UDC 621.882.219 : 621.882.211

June 1983

Light duty hexagon head screw plugs with parallel screw thread

DIN 7604

Verschlussschrauben mit Aussensechskant; leichte 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

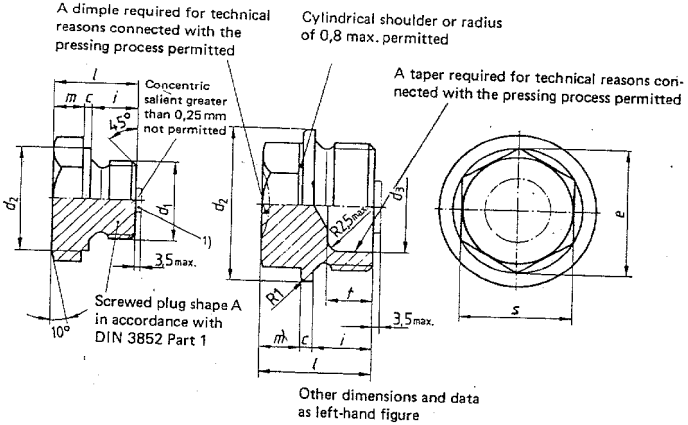
1 Field of application

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 and Part 6. 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

for nominal screw thread diameters up to and including 16 mm for nominal screw thread diameters from 18 mm



Designation of a design A steel (St) screw plug, with short screwed plug, with thread d_1 = M 22 X 1,5:

Screw plug DIN 7604 – A – M 22 X 1,5 – St

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1) 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 7604 – A – M 22 X 1,5 – St – PM

Continued on pages 2 and 3

Design	d_1 Metric fine screw thread in accordance with DIN 13 Part 5 and Part 6	c +0,2 0	d_2 h14	d_3 +0,5 0	e min.	i ± 0,2	l ≈	m ±1/2 IT 15	s h13	t +0,6 −0,3	Weight (7,85 kg/dm³) kg/1000 pieces ≈
A with short screwed plug	M 10 X 1	0,5	14	–	15,51	6	10,5	4	14	–	12,8
	M 12 X 1,5	0,5	17	–	18,90	9	15,5	6	17	–	19,2
	M 14 X 1,5	0,5	19	–	21,10	9	15,5	6	19	–	24,6
	M 16 X 1,5	0,5	21	–	24,49	9	15,5	6	22	–	33,4
	M 18 X 1,5	2	23	10	18,90	9	17	6	17	8	27,2
	M 22 X 1,5	2	27	14	21,10	9	17	6	19	8	34,3
	M 26 X 1,5	2,5	31	16	24,49	9	19,5	8	22	8	59,4
	M 30 X 1,5	2,5	36	20	24,49	9	19,5	8	22	8	69,5
C with long screwed plug	M 8 X 1	0,5	12	–	13,25	8	12,5	4	12	–	6,5
	M 10 X 1	0,5	14	–	15,51	8	12,5	4	14	–	9,6
	M 22 X 1,5	2	27	14	21,10	12	20	6	19	8	42,5
	M 26 X 1,5	2,5	31	16	24,49	12	22,5	8	22	10	68,5
	M 30 X 1,5	2,5	36	20	24,49	12	22,5	8	22	10	81,0
	M 38 X 1,5	3	44	26	24,49	12	23	8	22	10	118
	M 45 X 1,5	3	52	32	26,75	12	23	8	24	10	163
	M 52 X 1,5	3	60	38	30,14	12	23	8	27	10	205

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 [2])

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

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

General tolerances: DIN 7168 — g

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 kind 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.

[2]) These materials are valid in lieu of property class 5.8 complying with DIN ISO 898 Part 1, which was specified in previous editions of this standard.

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 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, nonferrous 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 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 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 1	Heavy duty hexagon head screw plugs with shoulder and parallel screw thread
DIN 910 Part 2	Heavy duty hexagon head screw plugs with shoulder, vent hole and parallel screw thread

Previous editions

DIN 4610: 02.31; DIN 7604: 07.36, 11.37x, 02.41, 07.44, 05.47, 08.56, 11.59, 01.73

Amendments

Compared with the January 1973 edition, the following amendments have been made:

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.

Explanatory notes

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. 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

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B 65 D 41-04
B 65 D 41-34