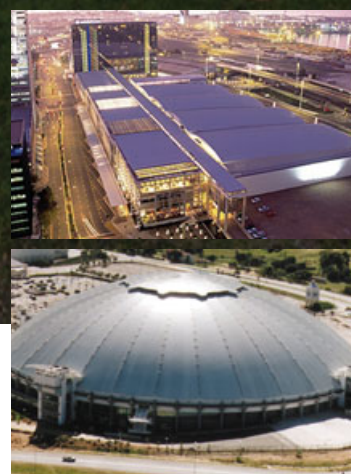
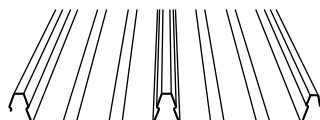


Global Roofing Solutions Klip-Lok 406™



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Visit www.globalroofs.co.za or email
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Typical specification

Materials

The roofing shall be Klip-Lok 406™ profile, roll-formed in continuous lengths and can be light industrial / heavy industrial in (select from table below). Klip-Lok 406™ is obtained from Global Roofing Solutions (Pty) Ltd.

Material	Steel	Colour One Side	Colour Two Side
Galvanised Z275	ISQ 550	_____	_____
Chromadek® Z200		✓	Special
Zincalume® AZ150	G550	_____	_____
Clean COLORBOND™ AZ150		✓	Special
ZincAL® AZ150	G550	_____	_____
COLORPLUS® AZ150		✓	Special

The Profile

Is roll-formed from certified steel complying with (select from steel column in above table). The profile shall have three trapezoidal ribs at 203 mm centres giving a nett cover of 406 mm. The rib height shall be 41 mm and provide capillary breaks. The male rib shall have spurs to ensure a positive double interlocking action at side-laps. Each pan shall incorporate two stiffener ribs.

Assembly

It is recommended that Klip-Lok 406™ sheeting be laid by an approved contractor in strict accordance with manufacturers specifications. When using a GRS (Brownbuilt) Approved Contractor, a five year guarantee on site-workmanship and water-tightness may be issued after approval by Global Roofing Solutions (Pty) Ltd.

Flashing

Stop endings must be formed at the apex and the pan turned down at the eaves to form a drip. The roof sheeting shall be closed as necessary with purpose made flashings of a design approved by the supplier.

These flashings shall be notched around ribs where necessary and fixed on S10 clips. All these operations must be performed with special tools available from the supplier.

Site handling

All Klip-Lok 406™ materials should be suitably supported under cover until required to be hoisted into final position.

Cleaning up

The completed roofing, including gutters, must be handed over free of any swarf and other debris.

Quality assurance

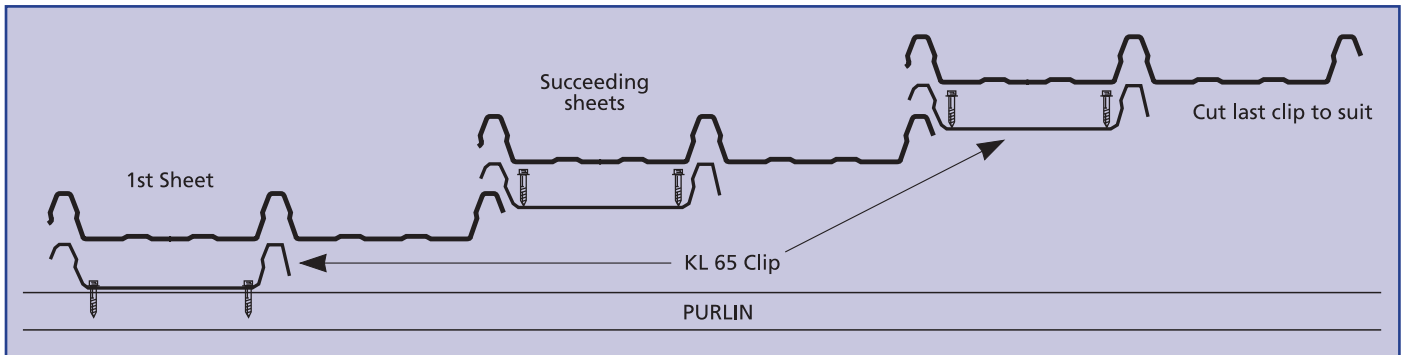
The manufacturer shall be assessed and certified as complying with ISO 9001:2008 Quality Management System.

Translucent Sheeting

The Klip-Lok 406™ profile is available in Polycarbonate and Fibreglass (GRP).

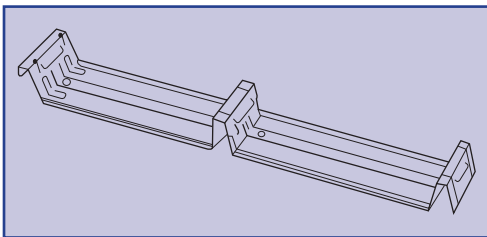


The concealed fixing concept



Fasteners

The recommended fasteners for fixing the KL 65 clips to steel or timber purlins are as follows:



Steel Purlins 1mm to 4,5mm thick

No.10-16 x 16mm long self drilling Wafer head PH2 screws #3 drill point.

Steel Purlins 6mm to 12,5mm thick

No.12-24 x 38mm long self drilling Wafer head PH3 screws #5 drill point.

Timber Purlins

No.10-11 x 45mm long self drilling Wafer head PH2 screws, type 17 drill point.

Where insulation is installed between purlin and sheeting, the length of screws should be increased depending on the compressed thickness and density of the insulation.

For Steel Purlins – At least 3 threads should protrude past the support.

For Timber Purlins – The screw should penetrate the purlin by the same depth recommended as if there was no insulation.

***For light steel frame purlins less than 1mm thick, please contact GRS.**

Note

Fasteners must be selected to match the life expectancy of the roofing and cladding material. Class 3 fasteners, complying with SANS 1273, should be used in conjunction with all roofing and cladding material.

Note

Where screws exceed 45mm long, they should be No.12 with a PH3 head.



Additional applications

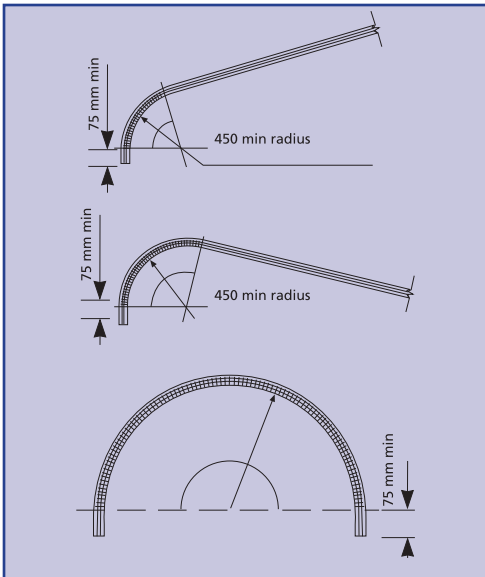
Sheet lengths

Klip-Lok 406™ is available ex-factory in sheet lengths limited only by transport restrictions, normal loads 12.5 m and abnormal loads 18.6 m. Longer lengths can be milled on site, eliminating end laps which are not recommended.

End lapping negates the concealed fix concept and no water tightness guarantee can be given.

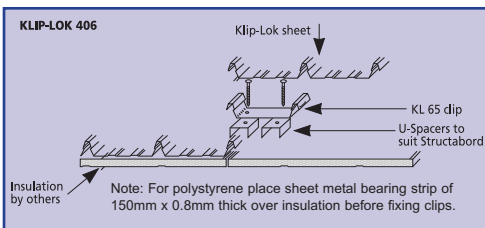
End lapping reduces the life expectancy of the roof, due to corrosion.

Bullnosing and cranking



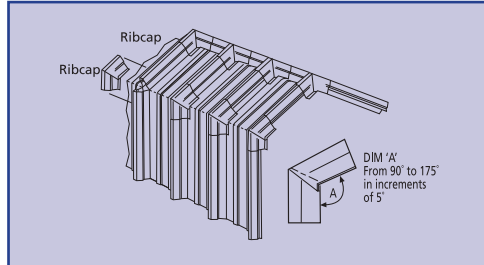
Note

Reverse cranking is not possible.



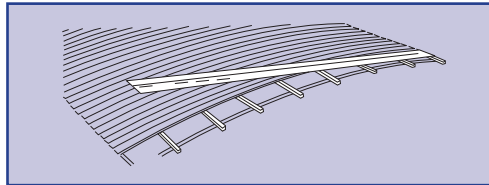
Please contact GRS for insulation specific fixing details.

Rib cap detail



Springing

Klip-Lok 406™ can be sprung to a minimum radius of 36 m convex or 40 m concave.



Note

Consideration for road transport has to be taken into account.

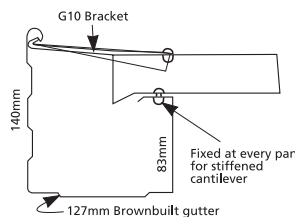
Refer to Erection / Technical manual for detailed dimensions and fixing instructions.

Site cranking for milled sheets is available on application.

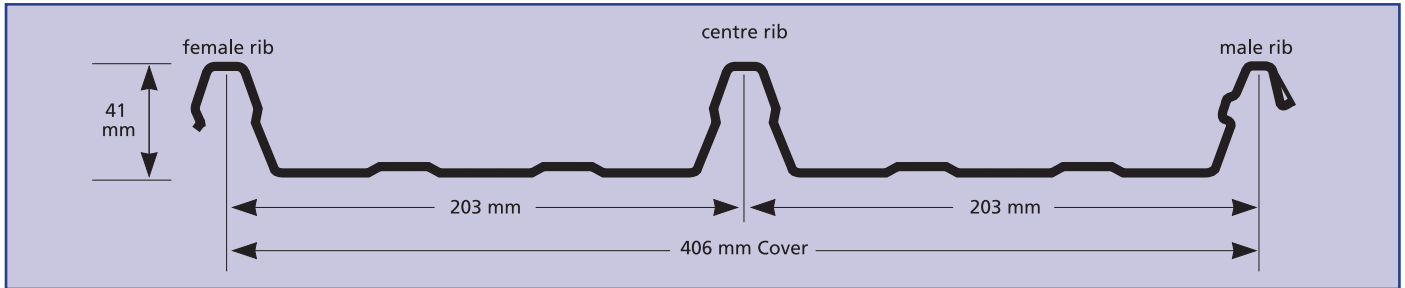
Gutters and fascias

Klip-Lok 406™ in addition offers a fascia gutter and a fascia capping, with horizontal stiffening ribs rolled in, giving a clean unbroken surface.

Used both as gutter and barge capping, the fascia gutter permits clean lined eaves for an attractive finish. With the gutter attached by means of the appropriate concealed bracket and verandah bolts to the sheeting trough and the concealed support bracket pop rivetted to the narrow flute of the sheeting at 1218 mm centres.



Profile : Klip-Lok 406™



Load span table

The recommended purlin support centres are based on the following design criteria and obtained through testing:

	Ultimate Superimposed Distributed Load	Ultimate Uplift Load
ROOFS	1.50 kN/m ²	1.60 kN/m ²
WALLS	0.75 kN/m ²	

Drainage table

Maximum roof run (in metres) for roof slopes and rainfall intensities shown. These figures are based on unrestricted, free flow of water.

Roof Slope	Rainfall Intensity mm/h			
	250	300	400	500
1 in 50 (1°)	64	53	40	32
1 in 30 (2°)	80	66	50	40
1 in 20 (3°)	94	78	58	46
1 in 12 (5°)		95	70	56
1 in 7.5 (7.5°)			83	66
1 in 6 (10°)			91	73

MAXIMUM ALLOWABLE SUPPORT SPACINGS

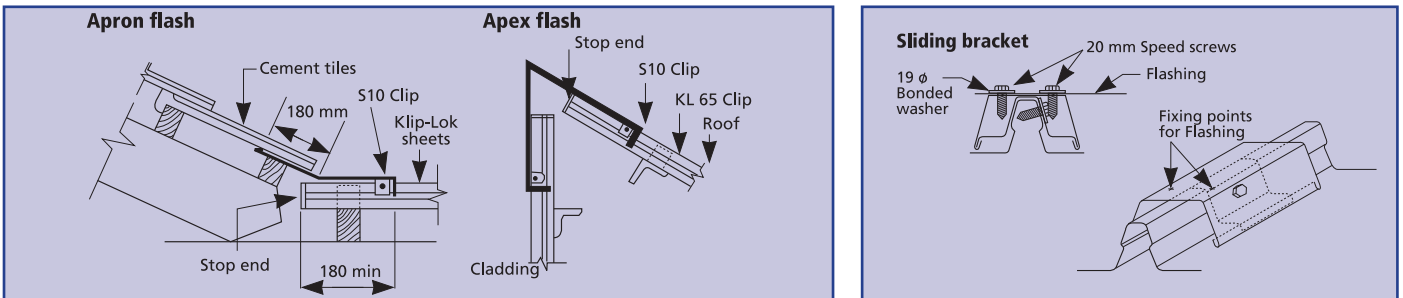
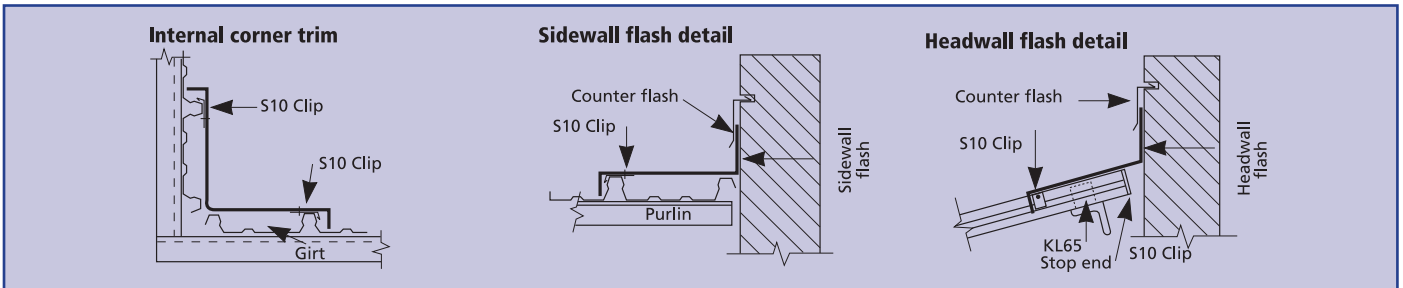
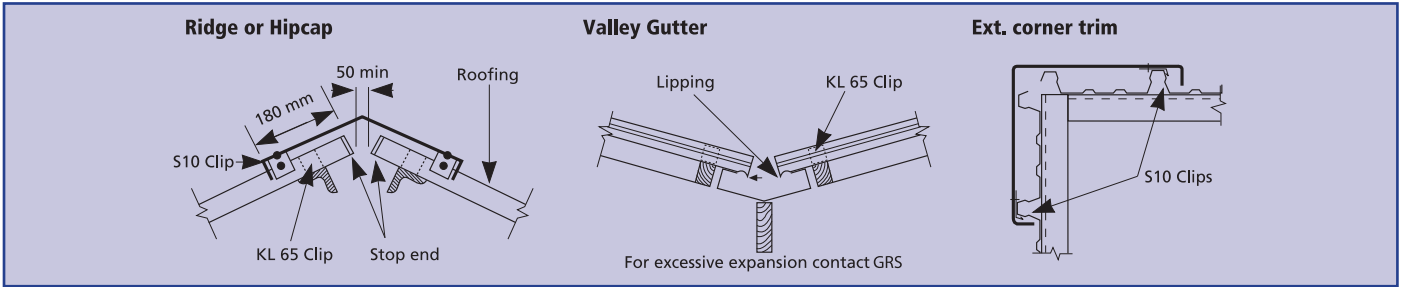
TYPE OF SPAN	GALVANISED / CHROMADEK®		ZINCALUME® / COLORBOND™		ZINCAL® / COLORPLUS®	
	0.5 mm ISQ550 (3T)	0.58 mm ISQ550 (3T)	0.47 mm G550	0.53 mm G550	0.5 mm G550	0.55 mm G550
Roofs						
Single Span	1.400 m	1.800 m	1.300 m	1.500 m	1.400 m	1.800 m
End Span	1.700 m	2.100 m	1.600 m	1.900 m	1.700 m	2.100 m
Internal Span	2.000 m	2.500 m	1.900 m	2.300 m	2.000 m	2.500 m
Cantilever (Unstiffened)	0.180 m	0.260 m	0.150 m	0.180 m	0.180 m	0.200 m
Cantilever (Stiffened - max sheet length of 13m)	0.400 m	0.600 m	0.350 m	0.400 m	0.400 m	0.450 m
Normal mass kg/m ²	5.84	6.78	5.31	5.98	5.92	6.43



Popular flashings

Available in 0.58 mm / 0.8 mm thick commercial quality galvanised Z275 steel, 0.53 mm thick Zinalume® AZ150 or 0.55 mm thick ZincAL® AZ150. Or with a colour option

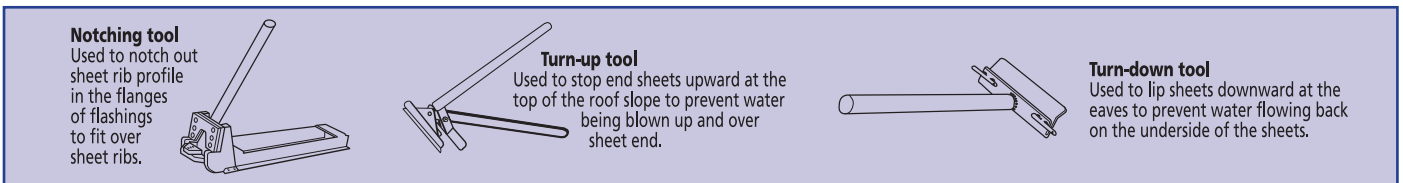
Chromadek® (Galvanised Z200), Clean COLORBOND™ (Zinalume® AZ150) or COLORPLUS® (ZincAL® AZ150) finish to one / two sides.



Please visit our website or contact GRS for standard flashing details

*** When sheet lengths are over 30m flashings must be fixed to sheets using sliding brackets.**

Tools



GRS Klip-Lok 406 05/14

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Cape Town
Durban
East London
Bloemfontein
Rustenburg

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Tel: (041) 596 6121

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