

Thread Forming Screw for Thermoplastics

POLYMATE30 SCREW

EFFICIENCY OF POLYMATE30 CONNECTIONS

Direct assembly using the Polymate30 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 Polymate30 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

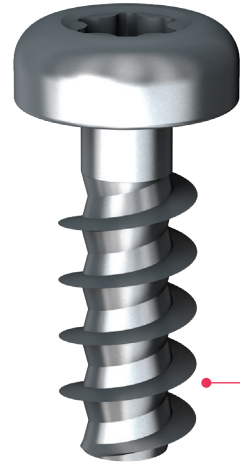
CONSIDERATIONS FOR THE DESIGN ENGINEER

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.

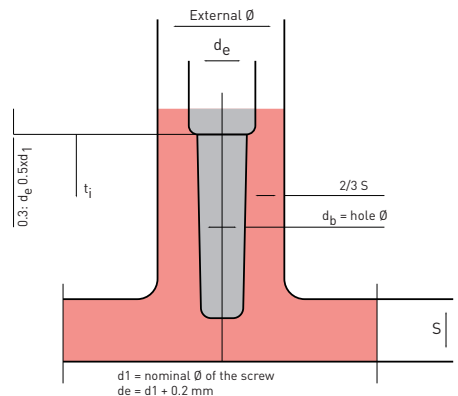
The shear stress occurring in the boss during assembly may not inadmissibly expand, and for that reason the following sequence should be adhered to:

- 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.



The Polymate30 Screw with 30° flank angle and recessed thread root.

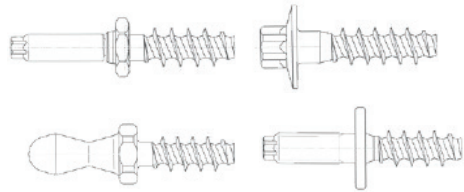


The balancing hole is of special importance as it ensures a favourable distribution of edge stress.

CHROME VI FREE COATINGS

- Zinc-plated, blue passivated
- Zinc blue / thick film passivation
- 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)
- Additional coating options upon request

SPECIAL DESIGNS / EXAMPLES



SCREW MATERIAL

- Through hardened steel
- Stainless Steel and
- other materials upon request

MANUFACTURING RANGE OF POLYMATE30 SCREW

KEBA Polymate Screw Nominal Ø Length [mm] [mm]	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 ± 0.80	█	█	█	█	█	█	█	█	█	█
70 ± 0.80	█	█	█	█	█	█	█	█	█	█
80 ± 0.80	█	█	█	█	█	█	█	█	█	█
90 ± 0.80	█	█	█	█	█	█	█	█	█	█
100 ± 0.80	█	█	█	█	█	█	█	█	█	█

Production with partial thread is possible