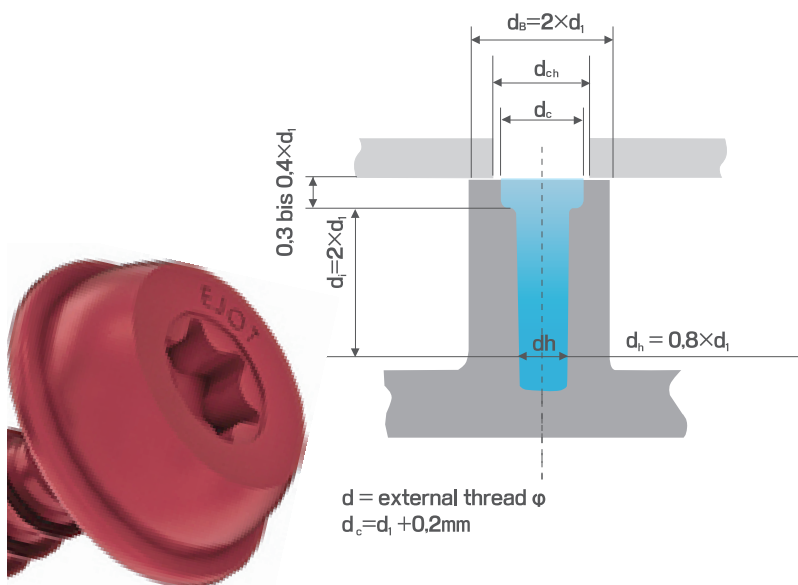


Recommended Boss Design



- d_i = Screw Dia
- d_e = Boss External Dia
- d_c = Counterbore Dia
- d_h = Hole Dia(Screw Dia × 0.8)
- d_i = Insertion depth

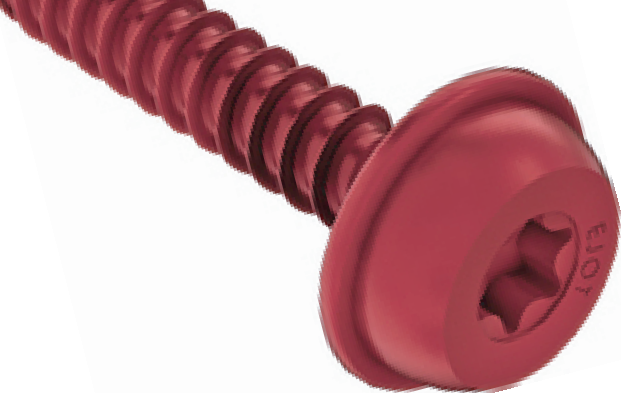
HIOS PAT. SCREW

HIOS PAT.Screw has variations of patents for design and trademark including its structure,punch dies and bits at home and abroad. HIOS PAT.screw is developed with high function,durability,and efficiency of work. It reduces screw tightening error and offers highly reliable fastening and "Stable Quality Control"



- ◎ Features
- ◎ Prevention of Cam out phenomenon
 - ◎ Excellent fit with driver bits
 - ◎ Less thrust required
 - ◎ Improvement in durability of driver bits
 - ◎ Reduction in worker's fatigue
 - ◎ Perfect match with automatic screw fastening machines
 - ◎ Improvement in quality control and productivity
 - ◎ Easy to remore in recycling process and maintenance of your products

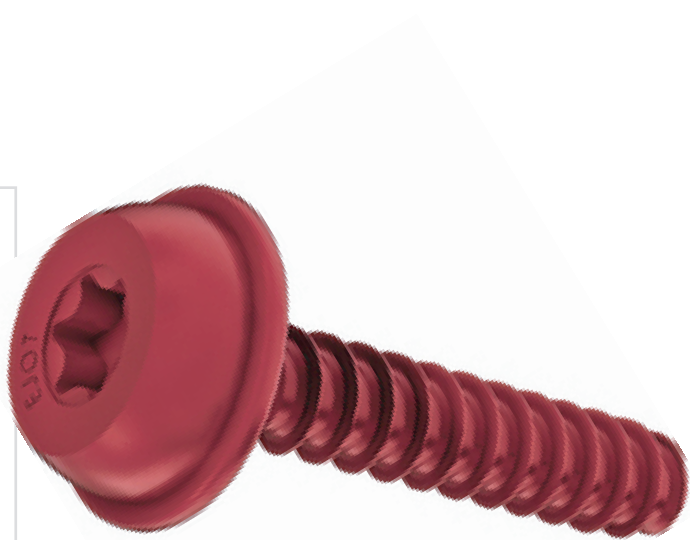
HIOS®



It offers less damage to plastics and higher clamp load.

DELTA^{PT}®

Self Tapping Screw for Thermoplastics



EJOT®
The EJOT
DELTA PT Faster
Predictable
performance improvement
for thermoplastics



What's DELTA PT?

Details are available at www.hios.com ●Inquiries: Fastener Department +81(Japan) 47-392-2090 (direct line)

HIOS INC.
111-6 Akiyama, Matsudo City, Chiba Prefecture,
Tel: +81(Japan)47-392-2090

HIOS TOYO PRECISION SCREWCO.,LTD.
Room8-1,11/F,Favor Industrial Centre,2-6 Kin Hong Street,
Kwai Chung,N.T.,Hong Kong.

HIOS(Shenzhen)Co.,LTD
11CD Room, New Times Plaza, 1 Taizi Road, Shekou Nanshan District,
Shenzhen Guangdong Province, CHINA, Tel:+86 755-26674278



DELTA PT[®], the best self tapping screw for plastics, was designed based on characteristic of plastics.

Thread Part

DELTA PT[®]

The specially-designed flank geometry guarantees less damage to plastics.



Head Shape

We recommend using DELTA PT with HIOS PAT. Recesses.

HIOS PAT. SCREW

It prevents Cam-out phenomenon and offers highly reliable fastening.

Cross recess

TOTSUPURA[®]

Y recess

HIOS CLOVER[®]

Hexalobular

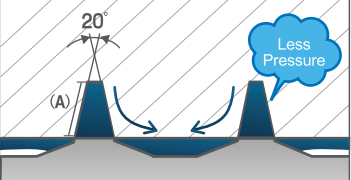
INTRTORQUE[®]

※DELTA PT is registered a trademark of EJOT.

What's DELTA PT ? Comparison Differences!

Thread shape The specially-designed flank geometry goes into material sharply and guarantees damage-free flow of material.

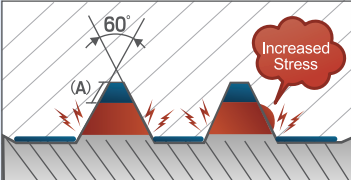
DELTA PT[®]



Thread Angle: **20°**
Minor Dia of External Thread: **Deep**
(A) Flank*: **Bigger**
※Engagement Area

- Displaced material is accommodated entirely into the specially designed root.
- High flank coverage and minor contact pressure
- Less radial stress and frictional resistance
- Damage free material forming

Other company's tapping screw (sheet metal 60° Flank Angle)




Thread Angle: **60°**
Minor Dia of External Thread: **Shallow**
(A) Flank*: **Smaller**
※Engagement Area

- Due to the straight designed roots, there is not enough space for displaced material, causes crack in boss.
- Small flank coverage and high contact pressure
- High radial stress and frictional resistance
- Boss Cracking

Comparison in boss It creates optimum screw hole and remain high clamp load.

DELTA PT[®]



No Boss Cracking

- No Metallic Insert needed
- Thinner boss wall
- Material and weight saving

Other company's tapping screw (sheet metal 60° Flank Angle)




Boss Cracking

- Increased stress causes boss cracking.

Stress transmission It offers stable quality control in screw tightening.

DELTA PT[®]

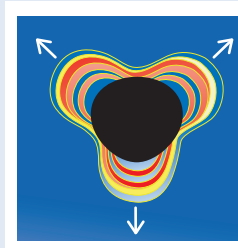


Cross-section view of Thread Part: **Round Shape**

Stress is balanced and transmitted evenly.

- Stable
- Less damage to thermoplastics
- No Boss Cracking

Other company's tapping screw (sheet metal 60° Flank Angle)



Cross-section view of Thread Part: **Triangular Geometry**

Stress is transmitted concentratedly in 3 directions.

- Unstable
- Damage thermoplastics.
- Boss cracking

Repeat assembly Due to less damage to plastics, it can be tightened repeatedly.

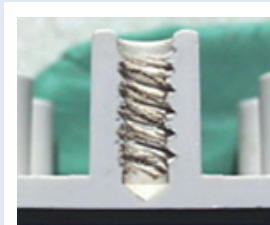
DELTA PT[®]



40 times Less damage

- Can be tightened repeatedly.

Other company's tapping screw (sheet metal 60° Flank Angle)



7 times Damage easily

- Unsuitable for repeat assembly