

Westfield Fasteners Product Specification:

DIN 7981 - Pozi Pan Self Tapping Screws Type C

This product guide contains the specification for metric threaded socket head button screws as available from Westfield Fasteners. The basis of this specification is the DIN standard DIN 7981.

Product Description

Self tapping screws are normally used with sheet metal and plastics. This variant has a pan head with a pozi pattern drive. As the name suggests, this type of screw forms its own mating thread as it is installed into a pre-drilled hole.

There are many different types of screw that could be defined as 'self tapping', including several more modern designs. The self tapping screws defined here are the long established type adhering to DIN 7981. The same thread forms with differing head types are defined in other standards. These self tapping screws are manufactured in gauge sizes, from number 2 up to number 14, but these sizes are usually stated alongside the millimetre equivalent.

Scope of the DIN standard.

DIN 7981 specifies the tolerances and variation in form of pozi pan head tapping screws, for sizes from No.2 (2.2 mm) up to and including No.14 (6.3 mm). Figure 1 and table 1 below defines the overall dimensions and tolerances of this screw type. Table 2 defines the tolerance on the shank length. Although the DIN 7981 standard has now been superceded by ISO 7049, off the shelf parts are generally still manufactured to the older specification.

Self tapping screw thread forms have historically been classified in a number of different ways, and can cause some confusion. The DIN 7981 standard defines the thread form featuring spaced threads and a cone or pointed tip that we are concerned with here as a 'Type C'. This thread form is also known as 'Type AB' elsewhere. These type definitions help to differentiate these cone pointed tapping screws from the square ended or dog point 'Type F' (also known as 'Type B' or 'Type BZ', depending on who you ask).

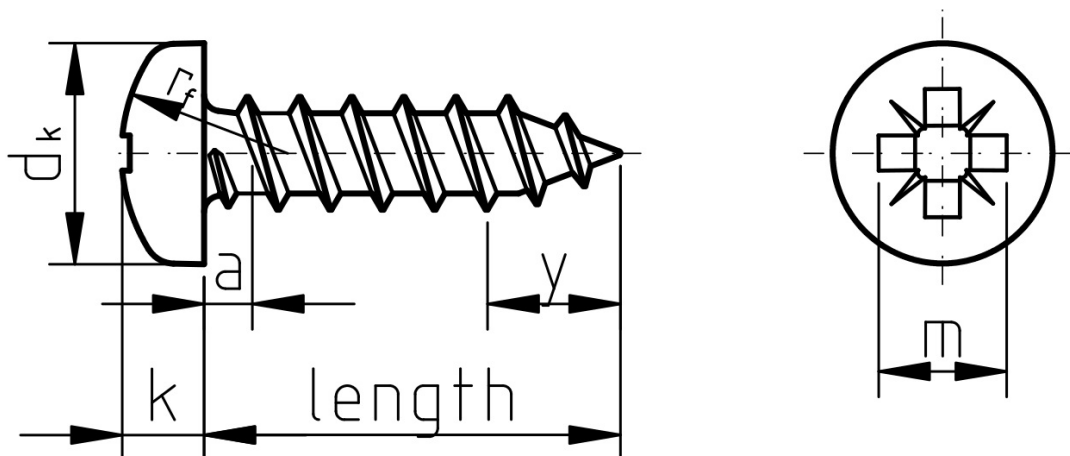


Figure 1: Pozi Pan Self Tapping Screw Type C

Table 1: Dimensions and Tolerances according to DIN 7981 (mm)

Thread Size		2.2 (no.2)	2.9 (no.4)	3.5 (no.6)	3.9 (no.7)	4.2 (no.8)	4.8 (no.10)	5.5 (no.12)	6.3 (no.14)	
p		0.8	1.1	1.3	1.3	1.4	1.6	1.8	1.8	
a	max	0.8	1.1	1.3	1.3	1.4	1.6	1.8	1.8	
d _k	max=nom	4.2	5.6	6.9	7.5	8.2	9.5	10.8	12.5	
	min	3.9	5.3	6.54	7.14	7.84	9.14	10.37	12.07	
k	max=nom	1.8	2.2	2.6	2.8	3.05	3.55	3.95	4.55	
	min	1.55	1.95	2.35	2.55	2.75	3.25	3.65	4.25	
r	max	0.3	0.4	0.5	0.5	0.6	0.7	0.8	0.9	
r _f	=	3.4	4.4	5.4	5.8	6.2	7.2	8.2	9.5	
Cross Recess	Cross Recess No.		1		2				3	
	Type Z	m =	2.4	2.9	3.9	4.1	4.3	4.7	6.2	6.7
		Penetration Depth min	1.1	1.58	1.47	1.7	1.88	2.28	2.51	3.02
		Penetration Depth max	1.35	1.83	1.93	2.16	2.34	2.74	2.97	3.48
y max		Type C	2	2.6	3.2	3.5	3.7	4.3	5	6
		Type F	1.6	2.1	2.5	2.7	2.8	3.2	3.6	3.6

Table 2: Shank Length Tolerance according to DIN 7981 (mm)

Nominal Length	Type C	
	min	max
4.5	3.7	5.3
6.5	5.7	7.3
9.5	8.7	10.3
13	12.2	13.8
16	15.2	16.8
19	18.2	19.8
22	21.2	22.8
25	24.2	25.8
32	30.7	33.3
38	36.7	39.3

For verification of details and for further information please refer to the DIN standard document for this item.
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