

Panelrib®

Subtle fluted profile
steel wall cladding



- Longitudinal flutes provide rigidity along the length of the sheet while retaining full flexibility across the width
- Used on interior or exterior walls on straight or curves surfaces for walling in garages, ceilings, fascia and barge boards
- Long, straight lines minimise fixing costs
- Available in a wide variety of COLORBOND® steel colours and unpainted ZINCALUME® steel

Lysaght Panelrib®

LYSAGHT PANELRIB® wall cladding has a fluted profile making it suitable for many applications where flat sheet would not normally be considered. The longitudinal flutes provide rigidity along the length of the sheet while retaining full flexibility across the width. PANELRIB is easy to fix and can be used on exterior and interior walls. It is suitable for application to both straight or curved surfaces with flute orientation laid either horizontally or vertically. A range of trims are available in plastic or aluminium.

PANELRIB is used where an inexpensive, quick to install cladding is desirable, such as garages, carports and sheds. The speed of installation also makes it popular for commercial and industrial projects such as warehouses, showrooms and retail premises.

Available in a range of COLORBOND® steel colours, PANELRIB will make an attractive choice for any building project. COLORBOND® steel Metallic finish provides superior aesthetic qualities, and COLORBOND® steel Ultra finish is intended for severe coastal or industrial environments.

Masses (based on 850 cover)

	BMT (mm)	kg/m	kg/m ²	m ² /t
ZINCALUME	0.35	2.74	3.23	310
COLORBOND	0.35	2.80	3.29	304
ZINCALUME	0.42	3.26	3.83	261
COLORBOND	0.42	3.32	3.90	256

Material specifications

PANELRIB is made from:

- ZINCALUME® aluminium/zinc alloycoated steel complying with AS1397—2001 G550, AZ150 (550 MPa minimum yield stress, 150 g/m² minimum coating mass);

The base metal thickness (BMT) is 0.35 or 0.42mm.

The COLORBOND prepainted steel complies with AS/NZS 2728 -1997.

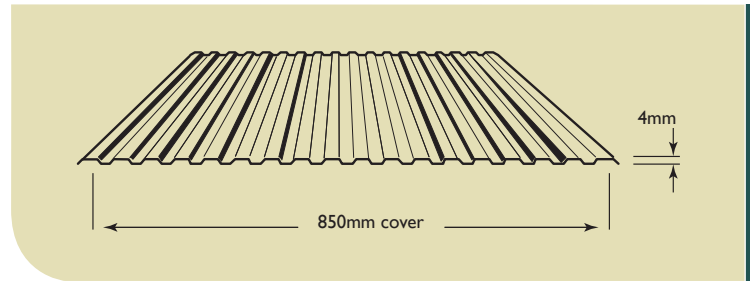
Lengths

PANELRIB is available in custom cut lengths to suit the application requirements. Check with your local supplier on the maximum and minimum available lengths.

Tolerances

Length: + 0mm, - 15mm

Width: + 0mm, - 4mm



Maximum Support Spacings (mm)

Type of Span	Thickness	
Walls	0.35	0.42
Single Span	1100	1200
End Span	1200	1200
Internal Span	1200	1200
Overhang	150	150

- For walls: the data are based on pressures (see wind pressures table).
- Table data are based on supports of 1mm BMT.

Maximum support spacings

The maximum recommended support spacings are based on testing in accordance with AS1562.1-1992, AS4040.0-1992 and AS4040.2-1992.

Wall spans consider resistance to wind pressure only.

The pressure considered is based on buildings up to 10m high in Region B, Terrain Category 3, Ms=0.85, Mi=1.0, Mt=1.0 with the following assumptions made:

Walls:

$C_{pi}=+0.20$, $C_{pe}=-0.65$, $K_f=2.0$ for single and end spans, $K_f=1.5$ for internal spans.

These spacings may vary by serviceability and strength limit states for particular projects.

Fasteners

PANELRIB steel cladding can be attached to the frame with the flutes either vertical or horizontal. When fixing with flutes horizontally, ensure that the top sheet overlaps the sheet below it. If end laps are necessary because of very long runs, allow at least 75mm lap.

For sheets fixed in external applications where sealing is required, seal end laps with a suitable sealant.

PANELRIB

	Fixing to steel up to 3mm BMT	Fixing to timber
Valley fixed	Self drilling screws with hex.washer-head 10-16 x 16 (M4.8-16x16)	Self drilling screws with hex.washer-head SOFTWOOD & HARDWOOD: 10-12 X 20 (M4.8-12x20)

Valley: 4 fasteners†



Valley: 8 fasteners†



Number of fasteners depends on wind pressure (see brochure on this product).

Do not fix screws less than 25mm from the end of sheet.

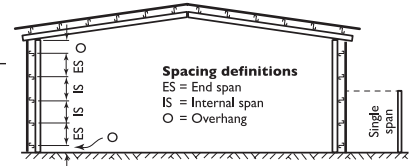
Sheet coverage

Width of wall (m)	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	30	40	50
Number of sheets	4	5	6	8	9	10	11	12	13	15	16	17	18	19	20	22	23	24	36	48	59

PANELRIB: Limit state wind pressure capacities (kPa)

Type of Span	Fasteners per sheet per support	Limit State	Span (mm)									
			600	700	800	900	1000	1100	1200	1300	1400	1500
Base Metal Thickness 0.35mm												
Single	4	Serviceability	2.11	1.74	1.39	1.06	0.76	0.51	0.31	0.18	-	-
		Strength	9.45	8.55	7.65	6.85	6.10	5.40	4.85	4.40	-	-
	8	Serviceability	2.01	1.67	1.34	1.03	0.75	0.52	0.33	0.20	-	-
		Strength	12.00	12.00	12.00	12.00	10.80	9.70	8.80	8.10	-	-
End	4	Serviceability	3.39	2.80	2.22	1.68	1.19	0.78	0.45	0.23	-	-
		Strength	7.35	6.60	5.85	5.15	4.50	3.90	3.40	3.00	-	-
	8	Serviceability	2.78	2.29	1.82	1.38	0.98	0.64	0.37	0.19	-	-
		Strength	11.25	10.20	9.25	8.30	7.45	6.65	6.00	5.45	-	-
Internal	4	Serviceability	3.95	3.32	2.71	2.13	1.61	1.15	0.78	0.51	0.32	0.19
		Strength	8.25	7.45	6.70	5.95	5.30	4.70	4.20	3.80	3.55	3.35
	8	Serviceability	3.63	3.02	2.44	1.88	1.38	0.95	0.60	0.35	0.19	0.10
		Strength	12.00	12.00	12.00	11.00	9.85	8.85	8.00	7.30	6.75	6.35
Base Metal Thickness 0.42mm												
Single	4	Serviceability	2.18	1.82	1.48	1.15	0.86	0.61	0.41	0.27	0.18	0.13
		Strength	12.00	12.00	12.00	11.15	10.00	8.95	8.10	7.30	6.70	6.15
	8	Serviceability	1.92	1.63	1.34	1.07	0.82	0.61	0.44	0.32	0.23	0.17
		Strength	12.00	12.00	12.00	12.00	12.00	11.65	10.80	10.15	9.65	9.30
End	4	Serviceability	3.60	3.00	2.42	1.87	1.38	0.95	0.61	0.37	0.21	0.12
		Strength	8.25	7.50	6.75	6.05	5.40	4.80	4.30	3.90	3.55	3.25
	8	Serviceability	2.90	2.37	1.86	1.38	0.95	0.59	0.31	0.12	-	-
		Strength	12.00	12.00	12.00	12.00	10.90	9.70	8.70	7.90	-	-
Internal	4	Serviceability	6.21	5.09	4.01	3.00	2.09	1.32	0.73	0.33	0.10	-
		Strength	10.35	9.35	8.40	7.50	6.70	5.95	5.40	4.90	4.60	4.35
	8	Serviceability	4.60	3.79	3.00	2.27	1.61	1.05	0.61	0.32	0.14	0.07
		Strength	12.00	12.00	12.00	12.00	12.00	11.35	10.35	9.50	8.90	8.40

* A capacity reduction factor of $\phi = 0.9$ has been applied to strength capacities. Supports must be not less than 1mm BMT.



Limit states wind pressures

The wind pressure capacities are based on tests conducted at BlueScope Lysaght's NATA registered testing laboratory. Testing was conducted in accordance with AS 1562.1—1992 Design and Installation of Sheet Roof and Wall Cladding—Metal, and AS 4040.2—1992 Resistance to Wind Pressure for Non-cyclonic Regions.

The pressure capacities for serviceability are based on a deflection limit of $(\text{span}/120) + (\text{maximum fastener pitch}/30)$.

The pressure capacities for strength have been determined by testing the cladding to failure (ultimate capacity).

These pressures are applicable when the cladding is fixed to a minimum of 1.0mm, G550 steel.

For material less than 1.0mm thick, seek advice from our information line.

Adverse conditions

If this product is to be used in marine, severe industrial, or unusually corrosive environments, ask for advice from our information line.

Metal & timber compatibility

Lead, copper, free carbon, bare steel and green or some chemically-treated timber are not compatible with this product. Don't allow any contact of the product with those materials, nor discharge of rainwater from them onto the product. Supporting members should be coated to avoid problems with underside condensation. If there are doubts about the compatibility of other products being used, ask for advice from our information line.

Maintenance

Optimum product life will be achieved if all external walls are washed regularly.

Areas not cleaned by natural rainfall (such as the tops of walls sheltered by eaves) should be washed down every six months.

Safety, storage and handling

Handling Safety - LYSAGHT product may be sharp and heavy.

It is recommended that heavy-duty cut resistant gloves and appropriate manual handling techniques or a lifting plan be used when handling material.

Keep the product dry and clear of the ground. If stacked or bundled product becomes wet, separate it, wipe it with a clean cloth to dry thoroughly.

Handle materials carefully to avoid damage: don't drag materials over rough surfaces or each other; don't drag tools over material; protect from swarf.

Cutting

For cutting thin metal on site, we recommend a circular saw with a metal-cutting blade because it produces fewer damaging hot metal particles and leaves less resultant burr than does a carborundum disc.

Cut materials over the ground and not over other materials.

Sweep all metallic swarf and other debris from roof areas and gutters at the end of each day and at the completion of the installation. Failure to do so can lead to surface staining when the metal particles rust.

Sealed joints

For sealed joints use screws or rivets and neutral-cure silicone sealant branded as suitable for use with galvanised or ZINCALUME® steel.

Non-cyclonic areas

The information in this brochure is suitable for use only in areas where a tropical cyclone is unlikely to occur as defined in AS 1170.2—2002.

For information on the use of LYSAGHT products in cyclonic conditions, refer to the Design Capacities for Cyclonic Areas brochure (formerly Cyclonic Area Design Manual) which is available by ringing Steel Direct on 1800 641 417 or on our website: www.lysaght.com.

Installation of Lysaght Panelrib®

Location of Fasteners

A fastener should be located either at the side lap or adjacent to it. For a quality finish, fasteners at the ends of panelrib sheets, including end laps, should be located at every second valley. At intermediate supports, four fasteners should be used equidistant across the sheet.

For internal applications not subject to wind loads, the number of fasteners may be reduced by 50%, except for ceiling applications.

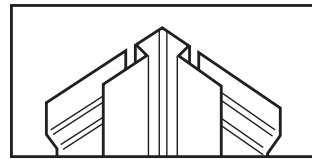
Joining and Edge Treatments

Suggested steel, plastic or aluminium mouldings are illustrated here. Please contact your local office for availability of mouldings.

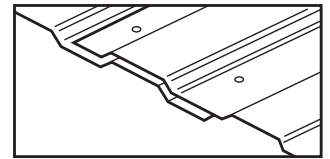
Side Lapping

Three types of side lapping methods are used: the overlapping flute, the butt joint and the edge lap joint. (See illustrations below.)

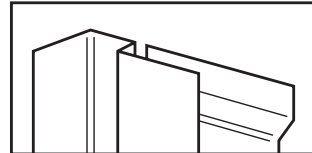
When using the overlapping or edge lap joint methods, side lap fasteners are required at 200-300mm centres.



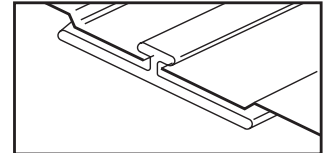
STEEL CORNER



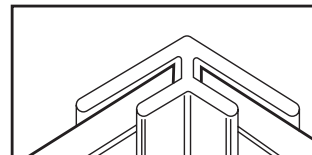
OVERLAP JOINING



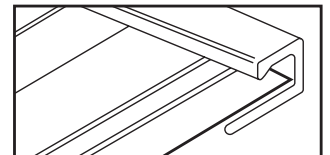
STEEL EDGE



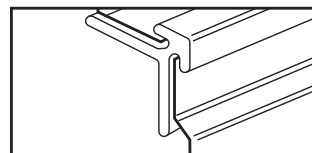
JOIN STRIP



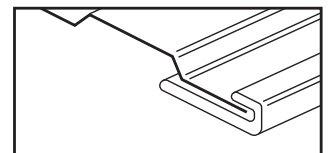
INTERNAL/EXTERNAL CORNER



ENDCAP

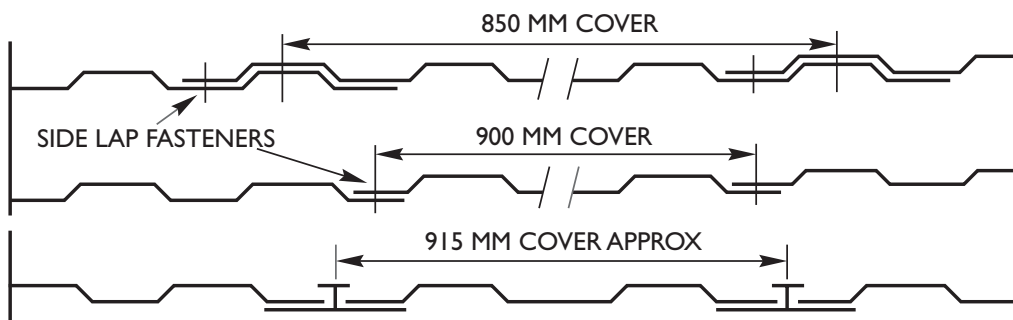


EXTERNAL/INTERNAL CORNER



EDGE COVER

Side lapping options



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This publication is intended to be an aid for all trades and professionals involved with specifying and installing LYSAGHT products and not to be a substitute for professional judgement.

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www.lysaght.com

Information, brochures and your local distributor

1800 641 417

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