

Fastening Elements

DELGLAS Rods and Nuts

- Good resistance to humidity and sea water
- Excellent resistance to transformer oil and other dielectric liquids
- Good resistance to very low temperatures and to high temperatures up to 180°C
- High dielectric strength
- Good tracking resistance
- Good resistance to chemical agents.

General description

DELGLAS threaded rods and nuts are produced by machining specially developed epoxy glass laminates. The threads are made according to ISO profiles and dimensions. (Standards NF E 03.001 and 03.014).
- Quality 8 G.

Colour

White

Composition and forms of delivery

Standard threaded rods :

- Without flat **DELGLAS 68830**
Length : 1425 mm
Diameters : M8-10-12-16-20-24-30
M6 threaded rods are supplied in length 940 ± 20 mm.
- With flat **DELGLAS 68860**
Length : 1425 mm
Diameters : M8-10-12-16-20-24-30

Standard nuts :

- Square nuts **DELGLAS 68840** (1D) and **68810** (1.5D)
- Hexagonal nuts **DELGLAS 68850** (1D) and **68820** (1.5D)
Height : 1 or 1.5 time the nominal diameter of the threaded rod : 1D and 1.5D

Non standard sizes :

- Threaded rods
Maximum length : 8000 mm
Maximum diameter : M42
- Bolts, stud bolts, nuts (various heights), round and square rods with a threaded end, parts according to drawings.
- Non threaded rods **DELMAT Epoxy 68700**
Length : 950 or 1300 mm
Diameter 6 to 70 mm

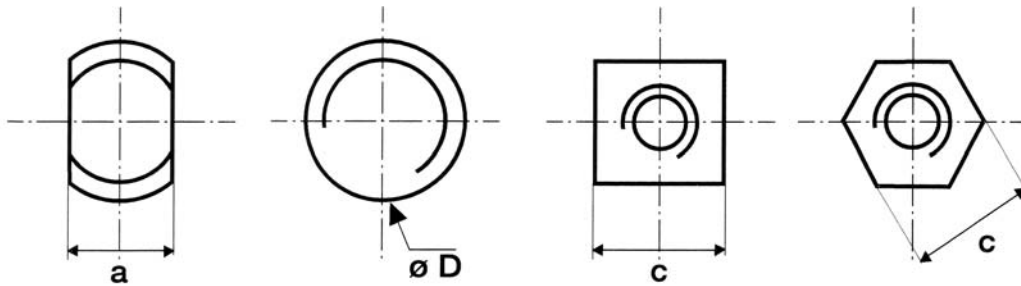


Table of standard dimensions (mm)

Standard diameters	Threaded rods		Nuts	
	a	c	Height = 1 D	Height = 1.5 D
M8	6	13	8	12
M10	8	16	10	15
M12	9	18	12	18
M16	13	24	16	24
M20	16	30	20	30
M24	20	36	24	36
M30	25	46	30	45

Application

- Direct assembly of parts under tension without using other electrical insulation materials.
- Transformers
- Coils
- Rectifiers
- Switches
- Rotating machines
- Equipment for the chemical industry
- All types of application where a threaded rod has to be non-magnetic and withstand corrosion, chemicals, sea water and severe weather conditions.

Specific properties of the rods with flats

Numerous advantages are to be found in using threaded rods with flats :

- The flats are used to lock the rod when tightening the nut, which increases the torque and therefore increasing the clamping pressure
- Easy screwing and unscrewing of the nuts without causing deterioration of the rod.
- Excellent visual control avoiding rod deformation due to torsion
- Easier removal of the dust due to friction
- Possible blocking of the nut with wedges
- Attractive cost effectiveness
- Easier lubrication of the thread (silicon grease, PTFE spray) which facilitates the set up of the nuts and increases the tightening of the torque.

Properties

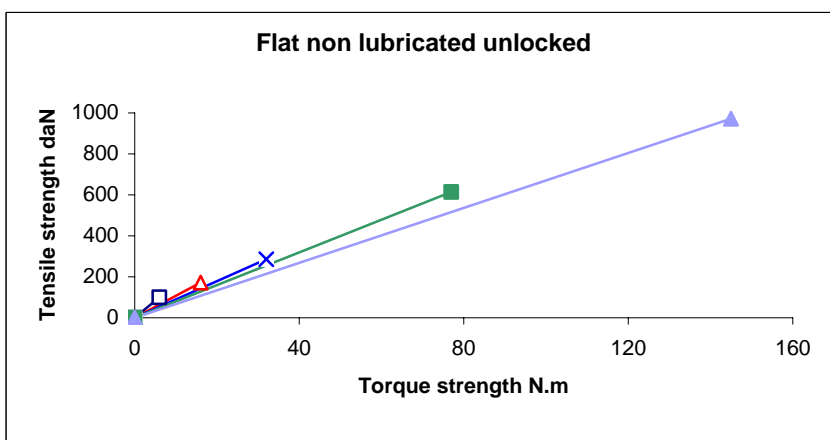
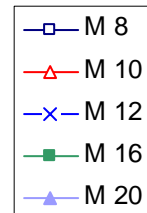
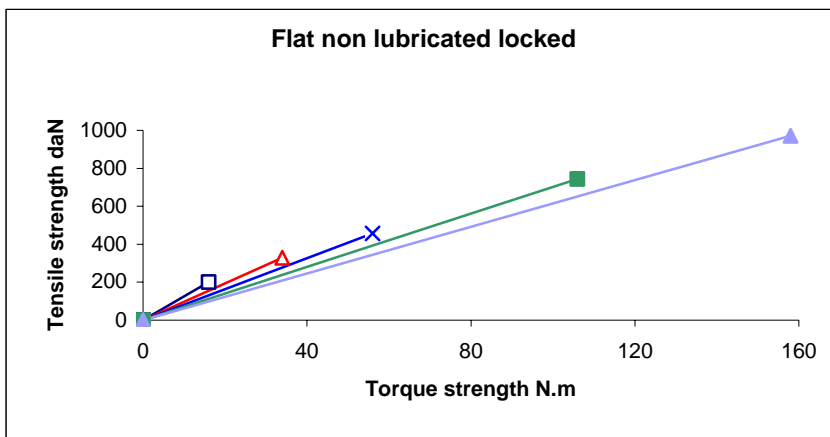
Tensile strength of threads in Newton (N)

	Nuts H = 1 D		Nuts H = 1.5 D		Nuts H = 2 D	
	20°C	155°C	20°C	155°C	200°C	155°C
Threaded rods with flats 68860						
M 8	4800	2900	7300	4300	9800	5700
M 10	8100	5000	12000	7500	15400	10400
M 12	12900	7500	18500	11500	24800	14800
M 16	24200	14300	33800	21300	42200	26500
M 20	37800	23300	52800	32100	67900	40300
Threaded rods without flats 68830						
M 8	6000	3000	9000	4500	10000	6600
M 10	9000	5000	15000	8000	18000	11600
M 12	14500	7500	22000	12000	28000	17000
M 16	25000	15000	38000	21500	46500	29000
M 20	40000	25000	57000	36000	75000	44500

Torque strength at rupture in Newton.meter (N.m)

	Threaded rods – non lubricated, with Nuts H = 2 D		
	With flat		Without flat
	unlocked	locked	
M 8	10	19	10
M 10	16	37	20
M 12	32	60	35
M 16	82	110	85
M 20	148	162	150

Tensile strength / flattening torque (Nut H = 2D)

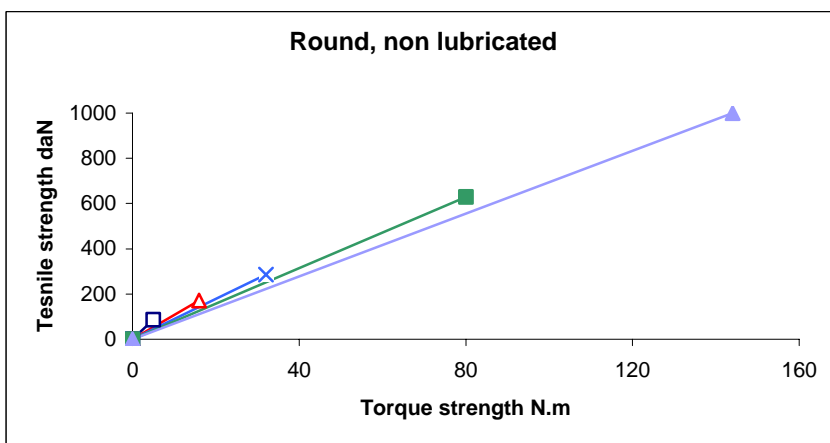


Note :

By suppressing the torsion of the threaded rod, it is possible to use a smaller diameter rod. It is therefore cost and weight effective.

Example :

- Tensile strength 400 daN
- Diameter of the threaded rod with flats :
- unlocked : M16
- locked : M12



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