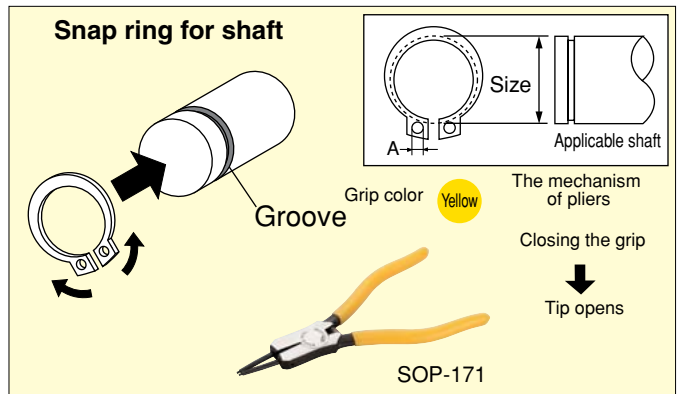
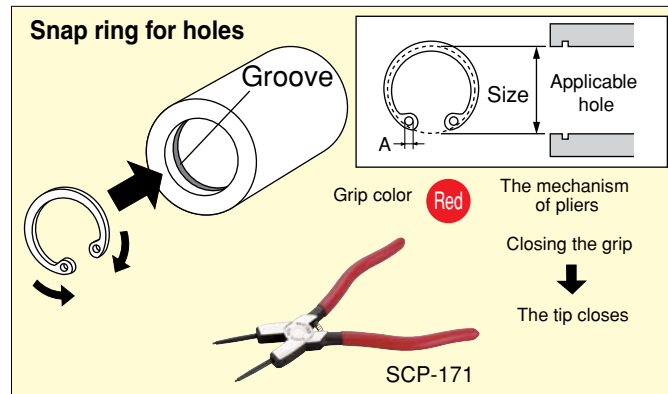
WATERPUMP PLIERS

No.	Nominal	Applicable Dia.	L	Type	▼g	📦	
WP-250C	250	ø6~32	245	With Coating	245	10	
WP-250	250	ø6~32	240	Non Coating	240	10	

- Vinyl coated handle for WP-250C.

Types and applicable diameters of the snap ring pliers

- KTC sets the claw diameter of the snap ring pliers according to the dimensions of the hole as shown in diagram "A" below. The "A" dimensions determine the nominal diameter of the snap ring according to the JIS standards. Therefore, the application of the snap ring pliers (nominal diameter) is dependent on the claw diameter.
- The grip color of KTC snap ring pliers is differentiated by using red for the "hole type" and yellow for the "shaft type", setting the tip shape according to use by dividing the types into the "straight type" where the tip is straight and the "curved type" where the tip is curved.



●INTERNAL SNAP RING PLIERS



SCP-171

SCP-171LL

INTERNAL SNAP RING PLIERS

INTERNAL SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	📦	
SCP- 171	ø2.0	19~30	185	200	10	
-1715	ø1.5	12~13	185	200	10	

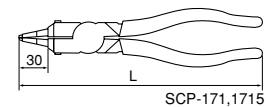
- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 204 can be used.)

* The number marked on the pliers is the product number (SCP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

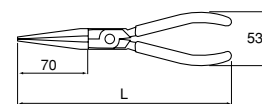
INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g	📦	
SCP-171LL	ø 1.2	10~11	220	160	10	

- Long claws for use in narrow spaces.



SCP-171,1715



SCP-171LL





INTERNAL SNAP RING

*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.



*Please check the merchandise inventory for a product that is marked by before placing an order.

BENT INTERNAL SNAP RING PLIERS**BENT INTERNAL SNAP RING PLIERS**

No.	Claw Dia.	Applicable Dia.	L	▼g		
SCP-172L	ø1.2	10~11	165	200	10	

- Claws are interchangeable. (7 kinds of spare claw tip sets are available.)
- Convenient for removing/installing snap rings on master cylinders of brakes.

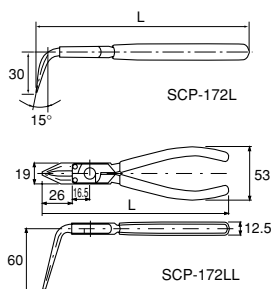
BENT INTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g		
SCP-172LL	ø1.2	10~11	175	200	10	

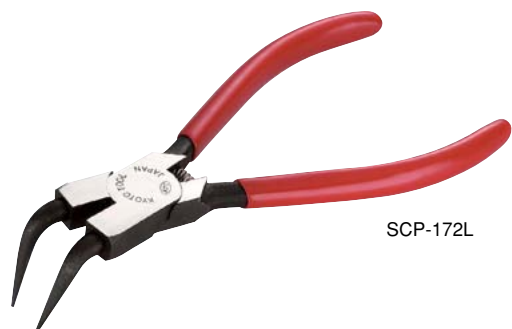
- Long claws (60a) for use in narrow deep spaces.



INTERNAL SNAP RING



*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.



BENT INTERNAL SNAP RING PLIERS

SCP-172L





SCP-172LL

EXTERNAL SNAP RING PLIERS**EXTERNAL SNAP RING PLIERS**

No.	Claw Dia.	Applicable Dia.	L	▼g		
SOP-171	ø2.0	19~30	180	200	10	
-1715	ø1.5	12	180	200	10	

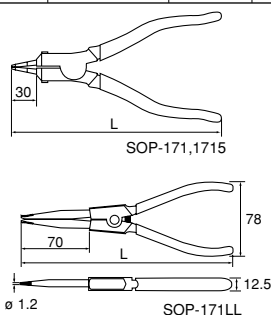
- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 204 can be used.)

EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g		
SOP-171LL	ø1.2	10~11	215	200	10	



EXTERNAL SNAP RING





- * The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

EXTERNAL SNAP RING PLIERS

SOP-171

SOP-171LL

BENT EXTERNAL SNAP RING PLIERS**BENT EXTERNAL SNAP RING PLIERS**



No.	Claw Dia.	Applicable Dia.	L	▼g		
SOP-172	ø2.0	19~30	170	195	10	



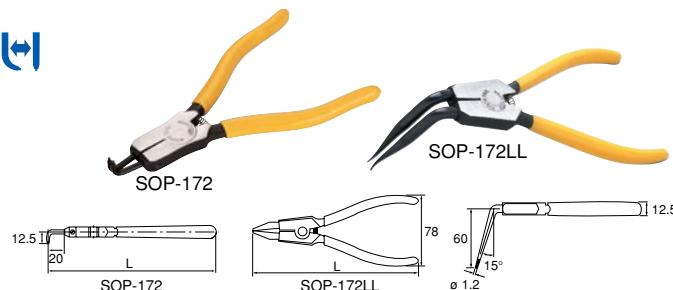
EXTERNAL SNAP RING

- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 204 can be used.)
- * The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

BENT EXTERNAL LONG SNAP RING PLIERS

No.	Claw Dia.	Applicable Dia.	L	▼g		
SOP-172LL	ø1.2	10~11	170	200	10	

- *Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

BENT EXTERNAL SNAP RING PLIERS

SOP-172

SOP-172LL

SOP-172

SOP-172LL

ø 1.2

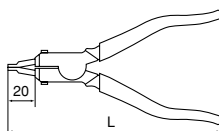
FLAT TYPE EXTERNAL SNAP RING PLIERS

No.	Claw Dia.	L	▼g		
SOP-173	Flat type	170	195	10	



EXTERNAL SNAP RING

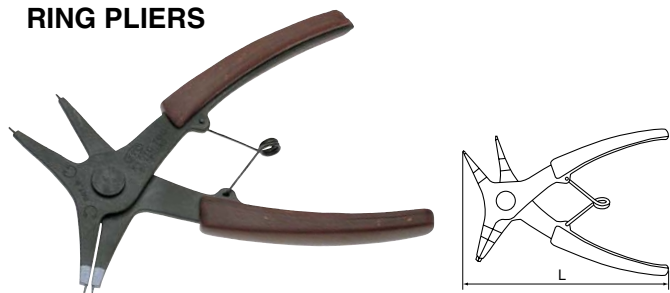
- The claws are interchangeable. The caulked part of the grips has little looseness. The spring helps open the mouth. (The set of claws shown on page 204 can be used.)
- * The number marked on the pliers is the product number (SOP-170), which indicates only the pliers themselves (without claws). (The pliers are not sold alone.)

**FLAT TYPE EXTERNAL SNAP RING PLIERS**

*Replaceable parts are available for the opening/closing spring and screw. Check with your dealer for details.

*Please check the merchandise inventory for a product that is marked by  before placing an order.

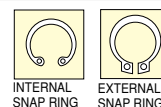
●INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS



INTERNAL-EXTERNAL CONVERTIBLE SNAP RING PLIERS

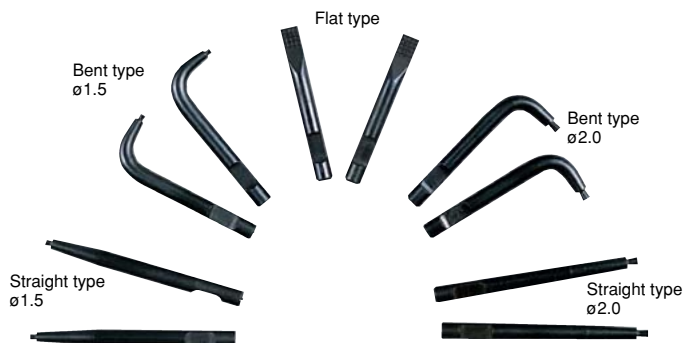
No.	Diameter of sharp end claw	Applicable Dia.	L	▼g	📦
SOCP-130	ø1.2	For Internal & External 10~40	145	120	6

- Good work efficiency for the hole provided on the shaft.



*Replaceable parts are available for the opening/closing spring. Check with your dealer for details.


●SPARE TIPS FOR SNAP RING PLIERS (10pcs.)

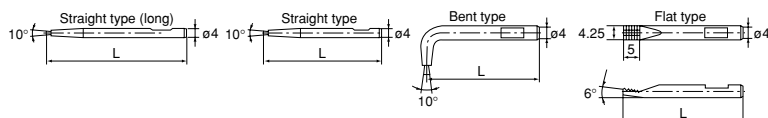


SPARE TIPS FOR SNAP RING PLIERS (10pcs.)

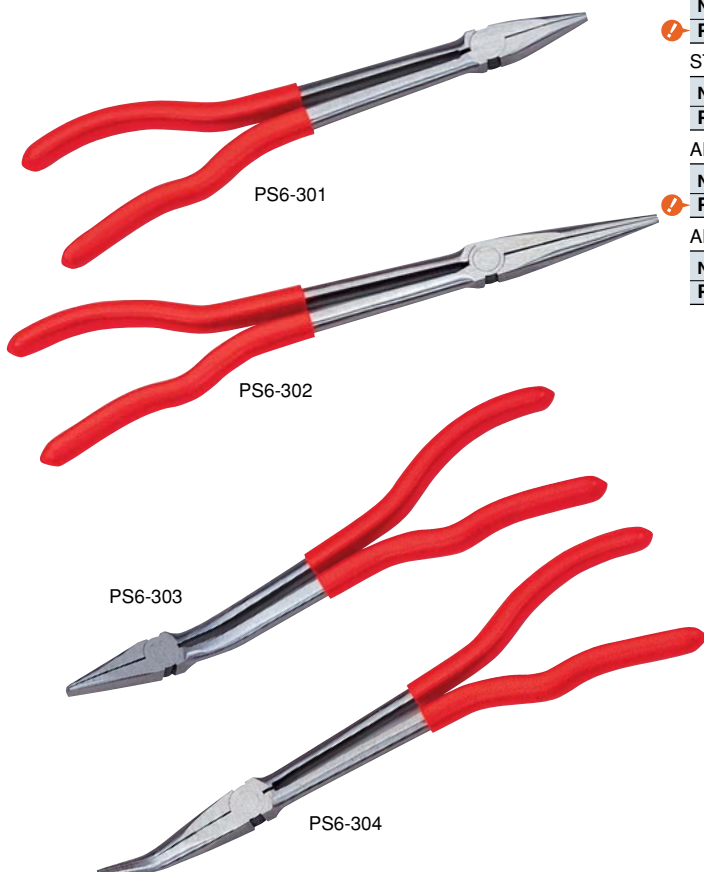
No.	Contents	L	▼g	📦
SPC 110	Straight type ø2.0 10pcs.	36	40	10
SPC 110L	Straight type ø2.0 (Long) 10pcs.	46	40	10
SPC0110	Straight type ø1.5 10pcs.	36	40	10
SPC0110L	Straight type ø1.5 (Long) 10pcs.	46	40	10
SPC 210	Bent type ø2.0 10pcs.	34	40	10
SPC0210	Bent type ø1.5 10pcs.	34	40	10
SPC 310	Flat type 10pcs.	36	40	10
SPC5	Straight ø1.5 (Long), ø2.0 1pa.ea. Flat 1pa. Bent ø1.5, ø2.0 1pa.ea.	—	40	10

- 7 kinds of Interchangeable claws are available for installation/removal of various kinds of snap rings. Economical as the claws are replaceable.
- Claws are made of special alloy steel and specially heat-treated for extra strength. Also upside-down tapered tip to prevent snap rings from clipping off the claws.
- * Suitable for work in narrow spaces.

* Snap ring pliers with a  mark as shown on P.134~135 are applicable to the pliers themselves. (Cannot be used for SCP-171LL, SCP-172L, SCP-172LL, SOP-171LL, SOP-172LL, and SOCP-130.)



●LONG PLIERS SERIES



LONG PLIER SERIES

STRAIGHT SHORT NOSE CUTTING PLIERS, LONG TYPE

No.	L	ℓ	D	▼g	📦
PS6-301	260	38	73	260	5

STRAIGHT LONG NOSE CUTTING PLIERS, LONG

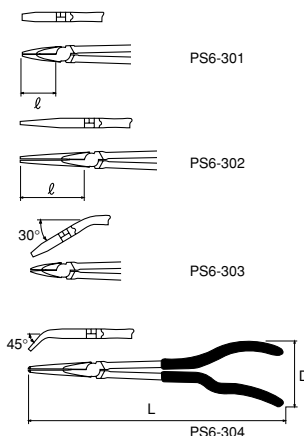
No.	L	ℓ	D	▼g	📦
PS6-302	295	72	73	300	5

ANGLED SHORT NOSE CUTTING PLIERS, LONG TYPE

No.	L	Angle	D	▼g	📦
PS6-303	255	30°	73	260	5


ANGLED LONG NOSE CUTTING PLIERS, LONG TYPE

No.	L	Angle	D	▼g	📦
PS6-304	290	45°	73	300	5




LONG HOSE PLIER SERIES


ANGLED HOSE PLIERS, $\frac{3}{4}$ LONG TYPE

No.	L	Angle	σ	D	▼g		
PS6-305	280	65°	19	73	300	5	


ANGLED LONG NOSE CUTTING PLIERS, $\frac{1}{2}$ LONG TYPE

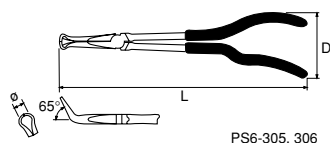
No.	L	Angle	σ	D	▼g		
PS6-306	280	65°	13	73	295	5	

STRAIGHT HOSE PLIERS, $\frac{3}{4}$ LONG TYPE

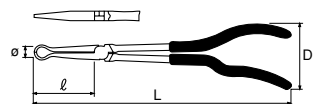
No.	L	ℓ	σ	D	▼g		
PS6-307	290	64	19	73	300	5	

STRAIGHT HOSE PLIERS, $\frac{1}{2}$ LONG TYPE

No.	L	ℓ	σ	D	▼g		
PS6-308	290	67	13	73	295	5	

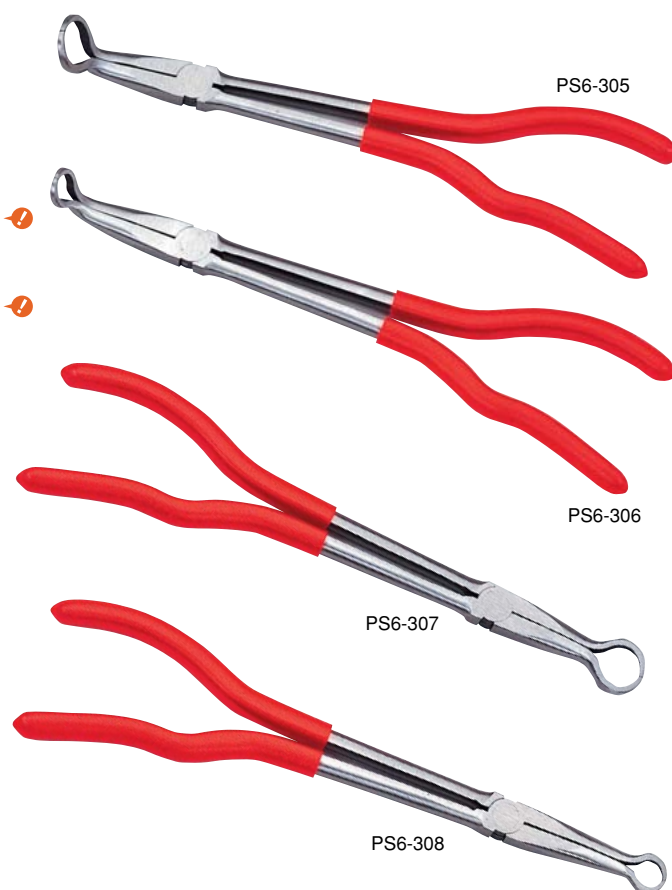


PS6-305, 306




PS6-307, 308

LONG HOSE PLIERS SERIES

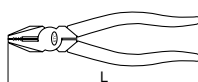


SIDE CUTTING PLIERS (COATED HANDLE)

JIS

No.	Nominal	Max. Cutting Dia.	L	▼g		
SP1-175	175	wireø2.75	188	285	6	
-200	200	wireø3.4	213	370	10	

- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.
- With vinyl coated handle. (No insulation)




SIDE CUTTING PLIERS (COATED HANDLE)



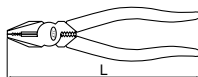
SP1-200

SIDE CUTTING PLIERS (COATED HANDLE)

JIS

No.	Nominal	Max. Cutting Dia.	L	▼g		
SPD-150C	150	wireø2.15	165	215	10	
-175C	175	wireø2.75	190	275	10	
-200C	200	wireø3.4	215	375	10	

- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.
- With vinyl coated handle. (No insulation)




SIDE CUTTING PLIERS (COATED HANDLE)



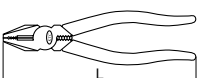
SPD-200C

SIDE CUTTING PLIERS

JIS

No.	Nominal	Max. Cutting Dia.	L	▼g		
SPD-175	175	wireø2.75	185	265	10	
-200	200	wireø3.4	210	360	10	

- For cutting copper & steel wire and gripping & bending wires, thin plates, small parts, etc.
- Suitable for steel wire & sheet metal working.



SIDE CUTTING PLIERS



SPD-200

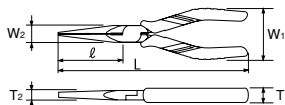
● NEEDLE NOSE PLIERS (STANDARD TYPE) PAT.P.



PSL-150

NEEDLE NOSE PLIERS (STANDARD TYPE)

No.	Max Cutting Dia.		L	ℓ	W ₁	W ₂	T ₁	T ₂	▼g		
	soft	hard									
PSL-150	ø2.0	ø1.6	165	54	54	16	14	9	110	5	
-200	ø2.3	ø1.8	205	70	55	18	15.5	10	190	5	

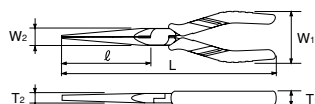


● NEEDLE NOSE PLIERS (LONG TYPE) PAT.P.



NEEDLE NOSE PLIERS (LONG TYPE)

No.	Max Cutting Dia.		L	ℓ	W ₁	W ₂	T ₁	T ₂	▼g		
	soft	hard									
PSL-200L	ø2.0	ø1.6	200	89	54	16	14	10	130	5	



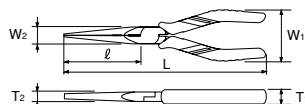
● NEEDLE NOSE PLIERS (SLIM TYPE) PAT.P.



NEEDLE NOSE PLIERS (SLIM TYPE)

No.	L	ℓ	W ₁	W ₂	T ₁	T ₂	▼g		
PSL-175N	175	54	55	13.5	14.5	9	130	5	

- No blade.



● NEEDLE NOSE PLIERS (BENT NOSE TYPE) PAT.P.



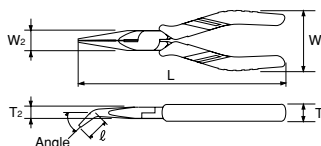
PSL-200BN



PSL-200BN1

NEEDLE NOSE PLIERS (BENT NOSE TYPE)

No.	Max Cutting Dia.		L	ℓ	Angle	W ₁	W ₂	T ₁	T ₂	▼g		
	soft	hard										
PSL-150BN	ø2.0	ø1.6	161	15	45°	54	16	14	9	110	5	
-200BN	ø2.3	ø1.8	199	25	45°	55	18	15.5	10	190	5	
-200BN1	—	—	181	50	60°	55	18	15.5	10	190	5	



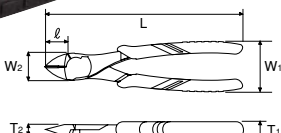
- A cross groove has been designed on the tip section in order to prevent the grasped object from slipping.

*The PSL-200BN1 is not supplied with a cutting edge.

● DIAGONAL CUTTING PLIERS PAT.P.



PN1-150

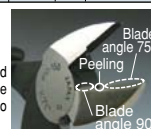


DIAGONAL CUTTING PLIERS

No.	Max Cutting Dia.			L	ℓ	W ₁	W ₂	T ₁	T ₂	▼g		
	soft	hard	piano wire									
PN1-125	ø2.3	ø1.6	ø1.2	135	16	49	17	14	10	95	5	
-150	ø2.6	ø2.0	ø1.8	160	18	52	22	15	10.5	172	5	
-175	ø2.6	ø2.0	ø1.8	180	20	51	25	16	11.5	220	5	
-200	ø2.9	ø2.3	ø2.0	205	22	52	28	15	11.5	265	5	

- A multi-functional type that can cut thin soft wires (such as copper) with its tip and hard wires (such as piano strings) with the base.
- Skin peeler attached.

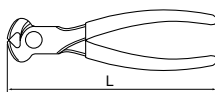
Standard shape has been fitted to the wide type. The angle of the blade is adjusted according to the object. (tip 75°, base 90°)



END CUTTING PLIERS

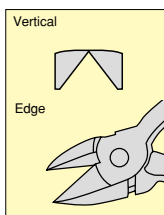
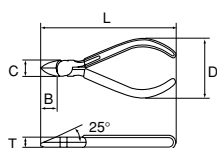
No.	Nominal	Cutting Dia.	L	▼g		
EP-160	160	Hardø2 Softø2.6	160	220	10	

- Special tool for cutting wires.
- Can be used for cutting nails.

**●END CUTTING PLIERS****ANGLE CUTTER (TRUE FLUSH CUT)**

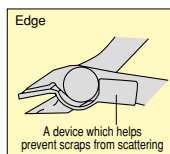
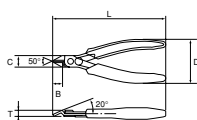
No.	Nominal	L	B	C	D	T	Capacity(ø)	▼g		
EN-21S	125	130	14	12.5	51	6.5	Copper2.0	75	5	

- Special tool for cutting wires on printed circuits.
- Sharp edge of the blade for smooth cutting.

**●ANGLE CUTTER (TRUE FLUSH CUT)****PLATE TYPE CUTTER**

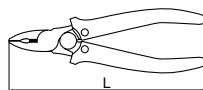
No.	Nominal	L	B	C	D	T	Capacity(ø)	▼g		
EN-30S	130	130	11	13	48	7	Copper0.9	50	5	

- For cutting leads in printed circuits.
- Flush cut blade for sharp cutting with stainless body for durability.
- Stopper for easy handling.
- Built in device for preventing chips from scattering.

**●PLATE TYPE CUTTER****MULTIPLICATIVE SIDE CUTTING PLIERS**

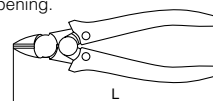
No.	Nominal	Max. Cutting Dia.	L	▼g		
SPP-175	175	Hard ø1.8 Soft ø2.3	175	200	10	

- Compound leverage action offers easy cutting.
- Soft comfortable grip.
- The grip end comes with a ball chain that prevents it from opening.

**●MULTIPLICATIVE SIDE CUTTING PLIERS****MULTIPLICATIVE CUTTING PLIERS**

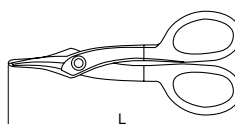
No.	Nominal	Cutting Dia.	L	▼g		
DPP-165	165	Hard ø1.8 Soft ø2.3	165	180	10	

- Compound leverage action offers easy cutting.
- Soft comfortable grip.
- Blade is induction heat-treated.
- The grip end comes with a ball chain that prevents it from opening.

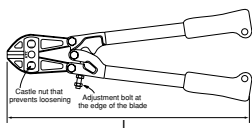
**●MULTIPLICATIVE CUTTING PLIERS****ALL PURPOSE SHEARS**

No.	Nominal	L	▼g		
AP-175	175	180	200	10	

- Induction heat-treated special alloy steel for sharpness and durability.
- Specially shaped back of the blade for avoiding deformation or bent.
- Built-in special nut in the axle bolt for tight and sharp cutting.

**●ALL PURPOSE SHEARS**

●BOLT CLIPPER

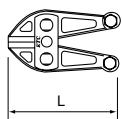


BOLT CLIPPER

No.	Nominal	Cutting Dia.	L	B	▼kg	☞	
BP7-300	300(12")	ø5	320	54	0.8	1	
-350	350(14")	ø6	370	60	1	1	
-450	450(18")	ø7	465	69	1.5	1	
-600	600(24")	ø9	620	84	2.6	1	
-750	750(30")	ø12	770	96	3.9	1	
-900	900(36")	ø15	920	108	5.9	1	

- Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous replacement blades (BP2K-).

●SPARE BLADE FOR BOLT CLIPPER

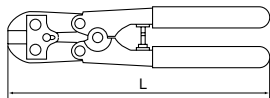


SPARE BLADE FOR BOLT CLIPPER

No.	Nominal	▼kg	☞	
BP7-300-K	For 300(12")	0.3	1	
-350-K	For 350(14")	0.4	1	
-450-K	For 450(18")	0.6	1	
-600-K	For 600(24")	1.0	1	
-750-K	For 750(30")	1.4	1	
-900-K	For 900(36")	2.1	1	

- Blade is made of chrome-vanadium steel and forged & heat-treated to increase toughness. Blade tip is additionally processed with secondary quenching by induction heating to provide an improved cut.
- The product cannot be used for previous tools (BP2-).

●MINI CLIPPER



MINI CLIPPER

No.	Nominal	Cutting Dia.	L	▼g	☞	
BPZ2-215C	215	Hardø2.9	215	355	6	

2. CONVENTIONAL TOOLS

WISE-GRIP®

The name "WISE-GRIP" is a registered trade mark of Irwin Industrial Tools Company.



Original locking pliers by WISE-GRIP®

Blacksmith William Petersen from Denmark was the first to achieve a patent for the locking pliers. Mr. Petersen founded a small factory in De Witt, Nebraska in 1924. Today, the factory has grown, employing several hundred people. His invention is treasured and used around the world both domestically and professionally. To this day, all tools manufactured by WISE-GRIP adhere to Mr. Petersen's strict policies towards craftsmanship and quality.



CAUTION

Vise grips

- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Take care to avoid jamming your hands with the grip.
- Make sure that the held object is firmly locked in place before use.

LONG NOSE LOCKING PLIERS (WIRE CUTTER)

No.	L	ℓ	Width when open	Width of end tooth (A)	Screw	Spring	▽g	⊞
4LN	135	36	0~44	3.1	No.91	No.92	100	5
6LN	165	45	0~57	4.0	No.51	No.52	170	5
9LN	215	61	0~76	4.7	No.21	No.22	355	5

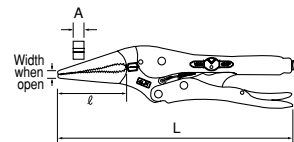


- Can be used as a wrench.



- Is extremely convenient for use in hard to reach spaces.

● LONG NOSE LOCKING PLIERS (WIRE CUTTER)

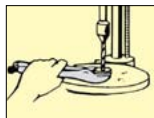


LOCKING PLIERS (WIRE CUTTER)

No.	L	Width when open	Screw	Spring	▽g	⊞
4WR	115	0~23	No.91	No.92	90	5
5WR	135	0~31	No.51	No.52	230	5
7WR	175	0~41	No.21	No.22	400	5
10WR	210	0~47	No.07	No.08	595	5

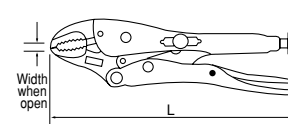


- Use the vise grip as a wire cutter.



- Make sure that items are firmly held when making holes with a drill.

● LOCKING PLIERS (WIRE CUTTER)



LOCKING PLIERS-CURVED JAW

No.	L	Width when open	Screw	Spring	▽g	⊞
7CR	175	0~41	No.21	No.22	370	5
10CR	210	0~47	No.07	No.08	595	5

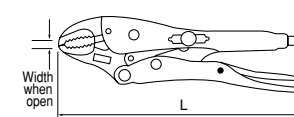


- This tool can provide leverage by firmly gripping the screwdriver.



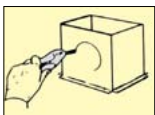
- Is beneficial for holding even small pieces in operations such as grinding.

● LOCKING PLIERS-CURVED JAW



LOCKING PLIERS-STRAIGHT JAW

No.	L	Width when open	Screw	Spring	▽g	⊞
7R	175	0~28	No.21	No.22	425	5
10R	212	0~38	No.07	No.08	625	5

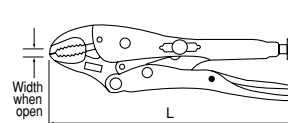


- Is beneficial for temporary use as a handle for saw blades and files, etc.

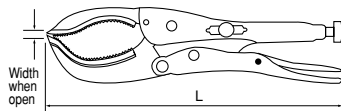


- Is beneficial as a toggle press for use in shaping, bending, twisting, and folding operations.

● LOCKING PLIERS-STRAIGHT JAW



● LOCKING PLIERS-LARGE JAW

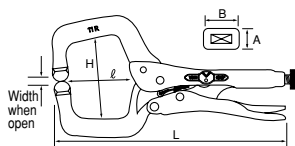


LOCKING PLIERS-LARGE JAW

No.	L	Width when open	Screw	Spring	▼g	📦
12LC	265	0~79	No.07	No.08	650	5

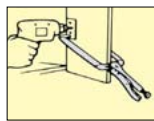
• Can be used in exhaust pipe and radiator hose replacement, etc.

● LOCKING C-CLAMP



LOCKING C-CLAMP

No.	L	Width when open	ℓ	H	A	B	Screw	Spring	▼g	📦
6R	165	0~50	35	57	10	10	No.51	No.52	215	5
11R	260	0~95	63	95	11	15	No.07	No.22	825	5
18R	435	0~205	241	115	11	15	No.07	No.34	1,130	5
24R	580	0~315	393	115	11	15	No.07	No.137	1,475	5

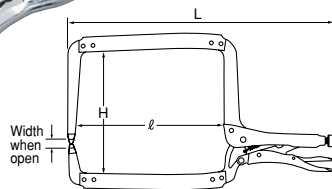


• Is beneficial for installing cabinet doors with short depth.



• Is effective for items like square iron clamps.

● WIDE C-CLAMP

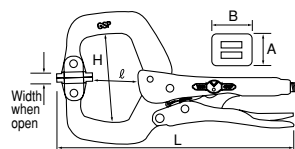


WIDE C-CLAMP

No.	L	Width when open	ℓ	H	Screw	Spring	▼kg	📦
18DR	455	0~190	240	190	No.07	No.34	1.5	1

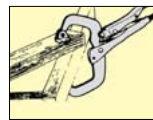
• Is effective when using fender clamps, lower panels, upper panel clamps, and back panel clamps.

● SWIVEL PAD CLAMP

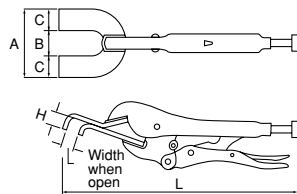


SWIVEL PAD CLAMP

No.	L	Width when open	ℓ	H	A	B	Screw	Spring	▼g	📦
4SP	135	0~38	25	47	17	18	No.91	No.92	160	5
6SP	170	0~50	31	57	22	22	No.51	No.52	240	5
11SP	270	0~95	63	95	28	29	No.07	No.22	795	5
18SP	445	0~205	240	115	29	29	No.07	No.34	1,135	1
24SP	590	0~315	395	115	29	29	No.07	No.137	1,475	1



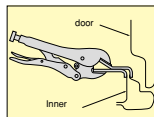
● PANEL CLAMP



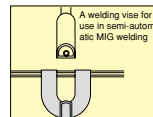
PANEL CLAMP

No.	L	Width when open	A	B	C	H	Screw	Spring	▼g	📦
9AC	230	0~9.5	69	25	22	13	No.21	No.22	300	1

• The lower jaw of the tool can be adjusted by sliding forward and backward to suit, (a width of 0~9.5 mm) and can be clamped to a panel at 90°.

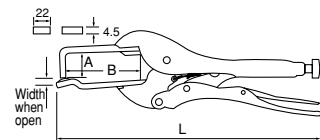


• Can be adjusted to suit the gap of closed doors.



• Start the welding process after adjusting the tool to suit the gap of the closed door.

● WELDING CLAMP



WELDING CLAMP

No.	L	Width when open	A	B	Screw	Spring	▼g	📦
9R	215	0~0	25	41	No.21	No.22	710	1



• Is suited for working with sheet metal.



• Is beneficial in rivet work.

SHEET METAL TOOL

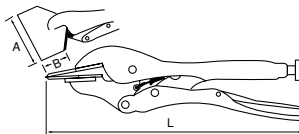
No.	L	A	B	Screw	Spring	▼g		
8R	190	79	44	No.21	No.22	540	1	



• Is beneficial for end-bending work.



• Is beneficial for double layered folding and bending work.



● SHEET METAL TOOL

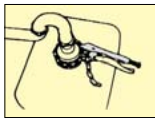


LOCKING CHAIN CLAMP

No.	L	Chain length	Screw	Spring	▼g		
20R	210	500	No.07	No.08	850	1	

Chain

No.	Chain length	▼g	
20EXT (For use in add-ons)	500	310	1
20REP (For replacement)	500	310	1

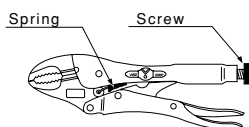


● LOCKING CHAIN CLAMP

Replacement for vise grips

No.	Product name	Applicable product number	Number
91	Screw	4BN, 4WR, 4LN, 4SP	5
51	Screw	5WR, 6BN, 6LN, 6R, 6SP	5
21	Screw	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 9AC	5
07	Screw	10WR, 10CR, 10R, 20R, 11P, 11R, 11SP, 18R, 18SP, 18DR, 24R, 24SP, 24DR, 12LC	5

*5 units to one bag.



No.	Product name	Applicable product number	Number
92	Spring	4BN, 4WR, 4LN, 4SP	5
52	Spring	5WR, 6BN, 6LN, 6R, 6SP	5
22	Spring	7WR, 7CR, 7R, 8R, 9R, 9BN, 9LN, 11P, 11R, 11SP, 9AC	5
08	Spring	10WR, 10CR, 10R, 20R, 12LC	5
34	Spring	18R, 18SP, 18DR	5
137	Spring	24R, 24SP, 24DR	5

*5 units to one bag.

2. CONVENTIONAL TOOLS

PROSNIP®

The name "Prosnip" is a registered trade mark of Irwin Industrial Tools Company.



CAUTION

PROSNIP® type

- Do not use if there is a live electric current.



WARNING

PROSNIP® type

- Check the direction the cut piece is likely to travel before cutting.
- Use protective goggles when working.
- Close the blade and store when the tool is not going to be used.
- Do not use the blade tip for gouging or hitting.
- Take care not to cut the hand holding the tool.

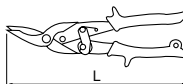
● SNIP (STRAIGHT LEFT CUTTING)



SNIP (STRAIGHT LEFT CUTTING)

No.	L	Cutting power mm	▼g	☞	
101	250	1.25	420	5	

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from left to right.

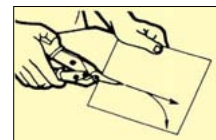
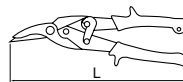
● SNIP (STRAIGHT RIGHT CUTTING)



SNIP (STRAIGHT RIGHT CUTTING)

No.	L	Cutting power mm	▼g	☞	
102	250	1.25	410	5	

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from right to left.

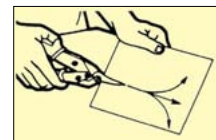
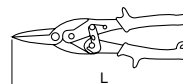
● SNIP (STRAIGHT WIDE CURVES CUTTING)



SNIP (STRAIGHT WIDE CURVES CUTTING)

No.	L	Cutting power mm	▼g	☞	
103	250	1.25	420	5	

- Will cut stainless steel to 0.8 mm in thickness.



- Is beneficial for cutting in a straight line and from left to right.

2. CONVENTIONAL TOOLS

HAMMERS



CAUTION

Hammer types

- Use the face of the hammer to tap in a perpendicular fashion.
- Do not use if the connection between the head and the grip is loose.
- Do not use if the blade becomes blunt as this will cause ripping and burring from long-term use.
- Do not use in the presence of fire hazards.
- Use protective goggles when working.

COMBINATION HAMMER

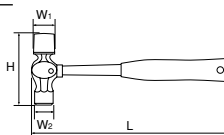
No.	Size	L	W ₁	W ₂	H	▼g		
UD7-10	1 LB	315	32	30	114	730	1	

- This tool is a combined hammer made from steel and plastic that allows two different uses.
- Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.
- Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material		
UD7-10-1	For UD7-10	Plastic	1	

COMBINATION HAMMER

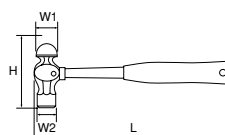


BALL-PEEN HAMMER

No.	Size	L	W ₁	W ₂	H	▼g		
PH45-323	1 LB	310	26	30	105	720	5	
PH68-344	1.5 LB	335	28	35	117	950	5	

- Specially heat treated head for preventing recess or chipping.
- The head is pressed into the shank and a pin tang thru.
- Chrome plated shank is made of high class pipe steel so light and durable.
- The grip is made of oil-resistant rubber and offer secure and comfortable gripping.

BALL-PEEN HAMMER



PLASTIC HAMMER

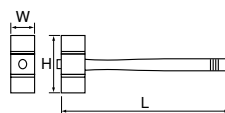
No.	Size	Material	L	W	H	▼g		
UD8-10	1 LB	Plastic (reinforced nylon)	310	32	112	450	1	

- The head is constructed from reinforced nylon which prevents cracking and chipping, also reducing the possibility of chipped materials entering the machine.
- A slit is added to the wooden grip for prevention of slipping.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material		
UD8-10-1	For UD8-10	Plastic (reinforced nylon)	1	

PLASTIC HAMMER

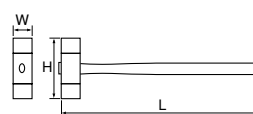


PLASTIC HAMMER

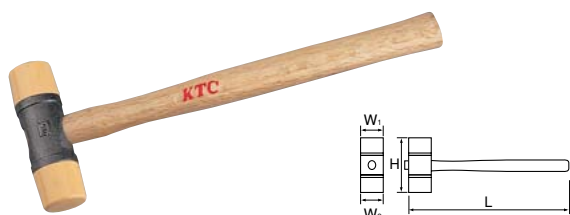
No.	Size	L	W	H	▼g		
K9-6	1 LB	310	32	110	450	5	

- Head is made of plastic
- (Note) The head is not replaceable.

PLASTIC HAMMER



● PLASTIC HAMMER



PLASTIC HAMMER

No.	Size	Material	L	W	H	▼g	📦	
UD3-10	1 LB	Plastic	330	35	116	500	1	

- A tapered grip form that raises efficiency and allows for easy familiarization.
- The head can be replaced.

Replacement head (1 attached)

No.	Application	Material	📦	
UD3-10-1	For UD3-10, UD6-10	Plastic	1	

● SHOCK-LESS HAMMER



SHOCK-LESS HAMMER

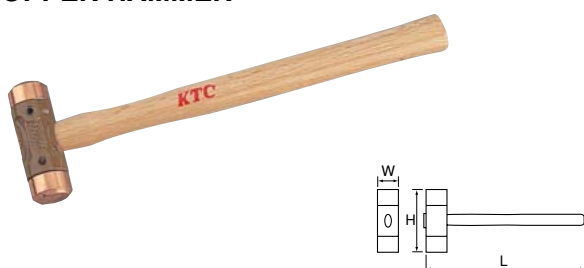
No.	Size	Material	L	W	H	▼g	📦	
UD1-10A	1 LB	Plastic	330	36	118	450	1	
UD1-10B	1 LB	Steel, Plastic	366	36	119	450	1	

- The head can be replaced. Replacement can be carried out in one single motion without a roll pin. (UD1-10A)
- This tool is a combined hammer made from steel and plastic that allows two different uses. The head on the plastic side can be replaced (roll pin type). (UD1-10B)
- The flat hitting side allows for the nailing in of decorative pins or for hitting in center punches. (UD1-10B)

Replacement head (1 attached)

No.	Application	Material	Hardness	Color	📦	
UD1-10A-1	For UD1-10A	Plastic	98HRR	Yellow	1	
UD1-10A-2	For UD1-10A	Plastic	110HRR	Black	1	
UD1-10B-1	For UD1-10B	Plastic	110HRR	White	1	

● COPPER HAMMER



COPPER HAMMER

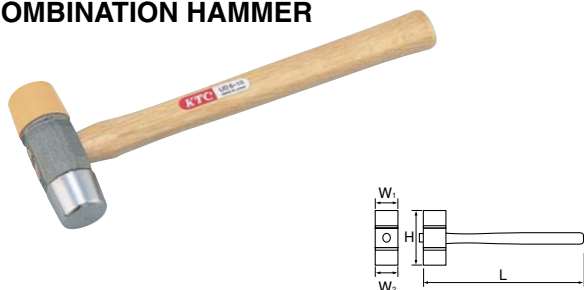
No.	Size	Material	L	W	H	▼g	📦	
UD2-10	1 LB	Copper	330	30	88	450	1	

- The head can be replaced (roll pin type).
- The main structure is made from cast iron.

Replacement head (1 attached)

No.	Application	Material	📦	
UD2-10-1	For UD2-10	Copper	1	

● COMBINATION HAMMER



COMBINATION HAMMER

No.	Size	Material	L	W1	W2	H	▼g	📦	
UD6-10	1 LB	Steel, Plastic	300	33	32	100	610	1	

- A tapered grip form that raises efficiency and allows for easy familiarization.
- This tool is a combined hammer made from steel and plastic that allows two different operations.
- The head on the plastic side can be replaced.

Replacement head (1 attached)

No.	Application	Material	📦	
UD3-10-1	For UD3-10, UD6-10	Plastic	1	

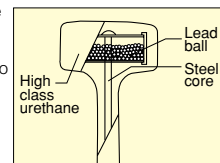
● COMPONENT HAMMER



COMPONENT HAMMER

No.	Size	Material	L	W	H	▼g	📦	
UD1-10	1 LB	Plastic	310	46	98	610	1	

- A singular structure with high standards of safety (urethane plastic). The tool is highly durable and produces no noise, allowing for quiet operation.
- The "shock-less" structure does not feed back the impact to your hands.
- The tool does not damage the item being worked on.



● RUBBER HAMMER





RUBBER HAMMER

No.	Size	L	W	H	▼g	📦	
UD4-10	1 LB	330	60	100	450	1	

- Excellent quality rubber with high durability is used.

MINI HAMMER-SET

No. TUD6		▼g 190	 1		
MINI HAMMER · SET		TUD3S, 3L			
No.	L	H	▼g		
TUD3S	180	56	70	1	
3L	245	65	120	1	

- Interchangeable head (iron, plastic, brass) enables use for different applications.
- The head is a twist-in type.
- Most suitable for press fitting of oil-seals and small bearings, and installation/removal of split pins.
- Complete with each 1 piece of plastic head and brass head.

Head set (2 each attached)

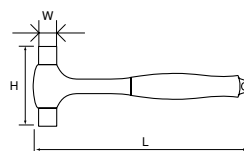
For TUD3S

No.	W	Material	
UD1802C	12	Brass	
F	12	Iron	
P	12	Plastic	

For TUD3L

No.	W	Material	
UD2502C	4	Brass	
F	4	Iron	
P	4	Plastic	

● MINI HAMMER-SET

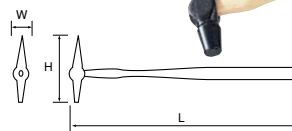


TEST HAMMER

No.	Size	L	W	H	▼g	1	
UDHT - 2	1/4 LB	380	16	95	160	1	
-26	1/4 LB	600	16	95	250	1	
- 4	1/2 LB	420	20	113	290	1	
-46	1/2 LB	600	20	113	350	1	
-49	1/2 LB	900	20	113	420	1	

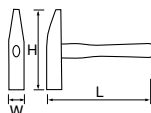
*The grip is available as a replacement part. Check with your dealer for details.

● TEST HAMMER



SHEET METAL PROCESSING HAMMER

No.	Usage	L	W	H	▼g	1	
UD5-1	Rough	250	38	190	1600	1	
-2	Cone shaping	300	30	143	290	1	
-3	Horizontal	300	30	100	300	1	
-4	Vertical	300	50	100	390	1	



● SHEET METAL PROCESSING HAMMER

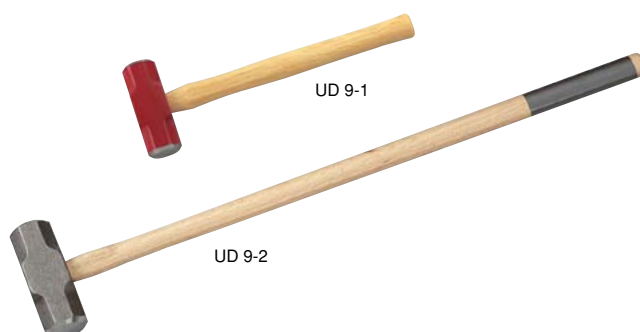
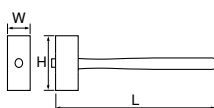


● DOUBLE-HEAD HAMMER

No.	Size	Head weight (kg)	Material	L	W	H	▼kg	1	
UD9-1	3 pounds	1.3	Iron	360	44	118	1.5	1	
-2	8 pounds	3.6	Iron	900	58	163	4.0	1	

*The grip of the UD9-2 has a slip prevention structure.

*The grip is available as a replacement part. Check with your dealer for detail.



2. CONVENTIONAL TOOLS

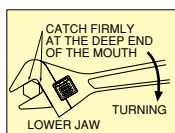
ADJUSTABLE WRENCHES,
PIPE WRENCHES and GEAR
PULLERS**CAUTION****Adjustable wrenches**

- Firmly adjust the mouth to the width of the bolts and nuts.
- Turn towards the lower jaw.
- Do not use by adding on pipes, etc.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

Pipe wrenches

- Use this tool within the range of the outer diameter of the pipe being held.
- Firmly hold the wrench perpendicular to the pipe and hold firmly at the center.
- Do not apply force sideways.
- Do not use by adding on pipes, etc.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Do not use when the teeth are chipped or worn, or when blocking has occurred.

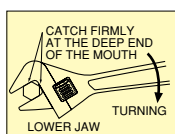
● ADJUSTABLE WRENCH



ADJUSTABLE WRENCH

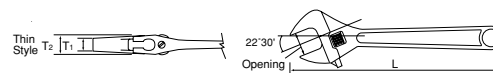
No.	Nominal	Opening	T ₁	T ₂	B	L	▽g	㊦	
WM-150	150	25	5.5	11	51.7	164.5	140	10	
-200	200	30	6.5	13	63.5	213	240	10	
-250	250	35	8.5	14.5	75	263	380	10	
-300	300	43	10	18.5	91.5	316	670	5	

● ADJUSTABLE WRENCH

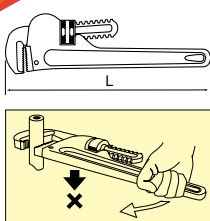
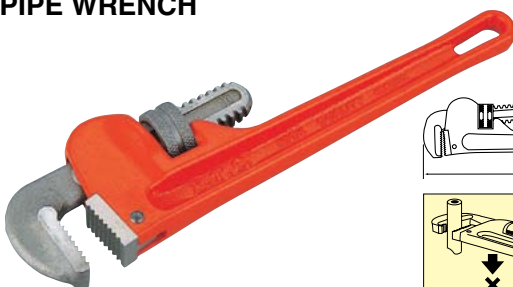


ADJUSTABLE WRENCH

No.	Nominal	Opening	T ₁	T ₂	L	▽g	㊦	
MWA-150	150	20	6.7	11	158	120	6	
-200	200	24	7.5	12.9	208	235	6	
-250	250	29	8.7	15.32	258	380	6	
-300	300	34	10.2	18.24	308	590	6	
-375	375	44	13.4	23.5	375	1,300	1	
-450	450	55	14	25.6	450	2,200	1	



● PIPE WRENCH

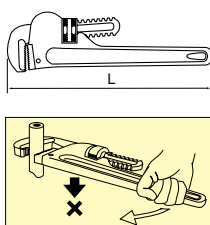


PIPE WRENCH

No.	Nominal	Max. Dia. of Pipe	L	▽g	㊦	
PWA-150	150(6")	3/4"(19)	150	185	6	
-200	200(8")	3/4"(20)	185	350	5	
-250	250(10")	1"(26)	245	750	5	
-300	300(12")	1 1/4"(32)	300	1,100	5	
-350	350(14")	1 1/2"(38)	325	1,300	5	
-450	450(18")	2"(52)	410	2,100	5	
-600	600(24")	2 1/2"(65)	540	3,800	1	
-900	900(36")	3 3/4"(95)	780	7,300	1	

- Upper jaw screws have trapezoidal shape and are processed using a non-oxidizing heat-treatment to enhance strength and endurance.
- Upper and lower jaws have well-engaging teeth and are processed with induction heat-treatment for superior strength.

● ALUMINUM PIPE WRENCH




ALUMINUM PIPE WRENCH

JIS

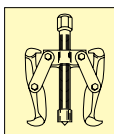
No.	Nominal	Max. Dia. of Pipe	L	▽g	㊦	
APWA-350	350(14")	1 1/2"(38)	325	1,000	5	
-450	430(18")	2"(52)	400	1,600	5	
-600	600(24")	2 1/2"(65)	550	2,500	1	

- Extra light body made of specially selected aluminum alloy.
- Highly accurate and rugged enough to pass U.S. Federal standards.

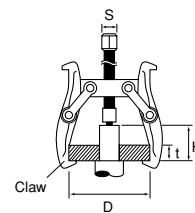
GEAR PULLER

No.	D - Diameter of Subject		t - Width of Subject (when D is max.)	H Claw Span	B Screw Hexagon	Breaking Load ton	▽g		
	Min	Max							
GU- 75	40	75	30	55	14	2	385	1	
-100	50	100	45	70	17	4	800	1	
-150	60	150	60	100	19	6	1,862	1	

• Can be used both outer and inner diameter by reversing the claws
 *Replacement parts are available. Check with your dealer for details.



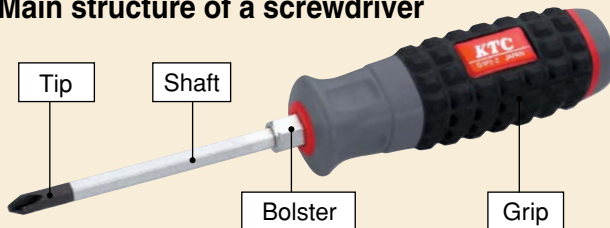
● GEAR PULLER



SCREWDRIVER

A screwdriver is a common tool that can be found in family homes. The screwdriver is used for tightening and loosening screws. Along with the more common cross and flat screwdrivers, there are hex bolt/nut screwdrivers, hex hole bolt screwdrivers, TORX® screwdrivers, etc. according to the purpose.

Main structure of a screwdriver



There are cross (+), and sometimes referred to as Philips) screwdrivers and flat (⊖) screwdrivers. In many cases KTC color codes the handles red or orange (+ or cross) and green (⊖ or flat).

The size of the cross screwdriver is determined by the size of the screw it turns.

The KTC lineup of cross screwdrivers covers the following screw sizes: No. 00, No. 0, No. 1, No. 2, No. 3, No. 4 but No. 1~No. 3 are most commonly used. The flat screwdriver size is determined by the length from the tip to the base of the shaft or by the width of the tip. Flat screwdrivers with a shaft length between 75 mm and 150 mm or a tip width between 5.5 mm and 8 mm are used most frequently.

Types of screwdrivers



Hexagon screwdrivers

This screwdriver is used to turn bolts with hex holes.



Flat ratchet screwdriver

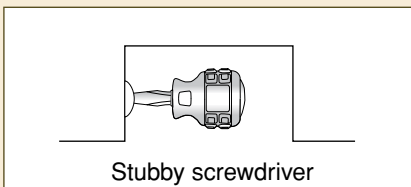
The ratchet structure allows for the forward and reverse movement alone to tighten and loosen screws.



Impact screwdriver

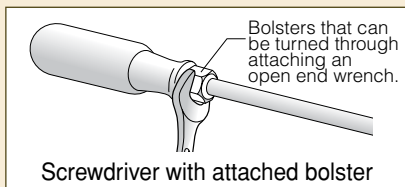
By holding the grip and hitting the base of the tool with a hammer, the strength of the impact turns the screw. This method is effective for turning tightly screwed screws or rusty screws.

Selecting screwdrivers



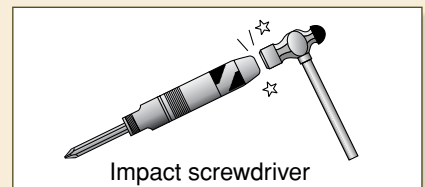
Stubby screwdriver

Removing screws in confined spaces.



Screwdriver with attached bolster

Removing and attaching screws that require large torque.



Impact screwdriver

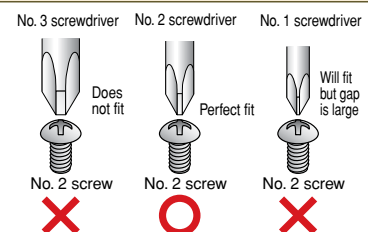
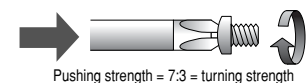
Apply impact to a hard tightened screw in order to loosen.

Refer to "Selecting screwdrivers" (P.189) listed in the section on conventional tools - screwdrivers for information on basic selection methods.

How to use the screwdriver

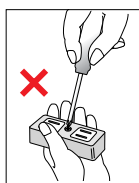
The basic movement in using a screwdriver is "push and turn" - pushing the screw and turning at the same time. Generally, the ratio between pushing and turning is 7:3, however, with hard-tightened screws, the pushing force must be increased in order to prevent the tip from slipping off the screw or damaging the screw. The center of the screwdriver shaft and the center of the screw must match for flat screwdrivers. Not only is turning difficult but the screw and/or screwdriver tip may become damaged if the center does not match.

It is also important to select the screwdriver size that matches the number allocated to the screw. The key to selecting the right size is to initially select a screwdriver that is slightly larger than the size of the screw. By selecting screwdrivers one size below the first screwdriver, the right match will be found. Once the perfect fitting screwdriver has been found, the operation can commence. If the size of the screwdriver is smaller than the size of the screw cross, the gap will increase, resulting in damaging the cross-hole of the screw.

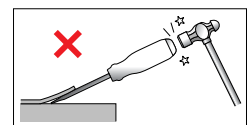


Proper use of the tools

- Do not hold materials in one hand and the screwdriver in the other as it is unsafe. Carry out maintenance in a safe, stable position.



- The plastic on the grip does not provide insulation against electrical current. Do not use if there is a live electric current.
- Do not use this tool as a lever or chisel.
- Do not use this tool as a hammer.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.
- Use screwdrivers that conform to the size of the screws.

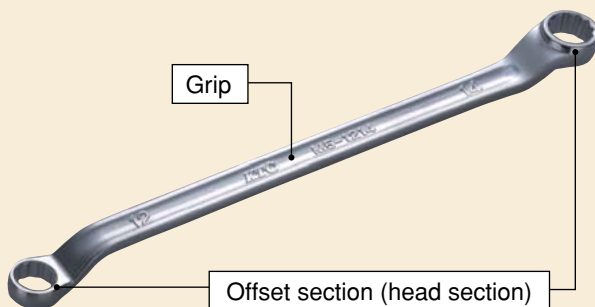


OFFSET WRENCH · OPEN END WRENCH

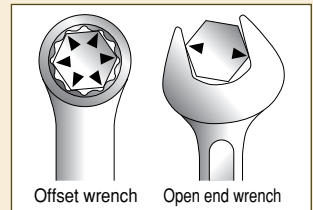
Bolts and nuts are used not only in engines, machines, and automobiles but also in building structures, furniture, and various places. The offset wrenches, open end wrenches, and combination wrenches are used for the attachment and removal of bolts and nuts.

Offset wrench

● Basic structure of the offset wrench



Like the open end wrench, the offset wrench is a tool that is used to tighten and loosen bolts and nuts. Where the open end wrench holds the bolt/nut in two points, the offset wrench holds the bolt/nut in 6 points. The ring-form of the offset wrench prevents the head from slipping off the bolt/nut allowing even distribution of load, resulting in the application of more force than the open end wrench. The offset wrench is composed of the head used to grasp bolts/nuts and the grip. The nickname "eyeglass wrench" in Japan comes from the ring-form grip head on both sides of the grip. The head section is normally dodecagonal (12 sided/double hex) with a deflection angle of 30°, allowing the turning of bolts/nuts. The size of the offset wrench is expressed from the width-across flat of the diameter as in open end wrenches. For example, the offset wrench that can turn bolts and nuts with a width-across flat of 12 mm and 14 mm is called 12 × 14. KTC offers offset wrenches between 5.5 mm and 46 mm.



● Offset wrench types



Offset wrench for brake pipes

This offset wrench is mainly used for the flare nuts on the brake pipes of automobiles. The tip of the head is open, making this type suitable for working on nuts in piping connections.



Combination wrench

One side has a ring-form head and the other has an open end wrench head. The open end wrench is suitable for quick turning and the ring-form head is suitable for applying force as an offset wrench.



Ratchet offset wrench

This type has a ratchet function included in the head. The wrench can continuously turn the bolt/nut without taking the head off the bolt/nut.

● Classification of offset wrenches

Classification through total length — short type or long type

The long type is more commonly used. The longer wrench provides more force when turning, but is difficult to use in confined spaces. KTC also provides a super-long type straight offset wrench (M160) together with the previous long type.

Classification according to the angle of the handle — straight type · 15 degree type · 30 degree type · 45 degree type

A variety of types are available according to the working environment but the 45° type is the most common wrench. KTC offers the 45° × 6° and the 45° × 10° types (NEPROS®, M5, M27, M28) that allow for easy operation and increased application of force.

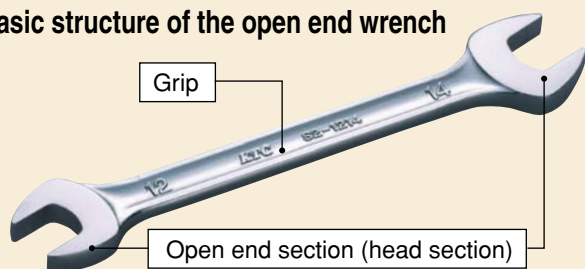
● Using the offset wrench

Select the correct diameter according to the width-across-flat of the bolt/nut and cover the bolt/nut with the ring-form head from above. The hex edge of the bolt/nut can slip or jar dangerously if the gap between the offset wrench diameter and the bolt/nut is too big. Select the right size offset wrench for the bolt/nut and firmly place the ring form to the end.

Long type	Short type
M150 Straight M160 Super long-straight M151 15° M15 30° M25 45° M5 45° 6° M28 45° 10° M27 45° 10°	M100 Straight M20 45° M5S 45° 6° <p>The symbols to the left of the illustration display the head section of the offset wrench with the product number inscribed. For example, the offset wrench product number for the 45 degree long type 10 × 12 mm is M25-10 × 12.</p>

Open end wrench

Basic structure of the open end wrench



The open end wrench is a basic tool used to tighten or loosen nuts. The open end wrench holds the bolt/nut across the flat side in two places. Open end wrench size is determined through the width-across-flat of the diameter.

For example, the open end wrench that can turn bolts and nuts with a width-across flat of 12 mm and 14 mm is called 12 × 14.

KTC offers open end wrenches between 5.5 mm and 46 mm.

Tool basics

The open end wrench is included in vehicle maintenance tools and is commonly known. However, professional mechanics rely on offset wrenches that offer firmer control.

Types of open end wrenches



Slim type open end wrench (Tappet open end wrench)

This open end wrench is thin with a long grip, making it suitable for adjusting the tappets.



Flex socket spanner

The other end is an offset socket wrench, allowing for quick turning using the spanner and final adjustments using the socket.



PROFIT® open end wrench

This open end wrench is an original thin slim design by KTC allowing work to be completed effectively in hard to reach areas, difficult with previous open end wrenches.

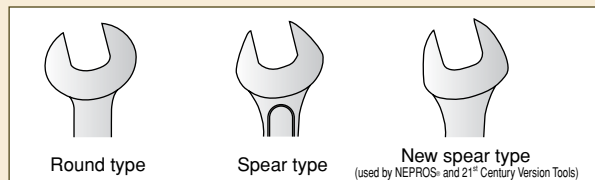
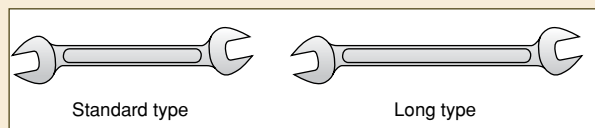
Classification of open end wrenches

Classification through total length - - - standard type or long type

The longer open end wrench provides more force when turning, but is difficult to use in confined spaces.

Classification through head shape - - - round · spear · new spear types

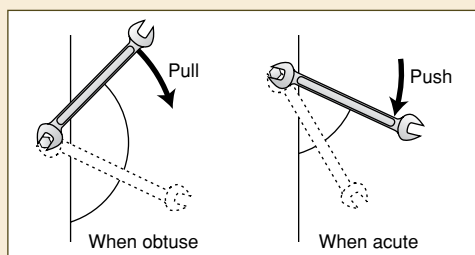
The spear type is small compared to the round type, making work in narrow areas easy. It is also often used in automobiles as the head weight is reduced. All KTC open end wrenches are spear types. NEPROS® and 21st Century Version Tools offers advanced, new original spear heads by KTC with minimal outer diameters and large volume in areas where strength is applied compared to previous spear types.



How to use the open end wrench

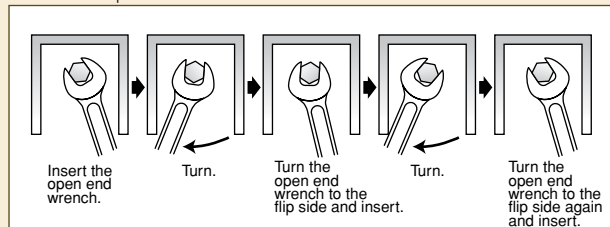
The open end wrench is effective on the return as well.

For safety, pull towards you if the turning angle against the bolt/nut is obtuse. Push away from you if the turning angle is acute.



Using the open end wrench in confined spaces

Common open end wrenches have an angle of 15° against the grip. By using the front and flip sides of the open end wrench, a leverage of 30° and half the angle allows the bolt/nut to turn, making it convenient to use in confined spaces.



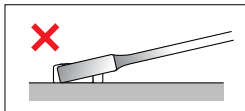
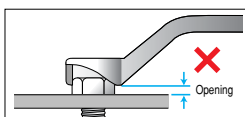
Proper use of the tools

- The offset wrench must completely cover the bolt/nut before turning.

- Do not use this tool as a hammer.

- Do not attach the open end wrench diagonally towards the bolt/nut.

- Do not link two open end wrenches together.

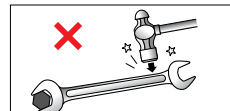
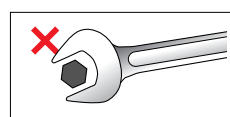


- Use tools that conform to the size of the bolts and nuts.

- Do not use by adding on pipes, etc.

- Do not apply strong impact on this tool by hitting it with a hammer, etc.

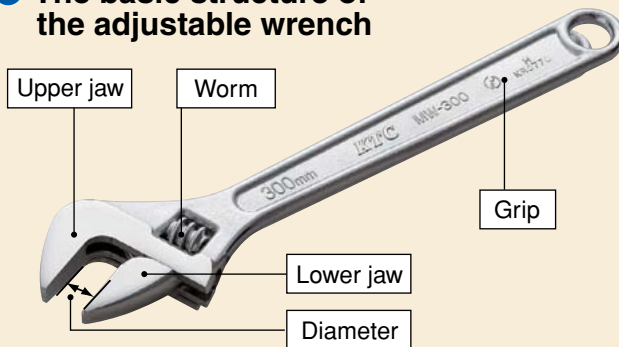
- Firmly hold the bolts and nuts using the end of the tool mouth.



ADJUSTABLE WRENCH

The adjustable wrench is able to turn several kinds of bolts and nuts, by adjusting the worm on the head section. Monkey wrench is the slang term in English. The nick name "monkey wrench" is said to have come from the inventor Charles Moncky or from the theory that the head section is shaped like a monkey. The correct term is Adjustable Wrench.

The basic structure of the adjustable wrench



Adjustable wrenches are divided into 15° and the 23° types according to the angle of the head.

KTC offers both 15° and 23° adjustable wrenches. SSize dimensions of the adjustable wrench all display the total length. SSize dimensions are displayed on the grip section. The maximum opening (maximum size of the bolt/nut that can be turned) as opposed to the size dimension is determined.

Size dimension (mm)	150	200	250	300	375	450
Maximum opening (mm)	20	24	29	34	44	53

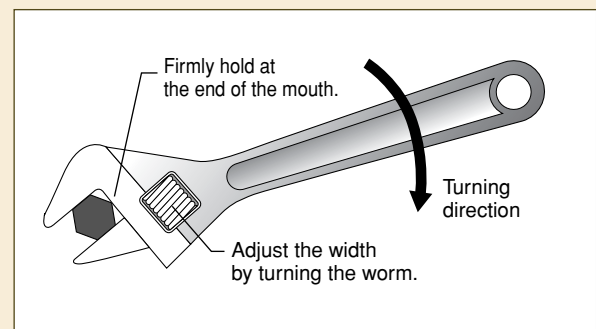
How to use the adjustable wrench

The adjustable wrench is basically used like an open end wrench with an adjustable opening. Widen the opening by turning the worm with the thumb. Match the upper jaw to the bolt/nut and bring in the lower jaw by twisting the worm until the bolt/nut is firmly grasped. Move the adjustable wrench up and down in order to check for looseness. Turn the bolt and nut after re-gripping the grip.

The direction of the turn is important. Always turn adjustable wrenches towards the lower jaw side.

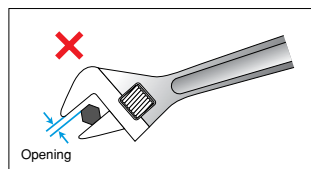
Turning towards the upper jaw will stress the lower jaw, causing the tool to break.

Any movementAny play in the lower jaw of the adjustable wrench causes loosening. Do not apply excessive torque. Take care when using an adjustable wrench for turning small bolts/nuts as the play can becomes larger. Like the open end wrench, the adjustable wrench only holds the bolt/nut in two places. When high torque is needed, use the socket wrench/offset wrench as these tools hold the nut in 6 points.

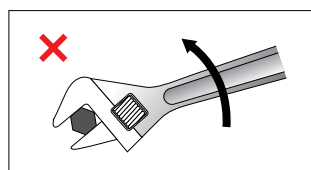


Proper use of the tools

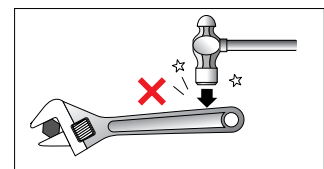
- Firmly adjust the mouth width to the bolts and nuts using the end of the mouth.



- Always turn towards the lower jaw. The lower jaw can be exposed to excessive force, causing damage.



- Do not apply strong impact on this tool by hitting it with a hammer, etc.



- Do not use this tool as a hammer.
- Do not use by adding on pipes, etc.

3. MEASURING TOOLS and EQUIPMENT

TORQUE WRENCHES
GAUGES

3. MEASURING TOOLS and EQUIPMENT

TORQUE WRENCHES



CAUTION

TORQUE WRENCHES

- BE SURE TO READ INSTRUCTIONS AND OTHER MANUALS BEFORE USE.
- DO NOT USE A TORQUE WRENCH TO LOOSEN BOLTS.
- DO NOT ATTEMPT TO EXTEND BY CONNECTING A PIPE, ETC.
- DO NOT USE A TORQUE WRENCH AS A SUBSTITUTE FOR A HAMMER.
- DO NOT APPLY IMPACT BY HITTING WITH A HAMMER, ETC.
- BE SURE TO INSERT THE SQUARE DRIVE TO THE DEEP END, ETC.

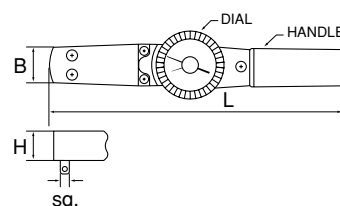
- THE RELATION BETWEEN THE FASTENING TORQUE AND RESISTANT POWER OF THE SCREW VARIES DEPENDING ON PLURAL FACTORS, INCLUDING THE CONDITION AND STRUCTURE OF THE SCREW AND COEFFICIENT OF FRICTION.
- READ THE HANDLING INSTRUCTIONS AND PRECAUTIONS FROM THE MANUFACTURER CAREFULLY BEFORE USING THE TOOL.
- USE THE TORQUE WRENCH WITHIN THE RANGE OF A MEASURABLE TORQUE.
- IT IS RECOMMENDED TO HAVE THE INSTRUMENTS CALIBRATED PERIODICALLY.



●TORQUE WRENCH DIAL TYPE



With Plastic case



CMD484



CMD143



CMD072

TORQUE WRENCH DIAL TYPE

Features

The dial scale is easy to read, and the pointer remains in the measured position to facilitate confirmation of the measurement.

Accuracy

- The unique, long torsion bar shows the torque difference more clearly and makes the measurement more accurate.
- The pointer system allows detailed confirmation of measurement, facilitating accuracy of measurement.

Ease of handling

- The long torsion bar reduces overall size, weight and thickness.
- The measurement scale is indicated in N-m scale in compliance with the SI (international standard). A kgf-cm scale is also provided to meet both past and present standards.
- The scale 0-point located on the center line of the tool facilitates reading as well as counterclockwise torque measurement. Operations in invisible locations (including upside down use of the wrench) are possible thanks to the use of the pointer.

Endurance

- The long torsion bar provides good stability. Without excessive force applied, the tool can maintain high accuracy indefinitely.
- The main body is accommodated by a rugged plastic case that is suitable for protection and storage.

No.	sq.	Torque Range kgf-cm	Minimum Scale	L	B	H	▼kg		Main Applications & Purposes
CMD0091	1/4"	1.8 ~ 9	0.2	290	26	27	0.46	1	Precision measurement and pre-load measurement of low voltage parts and small torque.
CMD0172	3/8"	3.5 ~ 17.5	0.5	290	26	27	0.46	1	Effective for management of small torque such as bearing pre-load measurement.
CMD0282	3/8"	6 ~ 28	0.5	290	26	27	0.46	1	Effective for management of small torque such as bearing pre-load measurement.
CMD 072	3/8"	14 ~ 70	2	375	36	27	0.76	1	3/8"sq. basic model, widely applicable to passenger vehicles and motorcycles.
CMD 143	1/2"	30 ~ 140	2	545	48	32	1.34	1	1/2"sq. models which can also be transformed into beam type models. Easy to use with passenger vehicles.
CMD 243	1/2"	50 ~ 240	5	545	48	32	1.33	1	1/2"sq. models which can also be transformed into beam type models. Easy to use with passenger vehicles.
CMD 353	1/2"	70 ~ 350	10	545	48	32	1.34	1	1/2"sq. model with a wide application range.
CMD 484	3/4"	100 ~ 480	10	708	56	39	2.78	1	3/4"sq. model, effective for engines of medium-sized vehicles.
CMD 804	3/4"	160 ~ 800	20	1185	56	38.5	4.1	1	Widely applicable in construction, construction machinery and medium-sized vehicles.
CMD 805	1"	160 ~ 800	20	1185	56	38.5	4.14	1	Widely applicable in construction, construction machinery and medium-sized vehicles.

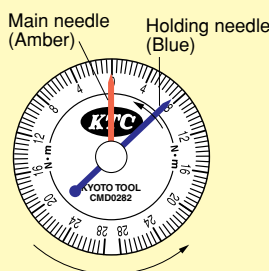
* The graduations on the scale indicates N-m. (1kgf-m \approx 10N-m 1N-m \approx 0.1kgf-m)



• DO NOT APPLY A LOAD LARGER THAN THAT WHICH A FULLY LOADED SCALE CAN HANDLE.

● Clockwise torque measurement

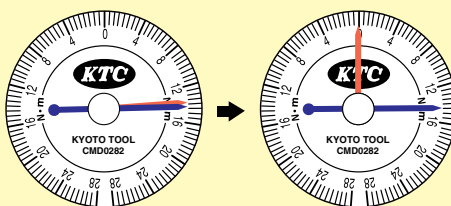
1 Set main pointer needle to 0.



Turn counterclockwise.

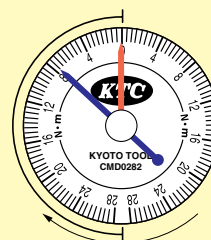
Turn dial counter-clockwise to superimpose holding needle (blue) on main needle (amber). Turn dial further until main needle indicates zero on outer scale.

2 Start measurement.



Turn handle clockwise. The main and holding needles swing until the torque value. When tightening force is released, main needle returns to scale 0 automatically while holding needle remains at torque value. When measuring same torque values successively, it is recommended to leave holding needle in position.

3 To measure the counterclockwise torque:



Turn clockwise

Holding needle is set from reverse direction to clockwise torque measurement, i.e. from left side of main needle (by turning clockwise). Counterclockwise torque should be measured by reading inner scale.

TORQUE WRENCH ADJUSTABLE TYPE

●TORQUE WRENCH ADJUSTABLE TYPE

Features

Because they are capable of setting torque value to be measured prior to measurement, the preset torque wrenches are effective in successive operations or operations in places where scale readout is difficult.

Accuracy

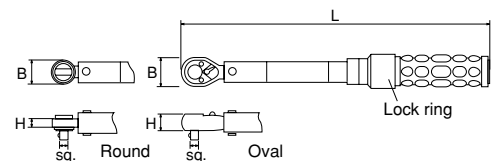
- The unique preset mechanism can set the torque value to be measured easily and accurately in detail.
- The preset value can be locked.

Ease of handling

- The measurement scale is indicated in N·m scale in compliance with the SI (international standard). The scale is stamped so it does not fade out.
- The operator is informed that the preset value is reached by the ratchet which changes angle at the neck.
- The counterclockwise torque can be measured as well as the clockwise torque.
- The head consists of a circular ratchet with a 60-tooth gear (having feed angle 6°), that is suitable for operations in tight spaces.

Endurance

- The main body is accommodated in a rugged plastic case which is suitable for protection and storage.
- The handle grip is made of rubberized material which resists slippage and the effects of shock.
- The entire mechanism is sealed to prevent penetration of dirt and dust, thereby reducing the possibility of malfunction.



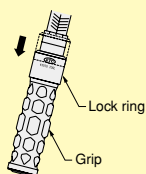
No.	sq.	Torque Range N·m (kgf·cm)	Minimum Scale	Type	L	B	H	▼kg			Main Applications & Purposes
CMPB0152	1/4"	3~ 15	0.1	Oval	247	22	10	0.3	1		Effective for successive tightening with small torque of small parts, etc.
CMPB0253	3/8"	5~ 25	0.1	Oval	278	22	10	0.3	1		Suitable for compact aluminum engines, etc.
CMPB0503	3/8"	10~ 50	0.5	Oval	337	33	13.5	0.8	1		Basic model for motorcycles, but can also be used widely in general applications.
CMPB1003	3/8"	20~100	0.5	Oval	397	33	13.5	0.9	1		3/8"sq. 1000 kgf type. The standard tool of the future.
CMPB0504	1/2"	10~ 50	0.5	Oval	337	33	13.5	0.8	1		1/2"sq. compact and easy to use.
CMPB1004	1/2"	20~100	0.5	Oval	397	33	13.5	0.9	1		1/2"sq. model covering a wide range of torque.
CMPB2004	1/2"	40~200	2	Oval	475	39.5	18	1.2	1		Effective for constructions and medium-sized vehicles.
CMPB3004	1/2"	60~300	2	Oval	480	39.5	18	1.2	1		1/2"sq. model covering a wide range of torque.
CMPB8006	3/4"	150~800	5	Oval	1050	68	29	4.5	1		
CMPB8008	1"	150~800	5	Oval	1050	68	27.5	4.5	1		

* The graduations on the scale indicates N·m. (1kgf·m \approx 10N·m 1N·m \approx 0.1kgf·m)

CAUTION • WHEN THE WRENCH GENERATES A "CLICK" SOUND OR YOUR HAND FEELS A LIGHT SHOCK, DO NOT APPLY FURTHER LOAD TO THE WRENCH.
• DO NOT USE THIS WRENCH FOR LOOSENING A BOLT OR NUT.

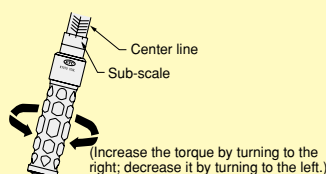
● How to preset the torque.

1 Pull grip down



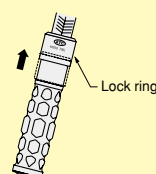
Hold grip and pull it downward while shaking it a little to the left and right.

2 Preset to desired torque



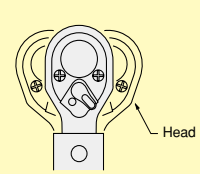
The torque is determined by the main scale and the sub-scale on the grip.

3 Lock the torque.



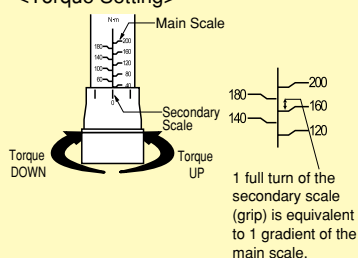
Release your hand from the lock ring, and it will return automatically and the torque will be set.

4 Start measurement.



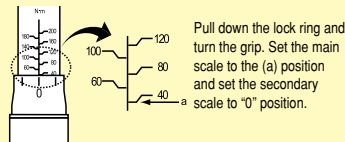
Perform measurement. When preset value is reached, a light shock is felt and neck angle changes.

<Torque Setting>



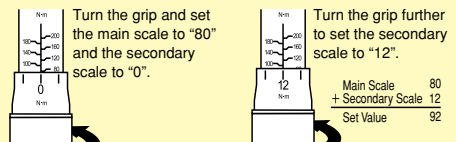
○ Setting the value of the main scale to a set value.

Example) Setting to 40N·m (For CMPA203)



○ Setting a value between the two scales to a set value.

Example) Setting to 92N·m (For CMPA203)



*The turning direction of the grip is reversed when setting the torque from a high level.

● 1/2" sq. WHEEL NUT TORQUE WRENCH SET D.PAT.

WHEEL NUT TORQUE WRENCH SET

No.	▼kg 1.3	1
No. TWCMPA221		
Torque wrench for wheel nut		WCMPA103
Socket for 1/2"sq. wheel nut 21mm		B38Z-21H

The time has come for all service personnel to have his or her own torque wrench because excessive tightening of impact wrenches very frequently causes trouble. The wheel nut torque wrench has been released to deal with the present situation. The reasonable price of such wrenches make them essential tools to be owned by every operator.

Applications

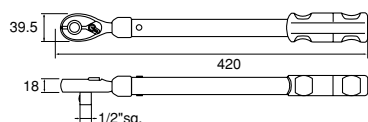
- Preset torque wrench is dedicated for tightening most of 19 or 21 mm automobile wheel nuts at 10.5 kgf-cm torque. (A socket for 19 mm nuts is optionally available.)

Features

- Easily tightens wheel nuts at specified torque.
- Suitable for torque management of vehicles equipped with aluminum wheels as standard, which are becoming increasingly popular.
- Powerful tool for final inspection line checking, as well as for training beginners to become accustomed with the feel of torque force.
- Pre-set type torque wrench for tightening wheel nut at regular torque. (10.5 kgf-m)
- Applicable to most of medium size cars with 19mm or 21mm wheel nut.



- THIS IS A MEASURING TOOL.
- BE SURE TO READ THE INSTRUCTIONS AND OTHER MANUALS BEFORE USE.
- WHEN THE WRENCH GENERATES A "CLICK" SOUND OR YOUR HAND FEELS A LIGHT SHOCK, DO NOT APPLY FURTHER LOAD TO THE WRENCH.
- DO NOT USE THIS WRENCH FOR LOOSENING A BOLT OR NUT.
- DO NOT USE THIS WRENCH WITH LEFT-HAND THREADED NUTS.



Compatibility Table (Vehicle make)

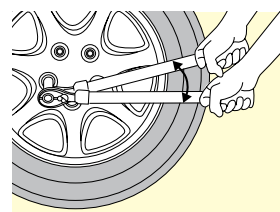
Nut size (mm)	Manufacturer	Examples of Compatible Vehicles
19 <small>19mm socket is required (sold separately)</small>	Honda, Subaru	All passenger vehicles (Except recreational and light vehicles)
	Isuzu	All passenger vehicles
21	Toyota, Nissan	All passenger vehicles (Except recreational and light vehicles)
	Mitsubishi, Daihatsu	All passenger vehicles (Except recreational and light vehicles)
	Mazda	All passenger vehicles (Except recreational and light vehicles)

*The torque value for light vehicles with 17mm nuts differs from the one for regular vehicles. For this reason, the above torque wrench cannot be used. However, the torque wrench can be used on some foreign vehicles made outside of Japan.

*Compatible to wheel tightening torque value of 103N·Em. (Not applicable to certain vehicles and wheels.)

*The wrench cannot be used for trucks and recreational vehicles as the torque required is too high.

*Check the required torque before using the wrench on non-standard wheels.



Confirm the tightening torque with the wrench positioned between the arrows as shown in the diagram.

**CAUTION****Notes**

1. The wheel tightening torque values are those for standard wheels used by Japanese automobile manufacturers. Be sure to check the required torque for special wheels.
2. This product is a measuring tool which should be handled very carefully. Take particular care never to drop, throw or hit it.
3. Always, apply load slowly, centering around the grip line.

4. Accurate torque value may not be obtained if load is applied by using other parts (such as a pipe).
5. When the tool has not been used for a long period, be sure to perform "running-in" before actual measurement.
6. Do not use the tool in rain, under high humidity or in places where it may be subject to water penetration.
7. Do not open the tool. Otherwise, the torque value may deviate.
8. Should operation failure, abnormal noise, dropping or submersion in water occur, immediately stop use and have qualified service personnel inspect and overhaul the tool.

● 1/2"sq. SOCKET WRENCHES FOR WHEEL NUTS

WHEEL NUT SOCKET

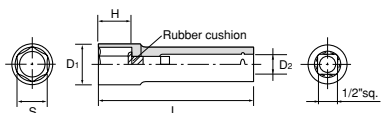
No.	S	D ₁	D ₂	H	L	▼g	5	
B38Z -17H	17	24	22	22	100	200	5	
-19H	19	26	22	24	100	200	5	
-21H	21	27.5	22	26	100	200	5	
-22H	22	29.5	22	27	100	200	5	

- Two models, both with an overall length of 100 mm, are especially designed for ease of use with wheel nuts. The ease of use can be improved by using a socket wrench together with a torque wrench.
- A built-in rubber cushion attenuates contact with plated and painted wheel nuts.

Applications

Nut Size (mm)	Maker	Vehicle Models
22	Toyota	Recreation vehicles
	Toyota, Nissan	All models (except for RVs)
21	Mitsubishi, Daihatsu	All models (except for RVs and mini-cars)
	Mazda	All models (except for mini-cars)
19	Honda, Subaru	All models (except for mini-cars)
	Isuzu	Steel wheel models
17	Suzuki	Not all models
	Mitsubishi	2WD among light cars
	Mazda	Carol and Scrum (10 inch wheel)
	Suzuki	Alto (before Oct 94), Carry and Every (10 inch wheel)
	Mercedes Benz, Rover, VW, Audi, Opel	All models
		All models

* Suitable for wheel tightening torque of 10.5 kgf-cm. (Not applicable to some special vehicles and wheels.)



DIGITAL RATCHET

●DIGITAL RATCHET

High Basic Performance Ensures Easy Use

- A digital torque wrench with the feel of a ratchet wrench.
- Storage of up to five measurements in memory ideal for frequent operations.
- Advanced torque measuring functions conform to international (ISO) standards.
- Built-in torque unit conversion function useful for maintenance on older or foreign cars.

Large LED Lamp

The large LED lamp is readily visible even from the side.



Ratchet Head

The ratchet head offers the familiar handling of a union mechanism, integrated claw, and 36 gears.

Grip End

The grip end is made of soft resin for higher visibility and a better fit.

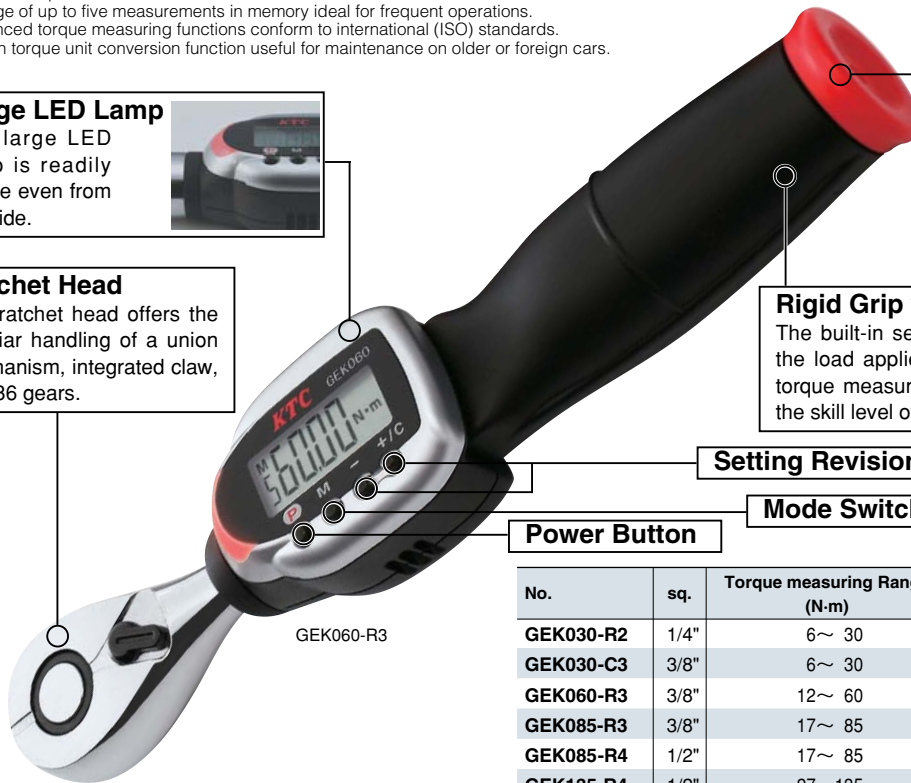
Rigid Grip with Built-in Power Sensor

The built-in sensor accurately detects and analyzes the load applied to the grip to enable more precise torque measurement regardless of work posture and the skill level of the operator.

Setting Revision Button

Mode Switching Button

Power Button



GEK060-R3

Dimensions in mm











No.	sq.	Torque measuring Range (N·m)	B	L	T1	T2	▼g	
GEK030-R2	1/4"	6~ 30	22	211	10	36	330	1
GEK030-C3	3/8"	6~ 30	22	211	10	36	330	1
GEK060-R3	3/8"	12~ 60	33	217	13.5	36	400	1
GEK085-R3	3/8"	17~ 85	33	271	13.5	36	440	1
GEK085-R4	1/2"	17~ 85	39.5	274	18	36	590	1
GEK135-R4	1/2"	27~135	39.5	380	18	36	700	1
GEK200-R4	1/2"	40~200	39.5	580	18	36	990	1

● Model selection guideline: A model in which the actual working torque value falls within 70% of the torque measuring range is recommended.

* The GEK030-C3 Digital Ratchet is a compact model with a 9.5 sq. drive angle set in a 6.3 sq. ratchet head.

* Digital Ratchet Wrench is a registered trademark of Kyoto Tool Co., Ltd.

Product Lineup

	Comes with a small special resin case	Comes with a large special resin case	Comes with a large special resin case and socket set
	 GEK060-R3	 GEK060-R3-L	 TB306WG1
 Application: Normal bolts sized M5 to M10	No. GEK030-R2 Size: W268xD107xH57	No. GEK030-R2-L Size: W324xD166xH58	No. TB206WG1 Size: W324xD166xH58 Content: No. GEK030-R2-L, EHB205 B2-07W, 08W, 10W, 12W, 14W
 Application: Normal bolts sized M5 to M10	No. GEK030-C3 Size: W268xD107xH57	No. GEK030-C3-L Size: W324xD166xH58	No. TB306WG3 Size: W324xD166xH58 Content: No. GEK030-C3-L, EHB305 B3-07W, 08W, 10W, 12W, 14W
 Application: Normal bolts sized M8 to M12	No. GEK060-R3 Size: W268xD107xH57	No. GEK060-R3-L Size: W324xD166xH58	No. TB306WG1 Size: W324xD166xH58 Content: No. GEK060-R3-L, EHB305 B3-08W, 10W, 12W, 14W, 17W
 Application: Normal bolts sized M10 to M14	No. GEK085-R3 Size: W322xD107xH57	No. GEK085-R3-L Size: W324xD166xH58	No. TB306WG2 Size: W324xD166xH58 Content: No. GEK085-R3-L, EHB305 B3-10W, 12W, 14W, 17W, 19W
 Application: Normal bolts sized M10 to M14	No. GEK085-R4 Size: W322xD107xH57	No. GEK085-R4-L Size: W324xD166xH58	No. TB406WG1 Size: W324xD166xH58 Content: No. GEK085-R4-L, EHB405 B4-10W, 12W, 14W, 17W, 19W
 Application: Normal bolts sized M12 to M16	No. GEK135-R4 Size: W428xD107xH57	● The large special resin case can hold the Digital Torque Ratchet Wrench with socket attached to the socket holder (No. EHB 205, 305, 405). * However, this does not include sockets or bit sockets with an overall length exceeding 70 mm or an outer diameter exceeding 32 mm.	
 Application: Normal bolts sized M12 to M18	No. GEK200-R4 Size: W628xD107xH57		



TB306WG1 in the case

Specification

Name : Digital Ratchet

Measuring accuracy : $\pm 3\% + 1$ digit for left- and right-turning threads in the torque measuring range (digit = minimum readout unit)

For the GEK030-R2 and GEK030-C3: $\pm 4\% + 1$ digit for left- and right-turning threads in the torque measuring range.

Measuring direction : Left- and right-turning

Measuring unit : N·m (switchable to convert to kgf·m, lbf·in, lbf·ft)

Power supply : Coin-type lithium battery

No. of storable measurements : 5 (storable target torque values)

Auto OFF : The power supply will turn off automatically if an operation is not performed within approximately 2 minutes.



CAUTION

- Do not operate the ratchet outside the torque measuring range.
- Do not use pipes or other items to extend the length.
- Do not apply excessive impacts to the Digital Ratchet by using it like a hammer to strike something, or by dropping it.
- The Digital Ratchet is not waterproof.
- Wipe the Digital Ratchet off immediately if chemicals or other liquids are spilled onto it.
- We recommend periodically calibrating the torque to maintain measuring accuracy.

DIGITAL ADJUSTABLE WRENCH

Digital Adjustable Wrench expands usage wildly.

KTC is dedicated to providing each and every production site with torque control that upholds our commitment to safety, reliability, and quality.

- A digital torque wrench with the feel of an adjustable wrench.
- Storage of up to five measurements in memory ideal for frequent operations.
- Advanced torque measuring functions conform to international (ISO) standards.
- Built-in torque unit conversion function useful for maintenance on older or foreign cars.



Suitable for plumbing work which socket wrench not applied to.

●DIGITAL ADJUSTABLE WRENCH



Greater ease of use was explored down to the finest detail.

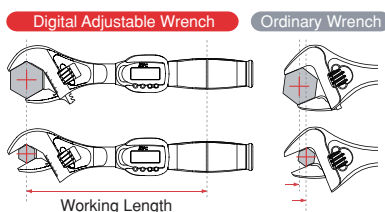
The new Digital Ratchet features a fixed grip with power sensors for accurate torque measurement regardless of the work posture and the skill level of the operator. New functions, including customizable measuring and display modes, were added to broaden the range of applications. And greater ease of use was explored down to the finest detail to yield features like a larger, easier-to-read LED lamp.



Large LED Lamp is Visible Even from the Side
Working conditions have also been improved by employing an LED lamp that is readily visible even if the display itself is in an awkward position that makes it hard to read, such as in tight, narrow spaces.



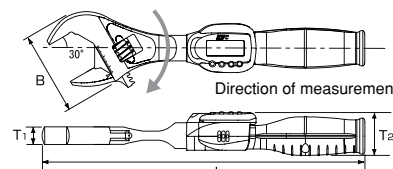
Rigid Grip with Built-in Power Sensor
The built-in sensor accurately detects and analyzes the load applied to the grip to enable more precise torque measurement regardless of the work posture and the skill level of the operator.



Working length (from rotational axis of the bolt to the force applied point) hardly changes even if the opening width changes, which enables high accuracy measurement.



Comes with a special resin case



Dimensions in mm

No.	Torque measuring Range (N·m)	Min.Readout (N·m)	Applied Size	B	L	T1	T2	▼g	Box
GEK085-W36	17~ 85	0.1	10~36	69	275.2	14.5	36	560	1
GEK135-W36	27~135	0.1	10~36	69	381.2	14.5	36	680	1
GEK200-W36	40~200	0.2	10~36	69	581.2	14.5	36	990	1

- Model selection guideline: A model in which the actual working torque value falls within 70% of the torque measuring range is recommended.
- Accuracy assured under the below conditions only.
 - shape of measuring object: hexagonal
 - direction of measurement: toward the movable jaw
- **CAUTION** • Firmly adjust the mouth to the width of the bolts and nuts.
- Turn towards the lower jaw.
- Do not apply strong impact on this tool by hitting it with a hammer, etc.

3. MEASURING TOOLS and EQUIPMENT

GAUGES



CAUTION

Gauges

- Make sure that you read the Owner's Operator Manual carefully before using the gauges.
- Do not use in areas with high levels of humidity or dust. Damage may occur if the gauges come into direct contact with water or oil.
- Look at the gauge straight on when taking readings.
- Do not use gasoline or thinners for cleaning purposes. These agents could damage the shape of the gauge.

- Do not use the gauge outside its designated usage.
- The precision of the gauge will need to be checked if it has been dropped, is cracked, or has been used in a rough manner.

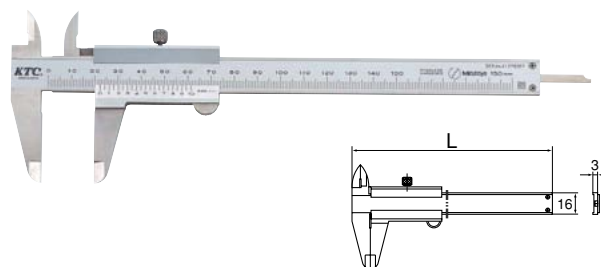
SLIDE GAUGE

No.	Measuring Range	L	▼g		
GMN -15	0~150	230	150	1	
-20	0~200	290	180	1	
-30	0~300	405	355	1	

- Long vernier for easy reading.
- Stepped surface for avoiding entry of dust, etc.

*Replacement parts are available. Check with your dealer for details.

●SLIDE GAUGE



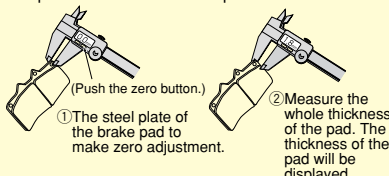
DIGI-PRO® SLIDE GAUGE

No.	Range	Minimal indication	Precision	Battery life	Battery	L	▼g		
GDN-15	0~150	0.1	±0.2	Approx. 2 years	SR44	230	140	1	

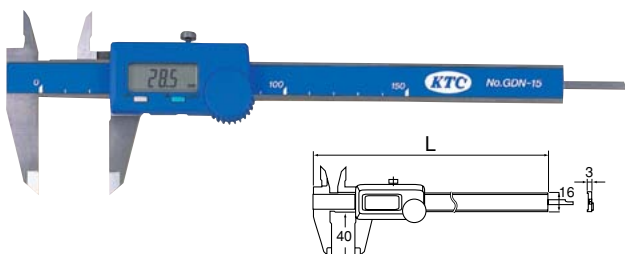
- The measurement is displayed digitally in 0.1mm unit for easy reading.
- Four measurements are possible (inner & outer diameters, depth and step).
- A long vernier scale with zero point adjustment function is adopted.

*Battery cell replacements are available. Check with your dealer for details.

It is possible to measure the pad alone.



●DIGI-PRO® SLIDE GAUGE



*DIGI-PRO® is the registered trademark of KYOTO TOOL CO., LTD.

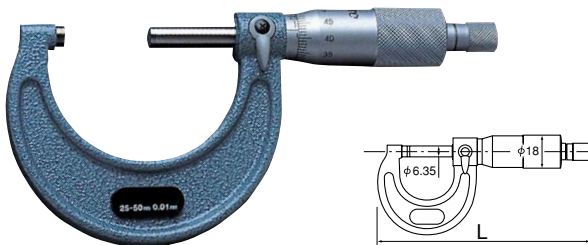
MICROMETER

No.	Measuring Range	L	▼g		
GMM-025	0~25	120	160	1	
-050	25~50	145	215	1	
-075	50~75	175	315	1	

- Painted frame for rust resistance.
- Super hand alloy tip attached.
- With constant pressure device.

*Replacement parts are available. Check with your dealer for details.

●MICROMETER



●DIGI-PRO® DEPTH GAUGE

DIGI-PRO® DEPTH GAUGE

No.	Range	Minimal indication	Precision	Battery life	Battery	L	▼g		
GDT-25	0~25	0.1	±0.2	Approx. 2 years	SR44	83	40	1	

- Most suitable for measuring the groove depth of the tires (four-wheel and two-wheel vehicles).
- With a compact body, the gauge can be used even in the tire housing.
- The measurement is displayed digitally in 0.1mm unit for easy reading.

*Battery cell replacements are specified. Check with your dealer for details.

Reference: Required minimal groove depth of tires

unit : mm

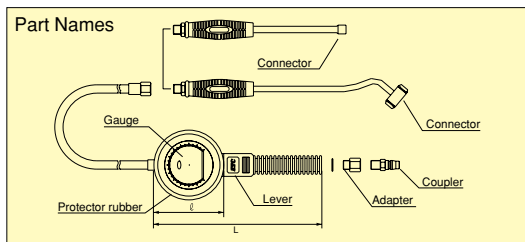
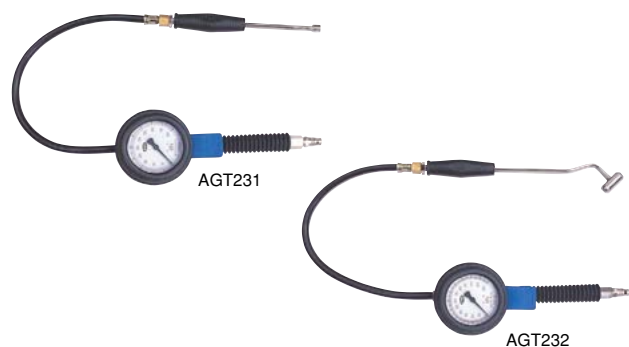
Tire types	Passenger cars and light trucks	Pickup trucks	Trucks and buses	Motorcycles
Minimal depth	1.6	2.4	3.2	0.8

• Based on Road Trucking Vehicle Law



*DIGI-PRO® is the registered trademark of KYOTO TOOL CO., LTD.

●TIRE AIR GAUGE



TIRE AIR GAUGE

No.	Measuring range	Minimal scale	Thickness	ℓ	L	▽g	㊦	
AGT231	0~ 500kPa (0~ 5kg/cm ²)	10kPa	95	100	270	800	1	
AGT232	0~1200kPa (0~12kg/cm ²)	10kPa	95	100	270	800	1	

Purpose

- To measure, increase and decrease the air pressure of automobile tires.

Application




- Tire Air Gauge 500: Passenger cars and commercial cars (vans).
- Tire Air Gauge 1200: Motorcycles, passenger cars, trucks and buses.

Features

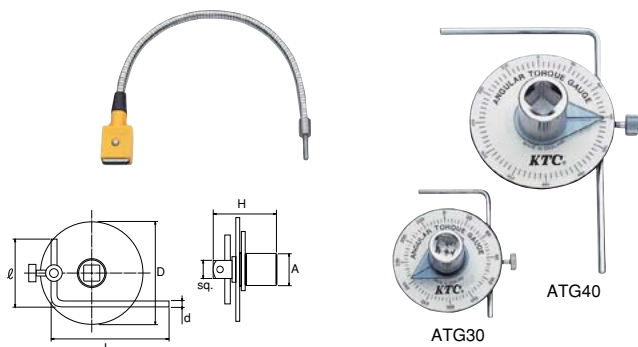
- The lever is lightweight for fine adjustments with ease.
- The gauge is large (ø70mm) and easy to read measurements. The pressure can be measured and decreased without connection to the air hose.
- With the swivel joint, the hose is not easily twisted.
- The ultra thin straight connector on the tip (the tip is 11mm diameter) enables use for almost all aluminum wheels (AGT231).
- The long type double connector facilitates use for double tires (AGT232).
- The connector on the tip is replaceable (option).

*Replacement parts are available. Check with your dealer for details.

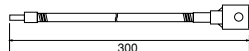
The connectors for replacement:

Connectors	Product No.
Straight connector 	AGT23-A1
Double connector 	AGT23-A2
Clip connector 	AGT23-A3

●ANGULAR TORQUE GAUGE



Flexible stopper (Compatible with both the ATG30, 40 models)



CAUTION * Do not tighten with a torque wrench when using this product.
Torque limits may be exceeded and cause damage to the torque wrench.

ANGULAR TORQUE GAUGE

No.	sq.	A	H	D	L	ℓ	d	▽g	㊦	
ATG30	12.7	24.2	55	78.5	97	52	4.8	365	10	
ATG40	19.0	34.5	76	105.5	190	120	6.4	700	10	

Usage

- For the purpose of setting the tightening angle (of degrees) of bolts. (Bolts that are to be tightened to degrees after torque settings applied.)

Characteristics

- Because the gauge measures in small 5° units, it can be used in many ways and on a variety of different manufacturers' engines. (The gauge can be used not only on domestic vehicles, but also on foreign vehicles made outside of Japan.)
- An effective flexible stopper is fitted for when locking is not possible by the L shaped stopper.

How to use the gauge:

1. Fasten the head bolt with the specified torque.



2. Set the angle torque gauge and fix it with the L-stopper or the flexible stopper.

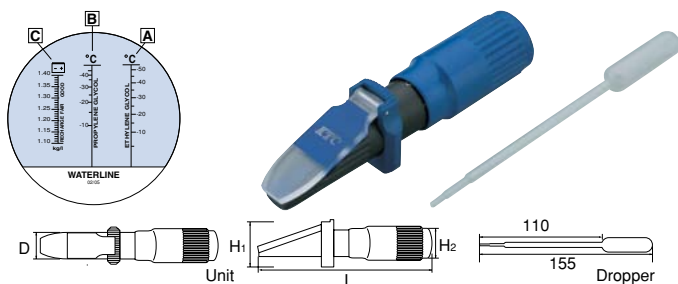


3. Set the hand of the gauge to zero.



4. Fasten it to the specified angle with the spinner handle.

●FLUID TESTER



FLUID TESTER

No.	D	H ₁	H ₂	L	▽g	㊦	
AG601	25	40	32	150	150	1	

- Attachments: Dropper for Liquid Measurements, Soft Storage Case (Cloth)

Usage

- Measuring coolants freezing temperature (LLC) (Scale "A" - "B")
- Measuring the relative density of battery electrolyte (Scale "C")

Characteristics

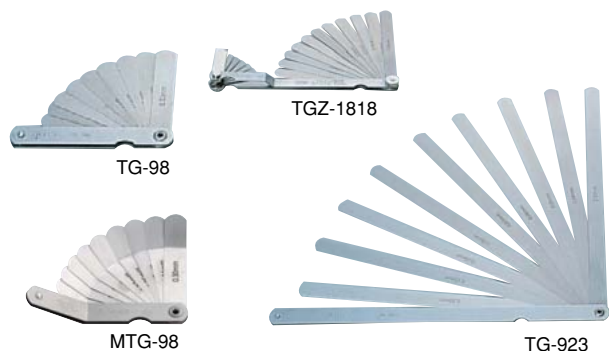
- Measurements can be made simply by dropping liquid on a prism surface and looking through the lens.

Measurable Range

- Coolant (LLC) ... Ethylene: 0~-55°C Scale ("A")
Propylene: 0~-50°C Scale ("B")
- Battery fluid ... 1.10~1.40kg/l (minimum scale of 0.01kg/l)

*Replacement parts are available. Check with your dealer for details.

●THICKNESS GAUGE



THICKNESS GAUGE

No. TG-98	▽g 34	㊦ 10
90×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30	
No. TG-923	▽g 79	㊦ 10
230×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30	
No. TGB-98	▽g 34	㊦ 10
90×13 9pcs. set (in)	.0015 .002 .003 .004 .006 .008 .010 .012 .015	
No. TGB-923	▽g 79	㊦ 10
230×13 9pcs. set (in)	.0015 .002 .003 .004 .006 .008 .010 .012 .015	
No. MTG-98 (With angle)	▽g 34	㊦ 10
90×13 9pcs. set (mm)	.04 .05 .06 .07 .08 .10 .15 .20 .30	
No. TGZ-1818 (Maintenance Gauge Set)	▽g 100	㊦ 10
For valve clearance 11pcs. set (mm)	.15 .18 .20 .25 .28 .30 .33 .35 .36 .38 .40	
For point plug 6pcs. set (mm)	.45 .50 .80 .90 1.10 1.30	
Hook for adjusting plug 1pce.		

Torque

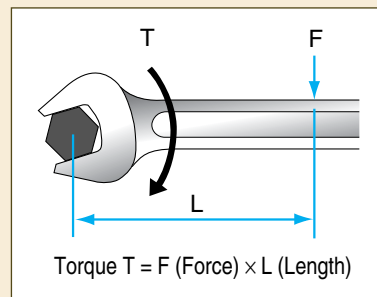
What is torque?

As shown in the diagram, the turning pressure (T) that is put upon a bolt when force (F) is applied to a certain point on the spanner's length (L).

(Example) If a force of 100N (approx. 10kgf) is applied to the spanner at a length of 1m, the torque is calculated as $(F) 100N \sim (L) 1m = 100N \cdot m$ (approx. 10kgf · m).

If a torque of 100N · m (approx. 10kgf · m) is required to be applied to a 200mm wrench, the force that must be applied to the wrench is 500N (approx. 51kgf). This can be calculated as shown below. Therefore, in normal circumstances it would be difficult to apply this amount of force to a wrench of this length.

$$\begin{aligned} F \times 0.2m &= (T) 100N \cdot m \\ F &= 100 \div 0.2 \\ &= 500N \text{ (Approx. 51kgf)} \end{aligned}$$



Measuring Torque

Torque has conventionally been shown in measurements of kgf · m. However, with the introduction of the “New Measurement Act 1993”, torque is now measured in SI units (ISO International Specification). Units of force are now shown by N (Newton), and torque N · m (Newton-meter).

1N · m is 0.10197kgf · m, and 1kgf · m is 9.8067N · m. Therefore, in actual operations, 1kgf · m can be roughly estimated to be 10N · m.

(Refer to the supplement at the end of the volume regarding Kg and N · m conversions.)

Tool basics

The difference between N (Newton) and kg

The conventional unit of kgf is the force given by the mass of a 1kg object with a standard gravity acceleration rate of 9.8m/s². However, N (Newton) units are simpler, as they refer to the application of acceleration 1m/s² of an object with a mass of 1kg.

In other cases, the unit for pressure has changed from kgf/cm² to Pa (Pascal).

Note that a unit of kgf/cm² can be changed to Pa as shown by the calculation below:

$$1\text{kgf/cm}^2 = 98.0665\text{kPa (kilo-Pascal)} = 0.0980665\text{MPa (mega-Pascal)}$$

Torque / Wrench Length

As torque is measured by “Force × Length”, larger amounts of torque can be applied as the length of the wrench becomes longer. However, the torque of the bolt is specified. There is an appropriate tightening torque for each bolt. The wrench is made to bear the necessary torque, and is of a set length to apply that torque when loosening or tightening bolts.

For example, the specified torque for most wheel nuts of passenger vehicles is set to 103N · m. If tightening a nut with a 400mm wrench, the force required will be 257.5N (approx. 26kgf) as shown below. Bolts may become over-tightened even with a moderate force, if one bends at the waist and then recoils, or if one steps on the wrench when tightening.

$$\begin{aligned} F \times 0.4m &= 103N \cdot m \\ F &= 103 \div 0.4 \\ &= 257.5N \text{ (Approx. 26kgf)} \end{aligned}$$

Take care when using longer wrenches made for use in confined areas. If too much force is applied, the bolt can be severed, or the wrench may even break.

Long wrenches are made to reach difficult places, or to apply required torque with a lesser force. They are not designed to apply excessive torque. Always take care not to apply excessive torque.

4. POWER TOOLS

ELECTRIC IMPACT WRENCHES

AIR IMPACT WRENCHES

AIR RATCHETS



4. POWER TOOLS

ELECTRIC IMPACT WRENCHES



WARNING

Electric Impact Wrench

- Do not use this machine outside its designated usage.
- Do not use outside the wrench's capability or specifications.
- Do not operate while in an awkward posture.
- Make sure that all operators are wearing safety glasses, earplugs, a hard hat, a dust mask, safety boots, and clothing that comply with the work purpose and environment when working.
- Always use head tools (such as sockets) that are compatible with impact wrenches and make sure that the trigger switch is released before replacement.
- Always make sure the head tools, etc. are securely attached before commencing work.
- Do not touch the drive areas or turning areas of head tools.

- Before use make sure there are no irregularities, such as cracks or irregular operating sounds.
- If there are any abnormalities during use, stop the wrench immediately to inspect, and have the wrench serviced if required.
- Always hold the object being worked on securely when using the wrench.
- Do not operate near flammable materials, such as gasoline (petrol) or gas.
- Do not operate the impact wrench in mid-air freely under no-load with the head tool attached as the head tool may fly off.
- Use a domestic 100V power point to recharge. Avoid usage under direct sunlight or rainfall, and outside 10°C~40°C.
- Do not recharge any batteries, other than ones specified for impact wrenches.
- Do not touch the recharger or battery pack with wet hands.
- Do not throw the battery pack into a fire.



CAUTION

Electric Impact Wrench

- Handle the machine with care. Do not throw or drop the machine.
- Do not run an impact wrench freely as it may lead to early wear and tear.
- To prevent early wear and tear, do not use the machine continuously on full power for more than a minute.

- As the impact wrench cannot control the torque, use a torque wrench to tighten if a specific torque is required.
- Do not short circuit the battery pack terminal.
- Always dispose of battery packs in compliance with local government regulations.

Cordless Impact Wrench

- With a high voltage of 19.2V, there is plenty of power for wheel nut tightening.
- Operation is hassle free as the machine is cordless, and there is no need for air hoses and electric cords.
- The grip has been ergonomically designed, with an anti-slip coating for easy handling.
- Powered by a high performance motor with a cooling fan for power and reliability.
- Comes with a resin carrying case that can store attachments and wheel nut sockets. (Sold separately)
- With the inclusion of a reserve battery, continual hassle free use is possible.
- Features an electronically controlled stepless ratio transmission, with a brake mechanism where rotation will stop when the switch is released.



1/2" sq.

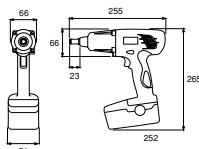
1/2"sq. Exclusive Wheel Nut Cordless Impact Wrench

No. JAE401	1
Method	Cordless Rechargeable Electric Impact
Voltage	19.2V
Maximum tightening torque	300N·m
Tightening ability · applicable bolt	M6~M16
RPM (under 0 load)	0~2500rpm
Square drive	12.7mm
Estimated work range per battery	Approx. 150 vehicle wheel nuts
Weight	1.95kg (body only) 2.95kg (with battery) 6.2kg (net weight)

*Maximum tightening torque and work capacity is only an estimate, as actual work range will vary according to conditions.

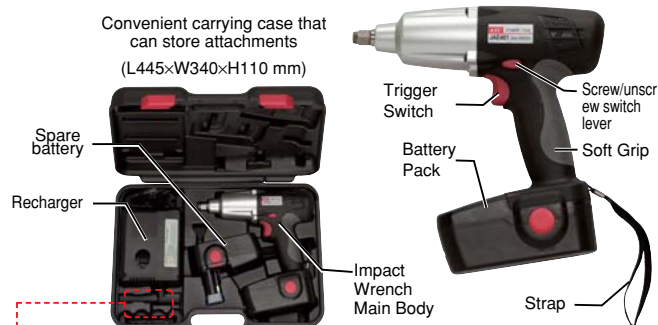
Battery Specifications

- Rechargeable Battery: Ni-Cd
- Battery capacity: 2.0Ah (Panasonic)
- Recharge time: 50 minutes (rapid recharger)
- Recharger: DC-14.4~19.2V
- Power input: AC-100V 50 / 60Hz



Replacement parts

No.	Product name	Capacity	▼kg	1
JAE401-BAP	Battery Pack	2.0Ah	1.0	1



Space for two impact wrench (BP48-17~22) wheel nut sockets.

*Impact Wrench Sockets are sold separately.



4. POWER TOOLS

AIR IMPACT WRENCHES



WARNING Air Impact Wrenches

- Do not use this machine outside its designated usage.
- Do not use outside the wrench's capability or specifications.
- Do not operate while in an awkward posture.
- Make sure that all operators are wearing safety glasses, earplugs, a hard hat, a dust mask, safety boots, and clothing that comply with the work purpose and environment while working.
- Always use head tools (such as sockets) that are compatible with impact wrenches, and remove the air hose (coupler) before replacing.
- Always make sure the head tools, etc. are securely attached before commencing work.
- Do not touch the drive areas or turning areas of head tools.
- Before use make sure there are no irregularities, such as cracks or irregular operating sounds.
- If there are any abnormalities during use, stop the wrench immediately to inspect, and have the wrench serviced if required.
- Use the specified air pressure.
- Do not use anything other than pressured air to power the machine. Use of high-pressured gas, such as oxygen or propane gas, is prohibited.
- Always attach the air hose (coupler, etc.) securely. The hose will fly off if the air hose becomes loose.
- Always hold the object being worked on securely when using the wrench.
- Do not operate near flammable materials, such as gasoline (petrol) or gas.
- Do not operate the impact wrench in mid-air freely under no-load with the head tool attached as the head tool may fly off.










CAUTION Air Impact Wrenches

- Handle the machine with care. Do not throw or drop the machine.
- Do not run an impact wrench freely as it may lead to early wear and tear.
- To prevent early wear and tear, do not use the machine continuously on full power for more than a minute.
- Add oil as required through the inlet after each use.
- As the impact wrench cannot control the torque, use a torque wrench to tighten if a specified torque is required.

■ Impact Wrench Outline Chart

*Torque levels are only estimates as these will vary according to conditions.

Type Drive angle	Special reinforced plastic body (super lightweight type)	Aluminum Body		
		Mini-type Compact-type	Standard-type	High power type
3/8" sq.		JAP350 		
1/2" sq.	JAP420EX  JAP450 	JAP425 		
3/4" sq.	JAP650 			JAP6553A 
1" sq.				JAP885 

*Please check the merchandise inventory for a product that is marked by  before placing an order.

Description



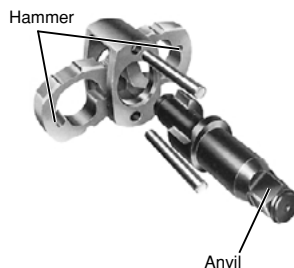
High power using the twin hammer system

Because the anvil is hit twice per each rotation of the rotor, balanced rotation and stable striking power is achieved. The twin hammer also has high durability, and recoil is low compared to output.



Air Motor with 7 Vanes

By adding one more vane than existing line and enhanced rotation efficiency.



Siebel Inlet

Prevents the inlet rotation from twisting the hose.



Teasing Throttle

Precise rotation is controlled by the trigger; this allows a smooth operation for loosening and tightening.



One-Push changeover switch

One-Push changeover switch in one hand.



3/8"sq. IMPACT WRENCH (COMPOSITE TYPE)

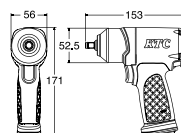
No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP350	11,700rpm	0.481m ³ /min	NPT1/4"	8mm

• Attachment: 1 Air Coupler (20PM)

Little noise and Low Air Consumption Type for an eco-friendly



- High power and lighter New model of twin hammer.
- High rotational efficiency by new model air motor adopted 7vanes.
- Teasing throttle which can adjust rotation speed by pulling trigger
- Siebel Inlet which prevents the inlet rotation from twisting the hose.
- One-Push changeover switch in one hand.



The regulator and the changeover SW; easy to operate.

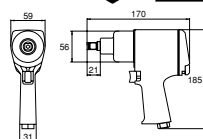


1/2"sq. "MINI-PACT"

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP425	8,000rpm	0.6m ³ /min	PT1/4"	8mm

• Attachment: 1 Air Coupler (20PM)

Lightweight high-powered model, the most balanced type in the series.



Recommended Air Hose JAH-080



1/2"sq. ULTRA-LIGHT 1/2"sq. IMPACT WRENCH

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP420EX	10,000rpm	1.07m ³ /min	PT1/4"	8mm

• Special reinforced plastic body • Attachment: 1 Air Coupler (20PM)



This model succeeds the JAP420.



Bidirectional Independent Air Regulator

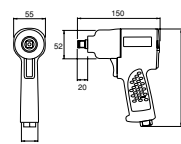
Output adjustments can be made through the air regulator for both left/right rotations.

World's lightest in its class

The world's lightest impact wrench, usable for removal/installation of tires at 1/2" sq. The most advanced reinforced plastic is used for the body that reduces the weight of the tool and assures the strength equivalent to a conventional aluminum body. Unlike an aluminum body, the plastic body ensures firm gripping with its non-slip surface.

High Power

For its main application, installing/removing tires, the impact wrench has a torque of 320 to 360N·m. The reverse bias motor, which provides torque for loosening (left rotation) is stronger by 10% than the torque for fastening. (Right Rotation: 320N·m, Left Rotation: 360N·m)



Regulator for Left/Right Rotation, and the Rotation Changeover Lever



Recommended Air Hose JAH-080

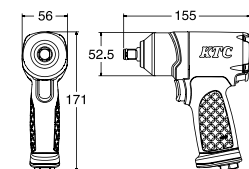


1/2" sq. IMPACT WRENCH (COMPOSITE TYPE)

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP450	10,000rpm	0.39m ³ /min	NPT1/4"	8mm

• Body of reinforced plastic • Attachment: 1 Air Coupler (NPT1/4)

By using aluminium hammer case and composite body provides users with weight saving, high mechanical strength and high durability.



- High power and lighter New model of twin hammer.
- High rotational efficiency by new model air motor adopted 7 vanes.
- Teasing throttle which can adjust rotation speed by pulling trigger
- Siebel Inlet which prevents the inlet rotation from twisting the hose.
- One-Push changeover switch in one hand.

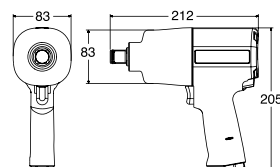
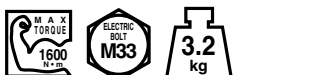


The regulator and the changeover SW; easy to operate.

3/4" sq. IMPACT WRENCH (COMPOSITE TYPE)

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP650	6,320rpm	1.133m ³ /min	NPT3/8"	11mm

• Body of reinforced plastic • Attachment: 1 Air Coupler (NPT3/8) 1 Air Regulator



- High power and lighter New model of twin hammer.
- Max 1600N·m high power is equally of 1"sq. class
- Teasing throttle which can adjust rotation speed by pulling trigger
- Siebel Inlet which prevents the inlet rotation from twisting the hose.
- One-Push changeover switch in one hand.



The regulator and the changeover SW; easy to operate.

1" sq. LARGE SIZE 1"sq. "MEGA-IMPACT"

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAP885	5,000rpm	2m ³ /min	PT1/2"	11mm

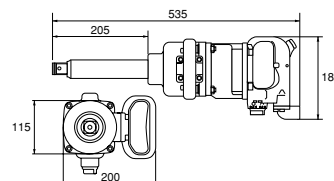
• Attachment: 1 Air Coupler (40PM)

This 1-inch Impact Wrench has the highest torque for its class with an output range up to a maximum torque of 2000N·m.

The tires of large trucks can be easily removed/installed.



Recommended Air Hose JAH-110



*MEGA-IMPACT is a registered trademark of KYOTO TOOL CO., LTD.

AIR HOSE

No.	Inner diameter	Outer diameter	Hose Color	diameter	Hose plug	Hose socket
JAH-065	ø6.5mm	ø10mm	10m	Red	Polyurethane ø10.1×43.5	ø10.1×53.4
JAH-080	ø8.0mm	ø12mm	10m	Blue	Polyurethane ø12.5×46	ø12.5×55.9
JAH-110	ø11mm	ø16mm	10m	Orange	Polyurethane ø16.5×52	ø16.5×61

- Hose sockets and hose plugs are both manufactured by Nitto Koki.
- Attached with 30PM plug and 30SM socket.
- The color of the hose is orange (distinguishable).

JAH-065

JAH-080

JAH-110



AIL TOOL OIL

No.	Net	Container Size	Box
YCO -280	280ml	ø50mm×H210	1

- Oil made especially for air tools.
- Suitable for air tools with high RPM.



4. POWER TOOLS

AIR RATCHETS



WARNING

Air Ratchets

- Do not use this machine outside its designated usage.
- Do not use outside the ratchet's capability or specifications.
- Do not operate while in an awkward posture.
- Make sure that all operators are wearing safety glasses, earplugs, a hard hat, a dust mask, safety boots, and clothing that comply with the work purpose and environment while working.
- Always use head tools (such as sockets) that are compatible with impact wrenches, and remove the air hose (coupler) before replacing.
- Always make sure the head tools, etc. are securely attached before commencing work.
- Do not touch the drive areas or turning areas of head tools.

- Before use make sure there are no irregularities, such as cracks or irregular operating sounds.
- If there are any abnormalities during use, stop the ratchet immediately to inspect, have the ratchet serviced if required.
- Use only the specified air pressure. Do not use any power source other than compressed air.
- Always attach the air hose (coupler, etc.) securely.
- Always hold the object being worked on securely when using the ratchet.
- Do not operate near flammable materials, such as gasoline (petrol) or gas.
- Watch for Air Ratchet recoil at the beginning of loosening or at the end of tightening operations.



CAUTION





Air Ratchets

- Handle the machine with care. Do not throw or drop the machine.
- Do not run a ratchet freely as it may lead to early wear and tear.
- To prevent early wear and tear, do not use the machine continuously on full power for more than a minute.

- Add oil as required through the inlet after each use.
- As the ratchet cannot control the torque, use a torque wrench to tighten if a specified torque is required.

Air Ratchet Overview

*Torque levels are only estimates as these will vary according to conditions.

Type Drive Angle	Mini-type	Standard-type	High-speed type	Power type	Recoilless type
1/4" sq.	JAR203A 				
3/8" sq.					JAR311 
1/2" sq.		JAR407A 			JAR411 

Description



■Twin Pole & Damper System

A new system is used with the gear structure that allows sound rotation at high speeds without gear slippage.



■Regulator Ring

Simply twist the regulator ring to switch rotating speed.



■Teasing Throttle Lever

The throttle lever controls precise rotation adjustments.



■Recoilless Mechanism

Work can be carried out without jamming one's hand when working in confined areas.



■360-degrees rotational exhaust

The exhaust position can be set in accordance with each operation as required.



● MINI-TYPE 1/4"sq. MINI-RATCHET

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR203A	200rpm	0.06m ³ /min	PT1/4"	8mm

• Attachment: 1 Air Regulator
Attachment: 1 Air Coupler (20PM)

This lightweight and compact machine is suitable for working around confined spaces, such as engines and doors.



Recommended Air Hose
JAH-065



*MINIRATCHE is a registered trademark of KYOTO TOOL CO., LTD.

*Please check the merchandise inventory for a product that is marked by  before placing an order.

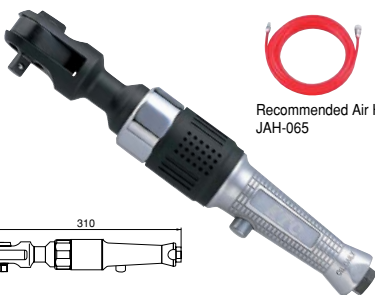
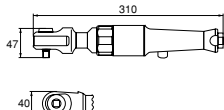
3/8" sq.

● HIGH-POWER TYPE 3/8"sq. "MEGA-RATCHET" U. PAT

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR309A	270rpm	0.65m ³ /min	PT1/4"	8mm

- Attachment: 1 Air Regulator
- Attachment: 1 Air Coupler (20PM)

Ideal for work that demands high torque, such as large buses, trucks and construction machines. This machine is also used especially when replacing claws on agricultural machines.



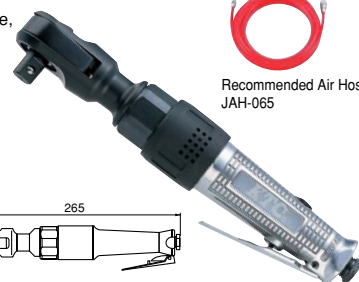
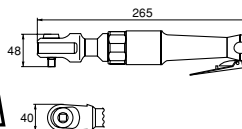
1/2" sq.

● STANDARD TYPE 1/2"sq. "POWER-RATCHET"

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR407A	160rpm	0.5m ³ /min	PT1/4"	8mm

- Attachment: 1 Air Regulator

Attachment: 1 Air Coupler (20PM)
Ideal for work that demands high torque, such as servicing of automobiles and truck engines, etc.



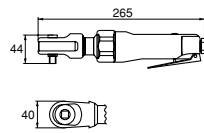
3/8" sq.

● RECOILLESS TYPE 3/8"sq. "POWER-RATCHET (NON-KICK)" PAT / U. PAT

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR311	300rpm	0.11m ³ /min	PT1/4"	8mm

- Attachment: 1 Air Regulator
- Attachment: 1 Air Coupler (20PM)

The recoilless mechanism eliminates recoil when carrying out loosening and tightening operations. This means that work can be carried out safely as hands will not become jammed when working in confined spaces.



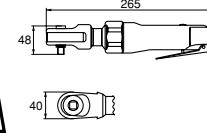
1/2" sq.

● RECOILLESS TYPE 1/2"sq. "POWER-RATCHET (NON-KICK)" PAT / U. PAT

No.	No. of rotation (unloaded)	Air consumption (unloaded)	Air inlet	Inner diameter of hose used
JAR411	300rpm	0.11m ³ /min	PT1/4"	8mm

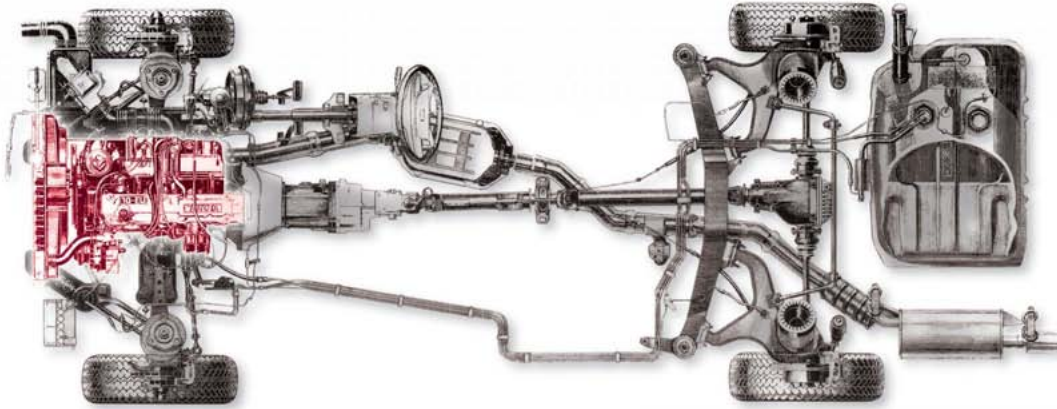
- Attachment: 1 Air Regulator
- Attachment: 1 Air Coupler (20PM)

The recoilless mechanism eliminates recoil when carrying out loosening and tightening operations. This means that work can be carried out safely as hands will not become jammed when working in confined spaces.



5. AUTOMOTIVE SPECIAL TOOLS

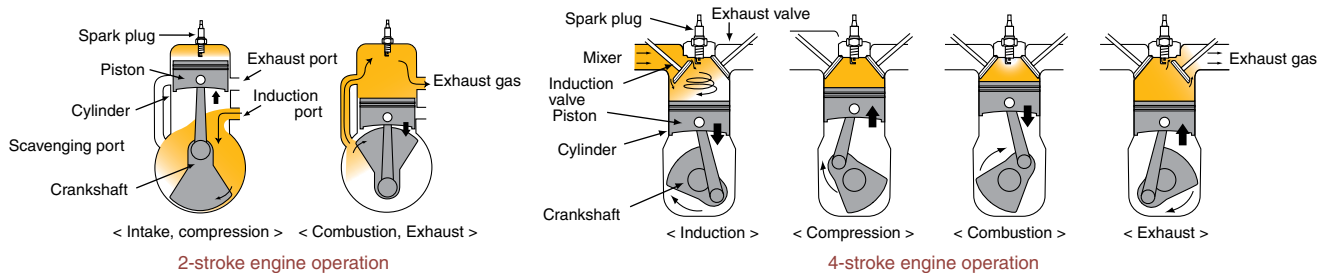
ENGINE	
DRIVELINE SYSTEM	
STEERING SYSTEM	
SUSPENSION SYSTEM	
TIRE & WHEEL	
BRAKE SYSTEM	
ELECTRIC SYSTEM	
BODY	
TRUCK & BUS	



MECHANISM 1

Combustion setup

Most vehicles nowadays use gasoline engines. However, depending on the combustion type, gasoline engines are divided into "2-stroke" and "4-stroke" categories. Gasoline is burned in the cylinder to create heat energy. Heat energy is then turned into kinetic energy as it is transferred from piston to crankshaft. One engine movement can be divided into 4 steps - induction, compression, combustion, and exhaust. 2-stroke engines only have a two-step up/down piston movement ("Induction and Compression" step and "Combustion and Exhaust" step). 4-stroke engines have four piston movements as previously mentioned. With the same displacement, a 2-stroke has a larger output than a 4-stroke. However, most cars use a 4-stroke engine due to the increased fuel economy and exhaust capability.



MECHANISM 2

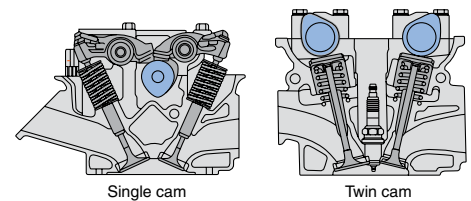
Engine Makeup

When viewed externally from top to bottom, the engine is divided into an upper cylinder head, a cylinder block, and an oil pan. Many cylinder heads and cylinder blocks are made from cast iron or aluminum alloy. A gasket is placed between the two and they are locked together. This head gasket increases air tightness, and prevents gas, and oil & coolant leaks, as it is a sheet type of packing. The cylinder head is made up of a combustion chamber together with pistons and an intake/exhaust valve & camshaft is built in. A water jacket is provided to circulate coolant around the combustion chamber. In addition, the cylinder block is the main part and houses the pistons. The lower part is made up of a shaft bearing area that holds the crankshaft.

MECHANISM 3

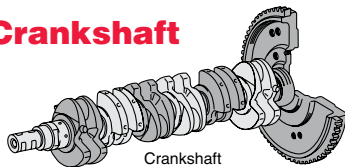
Valve System

The system that drives the engine intake/exhaust can be a single cam (SOHC) driving the valve with a cam shaft, or a twin cam (DOHC) that separately drives the induction and exhaust valves with two cam shafts. Timing adjustments can be carried out easily to the camshaft as it is of a singular design. However, the operation of the parts situated midway along the shaft is sluggish. Although smooth, high-speed RPM is possible by using just one twin cam for the two camshafts, the structure is complicated and adjustments are difficult.



MECHANISM 4

Crankshaft

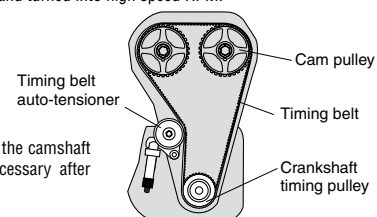


The crankshaft is a component that allows the pistons up/down movements inside the cylinder into a rotary motion, and is built into the lower part of the cylinder block. The crankshaft consists of a crank journal that is on the crankshaft's main axle, a crank pin that connects the piston's connecting rod (con-rod) and a crank arm that connects the crank pin and the crank journal. The crankshaft has been made out of special steel and cast iron for wear resistance, sturdiness and strength, so that large amounts of power can be transferred from the pistons and turned into high speed RPM.

MECHANISM 5

Timing belt

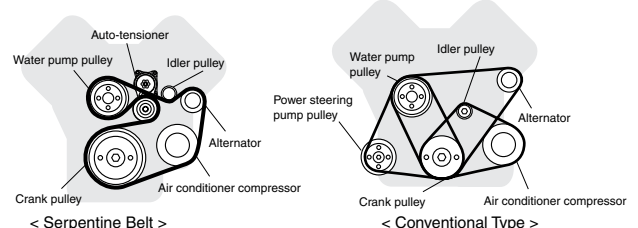
The role of the timing belt (a device with a chain instead of a belt is called a "timing chain") is to transfer power to the camshaft through the cam pulley for valve open/close operation. If the belt system is being used, replacement is necessary after approximately one hundred thousand kilometers.



MECHANISM 6

Role of the Belt and Auto-tensioner

On the exterior of the crankshaft timing pulley there is another belt that transfers crankshaft power to the alternator (generator), the air conditioner's condenser, and to the water pump that sends coolant around the engine. Conventionally, a number of belts were used. However, nowadays it has become mainstream to have a single Serpentine Belt driving all the devices at once. An auto-tensioner is installed to adjust the tension of this belt.



1.Remove the undercover→2.Remove the drain plug→3.Drain the oil→4.Remove and replace the oil filter→5.Refit the drain plug→6.Refit the undercover

Changing Engine Oil

ENGINE

●SCREWDRIVER ●T-SHAPED WRENCH ●SOCKET ●OTHER TOOLS

Remove the undercover

1

●OFFSET WRENCH ●OTHER TOOLS

Remove the drain plug

2

Change the oil easily and effectively with a **KTC** oil drainer.

Use a tray to catch the waste oil.

- Use a large wide hat type funnel to catch the waste oil.
- Use a funnel with an attached net to prevent debris such as drain plug from falling into the tank.
- Remove the wide hat for use in hard to reach areas.
- Offsetting is possible from the unit and the pipe making work easy. (*This pack (Oriru-kun) is not included)

Air pressure for easy discharge of used oil.

- Discharge is possible without a complex operation.
- Discharged hose can be stored when it is not being used.

A large tank with a level gauge attached.

- The tank's free capacity can be seen and calculated.
- Large amounts of oil can be stored safely in large capacity tanks.

Moveable parts tray

- Convenient for temporarily storing tools, i.e. draining plug, etc. Size: 95 x 150 x 45

Pipe handles allow for easy movement.

Large castors provide easy movement and stability.

- Curbs and steps pose no problems. (2 front wheels)

The castor wheels are equipped with a double brake mechanism that prevents both travel and swivel.

- The machine can be held steady during operation. (1 rear wheel and both front wheels of the machine (Oriru-kun))

Oil drainer



Discharge hose



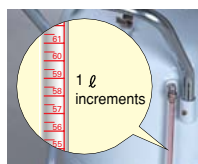
Parts tray



Handle



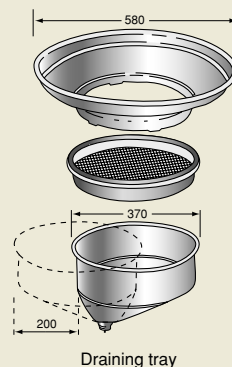
Castors



Level gauge

Drain the oil

3



Draining tray

OIL DRAINER

No.	Draining Tray		Castor's Diameter		Air Coupler Draining for Input	Draining Hose	Draining by Air Pressure	▼kg	
	Full Capacity	Wide Pad	Front (fixed)	Rear (moving)					
GOD80B	12 ℓ	●	φ 150	φ 80	20PM by Nitto Koki	φ 19 2m	●	32	

- Draining Tray Size: Large Diameter 580 (Small Diameter 370) × Height 300mm

*Comes in packs of 3

*Replacement parts are available. Check with your dealer for details.

*Only use engine oil. Do not use any other type of oil.

Tank
80 ℓ

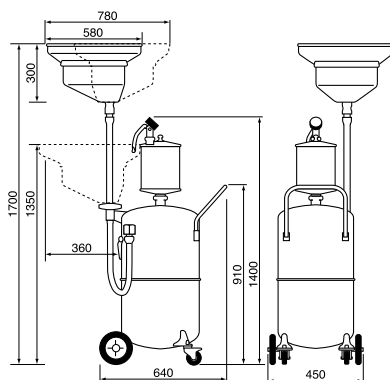
●OIL DRAINER



Multi-functional

The transparent cylinder shows the state of draining clearly.

Talk to customers while checking the waste oil.



Suction Adaptor

Suction Adaptor A	For Volkswagen
Suction Adaptor B	For BMW

Suction nozzle (detachable)

Flexible suction nozzle	Made of resin	Outer diameter φ 5×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 8×700mm
Metal suction nozzle	Copper ore	Outer diameter φ 5×700mm
Metal suction nozzle	Copper ore	Outer diameter φ 6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ 7×1,000mm

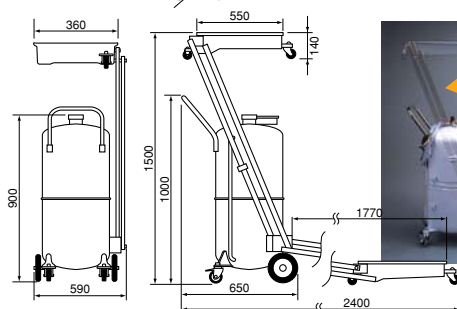
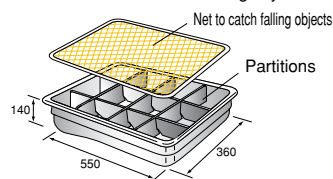
1.Remove the undercover→2.Remove the drain plug→3.Drain the oil→4.Remove and replace the oil filter→5.Refit the drain plug→6.Refit the undercover

3 Drain the oil



●OIL DRAINER

Thin tray; easy to get under vehicle.
Partition prevents splashing oil during transfer. The net catches falling objects.



OIL DRAINER

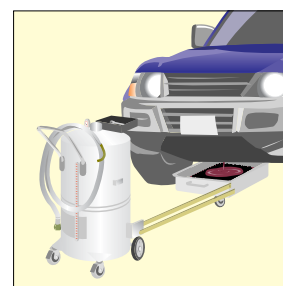
No.	Draining Tray		Castor's Diameter		Air Coupler Draining for Input	Draining Hose	Draining by Air Pressure	▼kg	
	Full Capacity	Wide Pad	Front (fixed)	Rear (moving)					
GOD115C	14 ℓ	—	φ 180	φ 80	20PM by Nitto Koki	φ 19 2m	●	46	

• Draining Tray Size: Length 360 × Width 550 × Height 140mm

Arm-type

Applicable to cars that cannot be elevated.
Convenient in a shop where high-roof vehicles or RVs cannot be elevated.

Tank
115 ℓ



●OIL DRAINER



Wide opening easy to receive waste oil

Convenient height. Reaches 1700mm, enough to approach drain at the high position. Prevents splashing of waste oil.

OIL DRAINER

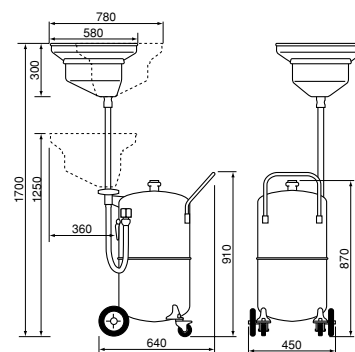
No.	Draining Tray		Castor's Diameter		Air Coupler Draining for Input	Draining Hose	Draining by Air Pressure	▼kg	
	Full Capacity	Wide Pad	Front (fixed)	Rear (moving)					
GOD80A	13 ℓ	●	φ 150	φ 80	20PM by Nitto Koki	φ 19 2m	●	35	

• Draining Tray Size: Large Diameter 580 (Small diameter 370) × Height 300mm

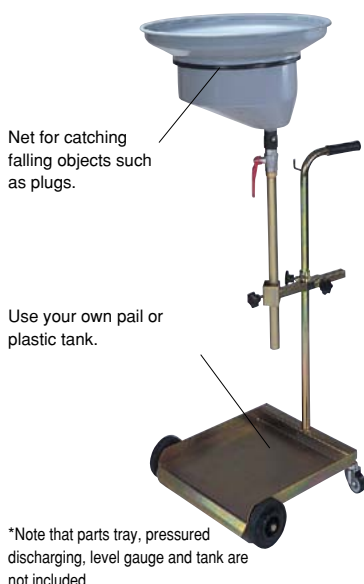
Standard Design

Valuable unit with the large tray and convenient height, useful also for car inspection.

Tank
80 ℓ



●OIL DRAINER



Net for catching falling objects such as plugs.

Use your own pail or plastic tank.

*Note that parts tray, pressured discharging, level gauge and tank are not included.

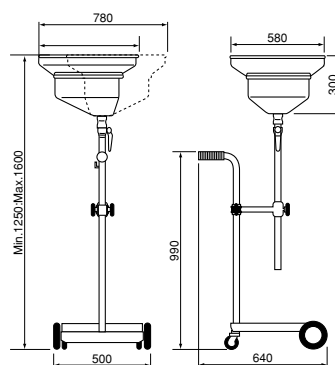
OIL DRAINER

No.	Draining Tray		Castor's Diameter		Air Coupler Draining for Input	Draining Hose	Draining by Air Pressure	▼kg	
	Full Capacity	Wide Pad	Front (fixed)	Rear (moving)					
GOD20D	13 ℓ	●	φ 125	φ 60	—	—	—	17	

• Draining Tray Size: Large Diameter 580 (Small Diameter 370) × Height 300mm

Practical Design

Excellent cost performance, Simplified model with minimal function.



OIL DRAINER

No.	Tank		Castor's Diameter	Air Coupler	Induction	Oil	▼kg	
	Full Capacity	Available Capacity	Fixed	Draining for Input	Hose	Discharge Methods		
GOD24B	24 ℓ	20 ℓ	φ 125	20PM by Nitto Koki	φ 19 2m	manual	13.7	

*Only use engine oil. Do not use any other type of oil.

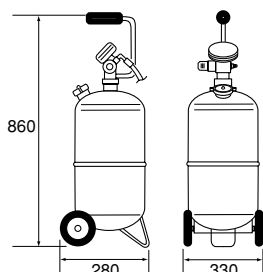
*Replacement parts are available. Check with your dealer for details.

Movable model

Small, movable, lift-out type.

Convenient for providing outside services

Tank
24 ℓ



Suction nozzle (detachable)

Flexible suction nozzle	Made of resin	Outer diameter φ5×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ8×700mm
Metal suction nozzle	Copper ore	Outer diameter φ5×700mm
Metal suction nozzle	Copper ore	Outer diameter φ6×700mm
Flexible suction nozzle	Made of resin	Outer diameter φ7×1,000mm

COMPACT OIL DRAINER (CARRING TYPE)

Expected release date: September 2005



Drain the oil **3**



KTC Oil Filter Wrench Series

There are four KTC wrenches available to deal with the various types of oil filters - cup type, chain type, band type and adjustable type. In particular, there are 31 sizes in total for the cup size - 12 sizes for domestic cars, 13 sizes for imported cars and 6 sizes for larger vehicles.

Remove and replace the oil filter **4**



Characteristics of KTC Oil Filter Wrenches

A low height, easy fit, non-slip large design

A design that is restricted in height, easy to operate, and has a large area for the oil filter wrench and the oil filter to work in (depth of the fitting area).

Improved operation!

With its gripped outer shape, slippage when fitting the oil filter by hand is reduced.

The aluminum tool weighs only 60% of conventional steel products.

Through aluminum die-casting, the wrench has been molded into a single entity* to weigh just 60% of conventional steel products.

*With a large diameter, an insert manufacturing method is employed that has applied steel onto the driving angles (Structural steel).

Drive tool choice

Depending on the working requirement, an inserting type or a hexagonal type is available. (For domestic and imported vehicles: Use the driver 3/8"sq. hexagonal 2-faced width 24mm) (For larger diameters: Use the 1/2"sq. hexagonal 2-faced width 27mm)

CUP TYPE OIL FILTER WRENCH SET D.PAT.

Cup type oil filter wrench set (12 sets)

No. AVSA12A	▼kg 4.1
Oil filter wrench	AVSA-063, 064, 067, 073, 074, 079, 080, 089, 092, 095, 099, 101
Metal case (390×245×75)	

Cup type oil filter wrench set (8 sets)

No. AVSA08A	▼kg 3.7
Oil filter wrench	AVSA-064, 067, 073, 079, 080, 095, 099, 101
Metal case (390×245×75)	

CUP TYPE OIL FILTER CARTRIDGE WRENCH SET



AVSA12A



AVSA08A

*Please check the merchandise inventory for a product that is marked by before placing an order.

1.Remove the undercover→2.Remove the drain plug→3.Drain the oil→4.Remove and replace the oil filter→5.Refit the drain plug→6.Refit the undercover

4 Remove and replace the oil filter



●CUP TYPE OIL FILTER WRENCH

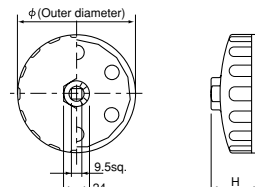
D.PAT.



Domestic cars

CUP TYPE OIL FILTER CARTRIDGE WRENCH

No.	Interior measurement	φ (Outer diameter)	H	Shape	▼g	φ	
AVSA-063	63	72	35	14 Sides	80	10	
-064	64	72	35	14 Sides	80	10	
-067	66.5	74	35	14 Sides	80	10	
-073	72.5	80	35	14 Sides	90	10	
-074	74	82	35	15 Sides	90	10	
-079	79	86	40	15 Sides	100	10	
-080	79.5	86	40	15 Sides	110	10	
-089	89	96	40	15 Sides	120	10	
-092	92	99	40	15 Sides	130	10	
-095	94.5	102	45	15 Sides	140	10	
-099	99	106	45	15 Sides	140	10	
-101	100.5	108	45	15 Sides	150	10	



Domestic car oil filter chart

Manufacturer	Car type (engine) model	Applicable oil filter wrenches	Manufacturer	Car type (engine) model	Applicable oil filter wrenches
Toyota	1AZ, 2AZ, 1NZ, 2NZ, 1SZ, 1ZZ, 2ZZ, 2Y(-099 may be used), 3Y, 3A, 4A, 5A, 7A, 3E, 4E, 5E, 3S, 4S, 5S, 4K, 5K, 7K 3GR, 4GR, K3, 1KR(Wax paper replacement type) EJ(Replacement Part - 064), HC, K3(Replacement Part - 064)	AVSA-064	Mitsubishi	4D56, 4D65, 4D68, 4M40(Pajero) 4M40(Delica Space Gear etc.), 4M50, 4M51	AVSA-101 AVSA-106B
	1G, 1JZ, 1MZ, 2MZ, 1N(-099 may be used), 1RZ (-095 may be used), 3RZ, 2JZ, 2TZ, 2UZ, 3VZ, 4VZ, 5VZ, 5V, 7M	AVSA-067		13B(-067 may be used), 20B(-067 may be used), B3(-067 may be used), B5(-067 may be used), B6(-067 may be used), BP(-067 may be used), F6A, G16A, H25A, QG13, QG15, U20A	AVSA-064
	2Y (-064 may be used), 3Y(LPG Spec)	AVSA-073		F8, FP(-064 may be used), FS(-064 may be used), G6, J5(-064 may be used), JE(-064 may be used), K8(-064 may be used), KF(-064 may be used), KJ(-064 may be used), KL(-064 may be used), RF(-079 may be used), ZY, ZJ(Demio)	AVSA-067
	11B, 13B, 14B, 15B (-099 may be used), 1C, 1FZ, 1RZ (-073 may be used), 2C (-099 may be used), 2L (-099 may be used), 1N-T (-099 may be used), 2RZ, 3B, 3F, B	AVSA-079		DE(Atenza 2.0 LF-DE)(Wax paper replacement type) VE(Atenza 2.3 L3-VE)(Wax paper replacement type)	AVSA-074
	14B, 1HD, 1HZ, 1KZ, 1N (-095 may be used), 1P, 2C (-095 may be used), 2L (-095 may be used), 3C, 3L (-095 may be used), 5L	AVSA-095		PN, RF(-067 may be used)	AVSA-079
	1W, J05, S05	AVSA-099		GA15	AVSA-080
	T2 (Cavalier)	AVSA-101B		RF(-067,-079 may be used)	AVSA-089
	1GZ	AVSA-A74		RF(Diesel) (Bongo)	AVSA-101
		AVSA-110B		R2, WL	AVSA-101B
				4HF1, 4HG1	AVSA-108B
Nissan	TB45E, VG33, VH45, SR16, VK45, CG10, CG13, KA24, SR16, SR18, SR20, QG13, QG15, QG18, VQ20, VQ30, VQ35, QR15, QR18, QR20, QR25 HR15, MR18, MR20, K6A, CR14, CGA3	AVSA-063	Honda	GY, AJ, YF(MVP, Tribute)	AVSA-A93
	F8	AVSA-067		E07A, E07Z, L13A, 15A(Fit), E05A	AVSA-063
	A12, A15, CA18, CA20, GA13, GA15, GA16, MA09, MA10, NA16, NA20, RB20 (-064 in some cases post October 1998), RB25 (-064 in some cases post October 1998), RB26 (-064 in some cases post October 1998), VG20, VG30, VG33, VH41, VH45	AVSA-080		G25, 20A, F20B(Inspire, Accord)	AVSA-079
	CD17, CD20, D5, FD35, FD42, LD20, QD32, RD28, TB42, TD23, TD27, TD42	AVSA-092		B16A, B16B, B18B, B18C, B20B, C30A, C32A, C32B, C35A, D13B, D15B, D16A, F18A, F18B, F20A, F20B, F22A, F22B, F23A, G20A, G25A, H22A, H23A, J25A, J30A, J32A, J35A, ZC(-064 may be used; -064 for models with cab spec.)	AVSA-080
	CD, TD	AVSA-095		F6A, F6B, G10, G13B, G15A, G16A, H25, J20, K6A	AVSA-063 AVSA-064
	R2	AVSA-101B		*AVSA-063 and AVSA-064 can be used on all models where required	
				3S, 2Y, 3Y	AVSA-064
				K3, 1KR(Wax paper replacement type)	
				EF, EJ, HC, HD, HE, JB, JC, K3	AVSA-067
				2C, 3C	AVSA-099
Mitsubishi	3G81 (-064 may be used), 4A30 (-064 may be used), 4G13 (-064 may be used), 4G15 (-064 may be used), 4G91 (-064, -079 may be used), 4G92 (-064, -079 may be used), 4G93 (-064, -079 may be used), 6A10 (-064 may be used), 6A11 (-064 may be used), 6A12 (-064 may be used), 6A13 (-064 may be used), 6Aseries, 4G37, 4G63, 4G64, 4G67, 6G7, 6G71, 6G72, 6G73, 6G74, D13B, D15B, D16A, G13B, G15B, G32B, G33B, G37B	AVSA-067	Daihatsu	QG13, QG15, QG18	AVSA-064
		AVSA-079		EN07(-064 may be used), EG33	AVSA-067 AVSA-079
				EJ15, EJ16, EJ18, EJ20, EJ22, EJ25, GA15, EZ30	AVSA-080*
				CD17, CD20	AVSA-092
				4XC1, 4XE1, 4XF1, 4EC1, 4EE1, 4ZB1, 4ZC1	AVSA-079
				4FC1, 4FC1-T, 4JB1, 4JG2	AVSA-089

*The 067 may be compatible for Subaru vehicles that use the AVSA-080.

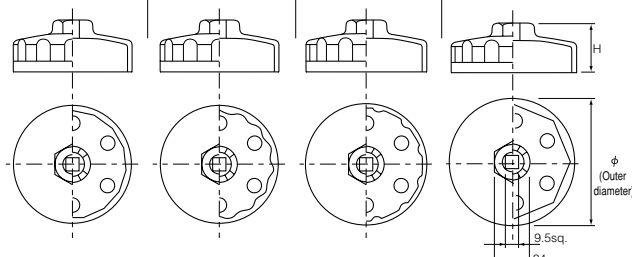
CUP TYPE OIL FILTER CARTRIDGE WRENCH

For imported cars

No.	Size dimensions	φ (Outer diameter)	H	Shape	▽g	φ
AVSA-074	74	82	35	14 Sides	90	10
-074C	74C	82.5	50.5	14 Sides	100	10
-075	75	81	35	15 Sides	90	10
-076	76	82	35	15 Sides	90	10
-086	86	95	46.5	16 Sides	120	10
-087	87	96	68	16 Sides	210	10
-A74	A74	81	35	15 Notches	90	10
-A75	A75	82	35	30 Notches	90	10
-A93	A93	100	40	36 Notches	140	10
-B76	B76	83	35	12 Indents	90	10
-B86	B86	93	40	18 Indents	120	10
-C76	C76	86	35	8 Sides	90	10
-C95	C95	103	40	10 Sides	120	10

• A wrench for removing/installing oil filters in imported cars.

074 14Sides	076 15Sides	A74 15Notches	B76 12Indents	C76 8Sides
074C 14Sides	086 16Sides	A75 30Notches	B86 18Indents	C95 10Sides
075 15Sides	087 16Sides	A93 36Notches		



Applicable oil filters for imported cars

Manufacture	Car type (engine) model	Applicable oil filter wrenches	Manufacture	Car type (engine) model	Applicable oil filter wrenches
Volkswagen	Gasoline vehicles	AVSA-074	Ford	Taurus, Seven, Mustang 3.8L	AVSA-A75
Audi	Gasoline vehicles	AVSA-074		Thunderbird, Lincoln Convertible 3.8L	AVSA-A93
Opel	Vita, Astra, Vectra	AVSA-075		Probe 2.5L/3.0L	AVSA-064
	Calibra, Omega	AVSA-092		Thunderbird	AVSA-067
	Former Omega	AVSA-092		Mustang 5.0L/V8 4.6L/5.8L /all vehicles	AVSA-074
BMW	3 series E30 model, Latter Phase, 4-cylinder	AVSA-074		Explorer	AVSA-076
	3 series, 4-cylinder (Wax paper replacement type) before 2002	AVSA-074C		Probe 2.2L	AVSA-079
	3 series, 4-cylinder (Wax paper replacement type) after 2002	AVSA-086		Laser (gasoline)	AVSA-089
Mercedes Benz	Gasoline 4, 6, 12-cylinder *1	AVSA-074		Telstar (gasoline)	AVSA-095
Porsche	All existing vehicles	AVSA-074		Festiva	AVSA-A74
	911 models before 1993	AVSA-092		Focus	AVSA-A93
Peugeot *2	All Vehicles (existing)	AVSA-B76, B86		Ka, Lincoln SL, Mondeo V6	AVSA-076
Citroen *2	2CV, GS, GSA, CX2400, CX2500Diesel	AVSA-B76		Laser (diesel)	AVSA-079
	CX2500, AX, BX, ZX, XM-V6	AVSA-B86		Telstar (diesel)	AVSA-095
	Exantia	AVSA-B86		Mondeo	AVSA-095
Renault *2	Twingo, Lucia, Megane	AVSA-B76, B86	Mazda (Ford)	Tribute/Escape 3L (V6) AJ type	AVSA-A74
Fiat	Panda, Uno	AVSA-C76		Tribute/Escape 2L (L4)	AVSA-A93
	Tipo, Coupe Fiat	AVSA-C95	Chrysler	Grand Cherokee, Cherokee	AVSA-092
Lancia	Thema V type 3.0L	AVSA-B86	Toyota made	Models after the 1996 Cavalier	AVSA-A74
	Thema 2.0L, Delta, Tedler, Prisma	AVSA-C76	Rover	Mini M/T, 100 series, 200/400DOHC1.6L	AVSA-076
Alfa Romeo	164, 147	AVSA-C76		200/400/600/800SOHC2.0L	AVSA-079
	155, 75, Spider, 145, 156	AVSA-C95		Sterling 4 door sedan	AVSA-095
Ferrari	328	AVSA-095		200/400DOHC 2.0L, 600/800DOHC	AVSA-095
	348	AVSA-B86		2.3L Discovery, Range Rover	AVSA-095
Saab	All vehicles (existing)	AVSA-075		MGF1.8L E-RD18K	AVSA-095
GM	Cadillac Fleetwood Brougham	AVSA-092	Jaguar	Straight 6, V12	AVSA-095
	Elegance Sedan, Cadillac Limousine,	AVSA-075		V8	AVSA-076
	Early Transam, Early model Camaro, Chevy G-20	AVSA-A74	Volvo	V40, S40, S60, C70, V70, S80	AVSA-087
	Grandum	AVSA-A74		Cross Country	AVSA-087
	Cadillac Concourse, Allante, Eldorado, Seville,	AVSA-A74		*Cannot be used on oil filters with round heads on the	AVSA-087
	Fleetwood Elegance Sedan, Fleetwood 60 Special,	AVSA-A74		former 70 series (models before 1998).	AVSA-087
	Fleetwood Regal, Astro, Bonneville	AVSA-A74			AVSA-087
	S-10 Blazer, Blazer Silverado	AVSA-A74			AVSA-087
	Models after the 1994 Camaro sports	AVSA-A74			AVSA-087
	Park Avenue, Existing Corvette	AVSA-A74			AVSA-087
	Saturn	AVSA-076	Hyundai	All vehicles	AVSA-079
		AVSA-076		*Limited to officially imported vehicles	AVSA-079

*1 Compatible parts may not be available for the 1994 190E due to part changes.

*2 Sizes can differ for the Renault, Peugeot, and Citroen models depending on whether the parts are factory equipped or after market long life parts. Both the AVSA-B76 and the B86 are recommended for purchase.

●CUP TYPE OIL FILTER WRENCH DESIGNED FOR IMPORTED CARS D.PAT.



● Designed to grip tightly even when the filter has been expanded by heat. To deal with an oil filter cover made of resin that is heat expanded, the AVSA-074C and 087 version grips the whole length of the filter unlike conventional types. This wrench has been designed to hold the filter tightly even when the filter is heat expanded.



Remove and replace the oil filter 4



Wax paper replacement type for the replacement of the Volvo oil filter cap

4 Remove and replace the oil filter



●BIG SIZE CUP TYPE OIL FILTER WRENCH D.PAT.



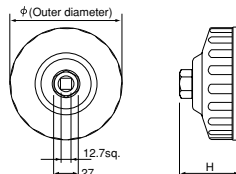
CUP TYPE OIL FILTER CARTRIDGE WRENCH					
No.	φ(Outer diameter)	H	Shape	▼g	kg
AVSA-101B	117	64	15 Sides	550	10
-106B	124	64	16 Sides	570	10
-108B	125	66	16 Sides	610	10
-110B	125	68	17 Sides	610	10
-118B	135	68	16 Sides	650	10
-125B	142	70	18 Sides	750	10

Usage

- Removal of the engine oil filter cartridge for 2-4t class trucks/buses, etc.

Characteristics

- By employing the insertion method, iron (steel materials) has been used for the drive parts and the thickness of the aluminum section has been increased for improved durability.



Applicable large diameter oil filters

Manufacture	Car type (engine) model		Applicable oil filter wrenches	Manufacture	Car type (engine) model		Applicable oil filter wrenches		
Toyota	Coaster	HB30,36V(2H)HB31,32(12H-T)	AVSA-110B	Hino	Ranger	FC3HJAA(H07D)FB4JEEA(J05C) FC3JLAA(J07C)FD2JLBA(J08C) FE7JPE(J07E)(101B may be used)	AVSA-108B		
		HDB51(1HD-FT)HDB51,31(1HD-T)	AVSA-099			FB2WEAA(W04D)	AVSA-101B		
		HZB50(1HZ) UB31(3B)	AVSA-095			Ranger2	BU212M(15B-F)	AVSA-099	
	Hiace	BU100(3B)LY211,101(3L)	AVSA-095		Ranger3	HV116HU(14B)	AVSA-099		
	Toyoace	BU102,142(15B-F)BU88(14B)	AVSA-099		Ranger4E	FD166BJ(H06C-T)	AVSA-108B		
	Dyna	FB4JEAT(J05C)	AVSA-108B		RangerFD	FD3WDAD(H06E)	AVSA-108B		
		RZU100H(3RZ-FP) WU95(1W)	AVSA-101B		Super Ranger	J08	AVSA-118B		
	Land Cruiser Prado	FJ60,61(2F)FJ80,62(3F)FZJ70, 80(1FZ-FE)	AVSA-095		Serega	TL-RUIJ	AVSA-118B		
		HDJ81V(1HD-FT)HZJ80, 77HV(1HZ)KZJ78,71(1KZ-TE) HJ60V(2H)(2H-T)HJ61V(12H-T)	AVSA-099 AVSA-110B		Dutro	S05C, S05D	AVSA-101B		
	Hilux	KZN18□, 130G(1KZ-TE)LN130G(2L-TE) LN131V,10□,8□(3L)	AVSA-099 AVSA-095		Isuzu	Elf	NPR59PR(4BD1) 2 parts supplied NHR, NKR(4JA1, 4JB1)-May 1988 NKR58EA(4BE1)June 1988 - 2 parts supplied NKR58EA(4BE1)-May 1988 - 2 parts supplied NKR66EA(4HF1)NKR71EA(4HG1) NPR70PV(4HE1) 4HJ1N, 4HJ1, 4HF1, 4HK1T UBS55(4JA1, 4JB1) August 87~ NHR, NKR(4JA1, 4JB1) June 88~ NHR69CA(4JG2) ASN2F23(TD25)	AVSA-080, 101B AVSA-101B AVSA-080, 101B AVSA-089, 101B AVSA-118B AVSA-089	
RZN18□(3RZ-FE)VZN130G(3VZ-E) VZN18□(5VZ-FE)		AVSA-073	Journey	W40(TD42T, FD35)			AVSA-092		
Daihatsu		Delta	BU212N(15B-F)V116(14B) V98(B)	AVSA-099 AVSA-095			Journey M, L	BL38SDH(4BG1)	AVSA-101B
			Mitsubishi	Canter			4D32 Large (2 parts supplied) 4D32 Small (2 parts supplied) FB308B(4DR7) 2 parts supplied FB501B(4M40),4M50 FE305B(4D32)FE516BN(4D36) FE638E(4D35)FE507B,FG337B(4D33) FE649E,FE439E(4D34T),4M51	AVSA-101B AVSA-089 AVSA-089,101B AVSA-106B AVSA-101B	Journey Q
Fighter Mignon	FK330H(6D31)	AVSA-101B					Journey Q, GR	GR433F(6HH1-S)	AVSA-118B
Rosa	BE438(4D35)BE459F(4D34T)	AVSA-101B	Forward	NRR33K2(6HH1-S)FRR32L2XN8A (6HE1-TCN)FRR32HB(6HE1)6HHI,K FRR12LC(6BG1)			AVSA-118B AVSA-108B		
Pajero	V24,V27,V47(4D56)V26,V46(4M40)	AVSA-101B	Nissan	Atlas Condor			H40(ED33 / FD33)H41 AMF22(BD30)H41(ED35)SGH40 (FD35)LG4YH41(FD42) SN6F23(TD25)SP8F23(TD27) SK4F23(NA20)	AVSA-092 AVSA-080	
Delica	P□5(4D56)	AVSA-101B					Atlas	4HF1, 4HG1, 4HE1T	AVSA-118B
Delica Space Gear	PE8,PD8,PF8(4M40)	AVSA-106B		Civilian			W40(ED33, 35, FD33, TD42T)	AVSA-092	
Mazda	Titan	WG31T(4HF1)		AVSA-108B			Safari	W40(TB42E, 42S, TD42T)	AVSA-092
		WG5AT(XA)WG5FAD(HA)WGE4T(TF) WGLAT(SL)WGM4H(TM)WGSAT(VS) WG67T(4HG1)		AVSA-101B AVSA-108B	Terrano, Mistral	D21, 50(TD27 series) Mistral R20 (TD27 series)	AVSA-092		
		Hino		Liesse	RX4JFAA(J05C)	AVSA-108B	Datsun Truck	D21, 50(VG series)	AVSA-080
Rainbow	CH1JFAA, RJ1JJAA(J08C)RH4JEEA(J05C)	AVSA-108B		Nissan Diesel	Condor	BKR69EA(4JG2) SN2F23(TD25), SP4F23(TD27) SW2S41(BD30), TE2S41(ED35) FE6A, FE6F, FE6TA, FE6B, MD92	AVSA-089 AVSA-092 AVSA-125B		
Rainbow7 M	CH3HFAA(H07D)	AVSA-108B				Fuso	6D17	AVSA-089	
Rainbow AB	AB2WGAA(W04D)	AVSA-101B							
Rainbow RB	RB1WEAA(W04D-T)	AVSA-108B							
Ranger	FD1HLAA(H06C)FD2HLAA(H07C)								
* The □ symbol in the table represents multiple models.									

* The □ symbol in the table represents multiple models.

●BIG SIZE CUP TYPE OIL FILTER WRENCH SET (5 sets) D.PAT.



No. AVSA5	▼kg 4.0
Oil filter wrench metal case	AVSA-101B, 106B, 108B, 110B, 118B (430×285×76)

CUP TYPE OIL FILTER CARTRIDGE WRENCH SET

CHAIN TYPE CARTRIDGE WRENCH

No.	Applicable Dia.	L	▼g	
CW-90140	φ90~125(Effective Dia. φ90~140)	140	530	10

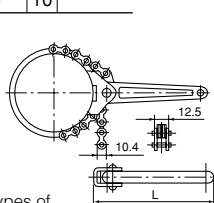
Purpose

For removing and replacing oil filter cartridge and fuel filter.

- Applicable to light and medium size cars up to 4t.

Special Features

- Give little damage on filters.
- Original flex band mechanism avoids concentrated load on cartridges.
- Wide application.
- Can be used on cartridge type filter(φ90~125)and fuel filter.
- * Due to the thickness of the chain (10.4mm), cannot be used for some types of filters with narrow niches.



●CHAIN TYPE CARTRIDGE WRENCH



Remove and replace the oil filter

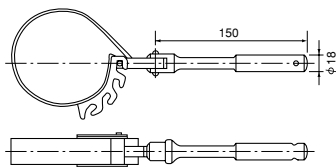
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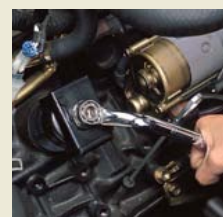
OIL FILTER CARTRIDGE WRENCH

No.	Applicable Dia.	▼g	
FF-8095	φ80~95	400	10
FF-90110	φ90~110	410	10

- Adjustable band type.
- Easy for squeezing and slip resistance.



●OIL FILTER CARTRIDGE WRENCH



KZ1-10

KZ1-15

KZ1-22

KZ1-30

●STAINLESS SCRAPER



Refit the drain plug

5

①Stripping the packing

②Attaching the drain plug

③Measuring the tightening torque

●OFFSET WRENCH

●DRAIN PLUG WRENCH

●OTHER TOOLS

●SCREWDRIVER

●T-SHAPED WRENCH

●SOCKET

●OTHER TOOLS

Refit the undercover

6

1.Remove the undercover→2.Remove the drain plug→3.Drain the oil→4.Remove and replace the oil filter→5.Refit the drain plug→6.Refit the undercover

OIL SERVICE STATION

This service station helps you replace the oil with good efficiency.

- On the top cover you can place various parts in order, such as oil container, filters and tools.
- To avoid mixing different kinds of oil, oil jug hooks help you drain oil completely.
- Variety of tools and kits in addition to side pockets. (Endurable load of the side pockets; pocket for packing : 1kg, Small and middle size pockets for AVSA : 1kg each, Large one : 3kg.)
- Oil pan is removable. Use it for draining oil. (See photo-1.)
- Large castors facilitates smooth moving of the station.
(Castor size: $\phi 127 \times 32$ for fixed type; $\phi 100 \times 51$ for movable type with stopper)
- Drawers are pulled out in two directions, so two stools can be laid out for this station.(See photo-2)

OIL SERVICE STATION SET

No. SKR823 System-F-Full set				
Number of components included in set:	72	▼kg 50	📦 1(3package)	
No. SKR822 System-S-Standard set				
Number of components included in set:	67	▼kg 48	📦 1(3package)	
No. SKR811A System-B-Basic set				
Number of components included in set:	34	▼kg 40	📦 1(2package)	
No. SKR81 Unit + Pocket				
Number of components included in set:	5	▼kg 33	📦 1(1package)	

Contents					
Description	No.	SKR81	SKR811A	SKR822	SKR823
3/8"sq.Socket(6pt.) <i>POWERFIT</i> (except inch size)	B3-08			●	●
	-10		●	●	●
	-11		●	●	●
	-12		●	●	●
	-13		●	●	●
	-14		●	●	●
	-15		●	●	●
	-17		●	●	●
	-19		●	●	●
	-21		●	●	●
	-22		●	●	●
	-24		●	●	●
	-9/16		●	●	●
	B4-26		●	●	●
	-27		●	●	●
	-32		●	●	●
1/2"sq.Socket(6pt.)	B4-1-1/8		●	●	●
	BRF3		●	●	●
3/8"sq.Ratchet Handle(Flex-Head)	BS3E		●	●	●
3/8"sq.Spinner Handle	BE3-075		●	●	●
3/8"sq.Extension Bar	-150		●	●	●
3/8"sq.-Adapter (Indents 1/4"sq × Notches 3/8"sq.) (Indents 3/8"sq × Notches 1/2"sq.)	BA23		●	●	●
	BA34		●	●	●
3/8"Hex.Wrench	BT3-08S		●	●	●
	-10S		●	●	●
1/2"sq.Hex. Wrench	BT4-17		●	●	●
3/8"TORX.Wrench	BT3-T45S		●	●	●
45°×10°Long Offset Wrench	M5-1012		●	●	●
	-1417		●	●	●
	-1921		●	●	●
	-2224		●	●	●
<i>POWERFIT</i> T.Shape Wrench With Short Handle	TH-10N		●	●	●
	Screwdriver(Flat)	D1M2-6		●	●
	-8		●	●	●
Screwdriver(Cross)	D1P2-2		●	●	●
	-3		●	●	●
Heavy Duty Screwdriver(Flat)	FD-250		●	●	●
Stainless Scraper	KZ1-22		●	●	●
Boxend Oil Filter Cartridge Wrench	AVSA-063		●	●	●
	-064		●	●	●
	-067		●	●	●
	-073		●	●	●
	-074		●	●	●
	-079		●	●	●
	-080		●	●	●
	-089		●	●	●
	-092		●	●	●
	-095		●	●	●
	-099		●	●	●
	-101		●	●	●
Boxend Oil Filter Wrench	AVSA-074		●	●	●
	-074C		●	●	●
	-075		●	●	●
	-A75		●	●	●
	-076		●	●	●
	-B76		●	●	●
	-C76		●	●	●
	-086		●	●	●
	-B86		●	●	●
	-087		●	●	●
	-A93		●	●	●
	-C95		●	●	●
Boxend Oil Filter Wrench for Big Size	AVSA-101B		●	●	●
	-106B		●	●	●
	-108B		●	●	●
	-110B		●	●	●
	-118B		●	●	●
	-125B		●	●	●
Chain Type Cartridge Wrench	CW-90140		●	●	●
Fender Cover	AYC-2		●	●	●
Oil Jog(5e)	AE501		●(2pcs.)	●(2pcs.)	●(2pcs.)
	SKR-55S		●	●(2pcs.)	●(2pcs.)
Oil Service Station	Pocket (small) for AVSA	●	●	●(2pcs.)	●(2pcs.)
	Pocket (medium) for AVSA	●	●	●(2pcs.)	●(2pcs.)
	Pocket (large) for AVSA	●	●	●(2pcs.)	●(2pcs.)
	Pocket for packing	●(2pcs.)	●(2pcs.)	●(3pcs.)	●(3pcs.)
Oil Service Station	Pocket for waste cloth	●	●	●	●

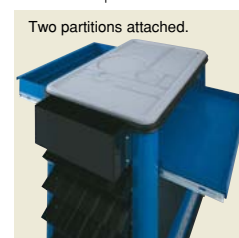
OIL SERVICE STATION

Photo-1 Removable oil pan



Oil pan size:
520(L) × 330(W) × 80(H)

Photo-2 Drawers pulled out in two directions.



Two partitions attached.



Oil Service Station
System-F (Full set)
SKR823

●OIL SERVICE STATION SET



Oil Service Station
(Main body and pockets)

●Pockets

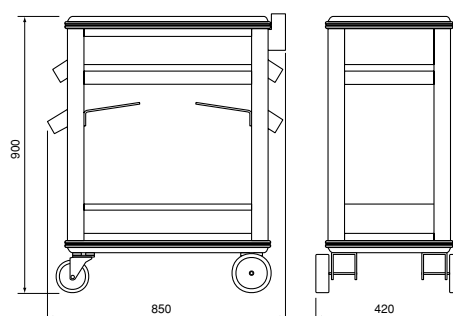
Pocket for waste cloth
SKR-55W

Pocket (large)for AVSA
SKR-55L

Pocket (medium)for AVSA
SKR-55M

Pocket for packing
SKR-55P

Pocket (Small)for AVSA
SKR-55S



Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

1 Replacing fluids
Injecting LLC
*Closing the hose when
using the coolant charger

●PINCH OFF PLIERS



PINCH OFF PLIERS

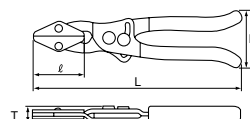
No.	L	ℓ	D	T	Opening rate	▼g
PSA34	140	33	48	5	23	75
PSA57	233	57	65	18	50	340

Usage

- Car hose closing operations.
- This tool is convenient when closing hoses in the cooling system, especially when using the coolant charger produced by KTC.
- Closing the brake hose when removing the strut, etc.
- Closing the ATF hose when removing/installing the AT.
- Closing the vacuum hose when inspecting the auxiliary instruments under deceleration, etc.
- Closing the fuel hose when changing the fuel filter.
- Closing the fuel and oil hose for motorcycles.
- The multi-level automatic lock function is employed, enabling the tool to lock the pliers position simply by grasping, allowing for speedy operation.
- Opening the grip will release the locked pliers position.



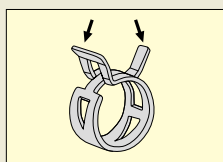
• Check that the pliers are firmly locked into position before use.



Outer diameter of applicable hose

PSA34	Outer diameter	φ 19mm
PSA57	Outer diameter	φ 41mm

2 Hose replacement
①Removing the
hose clip.



●HOSE CLIP PLIERS



HOSE CLIP PLIERS

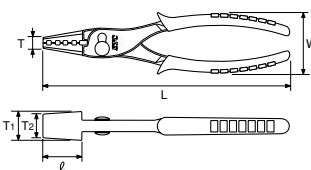
No.	L	ℓ	W	T	T ₁	T ₂	▼g
AE92	210	32	50	9	25	20	300

Purpose

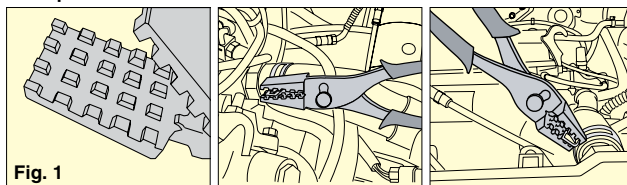
- Removing/installing hose clips.

Application

- Hose clips with diameter of 12-47mm.(except for screw types)
- The teeth edges are designed for firm grasping, preventing the hose clip from sliding out of the pliers, this is useful in confined or hard to reach areas. (Fig. 1)
- The shape (trapezoidal) of the teeth allows grasping from vertical, horizontal, diagonal, and other various positions.
- A hilt equipped resin grip allows easy gripping and prevents slippage.



Examples of use



2 Hose replacement
②Since the drive area
is 3/8"sq., it can be
used together with
other power tools.



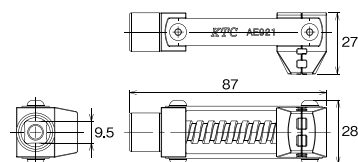
Example in use: AE921+BE3-150+BE3-Q

●HOSE CLIP TOOL (for mini-vehicles)

NEW

HOSE CLIP TOOL

No. AE921	▼g150	1
HOSE CLIP TOOL		





Application

- Hose clip fixing the cooling system hose of Suzuki vehicles (Wagon R, etc.) (Vehicle type with the lock position facing side or downward)
- Vehicle type that shows difficulty in work with pliers type tool

Features

- Work can be conducted without removing sensors, duct, hose, etc. near the hose clamps.
- Since the tool is a screw type, it can be held with hose clamps loosened. Assembly/removal can be conducted at a narrow work space.
- Since the tool has the same end shape as that of AE92, the hose clip does not slip and the tool does not come off abruptly.

* BE3-Q in the photo is not included in the price.

SET		RADIATOR HOSE PLUCKER					
No. AE45T		▼ g 300					
RADIATOR HOUSE PLUCKER		AE45-1, 2, 3					
No.	d	D	ℓ	L	▼g		
AE45 -1	6	26	90	185	100	10	
-2	6	26	90	185	100	10	
-3	6	26	90	185	100	10	

Purpose

- Pulling out hoses and removing stickies.

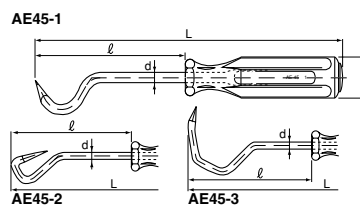
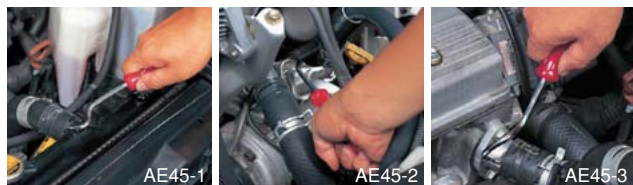
Special Feature

- 3 kinds of pluckers with specially shaped tips for use in narrow spaces.
- Specially angled tip for covering even back side of a hose.

● RADIATOR HOSE PLUCKER

Hose replacement
③ Pulling out hoses
and removing
stickies

2



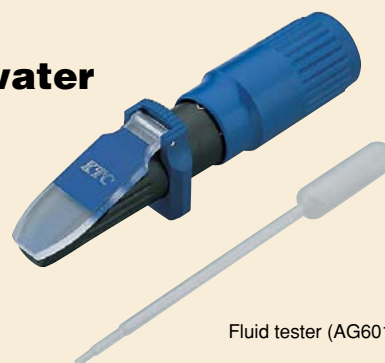
Basic knowledge of tools 4

About the LLC

● The role of the engine radiator and water

The engine is continuously exposed to heating from the combustion of fuel, and will naturally overheat if left in this state. The radiator plays the role of sustaining the optimum temperature by cooling the engine.

Cooling devices are divided into air-cooled and water-cooled types. Most cars commonly use the water-cooling system. The water-cooled type circulates cooled water (coolant) throughout the engine system using a water pump in order to cool the engine. The water that is heated from this process is directed back to the radiator for cooling, and is circulated back to the engine. This process is repeated.



Fluid tester (AG601)

● LLC

Because the liquid used in the radiator is mainly water, freezing will occur in temperatures less than 0°C, and boiling and evaporation will occur in temperatures over 100°C. Both of the above situations will cause engine trouble. LLC is a product that lowers the water freezing point, and raises the boiling point.

Previous coolants were known as anti-freeze, however, improvements have been made to these products giving them a longer useful life. These are now known as LLC (Long Life Coolant). One of the disadvantages of using anti-freeze was that it would have to be replaced after winter whereas the LLC can be used all year around. One of the disadvantages of using LLC is that the radiator can become blocked causing damage to the water pump and cause overheating and then possible engine trouble.

LLC concentration and freezing temperatures standards

LLC concentration	Freezing temperatures
30%	-15°C
35%	-20°C
40%	-24°C
45%	-28°C
50%	-36°C
55%	-41°C
60%	-54°C

● LLC concentration

There is a 30% concentration ratio of LLC in new vehicles. Because the freezing temperature is lowered when the concentration is high, the concentration ratio is increased in cold areas. However, the concentration ratio should not exceed 60%. LLC concentration ratios relating to cold temperatures are shown above. Current temperatures can be tested with the fluid tester (P. 227).

● LLC color

LLC main ingredient, ethylene glycol, is a poisonous product. The coolant is colored to help prevent mistaken use. The coolant is red mainly in Toyotas and green mainly in Nissan vehicles. However, the color does not affect performance. However, avoid using two different colored coolants.

● LLC toxicity

LLC main ingredient is ethylene glycol and is poisonous to humans. Drinking LLC may lead to death. The recently introduced PRTR law is specific to special chemical substances. Care must be taken when handling.

Tool basics

PRTR Law

PRTR (Pollutant Release and Transfer Register): This law deals with waste matter (pollutants) entering the environment and aims to improve the management of the environment. This law has been designed to build a system that carries out strong control of chemical substances and environmental protection. The law was put into practice in 2001, and obligates those who deal in pollutants, which can endanger the health of others, to understand their actions and report to the Government.

● KTC's CO₂ emission cutting proposal

Presently, problems concerning the cutting of CO₂ emissions have been getting much attention. However, KTC believes that CO₂ emissions can be reduced over and above maintenance alone.

This is believed to be the eliminating of idling after LLC is injected when carrying out the air bleeding process. By using the KTC's Coolant Charger (No. AE401), the air bleeding process can be completed without idling after the LLC has been added. This means that if the Coolant Charger was to be utilized in every service center that over 30 million cars (*1) that have their LLC replaced annually when renewing their fitness certificate, would not need to be idling while the process was carried out. In other words, the air bleeding process time for each vehicle is around 30 minutes. This calculates to about 0.4 liters of fuel and in CO₂ emission terms, around 270 g (*2). By this calculation, there is around 8,100t of CO₂ being emitted into the atmosphere every time the renewal process is carried on the vehicles out there today.

*1 The actual figure may be different to what is stated here as the figure of 30 million yearly fitness certificate checks includes light weight, as well as diesel powered vehicles.

*2 This data has been supplied by the Environmental Department

Replacing various belts

ENGINE

Can reach a wide range of locations.

FREE POSITION WRENCH SET

●FREE POSITION WRENCH SET PAT.P. D.PAT.

Belt replacement 1

Usage

- Can be used to tighten and loosen nuts and bolts in confined areas.

<Example>

- Vehicle engine starters on automobiles, on engine mounts, on manifolds, fitting air conditioners
- Bolts, adjusting bolts on various types of belts, around drive shafts, flanges, and around piping

Characteristics

- Can be used on a wide range of different sized nuts and bolts. (Photo 1)
- Because the wrench and wrench handle are separate entities, they can be combined at the rear side of the wrench socket to be used in a variety of ways. (Photo 2)
- The wrench itself can be set in 24 different positions at 15° intervals off the handle so that work can be carried out at a variety of different angles.
- If the wrench bit and the exclusive handle are used in the "free" state, the wrench may be operated at a high speed. (Photo 3)
- The wrench is a compact, flat ratchet type (15°)



<Example>
Wagon R
Compressor Removal/Installation

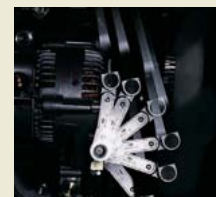
(Photo 1)
Wide variation of sizes



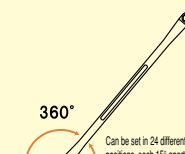
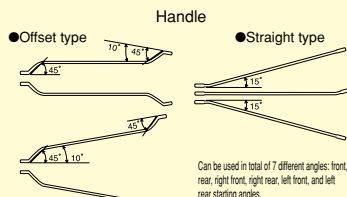
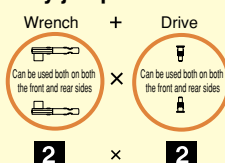
(Photo 2)
Wrench and handle are separate for combination as required



(Photo 3)
Fast operation is possible with crank motion.



The wrench, drive and handle combination makes any job possible.



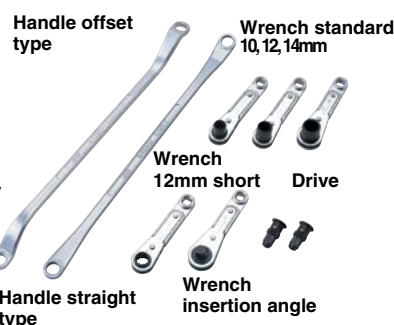
●Free positioning wrench set

No.	ATE104	▼kg1.2	1
Free positioning wrench	AE101-10, 12, 14		
Free positioning wrench handle	AE102 <Offset>		
*including drive			

No.	ATE107	▼kg1.7	1
Free positioning wrench	AE101-10, 12, 14		
12mm short	AE101-12S		
Insertion angle 3/8"sq.	AE101-3R		
Free positioning wrench handle	AE102 <Offset>		
*including drive			
	AE103 <Straight>		



*ATE104, 107 includes blister tray
Tray size (L450×W150×H40)



●Free positioning wrench/ standard

No.	S	D	T	t	d	L	▼g	5
AE101-10	10	24	24.5	10.5	14.5	106	130	5
-12	12	24	27.5	10.5	17	106	130	5
-13	13	28.5	28	11.5	18.5	106	150	5
-14	14	28.5	28	11.5	20	106	150	5
-15	15	28.5	28	11.5	21	106	150	5
-17	17	34.5	28.5	11.5	24	113	180	5
-19	19	34.5	28.5	11.5	26	113	180	5

●Free positioning wrench

No.	S	D	T	t	d	L	▼g	5
AE101-12S	12	24	14	10.5	17	106	115	5

- Suitable for cooler belt adjustment bolts on the Suzuki Alto Wagon R (F6A, K6A).

●Free position wrench/3/8"sq.

No.	▼g	5
AE101-3R	155	5

- As the tools are equipped with an insertion angle, it is possible to use the wrench on a 9.5sq standard semi-deep socket or a deep socket, etc.
- The wrench can be used on automobiles ranging from light to One-box type (including imported vehicles). <Recommended for 5.5~14mm hexagonal bolts and nuts with 2-faced widths.>
- Although limited, can also be used as short wrench.

●Free positioning wrench handle (offset type) <AE102-HD+AE102-DA>

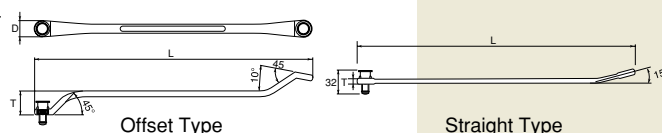
No.	D	T	L	▼g	5
AE102	22	31	370	320	1

●Free positioning wrench handle (straight type) <AE103-HD+AE102-DA>

No.	D	T	L	▼g	5
AE103	22	7	370	210	1

[Free positioning wrench series chart]

Product name	Product number	AE102	AE103	ATE104	ATE112	ATE107
Wrench	Standard					
	AE101-10			●		●
	-12					
	-13					
	-14			●		●
	-15					
	-17					
	-19					
Handle	12mm short					●
	Insertion angle 3/8"sq.				●	●
	Offset type (45°-45°×10°)	●		●		●
	Straight Type (0°×15°)		●		●	●
Drive		●	●	●	●	●×2

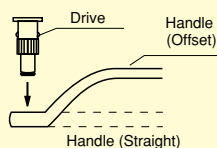


● Method of use

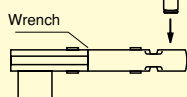
Connecting the wrench and the handle

- ① Insert the drive to the back of the handle.
- ② Push down on the top of the driver, to insert the driver into the square shaped hole of the wrench.

① Insert the driver

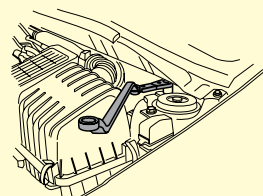
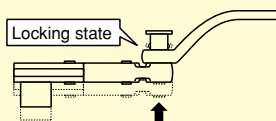


② Push down on the top of the driver, to insert.



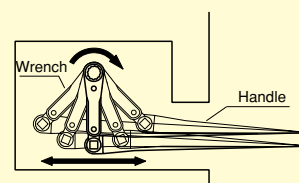
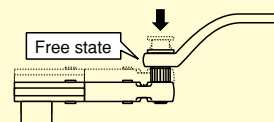
Loosening/tightening bolts & nuts

Lock the connecting area of the handle and the wrench together and then set in the desired angle.
(The wrench can be set in 24 positions at 15° increments)



Place in a free state for high speed rotation

High speed crank operation is possible by pulling and pushing the handle.



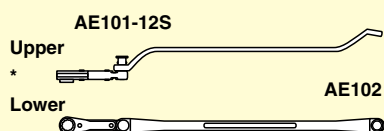
● Examples

The illustrations below show 2 pictures. The upper picture shows what the tool looks like when pieced together. The lower picture shows the fixed angle that the tool is used at.

① Suzuki Alto

Cooler belt adjustment

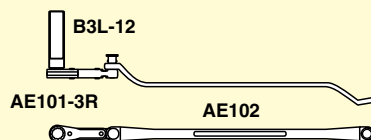
- A thin shaped socket is extremely effective when used in engine compartment



② Daihatsu Move

Alternator belt adjustment

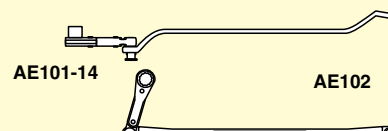
- This type is easy to use inside engine compartment.



③ Nissan Cube

Starter installation bolt

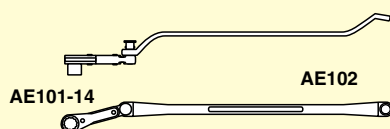
- This type can be used in a lifted up position.



④ Toyota Bitz

Drive shaft mount stay

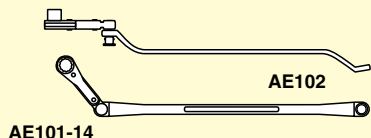
- This type can reach deep areas if in a lift up position.



⑤ Toyota Voxy

Strut tower installation bolt

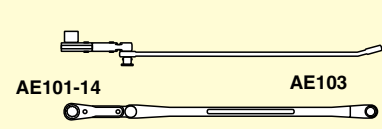
- Excellent for replacing the struts in engine compartment.



⑥ Mitsubishi Chariot Grandes

Power steering belt adjustment

- Can be used in pipe crossing in engine compartment.



Serpentine belt replacement

ENGINE

5 AUTOMOTIVE SPECIAL TOOLS

ENGINE

BELT TENSIONER WRENCH SET

No. ATE175	▼kg 1	1
Belt tensioner wrench	AE107-500	
Exclusive socket 14,17,19mm	AE107-14W,17W,19W	
3/8" sq. Driver	AE107-3A	

Usage

- This is an exclusive tool for loosening the tensioner when replacing belts used in vehicles that are fitted with auto-tension type drive belts (with 1 belt only).

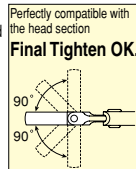
Application

- Is effective for working on domestic vehicles from light-weight to normal passenger vehicles, and especially on One-box type vehicles (FF vehicles).

Characteristics

Wrench

- This is a thin, exclusive long rotating head ratchet off-set wrench used for working on vehicles fitted with auto-tensioning. A large swing angle can be taken while working inside small engine compartments without interfering with pulleys and other obstacles.
- Provides easy operations on damper type auto-tensioners fitted in many heavy FF vehicles because of a non-slip, easy hold, and resin type grip.

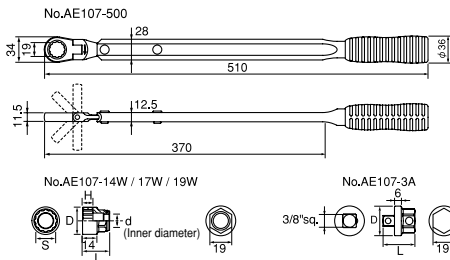
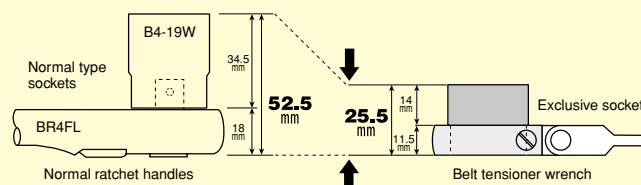


Exclusive socket 3/8" sq. Driver

- The exclusive socket can be set at 14/17/19mm, and is convenient where socket length must be changed frequently.
- A pierced type of thin design that helps eliminate slipping off the bolt.
- Normal sockets can also be used as the 3/8"sq driver is installed onto the offset area of auto-tensioner wrench.

●Comparison of the head section

(in the case of using 19mm sockets)



Replacement parts: Belt tensioner wrench

No.	▼g
AE107-500	850

Exclusive Socket 3/8"sq. Driver

Product name	No.	S	D	d	H	L	▼g
Exclusive socket 14mm	AE107-14W	14	22	11	8.5	26	35
17mm	-17W	17	24	13	9	26	40
19mm	-19W	19	26	13	9	26	40
3/8" sq. Driver	-3A	-	26	-	-	28	60

●BELT TENSIONER WRENCH SET

Belt replacement **1**

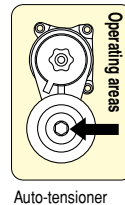
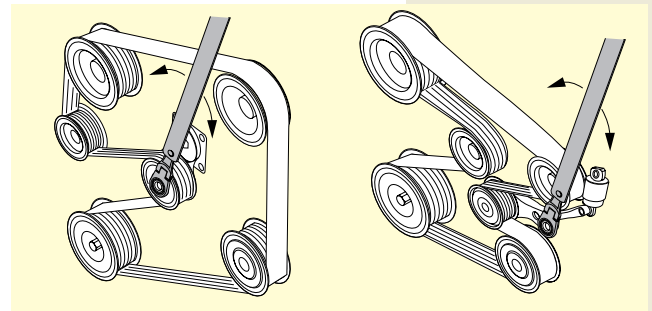


Exclusive socket

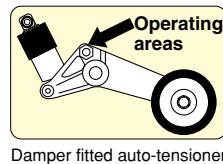
Covers a wide range of domestic vehicles.



Insert the exclusive hexagonal socket into the offset section.



Auto-tensioner



Damper fitted auto-tensioner

- CAUTION**
- Make sure that all operators read the Owner's Operator Manual carefully before usage.
 - Do not use for non-specified purposes.

ENGINE

Serpentine belt replacement

1 Belt replacement

●BELT WRENCH SET (for mini-cars only)

BELT WRENCH SET (for mini-cars)

No.	ATE109	▼g 410	1
	Belt wrench		
	Proprietary socket		

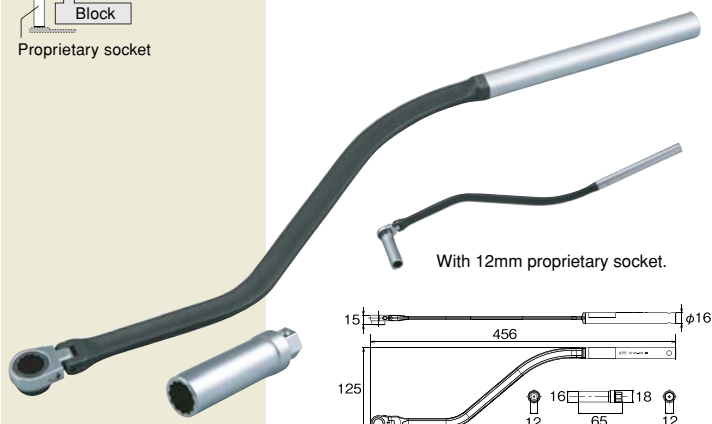
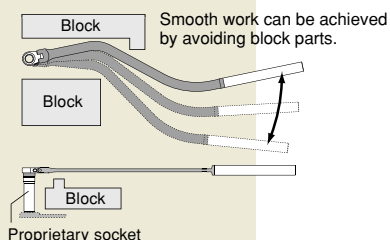
No.	Name	▼g	
AE109-450	Belt wrench	345	
AE109-12W	Proprietary socket	65	

Application

- Replacement and adjustment of Suzuki air conditioner belts (Wagon R [After September, 2008], MR Wagon [After January, 2006]) (Only the main unit)
- Replacement and adjustment of Daihatsu air conditioner and power steering belts (Move [after December, 2008], Tanto [After December, 2007]) (Main unit + proprietary socket)

Features

- Smooth work can be achieved by avoiding block with its unique shape.
- Optimum shape can be obtained for the engines of Daihatsu vehicles using the proprietary socket.
- Since a ratchet head is used at the end, work can be comfortably performed.
- Working time can be reduced only by removing the license plate.
- Removal of the bumper for replacement of the belt is not required.



Since work can be performed only by removing the license plate, it is effective for reduction of time.

●BELT HOOK TOOL

Expected release date: July 2005

BELT HOOK TOOL

No.	d	D	L	ℓ	▼g	1
AE108	6	34	660	540	200	1

Removal of auto-tension type drive belts is easier when a belt tensioner wrench (No. ATE175) is used as a set.

Usage

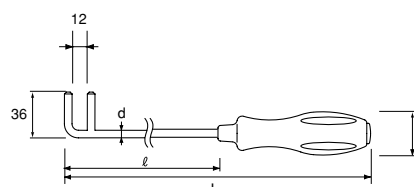
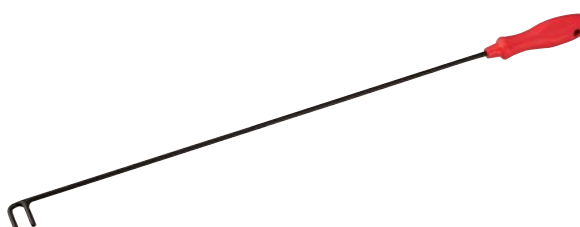
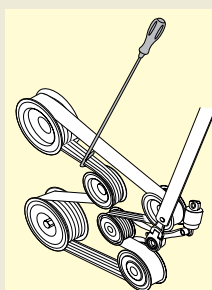
- Acts as a guide when replacing engine belts, and dealing with wiring or piping.

Application

- Mainly used in domestic and imported passenger vehicles where V belts and ribbed belts are common. (Belts with 7 ridges or more)

Characteristics

- Hooks that use rounded shafts make belt replacement easier and do not damage new belts.
- Belts that are normally difficult to replace, such as the wide and long serpentine belt, are quickly replaced.
- Due to its length (660mm), the tool is very effective in vehicles with tight engine compartments such as in the One-box vehicle type.



Replacing timing belt

ENGINE

●FREE POSITIONING
WRENCH

●HANDY BAR

●FLAT TYPE EXTRA-LONG
OPEN END WRENCH

Removing belts

1

CRANK PULLEY HOLDER

No.	AE701	▼kg 3.9	1
Crank pulley holder (body)			1
Pin			2
Set bolt for the pin (hex hole attached)		M8 Length 25: 2	
Set bolt (hex hole attached)		M6 Length: 35-40-50-60-70-80-90: 2 of each M8 Length: 40-45-60-75-85-100: 2 of each	
Washers		M6: 2 M8: 4	

A new crank pulley holding tool that can deal with various shapes

Usage

- Mainly for crank pulley removal operations (timing belt replacement, oil seal replacement, engine O/H operations) in automobiles (FR vehicles) with vertically placed engines. Can be used together with a crank pulley double-strength wrench to loosen the crank pulley lock bolt.

* The crank pulley puller manual type (AE702), or the hydraulic type (CPU13) is essential when removing the crank pulley.

Application

- Mainly used in vehicles with vertically placed engines. Especially in Toyota JZ type/1G type, Nissan RB type/VG type/VQ type. (Excluding diesel types)
- Exclusive to the V-ribbed belt • Pulley outer diameter: $\phi 90\sim 180$
- Where a service tap is included: fits with M6, M8

Characteristics

Easy to attach

- Simply attach the rotation claw onto the groove of the crank pulley and use the grip to tighten. (The center sliding position can be lined up when fitting the crank pulley.)

Thin Design! (Thickness 45mm)

- It is not necessary to remove the radiator condenser when carrying out work. (Excluding some vehicles)

Replacement parts

Product name	No.	Contents	
Pin set	AE701-1	Pins: 2 M8 set bolts for pins (hex hole included): length 25: 2 bolts Washer M8: 2	1
Set bolt set	-2	Set bolt (hex hole included) M6: Length: 35-40-50-60-70-80-90: 2 M8: Length: 40-45-60-75-85-100: 2 Washer M6: 2 M8: 2	1

CRANK PULLEY HOLD PLATE

No.	CPH1	▼kg 2	1
Crank Pulley Hold Plate			1
Set Bolt		M6: Length: 30-40-50-60-70-80-90: 2 M8: Length: 40-45-60-75-85-100: 2	
Washer		M6: 2, M8: 2	
ADAPTER		M10: 2	

Purpose

- Use to hold and take out pulley: plate as fixed with service tap of crank pulley; spinner handle (1/2"sq.) is set in.
- Applicable to crank pulley with service tap.
- Prevents pulley from rotating together and enables fastening/loosening of center lock bolt.
- Usable with AE-10.

* For removing a crank pulley, AE702 OR CPU 13 is required.

Spare parts (set bolts and washers) are No. CPH128 (Crank Pulley Hold Plate Spare Set). For the details, refer to page 213 (Crank Pulley Tool No. CPHU2).

CRANK PULLEY LOCK BOLT WRENCH

No.	AE-10	Handle Opening	Square Drive	L	W	H	▼kg	1
Accessories								
Square Drive		S37mm	L80mm					Each 1 pcs.
Set Bolt		M8x1.25 (Length 30mm)						2 pcs.

Supply Square Drive Short Long

No.	L
AE-10-1	37 (Short)
AE-10-2	80 (Long)

Purpose

- Removing Crank Pulley Lock Bolt for changing Timing Belt, Crank Short, Oil Seal, etc.)

Application

- Crank Pulley installed car with service tap except diesel engine over 3,000cc, Toyota3F, 1FZ Type Engine, Nissan VH Type. Engine, RB26DETT Type Engine.
- Can be used on vehicles with crank pulleys that do not have service taps when used with the AE701.

Special Feature

- Newly developed multiplying mechanism (Double Reverse) enables to loosen lock bolts without using impact wrenches.
- Can be used without removing radiators and condensers for shorter work time.

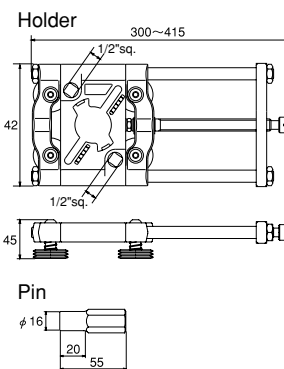
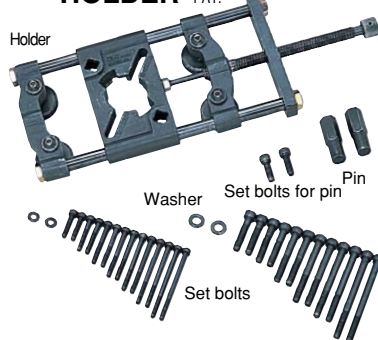
* CPH1 or AE701 is necessary for this operation.

* Cannot be used with AE11.

* Replacement parts are available. Check with your dealer for details.



THIS TOOL IS EXCLUSIVELY FOR LOOSENING BOLTS.

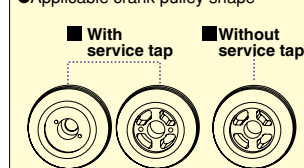
●CRANK PULLEY
HOLDER PAT.

Removing crank pulley

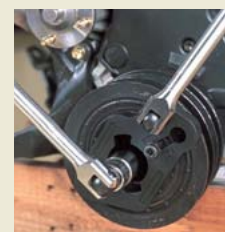
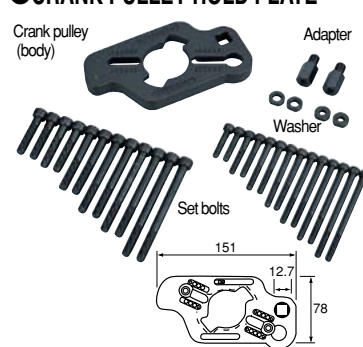
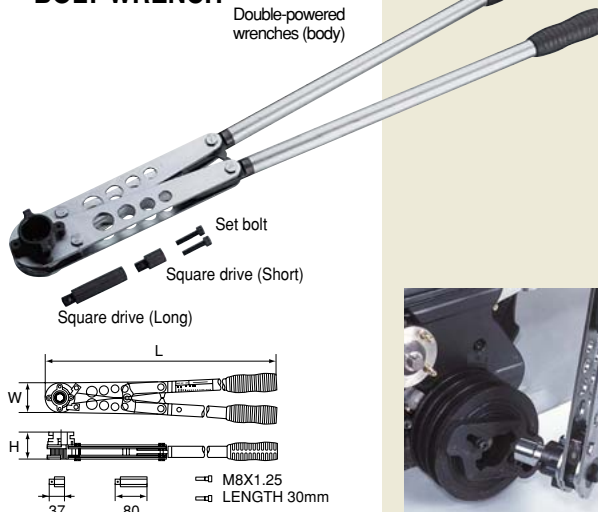
2



●Applicable crank pulley shape



●CRANK PULLEY HOLD PLATE

●CRANK PULLEY LOCK
BOLT WRENCH

2 Removing the crank pulley lock bolt



Use situation (AE703)



Use situation (AE703A)

●CRANK PULLEY HOLD WRENCH FOR HONDA



(AE703)

* 24mm wrench or 1/2"sq spinner handle is necessary for this operation.



(AE703A)

* 1/2"sq spinner handle is necessary for this operation.

CRANK PULLEY HOLD WRENCH

No.	▼g		
AE703	450	1	
AE703A	400	1	

Usage

- Crank pulley turn prevention tool for Hondas

* Crank pulley removal is not possible.

Use the AE701(or the CPH1) and the AE702 (or the CPU13) or carry out crank pulley removal.

Application

AE703

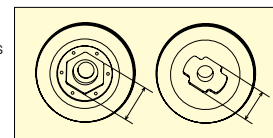
- The crank pulley shown in the right hand diagram is a 50mm 2-faced flat type used in Honda cars.

* Cannot be used on some NSX models.

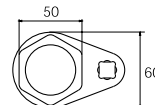
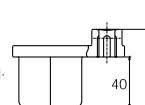
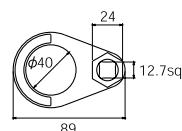
AE703A

- For Honda Life since 2003 (modelJB5-JB8)

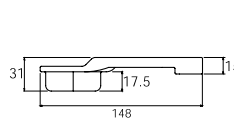
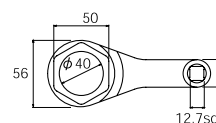
* Cannot be used on some of the old model of Honda Lifes (working space: less than 30mm)



AE703



AE703A



3 Crank pulley removal

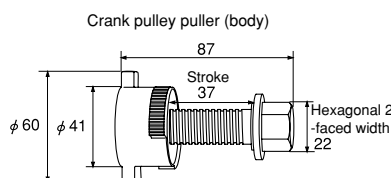


Example of AE701 + AE702 Use



Example of CPH1 + AE702 Use

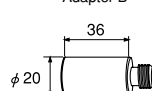
●CRANK PULLEY PULLER (MANUAL TYPE)



Adapter A



Adapter B



CRANK PULLEY PULLER

No.	AE702	▼g 500	1
Crank pulley puller (body)			1
Adapter A			1
Adapter B			1

Manual type crank pulley removal tool

Usage

- Crank pulley removal.

* The crank pulley holder (AE701) or the crank pulley hold plate (CPH1) is essential when removing the crank pulley.

* The clawed crank pulley puller (AE11) cannot be used in a combination.

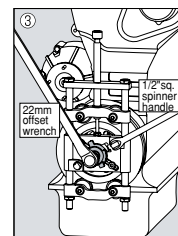
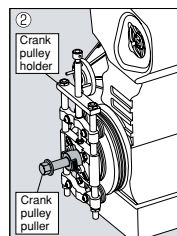
Characteristics

- Ideal for work in tight places due to its light weight and compactness.
- Stroke adjustment is possible due to 2 types of adapters.

Operating example

When a crank pulley holder (AE701) is utilized

- ① Set the crank pulley holder (AE701 or CPH1) to the crank pulley and remove the lock bolt.



- ② Select the adapter A/B combination and then fit it to the crank pulley holder.

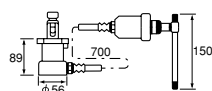
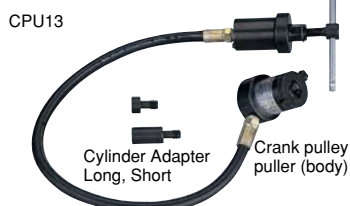
Select the adapter A/B combination according to the required crank pulley removal stroke.

- ③ Use the spinner handle to lock. Using a 22mm offset wrench or a drive tool turn the screw of the crank pulley puller and remove the crank pulley.

Replacement parts

Product name	No.	Contents	
Adapter A	AE702 -1	Adapter A 1	1
Adapter B	-2	Adapter B 1	1

●CRANK PULLEY PULLER (HYDRAULIC TYPE)



CRANK PULLEY PULLER

No.	CPU13	▼kg 1.7	1
Crank Pulley Puller			1 pcs.
Cylinder Adapter			2 pcs.

Purpose

- Pulling out crank pulley.

Features

- Strong power by hydraulic pressure.
- The remote control facilitates use of the tools in the limited space of engine room.

* For removing the crank pulley AE901 AE11 and CPH1 are required.

* Replacement parts are available. Check with your dealer for details.

Service Parts CRANK PULLEY PULLER SPARE SET

No.	CPU12	
Cylinder Adapter Long, Short		Each 1 pcs.



Example of CPH1 + CPU13 Use



An example of AE702 + CPU13

CRANK PULLEY TOOL SET A

No. ATE7A	▼kg 6.8	1
AE701 Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each	
	M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
AE702 Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

The application is of a broad variety with a low price on the standard type.

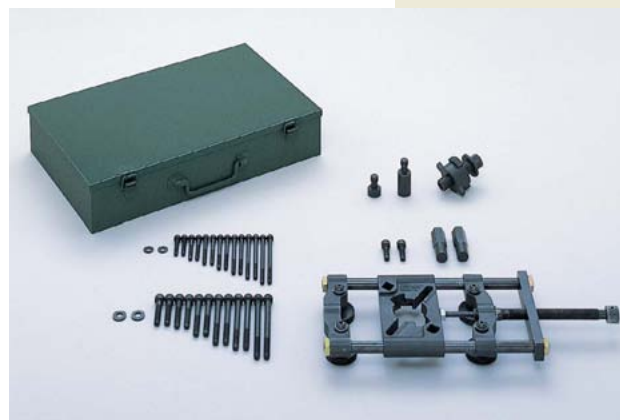
Usage

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

Application

- Sets which are available with the either service taps included/excluded.

●CRANK PULLEY TOOL SET A



CRANK PULLEY TOOL SET B

No. ATE7B	▼kg 8	1
AE701 Crank pulley holder (body)		1
Pin		2
Set bolt for the pin (hex hole included)	M8: Length 25: 2	
Set bolt (hex hole included)	M6: Length: 35-40-50-60-70-80-90: 2 each	
	M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 4	
CPU13 Crank pulley puller (body)		1
Adapter A		1
Adapter B		1
Metal case (390x245x75)		

A wide variety of easy, correct removal techniques is possible due to hydraulics.

Usage

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, hydraulic type

Application

- Sets which are available with the either service taps included/excluded.

●CRANK PULLEY TOOL SET B



CRANK PULLEY TOOL SET C

No. ATE7C	▼kg 1.9	1
CPH1 Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each	
	M8: Length: 40-45-60-75-85-100: 2 each	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	
AE702 Crank pulley puller (body)		1
Adapter A		1
Adapter B		1

* Metal case is not included.

Reasonable type at a low price.

Usage

- Tightening/loosening of the crank pulley lock bolt
- Crank pulley removal, manual type

Application

- Sets applicable for pulleys with fitted service taps.

●CRANK PULLEY TOOL SET C



CRANK PULLEY TOOL

No. CPHU2	▼kg 6	1
CPU13 Crank pulley puller (body)		1
Output cylinder adapter		2
CPH1 Crank pulley hold plate (body)		1
Set bolt (hex hole included)	M6: 14 M8: 12	
Washers	M6: 2 M8: 2	
Adapter	M10: 2	

Metal case

- Crank pulley removal with the service tap fitted

- Work time is reduced, as the radiator, condenser does not need to be removed. (Some vehicles may not be included.)
- When outside of the garage, it is not necessary to turn drive tools in the narrow confines of an engine compartment making the job easier.
- Other companies do not stock the outer parts of crank pulleys. However, as the CPHU2 uses service taps, and as the torsion damper rubber does not break down, it can be used freely.
- Torque can be controlled when tightening.

- Service taps are fitted to crank pulleys of vehicles ranging from light weight to normal passenger type and small trucks. (Excluding diesel vehicles that exceed 3000cc)

Replacement parts: Crank pulley holder spare set

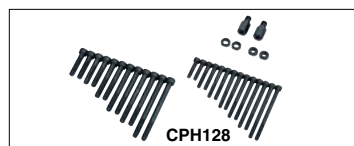
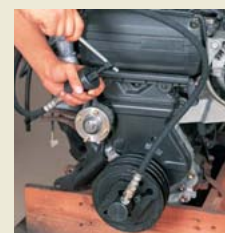
No. CPH128	
Set bolt (hex hole included)	M6: Length: 30-40-50-60-70-80-90: 2 each
	M8: Length: 40-45-60-75-85-100: 2 each
Washers	M6: 2 M8: 2
Adapter	M10: 2

●CRANK PULLEY TOOL



- Removing and fitting crank pulley lock nut

- Crank pulley removal



4 Cam pulley lock

5 Timing belt replacement

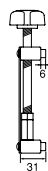
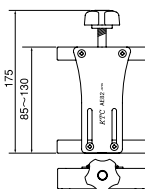
6 Fitting the crank pulley, tightening the lock bolt

7 Checking Torque

●CAM PULLEY LOCK TOOL



Usage



• Make sure that all operators read the Owner's Operator Manual carefully before usage.

CAM PULLEY LOCK TOOL

No.	▼g	
AE82	860	

The cam pulley ensures excellent locking. It supports smooth timing belt removal.

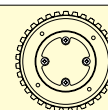
Usage • This is a tool that helps hold the 2-cam pulley's position, and helps prevent slippage when removing the timing belt in DOHC gasoline engines.

Application • Ranges from domestic light weight to normal passenger type vehicles with DOHC gasoline engines (FF, FR vehicles).

- As the insides of cam pulleys in some Honda and Mitsubishi vehicles are uneven, the pulley can move when tools that are in a fixed position are forced from the outside. (Fig. 1)
- It may not be possible to use this tool on some vehicles with adjustable valve timing as the shape can differ. (Fig. 2)



(Fig. 1)



(Fig. 2)

Characteristics

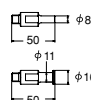
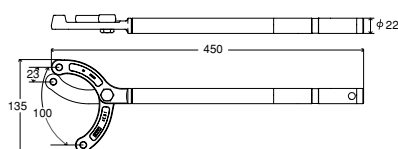
- It is possible to fix the cam pulley in a set position during timing belt replacement before removing the timing belt and up to the end of the operation.
- Install by the use of the knob only.
- Operating space is saved when installing/removing the timing belt as the center bolt is in an offset position.
- Is possible to be used in vehicles where there are obstacles between the 2 cam pulleys.

ENGINE

Disassembling, Inspecting and Installing Engine

1 Checking Torque

●CAM PULLEY HOLD WRENCH



Pin: 2-faced width: 14mm
Pin: Screw diameter: M8

CAM PULLEY HOLD WRENCH

No.	AE81	▼kg 1.1	1
Cam pulley hold wrench (body)	1		
Straight pin	2		
Flange fitted pin	2		

Usage

- Exclusive cam pulley stopper tool

Application Diagram below: Cam pulley shape



• Pin hole type cam pulley



• Star shaped cam pulley

Characteristics

- The arm is opened/closed by a spring mechanism; this keeps constant tension on the opening action of the tool increasing safety.
- There are 2 types of stopping pins, both of them fit the 2 types of cam pulleys mentioned above.
- The grip part is knurled, is easy to grasp and power is easy to apply.

Replacement parts

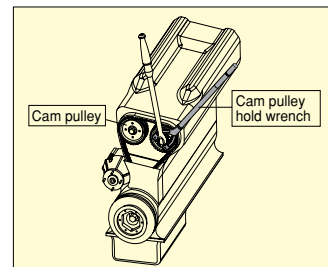
Product name	No.	Contents	1	1
Straight pin	AE81-5	Straight pin: 2	1	
Flanged pin	-6	Flanged pin: 2	1	



• Make sure that all operators read the Owner's Operator Manual carefully before usage.

Method of use

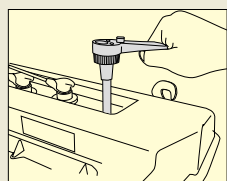
- Select the correct pin (straight/flange fitted) depending on the shape of the cam pulley and then attach it to the arm.
- Adjust the cam pulley so that it touches the pin and does not turn, then using a wrench, loosen (or tighten) the holding bolt.



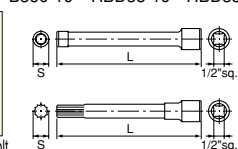
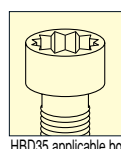
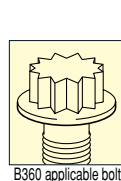
2 Removing Head Cover

●HEXAGONAL WRENCHES

3 Removing Head Bolt



●1/2"sq. CYLINDER HEAD BOLT WRENCH · SET



CYLINDER HEAD BOLT WRENCH-SET

No.	HBD353	▼g 355
HBD35-8, 10		
B360-10		

No.	S	L	▼g	1	1
HBD35- 8	8	100	110	5	
-10	10	115	115	5	
B360 -10	10	130	130	5	

Purpose

- For fastening/loosening head bolts when removing/installing cylinder heads of engines



• DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

CYLINDER HEAD BOLT SOCKET WRENCH · SET

No. HB352	▼g300	5
HB35-8, 10		

mm

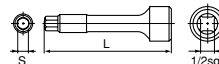
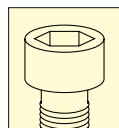
No.	S	L	▼g	5
HB35 - 8	8	80	140	5
- 8T	8	90	150	5
-10	10	105	160	5

Purpose

- For use on head bolt with hexagon end.

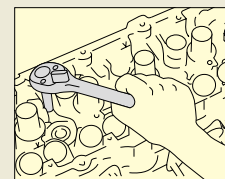
CAUTION • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

●1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH-SET



- Hexagon bolt is made of special spring steel for superb durability.
- Also can be used on cap screw bolts (with hexagon hole) 8mm. & 10mm.

Removing Head Bolt



3

CYLINDER HEAD BOLT SOCKET WRENCH-SET

No. B3502	▼kg 1.3	1
B350-10, 12		

mm(12pt.)

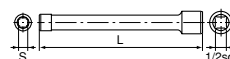
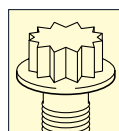
No.	S	L	▼g	5
B350 -10	10	190	600	5
-12	12	200	700	5

FPurpose

- Special wrench for removing/installing engine cylinder head bolts.

CAUTION • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

●1/2"sq. CYLINDER HEAD BOLT SOCKET WRENCH-SET



- Socket part with suitable wall thickness properly treated for superb durability.

CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET

No. ATBP603	▼kg 1.6	1
For head bolts	ABP6-14WP	
For head bolts & fly-wheels	ABP6-19WP, 22WP	

mm(Triple Square)

No.	S	D ₁	D ₂	H	L	▼g	5
ABP6-14WP	14	22.5	38	15	140	400	5
-17WP	17	26	38	16	90	540	5
-19WP	19	29	38	16	90	550	5
-22WP	22	33	38	16	120	650	5

POWERFIT

Usage

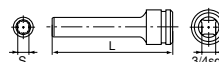
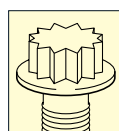
- This is a wrench that is exclusively designed for the removal and installation of engine cylinder head bolts and fly-wheel bolts.

Characteristics

- For bolts of Isuzu and Mitsubishi-fuso and fly-wheel bolts.

CAUTION • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

●3/4"sq. CYLINDER HEAD BOLT & FLY-WHEEL BOLT WRENCH-SET



- This 4 pcs. set can be used on both head bolts and fly-wheel bolts of Isuzu and Mitsubishi-Fuso cars.

TRIPLE SQUARE (12P) WRENCH

No.	S	sq.	D	L	ℓ	▼g	10
BT3-M 8	M8	3/8"	18.5	72	43	65	10
-M10	M10	3/8"	18.5	72	43	65	10
BT4-M12	M12	1/2"	22	76	40	110	10

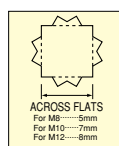
POWERFIT

Purpose

- Special wrench for special bolts with triple square holes such as head bolts, flange bolts of torsion joints, etc. of German cars.

CAUTION • DO NOT USE A TOOL WITH A POWER TOOL SUCH AS AN IMPACT WRENCH, ETC.

●3/8" & 1/2"sq. TRIPLE SQUARE (12P) WRENCH



ACROSS FLATS
For M8—5mm
For M10—7mm
For M12—9mm

4 Cleaning Head



● CERAMIC SCRAPER



CERAMIC SCRAPER

No.	A	T	L	▽g	⊞	
KZ4-12	11	3	145	30	5	
-18	18	3	175	52	5	

Purpose

- Scraping and finishing the surface of automotive engines and gaskets of industrial machinery, etc.

Special feature

- Superb wear resistance, and smooth cutting.
- Ceramic tip for preventing rust and deformation.
- The blade does not dig in and provides a smooth scraping action.
- Tip is not adhered to sticky gasket, seal, gum, etc.
- Both sides of the blade can be used.
- Care should be taken when handling as dropping or hitting may cause the tools to chip or be damaged.

* Ceramic tips are not sold separately.

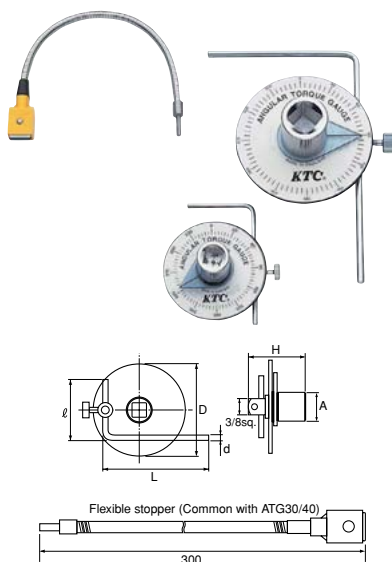


• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER, ETC.

5 Installing and Fastening Head Bolt



● ANGULAR TORQUE GAUGE



ANGULAR TORQUE GAUGE

No.	sq.	A	H	D	L	ℓ	d	▽g	⊞	
ATG30	1/2"	24.2	55	78.5	97	52	4.8	365	10	
40	3/4"	34.5	76	105.5	190	120	6.4	700	10	

Purpose

- Measuring fastening angles of specified angle fastening bolts.

Special feature

- Because the gauge measures in small 5° units, it can be used in many ways and on a variety of different manufacturers' engines. (The gauge can be used not only on domestic vehicles, but also on a wide range of foreign vehicles made outside of Japan.)
- The gauge is equipped with an effective Flexible Stopper for cases when the L-shaped stoppers cannot stop the rotation.



• BEFORE USING ANY TOOL, READ THE PROVIDED INSTRUCTION.
• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER, ETC.

How to use the gauge

- Pre-fasten head bolt with specified torque.



2. Set angle torque gauge and fix it with L-stopper or flexible stopper.



3. Set hand of gauge to zero.



4. Fasten gauge to specified angle with spinner handle.

6 Torque checks

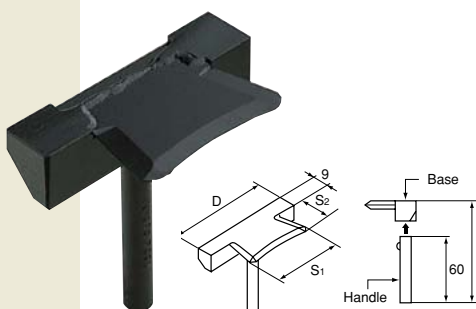
● TORQUE WRENCH

ENGINE

Removing oil pan

1 Cutting seal

● OIL PAN SEAL CUTTER



OIL PAN SEAL CUTTER

No.	D	L	S ₁	S ₂	▽g	⊞	
TAG-48	70	78	48	24	180	10	

Purpose

- Applied for removing oil pans with seal packings.

Special feature

- Arc shaped cutter for hitting into seal part.
- The side cutter is sharp and when it digs into the base from the side it can slide easily.
- Sharp angled(α°) side cutter for deep contact and secure operation.
- Can be used in narrow spaces without handle.



• USE ANTI-DUST GLASSES WHEN USING THIS TOOL.

2 Scraping Seal

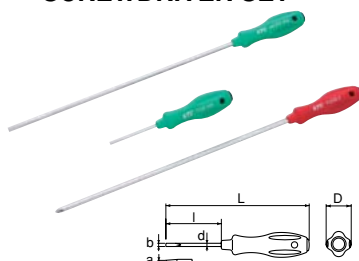
● CERAMIC SCRAPER

ENGINES

Adjustment of idling

1 Fastening/Loosening Adjustment Screw

● CARBURETOR SCREWDRIVER SET



CARBURETOR SCREWDRIVER SET

No.	CD3	▽g 380	⊞ 5
Carbjet Screwdriver	CDZ-165		
Long Screwdriver, Flat	MDDZ-400		
Long Screwdriver, Cross	PDDZ-2		

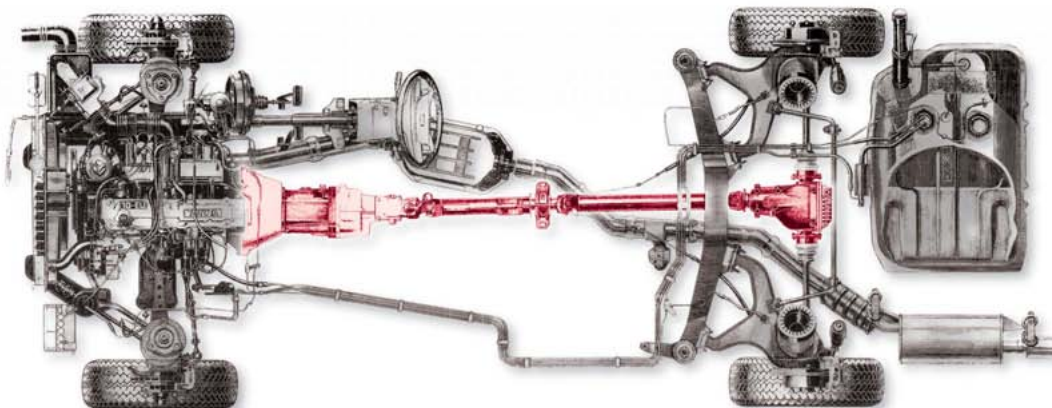
No.	Type	a	b	d	D	L	ℓ	▽g	⊞	
CDZ-165	Flat	0.7	3.5	3.5	27	155	60	40	5	
PDDZ-2	Cross No.2	-	-	6	27	385	290	100	5	
MDDZ-400	Flat	0.7	5.5	5.5	27	385	290	90	5	

- For adjusting carburetors.



• DO NOT USE THESE TOOLS WITH ELECTRIFIED OBJECTS.
• DO NOT USE A TOOL FOR PURPOSES OTHER THAN ADJUSTING CARBURETORS.

Driveline System Mechanism

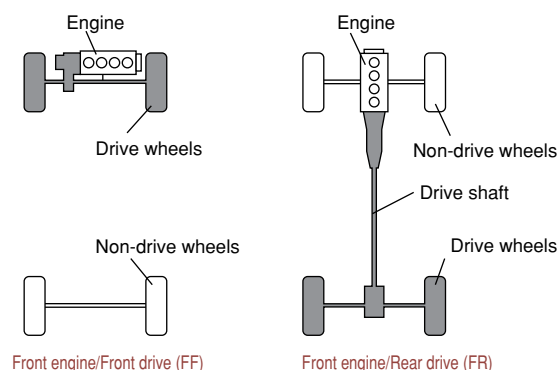


MECHANISM 1

FF model and FR model

As there are many types of drive mechanisms available in vehicles today, the FF method and the FR method are representative of most of these. Engines that are placed at the front of the chassis and that have the main drive going through the front wheels are known as FF (Front Engine Front Drive). Engines that are placed on the front side of the chassis and have the drive going through the rear wheels are known as FR (Front Engine Rear Drive).

As FR types have the steering mechanism and the drive mechanism separate, the system is easy to work with. However, a drive shaft is necessary to transfer the power from the engine to the rear wheels. Therefore, the drive shaft protrudes from the inner center of the vehicle. On the other hand, FF systems do not need a drive shaft and therefore have the merit of having the inner center of the vehicle free. However, as the steering mechanism and the drive mechanism have to be placed together, the system is more complicated.



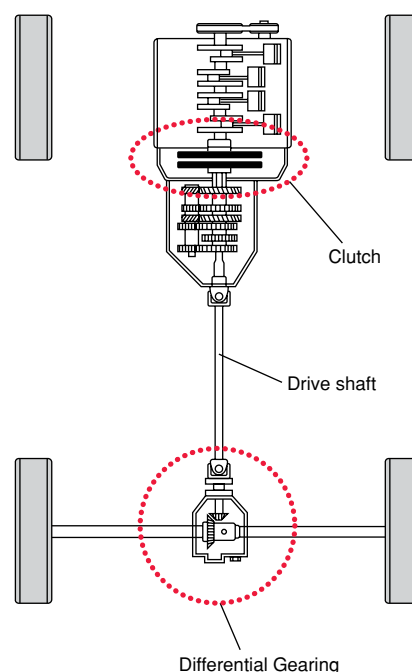
MECHANISM 2

Clutch

If the engine power and the transmission are connected directly, there is a large burden placed on the engine on starting.

Therefore, at the time of engine start, it is necessary to sever the relation with the transmission. Another way of looking at it is, the engine would stop if the effort of starting the engine were immediately placed on the transmission. It is here that the load is gradually placed on the transmission through a necessary mechanism known as a clutch.

The clutch, or the clutch plate (clutch disc) is fixed to the engine's fly-wheel where it transfers and takes away power from the drive system as it is activated on and off.



MECHANISM 3

Differential Gearing

The differential gearing plays the role of converting side directional rotation power towards forward motion, in other words, converting the power to forward motion when power is transferred to the rear wheels, it also helps in reducing speed and maximizing torque.

It also plays the role of adjusting the wheel speed on each side when driving around corners.

DRIVELINE

Transmission removal and attachment

1 Hanging Engine

●ENGINE HANGER

ENGINE HANGER FOR SHOCK ABSORBING BODY

No.	Capacity (Max. Load)	Winch weight ▼kg	▼kg	📦	
AE901	2,450N(250kgf)	6	16	1	

Purpose

- Dedicated tool for lifting up and hanging an automobile engine block.

Applications

- Engine block of FF vehicles from mini-cars to medium sized passenger cars (not applicable to the engine of trucks, vans and motorcycles).
- Max usable load: Less than 2,450N (250kgf)

Characteristics

- In recent years, many vehicles have adopted impact absorbent bodies.
- Fenders have been designed so they can be adjusted back to be parallel with the ground even after they have been bent out of place in an accident.
- The tool has been designed to be able to deal with vehicles that have short fender ribs, and fenders that cannot be set correctly which conventional types have not been able to cope with to date.
- The tool can hold the engine in position whilst being able to move the chassis and also lift it up and down.
- The bridge can be set on an angle, and when carrying out belt replacement, the tool can be used to move the bridge from above the belt.
- This winch employs a rear type directional method. The drive area can be switched easily between the right and left sides that help movements to the desired position.
- Even with the chassis in a raised position, the winch can be used temporarily outside the garage by the use of a chain wheel.

* This tool cannot be used on vehicles with resin set points.

* Replacement parts are available. Check with your dealer for details.

Applicable details

Engine mass	Max usable load=2,450N (250kgf)
Chassis width	Max. slide width of bridge=1,550mm
Length of engine compartment	Foot max. slide width=810mm
Width of engine compartment area	Adjustment angle of slide bar=32° (To the side)
Difference between height and depth of engine compartment	Height adjustment foot retract/extension length=50mm
Incline angle of fender	Within 20°
Max. outer diameter of set point bolts	17.5mm
Max. height of set point bolts	20mm

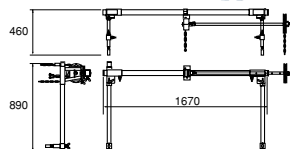
●Engine mechanical hanger optional kit (Kit corresponding to the previous model)

No.	▼kg	
AE901K	8.5	

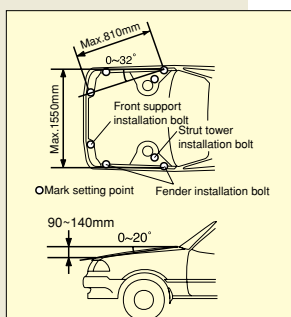
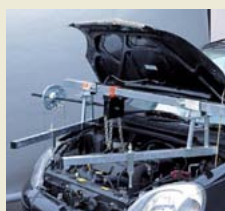
- An optional kit designed for use on previous engine machine hangers (ATH10) bridge (bar), and one that work with impact absorbent bodies.



AE901



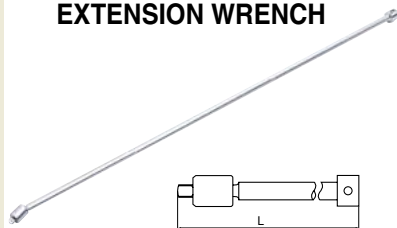
AE901K: Slide foot, Slide bar, Height adjustment foot × 2, Lifting tools, Connection plate × 1, and Installation bolts × 8



This product is available as a set of 4 of each vehicle fender installation bolt, front support installation bolt, and strut tower installation bolt. These sets are known as set-points.

2 Removing/Installing Transmission

●3/8"•1/2"sq. NEW FLEX EXTENSION WRENCH



NEW FLEX EXTENSION WRENCH

No.	Square Drive	L	▼kg	📦	
BEF3020-950	Indents 1/2"sq. Notches 3/8"sq.	950	1.0	5	

Purpose

- Removing/installing of clutch housing bolts.

Features

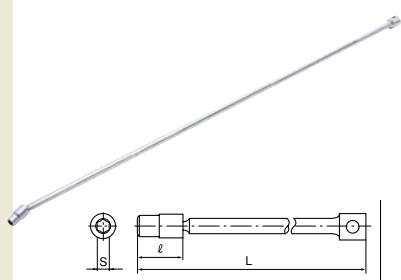
- Tip is 3/8"sq. with flexible head.
- Turns smoothly within the range of 40 degrees.



• DO NOT EXTEND THESE TOOLS WITH 2 PCS. OR MORE.



●1/2"sq. NEW FLEX WRENCH (WITH MAGNET)



NEW FLEX WRENCH (WITH MAGNET)

No.	S	Socket (ℓ)	L	▼kg	📦	
BEF31-12H	12	39	950	1.0	5	
-14H	14	41	955	1.1	5	
-17H	17	44	955	1.1	5	

Purpose

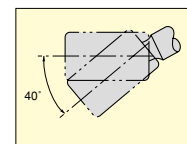
- Suitable for disassembling/assembling transmission and clutches.
- Also convenient for dismounting/mounting manifolds or diff-flanges.

Features

- Can be used as T Shape wrench, too.
- Turns smoothly within the range of 40 degrees.



• DO NOT EXTEND THESE TOOLS WITH 2 PCS. OR MORE.



DRIVELINE

Disassembling Clutch

1 Installing Clutch Disc

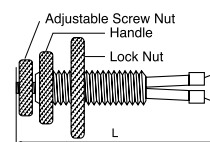
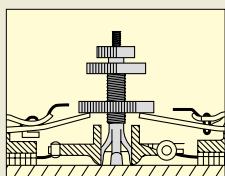
●CLUTCH ALIGNING TOOL

CLUTCH ALIGNING TOOL

No.	L	Applicable diameter	▼g	📦	
CGP-1625	132	φ16~25	120	1	

- Innovative Clutch Aligning tool.
- It can be used on the work table.
- Just install the assembled unit on the car. Easy and quick operation.
- Made of special plastic for light and durable body.
- Covers almost all types of cars.

* Not for use on cars.



CLUTCH ALIGNING TOOL SET

No. CG617	▼kg 3	1
Attachment	16, 17, 17.8, 20, 21.1, 22.9, 24.3	
Guide/ Center Shaft		
Metal Case	L185×95×H65	

- Purpose** • For use on mini & compact cars without pilot bearings and metal bushes.
Features • Centering of clutch disc possible, guided by the diaphragm of the clutch cover.
 • Easy operation by fixing the attachment only.
 • Can be used on the car.

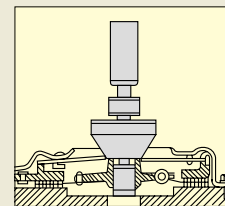
Application List

Size of Attachment	Car Maker	Size of Attachment	Car Maker
17.8	Nissan, Honda	22.9	Nissan, Honda
20.0	Mitsubishi, Honda, Mazda	24.3	Toyota
21.1	Toyota		

CLUTCH ALIGNING TOOL SET

Installing Clutch Disc

1

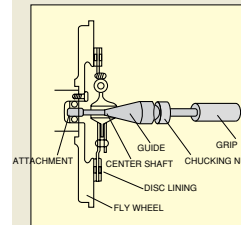
**CLUTCH ALIGNING TOOL SET**

No. CG67	▼kg 1.1	1
Attachment	10, 12, 14, 15, 16, 17, 19	
Guide/ Center Shaft		
Metal Case	L265×W65×H40	

- Purpose** • For centering of clutch disc of FR cars.
 • Different input shaft used to be required for each car model. **KTC** developed a clutch aligning tool set to facilitate the operation on FR cars.

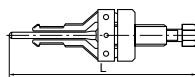
Application List

Size of Attachment	Car Maker	Size of Attachment	Car Maker
12, 15, 17	Toyota, Mazda, Mitsubishi	10, 12	Daihatsu
12, 16	Nissan	10, 15	Suzuki
12, 15, 19	Honda	12, 14	Subaru
16, 17	Isuzu		

CLUTCH ALIGNING TOOL SET**PILOT BEARING & BUSH PULLER**

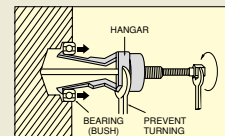
No. PBU-1219	Applicable Size	L	▼g	10
	Inner Dia. $\phi 12 \sim 19$	145	215	

- Purpose** • Light and compact body for easy handling.
Features • Special claws offer firm gripping.
 • Can be operated on the car.
 • Wide application.
 • Replacement parts are available. Check with your dealer for details.

**PILOT BEARING & BUSH PULLER**

Removing Pilot Bearing

2

**Transmission/differential oil replacement****DRIVELINE****DRAIN PLUG SOCKET • SET (3pcs.)**

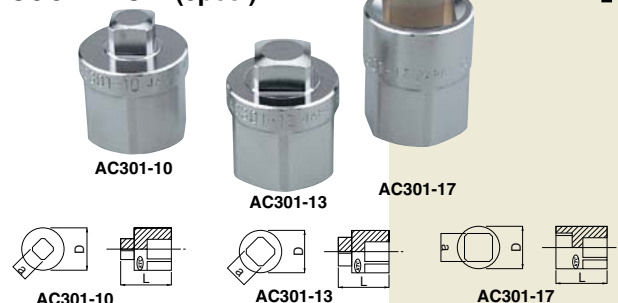
No. ATC3013	▼g 245	1
1/2"sq. Drain plug socket	AC301-10, 13, 17	

No.	a	D	L	▼g	10
AC301-10	10.5	26.5	31	70	
-13	13.1	26.5	31	85	
-17	17.3	26.5	32	90	

- Usage** • A tool exclusively designed for tightening and loosening of drain plugs (filler) on transmissions, and differentials for Nissan and Subaru vehicles.
Application • Mainly designed for Nissan FF types manual transmissions (AC301-10)
 • Mainly designed for Nissan manual transmissions, rear differentials, Subaru 4WD rear differentials (AC301-13)
 • Mainly designed for former Nissan FR types manual transmissions (AC301-17)
Characteristics • By employing a 1/2" sq. drive, the tools can cope with drain plugs that have been tightened under heavy torque.
 • Due to its hexagonal shape, the tool can be used with 24mm offset wrenches.

DRAIN PLUG SOCKET • SET (3pcs.)

1

**3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH**

No. AE503-10	S	D	L	ℓ	▼g	5
	10	18	38	8	50	

- 38mm length body enable to operate in a narrow space.
 • Can be used for hexagon socket head type of TOYOTA and NISSAN.
 • Less oscillation and stable operation.

POWERFIT

3/8"sq. HEX. BIT SOCKET DRAIN PLUG WRENCH**Disassembling Various Kinds of Transmissions****DRIVELINE****BALL BEARING PULLER SET**

No. BU382	▼kg 5	1
Body	1	
Claw	No.6004 3pcs. 6004	No.6204,5 3pcs. 6204,6205
No.6303 3pcs.(6303)	No.6304 3pcs. 6304	No.6305 3pcs. 6305
Chisel B	Bxone each	
Attachment	17,20,25 each1pcs.	

No. BU381	▼kg 3.5	1
Body	1	
Claw	No.6001,2,3 3pcs. 6001~6003	No.6201,2, 3pcs. 6201,6202
No.6203 3pcs. 6203		
Chisel C	A · Cx one each	
Attachment	12,15,17 each1pcs.	
Common Items	Handle · Metal Case (L325×W185×H55)	

- Usage** • Removing ball bearings from equipment such as farm and industrial machinery.
 • Standard parts are available. Check with your dealer for details.

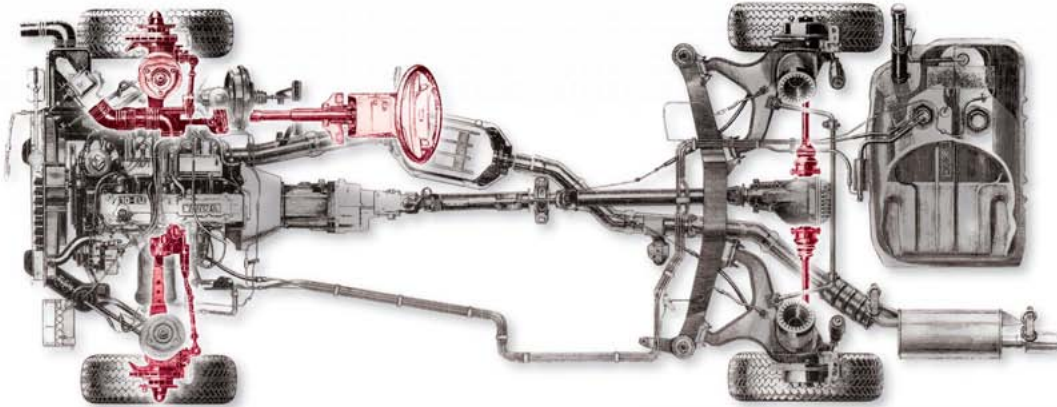
BALL BEARING PULLER SET

Disassembling Transmission

1



Steering System Mechanism

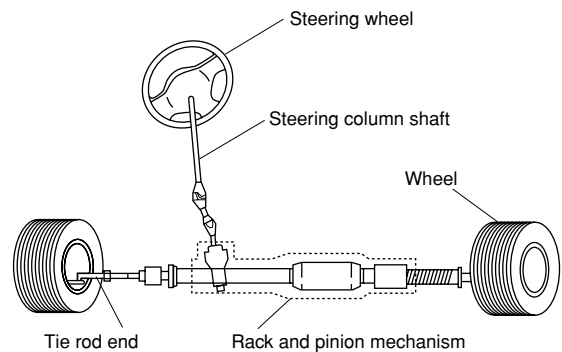


MECHANISM 1

Steering system makeup

By operating the steering wheel, the wheel direction is changed making the vehicle change direction. In other words, the steering system is a steering device. The fundamental mechanism allows the vehicle's direction to be changed when movement is transferred through the steering wheel gear box from the handle to the wheels.

There are many types of steering gear mechanisms available for steering systems. However, presently the main type is a combination of a rack and pinion gear. The rack gear connected at both ends by a tie rod is also known as the rack and pin method. However, because a large amount of power is required to change wheel direction, most vehicles now employ power steering mechanisms, which assist through hydraulics, and motorized mechanisms.



MECHANISM 2

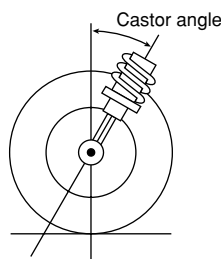
Wheel alignment

The wheels are fitted on a slight angle (not horizontal or square) to assist steering and drivability, and to keep the vehicle traveling in a straight line. This adjustment is called "wheel alignment" and is made up of 4 elements - caster, camber, toe, king-pin angle.

Castor

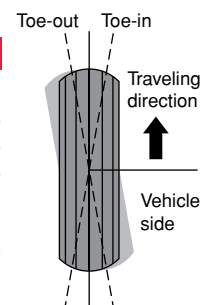
The front wheels are fitted off the axle on an angle, just as castors are fitted on the legs of chairs.

These are known as castors, by being set on an angle, help keep the vehicle in a constant aligned state.



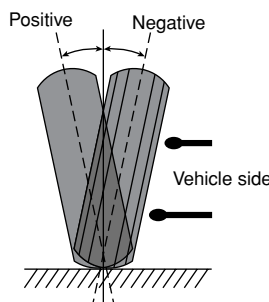
Toe

Looking at the wheel angle from above, toe-in is known as when the vehicle's tracking moves inwards, and toe-out is known as when the tracking moves outwards. When the camber is set to positive, the tendency for the wheels to head outwards will be eliminated and the vehicle's forward tracking will improve.



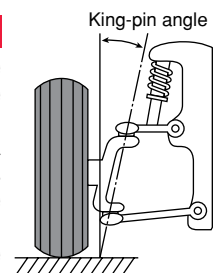
Camber

The angle seen from the front that is made from the perpendicular line opposed to the ground, and the wheel incline, is known as the camber angle. A negative camber is where the bottom is open, and a positive camber is where the top is open. This affects the vehicle's operation, stability and cornering when turning.



King-pin angle


When looking at the vehicle from the front, the king-pin axle faces towards the inside of the chassis leaning upwards. The angle that is perpendicular makes a line from the slant and the surface is known as the "king-pin angle". The angle that it is set to keeps the steering wheel in a straight position and also makes the steering return to the straight position after it has been turned.



Side slip adjustment

STEERING

TIE ROD LOCK NUT WRENCH

No.	D	T ₁	T ₂	T ₃	L	ℓ		
AS701	66	15	10	17	220	95	5	

Usage

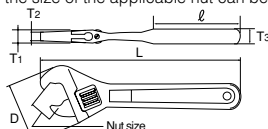
- Tightening and loosening Tie-rod end lock nuts in automobiles (light to normal automobiles)
- Side slip work at times of inspection and tire replacement.
- Rack boots replacement work

Application

- Hexagonal, 2-faced 17~24mm width lock nuts for tie-rod ends (covers most domestically made light~normal sized automobiles).

Characteristics

- The wrench is designed to grip the angles of the nut firmly and can loosen or tighten nuts without slipping.
 - Even when a large amount of force is applied, the user's hand will not slip and injuries will not occur thanks to the width of the grip.
 - The length of the tools means it does not become obstructed when the vehicle's steering wheels are at full rotate.
- This means that the operation can be carried out without removing the tires. (Photo 1)
- As their measurements are provided, the size of the applicable nut can be selected in advance.



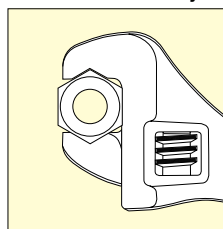
Tightening and loosening Tie-rod end lock nuts

1



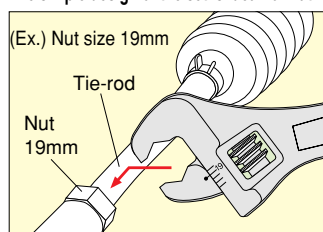
(Photo 1)

Holds the nut firmly



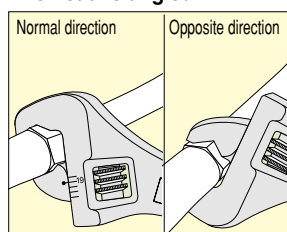
This wrench provides effective nut tightening / loosening without slippage. The shape of the wrench holds the angle of the nut.

The simple design of the set is ideal for nut




As the nut size has been set, it can be easily removed without obstructing the tie-rod.

The head is angled




As the head is angled it allows for both operating directions as required.


SIDE SLIP BOARD SET

No. ATG92	▼kg 31.5	 1(2 Cartons)
Side slip board	AG901	
Step Board	AG902	

●Side slip board

No. AG901	▼kg 21.5	 1
Main body	×1	
Slope for side slip board	×2	

●Step Board

No. AG902	▼kg 10	 1
Main body	×1	
Slope for side slip board	×2 Bolts with hexagonal holes (M5 ×10mm)×2	

Characteristics

- Easy use without the need for heavy setting.
- The small and light design allows easy maneuverability.
- A separate type is available for vehicles with wider chassis.
- As the length is short the tool can be set up in tight spaces.
- As the height is low (28mm), vehicles can move on and off easily with slope.
- The displayed value remains at the maximum value.
- The needle can reset back to 0 easily by hand.
- The display range is a wide scale 0~20mm/m for both IN/OUT and is capable of handling imported vehicles as well.



Example of use No. ATG92

Usage

- This is a tester that easily reads the amount the vehicle is pulling to the side (side slip), the vehicle's front wheel toe-in and the balance of the camber by simply passing the front wheels of the vehicle over the side-slip board.

Application

- Light vehicles to 2 ton class freight trucks
- Vehicles with tires that have a width of 280mm or less

Specs.

- * Weight measure on one side. The weight is shown within the brackets.

Wheel load tolerance*	750kg (Weight 1500kg)
Display range	Both IN - OUT measurements are 0 ~ 20 (mm/m) (Minimum increments of 1mm/m)
Display method	Analog, by needle (1)
Type	Left/Right separate

* This product is not a vehicle tester for fitness certificate checks.

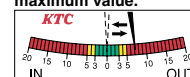
- * Replacement parts are available
- * Check with your dealer for details.

●SIDE SLIP BOARD SET

Easy checks before vehicle fitness certificate inspections.
Fast check, Side slip



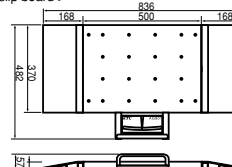
The displayed value remains at the maximum value.



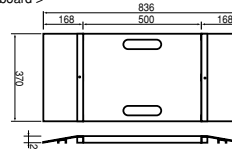
The needle can reset back to 0 easily by hand.

The display range is a wide scale 0~20mm/m for both IN/OUT and is capable of handling imported vehicles as well.

< Side slip board >



< Step board >







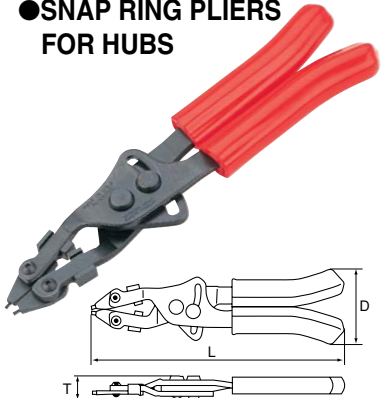

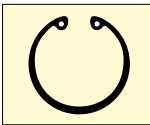
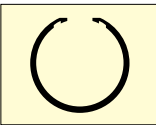


CAUTION* Make sure that all operators read the Owner's Operator Manual carefully before usage.

- Make sure that all operators are qualified to use this device. (A qualified vehicle maintenance technician or a holder of a special certificate applicable for work in this area.)
- Do not use for non-specified purposes.
- Do not disassemble or modify this product.
- * The AG902 (Step board) version does not have a side-slip display function attached. Use the ATG92 (Side slip board set) or the AG901 (Side slip board) x2 in combination with this product.

*Please check the merchandise inventory for a product that is marked by  before placing an order.

STEERING

Axle disassembling/assembling

1	Wheel removal	●WHEEL CAP WRENCH		●ALUMINUM WHEEL CENTER CAP WRENCH																				
	①Wheel cap removal ②Wheel nut removal	➡ P.217			➡ P.217																			
2	Hub nut removal	●IMPACT WRENCH	●WHEEL NUT SOCKET FOR IMPACT WRENCH	●CROSS RIM WRENCH	●OTHER TOOLS																			
		➡ P.205		●SOCKET	●OTHER TOOLS																			
3	Disc caliper removal	●SOCKET	●OTHER TOOLS																					
4	Tie-rod separation	●TIE-ROD END SEPARATOR	●BALL JOINT SEPARATOR	●OFFSET WRENCH	●SPINNER HANDLE																			
		➡ P.204		➡ P.204																				
5	Removing the axle assy	●PLASTIC HAMMER																						
6	Snap ring removal	●SNAP RING PLIERS FOR HUBS																						
				<table border="1"><thead><tr><th>No.</th><th>D</th><th>T</th><th>L</th><th>▼g</th><th></th><th></th></tr></thead><tbody><tr><td>AS307</td><td>58.5</td><td>18.2</td><td>228</td><td>310</td><td>5</td><td></td></tr></tbody></table> <p>Usage</p> <ul style="list-style-type: none">Installing and removing the snap ring used in the hubs of vehicles. <p>Application</p> <ul style="list-style-type: none">The open range of the mouth of the snap ring pliers is min. 10mm~max. 36mm <p>Characteristics</p> <ul style="list-style-type: none">Employs a non-stepped, automatic locking device. Can be locked to the desired position.The lock can be released easily from the handle.Only the claw can be easily replaced.All models, except the hole fitted snap ring type, can deal with notched type rings designed for certain models (Toyota). <p>Replacement parts: Pointed claws</p> <table border="1"><thead><tr><th>No.</th><th>Contents</th><th></th></tr></thead><tbody><tr><td>AS3072</td><td>Claw R/L 1, Installation screws 2</td><td></td></tr></tbody></table> <div></div>		No.	D	T	L	▼g			AS307	58.5	18.2	228	310	5		No.	Contents		AS3072	Claw R/L 1, Installation screws 2
No.	D	T	L	▼g																				
AS307	58.5	18.2	228	310	5																			
No.	Contents																							
AS3072	Claw R/L 1, Installation screws 2																							

7 Removal/installation of the axle assy.

MULTI PULLER



● Multi puller

No. AS301	▼kg 17	
Center bolt assy	Hexagonal 2 faced 22mm width × length 280mm (M18 × 2.0)	1
Hanger	270 × 38 × 37 mm	1
Slide arm	60.5 × 30 × 20 mm	1
Arm M	φ16 × 105 mm	2
Hub plate	φ154 × 24 mm (Screw: M18 × 2.0, 1/2"sq. inc.)	1
Hub holder 1 assy.	φ70 × 34 mm (Wing bolt (M6) inc.)	1
Hub holder 2 assy.	190/190 mm (Hexagonal adjustment bolt (M10) with hole inc.)	1
Race shaft	φ55 × 114 mm (Screw: M18 × 2.0)	1
Plate (4 types)	A(φ79 × 15) B(φ71 × 15) C(φ67 × 15) D(φ60 × 15)	1 each
Hanger assy. for press	150 × 50 × 25 mm (Hexagonal bolt (M10) + washer inc.)	1
Press arm	φ16 × 75 × 35 mm	2
Hanger nut	φ45 × 18mm (Screw: M18 × 2.0)	1
Race holder assy.	90 × 140 mm (Hexagonal adjustment bolt (M10) with hole inc.)	1
Plate bolt	Hexagonal 2 faced 22mm width × length 34mm (M18 × 2.0)	1
Arm L	φ16 × 330 mm	2
Claw	27 × 25 × 12 mm	2
M8 Bolt	Bolts with hexagonal holes (with washer) × 100 mm	2
M10 Bolt	M10 hexagonal bolt with hole for M10 (with washer) × 100 mm	2

● MULTI PULLER

All axles can be disassembled and assembled with this set.

Usage

- An exclusive tool designed for vehicle axle assembling/disassembling, steering wheel diff-companion flange mission bearing & gear removal, and also a range of bearing & gear removal.

Axle	Dismantling and fitting hubs and knuckles Dismantling and fitting the bearing race Dismantling and fitting of wheel bearings
Steering	Removing the steering wheel
Differential	Removing the companion flange
Transmission	Removing bearings and gears
Others	Removing various types of bearings and gears

Application

- Mainly used for the axles of light to normal FF vehicles
- Applicable for steering wheels, diff-companion flanges, transmission bearings and gears in light to normal vehicles.

Maximum weight when in use	19,600 N (2 t)
Hub bolts	4~5 Holes
Wheel bearing diameter	φ64~ φ84
Bearing race diameter	φ47~ φ63
Hub holder 1	φ68~84 mm
Hub holder 2	φ76~106 mm

Characteristics

- The axle can be dismantled and refitted using 1 set.
- Is applicable for hub bearings that are attached to either the inner or outer sides.
- A hydraulic press can be used making operations both easy and fast.
- The removal/installation of the arms is carried out by a one-touch set ball type system.
- The center bolt is fitted with a bearing, which makes for a light drive torque.
- Is applicable to FR and 4WD rear vehicles, as well as FF axles.
- Has a varied use on the steering wheel, differential companion flange, transmission bearing and gearing, as well as the axle.
- Is possible for use on the removal of other bearings and gearing from other devices because of interchangeable parts.

* Replacement parts are available. Check with your dealer for details.

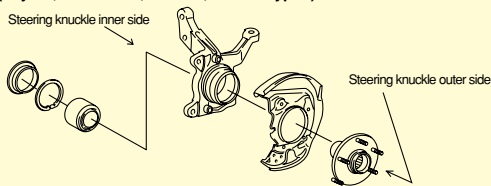
*Please check the merchandise inventory for a product that is marked by before placing an order.

●Ex. Multi puller operation: The following operations are possible by the multi puller.

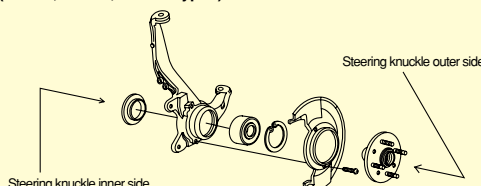
Removal/installation of the axle assy. **7**

1. Hub removal/installation, Inner race removal/installation, Bearing removal/installation **1 set compatible for multiple makers.**

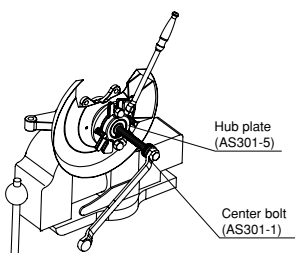
[Development chart]
Snap-rings fitted to the inner side of the steering knuckle
(Toyota, Mitsubishi, Subaru, Nissan types)



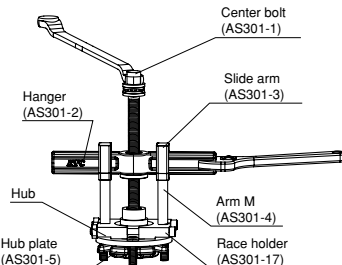
[Development chart]
Snap-rings fitted to the outer side of the steering knuckle
(Honda, Mazda, Nissan types)



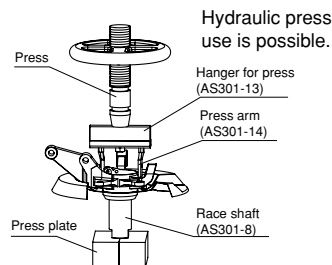
① Hub removal/installation example



② Inner race removal/installation example



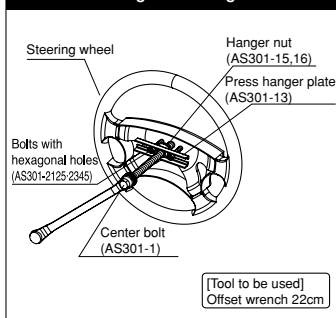
③ Bearing removal/installation example



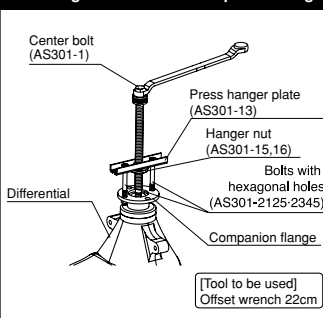
Hydraulic press use is possible.

2. Other operating example: The following operations are possible with the multi puller.

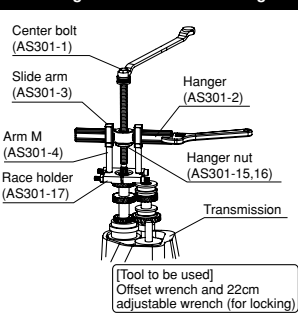
Removing the steering wheel



Removing the differential companion flange



Removing the transmission bearing



Replacement parts

Center bolt assy.	No. AS301-1
Quantity 1	M18 × 2 screws, Full length : 280mm, Hexagonal 2-faced width: 22mm
Hanger	No. AS301-2
Quantity 1	270 × 38 × 37mm
Slide arm	No. AS301-3
Quantity 2	61 × 30 × 20mm
Arm M	No. AS301-4
Quantity 2	φ 16 × 105mm
Hub plate	No. AS301-5
Quantity 1	Insertion angle 1/2°sq. M18 × 2Screw, φ154 × 24mm
Hub holder 1 assy.	No. AS301-6
Quantity 1	φ 70 × 34mm, Wing bolt M6 included
Hub holder 2 assy.	No. AS301-7
Quantity 1	190 × 190mm, M10 hex hole bolt (hex nut) included

Race shaft	No. AS301-8
Quantity 1	M18 × 2 Screw, φ55 × 114mm
Plate A	No. AS301-9
Quantity 1	φ 79 × 15
Plate B	No. AS301-10
Quantity 1	φ 71 × 15
Plate C	No. AS301-11
Quantity 1	φ 67 × 15
Plate D	No. AS301-12
Quantity 1	φ 60 × 15mm
Hanger assy. for pressing	No. AS301-13
Quantity 1	150 × 64 × 31mm, M10 hex bolt (washer) included

Press arm	No. AS301-14
Quantity 2	16 × 75 × 35mm
Hanger nut	No. AS301-15
Quantity 1	M18 × 2 Screw, φ45 × 18mm
Hex hole bolt for the hanger nut	No. AS301-16
Quantity 2	M5 × 10mm
Race holder assy.	No. AS301-17
Quantity 1	90 × 140mm, M10 hex hole bolt (hex nut) included
Plate bolt	No. AS301-18
Quantity 1	M18 × 2 screws, Full length: 34mm, Hexagonal 2-faced width: 22mm
Arm L	No. AS301-19
Quantity 2	φ 16 × 330mm
Claw assy.	No. AS301-20
Quantity 2	27 × 25 × 12mm

Bolt set for M8	No. AS301-2125
Quantity 2	M8 hex hole bolt full length 100mm
Bolt set for M10	No. AS301-2345
Quantity 2	M10 hex hole bolt full length 100mm

The equipping of the axle assy. to the chassis **8**

●IMPACT WRENCH

●WHEEL NUT SOCKET FOR IMPACT WRENCH

●OTHER TOOLS

●TORQUE WRENCH SET FOR THE WHEEL NUT

Attaching the wheel **9**

- ①Attaching the wheel nut
- ②Checking torque

1.Removing wheel→2.Removing tie rod→3.Removing pitman arm→4.Removing lock nut→5.Separating & removing drive shaft & hub→6.Disassembling/Installing drive shaft band→7.The attaching of the drive shaft to the chassis→8.Attaching the wheel

STEERING

Drive shaft disassembling/assembling

1 Removing wheel

① Removing Wheel Cap

① Removing Wheel Nuts

●WHEEL CAP WRENCH



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●ALUMINUM WHEEL CENTER CAP WRENCH



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●OTHER TOOLS

●IMPACT WRENCH



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●WHEEL NUT SOCKET FOR IMPACT WRENCH



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●CROSS RIM WRENCH



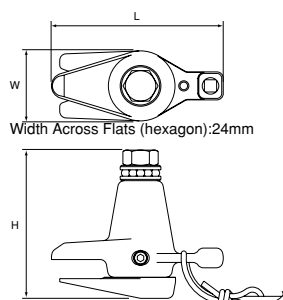
P.119

●OTHER TOOLS

2 Removing tie rod



●TIE ROD END SEPARATOR (OFFSET TYPE)



TIE ROD END SEPARATOR

No.	L	W	H	▼kg	☐	
AS201	135	55	116	1.6	1	

Purpose

- Separating tie rod end.

Features

- Tough! Power increased!
 - Rated output power.15kN(1.5t), maximum power, 30kN(3t)
 - Applicable to larger output power compared with former model (BJU-1945).
- High Durability Design
 - Durability enhanced by offset shape.
- Fits various vehicle models
 - Range of opening: 16mm-50mm
 - Applicable tie rod end: from mini cars to large passenger cars (3L)
- Easy operation raises work efficiency.
 - Use of thrust bolt alone enables easy installation and removal of tie rod end.
 - Smooth job using with a drive tool.
 - Square drive (3/8"sq.) adopted. Can hold counterforce of driving tool.

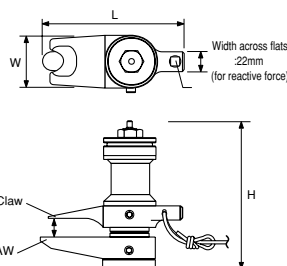
Application Table

Object	Models	Mini Cars	Compact Cars
Tie Rod End		●	●
Suspension	Upper	●	△
	Lower	×	×



●BALL JOINT SEPARATOR (OFFSET TYPE)

PAT. P



BALL JOINT SEPARATOR (OFFSET TYPE)

No.	L	W	H	▼kg	☐	
AS202A	165	70	160~200	3.0	1	

Application Table

Object	Models	Mini Cars	Compact Cars
Tie Rod End		●	●
Suspension	Upper	●	●
	Lower	●	×

Purpose

- Separating ball joint.

Features

- Study design of the rated output, 2.5t
- Use of thrust bolt alone permits removal and pulling out of rod end.
- Smooth job using with a drive tool.
- Square drive (3/8"sq.) used. Can hold counterforce of driving tool.

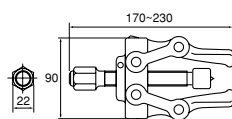
●Spare parts

No.	Name	▼kg	☐	
AS202-A24	Claw	0.7	1	
AS202-J	Jaw	0.7	1	

3 Removing pitman arm



●PITMAN ARM PULLER



PITMAN ARM PULLER

No.	Application	▼kg	☐	
PAU-3747	Mini & Compact cars, trucks & tractors	1.5	1	

Usage

- Pulls of pitman arm from center shaft quite easily.
- Forged claws with proper heat-treatment.
- A cord supplied for tying to prevent fall off.
- Fastening and claws will contact deeply to inside.

Application

- Pitman outer diameter $\phi 37 \sim \phi 47$

1.Removing wheel→2.Removing tie rod→3.Removing pitman arm→4.Removing lock nut→5.Separating & removing drive shaft & hub→6.Disassembling/Installing drive shaft band→7.The attaching of the drive shaft to the chassis→8.Attaching the wheel

LOCK NUT CHISEL

No.	a	b	D	L	ℓ	▽g	📦	
AS404	0.4	4.5	50	173	51	350	10	

Purpose

- Removal (Attachment) of sealed type lock nuts on drive shafts.

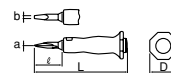
Application

- Most of sealed type lock nuts used on drive shafts.

Features

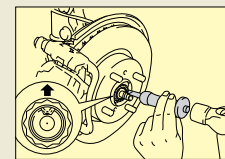
- Sealing and pulling up of sealed part lock nuts is possible with one single chisel.
- Ship-shaped tip facilitates pulling up of the caulked part by hitting the chisel head.
- Grip, made of rubber, is easy to handle and is provided with the flange for protection of your hand.
- Forged and strong!

●LOCK NUT CHISEL



Removing lock nut

4



SLIDE HAMMER PULLER

No.	D ₁	D ₂	D ₃	D ₄	L	Shocker Weight	Screw Size	▽kg	📦	
AUD3	60	68	30	14	580	1.2kg	W9/16-12	2.7	1	
AUD4	85	68	30	18	675	3.5kg	M18×2.0	5.5	1	

Purpose

- Body shop working.

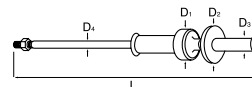
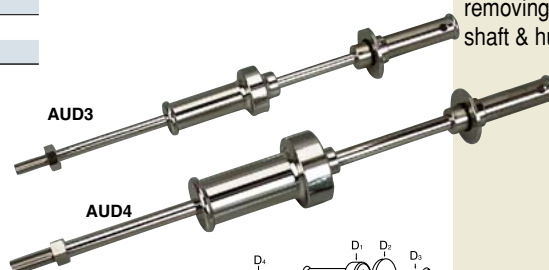
Application

- For mini cars, passenger car and pick up trucks.

Special features

- Safety conscious design.
- Big and small hammers with weight 3.5kgs and 1.2kgs for wide application.

●SLIDE HAMMER PULLER



Separating & removing drive shaft & hub

5

CAUTION • WHEN USING SLIDE HAMMER, MIND WORKING POSTURE AND THE POSITION OF HANDS. IMPROPER POSITION CAN RESULT IN INJURY.

SLIDE HAMMER PULLER ATTACHMENT

Screw size conversion adapter set for slide hammer

No.	ATUD302	▽g	600	📦	1
AUD3-1820	Screw Size Puller Side	W9/16-12	Object Side	M18×2.0	
AUD3-G1/2	Screw Size Puller Side	W9/16-12	Object Side	G1/2	

No.	ATUD402	▽g	600	📦	1
AUD4-9/16	Screw Size Puller Side	M18×2.0	Object Side	W9/16-12	
AUD4-G1/2	Screw Size Puller Side	M18×2.0	Object Side	G1/2	

Screw size convertible adapter set for slide hammer puller

No.	ATUD307	
AUD3-A1	Screw Size Puller Side	W9/16-12 Object Side M18×1.5 Suzuki
AUD3-A2	Screw Size Puller Side	W9/16-12 Object Side M19×1.5 Toyota
AUD3-A3	Screw Size Puller Side	W9/16-12 Object Side M20×1.0 Nissan, Daihatsu
AUD3-A4	Screw Size Puller Side	W9/16-12 Object Side M20×1.5 Mazda
AUD3-A5	Screw Size Puller Side	W9/16-12 Object Side M22×1.0 Nissan
AUD3-A6	Screw Size Puller Side	W9/16-12 Object Side M22×1.5 Nissan, Mazda, Mitsubishi, Daihatsu
AUD3-A7	Screw Size Puller Side	W9/16-12 Object Side M24×1.5 Nissan, Honda

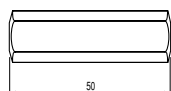
●SLIDE HAMMER PULLER ATTACHMENT



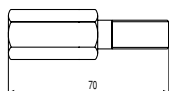
ATUD 302
ATUD 402



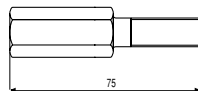
ATUD 307



AUD3-A1~A7

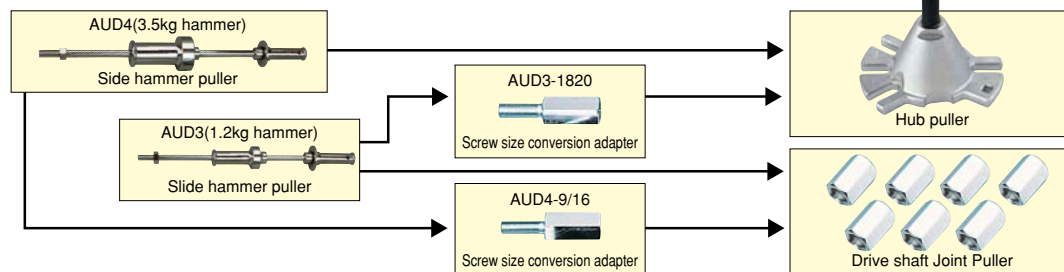


AUD3-1820, G1/2



AUD4-9/16, G1/2

Combination

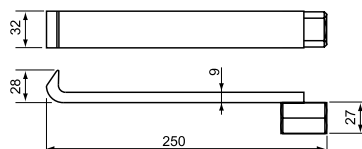


DRIVE SHAFT REMOVER FOR SLIDE HAMMER

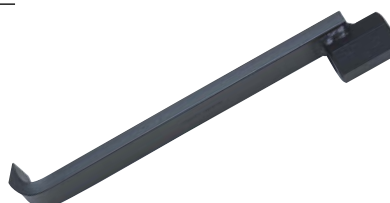
No.	Size	Screw Size (puller-side)	▽g	📦	
AUD3-AD1	250 × 32 × 28	W9/16-12	660	1	

Purpose

- Removing drive shaft from trans-axle (FF vehicle).
- Used exclusively with slide hammer puller (AUD3).

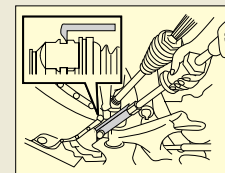


●DRIVE SHAFT REMOVER FOR SLIDE HAMMER



Separating & removing drive shaft & hub

5



5 Separating & removing drive shaft & hub

●SLIDE HAMMER PULLER ATTACHMENT



●HUB PULLER (FOR 6 HOLES) FOR THE SLIDE HAMMER PULLER



HUB PULLER FOR SLIDE HAMMER

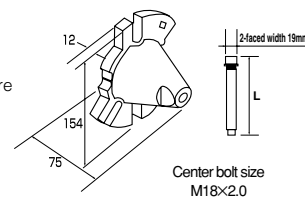
No.	Applicable Hub	▼kg	☞	
AS30	PCD100mm~140mm Bolt M14smaller	1.4	1	

Purpose

- Drawing axle shaft and brake drum.

Special feature

- Can be used for both 4 holes and 5 holes types.
- Can hold reactive force from driving tool as square drive (3/8"sq.) used.
- Open-end wrench usable as width across flats provided. Can hold counterforce.



Replacement parts

No.	Product name	L	2-faced width	▼g	☞	
AS30-1	Center bolt (M18 × 2.0)	138	19	240	1	

HUB PULLER FOR SLIDE HAMMER

No.	Applicable Hub	▼kg	☞	
AS309	PCD140mm M14	2.5	1	

Usage

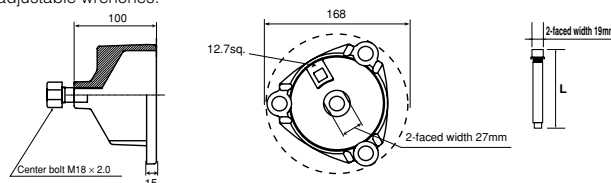
- Pulling out the axle shaft/brake drum and pushing out the drive shaft

Application

- 6 hole type hub for vehicles.

Characteristics

- Deep hole design is compatible with the front free wheel hubs on 4 wheel drive vehicles.
- With a 12.7 sq drive, force application can be maintained by the drive tool.
- The 27mm 2-faced width allows the application force to be maintained while using adjustable wrenches.



Replacement parts

No.	Product name	L	2-faced width	▼g	☞	
AS30-1	Center bolt (M18 × 2.0)	138	19	240	1	

●HANDY BAR



➡ P.263

6 Disassembling/Inst

①Removing Boot Band



●BOOT BAND CUTTER



BOOT BAND CUTTER

No.	B ₁	B ₂	T	L	▼g	☞	
AS402	24	41	11	193	260	10	

Usage

- Cutting the boot or boot band of the drive shaft

Application

- The stainless boot band of the drive shaft on light weight vehicles to standard vehicles.



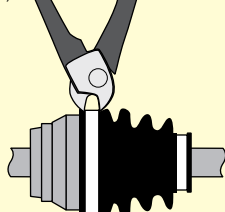
- Rubber drive shaft boot

Characteristics

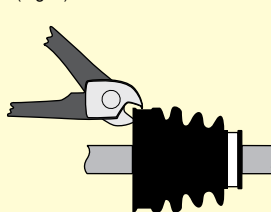
- Cutting can be conducted while the boot band is attached.
- The boot band can also be cut, increasing overall operation speed. (Fig. 1)
- The same tool can be used to cut the boot after cutting the band. (Fig. 2)
- The attached spring allows easy opening while the stopper allows storage in a compact form. Pushing the stopper while holding the handle will fix the tool in a position where the handle is closed, reducing the total storage space occupied by the tool. (Fig. 3)

* Springs are available as replacement parts. Check with your dealer for details.

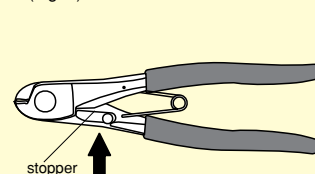
(Fig. 1)



(Fig. 2)



(Fig. 3)



EXTERNAL SNAP-RING PLIERS

No.	D	L	ℓ	▼g	📦
AS403A	90	168	21	170	10
AS403B	90	168	21	170	10

Usage

- Useful in the removal and installation of snap-rings without grips that aid removal.

Application

<AS403A>

- Standard snap-ring without removal aid.
- Working with narrow rings in openings is easier as the tip of the claw is of a thin design.

<AS403B>

- This is a special tool designed for Honda snap-rings that are fitted in narrow openings with their gripping areas placed on an angle.
- Wear and tear is limited to the claw, and therefore only the claw needs replacing.

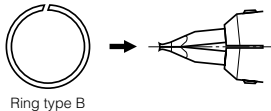
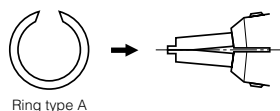
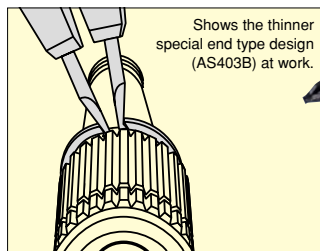
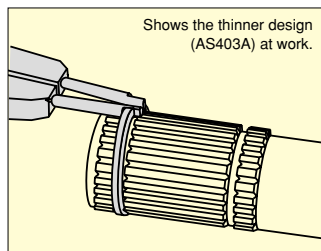
Characteristics

<AS403A>

- As the tip is of a step fitted shape, previous hard to work with snap-ring removal/installation is now easier.
- Vertical and horizontal settings are possible depending on the position of the axle.

<AS403B>

- Suitable for snap-ring removal/installation in Honda vehicles that are traditionally hard to work with.
- * Spare parts are available for springs and claw type screws.



PARTS FOR REPLACEMENT END CLAW

No.	Content of set
AS403A4	AS403A Claws: 4 sets
AS403B4	AS403B Claws: 4 sets

BOOTS BAND TOOL WITH CUTTER

No.	B	T	t	L	▼g	📦
AS401	26	43	8	160	180	1

Usage

- Fastening/cutting of the band fixing the joint boot of drive shaft.

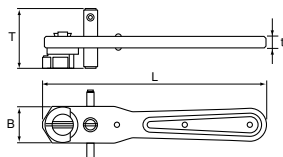
Application

- Applicable to quality boot bands (all sizes) for mini cars to compact cars.

Features

- Ratchet mechanism ensures effective winding of the band.
- Only one action required for bending and cutting of the band.

* Not required for the standard boot band designated by manufacturers.



BOOTS BAND TOOL WITH CUTTER PAT. P

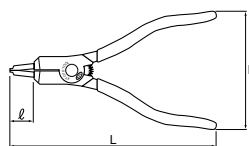


Disassembling/
Installing drive shaft
band

② Disassembling/Installing
Import Joint

6

EXTERNAL SNAP-RING PLIERS



③ Fastening/Cutting
of Boot Band

④ Sealing

Method of use

1 Set the boot band tool.

Insert the boot band attached to the boot of the drive shaft into the slit in the boot band tool.

2 Twist away the boot band.

Twist the boot band by turning the handle clockwise.

3 Turn back the boot band and cut.

Lower the boot band tool (in the direction of the arrow) until the boot band is cut.

4 Sealing the boot band

Adjust and reshape the boot band after cutting using hammers and punches.

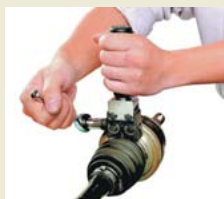
●CENTER PUNCH

●HAMMER

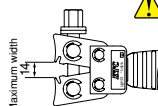
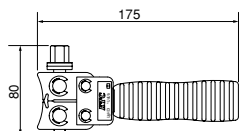
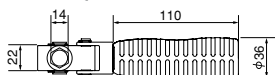


6 Disassembling/ Installing drive shaft band

③ Sealing of the boot band

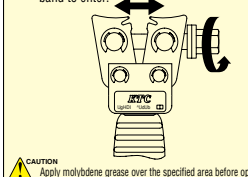


●BOOT BAND TOOL



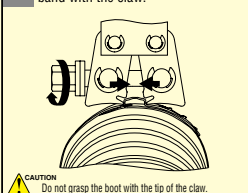
Method of use

1 Widen the claw by turning the center bolt and allow the sealing section of the boot band to enter.



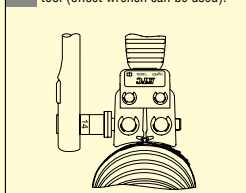
CAUTION Apply molybdenum grease over the specified area before operating.

2 Touch the sealing section of the boot band with the claw.

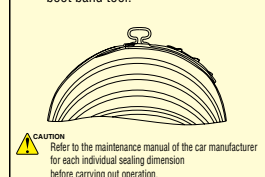


CAUTION Do not grasp the boot with the tip of the claw.

3 Tighten the bolt using a 14mm drive tool (offset wrench can be used).



4 Confirm end of operation. Loosen the center bolt and remove the boot band tool.



CAUTION Refer to the maintenance manual of the car manufacturer for each individual sealing dimension before carrying out operation.

CAUTION • Make sure that all operators read the Owner's Operator Manual carefully before usage.

BOOTS BAND TOOL

No.	▼g		
AS405	750	1	

Usage

• An exclusive tool used for sealing the boot band on the drive shaft of vehicles

Application

• The tool is compatible with light weight to passenger type vehicles using the sealing type boot band.(Can be used for imported vehicles)

Characteristics

- Sealing is made easy by a simple bolt screw-in operation.
- The operation is faster and easier when using wrenches, such as the ratchet type, etc.(Hexagonal 2-faced width 14mm)
- As the center bolt is fitted with a flange, an offset wrench can be used and the wrench will not slip off.
- A resin grip is employed for the handle to prevent slippage.
- A claw form has been employed to stop the sealing section from rising.

7 The attaching of the drive shaft to the chassis

8 Attaching the wheel

① Attaching the wheel nut

② Checking torque

●IMPACT WRENCH

●WHEEL NUT SOCKET FOR IMPACT WRENCH

●CROSS RIM WRENCH

●OTHER TOOLS

●TORQUE WRENCH SET FOR THE WHEEL NUT

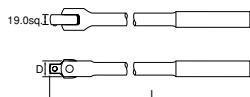
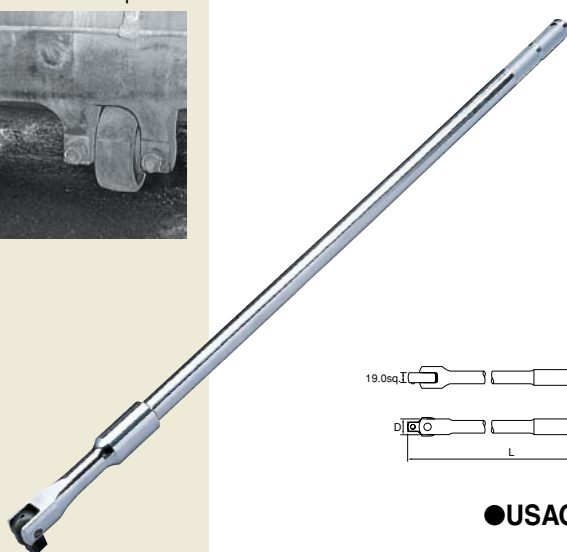
STEERING

All suspension work

1 Loosening and tightening the nuts on truck suspension



●LONG SPINNER HANDLE PAT.P.



LONG SPINNER HANDLE

No.	D	L	▼kg		
BS6-1050	38	1000	3.7	1	

Usage

• Is suitable for construction machinery and large sized vehicles where high torque is necessary.

Characteristics

- The extra long type with a maximum length of 1050mm is suitable for tightening and loosening high torque bolts using minimal strength. (The length is twice of that of the previous BS40-500 model with approximately half the handle load.)
- The handle is light as it employs the mid-air pipe.
- The knurled type grip is easy to grasp and prevents slippage.
- The drive heads (sold separately) can be replaced.

CAUTION • Hold at the grip center in order to avoid jamming your hand in the drive section.
• Take care as to avoid overloading the tool with torque due to its extra length.

Replacement parts: Replacement drive head (repair kit)

No.	BS6-K		
Drive head assy.	×1	Pin	×1
Steel ball	×1	Spring	×1
Hex hole stopping screw	×1	Replacement repair parts	×1
Replacement hex shaft wrench	×1		

●USAGE



For the wheel nuts on trucks



For the U bolt nuts on trucks



For maintenance of construction machinery

Bearing grease charge

STEERING

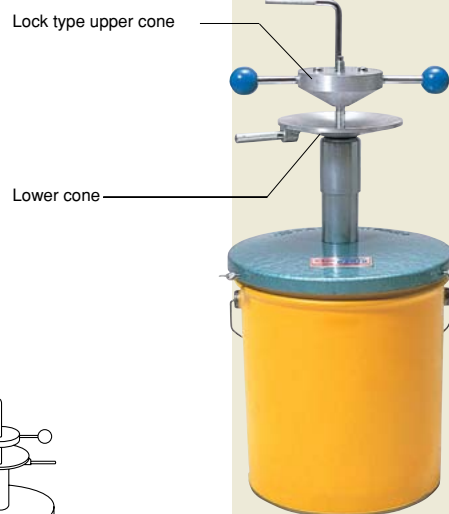
GREASE EXCHANGER HIGHLOAD

No.	Applicable Container	Applicable Bearings	▼kg	☞	
GZR18	16kg round cans	φ 15~100	19	1	

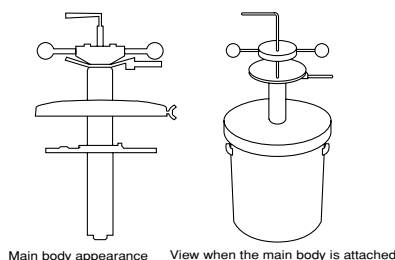
Usage

- Suitable for exchanging grease used in heavy-load bearings of large-sized vehicles.
- For exchanging grease in the hub bearings during inspection and servicing of vehicles for general use.
- **Wide range of applications.**
For bearings of various sizes used in automobiles (from mini-cars to large-sized trucks) and construction machinery.
- **Easy handing, improved work efficiency, keeps hands clean.**
Grease can be exchanged easily, requiring no skill.
Operator's hands stay clean and free of grease, so he can proceed working immediately.
- **Reduced grease consumption by eliminating waste.**
Only a minimal amount of grease is required, Grease can be used completely to the bottom of a can, so you can save more grease than is possible with manual exchange operation.
- **Simple, highly reliable mechanism.**

●GREASE EXCHANGER "HIGHLOAD"



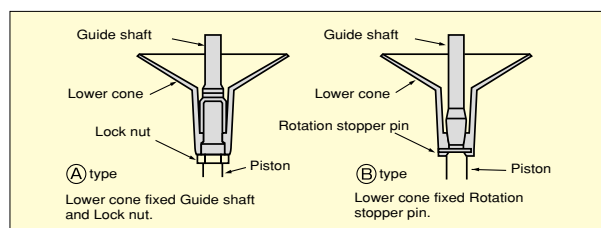
• CZR18 is the heavy-duty model of GZ18.



GREASE EXCHANGER HIGHLOAD ASSY.

No. GZR182	▼kg 2.2	☞ 1
Upper cone	Applicable Bearings φ 15~100	
Lower cone		
Handle		
Rotation stopper handle		
Guide shaft		

- This kit of replacement parts for upgrading a GZ18 grease exchanger into a "HIGHLOAD" type heavy-duty grease exchanger can be used only with the (A) type model. Adaptability can be confirmed by pressing the bellows below the lower cone and checking if the lock nut is present.
- GZ18 can be used as GZ18 heavy duty model by assembling with these parts.



●ASSEMBLY PARTS FOR GREASE EXCHANGER "HIGHLOAD"



GREASE EXCHANGER

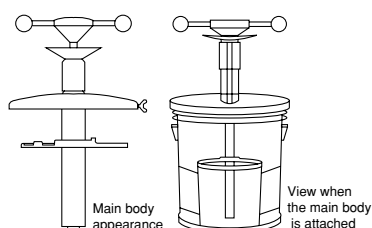
No.	Applicable Container	Applicable Bearings	▼kg	☞	
GZ18	16kg round cans	φ 15~100	8.2	1	

Usage

- Grease charging heavy load bearings of large automobiles.
- Grease charging to hub bearing of various automobiles in inspection or service.

Features

- Work time can be reduced to about 1/7 compared to the previous method.
- Useful in wide range of application.
- Keeps your hands clean and raises work efficiency.
- Grease in the can can be used up completely so waste can be eliminated and grease can be saved.
- KTC®-original pumping unit exchanges grease easily by using fresh grease to push out old grease.



●GREASE EXCHANGER



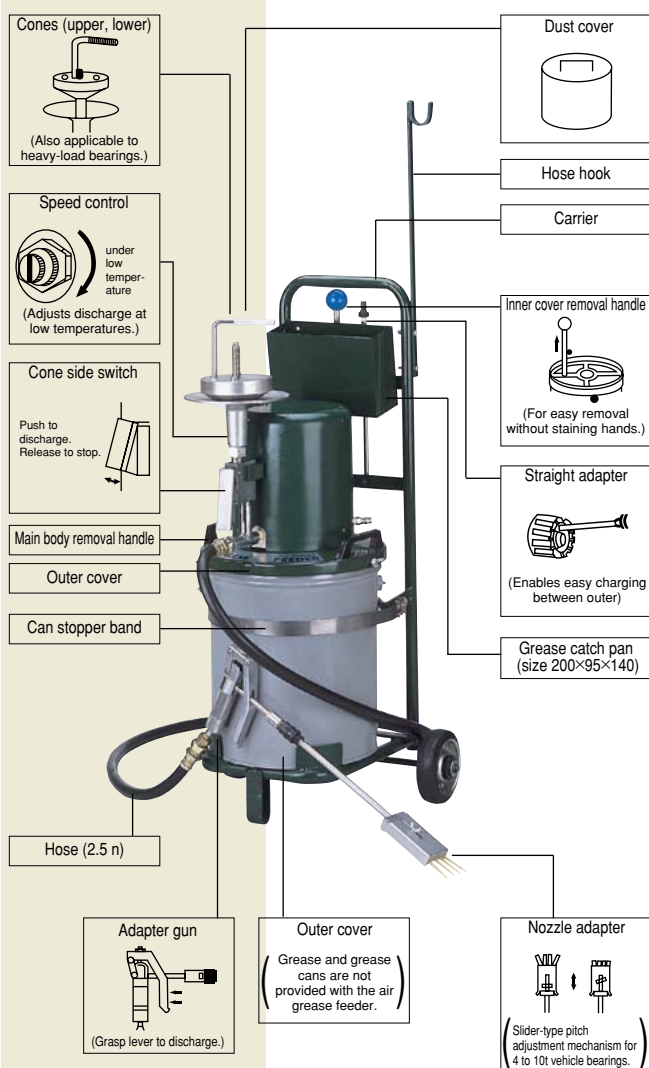
Condition of Use



●AIR GREASE FEEDER



●Name of parts and their applications



AIR GREASE FEEDER

No. AVG35	▼kg 30
Pump type	Air-driven plunger pump
Size	460×360×1,190
Discharge	500g/min. on nozzle side (No.3 grease, 29°C, no load)
Discharge pressure	75~80kg / cm ²
Air pressure	6~9.8kg / cm ²
Grease type	No.0~No.3
Can	16kg pail can
Temperature Condition	0~40°C

Applicable bearings

Cone side	Bore 15 to 100 mm
Hose side	Nozzle Adapter Nozzle adapter Bore 45 to 90 mm (bearing pitch 15 to 21 mm, equialant. to front-rear) (tapered roller bearing for 4 to 10 t vehicles)

Usage

Dedicated equipment for feeding grease into tapered roller bearings during grease exchange or supply for medium-to large-sized trucks.

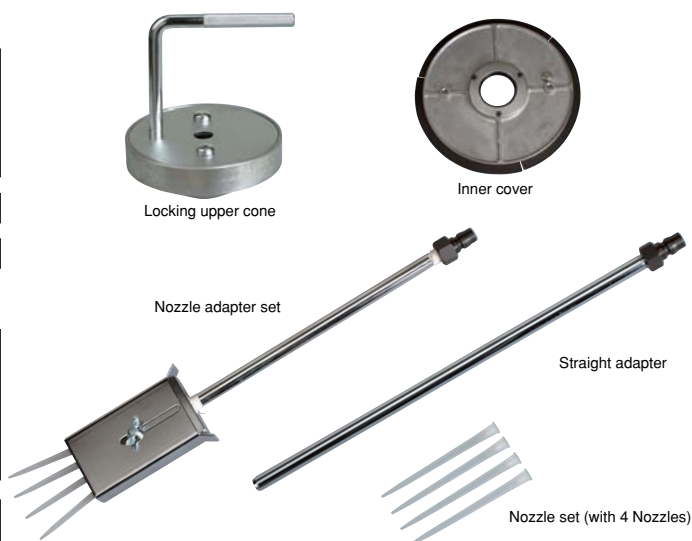
Application

Bearings with cone side bores of 15 to 100 mm, hose side bores of 45 to 90 mm and bearing pitches of 15 to 21 mm.

Features

- With the nozzle adapter, fresh grease pushes out old grease, without no need to remove each bearing.
- Grease can also be fed into a removed bearing by installing it on the cone.
- Grease can be fed even at around -10°C by proper piston speed control operation.
- Foreign objects (such as moisture and dirt) in compressed air are filtered out by an air filter, preventing air regulator operation failure.
- The built-in air regulator ensures air supply at optimal pressure.
- Easy operation and setup reduces work time.
- The carrier is equipped with a can stopper band and plate that prevents the grease can from falling or being displaced.

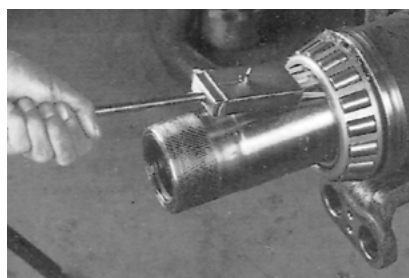
- CAUTION**
- DO NOT PULL THE LEVER EVEN AFTER REMOVAL OF THE AIR HOSE. OTHERWISE, GREASE MAY SCATTER INTERNALLY DUE TO RESIDUAL PRESSURE.
 - STORE IN PLACES WHERE YOU CAN AVOID FREEZING.
 - USE CLEAN AIR FOR INPUT.



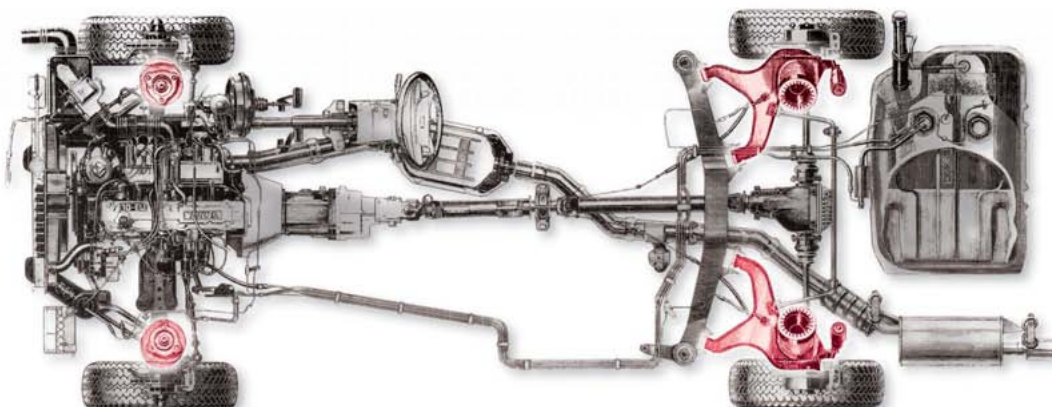
Supply parts

No.	Part Name	Q'ty	
AVG35-2	Locking upper cone	1	
-4	Inner cover	1	
-6	Nozzle adapter set	1	
-7	Straight adapter	1 (with 4 nozzles)	
-7-7	Nozzle set	1	

* These parts are also optionally available.



Suspension System Mechanism



MECHANISM 1

The suspension

Suspension is designed to dissipate the load forced onto a vehicle by absorbing vibration and impact from the road, stabilizing the position of the car while driving, and sustaining the optimum balance of the car for comfortable driving.

The suspension is constructed using a combination of spring or shock absorber that absorbs vibration/impact and a stabilizer that reduces horizontal movement (roll).

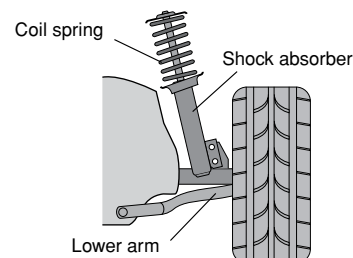
MECHANISM 2

Types of suspension

Strut type suspension

The lower part of the suspension system uses the lower arm attached to the chassis to receive the drive shaft where as the upper part is placed on the extension of the king pin, connected to the body with the coil spring attached to the shock absorber.

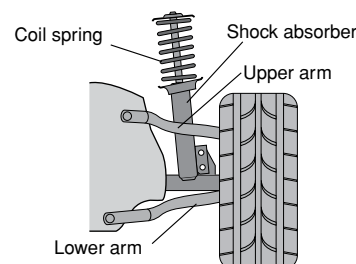
The system allows for a lower number of component parts, providing increased space as a merit, however, is less effective during larger rolls while cornering.



Strut type suspension

Double wishbone type suspension

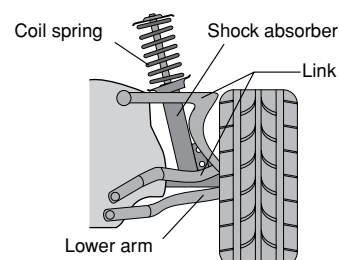
The double wishbone type suspension system has independent moving right hand and left hand parts. The independent hanging type is most common. The two upper and lower suspension arms support the combined shock absorber and coil spring. The wishbone name likens the shape of the arm to the chest bone of birds. The system provides high rigidity, better stability and handling but due to the complex structure, the system occupies space.



Double wishbone type

Multi-link suspension

The term multi-link is coined as the system is structured by dividing the lower arm into multiple links. The high control ability born of the multiple link system allows the vehicle to sustain the vehicle in an optimum balanced condition during roll, braking, and acceleration. Recently, the system has been used in many luxury vehicles.



Multi-link type

SUSPENSION

Disassembling/Assembling Suspension System

- 1** Removing/Installing Wheel
 ① Remove Wheel Cap
 ② Remove/Installing Wheel Nuts

● WHEEL CAP WRENCH

● CENTER CAP WRENCH FOR ALUMINUM WHEEL

● OTHER TOOLS

● IMPACT WRENCH

● WHEEL NUT SOCKET FOR IMPACT WRENCH

● CROSS RIM WRENCH

● OTHER TOOLS

- 2** Pinching off Brake Hose
 ① Block off of Hoses
 ② Disassembling Pipe

● PINCH OFF PLIER

● FLARE NUT WRENCH

● OTHER TOOLS



- 3** Removing/Installing Suspension System

● STRUT SPRING COMPRESSOR D.PAT.

STRUT SPRING COMPRESSOR

No. AS10	kg 6.0	1
Body	AS10-1	
Standard Arm (Dia.90~170)	AS10-2	

Applicable Coil Spring

Article	Applicable Capacity
Wire Dia.	18mm or smaller
Outer Dia.	Standard Am... 90~170mm Large Am135~220mm
Coiling Cycle	2 times or more
Coil Span	20mm or over

Purpose

- For removing/installing coil springs used in automotive suspensions.
- Wide application for use on front- & rear-suspension of FWD (FF Cars) and RWD (FR Cars), strut type coil springs, etc.

Special feature

- If excessive load is applied on spring compressor, breaking mechanism will work inside the drive of center screw bolts. (Breaking load: 1,300kgs.) (Fig.2)
- Built in center screw bolts for protecting screw part.
- Compact pipe style body for easy operation.

Body

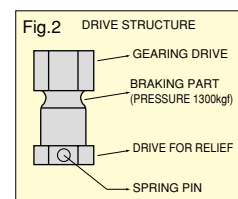
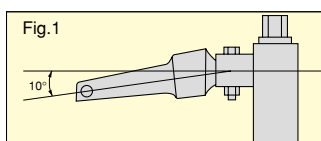
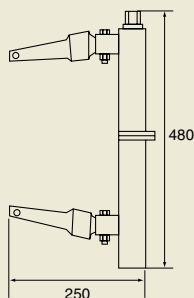
No.	Dimension	kg
AS10-1	Length 480×φ42	3.8

Arm

No.	Applicable Diameter	kg	1
AS10-2	Standard Am Dia. 90~170	2.2	1
AS10-3	Large Am Dia. 135~220	2.5	1



- BEFORE USING THIS TOOL, CAREFULLY READ THE PROVIDED INSTRUCTIONS.
- NEVER APPLY OVER TORQUE ALTHOUGH BRAKE MECHANISM WORKS AT THAT TIME.
- NEVER USE THIS TOOL WITH IMPACT WRENCH.
- THIS TOOL IS SUITABLE FOR USING ON JAPANESE CARS.



Cautionary points on handling the spring compressor

As a result of the investigations carried out based on consumer comments and questions concerning the usage of the previous spring compressor SPU-70315 (1987~1995) provided by our company, the following daily uses were occurring. It is requested that the User's manual and cautionary points along with the maintenance procedures of this product are read thoroughly before use.

If any faults are recognized under the inspection items within the inspection guidelines, stop using this product and replace with the spring compressor (product number: AS10) currently provided by our company.

Explaining the situation

- Recent strut type springs have high spring numbers or illegally modified springs projecting a high stress load. Attachment and removal of springs that exceed the previous safety standards is being conducted.
- The tool is used when the span of the upper and lower arm (that hooks the spring during spring attachment and removal) is short. The spring characteristic allows for the compression that presses the spring to be different even when compressing the same amount.

Ex.) Standard number of springs (Load necessary in order to compress the spring by 1mm)
 2 springs wound 363N/mm
 3 springs wound 180N/mm
 The compression load can double depending on the condition in which the spring is hooked (wound).

- The spring is sometimes compressed using prohibited power tools (impact wrench) instead of the hand tool.

Using a power tool to compress the spring is dangerous due to the immediate change in tightening strength, which can lead to compression exceeding the permissible range of the product.

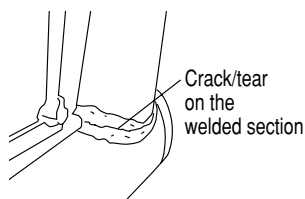
The content explained above relates to an extremely dangerous operation on using the tools.
 Check the following inspection guidelines when using this tool.

Inspection guidelines

● Inspection spots and inspection methods (do not use if the following inspection items are faulty)

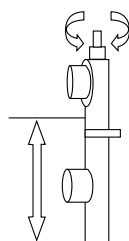
① Welded spot on the attachment section of the fixed arm

- Thoroughly clean the welded section using brake cleaners, etc. and visually check for any torn, cracked weld sections. (Cracked or torn sections are faulty)



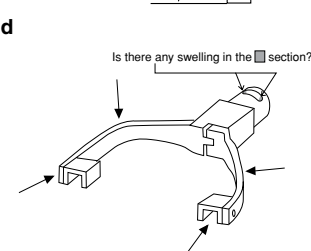
② Inspecting the center screw bolt

- From the slide groove on the main unit moving arm, visually inspect for unusual wear or bends on the center screw bolt.



③ Moving arm friction inspection

- Turn the head-drive with your hands and check that the moving arm moves smoothly. (When rotation is uneven, the center screw bolt is worn or damaged.)

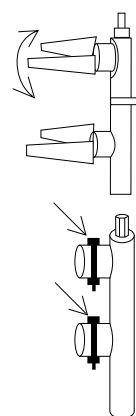


④ Individual inspection for the fixed and moving arm

- Remove both arms from the body and inspect for bends and wear.
- Inspect for any deformities on the hole for passing through the attachment bolt.
- Check that the arm can be removed easily.

⑤ Moving and fixed arm sway inspection

- After properly attaching the fixed and moving arm to the main unit, check that the neck sways smoothly without unevenness. (If uneven, item (4) is swelled or the attachment section is deformed.)



⑥ Fixed and moving arm attachment bolt

- Remove the fixed and moving arm attachment bolt from the main unit and visually check for bends, wear, and damage on the screw section.

If any faults are found in the above inspection, the parts have exceeded their useful life. Continuing to use these parts can cause damage and is dangerous. Avoid use. The listed contents can be used for the inspection for AS10. Please perform these inspections.

Cautionary points on use

● Never use an impact wrench as this can cause the spring compressor to break.

[Pre-use inspection]

- Perform the following inspections before operation and check for any faults. (Do not use if there are any faults)

- Check that the attachment bolts and nuts on Arm 1 and Arm 2 are not loose.
- Arm 1 and Arm 2 necks should sway freely.
- Turn the center screw bolt with your hands and check that Arm 2 moves smoothly along its full stroke.
- The hook moves swiftly left and right.
- There are no signs of cracking, deformity, or damage.

[Attaching the spring]

- Attach to the diameter section of the spring when attaching the hook to the spring. (Fig. 2)
- Set to the widest position when considering the span of the hook for the upper and lower arms. (Distance between diagram 3A and B)
- The spring pitch number (wind number) for the wind between the left and right hooks for the upper and lower arm must be equal. (Fig. 3)

[In use]

- When the tightening force suddenly increases during compression, immediately stop operation and loosen the spring.
- Do not compress until the line spaces between the springs are filled.
- Take care as to avoid having the upper and lower arm attachment bolts touch when using springs with low pitch numbers (fewer winds).
- Many springs with low pitch numbers have a high load. Use a torque wrench to control the torque of the tightening drive when using. (Tightening drive torque should be below 44N-m)

[Maintenance]

- Amplify support the screw section of the center screw bolt and apply lubricant before use.
- When storing, make sure foreign particles/dust, etc. do not enter the slide groove section of the main unit.
- Do not disassemble or modify this product.

Fig. 1

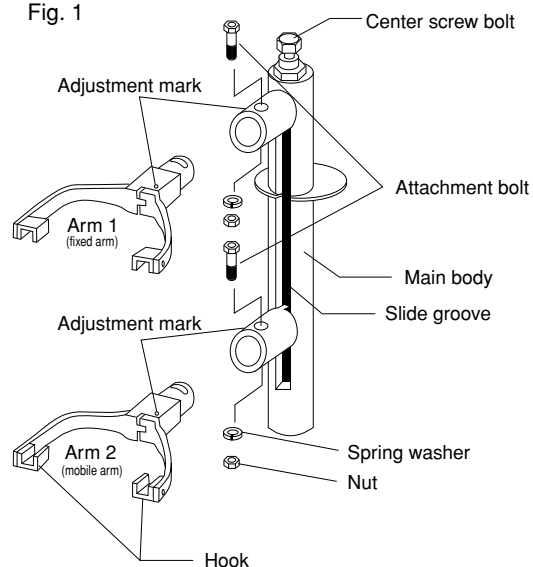


Fig.2 Coil spring

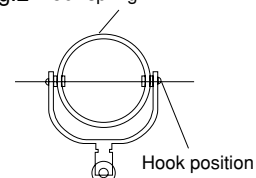
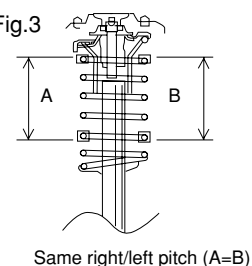


Fig.3



4 Inspecting Torque

●TORQUE WRENCHES



➔ P.157

5 Installing Wheel and Inspecting Torque

●IMPACT WRENCH



➔ P.166

●WHEEL NUT SOCKET FOR IMPACT WRENCH



➔ P.218

●CROSS RIM WRENCH



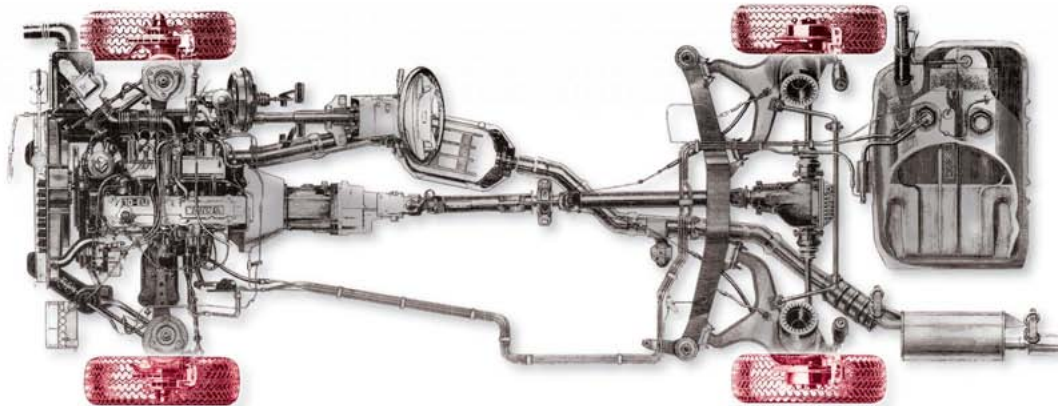
➔ P.119

●WHEELNUT TORQUE WRENCH



➔ P.219

Tire & Wheel Mechanism

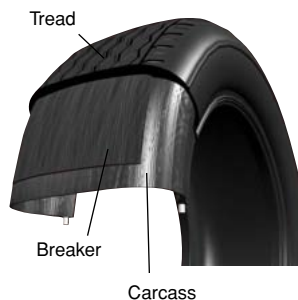


MECHANISM 1

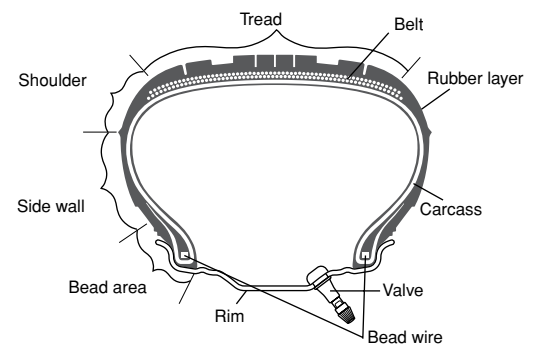
Function and mechanism of tire

The tires support the weight of the vehicle, they not only transfer the drive and braking power, they also protect the vehicle from road shock and play a role in transferring the vehicle's functionality to the road.

The following details the parts of the tire structure: Tread: This is the area that comes into contact with the road. Shoulder: The area that protects the carcass of the tire. Sidewall: The area where the tire size and the manufactures name is displayed. Bead area: This is made up of the rubber layers, belts, carcass, and bead wire materials and is where the tire is fixed to the rim.



Cross section of a bias tire

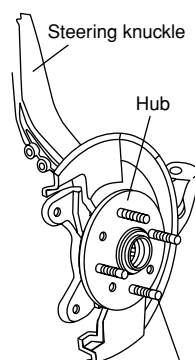


Cross section of a radial tire

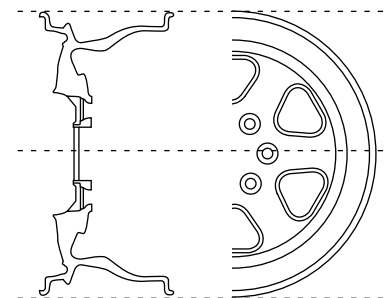
MECHANISM 2

Wheel & hub

A wheel consists of a rim and tire which is attached to the "hub" assembly. In modern cars the hub is a disc which normally contains 4-6 bolts (or studs) and is attached to the axle by way of the axle nut. The average amount of bolts is between 4-6. The heavier the vehicle, the more wheel nuts/bolts will be required.



Hub bolt (Wheel bolt)

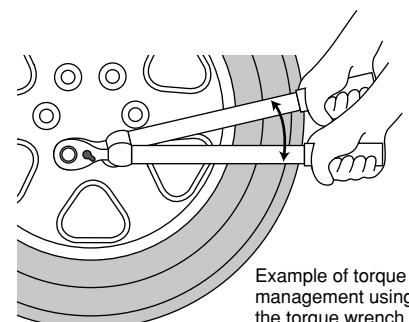


Cross section of wheel

MECHANISM 3

Torque management suggestion

Not only the tires, but faulty attachment or tightening of the hub bolts (wheel nuts) will largely influence safe driving. For example, if tightening of the hub nut (wheel nut) is weak, the tire can fall off because of vibration. If tightening is too strong, the hub bolt can break. In order to prevent these accidents, the tightening torque should be managed with a torque wrench. The common tightening torque for passenger vehicles is 103N-m and this torque is relatively easy to achieve. If the hub-nut (wheel nut) of your vehicle cannot be loosened with the provided tire wrench (providing there is no rusting), the hub nuts have been tightened excessively.



Example of torque management using the torque wrench

TIRE & WHEEL

Wheel attachment and removal

1 Installing Fender Cover

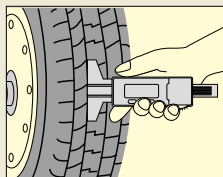
●FENDER COVER



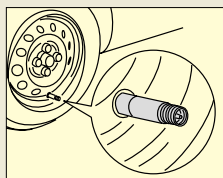
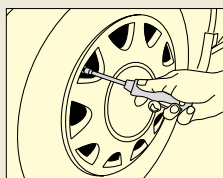
➔ P.263

2 Inspecting Tire Grooves

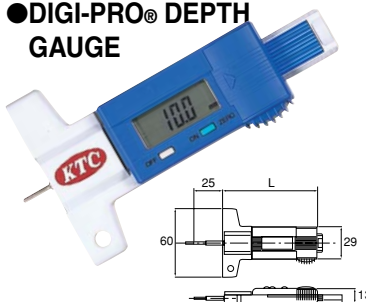
① Checking the tire groove



② Inspection and Adjustment of Air Pressure



●DIGI-PRO® DEPTH GAUGE



*DIGIPRO is the registered trademark of KYOTO TOOL CO., LTD.

DIGI-PRO® DEPTH GAUGE

No.	Range	Minimal indication	Precision	Battery life	Battery used	Whole length			
GDT-25	0~25mm	0.1mm	±0.2mm	Approx. 2 years	SR44	83	40	10	

Purpose

- For measuring the groove depth of the tires (four-wheel and two-wheel vehicles).

Features

- Compact body enables use in the tire housing.
- Digital display in 0.1mm unit. Easy to read.

Reference: tire wear limit

Unit: mm

Tire types	Passenger vehicle and light trucks	Small type trucks	Trucks and buses	Motorcycle
Groove depth limit	1.6	2.4	3.2	0.8

*The groove depth limit adheres to the Road Transport Vehicle Laws

●TIRE VALVE WRENCH



TIRE VALVE WRENCH

No.	D	ℓ	L			
AH2-4	17	165	235	40	1	

Purpose

- Used to remove/install valve core of tires of mini cars, compact cars, trucks and buses (except for motor cycles, construction vehicles and tire of double tires)

Features

- Long shaft enables operation without hitting tire with the tool and improves work efficiency. (The length is 165mm.)
- Thinner handle to turn.

●TIRE AIR GAUGE



AGT231

AGT232

TIRE AIR GAUGE

No.	Range	Minimal indication	Thickness	ℓ	L			
AGT231	0~500kPa (0~5kgf/cm ²)	10kPa	95	100	270	800	1	
AGT232	0~1200kPa (0~12kgf/cm ²)	10kPa	95	100	270	800	1	

Purpose

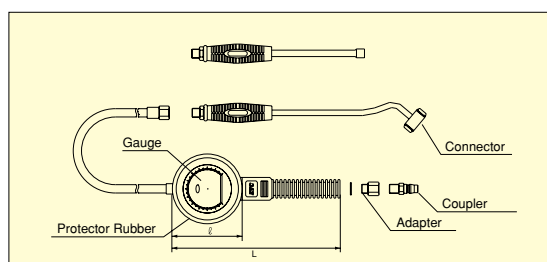
- Measuring, increasing and decreasing air pressure in car tires.

Application

- Tire Air Gauge 500: for passenger cars and commercial cars (vans)
- Tire Air Gauge 1200: for motorcycles, passenger cars, trucks and buses.

Features

- Light touch lever enables smooth fine adjustment.
- Large gauge (φ70mm) easy to read measurements. Possible to measure and decrease pressure without connection with the air hose.
- Swivel joint prevents hose twisting.
- Ultra-thin straight connector on the tip (tip: 11mm dia.) facilitates use for most of aluminum wheels (AGT231).
- Double connector usable for outer tire of double tires (AGT232).
- Usable for some of the inner tire depending on the notch shape of the wheel.



Connectors for replacement:

Connectors	No.	
Straight connector	AGT23-A1	
Double connector	AGT23-A2	
Clip Connector	AGT23-A3	

WHEEL CAP WRENCH

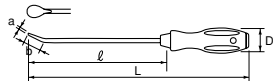
No.	a	b	D	ℓ	L			
AH101	1.3	20	40	215	350	200	5	

Purpose

- Removing wheel cap from cars.

Features

- Thin tip; easy to put in between wheel rim and wheel cap, with lower possibility of damaging wheel cap and wheel.
- Tip is bent for easy operation.
- Hand fitting plastic handle.



●WHEEL CAP WRENCH



CENTER CAP WRENCH FOR ALUMINUM WHEEL

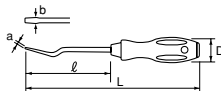
No.	a	b	D	ℓ	L			
AH102	0.7	7	34	115	235	90	5	

Purpose

- Removing the center cap of aluminum wheel.

Features

- Thin tip, easy to put into the notch, with lower possibility of damaging the cap and wheel.
- Tip is bent at two points for easy operation.
- Hand fitting plastic handle.



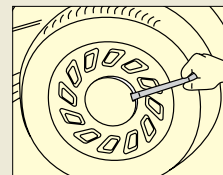
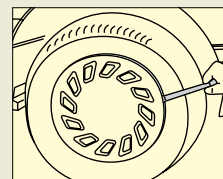
●CENTER CAP WRENCH FOR ALUMINUM WHEEL



Removing/Installing Wheel

3

① Removing Wheel Cap



●IMPACT WRENCH



P.166

② Removing/Installing Wheel Nuts



ALUMINUM SOCKET • SET (3pcs.) FOR POLISHED NUT

No.	ATBP403AL	415	1
Aluminum Socket Set For Polished Nut		ABP4-17ALP, 19ALP, 21ALP	
Metal Case L165×W70×H40			

- Set of 3 popular sizes (17, 19, & 21).

POWERFIT

●1/2"sq. ALUMINUM SOCKET SET FOR POLISHED NUT (3pcs.)



ALUMINUM SOCKET FOR POLISHED NUT

No.	S (Hexagonal)	D1	D2	H	L	▽g		
ABP4-17ALP	17	26	29	21	49	50	1	
-19ALP	19	28.5	29	24	52	60	1	
-21ALP	21	31	29	27	55	70	1	

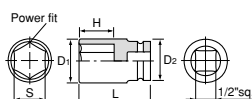
- For use on aluminum wheel and surface-treated nuts.
- Thin wall type with minimum outer diameter.
- Made of newly developed special aluminum alloy with special heat-treatment for superb durability.

POWERFIT

(Caution) Aluminum wheel nut tightening should be conducted according to the set torque defined by each manufacturer.



- USE ONLY ON WHEEL NUTS.
- FASTEN ALUMINUM WHEEL NUTS AT THE SPECIFIED TORQUE.



●1/2"sq. ALUMINUM SOCKET FOR POLISHED NUT



Attached pins and rings
PR-2026

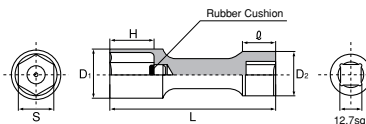


3 Removing/Installing Wheel



② Removing/Installing Wheel Nuts



● 1/2"sq. Wheel nut socket set for impact wrench (long, thin type) PAT.P.



WHEEL NUT SOCKET SET FOR IMPACT WRENCH

No. TBP4803		580		 1				
Wheel nut socket for impact wrench				BP48-17, 19, 21				
No.	\$ (Hexagonal)	D ₁	D ₂	H	ℓ	L		
BP48-17	17	24.0	25	22	18	100	180	5
BP48-19	19	26.0	25	24	18	100	200	5
BP48-21	21	27.5	25	26	18	100	200	5
BP48-22	22	29.5	25	27	18	100	220	5

POWERFIT

Usage

- Compatible with exclusive socket wrenches and impact wrenches used to tighten and loosen vehicle wheel nuts.

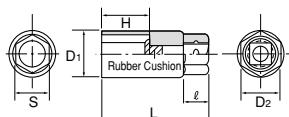
Characteristics

- Exclusive socket for the aluminum wheel
- A protective rubber cushion has been fitted for chrome or painted nuts.



- DO NOT USE EXCEPT FOR CAR WHEEL NUTS.
- SPECIALLY DESIGNED TO BE THINNER THAN ORDINARY PRODUCTS. DUE TO THE THINNER CONSTRUCTION, THIS SOCKET SET MAY BREAK DEPENDING ON THE WAY OF USE.

● 1/2"sq. SOCKET SET FOR ALUMINUM WHEEL WHEEL



SOCKET FOR ALUMINUM WHEEL

No.	S (Hexagonal)	D ₁	D ₂	H	ℓ	L		
B35A-17H	17	24	21	22	15	60	140	10
-19H	19	26	21	24	15	60	140	10
-21H	21	27.5	21	27	15	60	140	10

POWERFIT

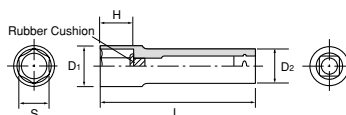
Purpose

- Specialty for fasten/loosening aluminum wheel nuts of cars.
- With rubber cushion for plated and painted wheel nut.



- DESIGNED SPECIALLY FOR THE ALUMINUM WHEEL AND ENDURES LOWER TORQUE BECAUSE OF ITS STRUCTURE.

● 1/2"sq. WHEEL NUT SOCKET



WHEEL NUT SOCKET

No.	S (Hexagonal)	D ₁	D ₂	H	L		
B38Z-17H	17	24	22	22	100	200	5
-19H	19	26	22	24	100	200	5
-21H	21	27.5	22	26	100	200	5
-22H	22	29.5	22	27	100	200	5

POWERFIT

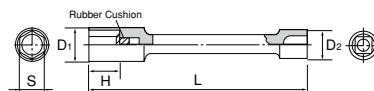
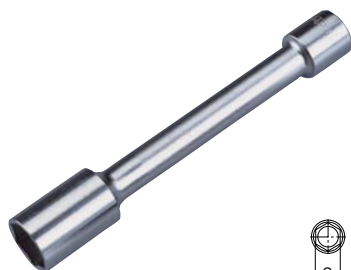
Purpose

- Specialty for fasten/loosening aluminum wheel nuts of cars.

Features

- The whole length is 100mm, designed exclusively to fit the wheel. Use with a torque wrench improves work efficiency.
- With rubber cushion for plated and painted wheel nut.
- 22H is for Land Cruiser 100 and Honda Legend (KB1)

● 1/2"sq. WHEEL NUT LONG SOCKET



WHEEL NUT LONG SOCKET

No.	S (Hexagonal)	D ₁	D ₂	H	L		
B38ZL-17H	17	24	24	22	180	330	5
-19H	19	26	24	24	180	340	5
-21H	21	27.5	24	26	180	350	5

POWERFIT

Purpose

- Specialty for fasten/loosening aluminum wheel nuts of cars.

Features

- Long size most appropriate for RVs.
- Long size necessitates no extension bar and improves work efficiency.
- With rubber cushion for plated and painted wheel nut.

● CROSS RIM WRENCH



P.119

WHEEL NUT TORQUE WRENCH SET

No. TWCMPA221	kg 1.3	1
1/2"sq. Torque wrench for wheel nut		WCMPA103
1/2"sq. Exclusive socket for wheel nut 21mm		B38Z-21H

Usage

- This tool is a pre-set type torque wrench that is used to tighten vehicle wheel nuts 17, 19, and 21mm at a specified torque of 103N-m (10.5kgf-m). (The 17, 19mm sockets are sold separately.)
- Applicable for clockwise rotation tightening. (Is not applicable for anti-clockwise rotation tightening)

Characteristics

- Reliable operation is possible through torque management. (For confirmation during inspection on completion)
- Work hours have been reduced with the employment of the ratchet head. (36 plate gears) The union structure allows for the firm sustenance of the socket. Socket replacement can be carried out easily.
- The full optimum length is designed so that the tire and the mechanic's hands do not interfere. (Full length has been set at 420mm, 55mm longer than in previous models.) The load on the handle has also been reduced during operation.
- The head angle changes with a light shock to the hands when the tightening torque is reached, enabling recognition of completion.
- The rubber cap attached to the base prevents entry of dirt and dust.
- Provided with a soft case that makes storage easy.

*Replaceable parts are available for the ratchet section. Check with your dealer for details.

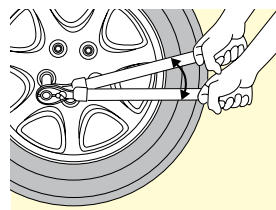
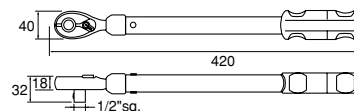
Compatibility Table (Domestic Vehicles)

Nut size (mm)	Manufacturer	Examples of Compatible Cars
19	Honda, Subaru	All passenger vehicles (except recreational and light vehicles)
	Isuzu	All passenger vehicles
21	Toyota, Nissan	All passenger vehicles (except recreational and light vehicles)
	Mitsubishi, Daihatsu	All passenger vehicles (except recreational and light vehicles)
	Mazda	All passenger vehicles (except recreational and light vehicles)

- * The torque value for light vehicles with 17mm nuts differs from the one for regular vehicles. For this reason, the torque wrench above cannot be used. However, the torque wrench can be used on some foreign cars made outside of Japan.
- * Compatible with wheel tightening torque value of 103N-m. (Not applicable to certain vehicles and wheels.)
- * The wrench cannot be used for trucks and recreational vehicles, as the torque value required is too high.
- * Check the torque value before using wrench on non-standard wheels.

●1/2"sq. WHEEL NUT TORQUE WRENCH SET

D.PAT.



Confirm the tightening torque with the wrench positioned between the arrows, as shown in the diagram.

Inspecting
Tightening Torque

4

**CAUTION**

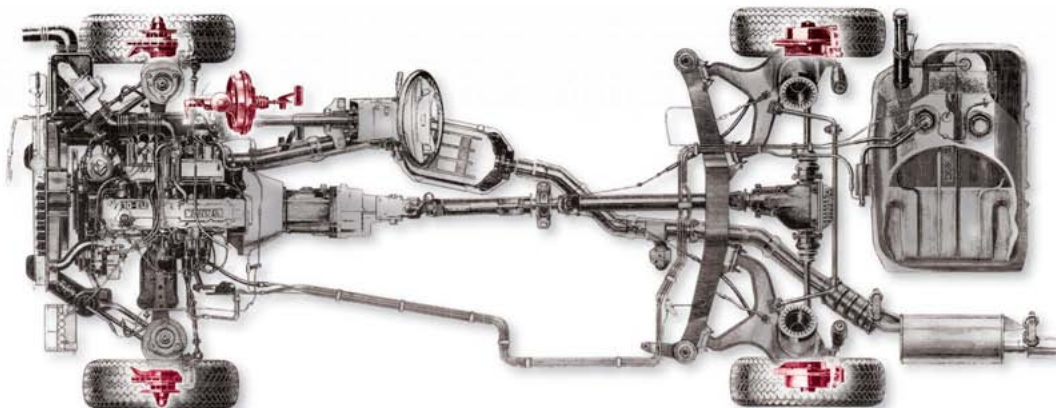
1. This torque wrench is exclusively designed for wheel nuts. Do not use this tool to tighten or loosen other bolts/nuts.
2. The wheel tightening torque is set for domestically manufactured vehicle standard wheels. Check the torque settings for special wheels before use.
3. This product is a measurement tool. Take extreme care when handling. Be sure to avoid dropping, throwing, or hitting this product.
4. Hold the grip at the line as the center and apply even firm pressure.
5. Applying pressure at other places (pipe part etc.) than the grip will give inaccurate torque readings.

6. Use this product multiple times to avoid misleading when the tool has been stored for a long time.
7. Do not use during rain, high humidity levels, and in conditions where the tool is exposed to water.
8. Do not disassemble this product. The torque settings can become faulty.
9. Immediately stop use and request for an inspection/disassembly and adjustment when this product is dropped, submerged in water, emits abnormal sound, or operates faultily.
10. Do not apply force after operation.

5. AUTOMOTIVE SPECIAL TOOLS

Dismantling the Mechanism (6)

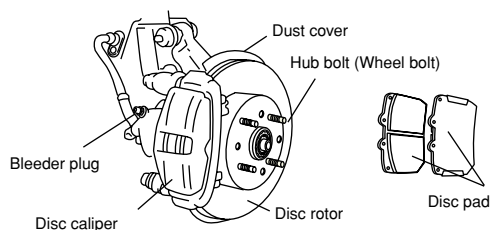
Brake System Mechanism



MECHANISM 1

How the disc brake works

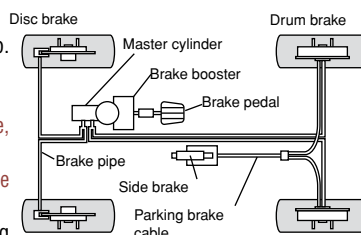
The disc brake is a device that works by pressing a brake pad against the disc rotor that rotates with the wheel. Compared to the drum brake, the disc brake is far more effective and stable, allowing for a larger braking force and is used on the front wheels of passenger vehicles and light trucks.



MECHANISM 2

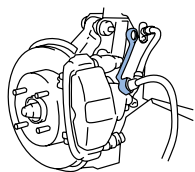
Brake system

Braking is one of the basic functions being necessary for vehicles in order to drive, turn and stop. Brakes are an important device necessary for safe driving. The system consists of 2 main operations used by the driver - being the "Brake Pedal" and the "Parking Brake Lever". The master cylinder that converts the pressure directed towards the brake pedal to fluid pressure, further directing the brake fluid to the braking device. The "Brake Pipe" and "Brake Hose" that direct the brake fluid pressure to the braking device from the master cylinder. The "disc Brake" and "Drum Brake" that transfer the braking pressure on the brake pedal to the rotating wheel. Respective categories are raised above.

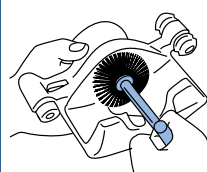


Disc brake tools

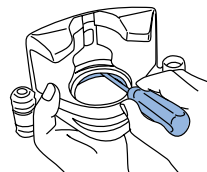
Offset wrench for bleeder plugs
No.ABX7-08-10



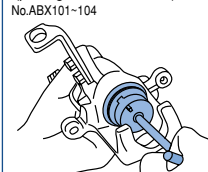
disc cylinder polisher
No.ACPD-54-64



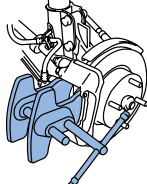
Seal pick tool
No.ABO-100



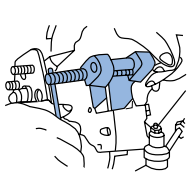
Disc parking tool
(parking attached for discs)
No.ABX101-104



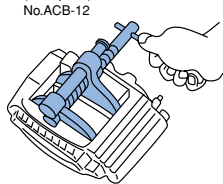
Disc brake piston tool
No.ABX10



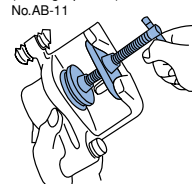
Disc brake piston tool
No.AB-10



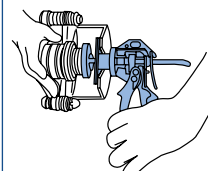
Disc brake piston tool
(wide plate)
No.ACB-12



Disc brake piston tool
(for single pistons)
No.AB-11

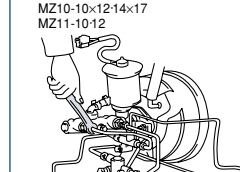


Brake piston re-setter
No.ABX105



Offset wrench for brake pipes

Offset wrench for brake pipes
No.MZ1-10-10x14-10x12-11x12
MZ10-10x12-14x17
MZ11-10-12



Socket for brake pipes
No.BZ25-10H



Claw-foot offset wrench for brake pipes
No.MZ25-10H



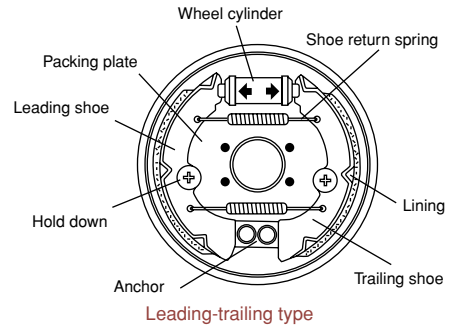
Rotating offset wrench for brake pipes
No.MZF-10



MECHANISM 3

How the drum brake works

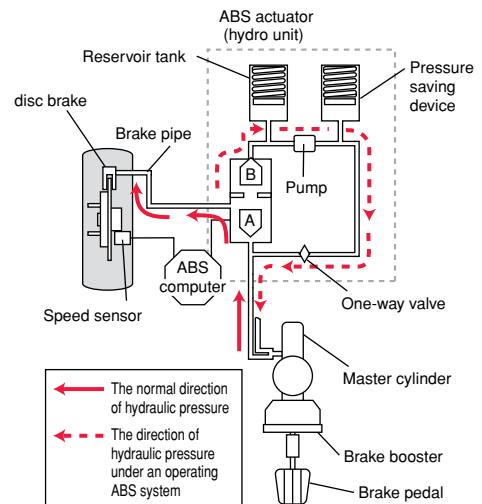
The brake drum is a device that works by pressing a brake shoe against the inner side of a cylindrical drum that rotates with the wheel axle. There are the leading-trailing type, 2 trailing type, and 2 leading type and other different types of drum brakes depending on the operating form of the brake shoe. The leading-trailing type is effective and stable for driving and reversing. However, due to the inferior cooling qualities, drying qualities when wet, and brake fade phenomenon through continuous use, the drum brake is often used for the rear wheel brake only.



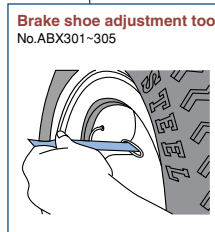
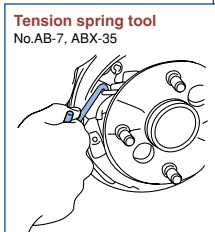
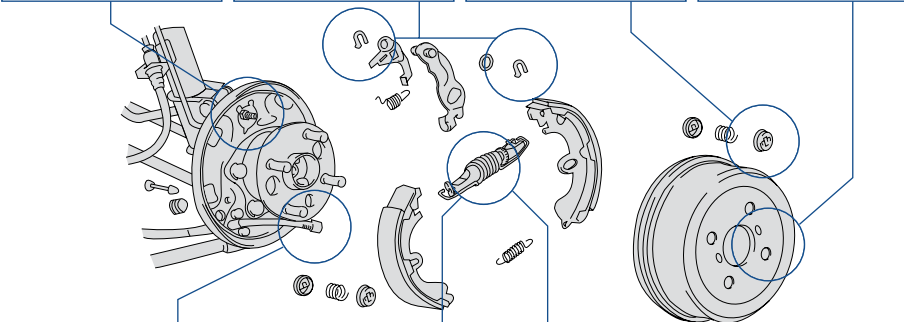
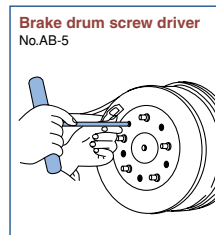
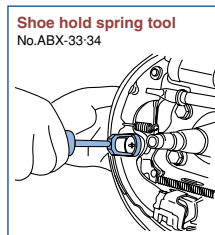
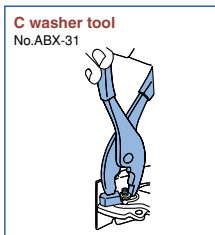
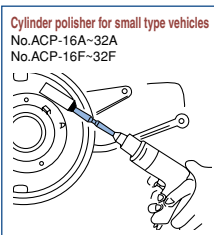
MECHANISM 4

How the ABS (Anti-lock Brake System) system works

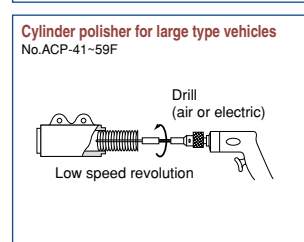
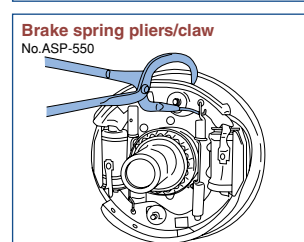
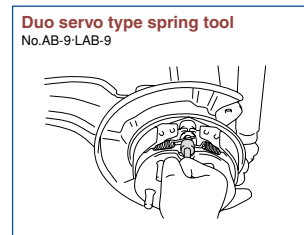
ABS is an electronic brake control system that increases braking hydraulic pressure in order to prevent the locking of the tires, providing better driving stability and handling. ABS works by having speed sensors on each wheel detect a slipping condition. The normally open valve A within the ABS actuator (as in the diagram on the right) is closed and valve B open, releasing brake fluid into the reservoir tank. Furthermore, the pump feeds back the brake fluid to the master cylinder for depressurization, mechanically creating a brake-pumping motion. As oil normally does not flow to the ABS actuator, air is not caught within the system when replacing brake fluid.



Drum brake tools



Large vehicle brake tool



1 Removing wheel → 2 Disassembling/Installing drum brake → 3 Disassembling/Installing disc pad → 4 Replacing inner parts → 5 Adjusting shoe clearance →
6 Replacing brake oil → 7 Installing wheel & Inspecting torque

BRAKE

Disassembling/Assembling Brake

Overall disassembly and attachment of the brake tool

●DRUM BRAKE SERVICE TOOL SET (12 ITEM)



ATBX12

DRUM BRAKE SERVICE TOOL SET (12 item)

No. ATBX12	kg 1.1	1
Tension spring tool		AB-7
C washer tool		ABX-31
Parking shoe lever tool		ABX-32
Shoe hold spring tool		ABX-33, 34
Tension spring tool		ABX-35
Brake shoe adjustment tool		ABX301, 302, 303
High grade L type standard hex shaft wrench		HLD100-6
Brake drum removal tool (hex hole bolt M8 x 2 pieces)		ATBX14-1
Tray (335 × 230 × 45)		



Usage

- A tool set that is exclusively designed for disassembling, attaching, and adjusting the brake drum on vehicles.

Application

- The drum brake device that is used on vehicles ranging from light weight class vehicles to small trucks (up to 2 tons)

- The tool set fits within the tool station (P.354-355) alongside the ATBX6.

●DISC BRAKE SERVICE TOOL SET (6 ITEM)



ATBX6

DISC BRAKE SERVICE TOOL SET (6 item)

No. ATBX6	kg 1.6	1
Disk brake piston tool		ABX10
Disk parking tool		ABX102, 103, 104
Disk parking tool handle		ABX101
Seal pick tool		ABO-100
Tray (335 × 230 × 45)		



Usage

- A tool set that is exclusively designed for disassembling, attaching, and adjusting the disk brake on vehicles.

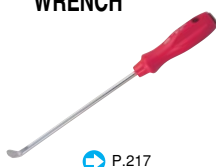
Application

- The disk brake device that is used on vehicles ranging from light weight class vehicles to small trucks (up to 2 tons)

- The tool set fits within the tool station (P.354-355) alongside the ATBX12.

1 Removing Wheel
① Removing Wheel cap and Wheel Nuts

●WHEEL CAP WRENCH



P.217

●CENTER CAP WRENCH FOR ALUMINUM WHEEL



P.217

●IMPACT WRENCH



P.166

●WHEEL NUT SOCKET FOR IMPACT WRENCH



P.218

●CROSS RIM WRENCH



P.119

② Removing hub cap.



●HUB CAP PLIERS

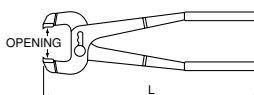


HUB CAP PLIERS

No.	Max. Opening	L	kg	10
HP-350S	95	350	750	

Purpose

- Removing Hub Cap.
- Can operate by one touch without damaging hub caps.
- Easily taking off caps.
- Free size for wide application.



●HUB CAP PLIERS

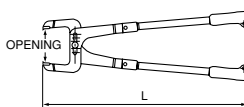


HUB CAP PLIERS

No.	Max. Opening	L	kg	1
HP-45130	130	490	1.35	

Purpose

- Removing Hub Cap.
- For taking off hub grease cap easily without damaging it.
- Adjustable jaw opening, for small cars to middle size trucks.

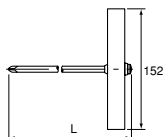


SCREWDRIVER FOR BRAKE DRUM SCREW

No.	Tip	L			
AB-5	Cross No.3	270	260	1	

- For removing/installing brake drum bis.
- T shape handle with non-slip handle.
- Also used for removing/installing door hinge bolts.

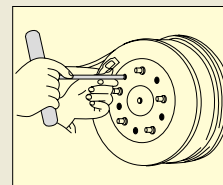
- WARNING**
- DO NOT USE THIS TOOL WITH ELECTRIFIED OBJECTS.
 - USE SCREWDRIVER APPROPRIATE TO SIZE OF THE SCREW.
 - DO NOT USE SCREWDRIVER FOR ANY OTHER PURPOSE.



SCREWDRIVER FOR BRAKE DRUM SCREW



Disassembling/Installing drum brake
① Disassembling/Installing shoe



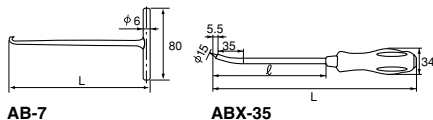
TENSION SPRING TOOL

No.	L	ℓ			
AB-7	153	—	90	1	
ABX-35	265	145	130	10	

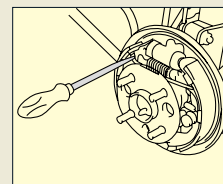
Purpose

- Disassembling/installing tension spring for drum brake.

- AB-7**
- Tip is designed to prevent spring coming off, and T-shape handle ensures safe operation.
- ABX-35**
- Round shaft makes smooth spring movement. The easy-to-hold grip makes installation of spring easier.



TENSION SPRING TOOL



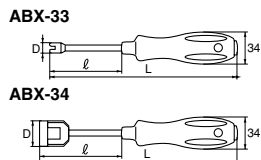
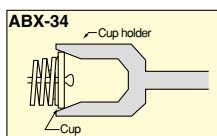
SHOE-HOLD SPRING CUP TOOL

No.	D	L	ℓ		
ABX-33	10	195	75	100	10
ABX-34	24	205	85	130	10

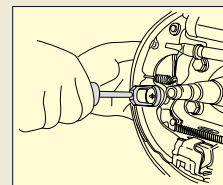
Purpose

- Disassembling/installing shoe hold spring for drum brake.

- ABX-33**
- Easy-to-hold grip suitable for pressing and turning of screw/pin.
- ABX-34**
- Tapered cap holder suitable for good holding enables speed operation.



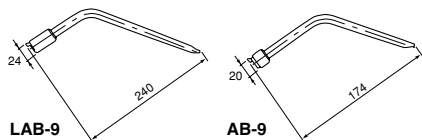
SHOE-HOLD SPRING CUP TOOL



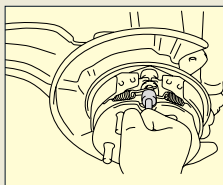
DUO-SERVO TYPE BRAKE SPRING TOOL

No.	Application			
AB-9	Medium sized cars (24tons) (2~4t) Hi Ace class	160	5	
LAB-9	Big sized cars	470	1	

- Cover almost all models for dismounting/mounting brake shoe return springs using with Brake Spring Plier (ASP-550).



DUO-SERVO TYPE BRAKE SPRING TOOL



PARKING SHOE LEVER TOOL

No.	L			
ABX-32	177	170	10	

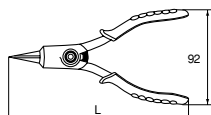
With one motion, parking cable can be installed/removed.

Purpose

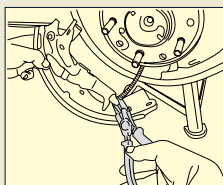
- Removing/installing parking cable.

Features

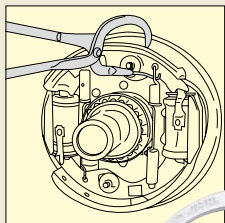
- The claw, designed exclusively for this tool, ensures good holding of the parking cable.



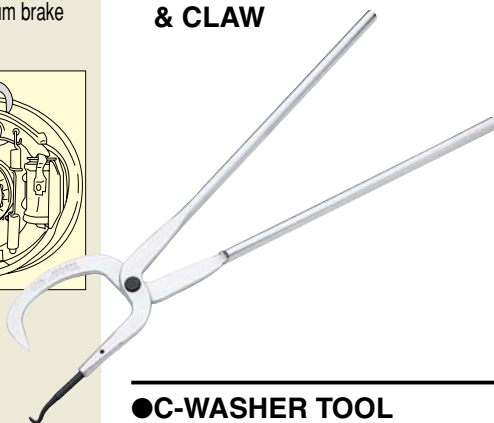
PARKING SHOE LEVER TOOL



2 Disassembling/Installing drum brake



●BRAKE SPRING PLIERS & CLAW



BRAKE SPRING PLIERS [Claw (with a pin)]

No.	L			
ASP-550	550	1,200	1	

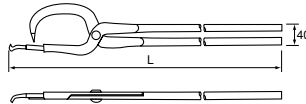
Claw with a pin

No.	L			
ASP-C	101	35	1	

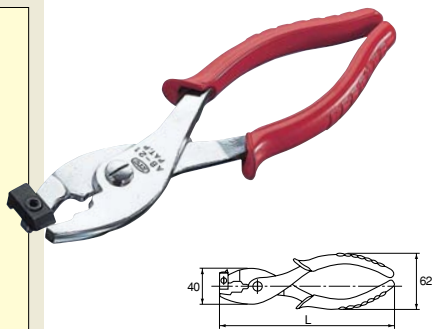
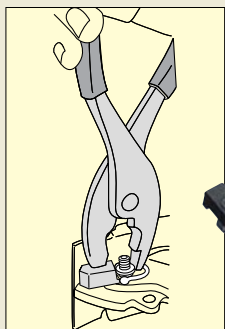
Purpose

- Special tool for removing / setting of large sized vehicle (4-10 tons).

*Do not use this claw with BSP-520 (conventional type).



●C-WASHER TOOL



C-WASHER TOOL

No.	L			
ABX-31	203	230	10	

Good work efficiency with special claws.

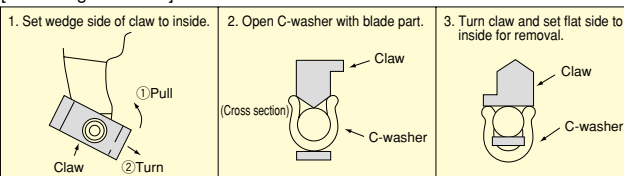
Purpose

- Removing/installing C-washer.

Features

- For quick work, use wedge side of claw to open C-washer flat side to push it out.

[Removing C-washer]

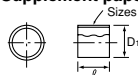


②Cleaning Brake Shoe Bracket of Large Vehicles

●BRACKET SANDER SET




Supplement paper



Rubber wheel



BRACKET SANDER SET

No.	Contents							Car Models				
	Paper				Rubber Wheel							
	D ₁	ℓ	No.	Pcs.	D ₂	L	Qty.					
APS306	30	25	#60	5	29	177	1	Hino over 8t	160	5		
APS326	32	30	#60	5	31	177	1	UD over 8t	160	5		
APS356	35	35	#60	5	34	177	1	Fuso, Isuzu over 8t	160	5		

SPARE PAPER SET FOR BRACKET SANDER

No.	Contents	Quantity		
APS3010	#60 Paper for φ30	10pcs.	100	5
APS3210	#60 Paper for φ32	10pcs.	100	5
APS3510	#60 Paper for φ35	10pcs.	100	5

Purpose

- Cleaning brake shoe bracket of large vehicles.

Rubber wheel for bracket sander

No.	D ₂	L		
APS-30G	29	177	110	10
APS-32G	31	177	110	10
APS-35G	34	177	110	10

Disassembling/
Installing disc pad
① Removing Pad

3

T-SHAPED DRUM REMOVER

No.	a	L	ℓ	D ₁	D ₂	▽g	
ABX9-06	M6	160	100	14	9	200	
ABX9-08	M8	160	100	14	9	200	

- Application** • Removal of brake drum mainly on mini-vehicles
- Features** • Since the handle is operated with a sliding mechanism, the brake drum can be smoothly removed without interference of handles each other if two handles are used.
• Since the end screw is designed to be replaceable, only the end screw can be replaced if the screw is worn off.

Part for replenishment

No.	Name	
ABX9-06A	M6 bit	
ABX9-08A	Ma bit	

●T-SHAPED DRUM REMOVER

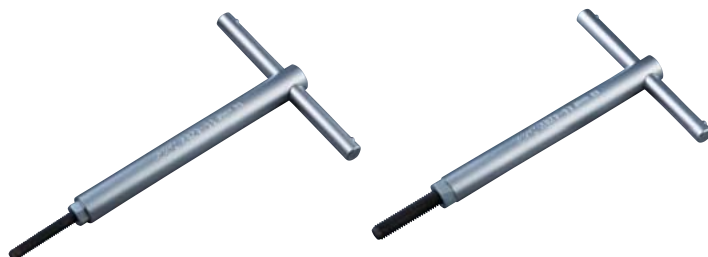
NEW



Since the handle is operated with a sliding mechanism, no interference of handles occurs if two handles are used.

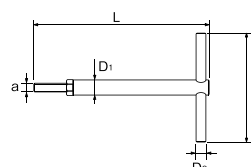


When two handles are used, the brake drum can be removed in a stable manner.



No. ABX9-06

No. ABX9-08



●HEX. WRENCH

●PLIERS

DIGI-PRO® SLIDE GAUGE

No.	Range	Minimal Indication	Precision	Battery life	Battery	Full Length		
GDN-15	0~150mm	0.1mm	±0.2mm	Approx. 2 years	SR44	230	140	10

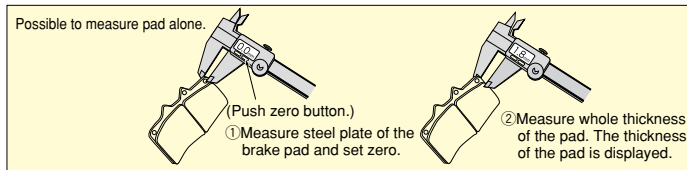
Measurement is displayed digitally up to 0.1mm for easy reading on this gauge.

Purpose

- Measuring thickness of brake pad and lining.

Special feature

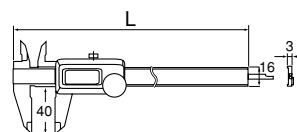
- Measurement is displayed digitally up to 0.1mm for easy reading.
- Four properties (inner & outer diameters, depth and step) can be measured.
- Function of setting zero point is available.



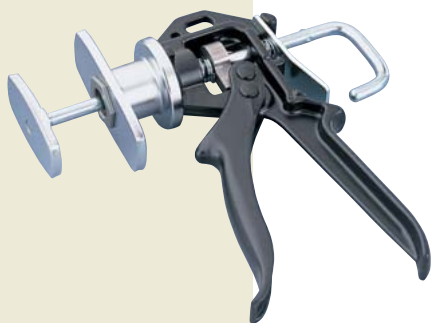
*DIGIPRO is the registered trademark of KYOTO TOOL CO., LTD.

●DIGI-PRO® SLIDE GAUGE

② Measuring
Remaining Pad



3 Disassembling/ Installing disc pad ③ Replacing Piston



●DISK-BRAKE SPREADER

DISK-BRAKE SPREADER

No.	L	H		
ABX105	145~195	214	750	1

Usage

- An exclusive tool designed for disk brake pad replacement, and also pushing out brake caliper pistons (single piston type) during overhauls.

Characteristics

- The brake piston is returned easily by just operating the lever.
- Various positions are possible by turning the handle.
- One hand operation in removing from the caliper.
- Parallel movement with no piston damage, direct, straight pushing is possible.

Application

- Is applicable for single piston types from light weight vehicles to small trucks (2 ton class)
- Brake (Cannot be used on parking brake body type brake calipers)

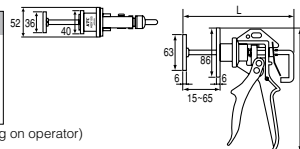
*Replacement parts are available. Check with your dealer for details.

Comparisons with previous KTC products.

Compared to the previous handle type, piston retrieval is completed in 12 sec* with just holding the grip.

A 60% reduction is operation timing compared to previous products.

*Piston will be ejected: 20mm → 0mm (Will vary depending on operator)



●DISK-BRAKE SPREADER D.PAT.

DISK-BRAKE SPREADER

No.	Plate Opening	ℓ	L	W	H	kg	
ABX10	10~75	125	155	86	117	1	5

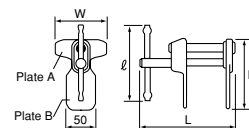
Use of either plate A or B enables application to various car models.

Purpose

- Pushing in disc brake piston (single piston/2-piston types).

Features

- Applicable to single piston caliper, parallel piston calipers, and opposed piston calipers of mini cars to small trucks (2t).
- (Cannot be used on brake calipers combined with parking brakes.)



●DISK-BRAKE SPREADER

DISK-BRAKE SPREADER

No.	Plate Opening	ℓ	L	W	H	kg	
AB-10	10~65	115	155	50	115	780	1

Purpose

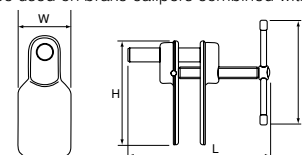
- Pushing in disc brake piston (2-piston type).

Features

- The claw for pushing in the piston makes parallel movement along guide.
- Operation possible by turn of the handle.
- Designed to prevent claw from widening the caliper or mounting when putting it in.

Application

- Applicable for parallel piston caliper and opposed piston caliper of light cars to small trucks (2t). (Cannot be used on brake calipers combined with parking brakes.)



●DISK-BRAKE SPREADER (WIDE PLATE) D.PAT.

DISK-BRAKE SPREADER

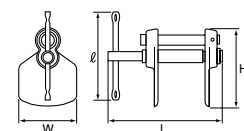
No.	Plate Opening	Handle	Thickness	L	W	H	kg	
ACB-12	10~87	150	5	184	90	120	1.4	5

Application

- From mini cars to small trucks.
- Cannot be used on brake calipers combined with parking brakes.
- Cannot be used on opposite 2 pistons brake caliper on the car.
- Can be used if it is dismantled from the car.

Special Features

- For use on opposite 4 pistons, parallel pistons & single pistons.
- Superb durability.
- Smooth work by handle.



●DISK-BRAKE SPREADER (SINGLE PISTON TYPE) D.PAT.

DISK-BRAKE SPREADER

No.	Plate Opening	ℓ	L	W	H	kg	
AB-11	12~77	125	122	36	86	345	1

Purpose

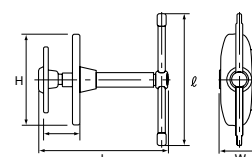
- Pushing in disc brake piston (single piston type).

Features

- With this tool, the plate can make full contact for either high arm or low arm.
- Ball-bearing center screw makes smooth movement.

Application

- Applicable to single piston caliper of light cars to small vehicle (Max.:2t) (Cannot be used on brake calipers combined with parking brakes.)



DISC PARKING TOOL SET (3pcs.)

●Disc Parking Tool Set

No. ATBX13	200	10	
Rotor (A-B) (C-D) (E-F) ABX102,103,104			



Note: AB101(Handle)is not included in ATB13.

Features:

- With three types of rotor, applicable to six types of brake piston.
- Small outer diameter allows installation through notch portion of the caliper.
- Precision-cast tool fits piston shape. Easy selection of applicable rotor and reduced coming off of rotor nail.

●Rotor (A&B)

No.	L	W ₁	W ₂		
ABX102	34	11	16	70	10

●Rotor (C&D)

No.	L	W ₁	W ₂		
ABX103	30	11	16	60	10

●Rotor (E&F)

No.	L	W ₁	W ₂		
ABX104	34	11	16	70	10

●3/8" sq. handle

No.	L	W ₁	W ₂		
ABX101	105	135	28	250	10

●DISC PARKING TOOL SET (3pcs. Set)



ABX101



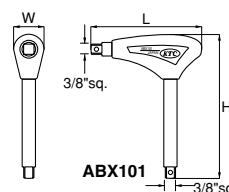
ABX102



ABX103



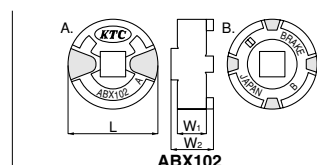
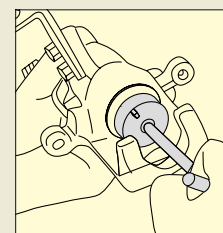
ABX104



ABX101

Disassembling/Installing disc pad

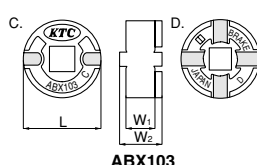
3



ABX102

Applicable Makers

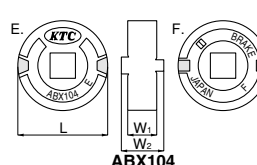
A	B
Toyota, Mitsubishi, Mazda, Daihatsu, Nissan (Akebono Brake)	Nissan



ABX103

Applicable Makers

C	D
Toyota (Aishin), Suzuki	Honda (Nissan), Suzuki



ABX104

Applicable Makers

E	F
Volkswagen, Audi	Subaru

SEAL PICK TOOL

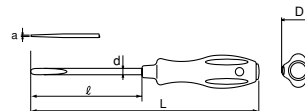
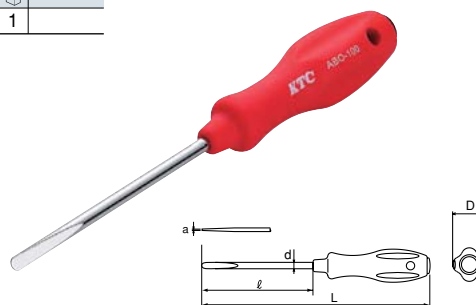
No.	a	D	d	L	ℓ		
ABO-100	1	27	5	187	100	55	1

The round tip prevents scratching.

Purpose

- Peeling off seal from disc brake.
- For removing O ring without damaging seals and boots.
- Ergonomic grip and long shank for removing seals and boots easily.

●SEAL PICK TOOL



Replacing inner parts

4

① Seal Picking

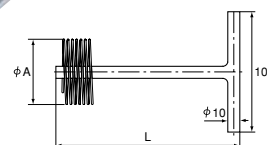
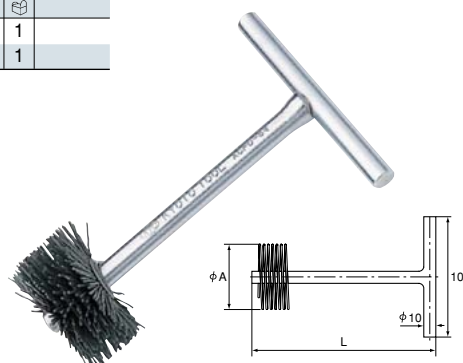


DISC CYLINDER POLISHER®

No.	L	Cylinder Size (φ A)		
ACPD-54	150	48~53	180	1
-64	150	54~60	180	1

- For easy cleaning in disc brake cylinders.
- For cleaning inside the cylinders, rust in the seal groove, dust, etc.
- 2 sizes according to inner diameters of cylinders.
- With hand brush with wear resistance and elasticity.

●DISC CYLINDER POLISHER®



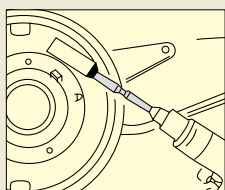
② Cleaning of Cylinder



*Cylinder Polisher the registered trademark of KYOTO TOOL CO., LTD.

4 Replacing inner parts

② Cleaning of Cylinder



●BRAKE CYLINDER POLISHER® SET (6pcs.)



BRAKE CYLINDER POLISHER® SET (6pcs.)

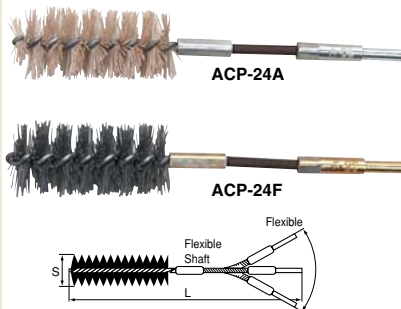
No.	ACP6	400	5
For Aluminum Alloy Cylinder	φ16 · φ24 · φ32		
Molded Cylinder	φ16 · φ24 · φ32		

- For easy cleaning in disc brake cylinders.
- For cleaning inside the cylinders, rust in the groove, dust, etc.
- 2 sizes according to inner diameters of cylinders.
- With hard brush with wear resistance and elasticity.

CAUTION • BE CAREFUL OF DUST OR NYLON FIBER AS IT MAY CUT AND SCATTER.
• WEAR EYE GLASSES WHEN USING THE TOOL.

*Cylinder Polisher the registered trademark of KYOTO TOOL CO., LTD.

●BRAKE CYLINDER POLISHER®



BRAKE CYLINDER POLISHER®

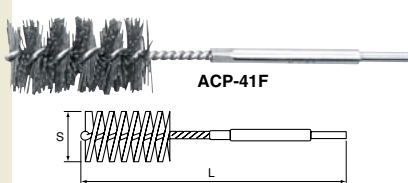
No.	S	L	Type		
ACP-16A	φ16	172	Aluminum For cylinder	30	10
-24A	φ24	175		35	10
-32A	φ32	175		40	10
ACP-16F	φ16	172	Mould For cylinder	30	10
-24F	φ24	175		35	10
-32F	φ32	175		40	10

- For cleaning brake wheel & master cylinders.
- Flexible shaft for easy operation.

CAUTION • BE CAREFUL OF DUST OR NYLON FIBER AS IT MAY CUT AND SCATTER.
• WEAR EYE GLASSES WHEN USING THE TOOL.

*Cylinder Polisher the registered trademark of KYOTO TOOL CO., LTD.

●BRAKE CYLINDER POLISHER® FOR LARGE SIZED VEHICLES



BRAKE CYLINDER POLISHER®

No.	S	L	Type		
ACP-41F	φ41	220	Mould For cylinder	110	5
-51F	φ51	230		160	5
-59F	φ59	250		200	5

- The decisive factor is in the nylon threads which contain polishing agent.
- One polisher can be used for over 3000 cylinders.
- Easy to use. Finish in around 15~30 seconds.

CAUTION • SCATTERING OF THE NYLON THREADS AND PARTICLES CAN OCCUR, IF BREAKAGE OCCURS.
• ALWAYS WEAR SAFETY GOGGLES WHEN USING.

*Cylinder Polisher the registered trademark of KYOTO TOOL CO., LTD.

●FLEX FLARE NUT WRENCH



FLEX FLARE NUT WRENCH

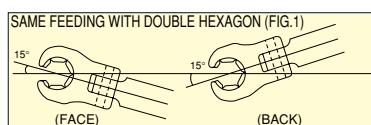
No.	S ₁ ×S ₂	T	L		
MZF-10	10 × 10	10	143	80	5

Purpose

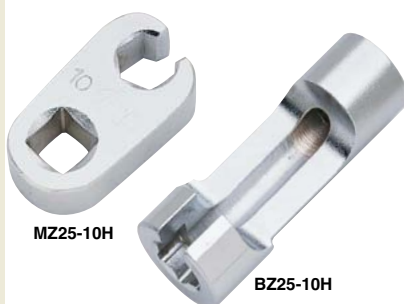
- Fastening/loosening union nuts (flare nuts) on brake and clutch systems of many types of cars from mini-cars to small trucks.

Special Feature

- Flexible head for wider application, particularly narrow space near master cylinders.
- 15° angled Hexagon for getting same feeding with double hexagon by continuous reversing operation.(Fig.-1)



●BRAKE PIPE TOOL SET (2pcs.)



BRAKE PIPE TOOL SET (2pcs.)

No.	AB252	▽ g 105	10
Socket for Brake Pipe		BZ25-10H	
Claw foot for Brake Pipe		MZ25-10H	

Purpose

- Fastening/loosening flare nuts (union nuts) of brake and clutch systems of light cars to small trucks (2t).

Features

- Designed to be compact and effective for the flare nut of master cylinder installed in narrow space.

Application

- Applicable to flare nuts (10mm) of brake and clutch systems of all models of Japanese cars (mini cars, compact cars, passenger cars, light trucks and small trucks.)

Socket wrench for brake pipe

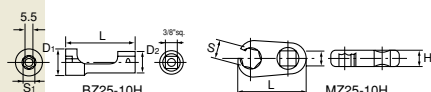
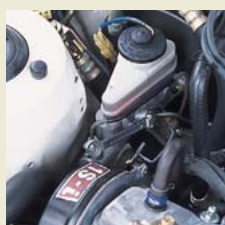
No.	S ₁	D ₁	D ₂	L		
BZ25-10H	10	20	17	54	60	1

Claw foot offset wrench for brake pipe

No.	S	H	L		
MZ25-10H	10	10	40	45	1

- Claw foot offset wrench for brake pipe has an angle of 15 degrees from the center line. The hexagonal end can be used as 12 point end (30 degrees) by repeated operation with the two sides.

③Disassembling of the Pipe



Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

1 Removing wheel → 2 Disassembling/Installing drum brake → 3 Disassembling/Installing disc pad → 4 Replacing inner parts → 5 Adjusting shoe clearance → 6 Replacing brake oil → 7 Installing wheel & Inspecting torque

FLARE NUT WRENCH

No.	S (Hexagonal shaped)	L			
MZ1-10	10	160	80	5	

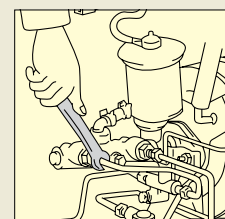
- Fastening/loosening brake pipe flare nuts of mini, compact & medium sized cars of all car makers.
- 45° angled & straight ends for wider application.

●FLARE NUT WRENCH (MZ1)



Replacing inner parts

③ Disassembling of the Pipe

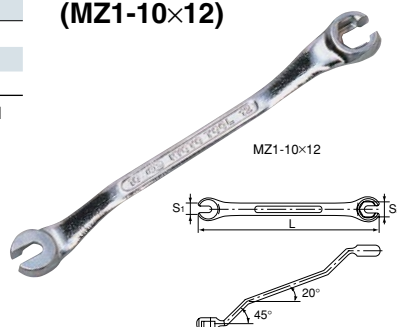


FLARE NUT WRENCH

No.	S ₁ (Hexagonal shaped) × S ₂ (Hexagonal shaped)	L			
MZ1-10 × 12	10 × 12	160	80	5	
-11 × 12	11 × 12	160	80	5	
-10 × 14	10 × 14	165	100	5	

- Fastening/loosening brake pipe flare nuts of mini, compact & medium sized cars of all car makers.
- 45° angled & straight ends for wider application.

●FLARE NUT WRENCH (MZ1-10×12)



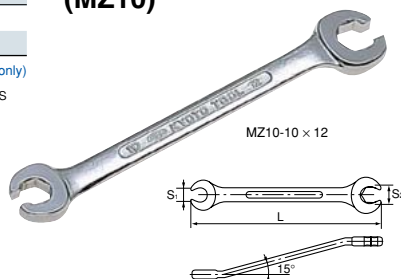
FLARE NUT WRENCH

No.	S ₁ × S ₂	L			
MZ10-10 × 12	10 × 12	145	80	5	
-14 × 17	14 × 17	164	100	5	

POWERFIT (MZ10-10 × 12 only)

- Special wrench for removing/attaching brake pipe flare nuts and clutch pipe flare nuts (hydraulic type only).
- Contacting by 5 points for turning nuts securely.

●FLARE NUT WRENCH (MZ10)



FLARE NUT WRENCH-SET (2pcs.)

No. MZ112	135	10
Flare Nut Wrench	MZ11-10, 12	

No.	S ₁ × S ₂ (Hexagonal shaped)	L			
MZ11-10	10 × 10	150	60	10	
-12	12 × 12	154	75	10	

- Combination of Flare Nut Wrench and Open End Wrench.
- Open end for quick turning and split-ring end for final tightening.

●FLARE NUT WRENCH & SET (MZ11 2pcs.)



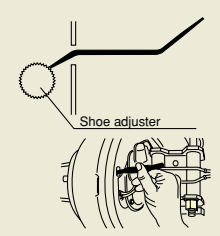
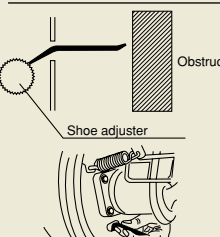
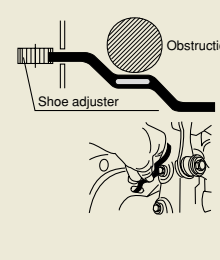
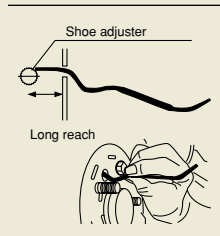
●INTERNAL SNAPPING PLIERS



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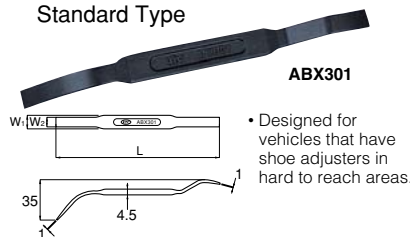
●OTHER TOOLS

④ Disassembling Master Cylinder

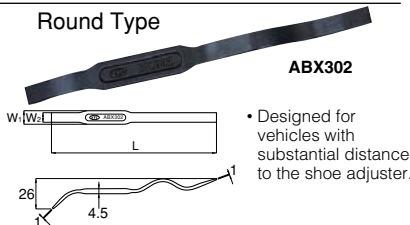


●BRAKE SHOE ADJUSTER TOOL SET

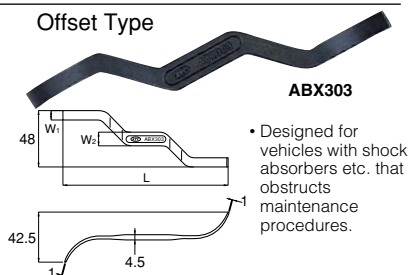
Standard Type



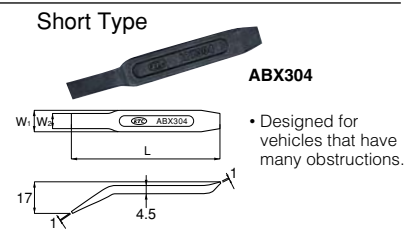
Round Type



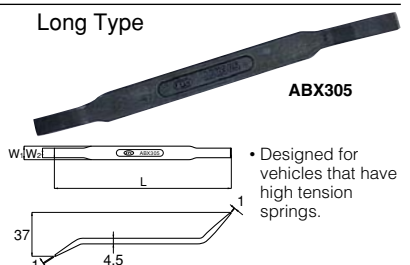
Offset Type



Short Type



Long Type



BRAKE SHOE ADJUSTER TOOL SET

●For Passenger Cars (3pcs. Set)

No. ATBX33	110	10
Brake Shoe Adjuster Tools	ABX301, 302, 303	

●For Medium-Sized Cars (2-3t class) (2pcs. set)

No. ATBX32	75	10
Brake Shoe Adjuster Tools	ABX304, 305	

Purpose

- Specialized tools for adjusting clearance between drum and brake shoe on drum brakes.

Application

- Mainly for minicars and compact cars (ATBX33)
- Mainly for trucks 2-4t (ATBX32)

Features

- Diverse shapes enable shoe adjustment in places previously inaccessible.
- Each tool has two types of curve and therefore broader application.

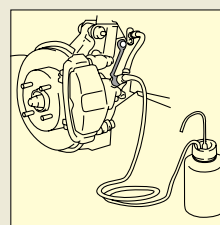
No.	Type	Application	L	W ₁	W ₂			
ABX301	Standard Type	For Passenger Cars	140	12	8	40	10	
ABX302	Round Type	For Passenger Cars	140	12	8	33	10	
ABX303	Offset Type	For Passenger Cars	140	8	12	39	10	
ABX304	Short Type	For Medium-Sized Cars	80	12	8	24	10	
ABX305	Long Type	For Medium-Sized Cars	150	12	8	51	10	

●Applicable Models

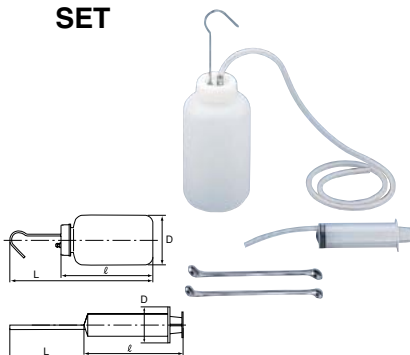
Type	Maker	Model
ABX301	Toyota	Ardeo / Starlet / Tercel / Corsa
		Crown / Hiace / Townace / Lightace
	Nissan	Largo / Serena
	Mitsubishi	Toppo / Minica
	Subaru	Pleo / Vivio
ABX302	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Toyota	RAV4 / Ipsum / Gaia / Nadia
	Honda	Effective for adjustment form the drum side
	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
ABX303	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Toyota	Corolla / Marino / Ceres / Sprinter / Vista / Spacio
	Mazda	Bongo
	Fuso	Fighter / Canter
	Isuzu	Elf (new) / Fargo
ABX304	UD	Condor
	Nissan	Bluebird / Primera / Presea / Be-1
	Mitsubishi	Bravo
	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.
ABX305	Toyota	Dyna / Toyoace
	Hino	Dutro / Ranger
	Mazda	Titan
	Isuzu	Elf (earlier models)
	Daihatsu	301, 302, 304, 305 can be used as the drum is removed for adjusting.
	Suzuki	301, 302, 304, 305 can be used as the drum is removed for adjusting.

MODEL CHANGE This model succeeds the AB-3 and 45.

6 Replacing brake oil



●BLEEDER WRENCH SET



●BLEEDER PLUG WRENCH



BLEEDER WRENCH SET

No. ATBX04	320	1
BLEEDER PLUG WRENCH	ABX7-08, 10	
Fluid catch tank (capacity: 1L)		
Fluid inhaler (50cc)		

Replacement parts

No.	Product name	Materials	L	ℓ	D	Hose spec.	Capacity			
ABX7-T1	Fluid catch tank	PE	282	182	100	Soft PVC φ5 × φ8 × 1.1m	1 ℓ	170	1	
ABX7-S1	Fluid intake container	PP	240	138	49	Silicone tube φ3 × φ6 × 0.1m	50cc	30	1	

Essential Tool for removing air of Brake Oil

Purpose

- Replacing brake oil and bleeding air in the pipe.

Application

- Applicable to bleeder for light cars to small trucks (2t class)

Features

- Convenient combination of a large tank for waste oil and necessary tools for good work efficiency.

BLEEDER PLUG WRENCH

No.	S	D	T	L			
ABX7-08	8	16	7.5	141	60	1	
-10	10	19	7.5	143	60	1	

Stopper on the top of the opening enables easy operation.

Purpose

- Fastening/loosening of bleeder plugs.

Features

- Optimal rising angle enhances operability.

BRAKE BLEEDER ●BRAKE BLEEDER PAT.P.

Continuous smooth feeding without pausing! Applicable to ABC Models. Quick One-man Operation!

Purpose

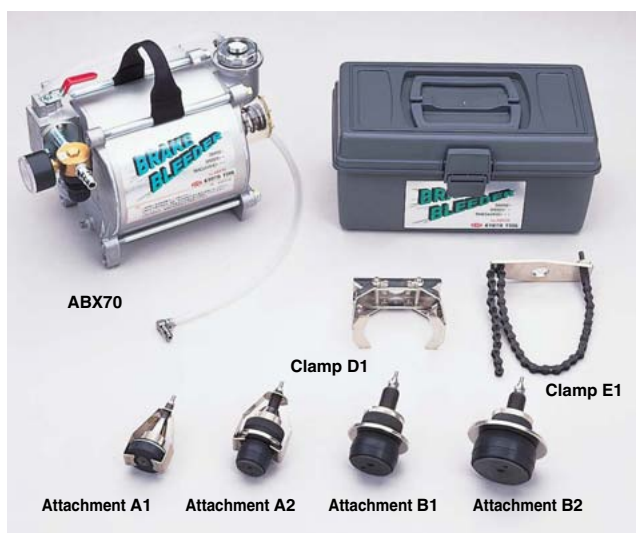
- Replacing brake oil and supplying of brake oil during air-removing.

Application

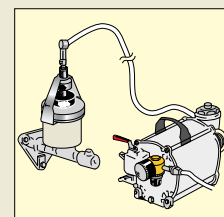
- Applicable to reserve tanks (inner diameter of inlet: $\phi 18-76$) for mini cars and compact cars to small trucks (2t).

Features

- Continuous feeding (pressured) shortens work time
- Compact design: simple, low cost, but high performance.
- Easy to operate for air-driven method.
- One touch on the button enables air-removing of the tank.
- Plate rubber adopted for attachment by one action (see attachment A1).
- Expansion rubber with inner pressure ensures excellent contact (see attachments A2, B1 and B2).
- Special attachment enables quick installation (see attachments G1, G2, F1, F2 and H1).



Replacing brake oil 6



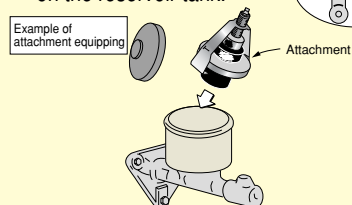
●BRAKE BLEEDER

No. ABX70		kg 8.5
Brake bleeder main body (with dust-proof cover),		L320xW205xH210 Tank Capacity2 ℓ Feeding Hose 3.5m
Attachment Set	Attachment A1	ABX70-A1
	Attachment A2	ABX70-A2
	Attachment B1	ABX70-B1
	Attachment B2	ABX70-B2
	Clamp D1 (Claw)	ABX70-D1
	Clamp E1 (Chain)	ABX70-E1
	Attachment Case	Plastic case



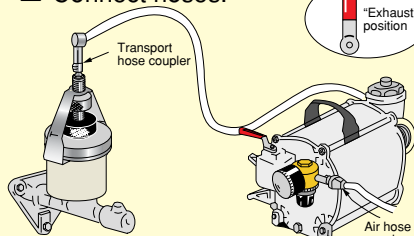
● How to Use Brake Bleeder

1 Equip the attachment on the reservoir tank.



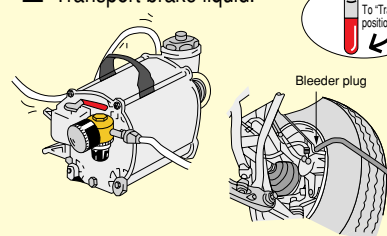
Remove the reservoir tank cap and equip the appropriate attachment on the tank.

2 Connect hoses.



Connect the transport hose coupler with attachment and air coupler with brake bleeder.

3 Transport brake liquid.



Switch the operation lever to "Transport" and transport brake liquid, replace brake liquid, or relieve air.

No. ATBX70I					
Brake Bleeder Main Body (with Dust-Proof Cover)		L320xW205xH210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2	$\phi 32-45$	Toyota, Nissan, Mitsubishi, Mazda, Daihatsu, Suzuki, Subaru, Isuzu, Daimler-Benz, OPEL, GM		1
Attachment Case					1

Trial set comes at a reasonable price.

- A set including an attachment with most applicable cars.



●IMPACT WRENCH



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●WHEEL NUT SOCKET FOR IMPACT WRENCH



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●CROSS RIM WRENCH



P.119

●WHEEL NUT TORQUE WRENCH SET



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Installing wheel & Inspecting torque 7



Attachment A1



Attachment A2



Attachment B2 + Clamp E1



Attachment B2 + Clamp D1



Attachment F1



Attachment G1



Attachment H1 + Clamp E1



Attachment A1



Attachment A2



Attachment B1



Attachment B2



Attachment F1



Attachment F2



Attachment G1



Attachment G2



Attachment H1



Clamp D1



Clamp E1

SPECIAL BRAKE BLEEDER SET

●Attachment (separately sold)

Product Name	Product No.	Applicable Size	Applicable Makers (Models)	
Attachment A1	ABX70-A1	φ 18~31	Toyota, Nissan, Mitsubishi, Daihatsu, Audi, VW	
Attachment A2	ABX70-A2	φ 32~45	Toyota, Nissan, Mitsubishi, Mazda, Daihatsu, Suzuki, Fuji H. I., Isuzu, Daimler-Benz, BMW, Opel, GM	
Attachment B1	ABX70-B1	φ 46~60	Toyota, Honda, Mitsubishi, Daihatsu, Suzuki, Fuji H. I., Isuzu	
Attachment B2	ABX70-B2	φ 61~76	Toyota, Nissan, Honda, Mitsubishi, Mazda, Suzuki, Fuji H. I.	
Attachment F1	ABX70-F1	φ 36	Mazda (mainly Bongo)	
Attachment F2	ABX70-F2	φ 60	Daihatsu (mainly one-box wagon)	
Attachment G1	ABX70-G1	φ 42.5	Toyota (passenger cars in general)	
Attachment G2	ABX70-G2	φ 56	Honda (mainly Acty and Odyssey)	
Attachment H1	ABX70-H1	φ 75	Honda (mainly Odyssey)	
Clamp D1	ABX70-D1	For ABX70-B1, B2		
Clamp E1	ABX70-E1	For ABX70-B1, B2, H1		

Features

- Simple attachment with a fit-and-press type plate rubber (attachment A1)
- Internal pressure-expanded rubber gives excellent contact (attachments A2, B1, B2)
- Special attachment enables easy equipping (attachments G1, G2, F1, F2, H1).

●For Toyota

No. ATBX70T			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment B2	ABX70-B2		1
Attachment G1	ABX70-G1		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1

●For Nissan

No. ATBX70N			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment A2	ABX70-A2		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1

●For Honda

No. ATBX70H			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Clamp E1	ABX70-E1		1
Attachment H1	ABX70-H1		1
Attachment G2	ABX70-G2		1
Attachment Case	Resin Case		1

●For Mitsubishi

No. ATBX70M			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A1	ABX70-A1		1
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Attachment B2	ABX70-B2		1
Clamp D1	ABX70-D1		1
Attachment Case	Resin Case		1

●For Daihatsu

No. ATBX70D			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Clamp E1	ABX70-E1		1
Attachment F2	ABX70-F2		1
Attachment Case	Resin Case		1

●For Mazda

No. ATBX70MZ			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment F1	ABX70-F1		1
Attachment Case	Resin Case		1

●For Subaru/Suzuki

No. ATBX70SS			
Brake Bleeder Main Body (with Dust-Proof Cover) L320 × W205 × H210, Tank Capacity 2 ℓ, Compressed Transport Hose 3.5m			1 each
Attachment A2	ABX70-A2		1
Attachment B1	ABX70-B1		1
Attachment B2	ABX70-B2		1
Clamp E1	ABX70-E1		1
Attachment Case	Resin Case		1

Attachment/Clamp Application Table (Attachment is sold separately.)

Toyota

Caliber	Model	Type	Attachment	
			Conventional	Special
φ23	Hiace	LH119, KZH106	A1	—
	Liteace	YR21		
	Townace	CR30		
	Townace Truck	YR28G, YM55		
	Estima	TCR11, 20G		
φ42.5	Dyna	BU87	A2	G1
	Noah	SR40/50, CR40		
	Rav4 (including EV)	SXA10/10W/11, ACA21W		
	Crown	BS130/131, MS137		
	Chaser	1JX100, GX100/81		
	Cresta	JZX101/90/81		
	Vista	SV41/4/32/20		
	Carina ED	ST202, 183		
	Corolla	AE110/101		
	Hiluxsurf	KZN, RZN185, LN131V		
	Soarer	JZZ31, GZ20		
	LandCruiser	HDJ81V/101K, UZJ100		
	Ipsium	SXM10G		
	Granvia	RCH11, VCH10/16, KCH10/16		
	Windom	MCV20, VCV11		
	Crown	JZS143/149/151/155/171, MS137		
	Majesta	JZX149		
	Aristo	JZS147/161		
	Celica RC	ST185/202		
	Toyoace	LH80		
	Coaster	HDB50		
	Caldina	ST191/215W		
	Carib	AE111G/95G		
	Splinter	AE101/81		
	Trueno	AE111/92		
	Levin	AE92		
	Curren	ST206		
	Carina/Corona	ST202/190/210		
	Supra	GA70, JZA80		
	Celsior	UCF11/21		
	LandCruiserPrado	KZJ90W		
	MarkII	GX71 (late version)		
	MarkII Wagon	SVX25W		
	Camry Gracia	SVX25W		
	Raum	EXZ10		
	Spacio	AE111N		
	Regius	RCH41W, KCH40W		
	GrandHiace	KCH16W		
	Harrier	MCU10W		
	Prius	NHW10		
	Altezza	GXE-10		
	Vitz	SCP10		
	FunCargo	NCP25/20		
	Platz	SCP11		
	Will Vi	NCP19		
	dB	NCP31		
	Ardeo	SV50		
	MR-S	ZZW30		
	Pronard	MCX20A		
	Carina	AT212		
	Estima	MCR30W		
φ54	Cami	J100E	B1 + D1 (E1)	—
φ56	MR2	AW11		
	Carina	AT170		
φ70	MarkII	GX71 (early version)	B2 + D1 (E1)	—
	Starlet	EP81/91		
	Sera	EXY10		
	Tercel/Corsa	EL51/45/41		
	Cynos	EL5		

Nissan

Caliber	Model	Type	Attachment	
			Conventional	Special
φ24	Elgrand	AVWE50	A1	—
	Caravan	KRME24		
	Vanette	KHGNC22		
	Atlas	H41		
	Liberty	PM12		
	Serena	PC24		
	Bassara	JHU30		
	Presage	HU30		
	Prairie Joy	HM11, PM11		
	Skyline	R34/33		
φ34	Silvia	S14/15	A2	—
	Largo	W30		
	Serena	KBC23		
	Stagea	WGNC34		
	Regulus	JLR50, JRR30		
	Cefiro/Cefior Wagon	A33/32, WPA32		
	Cima/Cedric/Gloria	Y34/33/32		
	Leopard	Y33		
	Laurel	HC34, GC35		
	Primera/Primera Wagon	P10, P11		
	Presea	PR10		
	Sunny	SB14, B13		
	Bluebird	EU13, U14		
	Avenir	W10		
	AD Wagon	WFY10		
	Pulser/S-RV	FN15		
	Rasheen	RFNB14		
	March	K11		
	President	H252		
	Rnessa	NN30		
φ36	Safari	WYY61	—	F1
	Cube	Z10		
	Tino	HV10		
	Vanette	SS28V		
	Atlas	AKR66EA		
	Sunny	HB12		
	Laurel	FNB12		
	Escargot	G20		
	FairladyZ	GCZ32		
	Terrano	YD21		
φ42.5	Silvia	S13	B2 + E1	—
	Cedric	Y31		
	Skyline	R32		
	Bluebird	U11/12		
	Sunny Truck	GB122		
	Laurel	HC33		

Mitsubishi

Caliber	Model	Type	Attachment		
			Conventional	Special	
φ 18	Delica	P35W, P51V	A1	—	
φ 34	Delica SpaceGear	PD8W	A2		
	MiniCab	U41V/41T/11V			
	Canter	FE437E			
	Chariot Grandis	N84W			
φ 58	Pajero Mini	H56A	B1 + E1 (E1)		
	Toppo	H31A/32V			
	PajeroJr.	H57A			
	Minica	H22A			
φ 66	GTO	Z16A	B2 + D1		
	Diamante	F31A/17A			
	Galant	EA1A, E33A/35A/52A			
		EC5A			
	Pajero	V26WG/24WG			
	Debonair	S12A			
	Legnum	EA1W			
	Mirage	CA1A, CJ2A			
	Lancer	CK4A			
	Challenger	K97W			
	Carisma	DA2A			
	Libero	CB5W			B2 + E1 (D1)
	RVR/Chariot	N23W/33W			

DAIHATSU

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 23	Delta	V57~	A1	—
φ 34	Hijet	S100V/110P	A2	
	Atrai	S130V		
	Midget	K100P		
φ 42.5	Delta Wagon	GR50		
φ 54	Terios	J100E	B1 + D1	
	Mira	L500S/700S	B1 + E1	
		200S, 70V		
	Move	L610S/602S		
	Applause	A101S		
	Charade	G200S		
φ 60	Hijet	S80V/82P/83V	B1 + D1	F2
	Atrai	S80V/81V	B1 + E1	—
	Pyzar	G313G		
	Rugger	F76G		

HONDA

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 30	Cherokee	MX, R4	A1	—
φ 34	Vamos	HM1/2	A1	
φ 56	StepWagon	RF1	B1 + D1 (E1)	G2
	S-MX	RH1		
	Accord	CF1		
	Torneo	CF4		
	Prelude	BB6/5		
	Life	JA4		
	Civic	EK3/9		
	Saber	UA5		
	Capa	GA4		
	Orthia	EL3		
	Z	PA1	—	
	Odyssey	RA6/5		
	HR-V	GH3		
	Steel/Acty	HH4/3		
	Civic	EG8/4, EF2, AH		
	CR-V	RD1		
	Legend	KA8/7/3		
	CR-X	EF6		
φ 75	Today	JW3, JA4	B1 + E1	G2 seal cap Assy + E1
	Logo	GA3	B2 + E1	H1 + E1
	Integra	DA5		
	Integra	DC2		
	Beat	PP1		
	Accord	CA3, CD4	—	
	Inspire/Vigor	CB5		
	Ascot	CB1		
	Prelude	BA5		
	NSX	NA1		
	Odyssey	RA2		

SUBARU

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 34	Samper (SamberDias)	KS3N, KR6, KV4	A2	—
	Domingo	KJ8, FA7		
	Impreza	GC8, GC1, GF6		
	Legacy	BG5/6/9, BH5		
	Legacy Turbo			
	Forester	SF5		
φ 60	Vivio	KW3A, KK3	B1+D11 (E1)	
	Samper	KV4, KS4	B1+D1	
φ 67	Legacy	BG5, BF5, BD5	B2+D1	
	Impreza	GC8	(E1)	

ISUZU

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 33	Fargo	WFS6~	—	—
φ 34	Elf	NPR6~	A2	
φ 42.5		NKR~		
φ 49	Forward ~ GIGA	(4t~10t)	—	
φ 54	Mu	UCS69DW	B1+	
	Bighorn	UBS69GW	D1 (E1)	
φ 67	Jemini	JT151F	B2+D1 (E1)	

MAZDA

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 27.5	Porter-cab	PC567	A1	—
	Titan	WGT4H		
φ 33	Carol	AA6PA	A2	F1
φ 34	Familia XG	MFY10		
	Scrum	DL51V		
	AZ-Wagon	CY21S		
φ 36	RX-7	FC3S, FD3S		
	Familia	BHALP, BJ3P		
	Sentia	HD55/5S, HEEA		
	Eunos 500	CA8PE		
	Luce	HBEY, HCFS, HCSS		
	MS-8	MB5P, MBEP		
	Eunos 800	TA5P		
	Lantis	CBA8P, CBAEP		
	Familia	BHA6R, BG6P, 5P		
	Friendee	SGLW		
	MPV	LVL R		
	Proceed	UF66M		
	Capella	GF8P		
	Bongo	SS88H, SSF8W, SD2AT	—	
	Taitan	(oil type)		
φ 67	Persona	MASP	B2 + E1	—
	Roadster	NA6CE		
	Laser	BFSPF		
	Capella	CG2PP, GV8W, GD8S		
	Festiva	DA3PF		
	Demio	DW5W		

SUZUKI

Caliber	Model	Type	Attachment	
			Conventional	Special
φ 34	WagonR	CT21S/51S	A2	—
	WagonR Wide	MP61S		
	Crescent	GC41W		
	Every	DA52W, DF51		
	Cervo	CN22S		
	Alto	CN21S, HA11S		
	Carry	DB51, DA41P		
	Kei	HN11S		
	Swift	HT51S		
	Swift	HT51S		
φ 60	Cultus	AB34S	B1 + D1	
	Jimny	JA12W		
	Escudo	TD52W		
φ 67	Jimny	JA51W	B2+D1 (E1)	

Other Large Trucks

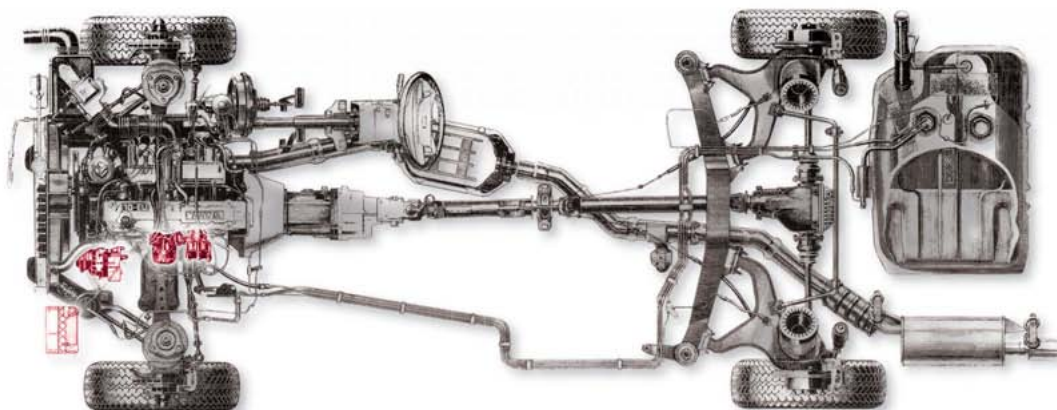
Manufacturer	Caliber	Type	Model	Attachment	
				Conventional	Special
Hino	φ 32	4 t type	Ranger	A2	—
	φ 92	10 t type	Super Dolphin		
UD	φ 80	4 t~10 t	Condor~Big Thumb	—	
Fuso	φ 80	Oil type			
	φ 95	4 t~10 t	Faighter~Super Great		

Imported Cars

Manufacturer	Caliber	Type	Model	Attachment	
				Conventional	Special
VW	φ 30.5	Golf	1HADZ	A1	
		Polo	Current type		
AUDI		80 2.0E 2.3E	8CABK~ 4AAAR		
		A6	4AAB~		
Mercedes	φ 32	Benz E280 E210/202 V12	E-124022 E-12408~ E-1400~ WDB~	A2	—
GM		Cadillac	E-AE~		
Citroen		Citroen	VF72AZ		
BMW		BMW	E-325, 318ti		
Opel		Astra	XD200~		
		Vita	Current type BY9506		
Ford		KA	WFOBX~		
		Discovery	LJ~		
Rover	φ 33	Mini cooper Rover 200	XW~		
Pugeot	φ 34	406	B-2343 DVF37CRFSW~		

* Although VW, AUDI, etc. are applicable with A1, the opening outer diameter of their reservoir tanks are larger than A1 rubber. Pay extra attention in aligning centers when you attach.

Electric System Mechanism



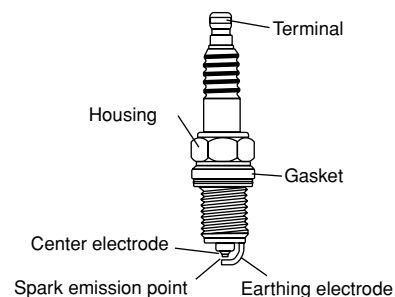
MECHANISM 1

Spark plug

The spark plug is designed to emit a high voltage spark directly into the combustion chamber. It is installed by screwing into the cylinder head.

The high voltage enters the spark plug via the top terminal and is transmitted through a ceramic insulator by the central electrode. As the current is grounded to an earthing electrode it creates a spark crossing the "gap".

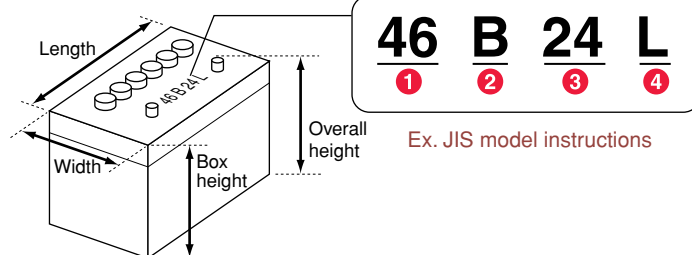
Sparks are discharged from the electrodes in a variety of shapes for different uses and functions.



MECHANISM 2

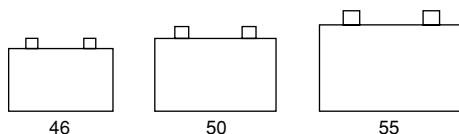
Battery

As the model of the battery is placed on the topside, it is easy to find out information like capacity, position and size of the terminal polarity, etc. Knowing and understanding these rules makes it easy when selecting a correct battery for each vehicle.



① Capacity rank

The performance of the battery is shown here. (Battery capacity and start performance) The higher the numerical value, the higher the capacity, however, there is no "recommended specific" number. For a simple setting to follow (Up to 50: Will produce 2; Over 50: Will produce 5).



③ Battery length measurements (approx. cm)

The overall battery measurement is shown (approx. cm)
Ex.: 46B24L (approx. 24cm)

② Battery size (JIS standards: Classification is worked out by Width × Box height)

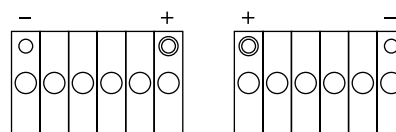
Sizes follow symbols from A → H and get larger in that order.

Symbol	Width	Box height
A	127	162
B	129 (127)	203
D	173	204
E	176	213
F	182	213
G	222	213
H	278	220

(Unit: mm)

④ Battery terminal position

Positive terminal position is shown. On the "R" Type, the positive terminal is on the far right side, while on the "L" type, the positive terminal is on the far left side.



MECHANISM 3

Alternator

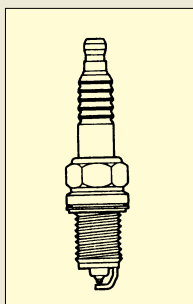
This is a generator that produces electricity while the engine is running. The first type of generators produced electricity in the DC form, however, nowadays they are more stable, producing electricity in the AC form.

ELECTRIC SYSTEM

Inspection, Cleaning and Replacing Spark Plug

1 Removing Spark Plug Leads

2 Removing Spark Plug



●3/8"sq. SPARK PLUG SOCKET



B3A-16SP

B3A-16P



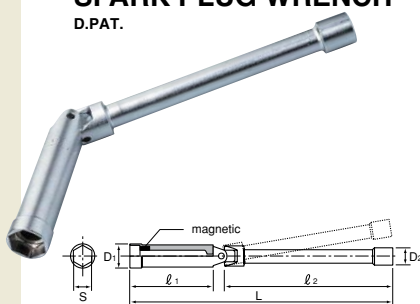
B3A-14SP

●1/2"sq. SPARK PLUG SOCKET

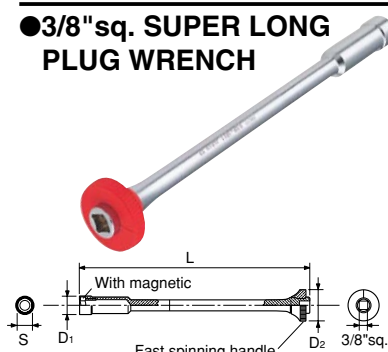


B4A-16P

●3/8"sq. UNIVERSAL SPARK PLUG WRENCH D.PAT.



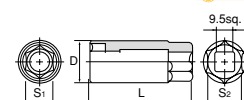
●3/8"sq. SUPER LONG PLUG WRENCH



SPARK PLUG SOCKET

No.	S ₁ (6pt.)	S ₂	D	L	Spark Plug (Type)		▽g	sq.	□	
					NGK	ND				
B3A-14SP	14	—	18.5	62			60	3/8"	5	
-16SP	16	—	20	65			65		5	
B3A-13P	13	17	18	56	ER	r	72		5	
-16P	16	17	21.5	62	BC,C	PQ,U	100		5	
-18P	18	19	23.5	62	D	X	130		5	
-20.8P	20.8	24	26.5	62	B	W	170		5	

- With Magnet for using in narrow spaces.
- * B3A-16SP is thin wall type for use on 4-valve engine of Mitsubishi mini cars.
- The B3A-14SP is a socket designed to be compatible with the new Nissan engines HR15DE, MR18DE, MR20DE types.



- Do not place a wrench around the outside of the B3A-14SP and rotate it.

SPARK PLUG SOCKET

No.	S ₁ (6pt.)	S ₂	D	L	Spark Plug (Type)		▽g	sq.	□	
					NGK	ND				
B4A-16P	16	—	22	63.5	BC,C	PQ,U	110	12.7	5	
-19P	19	—	26.5	65	BM	WM	170		5	
-20.8P	20.8	24	26.5	65	B	W	160		5	

- With Magnet for using in narrow spaces.
- * B35P-19H for changing spark plugs on chain saws, mowing machines, small generators, etc.

POWERFIT

UNIVERSAL SPARK PLUG WRENCH

No.	S (6pt.)	D ₁	D ₂	ℓ ₁	ℓ ₂	L	▽g	□	
B3F-14SP	14	18.5	17	73	111	192	270	1	
-16SP	16	20	18	73	148	230	300	1	

Purpose

- Removing/installing spark plug.

Application

- Mini-van and wagon: effective for use on cars having small clearance between engine and cowl panel. Toyota's Ipsum, Hiace Rejas, Prius, Noa; Honda's Odyssey, and other models.
- Usable for replacing spark plugs on other models.

Features

- No falling of the socket from the extension bar during operation as the 16mm plug socket and the bar are integrated into one piece of tool.
- Easy insertion into plug hole with universal joint used in the middle of the wrench. (the maximum flexible angle : 90 degrees).
- For specially thin socket, usable on 4-valve engine of Mitsubishi.

SUPER LONG PLUG WRENCH

No.	S (6pt.)	D ₁	D ₂	L	▽g	□	
B3P-16LL	16	20	35	250	250	5	

Purpose

- Use for spark plug removal/installation.

Characteristics

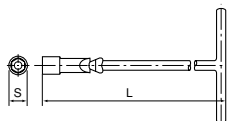
- This is a plug socket, extension bar, and quick spinner all in one new type of plug wrench.
- The operation is improved by eliminating time wastage and troublesome tool retrieval. The fast handle movement when using the ratchet (quick spin) also brings a positive effect.
- As the socket section is of a quite thick design, its uses are wide. (It can also be used on Mitsubishi light weight 4-valve engines).
- Dropping spark plugs is prevented as the tool is magnetic.
- The tightening angle is determined by a line mark on the side of the quick spinner.

POWERFIT

FLEX T SHAPE SPARK PLUG WRENCH

No.	S	L	Spark Plug(Type)		Applicable Car	▼g	10	
			NGK	ND				
PHF-16H	16	385	BC, C	PQ, U	Toyota 4A-G, IG-G Nissan VG20, VG30 Others Twin CAM For Multi Valves	500	10	
-20.8H	20.8	530	B	W		600	10	

- T shape handle and magnetized socket with flex joint.
- For changing spark plugs in deep narrow quarters.



● FLEX SHAPE SPARK PLUG WRENCH



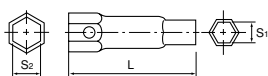
Removing Spark Plug

2

SPARK PLUG WRENCH

No.	S (6pt.)		L	Applicable Car		▼g	5	
	S ₁	S ₂		NGK	ND			
PH-16×21	16		115	BU, C	PQ, U	130	5	
	20.8			B	W			

- Can be used for 2 types of spark plugs.



● SPARK PLUG WRENCH



COMPACT SPARK PLUG WRENCH SET

No.	B126P	▼kg	1	1
Spark Plug Wrench	B12P-16H, 18H, 20.8H			
Special Extension Socket	BE12-30, 45			
Ratchet Box-End Wrench	RM-10×12			
Metal Case L185×W105×H35	B126P-M			

- New type Spark Plug Wrench Set specially designed for use on motorcycles.
- Most usable sizes for wider application.

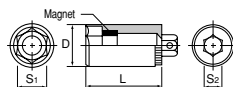
● COMPACT SPARK PLUG WRENCH SET



COMPACT SPARK PLUG WRENCH SOCKET

No.	S ₁ (6pt.)	S ₂	D	L	Applicable Plug(Type)		▼g	5	
					NGK	ND			
B12P-16H	16	12	21.5	61	BC, C	PQ, U	100	5	
-18H	18	12	23.5	61	D	X	120	5	
-20.8H	20.8	12	26.5	61	B	W	150	5	

- New type Spark Plug Wrench
- Most suitable for the latest models of motorcycles and agri-machines with small hexagon head. (Can be used in the space where Ratchet Handles cannot be used due to the shape of the frame, cowering, or cylinder head.)
- Can be used on mini motorcycles.



● COMPACT SPARK PLUG WRENCH SOCKET

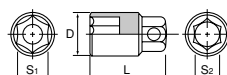


SPECIAL EXTENSION SOCKET

No.	S ₁ (6pt.)	S ₂	D	L	▼g	5	
BE12-30	12	12	17	30	40	5	
-45	12	12	17	45	60	5	

Purpose

- Extending plug wrench (B12P-) for motorcycles.



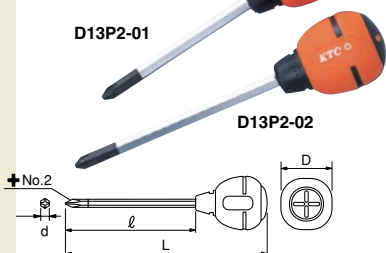
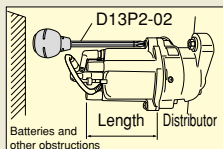
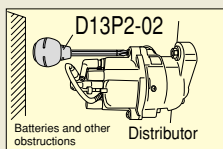
● SPECIAL EXTENSION SOCKET



ELECTRIC SYSTEM

Distributor cap removal

●3/8"sq. LONG STUBBY SCREW DRIVER · SET (2pcs.)



LONG STUBBY SCREW DRIVER · SET (2pcs.)

No.	aa	D	d	L	ℓ	▼g	📦
No. TD13P22							10
Long stubby driver		D13P2-01,02					

No.	aa	D	d	L	ℓ	▼g	📦
D13P2-01	No.2	35	6	130	80	50	10
-02	No.2	35	6	150	100	60	10

Usage

- This is a tool designed for loosening and tightening cross screws in hard to reach places in vehicles and other related areas. (Great for hard to reach areas where conventional stubby drivers can't because of the short length of the neck.)

Application Characteristics

- No.2 cross screws
- As the neck length is long with a short grip, it can be used on stubby driver or No. 2 driver in hard to reach areas.
- The neck is hexagonal (2-faced width 6mm) and can be used with open end wrenches and adjustable wrenches.
- A magnet is fitted to the end of the tool.
- 2 lengths are available to suit different types of jobs.

ELECTRIC SYSTEM

Disassembling Alternator

1 Removing Alternator Belt

●FREE POSITIONING WRENCH



●FLAT TYPE EXTRA LONG BOXEND WRENCH

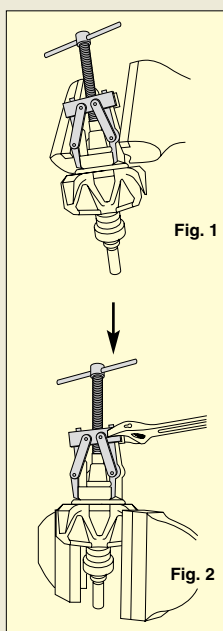


●HANDY BAR



2 Disassembling Alternator

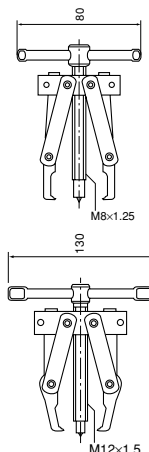
●ARMATURE BEARING PULLER D.PAT.



No.ABU-1935



No.ABU-3262



ARMATURE BEARING PULLER

No.	BEARING APPLICABLE RANGE	▼g	📦
ABU-1935	Outer ϕ 19~35 Inner ϕ 7 Over	210	1

- For small bearings.

Purpose

- For generators and alternators with built-in cooling fans.
- For removing armature bearings of reduction type starter motor, power tools, cleaner, etc.

No.	BEARING APPLICABLE RANGE	▼g	📦
ABU-3262	Outer ϕ 32~62 Inner ϕ 10 Over (No.6201~6305)	890	1

- For mini cars to big sized vehicles.
- Thin tip of claw for using in narrow space.
- Can be used by fixing the back by vise for narrow niche. (Fig.1)
- In case of bigger niche, preventing the tool from turning itself by using adjustable wrench, etc. (Fig.2)

Bearing Application Chart

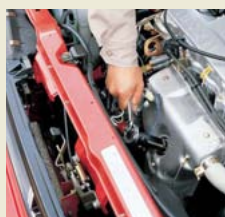
Inner	No.	Outer	Inner	No.	Outer
7	607 *	19	12	6001 *	28
	627	22		6201 *	32
	637	26		6801	21
	608 *	22		6901	24
8	628	24	15	16001	28
	638	28		6002	32
	698	19		6202 *	35
	B8-74D *	22		6802	24
9	609	24	17	6902	28
	629 *	26		16002	32
	639	30		6003 *	35
	699	20		6803	26
10	6000 *	6		6903	30
	6200	30		16003	35
	6300	35			
	6800	19			
	6900	22			
	B10-46D *	23			

*Frequently used types
Note: For other bigger types than the above mentioned, please use ABU-3262.

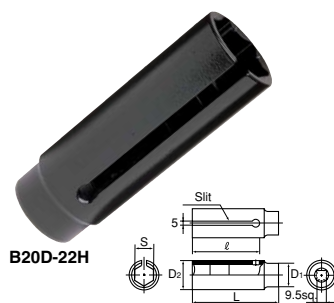
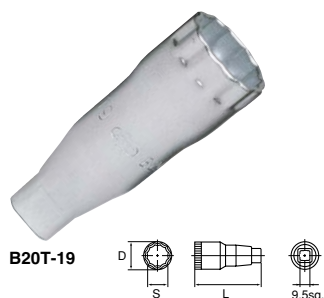
ELECTRIC SYSTEM

Removing/Installing Thermo-sensor and Oxygen Sensor

1 Removing/Installing Thermo-sensor and Oxygen Sensor



●3/8"sq. THERMO-SENSOR SOCKET



THERMO-SENSOR SOCKET · O₂ SENSOR SOCKET

No.	B202TD	▼g	290	1
Thermo-Sensor Socket	19mm	B20T-19		
O ₂ Sensor Socket	22mm	B20D-22H		

CAUTION • FOR CHECKING AND CHANGING THERMO-SENSOR AND O₂ SENSOR.

THERMO-SENSOR SOCKET

No.	S	D	L	▼g	1
B20T-19	19	26	73	55	1

Purpose • Specially designed in accordance with the size shape of thermo-sensor..
Application • For Toyota, Nissan, Mazda, Honda and Daihatsu cars.
Special features • Thin wall type with small diameter for using in narrow engine rooms.

CAUTION • DO NOT USE THIS SOCKET FOR ANY PURPOSE, EXCEPT FOR REMOVING/INSTALLING THERMO-SENSORS.

O₂ SENSOR SOCKET

No.	S (6pt.)	D ₁	D ₂	ℓ	L	▼g	1
B20D-22H	22	27	30	70	90	235	1

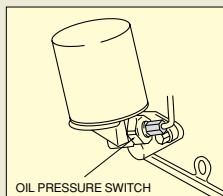
Purpose • For removing/installing O₂ sensor.
Application • Deep socket with slit for easy operation.
Special features • Specially designed in accordance with the size and shape of O₂ sensor.
 • With 3/8" square female drive for using with ratchet handles or extension bars.

CAUTION • DO NOT USE FOR ANY PURPOSE OTHER THAN REMOVING/ATTACHING A O₂ SENSOR.

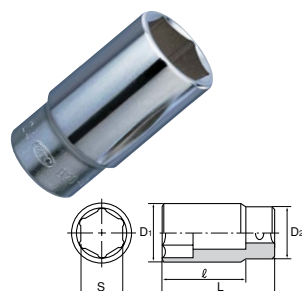
ELECTRIC SYSTEM

Removing/Installing Oil Pressure SW

1 Removing/Installing Oil Pressure SW



●3/8"sq. OIL PRESSURE SOCKET · SET (2pcs.)



OIL PRESSURE SOCKET · SET (2pcs.)

No.	B202HD	▼g	470	1
Oil Pressure Socket		B20-24HD,27HD		

No.	S (6pt.)	D ₁	D ₂	ℓ	L	▼g	1
B20-24HD	24	32.5	28.5	46	58	230	1
-26HD	26	35	30	46	58	230	1
-27HD	27	36.5	31	46	58	240	1

Purpose • For removing/installing oil pressure switch.
Special features • With 3/8" square female drive for easy operation.

ELECTRIC SYSTEM

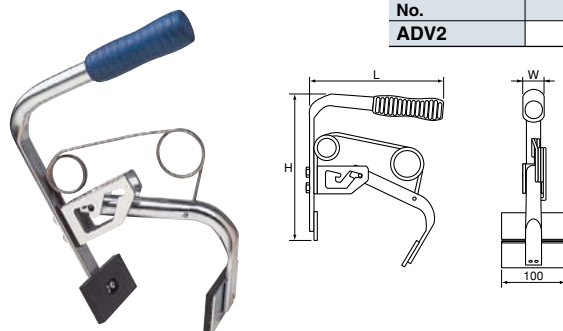
Battery replacement

Removing vehicle batteries



This tool is great for removing batteries from hard to reach areas. There is a rubber pad on the gripping part of the tool to prevent scratching the battery.

●BATTERY CATCHER



BATTERY CATCHER

No.	L	W	H	▼kg	1
ADV2	193	33	215	0.95	1

Usage • Useful in battery removal and carrying
Application • From light weight vehicles to passenger and one-box car batteries.
 • Battery width 120~180mm, Less than 22kg in mass. (Sample battery size: JIS26A17RL~95D31RL)
 * Replacement grips are available. Check with your dealer or service provider for details.

NEW

INSULATION TORQUE WRENCH

No. ZGWP30550

▼kg 1.1

1

Insulation torque wrench

Application

- Hybrid vehicles (HV)
- Electric vehicle (EV)

Features

- Products conforming to the IEC60900: 2004 standard.
- Optimum torque measurement range for service of hybrid vehicles (HV) and electric vehicles (EV).
- It is simple to change the torque. Just pull and turn the grid end.
- Union mechanism to prevent fall of the socket.
- The measuring accuracy meets the ISO standard of $\pm 4\%$. Measurement is available at both left and right sides. Calibration can also be performed.
- Proprietary storage bag is available.



Specification of insulation torque wrench

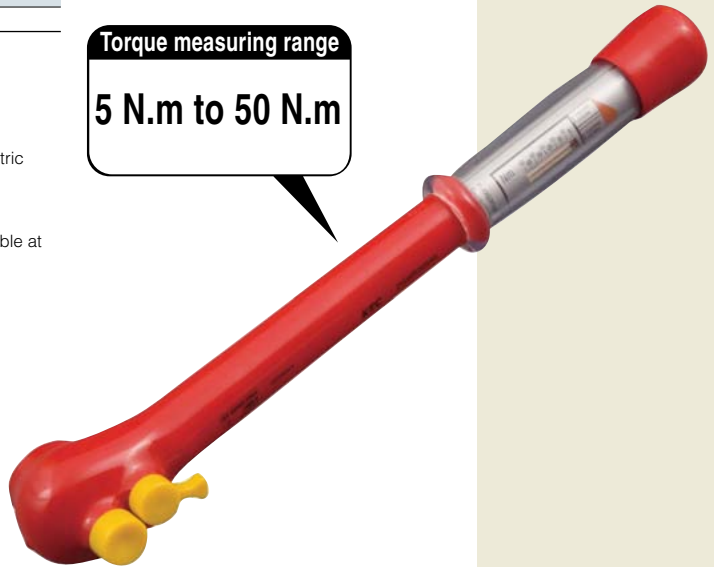
Overall length: 370 mm
Weight: 1.1 kg (main unit)
1.2 kg (including storage bag)

Torque measuring range: 5 to 50 N.m
Measuring tolerance: $\pm 4\%$
Measuring direction: Right hand screw, left hand screw

INSULATION TORQUE WRENCH

Torque measuring range

5 N.m to 50 N.m



INSULATION TOOL SET A

No. ZTB311

Total 11 pcs.

▼kg 2.9

1

• Open Top Metal Case

Contents

3/8"sq.Socket	POWERFIT	ZB3-08, 10, 12
3/8"sq.Deep Socket	POWERFIT	ZB3L-08, 10, 12
3/8"sq.Ratchet Handle		ZBR3
3/8"sq.Extension Bar		ZBE3-125, 250
3/8"sq.T Shape Wrench		ZTH3
Flat-blade Screwdriver		ZD1M-100

INSULATION TOOL SET B

No. ZTB311V

Total 12 pcs.

▼kg 3.1

1

• Open Top Metal Case

Contents

3/8"sq.Socket	POWERFIT	ZB3-08, 10, 12
3/8"sq.Deep Socket	POWERFIT	ZB3L-08, 10, 12
3/8"sq.Ratchet Handle		ZBR3
3/8"sq.Extension Bar		ZBE3-125, 250
3/8"sq.T Shape Wrench		ZTH3
Flat-blade Screwdriver		ZD1M-100
Voltage Tester		ZGEV-750

- Application**
- Hybrid vehicle (HV)
 - Electric vehicle (EV)

- Features**
- Products conforming to IEC60900: 2004 which is the only international standard for insulation tools.
 - The set is most suitable for service of hybrid vehicles (HV) and electric vehicles (EV).
 - The socket bore has POWERFIT prevents concentration of stress and are easy on bolts and nuts.
 - To prevent fall of the socket (*), the ratchet handle uses a union mechanism and the extension bar and the T-shaped handle use "fall prevention screws".
 - Proprietary trays are available in a plastic case in red which stands out at a site.
- * Standard IEC60900:2004 requires "Mechanical lock retaining system".

NEW



NEW



Voltage tester that can check 0V (zero volt) before work is available.



Voltage measurement before work is specified in the vehicle manufacturer's manual.

ZTB311

ZTB311V



Double layer insulation film which is highly safe

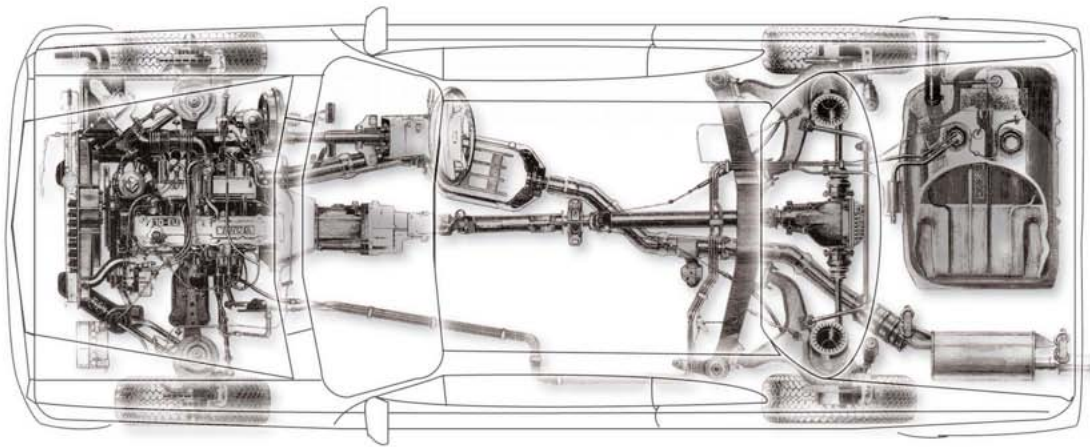


"Fall prevention screw" to prevent loss of socket



Warning • If the red part is worn off and a yellow part is exposed, stop use of the tool immediately.

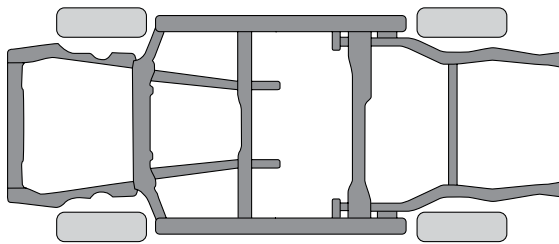
Body Mechanism



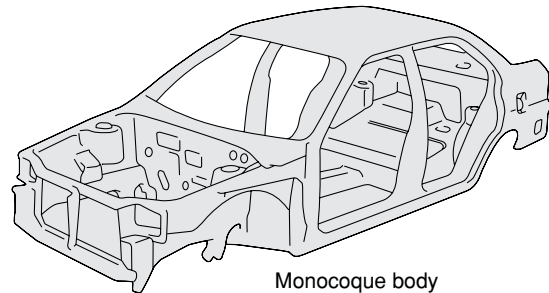
MECHANISM 1

Frame and monocoque body

The framework that is designed as a base for vehicles is called the Frame. The engine & suspension, steering mechanisms, body, are fitted to this. This structure is seen more frequently these days compared with previous models. In recent years, as the merit of a more rigid body that is even more lightweight is achieved, the monocoque body, where the frame is one with the body, is becoming more popular.



Frame



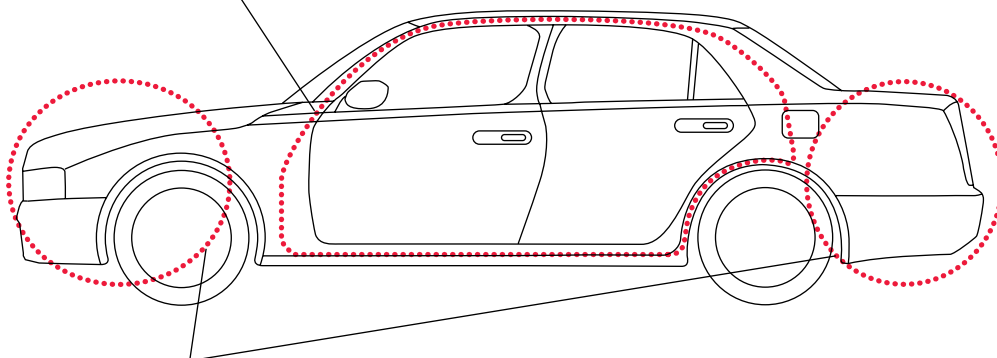
Monocoque body

MECHANISM 2

Impact absorbing body

Monocoque bodies are a countermeasure for impacts. There is a variety of names for these; impact absorbing body, crushable body, etc. However, these body structures all come from the "Front/Rear Impact Absorption" and "Strengthened cabin to protect vehicle occupants" designs. The names differ depending on the maker, however, GOA, ZONE, G-CON, RIZE, MAGMA, TAF, TECT. New cyclic structure bodies are in use at present.

Cabin: Strengthened cabin designed to protect vehicle occupants in an accident.



Front/Rear structure: Front/Rear structural design to absorb impact force at the time of an accident.

Maintenance of Body

BODY

No.	L	H	▼kg		
AP901	1,016	58	2	1	

Usage

- This is an exclusive tool (estimates etc.) designed to assess the damage to a vehicle's body after an accident.

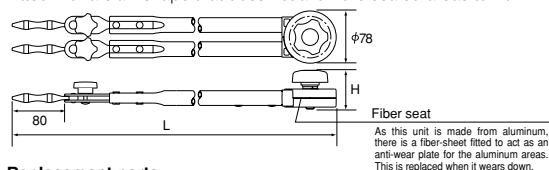
Application

- From light weight vehicles to normal passenger types (also compatible with foreign vehicles)

Damage assessment range	40~1700mm
Body measurement hole diameter	φ5~10mm

Characteristics

- Sealing is made easy by a simple bolt screw-in operation. The operation is faster and easier when using wrenches, such as the ratchet type, etc. (Hexagonal 2-faced width 14mm)
- As the center bolt is fitted with a flange, an offset wrench can be used and the wrench will not slip off.
- A resin grip is employed for the handle to prevent slippage.
- Fitted with a claw shape that does not allow the sealed areas to lift.



Replacement parts

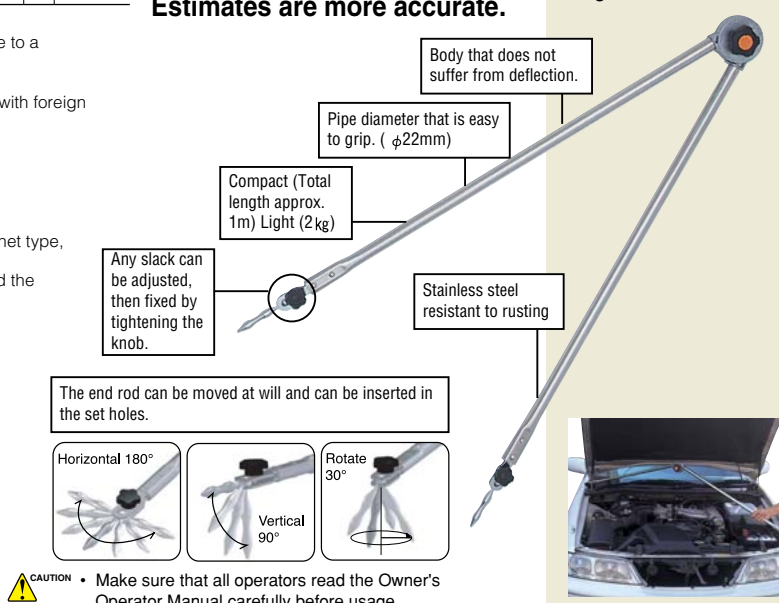
Product name	No.	
Fiber-sheet	AP901-1	

* Replacement parts are available. Check with your dealer for details.

●BODY COMPASS PAT.P.

Estimates are more accurate.

Damage Diagnosis/Estimates



• Make sure that all operators read the Owner's Operator Manual carefully before usage.

SLIDE HAMMER PULLER ATTACHMENT SET

No. AUD55T	▼kg 13.5	
SLIDE HAMMER PULLER	AUD5	
SLIDE HAMMER PULLER ATTACHMENT	AUD5-B2,B21,B3,F1	

Usage

- Body shop working

Application

- For mini cars, passenger cars and pick up trucks.

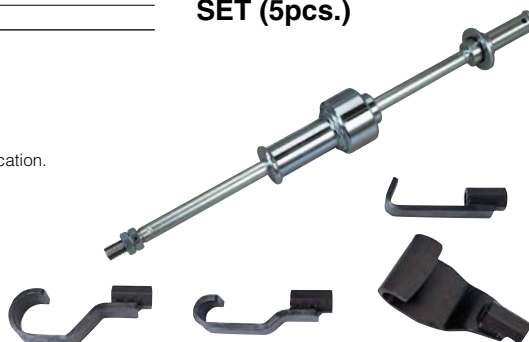
Special features

- Big and small hammer with weight 3.5kgs and 1.2kgs for wide application.

●SLIDE HAMMER PULLER ATTACHMENT SET (5pcs.)

Repair of Sheet Metal

CAUTION • TAKE YOUR FOOTHOLD SECURELY, MAINTAIN GOOD POSTURE, AND MIND POSITION OF YOUR HANDS WHEN USING THE SLIDE HAMMER.

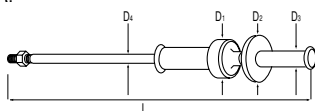


SLIDE HAMMER PULLER

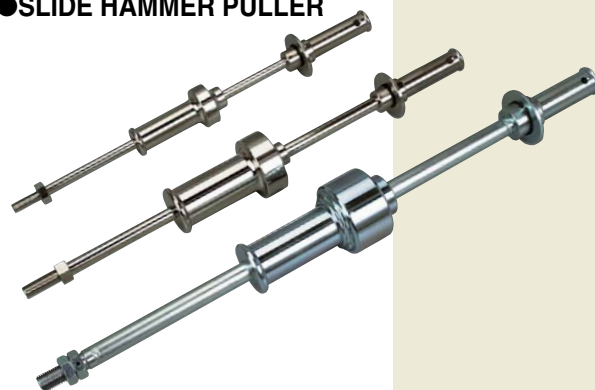
No.	D1	D2	D3	D4	L	Weight Shocker	Screw Size	▼kg		
AUD3	60	68	30	14	580	1.2 kg	W9/16-12	2.7	1	
AUD4	85	68	30	18	675	3.5 kg	M18×2.0	5.5	1	
AUD5	96	80	36	25	825	5.3 kg	M22×2.5	8.4	1	

- Wide range of application with shockers of 3 different weight, i. e. 5.3kgs., 3.5kgs., and 1.2kg.
- Applicable to mini/compact cars and small trucks.

CAUTION • TAKE YOUR FOOTHOLD SECURELY, MAINTAIN GOOD POSTURE, AND MIND POSITION OF YOUR HANDS WHEN USING THE SLIDE HAMMER.



●SLIDE HAMMER PULLER



BEFORE USING TOOLS.

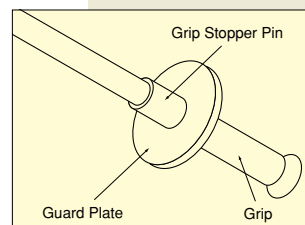
- READ INSTRUCTION MANUALS BEFORE USE.
- TAKE YOUR FOOTHOLD SECURELY AND TAKE A GOOD BALANCE WHEN USING.

FOR YOUR SAFETY:

- ENSURE GRIP STOPPER PIN HAS BEEN INSERTED. (SEE FIGURE BELOW. AUD5 DOES NOT HAVE THE PIN.)
- HOLD THE TOOL WITH BOTH HANDS TO PREVENT UNEXPECTED MOVEMENT OF SHOCKER.
- USE IT ALONE.
- BE SURE TO INSTALL NUT TO TIP OF SHAFT. DO NOT ALLOW SHOCKER TO MOVE TOWARD TIP.
- BE SURE TO FIX ATTACHMENTS WITH CLOSED NUT.
- APPLY THIS TOOL TO THE PART FREE FROM DAMAGE BY HITTING.
- DO NOT ATTEMPT TO MODIFY A TOOL, OTHERWISE, YOU MAY DEGRADE QUALITY CONSIDERABLY.

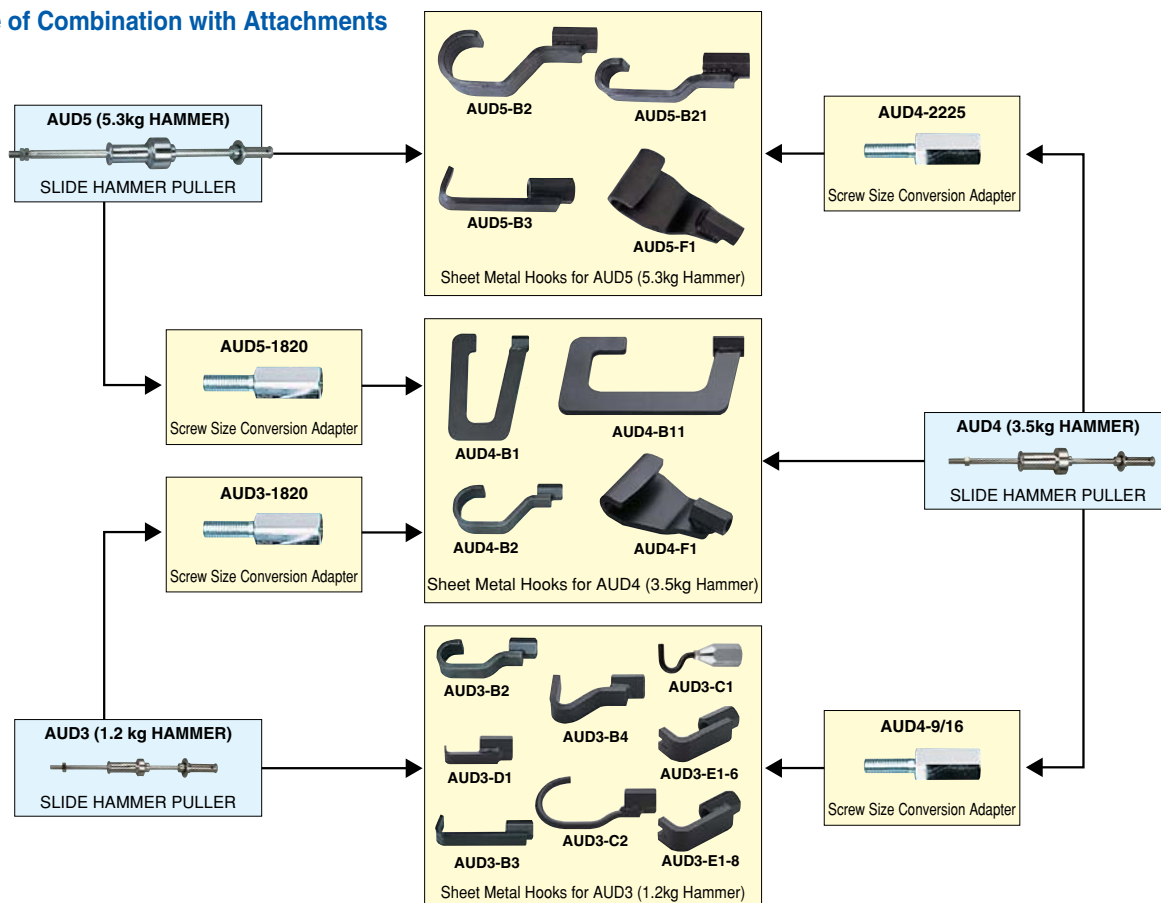
FOR DAMAGE PREVENTION

- SELECT ATTACHMENTS APPROPRIATE TO THE WORK.
- BE CAREFUL NOT TO DROP THE TOOL. DO NOT PLACE ANYTHING ON THE TOOL.
- DO NOT ALLOW MOISTURE, CHEMICALS, IRON POWDER OR DUST TO COVER THE TOOL.



Use slide hammer puller together with the attachments (separately sold).

Example of Combination with Attachments



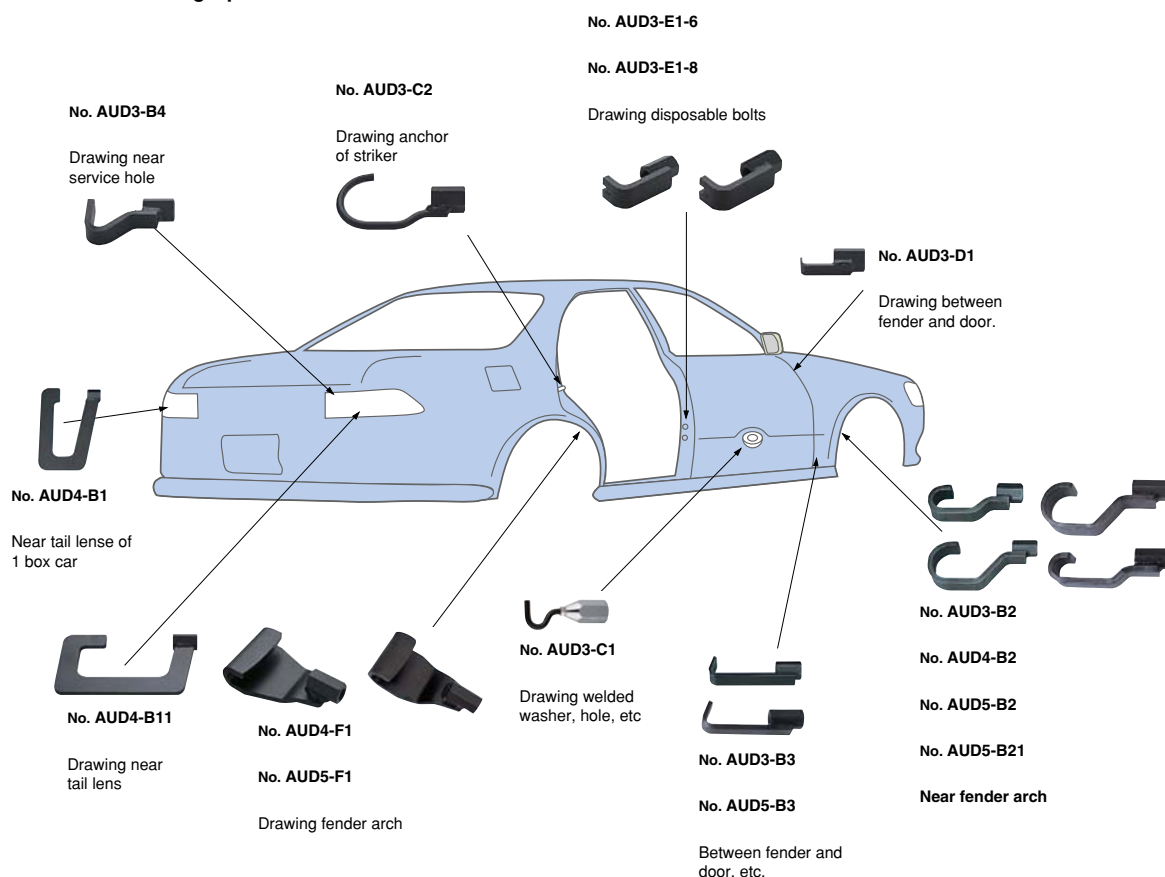
Application

Applicable to mini/compact cars and trucks.

How to Use

- To tip of the slide hammer puller, install attachment appropriate to work.
- Fix the attachment to puller with enclosed nut and offset wrench or similar tool.
- Slide the shocker and start to work.

●Example of Sheet Metal Drawing Operation



SLIDE HAMMER PULLER ATTACHMENT HOOK

SLIDE HAMMER PULLER ATTACHMENT SET (4pcs)

No. ATUD304	▼kg 1.35	1
Attachments for Sheet Metal AUD3-B4,C2,D1,E1-8		

SLIDE HAMMER PULLER ATTACHMENT SET (3pcs)

No. ATUD303	▼kg 1.17	1
Attachments for Sheet Metal AUD3-B2,B3,C1		

SLIDE HAMMER PULLER ATTACHMENT

No.	AUD3-B2	AUD3-B3	AUD3-B4	AUD3-C1
Screw Size at Puller side	W9/16-12	W9/16-12	W9/16-12	W9/16-12
Thickness × Width (mm)	9 × 32	9 × 32	9 × 25	Length 105
No.	AUD3-C2	AUD3-D1	AUD3-E1-6	AUD3-E1-8
Screw Size at Puller side	W9/16-12	W9/16-12	W9/16-12	W9/16-12
Thickness × Width (mm)	Length 120	4.5 × 19	9 × 32	9 × 32
No.	AUD4-B1	AUD4-B11	AUD4-B2	AUD4-F1
Screw Size at Puller side	M18 × 2.0	M18 × 2.0	M18 × 2.0	M18 × 2.0
Thickness × Width (mm)	9 × 35	9 × 35	9 × 38	6 × 100
No.	AUD5-B2	AUD5-B21	AUD5-B3	AUD5-F1
Screw Size at Puller side	M18 × 2.0	M18 × 2.0	M18 × 2.0	M18 × 2.0
Thickness × Width (mm)	9 × 35	9 × 35	9 × 38	6 × 100

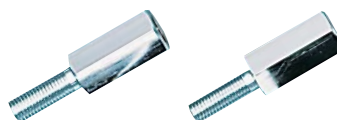
ADAPTER-SET FOR SLIDE HAMMER PULLER

ADAPTER-SET FOR SLIDE HAMMER PULLER (2pcs.)

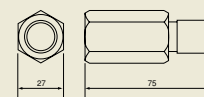
No. ATUD302	▼g 600	1
Adapter AUD3-1820 , G1/2		

No. ATUD402	▼g 600	1
Adapter AUD4-9/16 , G1/2		

ADAPTER-SET FOR SLIDE HAMMER PULLER



AUD3-1820, G1/2



AUD4-9/16, G1/2, 2225



AUD5-1820, G3/4

No.	Length	▼g	Screw Size (Puller)	(mm)	Screw Size (Object)	(mm)	Outer Hex A/F (mm)	
AUD3-1820	70	300	W9/16-12	(14.2 × 2.1)	M18 × 2.0	—	27	
AUD3-G1/2	70	300	W9/16-12	(14.2 × 2.1)	G1/2	(20.8)	27	
AUD4-9/16	75	300	M18 × 2.0	—	W9/16-12	(14.2 × 2.1)	27	
AUD4-G1/2	75	300	M18 × 2.0	—	G1/2	(20.8)	27	
AUD4-2225	75	300	M18 × 2.0	—	M22 × 2.5	—	27	
AUD5-1820	75	350	M22 × 2.5	—	M18 × 2.0	—	32	
AUD5-G3/4	75	350	M22 × 2.5	—	G3/4	(26.4)	32	

• Setting 12 kinds of attachments quite easily.
Adapter for changing screw sizes enables setting 12 kinds of attachments easily for big or small hammer.

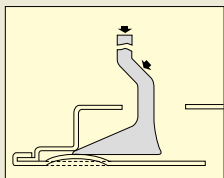
BODY

Modification of Body

Cutting Body



Line Alignment



●FLAT CHISEL D.PAT.



FLAT CHISEL

No.	A	L	▼g	kg	
TAG-25×170	25	170	160	10	
-26×220 (with rubber stopper)	26	220	270	10	

- Flat & light body. Curved shape for easy use.
- Side blade for effective work. (Fig.1)
- Rubber stopper for safety job. (TAG-26×220)



• WEAR SAFETY EYE GLASSES WHEN USING THIS TOOL.



●BODY PANEL EDGEWAYS CHISEL



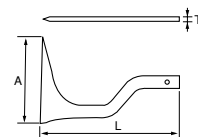
BODY PANEL EDGEWAYS CHISEL

No.	L	A	T	▼kg	kg	
TAGZ-200×320	320	200	9	1	10	

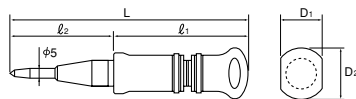
- Sharped edge on one side for effective lining on the corner of panel.
- Good impact transmission with center striking part for easy lining job.
- Various lining works are possible (Ex.1 : Removing inner cover of a door and inserting this tool through service hole, then hitting end of this tool for lining.
Ex.2 : At the corner of a panel or a narrow space, putting the edge of this tool into the damaged part and adjusting the direction of lining by hitting each part for lining.)



• WEAR SAFETY EYE GLASSES WHEN USING THIS TOOL.



●AUTO PUNCH



AUTO PUNCH

No.	L	l1	l2	D1	D2	▼g	
UDP-4	160	90	70	28	34	160	

Punches for Replacement

No. UDP-4-1

Application

- For making when attaching optional parts. To eliminating distortion during sheet metal processing.
- For marking the fitting point to engage the parts.

Features

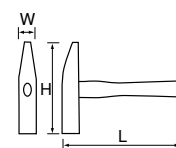
- Punch tip is made of highly durable hard steel.
- Continuous operations enhance operability.
- Quick marking with one hand without a hammer.
- Strength of punching adjustable by turning the handle.
- * Harder punch: turn clockwise. Softer punch: turn counter-clockwise.
- * The punch is made of abrasion-resistant SK steel.

●SHEET METAL PROCESSING HAMMER

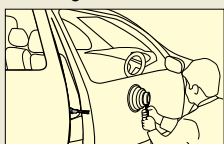


SHEET METAL PROCESSING HAMMER

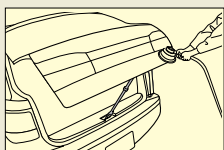
No.	Usage	L	W	H	▼g	kg	
UD5-1	Tapping at room temperature	250	38	190	1600	1	
-2	Variation	300	30	143	290	1	
-3	Side repair from interior	300	30	100	300	1	
-4	Vertical repairs from interior	300	50	100	390	1	



Working door sheet metal



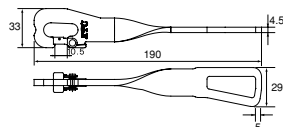
Working rear gate sheet metal



●DOOR · GATE STOPPER D.PAT.



●Door stopper No.AP902A



- Make sure that it is removed from the striker side when removing as there is a chance of scratching the body.
- Make sure that all operators read the Owner's Operator Manual carefully before usage.

DOOR · GATE STOPPER

No.	Usage	L	W	H	▼g	kg	
No. ATP9022					700		
Door stopper	AP902A						
Gate stopper	AP902B						

Product name	No.	Full length	▼g	
Door stopper	AP902A	190	200	
Gate stopper	AP902B	540~740	500	

Application

- An exclusive tool for working sheet metal or part replacement on doors and rear gates when slightly open.
- Door striker in the shape shown below. * Striker size: Less than $\phi 10$ mm (Does not fit chassis that are fitted with auto-lock door mechanisms)

Characteristics

- Sets the part using the door locking area. • Can be used on most models.
- Removal/installation is made easier.

●Gate stopper No.AP902B

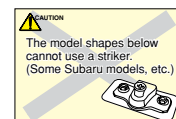


Replacement parts Extend/retractable pin-set for the gate stopper

No.	
AP902B-1	

* Exclusive for the gate stopper (No. AP902B). Contact your supplier or dealer for a replacement if this part is lost.

Applicable striker



Welding

BODY

PROTECLOTH With Straps

No.	Size	Fixing Strap		
AYPC-1	1250×1730	930mm×2	1	

No.	Size			
AYPC-2	820×1920	1		
-4	1700×1920	1		
-6	1700×2920	1		

Purpose

- Protecting front shields, seats, etc. from sparks caused by welding operation.

Special Features

- With magic tape straps for fixing on front shields & seats. (AYPC-1)
- No magnets to damage car bodies by abrasion.
- Sheet approval No.JIS1323A. Temperature limit for continuous use : 1,000.C. Maximum : 1,650C.
- Containing no asbestos so harmless for human bodies.

●PROTECLOTH



Protection of Front Shields and Seats



DISPOSABLE RESPIRATOR (3pcs.)

No.	Type	Possible operating time	▼g		
YEA-4000	Head-band type	12 hrs	11	10	

Characteristics

- High capacity mask that has passed national standards (Classification DS2)
- As there are no metal parts in use, replacement is easy.
- Fitted with a tough, rigid rubber belt that is difficult to sever.
- Adjust the length of the belt.



Anti-sever belt & rubber type belt



Belt length adjustment parts

* YAMAMOTO is the registered trademark of Yamamoto Kogyo Co., Ltd.

●DISPOSABLE RESPIRATOR (3pcs.)

YAMAMOTO

Expected release date: July 2005

MODEL CHANGE This model supercedes the YEA-2601.



Bumper removal/installation

BODY

LONG DEEP SOCKET · SET

No.	B3TLL2	▼g 255	1
	Long deep socket	B3LL-10, 12	

No.	S	D ₁	D ₂	d	H	L	▼g	
B3LL-10	10	15	18	8	11	130	115	5
-12	12	17	18	9	14	130	140	5

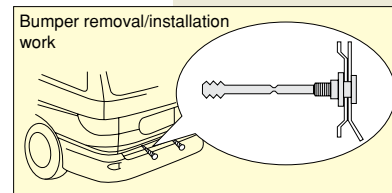
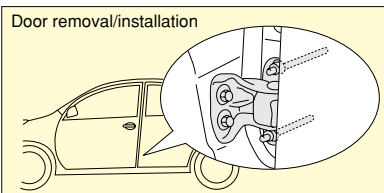
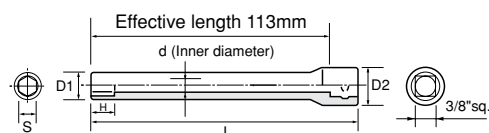
Usage

- Loosening/tightening of nuts that are in hard to reach areas or ones with bolts that have a very long thread.

Application

- Rear bumper cover installation bolt, door handle inner side installation bolt, door hinge bolt, side louver installation bolt
- Bumper reinforcement installation bolt, air bag adjustment bolt, tension pulley adjustment bolt.
- Undercarriage installation/bolt/nut
- Other spanners, offset wrenches, deep socket where it is hard to reach in some areas.

●3/8"sq. LONG DEEP SOCKET · SET



CORNER POLE NUT WRENCH

No.	▼g
AD401	85

Usage

- An exclusive tool for corner pole nut removal/installation

Characteristics

An exclusive design to match the shape

- Because the claw tips are not easily detached from the groove of the nut, bumpers and headlights are not easily scratched.

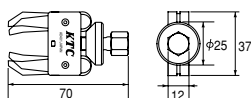
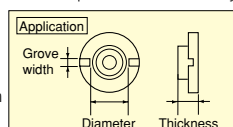
Drive tools can be used

- When nuts are tight, drive tools can be used to improve work efficiently.

Application

<Shape of corner ball nut>

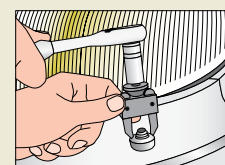
- Diameter: Equal to or less than 16.4mm
- Groove width: 1.9~2.5mm
- Equal to or less than thickness: 10.5mm



●CORNER POLE NUT WRENCH D.PAT.



Corner pole nut removal/installation



Make sure that all operators read the Owner's Operator Manual carefully before usage.

* Replacement parts are available. Check with your dealer for details.

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

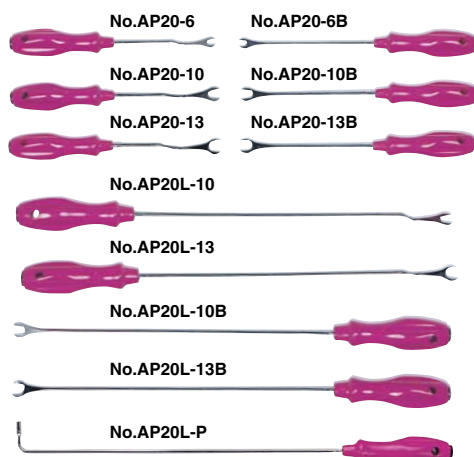
BODY

Removing Interior Fixtures and Exterior Parts

1 Removing Interior Fixtures and Exterior Parts Removing Interior Fixtures and Clips



●CLIP CLAMP TOOL · SET D.PAT.



Full Set Covers Wide Applications.

Purpose

- Removing upholstery and clips of cars.

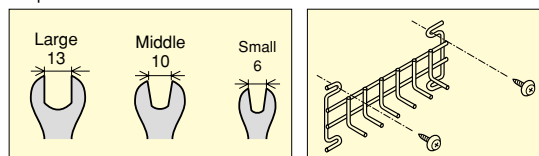
Application

- Optimal for upholstery such as panels of front/rear doors flooring, quarter panels.


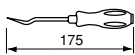
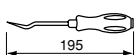
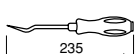
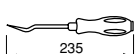
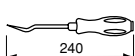
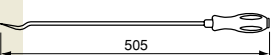
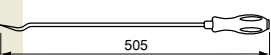
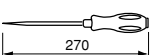
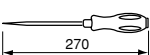
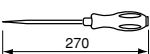
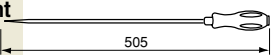
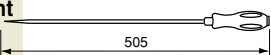
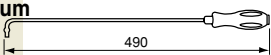
Features

- Applicable to three sizes of clips. Comes in two types, curved and straight.
- Tip of large-size clip clamp tool is specially designed to fit clip shape.
- Full set (No. ATP11) includes a useful hanger. (Figure 1)

Tip Sizes

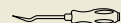


(Fig.1) Useful Hanger
*(only for ATP11)

Product Name, Product Number		Size	▼g		Angle Short Set	Angle Set	Straight Set	Long Angle Set	Long Straight Set	Full Set	
Angle short small No.AP203-6A		6	60	10	●						
Angle short middle No.AP203-10A		10	70	10	●						
Small No.AP20-6		6	100	10		●				●	
Middle No.AP20-10		10	120	10		●				●	
Large No.AP20-13		13	120	10		●				●	
Long-Middle No.AP20L-10		10	280	10				●		●	
Long-Large No.AP20L-13		13	280	10				●		●	
Straight-Small No.AP20-6B		6	110	10			●			●	
Straight-Middle No.AP20-10B		10	130	10			●			●	
Straight-Large No.AP20-13B		13	130	10			●			●	
Long-Middle-Straight No.AP20L-10B		10	280	10					●	●	
Long- Large -Straight No.AP20L-13B		13	280	10					●	●	
Long-Movable Fulcrum No.AP20L-P		-	160	10					●	●	
					ATP2032A	ATP03A	ATP03B	ATP02	ATP03C	ATP11	

Angle Type

Short



Long



Straight Type

Short



Long+Movable Fulcrum



HANDY REMOVER · SET

No. ATP2014	▼g 140	5
HANDY REMOVER	AP201-10A, 10P, N, W	

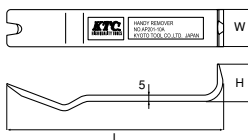
Purpose

Removing upholstery and clips on cars.

- Applicable to variety of work.
- Handy and colorful (4 types)

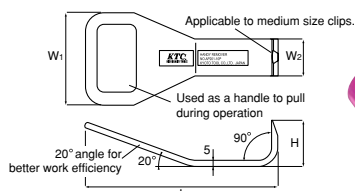
Medium Size

No.	L	W	H	▼g	5
AP201-10A	180	30	31	30	5



Pull Type (Medium size)

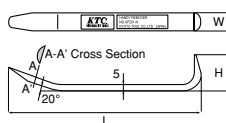
No.	L	W1	W2	H	▼g	5
AP201-10P	160	75	30	40	40	5



Narrow Type

No.	L	W	H	▼g	10	10
AP201-N	160	15	30	10	10	

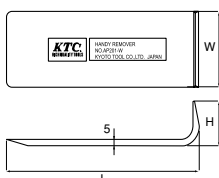
- The round bottom designed to avoid interference with instrument panel when removing the cluster of the panel.



Wide Type

No.	L	W	H	▼g	5
AP201-W	160	60	35	60	5

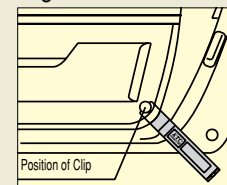
- Flat blade suitable for removing glued parts such as laces.



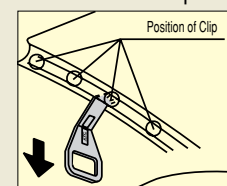
●HANDY REMOVER



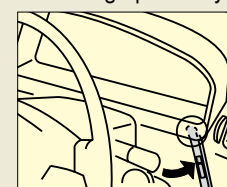
Removing upholstery in general



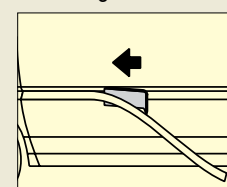
Removing upholstery in general including ones around the pillar



Removing upholstery



Removing laces



CLIP CLAMP TOOL · SET

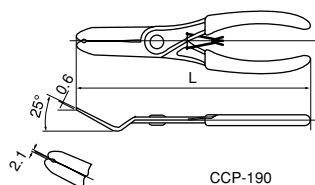
No. ATP2012	▼g 170	1
Clip Clamp Plier	CCP-190	
Clip Clamp Remover	AP201-10A	

- Clip Clamp Pliers : For removing clips and clamps.
- Clip Clamp Remover : For removing plastic and rubber fixtures.

CLIP CLAMP PLIERS

No.	L	▼g	1
CCP-190	190	140	1

- For removing clips by clamping the shafts without damaging them.
- Holding the clip shaft in 3.5mm combined hole on the edge of the blade.
- * Springs are available as replacement parts. Check with your dealer for details.



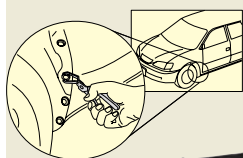
●CLIP CLAMP TOOL · SET

MODEL CHANGE This model supercedes the CCP2.



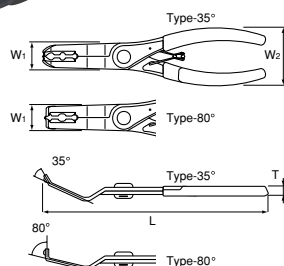
●CLIP CLAMP PLIERS 35°· 80° (for pulling out lock pins)

CLIP CLAMP PLIERS



AP202A

AP202B



Type -35° (for flat planes)



Type -35° (for flat planes)



Type -80°(for deep holes)

SET

No. ATP2022	▼g 290
CLIP CLAMP PLIERS	AP202A, AP202B

No.	Type	L	W1	W2	T	▼g	Box	
AP202A	35°	196	25	53	9	145	5	
AP202B	80°					145	5	

Purpose

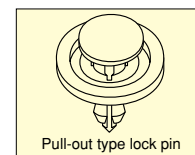
- Removal and installation of shaft of plastic clips used on front/rear bumpers, front fender faces, etc.. at time of removal and insertion.

Application

- Plastic clips with pull-out type lock pin (Shaft diameter : 5-10, in case of installing the clips.)

Features

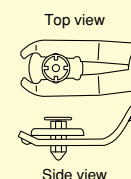
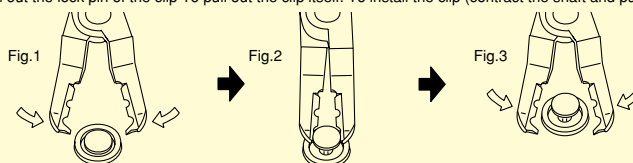
- Lock pin (lock release) can be done with ease. (Fig.1)
- Clip can be pulled out after pulling out the lock pin. (Fig.2)
- Easy clamping and inserting of clip shaft at clip installation into car body (Fig.3)
- Pliers tip shaped to prevent damage to a clip.
- Pliers tip is angled to avoid damage to car body and interior covers.
- Pliers tip provided with arrow mark for easy alignment with the clip.



Pull-out type lock pin

●How to Use the Pliers

To pull out the lock pin of the clip To pull out the clip itself. To install the clip (contract the shaft and push it in)



Side view

●WIPER ARM REMOVER

WIPER ARM REMOVER

No.	Full length	▼g	
AP204	162	300	

Usage

- Exclusive tools for removing car wiper arms.

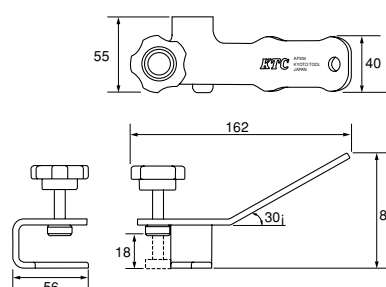
Application

- Can be used on vehicles ranging from light to RVs that use full-con and semi-con type shield wipers.

* There are some vehicle types that cannot use this system.

Characteristics

- Once the wiper arm is attached, removal can take place easily with only little effort.

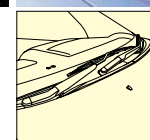
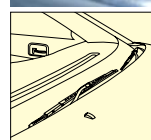


Full-con shield, wipers

- Type of pivot part of the wiper arm is hidden by the bonnet.

Semi-con shield, wipers

- The pivot part of the wiper arm pivot visible.



Removal, Installation and Adjustment of Doors

BODY

COURTESY LAMP SWITCH STOPPER

No.	L	D	AAA	▼g	
ATP32	79	40	2	25×2	5

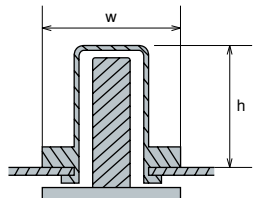
Usage

- When the door has been left in an open state, press the Courtesy switch to shut off the cabin's lamp and to stop the "open door alarm" from sounding.

Characteristics

- Simply grasp the lever to apply or remove.
- As the switch has been made out of engineering plastic with glass fiber, it is both robust and light.
- The switch's rubber does not scratch.

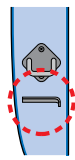
Applicable courtesy lamp switch size



Width (w): 21.5~28.5mm

Height (h): Over 10mm when switch is OFF

Courtesy switch shapes that are not applicable.



Hook type

(Some Honda models)

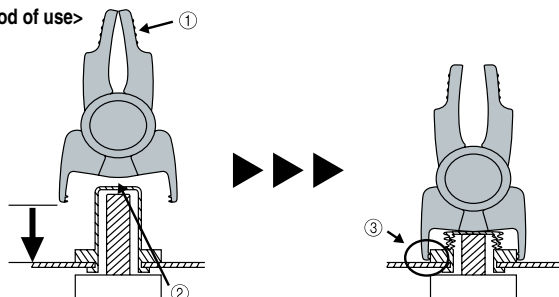


Electrode System

(Slide door)

Applicable for vehicles with courtesy switches attached to the main pillar.

<Method of use>



① Grasp the lever part and open at the edge of the body.

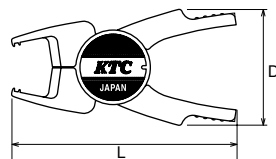
② Push vertically towards the courtesy switch push.

③ Fit so that the base of the courtesy switch's rubber cover catches the body's edge.

④ Make sure of secure installation.

●COURTESY LAMP SWITCH STOPPER

D.PAT.PAT.P



Stopping the door caution alarm

1

Photo of use (Front)



Photo of use (Rear)



CAUTION • Do not close the door when tool in use.

DOOR HINGE BOLT WRENCH SET (2pcs.)

No.	▼g	
DMZ2	450	10

Door Hinge Bolt Wrench 12, 14

No.	S	D	L	▼g	
DMZ-12	12	19	300	200	10
-14	14	22	300	250	10

Purpose

- Special wrench for adjusting, removing and installing doors.

Features

- Can be used in narrow quarters where conventional wrenches cannot be used.
- Combination of 12×12(14×14) enables using right side and left side effectively.

S	Applicable car Maker
12	Toyota, Nissan, Mitsubishi, Honda, Mazda, Subaru, Daihatsu
14	Toyota, Daihatsu, Mitsubishi

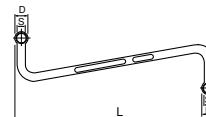
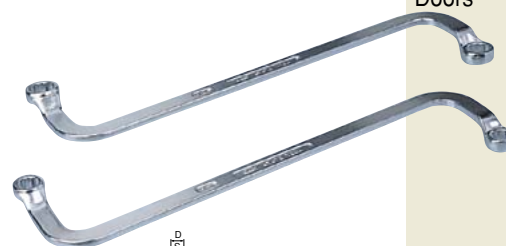
DOOR HINGE BOLT RATCHET WRENCH

No.	S	L	▼g	
DMR-12	12	250	250	10

Features

- Ratchet end for effective use in narrow spaces.
- Can be used from upper and lower sides of a hinge and left & right door.
- "S" shaped body for bypassing obstacles.
- Extruded shape of socket enables use on concave press-hinges, bypassing other bolts.
- 12 points ratchet end allows easy fitting into hinge bolts.

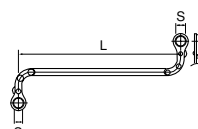
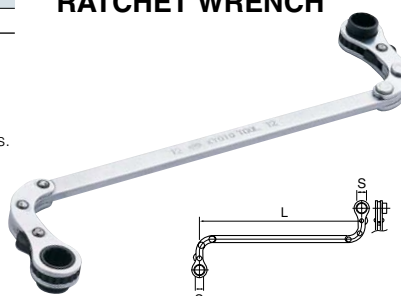
●DOOR HINGE BOLT WRENCH SET



Removal, Installation and Adjustment of Doors

2

●DOOR HINGE BOLT RATCHET WRENCH



●TORX® WRENCH

●TORX® DRIVER

●OTHER TOOLS

Adjustment of Door Striker

3


BODY

Spraying paint

Painting bumpers, fenders and doors

●SPRAY HANGER

SPRAY HANGER

No.	L×W×H standard (maximum value)	▼kg		
AP502	800×705×800(960)	7.3	1	

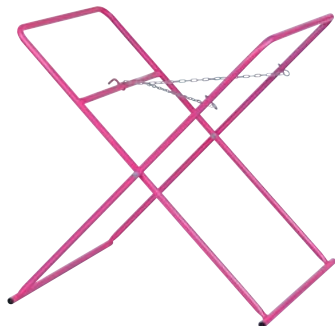
- With 4 pads

Usage

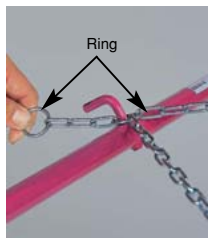
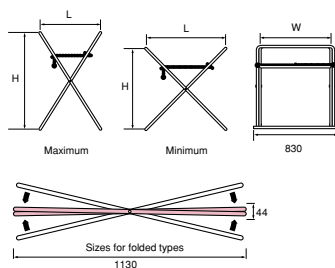
- Painting and drying work carried out on body parts that have been laid flat such as doors, engine hoods, rear gates and the bumpers of light to regular sized vehicles.
- Replacement parts

Characteristics

- The height can be adjusted to two levels (800mm and 960mm) by the ring hook position of the chain, according to the size of the object, or to the worker's height.
- Also applicable for long wrap around bumpers. (Maximum value)
- The legs are of flat steel with grating for grip.
- Folding type for compact storage.
- Light construction for easy movement.




Can work on long wrap around bumpers.

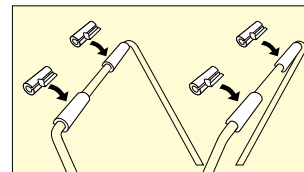


The height can be adjusted to two levels (800mm and 960mm) by the ring hook position of the chain.

SPRAY HANGER

No.	▼g 40		
AP502PA		1	

Pads × 4 (for replacement)



TILTING SPRAY HANGER

No.	A	B	C	D	E	Accessories	▼kg	📦
TSR1380	1350	834	800	400	400	Panel stays 1 kit Bumper stays 1 kit	17	1

Purpose

- Spraying of bumpers, fenders, doors, etc. of up to the smallest-sized vehicles.

Features

- The object can be rotated, so even portions which are hard to spray can be sprayed efficiently.
- The rotation angle can be adjusted in increments as fine as 15°. An object can be fixed at a desired position according to the progress of work.
- The versatile stays can move freely, vertically and horizontally, and can also be fixed.
- Three kinds of stays can be used to spray paint on bumpers, fenders, doors, engine hood, etc. (but not on tail gates).
- The stay for use with engine hoods is optional.
- The rotary mechanism has been designed not to turn more than 180° at any time, even if the lock wire is damaged.



Option (Engine hood stay)

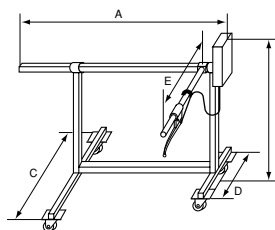
No. TSR1380-OP1



TSR1380-OP1

●TILTING SPRAY HANGER

Spraying Bumper, Fender and Door



●Usage example

Fender



Panel stay

Engine hood



Engine hood stay (Option)

Bumper



Bumper stay

Door



Bumper stay

SPRAY HANGER

No.	H	▼kg	📦
TS1500	1685	28	1

A-single unit can be used to spray paint and dry parts including urethane bumpers, doors and tail gates.

- The universal arms can rotate freely 360°, improving efficiency by allowing for fine work to proceed on two sides simultaneously.
- Parts are attached to newly designed hooks and can be transported easily.
- Rugged construction and contractable feet make it possible to spray heavy objects.
- The universal casters with 100mm diameter transport the stand freely even inside a booth or on a grating.
- Attached parts can be detached easily, so the storage space can be saved.
- Both the front and back sides of parts can be dried simultaneously to reduce expense.
- Rubber caps are provided to prevent parts damage, and rubber mats are attached on the base extensions to facilitate installation.



●SPRAY HANGER

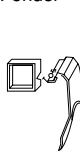


Door



Hook A
B

Fender

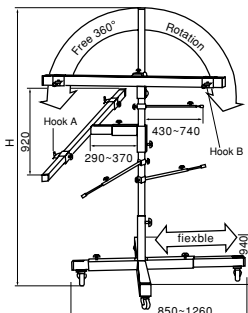


Hook B

Bumper



Hook A
B



Truck & Bus (Large & Small) specified tool series

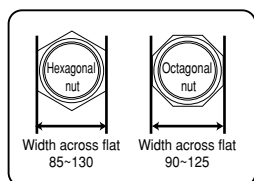


*3/4"sq drive tool (sold separately) is required for operation.

HOUSING NUT WRENCH FOR LARGE VEHICLES (FOR HEXAGONAL AND OCTAGONAL NUTS) D.PAT.P



Metal case is included



HOUSING NUT WRENCH FOR LARGE VEHICLES (FOR HEXAGONAL AND OCTAGONAL NUTS)

No. AS351	▼kg 4	📦 1
Housing nut wrench for large vehicles (for hexagonal and octagonal nuts)	1	
Metal Case (245×140×110)		

*Replacement parts are available. Check with your dealer for details.

Usage

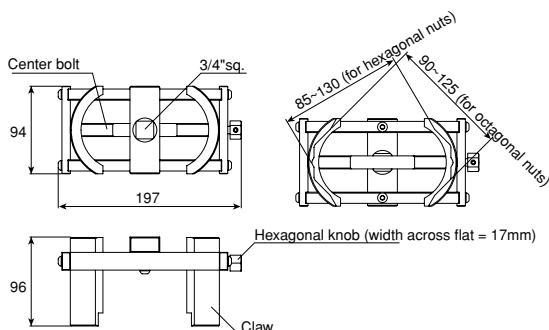
- Loosening / tightening of the rear housing nuts

Application

- Width across flat rear housing nuts used in heavy vehicles (over 4t)

Characteristics

- Compatible with both hexagonal and octagonal types
Specially designed claw to fit both hexagonal and octagonal types
- Special design helps avoid slipping.
Claws are specially designed to firmly hold the surface of the nut.
- Size is easily adjustable.
Adjust size simply by tightening hexagonal knob with a 17mm drive tool.



HOUSING NUT WRENCH FOR SMALL VEHICLES (FOR CIRCULAR NUTS)



HOUSING NUT WRENCH FOR SMALL VEHICLES (FOR CIRCULAR NUTS)

No. AS352	▼g 450	📦 1
Housing nut wrench for small vehicles (for circular nuts) (Main body)	1	
Pin A (for pin-hole diameter ϕ 6.8~9)	2	
Pin B (for pin-hole diameter ϕ 9.1~10)	2	
Wing nut	2	

*Replacement parts are available. Check with your dealer for details.

Spare parts

Product name	No.	Tip diameter	
Pin A (2)	AS352-2	ϕ 6.5	
Pin B (2)	-3	ϕ 9	

Usage

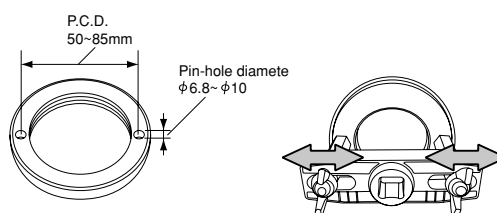
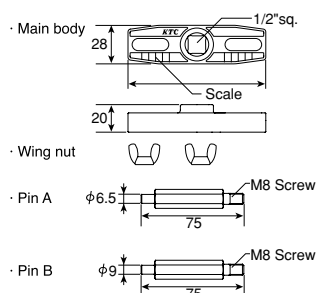
- Loosening / tightening of the rear housing nuts

Application

- Width across flat rear housing nuts used in small vehicle (over 2t)

Characteristics

- Compatible with both hexagonal and octagonal types.
Pitch is adjustable by sliding the pin.
- Easy to position
Easy to center as a scale is marked on the wrench.



*1/2"sq drive tool (sold separately) is required for operation.

REAR HUB PULLER FOR LARGE VEHICLES

No.	AS353	▼kg 3.5	1
Rear hub puller for large vehicles (Main body)			
Center bolt		1	
Spacer		1	
Metal Case (245×140×60)			

Spare parts

Product name	No.	
Center bolt	AS353-2	
Spacer	-3	

Usage

- For removal of rear wheel hub

Application

- Rear wheel hubs that are used in large vehicles (over 4t), which fulfills conditions below.
 - 8 or 10 holed (number of axle shaft attachment bolts)
 - P.C.D. 140~188mm
 - The size of axle shaft attachment bolt = M12~16

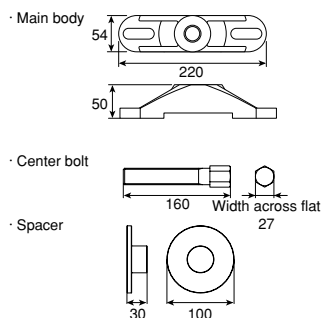
Characteristics

- Aluminum wheel will not be scratched or damaged.
Aluminum wheels will not be scratched as the tool is attached to the axle shaft attachment holes using the axle shaft attachment bolt.
- Light and compact
Simple to set up.
- Removal operation made easy
Hub is easily removed by tightening the bolt with an off-set wrench, or a socket with a drive tool (with 27mm width across flat).

REAR HUB PULLER FOR LARGE VEHICLES



Metal case is included



*An off-set wrench (with 27mm width across flat) or a socket with a drive tool (sold separately) is required for operation.

FRONT HUB PULLER FOR LARGE VEHICLES

No.	AS354	▼kg 12.1	1
Front hub puller for large vehicles (Main body)			
Center bolt		1	
Arm M20		2	
Arm M22		2	
Arm M24		2	
Metal Case (380×240×75)			

Spare parts

Product name	No.	
Center bolt (1)	AS354-2	
Arm M20 (2)	-3	
Arm M22 (2)	-4	
Arm M24 (2)	-5	

Usage

- For removal of front wheel hub.

Application

- Front wheel hubs that are used in large vehicles (over 4t), which fulfills conditions below
 - 6, 8, or 10 holed (6/8-hole: JIS system, 10-hole: ISO system) wheels
 - P.C.D. 222.25~335
 - Hub bolt size = M20×1.5, M22×1.5, M24×1.5

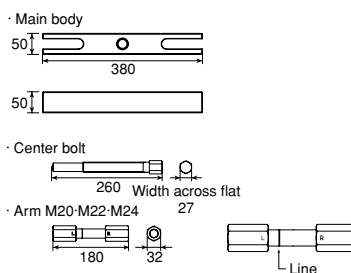
Characteristics

- Aluminum wheel will not be scratched or damaged.
Aluminum wheels will not be damaged as hub is removed by attaching this tool to hub bolts.
- Hub can be removed on both left and right wheels with just 1 arm.
The arm is engraved with "L" and "R" to distinguish between left and right wheel.
- The tool comes with 3 arm types.
There are three types of hub bolt size - M20, 22, and 24. The different sizes can be distinguished with number of lines on the arm.
(M20: 1 line, M22: 2 lines, M24: 3 lines)

FRONT HUB PULLER FOR LARGE VEHICLES



Metal case is included



*An off-set wrench (with 27mm width across flat) or a socket with a drive tool (sold separately) is required for operation.

CHAIN TYPE OIL FILTER WRENCH

No.	AE502	▼g 600	1
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Usage

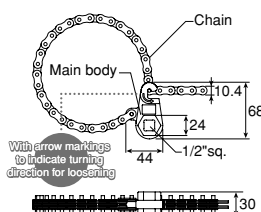
- For removal of cartridge type oil filters from standard-heavy vehicles

Application

- For cartridge type oil filters with outer diameter of 89~142mm (nominal size 89-125mm).

Characteristics

- Light and compact
The tool can operate in a narrow space.
- Drive tools can be chosen according to work condition.
A 1/2"sq spinner handle or an off-set wrench (with 24mm width across flat) can be used to operate this tool.
- Loosening can be done securely.
This tool is structured to prevent chain from coming off.



CHAIN TYPE OIL FILTER WRENCH



*A 1/2"sq spinner handle or an off-set wrench (with 24mm width across flat) (sold separately) is required for operation.

6. OTHER TOOLS and EQUIPMENT

SCRAPERS and TIRE CHAIN PLIERS
AUTOMOTIVE MAINTENANCE ACCESSORIES
OTHER TOOLS and EQUIPMENT

6. OTHER TOOLS and EQUIPMENT

SCRAPERS and TIRE CHAIN PLIERS



Matrix of Scrapers

Material of Blade \ Size of Blade (mm)	10	12	15	18	22	25	30	40
Ceramic		● KZ4-12		● KZ4-18				
H.S.S.				● KZ2-18				
Hard Steel				● KZ3-18				
Hard Steel (thin)						● KZSS-25		● KZS-40
Stainless	● KZ1-10		● KZ1-15		● KZ1-22		● KZ1-30	

CERAMIC & STAINLESS SCRAPER SET A · B



KZ 142 A

CERAMIC AND STAINLESS SCRAPER SET

CERAMIC AND STAINLESS SCRAPER SET A

No. KZ142A	▼g 80	10
Ceramic Scraper	Blade Width 12mm	KZ4-12
Stainless Scraper	Blade Width 10mm	KZ1-10

CERAMIC AND STAINLESS SCRAPER SET B

No. KZ142B	▼g 130	10
Ceramic Scraper	Blade Width 18mm	KZ4-18
Stainless Scraper	Blade Width 15mm	KZ1-15

• Stainless Scraper for grinding and Ceramic Scraper for finishing.



• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

CERAMIC SCRAPER D. PAT.



• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

CERAMIC SCRAPER

No.	A	T	L	▼g	10	5
KZ4-12	11	3	145	30	5	
-18	18	3	175	52	5	

Purpose

● Scraping and finishing the surface of automotive engines and gaskets of industrial machineries, etc.

Special feature

- Superb wear resistance, and smooth cutting.
- Ceramic tip for preventing rust and deformation.
- Tip does not adhere to sticky gasket, seal, gum, etc.
- Both sides of the blade can be used.

STAINLESS SCRAPER SET



KZ 12 A



• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

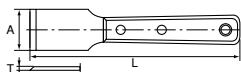
STAINLESS SCRAPER SET

No. KZ12A	▼g 130	10
Stainless Scraper	Blade Width 10mm	KZ1-10
	Blade Width 22mm	-22
No. KZ12B	▼g 130	10
Stainless Scraper	Blade Width 15mm	KZ1-15
	Blade Width 30mm	-30
No. KZ12S	▼g 160	10
Stainless Scraper	KZ1-22 (Blade Width 22mm)	KZ1-30 (Blade Width 30mm)

Caution

● Blade width is small, to avoid scraping with blade at vertical position.

STAINLESS SCRAPER



• DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC.

STAINLESS SCRAPER

No.	A	T	L	▼g	10	5
KZ1-10	10	1.4	165	50	5	
-15	15	1.4	170	52	5	
-22	22	1.4	180	80	5	
-30	30	1.4	180	80	5	

Special feature

● Set of stainless scrapers of different blade width for multi purposes.

HIGH CLASS SCRAPER SET (2pcs.)

No.	TKZ232A	▼g 110	10
H.S.S.	KZ2-18A	Blade Width 18mm	
Hard Steel	KZ3-18A	Blade Width 18mm	

Purpose

- Scraping gaskets on engines.
- Cleaning.
- For scraping heat-hardened gaskets easily and finishing for clean surface.
- Superb wear resistance.
- Specially heat-treated for superb durability so can be used for long time after grinding the edge at one time. (KZ3-18)

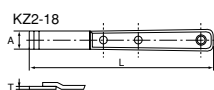
CAUTION • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC

● HIGH CLASS SCRAPER SET (2pcs.)**HIGH CLASS SCRAPER**

No.	Type	A	T	L	▼g	10
KZ2-18	H.S.S.	18	1.0	180	72	5
KZ3-18	Hard Steel	18	1.4	180	76	5

Special feature

- H.S.S. Edge. (KZ2-18)
- Hard Steel Edge. (KZ3-18)
- 18mm Blade width for use in narrow space possible.
- Made of packer -wood handle.
- With blade cover for safety.



CAUTION • DO NOT USE AS A SUBSTITUTE OF A CHISEL, LEVER, CUTTER ETC

● HIGH CLASS SCRAPER**STICKER SCRAPER · SPARE BLADE****STICKER SCRAPER**

No.	Blade Width	L	▼g	10
KZS-40	40	155	110	10

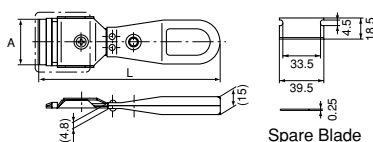
Special feature

- For speedy, neatly, and safety sticker scraping.
- Sharp edge for clean finish.
- Fixed blade for preventing the position from changing.
- Comfortable grip for easy operation.

SPARE BLADE

No.	Contents	▼g	10
KZS-4010	10pcs. set	15	10

CAUTION • DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE.
• BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

**● STICKER SCRAPER & SPARE BLADE****HIGH CLASS STICKER SCRAPER · SPARE BLADE****STICKER SCRAPER**

No.	L	W	H	▼g	10
KZSS-25	150	40	19	120	10

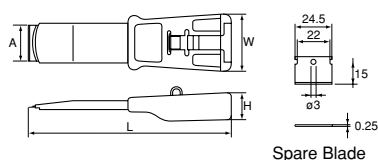
Special feature

- Easier job with unique 25mm blade width and round-shaped supporter for the blade.
- Built in space in the grip for storing optional spare blades set of 10pcs.
- 5pcs. spare blades as the standard accessory.

SPARE BLADE

No.	Contents	▼g	10
KZS-2510	10pcs.set	20	10

CAUTION • DO NOT USE THE SPARE BLADE AS A SUBSTITUTE OF A SHAVING BLADE.
• BE CAREFUL OF THE EDGE WHEN CHANGING THE BLADE.

● STICKER SCRAPER DX & SPARE BLADE D. PAT.

6. OTHER TOOLS and EQUIPMENT

AUTOMOTIVE MAINTENANCE ACCESSORIES

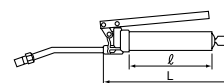
● GREASE GUN



GREASE GUN

No.	Capacity	Discharge per time (cc)	Max. Discharge Pressure (kg cm ²)	Tube Dia.	L	ℓ	Nozzle No.	▼g	☞	
G - 80	80	0.75	25	32	214	145	G-120NS	500	10	
-100	100	0.75	25	38	238	175	G-190NC	600	10	
-200	200	1.27	25	48	330	138		900	10	
-300	300	1.23	25	48	320	235		930	10	
-500	500	1.00	25	62	340	265		1200	10	

• Can be used in narrow space.



● GREASE GUN (Cartridge Type)

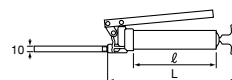


GREASE GUN

No.	Capacity	Discharge per time (cc)	Max. Discharge Pressure (kg cm ²)	Tube Dia.	L	ℓ	Nozzle No.	▼g	☞	
CG-400	400	1.45	25	56	360	290	G-250NS	1950	10	

Characteristics

- Cartridge type for easy grease charging. For saving grease.
- Comes with 1 cartridge. (Chassis Grease No.1 400g)



● NOZZLE FOR GREASE GUN



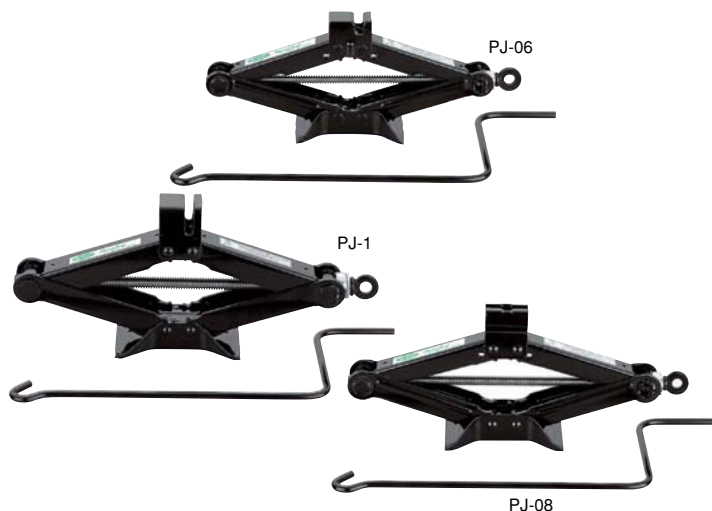
NOZZLE FOR GREASE GUN

No.	Type	L	▼g	☞	
G -120NS	Straight	120	30	1	
-180NS	Straight	180	60	1	
-250NS	Straight	250	200	1	
-450NS	Straight	450	270	1	
G -190NC	Chuck	163	100	1	
G -330NH	Hydro-hose	337	140	10	

Characteristics

- Exchangeable nozzles for multi purposes such as straight nozzles for pouring into the deep narrow space, freely twisting hydro-hose nozzles and chuck nozzles.

● PANTOGRAPH JACK



PANTOGRAPH JACK

No.	Capacity kg	Height Max. Min.	ℓ	L	W ₁	W ₂	Car Model	▼kg	☞	
PJ-06	600	340 90	130	380	40	90	Mini cars & Mini trucks	1.8	10	
-08	800	380 105	140	410	45	100	Passenger cars under 2,000cc	2.4	5	
- 1	1000	415 115	150	440	45	120	Passenger cars over 2,000cc	3.7	5	

Characteristics

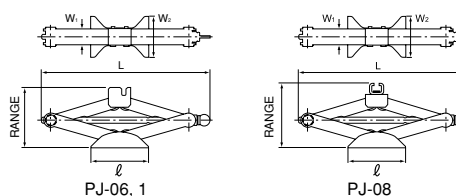
- Trapezoidal thread made by roll forming applied in the screw part for precision and durability.
- Comes with handle.
- PJ-08 has a movable head.

Spare parts

No.	Pats name	Length	▼kg	☞	
PJ-06-H	Handle	460	0.3	1	



- READ THE PROVIDED INSTRUCTION CAREFULLY BEFORE USE.
- DO NOT USE FOR THE LOAD OVER THE SPECIFIED CAPACITY.
- DO NOT PUT YOUR BODY OR ANY PART OF YOUR BODY SUCH AS HAND, FOOT, FINGER, ETC. BELOW THE CAR JACKED UP.



PINCH OFF PLIERS

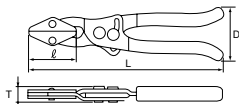
No.	L	ℓ	D	T	Opening Width	▼g	📦	
PSA34	140	33	48	5	23	75	5	
PSA57	233	57	65	18	50	340	5	

Purpose

- Hose blockage operation on automobiles.
- Useful in blocking cooling liquid hoses, especially in combination with our LLC Chargers.
- Blockage of brake hose when removing strut.
- Blockage of ATF hose when removing/attaching AT.
- Blockage of vacuum hose when inspecting auxiliaries at deceleration.
- Blockage of fuel hose when replacing fuel filters.
- Blockage of fuel hoses or oil hoses in motorcycles.

Application

- Applicable to hoses of diameter up to $\phi 41\text{mm}$.



Features

- Adopting no-step automatic locking mechanism, plier locks itself when object is pinched, facilitating speedy work.
- Retention is cancelled by only opening the grip.



PSA57 Suggested Use

● PINCH OFF PLIERS



COURTESY LAMP SWITCH STOPPER

No.	L	D	Number	▼g	📦	
ATP32	79	40	2	50	5	

Usage

- Holding the courtesy switch down while the vehicle door is open will turn off the room lamp and warning buzzer.

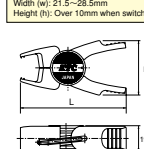
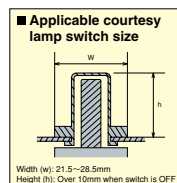
Characteristics

- Simply grasp the lever to attach or remove.
- Made using tough and lightweight engineering plastic with glass fiber.
- The rubber on the switch is scratch resistant.



• Do not close the door while attached.

● COURTESY LAMP SWITCH STOPPER PAT.P. D. PAT.



HAND PICKER

No.	L	▼g	
VS4-3	512	170	

Purpose

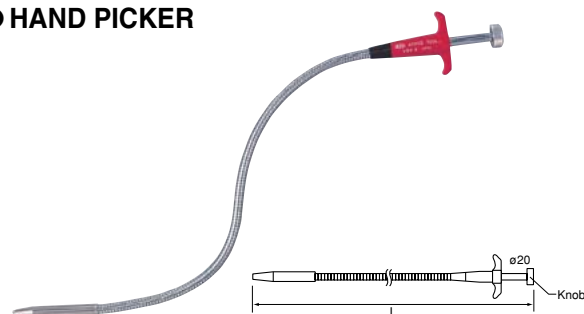
- A tool for picking up small objects fallen into narrow space you cannot reach or in liquid such as water.

Features

- Flexible rubber shaft you can bend in any way.
- Three claws easily catch resin, rubber, or aluminum objects which magnets cannot pick up.
- Large knob makes operation easy.



● HAND PICKER



MAGNET HAND

No.	L	Magnet Outer Diameter	Magnet holding capacity (g)	▼g	📦	
VL2-HD	520	6.5	450	115	20	

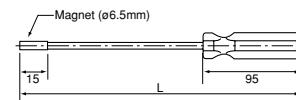
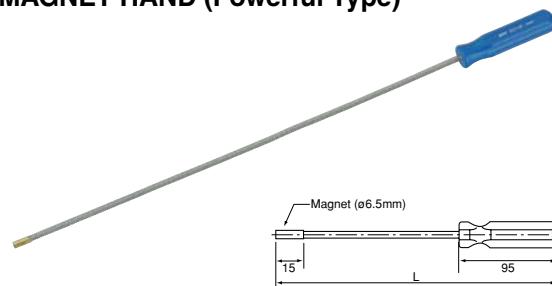
Special features

- Neodymium magnet applied for much stronger power for picking up.
- Magnetized flexible pick-up tool.
- Convenient for picking up articles dropped in narrow quarters, inside machines, liquids or chips in grooves or holes.



• DO NOT USE WHERE ANY BAD EFFECT CAN BE CAUSED BY MAGNETISM.
• DO NOT USE IN VERY HOT PLACE.

● MAGNET HAND (Powerful Type)



MAGNET HAND

Telescopic Motion Shaft

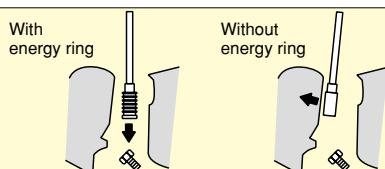
No.	Tip	L	ℓ	Magnet Diameter	Magnet Hanging Power (kg)	▼g	
VL3-1	Small	185~815	145	8	1.3	70	
VL3-2	Medium	185~815	145	15.6	6.3	90	
VL3-P	Hook Type	185~815	145	12.6	1.1	70	

Special features

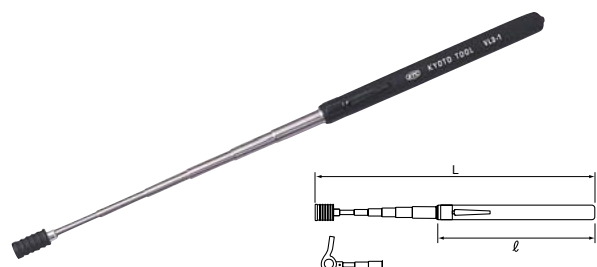
- 7-step shaft makes easy length adjustment.
- With a hook useful for storing in pockets.
- Energy ring reduces magnetism on the side, avoiding adherence to side objects in narrow space.

[Adoption of Energy Ring] (except VL3-P)

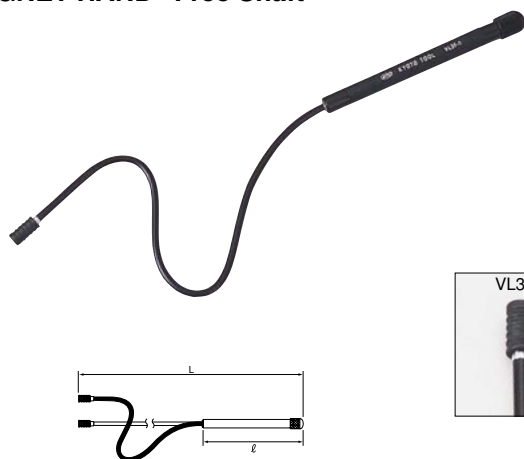
Side magnetism is reduced and catches the object quickly even in narrow and deep space.



● MAGNET HAND "Telescopic Motion Shaft"



● MAGNET HAND "Free Shaft"



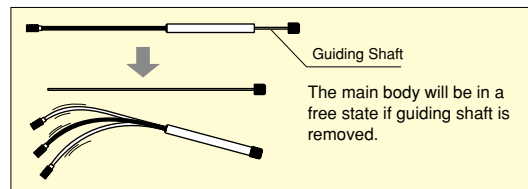
MAGNET HAND

Free Shaft

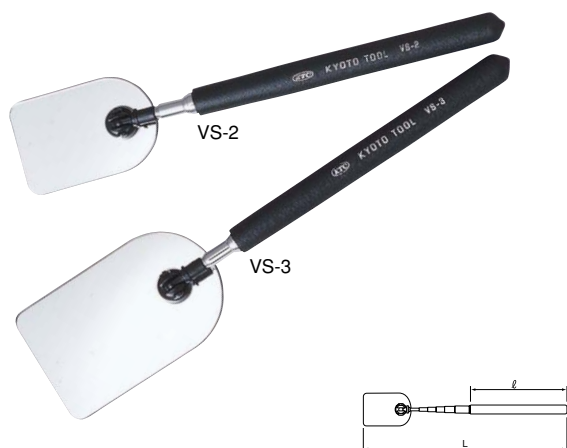
No.	Tip	L	ℓ	Magnet Diameter	Magnet Hanging Power [kg]	▼g
VL3F-1	Small	560	165	8	1.3	110
VL3F-2	Medium			15.6	6.3	130

Special features

- Free Shaft allows complicated moves.
- Magnet's direction can be determined from knob operation at grip end.
- The main body will be in a free state if you remove guiding shaft.
- Shaft section is coated with resin, making cleaning an easy job



● CHECK MIRROR



CHECK MIRROR

No.	Mirror Size	L	ℓ	▼g
VS-2	Medium 44×66	190~870	145	70
VS-3	Large 56×92	200~890		80

Purpose

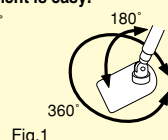
- For inspection side or back of engine room or engine auxiliaries.

Features

- Mirror section has an acrylic resin mirror which is difficult to break.
- Ball joint enables wide range of angles (Fig.1).
- Retention power is increased by fixing the ball joint with a bolt nut. (Fig.2)
- 7-step shaft makes length adjustment easy.
- For grip section a soft grip is employed. Easy to grip, hard to slip.

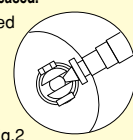
Angle adjustment is easy.

Mirror tilts 180° turns 360°



Retention power is increased.

Ball joint section fixed with a bolt nut.



● MAG-MIRROR COMBINATION

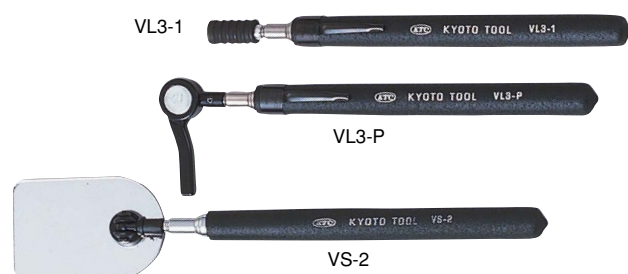


MAG-MIRROR COMBINATION

No.	L		ℓ	Magnet Diameter	Mirror Size	▼g
	Magnet	Mirror				
VLS2	190~800	190~880	145	8	44×46	200

- Magnet and mirror in one.

● MAG-MIRROR TRIAL SET



MAG-MIRROR TRIAL SET

No.	TVL3	▼g 210
Magnet Hand	Small (Telescopic movement shaft)	VL3-1
Magnet Hand, Hook type	(Telescopic movement shaft)	VL3-P
Checking Mirror	Medium	VS-2

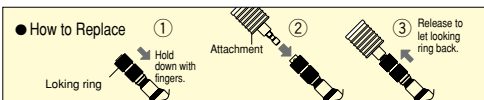
- Set of magnet hands (2 types) and checking mirror (1 type).

● MAG-MIRROR SET



MAG-MIRROR SET

No.	VLS5	▼g 280
Telescopic movement shaft	Full length: 180~810	
Magnet	Small Magnet diameter: 8	
Magnet	Medium Magnet diameter: 15.6	
Mirror	Size:44×66	
Magnifier	Size:44×66	



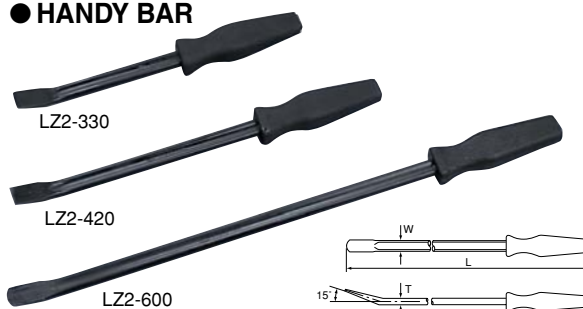
- wider range of application with change of attachments (4 pcs.) to meet your requirements.

HANDY BAR

No.	Name	W	T	L	▼g	☞	
LZ2-330	Handy Bar, Mini	19	10	330	530	5	
-420	Handy Bar, Short	9	10	420	635	5	
-600	Handy Bar, Long	19	10	600	800	5	

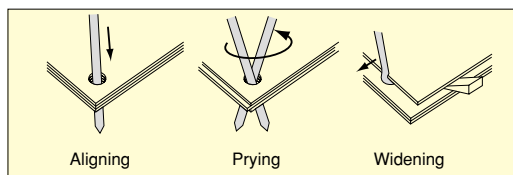
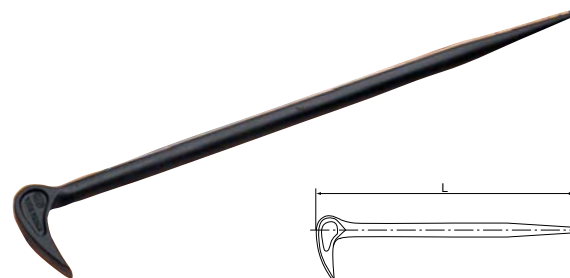
Purpose

- Prying : For adjusting tension belts such as V-belt
 Widening : For removing missons from engines
 : For separating struts and lower arms
 Drawing : For drawing drive shafts from missions (def)
 : For removing oil seals, gears, bearings, etc.

● **HANDY BAR****ROLLING WEDGE BAR**

No.	Shank Dia.	L	▼g	☞	
LZ1-450	ø16	410	685	1	

- Convenient tool aligning, prying, widening, hitting, etc.

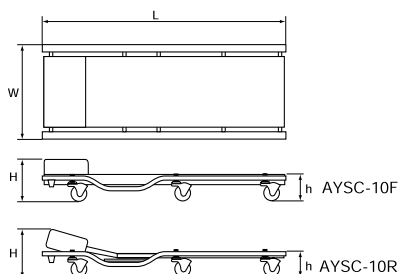
● **ROLLING WEDGE BAR****SERVICE CREEPER**

No.	L	W	H	h	Special Features	▼kg	☞	
AYSC-20F	1030	440	105	85	6 wheels type for superb operationability Big sized head rest applied for easy operation	7.5	1	
-20R	1030	440	125 ~240	90	Made of sponge Made of urethane with head rest	8.5	1	

- All items have swivel castors for good movability.



- DO NOT USE ANY CASTORS WHICH ARE WEARED, OLD OR CANNOT TURN SMOOTHLY
- DO NOT USE ON ANY SLOPE AND/OR ROUGH SURFACE.



*Castors are set as replacement parts.
 Check with your dealer for details.

● **SERVICE CREEPER**

AYSC-20F



AYSC-20R

FENDER COVER

No.	Size	▼g	☞	
AYC-2	400×1100	750	1	

Features

- Built-in magnet rubber in 4 positions make attachment to fender easy.
- With folding (stitches) easy to set on the fender.
- Inside is made of soft cloth that does not hurt the body, while outer surface is soft vinyl leather which absorbs shock.
- Work on car suspension possible even when the cover is on. Long enough to cover long nose cars.



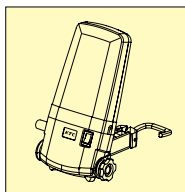
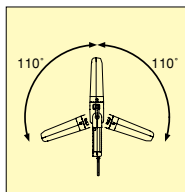
- DO NOT USE IN PLACES WHERE MAGNETISM MAY AFFECT ELECTRONIC PARTS, ETC.
- MAGNET RUBBER PART TENDS TO COLLECT STEEL POWDER. REMOVE THE POWDER BEFORE USE.

● **FENDER COVER**

● GARAGE LIGHT



AL803

Example of grip angle change
(upright placement)

Grip angle range

GARAGE LIGHT

Main Body

No.	Size	Voltage	Fluorescent lamp	Cord Length	▼kg	Box
AL803	410×150×50	AC100V	U-shaped Parallel Type, 27W	7.0m	1.1	1
AL804				0.3m	0.6	1

Supplied Parts

No.		Box
AL803-1	27W Bulb	1

Lights up your work area to ensure good work.

Purpose

- Lighting for indoor servicing.

Features

- Lights up your work area well with 27 watt parallel bulbs.
- Thin body and easy-to-handle grip facilitate work in various environments.
- Plug at the grip section makes it work as an extension cord (maximum allowable current: 10A)
- Hooks at 2 positions allow you to set the light at place convenient for your work.

*Replacement parts are available. Check with your dealer for details.

Applicable Replacement Bulbs (from Other Manufacturers)

Manufacturer	Type
National	FML27EX-N (Twin parallel 27W)
Mitsubishi Electric	FML27EX-N (Twin parallel 27W)
Toshiba	FML27EX-N (Twin parallel 27W)



- BE CAREFUL OF ELECTRIC SHOCK.
- DO NOT USE IN WATER OR IN RAIN.
- DO NOT THROW OR DROP THE LIGHT.
- PULL OUT THE PLUG AFTER USE.
- DO NOT MODIFY THE PRODUCT.



This model succeeds the AL801 and AL802.

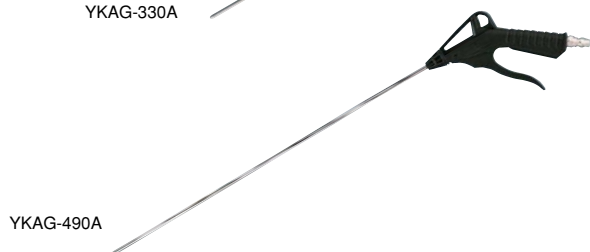
● AIR BLOW GUN



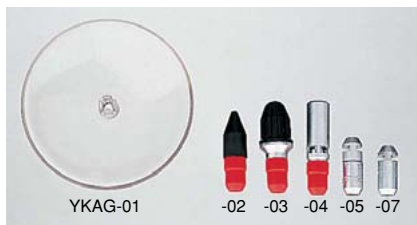
YKAG-090A



YKAG-330A



YKAG-490A



YKAG-01

-02 -03 -04 -05 -07

AIR BLOW GUN

No.	Nozzle Length	Dia.	Material	Temp	L	▼g
YKAG-090A	90	0D ø6 1D ø4	Poliacetar Oxymethylene	- 40°C ~+60°C	254	145
-330A	320				492	180
-490A	490				666	210

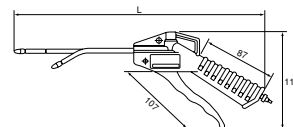
*For YKAG-090 only, the nozzle has 30° angle.

Purpose

- Blowing off dusts, misture, etc.

Special Feature

- Made of POM plastic light body and lever.
- 3 sizes of bodies and 7 kinds of accessories for multi purposes.



■Optional Accessories

No.	Name	Size	Purpose
YKAG-01	Chip Shield	ø100	Avoiding blow-back in operation.
-02	Rubber Chip	50	For use in painted sur. face and soft material
-03	Silencer	55	For minimizing noise under 79 dB.
-04	Ventury	55	For strong blowing off.
-05	Air Curtain	35	Preventing blow-back.
-06	Extension	385	For doing remotejob.
-07	By-pass	30	For using in lower pressure.

*For YKAG-090A only, the nozzle has 30° angle.



- BE CAREFUL OF DUST WHICH MAY SCATTER.
- WEAR SAFETY GLASSES AND A MASK WHEN USING THE TOOL.

● PROTECLOTH



AYPC-1



PROTECLOTH

With Straps

No.	Size	Fixing Strap
AYPC-1	1250×1730	930mm×2pcs.

No.	Size
AYPC-2	820×1920
-4	1700×1920
-6	1700×2920

Purpose

- Protecting front shields, seats, etc. from sparks made out of welding operation.

Special features

- With magic tape straps for fixing on front shields & seats. (AYPC-1)
- No magnet for not damaging car bodies by steel dusts.
- Sheet approval No.JIS 1323A. Temperature limit for continuous use : 1,000.c, Maximum : 1,650C.
- Containing no asbest so harmless for human bodies.

6. OTHER TOOLS and EQUIPMENT

OTHER TOOLS and EQUIPMENT

SET OF SMALL FILES

Set of small Files (5pcs.)

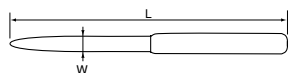
No. TZKF105	▽g 250	10
small File Flat	ZKF1-2H	
Half Round	-2HR	
Round	-2R	
Squire	-2S	
Triad	-2T	

SMALL FILE

No.	Shape	L	W	Type	▽g	10	
ZKF1-2H	Flat	220	11	Mid	60	25	
-2HR	Half Round	220	11	Mid	60	25	
-2R	Round	220	5.5	Mid	40	25	
-2S	Squire	220	5.5	Mid	50	25	
-2T	Triad	220	9	Mid	40	25	



• DO NOT TWIST THE TOOL.



Shape



ZKF1-2H



ZKF1-2HR



ZKF1-2R



ZKF1-2S



ZKF1-2T

● SMALL FILE



ZKF1-2H



ZKF1-2HR



ZKF1-2R



ZKF1-2S



ZKF1-2T

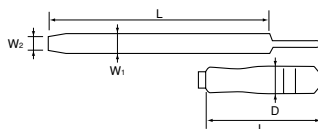
ENGINEER'S FILE (WOODEN HANDLE)

JIS

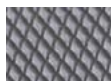
No.	Shape	Type	L	W ₁	W ₂	D	▽g	10	
ZKF2-2H	Flat	Mid	250	25	22	—	260	5	
-2HR	Half Round	Mid	250	25	15	—	240	5	
-2R	Round	Mid	250	ø10	ø5.2	—	150	5	
-HR	Wood Handle	Mid	115	—	—	ø23	30	10	



• DO NOT TWIST THE TOOL.



Shape



ZKF2-2H



ZKF2-2HR



ZKF2-2R

● ENGINEER'S FILE (WOODEN HANDLE)



ZKF2-2H



ZKF2-2HR



ZKF2-2R



ZKF2-HR

ABRASIVE PAPER · WATERPROOF ABRASIVE PAPER

ABRASIVE PAPER

No.	Size	100	
YWP- 360	228×280	100	
- 400	228×280	100	
- 500	228×280	100	
- 600	228×280	100	
- 800	228×280	100	
-1000	228×280	100	
-1200	228×280	100	

WATERPROOF ABRASIVE PAPER

No.	Size	50	
YGJ- 40	228×280	50	
- 60	228×280	50	
- 80	228×280	50	
-120	228×280	50	



• WEAR SAFETY GLASSES WHEN USING THE TOOL.

*Part Nos indicate the sizes of the abrasive grains on the papers.

● ABRASIVE PAPER WATERPROOF ABRASIVE PAPER

Supply will be in packing unit shown in the table.



● BRUSH

BRUSH



No.	Name	Material (brush)	Length	Dia	Width (brush)	Shape (head)	Material (handle)	Shape (handle)	Box	
YTBR-112	Three Line Wire Brush	Steel	270	0.3	85×15	Straight	Wood	Straight	10	
-132	Sword Type Wire Brush	Steel	230	0.3	90×30	Straight	Wood	Straight	10	
-142	Oval Type Wire Brush	Steel	130	0.3	110×50	—	Wood	—	10	
-122	Metal Handle Wire Brush	Steel	260	0.25	67	Straight	Steel	Bent	10	
-1221	A Type Channel Brush	Steel	215	0.25	65	Straight	Steel	Bent	10	
-1222	J Type Channel Brush	Steel	235	0.25	85	Bent	Steel	Bent	10	
-212	Brass Brush	Brass	240	0.14	75×17	Straight	Wood	Straight	10	
-311	Engine Brush (Small)	Pig Hair	200	—	38× 9	Straight	Bamboo	Straight	10	
-312	Engine Brush (Big)	Pig Hair	295	—	62×10	Straight	Bamboo	Straight	10	
-323	Angled Brush	Pig Hair	315	—	62×15	Straight	Bamboo	Straight	10	
-422	Palm Brush	Palm	260	—	65	Straight	Steel	Straight	10	

Features

- Brass plated wire brush for more durability. (YTBR-112, 132, 142, 122, 1221 & 1222)
- The wood section of the shank is made of timber from thinning, that is used in consideration for preservation of natural environments.

CAUTION • WEAR SAFETY GLASSES WHEN USING THE TOOL.

● CHISEL



OTHER TOOLS

- DO NOT USE THE TOOL IF ANYTHING WRONG SUCH AS CHIP, CRACK, WEAR OR DEFORMATION IS/ARE NOTICED.
- DO NOT ALTER.

CHISEL

No.	Size	▼g	Box	
UDC-10	10×140	70	10	
-13	13×160	150	10	
-16	16×180	260	10	
-19	19×190	290	10	
-25	25×215	600	5	

- Special alloy steel is friction-welded on the edge for more strength and durability.
- Chrome plated surface for rust resistance.

- DO NOT USE THE TOOL AS A SUBSTITUTE FOR A HAMMER.
- WEAR SAFETY GLASSES WHEN USING THE TOOL.
- DO NOT USE THE TOOL WITH CHIPPED OR ROUNDED EDGE.
- DO NOT TWIST THE TOOL.

● CENTER PUNCH



UDP-13

UDP-10

CENTER PUNCH

No.	Size	▼g	Box	
UDP-10	10×125	65	10	
-13	13×150	130	10	

Characteristics

- Made with special steel alloy for durability and strength.
- Galvanized surface to prevent rust.
- The handle is knurled to prevent slippage.

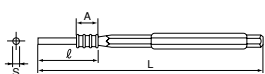


- Use protective goggles when working.
- Do not use a punch with a chipped or rounded tip.
- Do not use with force as the blade may break or shatter.

● KNOCK PIN PUNCH SET (3 or 8pcs.)



PK8



- Set of most frequently used sizes.
- Vinyl coated handle is hexagonal from, which prevents from rolling off.
- With chucking rubber at the point.



- WHEN USING THE TOOL, WEAR SAFETY EYE GLASSES.
- USE A TOOL APPROPRIATE TO THE SIZE OF AN OBJECT.
- SET THE CHUCKING RUBBER SECURELY.

KNOCK PIN PUNCH-SET (3pcs.) • (8pcs.)

No. PK3	▼g 300	Box 10
Knock Pin Punch Set (3pcs.)	PK-4185, 45185, 5190	
No. PK8	▼g 960	Box 5
Knock Pin Punch Set (8pcs.)	PK-2125, 3135, 4185, 45185, 5190, 6207, 212, 8217	

KNOCK PIN PUNCH

No.	No.	S	L	ℓ	A	▼g	Box	
PK-2125	2	1.8	125	25	12	46	10	
-3135	3	2.8	135	35	12	46	10	
-4185	4	3.8	185	45	18	98	10	
-45185	4.5	4.3	185	45	18	100	10	
-5190	5	4.8	191	51	18	100	10	
-6207	6	5.8	207	67	22	150	10	
-7212	7	6.8	212	72	22	160	10	
-8217	8	7.8	217	77	22	170	10	

Spare Parts

No.	Product	Number	
PK-2125-4	Chucking rubber	1	
-3135-4	Chucking rubber	1	
-4185-4	Chucking rubber	1	
-45185-4	Chucking rubber	1	
-5190-4	Chucking rubber	1	
-6207-4	Chucking rubber	1	
-7212-4	Chucking rubber	1	
-8217-4	Chucking rubber	1	

*Please check the merchandise inventory for a product that is marked by before placing an order.

SAFETY GLASSES

No.	Type	Lens	Frame Color	Width×Max. Height	▼g	☞	
YDA-360	1 Single lens	PET	Clear	150×56	52	10	
-715	1 Single lens	PET-AF	Blur	140×56	39	10	
-730	1 Single lens	PET-AF	Crystal Blue	160×64	43	10	
-221	2 Single lens	PET-AF	Clear	140×52	33	10	

- Can be fitted over prescription spectacles (YDA-360 only)
- Side length is adjustable (YDA-715, 221)
- To ensure comfortable operation, safety glasses have upper and side lenses to protect the worker's eyes from any flying debris.
- To ensure a comfortable fit and to prevent dust from getting in, the upper part of the safety glasses is made of elastomer cushion. This cushion will soften the shock if hit by flying debris. (YDA-715, 730)
- The lens can be adjusted for a perfect fit. (4 Levels, 38 Degrees) (YDA-715, 730)



Lens adjustment is possible
(YDA-715, 730)

*YAMAMOTO is the registered trademark of the Yamamoto Kogaku Co., Ltd.

● SAFETY GLASSES

YAMAMOTO®



YDA-360



YDA-715



YDA-221



YDA-730

SAFETY GOGGLE

No.	Lens	Frame Color	Frame Material	Width×Max. Height	▼g	☞	
YDB-530	Acety, Mistless, RET-AF	Clear	Flexible vinyl	150×56	85	10	

- Can be fitted over prescription spectacles
- Can be used together with a mask
- The strap turns at the frame, preventing twist.
- Can also be fitted while wearing a safety helmet.

*YAMAMOTO is the registered trademark of the Yamamoto Kogaku Co., Ltd.

● SAFETY GOGGLES

YAMAMOTO®



DISPOSABLE RESPIRATOR (3pcs.)

No.	Type	Max. period of Use	▼g	☞	
YEA-4000	Head Band Type	12 hours	11	10	

Characteristics

- Government certified high performance mask (Classification DS2).
- Easy disposal without separating/sorting as it does not contain any metallic parts.
- Strong and durable elastic strap.
- The length of the strap can be adjusted.



This model supercedes the YEA-2601.



Fold-back strap holder & elastic strap



Strap adjuster



*YAMAMOTO is the registered trademark of the Yamamoto Kogaku Co., Ltd.

● DISPOSABLE DUSTPROOF MASKS (3pcs.)

YAMAMOTO®

WRENCH RACK

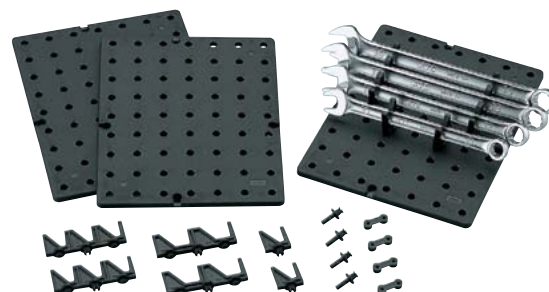
No.	TEH1SM
Base	180×140×5.5 3 Bases
Rack Pin A	For small size (approx. 19×21) 3 holders ×4
Rack Pin B	For large size (approx. 19×21~24×27) 2 holders ×2
Rack Pin C	For small size 1 holder ×4
Pin	4
Joint	4

Replacement Parts

No.	Product	Amount	
EH1SM210	Rack Pin A	10	
EH1SM310	Rack Pin B	10	
EH1SM410	Rack Pin C	10	
EH1SM510	Pin	10	
EH1SM610	Joint	10	

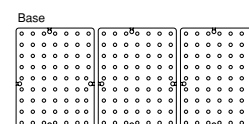
- Allows for tidy storage in cabinets and toolboxes.
- SKX0203, 0203S, 0203B, 1202, 1203 (P.353) will fit perfectly when 3 racks are lined up.
- The base and rack pin can be arranged to your personal preference.
- Made with lightweight and chemically stable PP plastic.
- Organized tools will enable more efficient servicing, which will appeal to the customer.

● WRENCH RACK (For open end wrenches, offset wrenches, and combination wrenches)



• Tools are sold separately.

[Suggested Use]



Base
Rack Pin A
Rack Pin B
Rack Pin C
Pin
Joint

Three bases cover the floor of chest draw (SKX0203, 0203S, 0203B, 1202, 1203)

● MAGNETIC PARTS TRAY



YKPT-RM



YKPT-SM



YKPT-MM



YKPT-LM

MAGNETIC PARTS TRAY

No.	Material	Thickness (mm)	Size	▼g	☞	
YKPT-RM	SUS430	0.5	ø150×41	370	1	
-SM	SUS430	0.5	240×140×42	700	1	
-MM	SUS430	0.6	358×158×42	1080	1	
-LM	SUS430	0.6	294×275×42	1430	1	

- Made of stainless steel tray for strong rust resistance.
- Rubber mounted magnet holds in 1,000 gauss magnetizing power.



• DO NOT USE IN PLACES WHERE MAGNETISM MAY CAUSE TROUBLES.

● STAINLESS PARTS TRAY



STAINLESS PARTS TRAY

No.	Material	Thickness (mm)	Size	▼g	☞	
YKPT-20	SUS304	0.5	200×120×45	160	1	
YKPT-22	SUS304	0.5	220×132×46	185	1	
YKPT-24	SUS304	0.5	240×144×48	225	1	
YKPT-26	SUS304	0.5	260×156×50	260	1	
YKPT-28	SUS304	0.5	280×168×50	290	1	
YKPT-30	SUS304	0.5	300×180×55	350	1	
YKPT-33	SUS304	0.5	330×198×57	400	1	
YKPT-36	SUS304	0.5	360×216×60	465	1	
YKPT-40	SUS304	0.6	400×240×66	740	1	
YKPT-44	SUS304	0.6	440×264×71	840	1	
YKPT-48	SUS304	0.6	480×288×77	980	1	
YKPT-52	SUS304	0.6	520×312×82	1200	1	

〈Optional〉 Special Partition Plate for Parts Tray (YKPT-20)

No.	Material	Thickness (mm)	Size	▼g	☞	
YKPT-20S	SUS304	1.0	180×100×20	70	1	

Efficiency of disassembly work improved by keeping parts in good order.

Purpose

- For temporarily placing parts of disassembled automobiles, motorcycles, or machines.

Features

- Various sizes of tray help you put disassembled parts in good order.
- Trays can be stacked for storage.
- Made of durable stainless steel.

● PARTS TRAY SET

STAINLESS PARTS TRAY SET



No. TYKPT4A ▼kg 1.7

1 each of YKPT-20, 26, 33, 40 and partitioning plate for 20.



No. TYKPT5A ▼kg 1.7

YKPT-20 (2), 24 (2), 40 (1), and partitioning plates (2) for 20.



No. TYKPT4B ▼kg 1.9

1 each of YKPT-24, 30, 36, and 44

LOCTITE					
Product	Color	Maximum Durable Temperature	Quantity		
YCE-601	Green (high strength)	150°	50ml	10	
-648	Green (high-resistant)	175°	50ml	10	

- This anaerobic bonding agent enters into the gaps found on metallic objects, such as on screws and shafts, and hardens once cut off from air. As this agent is a single liquid, the administering process is simplified saving time and cost.

Usage

- For holding engaging parts, such as bearings or splines.
- Main component : Anaerobic resin.

*LOCTITE is the registered trademark of Henkel.

LOCTITE					
Product	Color	Quantity			
YCD-242	Blue (medium strength)	50ml	10		
-262	Red (high strength)	50ml	10		

- This anaerobic bonding agent enters into the gaps found on metallic objects, such as on screws and shafts, and hardens once cut off from air. As this agent is a single liquid, the administering process is simplified saving time and cost.

Usage

- To prevent loosening as well as to help seal differential gear bolts, flywheel bolts and oil pan bolts, etc.
- Main component : Anaerobic resin.

*LOCTITE is the registered trademark of Henkel.

LOCTITE					
No.	Color	Quantity			
YCF-5651	White	250ml	10		

- This anaerobic bonding agent enters into the gaps found on metallic objects, such as on screws and shafts, and hardens once cut off from air. As this agent is a single liquid, the administering process is simplified saving time and cost.
- One step sealant for metallic pipes. The administering of Teflon to screw parts prevents biting.

Usage

- Seals the screw joints of sprinklers, hydraulic pipes, and other piping.
- Main component : Anaerobic resin.

*LOCTITE is the registered trademark of Henkel.

PRIMER					
No.	Color	Quantity			
YCK-7471	Yellow (for general use)	180ml	12		
-7649	Green (for flanges, etc.)	180ml	12		

- An accelerator used for anaerobic adhesive and anaerobic sealant.
- Use No. YCK-7649 if faster hardening is required.
- Spray type
- For cleaning bonding surfaces & peeling off gaskets
- For use on anaerobic adhesives

*LOCTITE is the registered trademark of Henkel.

BRAKE & PARTS CLEANER					
No.	Type	Color	Quantity		
YCA-480A	Medium drying speed	Colorless and transparent	480ml	12	
-480B	Fast drying	Colorless and transparent	480ml	12	

- General cleaner for brake devices and other automotive parts, etc.
- Gentle on the environment-Non-chlorofluorocarbon, non-chlorine type solvent.
- Spray type.

*LOCTITE is the registered trademark of Henkel.

ORANGE HAND CLEANER					
No.	Quantity				
YCH-40	Pump Type	4 ℓ	4		



- For removing all kinds of dirt and grime from hands
- Non-oil-base, natural hand cleaner, made from oranges and other natural ingredients.

● LOCTITE (TIGHTENS JOINTS)

LOCTITE



● LOCTITE (PREVENTS LOOSENING OF SCREWS)

LOCTITE



● LOCTITE (SEALANT FOR PIPES)

LOCTITE



● PRIMER (Solidification Accelerator)

LOCTITE



● BRAKE & PARTS CLEANER

LOCTITE



● ORANGE CLEANER (CONTAINS FINE PARTICLES)

LOCTITE



*LOCTITE is the registered trademark of Henkel.

7. MOTORCYCLE TOOLS

MOTORCYCLE TOOLS

7. MOTORCYCLE TOOLS

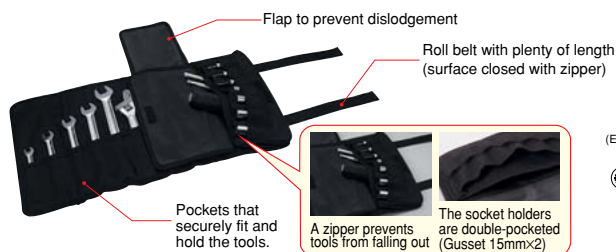
MOTORCYCLE TOOLS



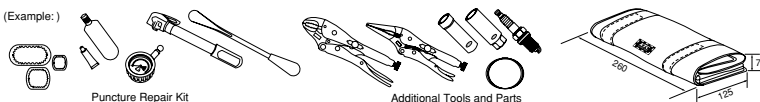
3/8" sq.

MOTO CLUB® SERIES

● RIDER'S MAINTENANCE TOOL SET



(Example:)



*MOTO CLUB is the registered trademark of KYOTO TOOL CO., LTD.

MOTO CLUB® SERIES RIDER'S MAINTENANCE TOOL SET

No.	MCK317	▼kg 1.8	1
3/8"sq. Semi-deep socket (hexagonal)	POWERSET® B3M-08, 10, 12, 14		
3/8"sq. Slide-head handle	BHM3		
3/8"sq. Extension bar	BE3-150		
3/8"sq. Hexagonal wrench	HB20-4, 5, 6		
Combination wrench	MS2-08, 10, 12, 14, 17		
Interchangeable driver set	DB4 Cross (No.2, No.3) Flat (head width 4.6)		
Pliers	PJ-150		
Adjustable Wrench	MW-200		
Tool Bag (Black)	MCKB-B (260×125×70mm when folded)		

MODEL CHANGE

This model supercedes the MCK11, MCK21A.

- The socket will allow easy operation in areas where open end wrenches and offset wrenches cannot reach.
- The drive tools employ a slide head handle and an extension bar for easy operation.
- The case can be folded down when traveling.
- The zipper prevents tools from falling out.
- By laying out the tool bag, it can be used as a replacement for tools/parts tray.
- Plenty of space (second stage pocket, etc.) for storing tools. E.g. Extra/spare parts, that are not included in the set.

Convenient for storing extra tools and spare parts.

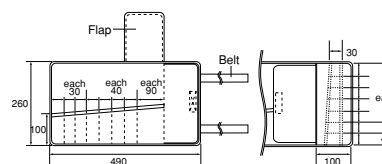
● Tool Bag (Black)



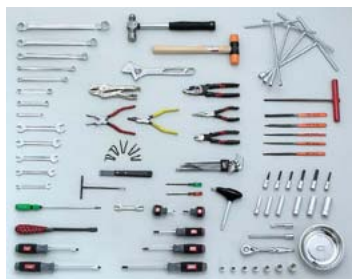
TOOL BAG

No.	Size when spread out	▼g
MCKB-B	260 × 490 (Not including belt and flap)	270

- Tool bag used for riders maintenance tool set.
- Materials: Nylon (Main body), PVC (Main body back), PP (rims, tapes)



● MOTORCYCLE TOOL STATION® SET



MOTORCYCLE TOOL STATION® SET

No.	SK7006B	▼kg 50.5	1 (2 Cartons)
80 tools/parts included			
· SK7006BT	Tools/Parts ×1		
· SKR703A	Tool Station ×1		

MODEL CHANGE

This model supercedes the SK7003B.

- A special new motorcycle tool set enclosed in the tool station.

*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

● MOTORCYCLE TOOL STATION® SET



MOTORCYCLE TOOL STATION® SET

No.	SK6006B	▼kg 39.5	1 (2 Cartons)
69 tools/parts included			
· SK6006BT	Tools/Parts ×1		
· SKR602A	Tool Station ×1		

MODEL CHANGE

This model supercedes the SK7003B.

- A special new motorcycle tool set enclosed in the tool station.

*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

Note : 6pt. Sockets are shown in blue letters. *Please check the merchandise inventory for a product that is marked by before placing an order.

DRIVE CHAIN TOOL SET

No.	MCCU14	Number	▼kg 2.2	☞ 1
Main body		1		
Outer Bolt		1		
Inner Bolt		1		
Handle		1		
For cutter pin 4050		1	40 and 50 series cutting	
For cutter guide 4050		1	40 and 50 series cutting	
For cutter pin 60		1	60 series cutting	
For press fit plate 40		1	Press fitting type 40 series	
For 52		1	Press fitting type 52 series	
For 50		1	Press fitting type 50 (530) series	
For 60		1	Press fitting type 60 series	
Press Fit Caulking Receival Plate		1	For press fitting in all sizes / Caulking receiver	
Caulking pin		1	Caulking all sizes	
Metal Case		1	L270×W145×H32	



This model supercedes the CAU13, 11.

Usage

- For motorcycle drive chain replacements.
- For removing chain pin, press fitting joint plates (including clip type), and caulking joint pins.

Application

- For chain sizes: 420 · 428 · 520 · 525 · 50 (530) · 532 · 630 · 632

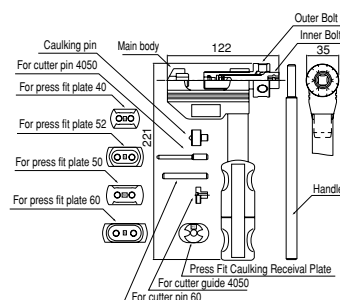
Characteristics

- This tool can be used for most domestic motorcycles.
- Based on strength analysis, the design is in an optimum shape for durability and lightness that even professionals will approve.
- Highly durable cutter pin & caulk pin is made from heat-treated special steel (SK type).
- These parts have been designed to facilitate workflow.
- Bolt removal is not required as cutter pins can be replaced from the front of the inner bolt.
- The cutter pin can be used frequently in 40 and 50 series.
- Press fitting is designed for all sizes (press fitting caulk receiving plate), and as it can also be used in caulking, this allows for a much smoother operation.
- The inner bolt does not need to be set after the joint pin has been removed as the plate press fitting uses the same outer bolt.
- The grip and handle are designed so that strength may be applied easily.

*A drive tool such as a separate 3/8"sq. ratchet tool is required when using this tool.

● DRIVE CHAIN TOOL SET**■ Replacement Parts**

No.	Product	☞
MCCU-BA	Outer Bolt	1
-BB	Inner Bolt	1
-H	Handle	1
-CA	For cutter pin 4050	1
-CG	For cutter guide 4050	1
-CB	For cutter pin 60	1
-PA	For press fit plate 40	1
-PB	For press fit plate 52	1
-PC	For press fit plate 50	1
-PD	For press fit plate 60	1
-PT	Press Fit Caulking Receival Plate	1
-KA	Caulking pin	1

**VALVE SPRING COMPRESSOR**

No.	MCVU5	▼kg 1.4	☞ 1
Body		L290~420×H172	
Attachment		MCVU-A16, A20, A24, A28	

*The attachment can also be used for a valve spring compressor (VSU4).

No.	Part Name	D ₁	D ₂	ℓ	☞
MCVU-A16	Attachment ø16.5	17	19	50	1
-A20	Attachment ø20	20	22	50	1
-A24	Attachment ø24	24	26	50	1
-A28	Attachment ø28	28	31	50	1

*The attachment can also be used for a valve spring compressor (VSU4).

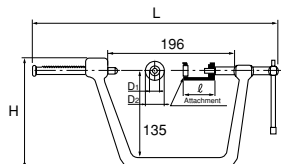


This model supercedes the VSU4.

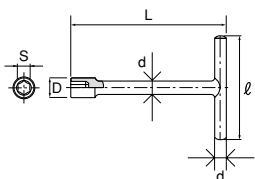
Purpose

SPECIAL TOOL FOR MAINTENANCE ON INTAKE & EXHAUST VALVE (REMOVING/INSTALLING VALVE SPRING) OF 4 CYCLE ENGINE.

- Guide Attachment of 4 sizes (ø16.5, 20, 24, 28) covers most types of motorcycles.
- Guide Attachment can be replaced by one-touch and wide opening for smooth operation on valve cotter.

**● VALVE SPRING COMPRESSOR**

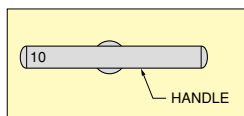
● T SHAPE WRENCH



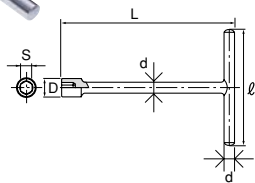
T SHAPE WRENCH

No.	S (Hexagon)	D	d	ℓ	L	▼g	📦	
TH- 8	8	12	8	200	255	300	10	
- 9	9	14	8	200	255	300	10	
-10	10	14	9	200	255	300	10	
-11	11	16	9	200	255	330	10	
-12	12	17	10	250	255	430	10	
-13	13	19	10	250	255	440	10	
-14	14	20	11	250	255	440	10	
-17	17	24	12	300	305	540	10	
-19	19	29	14	300	305	680	10	
-21	21	31	14	300	305	780	10	
-22	22	32	15	300	310	800	10	
-23	23	33	15	300	310	880	10	
-24	24	35	15	300	310	920	10	
-26	26	37	15	300	310	940	10	
-27	27	39	15	300	310	960	10	

• Size marked on the top of the handle for easy recognition.



● T SHAPE WRENCH WITH SHORT HANDLE



T SHAPE WRENCH WITH SHORT HANDLE

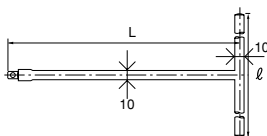
No.	S (Hexagon)	D	d	ℓ	L	▼g	📦	
TH- 8N	8	12	8	130	250	300	1	
-10N	10	14	9	130	250	300	1	
-12N	12	17	10	130	250	430	1	

• Short handle for quick turning.

● 3/8"sq. T SHAPE HANDLE



3/8"sq.



T SHAPE HANDLE

No.	ℓ	L	▼g	📦	
TH20	200	250	275	10	

• With 3/8"sq. dr. for use on Sockets, Hexagon Wrenches, etc.



• INSERT THE DRIVE SQUARE DEEPLY TO THE END.

● 3/8"sq. HANDLE



AB-53

ABX101

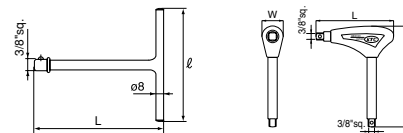
HANDLE

No.	L	ℓ	H	W	▼g	📦	
ABX101	105	—	135	28	250	10	
AB-53	115	100	—	—	90	1	

• With 3/8"sq. dr. for use on Sockets, Hexagon Wrenches, etc.



• INSERT THE DRIVE SQUARE DEEPLY TO THE END.



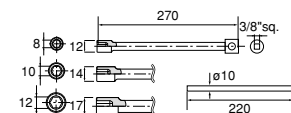
● 3/8"sq. EXCHANGEABLE T SHAPE WRENCH SET



EXCHANGEABLE T SHAPE WRENCH SET

No. BTH204	▼g 595	📦 1
Socket wrench	8, 10, 12	
Handle	ø10×220	

• Can be stored in tool box easily by detaching Handle.
 • 3/8"sq. Ratchet Handle, Spinner Handle or Torque Wrench.
 • Removable handle for compact storage in tool box. (Storage length 270mm)



STUD BOLT REMOVER - SET (4PCS.)

No. BSR354	▼kg 1.1	📦 1
Stud Bolt Remover	BSR35-6, 8, 10, 12	
Metal Case	L215×W82×H50	

No.	D	L	S	Applicable	▼g	📦
BSR35- 6	24	65	21	M 6	150	1
- 8	24	65	21	M 8	150	1
-10	28	75	21	M10	220	1
-12	28	75	21	M12	220	1

Purpose

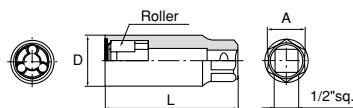
- For removing and replacing stud bolts.

Special features

- For fastening/loosening bolts continuously by ratchets.
- Because the center is perforated, stud bolts that are larger than the actual wrench can be removed.

(When using offset wrenches)

*Do not use on stud bolts that are exposed by only 20mm or less.

● 1/2"sq. STUD BOLT REMOVER SET

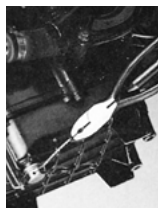
*A is hexagon that wrench can be applied to.

WIRE TWISTER

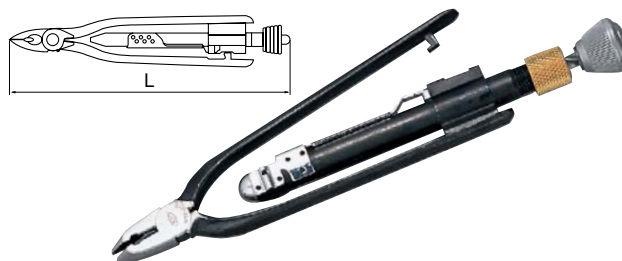
No.	L	Twistable Radius	▼g	📦
WTP-210	205	0.8	240	1

Purpose

- For twisting wire to wire-lock bolt's head.
- Rotates clockwise



When used

● WIRE TWISTER**SPARK PLUG WRENCH (SHORT TYPE)**

No.	S	D ₁	D ₂	L	▼g	📦
MCPS-20.8	20.8	34	32	170	176	5

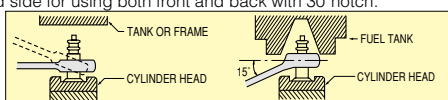
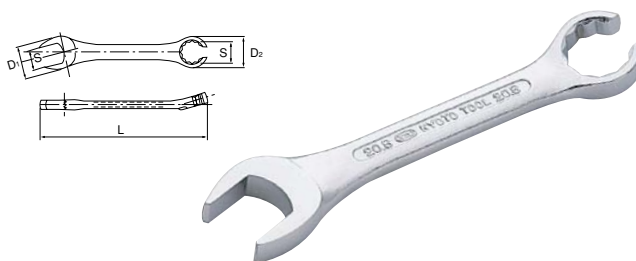
Purpose

SPECIAL WRENCH FOR REPLACING SPARK PLUG (20.8mm) OF 2-CYCLE WATER-COOLING ENGINE.

- Short length (170mm) for handy work.
- Convenient for use in narrow space where Socket Type Spark Plug Wrench cannot be applied.

(Open End) ● With 15°degreed side for using both front and back with 30° notch.

(Box End) ● Can be used on hexagon part such as below tank.

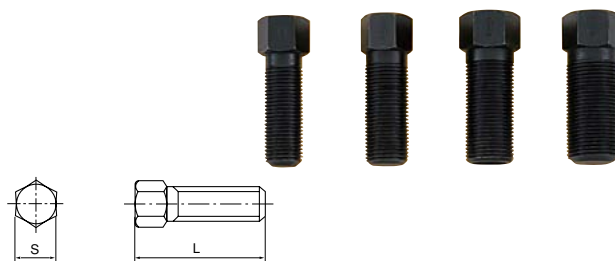
**● 20.8mm SPARK PLUG WRENCH, SHORT****ROTOR PULLER - SET (4pcs.)**

No. MCRU4	▼g 490	📦 5
Rotor Puller	MCRU-16, 18, 20, 22	

No.	Screw Size	S	L	▼g	📦
MCRU-16	M16×1.5	19	60	95	1
-18	M18×1.5	19	60	115	1
-20	M20×1.5	22	60	110	1
-22	M22×1.5	22	60	170	1

Purpose : Special tool for drawing rotor of AC generator of medium or big motorcycles (over 125cc).

- 4 sizes of M16.M18. M20.M22 for covering various types of motorcycles.

● ROTOR PULLER SET (4pcs.)**MAGNET FLY-WHEEL PULLER**

No.	S ₁	S ₂	H	L	▼g	📦
MCFU-80	M24×1	M27×1	91	120	225	1

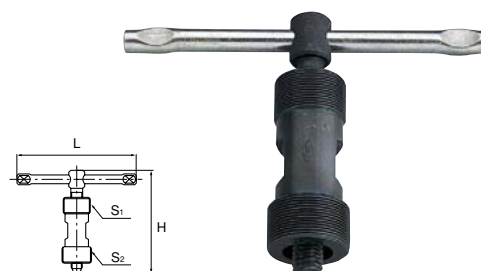
Purpose

SPECIAL TOOL FOR REMOVING MAGNET FLY-WHEEL OF SMALL MOTORCYCLES WITH SINGLE CYLINDER ENGINES (50~125cc).

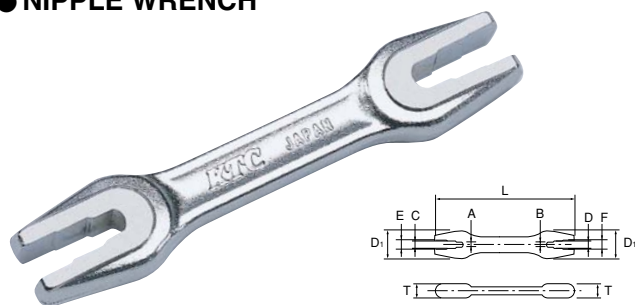
- One puller can be applied for 2 types of magnet fly-wheels.
- Can prevent parallel turning by using Open End Wrench (17mm), Adjustable Wrench, etc.
- Sliding Handle for easy operation.



When used

● MAGNET FLY-WHEEL PULLER

● NIPPLE WRENCH



NIPPLE WRENCH

No.	D ₁	A	B	C	D	E	F	T	L	▼g		
-----	----------------	---	---	---	---	---	---	---	---	----	--	--

MCS2-100	20	4.5	5.1	5.8	6.1	6.4	6.6	10	100	80	1	
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Purpose

SPECIAL WRENCH FOR FASTENING, ADJUSTING & CHECKING WHEEL SPOKE NIPPLE.

- One wrench applied to 6 sizes (4.5, 5.1, 5.8, 6.1, 6.4, 6.6) covering most of motorcycles.
- Small and light tool convenient for touring, racing etc.
- Drop forged and heat treated body for superb durability.
- The wrench is made with a high thickness (10mm) to help prevent nipples from scratching and losing their shape.

● TIRE VALVE WRENCH



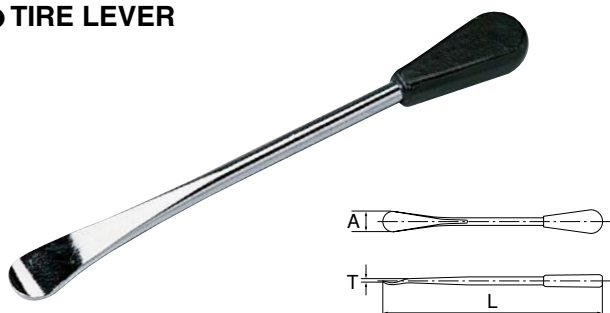
TIRE VALVE WRENCH

No.	a	b	D	e	L	▼g		
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MVC-30	2.2	4.5	29	15	35	20	1	
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- Compact size covering many types of motorcycles when conventional long tools cannot be used.
- "Must Have" for repairing flat tires or changing tires/tubes.

● TIRE LEVER



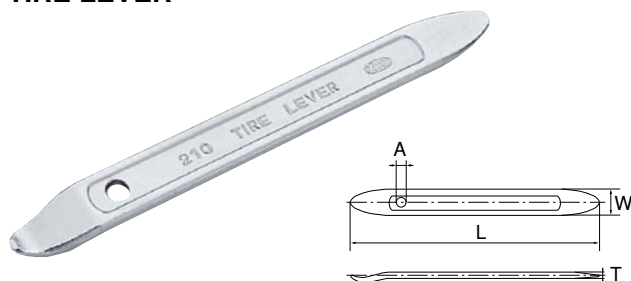
TIRE LEVER

No.	A	T	L	▼g		
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MCOL-260	23	1	265	170	5	
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- Thin and smooth tip provides smooth operation.
- Properly heat-treated for superb durability.
- Comfortable rubber handle with oil resistance enables sure gripping.

● TIRE LEVER



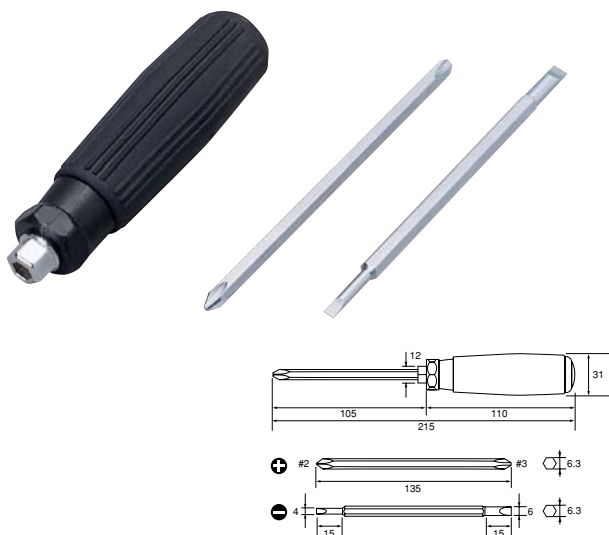
TIRE LEVER

No.	A	W	T	L	▼g		
-----	---	---	---	---	----	--	--

OHZ-210	7	22	5.5	210	100	1	
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- Short body (210mm) convenient for touring, etc.
- Drop forged and properly heat-treated for superb durability.

● INTERCHANGEABLE SCREWDRIVER SET (SOFT GRIP)



INTERCHANGEABLE SCREWDRIVER SET

No. DB4	▼g 180
Cross bit for interchangeable screwdriver. (No.2×No.3)	DB4-P
Flat bit (tip width 4×tip width 6)	-M
Handle	-H

- Cr-V is used for shaft material.

Characteristics

- 1 bit fits 2 sizes. Removal and insertion is a one-touch operation.
- Soft grip to prevent slippage.
- The shaft is hexagonal (each side of the hexagonal shaft is 6.3mm). The attached bolster (hexagonal width-across flat 12mm) allows the use of an open end wrench for tightening.
- Driver bits that are readily available can also be used. (Where each side of the shaft is 6.3mm and the full length is 65mm and over)

Replacement parts For the interchangeable screwdriver.

No.	Product	
DB4-P	Cross bit (No.2×No.3)	
-M	Flat bit (tip width 4×tip width 6)	
-H	Handle	

This model supercedes the KD4.

8. PLUMBING TOOLS

PLUMBING TOOLS

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PLUMBING TOOLS












CAUTION

Ratchet pipe cutters, Miniature ratchet tube cutter, Tube cutter, Flex pipe cutter, PVC cutter

- Make sure that you read the Owner's Operator Manual carefully before use.
- Do not use these tools to cut unspecified materials.
- Do not use the tools if they are cracked, chipped, worn or deformed, etc.
- Do not customize tools. The tools quality will decrease significantly if heated or modified.

Application Table of Ratchet Pipe Cutters

* A special blade (PCRK-S) is needed for cutting stainless steel pipes.

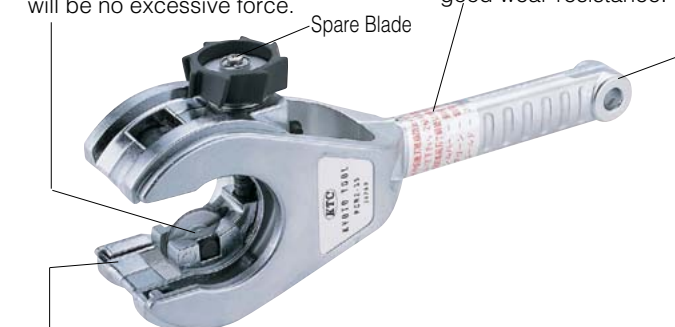
	Product and Product Code	Application	Copper Pipe	Steel Pipe	SUS Pipe	SUS Flexible Pipe	Plastic Pipe		
							Rigid polyvinyl chloride pipes for waterworks	Polyethylene pipes for waterworks	Polyethylene pipes for gas
Ratchet Pipe Cutters	PCR2-35 PAT. Ratchet Pipe Cutter 	Applicable Outer Diameter		15.88~35mm	15.88~35mm				
		Nominal		10~25	13Su~30Su				
		Applicable Thickness		Max.3.2mm	Max.1.2mm				
	PCR2-66 PAT. Ratchet Pipe Cutter For Large Size 	Applicable Outer Diameter		35~66mm	35~66mm				
		Nominal		25~50	30Su~60Su				
		Applicable Thickness		Max.3.8mm	Max.1.5mm				
	PCRT2-35 PAT. Ratchet Pipe Cutter For Copper And Resin Pipe 	Applicable Outer Diameter	15.88~35mm				15.88~35mm	15.88~35mm	15.88~35mm
		Nominal	1/2"~1 1/4"				13~25	10~25	20~25
		Applicable Thickness	Max.1.65mm				Max.3.5mm	Max.5.0mm	Max.3.4mm
	PCRT2-66 PAT. Ratchet Pipe Cutter For Copper And Resin Pipe, Large Size 	Applicable Outer Diameter	35~66mm				35~66mm	35~66mm	35~66mm
		Nominal	1 1/4"~2 1/2"				30~50	25~50	25~50
		Applicable Thickness	Max.2.03mm				Max.4.5mm	Max.6.5mm	Max.5.5mm
	PCRT-23 D.PAT. Miniature Ratchet Pipe Cutter 	Applicable Outer Diameter	6~23mm						
		Nominal	1/4"~7/8"						
		Covered copper piping	1/4"~1/2"						
Rotary Pipe Cutters	PC2-66 Tube Cutter 	Applicable Outer Diameter	6~66mm		6~66mm		6~66mm		
		Nominal	1/4"~2 1/4"						
		Applicable Thickness	Max.2.0mm		Max.1.5mm		Max.4.5mm		
	ZC30 D.PAT. Tube Cutter 	Applicable Outer Diameter	3~30mm				3~30mm	3~30mm	3~30mm
		Nominal							
		Applicable Thickness	Max.2.0mm				Max.3.0mm	Max.3.0mm	Max.3.0mm
	FV20 D.PAT. Flex pipe cutter 	Applicable Outer Diameter			15.88~21mm				
		Nominal			1/2"~3/4"				
		Applicable Thickness			Max.0.3mm				
Bladed Manual Pipe Cutter	PP-30 PVC Cutter 	Applicable Outer Diameter					Max.38mm		
		Nominal							
		Applicable Thickness							

● RATCHET PIPE CUTTER PAT. D. PAT.

- Cut surface smooth because blade is a thin, special type.
- By automatic feeding mechanism, cutter maintains a stable feeding (force). There will be no excessive force.
- Body is made of aluminum. with chrome plated surface having good wear-resistance.

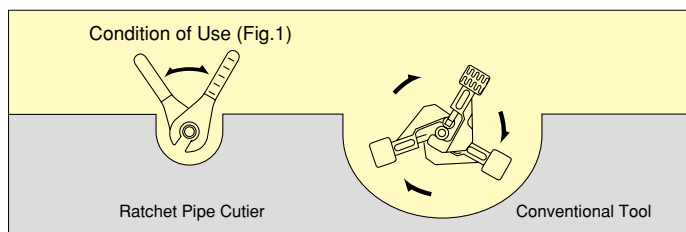
- Purpose : For cutting various pipes from water supply pipes to electric or gas pipes.

- Cutting is possible with the handle's swing of 8° Works well in cutting operation in a narrow space.



- Has a wide application up to outer diameter of 15.88mm (PCR2-35, PCRT2-35 only).

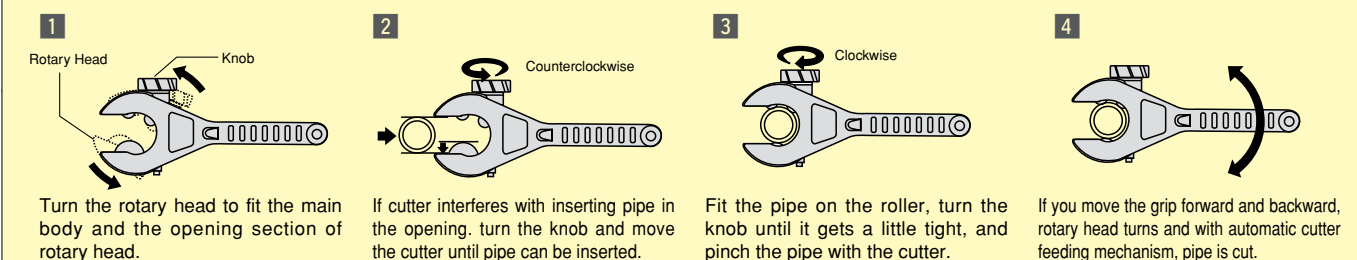
- Easy cutting in tight space.



- Spare Blades : Spare blades are colored differently for each applicable pipe. It is easy to distinguish.



● How to Use



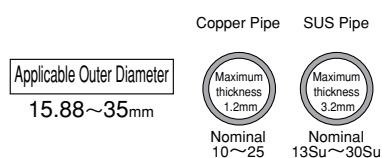
RATCHET PIPE CUTTER

No.	L	W	R	H	▼g
PCR2-35	240	102	70	54	960

*A blade for steel pipes is attached on the main body.

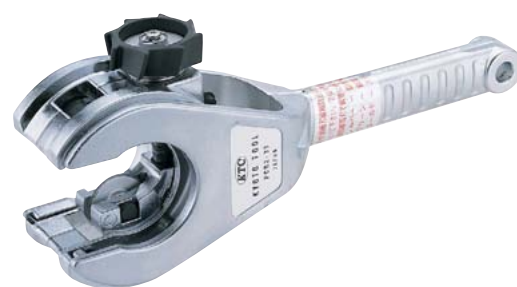
Applicable Spare Blades

No.	Contents	
PCRK-F	For Copper Pipe	1 piece
PCRK-S	For SUS Pipe	1 piece



*Replacement blade for copper pipes is included.

● RATCHET PIPE CUTTER PAT. D. PAT.



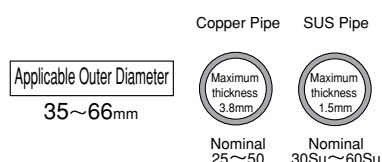
RATCHET PIPE CUTTER

No.	L	W	R	H	▼g
PCR2-66	335	135	90	62	1,650

*A blade for steel pipe is attached on the main body.

Applicable Spare Blades

No.	Contents	
PCRK-F	For Copper Pipe	1 piece
PCRK-S	For SUS Pipe	1 piece



*Replacement blade for copper pipes is included.

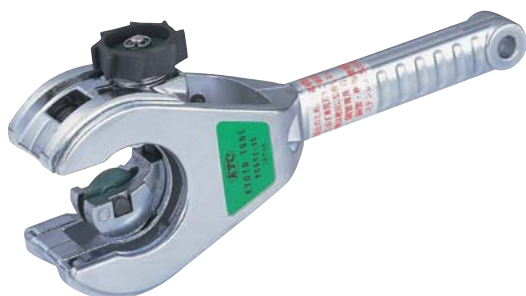
● RATCHET PIPE CUTTER FOR LARGE SIZE

PAT. D. PAT.



*Please check the merchandise inventory for a product that is marked by before placing an order.

● RATCHET PIPE CUTTER FOR COPPER AND RESIN PIPE PAT. D. PAT.



*With 1 spare blade

Spare Blades
PCRK-C
For Copper and
Resin Pipes



RATCHET PIPE CUTTER FOR COPPER AND RESIN PIPE

No.	L	W	R	H	▼g	
PCRT2-35	240	102	70	54	960	

*Cannot be used on steel or SUS pipes.

Applicable Spare Blades

No.	Contents	
PCRK-C	For Copper & Plastic Pipe	1 piece

Applicable Outer Diameter

15.88~35mm

Copper Pipe	Rigid polyvinyl chloride pipes for waterworks	Polyvinyl pipes for waterworks	Polyvinyl pipes for gas
Maximum thickness 1.65mm	Maximum thickness 3.5mm	Maximum thickness 5.0mm	Maximum thickness 3.4mm
Nominal 1/2"~1 1/4"	Nominal 13~25	Nominal 10~25	Nominal 20~25

● RATCHET PIPE CUTTER FOR COPPER AND RESIN PIPE PAT. D. PAT.



*With 1 spare blade

Spare pipe
PCRK-C
For Copper and
Resin Pipes



RATCHET PIPE CUTTER FOR COPPER AND RESIN PIPE

No.	L	W	R	H	▼g	
PCRT2-66	335	135	90	62	1,650	

*Cannot be used on steel or SUS pipes.

Applicable Spare Blades

No.	Contents	
PCRK-C	For Copper Pipe	1 piece

Applicable Outer Diameter

35~66mm

Copper pipe	Rigid polyvinyl chloride pipes for waterworks	Polyvinyl pipes for waterworks	Polyvinyl pipes for gas
Maximum thickness 2.03mm	Maximum thickness 4.5mm	Maximum thickness 6.5mm	Maximum thickness 5.5mm
Nominal 1 1/2"~2 1/2"	Nominal 30~50	Nominal 25~50	Nominal 20~50

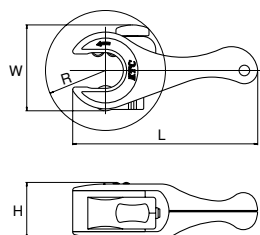
● MINI RATCHET TUBE CUTTER FOR COPPER D. PAT.



Applicable Outer Diameter

6~23mm

Bare Copper pipe Coated Copper Pipes



You can cut the pipe even on wall side or in parallel piping.

MINI RATCHET TUBE CUTTER

No.	L	W	H	R (Operation Radius)	▼g	
PCRT-23	140	64	42	45	180	

Applicable Spare Blades

No.	Included Items	
PCRK-CM	For Copper Pipe	1 piece

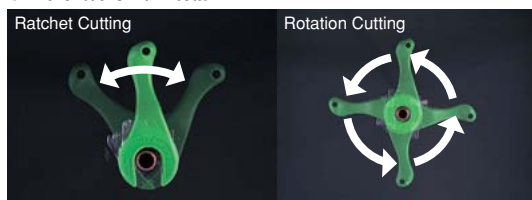
Purpose

- For cutting copper pipes for air conditioners, and bare or coated copper pipes for water/hot water supply.

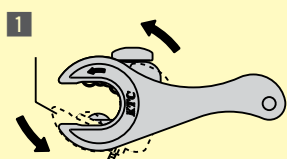
Features

- With ratchet mechanism, you can cut pipes even in tight spaces such as wall side or where pipes are located next to each other.
- If work space permits, you can cut pipes by rotating the cutter.
- Cutter's automatic feeding mechanism enables quick cutting without tightening the knob more than once. Difference from conventional type cutters.
- With resin body and aluminum rotary head, the cutter weighs only 180g, allowing you to work with one hand (weight is approximately 2/3 of our conventional model ZC30).
- Streamlined handle shape assures operation in less wearing condition compared with conventional wrench.
- Body in light green which stands out even in somber places.
- Resin used for the body is recyclable polyamide.

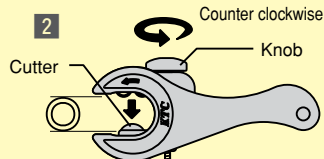
● Two functions with 1 cutter.



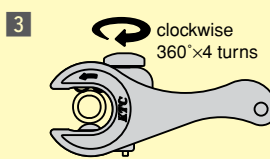
● How to Use



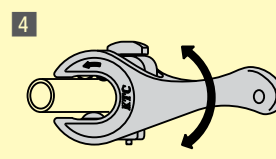
Turn the rotary head and fit the main body and the opening section of rotary head.



If cutter interferes with inserting pipe in the opening, turn the knob counterclockwise and move the cutter until pipe can be inserted.



Fit the copper pipe on the roller, turn the knob about 4 complete turns.



Move the handle forward and backward or rotate to cut the pipe. Automatic cutter feeding mechanism cuts the pipe completely.

TUBE CUTTER

No.	L	W	H	▼g	
ZC30	126	42	45	270	

*A blade for copper, resin and stainless steel flexible pipe is attached on the main body.

Purpose

- For cutting copper or resin pipes.

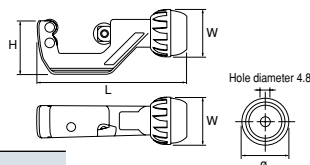
Features

- Adoption of resin roller and assisting roller has reduces deformation of pipe, burrs, etc. on the cut surface.

Spare Blade

No.	Cutting Dia.	Maximum Thickness	Quantity	
ZCK305	Cooper Pipe (ø3~30)	2.0mm	5 pieces	
	Plastic Pipe (ø3~30)	3.0mm		
	Stainless Steel Flexible Pipe (ø3~30)	0.3mm		
ZCK305S	Thin-wall Stainless Steel Pipe (ø3~30)	1.0mm	5 pieces	

• Rigidity against torsion and stability during cutting have been increased.

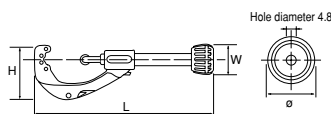


*With 1 spare blade

TUBE CUTTER

No.	Cutting Dia.	L	W	H	▼g		
PC2-66	ø6~66	201~282	42	90.5	730	1	

• For cutting and chamfering copper pipes, copper pipes, etc.



*With 1 spare blade

Spare Blade

No.	Content	Quantity	
PCK305	For Copper Pipe	5pcs.	
PCK305S	For Stainless Pipe	5pcs.	
PC2665C	For P.V.C. Pipe	5pcs.	

FLEX TUBE CUTTER

No.	L	W	H	▼g	
FV20	126	42	45	220	

Purpose

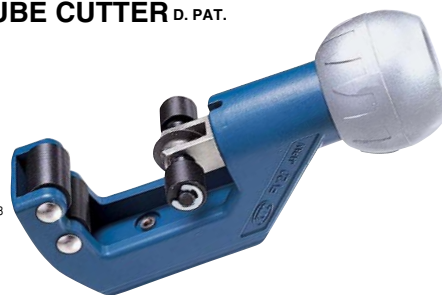
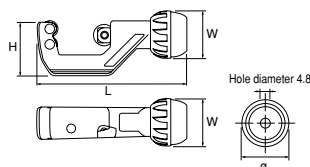
- For cutting stainless steel flexible pipes.

Application

- Stainless Steel Flexible Pipes for Gas Piping. Nominal 8A~20A
- Stainless Steel Flexible Pipes for Water/Hot Water Supply. Nominal 13, 20 (except spiral types)

Features

- Adoption of resin roller and assisting roller has reduced deformation of pipe, burrs, etc. on the cut surface.

**Spare Blade**

No.	Cutting Dia.	Maximum Thickness	Quantity	
ZCK305	Stainless Steel Flexible Pipe (ø3~30)	0.3mm	5 pieces	

*With 1 spare blade

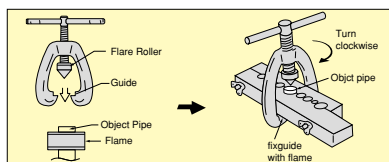
TUBING TOOL SET

No. VS31	▼kg 1.8	1
Tube Cutter (ø3~30)	ZC30	
Flaring Tool		
Metal Case L230×W130×H35		

Application

Pipe Type	Size
Brake Pipe, Copper Pipe	3/16 · 1/4 · 5/16 · 3/8 · 7/16 · 1/2 · 5/8

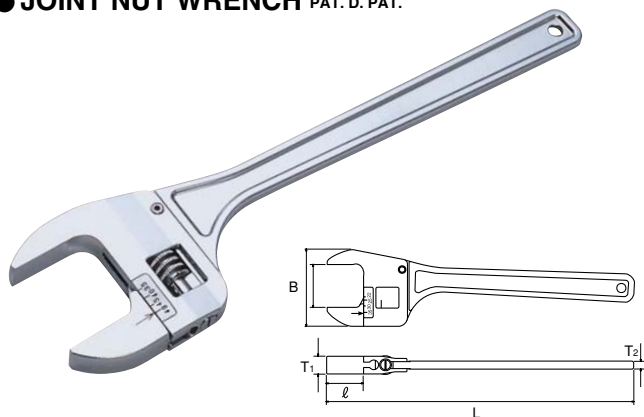
- A set of flaring tool and tube cutter necessary for flaring of connection section of brake pipes or air conditioner pipes.



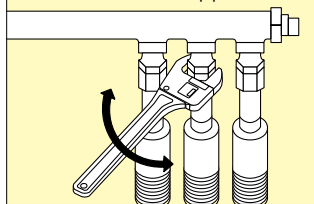
CAUTION • Make sure that you read the Owner's Operator Manual carefully before use.



JOINT NUT WRENCH PAT. D. PAT.



Also applicable to work on headers of cross-linked pipes.



JOINT NUT WRENCH

No.	B	T ₁	T ₂	Applicable Nut Width Across Flats	L	ℓ	▽g	Ⓜ
FMR260	66	15	7.5	22~35	260	31	500	5
FMR330	88	15	7.5	35~49	330	43	700	5

Purpose

● A Wrench for tightening and loosening of mechanical joints for gas, water, hot water, or air conditioning pipes.

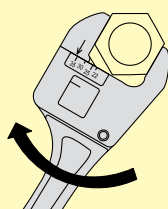
Features

- With ratchet mechanism, quick tightening and loosening of nuts possible with ease even in narrow spaces.
- Spanner type end enables application to both hexagonal and octagonal nuts with one wrench.
- Applicable to joints of different sizes.
- Engraved scale facilitates adjustment of size.

No. (Applicable Nut Width Across Flats)		FMR260	FMR330
Type of Joint			
Stainless Steel Flexible Pipe Joint for Water and Hot Water	Hexagonal	8A, 10A, 13A, 15A, 16A	20A
Metal Joints for Polyethylene Water Pipe	Hexagonal/Octagonal	13A	13A, 20A, 25A
Union Nuts for Water Supply	Hexagonal/Octagonal	13A	20A, 25A
Flex Pipe Joint for Gas	Hexagonal	8A, 10A, 15A, 20A	20A, 25A
Stainless Steel Flexible Pipe Joint for Water and Hot Water	Hexagonal	1/2", 3/4"	—
Flare Pipe Joint for Air Conditioner	Hexagonal	3/8", 1/2", 5/8"	3/4"

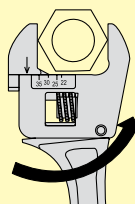
● **How to Use** Adjust the opening of joint nut wrench to fit width across flat of the nut in advance.

1 Tighten the nut.



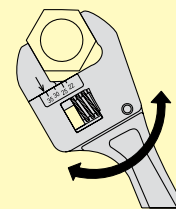
Turn the nut to tightening direction with joint nut wrench.

2 Turn the joint nut wrench back to loosening direction.



With nut still held in between, turn the wrench to loosening direction.

3 Tighten the nut



Repeat procedures 1 and 2 to complete.

FLANGING TOOL

No.	L	W	H	▽kg
FV10	350	90	145	3.7

Flange can easily be made with a simple operation.

Purpose

● A tool to make sealing surface on joint section of stainless steel flexible pipes for water/hot water supply.

Application

● Stainless flex pipes, nominal 13.20 (except spiral shapes).

Features

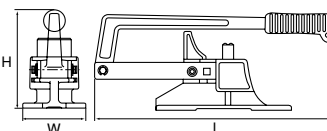
- You only push down the handle to make flanges quickly and efficiently.
- It applies force to create uniform flanges.
- One holder is applicable to flexible pipes of 2 different sizes.

Holder

No.	
FV10-1	



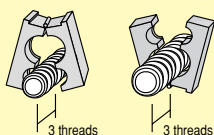
FLANGING TOOL



How to Use

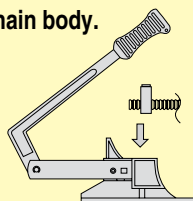
1 Set flexible pipe on the holder.

Nomination 13 (1/2") Nomination 20 (3/4")



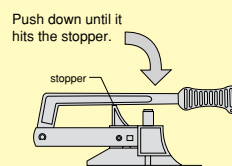
Set the flexible pipe into the holder of appropriate size with 3 threads projecting out of the holder end.

2 Attach the holder onto the main body.



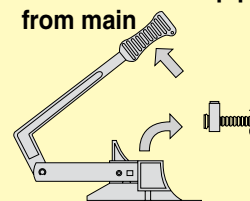
Attach the holder fixed with flexible pipe into the tool.

3 Push down the handle.



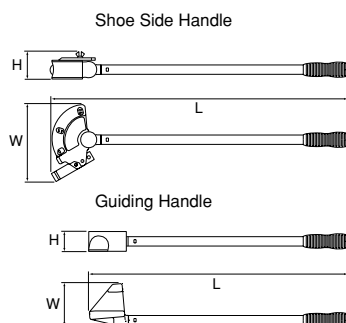
Push down the handle until it hits the stopper.

4 Take out the flex pipe from main



Pull up the handle and take out the flex pipe with holder.

● PIPE BENDER FOR STAINLESS FLEXIBLE PIPE



PIPE BENDER FOR STAINLESS FLEXIBLE PIPE

No.	Shoe Side Handle			Guiding Handle			▼kg	☐	
	W	H	L	W	H	L			

Purpose

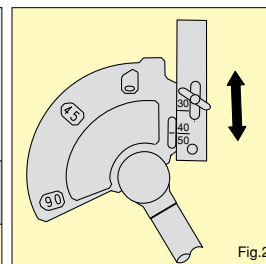
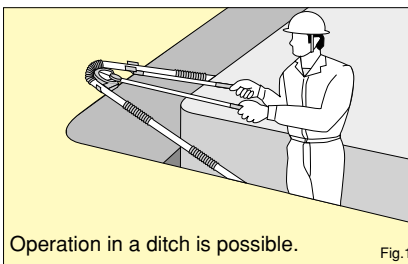
- A special tool for bending wavy stainless steel pipes used in piping from water supply pipe to meter up to 90 degrees.

Application

- Wavy Stainless Steel Pipes Nomination 30su, 40su, 50su.
- (Cannot be used for bending any other types of pipes.)

Features

- Use of guiding handle ; eliminates need of setting the pipe on the ground. Operation in a ditch (for piping) is possible (Fig.1).
- No need for complicated preparations. You can quickly, easily and smoothly bend the stainless steel pipe.
- With indication of angle (Fig.2).
- Mobile hook enables most appropriate bending for the pipe size.
- Made of high strength aluminum, the tool is light and easy to carry around.



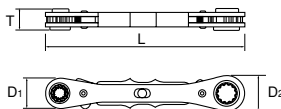
4 SIZE STANDARD RATCHET BOXEND WRENCH

No.	Size	D ₁	D ₂	T	L	▼g	☐	
-----	------	----------------	----------------	---	---	----	---	--

Features

- Thin socket convenient for work in narrow spaces.
- Side is green which stands out in working environment. Made of resin and light.
- Wave shape grip : hand-fitted and easy to transmit force.

POWERFIT



● 4 SIZE STANDARD RATCHET BOXEND WRENCH



- CAUTION**
- The changeover switch must be operated properly to prevent breakages and idling.
 - For temporary tightening only. Do not carry out the final tightening adjustment with this tool.

4 SIZE LONG RATCHET BOXEND WRENCH

No.	Size	h ₁	h ₂	h ₃	h ₄	D ₁	D ₂	T ₁	T ₂	L	▼g	☐	
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A "must" for piping work. Works in various situations.

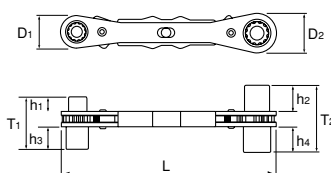
POWERFIT

Purpose

- Tightening various cable way or piping support materials.

Features

- Long socket enables to work in deep sections.
- Side is green which stands out in working environment.
- Made of resin and light.
- Wave shape grip ; hand-fitted and easy to transmit force.



- CAUTION**
- The changeover switch must be operated properly to prevent breakages and idling.
 - For temporary tightening only. Do not carry out the final tightening adjustment with this tool.

9. TOOL STORAGE

"SKX" SERIES
"TOOL STATION", MOVABLE TOOL STORAGE and "MECHANIC CASE"
OPEN-TOP and SPLIT-OPEN TOOL CASES
SYSTEM CABINET



9.TOOL STORAGE

"SKX" SERIES



CAUTION

Tool Storage

- Always read the user's manual on items that have manuals attached.
- Do not use for purposes other than storage of tools.
- Use an exclusive unit when stacking.
- Do not use on slopes or uneven surfaces.
- Pulling out two or more drawers with tools may cause the storage unit to topple.
- Securely lock the lid, drawers, and hinges when transporting.
- When moving storage units equipped with wheel castors, push the unit instead of pulling the handle.
- Always lock the wheels of the storage unit except when transporting.
- Do not use damaged wheel castors (worn, cracked, or deteriorated) for wheel equipped storage units.
- The 4 wheel rotational castor equipped storage unit can lose balance when items/tools etc. are placed on top of the unit. Make sure the tools are placed so that the unit is well balanced.
- Take care to avoid having hands or fingers caught within the shutter device-equipped tool storage units.
- Half-lid cases can close through vibration or wind.

SKX7000 SERIES

The 7000 series is the flag ship model within the lineup.

The series boasts top class usability, functionality, and form.

Main specifications

- Bearing type double suspension rail
- Lock equipped drawers
- Side molding
- Shock absorber
- Large wedge type side handle
- Large diameter castor
- Special key lock system



SKX5000 SERIES

Starting with the bearing type double suspension rail, the 5000 series will satisfy the high class users with its performance based specifications.

The large case provides ample storage space.

Main specifications

- Bearing type double suspension rail
- Pillar-reinforced structure
- Large diameter castor
- Special locking system



SKX3000 SERIES

Basic functions such as the bearing type double suspension rail and large diameter castor wheels are equipped to the 3000 series tool storage unit, most suitable for private use.

A basic model that exceeds previous models in all areas.

Main specifications

- Bearing type double suspension rail
- Large diameter castor
- Special locking system

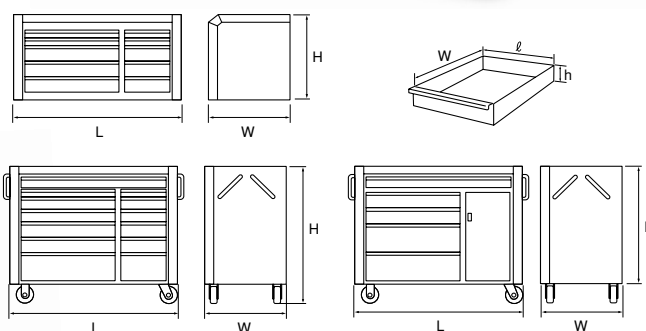


SKX7110L

SKX7613L



SKX7608L



SKX7000 SERIES

●CHEST (10-DRAWER)

No. **SKX7110L** ▼kg 136 ☞ 1

- Size L1170×W610×H620
- Top space ℓ 1143×w545×h125
- Drawer size
 - Left ℓ 595×w545×h 50×2
 - Left ℓ 595×w545×h 80×2
 - Left ℓ 595×w545×h105×1
 - Right ℓ 365×w545×h 50×2
 - Right ℓ 365×w545×h 80×2
 - Right ℓ 365×w545×h105×1
- Drawer divider x6 • Drawer Liner 1 roll



- The permissible load for each drawer is up to 30kg.

●ROLLER CABINET (7-DRAWER)

No. **SKX7613L** ▼kg 192 ☞ 1

- Size L1170×W610×H1070
- Drawer size
 - ℓ 1065×w545×h105×1
 - Left ℓ 595×w545×h 50×1
 - Left ℓ 595×w545×h 80×2
 - Left ℓ 595×w545×h105×2
 - Left ℓ 595×w545×h215×1
 - Right ℓ 365×w545×h 50×1
 - Right ℓ 365×w545×h 80×2
 - Right ℓ 365×w545×h105×2
 - Right ℓ 365×w545×h215×1
- Drawer divider x6 • Drawer Liner 1 roll



- The top board can be used as a working table. (Removable)
- The permissible load for each drawer is up to 30kg.
- Maximum permissible load is 1000kg (including product weight).

• Shock absorber

The top panel cover can be opened and closed smoothly by using a shock absorber.



• SKX7110L
7105L

• The knob of the drawer has a locking mechanism

Locking mechanism equipped in the drawer knob for prevention of unexpected coming out of the drawers.



• Common to the SKX7000 Series

●ROLLER CABINET (7-DRAWER) 1 locker

No. **SKX7608L** ▼kg 146 ☞ 1

- Size L1170×W610×H1070
- Drawer size
 - ℓ 1065×w545×h105×1
 - ℓ 595×w545×h 50×1
 - ℓ 595×w545×h 80×2
 - ℓ 595×w545×h105×2
 - ℓ 595×w545×h215×1
- Locker size ℓ 405×w545×h515×1
- Drawer divider x6 • Drawer Liner 1 roll



- The top board can be used as a working table. (Removable)
- The permissible load for each drawer is up to 30kg.
- Maximum permissible load is 1000kg (including product weight).

*Refer to P.308 for methods on removing the drawer.

• Double-suspension rails

The rails use double-suspension mechanism which allows full opening without a dead angle.

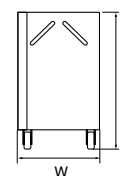
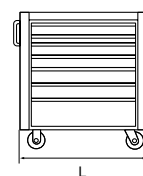
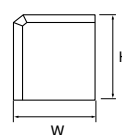
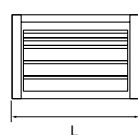
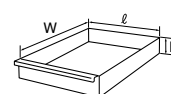


• Common to the SKX7000 Series



SKX7105L

SKX7607L



SKX7000 SERIES

●CHEST (5-DRAWER)

No. **SKX7105L** ▼kg 82 1

- Size L915×W535×H615
- Top space ℓ 890×w430×h100
- Drawer size ℓ 810×w470×h 50×2
ℓ 810×w470×h 80×2
ℓ 810×w470×h105×1
- Drawer divider ×4 • Drawer Liner 1 roll

- The permissible load for each drawer is up to 30kg.



●ROLLER CABINET (7-DRAWER)

No. **SKX7607L** ▼kg 129 1

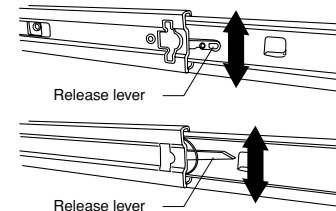
- Size L915×W535×H1070
- Drawer size ℓ 810×w470×h105×1
ℓ 810×w470×h 50×1
ℓ 810×w470×h 80×2
ℓ 810×w470×h105×2
ℓ 810×w470×h215×1
- Drawer divider ×6 • Drawer Liner 1 roll

- The top board can be used as a working table. (Removable)
- The permissible load for each drawer is up to 30kg.
- Maximum permissible load is 1000kg (including product weight).



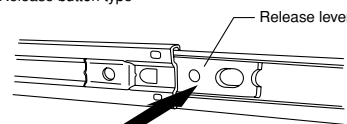
- Drawer removal methods for the SKX7000, 5000, and 3000 series

Release lever type



The lock is released by moving up/down the release lever on both sides of the drawer, allowing the drawer to be removed.

Release button type



The drawer can be removed by pressing the release buttons on both sides of the drawer.

*Replacement parts are available. Check with your dealer for details

• Attractive side decoration

The braids provided at the two sides make the appearance more attractive.



• Common to the SKX7000 Series

• Side handles for easy movement

The handles of unique design enables easy direction and movement of the chest.



• SKX7613L
7608L
7607L

• Large castors

The rugged castors are made of hard rubber having a large size of 125mm dia X50mm. They can be moved very smoothly so the chest can be transported very easily.



• SKX7613L
7608L
7607L

• Special locking system

The drawers can be locked simultaneously with a single key. Also, all drawers except for the drawer in use can be locked. The drawers are locked with the tube lock system and are hard to pry open through keyholes.



• Common to the SKX7000 Series

*Please check the merchandise inventory for a product that is marked by before placing an order.

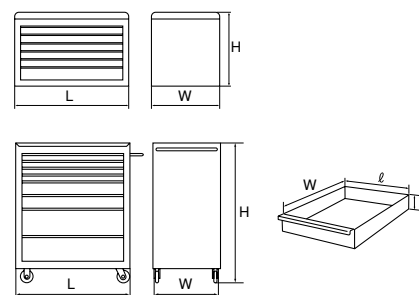
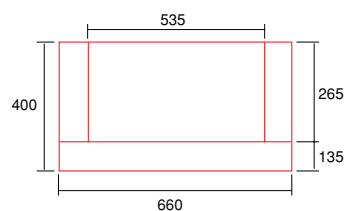
SKX5205

SKX5601

SKX5708



〈SKX5205 TOP SPACE SIZE〉



SKX5000 SERIES

●CHEST (5-DRAWER)

No. **SKX5205** ▼kg 36 1

- Size L665×W405×H500
- Drawer size
 - ℓ 565×w355×h35×2
 - ℓ 565×w355×h60×3
- Drawer divider ×4 • Middle-sized tray ×1 • Drawer Liner ×5



- The permissible load for each drawer is up to 23kg.
- *Replacement parts are available. Check with your dealer for details

●ROLLER CABINET (8-DRAWER)

No. **SKX5708** ▼kg 67 1

- Size L675×W460×H1045
- Drawer size
 - ℓ 565×w395×h 90×3
 - ℓ 565×w395×h 35×2
 - ℓ 565×w395×h 60×2
 - ℓ 565×w395×h145×1
- Drawer divider Large ×2 • Small ×2 • Top Liner ×1 • Drawer Liner ×8



- The permissible load for each drawer is up to 23kg.
- Maximum permissible load is 500kg (including product weight).

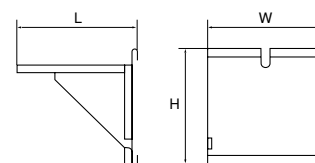
*Replacement parts are available. Check with your dealer for details *Refer to P.308 for methods on removing the drawer.

●SIDE SHELF

No. **SKX5601** ▼kg 5 1

- Size L450×W450×H350

- Maximum permissible load is 22kg



- **Employing the pillar reinforced structure**
The roller cabinet is composed of 1.2mm thick steel plating. Using the corner pillar reinforcement structure has increased rigidity compared to the previous double-wall structure.



• SKX5706 • 5708

- **Employing the bearing rail**
Double suspension rails have been employed for realizing the full-open structure, allowing full utilization of drawer space.



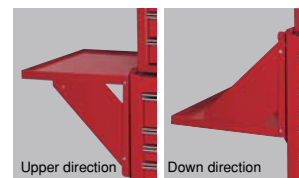
• Common to the SKX5000 Series

- **Drawer handle with a lock function**
A lock function has been employed in order to prevent accidental drawer opening.



• Common to the SKX5000 Series

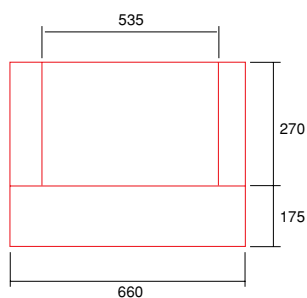
- **Side shelf**
Can be attached to either right, left or back of cabinets for bigger work surface.



Upper direction

Down direction

〈SKX5206 TOP SPACE SIZE〉



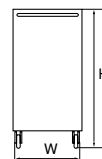
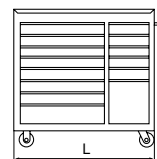
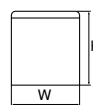
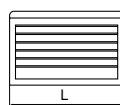
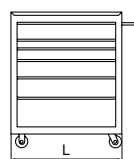
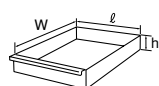
SKX5206



SKX5706



SKX5714



SKX5000 SERIES

●CHEST (6-DRAWER)

No.	SKX5206	▼kg 42	1
• Size	L665×W450×H500		
• Drawer size	ℓ 565×w400×h35×5 ℓ 565×w400×h60×1		
• Drawer divider	×4 • Middle-sized tray ×1 • Drawer Liner ×6		
• The permissible load for each drawer is up to 23kg.			



●ROLLER CABINET (6-DRAWER)

No.	SKX5706	▼kg 48	1
• Size	L675×W460×H880		
• Drawer size	ℓ 565×w395×h 90×2 ℓ 565×w395×h 35×1 ℓ 565×w395×h 60×2 ℓ 565×w395×h145×1		
• Drawer divider	Large ×2 • Small×2 • Top Liner ×1 • Drawer Liner ×6		
• The permissible load for each drawer is up to 23kg.			
• Maximum permissible load is 500kg (including product weight).			



●ROLLER CABINET (14-DRAWER)

No.	SKX5714	▼kg 110	1
• Size	L1040×W460×H1045		
• Drawer size	Left ℓ 565×w395×h 90×1 Left ℓ 565×w395×h 60×6 Left ℓ 565×w395×h145×1 Right ℓ 290×w395×h 90×1 Right ℓ 290×w395×h 60×4 Right ℓ 290×w395×h310×1		
• Drawer divider	Large×2 • Small×2 • Drawer Liner Large ×8 • Small×5		
• The permissible load for each drawer is up to 23kg.			
• Maximum permissible load is 500kg (including product weight).			



*Replacement parts are available. Check with your dealer for details *Refer to P.308 for methods on removing the drawer.

• Special locking system

Special locking system to lock all drawers with a single key action.



• SKX5205 - 5206

• Large castors

ø125×50 hard rubber castor for quiet and smooth moving.



• SKX5706 - 5708 - 5714

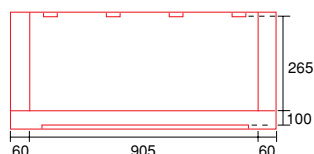
• Flat handles

The handles on the chest are designed to be flat; convenient for use in limited space.



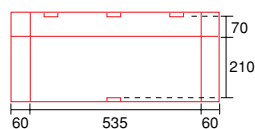
• SKX5205 - 5206

〈SKX3209 TOP SPACE SIZE〉



SKX3209

〈SKX3206 TOP SPACE SIZE〉



SKX3206

SKX3705

SKX3712

SKX3000 SERIES

●CHEST (9-DRAWER)

No.	SKX3209	▼kg 47	📦 1
• Size	L1030×W405×H505		
• Drawer size	Left ℓ 170×w395×h 50×3 Left ℓ 565×w395×h 80×1 Left ℓ 565×w395×h105×2 Right ℓ 290×w395×h130×1 Right ℓ 290×w395×h105×2		
• Tray ×1 • Drawer Liner Large×3 • Middle×3 • Small×3			
• The permissible load for each drawer is up to 15kg.			



●ROLLER CABINET (12-DRAWER)

No.	SKX3712	▼kg 95	📦 1
• Size	L1040×W465×H960		
• Drawer size	Left ℓ 565×w415×h105×1 Left ℓ 565×w415×h 80×5 Left ℓ 565×w415×h160×1 Right ℓ 295×w415×h105×1 Right ℓ 295×w415×h 80×3 Right ℓ 295×w415×h325×1		
• Top liner ×1 • Drawer Liner Large×7 • Small×5			
• The permissible load for each drawer is up to 15kg.			
• Maximum permissible load is 260kg (including product weight).			
*Replacement parts are available. Check with your dealer for details *Refer to P.308 for methods on removing the drawer.			



- **Rails with ball bearings**
The drawer can be pulled out. No blind corners. The double suspension rails allow smooth drawer movement.



• Common to the SKX3000 Series

- **Easy-to-grip pipe form handle**
The easy-to-grip handle makes positioning easy when transporting.



• SKX3705 - 3712

●CHEST (6-DRAWER)

No.	SKX3206	▼kg 20	📦 1
• Size	L665×W305×H390		
• Drawer size	ℓ 170×w275×h 50×3 ℓ 570×w275×h 50×2 ℓ 570×w275×h 80×1		
• Drawer Liner Large×3 • Small×3			
• The permissible load for each drawer is up to 15kg.			



This model supercedes the SKX3106

●ROLLER CABINET (5-DRAWER)

No.	SKX3705	▼kg 47	📦 1
• Size	L675×W460×H880		
• Drawer size	ℓ 570×w420×h 80×2 ℓ 570×w420×h105×1 ℓ 570×w420×h160×2		
• Top liner ×1 • Drawer Liner Large ×5			
• The permissible load for each drawer is up to 15kg.			
• Maximum permissible load is 260kg (including product weight).			



This model supercedes the SKX3605

- **Resin grip side handle provides soft touch to the hand**




• SKX3206 - 3209

- **Large castors**
ø125×50 head rubber castor for quiet and smooth moving.



• SKX3705 - 3712

*Please check the merchandise inventory for a product that is marked by  before placing an order.

SKX2512



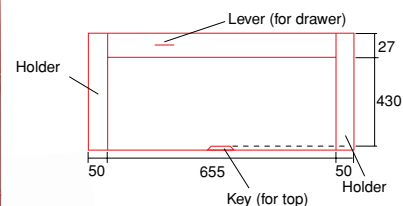
SKX2613



SKX2513



〈SKX2614 TOP SPACE SIZE〉



SKX2614



SKX2000 SERIES

●WAGON (2-LAYER)

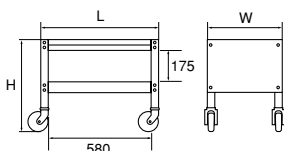
No. **SKX2512**

▼kg 14

1

• Size L670×W460×H375

- Large diameter castor (100×50mm) has been employed
- Wide and large castors for stable moving. All castors are free way castors with stoppers for smooth movement and safety locking.
- Wide handle Case-width big handle for easy gripping and moving.
- The customer is to assemble the unit after purchase



●WAGON (3-LAYER)

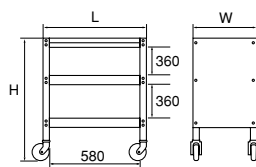
No. **SKX2513**

▼kg 22

1

• Size L670×W460×H900

- Convenient punched panel in one side can be used for multi purposes. Large castors
- Large diameter castor (100×50mm) has been employed
- Wide and large castors for stable moving. All castors are free way castors with stoppers for smooth movement and safety locking.
- The customer is to assemble the unit after purchase



●WAGON (1-DRAWER)

No. **SKX2613**

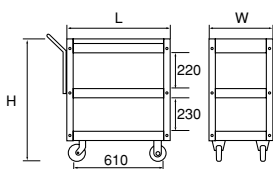
▼kg 24

1

- Size L715×W410×H880
- Drawer size \varnothing 570×w275×h65×1
- Top liner ×1 • Drawer Liner ×1 • Tray liner×2



- The package includes a stopper equipped free castor (2 units) and fixed castor (2 units). (\varnothing 100×30mm)
- Chests can be laid over top The SKX0203, SKX1202, SKX1203, and the SKX3206 can be laid over the top plate.
- The customer is to assemble the unit after purchase



●WAGON (2-DRAWER)

No. **SKX2614**

▼kg 48

1

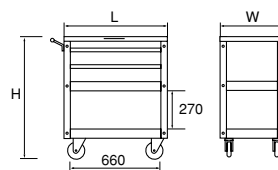
- Size L775×W515×H880
- Drawer size \varnothing 630×w445×h65×2
- Top liner ×1 • Drawer Liner ×2 • Tray liner ×1



- All castors are free rotating castors (2 with stoppers) (\varnothing 100×30mm)
- The top can be opened to store tools. Both sides have holders for storing driver tools etc.
- 2 step locking system The drawer locks can be operated through the lever within the top, and the top section can be locked using keys.
- The customer is to assemble the unit after purchase

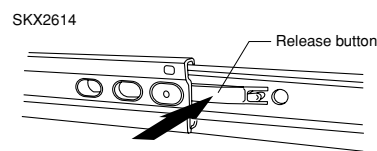
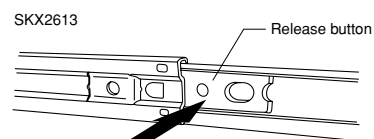


(Top is open)
*Tools are sold separately.



• Drawer removal method

The drawer can be removed by pressing the release buttons on both sides of the drawer.



*Replacement parts are available. Check with your dealer for details.

*Please check the merchandise inventory for a product that is marked by before placing an order.



SKX1202

SKX0213



SKX1110



SKX1203



SKX0213S



SKX0213BK



SKX1010

SKX1000 SERIES

●CHEST (3-DRAWER)

No. SKX0213 (Solid Red)	▼kg 11	📦 1
No. SKX0213S (Metallic Silver)	▼kg 11	📦 1
No. SKX0213BK (Solid Black)	▼kg 11	📦 1

- Size L520×W215×H300
- Top space ℓ 500×w200×h60
- Drawer size ℓ 455×w190×h45
- Top Liner×1 • Drawer Liner×3 • Drawer divider×3



- Maximum storage capacity in a compact size.
- This storage unit has a large capacity while being compact, and is equipped with a side handle that makes transporting easier.

*Replacement parts are available. Check with your dealer for details

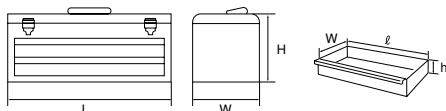
●CHEST (2-DRAWER)

No. SKX1202	▼kg 8	📦 1
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- Size L520×W220×H240
- Top space ℓ 510×w205×h65
- Drawer size ℓ 453×w205×h45×2
- Top liner×1 • Drawer Liner×2 • Drawer divider×4

- Maximum storage capacity in a compact size.
- This storage unit has a large capacity while being compact, and is equipped with a side handle that makes transporting easier.

*Replacement parts are available. Check with your dealer for details



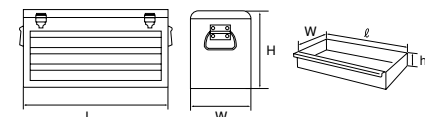
●CHEST (3-DRAWER)

No. SKX1203	▼kg 10	📦 1
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- Size L520×W220×H305
- Top space ℓ 510×w205×h65
- Drawer size ℓ 453×w205×h45×3
- Top liner ×1 • Drawer Liner×3 • Drawer divider×6

- Maximum storage capacity in a compact size.
- This storage unit has a large capacity while being compact, and is equipped with a side handle that makes transporting easier.

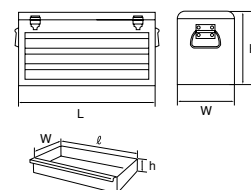
*Replacement parts are available. Check with your dealer for details



Bearing rails that allow for smooth opening and closing of drawers are equipped to the unit.



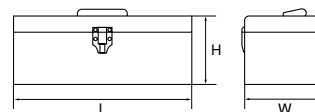
A KTC logo has been embossed on the top. (only SKX0203S)



●TOOL BOX

No. SKX1110	▼kg 2.1	📦 1
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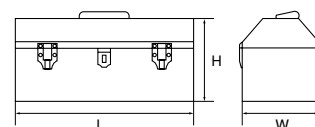
- Size L405×W180×H190
- Tray Size ℓ 390×w150×h70
- Tool box for multi purposes.
- Good for storing your collections (hobby)
- With tray.



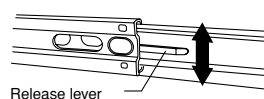
●TOOL BOX

No. SKX1010	▼kg 4	📦 1
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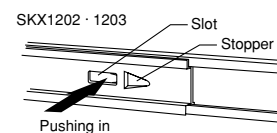
- Size L505×W180×H205
- Tray Size ℓ 480×w155×h100
- Semicylindrical shape tool box.
- With big tray for easy carrying.



- Drawer removal method SKX0203



The lock is released by moving up/down the release lever on both sides of the drawer, allowing the drawer to be removed.



Fully pull out the drawers and then push in the notch from both drawer rail slots. The drawers can then be removed.

9.TOOL STORAGE

"TOOL STATION",
MOVABLE TOOL STORAGE
and "MECHANIC CASE"

●TOOL STATION®

No. **SKR703A**

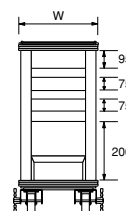
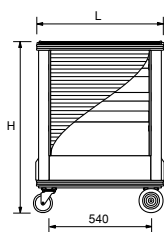
▼kg 39

1

- Unit size: L 670 × W 420 × H 900
- Size of trays: \varnothing 478 × w 360 × h 45 × 3 (Movable)
- Top mat × 1
- Partition panels × 8
- Dial lock × 1



- High-grade model.
- Lockable shutter-ideal for controlling stored items.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.

No. **SKR602A**

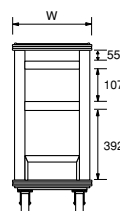
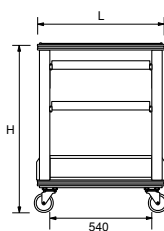
▼kg 30

1

- Unit size: L 670 × W 420 × H 900
- Size of trays: \varnothing 510 × w 360 × h 45 × 2 (Movable)
- Top mat × 1
- Partition panels × 8



- Standard model.
- Practical and functional: front and back are clearly defined/efficient use of workshop space.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.

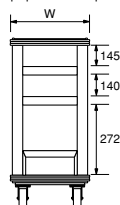
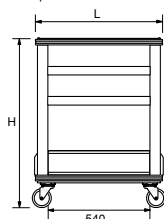
No. **SKR502A**

▼kg 26

1

- Unit size: L 670 × W 420 × H 900
- Size of trays: \varnothing 536 × w 360 × h 45 × 2 (Fixed)
- Top mat × 1
- Partition panels × 8

- Basic model.
- Front and back are clearly defined. The basic functions have been condensed into this model.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



*Refer to P.315 for methods on removing the drawer.

*Replacement parts are available. Check with your dealer for details

*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

*Please check the merchandise inventory for a product that is marked by before placing an order.

No. **SKR402A**

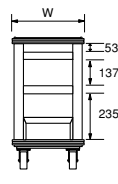
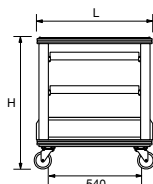
▼kg 27

1

- Unit size: L 670 × W 420 × H 770
- Size of trays: \varnothing 510 × w 360 × h 45 × 2 (Movable)
- Top mat × 1
- Partition panels × 8



- Compact model
- Height is 770 mm, lower than other models
- Being a low-line model, it is well suited for work in low places.
- Formerly inaccessible areas have been modified to provide storage, resulting in a widened pit inner area for a storage environment that is user-friendly. (Can be stored in FFW [P.362~371] our company's product.
- The permissible load for each drawer is up to 10kg.
- The permissible load for the top plate is up to 140kg.



*Replacement parts are available. Check with your dealer for details

*TOOL STATION is a registered trademark of KYOTO TOOL CO., LTD.

●OPTION



●SCREWDRIVER STAND

No.	
SKR-51	



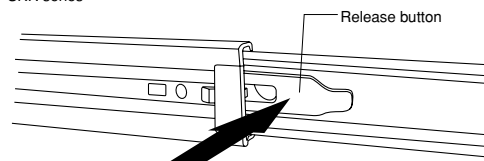
●SPRAY CYLINDER HOLDER

No.	
SKR-53	

*Tools and spray cans seen within the pictures are examples of storage methods. These products are not included within the displayed retail price.

• Drawer removal method

SKR series



The drawer can be removed by pressing the release buttons on both sides of the drawer.



●T-SHAPED WRENCH HOLDER II

No.	
SKR-52G	



●SIDE PUNCHING BOARD

No.	
SKR-54S	

Panel hole \varnothing 3mm

For

SKR502A · SKR602A

Accessories (for Side Punching Board)

SKR-54-A	4
SKR-54-B	4
SKR-54-C	4

● Options-Part Hook Sets (for Side Punching Board)

Product name	No.	Qty	Shape	Application
Hook Set A	SKR-54-A	10		Sockets
Hook Set B	SKR-54-B	10		Ratchet handles, screwdrivers, box end wrenches, etc
Hook Set C	SKR-54-C	10		Open end wrenches, combination wrenches, etc.
Hook Set D	SKR-54-D	10		Box end wrenches (larger sizes)
Hook Set E	SKR-54-E	10		Sockets (larger sizes)

Hook screw (M3 × pitch 0.5, axis diameter \varnothing 5mm)

●Side Pockets with Lining



Convenient pockets left and right. For holding spray cans, cleaning rags, etc. Pockets include lining to stop scratches and damage when placing or removing items, and prevent injury from items catching on edges.

• 703A, 602A, 502A, 402A

●Removable Trays



Trays can be removed completely, enabling exchange of trays as needed.

• 703A, 602A, 402A

●Sliding Shutter



The sliding shutter permits safeguarding and control of stored items. The shutter can be easily opened and closed with one hand.

• 703A

●Lockable



The unit is lockable, to reduce risk of theft.

• 703A

●Low Front Panel



With low front panel, the opening is larger, making it easier to place or remove large or heavy objects.

• 602A, 502A, 402A

●4 Universal Castors



The four castors turn smoothly in all directions. Stoppers on castors hold the unit stationary.

• 602A, 502A, 402A
(Model 703A has two castors)

●Options



A range of options can be attached at the holes on the inner sides of the supports.

• 703A, 602A, 502A, 402A

●Use of the Rear Panel



Publicity or advertisements (by special order) on the rear panel can effectively promote your business in many ways. Front and back are clearly defined.

• 602A

Special Orders

- Color of the storage unit
- Advertisement / company name on the rear panel.
- * Please ask at any KTC branch, sales office, dealer, or retail shop.

*Please check the merchandise inventory for a product that is marked by before placing an order.



SK200-M



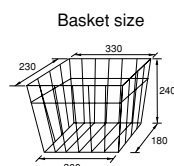
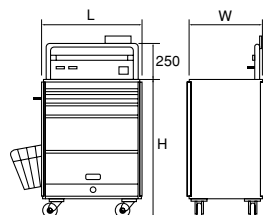
SKT23-M



SK300-M

MECHANIC DESK CASE®

No.	SK200-M	▼kg	50	📦	1
• Size	L575×W485×H880				
• Drawer Size	∅ 504×w407×h50 ∅ 504×w407×h85				
• Divider	• Large×4 • Middle×6 • Small×5	• Top mat	×1		
• Tool holder	×1	• Binder stand	×1 pair		
• Spray can stopper	×2	• Basket	×1		
• Magnet base attached pipe	×1	• Key	×2		
• Specially developed for car mechanics. Practical functions will enhance work efficiency.					



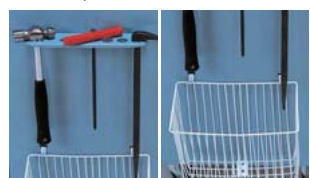
- Strong magnetic catch board for temporary holding tools.
- One-touch spray can fixer.



- Convenient bottom space with up and down drawer and lock.
- All free-way castors for smooth moving. (All of with stoppers)
- Rubber protector for not damaging other objects.



- A drawer can be locked to prevent the case from falling down.
- Tool-shaped tray for easy management. (Top drawer only)



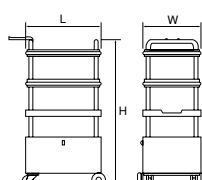
- Convenient holder for keeping hammers, etc.
- With basket for keeping waste cloth, etc.

*Spray cans seen within the pictures are examples of storage methods. These products are not included within the displayed retail price.

*MECHANIC DESK is a registered trademark of KYOTO TOOL CO., LTD.

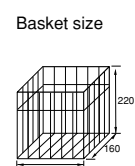
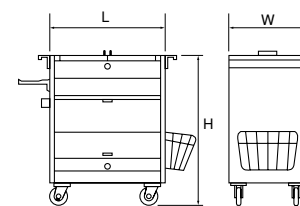
EASY BUGGY CASE

No.	SKT23-M	▼kg	31	📦	1
• Size:	L680×W405×H900				
• Divider	×8 • Top mat	×1 • Key	×1		
• The practical size and mobility of this product are its strengths.					
• The tool table and shelves slide vertically.					



WORK TRUCK CASE

No.	SK300-M	▼kg	50	📦	1
• Size	L700×W450×H890				
• Divider	• Large (Height 50mm) ×4 • Large (Height 40mm) ×1 • Small×2				
• T type wrench hanger	×1				
• Grease pump holder	×1				
• Basket	×1				
• Key	×2				
• Specially developed for mechanics of large vehicles; functional and easy storing.					



- Top cover is made of 2mm thick steel for using as work table.
- Upper layer box space with dividers for storing big size tools.



- Convenient holder for keeping hammers, etc.



- With basket for keeping waste cloth, etc.

*Replacement parts are available. Check with your dealer for details



DC-904FA



DC-9036A



DC-9038A



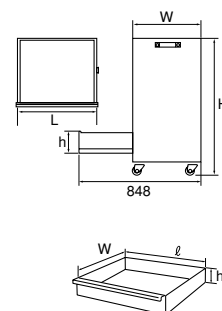
DC-602F



DC-6024



DC-6035



*Spray cans seen within the pictures are examples of storage methods.
These products are not included within the displayed retail price.

●WAGON (5 STAGE 4 DRAWER 1 LOCKER)

No.	DC-904FA	▼kg 32	📦 1
• Main unit size	L580×W450×H900		
• Drawer size	ℓ 485×w410×h 40×1 ℓ 485×w410×h 90×2 ℓ 485×w410×h140×1		
• Locker space opening	ℓ 525×w410×h290×1		



- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- Comes with a drawer and locker (compartment).
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (6 STAGE 6 DRAWER)

No.	DC-9036A	▼kg 40	📦 1
• Main unit size	L580×W450×H900		
• Drawer size	ℓ 485×w410×h 40×1 ℓ 485×w410×h 90×2 ℓ 485×w410×h140×3		



- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- Convenient for storing small items with 6 individual drawers.
- All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (8 STAGE 8 DRAWER)

No.	DC-9038A	▼kg 44	📦 1
• Main unit size	L580×W450×H900		
• Drawer size	ℓ 485×w410×h 40×3 ℓ 485×w410×h 90×4 ℓ 485×w410×h140×1		



- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- Convenient for storing small items with 8 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (3 STAGE 2 DRAWER 1 LOCKER)

No.	DC-602F	▼kg 23	📦 1
• Main unit size	L580×W450×H650		
• Drawer size	ℓ 485×w410×h 40×1 ℓ 485×w410×h 90×1 ℓ 525×w410×h245×1		



- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Comes with a drawer and locker (compartment).
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (4 STAGE 4 DRAWER)

No.	DC-6024	▼kg 28	📦 1
• Main unit size	L580×W450×H650		
• Drawer size	ℓ 485×w410×h 90×3 ℓ 485×w410×h140×1		



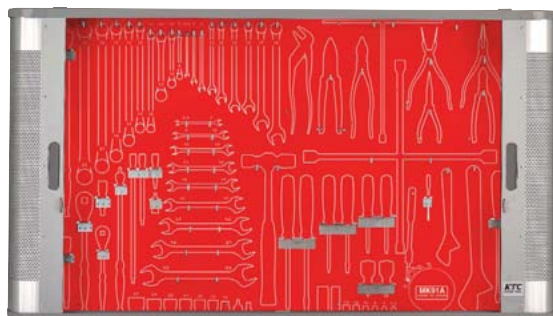
- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Convenient for storing small items with 4 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.

●WAGON (5 STAGE 5 DRAWER)

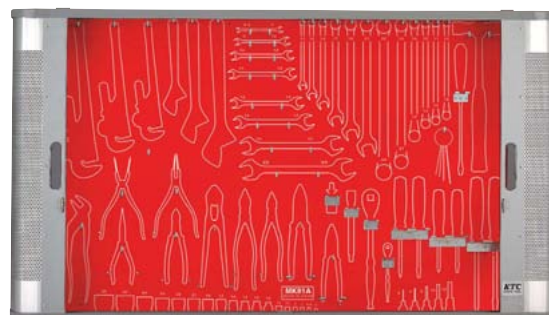
No.	DC-6035	▼kg 29	📦 1
• Main unit size	L580×W450×H650		
• Drawer size	ℓ 485×w410×h 40×2 ℓ 485×w410×h 90×2 ℓ 485×w410×h140×1		



- *Dividers within each of the drawers are sold separately. (Vertical × 2 + horizontal × 2 set)
- The 650mm maximum height allows the unit to be used as a tool box table.
- Convenient for storing small items with 5 individual drawers.
- All lock method. All drawers can be locked in one key position.
- The permissible load for each drawer is up to approx. 30kg.
- The maximum permissible load is up to 160kg.
- Castor (diameter 100mm) is equipped with free moving stoppers, 2 fixed castors each.



MK91A-M



MK81A-M

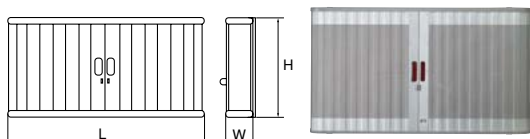
MECHANIC CASE

●MECHANIC CASE (SUITABLE FOR AUTOMOBILE MAINTENANCE)

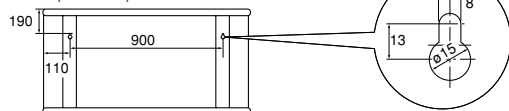
No.	MK91A-M	▼kg 18	1
• Size	L1125×W145×H630		
• Color	Shutter: silver, tool hanging panel: red		

MODEL CHANGE This model supercedes the MK91-M

- Hang-on-wall type with sliding shutter for security.
- Tool-shaped shadow pictures for hanging tools up.



Hanging Position (Back Side)

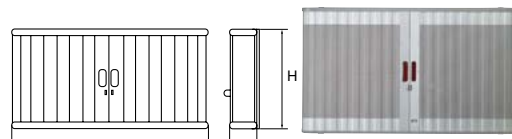


●MECHANIC CASE (SUITABLE FOR GENERAL MACHINE MAINTENANCE)

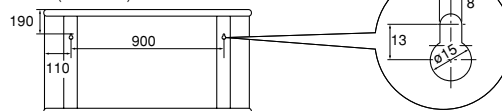
No.	MK81A-M	▼kg 18	1
• Size	L1125×W145×H630		
• Color	Shutter: silver, tool hanging panel: red		

MODEL CHANGE This model supercedes the MK81-M

- Hang-on-wall type with sliding shutter for security.
- Tool-shaped shadow pictures for hanging tools up.



Hanging Position (Back Side)



9.TOOL STORAGE

OPEN-TOP and SPLIT-OPEN TOOL CASES



EK-1



SK330P-M

CASES

●SPLIT-OPEN METAL CASE D.PAT.P.

No. **EK-1**

▼kg 6.0

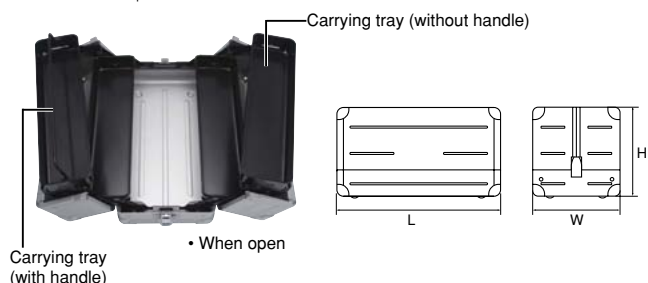
1

- Size L 430×W225×H225
- Carrying tray size (with/without handle) ℓ 390×w 100×h 45



This model supercedes the SK330-M and the SK430-M.

- Two types of removable carrying trays (with/without handle) have been set on the upper level. The unit can be easily transported after having included the necessary tools for the given working environment.
- The retractable handle provides precise movement without slack, preventing involuntary movement. Units can be loaded on top of each other by retracting the handle.
- Corners employ the R form for the benefit of users and the surrounding environment.
- The unit is composed of steel material.



- Retractable handle that prevents involuntary movement



- Rounded corners for the benefit of users and the surrounding environment.

●SPLIT-OPEN PLASTIC HARD CASE

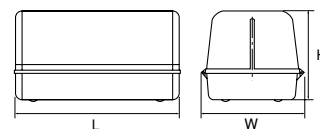
No. **SK330P-M**

▼kg 4.0

1

- Size L445×W280×H250

- Excellent oil resistance, shock resistance and strength-a tool box for the future!
- Made of Moston plastic exclusively developed for automobiles. This tool case is lightweight, rugged and very easy to use.



- The grip and lock can be accommodated flush with the top cover, making the flat top panel design flat and neat. Ease of storage has been improved and the grip has been made even easier to grasp.
- The case weight has been reduced considerably. It is now only 4 kg, 30% less than our previous steel case product.



Look at the flatness. The grip and the lock are below the surface.

*Replacement parts are available. Check with your dealer for details

*Please check the merchandise inventory for a product that is marked by before placing an order.

SKC-M



SUS-M



SK43A-M



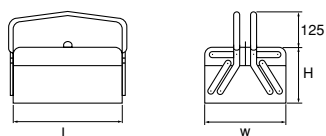
CASE

●SPLIT OPEN METAL CASE

No. SKC-M	▼kg 5.0	1
------------------	---------	---

- Size L415×W220×H165
- Divider×6

- One-touch full opening and easy take in/out tools.

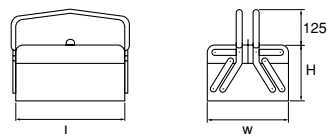


●STAINLESS CASE

No. SUS-M	▼kg 5.0	1
------------------	---------	---

- Size L415×W220×H250

- Made of stainless steel for rust resistance.

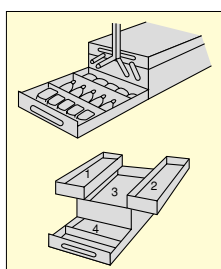
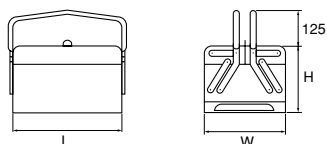


●SPLIT OPEN METAL CASE

No. SK43A-M	▼kg 7.4	1
--------------------	---------	---

- Size L415×W220×H180
- Divider×6

- Convenient with a special drawer for storing small articles.
- 4 different spaces.





SK120-M



KC-2



KC-1



EKB-1



EKB-2



EK-3



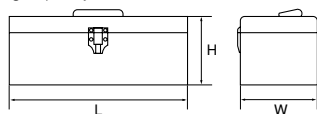
TCP1-1

●OPEN TOP METAL CASE

No. **SK120-M** ▼kg 4.0 1

- Size L405×W200×H170
- Middle-sizes tray ℓ 390×w110×h 45
- Carrying case ℓ 390×w110×h 35
- Tray for parts ℓ 155×w 65×h 20

- Practical size easy to carry with big storing capacity.



●OPEN TOP METAL CASE

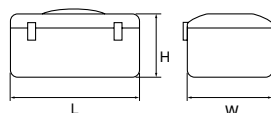
No. **EK-3** ▼kg 3.0 1

- Size L410×W210×H150
- Carrying case ℓ 390×w100×h 45



This model supercedes the SK-40M, SK20-M

- Padlocks can be used to lock the unit. (This product does not include a lock function)
- The handle will not protrude when storing.
- A fixed tray is included in the unit for the storage of small screws and parts.
- The carrying tray (metallic) with handle can be removed from the unit case for easy transporting.
- The unit is composed of steel material.



●OPEN TOP METAL CASE

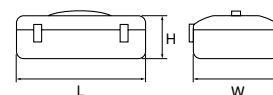
No. **KC-1** ▼kg 3.8 1

- Size L360×W150×H100

No. **KC-2** ▼kg 4.0 1

- Size L360×W200×H120

- Standard model.
- Convenient for outside jobs.



●OPEN TOP METAL CASE

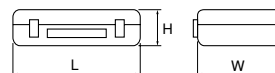
No. **EKB-1** ▼kg 0.8 1

- Size L275×W150×H50

No. **EKB-2** ▼kg 1.6 1

- Size L455×W190×H60

- Trunk type metal cases.
- Convenient for storage of tools and parts.



●OPEN TOP PLA-HARD CASE

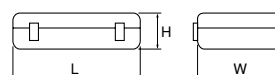
No. **TCP1-1** ▼kg 0.8 1

- Size L385×W190×H65

- So far we have the image that tool case=steel=durable while plastic may be fragile.

To change such image, we have chosen a completely brand-new material. Mostron : new plastic exclusively developed for automobiles.

This tool case is lightweight, rugged and very easy to use.



●MAPLE WORK BENCH WAM TYPE (PERMISSIBLE LOAD 1t)

Order made product



- WAM top plate (thickness 32mm) North American maple composite materials with high durability have been employed for this unit.
- Acrylic paint



Flat type

No. FWWAM-10M

Outer dimensions / W1800×D800×H732mm · 49.1kg



With 1 stage drawer

No. FWWAM-31ML

Outer dimensions / W1800×D800×H732mm · 55.9kg



With 2 stage drawer

No. FWWAM-32ML

Outer dimensions / W1800×D800×H732mm · 62.4kg



Drawer

No. FWL-1M

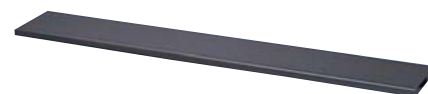
Outer dimensions / W445×D400×H135mm
Drawer inner dimension/W384×D280×H84mm · 6.8kg
*The drawer can be attached to the desired position.



2 drawer

No. FWL-2M

Outer dimensions / W457×D400×H262mm
Drawer inner dimension/W384×D280×H84mm · 13.3kg
*The drawer can be attached to the desired position.



Lower bench

No. FWWAM-US (WAM type)

Dimensions / W1640×D282×H30mm · 6.8kg

●TOOL WAGON (PERMISSIBLE LOAD 160kg)



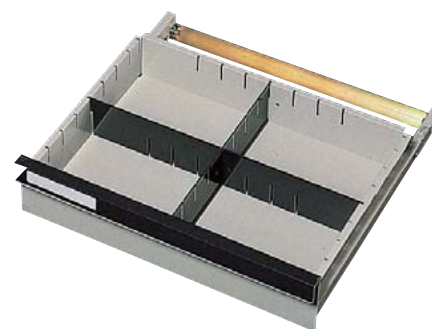
No. FWLK-W

Outer dimensions / W463×D407×H700mm



No. FWL1-W

Outer dimensions / W463×D407×H700mm



Drawer

L : Inner dimensions / W384×D280×H84mm

●HEAVY TOOL CABINET KCH TYPE



FWKCH-1011



FWKCH-1008



FWKCH-724



No. FWKCH-1011

Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
DH100×10	(100)	P10 : 20 compartment	10H8 : 60 compartment	229

Outer dimensions / W750×D720×H1140mm



No. FWKCH-1008

Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
DH100×4	(100)	P10 : 8 compartment	10H8 : 24 compartment	216
DH120×2	(200)	P12 : 4 compartment	12H8 : 12 compartment	
DH160×1	(200)	P16 : 2 compartment	16H8 : 6 compartment	
DH200×1	(200)	P20 : 2 compartment	20H8 : 6 compartment	

Outer dimensions / W750×D720×H1140mm



No. FWKCH-724

Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
DH120×1	(200)	P12 : 2 compartment	12H8 : 6 compartment	145
DH160×1	(200)	P16 : 2 compartment	16H8 : 6 compartment	
DH200×1	(200)	P20 : 2 compartment	20H8 : 6 compartment	
DH240×1	(200)	P24 : 2 compartment	24H8 : 6 compartment	

Outer dimensions / W750×D720×H860mm

*Please check the merchandise inventory for a product that is marked by  before placing an order.

● MIDDLE CLASS TOOL CABINET TBN TYPE



FWTBN-1101



FWTBN-901



FWTBN-701



No. FWTBN-1101				
Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
D100×11	(100)	TP10 : 22 compartment	10H6 : 66 compartment	140
Outer dimensions / W580×D600×H1200mm				



No. FWTBN-901				
Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
D100×9	(100)	TP10 : 18 compartment	10H6 : 54 compartment	116
Outer dimensions / W580×D600×H1000mm				



No. FWTBN-701				
Drawer	(Permissible load of each drawer (kg))	Partition	Divider	▼kg
D100×7	(100)	TP10 : 14 compartment	10H6 : 42 compartment	95
Outer dimensions / W580×D600×H800mm				

● LIGHT TOOL CABINET PA TYPE (H700)



FWPA-706



FWPA-705



FWPA-704



No. FWPA-706				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×6	(50)	12 compartment	12 compartment	65
Outer dimensions / W580×D620×H700mm				



No. FWPA-705				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×3	(50)	6 compartment	6 compartment	61
150×2	(50)	4 compartment	4 compartment	
Outer dimensions / W580×D620×H700mm				



No. FWPA-704				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
150×4	(50)	8 compartment	8 compartment	56
Outer dimensions / W580×D620×H700mm				

● LIGHT TOOL CABINET PA TYPE (H1000)



FWPA-1009



FWPA-1007



FWPA-1006



No. FWPA-1009				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×9	(50)	18 compartment	18 compartment	96
Outer dimensions / W580×D620×H1000mm				



No. FWPA-1007				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×3	(50)	6 compartment	6 compartment	89
150×	(50)	8 compartment	8 compartment	
Outer dimensions / W580×D620×H1000mm				



No. FWPA-1006				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
150×6	(50)	12 compartment	12 compartment	82
Outer dimensions / W580×D620×H1000mm				

● LIGHT TOOL CABINET PA TYPE (H1300)



FWPA-1312



FWPA-1310



FWPA-1308



No. FWPA-1312				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×12	(50)	24 compartment	24 compartment	124
Outer dimensions / W580×D620×H1300mm				



No. FWPA-1310				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
100×6	(50)	12 compartment	12 compartment	115
150×4	(50)	8 compartment	8 compartment	
Outer dimensions / W580×D620×H1300mm				



No. FWPA-1308				
Drawer	(Permissible load of each drawer (kg))	Vertical partition	Horizontal partition	▼kg
150×8	(50)	16 compartment	16 compartment	105
Outer dimensions / W580×D620×H1300mm				

● KTC SYSTEM CABINET



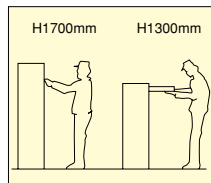
KTC SYSTEM CABINET

This system cabinet was developed to fully utilize the practical functionality of the limited space in factories and stands. Each cabinet width and depth have been unified, allowing for a logical combination of each of the cabinets.

A system cabinet designed to accommodate future modifications.

Diverse variations have been provided for an efficient operating layout.

(The base and drawer type are equipped with an adjuster that allows for horizontal adjustment.)
(The upper and lower cabinets can be linked easily.)



System cabinet types

- Make sure the Owners Operators Manual are carefully read before use.
- Do not use for purposes other than storage of tools.
- Use an exclusive unit when stacking.
- Do not use on slopes or uneven surfaces.

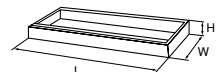
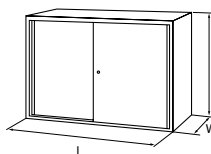
● CABINET (SLIDING DOOR TYPE)



CABINET (SLIDING DOOR TYPE)

No.	Size L×W×H	▼kg	📦	
CC-80S	1,160×450×800 With lock (Use the CC-B1 base when positioning on the ground)	43	1	
CC-B1	1,160×450×100 (With adjuster)	5	1	

• Bench/shelf load 100kg



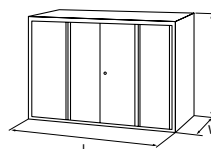
● CABINET (SPLIT OPEN TYPE)



CABINET (SPLIT OPEN TYPE)

No.	Size L×W×H	▼kg	📦	
CC-80F	1,160×450×800 With lock (Use the CC-B1 base when positioning on the ground)	42	1	
CC-B1	1,160×450×100 (With adjuster)	5	1	

• Bench/shelf load 100kg



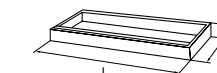
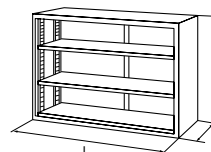
● CABINET (OPEN TYPE)



CABINET (OPEN TYPE)

No.	Size L×W×H	▼kg	📦	
CC-80K	1,160×450×800 (Use the CC-B1 base when positioning on the ground)	32	1	
CC-B1	1,160×450×100 (With adjuster)	5	1	

• Bench/shelf load 100kg



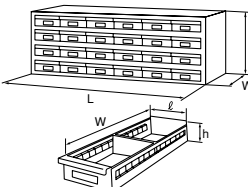
● TRAY CABINET



TRAY CABINET

No.	Size L×W×H	Drawer size		▼kg	📦	
		ℓ×w×h	Number			
CC-4064	1,160×450×400	170×390×65	24	59	1	
-4084	1,160×450×400	125×390×65	32	62	1	

- This is useful for storing small tools and parts.
- Each drawer is equipped with 1 divider.
- The position of the inner partitions can be changed freely.



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Memo

Memo


Memo

Memo

Memo

■ For Safe Use of Your Tools

In order to satisfy our customers, **KTC** is striving to improve safety and product quality. So you may use our products in the safest possible manner we have prepared a list of safety notices. Please read these carefully before use.

 **Caution**
Products shown in this catalog
Safety notices apply to all products.

- Do not use the tools for any purpose other than the intended purpose. (Fig. 1)
- If breaks, cracks, abrasions or deformities become apparent, stop using the tool. (Fig. 2)
- Do not use the tool in an unsafe manner. Make sure you have a good footing and maintain your balance. (Fig. 3)
- Do not attempt to modify the tool. The application of heat or any modification process may greatly reduce the quality of the product. (Fig. 4)
- Where an instruction manual is included, be sure to read it before using the tool.

Any other safety warnings are displayed at the beginning of each manual, or alongside the item in this catalog.
There are also warnings in the hand tool guide. These should be read in conjunction with other warnings.



Fig. 1



Fig. 2



Fig. 3



Fig. 4

Meaning of Symbols










Warning Improper use may result in death or serious injury to the user.



Caution Improper use may result in injury to the user or damage to the tool.

Meaning of Symbols

-  Unit as shipped from the factory
-  When ordering, please check availability of stock
-  Product weight by unit.
-  Powerfit symbol
-  Length x Width x Height
-  This model has been changed
-  Successive model is displayed

Caution & Request

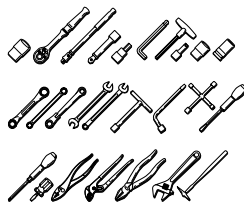
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- To allow for product improvements, the shape, size and color of products may change without notice.
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TOOL SETS



CONVENTIONAL TOOLS



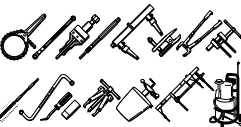
MEASURING TOOLS and EQUIPMENT



POWER TOOLS



AUTOMOTIVE SPECIAL TOOLS



OTHER TOOLS and EQUIPMENT



MOTORCYCLE TOOLS



PLUMBING TOOLS



TOOL STORAGE

