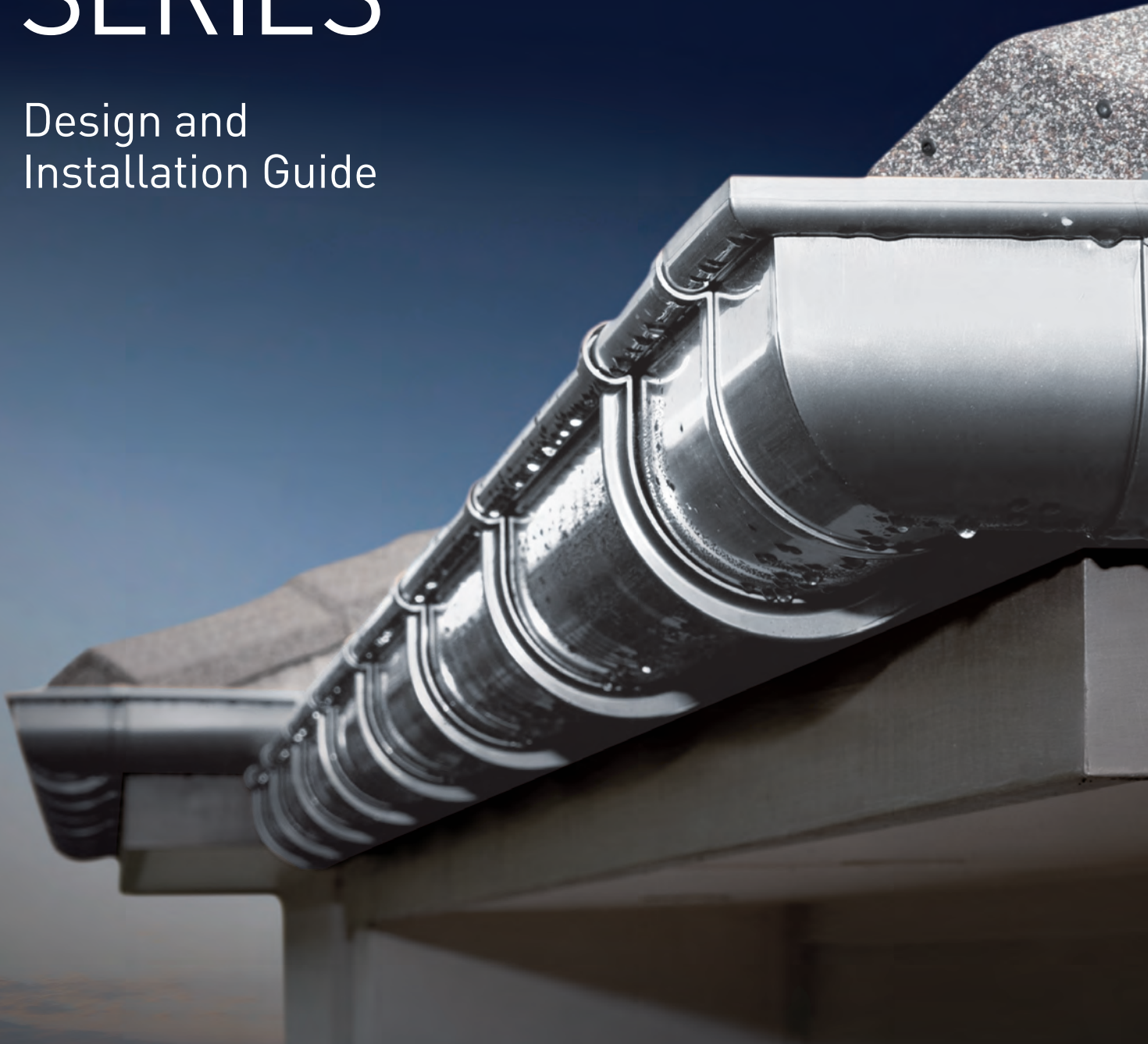


MARLEY STRATUS DESIGN SERIES

Design and
Installation Guide



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SYSTEM OVERVIEW

APPLICATION

Marley New Zealand Limited uPVC spouting and downpipe systems are designed for the collection and discharge of rainwater from roof areas. Marley uPVC spouting and downpipe systems are suitable **ONLY** as external spouting and downpipes and are **NOT** suitable for use as a concealed system.

- Marley spouting systems should not be installed as an internal spouting system.
- Marley downpipe systems should not be installed in wall or ceiling cavities.

NON STANDARD APPLICATION USE

If Marley uPVC spouting and downpipe systems are to be used in any applications not covered by the current Marley literature, written confirmation of suitability should be obtained from Marley.

DURABILITY

Marley uPVC spouting and downpipe systems are suitable as external spouting and downpipes exceeding the minimum five years durability requirements of the New Zealand Building Code clause B2/AS1 table 1. With correct installation and maintenance, Marley uPVC spouting and downpipe systems will perform well in excess of the 15 year guarantee period. A regular cleaning programme is essential to maintain the performance and appearance of the system.

ENVIRONMENTAL

Marley operates recycling programs with industry partners where uPVC pipes are returned from site for recycling on Marley's premises. All Marley manufactured uPVC spouting and downpipe systems are 100% recyclable. Marley uPVC spouting and downpipe systems are suitable for most environmental conditions and will never rust, rot or corrode.

QUALITY ACCREDITATION

Marley operates Quality and Environmental Management Systems that are registered by Telarc SAI as complying with ISO 9001 : 2008 Telarc Registration 678 and ISO 14001 : 2004 Telarc Registration 78.

DESIGN DETAILS

FLOW CHARACTERISTICS

Marley uPVC spouting and downpipe systems have been designed to optimise the discharge of water. Selection of profile and downpipe size is dependent upon the roof catchment area and the rainfall intensity for the region where the product is being installed. Applying fall to the spouting improves the flow and the location of the outlets can also influence the flow. The New Zealand Building Code Approved Document E1 references downpipes and spouting in the Acceptable Solution E1/AS1 Clauses 4.0 and 5.0. More detailed spouting design can be found in AS/NZS3500.3

WET SYSTEM – HEAD PRESSURE

When downpipes are holding water for a prolonged period of time and are therefore subjected to head pressure (e.g. water tank connection or downpipe installed horizontally), **ONLY** round downpipes are suitable. Care should be taken to ensure that all joints are sealed properly using Marley MCS solvent. Marley does not recommend uPVC downpipes be buried, instead Stormwater/DWV pipe should be used for this application.

WATER COLLECTION – DRINKING WATER

All Marley uPVC spouting and downpipe systems are suitable for the collection of rainwater for drinking purposes. Marley uPVC spouting and downpipe systems as well as Marley stormwater / DWV pipe and fittings have been tested and comply with, **AS/NZS 4020:2005: Testing of products for use in contact with drinking water**. As spouting and downpipes form only part of a complete rainwater collection system, care should be taken to ensure water is not contaminated by other sources.

WEATHERING

Over time the components of the Marley spouting and downpipe system will weather, as is customary with all exterior pigmented finishes. The weathering will not affect the long-term durability of the system. The rate at which fading occurs will be dependent on the environmental conditions the product is exposed to, including UV levels, pollution and building orientation.

FABRICATION

Marley's fabrication services can provide assistance with special part requirements for the completion of your project. Items, such as those described below, can be fabricated to the required dimensions:

- Special angle flat
- Special angle rake
- Special outlet
- Special adaptor

SNOW LOADING / WIND EFFECT

Marley recommends reducing the bracket spacing to 300mm for areas subjected to high wind or occasional snow falls. Marley uPVC spouting systems are **NOT** recommended for **HEAVY** snow fall areas.

TYPHOON SPOUTING SYSTEM

Typhoon is a half round spouting system designed specifically for New Zealand homes and conditions. This contemporary design offers a choice of either internal or external brackets.



<p>Cross-sectional area 6100 mm²</p>	<p>TYPHOON SPOUTING Available in 4m length</p> <p>MT1.4.TTN <input type="radio"/></p> <p>MT1.4.COP <input checked="" type="radio"/></p>
	<p>INTERNAL BRACKET</p> <p>MT2I.TTN <input type="radio"/></p> <p>MT2I.COP <input checked="" type="radio"/></p>
	<p>EXTERNAL BRACKET</p> <p>MT2E.TTN <input type="radio"/></p> <p>MT2E.COP <input checked="" type="radio"/></p>
	<p>EXPANSION OUTLET 80mm</p> <p>MT8.80.TTN <input type="radio"/></p> <p>MT8.80.COP <input checked="" type="radio"/></p>
	<p>DROPPER OUTLET 80mm</p> <p>MT11.80.TTN <input type="radio"/></p> <p>MT11.80.COP <input checked="" type="radio"/></p>
	<p>JOINER</p> <p>MT5.TTN <input type="radio"/></p> <p>MT5.COP <input checked="" type="radio"/></p>
	<p>EXPANSION JOINER</p> <p>MT17.TTN <input type="radio"/></p> <p>MT17.COP <input checked="" type="radio"/></p>

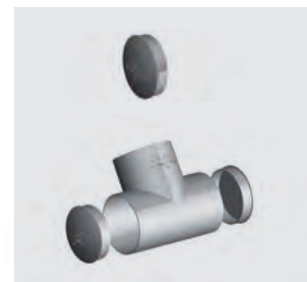
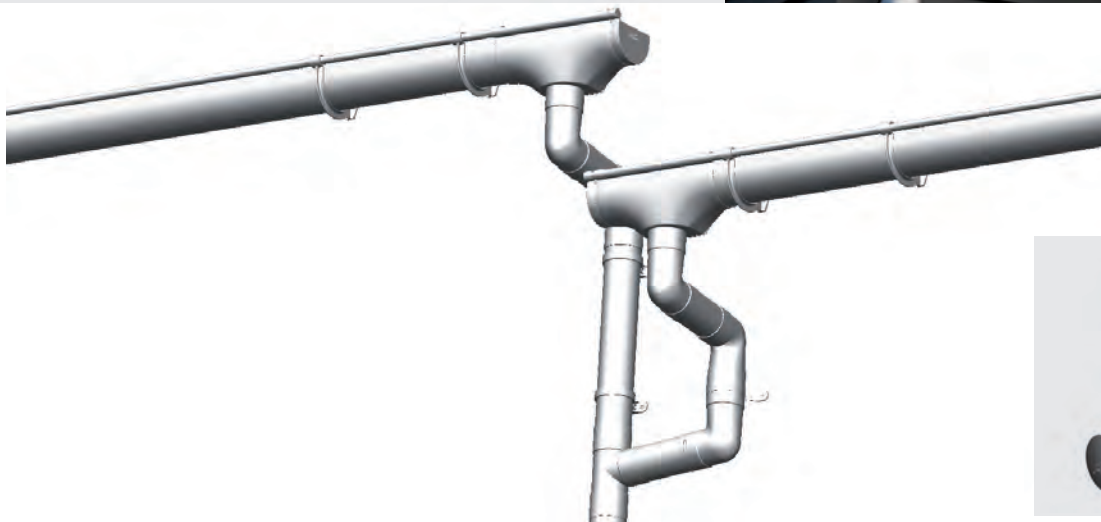
	<p>EXTERNAL ANGLE 90°</p> <p>MT6.TTN <input type="radio"/></p> <p>MT6.COP <input checked="" type="radio"/></p>
	<p>INTERNAL ANGLE 90°</p> <p>MT7.TTN <input type="radio"/></p> <p>MT7.COP <input checked="" type="radio"/></p>
	<p>LEFT HAND STOP END Spouting only</p> <p>MT3.TTN <input type="radio"/></p> <p>MT3.COP <input checked="" type="radio"/></p>
	<p>RIGHT HAND STOP END Spouting only</p> <p>MT4.TTN <input type="radio"/></p> <p>MT4.COP <input checked="" type="radio"/></p>

AVAILABLE ON REQUEST	
	<p>SPECIAL ANGLE - FLAT Fabricated</p> <p>MTSPEC.F <input type="radio"/></p> <p>MTSPEC.F <input checked="" type="radio"/></p>
	<p>SPECIAL ANGLE - RAKE Fabricated</p> <p>MTSPEC.R <input type="radio"/></p> <p>MTSPEC.R <input checked="" type="radio"/></p>

80MM ROUND DOWNPIPE SYSTEM

80mm round downpipes are well suited to most houses and buildings and can be used when subjected to head pressure eg. connected to water tanks.

Note: Round downpipes must not be used in wall or ceiling cavities as well as buried applications.



	ROUND DOWNPIPE 80mm 3m Length NB: Nonsocketed – use jointing socket RP80.TTN ● RP80.COP ●		END CAP 80mm CS80.TTN ● CS80.COP ●
	95° SOCKET BEND 80mm RB2.80.TTN ● RB2.80.COP ●		DOWNPIPE SPREADER KIT 80mm SKIT80.TTN ● SKIT80.COP ●
	PIPE CLIP-SADDLE 80mm RC80.TTN ● RC80.COP ●		DROPPER OUTLET N.B For flat bottom spouting only MC11.80.TTN ● MC11.80.COP ●
	ADJUSTABLE PIPE CLIP 80mm RC80.2.TTN ● RC80.2.COP ●		SOLVENT WELDING CEMENT – 180g tube MCS.TTN ● MCS.COP ●
	JOINTING SOCKET 80mm RS80.TTN ● RS80.COP ●		GALVANISED NAILS MCNAILS
	95° JUNCTION 80mm RJ80.TTN ● RJ80.COP ●		

INSTALLATION DETAILS

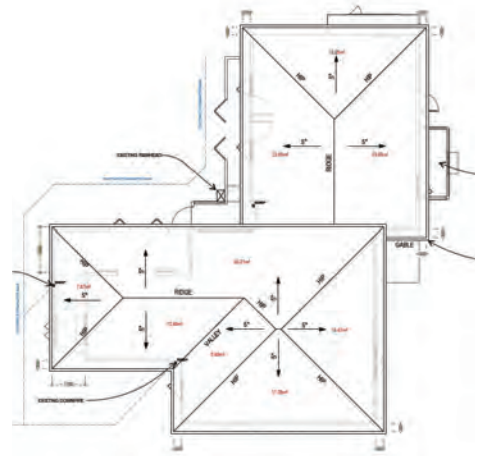
SECTION 1: PLANNING & PREPARATION

Draw your roof plan to scale, or use roof plan details of your house if available. A scaled drawing enables spouting lengths, spouting brackets and other required components to be more easily estimated. Establish the following:

- downpipe locations
- thermal expansion relief points
- spouting and downpipe lengths required
- fittings required.

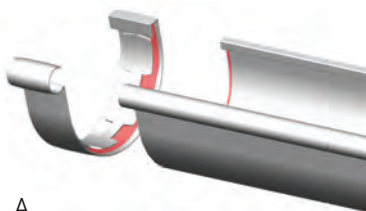
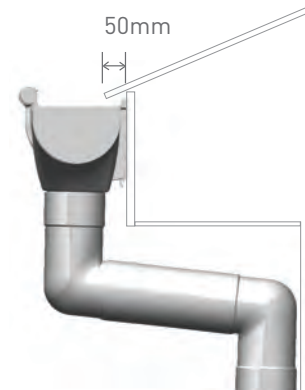
It is important to determine which direction the installation will be completed, as components should be solvent welded one after the other working in one direction.

- For a gable ended roof start fitting the spouting at the high point working towards the expansion outlet.
- For a hipped roof commence from a corner.

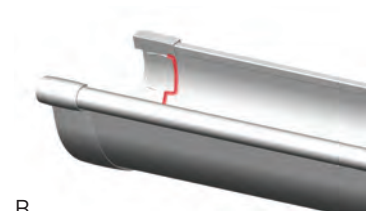


1.1 ROOF OVERHANG

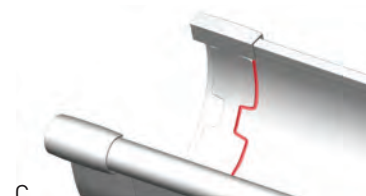
The roof overhang should not be less than 50mm to ensure correct roof water discharge into the spouting.



A.



B.



C.

1.2 SOLVENT WELDING PROCEDURE

Marley spouting and downpipe systems are assembled using solvent welding cement which ensures a watertight system and resistance to mechanical stress over the years.

When possible, solvent weld one side of the fitting on to a length of spouting and let it cure for 10 minutes before installing in the brackets and solvent welding onto another length of spouting. Only Marley solvent weld cement should be used and it is important to follow the steps below:

1. Ensure cuts of the spouting profile are straight and clean.
2. The surface areas to be welded must be clean and dry before the solvent is applied.
3. Apply solvent welding cement evenly to both surfaces to be joined. (A)
4. Ensure that the spouting has been fully pushed until it stops. (B)
5. Apply a final bead of solvent to fully seal the assembly. (C)
6. Wait 10 minutes before manipulating the assembly.
7. Any surplus solvent on the exterior surface should be removed immediately with a clean cloth.

1.3 THERMAL EXPANSION

Marley uPVC systems expand and contract at a linear thermal expansion coefficient of 0.7mm /m /10°C. Marley spouting systems allow for the thermal expansion of uPVC using expansion outlets and expansion joiners, creating relief points for expansion during the install.



Expansion joiner (MT17)



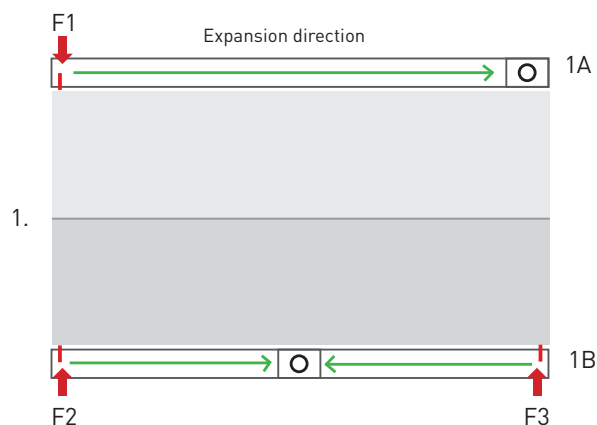
Expansion outlet (MT8.80)

Controlling the direction of Thermal Expansion/Contraction

To address thermal expansion, consider each run of spouting separately. Through continued expansion and contraction over a period of time, certain spouting runs which lead from an expansion outlet, may gradually creep in one direction. This may cause it to drop out of the expansion outlet or move too far into the expansion outlet. This can be prevented by screwing the spouting onto the fascia as indicated in the diagrams below.

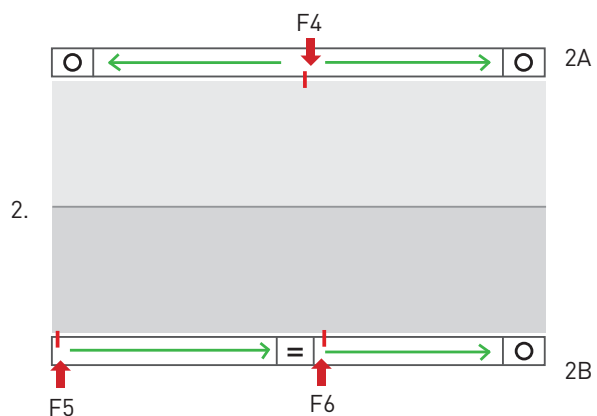
Fixing spouting to the fascia

These diagrams illustrate where the spouting should be screwed to the fascia to control the direction of expansion, for a number of common scenarios.



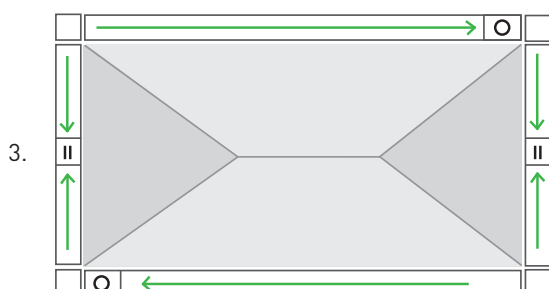
1A. For an expansion outlet positioned at one end of a spouting run, the expansion will be directed from the end cap to the expansion outlet. Fix at location **F1**.

1B. For an expansion outlet positioned in the middle of a spouting run, the expansion will be directed from the end caps to the expansion outlet. Fix at locations **F2** and **F3**.



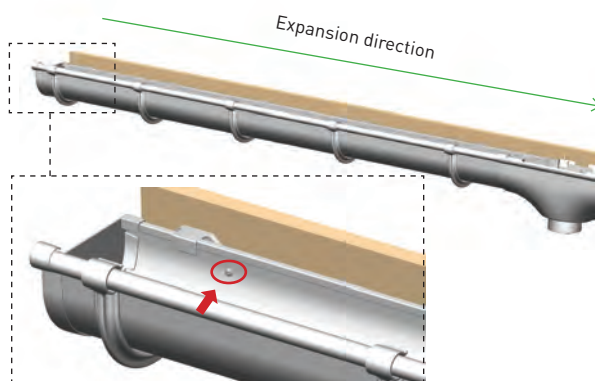
2A. For a long run of spouting with an expansion outlet at each end of the run, fix the spouting in the middle of the run to direct the expansion towards each outlet. Fix at location **F4**.

2B. For a long run of spouting exceeding 12 metres with an expansion outlet at one end, an expansion joiner is also required. The spouting will require fixing on the expansion outlet side of the expansion joiner and at the end of the run. Fix at locations **F5** and **F6**.

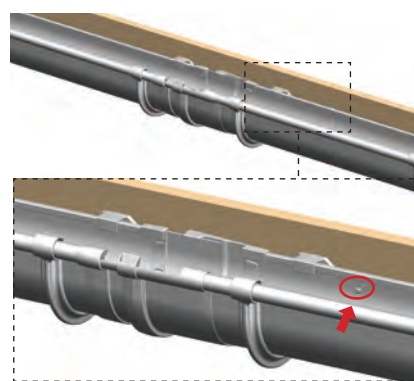


3. For a spouting run exceeding four metres between corners without an expansion outlet, an expansion joiner is required. In this instance, the spouting will not require screwing onto the fascia.

KEY:  Outlet
 Expansion Joiner



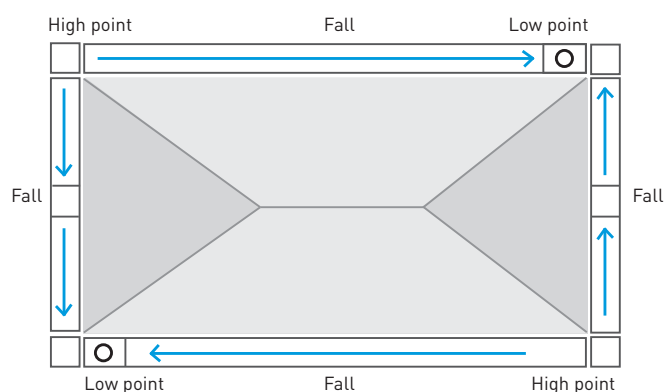
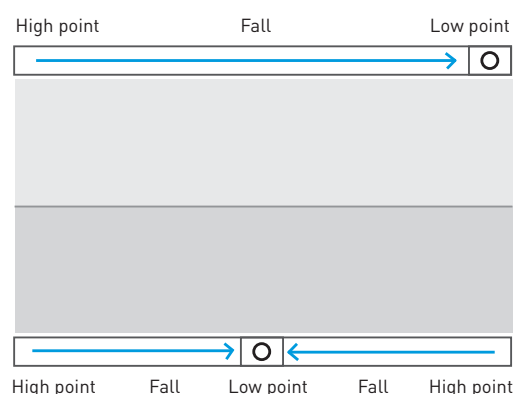
Screw spouting opposite end to expansion outlet (refer to 1A on previous page)



Screw spouting adjacent to expansion joint (refer to 2B on previous page)

1.4 WATER FLOW DIRECTION – HIGH POINT TO LOW POINT

First establish the **low points** of the installation. These are determined by the location of existing downpipes or storm water outlets and will become the outlet fixing points. Mark the centre of each outlet on the fascia board. **High points** should be half way between low points or with complex roofs try to establish the high points at the corners.



1.5 RECOMMENDED FALL

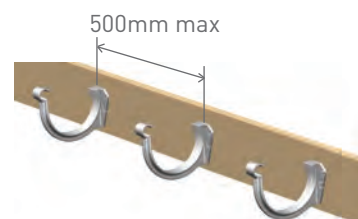
The New Zealand Building Code E1/AS1 stipulates that spouting should always be installed with a fall to the outlet. Marley recommend a minimum fall to the outlet of 5mm per 10m. This will ensure water travels efficiently to the downpipes and ponding is avoided.

SECTION 2: TYPHOON SPOUTING INSTALLATION

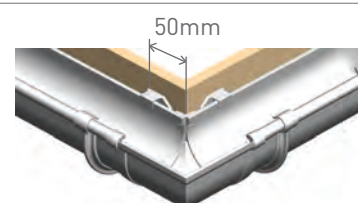
2.1 BRACKET POSITIONING

Brackets must be secured to the fascia with a **maximum spacing of 500mm**. In high wind or snow prone areas reduce spacing to 300mm. The system is **NOT** recommended for **HEAVY** snow fall areas.

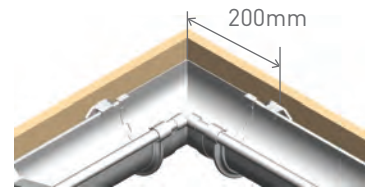
GENERAL: Position the first bracket at the determined high point as high as possible under the roof over-hang. Run the string line either over the top or under the bottom of the first bracket to the very end of the run, allowing the **recommended fall of 5mm per 10m**. Repeat this operation for each run always working from high point to low point.



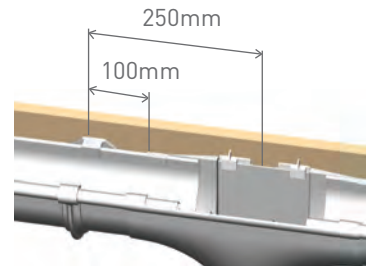
EXTERNAL CORNER (MT6): For an external corner allow 50mm clearance from the fascia to the centre of the first bracket.



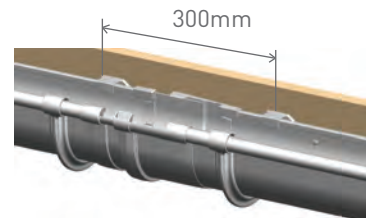
INTERNAL CORNER (MT7): For an internal corner allow 200mm clearance.



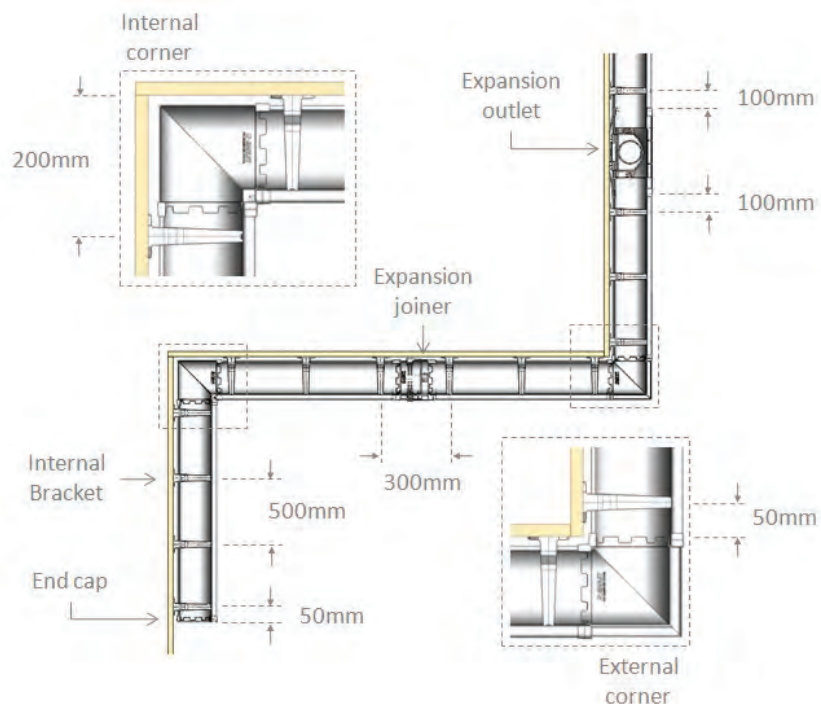
EXPANSION OUTLET (MT8.80): Allow 100mm clearance between the end of the expansion outlet and the first bracket to be fitted. Positioning the first bracket 250mm from the centre of the back plate will achieve this clearance.



EXPANSION JOINER (MT17): For expansion joiner, allow a spacing of 300mm (about the centre) between the two brackets.



The plan view below is indicative of a typical installation showing recommended bracket spacing for the individual components detailed above.



2.2 BRACKET FIXING

Use a minimum of 3 fixings per bracket.

On timber fascia;

- Self tapping screws 6g x 20mm Pan Head or Wafer head
- Marley galvanised nails (MCNAILS)

On metal fascia;

- Self drilling tek screws 6g Pan Head or Wafer head

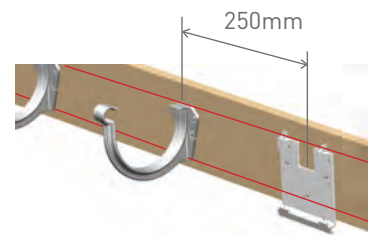
To ensure the right selection of fixings material grade for your project, refer to a specialist fastener manufacturer for advice.



2.3 INSTALLING THE EXPANSION OUTLET (MT8.80)

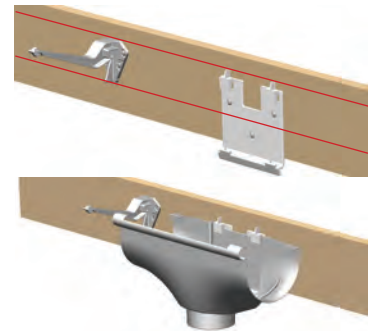
When running the string line over the bracket, line up the expansion outlet back plate with the following:

For **External Bracket (MT2E)** – the top of the back plate touching the string line.



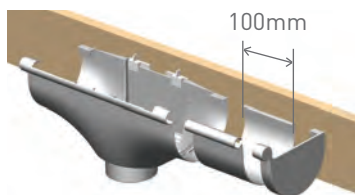
For **Internal Bracket (MT2I)** – the top positioning lugs touching the string line.

Note: If positioning the string line under the bracket, line up the witness marks located in the centre of the outlet back plate with the string line (Ensure the correct witness mark is used for the chosen spouting profile).

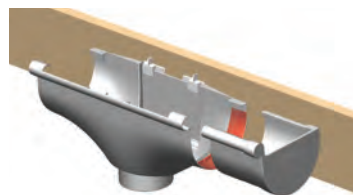


2.4 INSTALLING THE END CAP TO AN EXPANSION OUTLET

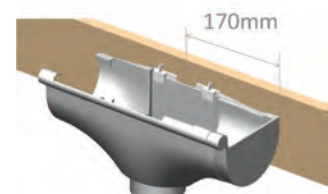
The end caps (MT3) and (MT4) do not fit directly onto the expansion outlet. Please follow the below instructions to fit an end cap onto an expansion outlet.



1. Cut 100mm section of spouting and solvent cement the end cap to one end of the spouting.

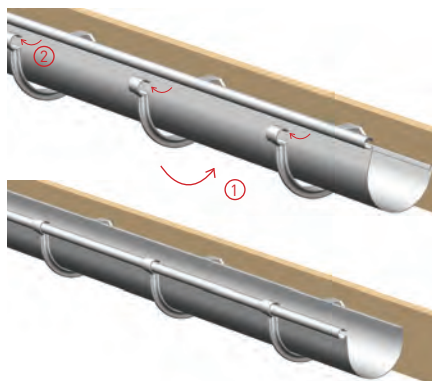


2. Solvent cement the sub-assembly to the expansion outlet as shown.



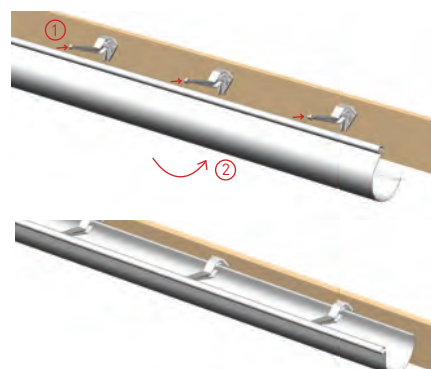
3. Assembly is complete.

2.5 INSERTING THE SPOUTING INTO THE BRACKETS



With **External Bracket (MT2E)**

1. Engage the back of the spouting into the rear of the bracket in order to clip it in position.



With **Internal Bracket (MT2I)**

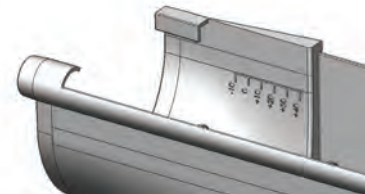
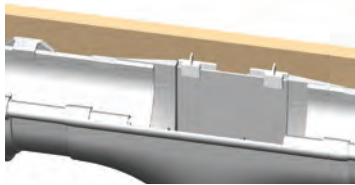
1. Position the front hook of the spouting onto the tips of the brackets and one by one clip it into position.

2. Then one by one clip the front hook of the spouting into the tip of brackets.
3. Check every bracket is correctly engaged.

2. Engage the back of the spouting into the rear of the bracket in order to clip it in position.
3. Check every bracket is correctly engaged.

2.6 INSERTING THE SPOUTING INTO THE EXPANSION OUTLET

The spouting is not solvent welded to the expansion outlet. Instead it is clipped in to allow for expansion and contraction.



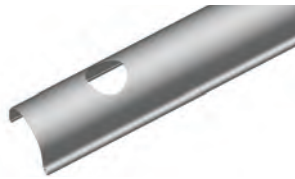
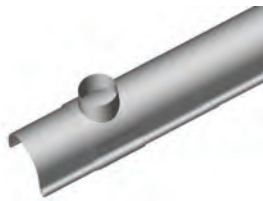
1. Engage the back of the spouting into the expansion outlet, and then clip in the front of the spouting.

2. Ensure the end of the spouting is aligned with the marking corresponding to the air temperature at the time of installation.

3. This will ensure correct movement of the spouting during thermal expansion.

2.7 INSTALLING THE DROPPER OUTLET (MT11.80)

Note: Only use the dropper outlet on runs of spouting up to two metres in length.



1. Place the dropper outlet onto the spouting and mark the position of the hole to be cut.

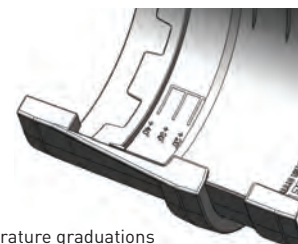
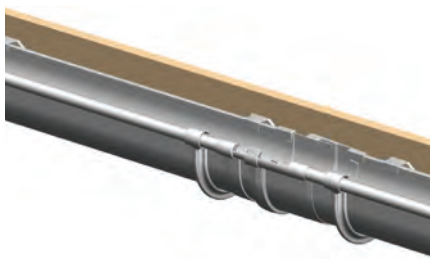
2. Use an 80mm hole cut saw to drill the bottom of the spouting. Note: A bracket can be positioned either side of the hole to support the spouting during cutting.

3. Solvent weld the dropper outlet into position and wait 10 minutes before manipulating the assembly.

4. Assembly is complete.

2.8 EXPANSION JOINER SETUP (MT17)

When an expansion joiner is used it should be pre-adjusted to the corresponding air temperature mark at the time of installation. This will ensure correct movement of the spouting during thermal expansion and contraction.



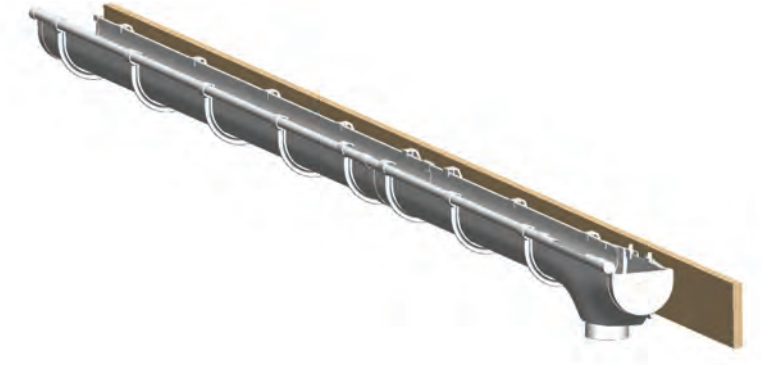
Temperature graduations

SECTION 3: SPOUTING INSTALLATION SCENARIOS

This section illustrates the key steps in installing common spouting runs. The three scenarios are shown complete below then detailed in steps on the following pages.

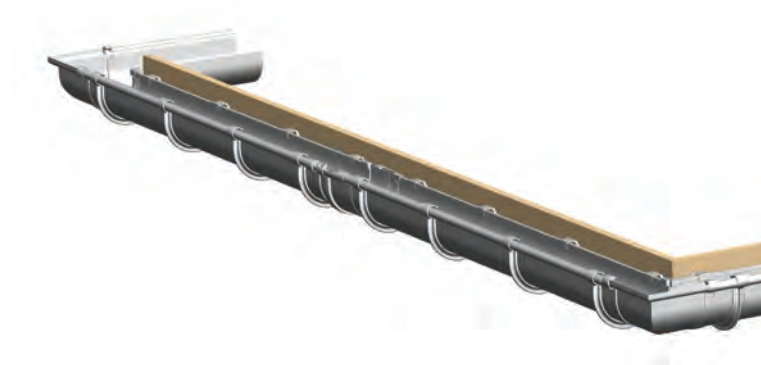
3.1. SPOUTING RUN WITH AN EXPANSION OUTLET

A linear run of spouting terminating with an expansion outlet



3.2. SPOUTING RUN WITH AN EXPANSION JOINER

A linear run of spouting with an expansion joiner part way through the run.



3.3. SPOUTING RUN TO DROPPER OUTLET

A linear run of spouting terminating with a dropper outlet. **NOT** to exceed two metres in total length.

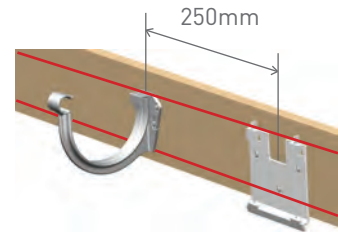


3.1 SPOUTING RUN TO AN EXPANSION OUTLET (MT8.80)

1. Fix the brackets to the fascia with the correct spacing from high point to low point (refer to section 2.2.1 page 7 for recommended bracket positioning). Use the recommended fall to the outlet of 5mm per 10 metres.



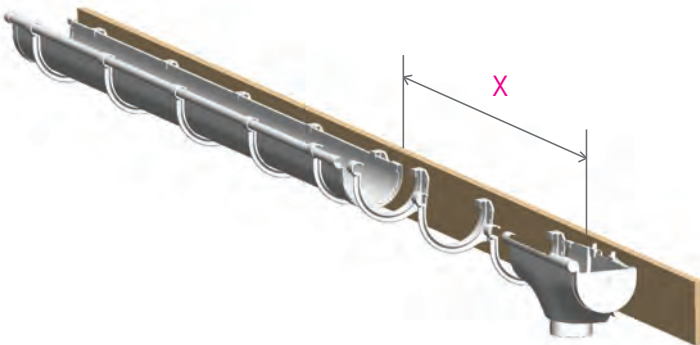
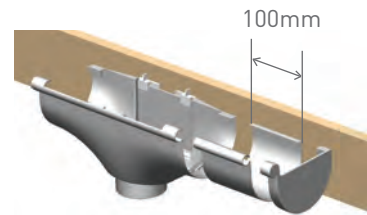
2. Fix the expansion outlet backplate.



3. At ground level solvent weld the end cap and joiner onto a spouting length. Let this assembly set for at least 10 minutes.

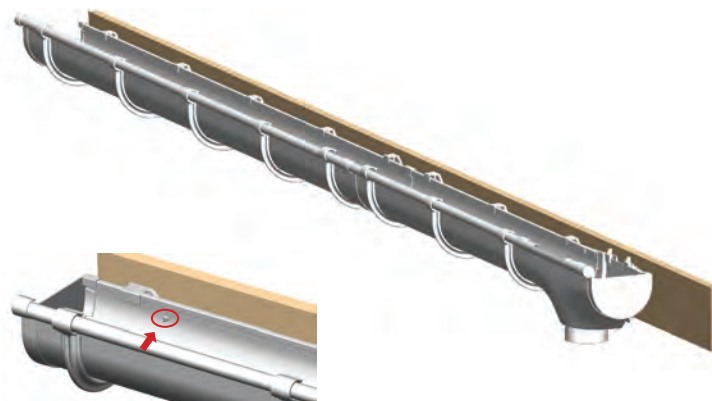


4. Solvent weld the end cap onto a piece of spouting 100mm long then this assembly can be solvent welded to the expansion outlet.



5. Once the solvent is set, insert the length of spouting into the brackets and clip the expansion outlet onto the backplate.

6. Measure the remaining spouting length X required between the joiner and the expansion outlet using the marking corresponding to the air temperature at the time of install.



7. Cut the required length of spouting using a fine tooth saw or drop saw.

8. Position the remaining length of spouting onto the brackets and expansion outlet then solvent weld it to the joiner.

9. Screw spouting opposite end to expansion outlet (refer to 1A page 6)

10. The run is complete.

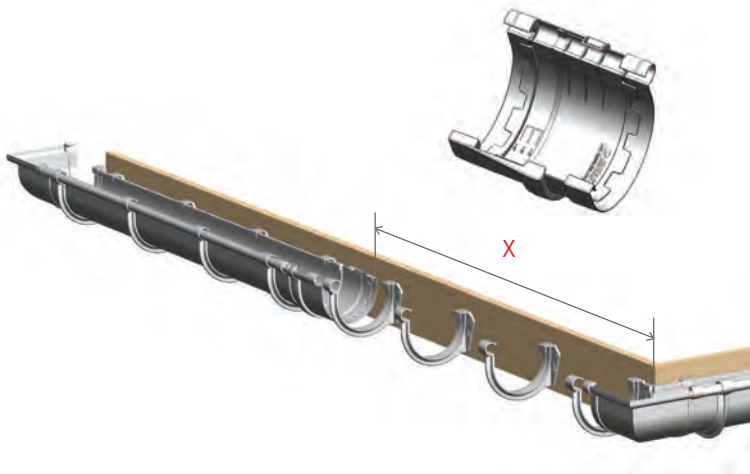
3.2 SPOUTING RUN WITH AN EXPANSION JOINER (MT17)



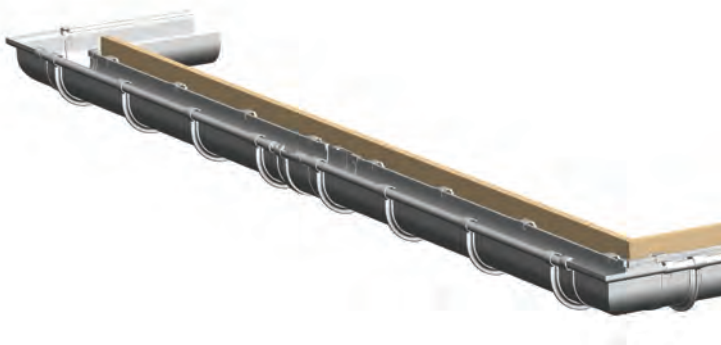
1. Fix the brackets to the fascia with correct spacing from high point to low point (refer to section 2.2.1 page 7). Use the recommended fall to the outlet of 5mm per 10 metres.



2. At ground level solvent weld the external angle and expansion joiner onto a spouting length. Let this assembly set for at least 10 minutes.



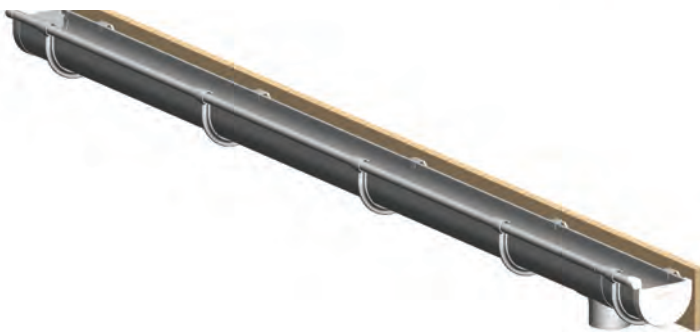
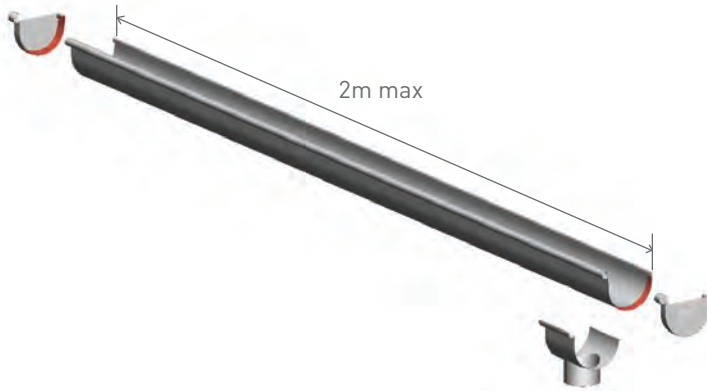
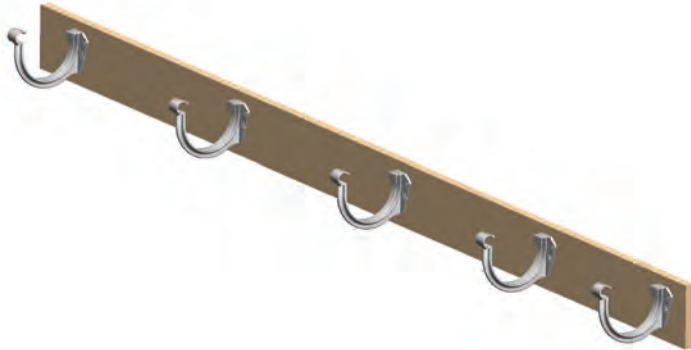
3. Once the solvent is set, insert the length of spouting into the brackets.
4. Adjust the expansion joiner to the corresponding temperature mark at the time of install and then measure the spouting length X required between the expansion joiner and the external angle.
5. Cut the required length of spouting using a fine tooth saw or drop saw.



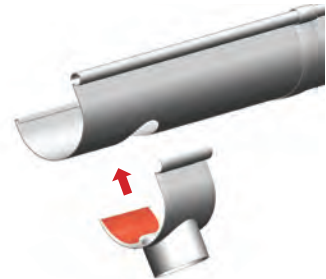
6. Position the remaining length of spouting onto the brackets.
7. Solvent weld the length to the expansion joiner and then to the external angle.
8. The run is complete.

3.3 SPOUTING RUN WITH A DROPPER OUTLET (MT11.80)

NOTE: The run should not exceed 2 metres when using a dropper outlet (MT11.80). For runs longer than 2 metres use an expansion outlet (MT8.80).



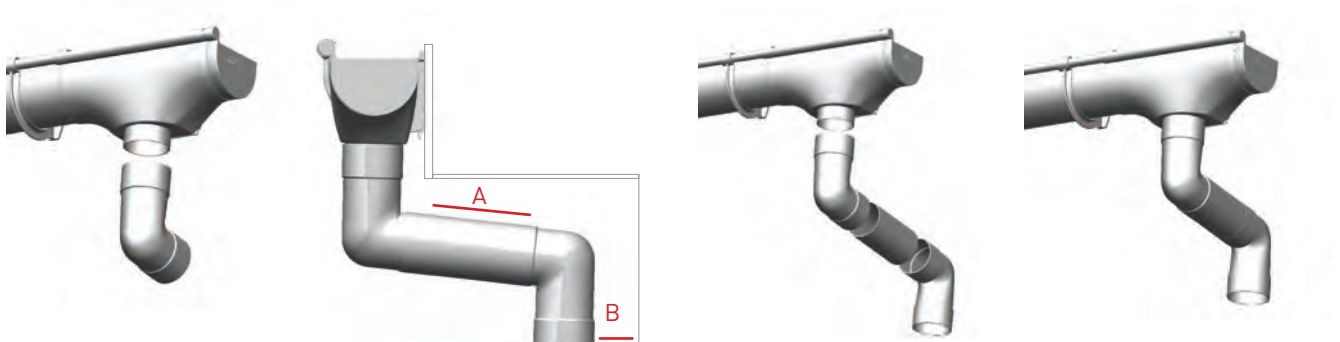
1. Fix the brackets to the fascia with correct spacing from high point to low point (refer to section 2 2.1 page 7). Use the recommended fall to the outlet of 5mm per 10 metres.
2. Measure the spouting length required for the run. Allow some clearance for thermal expansion if the run is installed between barge boards.
3. At ground level solvent weld on the dropper outlet and two end caps. Let this assembly set for at least 10 minutes.



4. Position the assembly into the brackets.
5. The run is complete.

SECTION 4: 80MM ROUND DOWNPIPE (RP80) INSTALLATION

4.1 SOFFIT OFFSET ASSEMBLY



1. Connect the first bend to the expansion outlet. **Note:** For easy removal of the downpipe assembly for future cleaning and maintenance, do not solvent weld the first bend to the outlet.
2. Calculate the offset length. When calculating the length of offset downpipe (A) include the length of sockets (40mm each end) and take into account the gap (B) between the downpipe and the wall. (Refer section 4.3 for downpipe clip dimensions)
3. Solvent weld the offset length of downpipe to the first bend and then solvent weld the second bend.
4. Finished soffit assembly.

4.2 DOWNPIPE JOINTING SOCKET (RS80)

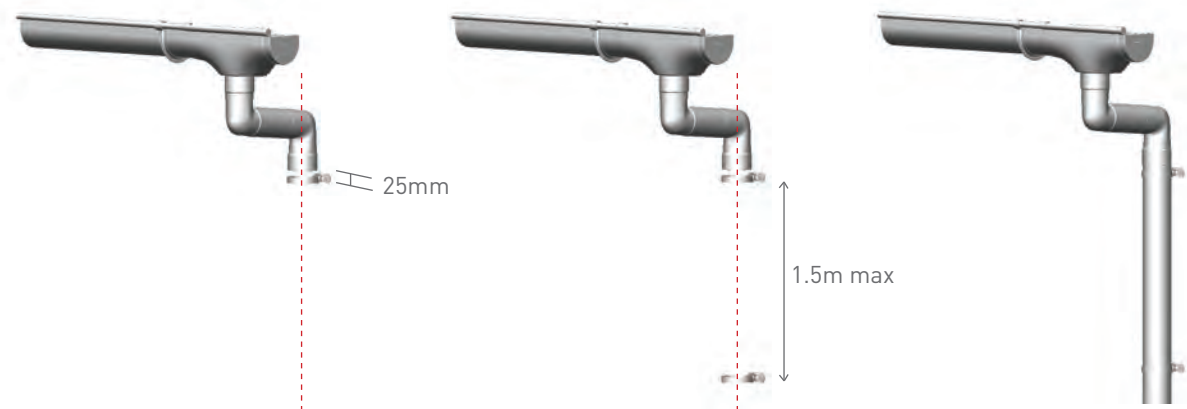
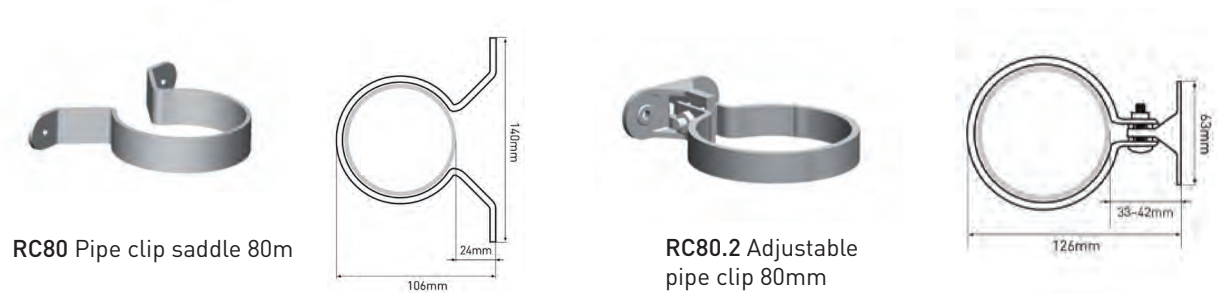


The Jointing socket (RS80) is required to connect two lengths of downpipe.

Always ensure the jointing socket is installed with the socket at the top and the spigot at the bottom. Use solvent welding cement to secure the jointing socket onto the downpipes.

The RS80 is also required to connect the downpipe directly to the expansion outlet (MT8.80) where no soffit exists.

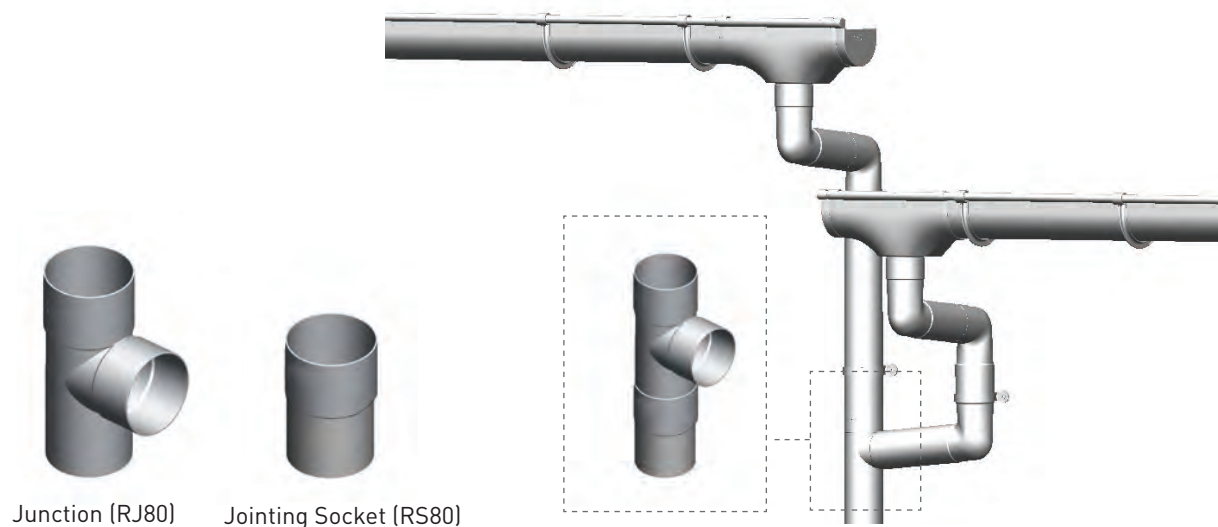
4.3 INSTALLING DOWNPIPE CLIPS (RC80 & RC80.2)



1. Use a level or plumb line to mark the downpipe position against the wall. Dry assemble the downpipe and mark the positioning of the downpipe clips. Place the first downpipe clip to a maximum of 25mm from the second bend using two stainless steel screws.
2. Ensure the second and further clips are spaced no more than 1.5 metres apart. **Note:** If running downpipe horizontally reduce the clips spacing to one metre apart.
3. Assembly is complete.

4.4 INSTALLING THE DOWNPIPE JUNCTION (RJ80)

The downpipe junction (RJ80) is used to connect a downpipe discharging from an outlet into another downpipe. The junction needs to be installed with a jointing socket RS80 on the spigot side of the junction.



4.5 DOWNPIPE SPREADER KIT (SKIT80)

The spreader allows for the even distribution of water to a lower level roof. It assists in complying with the Building Code E2/AS1. The relevant extract is below.

Building Code E2: external Moisture / 8.0 Roof claddings / 8.1.6 Spoutings. Downpipes discharging to a lower roof shall be fitted with a spreader as detailed in Figure 20 below, with the discharge limited to a section of roofing with no side laps. Spreader shall not be used on masonry tile roofs unless a roof underlay is installed. A maximum catchment area of 25m² shall be permitted to discharge via a spreader onto a lower roof area.

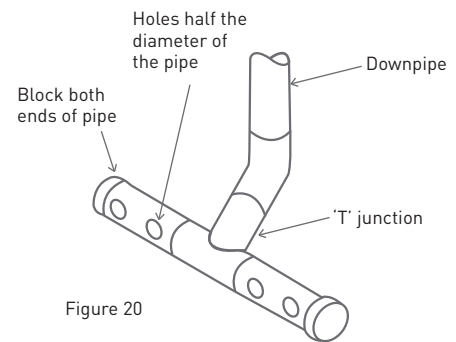


Figure 20

NOTE:

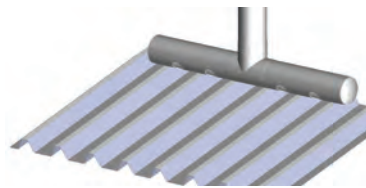
1. Hole positions to avoid joints in roofing.
2. When downpipe is located in corner, spreader to be L-shaped.

Marley's spreader kit includes the following:

1 x 80mm 90° tee junction

2 x end caps 80mm

Fixings and installation instructions.



MAINTENANCE

To ensure the Marley spouting and downpipe system maintains its performance and appearance:

- Regularly clear the inside of the spouting of leaves, silt, or other debris that can obstruct the flow of water and create additional load on the brackets and joints. This will prolong the life cycle and ensure full performance of the system.
- Water overflow is often the result of outlet blockages so it is recommended they are clear of debris at all times. The use of a Marley outlet strainer (RWST) is recommended to prevent large debris from entering the downpipe.
- Expansion joiners are designed with an EDPM rubber seal creating water tightness between the two sliding parts of the fitting. Over time the lubricated rubber seal may lose its sliding capability and this can be resolved by unclipping the joiner, cleaning the seal and lubricating it with a silicone based lubricant before reassembling.
- To maintain the appearance of the system the exterior of the spouting can be washed at least once per year using warm soapy water and a soft bristled brush or cloth. Simply rinse off with clean water.

TOUCH UP PAINT

Marley does not recommend the use of touch-up paint for its range of co-extruded uPVC coloured systems. Air drying touch-up paints have different weathering characteristics to co-extruded uPVC coloured systems. Over time, the touch up paint will fade at a different rate to the co-extruded uPVC coloured systems, producing an unacceptable aesthetic appearance.

Please take the following into consideration when assessing scratches and marks:

- If the scratches are obvious and visible from two metres away then the spouting, downpipe or fitting should be replaced.
- Minor surface scratches or marks become less noticeable as the external co-extruded layer weathers and are best left as they do not affect the long-term durability of the Marley uPVC spouting and downpipe system.
- Rough handling of the components before and during the installation should be avoided as repainting is not an option and replacement of the damaged components will be required.

STORAGE AND HANDLING

STORAGE

If storing Marley uPVC spouting and downpipe systems for a long period of time, the product should be kept in its original polyethylene sleeving and the fittings kept in their cartons. Both should be stored inside a building, out of direct sunlight.

Furthermore:

- Profiles should be well supported and stored on a flat surface to avoid deformation. Avoid stacking too many bundle packs to prevent overloading. A maximum of four packs high is recommended.
- Fittings supplied in cartons should be stored under cover in a cool dry place and remain packed until required for installation.
- Solvent welding MCS must be securely stored in a cool place, out of direct sunlight and away from any heat source.

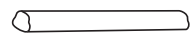
If the only option is to store the spouting and downpipe for long periods in strong sunlight, they should also be covered with a light coloured opaque sheet.

HANDLING

Marley uPVC spouting and downpipe systems are strong, lightweight and therefore easy to handle. Both spouting and downpipes are packed into strong polyethylene sleeving to prevent damage during transport and storage. When carrying bundle packs ensure they are lifted clear of the ground to avoid dragging, which could damage the ends of the product. When removing lengths from the sleeving, check that the external surface is facing up and handle with care.

During installation, handle the lengths with care to avoid damage to the exterior. To preserve the appearance of the profiles and fittings, when products are delivered to site, or left on the building site for a long period of time, they should be placed inside a storage building out of direct sunlight. All products should be left in their original packaging until ready to install on the building. If installation is to be carried out during extremely cold conditions, additional care should be given when handling the products.

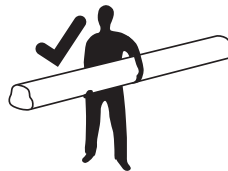
Downpipe



Store on flat surface



Store out of
direct sunlight



Handle with care
Lift, don't drag

Spouting



Store on flat surface



Store out of
direct sunlight



Handle with care
Lift, don't drag

GUARANTEE

Marley New Zealand Limited (Marley) guarantees the rainwater collection and discharge functions of Marley uPVC Spouting & downpipe systems to be free from defects in material and manufacture for a period of 15 years from the date of purchase.

For Marley's comprehensive Guarantee Document please see the Marley website www.marley.co.nz

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AUCKLAND

Mahia Road, Manurewa, Private Bag 802 Manurewa

Sales Department: Telephone 09 279 2777

Direct Fax 09 279 2778 Freefax 0800 652 621

Head Office: Telephone 09 279 2799 Fax 09 279 2798

CHRISTCHURCH

Shands Road, Hornby, PO Box 16233 Christchurch

For more information call free

FREEPHONE 0800 222 922

For more information: **FREEPHONE 0800 MARLEY (0800 627539)**

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