

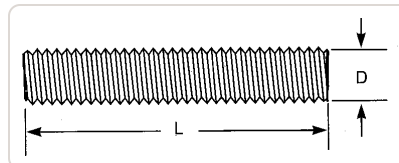


PRODUCT DATA SHEET

Metric Threaded Rod – DIN 975

1.0 Dimensions & Sizes DIN 975 • ISO metric thread 6g

- Threaded rods have only two dimensions: **thread** and **length**.
- Thread:** ISO metric coarse pitch, tolerance class 6g.
- Length:** 1 meter (1000 mm / 39.37") stocked; **2 meter lengths available.**
- Grades:** 4.6, 8.8, 10.9, 12.9, A193 B7, A2 (304) & A4 (316) stainless.



Size	Pitch (mm)	Stress Area A _s (mm²)	Approx. Weight (steel)		Stocked Online – 1 Meter Lengths							
			kg / m	lb / ft	4.6	8.8	10.9	12.9	B7	A2	A4	
M4	0.7	8.8	0.077	0.052	✓	•	•	•	•	✓	•	
M5	0.8	14.2	0.124	0.083	✓	•	•	•	•	✓	•	
M6	1	20.1	0.177	0.119	✓	✓	✓	✓	•	✓	•	
M8	1.25	36.6	0.319	0.214	✓	✓	•	✓	•	✓	•	
M10	1.5	58.0	0.502	0.338	✓	✓	•	✓	✓	✓	•	
M12	1.75	84.3	0.728	0.489	•	✓	✓	✓	✓	✓	•	
M14	2	115.4	0.995	0.668	✓	✓	✓	✓	✓	✓	•	
M16	2	156.7	1.332	0.895	✓	✓	✓	✓	✓	✓	•	
M18	2.5	192.5	1.653	1.111	✓	•	✓	•	•	✓	•	
M20	2.5	244.8	2.082	1.399	✓	✓	✓	✓	✓	✓	•	
M24	3	352.5	2.998	2.015	✓	✓	✓	✓	✓	✓	•	
M30	3.5	560.6	4.740	3.185	✓	•	✓	✓	✓	✓	•	
M33	3.5	693.6	5.821	3.912	✓	•	•	•	•	•	•	
M36	4	816.7	6.879	4.622	✓	•	✓	✓	✓	✓	•	
M39	4	975.8	8.170	5.490	•	•	•	•	•	•	•	
M42	4.5	1120.9	9.415	6.327	•	•	✓	•	•	•	•	

✓ = stocked online in 1 meter lengths. • = available on request (including all 2 meter lengths and A4 / 316). Stress area per ISO 898-1: $A_s = \pi/4 \times (d - 0.9382P)^2$. Weights are approximate for steel; stainless is about 2% heavier. Fine pitch stocked – Class 12.9: M10×1.25, M12×1.25, M14×1.5, M16×1.5; Class 4.6: M8×1, M10×1, M10×1.25, M12×1.25, M12×1.5, M14×1.5, M16×1.5, M18×1.5.

2.0 Specifications

Product standard	DIN 975 threaded rod (superseded by DIN 976-1, form A – same dimensions)
Thread	ISO metric coarse (standard) pitch, ISO 261 / ISO 724, tolerance class 6g (ISO 965). Fine pitch on request.
Length	1 meter (1000 mm / 39.37") stocked. 2 meter (2000 mm / 78.74") lengths available. Cut lengths on request.
Steel classes	ISO 898-1 property classes 4.6, 8.8, 10.9 and 12.9; ASTM A193/A193M Grade B7
Stainless	ISO 3506-1 A2-70 (304 / 18-8) and A4-70 (316)
Finish	Steel: plain (light oil). Stainless: plain / passivated. Zinc plated available on request (not available hot dip galvanized).
Mating nuts	4.6 & 8.8: Class 8 • 10.9: Class 10 • 12.9: Class 12 • B7: ASTM A194 2H • A2 / A4: A2-70 / A4-70

3.0 Mechanical Properties ISO 898-1 • ASTM A193 • ISO 3506-1

Grade / Class	Material	Diameter	Tensile Strength min.	Yield Strength min.	Elongation min.	Hardness
Class 4.6	Low carbon steel	All	400 MPa 58,000 psi	240 MPa 34,800 psi	22%	67–95 HRB
Class 8.8	Medium carbon steel, Q&T	M16 & under	800 MPa 116,000 psi	640 MPa 92,800 psi	12%	22–32 HRC
Class 8.8	Medium carbon steel, Q&T	Over M16	830 MPa 120,400 psi	660 MPa 95,700 psi	12%	23–34 HRC
Class 10.9	Alloy steel, Q&T	All	1,040 MPa 150,800 psi	940 MPa 136,300 psi	9%	32–39 HRC
Class 12.9	Alloy steel, Q&T	All	1,220 MPa 176,900 psi	1,100 MPa 159,500 psi	8%	39–44 HRC
ASTM A193 B7	AISI 4140 Cr-Mo alloy, Q&T	M64 & under	860 MPa 125,000 psi	720 MPa 105,000 psi	16% (RA 50%)	35 HRC max
A2-70 (304)	Austenitic stainless 18-8	M24 & under*	700 MPa 101,500 psi	450 MPa 65,300 psi	0.4d mm	–
A4-70 (316)	Austenitic stainless, Mo	M24 & under*	700 MPa 101,500 psi	450 MPa 65,300 psi	0.4d mm	–

Yield = lower yield (4.6), 0.2% offset (8.8, 10.9, 12.9, B7, A2/A4). *Stainless class 70 applies to M24 & under; larger sizes are supplied as class 50 (500 MPa tensile / 210 MPa yield) unless class 70 is agreed. B7 values per ASTM A193M for M64 & under.

4.0 Application Notes

- Threaded rod is threaded end to end, so it can be cut to any length and used as a long stud with a nut on each end – anchors, hangers, flanges, tie rods and machinery.
- Match the nut to the rod class and pitch. Use stainless nuts on stainless rod, and lubricate stainless threads to prevent galling.
- Class 4.6 rod is for general purpose, light-duty use. Use 8.8, 10.9, 12.9 or B7 where higher strength is required; A4 (316) for marine and chemical exposure.
- Do not weld heat treated (8.8, 10.9, 12.9, B7) rod – heat will change its mechanical properties.

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