

Installation advice

General

When working on gutters or fascias at height it is advisable to use scaffolding in preference to ladders. If you are using a ladder please take the following points into consideration: (These points are for guidance only)

1. Ensure the ladder is based on level ground, preferably not soil or grass. If the ladder is based on soil or grass then place a board beneath the legs to spread the load and prevent sinking.
2. If possible, tie the top of the ladder to ring bolts at eaves level.

Before fitting pipes/gutters, ensure that all pieces have been primed and painted, including all cut ends to prevent corrosion. If any pipes/gutters have been cut/drilled, ensure that there are no loose filings on the system as these will quickly discolour the product.

3. We strongly recommend that you do not work alone. Removal and installation of cast iron guttering generally requires two people.

Before replacing an existing system it is advisable to inspect and repair fascia and wall faces before beginning a new installation. All fascias must be in good condition before new guttering is installed as the weight of the cast iron gutters could cause rotten fascias to fall causing damage or injury to property or persons below.

If the building does not have fascia boards, contact your local builders merchant for advice on suitable support brackets, or contact our Technical Advisory department on **01952 262529**.

Equipment required

TOOLS

- Adjustable spanner
- Drill
- Hacksaw – disc cutter
- Ladder
- Paint brush
- Pencil/Marker

- Plumb line
- Scaffold
- Scraper
- Spirit level
- Screwdriver
- Tape measure
- Wirebrush

MATERIALS

- Classical gutters and rainwater fittings etc.
- Paint – metal primer, undercoat, topcoat, touch-up paint if installing PLUS (see page 33)
- Mastic sealant – low modulus (suitable for overpainting) or gutter jointing kits to suit HR profile (see page 28)
- Setscrews and nuts (gutter bolts 6mm x 25mm long)
- Wall anchors – for pipe sockets (50-75mm min. length)
- Lead strips – to wedge in sockets
- Round headed woodscrews (5mm x 25mm long) for fixing brackets to fascia boards.

Gutter installation



Step 1

Identify route which rainwater will take.

Step 2

Locate gully/connection to drain and position outlet, taking into account offset projection. (Fig. 1).

Step 3

Approximately 75mm – 100mm from the end of the run fit a bracket, taking into account the fall down to the outlet.

Note: For other brackets see 'General notes' (above).

Step 4

Ensure brackets are installed so that centre of gutter is beneath the tile edge. (Fig. 4).

See installation advice, general above re: fascia board.

Step 5

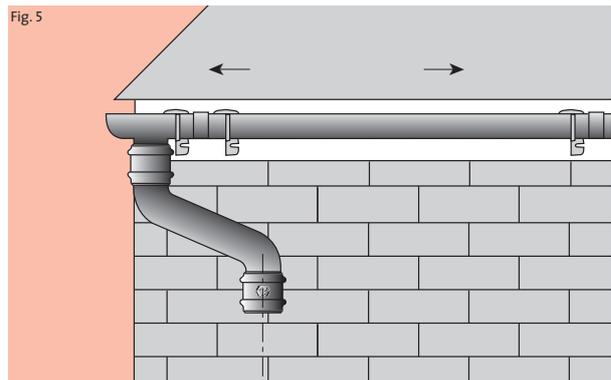
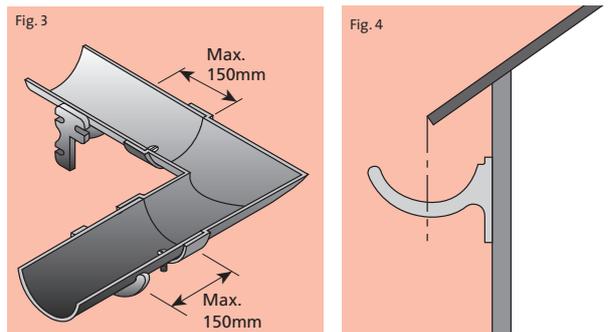
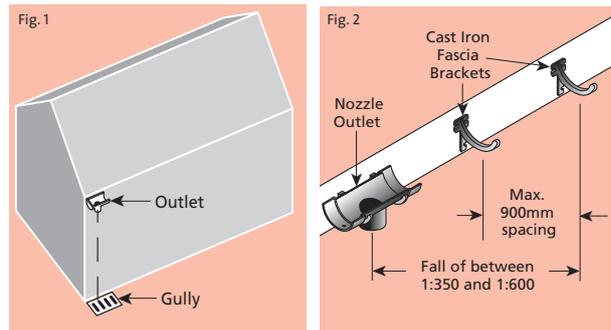
Position gutters loosely within brackets and assess installation for fall and offset position to rainwater pipe. Make adjustments as required. (Fig. 5).

Fix the remaining gutter brackets at maximum centres of 900mm (MORE FREQUENTLY IN AREAS PRONE TO HIGH SNOWFALL) along the fall line (as shown in Fig. 2).

Additional brackets should be fitted at a maximum of 150mm from angles and outlets (as shown in Fig. 3). Brackets should be fixed using corrosion resistant wood screws 5mm x 25mm round or pan headed.

Use plumb line or string for alignment when bracketing.

Please note: When using OG and moulded profiles, we recommend that fascia brackets are used wherever possible.



Jointing

Half round profile

If installing half round profile gutters, The **new cast iron jointing kit** (product code 192284) can be used as an alternative to the traditional method. Kit contains enough materials to seal 20 half round gutter joints (and is suitable for the 100, 115 and 125mm HR sizes. For 150mm HR, see Fig. 10).

1. Push screw through spigot of gutter or fitting and then through the hole in the gasket



material. The hole in the gasket is a tight fit and will locate on the screw while the joint is being made. (Fig. 6).

2. Locate the screw, seal and spigot of the gutter or fitting into the socket of the gutter or fitting and fix square nut to the end of the screw. (Fig. 7).
3. Ensure the seal is sitting squarely in the socket and tighten the nut on the screw. (It may be necessary to hold the screw with a screw driver as the seal is compressed. (Fig. 8).

4. Trim excess rubber at the edge of the joint with a sharp bladed knife. (Fig. 9).
5. Paint gutters, joint and screws as per installation guide.

The new Classical Gutter Jointing System has been designed to satisfy the requirements of the latest BS460 draft standard.

Beaded half round, deep half round, moulded No.46, OG, Notts OG and box profile

Gutter sockets should be joined to spigots with a specialist rubberised bitumen gutter sealant or a low modulus silicon sealant, then fixed with a corrosion resistant round/ pan head setscrew and nut, M6 x 20mm long. (Fig. 10).

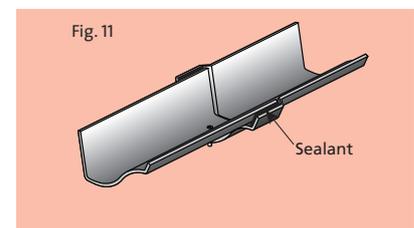
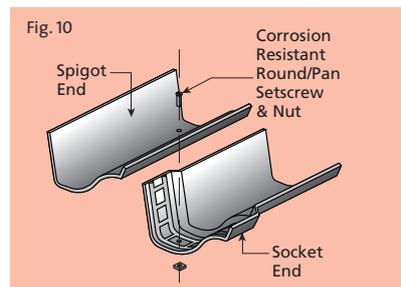
Spread sufficient sealant within the socket, applying additional sealant under the head of the setscrew, when bringing the parts together. The nut should then be finger tightened. Any excess that appears should then be removed. Allow the sealant to 'cure' and then tighten the nut and bolt. Do not over-tighten as this could damage the gutter. (Fig. 11).

Repeat this procedure for all joints.

See notes regarding replacement gutters.

Note: Before installing gutters and fittings, ensure that all pieces have been suitably painted. See painting/finish methods (page 33).

If any gutters have been cut, ensure that there are no loose filings on the system as these will quickly discolour the product.



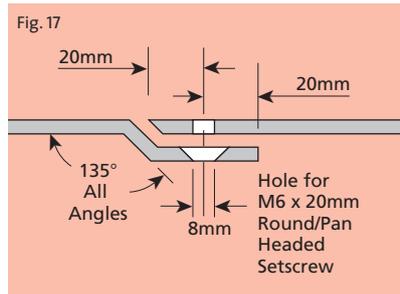
Drilling and cutting gutters

Drilling gutters

Hole size is 8mm (5/16") and should be positioned centrally 20mm from the spigot of the gutter (Fig. 17).

The hole in a fitting socket will provide a useful template.

We recommend the use of tungsten tipped drills.

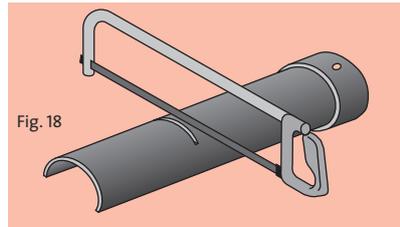


Cutting

Gutters can be cut using a hacksaw, the blade should be tungsten tipped with 50 teeth per inch.

A powered saw or disc cutter can be used.

Note: Please observe the necessary safety precautions recommended by the tool manufacturer.



Pipe installation (bottom up)

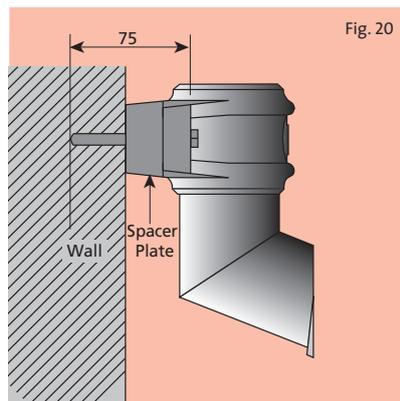
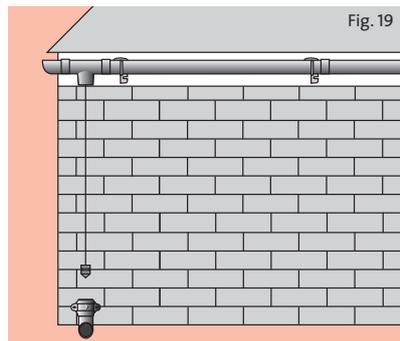
Step 1

Using plumb line from centre of nozzle/offset, determine position of shoe or connection to drain. (Fig. 19).

Step 2 (eared pipe)

Determine the position of the fixings and drill suitable holes to take rawlplugs or anchors. 8mm x 50mm min. non corrosive fixing should be used without wall spacer plate, 8mm x 75mm min. non corrosive fixing with wall spacer plate. (Fig. 20).

Note: Cast iron spacer plates may be required if wall is uneven and will also allow for easier maintenance. These should be fixed with the flat back plate to the back of the pipe ear.



Step 3

The pipe spigot is offered into the shoe socket and positioned in line with the plumb line, hole centres are then marked through centre of elongated holes in ears, this will allow for adjustment. (Fig. 21).

Step 4

Drill and fix as shoe.

Step 5

Repeat until last full length is fixed, ensuring in each case that the pipe spigot is fully seated in supporting socket.

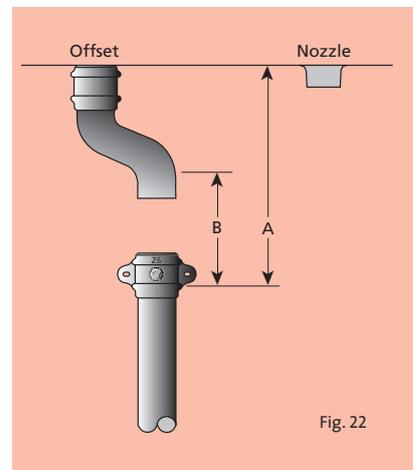
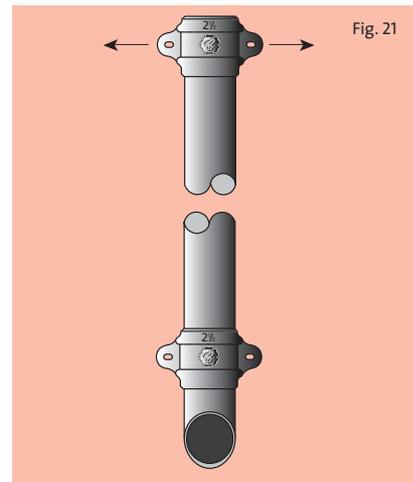
Step 6

The last pipe length should be measured from the internal base of the socket to the underside of the gutter nozzle (A), or to the spigot of the offset (B), remembering to include the depth of socket in overall length. (Fig. 22).

Step 7

Cut pipe to length allowing 5mm for clearance on length and fix as previously described.

Note: It may be necessary to lift gutter to locate nozzle in the pipe socket.



Pipe installation (bottom up)

Step 8

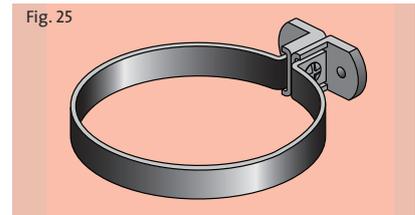
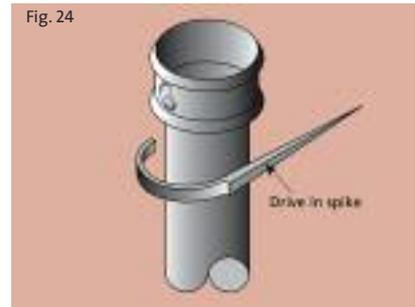
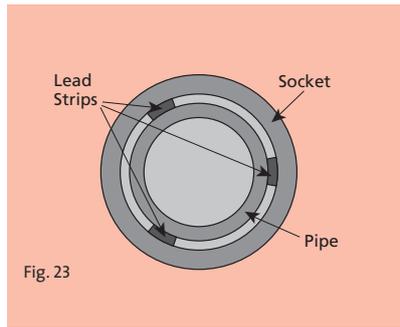
Finally, to centralise and secure pipe joints, use wedges made up from sheet lead cut into 30mm strips, rolled and tapped, between socket and pipe. This should be inserted in 3 places to avoid any rattle. (Fig. 23).

Unearthed pipe fixing

These can be fixed using a drive in spike (tradename, Holdfast), wrought iron or galvanised mild steel. (Fig. 24).

A wall fixing bracket made in galvanised mild steel can also be used by drilling suitable holes and inserting rawplugs to take 50mm (depth) screw. The bracket will then be located to the back plate supplied. (Fig. 25).

Note: For rectangular pipes, a cast iron decorative ear band can be supplied by Saint-Gobain PAM UK for fixing pipes to the wall.



Loose socketed pipe fixing

Bottom up fixing

Installation is as for Classical fixed socketed pipe, the loose socket, however, is loosely inserted into the pipe before establishing fixed centres.

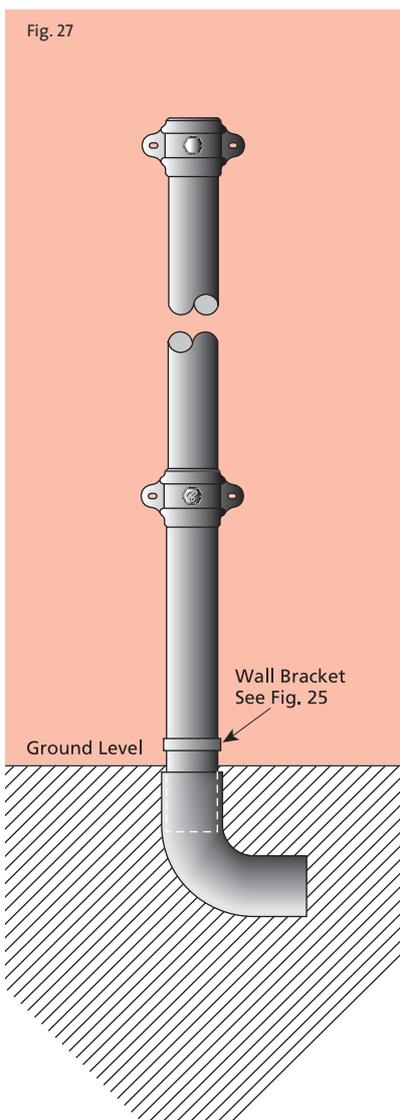
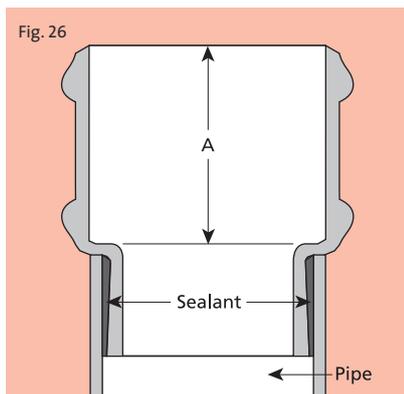
The socket will perform without the need for filling in the vertical position, but if preferred a suitable low modulus sealant or filler can be used.

To establish pipe length required, loosely insert socket and follow Step 6 in fixed socket section.

Note: Allowances for socket depths, refer to dimension A. (Fig. 26).

Note: When cutting pipe to length, ensure cut ends are clean and square to give a neat appearance. Any gaps can be filled using a proprietary mastic filler for external use.

In a situation where the connection at the base of the rainwater stack runs into the drain inlet, a galvanised steel wall fixing bracket or eared access pipe (100mm only) will be required to retain pipe barrel. (Fig. 27).

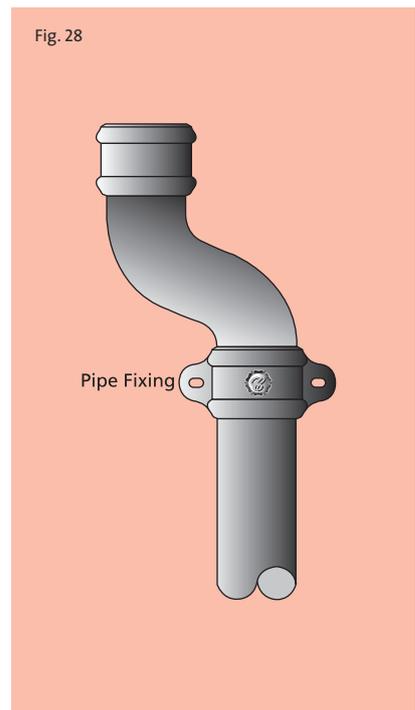


Top down fixing (fixed socket)

This is the reverse procedure to the previous section. The first pipe to be fixed is positioned and marked relative to the offset/gutter nozzle. (Fig. 28).

The process is repeated up to the last full pipe length.

The pipe at the base of the stack will have to be cut to length relative to the shoe.



Loose socketed pipe fixing

Top down fixing

Step 1

The loose socket is located and fixed so that it fully supports the offset, or is located beneath the nozzle.

Step 2

A pipe barrel is then inserted into the inlet of the loose socket.

Step 3

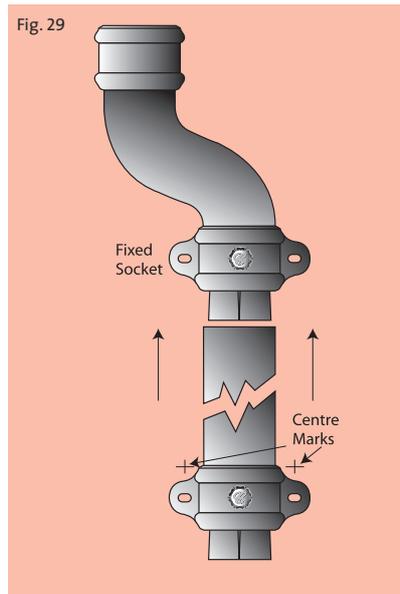
Both pipe and socket are then offered to the fixed socket spigot ensuring that the pipe end is located to the underside of the fixed socket.

Step 4

Holes on the loose socket are marked, drilled and socket is then fixed.

Step 5

This is repeated until stack is completed.



Offsets and sealing

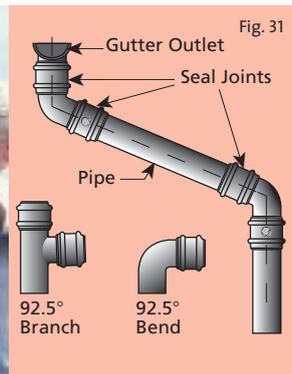
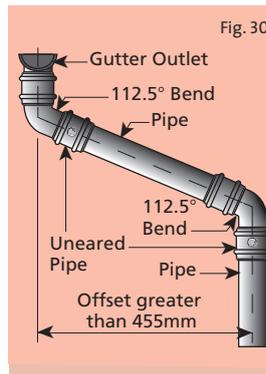
Making up offsets

When the projection of the fascia is in excess of 455mm the offset is formed with a pipe offset, and two 112.5° bends (as shown in Fig. 30).

Sealing pipe joints

With vertical pipes, joints are usually left unsealed in the sockets so that if any blockages occur the rainwater pipe does not fill up with water to the eaves and create a nuisance. Only seal joints between gutter outlet and rainwater pipe or offset. (Fig. 31).

Also, any joint which is in the horizontal position such as 90° branch arms or bends etc.



Maintenance

Maintenance

Cast iron rainwater gutter systems are designed and manufactured to give many years of reliable service, but to achieve this, regular inspection and minimal routine maintenance should be carried out including:

1. Annually check and clear the gutter systems and rainwater heads of any leaves and debris that could cause a potential blockage (may require more checks if in close proximity of trees etc).
2. Also inspect the condition of the paintwork at the same time as 1. wiping clean any film built up, to protect the surface finish.
3. Also check on security of fixings and joints.

If the manufacturers installation and paint suppliers instructions are adhered to re-painting should not be required for approx five years or longer. (Unless subject to aggressive atmospheric conditions i.e. coastal towns and providing the integrity of the finish coat is maintained).

Cutting pipe

How do you cut a length of cast iron pipe or gutter? With pipe there are three methods.

Firstly the easiest and quickest way is by using a powered disc cutter or metal saw (as shown here Fig. 32).

Secondly, by pipe wheel cutter, which takes slightly more time but gives a neat square edged cut.

Thirdly, by hacksaw, although a tungsten tipped or 50 TPI blade is usually required.

Note: Snap cutters are not recommended for use on cast iron pipes etc., and safety equipment, for instance eye protection, should be worn at all times.

