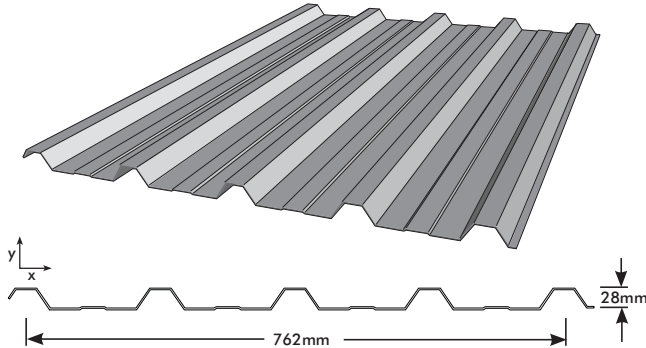


2.8 TL-5®



TL-5® Material Specifications					
Property		0.35 BMT	0.42 BMT	0.48 BMT	Notes
Total Coated Thickness		0.40	0.47	0.53	TCT
Mass / Unit Length (kg/m)	ZINCALUME®	2.75	3.30	3.70	1000 / (m/Tonne)
	COLORBOND®	2.80	3.36	3.77	
Mass / Unit Area (kg/m ²)	ZINCALUME®	3.60	4.34	4.87	1000 / (m Mass/profile width)
	COLORBOND®	3.68	4.42	4.96	
2 nd moment of area about principal axis (10 ³ mm ⁴)	I _x	32	39	45	
	I _y	19150	22980	26270	
Section modulus about principal axis (10 ³ mm ³)	Z _x	2	2	2	
	Z _y	47	56	64	
Warping Constant (10 ⁹ mm ⁶)	I _w	2	2	3	
Torsion Constant (mm ⁴)	J	14	23	35	
Minimum Yield Strength		G550			Base Steel Designation
Coating Class		AZ150 (150g/m ²) AZ200 (Ultra) Z450 (Galvanised) Z600 (Heritage Galvanised)			Minimum Coating g/m ² of Zinc - Aluminium
Coverage (mm)		762			
Tolerance		Sheet Length ±7mm Cover Width ±4mm			
Thermal Expansion		2.9mm average per 5m at 50° C change			

Table 2.8.A TL-5® Material Specifications

- TL-5 is manufactured to AS 1397 and AS 2728 Cat. 3. It is to be installed in accordance with AS 1445, AS 1562, and HB39.
- The sectional properties are theoretical values per sheet width. These properties are gross values only.

Rainfall Capacity

For further information, please refer to sections 4.2 'Rainfall Intensity' and 4.3 'Water Carrying Capacity and Rainwater Run-Off'.

Note: Minimum recommended slope is 2°. Sheet lengths greater than 24m are not recommended due to thermal expansion and contraction.

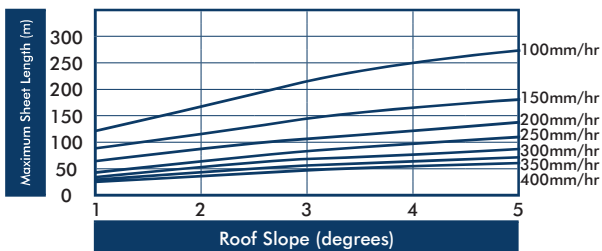


Figure 2.8.A TL-5® Rainfall Capacity (mm/hr)

TL-5® Maximum Sheet Length (m)							
Roof Slope (degrees)	Rainfall Capacity (mm/hr)						
	100	150	200	250	300	350	400
2	172	114	86	69	57	49	43
3	210	140	105	84	70	60	53
4	243	162	121	97	81	69	61
5	272	181	136	109	91	78	68

Table 2.8.B TL-5® Maximum Sheet Length (m)

Load Span Tables

The allowable spans have been determined from tests carried out in accordance with the following Australian Standards (wind load available by region): AS 1562.1 :1992, "Design and installation of sheet roof and wall cladding - Metal" and AS 4040:1992, "Methods of testing sheet roof and wall cladding".

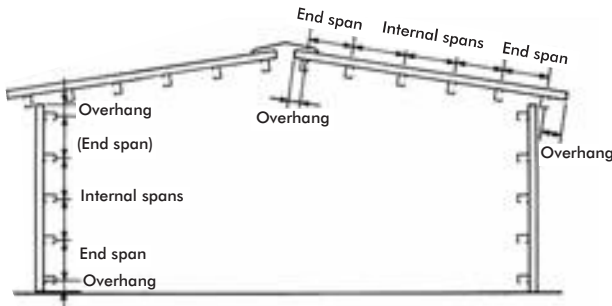


Figure 2.8.B End Spans, Internal Spans and Overhangs

Design Parameters*

Region A:

$h = 10\text{m}$ $C_{p,e} = -0.65$ $P_u = 2.25\text{kPa}$
 $v_u = 50\text{m/s}$ $C_{p,i} = 0.2$ $P_s = 1.93\text{kPa}$
 $K_L = 2.0$

Maximum Recommended Span* (mm) TL-5® Non Cyclonic

Span Type	0.35 BMT		0.42 BMT		0.48 BMT	
	Roof	Wall	Roof	Wall	Roof	Wall
Single Span	N/A		1000	1800	1500	1950
End Span	N/A	1200	1300	1800	1700	2050
Internal Span	N/A	1600	1800	2200	2300	2800
Unstiffened Overhang	N/A	N/A	150	150	180	180
Stiffened Overhang	N/A	N/A	300	300	350	350

Table 2.8.E TL-5® Maximum Recommended Span - Non-Cyclonic

Pierce Fixing

Fasteners must be selected to match the life expectancy of the cladding material. Recommendations from fastener manufacturers should be sought.

Only fasteners complying with AS 3566:2002 and those that are compatible with the roofing material should be used for its fastening.

Notes: All fasteners used externally should be fitted with an EPDM seal (washer).
Do not use punches to form fastener holes.

TL-5® Pierce Fixing - Non Cyclonic

Fixing Supports	Crest Fixing	Valley Fixing (Wall only)	Side Lap Fixing
Steel 1.0 to 3.5mm	M5.5 x 50mm Auto Tek's hexagon head with HiGrip and seal	10-16x16mm Metal Tek's hexagon head with seal	10-16x16mm hexagon head Tek's screws with seal
Timber Hardwood	M6-11x65mm RoofZips hexagon head with HiGrip & seal	M6-11x25mm RoofZips hexagon head with seal	
Timber Softwood	M6-11x65mm RoofZips hexagon head with HiGrip & seal	M6-11x25mm RoofZips hexagon head with seal	
Metal Battens (0.55 to 1.0mm)	M6-11x50mm RoofZips hexagon head with HiGrip & seal	15-15x25mm Metal Batten Tek's hexagon head with seal	

Table 2.8.C TL-5® Pierce Fixing - Non Cyclonic

TL-5® Pierce Fixing - Cyclonic

Fixing Supports	Crest Fixing	Valley Fixing (Wall Only)	Side Lap Fixing
Steel 1.0 to 3.5mm	14-10x42mm Metal Tek's hexagon head with Corri-Lok cyclone assembly	14-10x25mm Metal Tek's hexagon head Ext Pt/Seal	10x16mm hexagon head Neo Tek's
Timber Hardwood	M6-10x50mm RoofZips hexagon head with Corri-Lok cyclone assembly	14-10x25mm Type 17 hexagon head with seal	
Timber Softwood	14-10x65mm Type 17 hexagon head with Corri-Lok cyclone assembly	14-10x25mm Type 17 hexagon head with seal	
Metal Battens (0.55 to 1.0mm)	M6-10x50mm RoofZips hexagon head with Corri-Lok cyclone assembly	15-15x25mm Metal Batten Tek's hexagon head with seal	

Table 2.8.D TL-5® Pierce Fixing - Cyclonic

Side Lap Fixing

It may be necessary to use side lap fasteners at mid spans when using TL-5 at maximum spans. These will help to hold the sheet laps firmly in place and maintain a weather-proof joint.

Note: Do not use punches to form fastener holes.

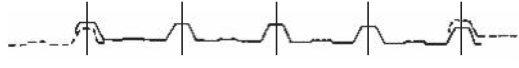
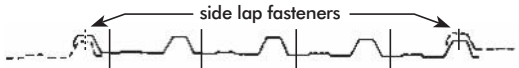
Fastener Spacings - Non Cyclonic	
Crest Fastener Location	
	
4 Fasteners per sheet – Internal and end supports Roofing should be lapped away from the prevailing weather.	
Valley Fastener Location (Wall Only)	
	
4 Fasteners per sheet – Internal and end supports	

Table 2.8.F TL-5® Fastener Spacings - Non Cyclonic

AQUABLOK™ System

The AQUABLOK system utilises an anti-capillary gap that prevents water from seeping into roofing joints.

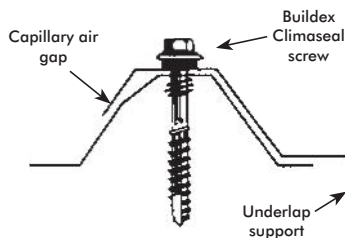


Figure 2.8.C AQUABLOK™ System

TL-5® Installation Procedure

For installation procedures see section 4.7 "Typical Pierce Fix Installation Guide". For general handling instructions refer to section 5.0 'Maintenance and Care'.

Turning of Roof Sheeting Ends

Refer to section 4.8 "Flashings, Cappings & Ends of sheets".

Curving

For details regarding spring fixing and crank curving of TL-5 sheets, please see section 4.5 "Curving of Steel Decks".