

Flat Washers — ISO 7089 / ISO 7093

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Washers · Flat Washers

Flat Washers to ISO 7089 / ISO 7093. Full dimensional table, materials, finishes and quotation. 38 sizes listed.



Technical Drawing

Customize the parameters below — every spec field is editable, and the drawing redraws to match the values you choose.

Changing the size will snap the other fields to that size's standard values; you can then override any individual value.

Sends the selected values to the quote form below.

Request a Quotation for Flat Washers

Tell us the size, material, finish and quantity you need for Flat Washers (ISO 7089 / ISO 7093) and our team will respond within one business day. Click "Request this configuration" on the drawing above to send the parameters you just chose straight into this

form.

Category Type Standard Thread size Material Finish

Dimensions & Specifications (ISO 7089 / ISO 7093)

Every row below is a starting point for the customizer above — pick any size and the drawing will redraw to that row.

For bolt size	Inner diameter d1 min (mm)	Outer diameter d2 max (mm)	Thickness h (mm)	Reference standard
M1.6	1.7	4.0	0.3	ISO 7089
M2	2.2	5.0	0.3	ISO 7089
M2.5	2.7	6.0	0.5	ISO 7089
M3	3.2	7.0	0.5	ISO 7089
M3.5	3.7	8.0	0.5	ISO 7089
M4	4.3	9.0	0.8	ISO 7089
M5	5.3	10.0	1.0	ISO 7089
M6	6.4	12.0	1.6	ISO 7089
M7	7.4	14.0	1.6	ISO 7089
M8	8.4	16.0	1.6	ISO 7089
M10	10.5	20.0	2.0	ISO 7089
M12	13.0	24.0	2.5	ISO 7089
M14	15.0	28.0	2.5	ISO 7089
M16	17.0	30.0	3.0	ISO 7089
M18	19.0	34.0	3.0	ISO 7089
M20	21.0	37.0	3.0	ISO 7089
M22	23.0	39.0	3.0	ISO 7089
M24	25.0	44.0	4.0	ISO 7089
M27	28.0	50.0	4.0	ISO 7089
M30	31.0	56.0	4.0	ISO 7089
M33	34.0	60.0	5.0	ISO 7089
M36	37.0	66.0	5.0	ISO 7089
M39	40.0	72.0	6.0	ISO 7089
M42	43.0	78.0	7.0	ISO 7089
M45	46.0	85.0	7.0	ISO 7089
M48	50.0	92.0	8.0	ISO 7089

For bolt size	Inner diameter d1 min (mm)	Outer diameter d2 max (mm)	Thickness h (mm)	Reference standard
M52	54.0	98.0	8.0	ISO 7089
M56	58.0	105.0	9.0	ISO 7089
M60	62.0	110.0	9.0	ISO 7089
M64	66.0	115.0	9.0	ISO 7089
M5	5.3	15.0	1.0	ISO 7093 large series
M6	6.4	18.0	1.6	ISO 7093 large series
M8	8.4	24.0	2.0	ISO 7093 large series
M10	10.5	30.0	2.5	ISO 7093 large series
M12	13.0	37.0	3.0	ISO 7093 large series
M16	17.0	50.0	3.0	ISO 7093 large series
M20	21.0	60.0	4.0	ISO 7093 large series
M24	25.0	72.0	5.0	ISO 7093 large series

Manufactured to ISO 7089 / ISO 7093, Flat Washers are washers supplied by engineeringhardware.com. The dimensional data, materials and selection notes are summarized here.

What Are Flat Washers?

Flat Washers are washers defined by ISO 7089 / ISO 7093. They are selected by thread size and the dimensional characteristics shown below, and are available in a range of materials and finishes to suit the application and environment.

Materials & Finishes

Common materials include carbon steel (typically zinc plated or hot-dip galvanized), alloy steel in property classes 8.8, 10.9 and 12.9, and stainless steel A2 (304) or A4 (316) for corrosion resistance. Specify the material, property class and surface finish appropriate to your load and environment.

Typical Applications

Load distribution, surface protection and anti-loosening under bolt and nut heads in virtually all bolted joints. [Read the full application guide for Flat Washers →](#)

Related Fasteners

- [Spiral-Wound Metal Gasket — GB/T 4622 / ASME B16.20 \(Series 090\) — GB/T 4622 / ASME B16.20](#)
- [Tab Lock Washer for Round Nut — GB/T 858 \(Series 089\) — GB/T 858](#)
- [General Flat Washer — GB/T 97.1 / ISO 7089 \(Series 087\) — GB/T 97.1 / ISO 7089](#)
- [Wedge / Taper Washer — GB/T 852 \(Series 084\) — GB/T 852](#)
- [Spring Lock Washer — GB/T 93 / DIN 127B \(Series 082\) — GB/T 93 / DIN 127B](#)

Pricing

Flat Washers are stocked and supplied to order. Pricing starts from approximately US\$0.010 per piece for standard sizes in carbon steel; final pricing depends on size, material, finish and order quantity (MOQ applies). Submit your exact configuration with the quote form above.

Frequently Asked Questions

Which standard governs Flat Washers, and how are they driven?

Flat Washers are manufactured to ISO 7089 / ISO 7093 and use the standard drive for this product family. The dimensional values on this page follow that standard.

What is the size range of Flat Washers?

The table on this page lists 38 sizes for Flat Washers, ranging from M1.6 to M24. Sizes outside the table can be quoted on request.

In which materials are Flat Washers supplied?

Flat Washers are supplied in carbon steel (zinc plated / HDG) and stainless A2 / A4, with finishes including zinc plating, hot-dip galvanizing and black oxide. Choose material and finish to suit the load and the service environment for Flat Washers.

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 engineeringhardware.com will respond within one business day.

More Washers

[← PreviousGeneral Flat Washer — GB/T 5782 / ISO 4014 \(Series 008\)GB/T 5782 / ISO 4014](#)[Next →Spring Lock WashersISO 7980 / DIN 127](#)