UDC 621.882.219 : 621.882.211

June 1983

Heavy duty hexagon head screw plugs with shoulder and parallel screw thread

DIN 910 Part 1

Verschlussschrauben mit Bund und Aussensechskant; schwere Ausführung, zylindrisches Gewinde

Supersedes January 1973 edition

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

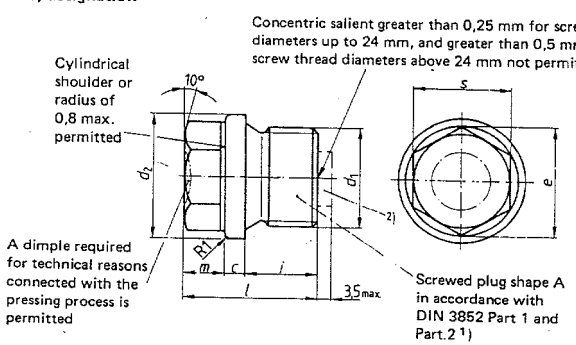
Dimensions in mm

1 Field of application

Screw plugs in accordance with this standard can be used to occlude holes with a parallel internal screw thread in accordance with DIN 13 Part 5, Part 6 or Part 7 and DIN ISO 228 Part 1. They are inserted together with a sealing ring in accordance with DIN 7603, for example, the shape and material of which will depend on the conditions concerned (medium, temperature, pressure etc.).

Note. Screw plugs in accordance with this standard shall not be used for gas and drinking water pipelines.

2 Dimensions, designation



Designation of a steel (St) screw plug with thread d_1 = M 20 × 1,5:

Screw plug DIN 910 – M 20 × 1,5 – St

Designation of a steel (St) screw plug with thread d_1 = G 1/2 A:

Screw plug DIN 910 – G 1/2 A – St

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1) In exceptional cases, the screw plugs can also be supplied with an undercut of the plug of shape B in accordance with DIN 3852 Part 1 and Part 2. In this case the designation will read for example:

Screw plug DIN 910 – B – M 20 × 1,5 – St

2) The screw plugs can also be supplied with an inserted permanent magnet (PM). The maximum dimension of 3,5 mm indicates the permissible length of projection. The dimensions and design of the magnet and its installation space requirement are left to manufacturer's discretion. The designation of a screw plug with an inserted permanent magnet will read for example:

Screw plug DIN 910 – M 20 × 1,5 – St – PM

Continued on pages 2 to 4

d_1 Metric fine screw thread in accordance with DIN 13 Part 5, Part 6 or Part 7		Pipe thread in accordance with DIN ISO 228 Part 1	c +0,5 0	d_2 h14	e min.	i ±0,2	l ≈	m ±1/2 IT 15	s		Weight (7,85 kg/dm³) kg/1000 pieces ≈
										Per. dev.*)	
M 10 X 1	–	G 1/8 A	3	14	10,89	8	17	6	10	h14	12,0
M 12 X 1,5	–	–	3	17	14,20	12	21	6	13		20,3
–	–	G 1/4 A 2)	3	18	14,20	8	17	6	13		20,0
–	–	G 1/4 A	3	18	14,20	12	21	6	13		23,8
M 14 X 1,5	–	–	3	19	14,20	12	21	6	13		25,0
M 16 X 1,5	–	–	3	21	18,72	12	21	6	17		35,2
–	–	G 3/8 A 2)	3	22	18,72	8	17	6	17		32,2
–	–	G 3/8 A	3	22	18,72	12	21	6	17		38,1
M 18 X 1,5	–	–	4	23	18,72	12	24	8	17		48,6
M 20 X 1,5	M 20 X 2 1)	–	4	25	20,88	14	26	8	19		64,5
–	–	G 1/2 A 2)	4	26	20,88	10	22	8	19		57,8
–	–	G 1/2 A	4	26	20,88	14	26	8	19		66,6
M 22 X 1,5	–	–	4	27	20,88	14	26	8	19		73,4
M 24 X 1,5	–	–	4	29	23,91	14	27	9	22		93,5
M 26 X 1,5	–	–	4	31	26,17	16	30	10	24		120
–	–	G 3/4 A 2)	4	32	26,17	12	26	10	24	h15	109
–	M 27 X 2	G 3/4 A	4	32	26,17	16	30	10	24		127
M 30 X 1,5	M 30 X 2	–	4	36	26,17	16	30	10	24		148
–	M 33 X 2	G 1 A	5	39	29,56	16	32	11	27		195
M 36 X 1,5	M 36 X 2	–	5	42	29,56	16	32	11	27		220
M 38 X 1,5	–	G 1 1/8 A	5	44	29,56	16	32	11	27		238
–	M 39 X 2	–	5	46	29,56	16	32	11	27		255
M 42 X 1,5	M 42 X 2	G 1 1/4 A	5	49	32,95	16	33	12	30		300
M 45 X 1,5	M 45 X 2	–	5	52	32,95	16	33	12	30		340
M 48 X 1,5	M 48 X 2	G 1 1/2 A	5	55	32,95	16	33	12	30		375
M 52 X 1,5	M 52 X 2	–	5	60	32,95	16	33	12	30		430
–	–	G 1 3/4 A	5	62	39,55	20	40	15	36		572
–	M 56 X 2	–	5	64	39,55	20	40	15	36		620
–	M 60 X 2	G 2 A	5	68	39,55	20	40	15	36		695
–	M 64 X 2	–	5	72	39,55	20	40	15	36		774

*) Per. dev. = permissible deviation

1) Only for the occlusion of threaded holes of indicator valves in accordance with DIN 6273

2) These sizes with a short screwed plug i should be avoided as far as possible. If they are however required in exceptional cases, the screw-in length i shall be included in the designation, e. g.:

Screw plug DIN 910 – G 1/4 A X 8 – St

3 Material

St = 9 SMnPb 28 K in accordance with DIN 1651 or UQSt 36 in accordance with DIN 17 111 } at manufacturer's discretion 3)

A1 = Stainless steel in accordance with DIN 267 Part 11

Al-Leg = Aluminium alloy in accordance with DIN 267 Part 18

CuZn = Copper-zinc alloy in accordance with DIN 267 Part 18

PA = Polyamide

Other materials or specific material qualities subject to agreement.

4 Finish

Product class B (previously type mg) in accordance with DIN ISO 4759 Part 1

Screwed plug in accordance with DIN 3852 Part 1 and Part 2

Surface peak-to-valley heights in accordance with DIN 267 Part 2 (at present at the stage of draft)

General tolerances: DIN 7168 – g.

3) These materials are valid in lieu of property class 5.8 in accordance with DIN ISO 898 Part 1, which was specified in previous editions of this standard

5 Surface protection

If surface protection is required, the following specifications shall apply:

- DIN 267 Part 9 for galvanic surface protection
- DIN 50 942 for phosphate coatings

Other kinds of surface protection subject to agreement.

6 General requirements

As regards general requirements, DIN 267 Part 1 shall apply.

7 Acceptance test

DIN 267 Part 5 (at present at the stage of draft) shall apply to the acceptance test.

Standards referred to

DIN 13 Part 5	ISO metric screw threads; fine screw threads with 1 mm and 1,25 mm pitch in screw thread diameters from 7,5 to 200 mm; nominal dimensions
DIN 13 Part 6	ISO metric screw threads; fine screw thread with 1,5 mm pitch in screw thread diameters from 12 to 300 mm, nominal dimensions
DIN 13 Part 7	ISO metric screw threads, fine screw thread with 2 mm pitch in screw thread diameters from 17 to 300 mm, nominal dimensions
DIN 267 Part 1	Fasteners; technical delivery conditions, general requirements
DIN 267 Part 2	(at present at the stage of draft) Fasteners; technical delivery conditions, finish and dimensional accuracy
DIN 267 Part 5	(at present at the stage of draft) Fasteners; technical delivery conditions, acceptance testing
DIN 267 Part 9	Fasteners; technical delivery conditions, components with electroplated coatings
DIN 267 Part 11	Fasteners; technical delivery conditions with additions to ISO 3506; stainless and acid-resistant steel components
DIN 267 Part 18	Fasteners; technical delivery conditions, non-ferrous metal components
DIN 1651	Free cutting steels; technical delivery conditions
DIN 3852 Part 1	Screwed plugs; screwed plug holes for pipe unions, valves and fittings, screw plugs with metric fine screw thread; design dimensions
DIN 3852 Part 2	Screwed plugs; screwed plug holes for pipe unions, valves and fittings, screw plugs with Whitworth pipe thread; design dimensions
DIN 7168 Part 1	General tolerances; linear and angular dimensions
DIN 7603	Sealing rings for pipe unions and screw plugs
DIN 17 111	Low carbon unalloyed steels for bolts, nuts and rivets; technical delivery conditions
DIN 50 942	Phosphating of metals; process principles, symbols and test methods
DIN ISO 228 Part 1	Pipe threads where pressure-tight joints are not made on the threads; designation, dimensions, tolerances
DIN ISO 898 Part 1	Mechanical properties of fasteners; bolts, screws and studs
DIN ISO 4759 Part 1	Fasteners; tolerances for bolts, screws and nuts with screw thread diameters from 1,6 to 150 mm; product classes A, B and C

Other relevant standards

DIN 906	Hexagon socket pipe plugs
DIN 907	Core plugs and core plug bars with parallel screw thread
DIN 908	Hexagon socket screw plugs with parallel screw thread
DIN 909	Hexagon head pipe plugs
DIN 910 Part 2	Heavy duty hexagon head screw plugs with shoulder, with vent hole and parallel screw thread
DIN 7604	Light duty hexagon head screw plugs with parallel screw thread

Previous editions

DIN 910: 04.25, 04.56, 09.59; DIN 910 Part 1: 12.43, 01.73; DIN 910 Part 2: 04.25x

Amendments

The following amendments have been made in comparison with the January 1973 edition:

a) The contents of the standard have been revised editorially. A new clause "Field of application" has been inserted at the beginning.

b) The permissible deviations in accordance with DIN 267 Part 2 or DIN ISO 4759 Part 1 have been incorporated in addition to the individual dimensions of the screw plugs.

c) The material specifications have been extended; symbols have been adopted.

d) An execution with a built-in permanent magnet has been included in the standard.

e) The previous Standard DIN 259 for pipe threads has been replaced by DIN ISO 228 Part 1. The designation of the thread has accordingly been changed from "R ..." to "G ..." in each case. This has not involved any changes in the thread dimensions.

Explanatory notes

For some sizes of screw plugs, two different thread pitches have been listed, as previously, such as M 30 X 1,5 and M 30 X 2. It is however advisable to select the coarser of the two pitches in each case, if the prevailing design conditions allow it.

The previously featured property class 5.8 in accordance with DIN ISO 898 Part 1 (previously DIN 267 Part 3) has been dropped. Property classes in accordance with the above-mentioned standard are intended primarily for bolts subjected to tensile stress, and they specify the corresponding mechanical properties and the valid test procedures applicable to these properties. In the case of screw plugs subjected to compressive stress, these properties are neither relevant nor verifiable. The specification of hardness categories in accordance with DIN ISO 898 Part 2 has also been dropped from the present standard. Depending on the manufacturing process, the degree of shaping and the measuring point, the hardness of screw plugs can vary quite considerably, and consequently it does not constitute a valid criterion for the assessment of the mechanical properties. It has however been allowed to continue referring to property class 5.8 on existing drawings and documents for the time being.

International Patent Classification

B 65 D 39-08
B 65 D 41-04
B 65 D 41-34