

What Are Split Cotter Pin Used For?

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[Fasteners/Pins Split Cotter Pin — ISO / DIN \(Series 102\)](#)/Applications

[Pins · ISO / DIN · Application guide](#)

Typical applications, the industries that specify split cotter pins, and how to choose the right size, material and finish for the joint.

Split Cotter Pins are used for precise location and light shear duty between two parts. They are manufactured to ISO / DIN, and selection is driven by the nominal diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Precise location and light shear duty between two parts

Governing standard

ISO / DIN

Nominal diameter range

1 mm to 8 mm

Category

Pins

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



Split Cotter Pins are selected when an assembly calls for precise location and light shear duty between two parts. This application guide to the ISO / DIN type covers concrete end-uses, the specification checklist, correct installation, and where an alternative fastener performs better. Stocked across roughly 1 mm to 8 mm, they cover general to heavy-duty work.

Typical Applications for Split Cotter Pin — ISO / DIN (Series 102)

The most common settings where these are specified:

- **Fabrication & metalwork:** bench and on-site assembly of steel frames, enclosures and weldments.
- **Jigs & fixtures:** precise location of tooling plates and locating features.
- **Linkages & hinges:** pivot points carrying light shear.
- **Machine alignment:** dowelling mating housings so they reassemble in the same position.
- **General machine building:** fastening covers, brackets, motors and sub-assemblies on production equipment.

How to Specify Split Cotter Pin — ISO / DIN (Series 102) for Your Application

- **Size:** Select on nominal diameter, then on the hole tolerance and fit class — the fit, not the diameter alone, determines whether the part locates or slips. This product spans 1 mm–8 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.

Installation & Assembly Practice

- Ream the hole to the specified fit class; a dowel pressed into a drilled-only hole will not locate accurately.
- Press pins in with steady force rather than hammer blows where possible, and chamfer the hole entry.

Common Selection Mistakes with Split Cotter Pin — ISO / DIN (Series 102)

- Using a dowel pin as a load-carrying shear bolt — dowels locate, they are not sized for sustained shear.
- Ignoring the fit class: a locational fit and an interference fit need different hole tolerances.

Where Split Cotter Pin — ISO / DIN (Series 102) Are Not the Right Choice

Not for carrying significant tensile or repeated heavy shear loads — use a bolt or a keyed joint for that.

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)

Nominal diameter (mm)	Length L (mm)	Material	Reference standard
1.0	16	Carbon steel	ISO 1234 / GB/T 91
1.2	20	Carbon steel	ISO 1234 / GB/T 91
1.6	25	Carbon steel	ISO 1234 / GB/T 91
2.0	32	Carbon steel	ISO 1234 / GB/T 91
2.5	40	Carbon steel	ISO 1234 / GB/T 91
3.2	50	Carbon steel	ISO 1234 / GB/T 91
4.0	63	Carbon steel	ISO 1234 / GB/T 91
5.0	80	Carbon steel	ISO 1234 / GB/T 91
6.3	100	Carbon steel	ISO 1234 / GB/T 91
8.0	125	Carbon steel	ISO 1234 / GB/T 91

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 material should Split Cotter Pin — ISO / DIN (Series 102) 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 Split Cotter Pin — ISO / DIN (Series 102) 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.

What are Split Cotter Pin — ISO / DIN (Series 102) used for?

Precise location and light shear duty between two parts. They are supplied to ISO / DIN.

Which industries use Split Cotter Pin — ISO / DIN (Series 102)?

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

Can I get a quote for Split Cotter Pin — ISO / DIN (Series 102) 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: [Split Cotter Pin — ISO / DIN \(Series 102\) — specifications & sizes](#)

Split Cotter Pin — ISO / DIN (Series 102) Specification Guides

- [A4 stainless Split Cotter Pin — ISO / DIN \(Series 102\)](#)

Related Fastener Applications

- [Clevis Pin — ISO / DIN \(Series 101\) applications](#)
- [Clevis Pin — ISO / DIN \(Series 105\) applications](#)
- [Clevis Pin — ISO / DIN \(Series 150\) applications](#)
- [Dowel Pins applications](#)
- [Internally Threaded Dowel Pin — GB/T 120.1 / ISO 8735 \(Series 099\) applications](#)
- [Internally Threaded Dowel Pin — GB/T 120.1 / ISO 8735 \(Series 100\) applications](#)