

What Are Wire Rope Used For?

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Fasteners/Rigging Hardware Wire Rope — GB/T 6170 / ISO 4032 (Series 063) Applications

Rigging Hardware · GB/T 6170 / ISO 4032 · Application guide

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

Wire Ropes are used for lifting, tensioning and securing loads within a rated working load limit. They are manufactured to GB/T 6170 / ISO 4032, and selection is driven by the working load limit required, the applicable safety factor and the service environment.

Primary duty

Lifting, tensioning and securing loads within a rated working load limit

Governing standard

GB/T 6170 / ISO 4032

Rope diameter range

4 mm to 24 mm

Category

Rigging Hardware

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



Wire Ropes are selected when an assembly calls for lifting, tensioning and securing loads within a rated working load limit. This application guide to the GB/T 6170 / ISO 4032 type covers concrete end-uses, the specification checklist, correct installation, and where an alternative fastener performs better. Stocked across roughly 4 mm to 24 mm, they cover general to heavy-duty work.

Typical Applications for Wire Rope — GB/T 6170 / ISO 4032 (Series 063)

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 Wire Rope — GB/T 6170 / ISO 4032 (Series 063) for Your Application

- **Size:** Select on rope diameter, and confirm it against the mating feature in the assembly. This product spans 4 mm–24 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 GB/T 6170 / ISO 4032. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Where Wire Rope — GB/T 6170 / ISO 4032 (Series 063) 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 (GB/T 6170 / ISO 4032)

Nominal diameter (mm)	Construction	Min breaking force (kN)	Mass (kg/100m)	Material	Reference standard
4	6x7	8.95	5.85	Galvanized steel	GB/T 20118 / ISO 2408
5	6x7	13.4	8.94	Galvanized steel	GB/T 20118 / ISO 2408
6	6x19	17.6	13.0	Galvanized steel	GB/T 20118 / ISO 2408
8	6x19	31.3	23.0	Galvanized steel	GB/T 20118 / ISO 2408
10	6x19	48.5	36.0	Galvanized steel	GB/T 20118 / ISO 2408
12	6x19	69.5	52.0	Galvanized steel	GB/T 20118 / ISO 2408
16	6x37	119	89.0	Galvanized steel	GB/T 20118 / ISO 2408
20	6x37	185	138.0	Galvanized steel	GB/T 20118 / ISO 2408
24	6x37	265	196.0	Galvanized steel	GB/T 20118 / ISO 2408

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 Wire Rope — GB/T 6170 / ISO 4032 (Series 063) used for?

Lifting, tensioning and securing loads within a rated working load limit. They are supplied to GB/T 6170 / ISO 4032.

Which industries use Wire Rope — GB/T 6170 / ISO 4032 (Series 063)?

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 Wire Rope — GB/T 6170 / ISO 4032 (Series 063)?

Select on rope diameter and on the fit the assembly requires. This product is available from 4 mm to 24 mm; the full dimension table on this page lists each size.

Are Wire Rope — GB/T 6170 / ISO 4032 (Series 063) made to a recognized standard?

Yes — they are manufactured to GB/T 6170 / ISO 4032, so dimensions are interchangeable between suppliers when you quote the standard on your order.

Can I get a quote for Wire Rope — GB/T 6170 / ISO 4032 (Series 063) 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: [Wire Rope — GB/T 6170 / ISO 4032 \(Series 063\) — specifications & sizes](#)

Wire Rope — GB/T 6170 / ISO 4032 (Series 063) Specification Guides

- [A4 stainless Wire Rope — GB/T 6170 / ISO 4032 \(Series 063\)](#)

Related Fastener Applications

- [Turnbuckle — ISO / DIN \(Series 156\) applications](#)
- [Wire Rope — ISO / DIN \(Series 152\) applications](#)
- [Wire Rope Clip \(U-Bolt\) — ISO / DIN \(Series 157\) applications](#)
- [Wire Rope Thimble — ISO / DIN \(Series 155\) applications](#)
- [Wire Rope Thimble — ISO / DIN \(Series 158\) applications](#)