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Westfield Fasteners Product Specification:

DIN 85 - Slotted Pan Head Screws

This product guide contains the specification for metric threaded slotted pan head screws as available from Westfield Fasteners. The basis of this specification is the DIN standard DIN 85.

Product Description

Similar to DIN 84 cheese head machine screws with the slot drive, but with a larger head diameter and a slightly different profile.

Scope of the DIN standard.

DIN 85 specifies the characteristics, tolerances and variation in form of slotted pan head machine screws, and covers metric thread diameters from M1.6 up to and including M10. Table 1 below defines the overall dimensions and tolerances of this screw type. Table 2 defines the tolerance on the shank length.

DIN 85 has specific provision for carbon steel, A2 stainless steel and non ferrous metals such as brass. Screws manufactured in other materials will be based on these dimensions where possible.

Although the DIN 85 standard has now been superseded by ISO 1207, off the shelf parts are generally still manufactured to the older specification. The ISO standard specifies new head diameters for M3 and M5.

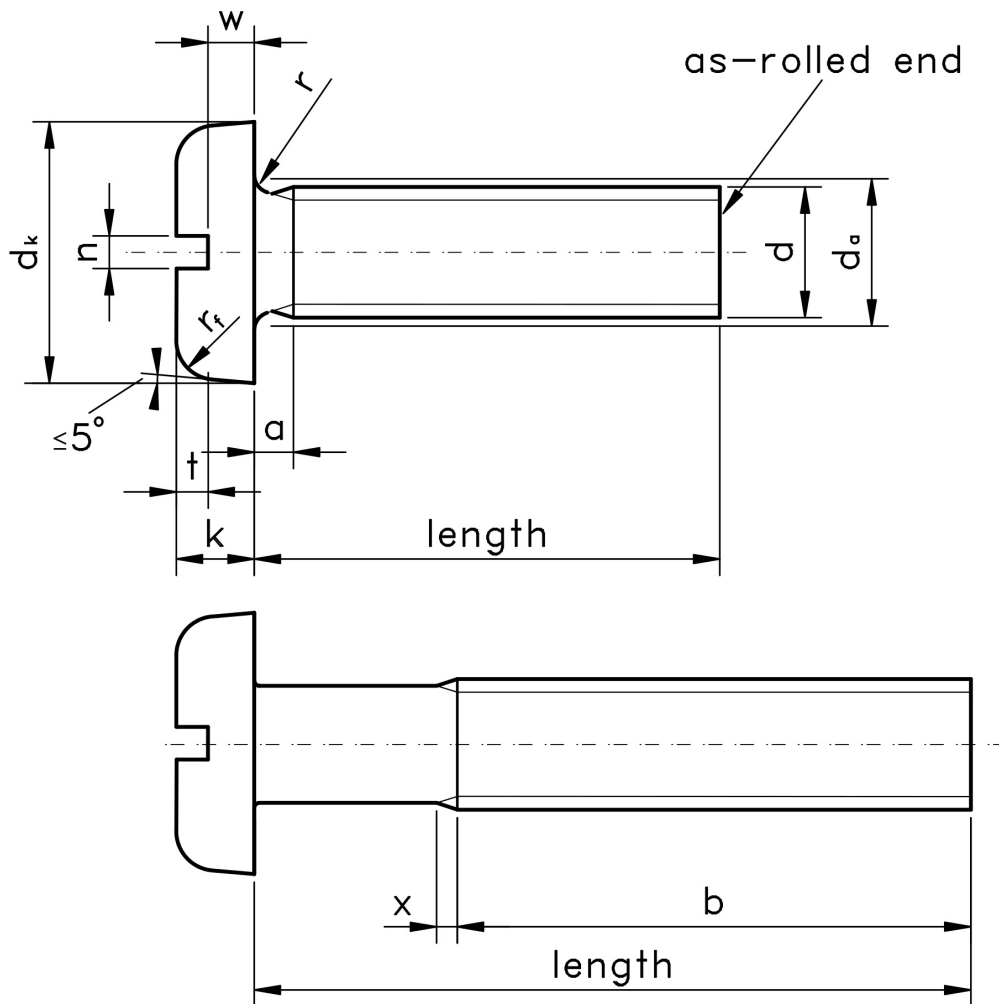


Figure 1: Slotted Pan Head Machine Screw

Variations from DIN 85

The DIN standard allows for a partially threaded shank, but off the shelf slotted cheese head machine screws are seldom seen with this variation. Please note that due to manufacturing limitations, all nylon variants of these items are only "similar to" and not "in absolute accordance with" this standard.

Table 1: Dimensions & Tolerances according to DIN 85

Thread, d		M1.6	M2	M2.5	M3	M3.5	M4	M5	M6	M8	M10
p		0.35	0.4	0.45	0.5	0.6	0.7	0.8	1	1.25	1.5
a	max	0.7	0.8	0.9	1	1.2	1.4	1.6	2	2.5	3
b	min	25	25	25	25	38	38	38	38	3	38
d _k	nom=max	3.2	4.0	5.0	5.6	7.00	8.00	9.50	12.00	16.00	20.00
	min	2.9	3.7	4.7	5.3	6.64	7.64	9.14	11.57	15.57	19.48
d _a	max	2	2.6	3.1	3.6	4.1	4.7	5.7	6.8	9.2	11.2
k	nom=max	1.00	1.30	1.50	1.80	2.10	2.40	3.00	3.60	4.80	6.00
	min	0.86	1.16	1.36	1.66	1.96	2.26	2.86	3.30	4.50	5.70
n	nom	0.4	0.5	0.6	0.8	1	1.2	1.2	1.6	2	2.5
	max	0.60	0.70	0.80	1.00	1.20	1.51	1.51	1.91	2.31	2.81
	min	0.46	0.56	0.66	0.86	1.06	1.26	1.26	1.66	2.06	2.56
r	min	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.25	0.4	0.4
r _f	ref	0.5	0.6	0.8	0.9	1	1.2	1.5	1.8	2.4	3
t	min	0.35	0.50	0.60	0.70	0.80	1.00	1.20	1.40	1.90	2.40
w	min	0.3	0.4	0.5	0.7	0.8	1.0	1.2	1.4	1.9	2.4
x	max	0.9	1.0	1.1	1.25	1.5	1.75	2.0	2.5	3.2	3.8

Table 2: Shank Length Tolerance according to DIN 85

shank length (mm)	+/- (mm)
2-3	0.2
4-6	0.24
8-10	0.29
12-16	0.35
20-30	0.42
35-50	0.5
55-80	0.95

For further details, please refer to the ISO/DIN standard document for this item.