

What Are Eye Bolts Used For?

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Typical applications, the industries that specify eye bolts, and how to choose the right size, material and finish for the joint.

Eye Bolts are used for providing a rated lifting or anchoring point on a threaded hole or stud, within a stated working load limit. They are manufactured to DIN 580, and selection is driven by the working load limit required, the applicable safety factor and the service environment.

Primary duty

Providing a rated lifting or anchoring point on a threaded hole or stud, within a stated working load limit

Governing standard

DIN 580

Thread size range

M6 to M36

Category

Bolts

Application notes are general engineering guidance. Verify the property class and any approval requirement against your own design calculation.



Eye Bolts are used primarily for providing a rated lifting or anchoring point on a threaded hole or stud, within a stated working load limit. This page lists the industries and assemblies where they are specified, the selection criteria that matter for each application, installation practice, and the cases where a different fastener type is the correct choice. Parts are supplied to DIN 580. Stocked across roughly M6 to M36, they cover general to heavy-duty work.

Typical Applications for Eye Bolts

The most common settings where these are specified:

- **Energy & infrastructure:** tower, pylon and pipework supports exposed to weather and long service life.
- **Lifting & rigging:** attachment points for slings, hooks and shackles when moving machinery and loads.
- **Tie-downs & anchoring:** fixed eyes for guy wires, tensioners and securing equipment.
- **General machine building:** fastening covers, brackets, motors and sub-assemblies on production equipment.
- **Maintenance & repair (MRO):** a stocked size for servicing existing plant where the original fastener spec must be matched.

How to Specify Eye Bolts for Your Application

- **Size:** Match the nominal size to the mating thread or hole. This product spans M6–M36; check the full table below for the exact dimensions of each size.

- **Strength class:** Choose the property class (e.g. 8.8, 10.9, 12.9 or A2/A4 stainless) for the load and environment, and tighten to the matching torque so the joint relies on preload, not friction.
- **Environment:** For damp, coastal or chemical exposure prefer A4/316 stainless or a suitable coating; indoors, plated steel or A2 is usually sufficient.
- **Standard:** This product is supplied to DIN 580. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Tighten to the torque for the size and property class with a calibrated wrench — the joint is held by preload, not by the thread friction alone.
- Ensure at least one full thread projects beyond the nut after tightening, and never re-use a bolt that has been tightened into yield.
- Under slotted or oversized holes, fit a hardened washer so the preload does not relax into the hole edge.

Common Selection Mistakes with Eye Bolts

- Specifying class 12.9 "to be safe" in a corrosive environment — high classes are more sensitive to hydrogen embrittlement and stress corrosion; 8.8 hot-dip galvanized often outlasts them outdoors.
- Choosing a length that puts the shear plane through the threaded portion when a plain shank (partially threaded bolt) was available.
- Mixing stainless bolts with plated-steel nuts: the joint loses its corrosion logic and can gall or seize.

Where Eye Bolts Are Not the Right Choice

Not for permanent joints that will never be opened (a rivet or weld is cheaper), and not where the head must sit flush — use a countersunk screw instead.

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 Quote

The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (DIN 580)

Thread size	Pitch (mm)	Ring inside diameter d (mm)	Ring outside diameter (mm)	Thread length (mm)	Max load vertical (kg)	Reference standard	Notes
M6	1.0	20	36	12	70	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M8	1.25	25	45	16	140	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M10	1.5	30	54	20	230	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M12	1.75	36	63	24	340	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M14	2.0	42	72	28	500	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M16	2.0	45	81	32	700	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M18	2.5	50	90	36	930	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M20	2.5	56	99	40	1200	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M24	3.0	63	117	48	1800	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull
M30	3.5	80	144	60	3200	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull

Thread size	Pitch (mm)	Ring inside diameter d (mm)	Ring outside diameter (mm)	Thread length (mm)	Max load vertical (kg)	Reference standard	Notes
M36	4.0	95	171	72	4600	DIN 580 / WLL	Drop-forged lifting eye bolt, vertical pull

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.

Frequently Asked Questions

How do I choose the right size of Eye Bolts?

Match the nominal size to the mating thread or hole. This product is available from M6 to M36; the full dimension table on this page lists each size.

How tight should Eye Bolts be torqued?

Tighten to the torque for the size and property class so the joint is held by bolt preload. The size pages and torque reference table give recommended values; use a calibrated torque wrench for anything structural.

What material should Eye Bolts be for outdoor use?

For damp, coastal or chemical environments specify A4 (316) stainless or a suitably coated steel. For indoor or dry use, A2 (304) stainless or zinc-plated steel is normally adequate.

Are Eye Bolts made to a recognized standard?

Yes — they are manufactured to DIN 580, so dimensions are interchangeable between suppliers when you quote the standard on your order.

Can I get a quote for Eye Bolts in the size and material I need?

Yes. Use the technical drawing and quote form on this page to set the size and options, then send the exact configuration to our team for pricing and lead time.

Related Pages

Product page: [Eye Bolts — specifications & sizes](#)

Eye Bolts Specification Guides

- [M6 Eye Bolts size guide](#)
- [A4 stainless Eye Bolts](#)

Related Fastener Applications

- [Carriage Bolts applications](#)
- [Clamping Handle Screw \(Long\) — DIN 6336 / GN 313 \(Series 044\) applications](#)
- [Clamping Handle Screw \(Medium\) — DIN 6336 / GN 313 \(Series 043\) applications](#)
- [Clamping Handle Screw \(Short\) — DIN 6336 / GN 313 \(Series 042\) applications](#)
- [Equal-End Stud Bolt — GB/T 901 / DIN 939 \(Series 093\) applications](#)
- [Hex Bolt — GB/T 5782 / ISO 4014 \(Series 006\) applications](#)