



Westfield Fasteners Product Specification:

DIN 938 - Engineering Studs with Thread Engagement 1 x Thread Diameter

This product guide contains the specification for Double Ended Engineers Studs with a length of engagement equal to 1 x thread diameter. They are a stock item available from Westfield Fasteners.

Product Description

Studs are short sections of metal rod threaded at both ends, with a plain shank inbetween. The thread proportion at the 'stud end' varies between standards, but this type, DIN 938, specifies this length at 1 x the thread diameter. The stud end is designed to be screwed into a tapped hole, whilst the 'nut end' of the stud is used for securing the mating part with a nut.

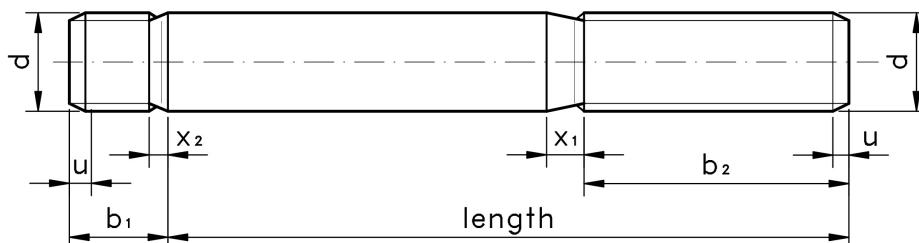
A stud as part of an assembly has a couple of advantages over bolts, being helpful in initially locating the components and from there making it easier to apply an accurate amount of torque. Engineering studs are also known as engineers studs and double ended studs to help differentiate them from the fully threaded type.

Scope of the DIN Standard

DIN 938 defines these stud's form, with figure 1 and table 1 below of this specification showing the key dimensions and tolerances for sizes M3 to M52. Non preferred threads are listed in brackets in table 1. Non preferred thread sizes are not generally recommended for new applications.

The DIN standard includes metric fine pitch threads, but if these become available they would be covered in a separate specification.

The ends of these studs conform to DIN 78 for K type (chamfered) thread ends. The thread tolerance for the stud end is Sk6, whilst the nut end is 6g.



b_1 = stud end
 b_2 = nut end

u (incomplete thread):
 1.5 Pitch max

Figure 1: Engineers Stud to DIN 938

Table 1: Dimensions & Tolerances according to DIN 938 (mm)

d		M3	M4	M5	M6	(M7)	M8	M10	M12	(M14)	M16	(M18)
b₁		3	4	5	6	7	8	10	12	14	16	18
b₂	1)	12	14	16	18	20	22	26	30	34	38	42
	2)	18	20	22	24	26	28	32	36	40	44	48
	3)	-	-	-	-	-	-	45	49	53	57	61
x₁		1.25	1.75	2.0	2.5	2.5	3.2	3.8	4.3	5.0	5.0	6.3
x₂		0.7	0.9	1.0	1.25	1.25	1.6	1.9	2.2	2.5	2.5	3.2

Table 1 Continued: Dimensions & Tolerances according to DIN 938 (mm)

d		M20	(M22)	(M24)	(M27)	M30	(M33)	M36	(M39)	M42	(M45)	M48	(M52)
b₁		20	22	24	25	30	32	35	38	42	45	48	52
b₂	1)	46	50	54	60	66	72	78	84	90	96	102	110
	2)	52	56	60	66	72	78	84	90	96	102	108	116
	3)	65	69	73	79	85	91	97	103	109	115	121	129
x₁		6.3	6.3	7.5	7.5	9.0	9.0	10.0	10.0	11.0	11.0	12.5	12.5
x₂		3.2	3.2	3.8	3.8	4.5	4.5	5.0	5.0	5.5	5.5	6.3	6.3

For further details, please refer to the DIN standard document for this item. E&OE