UDC 621.882.219-422.11

September 1986

Threaded rods
(not intended for new designs)

DIN 975

Gewindestangen (nicht für Neukonstruktionen)

Supersedes January 1970 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.

Threaded rods as specified in this standard are not intended for new designs. It is recommended that stud bolts as specified in DIN 976 be used for new designs (see Explanatory notes).

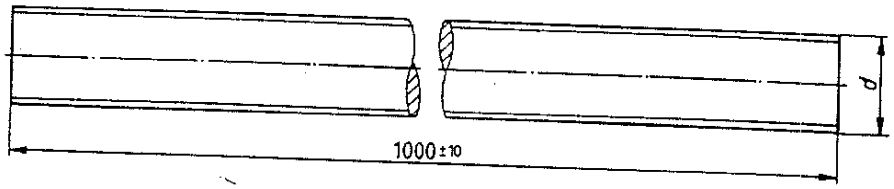
Dimensions in mm

1 Scope and field of application

Threaded rods are generally supplied in nominal lengths of 1000 mm and can be cut into sections if different lengths and tolerances on length are required by the customer. They can also be used as double end studs with a nut on either side, or as studs. Tolerance class 6g specified for the thread is commonly used for bolted connections and applies to thread engagement group N as specified in DIN 13 Part 14. It may not be assumed that threaded rods for lengths of engagement greater than those specified for thread engagement group N as defined in DIN 13 Part 14 are true to gauge.

Three standard types of threaded rods are manufactured, viz. property class 4.6, 5.6 and 5.8 threaded rods. Other property classes or materials shall be subject to agreement.

2 Dimensions



Thread size d	M 2	M 2,5	M 3	(M 3,5)	M 4	M 5	M 6
Mass (7,85 kg/dm³), in kg per 1000 units, approximately	18,7	30	44	60	78	124	177

Thread size d	M 8	M 10	M 12	(M 14)	M 16	(M 18)
	M 8 × 1	M 10 × 1,25	M 12 × 1,25	(M 14 × 1,5)	M 16 × 1,5	(M 18 × 1,5)
	—	M 10 × 1	M 12 × 1,5	—	—	—
Mass (7,85 kg/dm³), in kg per 1000 units, approximately	319	500	725	970	1330	1650

Thread size d	M 20	(M 22)	M 24	(M 27)	M 30	(M 33)
	M 20 × 1,5	(M 22 × 1,5)	M 24 × 2	(M 27 × 2)	M 30 × 2	(M 33 × 2)
Mass (7,85 kg/dm³), in kg per 1000 units, approximately	2080	2540	3000	3850	4750	5900

Thread size d	M 36	(M 39)	M 42	(M 45)	M 48	(M 52)
	M 36 × 3	(M 39 × 3)	M 42 × 3	(M 45 × 3)	M 48 × 3	(M 52 × 3)
Mass (7,85 kg/dm³), in kg per 1000 units, approximately	6900	8200	9400	11 000	12 400	14 700

Bracketed sizes should be avoided if possible.
The values of mass specified shall apply to threaded rods with coarse pitch thread.
As a general rule, threaded rods are kept on stock only with coarse pitch thread.

Continued on pages 2 and 3

3 Technical delivery conditions

Material		Steel	Stainless steel	Non-ferrous metal
General requirements		As specified in DIN 267 Part 1.		
Thread	Tolerance class	6g		
	Standard	DIN 13 Part 15		
Mechanical properties	Property class (material)	4.6; 5.6; 5.8 [1]	A2; A4	CuZn = copper-zinc alloy [2]
	Standard	ISO 898 Part 1 (test programme B)	DIN 267 Part 11	DIN 267 Part 18
Permissible dimensional deviations and deviations of form	Product grade	A		
	Standard	ISO 4759 Part 1		
Surface finish		As processed. DIN 267 Part 2 shall apply with regard to surface roughness. DIN 267 Part 19 shall apply with regard to the permissible surface discontinuities. DIN 267 Part 9 shall apply with regard to electroplating. DIN 267 Part 10 shall apply with regard to hot dip galvanizing.		
Acceptance inspection		DIN 267 Part 5 shall apply with regard to acceptance inspection.		

[1] Where no property class is specified, it shall be left to the discretion of the manufacturer.
[2] CuZn = CU2 or CU3 (as specified in DIN 267 Part 18), at the discretion of the manufacturer.

4 Designation

Designation of an M10 threaded rod:

Threaded rod DIN 975 – M10

Where a particular property class or other materials are required, the property class and the material shall be stated in the designation, as for example:

Threaded rod DIN 975 – M10 – 5.6

The DIN 4000-2-3 tabular layout of article characteristics shall apply to threaded rods conforming to this standard.

Standards referred to

DIN 13 Part 14	ISO metric screw threads; principles for a tolerance system for screw threads from 1 mm diameter
DIN 13 Part 15	ISO metric screw threads; fundamental deviations and tolerances for screw threads of 1 mm and larger
DIN 267 Part 1	Fasteners; technical delivery conditions; general requirements
DIN 267 Part 2	Fasteners; technical delivery conditions; types of finish and dimensional accuracy
DIN 267 Part 5	Fasteners; technical delivery conditions; acceptance inspection (modified version of ISO 3269, 1984 edition)
DIN 267 Part 9	Fasteners; technical delivery conditions; components with electroplated coatings
DIN 267 Part 10	Fasteners; technical delivery conditions; hot dip galvanized components
DIN 267 Part 11	Fasteners; technical delivery conditions (with additions to ISO 3506); corrosion-resistant stainless steel fasteners
DIN 267 Part 18	Fasteners; technical delivery conditions; components made of non-ferrous metals
DIN 267 Part 19	Fasteners; technical delivery conditions; surface discontinuities on bolts and screws
DIN 976	Threaded pins
DIN 4000 Part 2	Tabular layouts of article characteristics for bolts, studs and nuts
ISO 898 Part 1	Mechanical properties of fasteners; bolts, screws and studs
ISO 4759 Part 1	Tolerances for fasteners; bolts, screws and nuts with thread diameters between 1,6 (inclusive) and 150 mm (inclusive) and product grades A, B and C

Previous editions

DIN 976: 01.70.

Amendments

The following amendments have been made in comparison with the January 1970 edition.

a) The previous design m as specified in DIN 267 Part 2 has been replaced by product grade A as specified in ISO 4759 Part 1.

b) Material groups "stainless steel" and "non-ferrous metals" have been additionally included.

c) The technical delivery conditions have been amended.

d) The content of the standard has been editorially revised.

Explanatory notes

Stud bolts in lengths of 1000 mm as specified in DIN 976 can also be used as threaded rods by reducing the tolerance on length associated with product grade A. Therefore, instead of threaded rods as specified in the present standard, only stud bolts of the required lengths as specified in DIN 976 shall be used for new designs or as basic products for the manufacture of stud bolts of any length (including the associated tolerances). The present standard will be replaced by DIN 976 after a transition period of approximately 5 years.

International Patent Classification

F16B 35/00