PRODUCT DESCRIPTION & FEATURES

Concealed-fix roofing, also referred to as secret fix, is designed for very low pitched roofs. Because clips under the sheet hold it down, the sheet is not punctured with fasteners, and remains completely watertight even at a very low slope. The securing clips are pre-fixed into the purlins and the sheet is mechanically snapped onto the clip.

As a concealed fix sheet can also expand and contract over the clips as the temperature changes, this system is ideal for long spans on industrial, commercial and retail buildings.

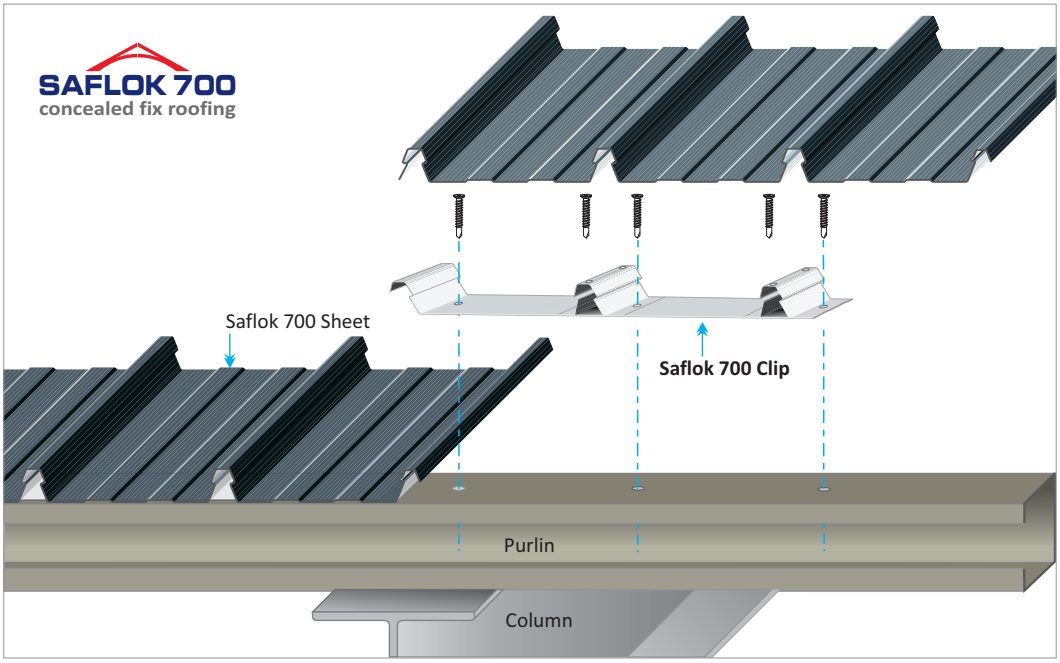
The Saflok 700 ® concealed fix roofing system is an interlocking trapezoidal rib profile that can be rolled on site in lengths of up to 120 metres.

Saflok 700 ® may be rolled in Aluminium - Zinc coated steel, (bare or colour coated) or Aluminium (Mill Finish or G4 Colortech).

On high slope roofs, the aesthetics of Saflok may be affected by occasional oil canning in the pans. This becomes visually apparent on slopes greater than 5 degrees, as the roof material becomes increasingly visible. It does not affect the structural integrity of the sheet in any way, and Safintra will not entertain claims made for oil canning.

Saflok 700 ® can be curved or bullnosed to a minimum internal radius of 450mm - 500mm. Reverse cranking is not possible.

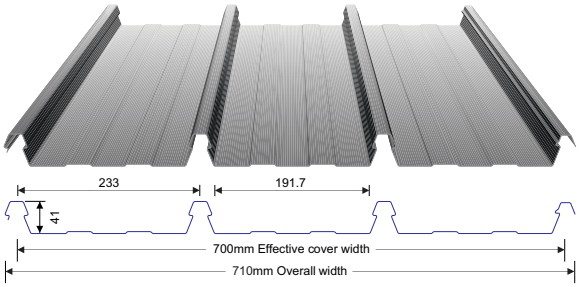
Further literature may be found at www.safintra.co.za.



NEW SAFLOK 700 CLIP

The fully interlocking SAFLOK 700 clip incorporates two anchors to clasp the two inner ribs and a dual action component to positively hold down the male-female joint.

1. Stiffener ribs on 0,8mm baseplate add formidable strength, specifically over the goose-neck
2. Full width engagement on the goose-neck male joint
3. 5 fastening points for stability, particularly over blanket insulation
4. Engineer-designed geometry of anchor unit for optimal performance under high wind loads and foot traffic
5. Entire clip is manufactured from Aluminium - Zinc coated steel for compatibility with sheeting



MATERIAL OPTIONS

Aluminium - Zinc	**Gauge (mm)**	
AZ150 G550 Unpainted	0.50	0.55
AZ150 G550 Pre-painted	0.50	0.55
Aluminium	**Gauge (mm)**	
Aluminium Mill Finish	0.70	0.80
Aluminium G4 Colortech	0.70	0.80

Other gauges are available on special request.

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PURLIN SPACINGS

GAUGE	0.5mm	0.55mm	0.8mm
MATERIAL	ALUMINIUM-ZINC	ALUMINIUM-ZINC	ALUMINIUM
ROOFS	**mm**	**mm**	**mm**
Single Span	1 400	1 700	1 400
End Span	1 700	2 100	1 500
Internal/Double Span	2 000	2 300	2 000
Cantilever (Unstiffened)	150	260	180
Cantilever (Stiffened)	350	400	380
SIDE CLADDING			
Single Span	2 100	2 300	1 600
End Span	2 400	2 600	2 200
Internal Span	2 600	2 700	2 400
Cantilever	300	400	300
Approximate Mass/m²	5.2kg	6.2kg	2.9kg

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

Span tables are for SAFLOK 700 with light foot traffic only. Span tables are based on 1.5kPa downward pressure, 1.6kPa upward pressure and 0.75kPa for the side cladding, inward or outward. The span tables are maximum recommended spans based on buildings up to 10m high in Region B, Terrain Category 3.

For further clarity on terrain categories, and wind speeds, please refer to the Safintra Design and Installation Manual (specifically pages 5,6 and 10,11).

Note:
It is important to reduce purlin spacings by 20% when spring curving a roof.

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 metres. The minimum roof pitch when using SAFLOK 700 is 2° on steel and 3° on wood.

DRAINAGE TABLE

DRAINAGE TABLE	ROOF SLOPE				
RAINFALL INTENSITY MM/HOUR	2°	3°	5°	8°	10°
250	75	90			
300	65	75	95		
400	50	55	70	80	90
500	40	45	55	65	70
Maximum roof run for roof slopes and rainfall intensities shown.					

WIND SPEED TABLE

Wind Zone	Purlin spacing for sheeting
Low (32 m/s) 115km/h	As per the profile span tables
Medium (37 m/s) 133km/h	As per the profile span tables - 5%
High (44 m/s) 158km/h	As per the profile span tables - 25%, all roof perimeters secured
Severe (50 m/s) 179km/h	As per the profile span tables - 25%. Consult your local Safintra branch

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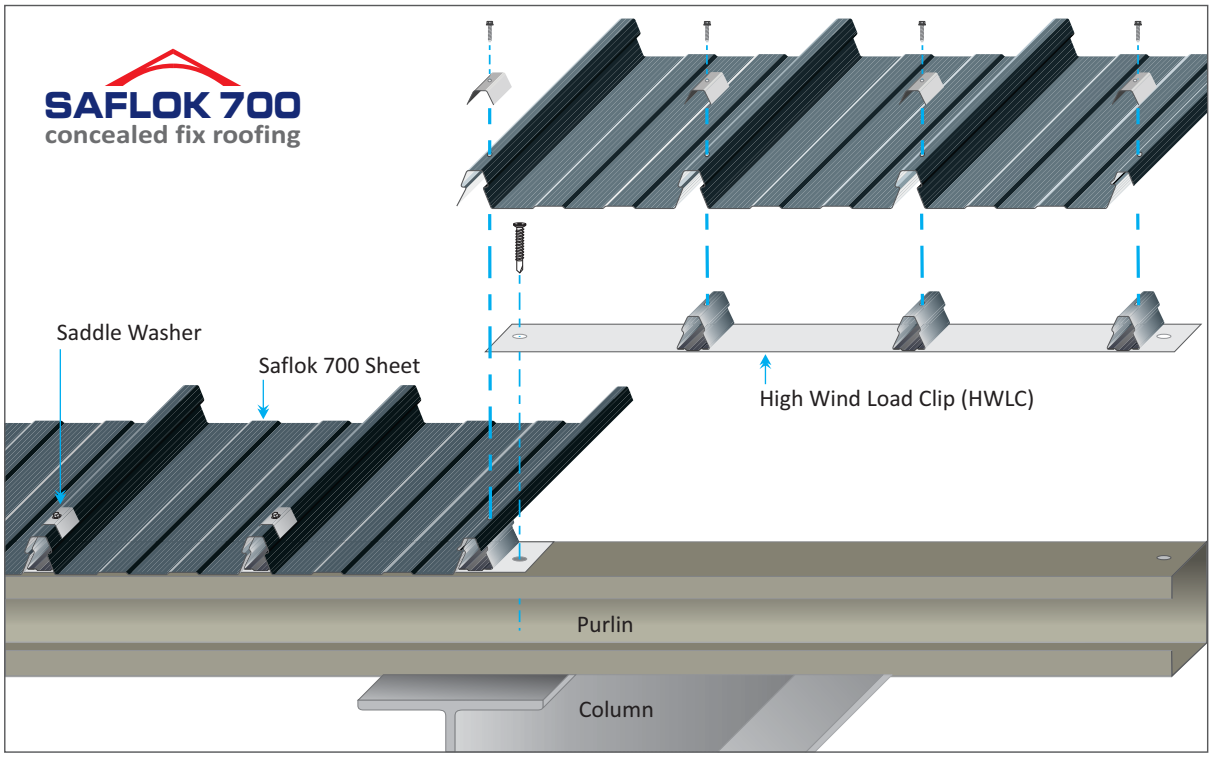
HIGH WIND LOAD INSTALLATION DETAILING (WIND CATEGORY 2 AND COASTAL WIND BELTS)

The installation process for using the High Wind Load System (HWLS) is a pierced fix method. The High Wind Load System is recommended for terrain categories 1 & 2, or areas with wind speeds exceeding 120km/h. (For pdf reference on terrain categories, a document may be found at www.safintra.co.za). Note that the HWLS is not a concealed fix system, and is therefore recommended only for the perimeter and/or overhang areas of the building. Buildings taller then 10m would also require special design attention and the use of the HWLS. When using the HWLS the roof slope should not be less than 4°.



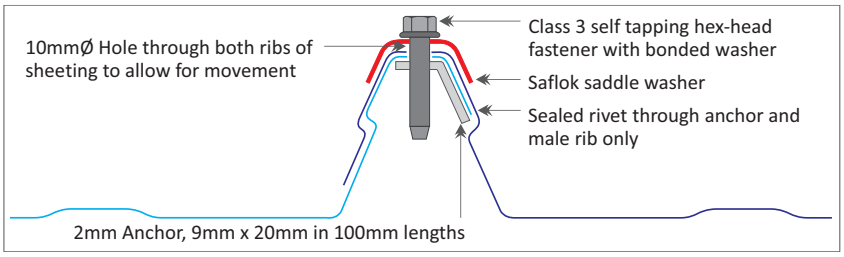
Step 1. Starting with the female rib first, align first sheet and hold down.

Step 2. Place saddle washers over the first 3 ribs above the purlins (starting from the female rib side). Align, and fasten the saddle washers through the rib using an appropriate class 3 or 4 fastener.

Step 3. Position the next sheet, engaging the female rib firmly over the male rib of the previous sheet. Repeat step 2.

Note: The bonded washer can only be fixed from the top.

HIGH WIND LOAD SYSTEM: MID SPAN FIXING DETAIL AT EAVES



For aluminium material, we recommend positive fixing on exposed eave purlins, in conjunction with a saddle washer. Allowance for thermal expansion and sheet movement should be accommodated with a pre-drilled and slotted hole.

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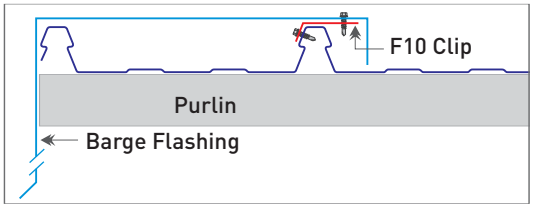
F10 BRACKET FOR FLASHINGS



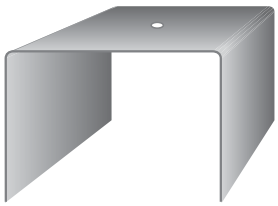
Note: this clip is positively fixed. Care should be taken when detailing industrial-length sheeting and flashing due to thermal expansion.

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

SPECIALISED FIXING ACCESSORIES

INSULATION SPACER

For any blanket insulation thicker than 50mm, spacers need to be used.
Spacers can be manufactured to specific requirements.



POLYSLIDER CLIP

For use with Saflok polycarbonate sheeting. Must be installed with saddle washer.
Polycarbonate sheets must be positively fixed - consult our technical department for advice.

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. 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 shankguard must not reach that purlin.
- into timber: the fastener must penetrate the timber by the same amount that the recommended fastener would do if there were no insulation.

CRANKING

SAFLOK 700 sheets may be cranked and bullnosed but not reverse bullnosed. Minimum radius is 450mm. On-site cranking is available on request.

CURVING

Natural springing occurs at 36m radius in the convex and 60m radius in the concave. It is important to reduce purlin spacings by 20% when spring curving a roof.

ROLLING STRAIGHT ONTO A ROOF

It is possible to rollform 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. The sheeting cannot be roll formed onto a building higher than 10m.

SEALED JOINTS

For sealed joints use fasteners or rivets and neutral-cure silicone sealant branded as suitable for use with AZ steel.

Disclaimer:
- Care has been taken to ensure that the information provided is accurate. SAFINTRA does not assume responsibility for inaccuracies or misinterpretations of this data.
- SAFINTRA is continuously engaged in product development, please ensure that you have the most recent issue of information from SAFINTRA.
- Photographs and illustrations are typical examples of roofing and cladding products and applications.

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