

What is a Low Pressure BSP Fitting?

BSP fittings are a family of fittings used to connect up threaded pipe and equipment.

They are manufactured from pipe, bar, hollow bar, castings or forgings.

The pipe to be threaded must have a wall thickness of Schedule 40S minimum.

The fittings are used in non-critical, low pressure applications where welding is not possible or required. They therefore provide a relatively low cost method of connection.

BSP fittings are usually fitted with a sealant (paste or tape such as PTFE) and are considered to be permanent pipe-work.

Low Pressure BSP Fittings are rated at 150lb and are made to wrought iron specification BS1740. BSP fittings are made only in type 316.

They are provided with a Certificate of Conformity only, and not a full Test Certificate.

Sizes ½ to 3 inch are the most commonly used and thus the most readily available.

What is the thread form? - External MALE threads are tapered and Internal FEMALE threads are parallel. The threads are cut to BS21: Part 1: 1985 and are called Whitworth Threads. See last page below.

CONTACT

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REVISION HISTORY

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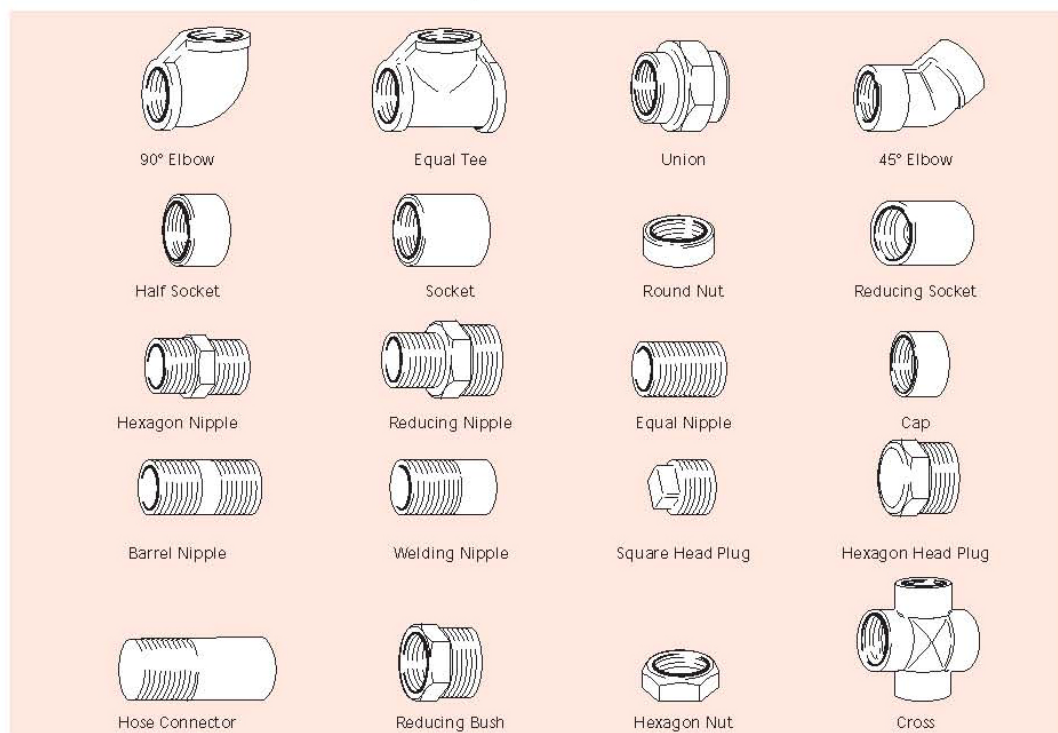
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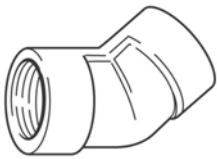

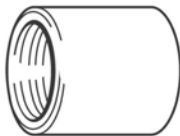

Whitworth Threads/British Standard Pipe Thread


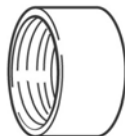
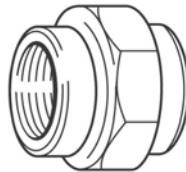

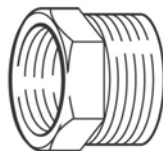


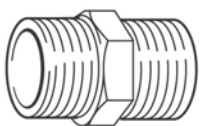
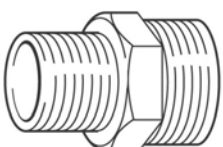
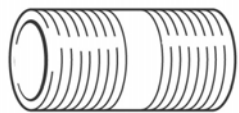
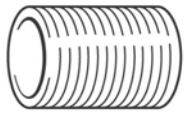
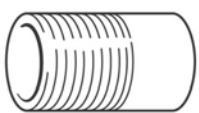
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- BSP fittings are usually fitted with a sealant (paste or tape such as PTFE) and are considered to be permanent pipe-work.
- Low Pressure BSP Fittings are rated at 150lb and are made to wrought iron specification BS 1740.
- BSP fittings are made only in type 316.
- They are provided with a Certificate of Conformity only, and not a full Test Certificate.
- Sizes 1/8 to 3 inch are the most commonly used and thus the most readily available.
- External MALE threads are tapered and Internal FEMALE threads are parallel. The threads are cut to BS21: Part 1: 1985 and are called Whitworth Threads – See below.


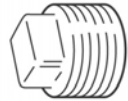
Nominal size of outlet		Min O/D	Min O/D of body behind external thread	Min I/D of body behind internal thread	No. of threads per inch
in	mm	mm	mm	mm	
1/8	6	15.0	9.8	8.6	28
–	8	18.5	13.3	11.4	19
3/8	10	22.0	16.8	15.0	19
–	15	27.0	21.1	18.6	14
–	20	32.5	26.6	24.1	14
1	25	39.5	33.4	30.3	11
1	32	49.0	42.1	39.0	11
1	40	56.0	48.0	44.8	11
2	50	68.0	59.8	56.7	11
2	65	84.0	75.4	72.2	11
3	80	98.0	88.1	84.9	11
4	100	124.0	113.3	110.1	11
5	125	151.0	138.7	135.5	11
6	150	178.0	164.1	160.9	11

For what is each fitting used?

Fitting	Use / Notes
 90° Elbow	<p>Enables the pipe run to be turned through a right angle.</p> <p>Female thread both ends</p>
 45° Elbow	<p>Enables the pipe run to be turned through 45 degrees.</p> <p>Female thread both ends</p>
 Equal Tee	<p>Allows the connection of a branch at right angles from the main pipe run.</p> <p>Female thread at all three connections.</p>
 Socket	<p>Used to connect two pipes or fittings that have male threads.</p> <p>Female thread both ends.</p>
 Half Socket	<p>Used to connect two pipes or fittings that have male threads.</p> <p>Used when there is a confined space</p> <p>Female thread both ends.</p>

Fitting	Use / Notes
 Reducing Socket	<p>Used to connect two different sizes of pipe or fittings that have male threads.</p> <p>Female threads both ends</p>
 Cap	<p>Used to terminate a male threaded pipe run.</p> <p>Female threaded.</p>
 Union	<p>Connects male threaded pipe or components.</p> <p>Used when easy or regular access is required e.g. for cleaning.</p> <p>Female thread both ends.</p>
 Hexagon Nut	<p>Used to fix male threaded fittings.</p> <p>Female threaded.</p>
 Reducing Bush	<p>Connects a larger female threaded component to a smaller male threaded component. Male thread at large end and Female thread at small end.</p>

Fitting	Use / Notes
 <p>Hexagon Nipple</p>	Used to connect two female threaded components. Male thread both ends.
 <p>Reducing Nipple</p>	Connects two female threaded components of different sizes. Male thread both ends.
 <p>Barrel Nipple</p>	Used to connect two female threaded components of the same size. Male (taper) thread both ends.
 <p>Equal Nipple</p>	The only BSP fitting to have a <u>Male Parallel</u> thread. Used to connect female threaded components together
 <p>Welding Nipple</p>	Weld prepared at one end and Male thread at the other. Used to weld onto equipment that is to be connected to a female threaded component.

Fitting	Use / Notes
Close Taper Nipple	Used to connect two female threaded components. No land between the threads so shorter than a barrel nipple and thus used where space is restricted. Male thread both ends.
 <p>Hexagon Head Plug</p>	Used to blank off female threaded outlet. Cannot be used to blank off a pipe directly as pipes only have male threads. Male threaded.
 <p>Square Head Plug</p>	Used to blank off female threaded outlet. Cannot be used to blank off a pipe directly as pipes only have male threads. Male threaded.
90 Degree Bend	This has a larger radius than a 90 Degree Elbow and is again used to turn the pipe run through a right angle. Female thread both ends.
Hose Nipple	Used to connect a hose to the system. Male thread one end and hose serrations at the other.

Whitworth Threads / British Standard Pipe Thread

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$\frac{1}{8}$	6	15.0	9.8	8.6	28
$\frac{1}{4}$	8	18.5	13.3	11.4	19
$\frac{3}{8}$	10	22.0	16.8	15.0	19
$\frac{1}{2}$	15	27.0	21.1	18.6	14
$\frac{3}{4}$	20	32.5	26.6	24.1	14
1	25	39.5	33.4	30.3	11
1 $\frac{1}{4}$	32	49.0	42.1	39.0	11
1 $\frac{1}{2}$	40	56.0	48.0	44.8	11
2	50	68.0	59.8	56.7	11
2 $\frac{1}{2}$	65	84.0	75.4	72.2	11
3	80	98.0	88.1	84.9	11
4	100	124.0	113.3	110.1	11
5	125	151.0	138.7	135.5	11
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