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Westfield Fasteners Product Specification:

ISO 14583 - Torx Drive Pan Head Screws

This product guide contains the specification for metric threaded hexalobular or torx drive pan head screws, a series of standard parts available from Westfield Fasteners. The basis of this specification is the ISO standard ISO 14583.

Product Description

Also known as star, 6 lobe, and hexalobular internal. Torx screws are commonly found on cars, motorcycles, bicycle brake systems, hard disk drives, computer systems and consumer electronics and are becoming increasingly popular. The Torx design allows for a higher torque to be exerted than a similarly sized conventional hex socket head.

Scope of the ISO standard.

This variant of torx pan screws is made to ISO 14583. This international standard specifies the dimensions, tolerances and the variation in form of this screw type, for sizes from M2 up to and including M10. Refer to figure 1 and table 1 below for dimensions and tolerances. Table 2 shows the tolerances on the shank length.

Before the introduction of ISO 14583 torx pan head screws were manufactured to dimensions based on the phillips or pozi pan head screws defined in DIN 7985. The two standards specify slightly different head dimensions from each other.

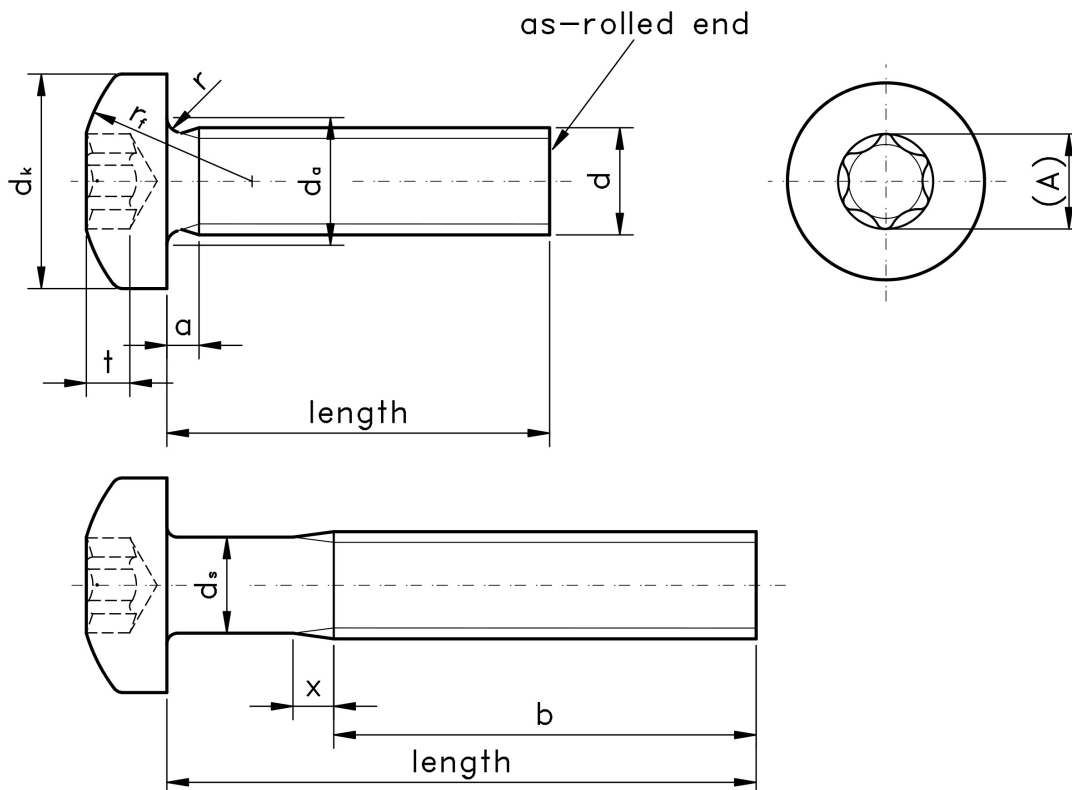


Figure 1: Hexalobular Socket Pan Head Screw

Notes to figure 1:

- ds - The shank diameter, which is approximate to the pitch diameter or equal to the major thread diameter.

Table 1: Dimensions & Tolerances according to ISO 14583

Thread, d		M2	M2.5	M3	M3.5	M4	M5	M6	M8	M10	
Thread Pitch, p		0.4	0.45	0.5	0.6	0.7	0.8	1.0	1.25	1.5	
a	max	0.8	0.9	1	1.2	1.4	1.6	2	2.5	3	
b	min	25	25	25	38	38	38	38	38	38	
d _a	max	2.6	3.1	3.6	4.1	4.7	5.7	6.8	9.2	11.2	
d _k	nom=max	4.0	5.0	5.6	7.0	8.0	9.5	12.0	16.0	20.0	
	min	3.7	4.7	5.3	6.64	7.64	9.14	11.57	15.57	19.48	
k	nom=max	1.60	2.10	2.40	2.60	3.10	3.70	4.60	6.00	7.50	
	min	1.46	1.96	2.26	2.46	2.92	3.52	4.30	5.70	7.14	
r	min	0.1	0.1	0.1	0.1	0.2	0.2	0.25	0.4	0.4	
r _f	=	3.2	4	5	6	6.5	8	10	13	16	
x	max	1.0	1.1	1.25	1.5	1.75	2.0	2.5	3.2	3.8	
Socket No.		6	8	10	15	20	25	30	45	50	
Hexalobular Socket	A	ref	1.75	2.40	2.80	3.35	3.95	4.50	5.60	7.95	8.95
	t	max	0.77	1.04	1.27	1.33	1.66	1.91	2.42	3.18	4.02
		min	0.63	0.91	1.01	1.07	1.27	1.52	2.02	2.79	3.62

Table 2: Shank Length Tolerance according to ISO 14583

Shank Length (mm)	+/- (mm)
3	0.2
4-6	0.24
8-10	0.29
12-16	0.35
20-30	0.42
35-50	0.5
55-60	0.6

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