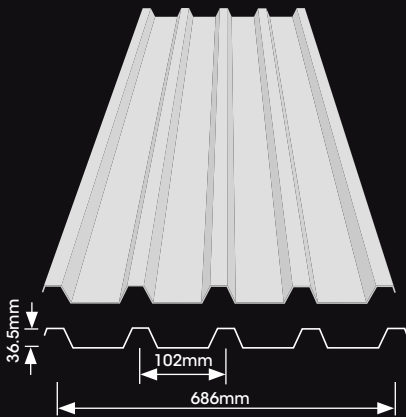




Inverted Box Rib or generally known as IBR is an angular trapezoidal fluted profile sheet that is both structurally sturdy and neat in appearance and which makes it attractive and practical. Since IBR was introduced to the South African market in the late 1950s, it has become popular in the construction of commercial and industrial buildings. The general shape and appearance of the trapezoidal flutes ensure that IBR is totally acceptable for use as roof and wall cladding. The deep and broad flutes of the IBR type sheeting ensure excellent drainage characteristics. IBR has five ribs, each 36mm high.



Cover width: 686mm
 Total width: 742mm
 Coil width: 925mm
 All dimensions given are nominal
 Minimum Pitch 5° (approx. 1 : 11.5)



FEATURES

- IBR provides the most rigid span characteristics of any pierced fix roof sheet profile.
- IBR offers the end user the option of having stiffening ribs in the sheet which help to remove oil canning from the broad flute.
- IBR can be factory-cranked, curved and bull-nosed in the concave and convex direction.

APPLICATIONS

IBR is ideal for commercial and industrial roofing applications. Its excellent strength in spanning and fast erection time makes IBR economical from a structural and erection point of view. The narrow pans of pierced fix profiles are resilient against oil canning and is thus recommended for any application where aesthetics is a consideration.

SHEET TOLERANCE

Sheet width: ± 4mm
 Sheet length: +5mm, - 0mm.

MATERIAL OPTIONS	Steel	Aluminium
Thickness (mm)	0.5 0.55 0.58 0.8	0.7 0.8
Nominal weight/square metre (kg/m ²)	3.45 4.0 4.19 5.69	2.5 2.9
Draped curved roof - min. radius (m)	28 convex 60 concave	28 convex 60 concave
Purlin spacing's for drape curved roof (mm)	1800	1700
Crimp curved - min. radius (mm)	450 convex 450 concave	450 convex 450 concave
Unsupported overhang (2)	300 350 400 450	300 350



ROOF PITCH

The rib height of IBR enables this roofing system to perform safely at a minimum roof pitch (or roof slope) of 5°. When IBR roof sheets are end-lapped the roof pitch should be taken into account. The minimum end laps for roofs pitches in excess of 15° is 150 mm and for lower roof pitches a minimum of 250 mm is advisable. End laps for side sheeting should be at least 100 mm. It is recommended that end and side laps on low-pitched roofs are sealed to ensure water tightness.

IBR LIMIT STATE LOAD / SPAN CAPACITY CHART

(span in mm, distributed serviceability and ultimate loads in kPa)

3. Non-Access Roof or Wall						
2. Restricted-Access Roof			Side stitching necessary →			
1. Unrestricted-Access Roof			Side stitching necessary →			
		Side stitching necessary	2kPa			
G550 Steel 0.50mm	End Span	1300	1550	1600	1650	1700
	Internal Span	1400	1600	1650	1700	1800
G550 Steel 0.55mm	End Span	1500	1650	1700	1800	1900
	Internal Span	1600	1700	1800	1900	2000
G300 Steel 0.58mm	End Span	1700	1800	1900	2000	2100
	Internal Span	1800	1900	2000	2100	2200
G300 Steel 0.8mm	End Span	1900	2000	2100	2200	2300
	Internal Span	2000	2300	2400	2500	2600

NOTES

- In any category, spans above the maximum shown should not be used. Category 1 and 2 maximum spans are based on static point load testing as a guide, and further limited by practical experience of roof performance under dynamic foot traffic loads. Category 3 maximum spans are limited as a guide to achieving satisfactory appearance for wall cladding.
- Loads given are based on 6 screw fasteners/sheet/purlin.
- Loads given are limited to a maximum of positive 2.5 kPa. If design requirements exceed this limit, contact Pro Roof for specific advice.
- Polycarbonate - Serviceability limit state loads are not applicable to the Polycarbonate material, as it does not experience permanent deformation.
- Ultimate loads limited by fastener pull out.

FASTENER DESIGN

IBR should be fixed with screws to either timber or steel purlins. The use of the appropriate length of screw will prevent failure due to "screw pull-out" under normal loads.

We recommend a 12x85mm, self-drilling, class 3 TEK screw with a 26mm Ø bonded washer for steel or timber. If insulation is used over the purlins, screw length should be increased.

Over-tightening will cause dishing of the crest of the profile rib which could in turn lead to leaking. Fasten IBR sheets through every rib along the top and bottom sheet edges. Fasten sheet through every second rib on every purlin for internal spans. Use a staggered pattern to reduce the thermal expansion bulge.

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