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Westfield Fasteners Product Specification:

DIN 966 - Phillips Raised Countersunk Head Screws (type H cross head)

This product guide contains the specification for metric threaded phillips raised countersunk head screws as available from Westfield Fasteners. The basis of this specification is the DIN standard DIN 966.

Product Description

A countersunk headed screw incorporating a slightly raised head which gives it an attractive finish when fitted. This particular variant is phillips driven.

Scope of the ISO standard.

DIN 966 defines the form and dimensional tolerances for phillips raised countersunk screws, with metric thread diameters of sizes M1.6 up to and including M10. The DIN 966 standard covers both pozi (type Z) and phillips (type H) drives. Table 1 below defines the overall dimensions and tolerances of this screw type, and should be used in conjunction with the diagram in figure 1. Table 2 defines the tolerance on the screw length. As figure 1 illustrates, the length is taken from the end of the shank up to the point where the head would sit flush on the workpiece, and disregarding the dome on the head.

Although the DIN 966 standard has now been superseded by ISO 7047, off the shelf parts are generally still manufactured to the older specification. The ISO standard specifies some revised dimensions and tolerances.

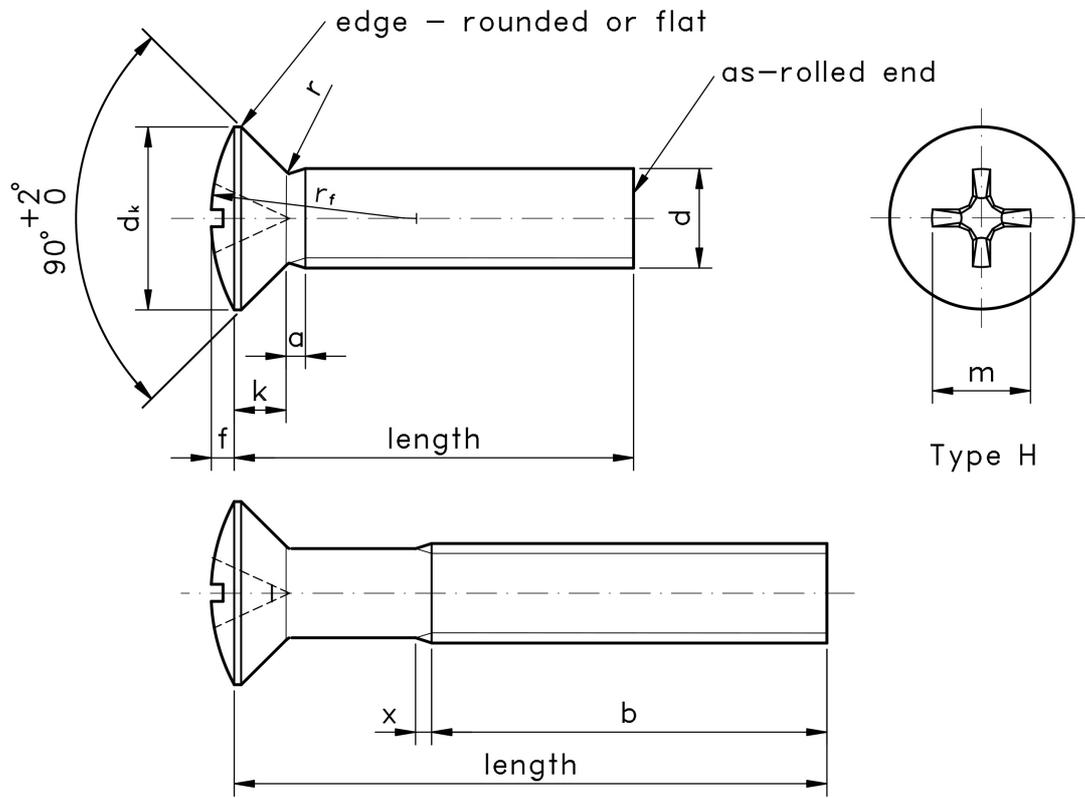


Figure 1: Phillips Raised Countersunk Head Machine Screw

Variations from DIN 966

The DIN standard allows for a partially threaded shank, but off the shelf phillips or pozi raised countersunk head machine screws are seldom seen with this variation.

Table 1: Dimensions & Tolerances according to DIN 966

Thread, d		M1.6	M2	M2.5	M3	M3.5	M4	M5	M6	M8	M10	
thread pitch (standard metric coarse)	P	0.35	0.4	0.45	0.5	0.6	0.7	0.8	1	1.25	1.5	
minimum thread length	b ref.	15	16	18	19	20	22	25	28	34	40	
head diameter	d_k max. = nominal size	3.0	3.8	4.7	5.6	6.5	7.5	9.2	11.0	14.5	18.0	
	d_k min.	2.75	3.5	4.4	5.3	6.14	7.14	8.84	10.57	14.07	17.57	
dome height	$f \approx$ (approx.)	0.4	0.5	0.6	0.75	0.9	1.0	1.25	1.5	2.0	2.5	
countersunk height	k max.	0.96	1.2	1.5	1.65	1.93	2.2	2.5	3.0	4.0	5.0	
neck radius	r max.	0.4	0.5	0.7	0.8	0.95	1.0	1.3	1.6	2.0	2.5	
dome radius	$r_f \approx$ (approx.)	3	4	5	6	7	8	10	12	16	20	
thread runout	x max.	0.9	1	1.1	1.25	1.5	1.75	2	2.5	3.2	3.8	
Recess no.		0	1			2			3	4		
recess width	$m \approx$ (approx.)	1.9	2.5	2.7	3.1	4.2	4.5	5.3	6.8	9.0	10.0	
penetration depth	min.	0.74	1.1	1.3	1.7	1.74	2.04	2.77	3.03	4.18	5.38	
	max.	1.1	1.4	1.6	2.0	2.24	2.54	3.27	3.53	4.68	5.88	

Table 2: Shank Length Tolerance according to DIN 966

shank length (mm)	+/- (mm)
3	0.20
4-6	0.25
8-10	0.30
12-16	0.35
20-30	0.40
35-50	0.50
55-60	1.00

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