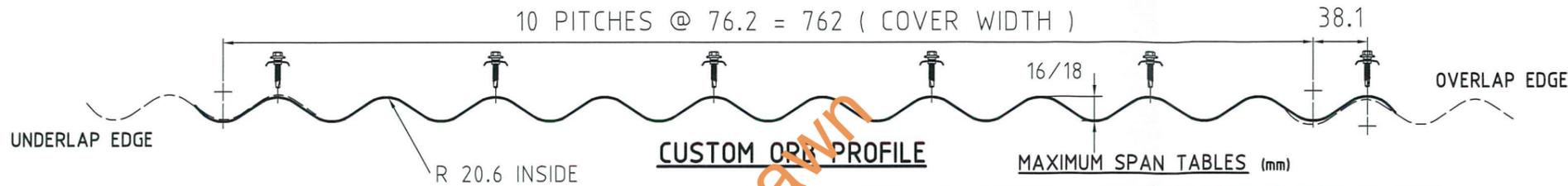


IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1) THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENTS P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.



MAXIMUM SPAN TABLES (mm)

BUILDING HEIGHT	TERRAIN CATEGORY	K1	pz (kPa)	CREST FASTENED WITH CYCLONIC WASHERS, 0.42BMT			CREST FASTENED WITH CYCLONIC WASHERS, 0.48BMT		
				SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
UP TO 5M	1	1	4.57	1120	980	1280	1140	1300	1550
		1.5	5.86	940	830	1090	1010	1030	1330
		2	7.15	780	690	920	880	780	1120
	2	1	3.44	1300	1140	1470	1280	1560	1760
		1.5	4.40	1150	1000	1300	1160	1340	1580
		2	5.37	1010	880	1150	1060	1130	1410
	2.5	1	3.49	1290	1130	1460	1280	1540	1750
		1.5	4.02	1200	1060	1370	1200	1420	1650
		2	4.91	1070	930	1220	1110	1230	1490
	3	1	2.86	1390	1230	1590	1370	1700	1880
		1.5	3.66	1260	1110	1430	1250	1500	1720
		2	4.47	1140	990	1290	1150	1320	1570
4	1	2.33	1480	1340	1710	1450	1830	1990	
	1.5	2.99	1370	1200	1560	1350	1670	1850	
	2	3.65	1260	1110	1430	1250	1500	1720	
UP TO 10M	1	1	5.2	1030	890	1180	1080	1160	1440
		1.5	6.67	840	740	980	930	870	1200
		2	8.13	660	N/A	810	800	600	970
	2	1	4.15	1180	1040	1350	1180	1390	1630
		1.5	5.32	1020	880	1160	1060	1140	1420
		2	6.48	860	760	1010	950	910	1230
	2.5	1	3.51	1280	1130	1450	1270	1540	1750
		1.5	4.5	1130	990	1290	1150	1320	1560
		2	5.49	990	860	1140	1050	1110	1390
	3	1	2.86	1390	1230	1590	1370	1700	1880
		1.5	3.66	1260	1110	1430	1250	1500	1720
		2	4.47	1140	990	1290	1150	1320	1570
4	1	2.33	1480	1340	1710	1450	1830	1990	
	1.5	2.99	1370	1200	1560	1350	1670	1850	
	2	3.65	1260	1110	1430	1250	1500	1720	
		3	4.96	1070	930	1210	1100	1210	1480

WARNING
Product Approval Withdrawn
October 2021

ROOF DESIGN CAPACITY TABLES

CLADDING CREST FASTENED WITH CYCLONIC WASHERS - ULTIMATE LIMIT STATE PRESSURE (kPa)

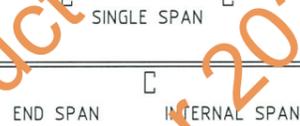
SPAN (mm)	0.42 BMT			0.48 BMT		
	SINGLE	END	INTERNAL	SINGLE	END	INTERNAL
600	8.64	8.10	10.13	10.80	8.16	10.80
900	6.19	5.18	7.34	6.98	6.54	8.65
1200	4.05	3.01	5.05	4.05	5.05	6.68
1500	2.23	1.58	3.27	2.02	3.69	4.88
1800	0.72	0.90	1.99	0.88	2.46	3.25
2100	N/A	N/A	N/A	N/A	1.36	1.80

MAXIMUM SUPPORT SPACING (mm)

SPAN TYPE	0.42 BMT	0.48 BMT
SINGLE	700	800
END	900	1300
INTERNAL	1200	1700
EAVE UNSTIFFENED	200	250
OVERHANG STIFFENED	300	350

THE MAXIMUM SUPPORT SPACING CONSIDERS LIGHT ROOF TRAFFIC FROM INCIDENTAL MAINTENANCE.

SPAN TYPE



Product Name
CUSTOM ORB - ROOFING FOR CYCLONIC REGIONS

Product Description
CUSTOM ORB ROOFING 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 Steel Limited
A.B.N. 16 000 011 058
Trading as Lysaght



Design Criteria

THE FOLLOWING CRITERIA FROM AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1,2&3) HAVE BEEN USED TO GENERATE THE TABLES.

- IMPORTANCE LEVEL 2 WITH RETURN PERIOD OF 500 YEARS
- VR = 66xFc = 66x1.05 = 69.3 m/sec
- Ms = Mt = Md = 1.0
- Cpe = -0.9; Cpi = +0.7 Kce & Kci = 0.9
- HEIGHT MULTIPLIERS FROM TABLE 4.1 OF AS/NZS 1170.2:2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No. 1,2&3) HAVE BEEN USED TO GENERATE THE TABLES.

HEIGHT (m)	TERRAIN / HEIGHT MULTIPLIER (Mz,cat)				
	1	2	2.5	3	4
<=5	1.05	0.91	0.87	0.83	0.75
<=10	1.12	1.00	0.92	0.83	0.75



Limitations

- THE DATA IN THIS SHEET SHALL BE APPLICABLE TO CUSTOM ORB ROOFING ONLY. PROFILE DIMENSIONS OF CUSTOM ORB AS SUPPLIED FOR INSTALLATION SHALL COMPLY WITH CUSTOM ORB PRODUCT DRAWINGS AS DEVELOPED BY LYSAGHT.
- ROOF DESIGN CAPACITY TABLES & MAXIMUM SPAN TABLES HAVE BEEN DEVELOPED FOR TIMBER SUPPORTS & STEEL SUPPORTS 1.5mm BMT OR THICKER. FOR STEEL SUPPORT LESS THAN 1.50mm BMT, REFER TO APPROPRIATE DTCM SHEET FOR MAXIMUM BATTEN SPACING.
- INSTALLATION SHALL BE IN ACCORDANCE WITH LYSAGHT CYCLONIC AREA DESIGN MANUAL AND CUSTOM ORB MANUAL.
- MAXIMUM SPAN TABLES ARE BASED ON MAXIMUM ROOF HEIGHT = 10M.
- MAXIMUM OVERHANG SHALL BE DETAILED ACCORDING TO CURRENT LYSAGHT ROOFING & WALLING INSTALLATION MANUAL.
- Pz (PRESSURE) IN THE TABLES SHALL BE INCREASED ACCORDING TO AS/NZS 1170.2:2011, STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTIONS (INCORPORATING AMENDMENT No 1,2 & 3) AS/NZS 1170.2: 2011 CLAUSE 5.4.1 IN THE CASE OF: ELEVATED BUILDING ALLOWING FOR AIR FLOW UNDER: - h/b > 1, - h/d > 1. *
- NO PRE-BORED HOLES PERMITTED.
- CUSTOM ORB COMPLIES WITH AUSTRALIAN STANDARDS FOR THE FOLLOWING REQUIREMENTS:
 - SERVICEABILITY: AS/NZS 1170.0: 2002 STRUCTURAL DESIGN ACTIONS PART 0: GENERAL PRINCIPLES (INCORPORATING AMENDMENT 1,2,3,4&5)
 - WIND LOADING: AS/NZS 1170.2: 2011 STRUCTURAL DESIGN ACTIONS PART 2: WIND ACTION (INCORPORATING AMENDMENT No. 1,2&3)
 - CONCENTRATED LOAD AT MAXIMUM SPAN: AS 4040.0-1992: METHODS OF TESTING SHEET ROOF AND WALL CLADDING - INTRODUCTION, LIST OF METHODS AND GENERAL REQUIREMENTS; AS 4040.1-1992: METHODS OF TESTING SHEET ROOF AND WALL CLADDING - RESISTANCE TO CONCENTRATED LOADS
- SERVICEABILITY LIMIT STATE PRESSURES CAN BE OBTAINED BY MULTIPLYING ROOF DESIGN CAPACITY TABLES BY A FACTOR 0.46.
- ALWAYS WALK OVER SUPPORTS IF POSSIBLE. GENERALLY KEEP YOUR WEIGHT DISTRIBUTED EVENLY OVER THE SOLES OF YOUR SHOES.
- MAX. CUSTOM ORB ROOF LENGTHS AS RELATED TO ROOF CARRYING CAPACITY & ROOF PITCH SHALL BE DETERMINED USING THE CUSTOM ORB DESIGN & INSTALLATION GUIDE.
- INCREASE SCREW LENGTH IF FIXING OVER INSULATION TO MAINTAIN A MIN. OF 3 SCREW THREADS PROTRUDING ON THE FAR SIDE STEEL SUPPORT.
- FOR STRENGTH GROUPS OF TIMBER, REFER TO AS 1720.2: 2006 TIMBER STRUCTURES PART 2: TIMBER PROPERTIES (INCORPORATING AMENDMENT No. 1).
- DESIGN TABLES ARE BASED ON TEST RESULTS IN ACCORDANCE TO BCA REQUIREMENTS FOR "LHL" CYCLONIC TEST FOR METAL ROOFS.
- PRODUCT METALLIC COATING COMPLIES WITH AS 1397-2011: 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

RECOMMENDED ROOF FASTENERS FOR STEEL SUPPORTS ONLY FASTENERS NOTED CAN BE USED IN THIS DTCM SHEET. **RECOMMENDED ROOF FASTENERS FOR TIMBER SUPPORTS**

SCREW NOTATION CODE:	STEEL THICKNESS	CLASS 4 : SELF DRILLING & TAPPING HEX HEAD SCREW WITH EPDM SEAL	STRENGTH GROUP	CLASS 4 : SELF DRILLING HEX HEAD SCREW WITH EPDM SEAL
HH DENOTED - HEX. HEAD	SINGLE: 1.0mm UP TO 3.0mm bmt	#14 - 10 x 42 HH (CREST FIX)	HARDWOOD J1-J3	#12 - 11 x 50 T17 HG/TG HH (CREST FIX)
T17 " - TYPE 17				
HG " - HIGH GRIP	SINGLE/LAPPED: 0.75mm UP TO 1.0mm bmt (total 2.0mm)	M6.5 (#14) - 12 x 55 CYCLONIC ROOFZIP (CREST FIX)	SOFTWOOD J4	M6 - 11 x 50 ROOFZIPS (CREST FIX)
TG " - TOP GRIP	LAPPED: 1.0mm UP TO 1.9mm bmt (total 3.8mm)	#14 - 10 x 42 HH (CREST FIX)		#14 - 10 x 50 T17 HH (CREST FIX)

Notes covering basis of DTCM sheet (Relevant test reports etc)

- CUSTOM ORB 0.42 + 0.48 BMT CYCLONIC ROOF & WALL PRESSURE TESTS. PROJECT #501282. JUNE 2008. BLUESCOPE STEEL LYSAGHT No 7 FERNGROVE PLACE, CHESTER HILL 2162 NSW - AUSTRALIA.
- STATIC & CYCLIC FATIGUE WITHDRAWAL CAPACITIES OF SELF DRILLING SCREWS IN TIMBER SUPPORTS. REPORT: 5.1.2-REPORT 05. DECEMBER 2010. LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.
- CYCLIC PULLOUT CAPACITIES OF BUILDDEX M6.5-12X55 CYCLONIC ZIP SCREWS. REPORT: 5.1.3 - REPORT 05. JUNE 2010. BLUESCOPE LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.
- SCREW PULLOUT CAPACITIES TO BUILDING CODES OF AUSTRALIA'S LOW-HIGH-LOW CYCLONIC TEST REGIME. REPORT: 5.1.2 - REPORT 02. SEPTEMBER 2009. LYSAGHT No 27 STERLING RD, MINCHINBURY 2770 NSW - AUSTRALIA.

****Checking Engineers Certification**
Name: JACK HUANG
Registration Number: MIE AUST. 2592775
Date: 05/09/2016
Signature:

****Certifying Engineers Certification**
Name: STEPHEN HEALEY
NT Registration Number: 34856ES
Date: 27.September.2016
Signature:

Accepted for Inclusion

DTCM ref: M / 312 / 01
Chairman's Signature:
Chairman's Name: Peter Russell
Date of Approval: 03/10/2016 Expiry Date: 02/10/2021

**registered as a structural engineer in Australia

**registered as a structural engineer in Northern Territory