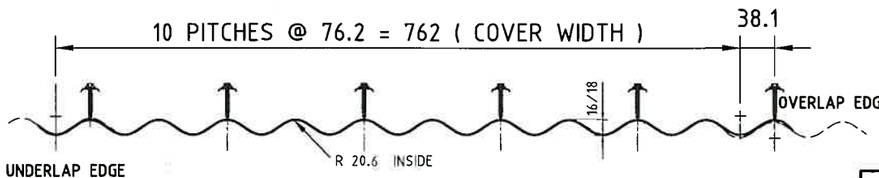
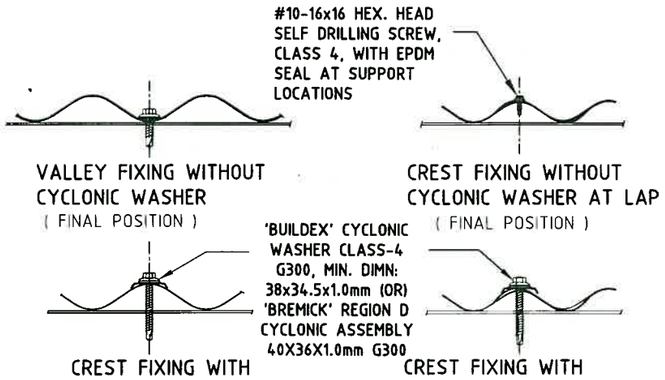
NORTHERN TERRITORY DEEMED TO COMPLY MANUAL - National Construction Code Volume 2 (Section 3.0.4 Structural resistance of materials in high wind areas)
This product has been determined to satisfy NCC Performance Requirement P2.1.1 for structural stability and resistance.



CREST FASTENED WITH CYCLONIC WASHERS

CUSTOM ORB PROFILE



SPAN TYPE

WALL DESIGN CAPACITY TABLES

ULTIMATE LIMIT STATE PRESSURE (kPa)

SPAN mm	0.42 BMT						0.48 BMT					
	PAN FASTENED WITHOUT CYCLONIC WASHERS			CREST FASTENED WITH CYCLONIC WASHERS			PAN FASTENED WITHOUT CYCLONIC WASHERS			CREST FASTENED WITH CYCLONIC WASHERS		
	SGL.	END	INT.	SGL.	END	INT.	SGL.	END	INT.	SGL.	END	INT.
450	-	-	-	-	-	-	-	-	-	-	13.05	13.05
600	10.8	8.10	8.09	8.64	8.10	10.13	10.80	8.10	10.13	10.80	11.7	11.7
900	7.00	5.18	6.17	6.19	5.18	7.34	6.98	5.56	7.38	6.98	6.54	8.65
1200	4.05	3.01	4.52	4.05	3.01	5.05	4.05	3.57	5.18	4.05	5.05	6.68
1500	1.96	1.58	3.12	2.23	1.58	3.27	2.02	2.12	3.51	2.02	3.69	4.88
1800	0.72	0.90	1.99	0.72	0.90	1.99	0.88	1.22	2.39	0.88	2.46	3.25
2100	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.86	1.80	N/A	1.36	1.80

SGL. = SINGLE SPAN, END = END SPAN, INT. = INTERNAL SPAN

RECOMMENDED FASTENERS

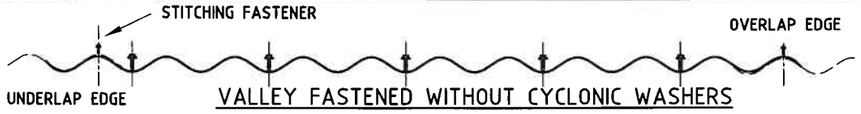
STEEL SUPPORTS - CLASS 4 : SELF DRILLING & SELF TAPPING HEX HEAD SCREW WITH EPDM SEAL

LOCATION ON CLADDING	SINGLE & LAPPED THICKNESS 0.75mm UP TO 1.0mm bmt.	SINGLE THICKNESS ≥ 1.0mm UP TO 3.0mm bmt.	LAPPED THICKNESS > 1.0mm UP TO 1.9mm bmt. (3.8mm total)
CREST	M6.5 (#14)-12x55 CYCLONIC ZIPS	#14 - 10 x 42 HH	#14 - 10 x 42 HH
PAN	M6.5 (#14)-12x30 CYCLONIC ZIPS	#14 - 10 x 25 HH	#14 - 10 x 25 HH

TIMBER SUPPORTS - CLASS 4 : TYPE 17 SELF DRILLING HEX HEAD SCREW WITH EPDM SEAL

LOCATION ON CLADDING	HARDWOOD (STRENGTH GROUP J1-J3)	SOFTWOOD (STRENGTH GROUP J4)
CREST	#12 - 11 x 50 T17 HH TG/HG	#14 - 10 x 50 T17 HH M6 -11 x 50 ROOFZIPS
PAN	#12 - 11 x 25 T17 HH	#14 - 10 x 50 T17 HH

FASTENER NOTATION
HH - HEX HEAD
HG - HIGH GRIP
TG - TOP GRIP
T17 - TYPE 17



VALLEY FASTENED WITHOUT CYCLONIC WASHERS

MAXIMUM SPAN TABLES FOR TIMBER & STEEL SUPPORT >=1.5 (mm)

NOTE: CLADDING SPAN SHALL NOT EXCEED THE MAXIMUM SPAN FOR CLADDING (SHEET 1) OR THE MAXIMUM BATTEN SPACING (SHEET 2)

BUILDING HEIGHT	TERRAIN CATEGORY	Kl	pz (kPa	VALLEY FASTENED WITHOUT CYCLONIC WASHERS, 0.42BMT			CREST FASTENED WITH CYCLONIC WASHERS, 0.42BMT			VALLEY FASTENED WITHOUT CYCLONIC WASHERS, 0.48BMT			CREST FASTENED WITH CYCLONIC WASHERS, 0.48BMT		
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
UP TO 5M	1	1	3.57	1260	1120	1400	1270	1120	1440	1270	1200	1480	1270	1520	1740
		1.5	4.43	1160	1000	1210	1140	1000	1300	1160	1070	1330	1160	1330	1580
		2	5.29	1070	880	1050	1020	880	1160	1070	940	1180	1070	1150	1430
		3	7.01	890	710	760	790	710	940	890	660	950	890	810	1140
	2	1	2.90	1360	1220	1550	1380	1220	1580	1360	1330	1660	1360	1690	1870
		1.5	3.60	1260	1110	1390	1270	1110	1440	1260	1190	1480	1260	1520	1730
		2	4.30	1170	1020	1240	1160	1020	1320	1170	1090	1350	1170	1360	1600
		3	5.69	1030	840	980	960	840	1110	1030	880	1120	1030	1070	1360
	2.5	1	2.65	1400	1270	1620	1430	1270	1640	1400	1390	1720	1400	1750	1920
		1.5	3.29	1300	1160	1460	1320	1160	1490	1310	1250	1550	1310	1590	1790
		2	3.93	1210	1070	1320	1220	1070	1380	1210	1140	1420	1210	1440	1670
		3	5.20	1080	890	1070	1030	890	1170	1080	950	1190	1080	1160	1440
	3	1	2.41	1430	1320	1680	1460	1320	1700	1440	1440	1790	1440	1810	1970
		1.5	2.99	1350	1200	1530	1370	1200	1560	1350	1320	1630	1350	1660	1850
		2	3.57	1260	1120	1400	1270	1120	1440	1270	1190	1480	1270	1520	1740
		3	4.73	1130	960	1160	1100	960	1250	1120	1020	1270	1120	1260	1520
	4	1	1.97	1490	1410	1800	1550	1410	1800	1510	1550	2010	1510	1930	2060
		1.5	2.44	1430	1310	1670	1460	1310	1690	1430	1430	1780	1430	1800	1060
		2	2.92	1360	1210	1550	1380	1210	1580	1360	1330	1650	1360	1680	1860
		3	3.87	1220	1080	1340	1230	1080	1390	1220	1150	1430	1220	1460	1680
UP TO 10M	1	1	4.08	1190	1050	1290	1190	1050	1360	1190	1120	1390	1190	1410	1640
		1.5	5.07	1090	910	1100	1050	910	1190	1090	970	1210	1090	1190	1460
		2	6.05	990	810	920	910	810	1060	990	840	1080	990	990	1300
		3	8.02	810	600	610	670	600	820	810	600	830	810	620	990
	2	1	3.50	1270	1130	1410	1290	1130	1460	1280	1210	1500	1280	1540	1750
		1.5	4.34	1170	1010	1230	1150	1010	1310	1160	1080	1340	1160	1350	1590
		2	5.19	1080	890	1070	1040	890	1180	1080	950	1190	1080	1170	1440
		3	6.87	910	720	790	810	720	960	910	740	960	910	880	1170
	2.5	1	2.96	1350	1210	1540	1370	1210	1570	1360	1320	1640	1360	1670	1850
		1.5	3.68	1250	1100	1380	1260	1100	1430	1250	1180	1460	1250	1500	1720
		2	4.39	1160	1000	1220	1150	1000	1310	1160	1070	1340	1160	1340	1590
		3	5.82	1020	830	960	950	830	1090	1010	870	1110	1010	1040	1340
	3	1	2.41	1430	1320	1680	1460	1320	1700	1440	1440	1790	1440	1810	1970
		1.5	2.99	1350	1200	1530	1370	1200	1560	1350	1320	1630	1350	1660	1850
		2	3.57	1260	1120	1400	1270	1120	1440	1270	1190	1480	1270	1520	1740
		3	4.73	1130	960	1160	1100	960	1250	1120	1020	1270	1120	1260	1520
	4	1	1.97	1490	1410	1800	1550	1410	1800	1510	1550	2010	1510	1930	2060
		1.5	2.44	1430	1310	1670	1460	1310	1690	1430	1430	1780	1430	1800	1960
		2	2.92	1360	1210	1550	1380	1210	1580	1360	1330	1650	1360	1680	1860
		3	3.87	1220	1080	1340	1230	1080	1390	1220	1150	1430	1220	1460	1680

Notes covering basis of DTC (relevant test reports etc).
1. CUSTOM ORB 0.42 & 0.48 BMT CYCLONIC ROOF & WALL PRESSURE TEST. PROJECT #501855, JUNE 2008. BLUESCOPE STEEL LYSAGHT. No 7 FERNGROVE PLACE, CHESTER HILL 2162 NSW - AUSTRALIA.
2. STATIC & CYCLIC FATIGUE WITHDRAWAL CAPACITIES OF THE SELF DRILLING SCREWS IN TIMBER SUPPORTS: REPORT 5.1.2 - REPORT No 05. DECEMBER 2001. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.
3. CYCLIC PULL OUT CAPACITIES OF BUILDEX #14 - 12 X 55 CYCLONIC ROOFZIPS SCREWS. REPORT, 5.1.2 - REPORT 05 JUNE 2010. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.
4. SCREW PULL OUT CAPACITIES TO BUILDING CODE OF AUSTRALIA LOW-HI-LOW CYCLONIC TEST REGIME: REPORT 5.1.2 - REPORT 02. SEPTEMBER 2009. BLUESCOPE LYSAGHT No 27 STERLING RD. MINCHINBURY 2770 NSW AUSTRALIA.

Checking Engineer
Name: SANDEEP SHARMA
Rego Number: MIE. Aust. 3101165
Date: 28/03/2022
Signature:
Must be an Australian registered structural engineer

Certifying Engineer
Name: STEPHEN HEALEY
NT Rego Number: 34856ES
Date: 07.06.2022
Signature:
Must be a registered structural engineer in the Northern Territory

Product Name

CUSTOM ORB - WALLING FOR CYCLONIC REGIONS
SHEET 1 OF 2

Product Description

CUSTOM ORB WALLING IS MANUFACTURED FROM 0.42mm & 0.48mm BMT G550, AM125 ZINCALUME, AM100 COLORBOND/COLORBOND METALLIC, AM150 COLORBOND ULTRA. Z450 GALVASPAN MATERIAL IS AVAILABLE IN SOME LOCATIONS.

Manufacturer's Name

LYSAGHT
BlueScope Limited
A.B.N. 16 000 011 058
Trading as Lysaght

Design Criteria

A. THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS HAVE BEEN USED TO GENERATE THE TABLES.
1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
2. VR = 66 m/sec
3. Ms = Mt = Md = 1.0, Mc = 1.05
4. Cpe = +0.7 / -0.65; Cpi = -0.65 / +0.7 Kce & Kci = 0.9
5. HEIGHT MULTIPLIERS FROM TABLE 4.1 OF AS/NZS 1170.2:2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS HAVE BEEN USED TO GENERATE THE TABLES.

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz,cat)				
	1	2	2.5	3	4
<=5	1.01	0.91	0.87	0.83	0.75
<=10	1.08	1.00	0.92	0.83	0.75

B. CUSTOM ORB COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
1. SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
2. WIND LOADING: AS/NZS 1170.2: 2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION.

C. DESIGN TABLES ARE BASED ON TEST RESULTS COMPATIBLE TO AS 4040.3 - 2018 METHODS OF TESTING SHEET ROOF AND WALL CLADDING METHOD 3: RESISTANCE TO WIND PRESSURES FOR CYCLONE REGIONS.

D. PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2021 : CONTINUOUS HOT-DIP METALLIC COATED STEEL SHEET AND STRIP - COATINGS OF ZINC AND ZINC ALLOYED WITH ALUMINIUM AND MAGNESIUM & AS/NZS 2728: 2013 PREFINISHED/PREPAINTED SHEET METAL PRODUCTS FOR INTERIOR/EXTERIOR BUILDING APPLICATIONS - PERFORMANCE REQUIREMENTS

E. FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).

Limitations

1. THE DATA IN THIS SHEET SHALL BE APPLICABLE TO CUSTOM ORB WALLING ONLY. PROFILE DIMENSIONS OF CUSTOM ORB AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH CUSTOM ORB PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND CUSTOM ORB MANUAL.
https://cdn.dcs.lysaght.com/download/lysaght-cyclonic-design-manual-steel-roofing-walling-topspan
3. MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
4. MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
5. Pz (PRESSURE) IN THE TABLES SHALL BE INCREASED ACCORDING TO AS/NZS 1170.2:2021, STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING AND ROOF PITCH >=25 DEG
6. NO PRE-BORED HOLES PERMITTED.
7. INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.

Accepted for Inclusion in Deemed to Comply Manual

DTCM drawing number: M/353/01

Chairperson Signature:

Chairperson Name: Paul Nowland

Date of Approval:11/07/2022 Expiry11/07/2027

NORTHERN TERRITORY DEEMED TO COMPLY MANUAL - National Construction Code Volume 2 (Section 3.0.4 Structural resistance of materials in high wind areas)
This product has been determined to satisfy NCC Performance Requirement P2.1.1 for structural stability and resistance.

MAXIMUM BATTEN SPACING TABLES FOR 0.75mm & 1.0mm BMT STEEL BATTENS (mm)

BUILDING HEIGHT	TERRAIN CATEGORY	KI	pz (kPa)	TS4075 BATTEN SPAN (SUPPORT SPACING), mm					TS6175 BATTEN SPAN (SUPPORT SPACING), mm						TS6110 BATTEN SPAN (SUPPORT SPACING), mm					
				≤600	900	1200	1500	1800	≤1500	2000	2500	3000	3500	4000	≤1500	2000	2500	3000	3500	4000
UP TO 5M	1	1	3.57	1455	1030	675	510	350	1005	750	410	315	260	205	1005	750	605	460	335	260
		1.5	4.43	1175	830	540	410	280	810	600	330	255	210	N/A	810	605	485	370	270	210
		2	5.29	980	695	455	345	235	675	505	275	210	N/A	N/A	675	505	405	310	225	175
		3	7.01	740	520	340	260	175	510	380	210	N/A	N/A	N/A	510	380	305	235	170	130
	2	1	2.9	1795	1265	830	630	430	1235	920	510	385	320	255	1235	925	740	570	410	320
		1.5	3.6	1445	1020	665	505	345	995	740	410	310	260	205	995	745	600	460	330	260
		2	4.3	1210	855	560	425	290	830	620	340	260	215	N/A	830	625	500	385	275	215
		3	5.69	910	645	420	320	215	630	470	260	N/A	N/A	N/A	630	470	375	290	210	165
	2.5	1	2.65	1960	1385	905	690	470	1350	1010	555	425	350	275	1350	1015	815	625	450	350
		1.5	3.29	1580	1115	730	555	375	1090	810	445	340	285	220	1090	815	655	500	360	285
		2	3.93	1320	935	610	465	315	910	680	375	285	235	N/A	910	680	545	420	305	235
		3	5.2	1000	705	460	350	240	690	515	280	215	N/A	N/A	690	515	415	315	230	180
	3	1	2.41	2160	1525	1000	755	515	1485	1110	610	465	390	305	1485	1115	895	685	495	390
		1.5	2.99	1740	1230	805	610	415	1200	895	490	375	310	245	1200	895	720	555	400	310
		2	3.57	1455	1030	675	510	350	1005	750	410	315	260	205	1005	750	605	460	335	260
		3	4.73	1100	775	505	385	260	755	565	310	235	N/A	N/A	755	565	455	350	250	195
	4	1	1.97	2640	1865	1220	925	630	1820	1360	750	570	475	375	1820	1365	1095	840	605	475
		1.5	2.44	2130	1505	985	750	510	1470	1095	605	460	385	300	1470	1100	885	680	490	385
		2	2.92	1780	1260	825	625	425	1225	915	505	385	320	250	1225	920	735	565	410	320
		3	3.87	1345	950	620	470	320	925	690	380	290	240	N/A	925	695	555	425	310	240
UP TO 10M	1	1	4.08	1275	900	590	445	305	875	655	360	275	230	N/A	875	655	525	405	290	230
		1.5	5.07	1025	725	475	360	245	705	525	290	220	N/A	N/A	705	530	425	325	235	185
		2	6.05	860	605	395	300	205	590	440	240	N/A	N/A	N/A	590	440	355	270	195	155
		3	8.02	645	455	300	225	155	445	330	N/A	N/A	N/A	N/A	445	335	265	205	145	115
	2	1	3.5	1485	1050	685	520	335	1025	765	420	320	265	210	1025	765	615	470	340	265
		1.5	4.34	1195	845	555	420	285	825	615	340	260	215	N/A	825	615	495	380	270	215
		2	5.19	1000	705	460	350	240	690	515	285	215	N/A	N/A	690	515	415	315	230	180
		3	6.87	755	535	350	265	180	520	390	215	N/A	N/A	N/A	520	390	310	240	170	135
	2.5	1	2.96	1755	1240	810	615	420	1210	905	500	380	315	250	1210	905	725	560	405	315
		1.5	3.68	1410	1000	650	495	335	975	725	400	305	255	200	975	730	585	450	325	255
		2	4.39	1185	835	545	415	280	815	610	335	255	210	N/A	815	610	490	375	270	210
		3	5.82	890	630	410	310	210	615	460	250	N/A	N/A	N/A	615	460	370	285	205	160
	3	1	2.41	2160	1525	1000	755	515	1485	1110	610	465	390	305	1485	1115	895	685	495	390
		1.5	2.99	1740	1230	805	610	415	1200	895	490	375	310	245	1200	895	720	555	400	310
		2	3.57	1455	1030	675	510	350	1005	750	410	315	260	205	1005	750	605	460	335	260
		3	4.73	1100	775	505	385	260	755	565	310	235	N/A	N/A	755	565	455	350	250	195
	4	1	1.97	2640	1865	1220	925	630	1820	1360	750	570	475	375	1820	1365	1095	840	605	475
		1.5	2.44	2130	1505	985	750	510	1470	1095	605	460	385	300	1470	1100	885	680	490	385
		2	2.92	1780	1260	825	625	425	1225	915	505	385	320	250	1255	920	735	565	410	320
		3	3.87	1345	950	620	470	320	925	690	380	290	240	N/A	925	695	555	425	310	240

BATTEN SPACING TABLE NOTES:

1. MAXIMUM SPACING COULD BE GOVERNED BY CAPACITY OF BATTENS AND THEIR CONNECTIONS TO SUPPORTING MEMBERS AS WELL AS PULL-OUT CAPACITIES OF FASTENERS CONNECTING LYSAGHT CLADDINGS TO BATTEN.
2. SPACING OF BATTENS SHALL NOT EXCEED BOTH MAXIMUM SPAN AND MAXIMUM SUPPORT SPACING OF CLADDING AS GIVEN IN SHEET 1.
3. FASTENER REQUIREMENTS FOR FIXING **TS4075** TO SUPPORTS IN BATTEN SPACING TABLE:
   STEEL SUPPORTS:
   - 1.00mm BMT: 2x #14(M6.5)-12X30 CYCLONIC ROOF ZIPS®
   - 1.20~1.9mm BMT: 2x #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
   - 'BUILDEX' M6.5-12X30 CYCLONIC ROOF ZIPS = #14-12X30 CYCLONIC ROOF ZIPS

   TIMBER SUPPORTS:
   - 2x 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS
4. FASTENER REQUIREMENTS FOR FIXING **TS6175** OR **TS6110** TO SUPPORTS IN BATTEN SPACING TABLE:
   - STEEL SUPPORT 1.20~1.9mm BMT: 4x #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
   - TIMBER SUPPORTS: 4x 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS

DESIGN CAPACITY TABLE NOTES:

1. STEEL SUPPORT FASTENER SPECIFICATION:
   - 1.00mm BMT: #14(M6.5)-12X30 CYCLONIC ROOF ZIPS®
   - 1.20~1.9mm BMT: #14-10X25 HEX. HEAD SELF DRILLING SELF TAPPING TEKS®
   - 'BUILDEX' M6.5-12X30 CYCLONIC ROOF ZIPS = #14-12X30 CYCLONIC ROOF ZIPS
2. TIMBER SUPPORT FASTENER SPECIFICATION: 'BUILDEX' #12(M5.5)-11x40 BATTENZIPS
3. DESIGN CAPACITY TABLE CAN BE USED TO DESIGN TS4075, TS6175 & TS6110 WITH TIMBER SUPPORTS:
   - 2 FASTENER CONNECTION: SOFTWOOD TIMBER = 1.5mm bmt STEEL SUPPORT, HARDWOOD TIMBER = 1.9mm bmt STEEL SUPPORT.
   - 4 FASTENER CONNECTION: HARDWOOD/SOFTWOOD TIMBER SUPPORT = 1.9bmt STEEL SUPPORT.
4. OUTWARD CAPACITY SHALL BE LIMITED BY THE MINIMUM VALUE BETWEEN MEMBER STRENGTH AND FASTENERS CAPACITY.
5. **TS4075** BATTEN SHALL BE CONTINUOUS OVER AT LEAST 2 SPANS, LAPPED 40mm MINIMUM AT THE SUPPORT LOCATIONS.
6. **TS6175** AND **TS6110** BATTENS SHALL BE CONTINUOUS OVER AT LEAST 2 SPANS, STRUCTURAL LAPPING DISTANCE AT SUPPORT IS MINIMUM 15% OF THE LONGER SPAN. NON STRUCTURAL LAPPING DISTANCE IS 40mm MINIMUM AT THE SUPPORT LOCATIONS.

TS6175, TS6110 DESIGN CAPACITY TABLE - OUTWARD, CONTINUOUS/LAPPED SPAN

ULTIMATE LIMIT STATE LOAD (kN/m)

SPAN (mm)	MEMBER STRENGTH (kN/m)		2 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt)				4 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt)			
	TS6175	TS6110	#14(M6.5)-12x30	#14-10x25			#14(M6.5)-12x30	#14-10x25		
			1.0mm	1.2mm	1.5mm	1.9mm	1.0mm	1.2mm	1.5mm	1.9mm
≤1500	4.31	5.88	1.90	2.48	3.10	4.12	2.67	3.59	4.52	5.41
2000	2.68	2.91	1.43	1.86	2.33	3.09	2.01	2.69	3.39	4.06
2500	1.48	2.17	1.14	1.49	1.86	2.47	1.60	2.16	2.71	3.25
3000	1.13	1.66	0.95	1.24	1.55	2.06	1.34	1.80	2.26	2.71
3500	0.94	1.20	0.82	1.06	1.33	1.76	1.15	1.54	1.94	2.32
4000	0.74	0.94	0.71	0.93	1.16	1.54	1.00	1.35	1.69	2.03

TS4075 DESIGN CAPACITY TABLE - OUTWARD, CONTINUOUS SPAN

ULTIMATE LIMIT STATE LOAD (kN/m)

SPAN (mm)	MEMBER STRENGTH kN/m	2 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt)				4 FASTENER CAPACITY (kN/m) SUPPORT THICKNESS (mm/bmt)			
	TS4075	#14(M6.5)-12x30	#14-10x25			#14(M6.5)-12x30	#14-10x25		
		1.0mm	1.2mm	1.5mm	1.9mm	1.0mm	1.2mm	1.5mm	1.9mm
≤ 600	7.98	5.51	7.19	8.99	11.93	7.75	10.41	13.09	15.69
900	4.72	3.68	4.79	5.99	7.95	5.16	6.94	8.73	10.46
1200	2.41	2.76	3.59	4.49	5.96	3.87	5.21	6.54	7.84
1500	1.83	2.21	2.88	3.60	4.77	3.10	4.16	5.24	6.27
1800	1.25	1.84	2.40	3.00	3.98	2.58	3.47	4.36	5.23

NOTES:

1. REFER TO "TOPSPAN 61 WALLING BATTENS FOR CYCLONIC REGIONS" & "TOPSPAN 4075 WALLING BATTENS FOR CYCLONIC REGION FOR BATTEN" DTCM DRAWINGS FOR DIMENSIONS, SPACING, SPANS, CONNECTIONS DETAILS AND TEST REPORTS.
2. 'FULL SCALE TOPSPAN 4075,6175,6110 ROOFING BATTENS TESTING TO BUILDING CODES OF AUSTRALIA'S LOW-HIGH-LOW CYCLONIC TEST', REGIME. INDEX No. 5.1.2 - REPORT 04, AUGUST 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.
3. 'WITHDRAWAL CAPACITIES OF TOPSPAN BATTEN TO TIMBER SUPPORT CONNECTIONS USING BUILDEX BATTENZIPS M5.5 - 11 x 40 FASTENERS', INDEX No. 5.1.2 - REPORT 06, DECEMBER 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.
4. 'PULLOUT CAPACITIES OF SCREW FASTENED CONNECTIONS THROUGH LYSAGHT TOPSPAN BATTENS TO STEEL PURLINS', INDEX No. 5.4.3 - REPORT 01, NOVEMBER 2010, BLUESCOPE LYSAGHT No. 27 STERLING RD, MINCHINBURY 2770 AUSTRALIA.

Checking Engineer

Name: SANDEEP SHARMA
Rego. Number: MIE AUST. 3101165
Date: 23/03/2022
Signature:
Must be an Australian registered structural engineer

Certifying Engineer

Name: STEPHEN HEALEY
NT Rego. Number: 34856ES
Date: 07.06.2022
Signature:
Must be a registered structural engineer in the Northern Territory

Product Name

CUSTOM ORB - WALLING FOR CYCLONIC REGIONS
SHEET 2 OF 2

Product Description

CUSTOM ORB WALLING IS MANUFACTURED FROM 0.42mm & 0.48mm BMT G550, AM125 ZINCALUME, AM100 COLORBOND/COLORBOND METALLIC, AM150 COLORBOND ULTRA. Z450 GALVASPAN MATERIAL IS AVAILABLE IN SOME LOCATIONS.

Manufacturer's Name

LYSAGHT
BlueScope Limited
A.B.N. 16 000 011 058
Trading as Lysaght

Design Criteria

A. THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS HAVE BEEN USED TO GENERATE THE TABLES.
   1. IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
   2. VR = 66 m/sec
   3. Ms = Mt = Md = 1.0, Mc = 1.05
   4. Cpe = +0.7 / -0.65; Cpi = -0.65 / +0.7 Kce & Kci = 0.9
   5. HEIGHT MULTIPLIERS FROM TABLE 4.1 OF AS/NZS 1170.2:2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS HAVE BEEN USED TO GENERATE THE TABLES.

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz,cat)				
	1	2	2.5	3	4
<=5	1.01	0.91	0.87	0.83	0.75
<=10	1.08	1.00	0.92	0.83	0.75

B. CUSTOM ORB COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
   1. SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
   2. WIND LOADING: AS/NZS 1170.2: 2021 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION.

C. DESIGN TABLES ARE BASED ON TEST RESULTS COMPATIBLE TO AS 4040.3 - 2018 METHODS OF TESTING SHEET ROOF AND WALL CLADDING METHOD 3: RESISTANCE TO WIND PRESSURES FOR CYCLONE REGIONS.

D. PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2021: CONTINUOUS HOT-DIP METALLIC COATED STEEL SHEET AND STRIP - COATINGS OF ZINC AND ZINC ALLOYED WITH ALUMINIUM AND MAGNESIUM & AS/NZS 2728: 2013 PREFINISHED/PREPAINTED SHEET METAL PRODUCTS FOR INTERIOR/EXTERIOR BUILDING APPLICATIONS - PERFORMANCE REQUIREMENTS

E. FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).

Limitations

1. THE DATA IN THIS SHEET SHALL BE APPLICABLE TO CUSTOM ORB WALLING ONLY. PROFILE DIMENSIONS OF CUSTOM ORB AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH CUSTOM ORB PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
2. INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND CUSTOM ORB MANUAL.
   https://cdn.dcs.lysaght.com/download/lysaght-cyclonic-design-manual-steel-roofing-walling-topspan
3. MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
4. MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
5. Pz (PRESSURE) IN THE TABLES SHALL BE INCREASED ACCORDING TO AS/NZS 1170.2:2021, STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING AND ROOF PITCH >=25 DEG
6. NO PRE-BORED HOLES PERMITTED.
7. INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.

Accepted for Inclusion in Deemed to Comply Manual

DTCM drawing number: M/353/02

Chairperson Signature:

Chairperson Name: Paul Nowland

Date of Approval: 11/07/2022 Expiry 11/07/2027