VERSION 1.2

STEELFORMERS

ROOFING & CLADDING SYSTEMS

PRODUCT GUIDE

JANUARY 2023

0800 4 ROOFING
steelformers.co.nz

CONTENTS

SECTION 1 / GENERAL INFORMATION

1.1 About Steelform Roofing Group

Steelform Roofing Group is proud to be the largest, 100% locally owned and operated metal roofing and cladding manufacturers in the Taranaki and Wanganui regions. We are proud to manufacture and supply a multitude of products you can rely on. Our longrun roofing, wall cladding and rainwater goods for commercial, industrial and residential projects are available in a variety of profiles, using different base materials, coatings and colours.

Superior customer service is assured as we use our own fleet of vehicles for prompt deliveries from our network of four branches; Stratford, New Plymouth, Wanganui and Taumarunui. Our teams are trained to assist with technical enquiries and product selection and are available to speak with throughout our branches.

1.2 Branch locations

Taranaki Steelformers Ltd
Mountain Road, Stratford 4332
P. 0800 655 142 or 06 765 5191
F. 06 765 8185
E. stratford@steelformers.co.nz

Wanganui Steelformers Ltd
380 Heads Road, Wanganui 4501
P. 0800 800 077 or 06 344 5142
F. 06 344 6766
E. chris@steelformers.co.nz
sara@steelformers.co.nz

Taranaki Steelformers Ltd
23 Katere Road, Waiwakaiho, New Plymouth 4312
P. 0800 476 634 or 06 758 3831
F. 06 758 5784
E. npoffice@steelformers.co.nz

King Country Longrun
Huia Street, Taumarunui 3920
P. 07 895 6464
F. 07 895 6858
E. blair@steelformers.co.nz

1.3 Disclaimer

Because of Steelform Roofing Groups' policy of continuous product improvement, the company reserves the right, at any time and without notice to discontinue or modify designs, features and other specifications of their product.

Steelform Roofing Group reserves the right to either temporarily or permanently withdraw any such product from the market without incurring any liability. Steelform Roofing Group disclaim any liability for loss or damage suffered from the use of such material as all information is correct to the best of our knowledge at the time of publishing.

As this is only issued as a general guide, it should not be treated as a substitute for detailed technical advice.

Version 1.2 / January 2023

For the most up to date version of our catalogue, visit our website www.steelformers.co.nz

2.0 Choosing the right product

SECTION 2 / CHOOSING THE RIGHT PRODUCT

2.1 Material selection

New Zealand is exposed to a wide range of environmental conditions. All of our products manufactured at Steelformers are available in a range of finishes to suit your environment. Prior to selecting a product, the product type, material and/or paint coating type, along with site details including site address, distance from the sea and the degree of exposure need to be considered to ensure your chosen material is suitable for the environment in which they will be exposed.

Durability

Past history and testing results from New Zealand Steel and Pacific Coilcoaters on their products indicate that providing the correct product for the environmental conditions are used, COLORSTEEL® and ColorCote® products installed in accordance with the NZMRM Code of Practice, and maintained in accordance with their literature will meet the performance criteria of the New Zealand Building Code. *Note: The New Zealand Building Code does not include aesthetic appearance.*

Attention should also be paid to the following to ensure the expected performance is achieved:

- The correct choice of underlay to suit the building environment, roof pitch and selected material
- Fasteners should be compatible with the chosen material and their durability equal than the material being fastened. Stainless steel or aluminium fasteners should be used with aluminium roofs
- Correct fixing patterns in relation to site environment and considerations made for thermal expansion
- The chosen product meets the sufficient minimum roof pitch
- Correct layout and installation of sheeting, underlay and netting
- Site storage and handling keeps all products dry and protected from damage
- Wall cladding should finish at least 50mm above ground level. Lower edge of sheets must be kept clear of vegetation and debris
- The implementation of maintenance requirements as per warranty conditions

More information the above mentioned is available in this publication.

Drinking water

Rainwater collected from roofs clad with products made from ZINCALUME® coated steel, GALVSTEEL® and COLORSTEEL® prepainted steel, will comply with the provisions of NZBC G12.3.1, provided the water is not contaminated from other sources. The first 25mm of rainfall from a newly installed roof must be discarded before drinking water collection starts. Where a paint or paint system is applied to the roof, its suitability for the collection of drinking water must be established.

Compatibility

Where two different metals are in contact one metal will tend to sacrifice itself to protect the other. Contact with or water run-off from dissimilar metals such as lead, copper or stainless steel should be avoided with any COLORSTEEL® or ZINCALUME® product. If dissimilar metal usage cannot be avoided then contact and/or water run-off must be avoided by insulating surfaces. Separation by rubber seal or coating the surfaces and maintaining the coating as an effective barrier for the life of the roof will be required. For further information refer to the NZMRM code of practice at https://www.metalroofing.org.nz/codeonline

RUN-OFF FROM (UPPER)	LOWER MATERIAL	ALUMINIUM	PRE-PAINTED ALUMINIUM	ZINCALUME®	ZINC OR ZINC COATED STEEL	PRE-PAINTED AZ STEEL	COPPER OR BRASS	SSTAINLESS STEEL	LEAD
ALUMINIUM	Contact with	Y	Y	Y	Y	Y	N	?	N
	Run-off too	Y	Y	Y	N	Y	Y	Y	Y
PRE-PAINTED ALUMINIUM	Contact with	Y	Y	?	?	Y	N	N	N
	Run-off too	Y	Y	Y	N	Y	Y	Y	Y
ZINCALUME®	Contact with	Y	Y	Y	Y	Y	N	N	N
	Run-off too	Y	Y	Y	N	Y	Y	Y	Y
ZINC OR ZINC COATED STEEL	Contact with	Y	Y	Y	Y	Y	N	?	Y
	Run-off too	Y	Y	Y	Y	Y	Y	Y	Y
PRE-PAINTED AZ STEEL	Contact with	Y	Y	Y	Y	Y	N	?	N
	Run-off too	Y	Y	Y	N	Y	Y	Y	Y
COPPER OR BRASS	Contact with	N	N	N	N	N	Y	Y	?
	Run-off too	N	N	N	N	N	Y	Y	?
STAINLESS STEEL	Contact with	?	N	N	?	N	Y	Y	Y
	Run-off too	Y	Y	Y	N	Y	Y	Y	Y
LEAD	Contact with	N	N	N	Y	N	?	Y	Y
	Run-off too	?	N	N	Y	N	Y	Y	Y

Y	Suitable
N	Not suitable
?	May need seperation, use with caution in severe environments

2.2 Environmental conditions, warranty periods and maintenance recommendations

It is essential to choose the roofing, wall cladding, guttering and fastener system that will provide the life expectancy in the environment in which it will be installed, as incorrect selection could result in no warranty. All warranties will carry a required maintenance clause, which must be implemented to ensure the warranty remains valid.

Routine maintenance

Warranty conditions require regular washing either by natural rainwater or by manual washing and scrubbing with a soft bristle brush. The frequency of washing must be enough to prevent build up of debris, dirt or salt deposits and will differ depending on location and degree of protection from rainfall.

As a general guide the following frequencies can be used as a starting point:

- Moderate/marine environments require manual washing every 6-12 months
- Severe marine environments require manual washing every 3-6 months
- Very severe marine environments require manual washing every 3 months

For more information on a particular product, please see section 2.3 of this catalogue.

Other important factors to consider:

- Paint coatings from different suppliers should not be mixed on the same job. For example, when the roofing is from one material supplier and the flashings from another. No warranty would be available on either material
- Warranties only apply to roofing, cladding and/or fascia and gutter situations and not when used as fences, shower liners or planter boxes etc.

Please note, warranties for commercial applications are issued on a case by case basis, contact a Steelformers representative for more information. It is recommended that you contact Steelformers representative prior to material selection to ensure the chosen product is suitable for the job.

2.2.1 New Zealand Steel

As a general guide, it is reasonable to expect the following warranty periods will be available. For more information on a particular product, please see section 2.3 of this catalogue.

Steel substrate with the appropriate coating

Commercial roofs:

Up to 15 years for perforation of substrate

Up to 15 years for paint coating (peeling, flaking or excessive fade)

Residential roofs (dependent on environment):

Up to a maximum of 30 years for perforation of substrate

Up to a maximum of 20 years for paint coating (peeling, flaking or excessive fade)

Fascia (dependent on environment):

Up to a maximum of 15 years for perforation of substrate

Up to a maximum of 10 years for paint coating (peeling, flaking or excessive fade)

Spouting (dependent on environment):

Up to a maximum of 10 years for perforation of substrate

Up to a maximum of 10 years for paint coating (peeling, flaking or excessive fade)

Source: https://www.colorsteel.co.nz/products/

2.2.2 ColorCote®

As a general guide, it is reasonable to expect the following warranty periods will be available. For more information on a particular product, please see section 2.3 (page 24-25) of this catalogue.

Aluminium substrate with appropriate paint coating

Commercial roofs:

Up to 15 years for perforation of substrate

Up to 15 years for paint coating (peeling, flaking or excessive fade)

Residential roofs (dependent on environment):

Up to 30 years (up to and including severe marine environments) and up to 20 years (in very severe marine environments) for perforation of substrate

15 to 20 years for paint coating (peeling, flaking or excessive fade)

Source: https://www.colorcote.co.nz/products/alumigard/

2.3 Material options

2.3.1 ZINCALUME®

ZINCALUME® coated steel has long-term corrosion resistance in moderate conditions, offering a blend of versatility and durability. Zincalume® combines 55% aluminium alloy coated steel and 45% zinc, giving the advantages of both metals.

Product finish & painting

ZINCALUME® has a finely spangled silvery matte finish. After exposure, the surface finishing darkens over time as the resin coating weathers away. This change is a natural one and visual only. ZINCALUME® is readily paintable using good quality primer and water-based acrylic topcoats. Paint manufacturers instructions should be followed.

Limitations of use

ZINCALUME® is not weldable and should not be exposed to any thermal processes, as this will invalidate the warranty and may cause premature failure of the product. Graphite pencils should not be used to mark the surface as the carbon may react with the coating.

ZINCALUME® is not suitable for the following:

- Formwork in contact with wet concrete
- Animal shelters where ammonia levels are constantly high
- Fertilizer storage sheds and containers
- Culverts, or where ZINCALUME® coated steel would be buried in the ground
- Water tanks
- Highly alkaline environments (e.g. cement manufacturing)
- Coolroom products

Warranty & maintenance

Your warranty is dependant on two things, having the right product for the right environment and ensuring you maintain it in line with the maintenance recommendations. The following shows New Zealand Steels environmental categories, maintenance recommendations and warranty periods. For further information, refer to New Zealand Steels technical literature.

ZINCALUME®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	15 years	15 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every 6 months	Rain washing	Manual washing every 3 months	Manual washing every 3 months

Source: https://www.colorsteel.co.nz/products/zincalume/

2.3.2 GALVSTEEL®

GALVSTEEL® is mild galvanised steel with a coating of zinc. The zinc protects the steel by providing cathodic protection to the exposed steel, so should the surface be damaged the zinc will corrode in preference to the steel. Galvanised steel is one of the most widely used products, used extensively in the building sector, automotive, agricultural and other areas where the steel needs to be protected from corrosion.

Product finish & painting

GALVSTEEL® has a bright silvery spangled finish and high reflectivity. Over a number of years in an external environment this dulls off to a matte metallic grey. GALVSTEEL® is readily paintable using good quality primer and water-based acrylic topcoats. Paint manufacturers instructions should be followed.

Limitations of use

GALVSTEEL® is able to be soldered, brazed or spot welded. ZINCALUME® has largely replaced GALVSTEEL® except for the following applications:

- Extensions to existing galvanised roofing
- Fertiliser storage or processing areas
- Animal shelters or areas containing ammonia
- In direct contact with concrete e.g. formwork

Warranty

The material carries no specific warranty cover and is only recommended where ZINCALUME® is not appropriate and is therefore not recommended for residential or commercial applications.

Source: https://www.nzsteel.co.nz/

2.3.3 COLORSTEEL® ENDURA® and MAXX®

The COLORSTEEL® ENDURA® and MAXX® paint systems consist of a ZINCALUME® steel substrate to which a prepainted finish system is applied. The ENDURA® system is designed to provide protection against corrosion in areas where moderate to severe environmental conditions are experienced. The MAXX® system includes a corrosion resistant primer and baked-on finish to withstand tough environments and is suitable for more severe to very severe environmental conditions.

Handling & Storage

If COLORSTEEL® prepainted steel products are to be stored for any time prior to forming or installation, they must be stored in dry, ventilated conditions. Storage which allows water (including condensation) to be trapped between the sheets may damage the coating beyond repair. COLORSTEEL® products must be handled carefully during transport, fabrication and fixing to avoid damaging the surface.

Installation

Full installation details for COLORSTEEL® products is contained in the New Zealand Steel Installers' Guide and the NZMRM Code of Practice.

Fixings

Aluminium and factory painted fixings are acceptable. The fasteners durability should equal (or exceed) that of the roofing or cladding product and should be suitable for the environment. Stainless steel screws and lead head nails must not be used.

Limitations of use

The use of other materials in proximity to ENDURA® and MAXX® must be in accordance with New Zealand Steels Specifiers and Builders Guide. Mixing of brands of pre-painted steel material on the same building is not recommended. The reactions between ZINCALUME® steel and lead flashings will degrade the ZINCALUME® steel material. Soft zinc or aluminium flashings should be used. Marking with lead pencils is not advised.

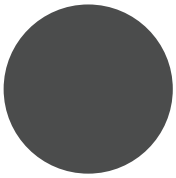
COLORSTEEL® products should not be used in the following applications:

- Embedded in concrete
- In contact with permanently wet materials
- Water tanks
- In contact with soil, bark or similar
- As concrete form work
- In intensive animal shelters

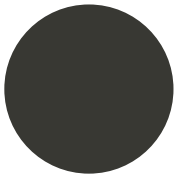
The COLORSTEEL® range

Steelformers offers three different options for their pre-painted products. Standard COLORSTEEL® colours are available ex-stock, see the *Standard Colours* colour chart below.

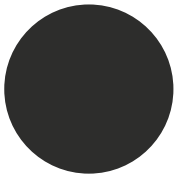
Steelform Standard COLORSTEEL® Colour Range



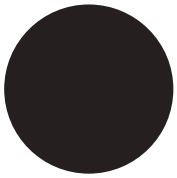
GREY FRIARS
TSR: 26%
LRV: 10%



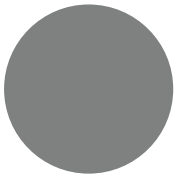
IRONSAND
TSR: 23%
LRV: 8%



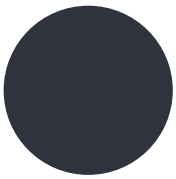
EBONY
TSR: 5%
LRV: 5%



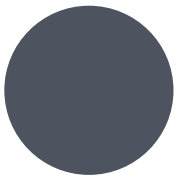
FLAXPOD
TSR: 23%
LRV: 11%



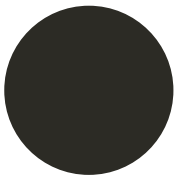
SANDSTONE GREY
TSR: 41%
LRV: 27%



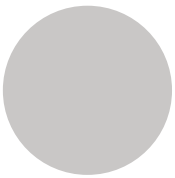
WINDSOR GREY
TSR: 21%
LRV: 7%



NEW DENIM BLUE
TSR: 25%
LRV: 11%

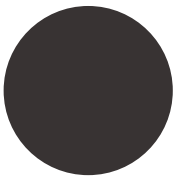


KARAKA
TSR: 25%
LRV: 8%

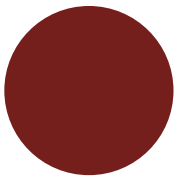


GULL GREY
TSR: 50%
LRV: 50%

TITANIA
TSR: 65%
LRV: 68%



SLATE
TSR: 27%
LRV: 9%



PIONEER RED
TSR: 36%
LRV: 13%

TSR: Total Solar Reflectance

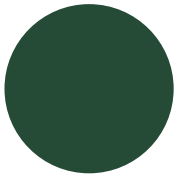
LRV: Light Reflectance Value

Please note, the colours are indicative and will vary depending on your screen resolution and/or print quality. We suggest you request a sample from your nearest Steelformers branch or by visiting https://www.colorsteel.co.nz/colours/

The COLORSTEEL® range cont.

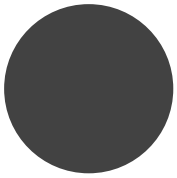
Non-standard colours and architectural colours are available on request. Please note additional coil fees, nominal lead times and minimum order quantities apply. See the *Secondary* and *Architectural Colours* colour chart below. For more information on these colours and their availability please contact your nearest Steelformers branch.

Steelform Secondary COLORSTEEL® Colour Range

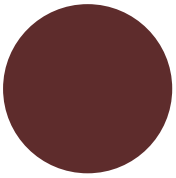


PERMANENT GREEN
TSR: 26%
LRV: 10%

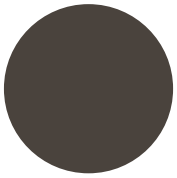
MIST GREEN
TSR: 38%
LRV: 26%



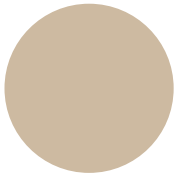
THUNDER GREY
TSR: 27%
LRV: 12%



SCORIA
TSR: 31%
LRV: 10%

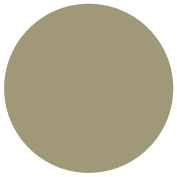


LIGNITE
TSR: 20%
LRV: 11%



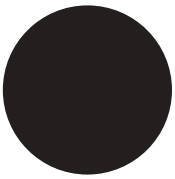
DESERT SAND
TSR: 56%
LRV: 49%

CLOUD
TSR: 70%
LRV: 75%

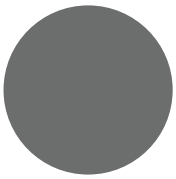


LICHEN
TSR: 25%
LRV: 8%

Steelform Architectural COLORSTEEL® Colour Range



FLAXPOD® MATTE
TSR: 22%
LRV: 6%



TIDALDRIFT® MATTE
TSR: 29%
LRV: 13%

TSR: Total Solar Reflectance

LRV: Light Reflectance Value

The colours are indicative and will vary depending on your screen resolution and/or print quality. We suggest you request a sample from your nearest Steelformers branch or by visiting https://www.colorsteel.co.nz/colours/

Warranty & maintenance

Like all roofing and cladding products, COLORSTEEL® prepainted steel products are subject to the cumulative effects of weather, dust and atmospheric debris. Careful and regular maintenance will extend the useful life of this product. Your warranty is dependant on two things, having the right product for the right environment and ensuring you maintain it in line with the maintenance recommendations.

The following shows New Zealand Steels environmental categories, maintenance recommendations and warranty periods. For further information, refer to section New Zealand Steels technical literature.

Please note, these are applicable to residential warranties only. For commercial buildings such as schools and warehouses, refer to New Zealand Steel for details of commercial warranties as these are issued on a case by case basis.

MODERATE

Environmental conditions characterised by:

- Little or no salt deposits
- The occasional smell of salt in the air
- Typically starts between 500-1000m from breaking surf, such as found on exposed coasts, or in the immediate vicinity of calm salt water such as estuaries

ENDURA®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	15 years	30 years	10 years	15 years
	PAINT	15 years	18 years	10 years	5 years
MAINTENANCE		Rain washing plus manual washing every year	Rain washing	Manual washing every 6 months	Manual washing every 6 months

MAXX®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	15 years	30 years	10 years	15 years
	PAINT	15 years	18 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every year	Rain washing	Manual washing every 6 months	Manual washing every 6 months

SEVERE

Environmental conditions characterised by:

- Light salt deposits

- A frequent smell of salt in the air

- Typically starts between 100 – 500 metres from breaking surf, such as on exposed coasts or in the immediate vicinity of large expanses of calm salt water such as harbour foreshores

ENDURA®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION		15 years	10 years	15 years
	PAINT		15 years	5 years	5 years
MAINTENANCE		Not recommended in this environment	Rain washing	Manual washing every 3 months	Manual washing every 3 months

MAXX®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	15 years	20 years	10 years	15 years
	PAINT	15 years	15 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every 3 months	Rain washing	Manual washing every 3 months	Manual washing every 3 months

VERY SEVERE

The environment typically starts 25m from high water on the East Coast and 50m on the West Coast with the following conditions:

- Heavy salt deposits

- The almost constant smell of salt spray in the air

- Close to breaking surf such as is found on exposed coasts.

MAXX®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	15 years	15 years	10 years	15 years
	PAINT	15 years	15 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every 3 months	Rain washing	Manual washing every month	Manual washing every month

Source: https://www.colorsteel.co.nz/products/colorsteel-endura/ and https://www.colorsteel.co.nz/products/colorsteel-maxx/

2.3.4 COLORSTEEL® ALTIMATE®

The COLORSTEEL® ALTIMATE® product is designed for superior corrosion protection. Combining a marine grade aluminium substrate which deliveres exceptional resistance to corrosion, with the proven paint technology of COLORSTEEL® that offers further protection and a premium finish.

Ideal for extremely severe environments, the usage of COLORSTEEL® ALTIMATE® is determined by the propertys proximity to the coast, geothermal areas and/or industrial environments.

Handling & Storage

If COLORSTEEL® prepainted steel products are to be stored for any time prior to forming or installation, they must be stored in dry, ventilated conditions. Storage which allows water (including condensation) to be trapped between the sheets may damage the coating beyond repair. COLORSTEEL® products must be handled carefully during transport, fabrication and fixing to avoid damaging the surface.

Installation

Full installation details for COLORSTEEL® products is contained in the New Zealand Steel Installers' Guide and the NZMRM Code of Practice.

Fixings

Aluminium and factory painted fixings are acceptable. The fasteners durability should equal (or exceed) that of the roofing or cladding product and should be suitable for the environment. Stainless steel screws and lead head nails must not be used.

Limitations of use

The use of other materials in proximity to ALTIMATE® must be in accordance with New Zealand Steels Specifiers and Builders Guide. Mixing of brands of pre-painted aluminium material on the same building is not recommended. ALTIMATE® is compatible with Zincalume® (as used in COLORSTEEL® ENDURA® & MAXX®) and galvanised products, but care should be taken to avoid contact with the steel substrate of these products. ALTIMATE® must not be used in wet contact with iron steel, stainless steel, lead, timber or butyl rubber.

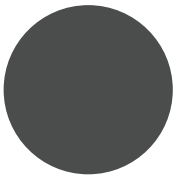
Before using ALTIMATE® products in aggressive environments (listed below) please contact one of New Zealand Steel's Technical Specialists.

- Embedded in concrete
- In contact with permanently wet materials e.g. swimming pools
- Water tanks
- In contact with soil, bark or similar
- As concrete form work
- In intensive animal shelters

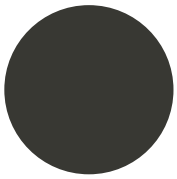
The COLORSTEEL® range

Steelformers offers three different options for their pre-painted products. Standard COLORSTEEL® colours are available ex-stock, see the *Standard Colours* colour chart below.

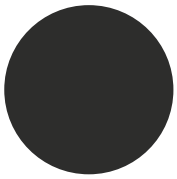
Steelform Standard COLORSTEEL® Colour Range



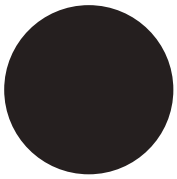
GREY FRIARS
TSR: 26%
LRV: 10%



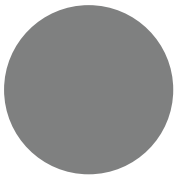
IRONSAND
TSR: 23%
LRV: 8%



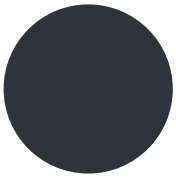
EBONY
TSR: 5%
LRV: 5%



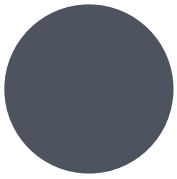
FLAXPOD
TSR: 23%
LRV: 11%



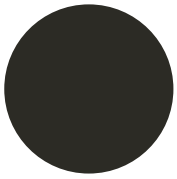
SANDSTONE GREY
TSR: 41%
LRV: 27%



WINDSOR GREY
TSR: 21%
LRV: 7%



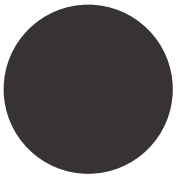
NEW DENIM BLUE
TSR: 25%
LRV: 11%



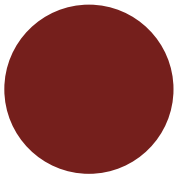
KARAKA
TSR: 25%
LRV: 8%

GULL GREY
TSR: 50%
LRV: 50%

TITANIA
TSR: 65%
LRV: 68%



SLATE
TSR: 27%
LRV: 9%



PIONEER RED
TSR: 36%
LRV: 13%

TSR: Total Solar Reflectance

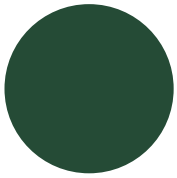
LRV: Light Reflectance Value

Please note, the colours are indicative and will vary depending on your screen resolution and/or print quality. We suggest you request a sample from your nearest Steelformers branch or by visiting https://www.colorsteel.co.nz/colours/

The COLORSTEEL® range cont.

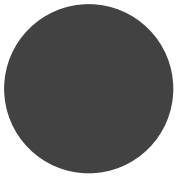
Non-standard colours and architectural colours are available on request. Please note additional coil fees, nominal lead times and minimum order quantities apply. See the *Secondary* and *Architectural Colours* colour chart below. For more information on these colours and their availability please contact your nearest Steelformers branch.

Steelform Secondary COLORSTEEL® Colour Range

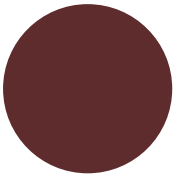


PERMANENT GREEN
TSR: 26%
LRV: 10%

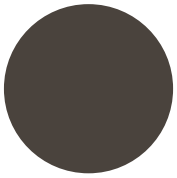
MIST GREEN
TSR: 38%
LRV: 26%



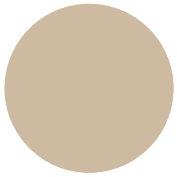
THUNDER GREY
TSR: 27%
LRV: 12%



SCORIA
TSR: 31%
LRV: 10%

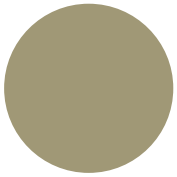


LIGNITE
TSR: 20%
LRV: 11%



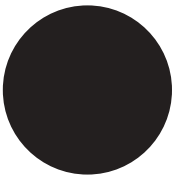
DESERT SAND
TSR: 56%
LRV: 49%

CLOUD
TSR: 70%
LRV: 75%

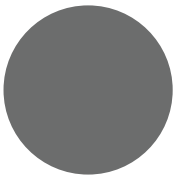


LICHEN
TSR: 25%
LRV: 8%

Steelform Architectural COLORSTEEL® Colour Range



FLAXPOD® MATTE
TSR: 22%
LRV: 6%



TIDALDRIFT® MATTE
TSR: 29%
LRV: 13%

TSR: Total Solar Reflectance

LRV: Light Reflectance Value

The colours are indicative and will vary depending on your screen resolution and/or print quality. We suggest you request a sample from your nearest Steelformers branch or by visiting https://www.colorsteel.co.nz/colours/

Warranty & maintenance

Like all roofing and cladding products, COLORSTEEL® prepainted steel products are subject to the cumulative effects of weather, dust and atmospheric debris. Careful and regular maintenance will extend the useful life of this product. Your warranty is dependant on two things, having the right product for the right environment and ensuring you maintain it in line with the maintenance recommendations.

The following shows New Zealand Steels environmental categories, maintenance recommendations and warranty periods. For further information, refer to section New Zealand Steels technical literature.

Please note, these are applicable to residential warranties only. For commercial buildings such as schools and warehouses, refer to New Zealand Steel for details of commercial warranties as these are issued on a case by case basis.

MODERATE

Environmental conditions characterised by:

- Little or no salt deposits
- The occasional smell of salt in the air
- Typically starts between 500-1000m from breaking surf, such as found on exposed coasts, or in the immediate vicinity of calm salt water such as estuaries

ALTIMATE®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	25 years	30 years	12 years	15 years
	PAINT	15 years	18 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every year	Rain washing	Manual washing every 6 months	Manual washing every 6 months

SEVERE

Environmental conditions characterised by:

- Light salt deposits
- A frequent smell of salt in the air
- Typically starts between 100 – 500 metres from breaking surf, such as on exposed coasts or in the immediate vicinity of large expanses of calm salt water such as harbour foreshores

ALTIMATE®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	20 years	30 years	12 years	15 years
	PAINT	15 years	15 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every 6 months	Rain washing	Manual washing every 6 month3	Manual washing every 3 months

VERY SEVERE

Environmental conditions characterised by:

- Heavy salt deposits
- The almost constant smell of salt spray in the air
- Close to breaking surf such as is found on exposed coasts
- Typically starts 25m from the high-water mark on the east coast and 50m from the high-water mark on the west coast

ALTIMATE®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	20 years	25 years	10 years	15 years
	PAINT	15 years	15 years	10 years	5 years
MAINTENANCE		Rain washing plus manual washing every 3 months	Rain washing	Manual washing every month	Manual washing every month

EXTREMELY SEVERE

Environmental conditions characterised by:

- Very heavy salt deposits
- Constant smell of slat spray in the air
- Immediate vicinity of breaking surf and offshore construction such as on jetties, wharfs or breakwaters
- The environment typically starts 0m from the high-water line on both coasts

ALTIMATE®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION	20 years	25 years	10 years	15 years
	PAINT	15 years	15 years	10 years	10 years
MAINTENANCE		Rain washing plus manual washing every 3 months	Rain washing	Manual washing every month	Manual washing every month

For anything within 100m of a salt water body, please contact COLORSTEEL® for confirmation of your warranty.

2.3.5 COLORSTEEL® DRIDEX® & DRIDEX+®

COLORSTEEL® DRIDEX® is an innovative roofing solution that delivers superior condensation absorption and allows for enhanced ventilations, by featuring a layer of anti-condensations fleece on the underside of each sheet, creating drier and healthier internal environments. Available in two grades, DRIDEX® is recommended for moderate environments and DRIDEX+® is for severe environments (determined by your sites proximity to the coast, geothermal and industrial areas).

Installation

COLORSTEEL® DRIDEX® products are designed for use as roofing products only and must be installed by an accredited installer. Adequate ventilations must be provided in all applications. Additional conditions apply for skillion (mono pitch) roofs. this is covered in the DRIDEX® accredited installer training.

Fixings

Aluminium and factory painted fixings are acceptable. The fasteners durability should equal (or exceed) that of the roofing or cladding product and should be suitable for the environment. Stainless steel screws and lead head nails must not be used.

Limitations of use

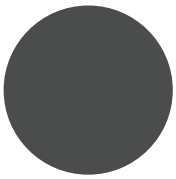
Before using COLORSTEEL® DRIDEX® or DRIDEX+® near sources of industrial pollution or in geothermal areas, consult a Steelformers representative. COLORSTEEL® DRIDEX® and DRIDEX+® should not be used in the following applications:

- Gutters or downpipes, fascia, flashings or cladding
- Embedded in concrete
- In contact with permanently wet materials
- Water tanks
- In contact with soil, bark or similar
- As concrete form work
- In intensive animal shelters
- Buildings with very high internal humidity such as indoor pools
- Shelters or buildings where fumes are generated e.g. fuel stations

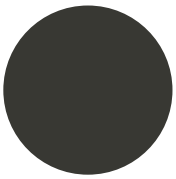
The COLORSTEEL® range

The DRIDEX® range is available in all standard existing COLORSTEEL® colours. The fleece colour is grey, similar to the grey primer on the underside of standard COLORSTEEL® products. Please note that the colours below are indicative and will vary depending on your screen resolution and/or print quality. We recommend you request a sample from your nearest Steelformers branch or by visiting www.colorsteel.co.nz/colours/

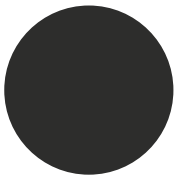
Steelform Standard COLORSTEEL® Colour Range



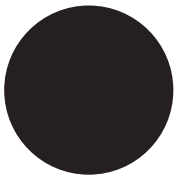
GREY FRIARS
TSR: 26%
LRV: 10%



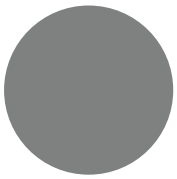
IRONSAND
TSR: 23%
LRV: 8%



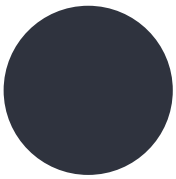
EBONY
TSR: 5%
LRV: 5%



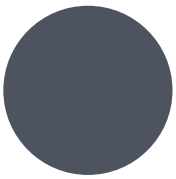
FLAXPOD
TSR: 23%
LRV: 11%



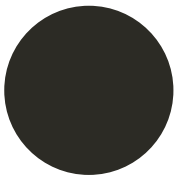
SANDSTONE GREY
TSR: 41%
LRV: 27%



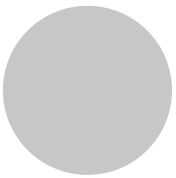
WINDSOR GREY
TSR: 21%
LRV: 7%



NEW DENIM BLUE
TSR: 25%
LRV: 11%

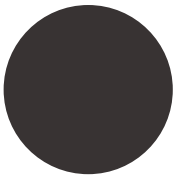


KARAKA
TSR: 25%
LRV: 8%

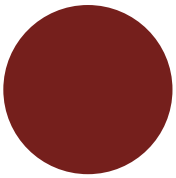


GULL GREY
TSR: 50%
LRV: 50%

TITANIA
TSR: 65%
LRV: 68%



SLATE
TSR: 27%
LRV: 9%



PIONEER RED
TSR: 36%
LRV: 13%

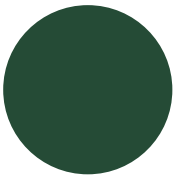
TSR: Total Solar Reflectance

LRV: Light Reflectance Value

The COLORSTEEL® range cont.

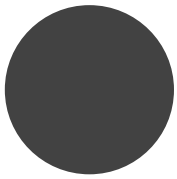
Non-standard colours and architectural colours are available on request. Please note additional coil fees, nominal lead times and minimum order quantities apply. See the *Secondary* and *Architectural Colours* colour chart below. For more information on these colours and their availability please contact your nearest Steelformers branch.

Steelform Secondary COLORSTEEL® Colour Range

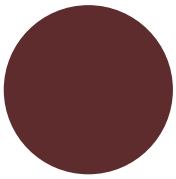


PERMANENT GREEN
TSR: 26%
LRV: 10%

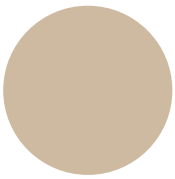
MIST GREEN
TSR: 38%
LRV: 26%



THUNDER GREY
TSR: 27%
LRV: 12%

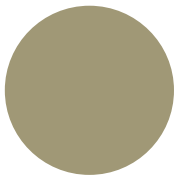


SCORIA
TSR: 31%
LRV: 10%



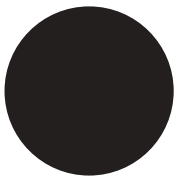
DESERT SAND
TSR: 56%
LRV: 49%

CLOUD
TSR: 70%
LRV: 75%

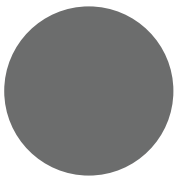


LICHEN
TSR: 25%
LRV: 8%

Steelform Architectural COLORSTEEL® Colour Range



FLAXPOD® MATTE
TSR: 22%
LRV: 6%



TIDALDRIFT® MATTE
TSR: 29%
LRV: 13%

TSR: Total Solar Reflectance

LRV: Light Reflectance Value

The colours are indicative and will vary depending on your screen resolution and/or print quality. We suggest you request a sample from your nearest Steelformers branch or by visiting https://www.colorsteel.co.nz/colours/

Warranty & maintenance

Like all roofing and cladding products, COLORSTEEL® prepainted steel products are subject to the cumulative effects of weather, dust and atmospheric debris. Careful and regular maintenance will extend the useful life of this product. Your warranty is dependant on two things, having the right product for the right environment and ensuring you maintain it in line with the maintenance recommendations.

The following shows New Zealand Steels environmental categories, maintenance recommendations and warranty periods. For further information, refer to New Zealand Steels technical literature. Please note, these are applicable to residential warranties only. For commercial buildings such as schools and warehouses, refer to New Zealand Steel for details of commercial warranties as these are issued on a case by case basis.

MODERATE

Environmental conditions characterised by:

- Little or no salt deposits
- The occasional smell of salt in the air
- Typically starts between 500-1000m from breaking surf, such as found on exposed coasts, or in the immediate vicinity of calm salt water such as estuaries

DRIDEX®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION		30 years		
	PAINT		18 years		
MAINTENANCE		Not recommended in this environment	Rain washing	Not recommended in this environment	Not recommended in this environment

SEVERE

Environmental conditions characterised by:

- Light salt deposits
- A frequent smell of salt in the air
- Typically starts between 100 – 500 metres from breaking surf, such as on exposed coasts or in the immediate vicinity of large expanses of calm salt water such as harbour foreshores

DRIDEX+®		WALL CLADDING	ROOFING	GUTTER DOWNPIPES	FASCIA
RESIDENTIAL WARRANTIES	PERFORATION		20 years		
	PAINT		15 years		
MAINTENANCE		Not recommended in this environment	Rain washing	Not recommended in this environment	Not recommended in this environment

Source: https://www.colorsteel.co.nz/products/colorsteel-dridex/

2.3.6 0.9mm BMT mill finish aluminium

Steelformers can provide a range of roofing and cladding profiles and flashings in 0.90mm BMT mill finish aluminium.

Fixings

Mechanical fasteners, whether rivets or screws, are available in aluminium. Where use of aluminium fasteners is unsuitable (e.g. self-drilling screws), stainless steel is regarded as the best alternative.

Contact with other materials

In general, direct chemical attack of aluminium only occurs when the PH is below 5 or above 8. Contact with other metals can result in corrosions due to galvanic reactions. Copper, steel, stainless steel and lead will all cause attack of the aluminium alloy. Contact with zinc will cause the zinc to be attacked. Refer to the compatibility table in section 2.1 for more information.

Warranty & maintenance

Regular cleaning is required to maintain an unaffected surface for good aesthetic quality in industrial and marine environments. This can be achieved naturally by rain washing but surfaces not adequately washed by rain must be cleaned by water washing and scrubbing with a soft brush to prevent build up of salt, dirt or other airborne deposits. In severe marine locations the washing frequency may be every 4-6 months for surfaces not washed by rain. Unpainted aluminium is typically warranted for 15 years against perforation of substrate (this applies to commerical and residential roofing), contact a Steelformers representative for more information.

Important details to consider:

• Galvanised netting must not be used directly under aluminium roofing. Either avoid using galvanised netting or prevent contact with an inert strip or install over a vented drainage mat. Building paper cannot be relied upon as an inert strip, especially in severe marine environments

• When stainless steel fasteners are used through aluminium roofs an oversize clearance hole around the fixing and a profiled metal washer with an EPDM seal must be used.

2.3.7 ColorCote® AlumiGard™

ColorCote® AlumiGard™ is a premium, marine grade metal roofing product, using an advanced coating system on an aluminium substrate. Suitable for use in 'very severe' marine environments, right up to the waterline, as well as chemical or acidic exposure in harsh industrial or geothermal areas.

Handling & Storage

If ColorCote® prepainted aluminium products are to be stored for any time prior to forming or installation, they must be stored in dry, ventilated conditions. Storage which allows water (including condensation) to be trapped between the sheets may damage the coating beyond repair.

Fixing

Aluminium or 304 stainless steel screws will give the best service life with AlumiGard™. Oversized holes with profiled metal washers and rubber EPDMs must be used to prevent corrosion.

Limitations of use

- If AlumiGard™ is in contact with unpainted steel, the two surfaces must be isolated by an inert membrane.
- Wet cement can have a corrosive effect on AlumiGard™ so care should be taken to avoid cement splashes on the material. If this does occur it should be cleaned off immediately
- Unseasoned wood and certain timbers may contain acids or chemicals which can cause galvanic corrosion. In mild atmospheres it is enough to seal the timber surface with an inert membrane at the points of contact with the AlumiGard™. In severe and very severe conditions the two surfaces must be fully isolated
- In no circumstances should AlumiGard™ be used in contact with brass, copper, or copper alloys as AlumiGard™ will corrode very quickly.

Installation

Full installation details for ColorCote® products is contained in the NZMRM Code of Practice.

Please note

Steelformers does not stock a full range of ColorCote® AlumiGard™ products, however, coils can be sourced as required. Coil fees, nominal lead times and minimum quantities will apply. For information on the ColorCote® colour range and the availability, contact your nearest Steelformers branch.

Warranty & maintenance

Depending on the environment, Pacific Coilcoaters offers warranties of differing lengths on AlumiGard™ for residential buildings. The following shows ColorCote® environmental categories, maintenance recommendations and warranty periods. For further information, refer to ColorCote® technical literature.

ISO CATEGORY 1-2

Mild - areas far inland

ISO CATEGORY 2

Moderate - areas inland, other than far inland

ISO CATEGORY 3

Marine - areas influenced by coastal salts

ISO CATEGORY 4

Severe marine - begins between 100-400 metres from the coast. May extend inland depending on local conditions.

ISO CATEGORY 5

Very severe - Off shore and within 100-400 metres from the coast. May extend inland depending on local conditions. Including geothermal.

		ENVIRONMENT (ISO CAT)		
		1-3	4	5
ROOFING	PERFORATION	18 years	15 years	15 years
	PAINT	30 years	30 years	25 years
CLADDING	PERFORATION	15 years	15 years	15 years
	PAINT	25 years	20 years	20 years
GUTTER DOWPIPES	PERFORATION	10 years	10 years	10 years
	PAINT	12 years	12 years	10 years
FASCIA	PERFORATION	10 years	10 years	10 years
	PAINT	15 years	15 years	15 years

The service life is extended by regular washing. A mechanical wash with water and a soft brittled brush every six months is recommended, more often if contaminants build up. The underside of eaves, sheltered roofs or wall cladding etc are not washed by rainfall, and are excluded by warranty.

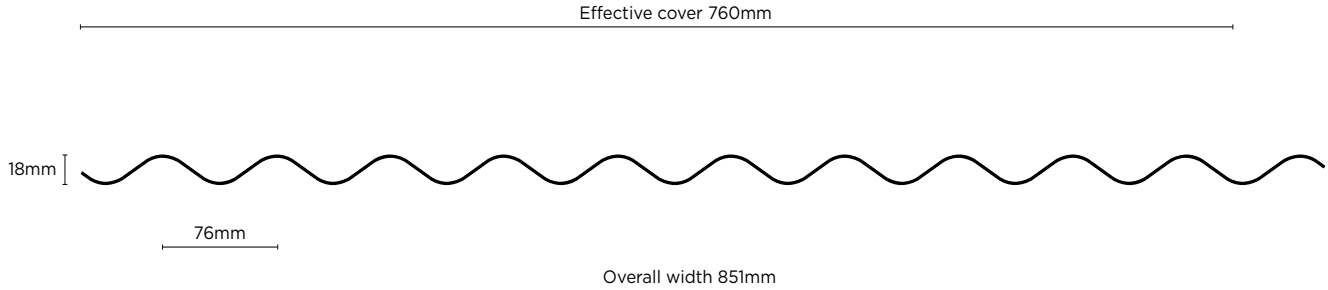
Source: https://www.colorcote.co.nz/products/alumigard/

3.0 Roofing and cladding products

3.1 Steelform Corrugate

One of the most widely used roofing and wall cladding profiles available, with its strong traditional appeal, ease of installation and relatively low cost. Steelformers' Corrugate, being light and strong, finds immediate acceptance in both domestic and commercial markets. Available in a range of coatings, either plain or prepainted, with custom made flashings and accessories to match Corrugate is warranted for coating performance*, corrosion resistance and substrate integrity. So whatever the choice, drape curved, bull nose, laid horizontally or vertically, let your imagination run wild with Steelformers' Corrugate. **excl. GALVSTEEL®.*

3.1.1 Specifications



*Dimensions are nominal

Suitable for:	Residential, commercial and industrial roofing, cladding and internal lining applications
Available in:	0.40mm (G550) and 0.55mm (G550/G300) BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®, COLORSTEEL® DRIDEX and DRIDEX+®, 0.90mm BMT mill finish aluminium and ColorCote® AlumiGard™ (available on request, conditions apply)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch for Steelform Corrugate is 8°
Rollformed in:	New Plymouth, Stratford, Wanganui and Taumarunui factories
Sheet lengths:	Sheet lengths are custom run to order
Curving:	Bullnose options are available through our Stratford factory
Clear sheeting:	A variety of Alsynite polycarbonate and topglass clear sheeting is available to match

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.1.2 Maximum spans

The following chart shows the maximum permissible purlin spacing (span) for Corrugate G550 (under 1kN concentrated load). These should be reduced in high foot traffic areas, areas supporting items such as air conditioning units or positioned to suit specific locations e.g. high wind zones.

MATERIAL	ROOF PITCH	INTERMEDIATE SPAN	END SPAN
0.40mm BMT	8°	1.2m	0.9m
0.55mm BMT	8°	1.6m	1.2m

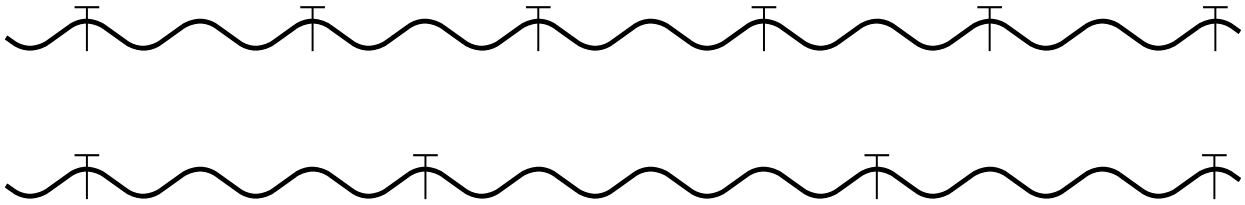
3.1.3 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. All screws must have a neoprene washer and in some circumstances may require a load spreading washer and EPDM. Ensure that the fasteners durability is at least equal to the durability of the material.

MATERIAL	SCREW FASTENER				
	Roofing - rib fixed			Wall cladding - pan fixed	
	Steel based	Alum. based		Steel based	Alum. based
Timber	12x55 Timbertite®	12x55 stainless steel Timbertite® with an alum. profiled washer and EPDM	Non-cavity	12x25 Timbertite®	12x25 stainless steel Timbertite®
			Cavity	Fixing must have min. penetration of 3x threads + height of rib. For Corrugate = 12x55 Timbertite®	Fixing must have min. penetration of 3x threads + height of rib. For Corrugate = 12x55 stainless steel Timbertite®
Steel up to 4.5mm	12x55 Steeltite®	12x55 stainless steel Steeltite® with an alum. profiled washer and EPDM	Non-cavity	12x20 Steeltite®	12x25 stainless steel Steeltite®
			Cavity	Fixing must have min. penetration of 3x threads + height of rib. For Corrugate = 12x55 Steeltite®	Fixing must have min. penetration of 3x threads + height of rib. For Corrugate = 12x55 stainless steel Steeltite®

3.1.3 Fasteners and fixing cont.

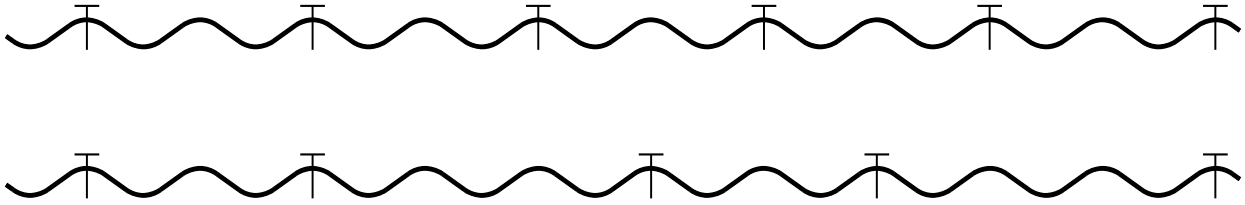
The following shows the recommended fixing patterns, per wind zone, as per the NZMRM Code of Practice.



NORMAL TO HIGH WIND ZONE

Top and bottom rows: Hit 1, miss 1

Internal supports: Hit 1, miss 2, hit 1, miss 3



VERY HIGH WIND ZONE

Top and bottom rows: Hit 1, miss 1

Internal supports: Hit 1, miss 1, hit 1, miss 2

EXTRA HIGH WIND ZONE

All rows: Hit 1, miss 1

The NZMRM Code of Practive provides further information on fixing selection and methods according to wind zones.

3.1.4 Flashings

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

- Residential roofing
- Residential cladding (cavity fix)
- Residential cladding (direct fix)

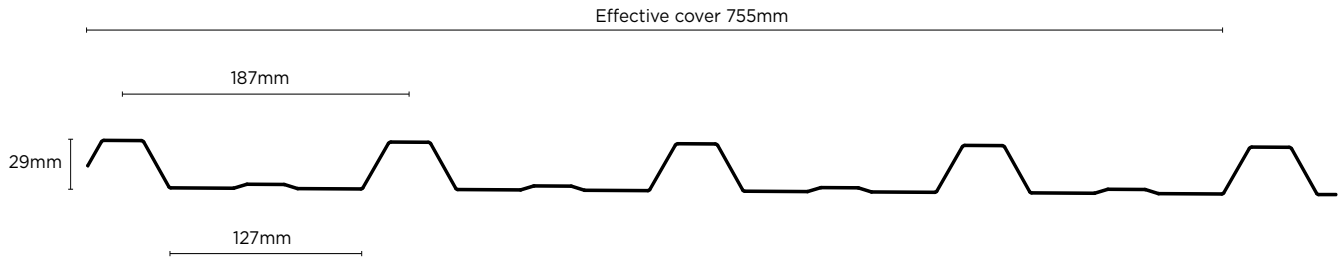
Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® MAXX®, 0.90mm BMT mill finish aluminium, 0.90mm BMT arctic white aluminium (max. 2.4m x 1.2m), Copper (available upon request)

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.2 Steelform Styleline

Styleline is one of the most stylish roofing and cladding profiles available due to its strong visual appeal and bold shape. Steelformers Styleline, a five rib trapezoidal profile, is light and strong finding immediate acceptance in both domestic and commercial markets. Styleline is warranted for coating performance*, corrosion resistance and substrate integrity. Add value to your home or building with this modern profile. **excl. GALVSTEEL®.*

3.2.1 Specifications



*Dimensions are nominal

Suitable for:	Residential, commercial and industrial roofing, cladding and internal lining applications
Available in:	0.40mm (G550) and 0.55mm (G550/G300) BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®, COLORSTEEL® DRIDEX and DRIDEX+®, 0.90mm BMT mill finish aluminium and ColorCote® AlumiGard™ (available on request, conditions apply)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch for Steelform Styleline is 3°
Rollformed in:	Stratford and Wanganui factories
Sheet lengths:	Sheet lengths are custom run to order
Clear sheeting:	A variety of Alsynite polycarbonate and topglass clear sheeting is available to match

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.2.2 Maximum spans

The following chart shows the maximum permissible purlin spacing (span) for Styleline G550 (under 1kN concentrated load). These should be reduced in high foot traffic areas, areas supporting items such as air conditioning units or positioned to suit specific locations e.g. high wind zones.

MATERIAL	ROOF PITCH	INTERMEDIATE SPAN	END SPAN
0.40mm BMT	3°	1.5m	1.2m
0.55mm BMT	3°	1.7m	1.3m

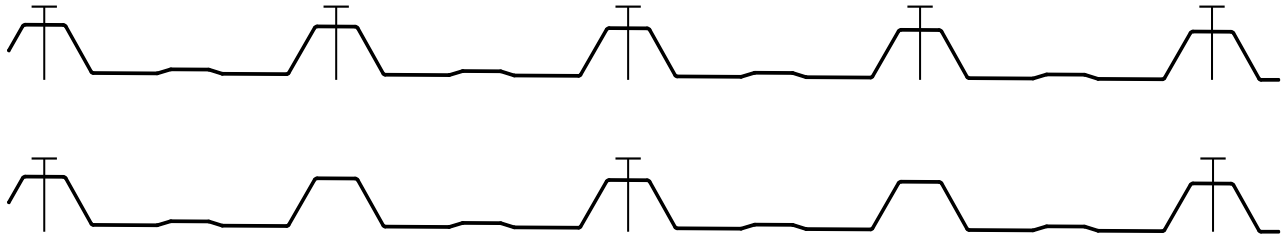
3.2.3 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. All screws must have a neoprene washer and in some circumstances may require a load spreading washer and EPDM. Ensure that the fasteners durability is at least equal to the durability of the material.

<table>
<tr><td></td><td colspan="4">SCREW FASTENER</td></tr>
<tr><td rowspan="2"></td><td colspan="2">Roofing - rib fixed</td><td rowspan="2"></td><td colspan="2">Wall cladding - pan fixed</td></tr>
<tr><td>Steel based</td><td>Alum. based</td><td>Steel based</td><td>Alum. based</td></tr>
<tr><td>Timber</td><td rowspan="4">12x65 Timbertite®</td><td rowspan="2">12x65 stainless steel Timbertite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x25 Timbertite®</td><td>12x25 stainless steel Timbertite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For Styleline = 12x65 Timbertite®</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For Styleline = 12x65 stainless steel Timbertite®</td></tr>
<tr><td>Steel up to 4.5mm</td><td rowspan="2">12x65 Steeltite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x20 Steeltite®</td><td>12x25 stainless steel Steeltite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For Styleline = 12x65 Steeltite®</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For Styleline = 12x65 stainless steel Steeltite®</td></tr>
</table>

3.2.3 Fasteners and fixing cont.

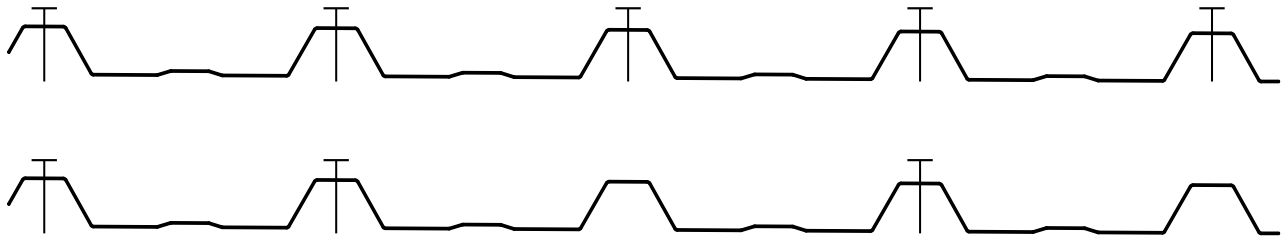
The following shows the recommended fixing patterns, per wind zone, as per the NZMRM Code of Practice.



NORMAL TO HIGH WIND ZONE

Top and bottom rows: Hit all

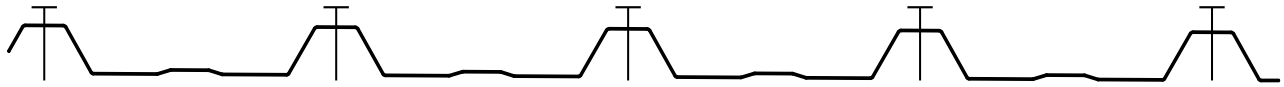
Internal supports: Hit 1, miss 1



VERY HIGH WIND ZONE

Top and bottom rows: Hit all

Internal supports: Hit 2, miss 1, hit 1, miss 1



EXTRA HIGH WIND ZONE

All rows: Hit all

The NZMRM Code of Practive provides further information on fixing selection and methods according to wind zones.

3.2.4 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

- Residential roofing
- Residential cladding (cavity fix)

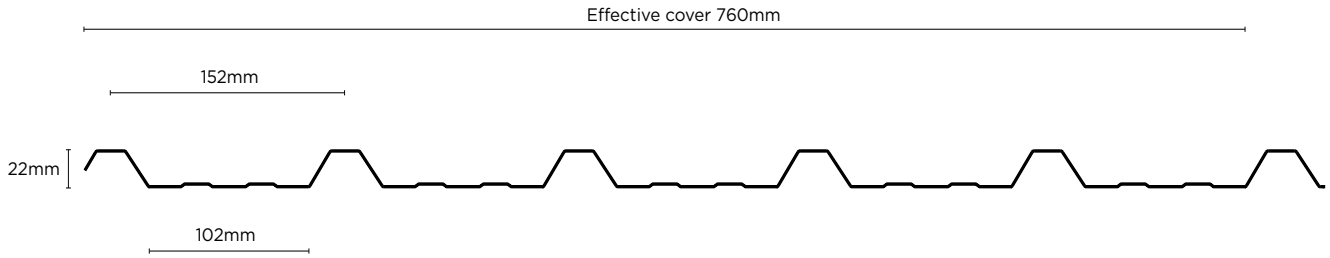
Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® MAXX®, 0.90mm BMT mill finish aluminium, 0.90mm BMT arctic white aluminium (max. 2.4m x 1.2m), Copper (available upon request)

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

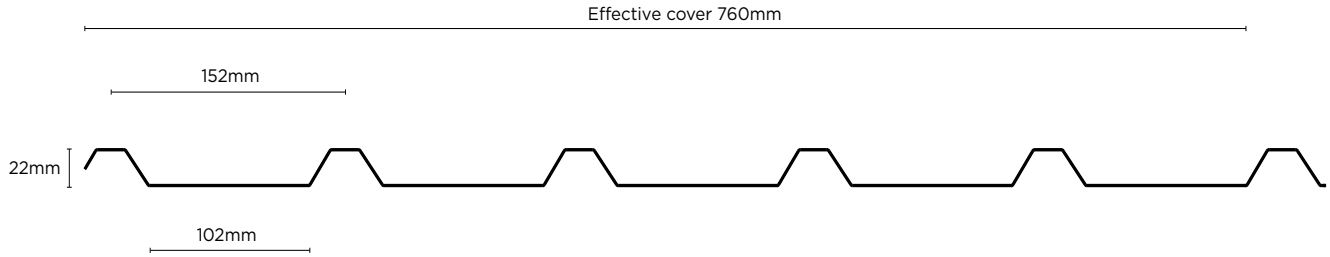
3.3 Steelform Ribline and Ribline Smooth

A popular choice for residential roofing/reroofing, farm buildings and light industrial applications, this six rib trapezoidal profile is available in a range of coatings either plain or pre-painted with custom made flashings and accessories to match. Ribline is warranted for coating performance*, corrosion resistance and substrate integrity, and is an attractive and cost effective profile for most roofing and cladding applications. Steelformers have recently introduced Ribline Smooth to their range of products. Ribline Smooth is an attractive wall cladding alternative, being run without swages brings a smooth, continuous finish to each tray. **excl. GALVSTEEL®.*

3.3.1 Specifications



*Dimensions are nominal



*Dimensions are nominal

Suitable for:	Residential, commercial and industrial roofing, cladding and internal lining applications (it is recommended that Ribline Smooth is to be used as cladding and lining only)
Available in:	0.40mm (G550) and 0.55mm (G550/G300) BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®, COLORSTEEL® DRIDEX and DRIDEX+®, 0.90mm BMT mill finish aluminium and ColorCote® AlumiGard™ (available on request, conditions apply)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch for Steelform Ribline is 5°
Rollformed in:	Stratford factory
Sheet lengths:	Sheet lengths are custom run to order
Clear sheeting:	A variety of Alsynite topglass clear sheeting is available to match (Ribline only)

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.3.2 Maximum spans

The following chart shows the maximum permissible purlin spacing (span) for Ribline G550 (under 1kN concentrated load). These should be reduced in high foot traffic areas, areas supporting items such as air conditioning units or positioned to suit specific locations e.g. high wind zones.

MATERIAL	ROOF PITCH	INTERMEDIATE SPAN	END SPAN
0.40mm BMT	5°	1.2m	0.9m
0.55mm BMT	5°	1.65m	1.2m

3.3.3 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. All screws must have a neoprene washer and in some circumstances may require a load spreading washer and EPDM. Ensure that the fasteners durability is at least equal to the durability of the material.

	SCREW FASTENER				
	Roofing - rib fixed			Wall cladding - pan fixed	
	Steel based	Alum. based		Steel based	Alum. based
Timber	12x65 Timbertite®	12x65 stainless steel Timbertite® with an alum. profiled washer and EPDM seal	Non-cavity	12x25 Timbertite®	12x25 stainless steel Timbertite®
			Cavity	Fixing must have min. penetration of 3x threads + height of rib. For Ribline = 12x65 Timbertite®	Fixing must have min. penetration of 3x threads + height of rib. For Ribline = 12x65 stainless steel Timbertite®
Steel up to 4.5mm	12x65 Steeltite®	12x65 stainless steel Steeltite® with an alum. profiled washer and EPDM seal	Non-cavity	12x20 Steeltite®	12x25 stainless steel Steeltite®
			Cavity	Fixing must have min. penetration of 3x threads + height of rib. For Ribline = 12x65 Steeltite®	Fixing must have min. penetration of 3x threads + height of rib. For Ribline = 12x65 stainless steel Steeltite®

3.3.3 Fasteners and fixing cont.

The following shows the recommended fixing patterns, per wind zone, as per the NZMRM Code of Practice.

NORMAL TO HIGH WIND ZONE

Top and bottom rows: Hit all

Internal supports: Hit 1, miss 1

VERY HIGH WIND ZONE

Top and bottom rows: Hit all

Internal supports: Hit 2, miss 1, hit 1, miss 1

EXTRA HIGH WIND ZONE

All rows: Hit all

The NZMRM Code of Practive provides further information on fixing selection and methods according to wind zones.

3.3.4 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

- Residential roofing
- Residential cladding (cavity fix)

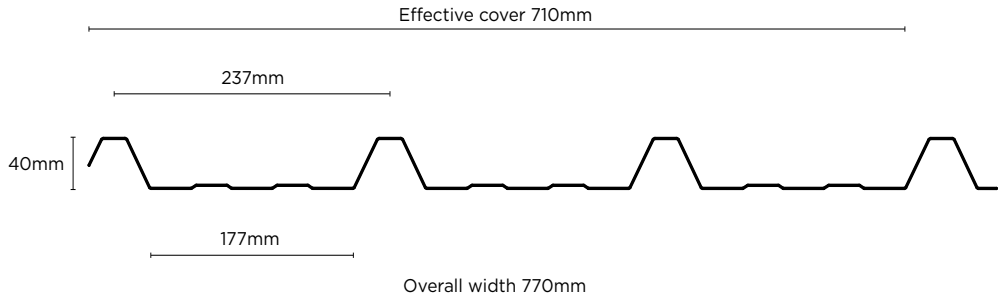
Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® MAXX®, 0.90mm BMT mill finish aluminium, 0.90mm BMT arctic white aluminium (max. 2.4m x 1.2m), Copper (available upon request)

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.4 Steelform NC710

Big and bold, with one of the best spanning capabilities of any locally produced profile, NC710 is suitable for a wide range of applications in commercial and industrial buildings. The four rib trapezoidal profile is available in a range of coatings either plain or prepainted, with custom made flashings and accessories to match. NC710 is warranted for coating performance*, corrosion resistance and substrate integrity. NC710 is an attractive and cost effective profile for most commercial and rural applications. **excl. GALVSTEEL®.*

3.4.1 Specifications



*Dimensions are nominal

Suitable for:	Residential, commercial and industrial roofing, cladding and internal lining applications
Available in:	0.40mm (G550) and 0.55mm (G550/G300) BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and COLORSTEEL® MAXX®, COLORSTEEL® DRIDEX and DRIDEX+®, 0.90mm BMT mill finish aluminium and ColorCote® AlumiGard™ (available on request, conditions apply)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch for Steelform NC710 is 3°
Rollformed in:	Stratford factory
Sheet lengths:	Sheet lengths are custom run to order
Clear sheeting:	A variety of Alsynite topglass clear sheeting is available to match

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.4.2 Maximum spans

The following chart shows the maximum permissible purlin spacing (span) for NC710 G550 (under 1kN concentrated load). These should be reduced in high foot traffic areas, areas supporting items such as air conditioning units or positioned to suit specific locations e.g. high wind zones.

MATERIAL	ROOF PITCH	INTERMEDIATE SPAN	END SPAN
0.40mm BMT	3°	2.6m	2.0m
0.55mm BMT	3°	3.2m	2.4m

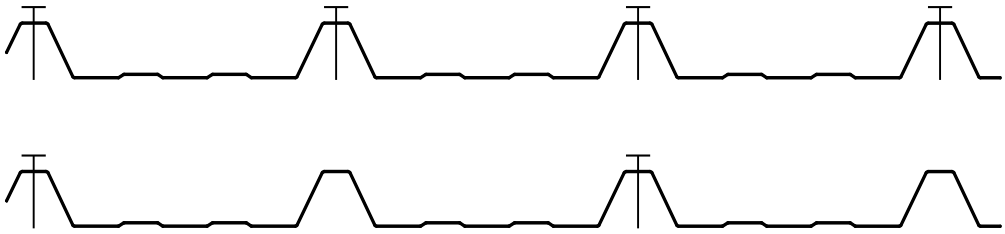
3.4.3 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. All screws must have a neoprene washer and in some circumstances may require a load spreading washer and EPDM. Ensure that the fasteners durability is at least equal to the durability of the material.

<table>
<tr><th></th><th colspan="4">SCREW FASTENER</th></tr>
<tr><th rowspan="2"></th><th colspan="2">Roofing - rib fixed</th><th rowspan="2"></th><th colspan="2">Wall cladding - pan fixed</th></tr>
<tr><th>Steel based</th><th>Alum. based</th><th>Steel based</th><th>Alum. based</th></tr>
<tr><td>Timber</td><td rowspan="4">14x75 Timbertite®</td><td rowspan="2">14x75 stainless steel Timbertite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x25 Timbertite®</td><td>12x25 stainless steel Timbertite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
14x75 Timbertite® for NC710.</td><td>Fixing must have min. penetration of 3x threads + height of rib.
14x75 stainless steel Timbertite® for NC710.</td></tr>
<tr><td>Steel up to 4.5mm</td><td rowspan="2">14x75 stainless steel Steeltite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x20 Steeltite®</td><td>12x25 stainless steel Steeltite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For NC710 = 14x75 Steeltite®</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For NC710 = 14x75 stainless steel Steeltite®</td></tr>
</table>

3.4.3 Fasteners and fixing cont.

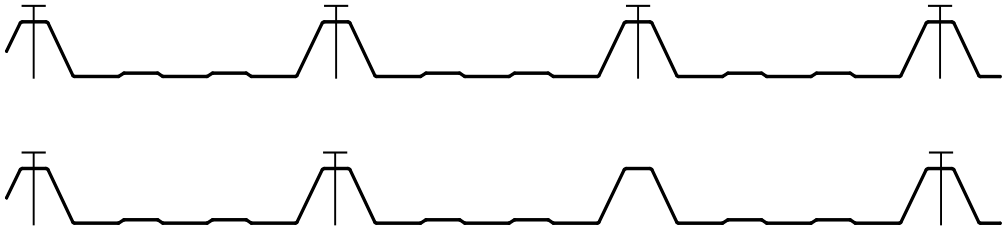
The following shows the recommended fixing patterns, per wind zone, as per the NZMRM Code of Practice.



NORMAL TO HIGH WIND ZONE

Top and bottom rows: Hit all

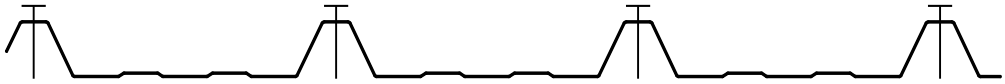
Internal supports: Hit 1, miss 1



VERY HIGH WIND ZONE

Top and bottom rows: Hit all

Internal supports: Hit 2, miss 1, hit 1, miss 1



EXTRA HIGH WIND ZONE

All rows: Hit all

The NZMRM Code of Practive provides further information on fixing selection and methods according to wind zones.

3.4.4 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

- Residential roofing
- Residential cladding (cavity fix)

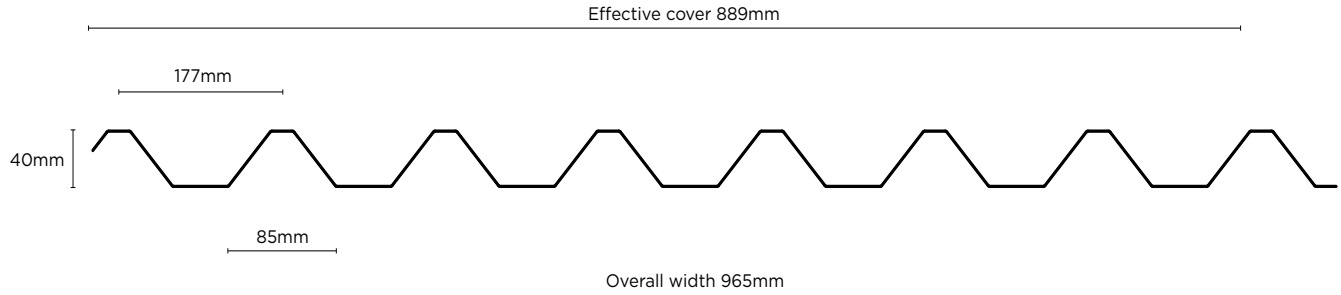
Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® MAXX®, 0.90mm BMT mill finish aluminium, 0.90mm BMT arctic white aluminium (max. 2.4m x 1.2m), Copper (available upon request)

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.5 Steelform DB7

Steelformers DB7 is sleek, strong and stylish. It has a wider effective cover, high strength for wider purlin spacings and excellent water run off for low pitch roofs. Manufactured in our New Plymouth factory, it is one of the most stylish roofing and wall profiles available, with its strong visual appeal and bold shaped profile. Being light and strong, Steelformers DB7 finds immediate acceptance in both domestic and commercial markets. DB7 is warranted for coating performance*, corrosion resistance and substrate integrity. Add value to your home or building with this great new profile. **excl. GALVSTEEL®.*

3.5.1 Specifications



*Dimensions are nominal

Suitable for:	Residential, commercial and industrial roofing, cladding and internal lining applications
Available in:	0.40mm (G550), 0.55mm (G550/G300) BMT and 0.75mm (G300)* ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and MAXX®, COLORSTEEL® DRIDEX® and DRIDEX+®, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply) *(excl. GALVSTEEL®)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch for Steelform DB7 is 3°
Rollformed in:	New Plymouth factory
Sheet lengths:	Sheet lengths are custom run to order
Clear sheeting:	A variety of Alsynite topglass clear sheeting is available to match

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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3.5.2 Maximum spans

The following chart shows the maximum permissible purlin spacing (span) for DB7 G550 (under 1kN concentrated load). These should be reduced in high foot traffic areas, areas supporting items such as air conditioning units or positioned to suit specific locations e.g. high wind zones.

MATERIAL	ROOF PITCH	INTERMEDIATE SPAN	END SPAN
0.40mm BMT	3°	2.6m	2.0m
0.55mm BMT	3°	3.2m	2.4m

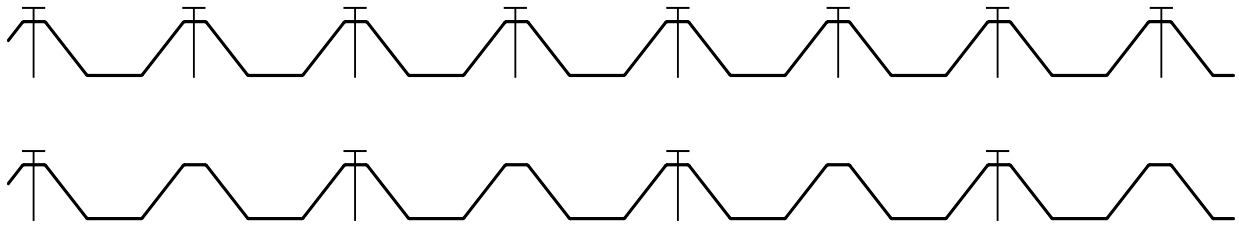
3.5.3 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. All screws must have a neoprene washer and in some circumstances may require a load spreading washer and EPDM. Ensure that the fasteners durability is at least equal to the durability of the material.

<table>
<tr><th></th><th colspan="4">SCREW FASTENER</th></tr>
<tr><th rowspan="2"></th><th colspan="2">Roofing - rib fixed</th><th rowspan="2"></th><th colspan="2">Wall cladding - pan fixed</th></tr>
<tr><th>Steel based</th><th>Alum. based</th><th>Steel based</th><th>Alum. based</th></tr>
<tr><td>Timber</td><td rowspan="4">14x75 Timbertite®</td><td rowspan="2">14x75 stainless steel Timbertite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x25 Timbertite®</td><td>12x25 stainless steel Timbertite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For DB7 = 14x75 Timbertite®</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For DB7 = 14x75 stainless steel Timbertite®</td></tr>
<tr><td>Steel up to 4.5mm</td><td rowspan="2">14x75 stainless steel Steeltite® with an alum. profiled washer and EPDM seal</td><td>Non-cavity</td><td>12x20 Steeltite®</td><td>12x25 stainless steel Steeltite®</td></tr>
<tr><td></td><td>Cavity</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For DB7 = 14x75 Steeltite®</td><td>Fixing must have min. penetration of 3x threads + height of rib.
For DB7 = 14x75 stainless steel Steeltite®</td></tr>
</table>

3.5.3 Fasteners and fixing cont.

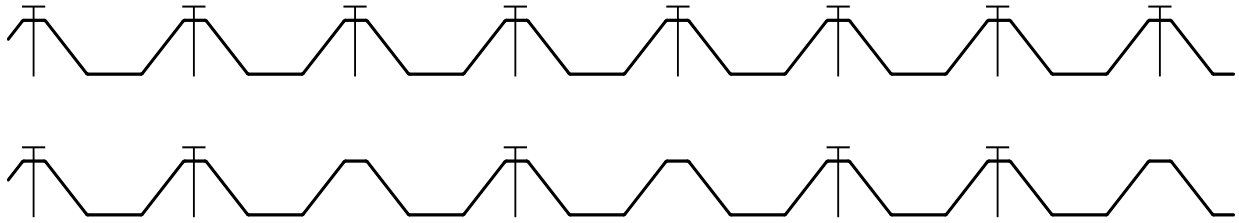
The following shows the recommended fixing patterns, per wind zone, as per the NZMRM Code of Practice.



NORMAL TO HIGH WIND ZONE

Top and bottom rows: Hit all

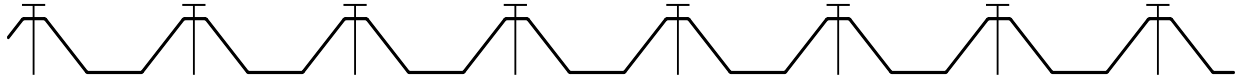
Internal supports: Hit 1, miss 1



VERY HIGH WIND ZONE

Top and bottom rows: Hit all

Internal supports: Hit 2, miss 1, hit 1, miss 1



EXTRA HIGH WIND ZONE

All rows: Hit all

The NZMRM Code of Practive provides further information on fixing selection and methods according to wind zones.

3.5.4 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

- Residential roofing
- Residential cladding (cavity fix)
- Residential cladding (direct fix)

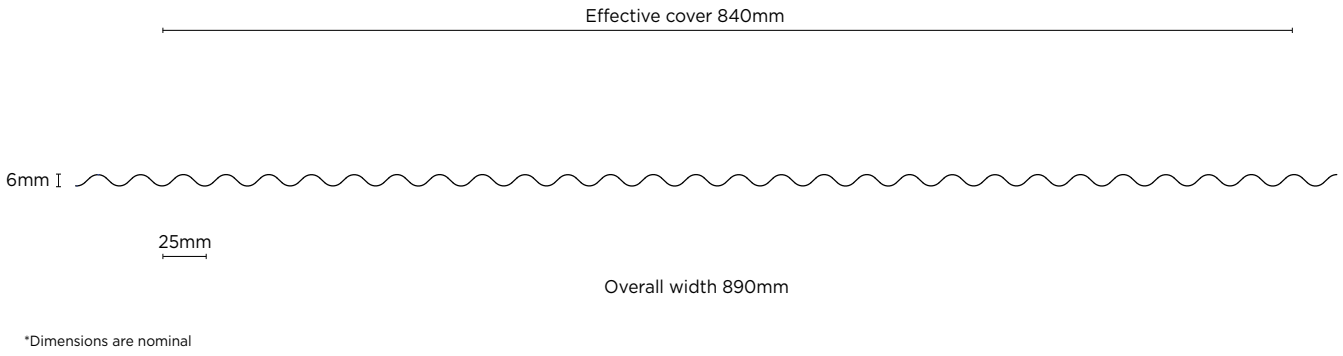
Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® MAXX®, 0.90mm BMT mill finish aluminium, 0.90mm BMT arctic white aluminium (max. 2.4m x 1.2m), Copper (available upon request)

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.6 Steelform Baby Corrugate

Ideal for landscaping, shop fit-outs and some wall cladding applications. Steelform Baby Corrugate is an aesthetically pleasing profile that is easy to use for those home projects. Baby Corrugate is made to order - each sheet is cut to your desired lengths, minimising wastage and leaving only any required onsite angle cutting to be done. A variety of flashings can be manufactured to compliment the installation.

3.6.1 Specifications



*Dimensions are nominal

Suitable for:	Fencing, internal fit-outs and some wall cladding applications
Available in:	Available in 0.40mm and 0.55mm BMT ZINCALUME®, GALVSTEEL®, COLORSTEEL® ENDURA® and MAXX®
Rollformed in:	Stratford
Sheet lengths:	Sheet lengths are custom run to order
Clear sheeting:	A variety of Alsynite clear sheeting is available to match

Please note:

Nominal lead times and minimum order quantities may apply. For more information please contact your nearest Steelformers branch.

3.6.2 Fasteners and fixing

Fasteners must be class 5 minimum and compatible with the material being fixed. Ensure that the fasteners durability is at least equal to the durability of the material.

	SCREW FASTENER			
	Fastening to timber		Fastening to steel	
	Direct fixed	Batten fixed	Direct fixed	Batten fixed
Internal	10x25 Timbertite®	N/A	10x16 Steeltite®	N/A
External	12x25 Timbertite®	12x55 Timbertite®	10x16 Steeltite®	12x25 Steeltite®

3.7 Steelform Quattro range (BPIS overview)

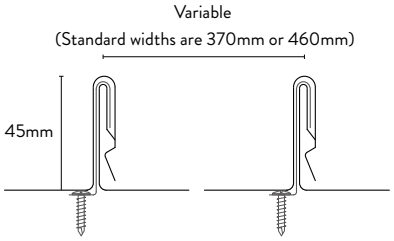
Description

The Steelformers Quattro range consists of proprietary metal tray roofing and wall cladding systems manufactured by long-run roll forming processes, using a concealed fixing system directly onto purlins, a substrate or through cavity battens at recommended spans.

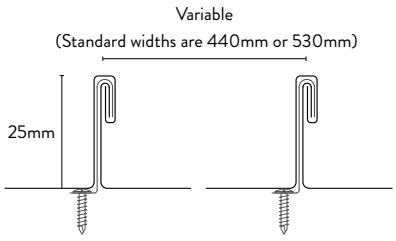
Offering versatility in design, the Quattro range is available in various profiles, including 45MM SNAPSEAM, DOUBLE STANDING SEAM, NAILSTRIP CLADDING, 25MM SNAPSEAM AND TCS CLADDING.

The pan (or tray) sizes range from 185mm to 530mm and are variable on request. It is mandatory practice the pans are run with swages for extra rigidity and strength, which is important in reducing wind driven roof noise, as well as assisting in the reduction of oil canning. **It will be at the discretion of Steelformers (on a case by case basis) to run the pans without swages.*

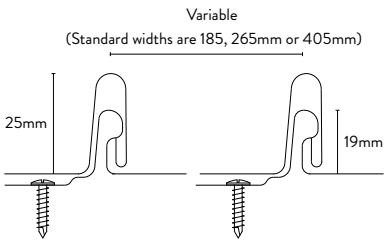
45mm SNAPSEAM



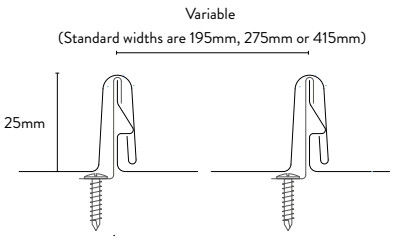
DOUBLE STANDING SEAM



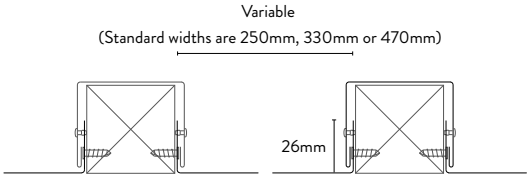
NAILSTRIP CLADDING



25mm SNAPSEAM



TCS CLADDING



Scope of use

Generally used as roofing or cladding* for residential and commercial projects. **Nailstrip and TCS Cladding profiles are for use as cladding only.*

Limitations

There are limitations on the use of the product and compatibility with other building materials. Incompatible products in contact with or run-off from may cause premature failure and not reach the required performance. Contact with other materials must be in accordance with E2/AS1 and the NZMRM Code of Practice.

There are location limitations for the coated steel products. Refer to the coated metal product manufacturers for location limitations and maintenance requirements.

The minimum pitch for Steelformers Quattro 45mm Snapseam, Double Standing Seam and 25mm Snapseam is 3°. Quattro Nailstrip Cladding and TCS Cladding is limited to use as cladding only.

Design

Design information is available from the NZMRM Code of Practice, at www.metalroofing.org.nz/cop. The Acceptable Solutions E2/AS1 and E2/AS4 also have design solutions for some residential building applications.

Materials

1. Metallic coated grade G300/G550 steel complying with AS 1397 type AZ 150 coating
2. Prepainted grade G300/G550 steel complying with AS 1397 coated in accordance to AS/NZS 2728 to Type 4 (Colorsteel Endura®/Colorcote® Zinacore™) or Type 6 (Colorsteel Maxx®/Colorcote® MagnaFlow™)
3. Unpainted or Prepainted H34/H36 aluminium (Colorsteel Altimate®/Colorcote® Alumiguard™)

Installation

Installation should be carried out by a suitable qualified practitioner in accordance with manufacturers recommendations, the NZMRM Code of Practice, RANZ Metal Roofing and Wall Cladding Guide and for Residential housing E2/AS1 and E2/AS4.

Installers should take appropriate safety measures when working at height.

For new residential construction, a Licensed Building Practitioner is required for the installation.

Roofing applications

Only 45mm Snapseam*, Double Standing Seam and 25mm Snapseam may be used as a roofing product and are installed over open purlins or a solid substrate, using a concealed fixing for timber framed buildings designed and constructed in accordance with B1/AS1, NZS3604 and E2/AS1 and designed steel framed buildings to NASH 3405. Panels are joined by clipping and/or seaming and do not have any external through fixings. The minimum roof pitch allowance is 3°. Flashings, building underlays and fixings must be in accordance with E2/AS1 and/or the NZMRM Code of Practice. **45mm Snapseam can be installed over purlin supports in low, medium and high wind zones.*

Fixing patterns

Fixing is recommended at 450mm centres in all wind zones.

In addition, a breather type underlay (such as Dupont™ Tyvek® Metal Roof Underlay, or an equivalent product at Steelformers discretion) is recommended over the substructure. Tyvek® metal roofing underlay is vapour-permable, yet water resistant and airtight, helping reduce condensation, improve airtightness, add thermal efficiency and protect structural integrity.

Cladding applications

The Quattro range, when used as a cladding, are installed over a drained and ventilated cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements). In unlined areas, a cavity system is not required. Steelformers recommends nog spacing at 600mm centres. Flashings, building underlays and fixings must be in accordance with E2/AS1 and/or the NZMRM Code of Practice.

Maintenance

Maintenance must be carried out in accordance with the manufacturer's recommendations.

New Zealand Steel: Refer to the "Residential Warranty, Environmental Categories, & Product Maintenance" brochure. Available for download at www.colorsteel.co.nz

Pacific Coil Coaters: Refer to the "Minimum Maintenance Schedule" brochure. Available from www.colorcote.co.nz

Unwashed areas (areas that are not rain-washed), such as wall cladding under eaves, soffits and sheltered roof areas including those under trees must be regularly manually washed to avoid the build-up of salt and debris.

Compliance with the New Zealand Building Code (NZBC)

The Steelformers Quattro range and associated flashings made from the equivalent material, used in combination with fasteners, underlays and clear sheeting accredited by NZMRM as complying to their product performance standards, will contribute to meeting the following performance requirements of the NZBC:

NZBC B1 Structure

The Steelformers Quattro range has been tested in accordance with AS/NZS 1170:2002.

NZBC B2 Durability

The Steelformers Quattro range is coated in accordance with AS/NZS 2728:2013 (cited in E2/AS1) which provides for profiled metal roofing and cladding solutions including the durability attributes of the building elements.

NZBC C Fire

Colorsteel Endura®, Colorsteel Maxx®, Colorcote® ZinaCore™ and Colorcote® Magnaflow™ are rated as a Group 1-S material when tested in accordance with ISO 5660:2002 Part 2.

NZBC E2 External Moisture

The Steelformers Quattro range is generally in accordance with the NZMRM Code of Practice & E2/AS1. Roofing and wall cladding systems demonstrate compliance with clause E2.

NZBC E3 Internal Moisture

When used with an absorbent, permeable underlay complying with NZS 2295:2006, the products in the Steelformers Quattro range will contribute to compliance with NZBC E3.3.1. Ceiling spaces of sarked roofs, skillion roofs, barrel curved roofs, flat roofs and roofs over moisture laden environments must have provision for adequate ventilation.

NZBC F2 Hazardous Building Materials

The Steelformers Quattro products manufactured from metallic coated, prepainted metallic coated or pre-painted aluminum will meet the performance requirements of F2, 2.3.1.

NZBC G12 Water Supplies

Colorsteel and Colorcote® tested in accordance with AS/NZS 4020:2005 passed the requirements for products in contact with drinking water.

Evidence

The product has and can make available the following additional evidence to support the above statements:

NZ Metal Roofing Manufacturers Association Inc. (NZMRM) Code of Practice.

Product Ban

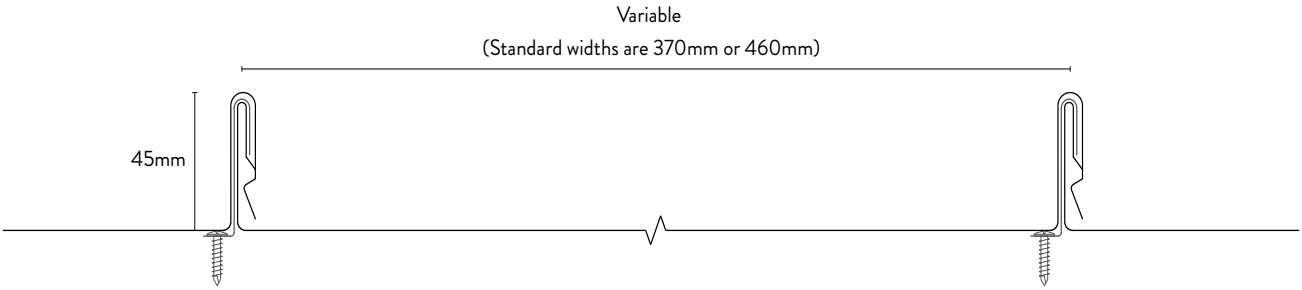
The products from the Steelformers Quattro range are not subject to any warning or bans under the Building Act 2004.

3.7 Steelform Quattro range

3.7.2 Quattro 45mm Snapseam

Steelformers Quattro 45mm Snapseam is one of the most cost effective architectural profiles available and is our only clip fixed profile that doesn't require an additional plywood substrate.* This customisable profile allows the user to alter the tray width to suit their design requirements and the ability to have it roll formed on site makes it logistical for those larger scale projects. **when used in roofing applications, excl. very high, extra high, and SED wind zones.*

3.7.2.1 Specifications



Suitable for:	Residential, light commercial and commercial roofing and cladding applications
Available in:	0.55mm (G300) BMT COLORSTEEL® ENDURA® and MAXX® , 0.75mm BMT copper, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply)
Fixing method:	For roofing, 45mm Snapseam can be installed over purlin supports in Low, Medium and High wind zones (with a pan width up to 460mm). In Very High, Extra High and SED zones, 45mm Snapseam must be installed over a solid ply substrate. For wall cladding, 45mm Snapseam is to be fixed over 20mm cavity batten.
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch is 3°
Run in:	New Plymouth factory (can be run on-site, additional fees and conditions apply)
Sheet lengths:	Sheet lengths are custom run to order, sheet length restrictions may apply depending on project location
Rib height:	45mm standard rib height
Pan width:	The standard pan widths (from rib to rib) are 370mm and 460mm, the pans are variable on request

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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3.7.2.2 Pans and swages

It is mandatory practice that the pans are run with swages. The swages are discreet and provide for extra rigidity and strength, as well as assisting in the reduction of oil canning. If the customer wants the pans run without swages, it will be at the discretion of Steelformers (on a case by case basis).

3.7.2.3 Roofing applications

Quattro 45mm Snapseam with pan widths of up to 460mm can be installed over purlin supports in Low, Medium and High wind zones. In Very High, Extra High and SED (specific engineering design) wind zones, Quattro 45mm Snapseam must always be installed over a solid ply substrate with purlin supports*. **Use of 45mm Snapseam in Extra High or Specific Engineering Design (SED) wind zones (or areas that may experience these conditions) are subject to review by a Steelformers Sales Representative.*

The purlin supports are generally:

- 75 x 50mm or 100 x 50mm purlins on the flat, fixed in accordance with the New Zealand Building Code.

The required plywood substrate must be:

- A minimum 12mm thick plywood sheet, structurally fixed to the frame in accordance with the New Zealand Building Code
- Fixed with 8g x 40mm countersunk stainless steel screws at 150mm centres around each panel edge and 300mm centres on the intermediate supports. The fasteners should be no closer than 10mm to the edge
- H3.2 treated (using a water based system) and of Stress Grade F11, with a moisture contect of 18% or less at the time of installation
- A 2-3mm expansion gap between sheets should be provided. All joints should be staggered, whilst ensuring all edges of the sheets are fully supported. This allows added air-flow between the underside of the tray and the substrate
- At the gutter line plywood should overhang the fascia board by 25mm

In addition Dupont™ Tyvek® Metal Roof Underlay (or an equivalent product, at Steelformers discretion) is required to be used with Quattro 45mm Snapseam in all wind zones. Tyvek® Metal roofing underlay is vapour-permable, yet water-resistant and airtight and helps reduce condensation, improve overall airtightness, add thermal efficiency and protect structural integrity.

**Oil canning is the visible waviness in the flat trays of metal roofing and cladding, it does not cause detriment to product performance. Oil canning can occur during the forming and installation processes and during thermal expansion of the roof sheets during its life cycle. For further information, please refer to the NZMRM Code of Practice, Section 12.3.*

3.7.2.4 Wall cladding applications

Quattro 45mm Snapseam cladding is installed over a solid cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements). In unlined areas, a cavity system is not required. Steelformers recommends nog spacing at 600mm centres in all wind zones, plus having a row of fixings along the line of the top and bottom of the cladding panel. Depending on the eaves construction, a row of nogs may be required at the soffit line to fix into.

The above is a guide only and reference should be made by the designer to the New Zealand Building Code and plywood manufacturers technical information. In some cases increased or decreased support spacing may be applicable depending on wind loads.

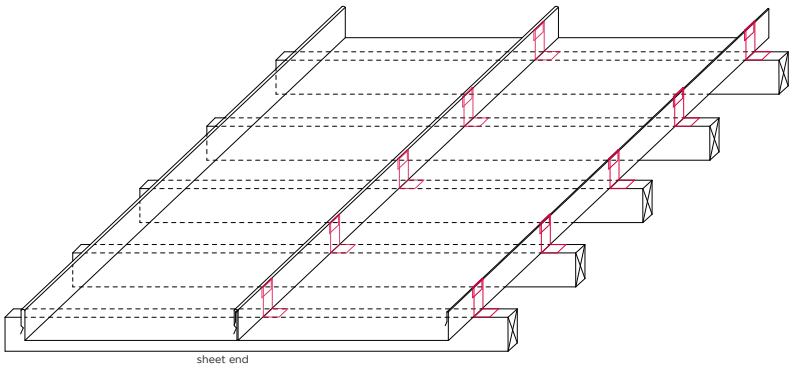
3.7.2.5 Fixing pattern

ALL WIND ZONES

LOW TO HIGH WIND ZONE

Maximum 450mm purlin centres

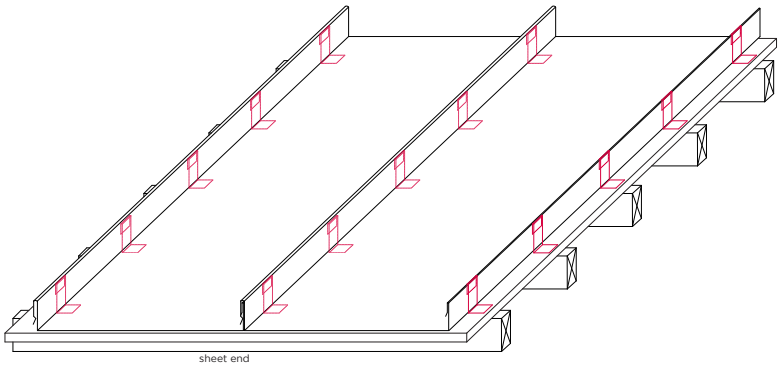
Clips fixed at 450mm centres



VERY HIGH/EXTRA HIGH WIND ZONE

Maximum 450mm purlin centres with min. 12mm ply substrate

Clips fixed at 450mm centres



In all wind zones, it is Steelformers standard practice that the clips are to be fixed to all ribs of all purlin lines.

3.7.2.6 Clip fixing

Concealed clips hook over the small rib of the sheet and are then fastened directly into the purlin or substrate. The larger rib on the preceding roof sheet is then snapped and locked down over the small rib and clipped. The edges of the sheets should be fixed for strength and spanning capability, and each clip must have a minimum of two fixings.

Purlin or frame material	Roof (no substrate)	Roof (ply substrate)	Wall (over cavity batten)
Timber	Class 4 Type 17 10g x 45mm	Class 4 Type 17 10g x 65mm	Class 4 Type 17 10g x 65mm
Steel	Class 4 10g x 16mm	Class 4 10g x 40mm	Class 4 10g x 40mm

The fasteners must be long enough to pass through the purlin or cavity batten and into the main frame by 30mm for timber and 6mm for steel. Ensure the fastener is fixed in the centre of the opening to allow for thermal expansion and contraction. *Reference should be made to the NZ MRM Code of Practice, E2/AS1 and the New Zealand Building Code. In some cases (for example, SED wind zones) increased support spacing and fixing may be required.*

3.7.2.7 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

Residential roofing

.PDF

Residential cladding

.PDF

Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX®

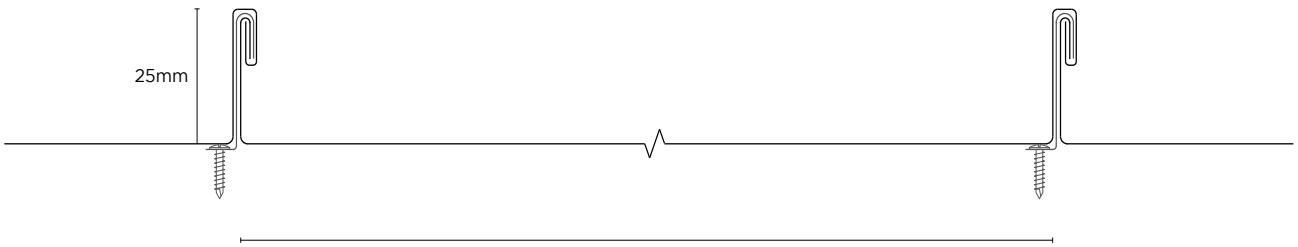
For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.7 Steelform Quattro range

3.7.3 Quattro 25mm Double Standing Seam

Steelformers Quattro 25mm Double Standing Seam is an architectural style profile with a refined traditional aesthetic. The profile uses concealed fixing and crimping techniques to lap panels along entire lengths, making it one of the strongest products on the market. In addition to good looks and strength, the Quattro 25mm Double Standing Seam offers superior wind and water resistance.

3.7.3.1 Specifications



*Dimensions are nominal

Suitable for:	Residential, light commercial and commercial roofing and cladding applications
Available in:	0.55mm (G300) BMT COLORSTEEL® ENDURA® and MAXX® , 0.75mm BMT copper, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply)
Fixing method:	Fixed over solid ply substrate with concealed clip fixing (for roofing), fixed over 20mm cavity batten for wall cladding
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch is 3°
Run in:	New Plymouth factory (can be run on-site, additional fees and conditions apply)
Sheet lengths:	Sheet lengths are custom run to order, sheet length restrictions may apply depending on project location
Rib height:	25mm standard rib height
Pan width:	The standard pan widths (from rib to rib) are 440mm and 530mm, the pans are variable on request

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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3.7.3.2 Pans and swages

It is mandatory practice that the pans are run with swages. The swages are discreet and provide for extra rigidity and strength, as well as assisting in the reduction of oil canning. If the customer wants the pans run without swages, it will be at the discretion of Steelformers (on a case by case basis).

3.7.3.3 Roofing applications

Quattro 25mm Double Standing Seam roofing is installed over a solid plywood substrate with purlin supports.

The purlin supports are generally:

• 75 x 50mm or 100 x 50mm purlins on the flat, fixed in accordance with the New Zealand Building Code.

The required plywood substrate must be:

• A minimum 12mm thick plywood sheet, structurally fixed to the frame in accordance with the New Zealand Building Code

• Fixed with 8g x 40mm countersunk stainless steel screws at 150mm centres around each panel edge and 300mm centres on the intermediate supports. The fasteners should be no closer than 10mm to the edge

• H3.2 treated (using a water based system) and of Stress Grade F11, with a moisture contect of 18% or less at the time of installation

• A 2-3mm expansion gap between sheets should be provided. All joints should be staggered, whilst ensuring all edges of the sheets are fully supported. This allows added air-flow between the underside of the tray and substrate, it also helps to reduce oil-canning* in the tray

• At the gutter line plywood should overhang the fascia board by 25mm

**Oil canning is the visible waviness in the flat trays of metal roofing and cladding, it does not cause detriment to product performance. Oil canning can occur during the forming and installation processes and during thermal expansion of the roof sheets during its life cycle. For further information, please refer to the NZMRM Code of Practice, Section 12.3.*

3.7.3.4 Wall cladding applications

Quattro 25mm Double Standing Seam cladding is installed over a solid cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements). In unlined areas, a cavity system is not required. Steelformers recommends nog spacing at 600mm centres in all wind zones, plus having a row of fixings along the line of the top and bottom of the cladding panel. Depending on the eaves construction, a row of nogs may be required at the eaves soffit line to fix into.

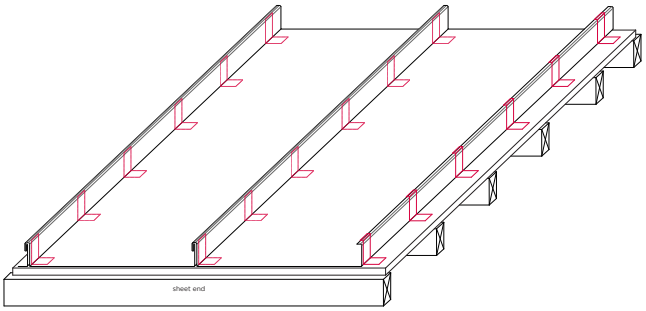
The above is a guide only and reference should be made by the designer to the New Zealand Building Code and plywood manufacturers technical information. In some cases increased or decreased support spacing may be applicable depending on wind loads.

3.7.3.5 Fixing pattern

ALL WIND ZONES

Maximum 450mm purlin centres, with min. 12mm ply substrate

Clips fixed at 450mm centres



In all wind zones, it is Steelformers standard practice that the clips are to be fixed to all ribs of all purlin lines (or nog/girt lines for wall applications).

3.7.3.6 Clip fixing

Concealed clips hook over the small rib of the sheet and are then fastened directly into the purlin or substrate. The larger rib on the preceding roof sheet is then snapped and locked down over the small rib and clipped. The edges of the sheets should be fixed for strength and spanning capability, and each clip must have a minimum of two fixings.

Purlin or frame material	Roof (no substrate)	Roof (ply substrate)	Wall (over cavity batten)
Timber	Class 4 Type 17 10g x 45mm	Class 4 Type 17 10g x 65mm	Class 4 Type 17 10g x 65mm
Steel	Class 4 10g x 16mm	Class 4 10g x 40mm	Class 4 10g x 40mm

The fasteners must be long enough to pass through the purlin or cavity batten and into the main frame by 30mm for timber and 6mm for steel. Ensure the fastener is fixed in the centre of the opening to allow for thermal expansion and contraction.

Reference should be made to the NZ MRM Code of Practice, E2/AS1 and the New Zealand Building Code. In some cases (for example, SED wind zones) increased support spacing and fixing may be required.

3.7.3.7 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

Residential roofing

.PDF

Residential cladding

.PDF

Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX®

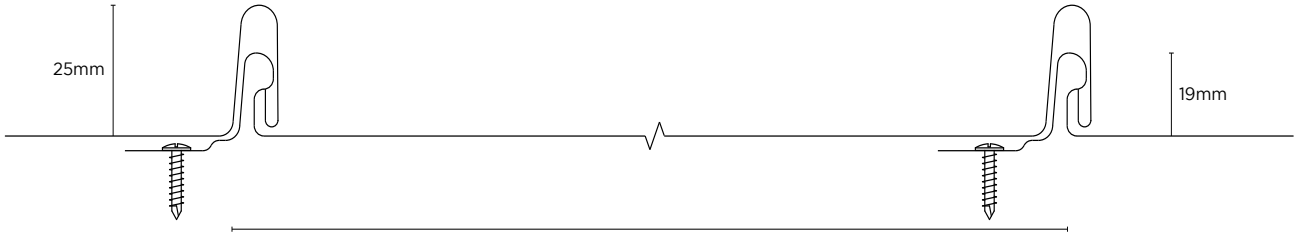
For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.7 Steelform Quattro range

3.7.4 Quattro 25mm Nailstrip

Steelformers Quattro 25mm Nailstrip is a popular choice for those who seek the look of architectural cladding without the more complicated installation. The profile has a thin rib and wide tray with a concealed perforated fixing strip along one side. There is no need for fixing clips or the additional operation of crimping, this ensures speed and ease of installation whilst still allowing for expansion and contraction in the sheets.

3.7.4.1 Specifications



*Dimensions are nominal

*Cladding only

Suitable for:	Residential, light commercial and commercial cladding applications
Available in:	0.55mm (G300) BMT COLORSTEEL® ENDURA® and MAXX® , 0.75mm BMT copper, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply)
Fixing method:	Fixed over 20mm cavity batten (for wall cladding)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch is 3°
Run in:	New Plymouth factory (can be run on-site, additional fees and conditions apply)
Sheet lengths:	Sheet lengths are custom run to order, sheet length restrictions may apply depending on project location
Rib height:	25mm standard rib height
Pan width:	The standard pan widths (from rib to rib) are 185mm (wall cladding only), 265mm and 405mm, the pans are variable on request

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.7.4.2 Pans and swages

It is mandatory practice that the pans are run with swages. The swages are discreet and provide for extra rigidity and strength, as well as assisting in the reduction of oil canning. If the customer wants the pans run without swages, it will be at the discretion of Steelformers (on a case by case basis).

3.7.4.3 Wall cladding applications

Quattro 25mm Nailstrip cladding is installed over a solid cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements). In unlined areas, a cavity system is not required. Steelformers recommends nog spacing at 600mm centres in all wind zones, plus having a row of fixings along the line of the top and bottom of the cladding panel. Depending on the eaves construction, a row of nogs may be required at the eaves soffit line to fix into.

The above is a guide only and reference should be made by the designer to the New Zealand Building Code and plywood manufacturers technical information. In some cases increased or decreased support spacing may be applicable depending on wind loads.

3.7.4.4 Panel fixing

Steelform Quattro 25mm Nailstrip panels are connected by an interlocking groove, giving it an elegant appearance of a recessed join. Nailstrip panels are laid and fixed directly to the timber along the perforated strip at 450mm centres with concealed fasteners. The high rib is then placed over the low rib and snapped into place along the length of the panel.

The fasteners must be long enough to pass through the substrate or cavity batten and into the main frame by 30mm for timber or 6mm for steel. Ensure the fastener is fixed in the centre of the opening to allow for thermal expansion and contraction.

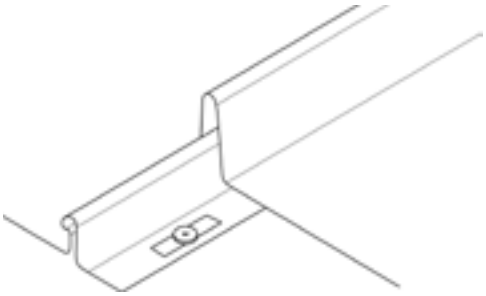
For timber, the fixings should be:

- Nails with an enhanced shank of 50mm long, or
- 10# x 25mm wafer head screws

For steel, the fixings should be:

- 10# x 16mm wafer head screws, or
- 12# hex head screws (where the profile provides clearance)

Fixing example:



3.7.4.7 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Code of Practice, E2/AS1 and all relevant building codes.*

- Residential cladding
  .PDF

Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX®

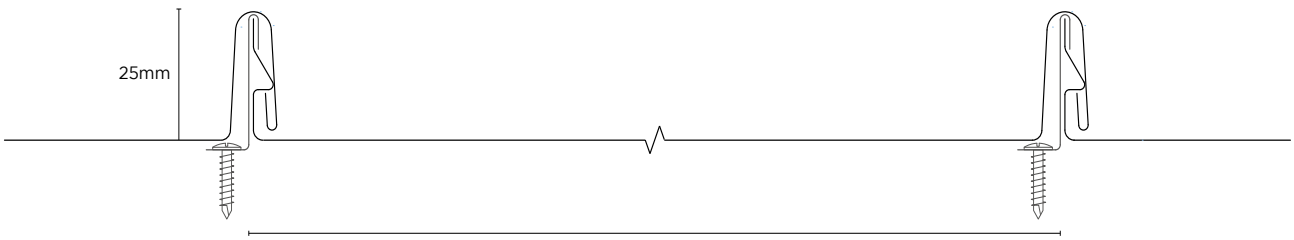
For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.7 Steelform Quattro range

3.7.5 Quattro 25mm Snapseam

Steelformers Quattro 25mm Snapseam is an architectural style roofing and cladding system, with thick distinctive ribs and wide pans giving it visual appeal. This profile provides a similar but slightly bolder look to Double Standing Seam but differs in that the panels snap together to form a locking joint, rather than requiring crimping. The Quattro 25mm Snapseam pan width can be increased or decreased to suit between windows and doorways so that the ribs finish neatly.

3.7.5.1 Specifications



*Dimensions are nominal

*Cladding only

Suitable for:	Residential, light commercial and commercial roofing and cladding applications
Available in:	0.55mm (G300) BMT COLORSTEEL® ENDURA® and MAXX® , 0.75mm BMT copper, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply)
Fixing method:	Fixed over solid ply substrate with concealed clip fixing (for roofing), fixed over 20mm cavity batten with ply substrate (for wall cladding)
Pitch:	In accordance with Acceptable Solution E2, the minimum pitch is 3°
Run in:	New Plymouth factory (can be run on-site, additional fees and conditions apply)
Sheet lengths:	Sheet lengths are custom run to order, sheet length restrictions may apply depending on project location
Rib height:	25mm standard rib height
Pan width:	The standard pan widths (from rib to rib) are 195mm (wall cladding only), 275mm and 415mm, the pans are variable on request

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.7.5.2 Pans and swages

It is mandatory practice that the pans are run with swages. The swages are discreet and provide for extra rigidity and strength, as well as assisting in the reduction of oil canning. If the customer wants the pans run without swages, it will be at the discretion of Steelformers (on a case by case basis).

3.7.5.3 Roofing applications

Quattro 25mm Snapseam roofing is installed over a solid plywood substrate with purlin supports.

The purlin supports are generally:

• 75 x 50mm or 100 x 50mm purlins on the flat, fixed in accordance with the New Zealand Building Code.

The required plywood substrate must be:

• A minimum 12mm thick plywood sheet, structurally fixed to the frame in accordance with the New Zealand Building Code

• Fixed with 8g x 40mm countersunk stainless steel screws at 150mm centres around each panel edge and 300mm centres on the intermediate supports. The fasteners should be no closer than 10mm to the edge

• H3.2 treated (using a water based system) and of Stress Grade F11, with a moisture contect of 18% or less at the time of installation

• A 2-3mm expansion gap between sheets should be provided. All joints should be staggered, whilst ensuring all edges of the sheets are fully supported. This allows added air-flow between the underside of the tray and substrate, it also helps to reduce oil-canning* in the tray

• At the gutter line plywood should overhang the fascia board by 25mm

**Oil canning is the visible waviness in the flat trays of metal roofing and cladding. Although it creates an aesthetic effect, it does not cause detriment to product performance. Oil canning can occur during the forming and installation processes and during thermal expansion of the roof sheets during its life cycle. There are several options to reduce the oil canning effect in profiles/flashing. For further information, please refer to the NZ MRM Code of Practice, Section 12.3.*

3.7.5.4 Wall cladding applications

Quattro 25mm Snapseam cladding is installed over a solid cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements). In unlined areas, a cavity system is not required. Steelformers recommends nog spacing at 600mm centres in all wind zones, plus having a row of fixings along the line of the top and bottom of the cladding panel. Depending on the eaves construction, a row of nogs may be required at the eaves soffit line to fix into.

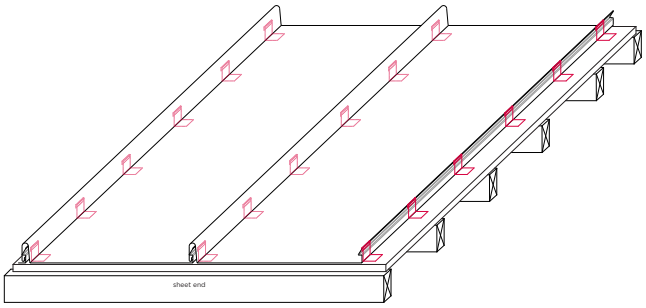
The above is a guide only and reference should be made by the designer to the New Zealand Building Code and plywood manufacturers technical information. In some cases increased or decreased support spacing may be applicable depending on wind loads.

3.7.5.5 Fixing pattern

ALL WIND ZONES

Maximum 450mm purlin centres, with min. 12mm ply substrate

Clips fixed at 450mm centres



In all wind zones, it is Steelformers standard practice that the clips are to be fixed to all ribs of all purlin lines (or nog/girt lines for wall applications).

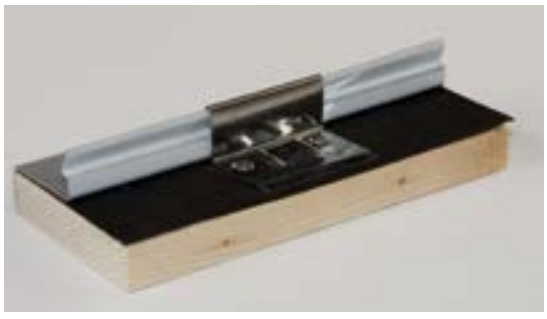
3.7.5.6 Clip fixing

Concealed clips hook over the small rib of the sheet and are then fastened directly into the purlin or substrate. The larger rib on the preceding roof sheet is then snapped and locked down over the small rib and clipped. The edges of the sheets should be fixed for strength and spanning capability, and each clip must have a minimum of two fixings.

Purlin or frame material	Roof (no substrate)	Roof (ply substrate)	Wall (over cavity batten)
Timber	Class 4 Type 17 10g x 45mm	Class 4 Type 17 10g x 65mm	Class 4 Type 17 10g x 65mm
Steel	Class 4 10g x 16mm	Class 4 10g x 40mm	Class 4 10g x 40mm

The fasteners must be long enough to pass through the purlin or cavity batten and into the main frame by 30mm for timber and 6mm for steel. Ensure the fastener is fixed in the centre of the opening to allow for thermal expansion and contraction.

Clip fixing example:



Reference should be made to the NZ MRM Code of Practice, E2/AS1 and the New Zealand Building Code. In some cases (for example, SED wind zones) increased support spacing and fixing may be required.

3.7.5.7 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

Residential roofing

.PDF

Residential cladding

.PDF

Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX®

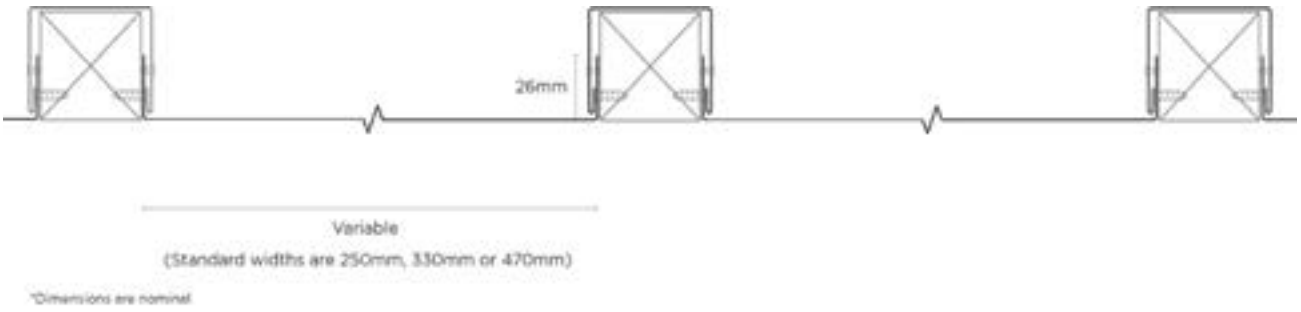
For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

3.7 Steelform Quattro range

3.7.6 Steelform TCS Cladding

Steelformers TCS Cladding is the latest cladding product by Steelform Roofing Group. The 26mm u-panel cladding system is available with standard pan widths of 250mm, 330mm and 470mm, but can be customisable, allowing the user to alter the widths to suit their design requirements. The cap provides added boldness while concealing the fixing system, creating a clean and modern exterior.

3.7.6.1 Specifications



Suitable for:	Residential and light commercial vertical wall cladding applications
Available in:	0.55mm (G300) BMT COLORSTEEL® ENDURA® and MAXX® , 0.75mm BMT copper, 0.90mm BMT mill finish aluminium and ColorCote® Alumigard™ (available on request, conditions apply)
Fixing method:	Timber batten (typically 45x45mm H3.1) fixed over 20mm cavity batten (horizontally fixed)
Run in:	New Plymouth factory
Sheet lengths:	Sheet lengths are custom run to order, sheet length restrictions may apply depending on project location
Pan width:	The standard pan widths (from rib to rib) 250mm, 330mm and 470mm, the pans are variable on request

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

3.7.6.2 Pans and swages

It is mandatory practice that the pans are run with swages. The swages are discreet and provide for extra rigidity and strength, as well as assisting in the reduction of oil canning. If the customer wants the pans run without swages, it will be at the discretion of Steelformers (on a case by case basis).

3.7.6.3 Fasteners and fixing

Fixing requirements

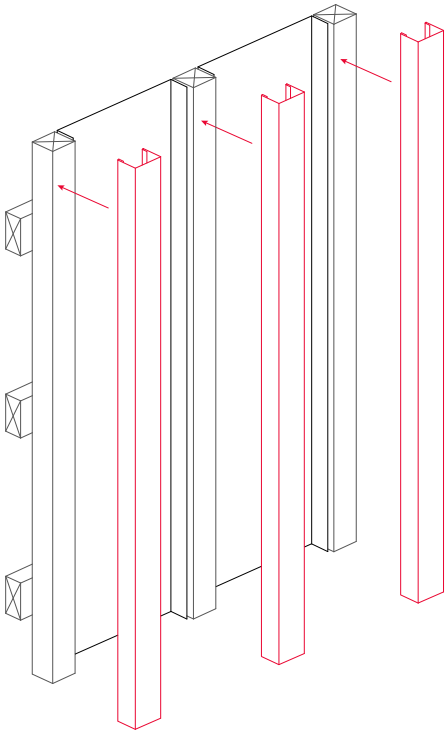
Quattro TCS Cladding is installed over a solid cavity system (make reference to E2 and the New Zealand Building Code for cavity requirements).

The recommended fixing process is as follows:

- 45x45mm H3.1 dressed timber battens are structurally fixed (vertically) along the horizontal cavity in accordance with the New Zealand Building Code. Spacings of the battens are dictated by the claddings pan width
- Each TCS Cladding panel is screwed fixed (using a stainless steel countersunk screw at 400mm centres) through each 26mm upstand into the timber batten
- The custom made cap flashing is then fitted over the top of the batten and pop riveted (at 400mm centres) to the sheet upstands
- For additional securing of the pans upstand, Steelformers recommends using a bead of silicone along each cavity batten

TIP: Steelformers recommends nog spacing at 450mm centres in all wind zones, plus having a row of fixings along the line of the top and bottom of the cladding panel. Depending on the eaves construction, a row of nogs may be required at the eaves soffit line to fix into.

Diagram, fixing example:



3.7.6.4 Flashing and construction details

Construction details covering residential roofing and cladding applications are available to view on our website (under the downloads section) or by clicking on the links below. *Flashing details should be used in conjunction with the MRM Building Code, E2/AS1 and all relevant building codes.*

Residential cladding

.PDF

Available in: 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX®

For more information on the range of flashings Steelformers has to offer, please refer to section 4 of this product catalogue.

4.0 Flashings

- 4.1 Custom made flashings
- 4.2 Rollformed flashings
- 4.3 Specialty flashings

4.1 Custom made flashings

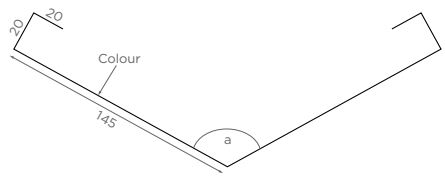
Steelformers can provide a range of flashings from all of our four branches, custom made to your requirements. Flashings can be manufactured from 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL MAXX® or from 0.9mm BMT mill finish aluminium at a maximum length of 8m. Flashings can also be folded out of 1200 x 2400mm arctic white aluminium held in stock. Copper is available upon request (contact your nearest Steelformers branch to check availability).

The girth of the flashing will be limited in one direction to 1200mm maximum (coil width). Where one dimension is 1200mm or less, the maximum length is 8m. As the flashings are created by mechanical folding there are certain limitations relating to the angle of the folds and the distance between the two folds that needs to be considered.

The following details are helpful and should be considered when ordering your flashings:

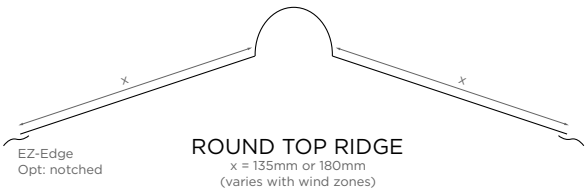
- Material type/coating and thickness
- Quantity and length(s) required (consideration should be given to the lengths the customer is capable of carrying if the flashing is being collected)
- All measurements and dimensions
- Angles required
- If soft edge (EZ-Edge) is required

The following range of flashings have proven to be universally popular and suitable for most applications Flashing cover over roofing should be in accordance with table 7 of Acceptable Solution E2/AS1.



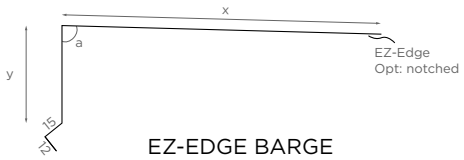
VALLEY

BARGE

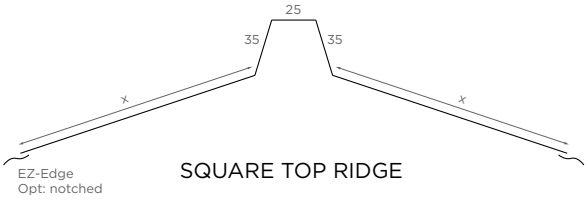


ROUND TOP RIDGE

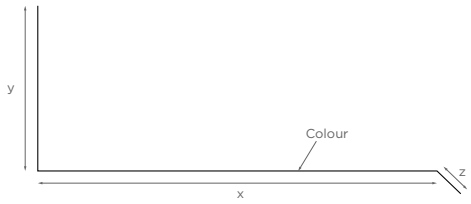
x = 135mm or 180mm
(varies with wind zones)



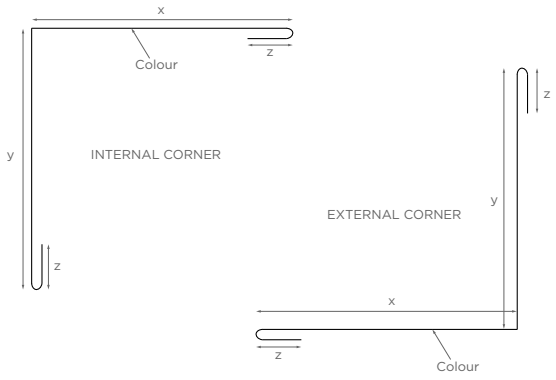
EZ-EDGE BARGE



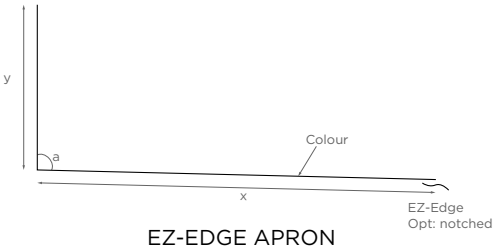
SQUARE TOP RIDGE



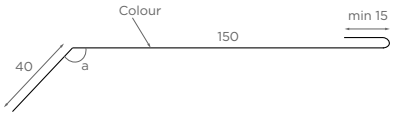
APRON



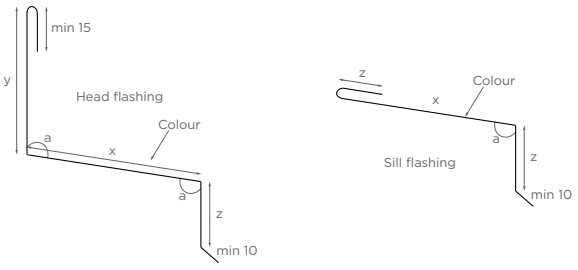
CORNER FLASHINGS



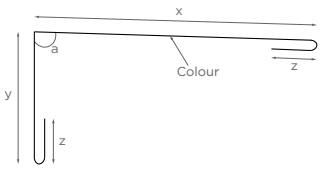
EZ-EDGE APRON



GUTTER FLASHING



WINDOW FLASHINGS



SOFFIT FLASHING

4.2 Rollformed flashings

EZ-Edge Ridging

• Available in standard (135mm legs) and wide (180mm legs, for very high and extra high wind zones)

• Manufactured in 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX® (contact your nearest Steelformers branch for colour availability)

• Rollformed in lengths up to 8m

• Manufactured in our Stratford factory and distributed to our other branches

Rolled Barges

• Manufactured in 0.55mm BMT ZINCALUME®, GALVSTEEL® and COLORSTEEL® MAXX® (contact your nearest Steelformers branch for colour availability)

• Rollformed in 3.6m lengths

• Manufactured in our Wanganui factory and distributed to our other branches

Other important factors to consider in the design and installation of flashings:

• The material of the flashing must be the same material and coating as the roof or wall cladding to ensure a similar durability and compatibility

• If you have to join flashings due to long lengths, flashing joing must be sealed at both ends of the lap and be a minimum of 150mm

• Soft edging (EZ-Edge) can be used on Corrugate and other low rib profiles with a rib height up to 30mm. The EZ-Edge should be neatly pushed down and formed into the profile pans to achieve a neat-tight fit

• For profiles with rib heights 30mm and over it is best practice to notch flashing downturns around sheet profiles in-situ. Clearance gaps around the ribs should be between 1mm to 3mm.

Flashing cover over roofing should be in accordance with table 7 of Acceptable Solution E2/AS1.

4.3 Specialty flashings

Our in-house specialist service provides a wide range of specialised flashing products that can be customised to your design requirements. With years of experience, our skilled craftsman ensures the highest quality workmanship to offer the most cost effective soutions for you project.

Available products include:

- Specialised custom curved flashings including: parapet caps, barges and ridging
- Rainwater heads (more information about rainwater heads in section 5.10/page 97 of this catalogue)
- Seam lock flashings
- Chimney cap flashings

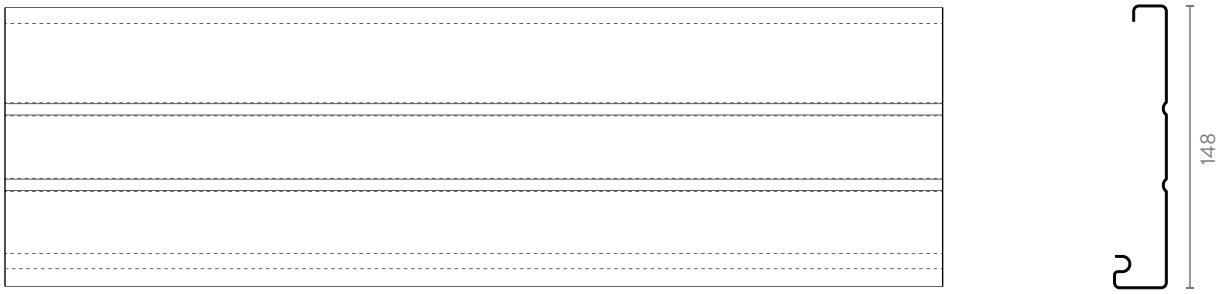
Talk to a Steelformers representative about pricing and availability.

5.0 Rainwater systems

5.1 Steelform 148 Metal Fascia

The Steelform 148 Fascia system features smooth, clean lines with a high quality, pre-finished appearance that will compliment any home. Steelform 148 Fascia is suitable for residential applications, used in conjunction with most of our gutter profiles providing a quality fascia/gutter system.

5.1.2 Specifications



Suitable for:	Residential applications
Available in:	Rollformed in 0.55mm BMT COLORSTEEL® MAXX® (please note that this product is not available in 'very severe' marine environments, see New Zealand Steel Warranty and Maintenance literature for more information)
Rollformed in:	New Plymouth
Lengths:	Lengths are custom run to order (maximum 8m lengths)

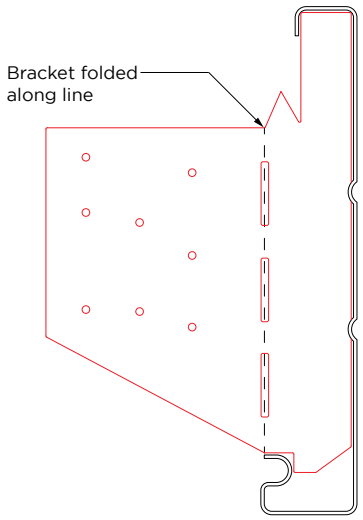
Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

masterspec partner

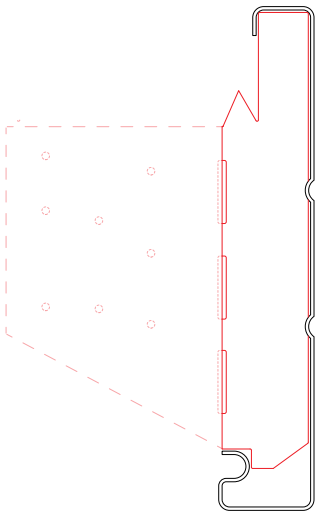
5.1.3 Components

Brackets

Steelform 148 Fascia uses a uniquely designed hidden bracket that ensures a straight line whilst preventing denting and damage due to movement of trusses and rafters. Check with your builder to confirm positioning and spacing of brackets. All installations as per NZMRM Code of Practice recommendations.

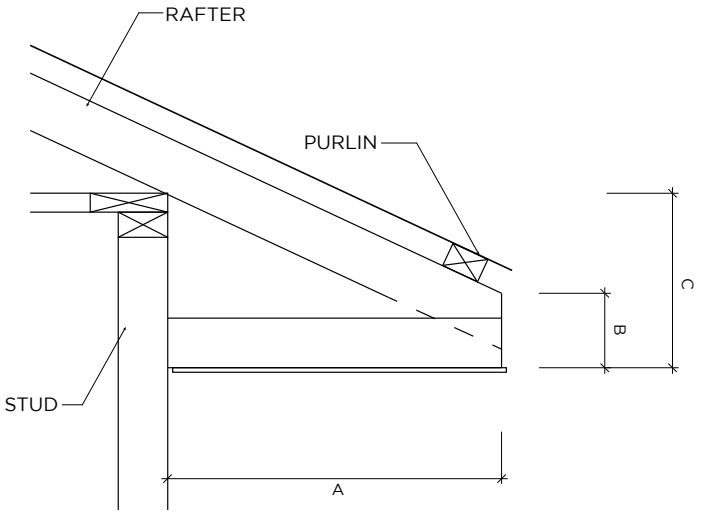


Unfolded bracket



Folded bracket

HIP & GABLE ROOF - EAVES DETAIL



ROOF PITCH	SOFFIT WIDTH 'A' 300MM	SOFFIT WIDTH 'A' 450MM	SOFFIT WIDTH 'A' 600MM	SOFFIT WIDTH 'A' 750MM	SOFFIT WIDTH 'A' 900MM	FASCIA DROP DIMENSION 'B'
	SOFFIT DROP HEIGHTS 'C'					
10°	55	93	107	134	160	93
15°	80	120	161	201	241	93
20°	110	165	220	274	329	97
25°	146	216	285	355	425	105
30°	179	266	352	439	526	110

NOTES

> Fascia brackets must be fitted to all rafters.

> Leave off the bottom purlin until fascia is fitted, to avoid bird proofing problems. It should just clear the edge of the fascia.

> Where loose fill insulation is used, the soffit must be blocked off at the top plate to prevent the insulation coming into contact with the metal fascia.

> Measurements are based on minimum purlin thickness of 45mm

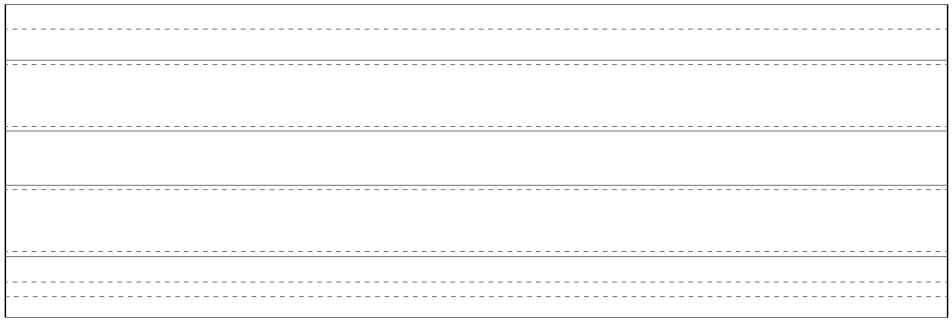
> For hip roofs, the drop distance (dimension B) should equal 105mm

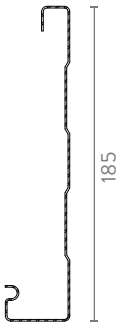
All details are typical set out details only. Dimensions and measurements should be checked prior to commencement of work. This set out guide should be used in conjunction with the NZMRM Code of Practice and all relevant building codes.

5.2 Steelform 185 Metal Fascia

The Steelform 185 Fascia system features smooth, clean lines with a high quality, pre-finished appearance that will compliment any home. Steelform 185 Fascia is suitable for residential applications, used in conjunction with most of our gutter profiles providing a quality fascia/gutter system.

5.2.2 Specifications





Suitable for:	Residential applications
Available in:	Rollformed in 0.55mm BMT COLORSTEEL® MAXX® (please note that this product is not available in 'very severe' marine environments, see New Zealand Steel Warranty and Maintenance literature for more information)
Rollformed in:	New Plymouth
Lengths:	Lengths are custom run to order (maximum 8m lengths)

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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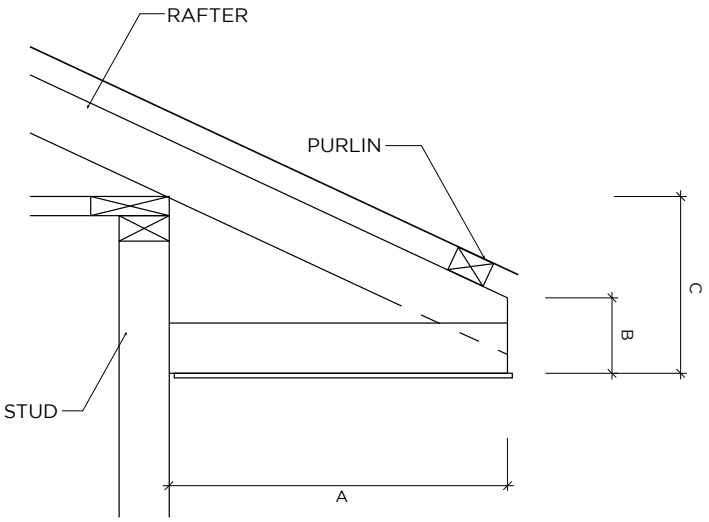
5.2.3 Components

Brackets

Steelform 185 Fascia uses a hidden bracket that ensures a straight line whilst preventing denting and damage due to movement of trusses and rafters. Check with your builder to confirm positioning and spacing of brackets. All installations as per NZMRM Code of Practice recommendations.

5.2.4 Steelform 185 Metal Fascia | Set out guide (for metal longrun roofing)

HIP & GABLE ROOF - EAVES DETAIL



ROOF PITCH	SOFFIT WIDTH 'A' 300MM	SOFFIT WIDTH 'A' 450MM	SOFFIT WIDTH 'A' 600MM	SOFFIT WIDTH 'A' 750MM	SOFFIT WIDTH 'A' 900MM	FASCIA DROP DIMENSION 'B'
SOFFIT DROP HEIGHTS 'C'						
10°	92	118	144	171	197	130
15°	117	157	198	238	278	130
20°	148	203	258	312	367	135
25°	181	251	320	390	460	140
30°	209	296	382	469	556	140

NOTES

> Fascia brackets must be fitted to all rafters.

> Leave off the bottom purlin until fascia is fitted, to avoid bird proofing problems. It should just clear the edge of the fascia.

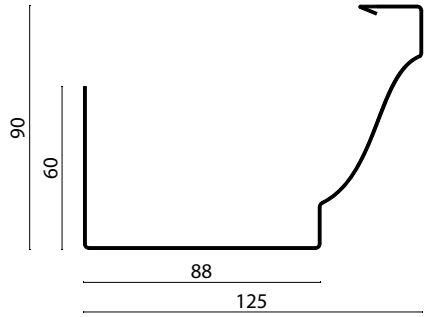
> Where loose fill insulation is used, the soffit must be blocked off at the top plate to prevent the insulation coming into contact with the metal fascia.

All details are typical set out details only. Dimensions and measurements should be checked prior to commencement of work. This set out guide should be used in conjunction with the NZMRM Code of Practice and all relevant building codes.

5.3 Steelform 125 Old Gothic Spouting

Steelform 125 'Old Gothic' spouting has a traditional look about it, with a convex and concave face reminiscent of that used on Colonial style homes.

5.3.1 Specifications



Area:	5800mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Residential applications
Available in:	Rollformed in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX® and Copper (price on application)
Rollformed in:	Can be run in our New Plymouth factory (max, 8m lengths) or run on-site Taranaki and Wanganui wide, allowing for continuous lengths

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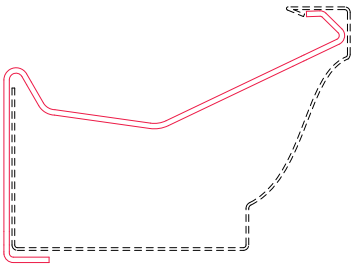
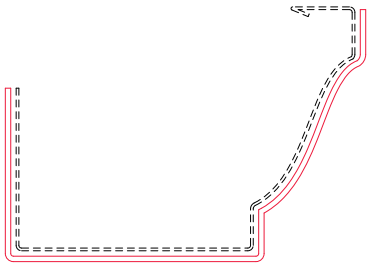
5.3.2 Components

Brackets

Steelform 125 'Old Gothic' spouting can be fixed with internal or external aluminium brackets that are powdercoated to match the spouting. The brackets should be fixed at a maximum of 750mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced to 600mm maximum. All installations as per NZMRM Code of Practice recommendations.



Internal bracket



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact.

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

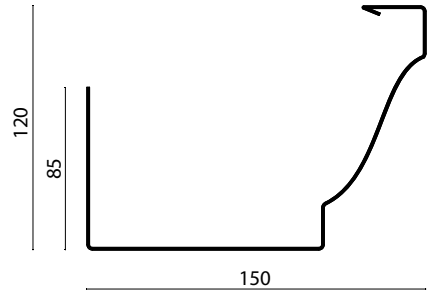
5.3.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installations as per NZMRM Code of Practice recommendations.

5.4 Steelform 150 Old Gothic Spouting

Steelform 150 'Old Gothic' spouting has a traditional look about it, with a convex and concave face reminiscent of that used on Colonial style homes. This profile features the same aesthetic lines as our 125 Old Gothic Spouting, but in a larger size to suit homes with a larger roof area.

5.4.1 Specifications



Area:	9815mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Residential applications
Available in:	Rollformed in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX® and Copper (price on application)
Rollformed in:	Can be run in our New Plymouth factory (max, 8m lengths) or run on-site Taranaki and Wanganui wide, allowing for continuous lengths

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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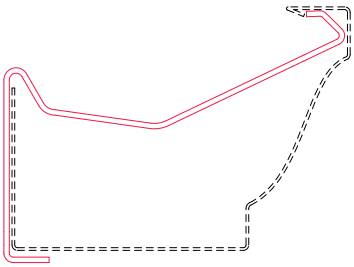
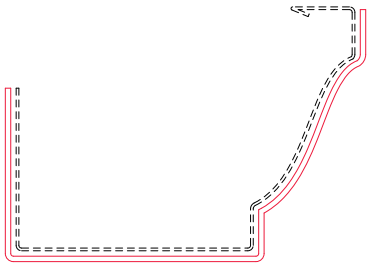
5.4.2 Components

Brackets

Steelform 150 'Old Gothic' spouting can be fixed with internal or external aluminium brackets that are powdercoated to match the spouting. The brackets should be fixed at a maximum of 750mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced to 600mm maximum. All installations as per NZMRM Code of Practice recommendations.



Internal bracket



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact.

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

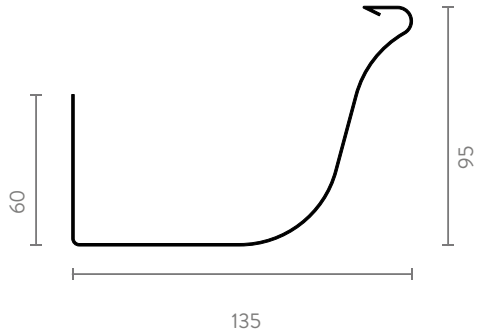
5.4.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installations as per NZMRM Code of Practice recommendations.

5.5 Steelform Quarter Round Spouting

Steelform Quarter Round is our most popular profile for both new and existing homes. Quarter Round is a contemporary D-shaped profile, featuring a plane face and high front. The Quarter Round provides a great roof edge coverage and offers good access for cleaning (when combined with internal brackets).

5.5.1 Specifications



Area:	6300mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Residential applications
Available in:	Rollformed in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX® and Copper (price on application)
Rollformed in:	Run on site Taranaki and Wanganui wide, allowing for continuous lengths

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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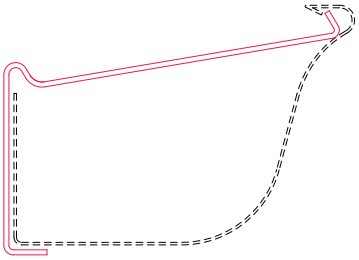
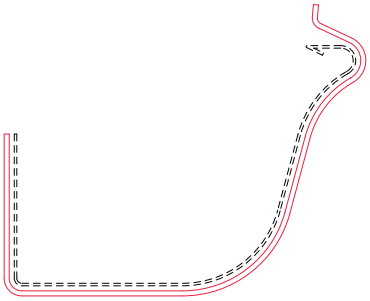
5.5.2 Components

Brackets

Steelform Quarter Round spouting can be fixed with internal or external aluminium brackets that are powdercoated to match the spouting. The brackets should be fixed at a maximum of 750mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced to 600mm maximum. All installations as per NZMRM Code of Practice recommendations.



Internal bracket



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact.

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

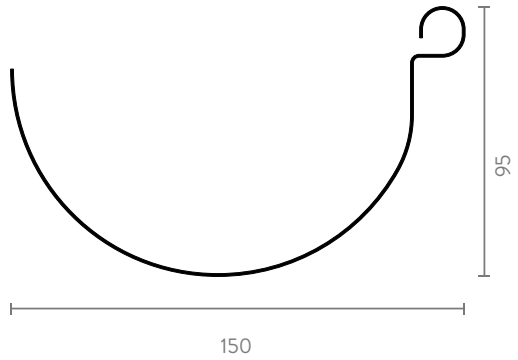
5.5.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installations as per NZMRM Code of Practice recommendations.

5.6 Steelform 150 Half Round Spouting

Steelform 150 Half Round is a premier product which excels in performance as well as appearance. The profile will bring an outstanding finish that demonstrates stunning aesthetics on any kiwi home. It has a large capacity, and with its rounded finish, the water is able to dissipate quickly and efficiently. The unique shape also prevents residue build up at the corners and along the edges, thus reducing the possibility of blockages and provides a cleaner water for catchment purposes.

5.6.1 Specifications



Area:	8700mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Residential and light commercial applications
Available in:	Rollformed in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX® and Copper (price on application)
Rollformed in:	Run on site Taranaki and Wanganui wide, allowing for continuous lengths

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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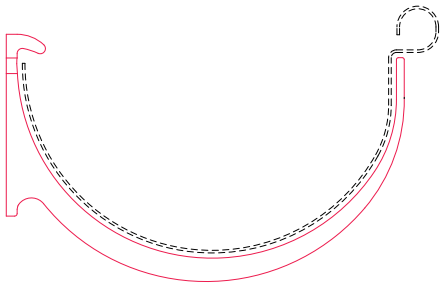
5.6.2 Components

Brackets

Steelform Half Round spouting is available with external aluminium brackets that are powdercoated to match the spouting.. The brackets should be fixed at a maximum of 750mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced to 600mm maximum. All installations as per NZMRM Code of Practice recommendations.



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

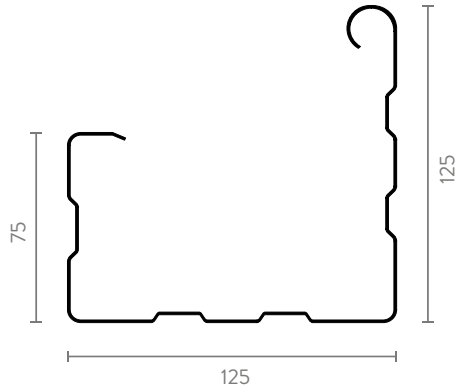
5.6.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installations as per NZMRM Code of Practice recommendations.

5.7 Steelform 125 Box Gutter

The uncomplicated square appearance of the box gutter suits both contemporary and more traditional dwellings. High fronted, it conceals ends of roof iron and can be fixed with either internal or external brackets. This gutter is well designed to capture water run-off from large surface areas. Internal brackets are the most common choice with 125 Box Gutter, providing extra strength.

5.7.1 Specifications



Area:	8750mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Residential and light commercial applications
Available in:	Rollformed in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX® and Copper (price on application), folded in 0.90mm BMT mill finish aluminium (with or without swages)
Manufactured:	Manufactured in our Stratford factory (aluminium folded in New Plymouth)
Lengths:	Lengths are custom run to order (maximum 8m lengths)

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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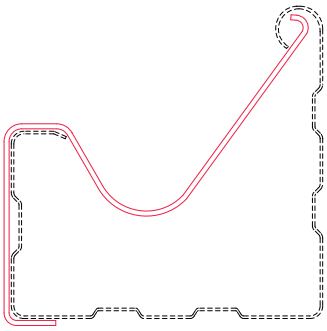
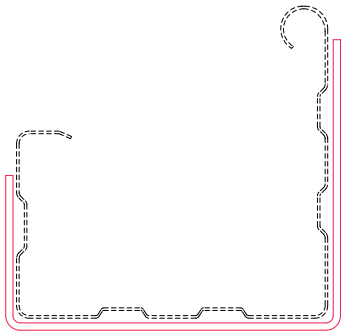
5.7.2 Components

Brackets

Steelform 125 Box Gutter can be fixed with internal or external aluminium brackets that are powdercoated to match the spouting. The brackets should be fixed at a maximum of 750mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced to 600mm maximum. All installations as per NZMRM Code of Practice recommendations.



Internal bracket



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

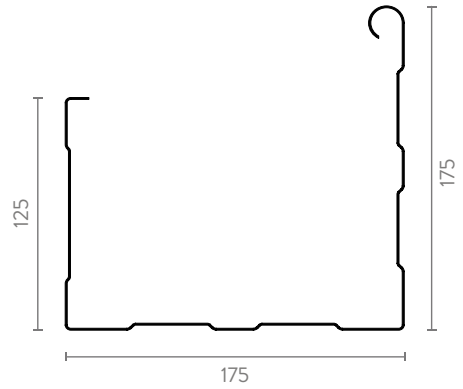
5.7.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installations as per NZMRM Code of Practice recommendations.

5.8 Steelform 175 Box Gutter

Similar in appearance to the 125 Box Gutter, the 175 Box Gutter has greater water carrying capacity and is custom made in lengths up to 8 metres. Specifically fabricated aluminium external brackets are recommended (formed and supplied by Steelformers) and can be powdercoated to match if required.

5.8.1 Specifications



Area:	19250mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Light commercial and commercial applications
Available in:	Folded in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX®, Copper (price on application) and 0.90mm BMT mill finish aluminium
Manufactured:	Manufactured in our Stratford factory
Lengths:	Lengths are custom run to order (maximum 8m lengths)

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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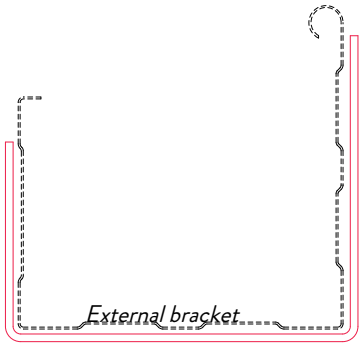
5.8.2 Components

Brackets

Steelform 175 Box Gutter is available with external brackets that are compatible with the selected substrate (to avoid dissimilar material contact). The brackets are formed in our New Plymouth factory from 4.5mm aluminium or galvalume flat bar (and powdercoated to match if necessary). The brackets should be fixed at a maximum of 750mm centres. All installation as per NZMRM Code of Practice recommendations.



Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact.

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

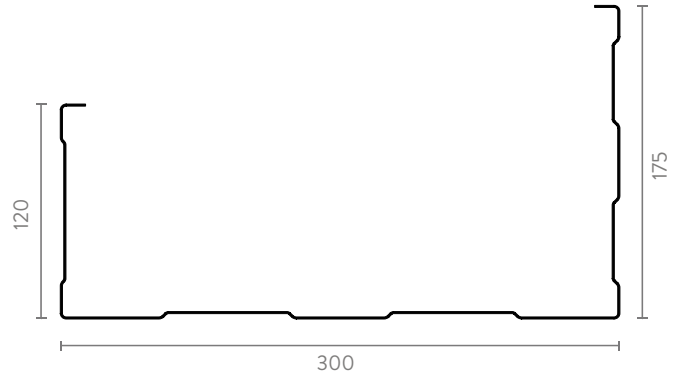
5.8.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installation as per NZMRM Code of Practice recommendations.

5.9 Steelform 300 Box Gutter

A large sized gutter system for commercial applications. Steelform 300 box gutter is able to handle large volumes of water, and is easy to clean out if required. Specifically fabricated duragalv external brackets are recommended (formed and supplied by Steelformers) and can be powdercoated to match.

5.9.1 Specifications



Area:	27000mm2 cross sectional area
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Commercial applications
Available in:	Folded in 0.55mm BMT ZINCALUME® and COLORSTEEL® MAXX®
Manufactured:	Manufactured in our New Plymouth factory
Lengths:	Lengths are custom run to order (maximum 8m lengths)

Click on the Masterspec link to view and/or download the most up-to-date Steelformers work sections.

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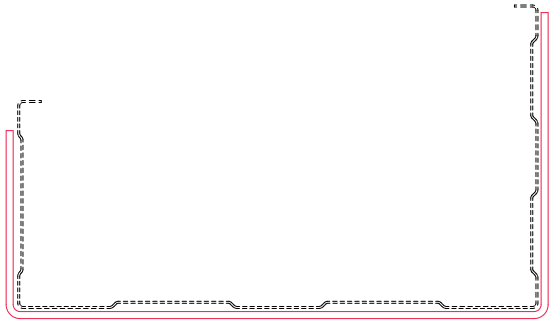
5.9.2 Components

Brackets

Steelform 300 Box Gutter is available with external brackets that are compatible with the selected substrate (to avoid dissimilar material contact). The brackets are formed in our New Plymouth factory from 605mm x 50mm x 4mm duragalv flatbar (and powdercoated to match if required). The brackets should be fixed at a maximum of 600mm centres. In areas where snow fall is possible and/or high wind areas the centres should be reduced. All installation as per NZMRM Code of Practice recommendations.



External bracket

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact.

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

5.9.3 Installation

If lapping spouting joints, lap in the direction of the water flow. There should be a minimum of 40mm to seal between and over top of the joint, the joing should be sealed with a silicone sealent and fixed with rivets. Ensure the joint is fixed over its full girth. Cut out neatly for and fit the pre-formed downpipe dropper and rivet and seal around the joint. All installation as per NZMRM Code of Practice recommendations.

5.10 Steelform Custom Box Gutter

Steelformers can custom fold box gutter, tailored to your specific needs, and supplied in a range of finishes. Talk to a Steelformers representative about pricing and availability.

5.10.1 Specifications

Area:	Customisable to your design requirements
Min. fall:	All gutters must have a minimum fall of 1:500 (2mm in 1m), the MRM Code of Practice recommends 1:200 (5mm in 1m) as it will improve drainage and self-cleaning
Suitable for:	Customisable to your design requirements
Available in:	Folded in 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX®, Copper (price on application) and 0.90mm BMT mill finish aluminium
Manufactured:	Manufactured in our New Plymouth factory
Lengths:	Lengths are custom run to order (maximum 8m lengths)

5.10.2 Components

Brackets

Steelformers can form suitable brackets in our New Plymouth factory from locally sourced duragalv or aluminium flatbar (and powdercoated to match if necessary). Refer to the NZMRM Code of Practice for recommended bracket spacings suitable to your sized gutter.

Fixings

Screw fastenings are to be compatible with substrate and bracket material avoiding dissimilar material contact

Corners and Stopends

All corners and stopends are to be formed on site at the time of installation. At the time of ordering, ensure you have allowed enough material at each end to do so. Steelformers recommends adding 400mm to your required lengths.

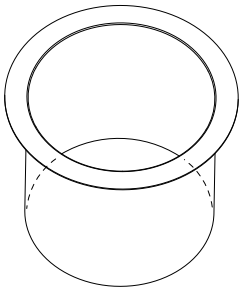
Downpipes and downpipe accessories

Various round downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. For more information on whats available go to section 5.9 of this catalogue.

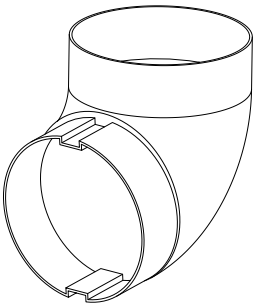
5.11 Downpipes and accessories

Various downpipes and accessories (both PVC and COLORSTEEL®) can be ordered in from our suppliers. The most common diameters are 60mm, 85mm and 100mm. Please note, as these are ordered in from an outside supplier, nominal lead times may apply. Downpipes can be supplied in custom lengths (a minimum order of 3.2 metres is required).

Examples of the most common downpipe accessories:



80mm dropper



80mm bend (95°)

80mm munzing ring

Calculating drainage capacities of gutters, downpipes, and valleys involve various factors such as rainfall intensity, roof pitch, gutter size, downpipe size, valley angle, etc. The NZMRM Code of Practice provides online calculators to derive the maximum allowable roof area drained under various scenarios. Below is a quick reference guide, refer to the Code of Practice for more information and for installation details.

	MAX ROOF AREA PER DOWNPIPE			
	ROOF PITCH			
DOWNPIPE SIZE	0-25°	26-35°	36-45°	46-55°
65mm (round)	60	50	40	35
80mm (round)	100	80	70	60
100mm (round)	155	130	110	90

For pricing, availability and other accessories available please contact a Steelformers sales representative.

5.12 Steelform Rainwater Heads

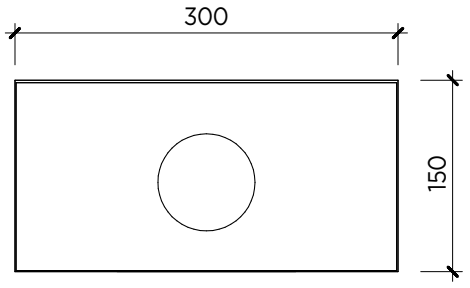
Rainwater heads are an essential element where internal gutters are used. Steelformers can custom make rainwater heads, tailored for all building types, supplied in a range of finishes including 0.55mm BMT ZINCALUME®, COLORSTEEL® MAXX®, 0.9mm BMT mill finish aluminium and Copper (price on application). Send your nearest Steelformers branch a drawing or diagram and details of the rainhead you have in mind.

Typical details to consider are:

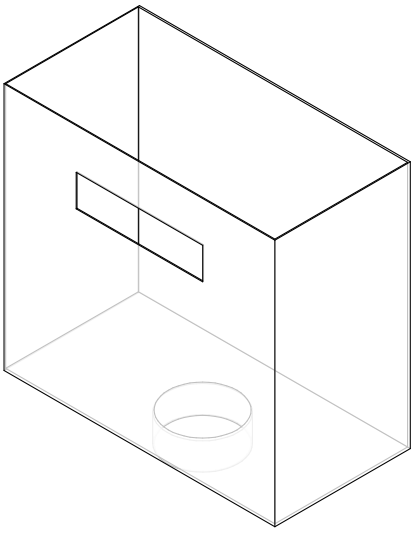
- Material and coating
- Thickness of material
- Height, width and depth*
- Cutout width, depth and positioning*
- Outlet/dropper diameter, shape and positioning*

**Ensure dimensions will meet your local building code requirements*

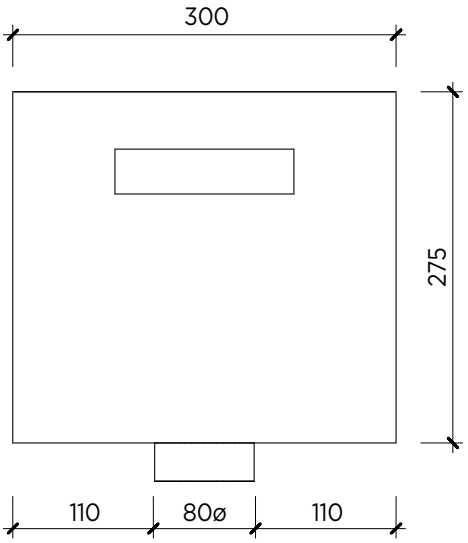
Example:



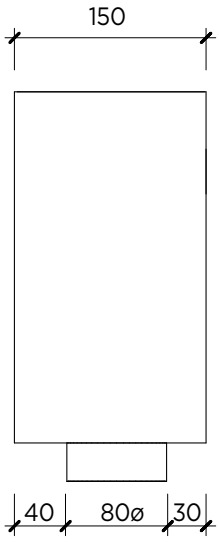
PLAN DETAIL



3D ISOMETRIC



ELEVATION FRONT



ELEVATION LEFT

Note: Overflow locations indicative only. Overflow locations are cut on site to suit.

6.0 Steelformers Ceiling Batten System

SECTION 6 / STEELFORMERS CEILING BATTEN SYSTEM

6.1 Range of products

The Steelformers Ceiling Batten System is manufactured using 0.55mm BMT G550 high tensile GALVSTEEL® from New Zealand Steel. The Ceiling Battens are cut to your required lengths (up to 10m), saving on product wastage and labour to install. Being light weight makes for easy installation and having the dimpled surface assists in preventing screw movement. The Steelformers Ceiling Batten System is your efficient choice.

Scope of use

The Steelformers Ceiling Batten System is suitable for residential and commercial applications. The system can be used for directly supporting single layered plasterboard ceiling linings in buildings within the scope of NZS 3604 or NASH Standard Part 2 - Light Steel Framed Buildings. (Ensure linings are installed as per the manufacturers guidelines.

Compliance

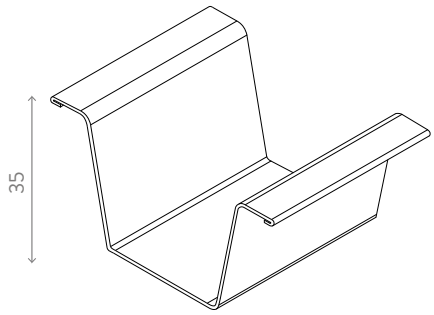
The Steelformers Ceiling Batten System is a tried and tested one, used frequently for new builds around the Taranaki region. The Ceiling Batten, C-Channel and clips are manufactured from steel sourced from New Zealand Steel and complies with AS 1397:2011.

Quality assurance

The Steelformers Ceiling Batten System is manufactured in a controlled factory environment, ensuring consistent product quality.

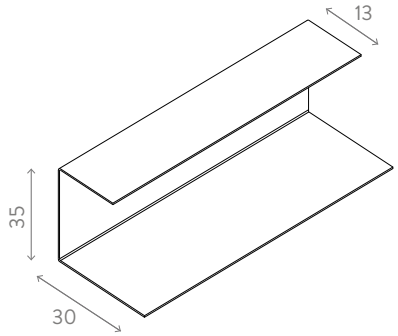
Technical support

Contact a Steelformers representative at your local branch for detailed technical advice.



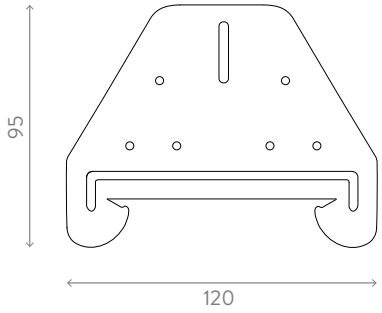
35mm Ceiling Batten

The Ceiling Batten is a deep trapezoidal top-hat steel section with double folded flanges and a dimpled surface that assists in preventing screw movement. Ceiling Battens are cut to order, to a maximum of 10m. Simply provide us with the quantities of each length and the install location within the building, the Ceiling Battens will be supplied to your exact lengths and pre-labelled for easy on-site identification.



C-Channel

The C-Channel is rollformed from the same 0.55mm BMT GALVSTEEL® as the Ceiling Batten and is supplied in 6 metre lengths. We recommend screw fixing the c-channel to supporting framing at the perimeter of the room at 1200mm maximum centres.



Clips

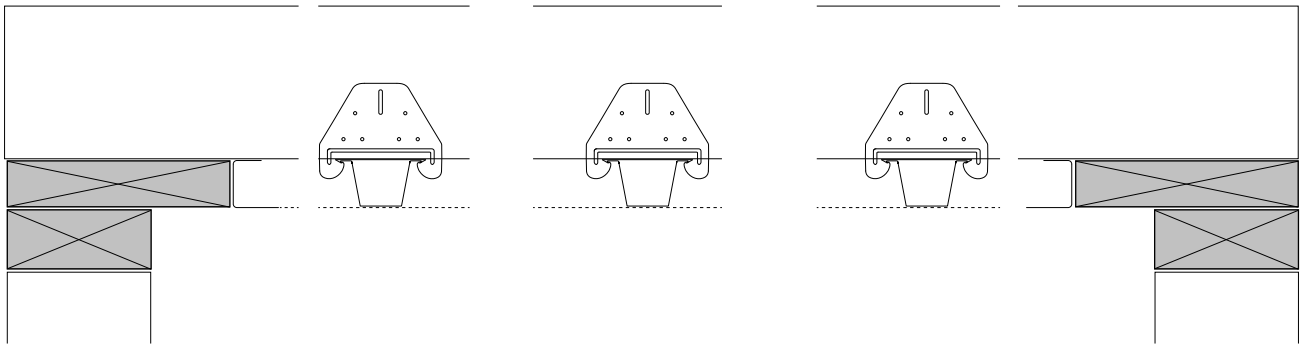
The clips are pressed metal tabs, manufactured locally in New Plymouth from 0.95mm BMT galvanised sheet steel. It is screw fixed to the sides of timber ceiling joists, truss chords or floor joists. The central fixing slot provides 25mm of vertical alignment to achieve a level ceiling line.

6.3 Installation

Installation of the Steelformers Ceiling Batten System must be completed by, or under the supervision of a Licensed Building Practitioner with the relevant license class. The Steelformers Ceiling Batten System is suitable to support single layered plasterboard ceiling linings up to a maximum weight of 25 kg/m2 - e.g. 13mm plasterboard is nominally 12 kg/m2. Ensure the linings are installed as per the lining manufacturers recommendations.

The Steelformers Ceiling Batten System can support the weight of small, lightweight items with a maximum mass of 7.5 kg, fixed to the ceiling lining with not more than 1 item per 1 m2. Heavy items such as range hoods, garage door openers, large luminaries and the like must be fixed to truss chords, ceiling joists or floor joists or blocking fixed between these elements.

Set out example:



Step-by-step guide:

1. Establish a datum line for the ceiling. Place a string line on the datum line at right angles to the battens. The best place is under the truss or joist closest to the room centre.

2. Install c-channel around the perimeter of the room using 10x16mm wafer head screws (for timber framing), or 12x20 steeltite screws (for steel framing). The c-channel must be fixed at the top plate with the longer leg at the bottom so that the end of the ceiling batten can slot it. C-channel should be fixed at maximum 1200mm centres.

3. Install the clips at 600mm centres using three 32x8g gold passivated, wafer head, course thread screws (for timber framing), or three Konnect ST12-14tp x20mm CLS5 Steeltite self-drilling screws (for steel framing). The clips are to be fixed to the side of the truss, rafter, ceiling or floor joists. Initially, use the central fixing slot so that the clip can be adjusted up or down to achieve a level ceiling line. Once level, secure the clip firmly by utilising the other available fixing holes for the remaining two screws.

Step-by-step guide cont.

4. Fix the ceiling batten into the c-channel using Konnect ST12-14tp x20mm CLS5 Steeltite self-drilling screws. If trimming of the ceiling batten is required*, be sure to ue tin snips or an angle grinder (abrasive cutting could damage the galvanised coating). Recommended spans for ceiling batten between supporting framing is max. 1200mm and max. 900mm for a single span.

Things to remember:

- **List the quantity and lengths of ceiling batten required for each room and Steelformers will label them for easy on-site identification*
- *The ceiling battens can be end joined by butt joining where the ceiling battens meet the supporting framing*
- *Consult an electrical contractor for any earthing requirements that may need incorporatiing*

masterspec partner

7.0 Stealth Roof Windows®

SECTION 7 / STEALTH ROOF WINDOWS®

7.1 Product overview

BRANZ appraised Stealth Roof Windows® are for use on roofs of buildings to provide natural light into interior spaces. Stealth Roof Windows® are available in a range of sizes or can be custom made to order. They feature thermally-broken aluminium frames suitable for uses with profiled metal longrun, metal tile and low slope membrane roofing.

We've partnered with handpicked suppliers, their proven track record in delivering quality products stands behind our new Stealth Roof Window® range. The extrusions supplier has their own recycling facility (unique in New Zealand) offering the most environmentally sustainable product in the market.

Key features

- Designed to be the highest performing, thermally broken roof window available in New Zealand. With 12% more insulation than our nearest competitor, we aim to be the best
- A range of options for tinting the glass
- Insulated NZ Metro glass unit can be specified as an acoustic unit, perceived sound reduction can be as high as 1/2 the original noise level
- Acoustic unit also has the added benefit of 99% elimination of harmful UV rays
- Quality Italian control mechanisms on opening sashes which can be integrated with insect screens and rain or wind sensors
- Highest recycled content of any aluminium produced in New Zealand

STEALTH STANDARD WINDOW RANGE

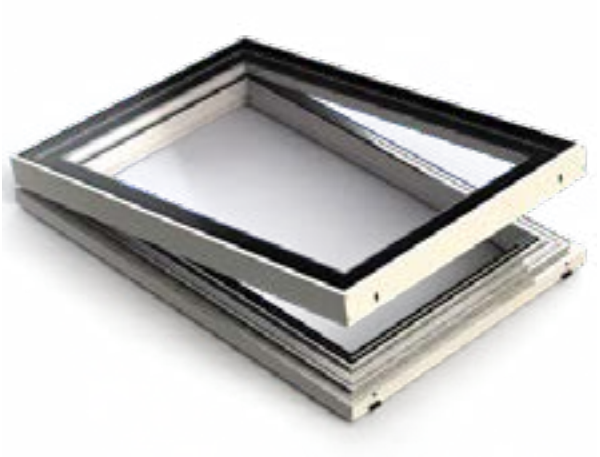
Stealth Roof Windows® are offered in a range of standard sizes and one colour to provide a substantially shortened lead time. Like our Elite range, all the same glass specifications are used, the same control gear for opening windows and the same quality approach.

- Sizes (Internal Measurement)
  - 580 x 765mm (fixed only)
  - 980 x 765mm (fixed and opening)
  - 1380 x 765mm (fixed and opening)

- Colour: Matte Black

- Installation: Below 5 metres from floor level

- Delivery: 5 working days turnaround (or available for pickup from: Auckland, Christchurch and New Plymouth stores.)



STEALTH ELITE WINDOW RANGE

• Sizes (Internal Measurement)

The Elite range of Stealth Roof Windows® allows the architect, designer or homeowner to design a roof window of any dimension and colour up to a size of 780 x 1380mm (opening) or 1200 x 2400mm (fixed). The Elite range of roof windows can be made to measure and ordered with either fixed glass or an opening sash for ventilation.

• Colour

The Elite range of Stealth Roof Windows® can be optioned so that the exterior portion of the framing can be colour matched to the roofing iron, while the inside can be colour matched to the ceiling.

• Delivery: 15-20 working days turnaround (delivery times depending on colour selection and glass specification)

7.3 Stealth Roof Windows® Limited Warranty

Stealth Roof Windows® warrants that our products, Fixed and Operable Roof Windows, are free from defects of workmanship and/or material for a period of time as stated below from the date of purchase.

LENGTH OF COVERAGE	
STEALTH FIXED ROOF WINDOW	YEARS
Components	10
Insulated Glass	10
Powder Coating - Duralloy®	10*

ELECTRIC OPENING STEALTH ROOF WINDOW	YEARS
Components	10
Insulated Glass	10
Powder Coating - Duralloy®	10*
Motors/sensors	3
Controller	3

** Powder coating has specific care requirements when close to breaking surf or geothermal areas. Duralloy® states it's only applicable greater than 100m from the high tide mark. Maintenance must be carried out on a quarterly cycle, washed with warm soapy water for the warranty to remain intact. For properties within the 100m mark from high tide specify Duratec®*

TO CLAIM WARRANTY

Within (30) days of discovery of defect, the buyer should contact:

1. who the owner purchased the product from, or
2. contact, Stealth Roof Windows® at www.stealthroofwindows.co.nz

7.4 Distributors

Taranaki Steelformers Ltd

23 Katere Road, New Plymouth 4312

P. 0800 476 634 or 06 758 3831

E. npoffice@steelformers.co.nz

Wanganui Steelformers Ltd

380 Heads Road, Wanganui 4501

P. 0800 800 077 or 06 344 5142

E. chris@steelformers.co.nz

King Country Longrun

Huia Street, Taumarunui 3920

P. 07 895 6464

E. blair@steelformers.co.nz

Franklin Longrun

36 Franklin Road, Auckland 2120

P. 09 238 9249

E. info@franklinroofing.co.nz

Central Roofing Ltd (approved installer)

9 Craig Place, New Plymouth 4312

P. 06 7596909

E. office@centralroofing.co.nz

RoofingSmiths Christchurch

13 Parkhouse Road, Christchurch 8042

P. 03 349 7218

E. mike@roofsmithschristchurch.co.nz

8.5 Stealth Roof Windows® step-by-step installation guide

Click on this link to view and/or download a PDF version of the guide

BRANZ Appraised
Appraisal No. 987 [2018]

Source: www.stealthroofwindows.co.nz