# Metric Fine Thread Dimensions





Engineering Reference · Metric Fine Thread Dimensions

36 catalogued sizes, dimensioned to ISO 724. Pick any row and the technical drawing redraws to it.

Metric Fine Thread Dimensions to ISO 724 are catalogued in pitch 0.75-4 mm, with dia 7.35-61.4 mm. 36 sizes are held in the table below, and the technical drawing redraws to whichever row you select.

Standard

ISO 724

Pitch

0.75-4 mm

Dia

7.35-61.4 mm

Catalogued sizes

36

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

Metric Fine Thread Dimensions conform to ISO 724. As engineering reference, they are specified by the dimensions in the table below; this page also covers materials, finishes and typical uses.

## About This Reference

This is an engineering reference table for metric fine thread dimensions based on ISO 724. Use it alongside our fastener catalog when selecting and specifying parts.

## Reference Data (ISO 724)

| Size x Pitch | Pitch (mm) | Pitch diameter d2/D2 (mm) | Minor dia external d3 (mm) | Minor dia internal D1 (mm) | Stress area (mm2) | Reference standard |
|---|---|---|---|---|---|---|
| M8x1 | 1.0 | 7.35 | 6.773 | 6.917 | 39.2 | ISO 724 fine thread |
| M8x0.75 | 0.75 | 7.513 | 7.08 | 7.188 | 44.2 | ISO 724 fine thread |
| M10x1.25 | 1.25 | 9.188 | 8.466 | 8.647 | 61.2 | ISO 724 fine thread |
| M10x1.0 | 1.0 | 9.35 | 8.773 | 8.917 | 64.5 | ISO 724 fine thread |
| M10x0.75 | 0.75 | 9.513 | 9.08 | 9.188 | 72.7 | ISO 724 fine thread |
| M12x1.5 | 1.5 | 11.026 | 10.16 | 10.376 | 88.1 | ISO 724 fine thread |
| M12x1.25 | 1.25 | 11.188 | 10.466 | 10.647 | 92.1 | ISO 724 fine thread |
| M12x1.0 | 1.0 | 11.35 | 10.773 | 10.917 | 98.0 | ISO 724 fine thread |
| M14x1.5 | 1.5 | 13.026 | 12.16 | 12.376 | 125.0 | ISO 724 fine thread |
| M14x1.25 | 1.25 | 13.188 | 12.466 | 12.647 | 131.0 | ISO 724 fine thread |
| M16x1.5 | 1.5 | 15.026 | 14.16 | 14.376 | 167.0 | ISO 724 fine thread |
| M16x1.0 | 1.0 | 15.35 | 14.773 | 14.917 | 182.0 | ISO 724 fine thread |
| M18x2.0 | 2.0 | 16.701 | 15.546 | 15.835 | 216.0 | ISO 724 fine thread |
| M18x1.5 | 1.5 | 17.026 | 16.16 | 16.376 | 232.0 | ISO 724 fine thread |
| M18x1.0 | 1.0 | 17.35 | 16.773 | 16.917 | 250.0 | ISO 724 fine thread |

| Size x Pitch | Pitch (mm) | Pitch diameter d2/D2 (mm) | Minor dia external d3 (mm) | Minor dia internal D1 (mm) | Stress area (mm2) | Reference standard |
|---|---|---|---|---|---|---|
| M20x2.0 | 2.0 | 18.701 | 17.546 | 17.835 | 272.0 | ISO 724 fine thread |
| M20x1.5 | 1.5 | 19.026 | 18.16 | 18.376 | 290.0 | ISO 724 fine thread |
| M20x1.0 | 1.0 | 19.35 | 18.773 | 18.917 | 311.0 | ISO 724 fine thread |
| M22x2.0 | 2.0 | 20.701 | 19.546 | 19.835 | 333.0 | ISO 724 fine thread |
| M22x1.5 | 1.5 | 21.026 | 20.16 | 20.376 | 353.0 | ISO 724 fine thread |
| M24x2.0 | 2.0 | 22.701 | 21.546 | 21.835 | 384.0 | ISO 724 fine thread |
| M24x1.5 | 1.5 | 23.026 | 22.16 | 22.376 | 407.0 | ISO 724 fine thread |
| M27x2.0 | 2.0 | 25.701 | 24.546 | 24.835 | 496.0 | ISO 724 fine thread |
| M30x2.0 | 2.0 | 28.701 | 27.546 | 27.835 | 621.0 | ISO 724 fine thread |
| M30x1.5 | 1.5 | 29.026 | 28.16 | 28.376 | 647.0 | ISO 724 fine thread |
| M33x2.0 | 2.0 | 31.701 | 30.546 | 30.835 | 761.0 | ISO 724 fine thread |
| M36x3.0 | 3.0 | 34.051 | 32.319 | 32.752 | 865.0 | ISO 724 fine thread |
| M36x2.0 | 2.0 | 34.701 | 33.546 | 33.835 | 915.0 | ISO 724 fine thread |
| M39x3.0 | 3.0 | 37.051 | 35.319 | 35.752 | 1030.0 | ISO 724 fine thread |
| M42x3.0 | 3.0 | 40.051 | 38.319 | 38.752 | 1210.0 | ISO 724 fine thread |
| M45x3.0 | 3.0 | 43.051 | 41.319 | 41.752 | 1410.0 | ISO 724 fine thread |

| Size x Pitch | Pitch (mm) | Pitch diameter d2/D2 (mm) | Minor dia external d3 (mm) | Minor dia internal D1 (mm) | Stress area (mm2) | Reference standard |
|---|---|---|---|---|---|---|
| M48x3.0 | 3.0 | 46.051 | 44.319 | 44.752 | 1600.0 | ISO 724 fine thread |
| M52x3.0 | 3.0 | 50.051 | 48.319 | 48.752 | 1900.0 | ISO 724 fine thread |
| M56x4.0 | 4.0 | 53.402 | 51.093 | 51.67 | 2180.0 | ISO 724 fine thread |
| M60x4.0 | 4.0 | 57.402 | 55.093 | 55.67 | 2520.0 | ISO 724 fine thread |
| M64x4.0 | 4.0 | 61.402 | 59.093 | 59.67 | 2850.0 | ISO 724 fine thread |

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: Metric Fine Thread Dimensions


► Watch video: https://www.youtube.com/watch?v=t6Ea_GzRI7Q

Coarse & Fine Thread Fastener Pitches Explained and How To Measure Thread Size

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 Metric Fine Thread Dimensions reference table cover?

Metric Fine Thread Dimensions is an engineering reference table aligned with ISO 724. 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

← PreviousTightening Torque ReferenceISO 898 (reference)Next →Tap Drill SizesISO 2306 (reference)