

What Are Solid Rivets Used For?

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[Fasteners/Rivets/Solid Rivets/Applications](#)

[Rivets](#) · [ISO 1051 / DIN 660 / DIN 661](#) · [Application guide](#)

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

Solid Rivets are used for permanent, vibration-proof joints in sheet and plate. They are manufactured to ISO 1051 / DIN 660 / DIN 661, and selection is driven by the nominal diameter, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Permanent, vibration-proof joints in sheet and plate

Governing standard

ISO 1051 / DIN 660 / DIN 661

Nominal diameter range

1 mm to 25 mm

Category

Rivets

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



The primary duty of Solid Rivets is permanent, vibration-proof joints in sheet and plate. Below: the sectors that specify them in volume, the checklist used to select the right size and material for the application, installation notes, and the known limits of the type. Stocked across roughly 1 mm to 25 mm, they cover general to heavy-duty work.

Typical Applications for Solid Rivets

The most common settings where these are specified:

- **Signage & cladding:** fast, vibration-resistant fixing of thin panels.
- **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.
- **Sheet-metal assembly:** permanent joints in ductwork, panels and enclosures.

How to Specify Solid Rivets 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–25 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 1051 / DIN 660 / DIN 661. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Drill the hole 0.1 mm over the nominal rivet diameter and deburr both sides before setting.
- Grip range must match the total joint thickness — a rivet set outside its grip range clamps poorly and works loose.

Common Selection Mistakes with Solid Rivets

- Setting a rivet outside its grip range, which leaves the joint loose from day one.
- Using aluminum rivets on steel sheet outdoors — galvanic corrosion eats the rivet.

Where Solid Rivets Are Not the Right Choice

Not where the joint must later be disassembled, and not for high-tension structural connections.

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

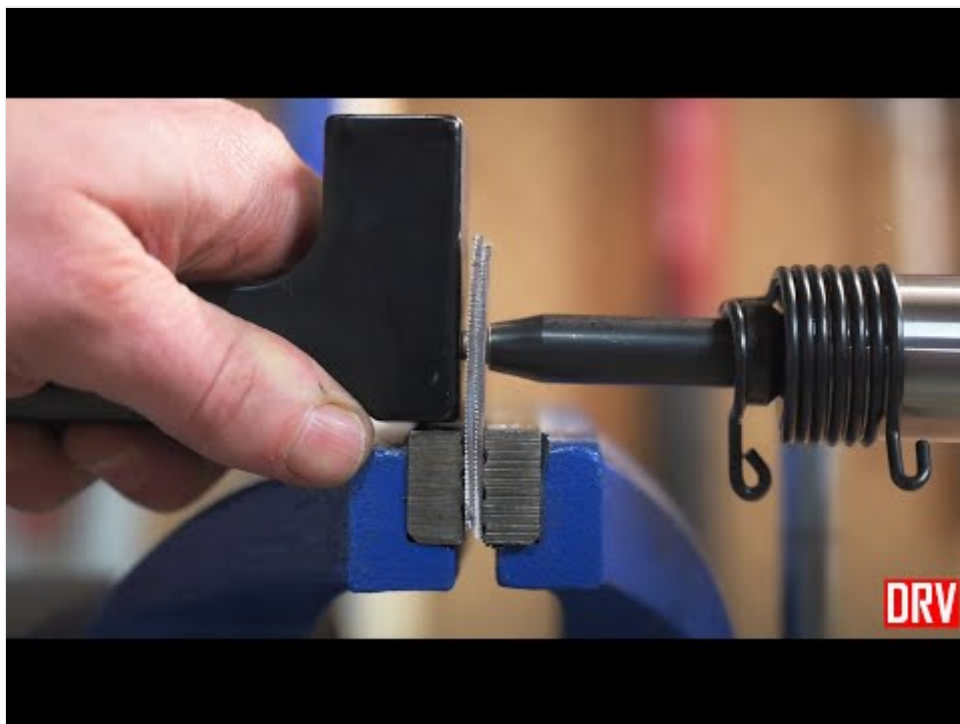
The form below follows the current technical drawing configuration. Change the drawing values above and the request details update automatically.

Dimensions & Specifications (ISO 1051 / DIN 660 / DIN 661)

Nominal diameter (mm)	Common length range (mm)	Head diameter dk (mm)	Head height k (mm)	Countersunk head dia (mm)	Reference standard
1.0	2~10	2.0	0.7	1.9	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
1.2	2~12	2.4	0.8	2.2	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
1.6	3~16	3.2	1.0	3.0	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
2.0	3~20	4.0	1.3	3.8	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
2.5	4~25	5.0	1.6	4.7	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
3.0	4~30	6.0	1.9	5.6	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
4.0	5~40	8.0	2.5	7.5	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
5.0	6~50	10.0	3.1	9.4	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
6.0	8~60	12.0	3.8	11.2	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
8.0	10~80	16.0	5.0	15.0	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
10.0	14~100	20.0	6.3	18.7	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
12.0	16~120	24.0	7.5	22.5	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
14.0	18~140	28.0	8.8	26.2	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
16.0	20~160	32.0	10.0	30.0	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)

Nominal diameter (mm)	Common length range (mm)	Head diameter dk (mm)	Head height k (mm)	Countersunk head dia (mm)	Reference standard
18.0	22~180	36.0	11.0	34.0	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
20.0	25~200	40.0	12.5	37.5	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
22.0	28~200	44.0	13.8	41.2	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)
25.0	32~200	50.0	15.6	47.0	ISO 1051 / DIN 660 (round) / DIN 661 (countersunk)

Video: What Are Solid Rivets Used For? in use



► Watch video: <https://www.youtube.com/watch?v=rV9E3gS2fH4>

[Buck Riveting 101 | Rivet Guns, Bucking Bars & Clecos | Solid Riveting](#)

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

Are Solid Rivets made to a recognized standard?

Yes — they are manufactured to ISO 1051 / DIN 660 / DIN 661, so dimensions are interchangeable between suppliers when you quote the standard on your order.

What are Solid Rivets used for?

Permanent, vibration-proof joints in sheet and plate. They are supplied to ISO 1051 / DIN 660 / DIN 661.

Which industries use Solid Rivets?

They are commonly specified in sheet-metal assembly, bodywork & trailers and signage & cladding, among other sectors.

How do I choose the right size of Solid Rivets?

Select on nominal diameter and on the fit the assembly requires. This product is available from 1 mm to 25 mm; the full dimension table on this page lists each size.

Can I get a quote for Solid Rivets 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: [Solid Rivets — specifications & sizes](#)

Solid Rivets Specification Guides

- [A4 stainless Solid Rivets](#)

Related Fastener Applications

- [Blind \(Pop\) Rivets applications](#)
- [Blind Pop Rivet — GB/T 12618 / ISO 15983 \(Series 098\) applications](#)
- [Round Head Solid Rivet — GB/T 867 / DIN 660 \(Series 097\) applications](#)