

VICKERS HARDNESS TESTER



HV HK HBS HBW Kc

FUTURE-TECH CORP.

VICKERS HARDNESS TESTER 7-300/ **FV-800** Series

Lab-friendly functions make FV Series Vickers Hardness Testers ideal for materials labs.

FV-800 Series make precise Vickers (HV) / Knoop (HK) / Brinell (HB) /

Fracture Toughness (Kc) measurements quick and easy.

One touch selection on touch panel

OUTSTANDING FEATURES

ADVANCED TOUCH PANEL OPERATION AND DISPLAY

- · Clean Touch Panel coordinated with highly integrated PC board .
- · Measuring procedures, conditions and data are displayed clearly.

(FV-800 Series)

BRINELL TEST

· Accurate light load Brinell Test is available as a standard function. Necessary additional optional item "Ball Indenter φ1~5mm".

(FV-800 Series)

FRACTURE TOUGHNESS TEST. Kc

- · Kc value can be measured as a standard function according to JIS R 1607 / IF Method.
- Together with the value of Vickers and Knoop, it is very effective to evaluate the quality of new material.

(FV-800 Series)



HV (FV-800Series)

CLEAR VIEW AND EASY MEASUREMENT

- The changeable aperture diaphragm and field aperture with a newly developed light source mechanism provides more resolution at both high and low magnifications.
- · Easily changeable color filter provides more resolution.

(All series)

FINE AND CLEAR MEASURING LINE

•The newly designed measuring lines with 0.04 mm width can provide clear and accurate measurement.

(All series)

☞ ※ MICROHARDNESS TESTER FV-800

HK (FV-800Series)

4 OBJECT LENSES (OPTIONAL)

- · The new turret mechanism enables to observe wide specimen area with up to 4 object lenses.
- · Various magnifications easily available by rotating the correct objective into position.
- · Placement of an indentation and its reading is more accurate and repeatable by (FV-800 Series) choice of proper objective.

2 INDENTERS FOR HV/HK MEASUREMENTS (OPTIONAL)

- It allows Vickers and Knoop tests without replacing the indenter. (FV-800 Series)

• The new turret mechanism enables to adapt 2 indenters simultaneously.

AUTO-TURRET

- · Auto turret mechanism provides guick and correct sequence without rotating the turret manually.
- · Manual turret rotation is also capable.

(All series)



HBW (FV-800Series)



⟨FV-100Series⟩

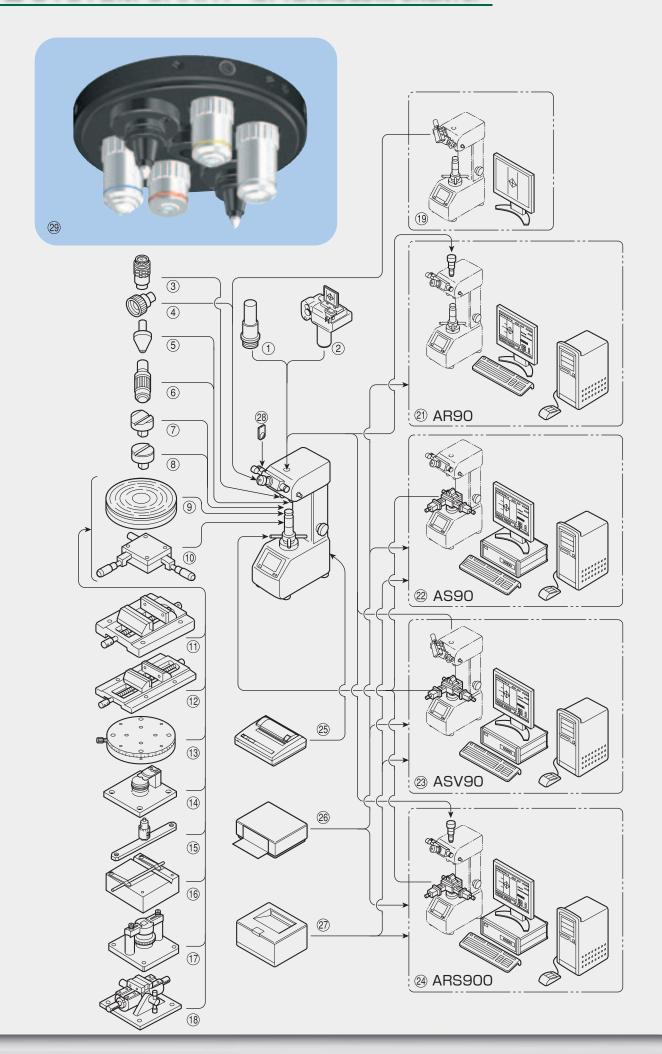


(FV-300Series)



Kc (FV-800Series)

SYSTEM CHART (OPTIONAL COMPONENTS)



OPTIONAL ACCESSORIES

V-033 SPECIMEN INCLINING DEVICE ① Specimen height : 5 ~ 20 mm (For mounted specimen) V-034 UNIVERSAL INCLINING VISE ⑩ Inclining device + Vise Max. opening : 45 mm M-035 V SHAPE (Large) ⑦ Specimen diameter : φ13 ~ φ40 mm (For measuring the cylindrical surface)		RIPTION	ľ	CODE NO.				
V-015 V-016 V-017 V-017 V-019 V-022 COLOR FELTER V-022 COLOR FELTER V-022 COLOR TEMPERATURE V-024 NUMERICAL APERTURE V-025 FIELD APERTURE V-026 V-026 V-027 V-007 V-000 AUTOMATIC READING SYSTEM V-0026 AUTOMATIC MEASURING V-0006 V-0006 SEMI-AUTOMATIC MEASURING V-0006 V-0006 SEMI-AUTOMATIC MEASURING V-0017 V-0010 V-0010 V-0010 V-0010 SEMI-AUTOMATIC MEASURING V-0011 V-0010 V-0010 SEMI-AUTOMATIC MEASURING V-0011 V-0011 V-0010 V-0011 V-0010 STYSTEM WITH AUTO-STAGE G-05-STYSTEM WITH		 9ss	ER ⑤	V-014				
V-015 V-016 V-017 V-019 V-019 V-019 V-022 COLOR FEMPERATURE CORNERSION FILTER V-024 V-025 CAMERA MOUNTING TUBE V-012 V-012 DIGITAL CAMERA ATTACHMENT CORD COLOR COLOR COLOR SERVINCE COLOR COLOR V-012 V-013 V-014 V-015 V-015 V-016 V-017 V-017 V-018 V-019 V-019 V-019 V-019 V-019 V-019 V-010 AUTOMATIC READING SYSTEM (AB90) V-010 V-010 V-010 V-010 V-010 V-010 V-010 AUTOMATIC READING SYSTEM (AB90) V-010 V-010 V-010 V-010 V-010 V-010 V-010 V-010 V-010 AUTOMATIC READING SYSTEM (AB90) V-010 V-01		V-100/FV-100e.)	FOR HV	V-041				
V-017 V-019 V-022 V-022 COLOR FILTER V-023 COLOR FILTER V-024 NUMERICAL APERTURE V-025 FIELD APPERTURE V-026 FIELD APPERTURE V-027 V-008 V-009 V-009 V-009 V-0012 DIGITAL CAMERA ATTACHMENT ② Color Tolor Color C			FOR HK	V-042				
V-016 V-017 V-019 V-022 COLOR FILTER V-023 COLOR TEMPERATURE CONVENSION FILTER V-024 NUMERICAL APERTURE V-025 FIELD APERTURE V-026 FIELD APERTURE V-027 V-037 V-040 MONITOR MEASURING DEVICE Color Col			1	V-015				
V-019 V-022 COLOR FILTER V-023 COLOR TEMPERATURE CONVERSION FILTER V-024 COLOR TEMPERATURE CONVERSION FILTER V-025 FIELD APERTURE V-026 FIELD APERTURE V-027 V-012 DIGITAL CAMERA ATTACHMENT Color MANUTION Black & White Color MANUTION Black & White Color Color CMOS camera + 17" LCD + L-type attachment + Image saving function (with 1GB SD card indentation measurement is automated the influence of metals or damage. Automatic X-y STAGE & CONTROL UNIT (-AS90) X-000 X-001 X-001 X-001 X-001 X-002 X-002 X-002 X-003 X				V-061				
V-062 EYEPIECE			3	V-016				
V-022 COLOR FILTER V-023 COLOR TEMPERATURE CONVERSION FILTER V-024 NUMERICAL APERTURE V-025 FIELD APERTURE V-026 FIELD APERTURE V-027 DIGITAL CAMERA ATTACHMENT ② V-037 CAMERA MOUNTING TUBE ③ V-038 MONITOR MEASURING DEVICE V-039 AUTOMATIC READING SYSTEM ③ (AR80) AUTOMATIC X-Y STAGE 4 CONTROL UNIT 《AS90) AUTOMATIC X-Y STAGE 4 CONTROL UNIT 《AS90) SSMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE 《AS900 AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE 《AS900					V-017			
V-022 COLOR FILTER V-023 COLOR TEMPERATURE CONVERSION FILTER V-024 NUMERICAL APERTURE V-025 FIELD APERTURE ↓ 0 1~6 mm each selectable (6 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (7 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 7~7 mm each selectable (8 kinds) ↓ 0 1 8~8 W CCD camera & CCD camera is not included) ↓ 0 1 8~8 W CCD camera each selectable (9 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CCD camera (1 kinds) ↓ 0 1 8~8 W CC				V-019				
V-023 COLOR TEMPERATURE CONVERSION FILETE V-025 FIELD APERTURE V-025 FIELD APERTURE V-025 CAMERA MOUNTING TUBE V-026 CAMERA MOUNTING TUBE V-027 FIELD APERTURE V-028 PIELD APERTURE V-029 DIGITAL CAMERA ATTACHMENT Color CMOS camera + 9.4.** LCD + L-Type attachment + Image saving function (with 1GB SD card function) and the influence of metals or damage. AUTOMATIC READING SYSTEM (AR90) AUTOMATIC X-Y STAGE 3 CONTROL UNIT (AS90) SEMI-AUTOMATIC X-Y STAGE 3 CONTROL UNIT (AS90) SEMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (AS90) V-001A AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (AS900) AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (AS900) V-001A AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (AS900) V-001B MANUAL X-Y STAGE MANUAL X-Y			4	V-062				
V-024 NUMERICAL APERTURE V-025 FIELD APERTURE V-026 FIELD APERTURE V-027 PIELD APERTURE V-038 POOL AUTOMATIC READING SYSTEM (AS90) V-0020 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0010 AUTOMATIC MEASURING SYSTEM (AS90) V-0011 PV-0011 AUTOMATIC MEASURING SYSTEM (AS90) V-0012 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0013 AUTOMATIC MEASURING SYSTEM (AS90) V-0014 AUTOMATIC MEASURING SYSTEM (AS90) V-0015 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0016 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0017 V-0018 AUTOMATIC MEASURING SYSTEM (AS90) V-0019 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0010 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0010 SEMI-AUTOMATIC MEASURING SYSTEM (AS90) V-0010 SEMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (AS900) V-0010 AUTOMATIC MEASURING SYSTEM (AS900)		accessory.)		COLOR FILTER	V-022			
V-025 FIELD APERTURE			RATURE		V-023			
V-012 DIGITAL CAMERA ATTACHMENT ② C MOUNT ATTACHMENT (Digital camera & CCD camera V-013 DIGITAL CAMERA ATTACHMENT ② C MOUNT ATTACHMENT (Digital camera is not included) V-004 MCASURING DEVICE			ERTURE	NUMERICAL A	V-024			
V-008 MONITOR Black & White Black & White Black & White DetVice Color Color CMOS camera + 8.4° LCD + L TYPE ATTACHMENT Color CMOS camera + 17° LCD + L-type attachment + Image saving function (with 1GB SD card Indentation measurement is automated Light-and-dark image processing protects this system against the influence of metals or damage. Automatric READING SYSTEM (AS90) AUTOMATIC READING SYSTEM (AS90) Connecting cable and exclusive control/data processing software Color connecting cable and exclusive			ϕ 1 \sim 7 mm each selectable (7 kinds)	RE	FIELD APERTU	V-025		
V-008 MONITOR MASURING DEVICE Color Gold Color Gold Color Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD + L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD L-type attachment + Image saving function (with 1GB SD card Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving function Color CMOS camera + 1.7" LCD L-type attachment + Image saving f		amera	For adapting photographic camera & CCD camera	TING TUBE ①	CAMERA MOU	V-055		
V-003 DEVICE Color Color CMOS camera + 17" LCD + L-type attachment + Image saving function (with 1GB SD card Indentation measurement is automated Light-and-dark image processing protects this system against the influence of metals or damage. Automatic measurement is automated Light-and-dark image processing protects this system against the influence of metals or damage. Automatic measurement can be done with high accurate repeatability exceeding any skilled technic System configuration: CCD camera, CCD camera attachment, personal computer, printer, 17" LCD board, connecting cable and exclusive controllogrossing software and exclusive controllogrossing software controlled in complicated multi-point measurement, stage movement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement, stage movement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement, stage movement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement at age movement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement is automated when an indentation is made and exclusive control of its automated in complicated multi-point measurement is automated of the PC (personal computer) monitor. System configuration: CCD camera, L-type CCD camera attachment, automated V-y stage, control box, personal computer, printer, 17" LCD, image board, connecting cable and exclusive control/data processing software v-order in indentation measurement is automated of the PC (personal computer) monitor. System configuration: CCD camera, CCD camera attachment, personal computer in m		not included)	C MOUNT ATTACHMENT (Digital camera is no	RA ATTACHMENT ②	DIGITAL CAME	V-012		
V-009 DEVICE Color Color CMOS camera + 17" LCD + L-type attachment + Image saving function (with 1GB SD card Indentation measurement is automated Light-and-dark image processing protects this system against the influence of metals or damage. Automatic measurement can be done with high accurate repeatability exceeding any skilled technic System configuration: CCD camera, CD camera attachment, personal computer, printer, 17" LCD baard, connecting cable and exclusive control/data processing software V-002/ V-002A		TACHMENT			V-008			
V-003	ard)	nent + Image saving function (with 1GB SD card)	Color CMOS camera + 17" LCD + L-type attachme			V-009		
V-002/V-002A CONTROL UNIT (AS90) In complicated multi-point measurement, stage movement is automated when an indentation is made a System configuration: Automatic X-Y stage, control box, personal computer, printer, 17" LCD, connecting and exclusive control/data processing software SEMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (ASV90) SEMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (ASV90) AUTOMATIC MEASURING SYSTEM WITH AUT	nnician.	curate repeatability exceeding any skilled techniciar attachment, personal computer, printer, 17" LCD, in	Light-and-dark image processing protects this system Automatic measurement can be done with high accu System configuration: CCD camera, CCD camera at	ADING SYSTEM @	AUTOMATIC R	V-003		
V-000 / V-000A SEMI-AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (ASV90) In complicated multi-point measure an indentation enlarged on the PC (personal computer) monitor. System configuration: CCD camera, L-type CCD camera attachment, automatic X-Y stage, control box computer, printer, 17" LCD, image board, connecting cable and exclusive control/data processing softwater. ARS900) V-001 / V-001 A AUTOMATIC MEASURING SYSTEM WITH AUTO-STAGE (ARS900) Indentation measurement is automated / Stage control is automated Light-and-dark image processing realizes the automation of indentation measurement and stage measurement. System configuration: CCD camera, CCD camera attachment, automatic X-Y stage, control box, person computer, printer, 17" LCD, image board, connecting cable and exclusive control/data processing softwater. V-038 ROUND TABLE 9 Φ 200 mm V-026 MANUAL X-Y STAGE 10 Max. movement : 50 x 50 mm Min. micro inching : 1/ 100 mm Dimensions : 110 x 110 mm V-027 PRECISION VISE 10 Max. opening : 50 mm V-029 ROTARY TABLE 13 Graduation of rotary angle : 5 degree Table diameter : Φ 128 mm V-030 THIN SPECIMEN MEASURING DEVICE 10 Specimen thickness : 5 mm max. (For measuring the cross section) V-031 FINE SPECIMEN MEASURING MEASURING DEVICE 10 Specimen diameter : Φ 5 mm max. (For measuring the cylind								
V-001A V-001B ROUND TABLE (a) (b) (c) (c) (c) (c) (d) (d) (e) (e) (e) (e) (e) (e	box, personal	ed on the PC (personal computer) monitor. mera attachment, automatic X-Y stage, control box, pe						
V-026 MANUAL X-Y STAGE (i) Max. movement : 50 x 50 mm Min. micro inching : 1/100 mm Dimensions : 110 x 110 mm V-027 PRECISION VISE (i) Max. opening : 50 mm Max. opening : 100 mm V-028 ROTARY TABLE (ii) Graduation of rotary angle : 5 degree Table diameter : φ128 mm V-030 THIN SPECIMEN MEASURING DEVICE (iii) Specimen thickness : 5 mm max. V-031 FINE SPECIMEN MEASURING DEVICE (iii) Specimen diameter : φ5 mm max. (For measuring the cross section) V-032 DEVICE HORIZONTAL TYPE (iii) Specimen diameter : φ5 mm max. (For measuring the cylindrical surfaction of the complex	personal	mation of indentation measurement and stage move attachment, automatic X-Y stage, control box, person						
V-026 MANUAL X-Y STAGE Φ Min. micro inching : 1/ 100 mm Dimensions : 110 x 110 mm V-027 PRECISION VISE Φ Max. opening : 50 mm V-028 ROTARY TABLE Φ Max. opening : 100 mm V-029 ROTARY TABLE Φ Carduation of rotary angle : 5 degree Table diameter : Φ 128 mm V-030 THIN SPECIMEN MEASURING DEVICE Specimen thickness : 5 mm max. V-031 FINE SPECIMEN MEASURING DEVICE TYPE TO Specimen diameter : Φ 5 mm max. (For measuring the cross section) V-032 SPECIMEN INCLINING DEVICE TYPE TO Specimen height : 5 ~ 20 mm (For measuring the cylindrical surfate) V-034 UNIVERSAL INCLINING VISE TO Inclining device + Vise Max. opening : 45 mm M-035 ANVIL			9	V-038				
V-028 PRECISION VISE (g) Max. opening : 100 mm V-029 ROTARY TABLE (g) Graduation of rotary angle : 5 degree Table diameter : φ 128 mm V-030 THIN SPECIMEN MEASURING DEVICE (h) Specimen thickness : 5 mm max. (For measuring the cross section) V-031 FINE SPECIMEN MEASURING DEVICE (h) Specimen diameter : φ 5 mm max. (For measuring the cross section) V-032 DEVICE HORIZONTAL TYPE (f) Specimen diameter : φ 5 mm max. (For measuring the cylindrical surfaction) V-033 SPECIMEN INCLINING DEVICE (f) Specimen height : 5 ~ 20 mm (For mounted specimen) V-034 UNIVERSAL INCLINING VISE (g) Inclining device + Vise Max. opening : 45 mm M-035 ANVIL V SHAPE (Large) (g) Specimen diameter : φ 13 ~ φ 40 mm (For measuring the cylindrical surfaction)			AGE 10	V-026				
V-028 (2) Max. opening : 100 mm V-029 ROTARY TABLE (3) Graduation of rotary angle : 5 degree Table diameter : φ 128 mm V-030 THIN SPECIMEN MEASURING DEVICE Specimen thickness : 5 mm max. (For measuring the cross section) V-031 FINE SPECIMEN MEASURING DEVICE VERTICAL TYPE (5) Specimen diameter : φ 5 mm max. (For measuring the cross section) V-032 DEVICE HORIZONTAL TYPE (6) Specimen diameter : φ 5 mm max. (For measuring the cylindrical surfaction) V-033 SPECIMEN INCLINING DEVICE (7) Specimen height (5 ~ 20 mm) (For mounted specimen) V-034 UNIVERSAL INCLINING VISE (8) Inclining device + Vise Max. opening : 45 mm M-035 ANVIL V SHAPE (Large) (7) Specimen diameter : φ 13 ~ φ 40 mm (For measuring the cylindrical surfaction)			Max. opening: 50 mm			V-027		
V-030 THIN SPECIMEN MEASURING DEVICE (Φ) Specimen thickness: 5 mm max. (For measuring the cross section) V-031 FINE SPECIMEN MEASURING DEVICE (Φ) VERTICAL TYPE (Φ) Specimen diameter: Φ5 mm max. (For measuring the cross section) V-032 DEVICE (FOR MEASURING DEVICE (Φ) Specimen diameter: Φ5 mm max. (For measuring the cylindrical surfaction) V-033 SPECIMEN INCLINING DEVICE (Φ) Specimen height: 5 ~ 20 mm (For mounted specimen) V-034 UNIVERSAL INCLINING VISE (Φ) Inclining device + Vise Max. opening: 45 mm M-035 ANVIL V SHAPE (Large) (Φ) Specimen diameter: Φ13 ~ Φ40 mm (For measuring the cylindrical surfaction)				PRECISION VIS	V-028			
V-031 FINE SPECIMEN MEASURING DEVICE VERTICAL TYPE (§) Specimen diameter : φ5mm max. (For measuring the cross section) V-032 DEVICE HORIZONTAL TYPE (§) Specimen diameter : φ5mm max. (For measuring the cylindrical surfaction) V-033 SPECIMEN INCLINING DEVICE (§) Specimen height : 5 ~ 20 mm (For mounted specimen) V-034 UNIVERSAL INCLINING VISE (§) Inclining device + Vise Max. opening : 45 mm M-035 V SHAPE (Large) (§) Specimen diameter : φ13 ~ φ40 mm (For measuring the cylindrical surfaction)		e diameter : ϕ 128 mm	Graduation of rotary angle: 5 degree Table of	13	V-029			
V-032 MEASURING DEVICE HORIZONTAL TYPE ® Specimen diameter: φ5mm max. (For measuring the cylindrical surfaction of the			Specimen thickness : 5 mm max.	EASURING DEVICE 14	V-030			
V-032 DEVICE HORIZONTAL TYPE (fill) Specimen diameter : φ5 mm max. (For measuring the cylindrical surfaction of the cylindri	1)	(For measuring the cross section)	Specimen diameter : \$\phi\$5 mm max.	VERTICAL TYPE 15	FINE SPECIMEN VERTICAL TYPE			
V-034 UNIVERSAL INCLINING VISE 1 Inclining device + Vise Max. opening : 45 mm M-035 V SHAPE (Large) Specimen diameter : φ13~φ40 mm (For measuring the cylindrical surface)	rface)	(For measuring the cylindrical surface	NG C			V-032		
M-035 NV SHAPE (Large) Specimen diameter : φ13~φ40 mm (For measuring the cylindrical surface)		(For mounted specimen)	Specimen height : 5 ~ 20 mm	INING DEVICE 17	V-033			
ANVIL ANVIL		nm	Inclining device + Vise Max. opening : 45 mn	LINING VISE 18	V-034			
	rface)	(For measuring the cylindrical surface	Specimen diameter : ϕ 13∼ ϕ 40 mm	V SHAPE (Large) ⑦				
M-036 V SHAPE (Small) (a) Specimen diameter : $\phi 2 \sim \phi 6 \text{mm}$ (For measuring the cylindrical surface)	rface)	(For measuring the cylindrical surface	Specimen diameter : ϕ 2 ∼ ϕ 6 mm	V SHAPE (Small) 8	ANVIL	M-036		
V-004		(For Hardness Tester)	RS232C type or CENTRONICS type	25	DIOITAL BOW	V-004		
DIGITAL PRINTER (For Automatic System)		(For Automatic System)	Ink-jet type (A4 size)	:H 26	DIGITAL PRINTER			
V-006 LASER PRINTER ② Monochrome type (A4 size) (For Automatic System)		(For Automatic System)	Monochrome type (A4 size)	R ②	V-006			
V-063~066 TUNGSTEN CARBIDE 6 φ1、2.5、5mm			φ1、2.5、5 mm	JNGSTEN CARBIDE 6	BRINELL HARDNESS			
V-067 BRINELL N 12.26 24.52 39.23 61.29 76.61 153.2 245.2								
Reg 1.25 2.5 4 6.25 7.8125 15.625 25 15.625 25 15.625		7 1226	N 306.5 392.3 612.9 980.7	EST WEIGHT	₹			
V-078 (For FV-800 Series) kgf 31.25 40 62.5 100 125			<u> </u>		V-U/8			
V-058 MECHANICAL PARTS FOR ADDITIONAL OBJECT LENS Turret internal parts for installing the second, third and fourth object lenses. (Please specify them when ordering the product.) The second object lens of TYPE B is supplied as standard accessory.		ANICAL PARTS (Please specify them when ordering the product.)				V-058		
M-079 DUAL INDENTER TURRET (For FV-800 Series) (Please specify it when ordering the product.)			Used when installing two HV/HK indenters at the (Please specify it when ordering the product.)					



M	IODEL	FV-100e	FV-100	F	V-300e	F	V-300	F۱	/-800e	FV-800		
TEST LOAD	TYPE A	N : kgf:	9.807 1	19.61 2	29.42 3	49.03 5	98.07 10	196.1 20	294.2 30	490.3 50		
TEST LUAD	TYPE B	N : kgf:	2.942 0.3	4.903 0.5	9.807 1	29.42	49.03 5	98.07 10	196.1 20	294.2 30		
LOADIN	G MECHANISM			Αι	utomatic Load	and Rele	ase Method					
LOAD AF	PPLYING SPEED	Initial loading speed: $120 \mu m$ / sec Actual loading speed: $60 \mu m$ / sec (Automatic speed changing)								hanging)		
DV	VELL TIME	5~4	5~40 sec 5~9						99 sec			
TURRE	T MECHANISM	Manual	Manual Automatic Manual Automatic				Manual Automatic					
DIAMOND	Standard	•		•	Vickers I	ndenter ((HV)					
INDENTER	Option			_					ndenter (HK) / Two Inc pecial Dual Indenter T	lenters (HV + HK) are available urret simultaneously		
OBJECT LENS	Standard Option	Type A : X10 / Type B : X10 & X 20 Max. 3 Lenses							Max. 4 Lenses			
	YEPIECE		IVIAX	o Lens		< 10			IVIAX.	+ Lelises		
	Type	Mecha	anical				Ele	ctronic				
MEASURING	Max. Measurement length		800	μm (In α	case of X 100)) / 400 µı	m (In case of	X 200)				
MICROSCOPE	Min. Graduation	Micrometer	: 0.5 μm			-			200) / 0.01 µm (In case of over X 400)			
	Min. Measurement unit	Eye judgmer	-			•				ase of over X400)		
MAX. HEIG	HT OF SPECIMEN				210	0 mm						
MAX. DEP	TH OF SPECIMEN				16	5 mm						
AVAILABLE	TEST PARAMETER		ŀ	HV / HK					HV/HK/HBS/HBW/Kc			
BRINELL I	HARDNESS TEST								HBS & HBW available			
									Option : Ball indenter & Light load			
	OUGHNESS TEST (Kc) SS CONVERSION		-						Conform to JIS R1607/ IF Method			
	'A MEMORY		_						Conform to SAE (J-417b) & ASTM (E-140) Max. 999 Data			
OPER. (SHEET SW	ATION PANEL for Type 100 / 300 & IEL SW for Type 800)	START / LIGHT TURRET R (for Auto -Tu	OTATION		START / RES LIGHT UP-E ROTATION (fo	OWN/1	TURRET	L C	ET/DWELL TIME / IWN / TEST LOAD / I SCALE / TURRET r Auto-Turret Type) / IEEAR			
(LED for	TA DISPLAY r Type 100 / 300 l for Type 800)	POWER / I (Pilot L				2 / HV-H ESS VAL DK-NG C	UE/		HK/HARDNESS NVERSION DATA/ RITERIA/START ing)/TEST TIMES/etc.			
DATA OUTPUT & PRINT OUT		-		(H	RS232C (HV-HK/HARDNESS VALUE/OK-NG) CENTRONICS (D1/D2/HV-HK/HARDNESS VALUE/TEST LOAD/OK-NG)			RS232C / CENTRONICS (D1/D2/HV-HK/HARDNESS VALU TEST LOAD / OK-NG/ CONVERSION SCALE / CONVERS DATA / STATISTIC DATA / etc.)				
OK / N	NG CRITERIA	-	Limit setting and HI/ OK/ LO Display									
SELF	DIAGNOSIS	<u>-</u>						Display troubles with motors and switches				
LIGH	HT SOURCE	6 V / 18 W (Auto-iris mechanism)										
OPTIC	AL FUNCTION	Aperture diaphram/ Field apperture / Color filter: Replaceable										
AC	CCURACY	Conform to JIS B-7725, ASTM E-92 and ISO 6507-2										
PHOTOG	RAPHIC DEVICE	Capable to mount at anytime on top of the machine (Camera/Attachment: Option))			
DIN	MENSIONS	(W) 215 x (D) 517 x (H) 690 mm										
\	WEIGHT			Approx.	55 kg (Includi	ng Stand	lard Accesso	ries)				
POW	/ER SUPPLY			lapan Overseas	: Single phas s : Single phas (Should be	e AC 100						

STANDARD ACCESSORIES

CODE NO.	ITEM	FV-100e	FV-100	FV-300e	FV-300	FV-800e	FV-800		
V-039	STANDARD TEST BLOCK (HV800)			1	1	1	1	1	1
V-013	DIAMOND INDENTER				1	1	1	1	1
V-043	MEASURING MICROSCOPE MECHANICAL TYPE			1	1	_	_	_	_
V-044	(WITH X 10 EYEPIECE) ELECTRONIC TYPE			_	_	1	1	1	1
V-018	X 10 TYPE A		TYPE A & B	1	1	1	1	1	1
	OBJECT LENS (BUILT-IN)		TYPE A	_	_	-	_	_	-
V-017		X 20	TYPE B	1	1	1	1	1	1
V-037		φ60 mm FLAT		1	1	1	1	1	1
V-035	ANVIL V-SHAPE (LARGE)		1	1	1	1	1	1	
V-036		V-SHAPE (SMALL)		1	1	1	1	1	1
V-053	LEVEL ADJUSTING LEG			4	4	4	4	4	4
V-054	INDENTER COVER (BUILT-IN FOR TESTING)			1	1	1	1	1	1
V-080	INDENTER SHAFT FIXTURE (FOR TRANSPORTATION)			1	1	1	1	1	1
V-045	LIGHT SOURCE BULB (6V 18W)			2	2	2	2	2	2
V-052	POWER CORD			1	1	1	1	1	1
	AUXILIARY TOOLS (SCREW DRIVER:1pc/SPANNER:1pc/L TYPE WRENCH:5 pcs)			1	1	1	1	1	1
V-041	HARDNESS CALCULATION TABLE FOR HV			1	1	_	_	_	_
V-056	MACHINE COVER			1	1	1	1	1	1
	HARDNESS CONVERSION TA	1	1	1	1	_	_		
	INSTRUCTION & MAINTENANCE MANUAL			1	1	1	1	1	1
V-057	ACCESSORY BOX			1	1	1	1	1	1
	WEIGHT SET FOR TEST LOA	D		1	1	1	1	1	1



⟨FV-300⟩ (Type B) Digital Vickers Hardness Tester



⟨FV-100⟩ (Type B) Analog Vickers Hardness Tester

* Appearance and specifications are subject to change without prior notice.











FUTURE-TECH CORP.

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