

What Are Hydraulic Compression Fittings Used For?

Engineering Hardware & Fasteners · engineeringhardware.com/applications/hydraulic-compression-fittings

[Fasteners](#) [Pipe & Pneumatic Fittings](#) [Hydraulic Compression Fittings](#) [Applications](#)

Pipe & Pneumatic Fittings · DIN 2353 · Application guide

Typical applications, the industries that specify hydraulic compression fittings, and how to choose the right size, material and finish for the joint.

Hydraulic Compression Fittings are used for joining and sealing fluid or pneumatic lines. They are manufactured to DIN 2353, and selection is driven by the pipe thread size, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Joining and sealing fluid or pneumatic lines

Governing standard

DIN 2353

Pipe thread size range

4 to 42

Category

Pipe & Pneumatic Fittings

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



Hydraulic Compression Fittings are used primarily for joining and sealing fluid or pneumatic lines. 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 2353. Stocked across roughly 4 to 42, they cover general to heavy-duty work.

Typical Applications for Hydraulic Compression Fittings

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.
- **Pneumatic systems:** connecting air lines, cylinders and valves on automation rigs.
- **Hydraulic & fluid power:** sealed, pressure-rated joints in fluid lines.

How to Specify Hydraulic Compression Fittings for Your Application

- **Size:** Match the nominal size to the mating thread or hole. This product spans 4–42; check the full table below for the exact dimensions of each size.

- **Thread & pressure:** Match the thread form (BSP/NPT/metric) and pressure rating to the line, and seal appropriately (tape, sealant or O-ring).
- **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 2353. Quoting the standard on your order guarantees interchangeable dimensions between suppliers.

Installation & Assembly Practice

- Seal tapered threads with PTFE tape or anaerobic sealant applied clear of the first thread; parallel threads seal on a washer or O-ring, not on the thread.
- Tighten to the fitting manufacturer's torque — over-tightening tapered threads splits female ports.

Common Selection Mistakes with Hydraulic Compression Fittings

- Mating BSP and NPT threads directly — the 55°/60° forms do not seal against each other.
- Exceeding the pressure rating of the lowest-rated component in the line.

Where Hydraulic Compression Fittings Are Not the Right Choice

Do not mix thread forms (BSP into NPT) without an adapter, and do not exceed the pressure rating of the lowest-rated component.

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 2353)

Tube OD (mm)	Nut length L (mm)	Nut width across flats (mm)	Tube bore (mm)	Max working pressure (bar)	Mating thread	Reference standard	Notes
4	22	13	8	400	M10x1	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
5	24	14	9	400	M12x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
6	27	17	11	400	M14x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
8	30	19	13	400	M16x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
10	33	22	16	400	M18x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
12	36	24	18	315	M22x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
14	39	27	20	315	M26x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
15	39	27	20	315	M26x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
16	42	30	22	315	M26x1.5	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
18	45	32	25	250	M30x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
20	48	36	27	250	M30x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
22	51	38	30	250	M36x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
25	55	41	32	250	M36x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
28	58	46	36	160	M42x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting

Tube OD (mm)	Nut length L (mm)	Nut width across flats (mm)	Tube bore (mm)	Max working pressure (bar)	Mating thread	Reference standard	Notes
30	60	48	38	160	M42x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
35	66	55	44	160	M52x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
38	69	58	47	160	M52x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting
42	74	65	52	100	M60x2	DIN 2353 / ISO 8434-1	Compression hydraulic fitting

Video: What Are Hydraulic Compression Fittings Used For? in use



► Watch video: <https://www.youtube.com/watch?v=8zekQMF1PLU>

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 Hydraulic Compression Fittings used for?

Joining and sealing fluid or pneumatic lines. They are supplied to DIN 2353.

Which industries use Hydraulic Compression Fittings?

They are commonly specified in fabrication & metalwork, pneumatic systems and hydraulic & fluid power, among other sectors.

How do I choose the right size of Hydraulic Compression Fittings?

Match the nominal size to the mating thread or hole. This product is available from 4 to 42; the full dimension table on this page lists each size.

Can I mix BSP and NPT Hydraulic Compression Fittings?

Not directly — the thread forms differ in angle and taper. Use a dedicated BSP-to-NPT adapter, and seal with the method suited to the thread (tape, sealant or O-ring).

Can I get a quote for Hydraulic Compression Fittings 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: [Hydraulic Compression Fittings — specifications & sizes](#)

Hydraulic Compression Fittings Specification Guides

- [A4 stainless Hydraulic Compression Fittings](#)

Related Fastener Applications

- [BSP Pipe Thread Fittings applications](#)
- [NPT Pipe Thread Fittings applications](#)
- [Push-In Pneumatic Fittings applications](#)