

What Are BSP Pipe Thread Fittings Used For?

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BSP Pipe Thread Fittings are used for joining and sealing fluid or pneumatic lines. They are manufactured to ISO 228 (G), and selection is driven by the screw size, the fit and tolerance the assembly requires, and the service environment.

Primary duty

Joining and sealing fluid or pneumatic lines

Governing standard

ISO 228 (G)

Screw size range

1 to 312

Category

Pipe & Pneumatic Fittings

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



BSP Pipe Thread 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 ISO 228 (G). Stocked across roughly 1 to 312, they cover general to heavy-duty work.

Typical Applications for BSP Pipe Thread Fittings

The most common settings where these are specified:

- **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.
- **Process & plant piping:** tapped connections on manifolds and equipment.

How to Specify BSP Pipe Thread Fittings for Your Application

- **Size:** Match the nominal size to the mating thread or hole. This product spans 1–312; 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 ISO 228 (G). 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 BSP Pipe Thread 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 BSP Pipe Thread 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 (ISO 228 (G))

Size	Nominal size (in)	Major diameter (mm)	Pitch (mm)	Threads per inch (TPI)	Tap drill (mm)	Reference standard	Notes
G1/16	1/16	7.723	0.907	28	6.8	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1/8	1/8	9.728	0.907	28	8.8	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1/4	1/4	13.157	1.337	19	11.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G3/8	3/8	16.662	1.337	19	15.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1/2	1/2	20.955	1.814	14	18.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G5/8	5/8	22.911	1.814	14	20.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G3/4	3/4	26.441	1.814	14	24.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G7/8	7/8	30.201	1.814	14	27.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1	1	33.249	2.309	11	30.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1-1/8	1-1/8	37.897	2.309	11	35.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1-1/4	1-1/4	41.91	2.309	11	39.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1-1/2	1-1/2	47.803	2.309	11	45.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G1-3/4	1-3/4	53.746	2.309	11	51.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G2	2	59.614	2.309	11	57.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket

Size	Nominal size (in)	Major diameter (mm)	Pitch (mm)	Threads per inch (TPI)	Tap drill (mm)	Reference standard	Notes
G2-1/4	2-1/4	65.71	2.309	11	63.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G2-1/2	2-1/2	75.184	2.309	11	72.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G2-3/4	2-3/4	81.534	2.309	11	79.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G3	3	87.884	2.309	11	85.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G3-1/2	3-1/2	100.33	2.309	11	97.5	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G4	4	113.03	2.309	11	110.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G5	5	138.43	2.309	11	135.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket
G6	6	163.83	2.309	11	160.0	ISO 228-1 / DIN ISO 228	Parallel pipe thread (G), sealed by gasket

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

Which industries use BSP Pipe Thread Fittings?

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

How do I choose the right size of BSP Pipe Thread Fittings?

Match the nominal size to the mating thread or hole. This product is available from 1 to 312; the full dimension table on this page lists each size.

Can I mix BSP and NPT BSP Pipe Thread 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).

What material should BSP Pipe Thread Fittings 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.

Can I get a quote for BSP Pipe Thread 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: [BSP Pipe Thread Fittings — specifications & sizes](#)

BSP Pipe Thread Fittings Specification Guides

- [A4 stainless BSP Pipe Thread Fittings](#)

Related Fastener Applications

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