

THE LEARNING CURVE

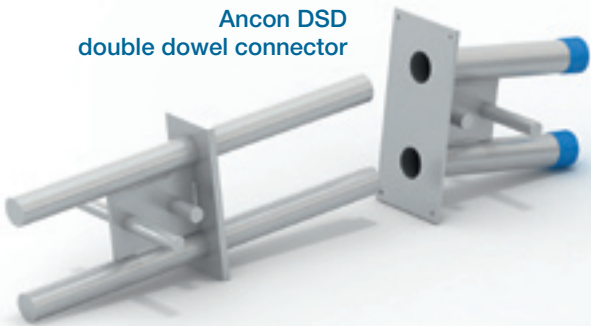


in association with The Concrete Society

ACCOMMODATING MOVEMENT & TRANSFERRING SHEAR LOAD AT JOINTS IN GROUND BEARING AND SUSPENDED CONCRETE SLABS

Dowels transfer load across joints in concrete and are used with a sleeve to allow movement. Ancon offers a comprehensive range of dowel systems and supplies concrete construction projects worldwide. Our engineers work closely with specifiers and contractors on a daily basis, advising on the design of the most practical and cost-effective solution.

Ancon DSD
double dowel connector



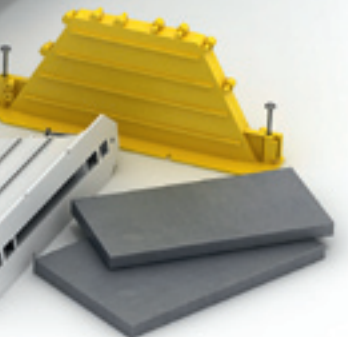
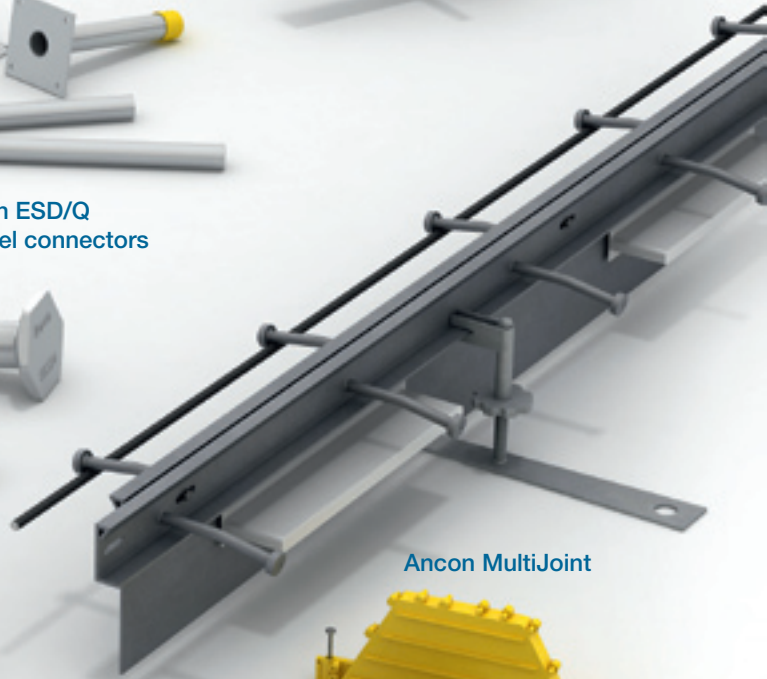
Ancon DSDQ
double dowel connector



Ancon ESD/Q
single dowel connectors

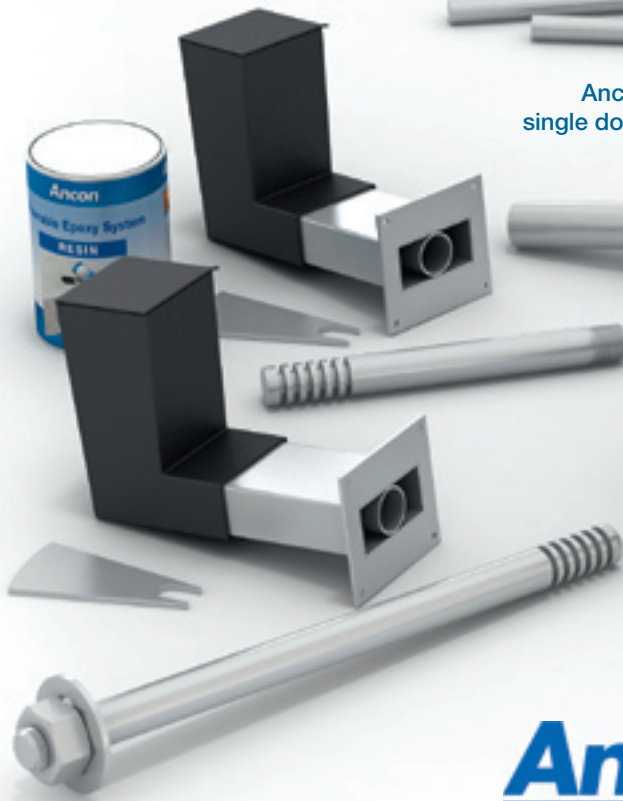


Ancon MultiJoint



Ancon individual
plate dowels

New Ancon
Lockable Dowels



Ancon
BUILDING PRODUCTS

is a member of



ACIFC

CONSTRUCT
concrete structures group

Visit www.ancon.co.uk for more information.
Sales enquiries should be sent to concrete@ancon.co.uk
and the Technical Services Team can be contacted on
tech@ancon.co.uk.



GROUND BEARING CONCRETE SLABS

Carbon steel plate dowels have replaced debonded round and square dowel bars as the preferred method of transferring load and accommodating movement in ground bearing concrete slabs. Today's industrial and commercial concrete floors are designed with fewer joints than those in the past. With greater distance between joints, more attention must be given to the joint details to avoid expensive, premature maintenance.

MultiJoint System

Ancon MultiJoint is an all-in-one solution to load transfer, concrete contraction, armoured edge protection and formwork. It is ideal for use in factories, distribution centres and other locations where floor slabs are subject to high loads and wheeled traffic. Its use can minimise slab depth, saving time and materials.



It is supplied in three metre lengths and is available in four heights to suit slab depths from 150mm. The rectangular plate dowels are housed in plastic sleeves which allow lateral

and longitudinal movement. A unique patented top rail transfers load into the concrete at an angle to avoid localised cracking. It comprises two square-edged 12mm wide steel strips.

Prefabricated corner units provide continuity in joint aris protection at the most vulnerable area of the slab.

The use of MultiJoint requires no site drilling or welding. Units are simply lapped end to end on site. Adjustable feet level and support the system prior, and during, the concrete pour.

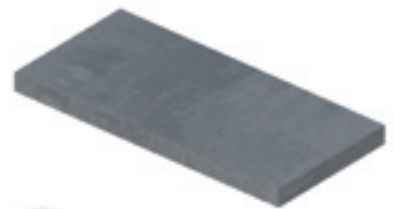
Other Plate Dowel Systems

Individual plate dowels are a cost-effective means of transferring shear loads and accommodating movement in load bearing ground floors. These dowels are typically installed at 600mm horizontal centres and are ideal where aris protection is not required. The innovative tapered sleeves allow greater longitudinal dowel movement as the joint width increases.

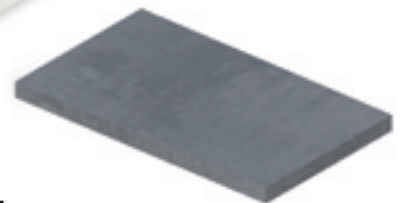
The Ancon Dominator Dowel is suitable for the majority of applications, however where a greater capacity is required or wider than average joint widths are anticipated, the Ancon Hi-Move system should be considered.



Ancon Dominator Dowel



Ancon Hi-Move Dowel



Performance Data

Tabulated performance data is available for all Ancon plate dowel systems for a slab depth up to 350mm and a joint width up to 40mm. Improved performance for plate dowels is seen in fibre reinforced concrete, when compared to plain or fabric reinforced concrete.

To download your copy of this technical brochure, please visit

www.ancon.co.uk/MultiJoint

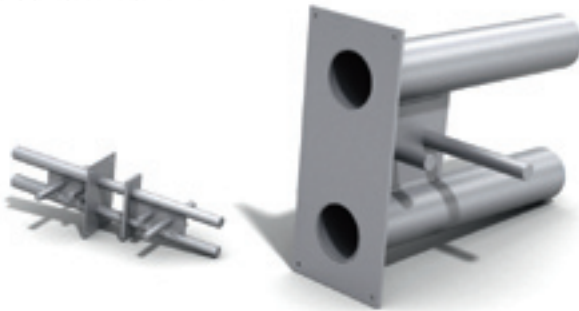


SUSPENDED CONCRETE SLABS

Double Dowel Shear Connectors

Ancon DSD shear connectors are more effective at both transferring load and accommodating movement than plain debonded dowels. The DSDQ uses the same dowel component but the sleeve component features a rectangular box section to allow some lateral and rotational movement, in addition to longitudinal movement.

These products can be used to replace complicated design details such as double columns, keyed joints and corbel supports. They are available in a comprehensive range of sizes to suit any project requirement.



Installation is a fast and accurate process and does not require either formwork or concrete to be drilled. The sleeve is simply nailed to the formwork and, once the slab is cast and the formwork removed, the dowel component is inserted into the sleeve.



POST-TENSIONED CONCRETE SLABS

NEW Lockable Dowels

The Lockable Dowel range has been designed for temporary movement joints in post-tensioned concrete frames.



A Lockable Dowel allows initial shrinkage of the concrete to take place and is then locked in position with a mechanical plate and a controlled amount of Ancon epoxy resin. The locked dowel continues to transfer vertical load, but prevents further movement taking place.



Use of a Lockable Dowel eliminates the need for one metre wide pour strips to be left in the concrete frame. Although a common design feature in post-tensioned concrete frames, pour strips are not ideal as they require the slabs to be propped which restricts site access and delays progress. They also create an unnecessary trip hazard for site workers, use additional formwork and leave the soffit face marked.

The Lockable Dowel range includes standard solutions for both slab-to-slab and slab-to-wall joints.

For more information, visit www.ancon.co.uk/Lockable



EUROCODE-COMPLIANT DESIGN PROGRAMS

Ancon provides free design programs for shear load connectors and punching shear reinforcement.

For a given application, the Ancon DSD design program will calculate the size and quantity of shear load connectors required, the edge distance and spacing at which they should be installed, and details of the local reinforcement. The design method used incorporates all relevant parts of Eurocodes 2, 3 and 4.

The Shearfix program allows design to Eurocode 2 and BS8110. It creates both radial and orthogonal rail layouts, which enables the engineer to specify the most economical design (fewest number of studs) for any application. A printable datasheet and DXF export file is created for each rail layout.

Faxback forms are also available for engineers to summarise the critical details of a project and to request assistance with either movement joints or column head designs.

Ancon's design programs can be downloaded from www.ancon.co.uk



CPD SEMINARS

Ancon has been conducting Continuing Professional Development seminars to the concrete industry for over 20 years. The standard training module is shown below. Alternatively, seminars can be tailored to meet individual project or practice requirements.

Designing for Joints in Structural Concrete

- Reinforcing against punching shear to Eurocode 2 and BS8110 using links and stud rail systems
- Transferring shear across movement joints using simple debonded dowels and proprietary shear connectors
- Replacing double columns, corbels and half lap joints
- Accommodating thermal movement in two directions
- Incorporating thermal breaks at balcony locations
- Replacing lapped joints & projecting starter bars using reinforcement continuity systems, starter systems and couplers
- Selection, performance and testing of rebar couplers

To book a seminar at your office please contact Ancon on 0114 275 5224 or email info@ancon.co.uk.

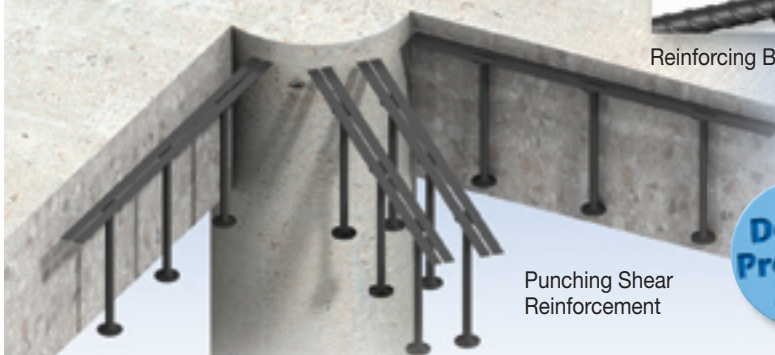
Call for Reinforcements



Reinforcing Bar Couplers



Reinforcement Continuity Systems



Punching Shear Reinforcement



Balcony Connectors

Tel: 0114 275 5224

