

Tightening Torque Reference

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15 catalogued sizes, dimensioned to ISO 898 (reference). Pick any row and the technical drawing redraws to it.

Tightening Torque Reference to ISO 898 (reference) are catalogued in sizes M4 to M36. 15 sizes are held in the table below, and the technical drawing redraws to whichever row you select.

Standard

ISO 898 (reference)

Size range

M4-M36

Catalogued sizes

15

Dimensions are nominal values from the governing standard. Confirm the tolerance class for your application before ordering.



Tightening Torque Reference are engineering reference manufactured to ISO 898 (reference). This page lists the full dimensional range with the key specifications engineers need to select and specify them.

About This Reference

This is an engineering reference table for tightening torque reference based on ISO 898 (reference). Use it alongside our fastener catalog when selecting and specifying parts.

Reference Data (ISO 898 (reference))

Size	Torque cl.4.6 (Nm)	Torque cl.8.8 (Nm)	Torque cl.10.9 (Nm)	Torque cl.12.9 (Nm)	Description
M4	1.5	2.9	4.1	4.8	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M5	2.9	5.8	8.1	9.5	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M6	5.0	9.9	14.0	16.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M8	12.0	24.0	34.0	40.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M10	24.0	47.0	67.0	78.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M12	42.0	82.0	115.0	135.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M14	66.0	130.0	185.0	215.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M16	100.0	200.0	280.0	330.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M18	140.0	275.0	390.0	455.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M20	195.0	390.0	550.0	640.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M22	265.0	530.0	750.0	870.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M24	340.0	670.0	950.0	1100.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M27	500.0	990.0	1400.0	1650.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M30	680.0	1350.0	1900.0	2250.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)
M36	1170.0	2350.0	3300.0	3900.0	Dry, unlubricated, friction coefficient approx. 0.12 (reference)

Inside the plant

Manufactured in our own plant

This part is cold-formed, threaded, heat-treated and finished in-house. The stages below are where its class and finish are actually decided.

1.



01

Cold heading

Wire rod is drawn to size and cold-formed into blanks. Forming rather than cutting keeps the grain flow continuous around the head, which is where a bolt is most likely to fail.

Head dimensions and under-head radius checked at set-up and per shift.



2.

02

Thread rolling

Threads are rolled between hardened dies rather than cut. Rolled threads are stronger in fatigue than cut threads and hold pitch and flank angle far more consistently across a batch.

Go / no-go ring gauges to ISO 965 tolerance class 6g.

3.



03

Heat treatment

Quench-and-temper brings carbon and alloy steel to the property class ordered — 8.8, 10.9 or 12.9 — with the furnace charge tracked so a finished lot can be traced back to it.

Core hardness and tensile tested per lot to ISO 898-1.

4.



04

Surface treatment

Zinc, zinc-nickel, hot-dip galvanizing, black oxide, phosphate and Dacromet, selected against the service environment rather than against the price list.

Coating thickness and neutral salt spray hours to ISO 9227.

Video: Tightening Torque Reference



► Watch video: <https://www.youtube.com/watch?v=E1HU04fV77w>

Third-party video, selected automatically for this topic. It is not produced by Engineering Hardware and is not a specification source — use the tables on this page for dimensional data.

Frequently Asked Questions

What does the Tightening Torque Reference reference table cover?

Tightening Torque Reference is an engineering reference table aligned with ISO 898 (reference). Use the values alongside our fastener catalog when selecting and specifying parts.

How do I request a quotation?

Use the parametric drawing on this page to set the exact configuration (size, material, finish) and click "Request this configuration" — a specialist from Engineering Hardware will respond within one business day.

More Engineering Reference

← Previous Bolt Property Classes ISO 898-1 Next → Metric Fine Thread Dimensions ISO 724