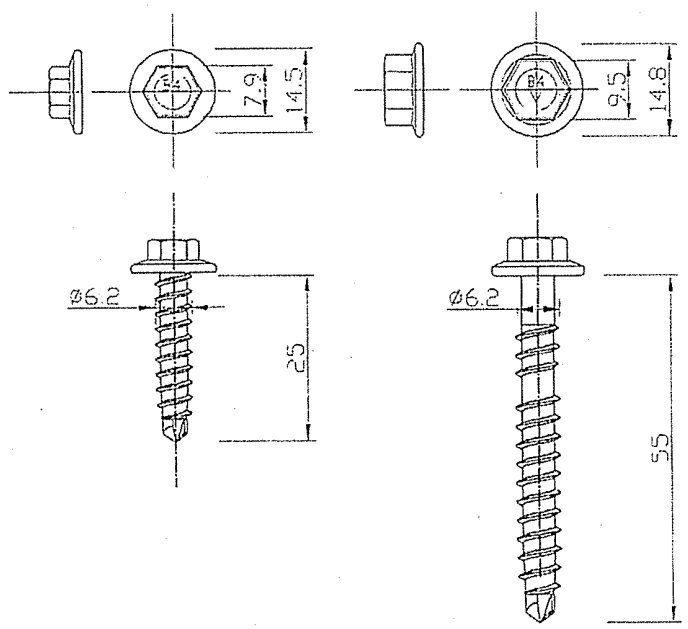
# CYCLONE ASSEMBLY COMPONENTS

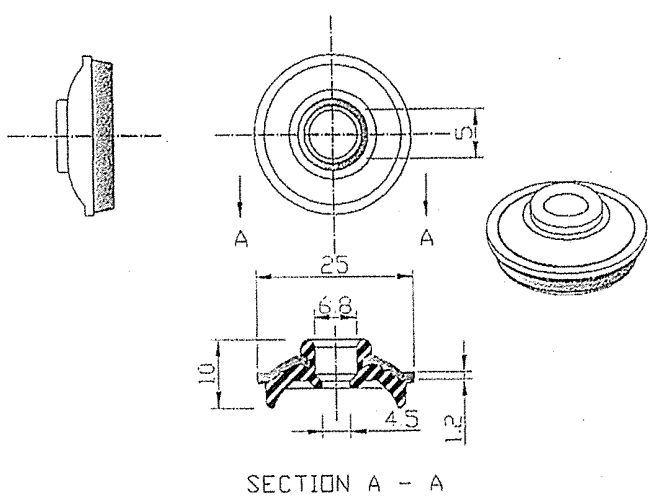
Comprising of self drilling screw & one piece cyclone washer

**VORTEX CYCLONE UNIVERSAL SCREWS**

FOR FASTENING TO METAL BATTENS
M6.2-13x55mm & M6.2-13x25mm BRA
(HEAD MARKING B4V & B4 ONLY)



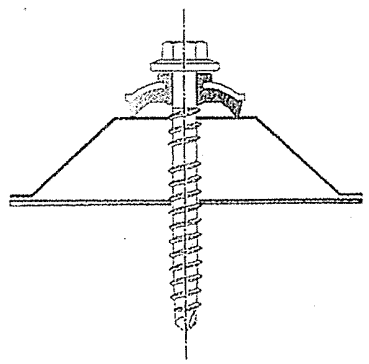

BREMICK BRA - CYCLONE WASHER / SEAL
ONE PIECE ALUMINIUM / EPDM CYCLONE WASHER




SECTION A - A

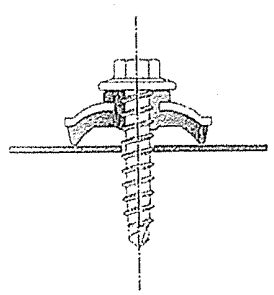
All dimensions mm ( nominal )

**FASTENING:**
VERSATILE BUILDINGS
6 RIB ROOFING PROFILE
0.42mm BMT min.
G550



**FASTENING TO:**
METAL BATTENS
0.75mm BMT min.
G550 min.

**FASTENING:**
VERSATILE BUILDINGS
7 RIB ROOFING PROFILE
0.42mm BMT min.
G550

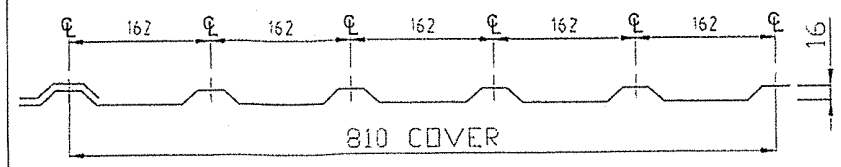


**FASTENING TO:**
METAL BATTENS
0.75mm BMT min.
G550 min.

## SQUARE RIB ROOFING PROFILE-VERSATILE BUILDINGS 6 RIB

**FASTENER SPACINGS**

Crest Fastener Locations : Each Rib (162mm Centres)
Spans Tested : 750mm End, 750mm Intermediate, 750mm End

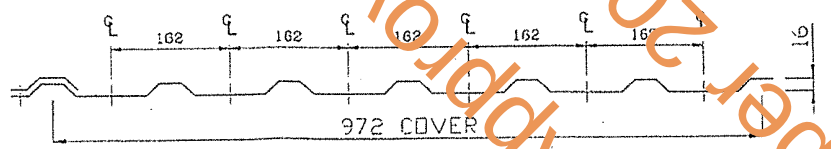



| Supports | Crest Fixing | Side Lap Fixing |
|---|---|---|
| Metal Battens<br>0.75mm BMT min.<br>G550 min. | Bremick<br>Vortex™ Cyclone<br>M6.2 -14x55 - BRA | Bremick<br>HEX 10 -16x16 SL<br>(900mm Centres min.) |

## SQUARE RIB ROOFING PROFILE-VERSATILE BUILDINGS 7 RIB

**FASTENER SPACINGS**

Pan Fastener Locations : Each Pan Centre (162mm Centres)
Spans Tested : 750mm End, 750mm Intermediate, 750mm End




( Pan fixing may not meet the performance provisions for water ingress of the BCA )

| Supports | Crest Fixing | Side Lap Fixing |
|---|---|---|
| Metal Battens<br>0.75mm BMT min.<br>G550 min. | Bremick<br>Vortex™ Cyclone<br>M6.2 -13x25 - BRA | Bremick<br>HEX 10 -16 x16 SL<br>(900mm Centres min.) |

Testing was undertaken at the James Cook University.Tested and approved in accordance with the requirements of AS/NZS 1170.2 and the Building Code of Australia ( BCA ) 2008 Specifications B 1.2 for the Design of Buildings in cyclonic areas.

Test Certificate Numbers

James Cook University : TS666a and TS666b

Product Name

# VORTEX™ CYCLONE - Cyclone Assembly

Product Description : Roofing Fasteners

## M6.2 - 13x55 & M6.2 - 13x25 - BRA Cyclone Assembly

Manufacturer's Name

## BREMICK FASTENERS Pty Ltd

www.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 ) |
|---|---|---|---|
| Versatile 6 Rib+ | 0.96 | 1.38 | 0.70 |
| Versatile 7 Rib* | 0.91 | 1.30 | 0.70 |

Table 2 : Strength Limit State Design Pressures

| Roofing Profile | Test Pressure ( kPa ) | C.O.V. ( $K_t$ ) | Design Capacity ( kPa ) |
|---|---|---|---|
| Versatile 6 Rib+ | 7.20 | 1.38 | 5.22 |
| Versatile 7 Rib* | 6.79 | 1.30 | 5.22 |

Notes:
+Rib fastened 0.42mm BMT, * Pan fastened 0.35mm BMT

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.
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 168/01

Chairman's Signature:

Chairman's Name: STEVEN J EHRLICH.

Date of Approval: 21/10/10 Expiry Date: ~~21/10/13~~

New Expiry Date: 21/10/15
Signature.....

**Design Engineers Certification
Name: Vadim Topolinsky
Rego Number: UPER.3 81496
Date: 6.9.10
Signature:
**registered as a structural engineer in Australia

**Certifying Engineers Certification
Name: Trevor John
NT Rego Number: 12178ES
Date: 5.9.10
Signature:
**registered as a structural engineer in Northern Territory