

MARSHALL-TUFFLEX RAINWATER SYSTEMS INSTALLATION DETAILS

GUTTER FIXING FOR

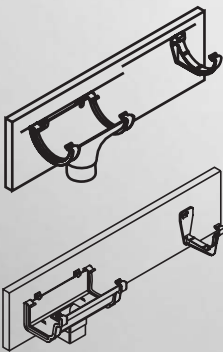
- HALF ROUND SYSTEM
- SQUARE LINE SYSTEM

- UNIVERSAL XL
- UNIVERSAL SYSTEM PLUS
- UNIVERSAL X-STREAM

The procedure for gutter fixing is dependent upon the design chosen, i.e. End or Centre Outlets for houses with standard gable ends, and a combination for hipped roof buildings. In all cases the Outlets should be positioned directly above the gully or drain connection if at all possible. Before installation, check that fascia boards etc. are level, and make allowances if not, when determining gutter fixing positions.

BSEN 12056-3:200 states that "In areas where snow lies on roofs, the front edge of the gutter should not be higher than the projected line of the roof, unless snow guards or other precautions are used.

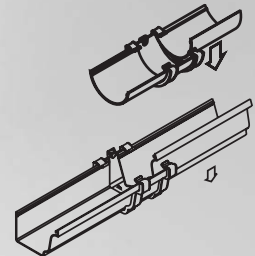
- 1 Fix the two End Support Brackets, making allowance for the fixing of an External Stop End. This may be under the tiles or extending 40mm beyond the end tile, depending on the gable end design. These brackets must be fixed with a 25mm no.10 rust proof round head screw. (Brackets are designed for fixing with one or two screws.) When fitting Universal X-Stream it is recommended that either 2 1" of No. 10 Screws are used or 1 ¼" No. 14 screw.



- 2 The Running Outlet is then fixed, at a level below the End Bracket. The gutter should have a gradient of between 1mm/M and 3mm/M, so the Outlet should be positioned to allow for a fall of between 15mm and 45mm in every 15m run of gutter. This Outlet is fixed with similar screws.
- 3 If the building does not have a fascia board then special brackets can be used to fix the gutter to the rafter or directly into the masonry.
- 4 For intermediate supports (fascia brackets), draw a string line between the End Brackets and the Outlet and fix the intermediate Brackets at the appropriate spacings. Top Hung Fascia brackets should be spaced at 600mm for

Universal System Plus and 800mm for Square Line Systems. Conventional style brackets should be spaced at 800mm for Universal System Plus/Universal XL/Universal X-Stream and a maximum of 1 metre for Half Round/Square Line Systems. On conservatory roofs the fascia bracket spacing should be reduced to 500mm to take into account snow loads.

- 5 Where the gutter run is over 4m, the Union Brackets should be carefully positioned at this time being sure to allow for expansion and contraction. The Union Brackets must be fixed with a 25mm no.10 rust proof round head screw.
- 6 When fixing gutter into Union Brackets, Outlets etc. ensure that the back edge of the gutter is fully under the rear clip, pull the front edge of the gutter down and push the loose clip over the front edge with your thumbs until it snaps into position. The ends of the gutter should line up with the insertion marks on the fittings to allow for movement. All fittings (e.g. outlets/unions/angles ext) must be secured with rust proof screws.
- 7 Where the gutter is taken around corners, the corner angles need to be supported by fascia brackets positioned within 75mm of the angle for Universal System Plus /Universal XL, 100mm for Universal X-Stream and within 300mm for Half Round/Square Line Systems. (Uni-Plus corners also have fixing ports that may also be fixed using rust proof screws). Where there are fixing holes within the angles, these should be used.



Marshall-Tufflex recommend the use of lubricant on all gutter seals for ease of fitting and for improved performance.

PLEASE TURN OVERLEAF
FOR DOWNPIPE FIXING



MARSHALL-TUFFLEX RAINWATER SYSTEMS INSTALLATION DETAILS CONTINUED

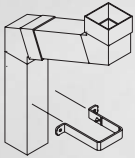
DOWNPIPE FIXING FOR

- HALF ROUND SYSTEM
- SQUARE LINE SYSTEM

- UNIVERSAL XL
- UNIVERSAL SYSTEM PLUS
- UNIVERSAL X-STREAM



8 When fixing the Downpipe you will almost certainly need to form an offset using 112° Offset Bends and a length of pipe, or where space is short two 90° Bends. If fitting a 112° bend directly to an outlet (all systems except Universal X-Stream), it is advisable that a small offset of pipe is inserted into the bend, this will act as a collar, to give a stable connection. The bottom Bend is held in position with a Downpipe Clip. If a narrow offset is required when using the square downpipe then RWSB4 Offset can be used.



9 When fixing a Downpipe, a Downpipe clip should be used at each socket connection and at a maximum 2m spacing between (1.8m for Universal X-Stream). An 8mm gap should be left at the top of each section of pipe to allow for expansion.



Universal X-Stream



Universal X-Stream

10 The water enters the drain through either a Shoe and Gully, or using the underground drainage adaptor direct into the 110mm drain.

11 The Downpipe Shoe, where used, should be supported by a Downpipe Clip to prevent the shoe and pipe from dropping.



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