DEUTSCHE NORM November 2000

Stud ends and tapped holes with pipe thread, for use with compression couplings, valves and screw plugs
Dimensions

DIN 3852-2

ICS 23.040.01

Supersedes November 1991 edition.

Einschraubzapfen, Einschraublöcher, für Rohrverschraubungen, Armaturen, Verschlussschrauben mit Whitworth-Rohrgewinde – Konstruktionsmaße

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.

Foreword

This standard has been prepared by the *Arbeitsausschuss Rohrverschraubungen* (Compression Couplings Standards Committee).

Amendments

This standard differs from the November 1991 edition as follows:

a) Dimensions have been harmonized with those specified in ISO/DIS 1179-1 and ISO/DIS 1179-4.
b) Type E stud ends are no longer specified.
c) The standard has been editorially revised.

Previous editions

DIN 3852-2: 1953x-08, 1964-10, 1991-11.

All dimensions are in millimetres.

1 Scope

This standard specifies the dimensions and designation for stud ends and tapped holes with pipe thread for use with compression couplings, valves and screw plugs.

The dimensions comply with those given in ISO 1179-1 and ISO 1179-4.

2 Normative references

This standard incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text, and the titles of the publications are listed below. For dated references, subsequent amendments to or revisions of any of these publications apply to this standard only when incorporated in it by amendment or revision. For undated references, the latest edition of the publication referred to applies.

DIN 3858	Pipe threads for compression couplings – Parallel internal threads and metric taper external threads – Thread dimensions
ISO 228-1 : 1994	Pipe threads where pressure-tight joints are not made on the threads – Part 1: Dimensions, tolerances and designation
ISO/DIS 1179-1 : 1995	Connections for general use and fluid power – Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing – Part 1: Threaded ports
ISO/DIS 1179-4 : 1995	Connections for general use and fluid power – Ports and stud ends with ISO 228-1 threads with elastomeric or metal-to-metal sealing – Part 4: Stud ends for general use only with metal-to-metal sealing (type B)

Continued on pages 2 to 6.

Translation by DIN-Sprachendienst.

In case of doubt, the German-language original should be consulted as the authoritative text.

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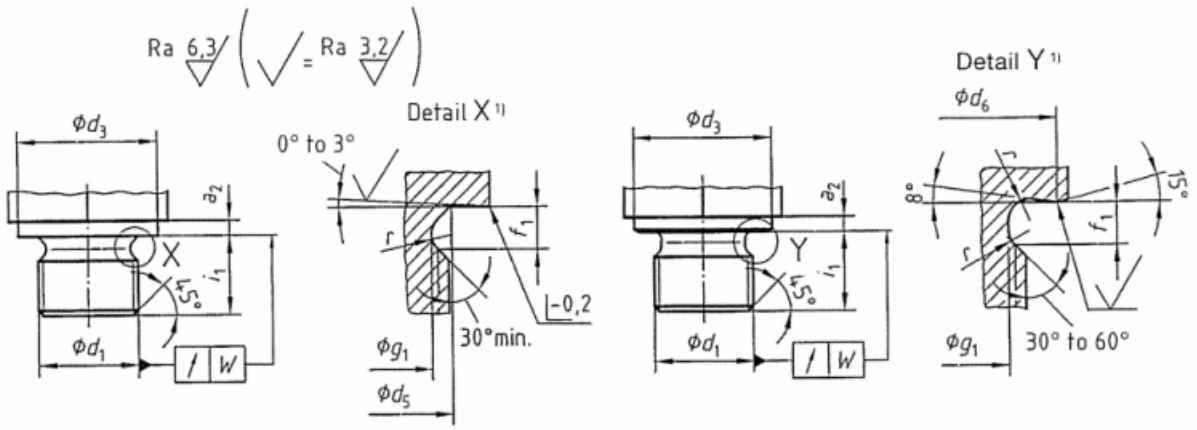
3 Dimensions and designation

3.1 Stud ends

3.1.1 Types

Type A, with sealing by washer

Type B, with sealing by compression against face of body



1) Thread chamfered to minor diameter.

Type C, with sealing in tapered thread

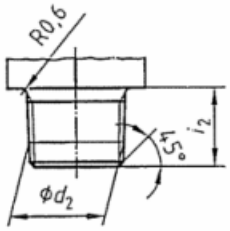


Figure 1: Stud end dimensions (notation)

Table 1: Stud end dimensions

Thread size for		a_2	d_3[1]		d_5	d_6	Groove dimensions		Standard design i_1	Short design i_1	Standard design i_1	Short design i_1	Standard design i_2[2]	Short design i_2[2]	r	W
types A and B stud ends (d_1)	type C stud ends (d_2)		Small	Large			f_1	g_1	With standard tapped hole only	With standard and short tapped holes	With standard tapped hole only	With standard and short tapped holes	With standard tapped hole only	With standard and short tapped holes		
									in compression couplings and valves		in screw plugs					
		Min.	0 −0,4	Max.	0 −0,3	0 −0,5	+0,3 0	0 −0,2	± 0,2				Min.		Min.	
G 1/8 A	R 1/8	1,5	14	18	10	13	2	8,3	8	8	8	6	8	6,5	1	0,1
G 1/4 A	R 1/4	2	18	24	13,4	17	3	11,2	12	10	12	8	12	10	1,2	
G 3/8 A	R 3/8	2,5	22	27	17	21	3	14,7	12	10	12	8	12	10	1,2	
G 1/2 A	R 1/2	3	26	33	21,3	25	4	18,4	14	12	14	10	14	12	1,2	
G 3/4 A	R 3/4	3	32	41	26,7	30	4	23,9	16	12	16	12	16	14	1,2	0,2
G 1 A	R 1	3	39	46	33,5	37	5	29,9	18	12	16	–	–	14	1,6	
(G 1 1/8 A)[3]	–	3	44	50	38,2	42	5	34,6	20	14	16	–	–	–	1,6	
G 1 1/4 A	R 1 1/4	3	49	57	42,2	47	5	38,6	20	14	16	–	–	15	1,6	
(G 1 3/8 A)[3]	–	3	51	56	44,6	49	5	41	22	14	–	–	–	–	1,6	
G 1 1/2 A	R 1 1/2	3	55	64	48,1	53	5	44,5	22	14	16	–	–	15	1,6	
(G 1 3/4 A)[3]	–	3,5	62	68	54	60	5	50,4	24	14	20	–	–	–	1,6	
G 2 A	–	3,5	68	75	60	–	5	56,3	24	14	20	–	–	–	1,6	

[1] Where sealing is by compression against the face, d_3 shall preferably be small.

[2] Type C stud ends with i_2 of the short design shall be provided with a taper screw thread with a useful thread of short length, with the thread length being in compliance with the specifications for taper screw threads given in DIN 3858.

[3] The sizes given in brackets shall not be used in pipework applications.

3.1.2 Screw threads

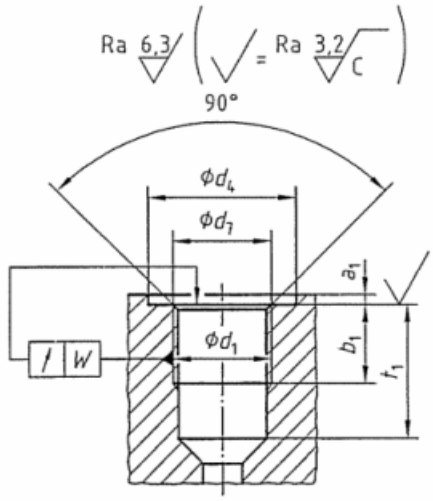
Type A stud ends shall be provided with a pipe thread as in ISO 228-1, tolerance class A. Type C stud ends shall be provided with a pipe thread as in DIN 3858, tolerance position 1 (for standard design), or tolerance position 2 (for short design).

3.2 Tapped holes

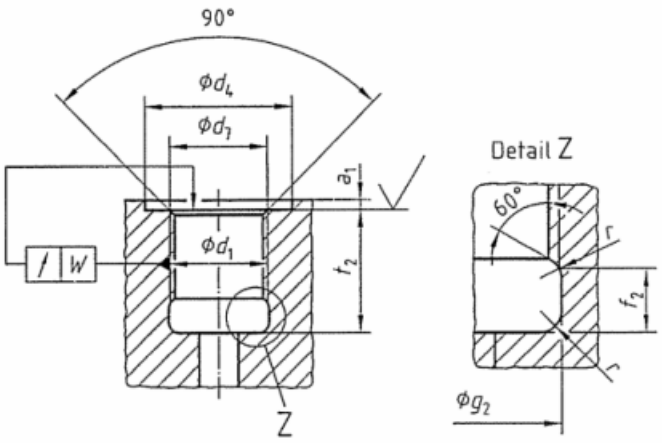
Types X and Y tappped holes are intended for use with types A and B stud ends.

3.2.1 Types

Type X, with run-out



Type Y, with groove



Type Z tapped holes are intended for use with type C stud ends.
Thread countersunk to dimension d_1.

Type Z, with run-out

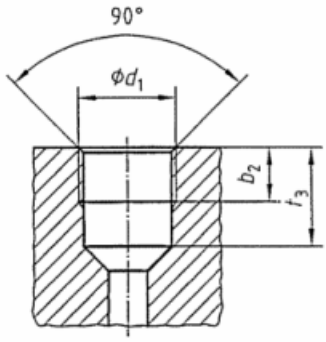


Figure 2: Tapped hole dimensions (notation)

Table 2: Tapped hole dimensions

Thread size (d_1) for		a_1	Standard design b_1	Short design b_1	Standard design b_2	Short design b_2	d_4 [1), 2)]		d_7		Groove dimensions				Standard design t_1	Short design t_1	Standard design t_2	Short design t_2	Standard design t_3	Short design t_3	W
types X and Y tapped holes	type Z tapped holes		for standard and short stud ends	for short stud ends only	for standard and short stud ends	for short stud ends only	Small	Large		Lim. dev.	f_2 Standard design	f_2 Short design	g_2	r	for standard and short stud ends	for short stud ends only	for standard and short stud ends	for short stud ends only	for standard and short stud ends	for short stud ends only	
		Max.	Minimum		Minimum		Minimum				+ 0,3 0		+ 0,3 0		Minimum		Minimum [3)]		Minimum		
G 1/8	Rp 1/8	1	8	6	5,5	4,8	15	19	9,8		3	2	9,9	1	10	8	11	8	8,5	6,8	
G 1/4	Rp 1/4	1,5	12	9	8,5	7,5	20	25	13,2		4	3	13,4	1,2	15	12	18	12	12,5	10,5	0,1
G 3/8	Rp 3/8	2	12	9	8,5	7,5	23	28	16,7	+0,2 0	4	3	16,9	1,2	15	12	16	12	12,5	10,5	
G 1/2	Rp 1/2	2,5	14	12	10,5	9,5	28	34	21		6	4	21,2	1,2	18	16	20	16	16,5	13,5	
G 3/4	Rp 3/4	2,5	16	12	13	11,5	33	42	26,5		6	4	26,7	1,2	20	16	22	16	19	15,5	
G 1	Rp 1	2,5	18	14	–	11,5	41	47	33,3		8	5	33,5	1,6	23	19	24	19	–	16,5	
(G 1 1/8) [3)]	–	2,5	20	14	–	–	45	51	37,9		8	5	38,1	1,6	25	19	28	19	–	–	
G 1 1/4	Rp 1 1/4	2,5	20	14	–	11,5	51	58	42		8	5	42,1	1,6	25	19	28	19	–	16,5	0,2
(G 1 3/8) [3)]	–	2,5	22	14	–	–	52	59	44,4	+0,3 0	8	5	44,6	1,6	27	19	30	19	–	–	
G 1 1/2	Rp 1 1/2	2,5	22	14	–	11,5	56	65	47,9		8	5	48,1	1,6	27	19	30	19	–	16,5	
(G 1 3/4) [3)]	–	3	24	14	–	–	63	69	53,8		8	5	54	1,6	29	19	32	19	–	–	
G 2	–	3	24	14	–	–	69	76	59,7		8	5	59,9	1,6	29	19	32	19	–	–	

[1)] Where sealing is by compression against the face, d_4 shall preferably be of the small design.

[2)] The counterbore (d_4) may be dispensed with where no washer is used and where the contact face is flat and normal to the thread axis.

[3)] The sizes given in brackets shall not be used in pipework applications.