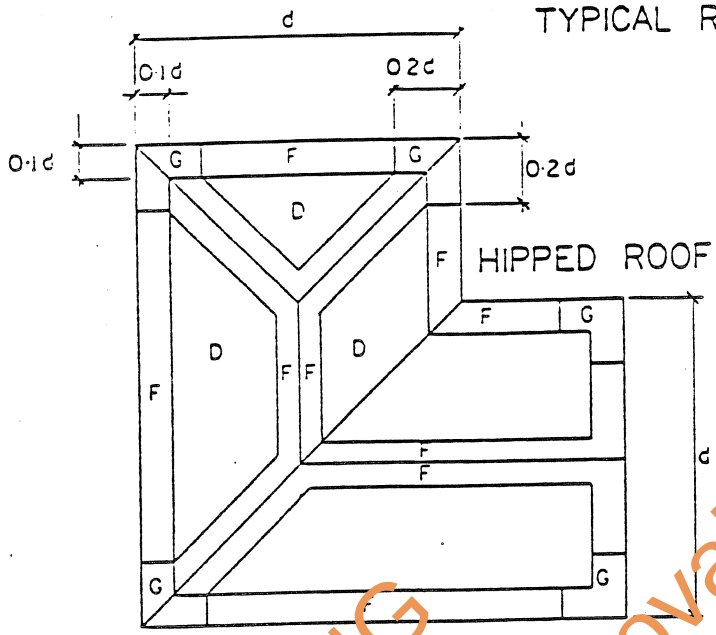
TYPICAL ROOF PLANS



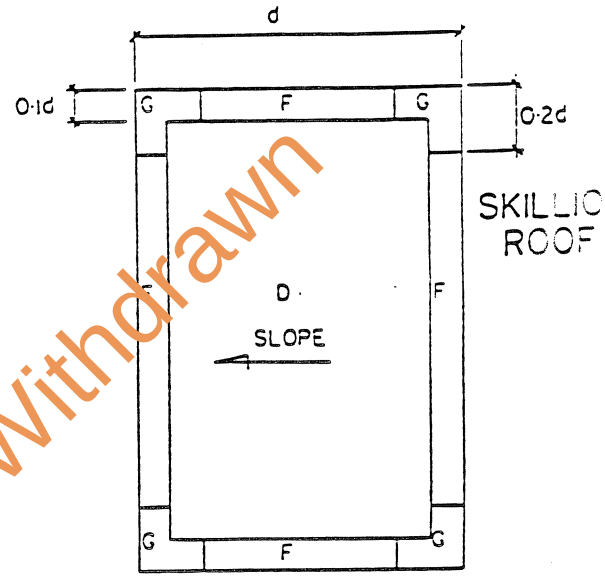


Table 1 - Max. Allowable Roof Spans for Buildings of Height up to 5m.

Terrain Category & Multiplier	Roof Area / Design Pressure kPa		max. Purlin Spacing(m) WG800 WG900
Cat.1 Mult.1.02	D	4.24	1.14
	F	5.37	0.93
	G	6.49	0.76
Cat.1 Mult.0.93	D	3.53	1.32
	F	4.46	1.10
	G	5.40	0.92
Cat. 2½ Mult.0.79	D	2.55	1.64
	F	3.22	1.40
	G	3.89	1.22

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N.S.W. 2161 Phone 681-9333

Certified P.E. Harrison M.I.E.Aust
P.E. HARRISON
Date 14TH MARCH 1984

Fixing of COMALCO W.G. Roofing on Buildings of Height up to 5 M in the Darwin Area

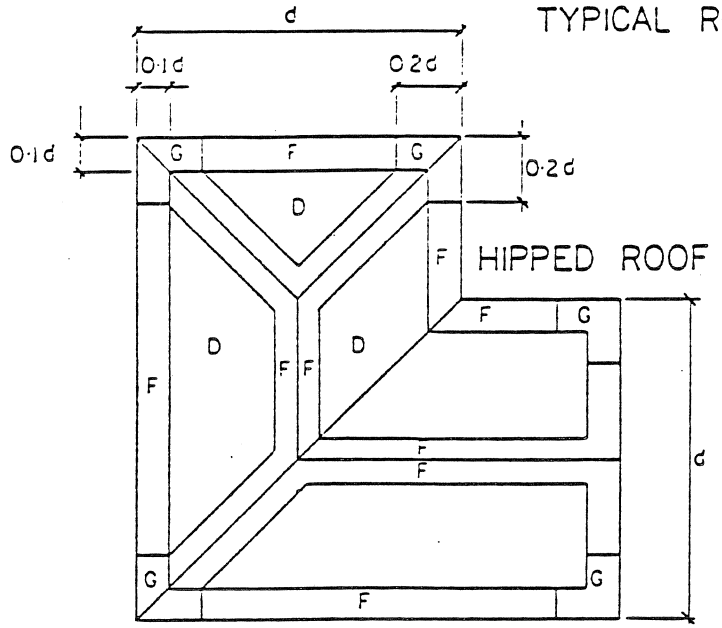
DESIGN DATA SHEET SH.1 OF 5

NORTHERN TERRITORY CYCLONIC AREAS

Acc'd [signature] M.I.E. AUST Date 26/6/84

Drawing No. M/107/2

TYPICAL ROOF PLANS



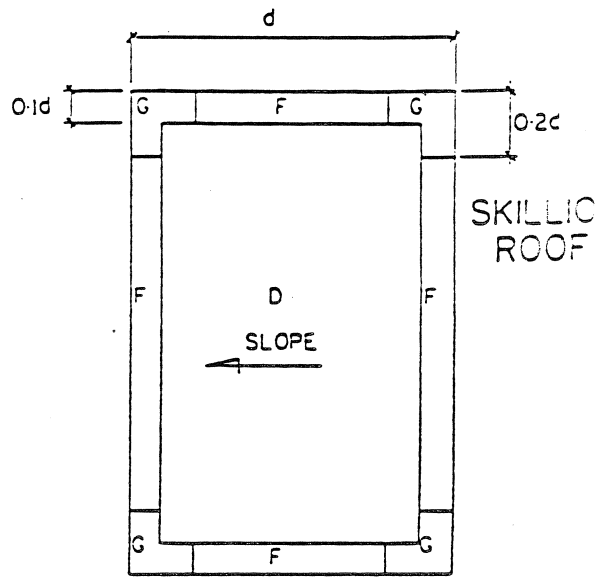


Table 2 - Max.Allowable Roof Spans for Buildings of Heights over 5m to 10m.

Terrain Category & Multiplier	Roof Area & Design Pressure kPa		Max.Purlin Spacing(m) WG800 WG900
Cat.1 Mult.1.09	D	4.85	1.00
	F	6.13	0.80
	G	7.41	0.65
Cat.2 Mult.100	D	4.08	1.18
	F	5.16	0.96
	G	6.24	0.79
Cat. 2½ Mult.0.85	D	2.95	1.50
	F	3.75	1.26
	G	4.51	1.09

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DESIGN DATA SHEET SH.2 OF 5

NORTHERN TERRITORY CYCLONIC AREAS

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SETTING OUT

The framing for roof sheeting and its supporting structure must be designed to withstand the anticipated cyclonic wind forces. All framing must be well anchored by using tie rods, straps, bolts or spikes to prevent dislodgement in extreme cyclonic conditions.

The direction of sheet laying is not critical as cyclonic winds may reverse their direction during the course of the storm, however the usual practice is to lay sheeting with the overlapping rib facing away from the direction of the prevailing wind.

Begin fixing at the barge line at the end of the roof away from the prevailing wind, laying the first sheet exactly at right angles to the eaves line. The wide troughs between ribs should be turned up level with tops of ribs at the ridge. The ends of sheets at the eaves should be lipped down slightly to provide a drip edge.

FLASHING METHODS

Comalco provides a range of standard flashings and accessories which should be securely fixed to the sheeting. For details of flashings and their installation refer to the Comalco Manual "Roof and Cladding Systems".

N.B. The attachment centres of flashings indicated in the Comalco Manual are for normal non cyclonic areas. For cyclonic areas the attachment centres should be reduced to cope with the higher design wind forces.

Maximum recommended centres 200mm.

FIXING METHOD

Sheeting is attached to the roof structure by means of extruded aluminium clips which must be spaced out to suit the pitch of the clipping rib profile. For clip fixing refer to Comalco "Roof and Cladding Systems" Manual.

For fixing to timber:	Use BP9050 14 gauge x 50mm type 17 stainless steel self-drilling self-tapping screw with neoprene washer.
For fixing to steel :	Use BP9062 14 gauge x 25mm Taptite stainless steel self-tapping screw with neoprene washer.
Drill size :	Under 5mm steel - 5.2mm diameter Over 5mm to 10 mm steel - 5.8 mm diameter

When fixing to steel purlins the driving speed for self-tapping screws must not exceed 300 R.P.M.

Manuf's Name COMALCO ALUMINIUM LIMITED Address NELSON RD. YENNORA N.S.W. 2161 Phone 681-9333	Fixing of COMALCO W.G. Roofing on Buildings of Height up to 10 M. in the Darwin Area	
	DESIGN DATA SHEET	SH.3 OF 5
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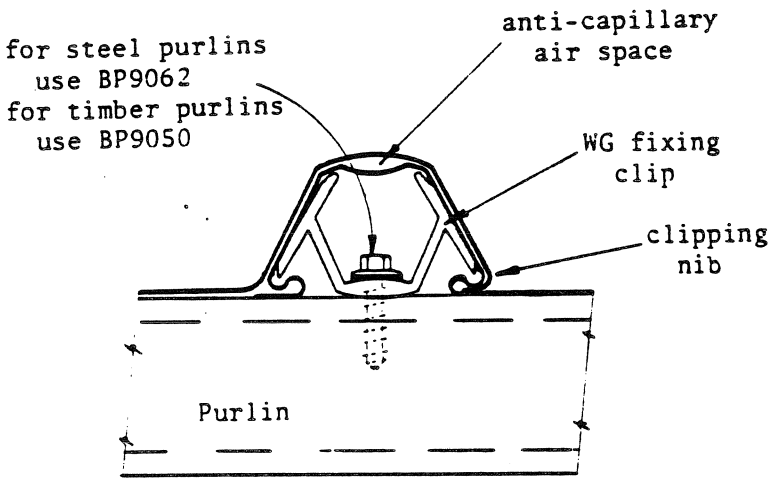
FIXING METHOD (cont'd)

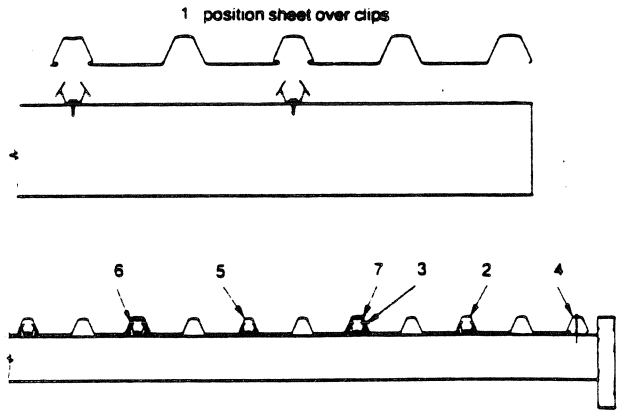
N.B. Before fixing any sheets ensure that the top face of all purlins are in the same plane as the roof and that all clips are properly aligned parallel to the length of sheet run. Failure to do so will cause fixing difficulties.

When the clips have been fastened and properly aligned the roof sheet is carefully positioned with the clipping ribs resting on the clips. The centre rib is then snapped over the clips by exerting a firm downward pressure on the top of the rib immediately over the clip, the male rib is then clipped down in a similar manner. The female rib is then engaged in the preceeding male rib by applying a gentle downward force progressively along the rib for the full length of the sheet.



FIXING SEQUENCE

1. Position sheet over clips.
2. Snap centre rib of first sheet over clip.
3. Snap male rib over clip.
4. Screw female rib on first sheet directly to purlins as shown. Allow for expansion by ensuring that an elongated hole is made in crest of rib. Use a capping washer under screw.
5. Snap centre rib of succeeding sheet over clip.
6. Snap male rib over clip.
7. Press and fit female rib, ensuring that the hooked edge is positively engaged.
   Repeat the fixing sequence for following sheets until roof area is covered.



Manuf's Name COMALCO ALUMINIUM LIMITED Address NELSON RD. YENNORA N.S.W. 2161 Phone 681-9333	Fixing of COMALCO W.G. Roofing on Buildings of Height up to 10 M. in the Darwin Area
	DESIGN DATA SHEET SH 4 OF 5
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DIMENSIONS

Overall width - 673mm
Effective cover width - 610mm
Lengths up to 11.5m -longer lengths subject to transport arrangements (21m max.).

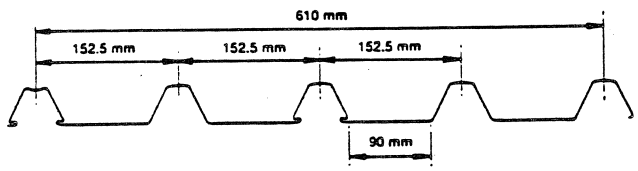
FINISH

Stucco embossed is standard.
Pre-painted on application.

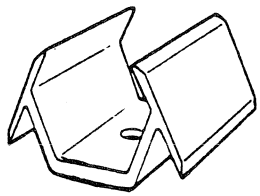
PROPERTIES

Class	Nominal Gauge	Mass/ lin.metre kg.	Mass per square metre of cover	Geometric properties of sheet per 100mm width	
				Sec.modulus mm^3	Moment of Inertia mm^4
WG800	0.8mm	2.09	3.43kg	955	24935
WG900	0.9mm	2.36	3.86kg	1012	27008

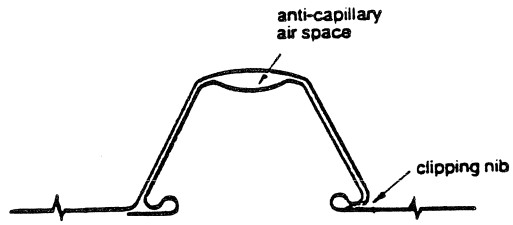
*Patent Nos.439223 & 457099



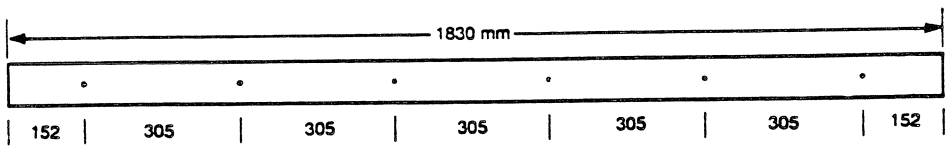
Fixing clip



Prepunched for fixing to purlin with No. 14 screw.



Spacing strip BP3033 used to correctly space clips along purlin.



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