



Westfield Fasteners Product Specification:

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Similar to ISO 7380 part 2 - Torx Drive Button Head Screws with Flange

This product guide contains the specification for metric threaded torx drive button screws with flange, a series of parts available from Westfield Fasteners. The basis of this specification is the ISO standard ISO 7380 part 2.

Product Description

A popular and attractive torx drive screw with an integrated flange offering a wider head for fixing into softer materials. Typically used where aesthetics are important, or where a lower profile domed finish is required. Manufactured with details based on ISO 7380 part 2, but with a torx or hexalobular drive in place of socket hex.

Scope of this Specification.

Dimensions and tolerances for torx button head screws with flange are based on the ISO standard ISO 7380 part 2. This standard is specific to hex socket drive variants of this screw type, but ISO 7380 part 4 is currently under development and will be specific to torx or hexalobular variants. All information given below is adapted from ISO 7380 part 2.

ISO 7380 part 2 covers metric thread diameters from M2 up to and including M12. Mechanical properties for these items are defined in ISO 898 and ISO 3506.

Table 1 below defines the overall dimensions and tolerances of this screw type. Table 2 defines the tolerances on the shank length, whilst table 3 shows the reduced minimum ultimate tensile loads for this product. The information in table 3 is presented here because due to their head design torx button screws are considered to have reduced loadability over other screw types, as defined in ISO 898 and ISO 3506.

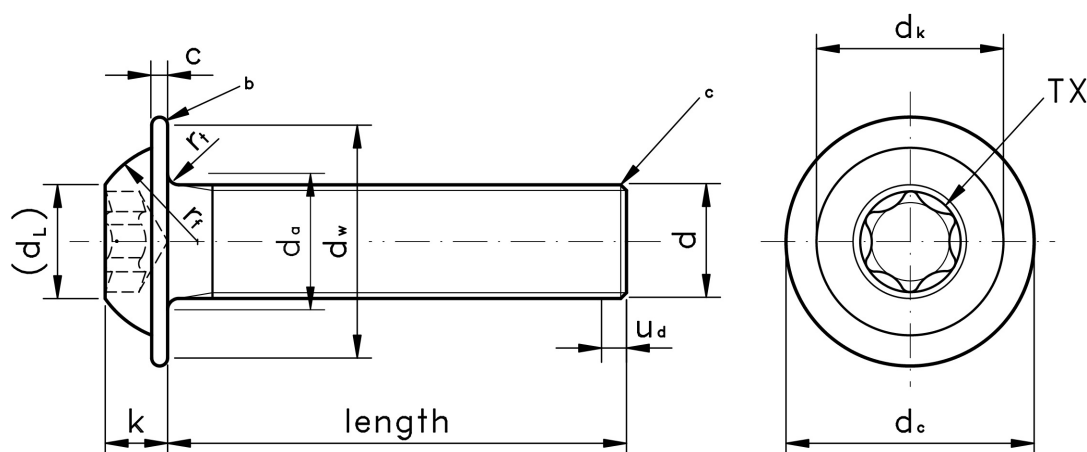


Figure 1: Socket Torx Drive Button Head Screw with Flange

Notes to figure 1:

- Under head radius (rt) is for a fully threaded screw.
- This contour (b) may vary in shape between batches, and is defined at the discretion of the manufacturer.
- The tip of the shank may finish with a chamfer or for sizes of M4 or less, rolled.
- The tip of the shank (d) may include up to 2 incomplete threads.

General Notes

Manufacturer and/or material markings may be present on the domed part of the head.

Table 1: Dimensions & Tolerances based on ISO 7380-2 (mm)

Thread, d		M2	M2.5	M3	M4	M5	M6	M8	M10	M12
p		-	-	0.5	0.7	0.8	1	1.25	1.5	1.75
b	ref	-	-	18	20	22	24	28	32	36
c	max	-	-	0.7	0.8	1.0	1.2	1.5	2.0	2.4
	min	-	-	0.55	0.65	0.80	1.00	1.25	1.70	2.10
d _a	max	-	-	3.6	4.7	5.7	6.8	9.2	11.2	13.7
d _c	max	-	-	6.9	9.4	11.8	13.6	17.8	21.9	26.0
	min	-	-	6.32	8.82	11.10	12.90	17.10	21.06	25.16
d _k	max	-	-	5.2	7.2	8.8	10.0	13.2	16.5	19.4
	min	-	-	4.9	6.8	8.4	9.6	12.8	16.1	18.9
d _L	ref	-	-	2.6	3.8	5.0	6.0	7.7	10.0	12.0
d _s	max	-	-	3	4	5	6	8	10	12
	min	-	-	2.86	3.82	4.82	5.82	7.78	9.78	11.73
d _w	min	-	-	5.74	8.24	10.40	12.20	16.40	20.22	24.32
k	max	-	-	1.65	2.20	2.75	3.30	4.40	5.50	6.60
	min	-	-	1.40	1.95	2.50	3.00	4.10	5.20	6.24
r _f	max	-	-	3.70	4.60	5.75	6.15	7.95	9.80	11.20
	min	-	-	3.30	4.20	5.25	5.65	7.45	9.20	10.50
r _t	min	-	-	0.30	0.40	0.45	0.50	0.70	0.70	1.10
TX		-	-	T10	T20	T25	T30	T40	T50	-

Table 2: Shank Length Tolerance based on ISO 7380-2

thread length (mm)	+/- (mm)
6	0.24
8-10	0.29
12-16	0.35
20-30	0.42
35-50	0.5
55-90	0.6

Table 3: Reduced Ultimate Tensile Loads based on ISO 7380-2

Thread, d	Property Class	
	8.8	10.9
	Reduced Minimum Ultimate Tensile Load, N	
M3	3220	4180
M4	5620	7300
M5	9080	1180
M6	12900	16700
M8	23400	30500
M10	37100	48500
M12	53900	70200
M16	100000	130000