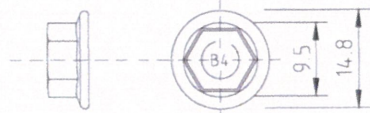


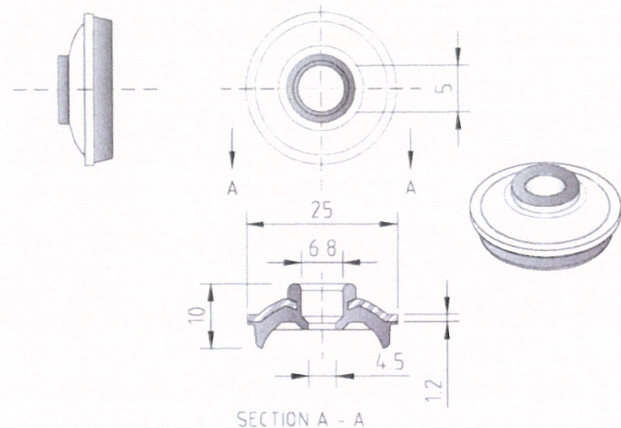
IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENT P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA.

CYCLONE ASSEMBLY COMPONENTS
Comprising of self drilling screw & one piece cyclone washer

VORTEX CYCLONE UNIVERSAL SCREW
FOR METAL BATTENS, TIMBER BATTENS & STEEL PURLINS
M6.2-13 x 55 & 65mm
(HEAD MARKING B4V & B4)
Screws are Class 4 in accordance with AS3566



BREMICK BRA - CYCLONE WASHER / SEAL
ONE PIECE ALUMINIUM / EPDM CYCLONE WASHER



All dimensions mm (nominal)

Notes covering basis of DTC (Relevant tests reports etc.)

Testing was undertaken at the University of Adelaide & BlueScope Lysaght Technology Centre. Tested and approved in accordance with the requirements of AS/NZS 1170.2 : 2011 - Structural design Actions - Wind actions and the Building Code of Australia (BCA) 2015 Specifications B1.2 for the Design of buildings in cyclonic areas.

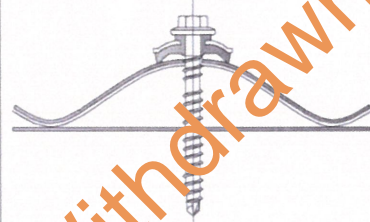
Test Certificate Numbers

Eng Test: Report No. C090201 - 22/4/2009

Trevor John & Associates Report No: TR01 - 17/3/2009, TR03 - 20/3/2009, TR05 - 26/3/2009, TR07 - 25/3/2009, TR09 - 24/3/2009 & TR11 - 19/3/2009

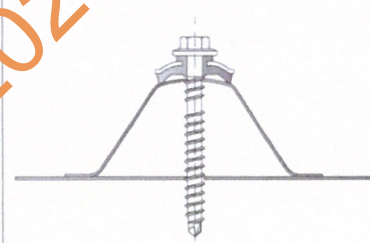
BlueScope Lysaght Technology centre: Report No. BSL 11:03:2009/1

FASTENING:
BSL CUSTOM ORB®
0.42mm BMT G550 min.



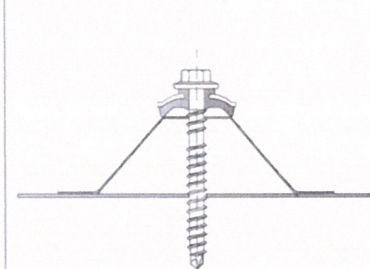
FASTENING TO:
STEEL PURLINS
1.5mm BMT min. G450 min.
METAL BATTENS
0.75mm BMT min. G550 min.
TIMBER BATTENS
JD3 min.

FASTENING:
BSL TRIMDEK®
0.42mm BMT G550 min.



FASTENING TO:
STEEL PURLINS
1.5mm BMT min. G450 min.
METAL BATTENS
0.75mm BMT min. G550 min.

FASTENING:
BSL SPANDEK®
0.42mm BMT G550 min.

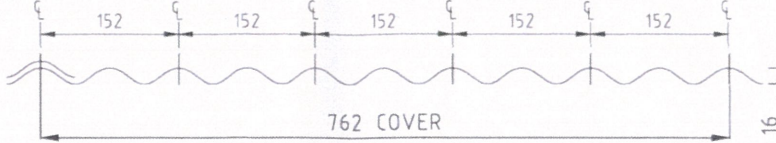


FASTENING TO:
STEEL PURLINS
1.5mm BMT min. G450 min.
METAL BATTENS

CORRUGATED ROOFING PROFILE - BSL CUSTOM ORB®

FASTENER SPACINGS

Crest Fastener Locations : Alternate Ribs (152mm Centres)
Spans Tested : 900mm End, 1150mm Intermediate, 900mm End

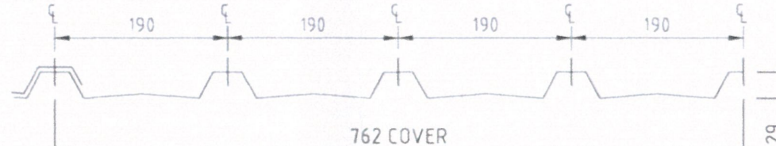


Supports	Crest Fixing	Side Lap Fixing
Steel Purlins G450 1.5mm BMT min.	Bremick Vortex™ Cyclone M6.2-13x55 - BRA	Bremick Vortex™ Stitch M6.5-13x20 (900mm Centres min.)
Metal Battens 0.75mm BMT min.		
Timber JD3 min.	M6.2-13x65 - BRA	

SQUARE RIB ROOFING PROFILES - BSL TRIMDEK®

FASTENER SPACINGS

Crest Fastener Locations : Each Rib (190mm Centres)
Spans Tested : 1200mm End, 1500mm Intermediate, 1200mm End

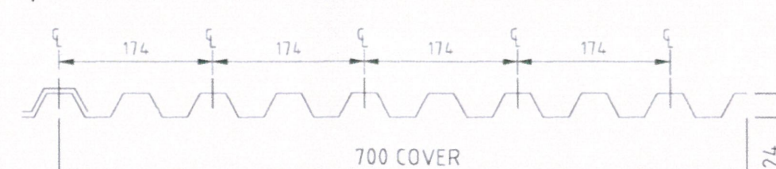


Supports	Crest Fixing	Side Lap Fixing
Steel Purlins G450 1.5mm BMT min.	Bremick Vortex™ Cyclone M6.2-13x55 - BRA	Bremick Vortex™ Stitch M6.5-13x20 (900mm Centres min.)
Metal Battens 0.75mm BMT min.		

SQUARE RIB ROOFING PROFILES - BSL SPANDEK®

FASTENER SPACINGS

Crest Fastener Locations : Alternate Ribs (174mm Centres)
Spans Tested : 1200mm End, 1500mm Intermediate, 1200mm End



Supports	Crest Fixing	Side Lap Fixing
Steel Purlins G450 1.5mm BMT min.	Bremick Vortex™ Cyclone M6.2-13x55 - BRA	Bremick Vortex™ Stitch M6.5-13x20 (900mm Centres min.)

Product Name

Vortex™ Cyclone - Cyclone Assembly

Product Description: Roofing Fasteners

M6.2-13x55 & 65 - BRA - Cyclone Assembly
With Lysaght Profiles

Manufacturer's Name: BREMICK Pty Ltd
F1, 62 Maddox Street
Alexandria NSW 2015
Ph: 02 8332 1501
Email: sales@bremick.com.au

Design Criteria

Fastener & support spacing to be controlled such that the maximum design loading per fastener or maximum design pressures do not exceed:

Table 1 : Strength Limit State Design Loads per Fastener

Roofing Profile	Test Load (kN)	C.O.V. (K _t)	Design Load (kN)
Custom Orb®	0.88	1.30	0.68
Trimdek®	1.05	1.30	0.81
Spandek®	1.08	1.38	0.78

Table 2 : Strength Limit State Design Pressures

Roofing Profile	Test Pressure (kPa)	C.O.V. (K _t)	Design Capacity (kPa)
Custom Orb®	5.36	1.30	4.12
Trimdek®	4.04	1.30	3.11
Spandek®	4.49	1.38	3.26

Limitations

This sheet confirms the structural adequacy of the roof sheeting assembly (sheeting, screw and washer) when correctly installed and does not extend to the capacity of the batten/purlin. Refer to the sheeting & batten manufacturers data for maximum support spacings. Axial withdrawal capacity for each fastener exceeds the 3.1kN requirements of AS3566.1: 2002 - Self-drilling screws for building and construction industries - General requirements and mechanical properties.

Strength limit state fastener loads have been derived from the test pressures using simplified static analysis with the uniform pressure (load) distribution.

Accepted for Inclusion

DTCM ref: M/186/01

Chairman's Signature:

Chairman's Name:

TREVOR JOHN

Date of Approval: 15/05/2017 Expiry Date: 09/12/2020

*Checking Engineers Certification

Name: RACHAEL ZEUNER
Registration Number: NPER 11734
Date: 6/2/2017
Signature: Rzeuner

*registered as a structural engineer in Australia

*Certifying Engineers Certification

Name: TREVOR JOHN
NT Registration Number: 12178 ES
Date: 23.2.17
Signature: TJB

**registered as a structural engineer in the Northern Territory