

RAINWATER SYSTEMS AND RIDGE CAPPING

An effective rainwater management system is an important part of every building. Our extensive range of fascia and gutter systems have a profile to aesthetically compliment every roof.

AUTHORISED SUPPLIER



www.freemanroofing.co.nz

Family owned since 1956





FREEMAN ROOFING RAINWATER SYSTEMS AND RIDGE CAPPING

Gutters

Freeman Roofing Gutters combine functionality with style, providing a tidy finish for both residential and commercial roofing. They are purposefully designed to mitigate the risk of significant water damage to the structure, making Freeman Roofing Gutters a smart investment.

Fascia

Freeman Roofing Fascia serves a dual purpose as a foundation for gutter attachment and as a concealer for the gap between the roof, eaves, and wall. Beyond its functional aspects, Freeman Roofing Fascia is crafted to create an appealing transition between the roof and wall surface.

Downpipes

Freeman Roofing offers downpipes suitable for various residential and commercial roofing needs. You can choose from round or square profiles in various sizes, ** ensuring that there is a Freeman Roofing downpipe to meet any requirement, from minor drainage to extensive industrial projects.

***Due to processing and/or geographical supply constraints, sizes and profile shapes are not available from every branch. Please contact your local Freeman Roofing team to find out more.*

Ridge Capping

Freeman Roofing's Ridge Cap is a versatile solution to top off your roofing project. Available in round or square profiles, and in wide or standard sizes, our ridge capping provides a seamless and attractive finish that complements any roof design. Choose the style that suits your needs and location.

Given that the primary role of the rainwater system is to effectively channel rainwater from the roof to the water tank or stormwater drainage network, it is crucial to ensure the proper sizing and quantity of downpipes are selected in accordance with the chosen gutter profile.

When specifying Freeman Roofing rainwater products into design plans, always cite each product as: 'Freeman Roofing Quad Gutter (example)'. This will ensure that the product used on the project is compliant and accurately manufactured using genuine NZ Made Colorsteel®

SUMMARY OF DESIGN CONSIDERATIONS

- Adequate drainage for the roof area is required.
- Consider the local average rainfall intensity (ARI) for the building's location.
- Ensure gutter capacity and fall meet the minimum requirement of 1:500 (2mm per metre) slope to the downpipe.
- Determine the necessary downpipe capacity and quantity.
- Prioritise downpipe capacity over gutter capacity or vice versa to determine the required number of downpipes.
- Ensure gutter and downpipe systems are designed to prevent overflow within the structure.
- Implement rain-heads where applicable in the design.
- In regions with snowfall, consider the addition of snow straps for gutter systems.
- Safeguard the collection of drinking water.
- Avoid contact with and runoff from dissimilar metals, such as stainless steel and copper, when using coated or uncoated roofing materials. Prevent discharging water from upper to lower roof sections via copper gutters or downpipes.
- Account for set-out and drop heights in wall and soffit framing when utilising Freeman Roofing metal fascia (refer to Fascia set-out description on page 10)
- (For a helpful set of tools and calculators, concerning roof drainage, visit: <https://www.metalroofing.org.nz/cop>)

MATERIAL COMPOSITION & COATINGS

Defining the boundaries of distinct corrosion zones can be challenging due to the numerous factors influencing the corrosiveness of a particular area. Selecting the appropriate materials for the specific location is crucial to ensure they meet the minimum durability standards of the NZ Building Code and align with customer expectations. Zinc/aluminium-coated steel substrates adhere to AS 1397:2011 standards. Additionally, pre-painted metal options are available to address various environmental conditions, encompassing different metals, metallic coatings, paint systems, and varying paint thickness. The paint coatings are crafted in compliance with AS/NZS 2728:2013.

For tailored product selections based on the project's environmental requirements, please contact your local Freeman Roofing branch for further information.



ADHERENCE TO BUILDING CODE STANDARDS

When employed in alignment with Freeman Roofing's installation and maintenance advice, Freeman Roofing Rainwater products will aid in fulfilling the subsequent stipulations of the New Zealand building code.

B2 DURABILITY:

B2.3.1 (c)

Building elements must, with only normal maintenance, continue to satisfy the performance requirements of this code for the lesser of the specified intended life of the building, if stated, or:

(c) 5 years if:

(i) the building elements (including services, linings, renewable protective coatings, and fixtures) are easy to access and replace, and

(ii) failure of those building elements to comply with the building code would be easily detected during normal use of the building.

E1 – SURFACE WATER:

E1.3.2

Refer to the profile pages for information regarding water-carrying capacities.

E2 EXTERNAL MOISTURE:

E2.3.1

Standard design details can be accessed from the web: <https://www.freemanship.co.nz/rainwater-spouting/>. Alternative details may comply with solutions for rainwater systems found in E2/AS1 or the 4 "D's" Deflection, Draining, Drying and Durability.

G12 WATER SUPPLIES:

G12.3.2

Rainwater collected from roofs and rainwater products that are made with steel and pre-painted steel products [including Colorsteel®], will comply with the provisions of NZBC G 1 2.3.1, provided the water is not contaminated from other sources (MRM Code of Practice 12.7).

TESTING & SUPPORTIVE EVIDENCE

Supporting evidence provided where requested will apply to the product supplied for the specific project.

Technical documentation and testing evidence pertaining to Colorsteel® and Altimate® can be found here: <https://www.colorsteel.co.nz/resources/downloads-and-brochures/>

Freeman Roofing Rainwater product performance reflects testing undertaken by the New Zealand Metal Roofing Manufacturers Association. To view calculators and tools used to measure carry and flow capacity, please visit <https://www.metalroofing.org.nz/cop>.

STORING AND HANDLING

Freeman Roofing provides gutters, downpipes, and fascia with a removable plastic coating to avoid potential damage to pre-coloured steel surfaces. It's crucial not to expose this plastic film to prolonged sunlight, as it may harden and become challenging to remove. Instead, remove the plastic film during product installation, and do not leave it for later removal.

Exercise care when handling rainwater products; refrain from dragging them across one another or other materials. Prioritise safety by wearing gloves during steel product handling, and ensure that your hands or gloves are clean. Keep steel products dry before installation, and if they get wet, promptly separate and dry them to prevent discolouration.

INSTALLATION

The roof overhang into the gutter should measure at least 50mm.

Gutters must be installed with a minimum slope to the downpipe of 1:500 (2mm per metre). It's considered good practice to increase this to 1:200 (5mm per metre) wherever possible for improved drainage and self-cleaning.

The gutter bracket system must support the potential weight of a gutter filled with water. Brackets for gutters should be positioned near all stop-ends, at both ends of sumps and rainheads, with a maximum spacing of 750mm for gutters less than 180mm wide and 600mm for gutters between 180mm and 300mm wide. In snow-prone areas, spouting may need snow straps and brackets with a maximum spacing of 600mm to support any additional weight from snow accumulation.

Eaves flashings must be installed when the roof pitch is $\leq 10^\circ$, the soffit width is $\leq 100\text{mm}$, or wind zones are Very High, Extra High, or Specific Engineer Design.

The back face of gutters should be lower than the fascia or cladding, leaving a gap between the fascia and gutter for overflow water drainage. The gutter bracket typically provides this gap, but if not, the gutter should be spaced off the fascia to maintain a 6mm gap. This

gap must be consistent, even in internal angles. For buildings without a soffit, external gutters must have a 10mm drainage gap or be designed as internal gutters.

Avoid using black lead pencils for marking products. Cutting should be done using tin snips or a hacksaw. Ensure that the fasteners used are compatible with the materials in use.

Gutters should be overlapped in the direction of water flow, creating a sealed joint of at least 40mm at both ends of the lap. After riveting the joint in place, apply a sealant to the surface of the lap. The sealant should cover the entire joint circumference, and any excess should be wiped away to ensure unobstructed water flow.

Roofers and other trades must avoid using abrasive disc cutters or grinders near or above the products to prevent swarf staining.

Avoid contact with wet concrete, lime, mortar acids, and treated timber throughout the installation. Spouting should be cleaned of loose debris during installation. All products must be cleaned with clean water and gently brushed to remove waste and contaminants upon completion.

MAINTENANCE

Areas not naturally rinsed by rain, such as steel fascias and gutters, necessitate more frequent maintenance. Neglecting a routine maintenance regimen can diminish a product's lifespan, as condensation in these areas can interact with surface salt and pollution, leading to expedited corrosion. Maintenance should be regular enough to prevent the buildup of dust, salts, pollutants, and any other substances that could shorten the product's life. The specific environmental conditions should determine the frequency of gutter cleaning. Depending on the environment, gutters should be cleaned out:

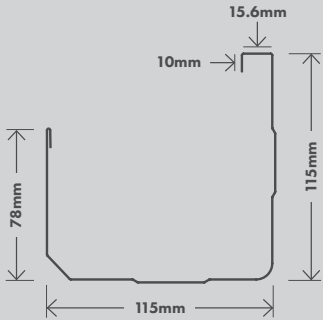
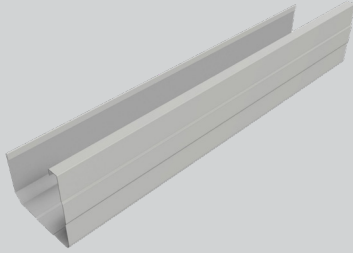
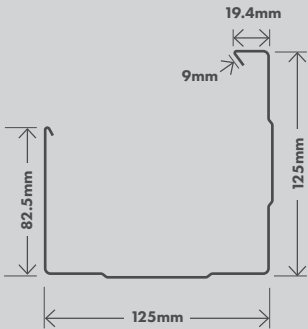
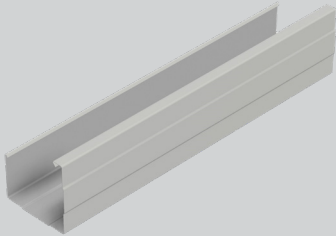
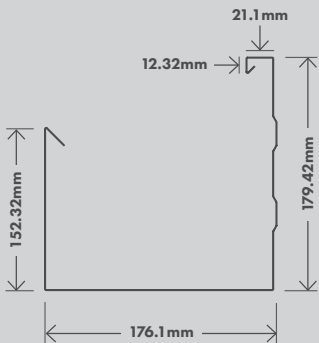
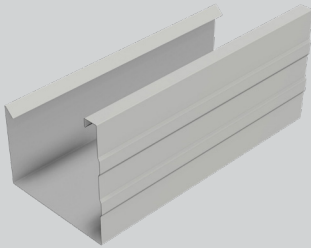
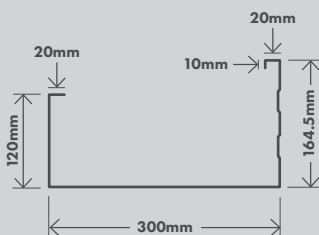
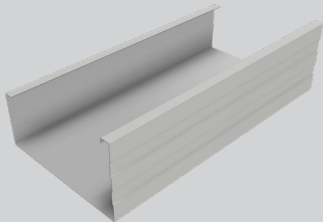
Moderate: 6 monthly / Severe: 3 monthly / Very Severe: - monthly.

Cleaning should also be frequent in areas with high leaf fall and/or dust levels. Clean surfaces not naturally cleansed by rain with fresh, clean water. If using clean water alone doesn't altogether remove the residue, consider adding a mild detergent solution and applying it with a soft-bristled nylon brush or using water blasting equipment at pressures not exceeding 20MPa. Be sure to rinse the painted surface with clean water thoroughly. Avoid using abrasive or solvent-based cleaners, such as turpentine, petrol, or kerosene.

STATEMENT IN REGARD TO SECTION 26 OF THE BUILDING ACT

Freeman Roofing Rainwater products are not subject to any warnings or bans under Section 26 of the Building Act.

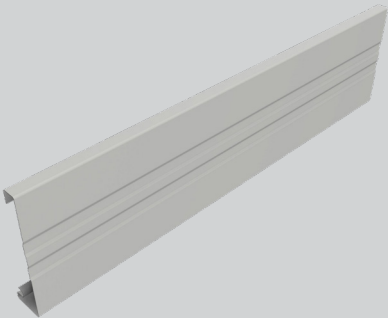
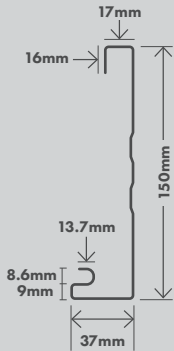
RAINWATER AND RIDGE CAPPING PRODUCT RANGE

MANUFACTURED IN WHANGAREI			
115 BOX GUTTER			<p>CAPACITY 7,740mm²</p> <p>CROSS SECTION AREA 8,895mm²</p>
MANUFACTURED IN ALL FREEMAN ROOFING BRANCHES			
125 BOX GUTTER			<p>CAPACITY 9,200mm²</p> <p>CROSS SECTION AREA 10,300mm²</p> <p>125mm Box Gutter can be roll formed in continuous lengths or folded up to maximum lengths of either 6.5m or 8m, depending on branch capacity. Please contact your local Freeman Roofing branch to discuss.</p>
MANUFACTURED IN NELSON			
BOX GUTTER 175MM FOLDED			<p>CAPACITY (10mm Freeboard) 20,196mm²</p> <p>CROSS SECTION AREA 21,971mm²</p> <p>Available up to 8m or 6.5m lengths, depending on branch capacity. Swage pattern pictured is a design example only. Please contact your local Freeman Roofing branch to discuss.</p>
MANUFACTURED IN ALL FREEMAN ROOFING BRANCHES			
BOX GUTTER 300MM FOLDED			<p>CAPACITY (10mm Freeboard) 32,304mm²</p> <p>CAPACITY (15mm Freeboard) 30,820mm²</p> <p>CROSS SECTION AREA 35,272mm²</p> <p>Available up to 8m or 6.5m lengths, depending on branch capacity. Swage pattern pictured is a design example only. Please contact your local Freeman Roofing branch to discuss.</p>

RAINWATER AND RIDGE CAPPING PRODUCT RANGE

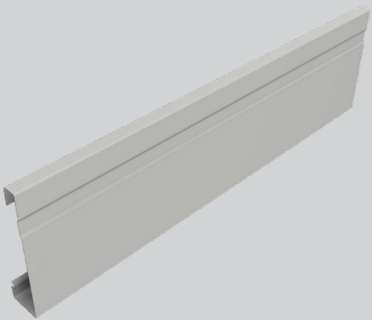
MANUFACTURED IN TAURANGA

150MM FASCIA



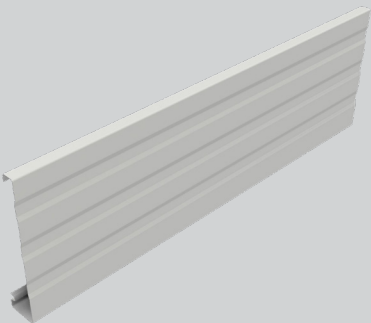
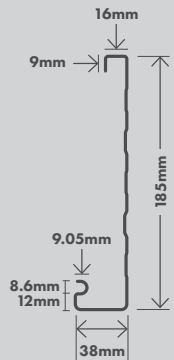
MANUFACTURED IN QUEENSTOWN

165MM FASCIA



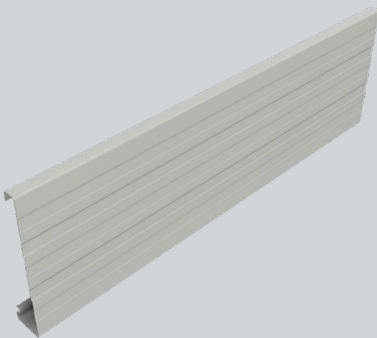
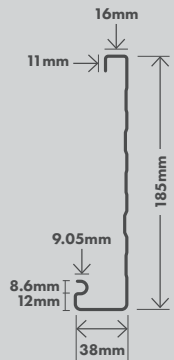
MANUFACTURED IN TIMARU AND NELSON

185MM FASCIA


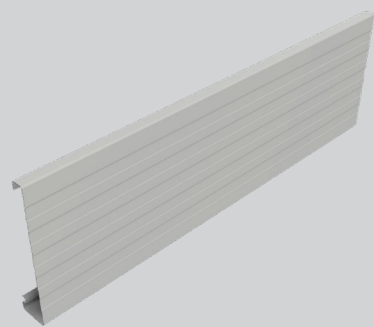
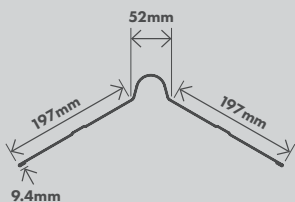
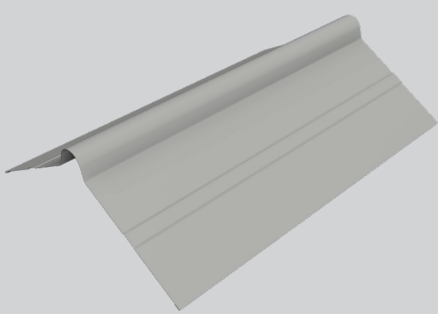
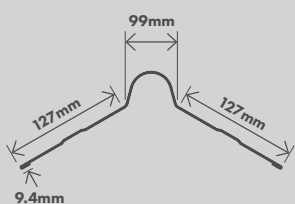
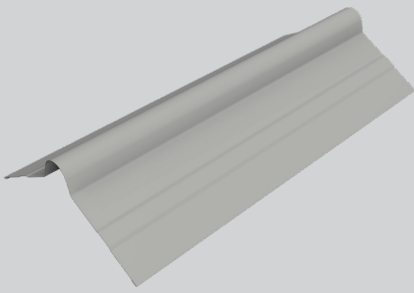
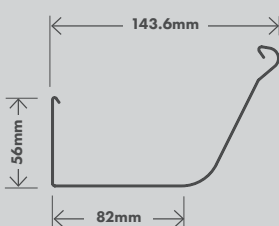
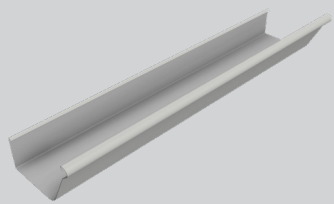


MANUFACTURED IN BLENHEIM AND NELSON

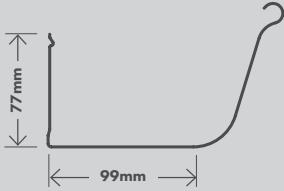
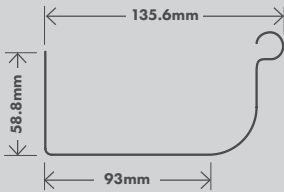
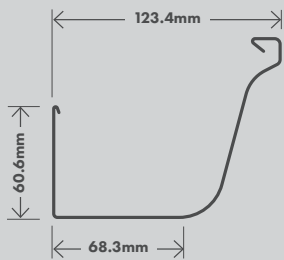
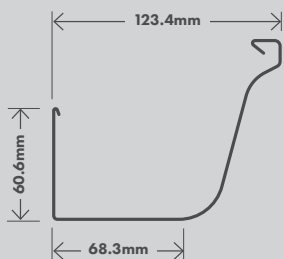
185MM FASCIA



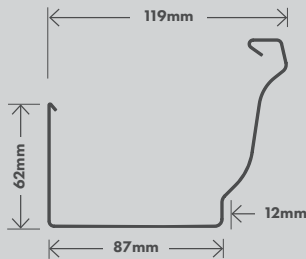
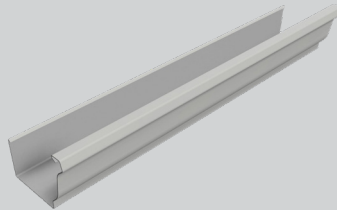
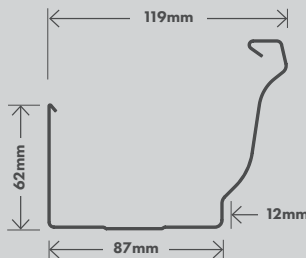
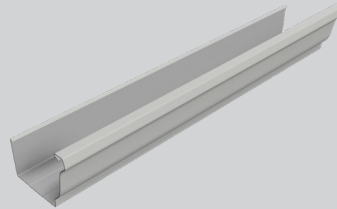
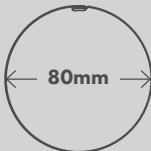

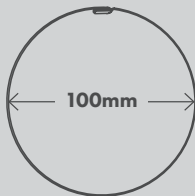

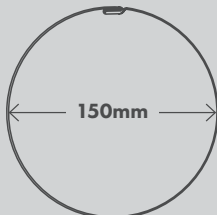

RAINWATER AND RIDGE CAPPING PRODUCT RANGE

MANUFACTURED IN NELSON			
185MM FASCIA			
MANUFACTURED IN ALL FREEMAN ROOFING BRANCHES EXCEPT WHANGAREI			
WIDE RIDGE			<p>Ridge cap is also available in square top profile up to 8m or 6.5m lengths depending on branch capacity. Please contact your local Freeman Roofing branch to discuss.</p>
MANUFACTURED IN ALL FREEMAN ROOFING BRANCHES EXCEPT QUEENSTOWN AND WANAKA			
NARROW RIDGE			<p>Ridge cap is also available in square top profile up to 8m or 6.5m lengths depending on branch capacity. Please contact your local Freeman Roofing branch to discuss.</p>
MANUFACTURED IN QUEENSTOWN			
QUAD GUTTER			<p>CAPACITY (10mm Freeboard) 4,868mm²</p> <p>CROSS SECTION AREA 6,074mm²</p>

RAINWATER AND RIDGE CAPPING PRODUCT RANGE

MANUFACTURED IN TAURANGA		
QUAD GUTTER		<p>CAPACITY (10mm Freeboard) 8,521mm²</p> <p>CROSS SECTION AREA 9,923mm²</p>
MANUFACTURED IN DUNEDIN		
QUAD GUTTER		<p>CAPACITY (10mm Freeboard) 5,649mm²</p> <p>CROSS SECTION AREA 6,907mm²</p>
MANUFACTURED IN BLENHEIM		
QUAD GUTTER		<p>CAPACITY (10mm Freeboard) 4,590mm²</p> <p>CROSS SECTION AREA 5,602mm²</p>
MANUFACTURED IN NELSON		
QUAD GUTTER		<p>CAPACITY (10mm Freeboard) 4,590mm²</p> <p>CROSS SECTION AREA 5,602mm²</p>

RAINWATER AND RIDGE CAPPING PRODUCT RANGE

MANUFACTURED IN NELSON				
CLASSIC GUTTER			<div>CAPACITY (10mm Freeboard) 4,926mm²</div> <div>CROSS SECTION AREA 6,013mm²</div>	
MANUFACTURED IN ASHBURTON				
CLASSIC GUTTER			<div>CAPACITY (10mm Freeboard) 4,948mm²</div> <div>CROSS SECTION AREA 6,034mm²</div>	
MANUFACTURED IN DUNEDIN AND ASHBURTON				
STEEL DOWNPIPE			<div>CAPACITY 5,020mm²</div> <div>INSIDE DIAMETER 80mm²</div>	
MANUFACTURED IN DUNEDIN				
STEEL DOWNPIPE			<div>CAPACITY 7,690mm²</div> <div>INSIDE DIAMETER 100mm²</div>	100mm and 150mm downpipe is available up to a maximum length of 6m.
			<div>CAPACITY 17,475mm²</div> <div>INSIDE DIAMETER 150mm²</div>	

FASCIA SET-OUT DESCRIPTION AND DOWNPIPE SIZES FOR GIVEN ROOF PITCH AND AREA

Position the soffit bearer on the right-hand side of the rafter when facing the building.

Install scaffolding in accordance with Worksafe and Working at Heights requirements before commencing the installation.

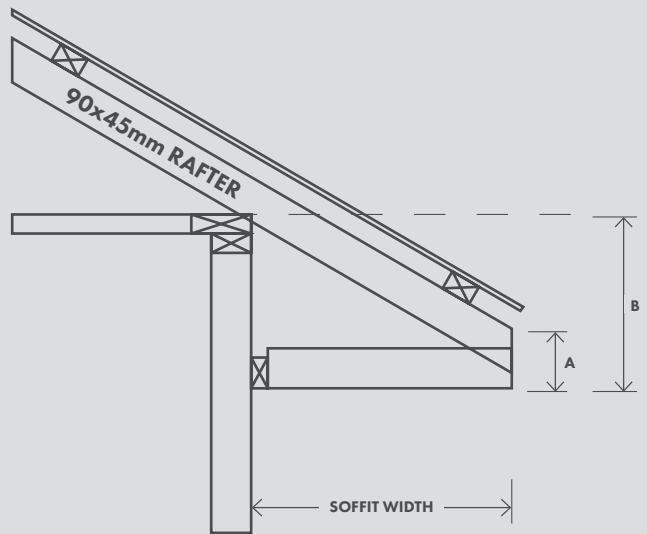
Scaffolding should extend a minimum of 500mm beyond the roof's external or gable corners. Ensure the scaffold's height allows for the safe installation of fascia and gutter systems. Adjust scaffold heights as needed for roof installation, and confirm these heights with the installer before erecting the scaffold.

Freeman Roofing provides gutters and fascia with a removable plastic coating to prevent scuffing and scratching. Avoid leaving this coating exposed to sunlight for extended periods, as removing it may become difficult. Remove the plastic coating during product installation; do not leave it for later removal.

Avoid dragging rainwater products over or across one another, as well as over other materials. When handling steel products, prioritise safety by wearing gloves and ensuring they are clean.

Keep steel products dry before installation. If they become wet, separate and promptly dry them, as discolouration may occur.

EAVES DETAIL



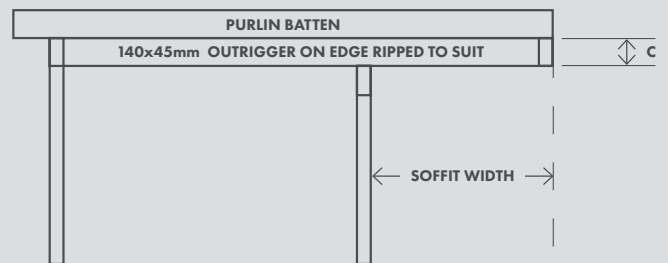
Notes:

80x80 batten required for metal file
70x45 purlin for longrun

FASCIA SET-OUT TABLE

ROOF PITCH	TOE CUT (A) MM	SOFFIT DROP			TOP CHORD DROP (C) MM
		450	600	750	
10	127	115	141	168	125
12.5	128	135	169	202	125
15	129	156	197	237	125
17.5	131	179	226	273	125
20	133	201	256	310	125
22.5	135	224	286	348	125
25	138	249	318	388	125
27.5	141	274	352	430	125
30	144	300	386	473	125
35	150	345	450	555	115
40	156	404	530	656	110
45	162	479	629	778	110

GABLE END DETAIL



Notes:

Gable flashing required

DOWNPIPE SIZES FOR GIVEN ROOF PITCH AND AREA

DOWNPIPE SIZE (MM)	0.25°	25-35°	35-45°	45-55°
63mmdiameter	60	50	40	35
74mm diameter	85	70	60	50
100mm diameter	155	130	110	90
150mm diameter	350	290	250	200
65x50mm rectangular	60	50	40	35
100x50mm rectangular	100	80	70	60
75x75mm rectangular	110	90	80	65
100x75mm rectangular	150	120	105	90

More information can be found here: <https://www.building.govt.nz/assets/Uploads/building-code-compliance/e-moisture/e1-surface-water/asvm/e1-surface-water-1st-edition-amendment11.pdf>.



Family owned since 1956

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Issued: 11/12/23