EXPANSION JOINTS – Small Movements

GRANOR® Ausflex Series – “ACB Stripseal”
The Granor® Ausflex Series ACB Stripseal Expansion Joint system is a specialty bolted down type expansion joint used only in the Australian state of Queensland for new works, and more widely as a retrofit solution. Typically ACB joint has been detailed for use with PSC plank beam style bridge structures predominantly used in Queensland. ACB joints can also be used as rehabilitation / replacement joints in conjunction with drilled ‘chemset’ anchors.

**Installation**

It is recommended that ACB joints only be installed by experienced installation contractors or by bridge crews containing experienced personnel. Contact Granor if you require contact details for experienced contractors covering your area.

---

**SYSTEM COMPONENTS**

**Aluminium Rails**

ACB aluminium rails are made in Australia from structural / marine grade aluminium.

**Elastomeric Gland**

ACB joints utilise the same central elastomeric sealing glands as used with the ‘AC-AR’ joint system. There are two seals styles; drape type and flush type.

**Fixings**

The Granor® design utilises stainless steel M16 threaded rod together with Queensland Main Roads Department approved stainless steel ferrules as per the requirements of specification MRTS82. The sockets/ferrules can either be cast into a deck slab or cast directly into the PSC units.

For retrofit outcomes the stainless steel threaded rods are anchored into the concrete deck using drilled ‘chemset’ epoxy anchorages at 150mm typical spacing.

**Channel Infill Material**

Once the nuts are tightened the channel in the aluminium rails is infilled with a proprietary flexible rubber compound to exclude debris while permitting access for future maintenance.

**Black Colour Epoxy Mortar**

Granor SILSPEC 900PNS black colour epoxy mortar is used as bedding underneath the ACB aluminium rails and to provide protective upstand headers / transition strips beside the aluminium rails.
CONCRETE SURFACE TO BE GRITBLASTED OR SCABBLED PRIOR TO PLACING GRANOR SILSPEC 900PNS EPOXY MORTAR.

N12 GALVANISED "U" BAR WITH 350 LEGS (MIN ONE PER 4-M16 CAST IN SOCKETS)

GRANOR SILESPC 900PNS BLACK COLOUR EPOXY MORTAR BEDDING AND TRANSITION STRIP

GRANOR TYPE ACB STRUCTURAL GRADE ALUMINIUM RETAINER

DALTObOND / CRUMBED RUBBER BOLT CHANNEL INFILL

M16 @ 150mm c/c (TYP) CAST IN STAINLESS STEEL SOCKETS BY GRANOR

NEW WORKS DETAIL

STANDARD DETAIL - NEW WORKS
GRANOR ACB BOLTED-IN ALUMINIUM STRIP SEAL EXPANSION JOINT SYSTEM.

ACB EXPANSION JOINT TABLE

<table>
<thead>
<tr>
<th>PART No.</th>
<th>Movement Range min. to max. (mm)</th>
<th>Min Installation Gap Width &quot;A&quot; (mm)</th>
<th>M16 Stud Spacings (nominal)</th>
<th>Seal Type</th>
<th>Seal Profile</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACB-100D</td>
<td>0 - 100</td>
<td>38</td>
<td>150mm</td>
<td>100D</td>
<td>Type &quot;D&quot;</td>
</tr>
<tr>
<td>ACB-125D</td>
<td>0 - 125</td>
<td>38</td>
<td>150mm</td>
<td>125D</td>
<td>Type &quot;D&quot;</td>
</tr>
<tr>
<td>ACB-100F</td>
<td>20 - 125</td>
<td>40</td>
<td>150mm</td>
<td>100F</td>
<td>Type &quot;F&quot;</td>
</tr>
</tbody>
</table>

Note: wider Initial Gap Widths ("A") can be used provided the joint movement range will not be exceeded.
PSC DECK UNIT SOCKET DETAIL
(DECK SLAB SOCKET DETAIL SIMILAR)

Note: positioning shown is typical only and may be adjusted by PSC Precaster as necessary.
CAST-IN SOCKET DETAIL

M16 STAINLESS STEEL CAST-IN SOCKET
No. OFF = ___

RETROFIT DETAIL

CONCRETE SURFACE TO BE SCARBED AND CRACKLED PRIOR TO PLACING GRANOR SILSPECS 900PNS EPOXY MORTAR.

GRANOR TYPE ACB STRUCTURAL GRADE ALUMINIUM RETAINER

BOLT CHAIN G/ GRANED RUBBER BOLT CHAIN IN FILL

100mm MIN
100mm

CONCRETE REINFORCEMENT

65mm

GRANOR ACB BOLTED-IN ALUMINIUM STRIP SEAL EXPANSION JOINT SYSTEM.

M16 STAINLESS STEEL OR GALVANISED STUDS INSTALLED INTO EPOXY CHEMICAL ANCHORS AT NOMINAL 150mm c/c