

Stramit® Cladding Solutions for Region D Using Stramit® Cyclonic Roof Battens

This update covers possible cladding solutions for Region D wind pressures, using Stramit® Cyclonic Battens. Wind pressure capacities are based on the latest LHL testing data for roofs, and on the AS4040.3 testing regime for walls. Ongoing research and development ensures that Stramit® products are tested or witnessed by independent organisations such as the Cyclone Testing Station at James Cook University and the University of Adelaide.

Note: Data subject to change because of ongoing testing. See the Stramit website for latest information.

Assumptions

Region D, Importance Level 2, No shielding, Flat topography
Roof height 5m or 10m, Roof height/building length ≤ 0.5
Roof slope ≤ 10 degrees
Enclosed building, Dominant opening on one wall

Strength: $V_R = 88$ m/s
Serviceability: $V_R = 53$ m/s
 $M_d = M_t = M_s = C_{dyn} = 1.0$
 $C_{p,i} = +0.2$ (service), $+0.7$ (strength)
 $C_{p,e} = -0.9$ (roof), -0.65 (wall)
Combination factors $K_{c,e} = K_{c,i} = 0.9$
 $K_a = K_p = 1.0$

Fixing

Roof sheeting – Buildex® 15-15 Batten Tek® or M6-11 Roof Zips® with Buildex® cyclone caps or equivalent.

Wall sheeting – Buildex® 15-15 Batten Tek® or M6-11 Roof Zips® or equivalent & No 10 sidelap fasteners for all spans.

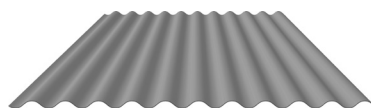
All steel supports minimum 0.75mm thick.

Stramit Monoclad® cladding - minimum 4 fasteners per sheet per support.

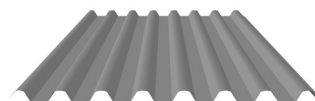
Stramit® Corrugated cladding - minimum 5 fasteners per sheet per support.

Stramit Longspan® cladding - minimum 5 fasteners per sheet per support for roofing, 4 for walling.

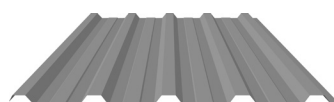
All other information as given in Cyclonic Areas Roof & Wall Cladding design supplement on the Stramit website.



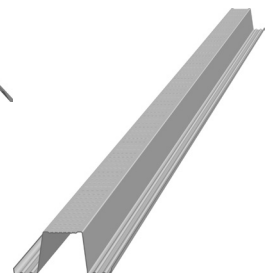
Stramit® Corrugated



Stramit Longspan®



Stramit Monoclad®



Stramit® Cyclonic Roof Batten

Stramit® Cladding Solutions with Stramit® Cyclonic Battens

STRAMIT® ROOFING SOLUTIONS FOR REGION D - DESIGN PRESSURES AS PER AS/NZS 1170.2:2011																				
Roof Height	Terrain Category	Local press factor LPF K _i	Roof Pressure (kPa)		Max Batten spacings (mm) for Batten span (mm) & fixing 2 No 14 screws into 1.5 G450				Solutions for Stramit® Roofing											
									Monoclad® with cyclone caps				Longspan® with cyclone caps				Corrugated with cyclone caps			
									0.42mm BMT		0.48mm BMT		0.42mm BMT		0.48mm BMT		0.42mm BMT		0.48mm BMT	
Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal									
<=5	1&2	1	1.84	6.04	1190	890	590	440	550	500	550	500	800	700	700	650	700	650		
		1.5	2.59	7.74	930	700	460	350	-	-	-	-	600	550	600	550	550	500		
		2	3.34	9.44	760	570	380	280	-	-	-	-	500	450	500	450	450	-		
		3	4.85	12.83	560	420	280	210	-	-	-	-	-	-	-	-	-	-		
	2.5	1	1.26	5.12	1410	1050	700	520	700	600	700	600	900	850	900	850	850	750		
		1.5	1.78	6.56	1100	820	550	410	500	450	500	450	700	650	700	650	650	600		
		2	2.30	8.00	900	670	450	330	-	-	-	-	550	500	550	500	550	500		
		3	3.33	10.89	660	490	330	240	-	-	-	-	-	-	-	-	-	-		
	3	1	1.15	4.28	1680	1260	840	630	800	750	800	750	1100	1000	1100	1000	1000	900		
		1.5	1.62	5.49	1310	980	650	490	600	550	600	550	850	800	850	800	800	700		
		2	2.09	6.69	1080	810	540	400	500	450	500	450	700	650	700	650	650	550		
		3	3.03	9.10	790	590	390	290	-	-	-	-	500	450	500	450	450	-		
<=10	1&2	1	2.09	6.69	1080	810	540	400	500	450	500	450	700	650	700	650	650	550		
		1.5	2.95	8.57	840	630	420	310	-	-	-	-	550	500	550	500	500	450		
		2	3.81	10.45	690	510	340	250	-	-	-	-	450	-	450	-	-	-		
		3	5.52	14.22	500	380	250	190	-	-	-	-	-	-	-	-	-	-		
	2.5	1	1.40	5.98	1200	900	600	450	550	500	550	500	800	700	800	700	750	650		
		1.5	1.97	7.66	940	700	470	350	450	-	450	-	600	550	600	550	550	500		
		2	2.54	9.34	770	580	380	290	-	-	-	-	500	450	500	450	450	-		
		3	3.68	12.70	560	420	280	210	-	-	-	-	-	-	-	-	-	-		
	3	1	1.15	5.30	1360	1020	680	510	650	550	650	550	850	800	850	800	800	750		
		1.5	1.62	6.79	1060	790	530	390	500	450	500	450	700	600	700	600	650	550		
		2	2.09	8.28	870	650	430	320	-	-	-	-	550	500	550	500	500	450		
		3	3.03	11.26	640	480	320	240	-	-	-	-	-	-	-	-	-	-		

STRAMIT® WALLING SOLUTIONS FOR REGION D - DESIGN PRESSURES AS PER AS/NZS 1170.2:2011																				
Wall Height	Terrain Category	Local press factor LPF K _i	Wall Pressure (kPa)		Max Batten spacings (mm) for Batten span (mm) & fixing 2 No 14 screws into 1.5 G450				Solutions for Stramit® Roofing											
									Monoclad®				Longspan®				Corrugated			
									0.42mm BMT		0.48mm BMT		0.42mm BMT		0.48mm BMT		0.42mm BMT		0.48mm BMT	
Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal	Internal	Equal									
<=5	1&2	1	1.42	5.09	1410	1060	700	530	700	600	700	600	900	850	900	850	850	800		
		1.5	1.96	6.32	1140	850	570	420	550	500	550	500	750	700	750	700	700	600		
		2	2.51	7.55	950	710	470	350	450	-	450	-	600	550	600	550	550	500		
		3	3.56	10.42	700	510	330	240	-	-	-	-	500	450	500	450	450	-		
	2.5	1	0.98	4.32	1670	1250	830	620	800	750	800	750	1100	1000	1100	1000	1000	900		
		1.5	1.35	5.36	1340	1010	670	500	650	550	650	550	850	800	850	800	800	750		
		2	1.72	6.40	1120	840	560	420	550	500	550	500	750	650	750	650	700	600		
		3	2.43	8.53	850	630	410	300	-	-	-	-	600	550	600	550	550	500		
	3	1	0.89	3.61	2000	1500	1000	750	950	850	950	850	1300	1150	1300	1150	1150	1100		
		1.5	1.23	4.48	1610	1200	800	600	800	700	800	700	1050	950	1050	950	950	850		
		2	1.57	5.35	1350	1010	670	500	650	550	650	550	850	800	850	800	800	750		
		3	2.23	7.53	1000	750	500	350	-	-	-	-	700	650	700	650	650	600		
<=10	1&2	1	1.62	5.65	1280	960	640	480	600	550	600	550	850	750	850	750	750	700		
		1.5	2.24	7.00	1030	770	510	380	500	-	500	-	650	600	650	600	600	550		
		2	2.85	8.36	860	640	430	320	-	-	-	-	550	500	550	500	500	450		
		3	3.91	11.13	630	460	300	210	-	-	-	-	-	-	-	-	-	-		
	2.5	1	1.08	5.04	1430	1070	710	530	700	600	700	600	900	850	900	850	850	800		
		1.5	1.49	6.26	1150	860	570	430	550	500	550	500	750	700	750	700	700	600		
		2	1.90	7.47	960	720	480	360	450	-	450	-	600	550	600	550	550	500		
		3	2.59	9.19	720	540	350	260	-	-	-	-	500	450	500	450	450	-		
	3	1	0.89	4.47	1610	1210	800	600	800	700	800	700	1050	950	1050	950	950	850		
		1.5	1.23	5.55	1300	970	650	480	600	550	600	550	850	800	850	800	800	700		
		2	1.57	6.62	1090	810	540	400	500	450	500	450	700	650	700	650	650	550		
		3	2.23	7.53	850	630	410	300	-	-	-	-	600	550	600	550	550	500		

■ May be limited by sheeting spans

■ May be limited by batten spacings

Span Configurations

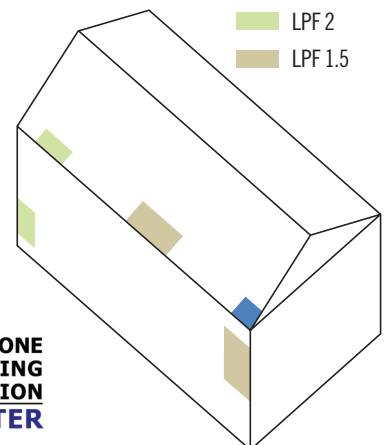
Internal = Internal spans with end spans at least 20% shorter

Equal = All spans equal, with minimum of 3 spans

Local Pressure Factors

Corner and edge areas may experience higher pressures and require reduced spans or increased fixing.

- LPF 3
- LPF 2
- LPF 1.5



For further information call (08) 9493 8800 Or visit www.stramit.com.au