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# Light-duty hexagon head screw plugs

DIN 7604

Verschlußschrauben mit Außensechskant; leichte Ausführung, zylindrisches 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

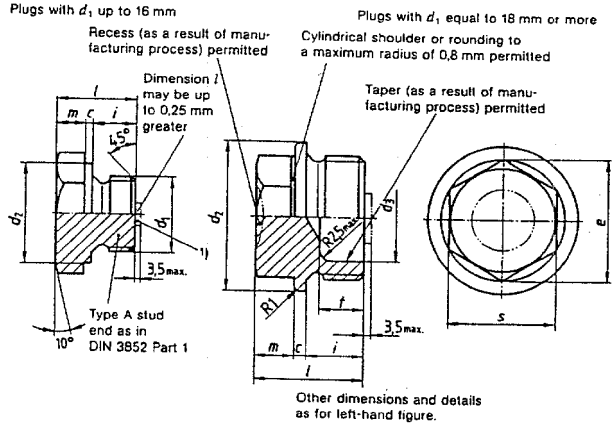
## 1 Scope and field of application

This standard specifies dimensions and technical delivery conditions for screw plugs which are intended to be screwed into holes with parallel thread as specified in DIN 13 Part 5 and 6. Such plugs may be used together with seal rings as specified in DIN 7603, type and material of which are to be selected as a function of the operating conditions (e.g. pressure, temperature, fluid with which the threaded parts are in contact, etc.).

## 2 Dimensions and designation

Plugs with $d_1$ up to 16 mm

Plugs with $d_1$ equal to 18 mm or more




Designation of an M 22 × 1,5 steel (St) screw plug with type A stud end:

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

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1) Screw plugs may be supplied with an integral permanent magnet (PM), which may protrude to a maximum of 3,5 mm. The type and dimensions of the magnet and the space to receive it are at the manufacturer's discretion. The designation of a screw plug with an integral permanent magnet will then read, for example:

**Screw plug DIN 7604 – A – M 22 × 1,5 – St – PM**

Continued on pages 2 and 3

| Type of stud end | Thread size ($d_1$) as in DIN 13 Part 5 or 6 | $c$ +0,2 0 | $d_2$ h14 | $d_3$ +0,5 0 | $e$ min | $j$ ±0,2 | $l$ ≈ | $m$ E½ IT15 | $s$ h13 | $t$ +0,6 −0,3 | Approximate mass (7,85 kg/dm³) per 1000 units, in kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A | M 10 × 1 | 0,5 | 14 | – | 15,51 | 6 | 10,5 | 4 | 14 | – | 12,8 |
| | M 12 × 1,5 | 0,5 | 17 | – | 18,90 | 9 | 15,5 | 6 | 17 | – | 19,2 |
| | M 14 × 1,5 | 0,5 | 19 | – | 21,10 | 9 | 15,5 | 6 | 19 | – | 24,6 |
| | M 16 × 1,5 | 0,5 | 21 | – | 24,49 | 9 | 15,5 | 6 | 22 | – | 33,4 |
| | M 18 × 1,5 | 2 | 23 | 10 | 18,90 | 9 | 17 | 6 | 17 | 8 | 27,2 |
| | M 22 × 1,5 | 2 | 27 | 14 | 21,10 | 9 | 17 | 6 | 19 | 8 | 34,3 |
| | M 26 × 1,5 | 2,5 | 31 | 16 | 24,49 | 9 | 19,5 | 8 | 22 | 8 | 59,4 |
| | M 30 × 1,5 | 2,5 | 36 | 20 | 24,49 | 9 | 19,5 | 8 | 22 | 8 | 69,5 |
| C | M 8 × 1 | 0,5 | 12 | – | 13,25 | 8 | 12,5 | 4 | 12 | – | 6,5 |
| | M 10 × 1 | 0,5 | 14 | – | 15,51 | 8 | 12,5 | 4 | 14 | – | 9,6 |
| | M 22 × 1,5 | 2 | 27 | 14 | 21,10 | 12 | 20 | 6 | 19 | 8 | 42,5 |
| | M 26 × 1,5 | 2,5 | 31 | 16 | 24,49 | 12 | 22,5 | 8 | 22 | 10 | 68,5 |
| | M 30 × 1,5 | 2,5 | 36 | 20 | 24,49 | 12 | 22,5 | 8 | 22 | 10 | 81,0 |
| | M 38 × 1,5 | 3 | 44 | 26 | 24,49 | 12 | 23 | 8 | 22 | 10 | 118 |
| | M 45 × 1,5 | 3 | 52 | 32 | 26,75 | 12 | 23 | 8 | 24 | 10 | 163 |
| | M 52 × 1,5 | 3 | 60 | 38 | 30,14 | 12 | 23 | 8 | 27 | 10 | 205 |

## 3 Material

Screw 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, or from polyamide (PA).

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

## 4 Product grade, surface roughness, width across flats and tolerances

Screw 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 specification of DIN 267 Part 2. The widths across flats shall comply with DIN 475 Part 1.

## 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

Screw 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 referred to

| | |
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| DIN 13 Part 5 | ISO metric screw threads; 1 mm and 1,25 mm fine pitch threads with diameters from 7,5 mm to 200 mm; nominal sizes |
| DIN 13 Part 6 | ISO metric screw threads; 1,5 mm fine pitch threads with diameters from 12 mm to 300 mm; nominal sizes |
| 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 475 Part 1 | Widths across flats for screws, bolts, valves and fittings |
| DIN 1651 | Free cutting steel; technical delivery conditions |
| DIN 3852 Part 1 | Stud ends, tapped holes and screw plugs for compression couplings and valves, with metric fine pitch thread; dimensions |
| DIN 7603 | Sealing rings for compression couplings and screw plugs |
| DIN 17 111 | Low carbon unalloyed steel for bolts, nuts and rivets; technical delivery conditions |
| DIN 50 942 | Phosphating of metals; methods of test |
| 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 |

## Other relevant standards

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|---|---|
| DIN 906 | Hexagon socket pipe plugs |
| DIN 908 | Hexagon socket screw plugs |
| DIN 909 | Hexagon head screw plugs |
| DIN 910 | Heavy duty hexagon head screw plugs |
| DIN 5586 | Compressed-air equipment for rail vehicles; screw plugs with vent |

## Previous editions

DIN 4610: 02.31; DIN 7604: 07.36, 11.37x, 02.41, 07.44, 05.47, 08.56, 11.59, 01.73, 06.83.

## Amendments

In comparison with the June 1983 edition, the standard has been editorially revised.

## International Patent Classification

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