Acra Screeds GO Expansion Spec Sheet

This is a Patented Product.

OVERVIEW OF PRODUCT

The Acra Screed GO Expansion system is a Patented Product.

Unlike other concrete expansion systems, the GO Expansion system allows users to set up the expansion section and form a permanent integral part of the concrete slab; this helps eliminate the standard requirement for separate pours and minimises the need for concrete pumps and labour over several days by allowing the contractor to continue pouring the concrete beyond the expansion joint.

Unlike most other methods, once the GO expansion form is erected, there is no need to disassemble anything; striping the shutter, removing steel pins, etc., is unnecessary. Should a slab require a temporary stop end or extension, a continuation system using stud connectors and threaded expansion bars is also available, preventing the need for protruding Expansion bars, creating a safer working environment.

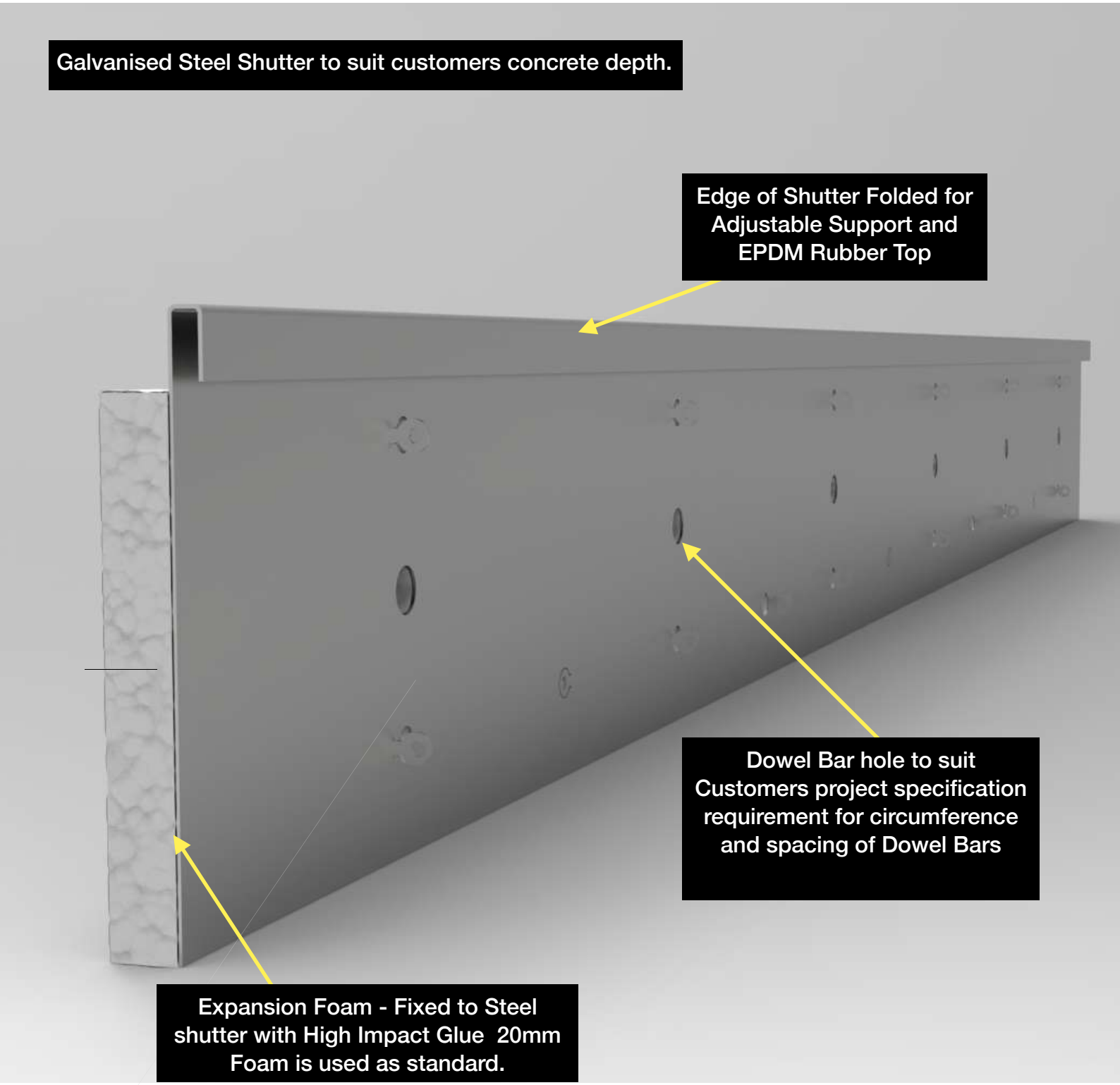
Unlike other Expansion Joints, which may require saw cutting or stripping back foam and filling with Polysulphide or joint sealants, the GO expansion joint comes with an EPDM rubber seal. This unique design binds into the concrete with integral voids, allowing for expansion and contraction of the joint during concrete movement. Polysulphide joints are known for disintegration over time, shrinking back or being pulled out by traffic movement during constant wear and tear. When this happens, water ingress is inevitable, and during winter months, this can then freeze and fracture the concrete along the joint.

The GO Expansion system has been rigorously tested in a real-life environment over a 6-year period, demonstrating its exceptional durability. The EPDM joint, a key component of the system, has shown no sign of damage or water ingress, remaining as solid as the day it was installed. With an expected life span of 50 to 100 years, the EPDM matches the expected life span of the concrete, making the GO Expansion system a cost-effective and long-lasting solution for your construction needs.

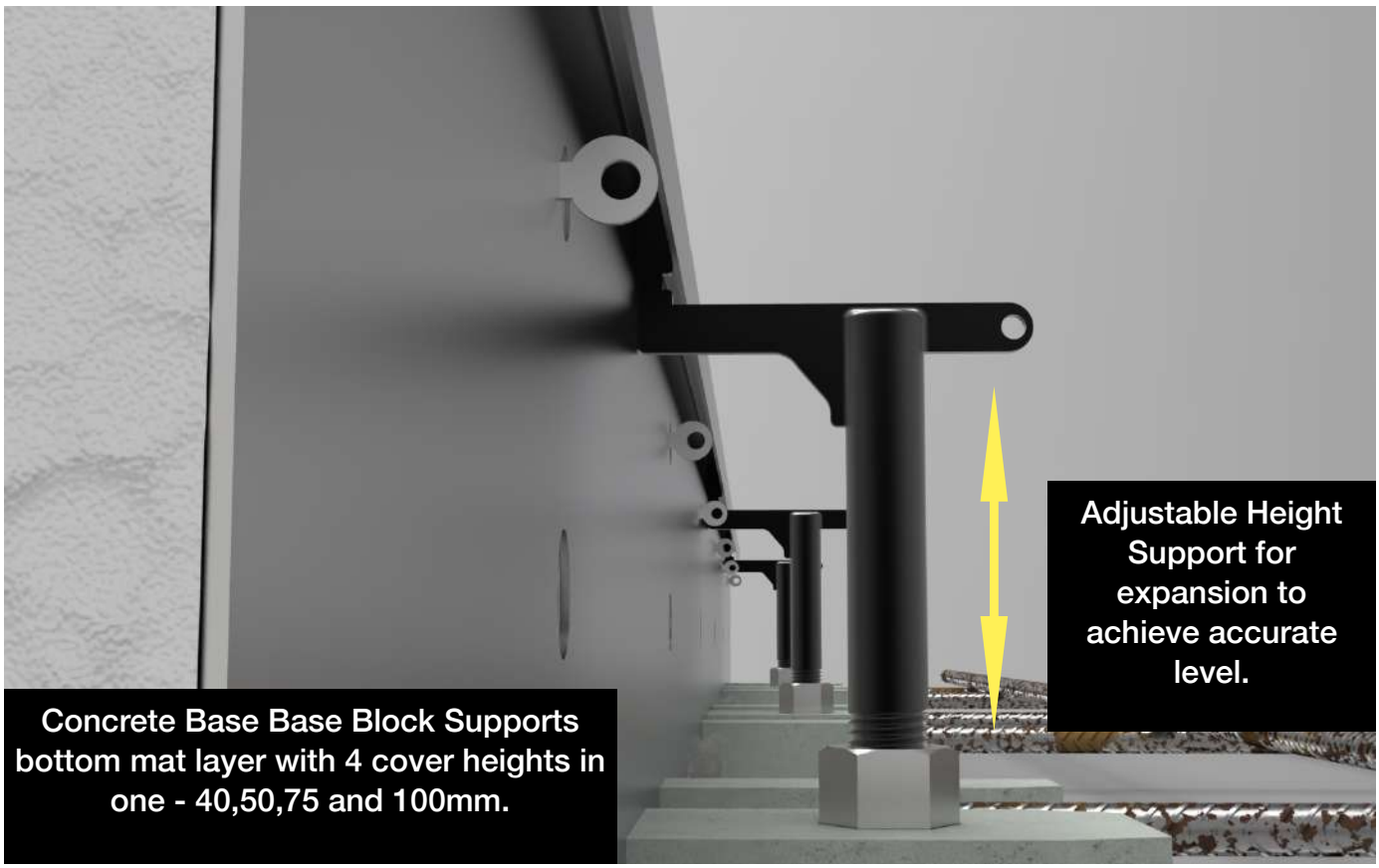
Instillation Guide

Please request the separate instillation guide which offers a simple step by step method.

The Main Shutter shown below with fixed Expansion Foam delivered to the site ready for installation. Depth, Hole Diameter, and Spacings are as per the customer's requirements.

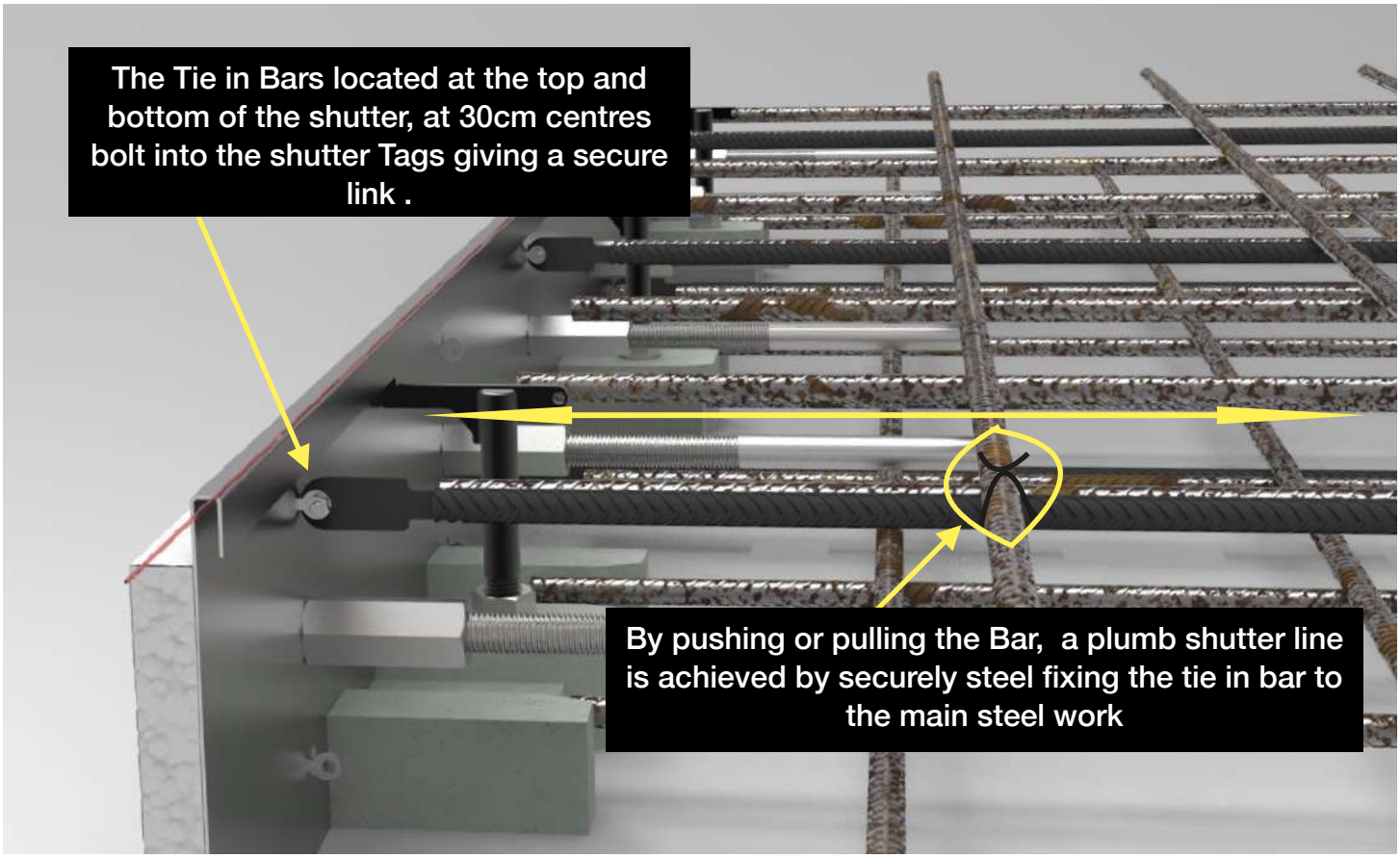


Height Adjustable



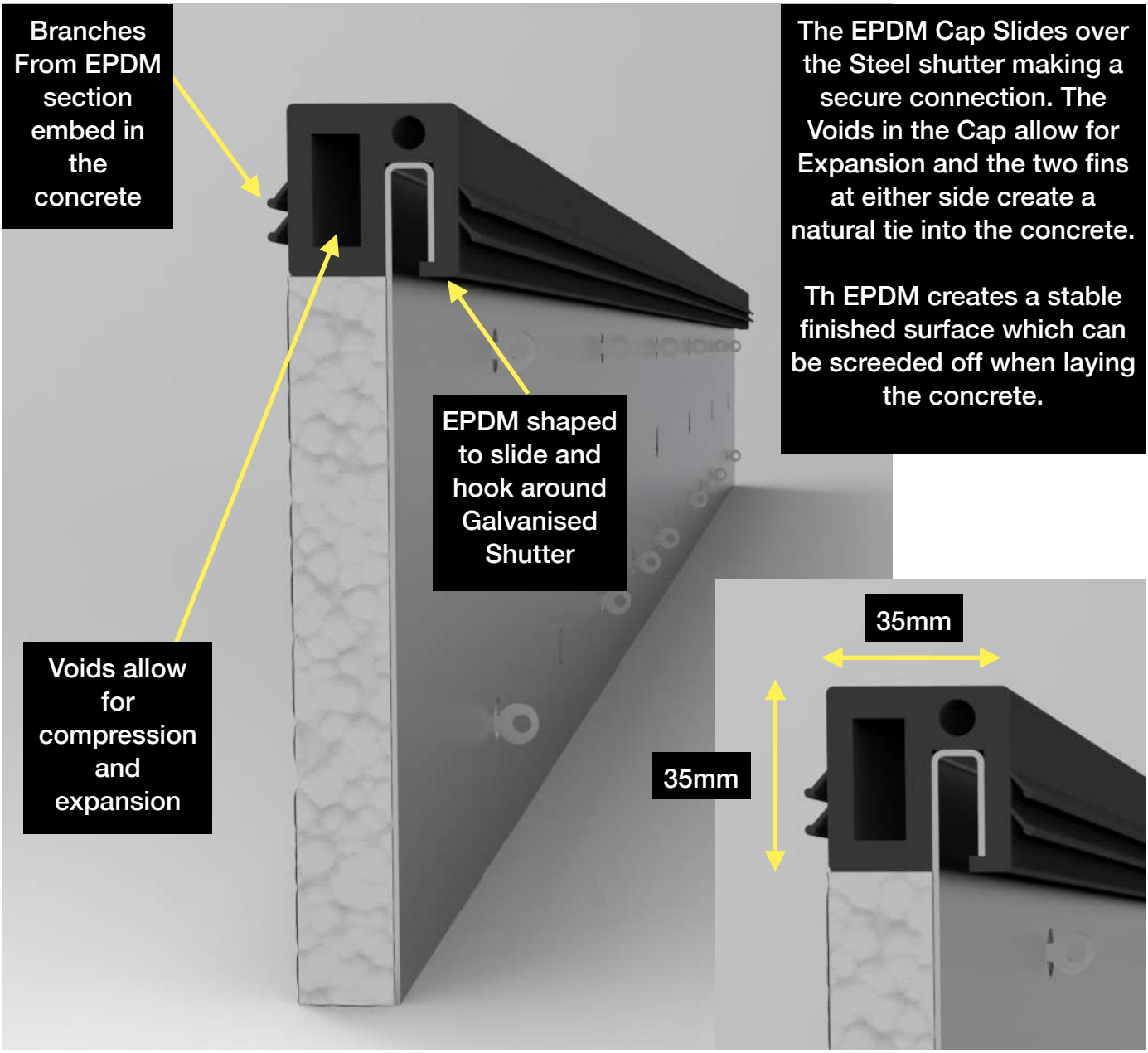
As with our Acra Screed Rail system the concrete Base Blocks allows for the Expansion level to be set to a precision height within half a millimetre either on falls or level surfaces.

Plumb Adjustable



THE EPDM RUBBER SEAL

EPDM Rubber Cap fits to the top of the shutter as shown below—voids allow joint movement. For complete information on EPDM material, please see the specification sheet at the end of this document. If the joint is to be used in an area where standing fuel, such as oil or diesel, will be constantly present, then we can manufacture the joint in Nitrile, which would be better suited.



Included as Standard when ordering the GO Expansion - Price per meter

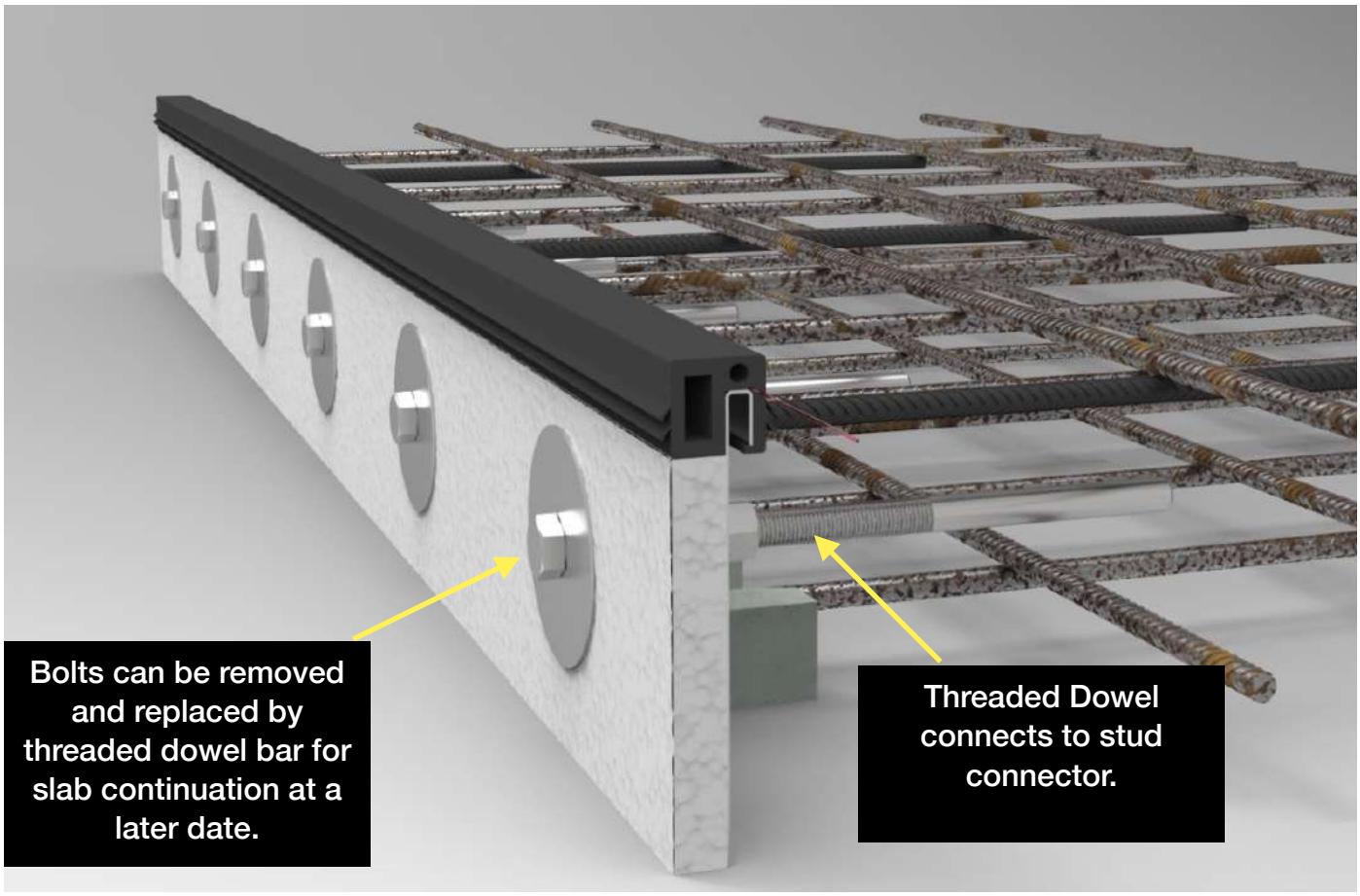
Galvanised Steel shutter with Dowel bar centre holes to suit dowel bar sizes and centres to customer specification.
Fixed expansion Foam
Base Blocks, Stud Connectors and Height Adjustable Shutter Supports
Tie In bars with fixings to connect shutter to main steel slab
EPDM Rubber Cap

Optional Extra - Normal or Threaded Dowel Bars and Dowel Bar Sleeves

While the GO Expansion system allows for continuous concrete pouring beyond the Expansion, stop ends and day joints are also considered when required.

The threaded dowel bar is sold as an optional extra and is ideal if the Expansion is used as a day joint or temporary stop where the customer requires the concrete to continue the slab later.

The Dowel Bars are threaded into a Stud connector at one side and a Bolt - which meets the central position at the other. When ready to continue the concrete, the bolts shown in the bottom image can be removed by the contractor and replaced by a threaded dowel bar, allowing the slab to be easily continued.



Material Specification Sheet

Component	Material	Additional Information
Shutter	Pre Galvanised Steel 1.2mm - to BSEN10346:2015 DX51D + Z275	Various Depths, Dowel Bar Size and Spacings manufactured to meet customer requirements.
Expansion Joint Foam 20mm Standard	Please see Separate Data below	Alternative Expansion Foam thicknesses by request
EPDM Rubber Seal	Please see Separate Data Sheet	EPDM is used for various applications including House Roofs and Boat Fenders with an expected lifespan of over 50 years.

Component	Material	Additional Information
Concrete Base Block	C45 OPC Cement reinforced with 4 number 3mm Steel Wires.	Various Depths, Dowel Bar Size and Spacings manufactured to meet customer requirements.
Adjustable Expansion Support	Rail Support Ordinary Mild Steel threaded for adjustment. BS EN 10025.S275	10 or 12mm Threaded Expansion Support. Adjustable for precision finish and level.

Expansion Foam Technical Information

PROPERTIES TEST METHOD UNIT TYPICAL VALUE DENSITY DIN 53420 Kg/m³ 28 TENSILE STRENGTH DIN 53571 N/mm² Extrusion Direction 0.318 Cross Direction 0.227 ELONGATION AT BREAK DIN 53571 % Extrusion Direction 70 Cross Direction 65 COMPRESSION STRENGTH DIN 53577 N/mm² 25% (4th Compression) 0.031 50% (4th Compression) 0.091 70% (4th Compression) 0.221 THERMAL STABILITY ASTM D-3575-S %< 3 (24h at 70°C) THERMAL CONDUCTIVITY ASTM C-177 W/mK 0.055 CELL SIZE BS 4443/1 Met.4 Cells/25mm ≥ 26 WATER ABSORPTION DIN 53428 Vol % 0.7 (after 24hours) WORKING TEMP. RANGE Internal °C -30 to +80

EPDM Rubber Seal Spec Sheet

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Imagineering Rubber

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NUFOX COMPOUND DATA SHEET

Nufox Compound Reference	**EP7012**	**Compound Hardness**	70° Shore A ± 5°
Polymer Type	Ethylene Propylene Diene Monomer	**Compound Colour**	Black
Date Issued	04/2019	**Issue Number / Issued by**	1 / BK

PROPERTY	**SPECIFICATION** (ISO 37)	**HEAT AGED 70HRS @ 70°C**	**HEAT AGED 168HRS @ 70°C**
Hardness (Shore A) (BS 903-A26 / ISO 48)	70.3°	+ 2.0 Points (Max)	+ 3.0 Points (Max)
Tensile Strength (MPa) ASTM 412; Test method A; Die C	> 10.70	- 39.80% (Max)	- 42.10% (Max)
Elongation at Break (%) ASTM 412; Test method A; Die C	> 161.4	- 82.70% (Max)	- 89.80% (Max)
Tear Strength (N/mm) BS ISO 34-1:2015 Method A	10.268		

PROPERTY	**SPECIFICATION** (ISO 37)	**HEAT AGED 70HRS @ 100°C**	**HEAT AGED 168HRS @ 100°C**
Hardness (Shore A) (BS 903-A26 / ISO 48)	70.3°	+ 6.0 Points (Max)	+ 7.3 Points (Max)
Tensile Strength (MPa) ASTM 412; Test method A; Die C	> 10.70	- 41.20% (Max)	- 45.90% (Max)
Elongation at Break (%) ASTM 412; Test method A; Die C	> 161.4	- 87.00% (Max)	- 92.40% (Max)
Tear Strength (N/mm) BS ISO 34-1:2015 Method A	10.268		

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