UDC 621.882.219.66 January 1992

Hexagon socket pipe plugs

DIN 906

Verschlußschrauben mit Innensechskant; kegeliges Gewinde

Supersedes June 1983 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

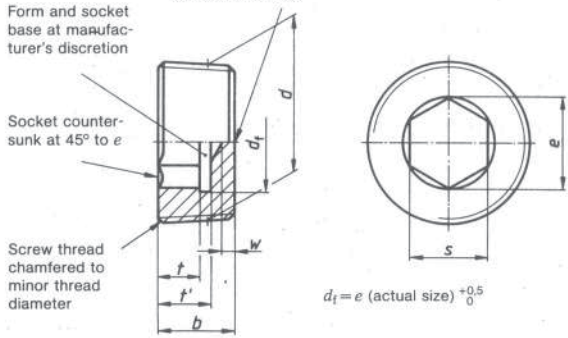
1 Scope and field of application

This standard specifies dimensions and technical delivery conditions for pipe plugs which are intended to be screwed into holes with parallel thread as specified in DIN 13 Part 12, DIN 158, DIN 3858 or ISO 228 Part 1. Since tightness is a function of pressure, temperature, the materials involved and the fluid with which the threaded parts are in contact, such connections cannot be assumed to be tight. Therefore, it is recommended that a sealant or seal ring should be provided where the hole has a thread as specified in DIN 13 Part 12.

Note. For pipe plugs for use in gas and water supply systems, see *Technische Regeln für Gasinstallationen* (DVGW Code of practice for gas supply installations) [1] and DIN 1988 Part 2.

2 Dimensions and designation

Dimension b may be up to 0,25 mm greater for thread sizes up to M 24 and up to 0,5 mm greater for thread sizes above M 24



$d_t = e$ (actual size) $^{+0,5}_{0}$

Designation of an M 20 × 1,5 steel (St) pipe plug:

Pipe plug DIN 906 – M 20 × 1,5 – St

Designation of an R ½ steel (St) pipe plug:

Pipe plug DIN 906 – R ½ – St

[1] Obtainable from *ZfGW-Verlag GmbH*, Voltastraße 79, D-6000 Frankfurt (Main) 90.

Continued on pages 2 and 3

Thread size (d)			b	e 1)	s	t	t' 2)	w	Approximate mass (7,85 kg/dm³) per 1000 units, in kg
as in DIN 158 (metric taper thread) (short thread)		as in DIN 3858 (pipe thread, tolerance position 2) (short thread)	js 16	min.	D 12	min.	min.	min.	
M 8 × 1	–	–	8	4,6	4	4	4,7	2	2,07
M 10 × 1	–	R 1/8	8	5,7	5	4	4,7	2	3,38
M 12 × 1,5	–	–	10	6,9	6	5	5,9	2	6,10
–	–	R 1/4	10	8	7	5	6	2	7,00
M 14 × 1,5	–	–	10	8	7	5	6	2	8,10
M 16 × 1,5	–	–	10	9,2	8	5	6,2	2	11,0
–	–	R 3/8	10	9,2	8	5	6,2	2	12,2
M 18 × 1,5	–	–	10	9,2	8	5	6,2	2	14,6
M 20 × 1,5	–	–	10	11,4	10	5	6,4	2	17,6
–	–	R 1/2	10	11,4	10	5	6,4	2	19,0
M 22 × 1,5	–	–	10	11,4	10	5	6,4	2	22,0
M 24 × 1,5	–	–	12	13,7	12	6	7,7	2	30,8
M 26 × 1,5	–	–	12	13,7	12	6	7,7	2	38,6
–	M 27 × 2	R 3/4	12	13,7	12	6	7,7	2	40,2
M 30 × 1,5	M 30 × 2	–	12	19,4	17	6	7,7	2	44,0
–	M 33 × 2	R 1	12	19,4	17	6	7,7	2	57,5
M 36 × 1,5	M 36 × 2	–	15	21,7	19	7,5	9,2	3	85,2
M 38 × 1,5	–	–	15	21,7	19	7,5	9,2	3	94,4
–	M 39 × 2	–	15	21,7	19	7,5	9,2	3	103
M 42 × 1,5	M 42 × 2	R 1 1/4	18	25,2	22	11,5	13,3	3	135
M 45 × 1,5	M 45 × 2	–	18	25,2	22	11,5	13,3	3	167
M 48 × 1,5	M 48 × 2	R 1 1/2	20	27,4	24	11,5	13,5	4	214
M 52 × 1,5	M 52 × 2	–	20	27,4	24	11,5	13,5	4	253
–	M 56 × 2	–	22	36,6	32	13	15,6	4	274
–	M 60 × 2	–	22	36,6	32	13	15,6	4	350

1) $e_{min} = 1{,}14\ s_{min}$ (values rounded).

2) The t' values are designed to ensure that a hexagon socket head wrench with a 45° chamfer can fully engage to a depth equal to t_{min}.

3 Material

Pipe plugs shall be manufactured from 9 SMnPb 28 K steel as in DIN 1651 or UQSt 36 steel as in DIN 17 111 (St), at the manufacturer's discretion, stainless steel (A1) as in DIN 267 Part 11, aluminium alloy (Al) as in DIN 267 Part 18, copper-zinc alloy (CuZn) as in DIN 267 Part 18, from polyamide (PA).

Use of other materials or material grades shall be the subject of agreement.

4 Product grade, surface roughness and tolerances

Pipe plugs shall be manufactured to the general tolerances, accuracy grade c, as specified in ISO 2768, be of product grade B as specified in ISO 4759 Part 1 and have a surface roughness complying with the specifications of DIN 267 Part 2.

5 Surface finish

DIN 267 Part 9 shall apply with regard to electroplating and DIN 50 942, with regard to phosphating, other finishes being subject to agreement.

6 General requirements

Pipe plugs shall comply with the general requirements specified in DIN 267 Part 1.

7 Acceptance inspection

DIN 267 Part 5 shall apply with regard to acceptance inspection.

Standards and other documents referred to

DIN	13 Part 12	ISO metric screw threads; coarse and fine pitch threads with diameters from 1 to 300 mm; selected diameters and pitches
DIN	158	Metric taper external screw threads, with mating parallel internal screw threads; nominal dimensions and limit deviations
DIN	267 Part 1	Fasteners; technical delivery conditions; general requirements
DIN	267 Part 2	Fasteners; technical delivery conditions; product grades and tolerances
DIN	267 Part 5	Fasteners; technical delivery conditions; acceptance inspection (modified version of ISO 3269:1984)
DIN	267 Part 9	Fasteners; technical delivery conditions; electroplated components
DIN	267 Part 11	Fasteners; technical delivery conditions; stainless and acid-resistant steel components (with addenda to ISO 3506)
DIN	267 Part 18	Fasteners; technical delivery conditions; non-ferrous metal components
DIN	1651	Free cutting steel; technical delivery conditions
DIN	1988 Part 2	Drinking water supply systems; materials, components and appliances; design and installation (DVGW Code of practice)
DIN	3858	Whitworth pipe threads; parallel internal thread and taper external thread for pipe unions
DIN	17111	Low carbon unalloyed steels for bolts, nuts and rivets; technical delivery conditions
DIN	50 942	Phosphating of metals; methods of test
ISO	228-1 : 1982	Pipe threads where pressure-tight joints are not made on the threads; designation, dimensions and tolerances
ISO	2768-1 : 1989	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

Technische Regeln für Gasinstallationen

Other relevant standards

DIN	908	Hexagon socket screw plugs
DIN	909	Hexagon head pipe plugs
DIN	910	Heavy-duty hexagon head screw plugs
DIN	5586	Compressed-air equipment for rail vehicles; screw plugs with vent hole
DIN	7604	Light-duty hexagon head screw plugs

Previous editions

DIN 906: 12.43, 04.56, 01.73, 06.83.

Amendments

The following amendments have been made to the June 1983 edition.

a) Reference has been made to *Technische Regeln für Gasinstallationen*.

b) The standard has been editorially revised.

International Patent Classification

B 65 D 39/04
B 65 D 39/08
F 16 B 35/00
F 16 J 13/12