

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.

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REVISION HISTORY

Datasheet Updated	18 July 2019
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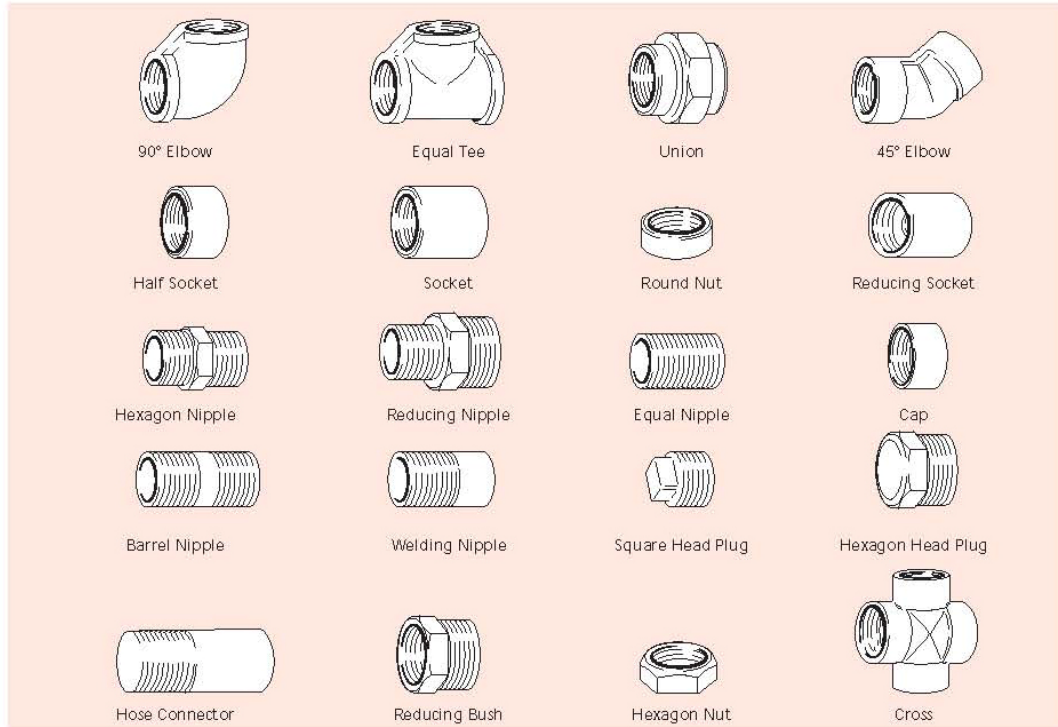
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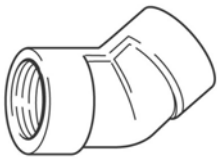

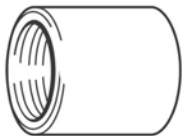

Whitworth Threads/British Standard Pipe Thread



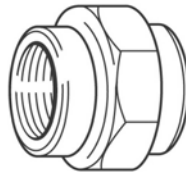




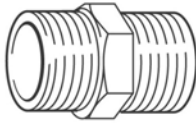
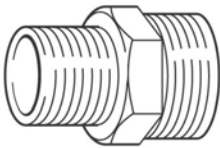
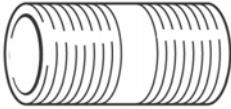
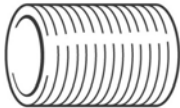
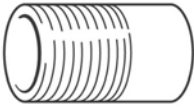
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- BSP fittings are made only in type 316.
- They are provided with a Certificate of Conformity only, and not a full Test Certificate.
- Sizes 1/8 to 3 inch are the most commonly used and thus the most readily available.
- External MALE threads are tapered and Internal FEMALE threads are parallel. The threads are cut to BS21: Part 1: 1985 and are called Whitworth Threads – See below.

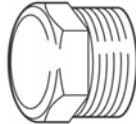
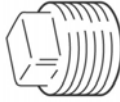
Nominal size of outlet		Min O/D	Min O/D of body behind external thread	Min I/D of body behind internal thread	No. of threads per inch
in	mm	mm	mm	mm	
1/8	6	15.0	9.8	8.6	28
–	8	18.5	13.3	11.4	19
3/8	10	22.0	16.8	15.0	19
–	15	27.0	21.1	18.6	14
–	20	32.5	26.6	24.1	14
1	25	39.5	33.4	30.3	11
1	32	49.0	42.1	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	Enables the pipe run to be turned through a right angle. Female thread both ends
 45° Elbow	Enables the pipe run to be turned through 45 degrees. Female thread both ends
 Equal Tee	Allows the connection of a branch at right angles from the main pipe run. Female thread at all three connections.
 Socket	Used to connect two pipes or fittings that have male threads. Female thread both ends.
 Half Socket	Used to connect two pipes or fittings that have male threads. Used when there is a confined space Female thread both ends.

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

Fitting	Use / Notes
 Hexagon Nipple	Used to connect two female threaded components. Male thread both ends.
 Reducing Nipple	Connects two female threaded components of different sizes. Male thread both ends.
 Barrel Nipple	Used to connect two female threaded components of the same size. Male (taper) thread both ends.
 Equal Nipple	The only BSP fitting to have a <u>Male Parallel</u> thread. Used to connect female threaded components together
 Welding Nipple	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.
 Hexagon Head Plug	Used to blank off female threaded outlet. Cannot be used to blank off a pipe directly as pipes only have male threads. Male threaded.
 Square Head Plug	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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in	mm	mm	mm	mm	
1/8	6	15.0	9.8	8.6	28
1/4	8	18.5	13.3	11.4	19
3/8	10	22.0	16.8	15.0	19
1/2	15	27.0	21.1	18.6	14
3/4	20	32.5	26.6	24.1	14
1	25	39.5	33.4	30.3	11
1 1/4	32	49.0	42.1	39.0	11
1 1/2	40	56.0	48.0	44.8	11
2	50	68.0	59.8	56.7	11
2 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
6	150	178.0	164.1	160.9	11