

What Are Angular Contact Ball Bearing Used For?

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Typical applications, the industries that specify angular contact ball bearing, and how to choose the right size, material and finish for the joint.

Angular Contact Ball Bearings are used for supporting a rotating shaft and carrying its radial and axial loads with low friction. They are manufactured to ISO / DIN, and selection is driven by the bore diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Supporting a rotating shaft and carrying its radial and axial loads with low friction

Governing standard

ISO / DIN

Bore diameter range

10 mm to 80 mm

Category

Bearings & Bushings

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



Angular Contact Ball Bearings (ISO / DIN) are specified where the joint requires supporting a rotating shaft and carrying its radial and axial loads with low friction. The sections below cover the typical end-uses by industry, the size and material decisions for each, assembly practice, and the applications this fastener type is not suited to. Stocked across roughly 10 mm to 80 mm, they cover general to heavy-duty work.

Typical Applications for Angular Contact Ball Bearing — ISO / DIN (Series 138)

The most common settings where these are specified:

- **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.
- **Fabrication & metalwork:** bench and on-site assembly of steel frames, enclosures and weldments.

How to Specify Angular Contact Ball Bearing — ISO / DIN (Series 138) for Your Application

- **Size:** Select on bore diameter, and confirm it against the mating feature in the assembly. This product spans 10 mm–80 mm; check the full table below for the exact dimensions of each size.

- **Material:** Choose the material and finish for the service environment — plated steel for general use, stainless for corrosion resistance.
- **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 ISO / DIN. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Where Angular Contact Ball Bearing — ISO / DIN (Series 138) Are Not the Right Choice

Match the fastener to the load, environment and whether the joint must be reopened; the wrong class or style is the usual cause of joint failure.

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 (ISO / DIN)

Bore d (mm)	Outer diameter D (mm)	Width B (mm)	Contact angle (deg)	Dynamic load C (kN)	Reference standard
10	30	9	15	5.85	ISO 76 / GB/T 292
15	35	11	15	8.06	ISO 76 / GB/T 292
20	47	14	15	12.5	ISO 76 / GB/T 292
25	52	15	15	14.8	ISO 76 / GB/T 292
30	62	16	15	20.3	ISO 76 / GB/T 292
40	80	18	15	32.5	ISO 76 / GB/T 292
50	90	20	15	37.5	ISO 76 / GB/T 292
60	110	22	25	55.0	ISO 76 / GB/T 292
70	125	24	25	70.2	ISO 76 / GB/T 292
80	140	26	25	82.4	ISO 76 / GB/T 292

Video: What Are Angular Contact Ball Bearing Used For? in use



► Watch video: <https://www.youtube.com/watch?v=Jo9RuuCuCTM>

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.

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

What are Angular Contact Ball Bearing — ISO / DIN (Series 138) used for?

Supporting a rotating shaft and carrying its radial and axial loads with low friction. They are supplied to ISO / DIN.

Which industries use Angular Contact Ball Bearing — ISO / DIN (Series 138)?

They are commonly specified in general machine building, maintenance & repair (mro) and fabrication & metalwork, among other sectors.

How do I choose the right size of Angular Contact Ball Bearing — ISO / DIN (Series 138)?

Select on bore diameter and on the fit the assembly requires. This product is available from 10 mm to 80 mm; the full dimension table on this page lists each size.

Are Angular Contact Ball Bearing — ISO / DIN (Series 138) made to a recognized standard?

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

Can I get a quote for Angular Contact Ball Bearing — ISO / DIN (Series 138) 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: [Angular Contact Ball Bearing — ISO / DIN \(Series 138\) — specifications & sizes](#)

Angular Contact Ball Bearing — ISO / DIN (Series 138) Specification Guides

- [A4 stainless Angular Contact Ball Bearing — ISO / DIN \(Series 138\)](#)

Related Fastener Applications

- [Angular Contact Ball Bearing — ISO / DIN \(Series 109\) applications](#)
- [Angular Contact Ball Bearing — ISO / DIN \(Series 111\) applications](#)
- [Angular Contact Ball Bearing — ISO / DIN \(Series 136\) applications](#)
- [Angular Contact Ball Bearing — ISO / DIN \(Series 137\) applications](#)
- [Cylindrical Roller Bearing — ISO / DIN \(Series 112\) applications](#)
- [Cylindrical Roller Bearing — ISO / DIN \(Series 113\) applications](#)