

Insulated Panels
Standing Seam Systems

Protected by



KingZip Standing Seam System Roof & Wall Product Data Sheet



Product Data

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

Application

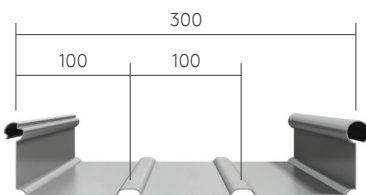
KingZip is designed for use in all roofing applications where the installed roof pitch is 1.5° or greater. KingZip can also be used as a vertically laid wall cladding solution.

Below you can find a more detailed breakdown of roof pitches possible on various applications with KingZip.

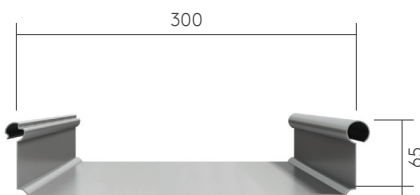
Continuous sheet ridge to eaves	1.5°
Welded end lap joint	1.5°
Welded roof penetrations	1.5°
Laid in rofflights ridge to eaves	1.5°
Rooflights lapped onto KingZip	> 4.0°
End lap joints with sealants and fixings	3.0°

Note: Roof pitches must be achieved after consideration of loadings and deflection. Ensure gutter straps and edge flashing details at the eaves do not reduce the above roof pitches to avoid ponding of water at the sheet edge.

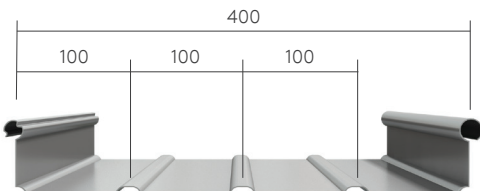
KingZip 300 Mini-Rib



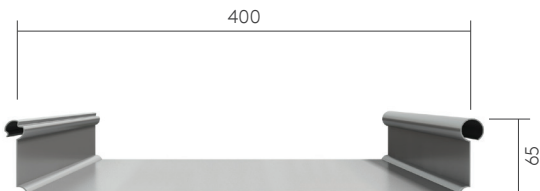
KingZip 300 Flat



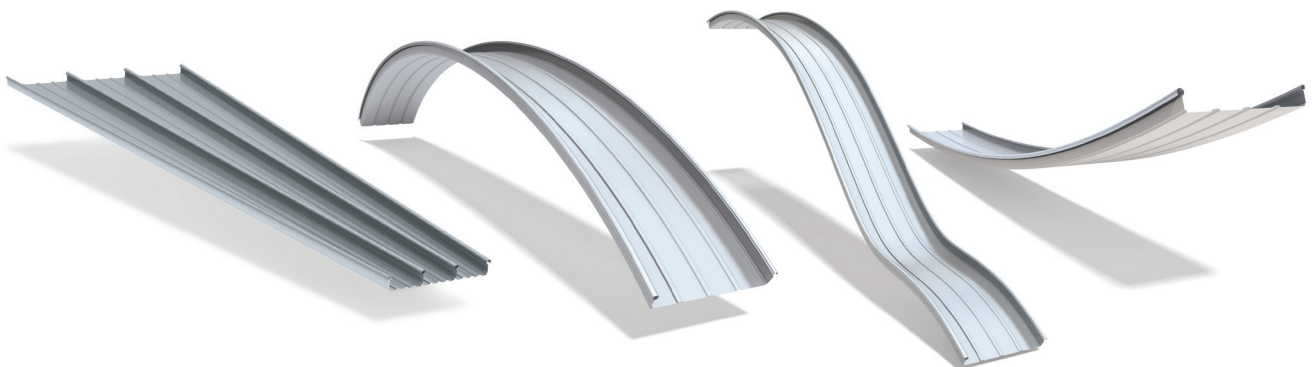
KingZip 400 Mini-Rib



KingZip 400 Flat



KingZip 400 is the most common and economical profile. Contact your local Kingspan representative for information about the most suitable profile for your project.



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 from 200-400 mm.

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

Deemed to Satisfy (DTS) non-combustible under provision C1.9 (e)(v) of the National Construction Code.

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.

Product Data

Curving KingZip

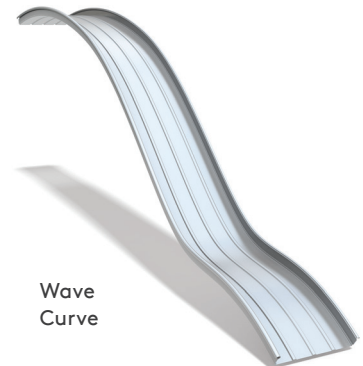
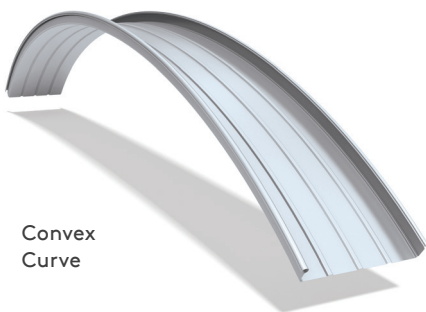
KingZip profiles are available in various curved options to suit the required application. The profile can be concave, convex or wave shaped incorporating both curves in one sheet.

The sheets will self curve to a certain degree, otherwise they can be mechanically smooth or crimp curved as detailed below. 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.

Convex Curve	Gauge (mm)	Recommended Support Spacing (m)	Radius (m)
Site sprung curved sheets	0.9 aluminium	1.5	40.0 / 45.0
	1.2 aluminium	1.6	55.0 / 60.0
	0.75 Colorbond steel	1.6	55.0 / 60.0
Smooth rolled curved sheets	0.9 aluminium	1.5	5.0
	1.2 aluminium	2.0	5.0
	0.75 Colorbond steel	1.6	12.0
Factory crimp curved sheets	0.9 aluminium	1.5	750 mm
	1.2 aluminium	1.6	750 mm
	0.75 Colorbond steel	1.6	750 mm

Concave Curve	Gauge (mm)	Recommended Support Spacing (m)	Radius (m)
Site sprung curved sheets	0.9 aluminium	1.6	50.0
	1.2 aluminium	1.6	60.0
	0.75 Colorbond steel	1.8	90.0
Smooth rolled curved sheets	0.9 aluminium	1.5	8.0
	1.2 aluminium	1.6	8.0
	0.75 Colorbond steel	1.6	10.0

For other metals and radii outside the above parameters consult our Technical Department.



Tapering

KingZip tapered sheets provide the flexibility to design more complex geometries, for example, curved on plan or dome structures.



Tapered sheets have the same curve radii as KingZip sheets and can be fully integrated to KingZip applications.

Minimum length: 3.5 m

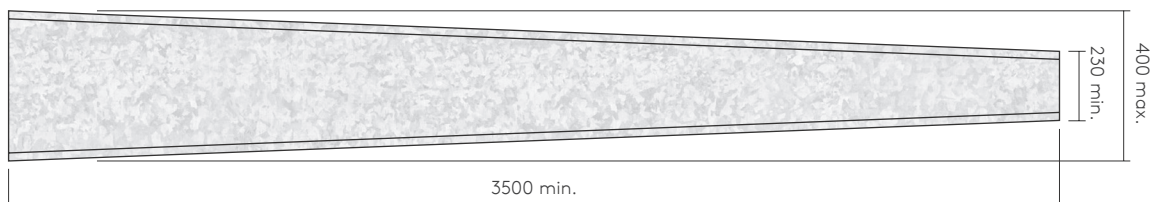
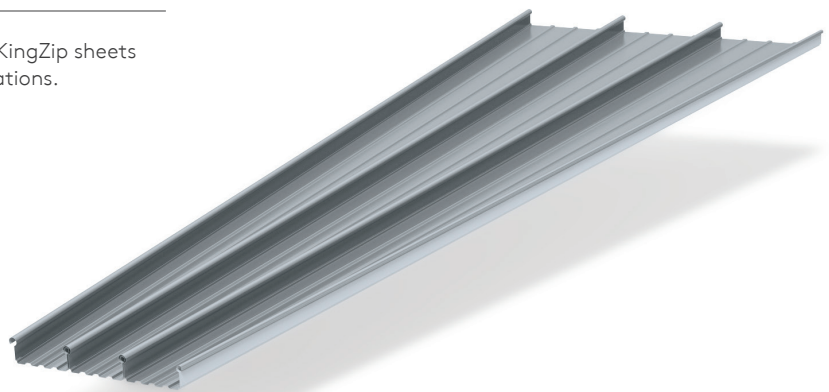
Maximum sheet length: 15 m (limited by transport vehicle dimensions)

On-site manufacture up to 150 m

Minimum taper width: 230 mm

Maximum taper width: 400 mm

Note: KingZip can be tapered in aluminium or steel.



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Finishes

The aluminium external weather sheets are available in a variety of finishes including; mill finish or plain stucco embossed finish, Kingspan PVDF and Kingspan Polyester. Also available in Colorbond standard, ultra and matt.

End Laps

Where sheets are required to be end lapped then the sheets will need to be notched as shown below. For a pitch greater than 3° the overlap joint must be fixed with end lap rivets (6604/6/3W) and sealed with end lap sealant (TAPE/BM/06).

For a more secure overlap and any pitch below 3°, site welding will ensure that there are no penetrations of the external weathering skin.



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 BS EN/IEC 62305.

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.

Contact Details

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Product Data Sheet.

For the product offering in other markets please contact your local sales representative or visit www.kingspanpanels.com

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