DEUTSCHE NORM May 2002

Ports and stud ends with metric fine pitch thread, for use with compression couplings, valves and screw plugs
Dimensions

DIN 3852-1

ICS 23.040.01

Einschraubzapfen – Einschraublöcher für Rohrverschraubungen, Armaturen – Teil 1: Verschlussschrauben mit metrischem Feingewinde – Konstruktionsmaße

This standard, together with DIN EN ISO 9974-1 and DIN EN ISO 9974-3, September 2000 editions, supersedes February 1992 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.

Foreword

This standard has been prepared by Technical Committee *Rohrverschraubungen* of the *Normenausschuss Rohrleitungen und Dampfkesselanlagen* (Pipelines and Pressure Vessels Standards Committee), taking into account the specifications of DIN EN ISO 9974-1 and DIN EN ISO 9974-3.

Amendments

This standard differs from the February 1992 edition as follows:

a) Dimensions d_4 for ports and d_3 for stud ends have been adopted from DIN EN ISO 9974-1 and DIN EN ISO 9974-3, respectively.

b) Type E stud ends are no longer specified.

c) Tolerances on d_3 and r have been specified (cf. table 1).

d) The standard has been editorially revised.

Previous editions

DIN KrG 403: 1931-12; DIN 7602: 1935-10, 1947-05; DIN 3852-1: 1953x-08, 1964-10, 1966-05, 1978-09, 1992-02.

All dimensions are in millimetres.

1 Scope

This standard specifies the dimensions and designation for ports and stud ends with metric fine pitch thread for use with compression couplings, valves and screw plugs.

NOTE: Ports and stud ends conforming to this standard should not be used for new designs in fluid power applications.

Continued on pages 2 to 8.

Translation by DIN-Sprachendienst.

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

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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 13-5	General purpose ISO metric screw threads – Nominal sizes for 1 mm and 1,25 mm fine pitch threads with diameters from 7,5 mm to 200 mm
DIN 13-6	General purpose ISO metric screw threads – Nominal sizes for 1,5 mm fine pitch threads with diameters from 12 mm to 300 mm
DIN 13-7	ISO metric screw threads – Nominal sizes for 2 mm fine pitch threads with diameters from 17 mm to 300 mm
DIN 13-14	ISO metric screw threads – Tolerance system for threads 1 mm in diameter and larger
DIN 158-1	Metric taper external and mating parallel internal screw threads – Dimensions, tolerances and inspection
DIN EN ISO 9974-1	Connections for general use and fluid power – Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing – Part 1: Threaded ports (ISO 9974-1 : 1996)
DIN EN ISO 9974-3	Connections for general use and fluid power – Ports and stud ends with ISO 261 threads with elastomeric or metal-to-metal sealing – Part 3: Stud ends with metal-to-metal sealing (type B) (ISO 9974-3 : 1996)

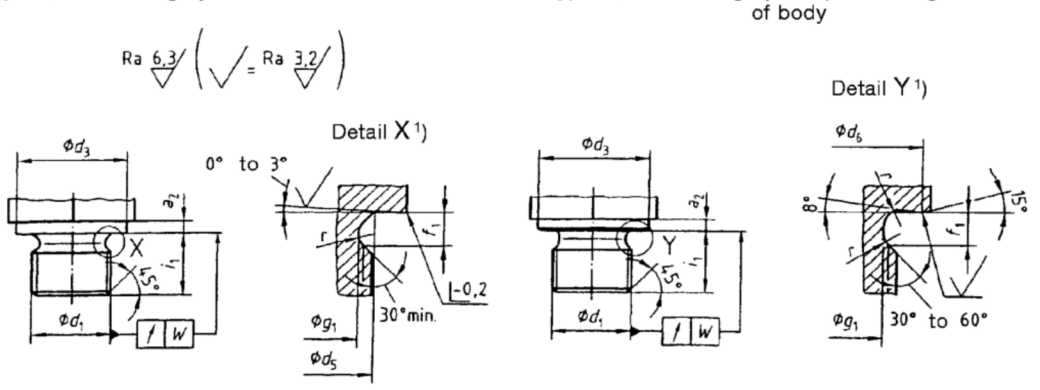
3 Dimensions and designation

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

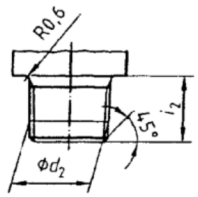


Figure 1: Stud end dimensions (notation)

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Table 1: Stud end dimensions

Thread size for		a_2	d_3[1]			d_5	d_6	Groove dimensions		Standard design (i_1)				Standard 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 ports only	With standard ports and ports with small d_4 value	With standard ports only	With standard ports and ports with small d_4 value	With standard ports only	With standard ports and ports with small d_4 value			
										in compression couplings and valves		in screw plugs							
		Min.	0 −0,2	0 −0,4	Max.	0 −0,3	0 −0,5	+0,3 0	0 −0,2	±0,2				Min.			±0,2	
M8 × 1•	M8 × 1 keg	1,5•	12•	12	16	8,3	11•	2•	6,4•	8•	8	8	6	8	6,5	1•	1	0,1•
M10 × 1•	M10 × 1 keg	1,5•	14•	14	19	10,3	13•	2•	8,4•	8•	8	8	6	8	6,5	1•	1	
M12 × 1,5•	M12 × 1,5 keg	2•	17•	17	24	12,3	16•	3•	9,7•	12•	10	12	9	12	10	1,2•	1,2	
M14 × 1,5•	M14 × 1,5 keg	2•	19•	19	24	14,3	18•	3•	11,7•	12•	10	12	9	12	10	1,2•	1,2	
M16 × 1,5•	M16 × 1,5 keg	2•	21•	21	27	16,3	20•	3•	13,7•	12•	10	12	9	12	10	1,2•	1,2	
M18 × 1,5•	M18 × 1,5 keg	2,5•	23•	23	29	18,3	22•	3•	15,7•	12•	10	12	9	12	10	1,2•	1,2	
M20 × 1,5•	M20 × 1,5 keg	2,5•	25•	25	33	20,3	24•	3•	17,7•	14•	12	14	9	14[3]	12[3]	1,2•	1,2	
M22 × 1,5•	M22 × 1,5 keg	3•	27•	27	33	22,3	26•	3•	19,7•	14•	12	14	9	14[3]	12[3]	1,2•	1,2	
M24 × 1,5	M24 × 1,5 keg	3	—	29	37	24,3	28	3	21,7	14	12	14	9	14[3]	12[3]	—	1,2	
M26 × 1,5•	M26 × 1,5 keg	3•	31•	31	41	26,3	30•	3•	23,7•	16•	12	16	9	—	14[3]	1,2•	1,2	0,2•
M27 × 2•	M27 × 2 keg	3•	32•	32	41	27,3	30,5•	4•	24•	16•	—	16	—	16	14	1,6•	1,6	
M30 × 1,5[4]	M30 × 1,5 keg[4]	3	—	36	43	30,3	34,5	3	27,7	—	12	16	9	—	—	—	1,2	
M30 × 2	M30 × 2 keg	3	—	36	43	30,3	34,5	4	27	16	12	16	9	—	14	—	1,6	
M33 × 2•	M33 × 2 keg	3•	39•	39	46	33,3	37•	4•	30•	18•	—	16	—	—	14	1,6•	1,6	
M36 × 1,5[4]	M36 × 1,5 keg[4]	3	—	42	49	36,3	40	3	33,7	—	—	16	—	—	—	—	1,2	
M36 × 2	M36 × 2 keg	3	—	42	49	36,3	40	4	33	18	—	16	—	—	15	—	1,6	
M38 × 1,5[4]	M38 × 1,5 keg[4]	3	—	44	51	38,3	42	3	35,7	—	14	16	12	—	—	—	1,2	
M39 × 2	M39 × 2 keg	3	—	46	52	39,3	44	4	36	—	—	16	—	—	15	—	1,6	
M42 × 1,5[4]	M42 × 1,5 keg[4]	3	—	49	55	42,3	47	3	39,7	—	—	16	—	—	—	—	1,2	

(continued)

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Table 1 (concluded)

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_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 ports only	With standard ports and ports with small d_4 value	With standard ports only	With standard ports and ports with small d_4 value	With standard ports only		With standard ports and ports with small d_4 value			
										in compression couplings and valves		in screw plugs							
		Min.	0 −0,2	0 −0,4	Max.	0 −0,3	0 −0,5	+0,3 0	0 −0,2	±0,2				Min.					±0,2	
M42 × 2•	M42 × 2 keg	3•	49•	49	57	42,3	47•	4•	39•	20•	—	16	—	—	15	1,6•	1,6		
M45 × 1,5[4]	M45 × 1,5 keg[4]	3	—	52	58	45,3	50	3	42,7	—	14	16	12	—	—	—	1,2		
M45 × 2	M45 × 2 keg	3	—	52	58	45,3	50	4	42	20	—	16	—	—	15	—	1,6		
M48 × 1,5[4]	M48 × 1,5 keg[4]	3	—	55	60	48,3	53	3	45,7	—	—	16	—	—	—	—	1,2		
M48 × 2•	M48 × 2 keg	3•	55•	55	64	48,3	53•	4•	45•	22•	—	16	—	—	15	1,6•	1,6		
M52 × 1,5[4]	M52 × 1,5 keg[4]	3	—	60	64	52,3	58	3	49,7	—	14	16	12	—	—	—	1,2		0,2•
M52 × 2	M52 × 2 keg	3	—	60	64	52,3	58	4	49	—	—	16	—	—	15	—	1,6		
M56 × 2	M56 × 2 keg	3	—	64	68	56,3	—	4	53	—	—	20	—	—	—	—	1,6		
M60 × 2	—	3	—	68	72	60,3	—	4	57	—	16	20	—	—	—	—	1,6		
M64 × 2	—	3	—	72	776	64,3	—	4	61	—	—	20	—	—	—	—	1,6		
M78 × 2	—	3	—	88	888	78,3	—	4	75	—	16	—	—	—	—	—	1,6		

NOTE: Thread sizes and values for type B stud ends marked • are identical with those specified in DIN EN ISO 9974-3.

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 as specified in DIN 158-1.

3) In the automotive industry, thread sizes M20 × 1,5 keg to M26 × 1,5 keg may be used with i_2 equal to 12 mm for the standard design, or equal to 10 mm for the short design, in accordance with DIN 158-1.

4) Size only to be used for LL type couplings.

3.1.2 Screw threads

Types A and B stud ends shall be provided with a metric fine pitch thread as in DIN 13-5 to DIN 13-7, and type C stud ends with a metric taper thread as in DIN 158-1.

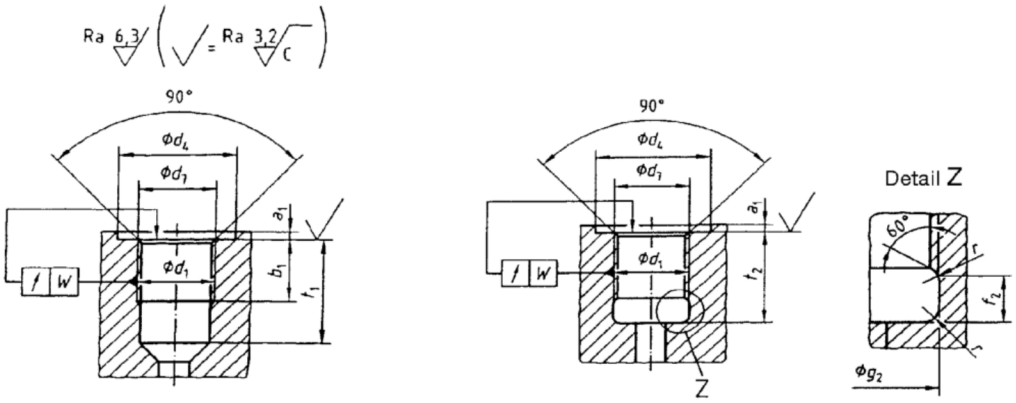
3.2 Ports

Types X and Y ports 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 ports are intended for use with type C stud ends. Thread countersunk to dimension d_1.

Type Z, with run-out

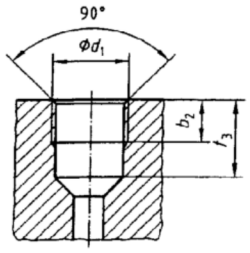


Figure 2: Port dimensions (notation)

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