

Insulated Panels
Australia

KingZip Standing Seam System Roof & Wall Product Data Sheet



Product Data

KingZip enables you to realise building envelope designs with total flexibility, creating angular, convex, concave and tapered architectural forms on roofs and walls.

Application

The KingZip system is a versatile external solution suitable for a wide range of building applications. It is specifically designed for use in both insulated and non-insulated roofs and walls, offering functionality, performance, and architectural flexibility.

Roof applications: KingZip sheets are installed with a slope from the apex to the eave, ensuring a weather-tight solution that effectively protects the building.

Wall applications: KingZip sheets can be used as a façade feature or can be integrated into a wall system, typically installed vertically.

Cover Widths

- Standard widths: 300 mm, 400 mm.
- Taper widths: 250 mm to 400 mm.

Custom pan widths available. Please contact your local Kingspan representative for further information.

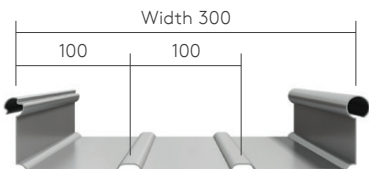
Applicable Roof Pitch

KingZip Standing Seam System is suitable for installation on roofs with various pitches. The following pitch requirements apply:

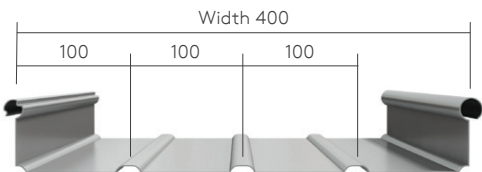
Continuous sheet ridge to eaves	≥ 1.5°
Welded end lap joint	≥ 1.5°
Welded roof penetrations	≥ 1.5°
Laid in rooflights ridge to eaves	≥ 1.5°
Rooflights lapped onto KingZip	> 4.0°
End lap joints with sealants and fixings	> 3.0°

Note: Roof pitches should be determined after consideration of loadings and deflection. Gutters must be correctly installed to maintain roof slope and avoid ponding along the eaves. Where on-site welding is required, all welded areas must be site-painted by others. For roof applications with pitches ≤ 3.0°, contact your local Kingspan Sales Representative for guidance.

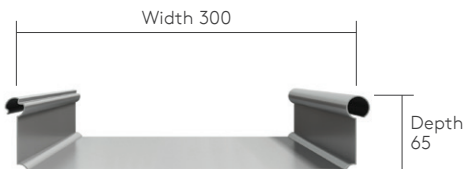
KingZip 300 Mini-Rib



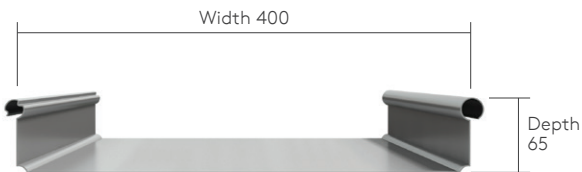
KingZip 400 Mini-Rib



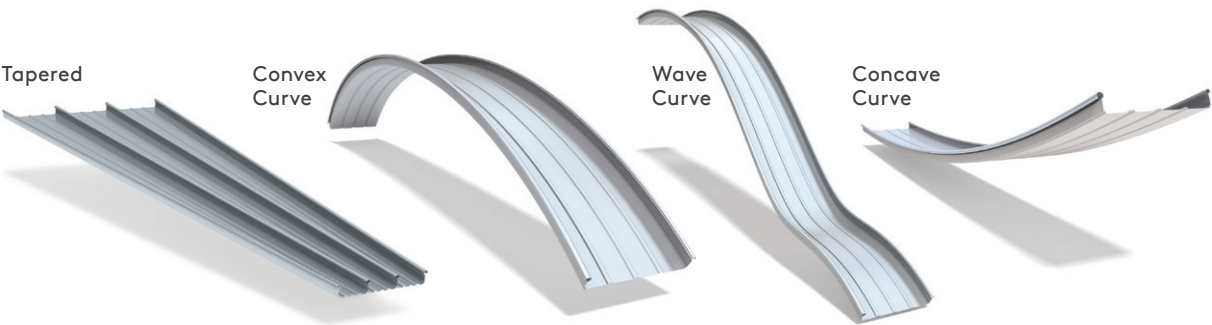
KingZip 300 Flat



KingZip 400 Flat



KingZip 400 is the most common and economical profile. Contact your local Kingspan representative for specification assistance.



All dimensions are in mm.



Product Detail

Materials:	Steel and Aluminium
Nominal thickness (mm):	0.90, 1.20 (aluminium) / 0.75 (Colorbond Steel)
Profile depth (mm):	65
Sheet length (m):	1.5 to 15 (factory rolled – due to transport limitation) 1.5 to 150 (site rolled)
Sheet width (mm):	300 and 400 standard pan widths. 400 is most economical. Custom pan widths available*
Fix method:	KingZip sheets are mechanically seamed to halters on site using a zipping machine, creating a concealed fixing

* Please contact your local Kingspan Sales Representative.

KingZip Typical Weights

Cover Width (mm)	Steel Thickness (mm)		Aluminium Thickness (mm)			
	0.75		0.9		1.2	
	kg/m ²	kg/lm	kg/m ²	kg/lm	kg/m ²	kg/lm
300	9.58	2.87	3.90	1.17	5.20	1.56
400	8.69	3.48	3.54	1.42	4.72	1.89

Fire Performance

KingZip Standing Seam is manufactured from a pre-finished solid aluminium or steel material which meets the requirements of clause C2D10 (6)(e) of the National Construction Code (NCC). Therefore, it can be used wherever a non-combustible material is required by the NCC.

Reaction to Fire

Test	Test Method	Result
Combustibility test for materials	AS 1530.1: 1994 (2016)	Not Deemed Combustible (KingZip aluminium or steel, uncoated)
Ignitability	AS/NZS: 1530.3: 1999	Ignitability Index: 0
Flame Spread		Spread of Flame Index: 0
Heat Release		Heat Evolved Index: 0
Smoke Release		Smoke Developed Index: 1-2

Tolerances

- Cover width: ± 2 mm
- Edge squareness: 1 % of sheet cover width
- Up to 10 m long: +10 mm / -5 mm
- Over 10 m long: +10 mm (+1 mm per metre length over 10 m) / -5 mm

Coating Finishes

The KingZip external weather sheets are available in a variety of finishes including:

- **Aluminium:** PVDF and PVDF Multi-layered systems
- **Steel:** Colorbond (standard, Ultra, and metallic)

For other bespoke solutions, such as mill finish, please contact your local Kingspan Sales Representative.

Product Data

Curving

KingZip sheets are available in a variety of curved options to suit specific project requirements, and to accommodate various architectural building shapes.

Curving operations can include:

- Natural self-curving to a certain radius
- Smooth or crimp curving
- Concave, convex, or a combination of both curves to form a wave

Parallel Convex Curve	Gauge (mm)	Radius (m)
Site sprung curved sheets	0.9 aluminium	45.0
	1.2 aluminium	60.0
	0.75 Colorbond steel	60.0
Smooth rolled curved sheets (recommended)	0.9 aluminium	6.0
	1.2 aluminium	3.0
	0.75 Colorbond steel	15.0
Factory crimp curved sheets	0.9 aluminium	750 mm
	1.2 aluminium	600 mm

Parallel Concave Curve	Gauge (mm)	Radius (m)
Site sprung curved sheets	0.9 aluminium	50.0
	1.2 aluminium	60.0
	0.75 Colorbond steel	60.0
Smooth rolled curved sheets (recommended)	0.9 aluminium	15.0
	1.2 aluminium	8.0
	0.75 Colorbond steel	20.0

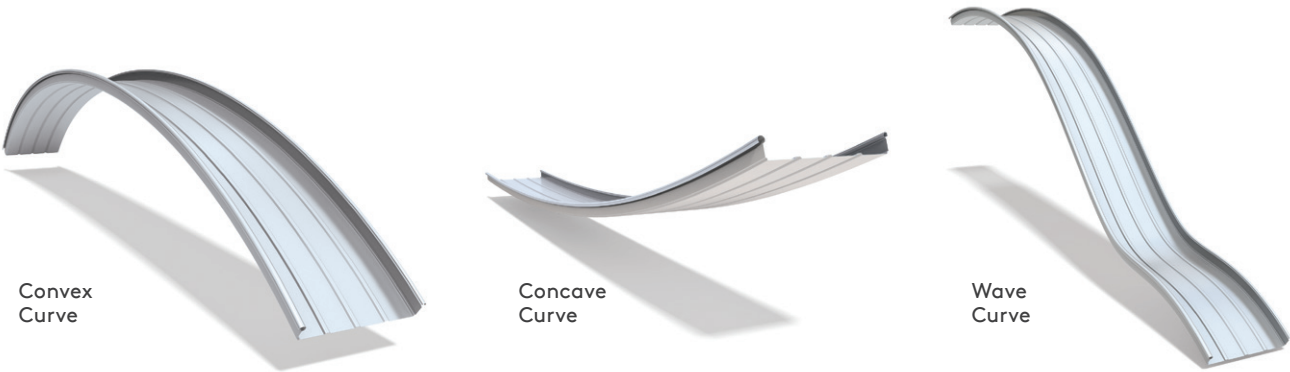
Notes:

Curved sheet and wave curve installations require a minimum 300 mm of linear (straight) section before and after each curve.

Crimp curve not available on site.

When straight sheets are sprung down to match the curve, the halter brackets need to be set out by approximately an extra 5 mm of the cover width of the sheet, dependant on the radius. This relieves the stress from the pan by allowing the upstands to open out.

Please contact your local Kingspan Sales Representative for further information about curved installation, including other metals and radii outside the above parameters.



Product Data



Tapering

KingZip tapered sheets provide the flexibility to design more complex geometries, such as curved or radial roof panels.

Tapered sheets enable the creation of planar, rounded, or irregular shapes, giving architects and designers greater freedom to explore innovative roof forms and unique building profiles.

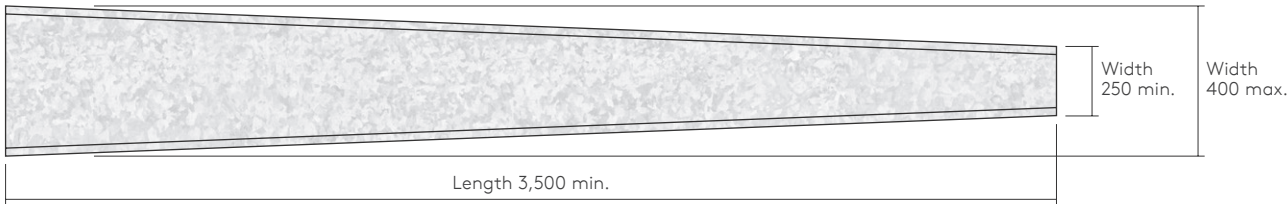
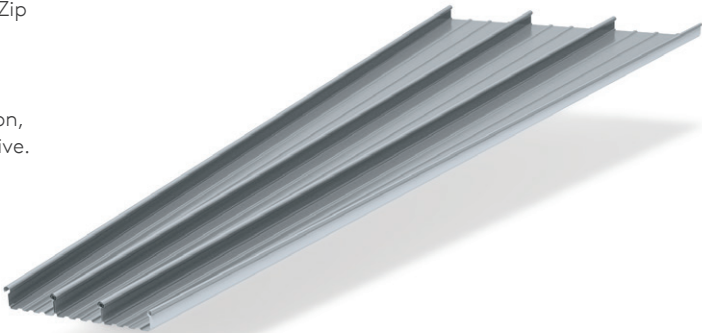
Tapered sheets can be sprung curved in aluminium or steel, and smooth rolled curved in aluminium, to the same radii as KingZip sheets, and can be fully integrated to KingZip applications.

- Maximum taper: 50 mm per 1,000 mm

For taper curve capabilities and taper width verification, please contact your local Kingspan Sales Representative.

Minimum length	3.5 m
Maximum sheet length (limited by transport vehicle dimensions)	15 m
On-site manufacture length	up to 150 m
Minimum taper width	250 mm
Maximum taper width	400 mm

Note: KingZip can be tapered in aluminium or steel.



All dimensions are in mm.

Product Data

End Laps

Continuous ridge-to-eave installation is recommended to eliminate or minimise end laps, particularly for steel sheets where welding is not possible.

Where sheets are required to be end lapped then the sheets will need to be notched as shown below.

Riveting and sealing of end laps can only be used on roof pitches of 3° or greater after deflection, and must be continuously supported.

For roof pitches between 1.5° and 3° after deflection, aluminium KingZip sheets must be used and site welded to ensure there are no gaps through the external weathering skin. Laps must be continuously supported, and welded areas must be site-painted by others.

Welding provides a more secure overlap, and can also be used on steeper roof pitches if desired.

For specific advice on end lapping please contact your local Kingspan Sales Representative.



Production Method

KingZip sheets can be manufactured either at Kingspan's production facility to a maximum length of 15m, or using mobile roll-formers that can be deployed and operated across Australia, subject to site conditions.

With access to a large fleet of mobile roll-formers, we are able to provide cost-effective, high-quality standing seam solutions while minimising logistical costs. This flexible production capability also supports complex architectural designs and enables greater creative freedom.

On-site Roll-forming

On-site roll-forming provides key advantages, especially when long, continuous sheet lengths are required up to a maximum sheet length of 150 metres. This method allows sheets to be produced to exact project-specific lengths, reducing the number of joints and optimising installation efficiency.

Drumming

The impact of rain or hail on a roof will always produce a noise. This sound energy (vibration) is then transmitted through the roof construction to the inside of the building.

BS 5427: 2016 + A1: 2017 states that this noise can be reduced by the introduction of a flexible insulation layer directly under the outer sheets. The insulated KingZip system deadens such sounds with absorption by virtue of the soft insulation being compressed to the underside of the roof sheet.

Lightning Protection

A close liaison should be ensured between the architect, the builder, the lightning protection system engineer and the appropriate authorities throughout the design stages to meet or exceed the requirements of AS 1768.

Modern buildings use metal extensively in their structure and there is considerable benefit in utilising such metal parts to maximise the number of parallel conducting paths. The KingZip roof systems combined with the steel frame of the building can be used to provide a principal lightning protection system.

Load Span

Specific span performance information can be provided by Kingspan Technical Services on a project-by-project basis.

Site Installation Procedure

Site assembly instructions are available from Kingspan Technical Services.

The appointed contractor should attend the Kingspan product installation training course prior to installation.

Product Data

Aluminium Halter

The aluminium halter is a standard component for KingZip Standing Seam Systems and is used to secure the KingZip external weather sheet to the roof structure. It is available with thermal barrier pads as standard and in a variety of heights.

Product Specification

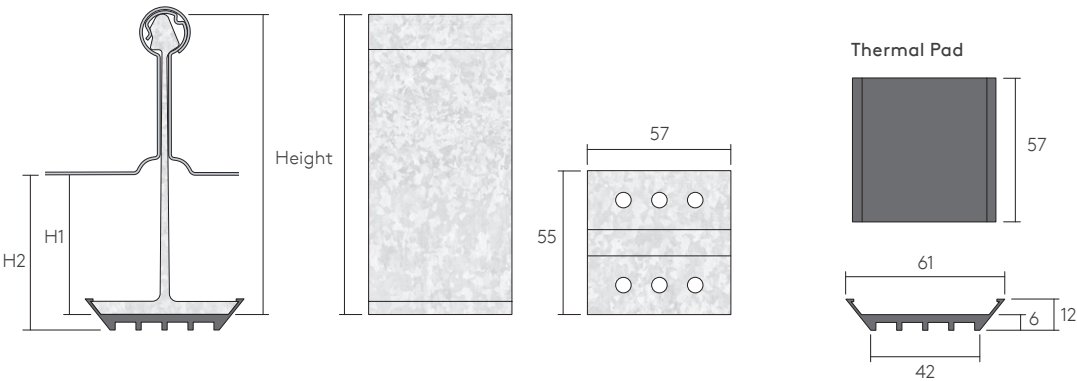
- **Material:** Halter – extruded aluminium alloy AA6082 T6.
Pad – extruded PVC
- **Lengths:** Standard length is 57 mm. Lengths can be increased according to design requirement
- **Heights:** 85, 105, 115, 125, 135, 155, 175, 195, 205, 225 and 245 mm



Dimensions and Weight

Halter Height (mm)	85	105	115	125	135	155	175	195	205	225	245
H1 (mm)	20	40	50	60	70	90	110	130	140	160	180
H2 (mm)	26	46	56	66	76	96	116	136	146	166	186
Weight* (g)	84	98	102	109	113	129	148	150	157	175	194

* Weights shown refer to the 57 mm halter.



All dimensions are in mm.

Product Data

Delivery and Handling

Factory Rolled

KingZip sheets delivered from the factory are packaged in bundles that can weigh approximately 1 tonne.

All deliveries (unless indicated otherwise) are by flatbed road transport to project site. Off loading is the responsibility of the client. Export orders are transported in shipping containers. WA orders are transported in shipping containers, unless road freight is opted for.

Packs up to 10 metres in length can be conveniently unloaded with a forklift, while cranes are necessary for longer packs.

When using cranes to lift the packs, use nylon slings instead of chains. Ensure that the pack does not extend more than 4 metres beyond the last sling. Maintain a maximum distance of 6 metres between slings. For extended packs, the use of spreader beams is required

Note: Customers must promptly remove the protective film and other delivery packaging right after installation, making sure this is done within a maximum of two months from production date.

On-site

For on-site packing, please contact Kingspan for more information on containerised roll-former machines.

Site Storage

Proper storage of sheets or coils is essential. Place on a clean and level surface within a covered area, with a maximum of two bundles stacked on top of each other. Prolonged storage in non-covered areas is not recommended.

In cases where storage in a non-covered area is unavoidable, position the sheets on a gently inclined surface to avoid water buildup. Protect the bundles with a UV-resistant waterproof covering that allows for adequate air circulation underneath.

Ensure the storage area is located away from potential fire hazards and falling objects to prevent any potential damage.

Contact Details

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