

EJOT PT® Screw

The proven fastener for reliable fastening into thermoplastics

Efficiency of PT® connections

Direct assembly using the PT® screw makes thin-walled and flat designs possible. This leads to material savings and reduced cycle times during injection moulding. Therefore, the quality of the PT® joint and the fastening component, translates into a considerable cost saving overall.

Radial forces

- Low radial force - equals low radial stress
- Large axial component - for optimum material flow into the recessed thread root

Displacement volume

- Larger thread bearing depth - for increased load-carrying capacity
- Lower installation torque - because of smaller leverage with the same displacement volume

Notes for the design engineer

The boss geometry should correspond to the depicted design recommendation. If residual stress, cavities, sink marks, expanded injection cycles etc. due to different wall thicknesses, are possible, the cross-section of the boss has to be changed.

The shear stress occurring in the boss during assembly may not inadmissibly expand, and for that reason the following sequence should be adhered to:

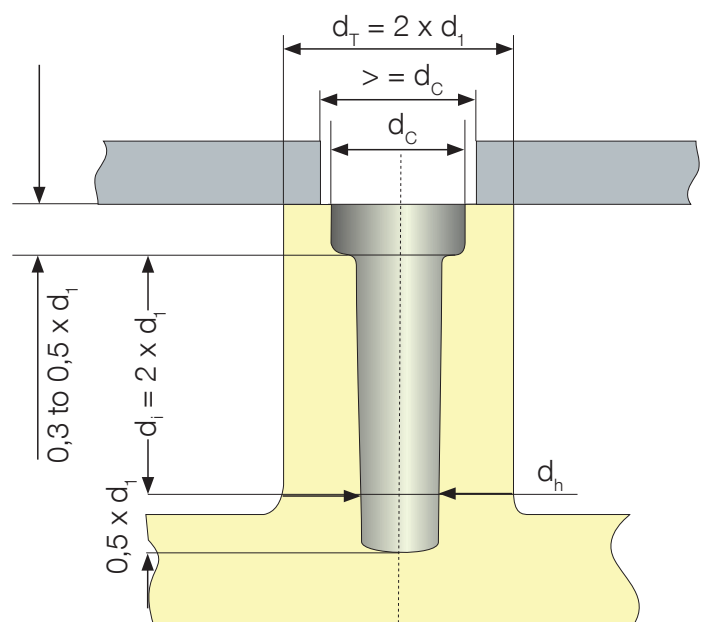
- Decrease external boss diameter
- Increase screw hole diameter. This leads to a decrease of axial load capacity, which can be compensated with
- Increased installation depth, to transfer the required strength grades

In case of these changes a part evaluation should always be carried out.

For materials with high filler content or high internal strength, the use of EJOT DELTA PT® is recommended.



The EJOT PT® screw with 30° flank angle and recessed thread root.



d_1 = Nominal-Ø of the screw

d_C = $d_1 \times 1,05$

d_h = $0,7$ to $0,8 \times d_1$ (material depending)

The balancing hole is of special importance as it ensures a favourable distribution of edge stress.

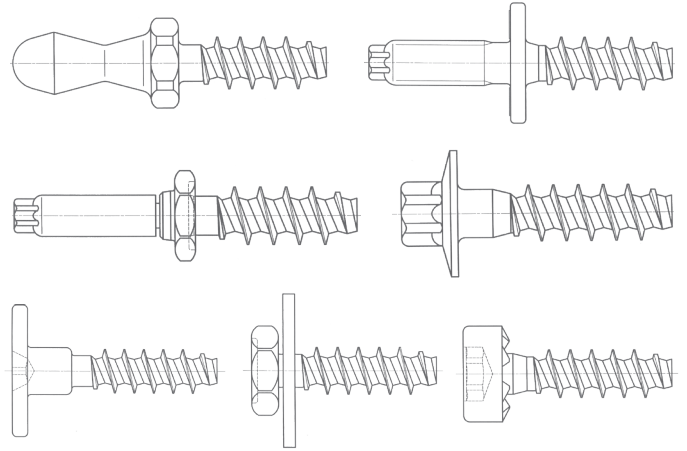
Chrome VI free coatings:

- Zinc-plated, blue passivated
- Zinc blue / thick film passivation + EJOSEAL 4C
- Zinc / thick film passivation
- ZnFe, ZnNi, clear passivated (with and without sealing / Top Coat)
- ZnFe, ZnNi, black passivated (with and without sealing / Top Coat)
- Zinc flake coating (with and without sealing / Top Coat silver and black)
- Further coatings upon request

Screw material:

- Through hardened steel with material properties PT® 10 (WN 1461, part 2)
- Other materials upon request

Special designs / examples:



Special screw designs are available. Please contact the EJOT application engineers to realise individual designs.

Manufacturing Range of EJOT PT® Screws

EJOT PT® screw	Nominal Ø [mm]															
	K 10	K 12	K 14	K 16	K 18	K 20	K 22	K 25	K 30	K 35	K 40	K 50	K 60	K 70	K 80	K 100
Length [mm]	1,00	1,20	1,40	1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00	7,00	8,00	10,00
3 ± 0,30																
3,5 ± 0,38																
4 ± 0,38																
4,5 ± 0,38																
5 ± 0,38																
6 ± 0,38																
7 ± 0,45																
8 ± 0,45																
10 ± 0,45																
12 ± 0,55																
14 ± 0,55																
16 ± 0,55																
18 ± 0,55																
20 ± 0,65																
22 ± 0,65																
25 ± 0,65																
30 ± 0,65																
35 ± 0,80																
40 ± 0,80																
50 ± 0,80																
60 ± 0,95																
70 ± 0,95																
80 ± 0,95																
90 ± 1,10																
100 ± 1,10																

Upper stepped line = min. length
(Counter sunk head production length „l“ + 2 mm)

Lower stepped line = max. length

Production with partial thread possible

For more information please contact our EJOT Hotline, phone +49 2751 529-123, e-mail hotline@ejot.com