UDC 621.882.219.4 : 62-229.312.2 August 1993

Grub screws with thrust point

DIN 6332

Gewindestifte mit Druckzapfen

Supersedes January 1981 edition.

In keeping with current practice in standards published by the International Organization for Standardization (ISO), a comma has been used throughout as the decimal marker.

Dimensions in mm

1 Scope and field of application

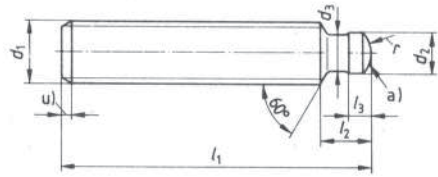
This standard specifies requirements for grub screws with a thrust point which, together with controlling elements, wing nuts or knurled nuts, are suitable for clamping with the thrust point directly or using a DIN 6311 thrust pad attached to the thrust point.

2 Dimensions and designation

Details left unspecified are to be selected as appropriate.

For general tolerances, tolerance class m as specified in ISO 2768-1 shall apply.

Type S (suitable for accommodating thrust pads with snap ring)



u) Incomplete thread: 2 P maximum.
DIN 78-K thread end.

a) Thrust face.

Figure 1: Grub screw with thrust point

Designation of a type S M 12 grub screw with a length, l_1, of 60 mm:

Grub screw DIN 6332 – S M 12 × 60

Continued on pages 2 to 4.

Table 1

d_1	M 6	M 8	M 10	M 12	M 16	M 20
d_2 h11	4,5	6	8	8	12	15,5
d_3 $^{0}_{-0,1}$	4	5,4	7,2	7,2	11	14,4
r	3	5	6	6	9	13
l_2	6	7,5	9	10	12	14
l_3	2,5	3	4,5	4,5	5	5,5
l_1 js15	Mass per 100 units, in kg					
30	0,49	—	—	—	—	—
40	—	1,18	—	—	—	—
50	0,84	—	—	—	—	—
60	—	1,81	2,75	4,02	—	—
80	—	—	3,75	5,48	9,96	—
100	—	—	—	6,93	12,6	19,8
125	—	—	—	—	16,0	24,9
150	—	—	—	—	—	30,1

3 Material

Grub screws shall be made of steel of property class 5.8 as specified in DIN EN 20 898-1.

4 Design

Grub screws shall be of property class A as specified in ISO 4759-1. The hardness of the thrust face shall be 550 + 100 HV 10.

Where grub screws are slotted as specified in DIN 427, the designation shall read, for a slotted (Sz) type S M 12 grub screw with a length, l_1, of 60 mm, as follows:

Grub screw DIN 6332 – S M12 × 60 Sz

5 Examples of application

The type of gripping elements and their attachment to the screw is optional.

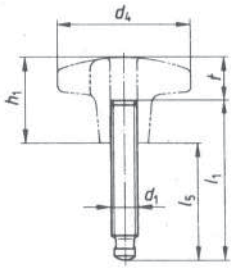


Figure 2: Clamping screw with DIN 6335 star handle or DIN 6336 machine knob

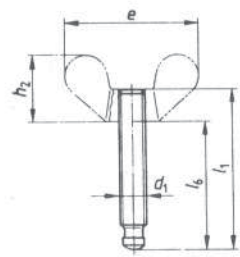


Figure 3: Clamping screw with DIN 315 wing nut for sizes M 6 to M 10

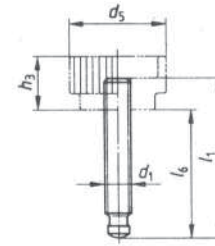


Figure 4: Clamping screw with DIN 6303 knurled nut for sizes M 6 to M 10

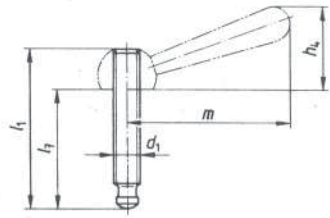
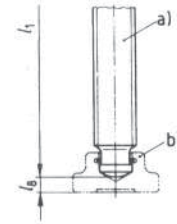


Figure 5: Clamping screw with DIN 99 lever for sizes M 10 to M 20



a) Grub screw
b) Thrust pad with snap ring

Figure 6: Clampinmg screw with thrust pad

Table 2

d_1	M 6	M 8	M 10	M 12	M 16	M 20
Star handle as in DIN 6335	D 32	D 40	D 50	D 63	—	—
Machine knob as in DIN 6336	D 32	D 40	D 50	D 63	—	—
Wing nut as in DIN 315	M 6	M 8	M 10	—	—	—
Knurled nut as in DIN 6303	AM 6	AM 8	AM 10	—	—	—
Clamping lever as in DIN 99	—	—	E 13 × M 10	E 16 × M 12	E 20 × M 16	E 25 × M 20
Thrust pad as in DIN 6311	S 12	S 16	S 20	S 25	S 32	S 40
d_4	32	40	50	63	—	—
d_5	24	30	36	—	—	—
e	32	40	50	—	—	—
h_1	20	25	32	40	—	—
h_2	16	20	25	—	—	—
h_3	14	17	20	—	—	—
h_4 ≈	—	—	38	47	59	76
l_8 ≈	2,2	3	3,6	4,5	5,3	5,6
m ≈	—	—	76	95	118	152
t	10	12	16	20	—	—

Table 3

l_1	l_5 for screws of size				l_6 for screws of size			l_7 for screws of size			
	M 6	M 8	M 10	M 12	M 6	M 8	M 10	M 10	M 12	M 16	M 20
30	20	—	—	—	22	—	—	—	—	—	—
40	—	27	—	—	—	30	—	—	—	—	—
50	40	—	—	—	42	—	—	—	—	—	—
60	—	47	44	40	—	50	48	45	41	—	—
80	—	—	64	60	—	—	68	65	61	55	—
100	—	—	—	80	—	—	—	—	81	75	69
125	—	—	—	—	—	—	—	—	—	100	94
150	—	—	—	—	—	—	—	—	—	—	119

Standards referred to

DIN 78	Thread ends and lengths of projection of bolt ends for ISO metric screw threads in accordance with DIN 13 series
DIN 99	Clamping levers
DIN 315	Wing nuts
DIN 427	Slotted headless screws with chamfered end
DIN 6303	Knurled nuts
DIN 6311	Thrust pads
DIN 6335	Star handles
DIN 6336	Machine knobs
DIN 6773 Part 4	Heat treatment of ferrous materials; heat treated parts, representation and indications on drawings; case hardening
DIN EN 20 898-1	Mechanical properties of fasteners; bolts, screws and studs (ISO 898-1 : 1988)
ISO 2768-1 : 1989	General tolerances; tolerances for linear and angular dimensions without individual tolerance indications
ISO 4759-1 : 1978	Tolerances for fasteners; bolts, screws, and nuts with thread diameters from 1,6 to 150 mm and product grades A, B and C

Other relevant standard

DIN 267 Part 2 Fasteners; technical delivery conditions; surface discontinuities on nuts

Previous editions

DIN 6301: 12.31, 05.40; DIN 6302: 12.31, 05.40; DIN 6308: 12.31, 05.40x; DIN 6332: 05.40, 05.68, 07.80, 01.81.

Amendments

The following amendments have been made to the January 1981 edition.

a) In figure 1, dimension l_4 has been omitted and is now defined as incomplete thread.

b) In table 2, l_5 has been replaced by l_8.

c) In clause 4, the hardness of the thrust face has been changed to 550 + 100 HV (as specified in DIN 6773 Part 4).

d) The standard has been editorially revised.

International Patent Classification

F 16 B 035/00