PRODUCT DESCRIPTION & FEATURES

Saflok 700 is a concealed fix sheet profile with an effective cover width of 700mm. It is an angular interlocking standing seam trapezoidal rib profile, and can be roll-formed on site.

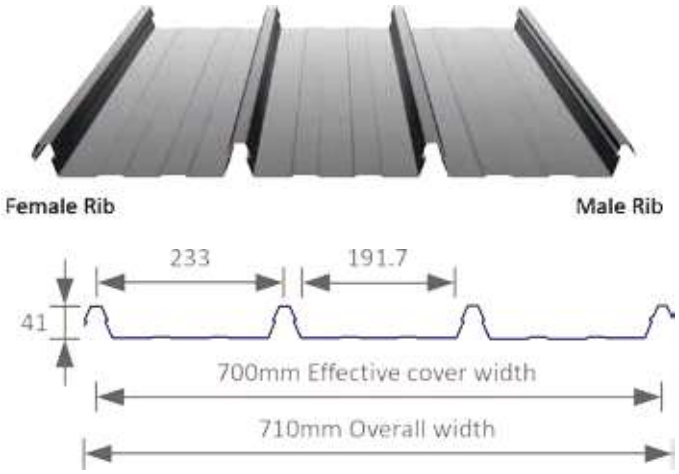
Saflok 700 can be curved or bullnosed to a minimum internal radius of 450mm. Reverse cranking is not possible.

SAMPLE SPECIFICATION

Safintra 0,50mm thick Saflok 700 Colorplus® AZ150 interlocking roof sheeting fixed to steel internal purlins at 1900mm centres and ridge/eaves purlins at 1700mm centres using Saflok 700 clips which are fastened to steel purlins with Fixtite® or Safintra approved wafer head self-tapping fasteners, all in accordance with manufacturers recommendation.

The sheeting will be a double interlocking concealed fix Saflok 700 profile as manufactured by Safintra. Roll-formed in continuous lengths from certified G550 steel.

The profile shall be roll-formed with 4 ribs and centres not exceeding 233mm and a cover width of 700mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum rib height will be 41mm. Two stiffening ribs are incorporated in each pan.



MATERIAL OPTIONS

Aluminium - Zinc	Gauge (mm)
AZ100/150/200 G550 Unpainted or pre-painted	0.47 0.50 0.53 0.55 0.80*
Aluminium	**Gauge (mm)**
Aluminium Mill Finish Aluminium G4 Colourtech	0.80
Zinc-Coated	**Gauge (mm)**
Z200/Z275 ISQ550 Unpainted or pre-painted	0.50 0.58*
Other gauges are available on special request. All material is subject to availability.	
* Available in G275/ISQ300 only	

Note 1

Note that when using Aluminium material on galvanized steel purlins, the use of an isolation tape or similar to prevent the bridging of the two dissimilar materials is recommended. Should the two metals have direct contact it will ultimately result in the manifestation of galvanic corrosion, and the service life of the aluminium will be compromised.

PURLIN SPACINGS

Span tables are for Saflok 700 with light foot traffic only. Span tables are based on 1.5kN downward load and 2kPa negative wind loading. The span tables are maximum recommended spans based on buildings up to 10m high for a basic design wind speed of 28m/s, Terrain Category C.

GAUGE	0.47	0.50	0.53	0.55	0.80	0.80
MATERIAL	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM
ROOFS	mm	mm	mm	mm	mm	mm
Single Span	1400	1500	1700	1800	2300	1400
End Span	1600	1700	1900	2000	2500	1600
Internal/Double Span	1800	1900	2100	2200	2700	1800
Cantilever (Unstiffened)	150	150	200	200	200	100
Cantilever (Stiffened)	300	300	350	350	350	200
Side Cladding						
End Span	2200	2300	2500	2600	2800	2200
Internal Span	2400	2500	2700	2800	3000	2400
Cantilever	150	150	200	200	250	100
Approximate Mass/kg	4.9	5.2	5.6	5.8	8.4	3.2
Design requirements exceeding the above, may be considered in consultation with the Safintra Technical Department.						

*0.80 Aluminium-Zinc Material is rolled in G275.

Saflok 700 clips are calculated at 330g per clip - You will require approximately 1.5 clips per m².

The Saflok 700 clip 35 (as a whole) and the anchor mechanism are separately design registered with the following numbers: for the complete clip: South African Design Appl. No. F2017/00455; and for the anchor mechanism: South African Design Appl. No. F2017/00456*

DRAINAGE TABLE

DRAINAGE TABLE	ROOF SLOPE			
PEAK RAINFALL INTENSITY (mm/h)	1:50 (1°)	1:30 (2°)	1:20 (3°)	1:12 (5°)
150	120	169	207	268
200	90	127	155	201
250	72	100	124	161
300	60	85	104	134
350	51	72	89	115
400	45	63	78	100
500	36	51	62	80
Maximum roof sheet length (m)				

NOTE 2

Concealed fix side cladding must be pierced fixed for prevention of sheet movement due to gravity. Pierce fix the bottom and top of the sheets. Internal pierce fixing may be necessary on longer sheets. Cladding is to be fixed in the pan of the sheet with 12x25mm Fixtite Fasteners - Class 4 only.

*refer to the Safintra Technical Department for more information www.safintra.co.za

LENGTHS & ROOF PITCH

Saflok 700 can be ordered in any practical length as per customer requirements. On-site rolling is recommended for lengths in excess of 13.2 metres. The minimum roof pitch when using Saflok 700 is 2° on steel and 3° on timber.

Saflok 700 was designed for roof pitches from as low as 2°. When applying to very steep roof pitches, it is recommended to pierce fix through each sheet under the flashing or capping. This should be done along the top of the sheet to prevent the concealed fix sheeting from sliding downward on the fixing clips. Clip-in marks might be visible on high pitched roofs or vertical applications. This visual effect might not be aesthetically pleasing in a residential application.

FIXING GUIDE

FASTENERS

Where insulation is to be installed, you may need to increase the length of the fasteners given below, depending on the density and thickness of the insulation and spacer. When the fastener is properly tightened:

• Into metal: there should be at least three threads protruding past the purlin you are fixing to, but the shank guard must not reach that purlin.

• Into timber: the fastener must penetrate the timber by at least 30mm.

FASTENERS FOR SAFLOK 700		
	ROOF	FLASHINGS
Steel	#10 x 22mm Metalfix wafer head	#14 x 22mm Metalfix stitching screw, hex head, tapered
Timber	#10 x 45mm Timberfix wafer head	

SAFLOK 700 CLIP 20

The Saflok 700 Clip 20 incorporates two anchors to clasp the two inner ribs and a dual action gooseneck to positively hold down the male-female joint.

1. The Saflok 700 clip 20 is the recommended clip for Saflok 700 onto timber purlins.
2. The patented design is strong and durable.
3. Suitable for installation on a tubular frame.
4. The entire clip is manufactured from 0.8mm Aluminium-Zinc coated steel for compatibility with sheeting.
5. The extended base plate is self-aligning

SAFLOK 700 CLIP 35

The fully interlocking Saflok 700 Clip 35 incorporates two anchors to clasp the two inner ribs and a dual action gooseneck to positively hold down the male-female joint.

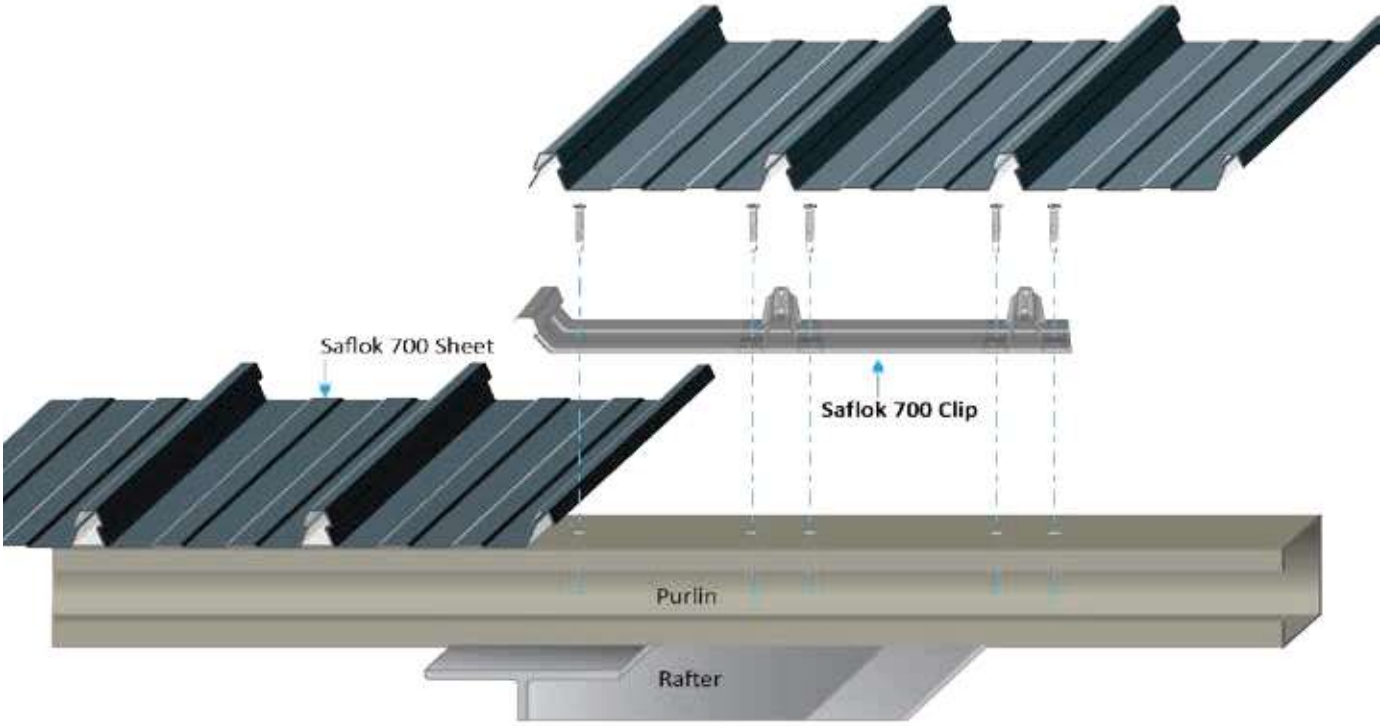
1. The Saflok 700 clip 35 demonstrates an excellent hold down capability in negative wind uplift load tests.
2. Stiffener ribs on a 0.8mm base plate add formidable strength, specifically over the gooseneck.
3. Full width engagement on the gooseneck male rib joint.
4. Five fastening points for strength.
5. Engineer-designed geometry of anchor unit for optimal performance under high wind loads and foot traffic.
6. Entire clip is manufactured from Aluminium-Zinc coated steel for compatibility with sheeting.

NOTE 3
Please note that clips can be manufactured in alternative metals to ensure metal compatibility.

SAFLOK 700 INSTALLATION

1. Starting with the female rib first, align the first row of clips and fasten on all five fastening positions.
2. Lay the first sheet down over the clips. Starting at the eave side, clip the sheet onto the clips by first engaging the anchors and then engaging the female rib over the gooseneck and male rib.
3. Engage the gooseneck of the next row of clips over the male rib and fasten on all five fasteners. Repeat from step 2.

NOTE 4
During installation, clean the roof daily by removing all swarf, pop rivets and unused fasteners or any other debris.

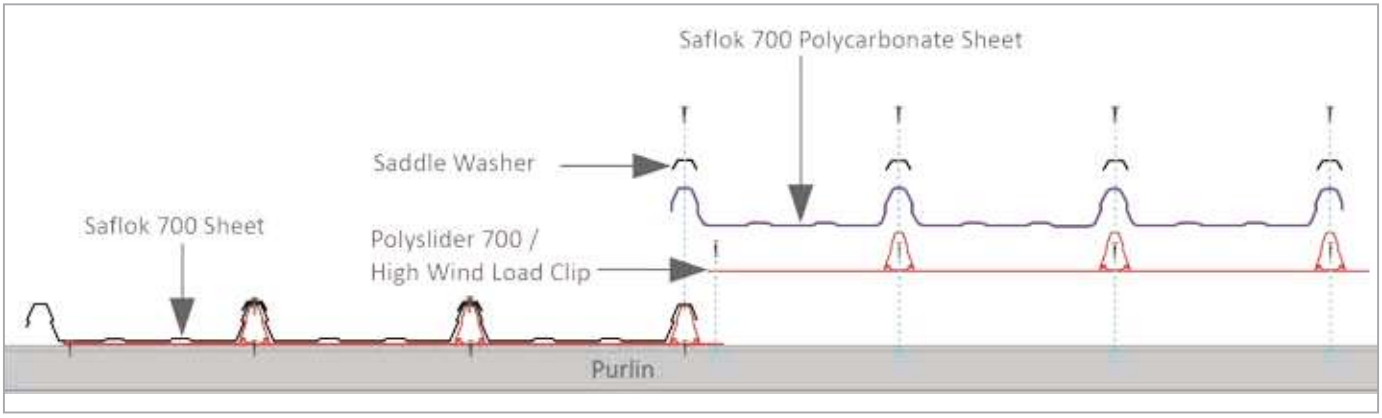


SPECIALISED FIXING ACCESSORIES

HIGH WIND LOAD INSTALLATION DETAILING (HIGH WIND ZONES AND COASTAL WIND BELTS)

Polysliders are specifically designed for polycarbonate or fibreglass sheeting and allow for a large amount of thermal expansion. The components are designed to work in conjunction with a saddle washer which is positively fixed to the sliding bracket. This clip is also used for Saflok 700 sheeting around the perimeters and exposed areas of the building, where high wind load conditions prevail.

Overhangs are prone to a build up of wind pressure and are considered to be the weak point of any roof. All overhangs larger than 500mm need to be positively fixed with a saddle washer to allow for expansion and contraction. These include canopies, walkways, lean-to roofs, loading bays and decorative roofs.



1. Align the first row of the Polyslider baseplates and fasten through the pre-drilled holes in the three positions where the slider brackets attach.

2. Connect the slider brackets to the base plate and lay the first sheet over the sliders brackets.

3. Place saddle washers over the first three ribs above the purlin, and fasten the saddle washers through the ribs into the slider brackets.

4. Place the next row of baseplates and fasten. Overlap the end fastening positions to self-align the row of baseplates. Repeat from step 2.

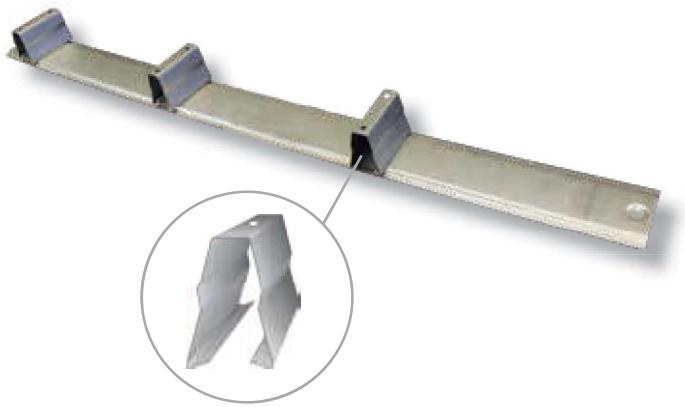
SAFLOK SADDLE WASHER

The Saflok saddle washer works with the Polyslider to positively fix the sheeting (polycarbonate or steel) onto the Polyslider clip without restricting thermal expansion. The saddle washers are cold bonded to a 3mm Ethylene Vinyl Acetate (EVA) seal, which prevents ingress of water through the fastener hole.

NOTE 4
The bonded washer can only be fixed from the top.

POLYSLIDER 700 CLIP | HIGH WINDLOAD CLIP

The polyslider clip consist of a baseplate and three sliding brackets.

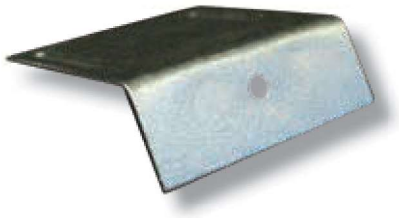


SPECIALISED FLASHING INSTALLATION

Safintra recommends the use of Flashing Slider Brackets for very long sheets. Please consult our Technical Department for assistance.

Sheet Length (m)	Transverse flashings (Ridge, Apex, Headwall)	Longitudinal flashings (Barge, Sidewall)
<20	F10 Bracket -Internal Ribs Only	F10 Bracket Every 500mm
>20	2-Piece Slider -Internal Ribs Only	Clip-on Slider Every 500mm

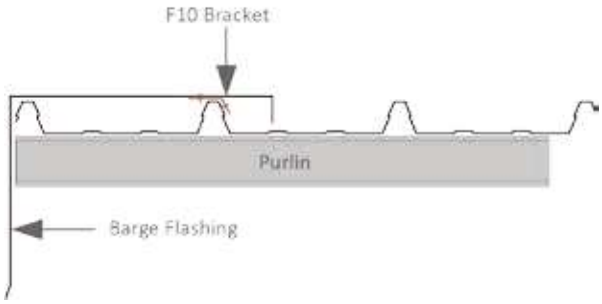
F10 BRACKET FOR FLASHINGS



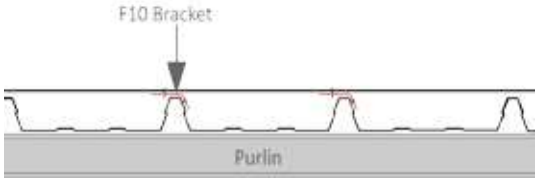
The F10 brackets are used to fix flashings onto Saflok profiles without drilling directly into the sheet. The bracket allows for minimal expansion.

NOTE
This clip is positively fixed. Care should be taken when detailing industrial length sheeting and flashings due to thermal expansion.

F10 bracket for transverse flashings on Saflok profiles.



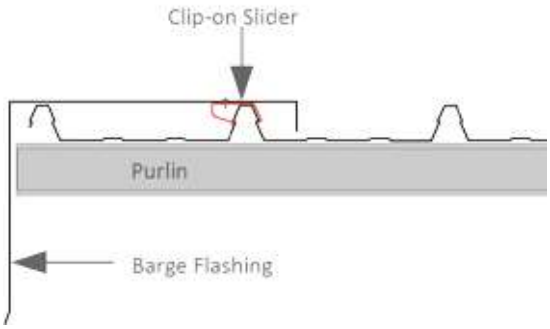
F10 bracket for longitudinal flashings on Saflok profiles.



CLIP-ON SLIDERS FOR FLASHINGS

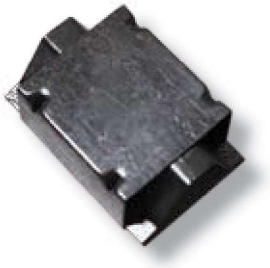
The clip-on slider clips onto the rib of the Saflok profile to fix longitudinal flashings (Barge, Sidewall) to the sheeting without the need for fasteners piercing the sheet. The clip will allow for more thermal expansion than the F10 bracket.

Clip-on Slider bracket for longitudinal flashings on Saflok profiles.

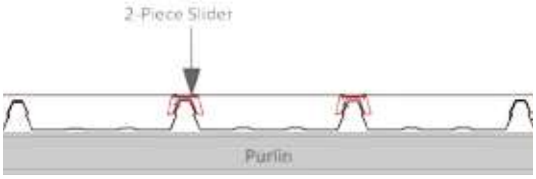


SPECIALISED FLASHING INSTALLATION

2-PIECE SLIDER FOR FLASHINGS

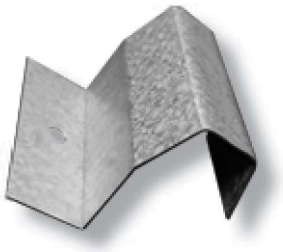


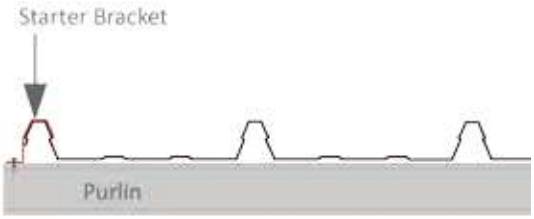
2-piece Slider bracket for transverse flashings on Saflok profiles.



The 2-piece sliders are used to fix transverse flashings (Apex, Ridge, Headwall) to the sheeting without drilling directly into the sheet. This bracket will allow for up to 50mm of thermal expansion.

SAFLOK STARTER BRACKET





The Saflok starter bracket is used to secure the first and/or last rib of the edge sheet without restricting thermal expansion.

SAFLOK 700 LIPPING & BENDING TOOL

The bending tool is used to bend the pan up on the ridge side of the sheet to create a water barrier (Also known as the tanking or turning up of the sheet.). The tool on the bottom is used on the eave side of the sheet to create a turned down lip (Also known as the lipping or turning down of the sheet).

Saflok 700 bending tool application

Saflok 700 lipping tool application

CRANKING

Saflok 700 sheets can be cranked and bullnosed but not reverse cranked. The minimum radius is 450mm. On-site cranking is available on request.

CURVING

For the Saflok 700 profile natural springing occurs at a 36m radius in the convex and at a 60m radius in the concave. It is important to reduce purlin spacing's by 20% when spring curving a roof. Oil canning may be expected.

ROLLING STRAIGHT ONTO A ROOF

It is possible to roll-form straight onto a roof using a scaffold ramp. The limitations are the building height and space needed to roll. A departure angle of 10° is the maximum allowed at any time. A greater angle would damage the sheet when leaving the mill and again when bending to settle onto the roof.

DIMENTIONAL TOLERANCES

A length variation range of +10mm and-0mm, and a width tolerance of ±4mm is permissible.

PRODUCT DESCRIPTION & FEATURES

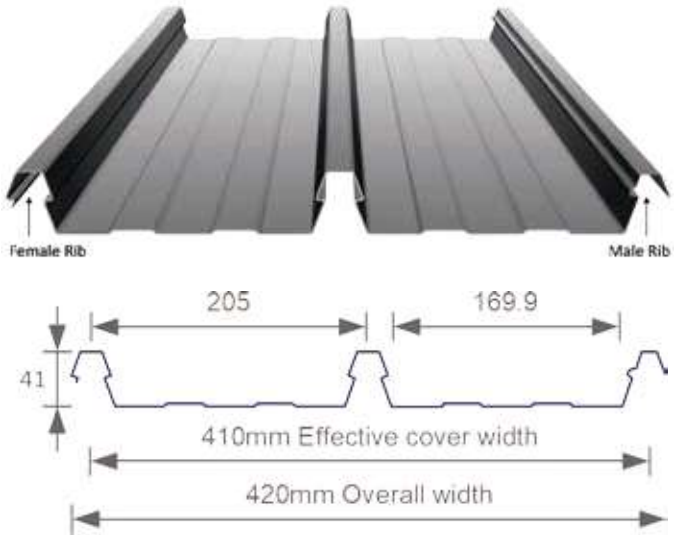
Saflok 410 is a concealed fix sheet profile with an effective cover width of 410mm. It is an angular interlocking standing seam trapezoidal rib profile, and can be roll-formed on site.

SAMPLE SPECIFICATION

Safintra 0,50mm thick Saflok 410 Colorplus® AZ150 interlocking roof sheeting fixed to steel internal purlins at 1700mm centers, and ridge/eaves purlins at 1500mm centres using Saflok 410 clips that must be fastened to steel purlins with Fixtite® or Safintra approved wafer head self-tapping screws, all in accordance with manufacturer's recommendations.

The sheeting will be a double interlocking concealed fix Saflok 410 as manufactured by Safintra, roll-formed in continuous lengths from Aluminium or Aluminium-Zinc coated steel.

The profile shall be roll-formed with 3 ribs at centres not exceeding 205mm and a cover width of 410mm. The male rib is to include spurs to ensure a double interlocking action with adjacent sheets. The minimum rib height shall be 41mm. Two stiffening ribs are incorporated in each pan.



MATERIAL OPTIONS

Aluminium - Zinc	Gauge (mm)
AZ100/150/200 G550 Unpainted or pre-painted	0.47 0.50 0.53 0.55
Aluminium	**Gauge (mm)**
Aluminium Mill Finish Aluminium pre-painted	0.80
Rheinzink	**Gauge (mm)**
Rheinzink Material	0.80
Zinc-Coated	**Gauge (mm)**
Z200/Z275 ISQ550 Unpainted or pre-painted	0.50 0.58*
Other gauges are available on special request. All material is subject to availability.	
* Available in G275/ISQ300 only	

Note 1

Note that when using Aluminium material on galvanized steel purlins, the use of an isolation tape or similar to prevent the bridging of the two dissimilar materials is recommended. Should the two metals have direct contact it will ultimately result in the manifestation of galvanic corrosion, and the service life of the aluminium will be compromised.

PURLIN SPACINGS

Span tables are for Saflok 410 with light foot traffic only. Span tables are based on 1.5kN downward load and 2kPa negative wind loading. The span tables are maximum recommended spans based on buildings up to 10m high for a basic design wind speed of 28m/s, Terrain Category C.

GAUGE	0.47	0.50	0.53	0.55	0.80
MATERIAL	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM -ZINC	ALUMINIUM
ROOFS	mm	mm	mm	mm	mm
Single Span	1200	1300	1500	1600	1100
End Span	1400	1500	1700	1800	1300
Internal/Double Span	1600	1700	1900	2000	1500
Cantilever (Unstiffened)	150	150	150	150	100
Cantilever (Stiffened)	300	300	300	300	200
Side Cladding					
End Span	2000	2100	2300	2400	2100
Internal Span	2200	2300	2500	2600	2300
Cantilever	150	150	150	150	100
Approximate Mass/kg	8.4	8.9	9.5	9.8	5.5
Design requirements exceeding the above, may be considered in consultation with the Safintra Technical Department.					

Saflok 410 clips are calculated at 145g per clip - You will require approximately 3 clips per m².

DRAINAGE TABLE

DRAINAGE TABLE	ROOF SLOPE			
PEAK RAINFALL INTENSITY (mm/h)	1:50 (1°)	1:30 (2°)	1:20 (3°)	1:12 (5°)
150	114	162	198	256
200	86	121	148	192
250	68	97	119	153
300	57	81	99	128
350	49	69	85	110
400	43	61	74	96
500	34	48	59	77
Maximum roof sheet length (m)				

NOTE 2

Concealed fix side cladding must be pierced fixed for prevention of sheet movement due to gravity. Pierce fix the bottom and top of the sheets. Internal pierce fixing may be necessary on longer sheets. Cladding is to be fixed in the pan of the sheet with 12x25mm Fixtite Fasteners - Class 4 only.

*refer to the Safintra Technical Department for more information
www.safintra.co.za

LENGTHS & ROOF PITCH

With the aid of mobile rolling mills, custom lengths can be rolled on-site, limited by space constrictions and building design. Off-site rolled sheets are cut to transportable lengths (approximately 13.2m).

Saflok 410 was designed for roof pitches from as low as 2°. It can also be used on walls. When applying to very steep roof pitches you should pierce fix through each sheet under the flashing or capping, along the top of the sheet to prevent the concealed fix sheeting from sliding downward in the fixing clips. Clip-in marks might be visible on high pitched roofs or vertical applications. This visual effect may not be aesthetically pleasing in a residential application.