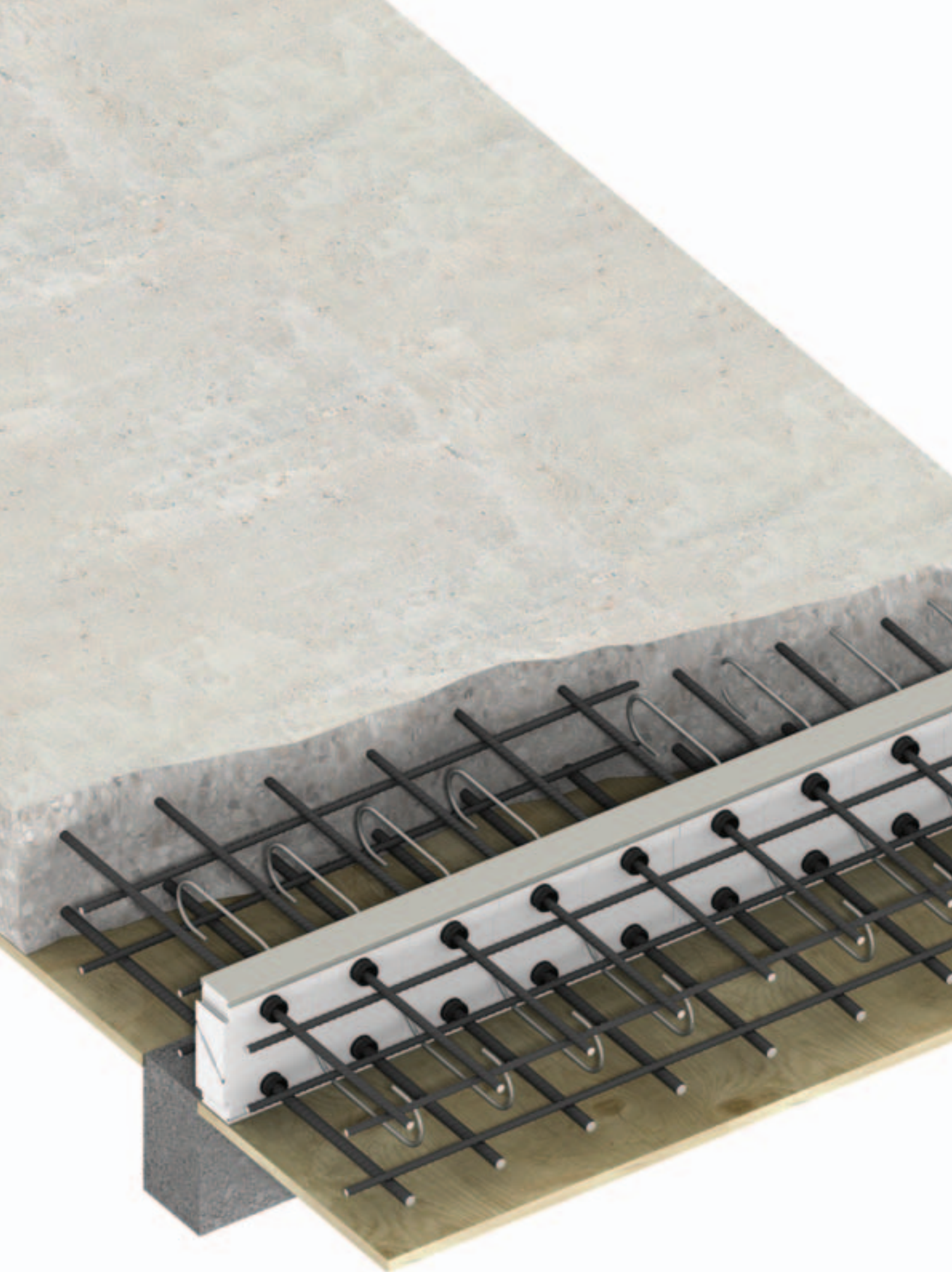


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| CI/SIB | (23.79) | Ei6 | |
| February 2008 | | | |

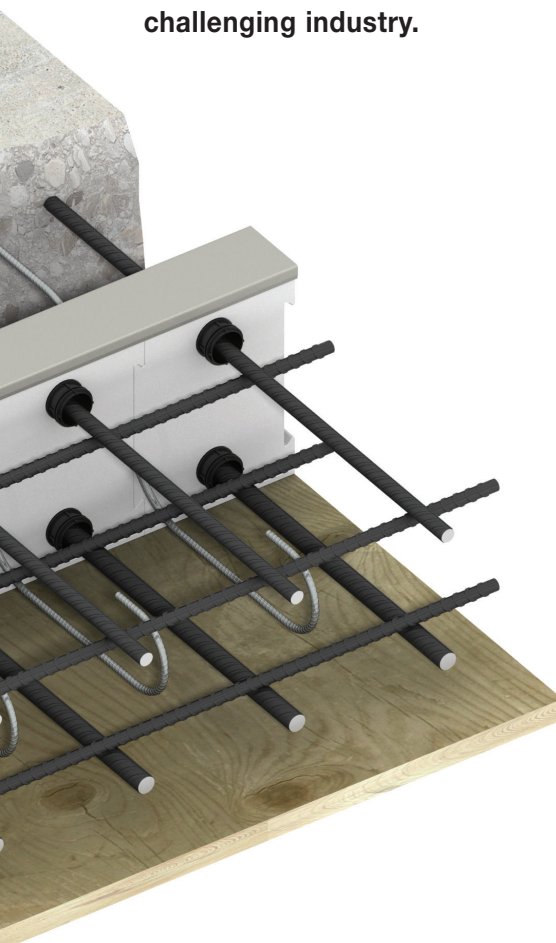


Isolan[®] Insulated
Balcony Connectors
for Concrete to Concrete Applications

Ancon[®]
BUILDING PRODUCTS



Ancon designs and manufactures high integrity steel products for the construction industry. Through continuous programmes of new product development, inward investment and employee advancement, the company is committed to maintaining the highest level of customer service within a dynamic and challenging industry.



Ancon Isolan connectors join external concrete balconies to internal concrete floor slabs. Used to minimise cold bridging, these connectors provide continuity to the thermal insulation in the wall. Standard systems, comprising rigid CFC-free polystyrene insulation and stainless steel shear reinforcement, suit most depths of cantilever and simply supported balconies.

| | | |
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| Masonry Reinforcement | Isolan Systems | 5 |
| Windposts and Lintels | Applications | 6 |
| Wall Ties and Restraint Fixings | System Components | 7 |
| Channel and Bolt Fixings | Specification Guidance | 8 |
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| Stainless Steel Fabrications | Isolan MV System | 10-12 |
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| Reinforcement Continuity Systems | Corner Details | 16-17 |
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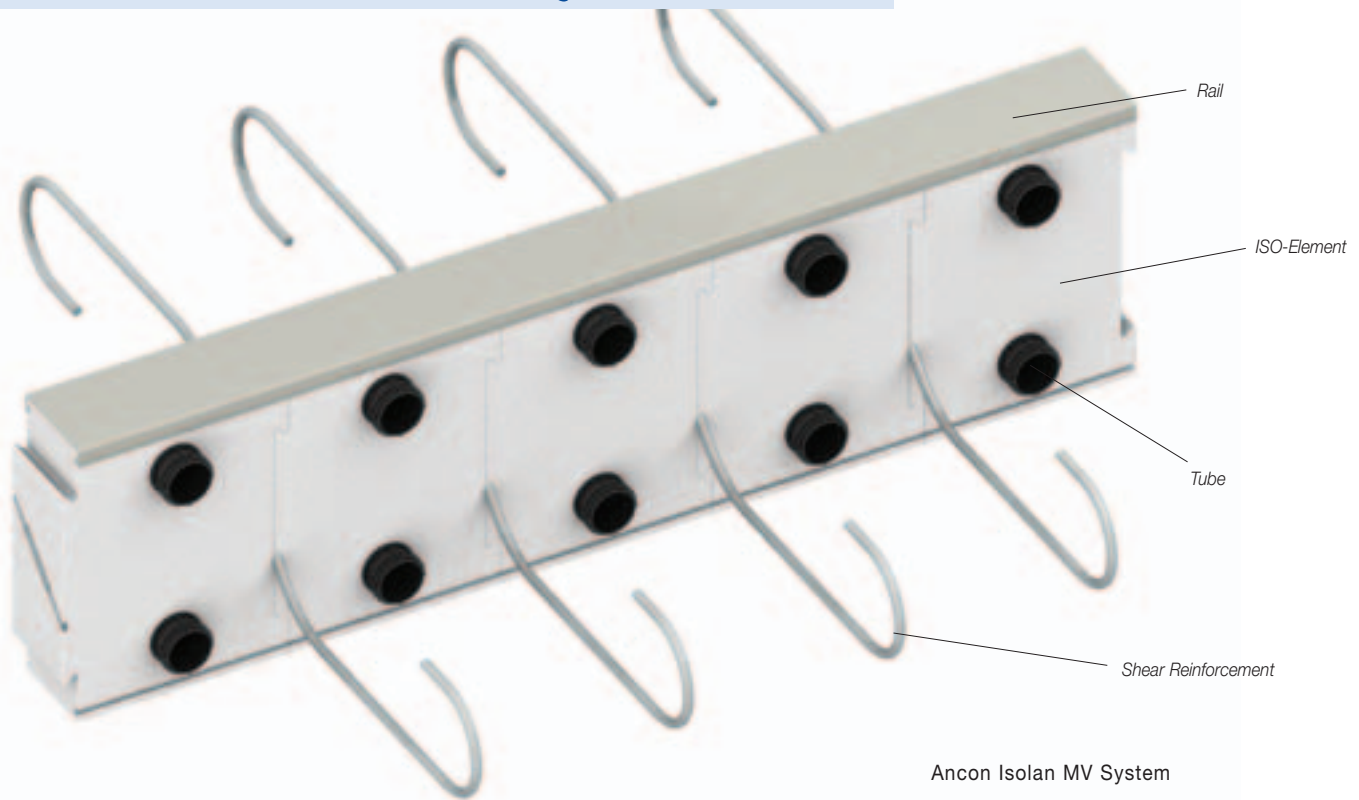
ISO 9001: 2000
FM 12226



ISO 14001: 2004
EMS 505377



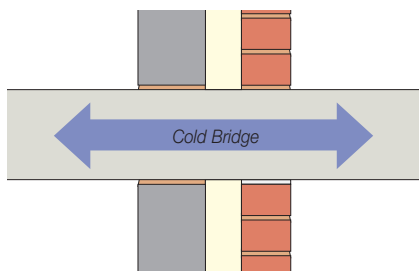
Isolan[®] Insulated Balcony Connectors



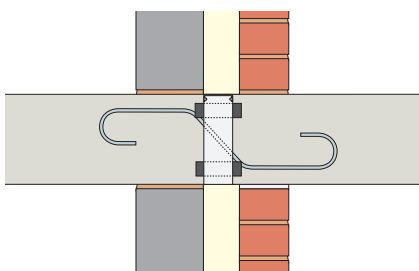
Ancon Isolan MV System

ANCON ISOLAN INSULATED CONNECTORS

In applications such as balconies, where concrete slabs pass through the building envelope, a cold bridge is created that can result in significant heat loss.



The Ancon Isolan system is a structural component used to join external concrete balconies to internal concrete floor slabs. It provides continuity to both the reinforcement and the thermal insulation of the wall protecting the building against the effects of cold bridging.



Standard Isolan systems, comprising rigid CFC-free polystyrene insulation and stainless steel shear reinforcement, suit most depths of cantilever and simply supported balconies. The various systems allow the transfer of all loads in structural concrete i.e. moment, shear, compression and tension, and are suitable for straight runs and both internal and external corners.

System Benefits

Ancon Isolan connectors use conventional reinforcing bars to provide the tension and compression reinforcement. When compared to systems where this reinforcement is an integral component, the Ancon Isolan solution can provide substantial cost savings and simplify specification, scheduling, transportation, handling and installation.

U-Value

The Isolan system has a typical U-value of 0.3 W/m²K.

Curved or Stepped Balconies

Special configurations can be manufactured to suit specific project requirements including curved or stepped balconies.

Precast Balconies

In addition to balconies cast in-situ, Ancon Isolan systems can be used in precast balconies. For such applications, tension and compression bars must be scheduled and installed at the time of casting. Please contact Ancon for more information.

'PRODUCTS FOR STRUCTURAL CONCRETE' DIVISION

Ancon provides a dedicated service to the concrete sector. The 'Products for Structural Concrete' team advises on the selection of the most appropriate product, provides pricing information and can project manage the supply of all elements to suit the site schedule. Overseas enquiries are also serviced by this team. Our product offering includes, but is not restricted to, balcony connectors, reinforcing bar couplers, reinforcement continuity systems, punching shear reinforcement and shear load connectors.

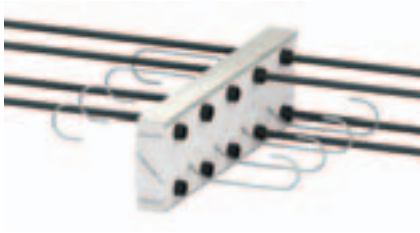
Email concrete@ancon.co.uk, fax +44 (0) 114 238 1240 or call +44 (0) 114 275 5224 with your enquiry.

ISOLAN SYSTEMS

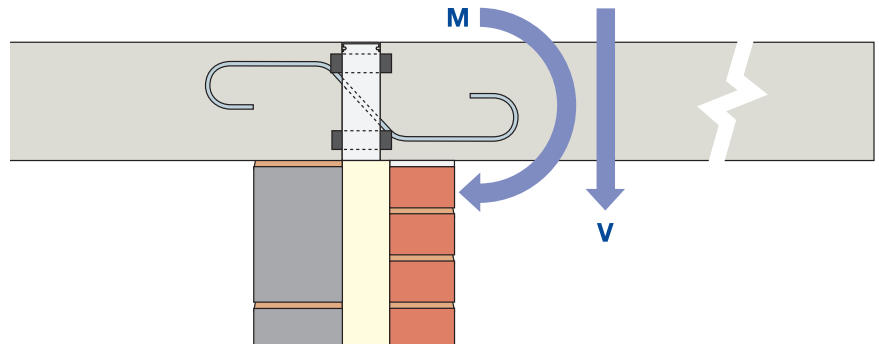
Standard Isolan systems are available in five heights to suit different depths of balcony i.e. 160, 180, 200, 220 and 240mm, and are supplied complete with stainless steel shear reinforcement. Tension and compression reinforcement to be supplied by others.

MV System

The Ancon Isolan MV system is used for the transfer of moment and shear forces in cantilevered balconies.

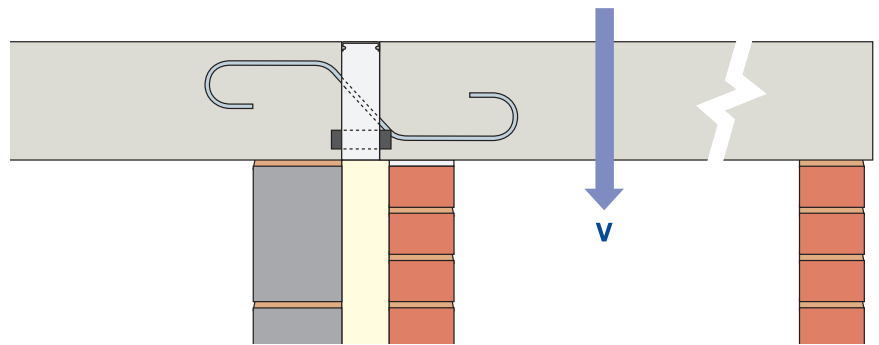
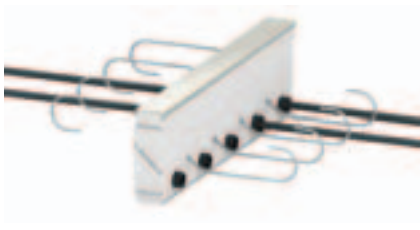


Notes: For clarity, main reinforcement (supplied by others) has been omitted from these drawings. The Isolan system should always be orientated so the stainless steel shear reinforcing bars are at the bottom of the slab on the side of the load (the balcony side).



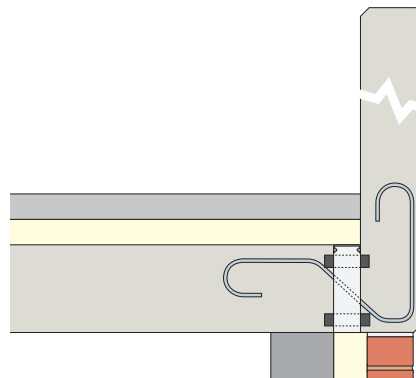
V System

The Ancon Isolan V system is used for the transfer of shear forces in simply supported balconies.



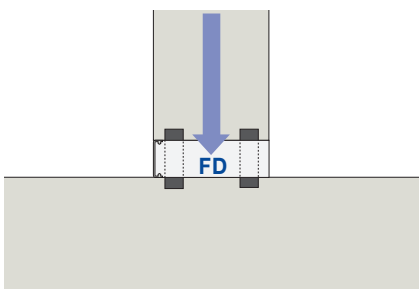
Special Configurations

Isolan components can be individually adapted to suit specific applications. The stainless steel shear reinforcement can be supplied in a range of diameters and bent into other required shapes outside the polystyrene insulation element. The number of tubes can be modified and the standard height of the ISO-Element can be increased. Systems can be manufactured for use in curved or stepped balconies. Please contact Ancon with details of specific applications.



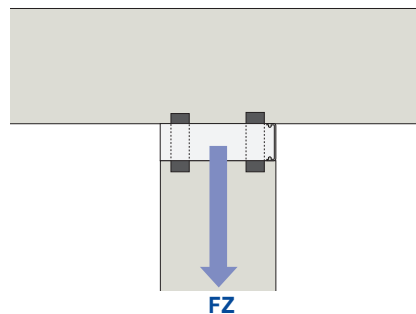
FD System

The Ancon Isolan FD system is used for the transfer of compression forces.

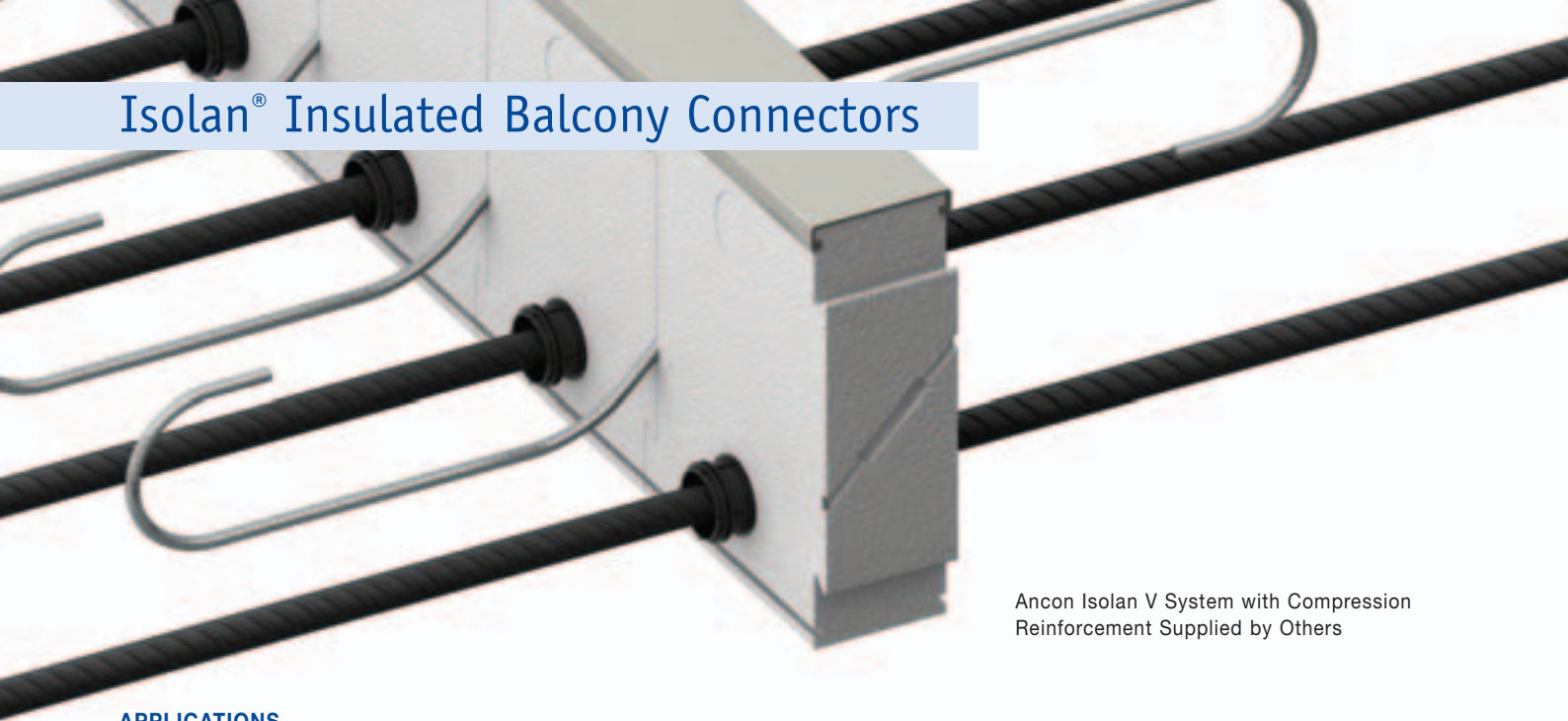


FZ System

The Ancon Isolan FZ system is used for the transfer of tensile forces.



Isolan® Insulated Balcony Connectors

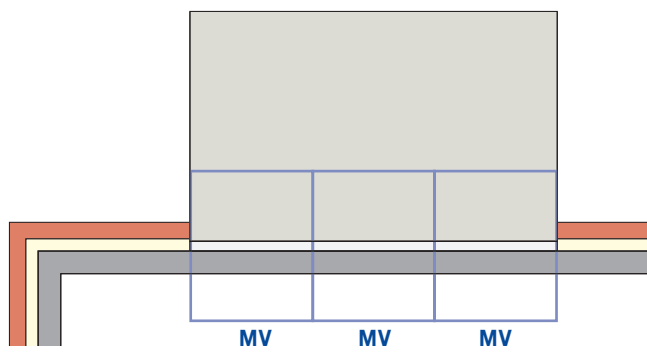


Ancon Isolan V System with Compression Reinforcement Supplied by Others

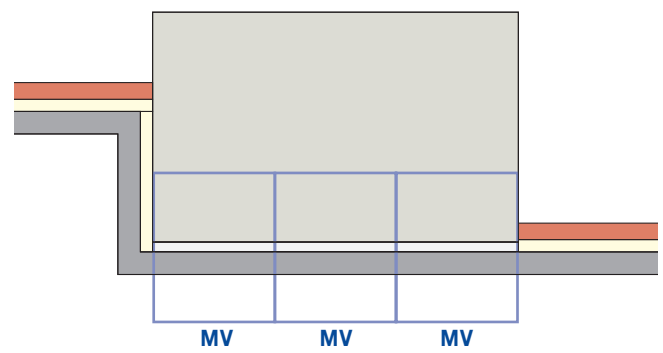
APPLICATIONS

The Ancon Isolan system is suitable for straight runs and both internal and external corners.

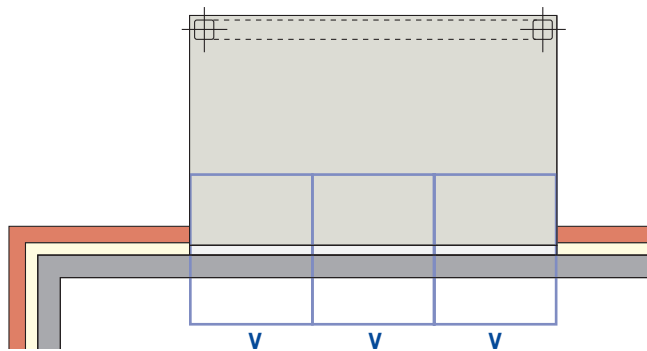
The following drawings show example applications in plan view.



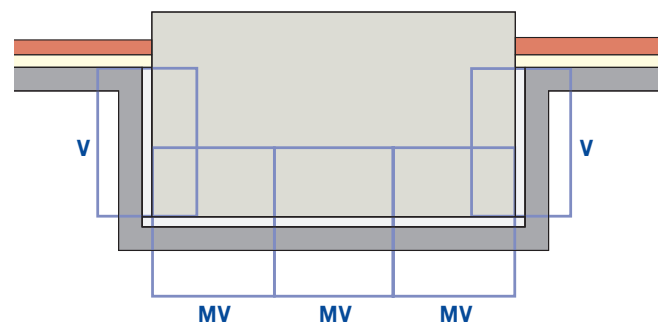
Cantilever Balcony



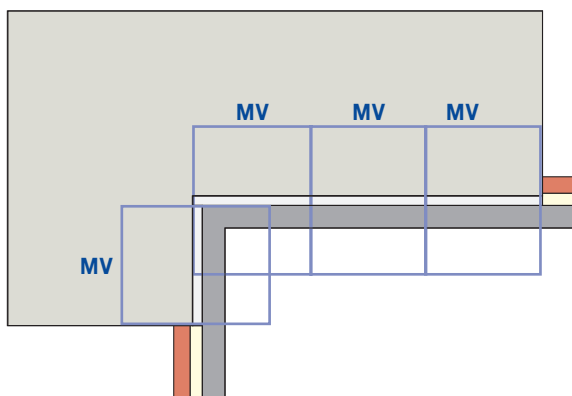
Cantilever Balcony at Internal Corner



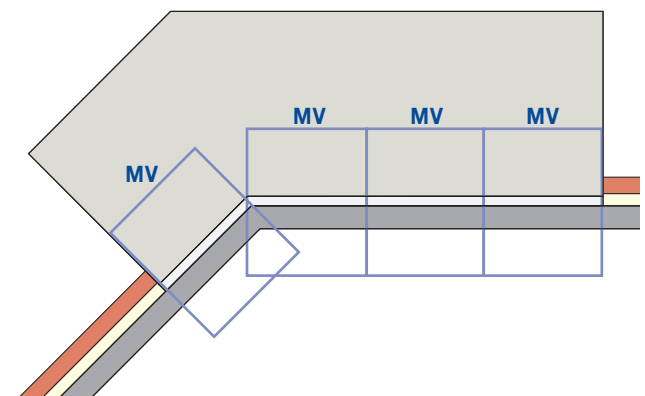
Simply Supported Balcony



Supported Slab Recessed Balcony



Cantilever Balcony with 90° External Corner



Obtuse Angle Corner Cantilever Balcony

SYSTEM COMPONENTS

ISO-Element

The ISO-Element is 60mm thick, CFC-free, rigid white polystyrene insulation in a standard length of 750mm. It is available in five heights (160, 180, 200, 220 and 240mm) to suit different depths of balcony.

Shear Reinforcement

The shear reinforcement is duplex stainless steel grade 1.4462 and is available in three diameters (6, 8 and 10mm) as standard. In addition to the standard systems, this reinforcement can be bent into other required shapes outside the polystyrene insulation element.

Tubes

Polypropylene tubes with a 27mm internal diameter are located at pre-determined positions in the ISO-Element to allow for the passage of tension and compression reinforcing bars.

Rail

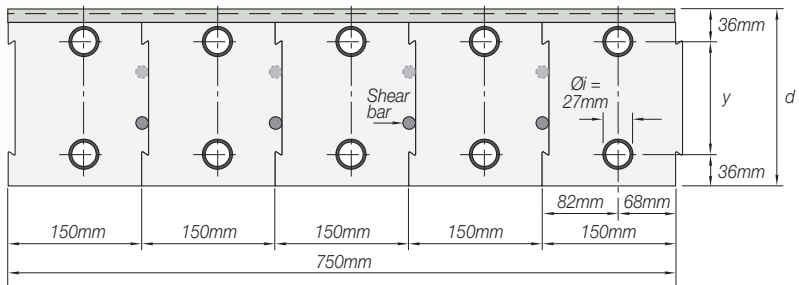
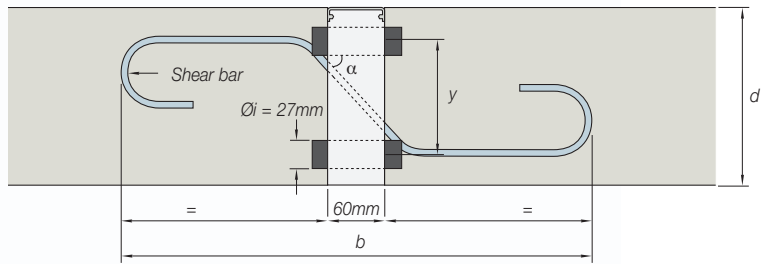
A high density polyethylene rail is located on the top edge of the ISO-Element to protect the insulation.

Tension/Compression Reinforcement (supplied by others)

Reinforcement used for tension and compression bars to be grade 500B to BS4449: 2005 and supplied by others.

Fire Protection

The Isolan system offers fire resistance to DIN 4102: Fire behaviour of building materials and components. Fire protection can be provided by adding Duripanel fire resistant strips to the base or to the top and base of the ISO-Element. The strips are available in 18, 28 or 36mm thickness providing 30, 60 or 90 minute fire resistance respectively. Examples of how these strips are referenced are 1R30 for a 30 minute strip fixed to the base and 2R90 for a 90 minute strip fixed to the top and base. When specifying and ordering, these references should be added as a suffix to the Isolan system (see page 8), for example 4MV6-200-5Ø12T/5Ø16C-1R60. The polyethylene rail is omitted from the ISO Element if these strips are employed to the top. For further information contact Ancon's Technical Services Team.



| Height d (mm) | Height y (mm) | Length b Shear Bar 6mm Dia. | Length b Shear Bar 8mm Dia. | Length b Shear Bar 10mm Dia. | Angle α |
|---------------|---------------|-----------------------------|-----------------------------|------------------------------|----------------|
| 160 | 88 | 530 | 670 | 810 | 39° |
| 180 | 108 | 530 | 670 | 810 | 44° |
| 200 | 128 | 530 | 670 | 810 | 47° |
| 220 | 148 | 530 | 670 | 810 | 53° |
| 240 | 168 | 530 | 670 | 810 | 57° |

Note: Shear bar length (b) tolerance +/-10mm

Corrosion Resistance

The Ancon Isolan system has been engineered to provide a high resistance to corrosion. The shear reinforcement is stainless steel and the carbon steel tension and compression reinforcement passing through the insulation unit is encased in polypropylene tubes which fill with concrete fines at the time of casting. This prevents water and oxygen from reaching the bars, thus providing corrosion protection.



Isolan® Insulated Balcony Connectors

SPECIFICATION GUIDANCE

Design Information

The graphs on pages 10 to 14 are used to select the most appropriate Isolan element, and the diameters of the shear, tension and compression reinforcement.

Example calculations are provided on the following page. Consideration should be given to horizontal forces on parapets and local concentrated load checks, these are not included in the examples.

The graphs provide the design resistance (ultimate limit state) values for the shear V_{Rd} and moment M_{Rd} .

The Isolan element design is based on normal structural calculations. The calculations are based on the following material properties.

| | |
|----------------|--|
| Concrete: | C25/30 (cylinder/cube compressive strengths) = 30N/mm ² |
| Reinforcement: | Shear reinforcement material, duplex stainless bar designation 1.4462 BS6744, Grade 500 R_s or $R_{p0.2} \geq 500\text{N/mm}^2$ $R_m \geq 550\text{N/mm}^2$ Tension and compression reinforcement, BS4449, Grade 500B $R_s \geq 500\text{N/mm}^2$ $R_m \geq 540\text{N/mm}^2$ |

The partial load factors used in the examples are:
Dead load (persistent) = 1.35
Imposed load (quasi) = 1.50

How to Use The Graphs

MV Elements

1. The graph for the height of the Isolan element that corresponds to balcony slab thickness is selected.
2. The design shear capacity required (unit: kN per linear metre) is plotted on the horizontal axis of the graph and a vertical line drawn. From this, the relevant Isolan element type (i.e. 2MV6, 4MV6, 4MV8 or 4MV10) is selected.
3. The bending moment capacity required (unit: kNm per linear metre) is plotted on the vertical axis of the graph and a horizontal line drawn.
4. The intersection between the vertical line corresponding to the design shear capacity and the horizontal line corresponding to the design moment capacity determines the respective diameters of the tension and compression reinforcement e.g. Ø12T/Ø16C. The first number refers to tension and the second to compression reinforcement. Refer to the drawings on page 10 for the number of bars required.

V Elements

1. The balcony slab thickness is selected on the horizontal axis of the graph and a vertical line drawn.
2. The design shear capacity required (unit: kN per linear metre) is plotted on the vertical axis of the graph and a horizontal line drawn.
3. The intersection between the vertical line corresponding to the balcony slab thickness and the horizontal line corresponding to the design shear capacity determines the Isolan element type and diameter/number of compression bars.

FD Elements

1. The concrete thickness is selected on the horizontal axis of the graph and a vertical line drawn.
2. The design compression capacity required (unit: kN per linear metre) is plotted on the vertical axis of the graph and a horizontal line drawn.
3. The intersection between the vertical line corresponding to the concrete thickness and the horizontal line corresponding to the design compression capacity determines the Isolan element type and diameter/number of compression bars.

FZ Elements

1. The concrete thickness is selected on the horizontal axis of the graph and a vertical line drawn.
2. The design tensile capacity required (unit: kN per linear metre) is plotted on the vertical axis of the graph and a horizontal line drawn.
3. The intersection between the vertical line corresponding to the concrete thickness and the horizontal line corresponding to the design tensile capacity determines the Isolan element type and diameter/number of tension bars.

Calculation Method

A hard copy of the calculation to derive the load graphs is available from Ancon on request.

Balcony Deflection

The deflection of the equivalent 'monolithic' balcony should be calculated in the usual way, in compliance with relevant standards and design codes. A coefficient of 1.20 must be applied to the calculated figure to determine the maximum deflection with Isolan connectors. The final figure can be used to determine the amount of pre-camber to apply to the formwork to compensate for the deflection.

Ancon Isolan Product Referencing

4MV8 - 200 - 5Ø12T / 5Ø16C

| | | | |
|---|---------------|--|--|
| ↑ | ↑ | ↑ | ↑ |
| Number of shear bars, System type, Diameter of shear bars | System height | Number and diameter of tension bars to be supplied by others | Number and diameter of compression bars to be supplied by others |

Typical Specification Clause

Once the appropriate Isolan system has been selected from the design graphs, the following clause may be adapted for use. Details in *italics* must be changed to suit the product reference.

4MV8 - 200 - 5Ø12T / 5Ø16C

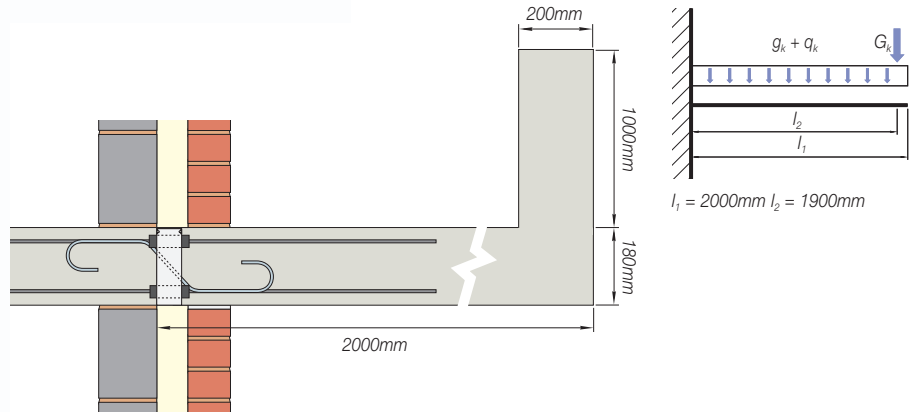
Ancon Isolan *MV* system *200mm* high comprising CFC-free polystyrene insulation, 60mm thick by 750mm long, and *four* stainless steel grade 1.4462 shear reinforcing bars of *8mm* diameter. System requires *five 12mm* diameter grade 500B tension bars and *five 16mm* diameter grade 500B compression bars to be supplied by others.

DESIGN EXAMPLES

1. MV Element Depth 180mm

Dead load slab g_k = 4.5kN/m²
 Imposed load q_k = 3.0kN/m²
 Parapet load G_k = 5.0kN/m
 $q_d = (1.35 \times 4.5 + 1.50 \times 3.0)$ = 10.6kN/m²
 $G_d = (1.35 \times G_k) = (1.35 \times 5.0)$ = 6.8kN/m
 $M_{Ed} = (q_d \times l_1^2)/2 + (G_d \times l_2)$ = **34.1Nm/m**
 $V_{Ed} = (q_d \times l_1) + G_d$ = **28.0kN/m**

From graph for MV180 select 4Ø6 shear bars, Ø12/16 (tension/compression bars). Product reference 4MV6-180-5Ø12T/5Ø16C.

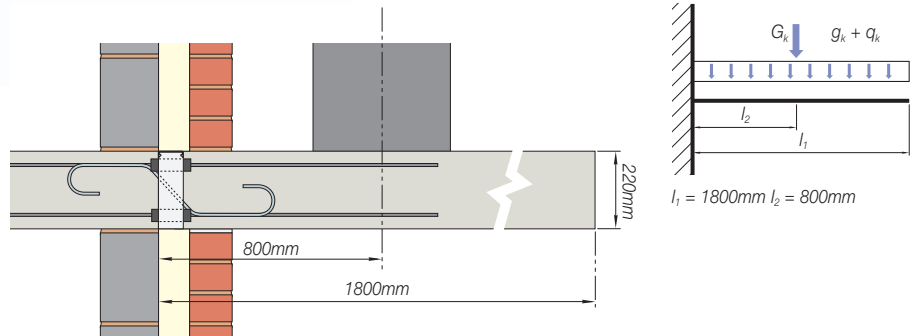


MV System

2. MV Element Depth 220mm

Dead load slab g_k = 5.5kN/m²
 Dead load (point) G_k = 35kN
 Imposed load q_k = 3.0kN/m²
 $q_d = (1.35 \times 5.5 + 1.50 \times 3.0)$ = 11.9kN/m²
 $G_d = (1.35 \times G_k) = (1.35 \times 35)$ = 47.3kN/m
 $M_{Ed} = (q_d \times l_1^2)/2 + (G_d \times l_2)$ = **57.1kNm/m**
 $V_{Ed} = (q_d \times l_1) + G_d$ = **68.7kN/m**

From graph for MV220 select 4Ø8 shear bars, Ø16/20 (tension/compression bars). Product reference 4MV8-220-5Ø16T/5Ø20C.

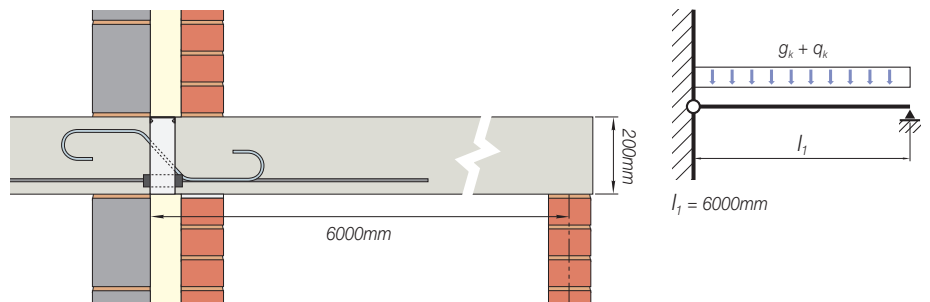


MV System

3. V Element Depth 200mm

Dead load slab g_k = 5.0kN/m²
 Dead load finishes g_k = 2.0kN/m²
 Imposed load q_k = 5.0kN/m²
 $q_d = (1.35 \times 7.0 + 1.50 \times 5.0)$ = 17.0kN/m²
 $V_{Ed} = (q_d \times l_1)/2$ = **51.0kN/m**

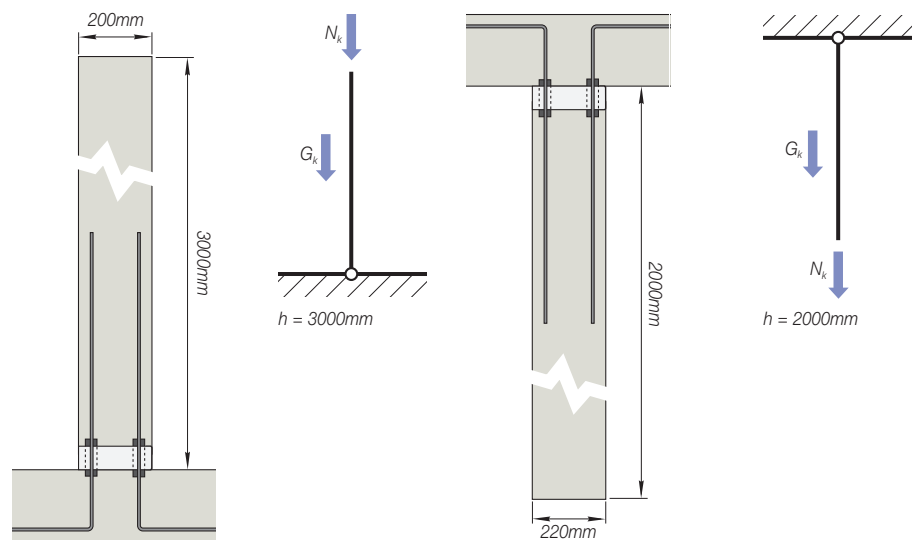
From V graph select 200mm 4V8/5Ø12C, (4Ø8 shear bars with 5Nr. Ø12 compression bars). Product reference 4V8-200-5Ø12C.



V System

4. FD Element Depth 200mm

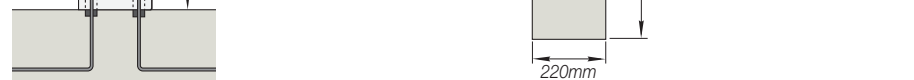
Dead load wall G_k = 15kN/m
 Imposed load wall N_k = 160kN/m
 $FD_{Ed} = (1.35 \times 15.0) + (1.50 \times 160.0)$ = **260.3kN/m**
 From graph for FD, 200mm. Product reference FD-200-2x5Ø12C.



FD System

5. FZ Element Depth 220mm

Dead load wall G_k = 11kN/m
 Imposed load wall N_k = 200kN/m
 $FZ_{Ed} = (1.35 \times 11.0) + (1.50 \times 200.0)$ = **315kN/m**
 From graph for FZ, 220mm. Product reference FZ-220-2x5Ø10T.



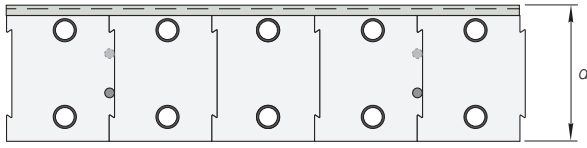
FZ System

Note: For clarity, not all reinforcement is shown

Isolan[®] Insulated Balcony Connectors

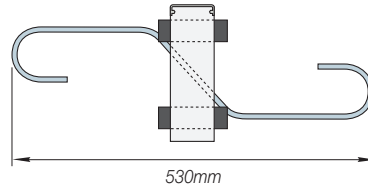
ISOLAN MV RANGE

2MV6



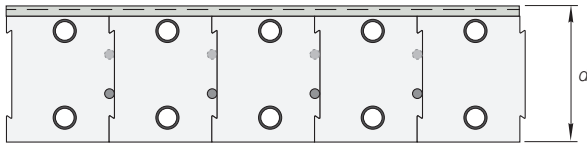
2 Shear Bars 6mm Diameter - Supplied

5 Tension and 5 Compression Bars - To be supplied by others



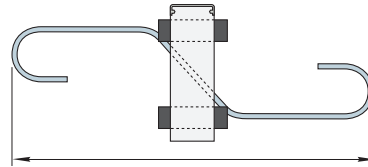
530mm

4MV6



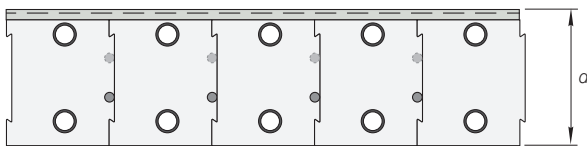
4 Shear Bars 6mm Diameter - Supplied

5 Tension and 5 Compression Bars - To be supplied by others



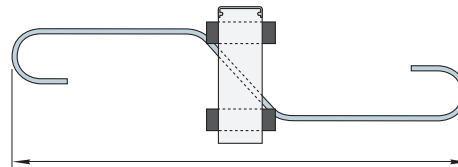
530mm

4MV8



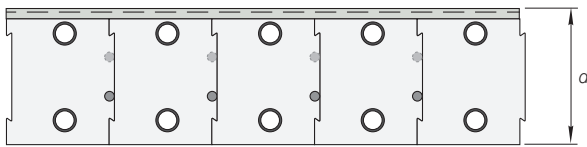
4 Shear Bars 8mm Diameter - Supplied

5 Tension and 5 Compression Bars - To be supplied by others



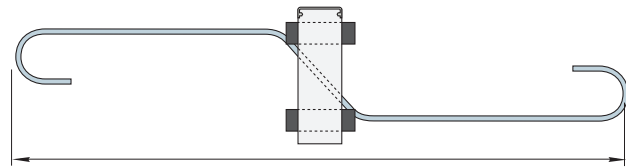
670mm

4MV10



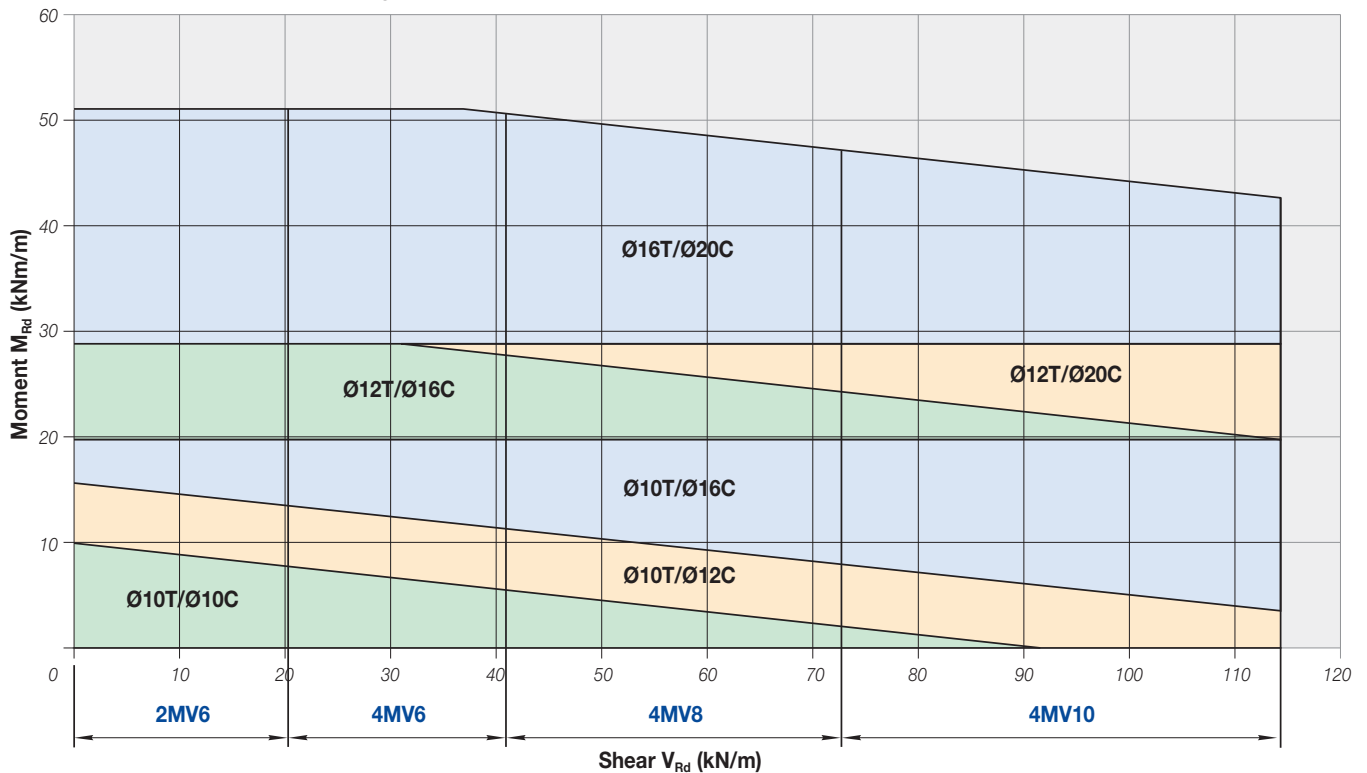
4 Shear Bars 10mm Diameter - Supplied

5 Tension and 5 Compression Bars - To be supplied by others

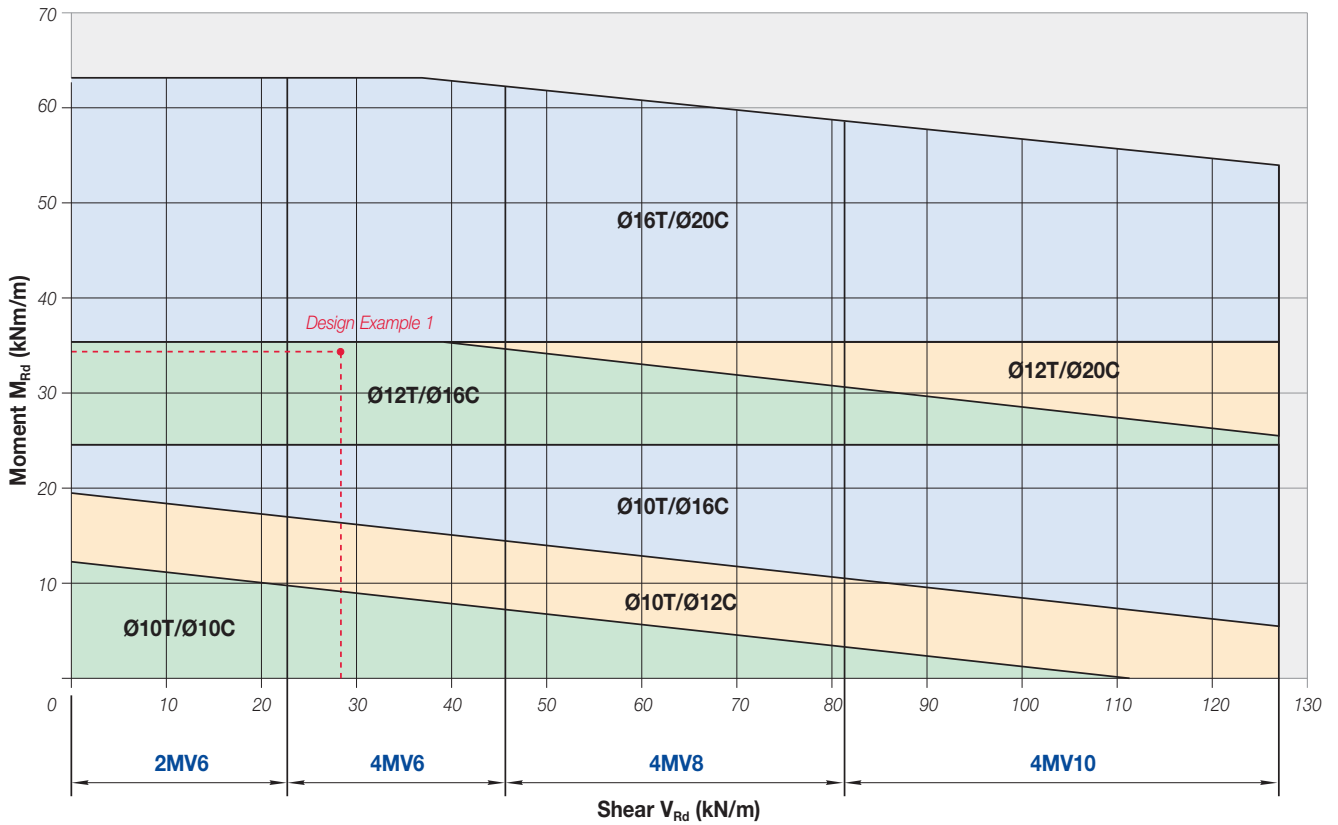


810mm

Isolan MV Element - 160mm Height

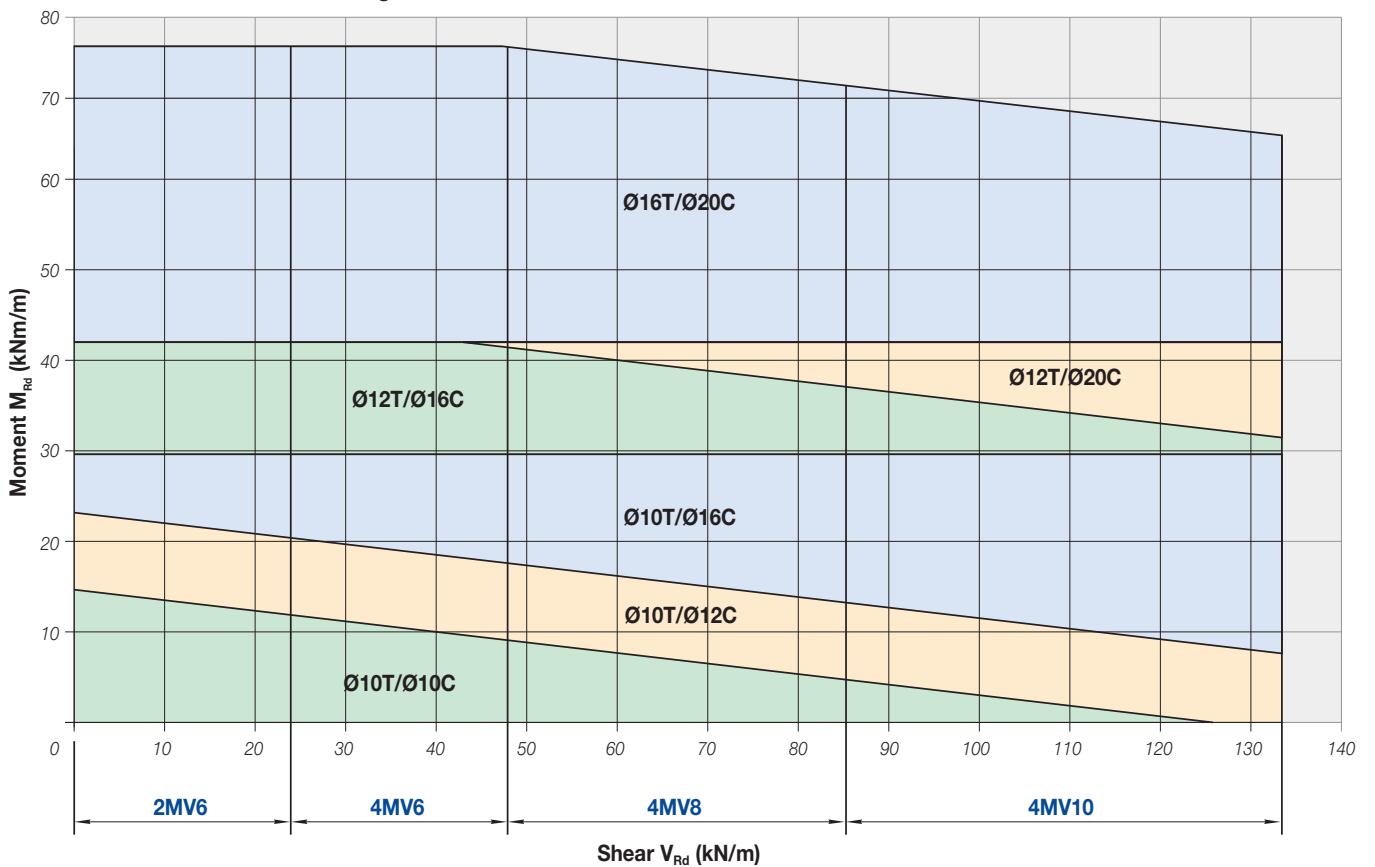


Isolan MV Element - 180mm Height



Note: See guidance and design examples on pages 8 and 9

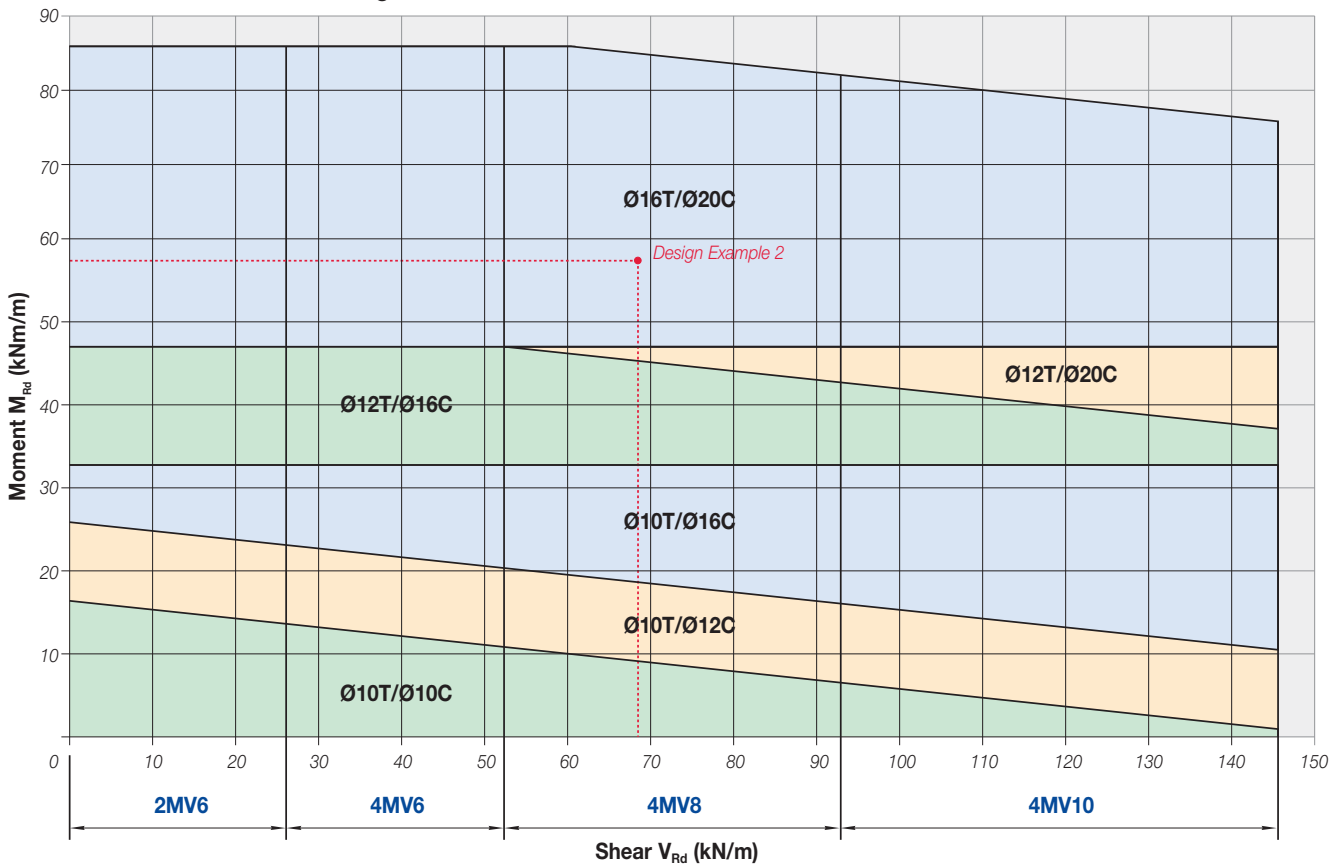
Isolan MV Element - 200mm Height



Note: See guidance and design examples on pages 8 and 9

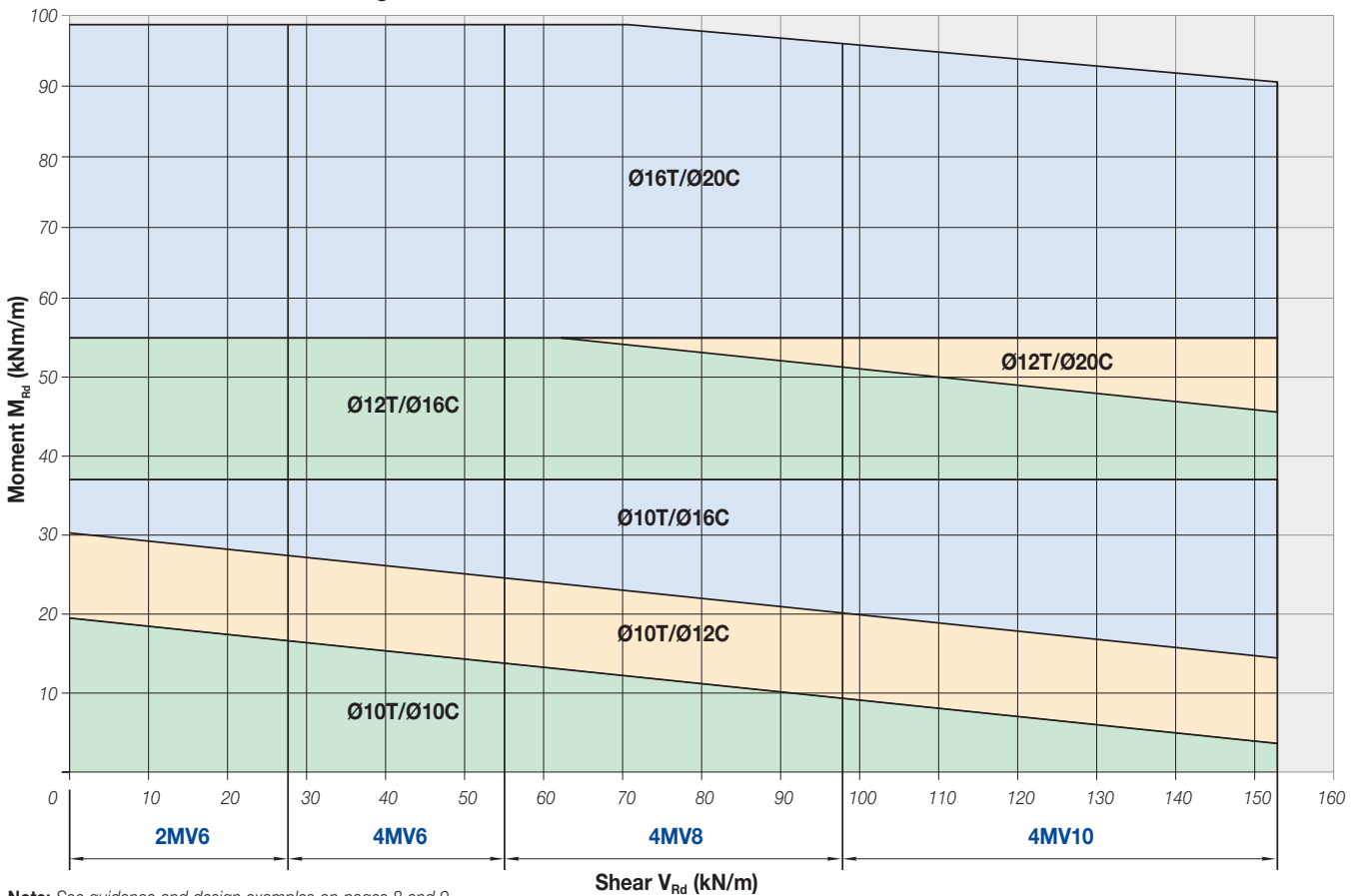
Isolan[®] Insulated Balcony Connectors

Isolan MV Element - 220mm Height



Note: See guidance and design examples on pages 8 and 9

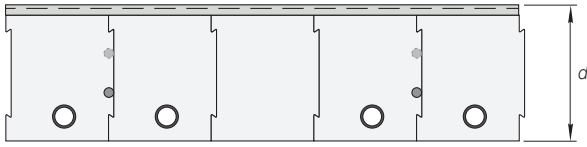
Isolan MV Element - 240mm Height



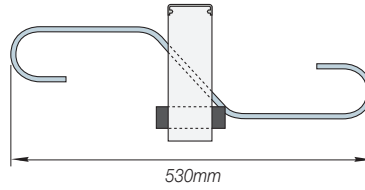
Note: See guidance and design examples on pages 8 and 9

ISOLAN V RANGE

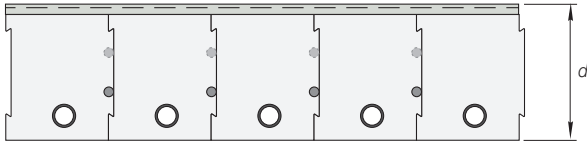
2V6



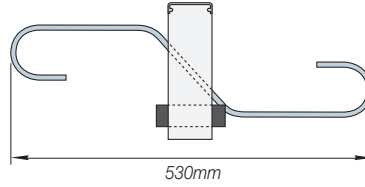
2 Shear Bars 6mm Diameter - Supplied
4 Compression Bars - To be supplied by others



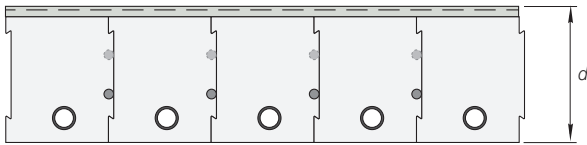
4V6



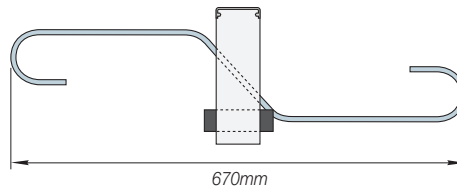
4 Shear Bars 6mm Diameter - Supplied
5 Compression Bars - To be supplied by others



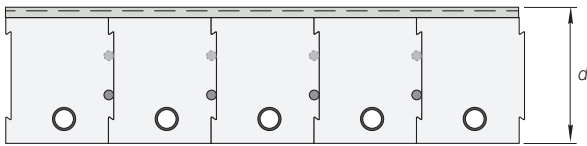
4V8



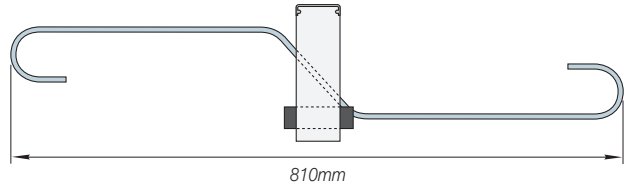
4 Shear Bars 8mm Diameter - Supplied
5 Compression Bars - To be supplied by others



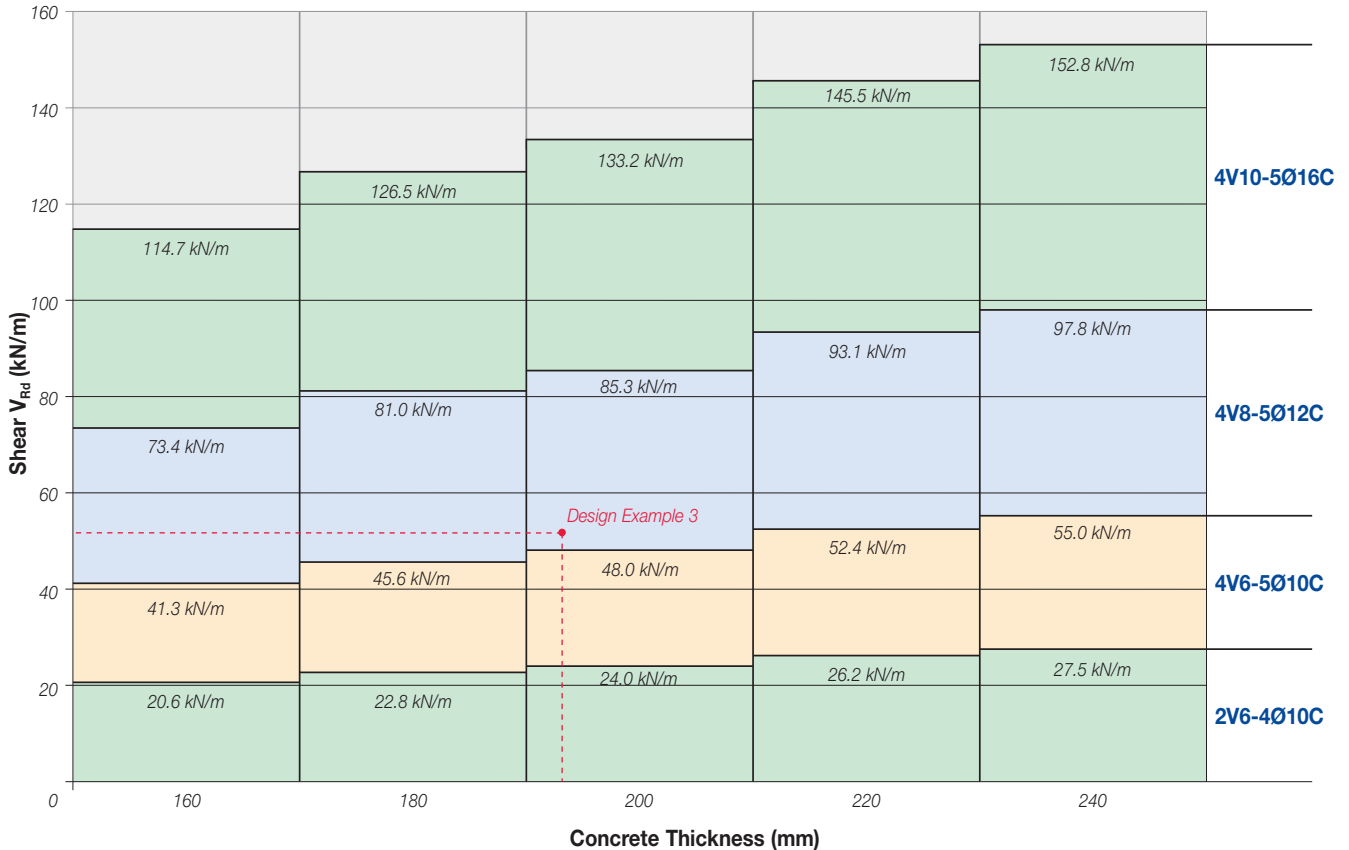
4V10



4 Shear Bars 10mm Diameter - Supplied
5 Compression Bars - To be supplied by others



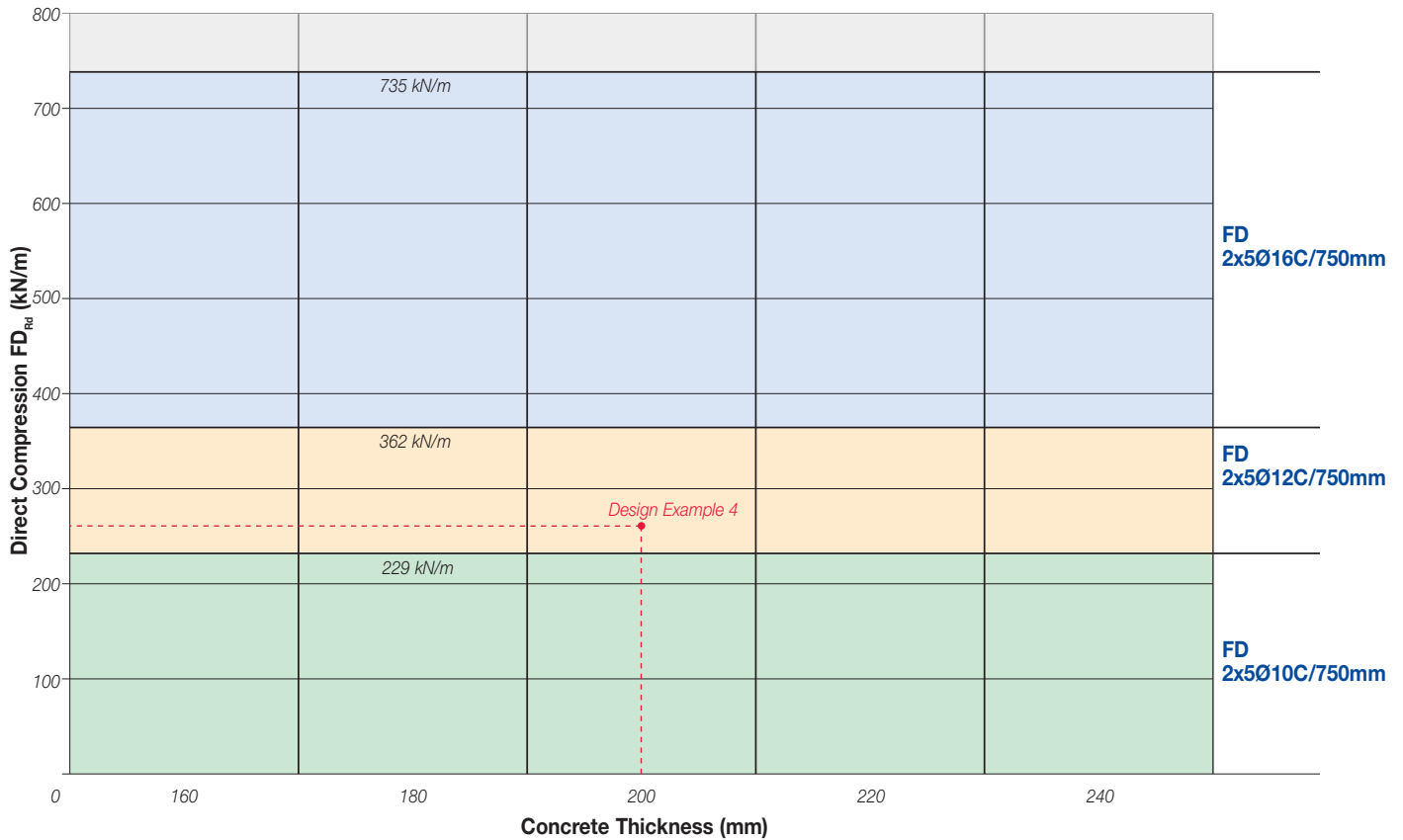
Isolan V Element - Sizes 160, 180, 200, 220 and 240mm



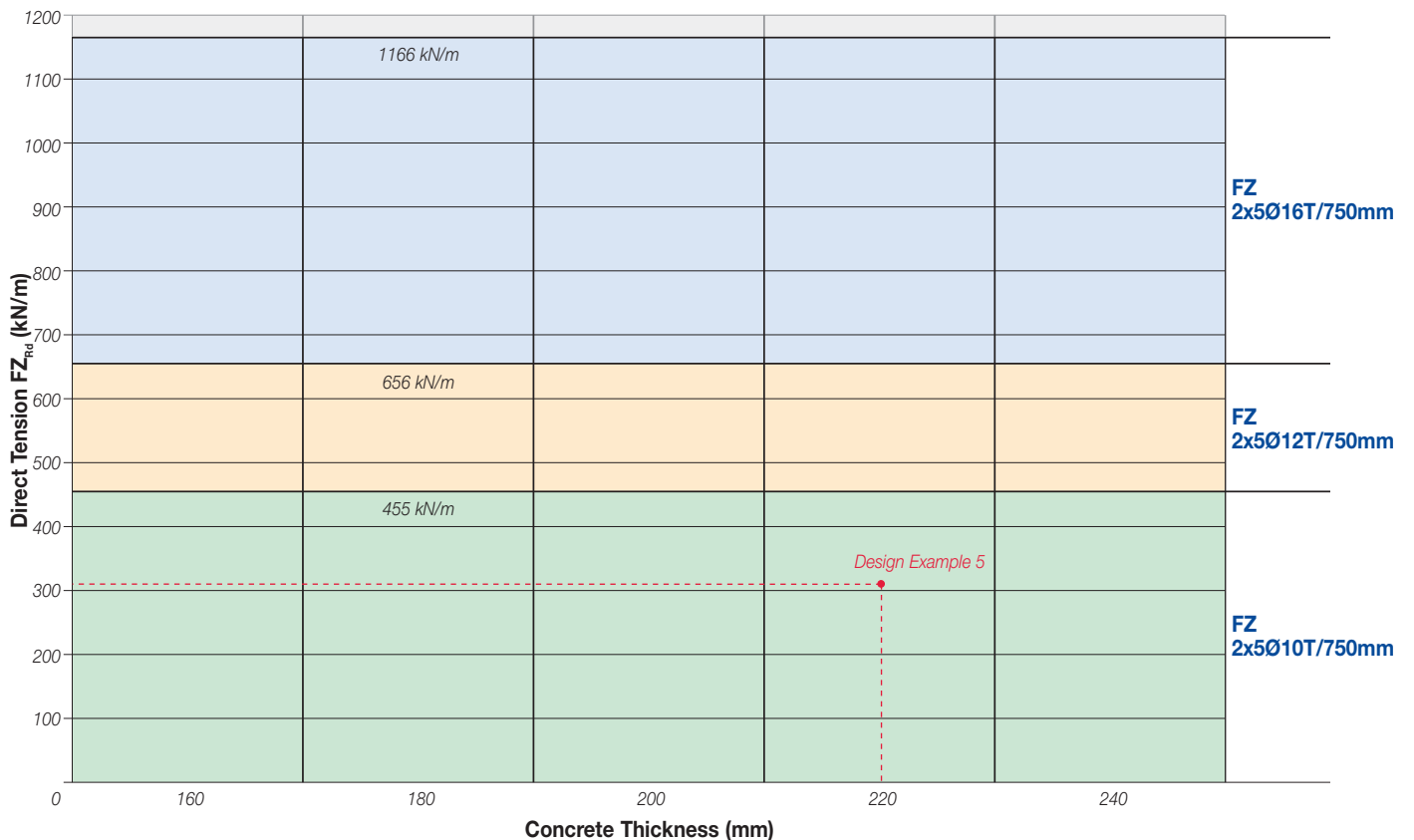
Note: See guidance and design examples on pages 8 and 9

Isolan® Insulated Balcony Connectors

Isolan FD Element - Compression Reinforcement Sizes 160, 180, 200, 220 and 240mm

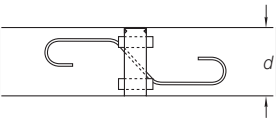
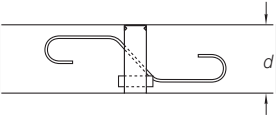
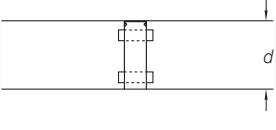
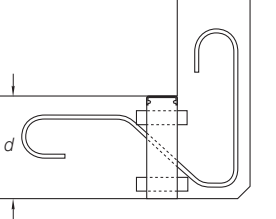


Isolan FZ Element - Tension Reinforcement Sizes 160, 180, 200, 220 and 240mm



ANCON ISOLAN ENQUIRY / ORDER FORM

Copy, complete and fax to +44 (0) 114 238 1240

| Isolan System | Slab Depth d (mm) | System Type & Length (standard unit length 750mm) | | | |
|--|-------------------|---|--------------------------|--------------------------|---------------------------|
| MV System  | _____ mm | 2 MV 6 _____ m | 4 MV 6 _____ m | 4 MV 8 _____ m | 4 MV 10 _____ m |
| | _____ mm | 2 MV 6 _____ m | 4 MV 6 _____ m | 4 MV 8 _____ m | 4 MV 10 _____ m |
| V System  | _____ mm | 2 V 6 _____ m | 4 V 6 _____ m | 4 V 8 _____ m | 4 V 10 _____ m |
| | _____ mm | 2 V 6 _____ m | 4 V 6 _____ m | 4 V 8 _____ m | 4 V 10 _____ m |
| FD/FZ System  | _____ mm | _____ m | | | |
| | _____ mm | _____ m | | | |
| Special Configurations  | _____ mm | Sketch of intended application | | | |
| | _____ mm | Diameter of Shear Reinforcement _____ mm | | | |

| | | | |
|--------------------|--------------------------------|----------------------------------|------------------------|
| Date _____ | <input type="checkbox"/> Order | <input type="checkbox"/> Enquiry | Delivery Date _____ |
| Company _____ | | | Delivery Address _____ |
| Address _____ | | | _____ |
| Town _____ | Post Code _____ | Town _____ Post Code _____ | |
| Contact Name _____ | | | Contact Name _____ |
| Tel _____ | Fax _____ | Tel _____ Fax _____ | |
| Email _____ | | | Project Name _____ |

Isolan® Insulated Balcony Connectors

CORNER DETAILS

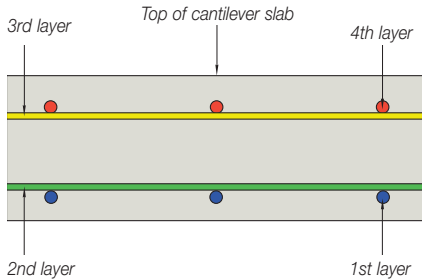
At balcony corner configurations, if the diameters of the tensile and compressive reinforcement add up to or are greater than 27mm, attention to the local reinforcement detail is required. This is necessary because the inner diameter of the polypropylene tube is 27mm and if the tubes are maintained in the same horizontal plane, the reinforcement would clash.

In the main load bearing direction the Isolan element is selected to suit the height of the slab, so that the compression reinforcement which crosses the 60mm insulation cavity will be located in the 1st layer (bottom steel) and the main tensile reinforcement will be located in the 4th layer (top steel). Refer also to Plan View of Cantilever Balcony and Sections.

As previously noted, the corner detail is dependent upon the reinforcement diameters; the size of the Isolan element at corners needs to be selected to avoid local clashing of reinforcement. A typical plan of a corner balcony is shown below, and the Isolan element selected will be 20mm or 40mm smaller in height than that adopted for the general cantilever design.

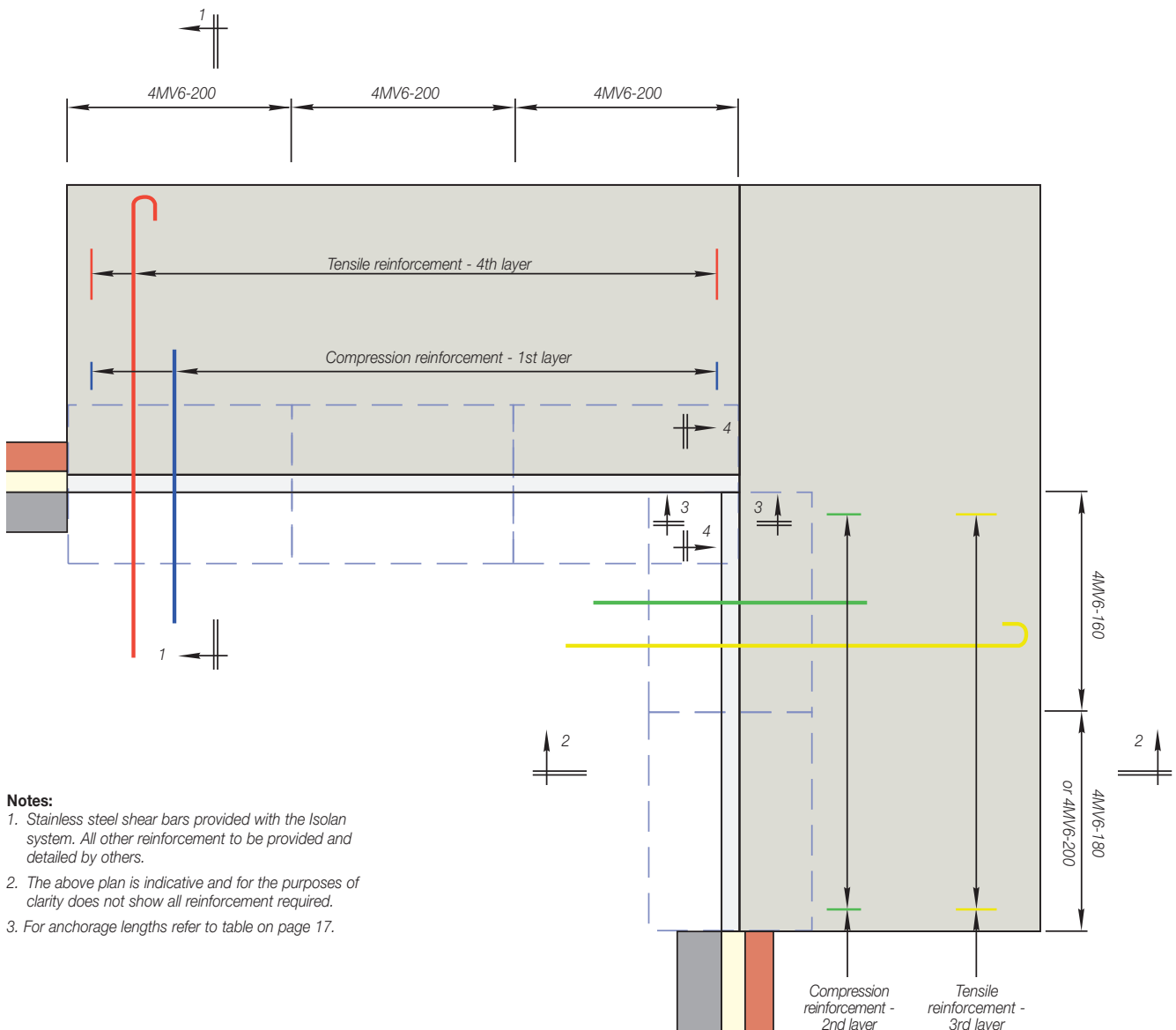
For example, a cantilever balcony requires a structural slab of height 200mm, accordingly an Isolan MV 200 element would be selected, however locally at the external corner an Isolan element MV 160 is selected to avoid clashing of reinforcing bars. The Isolan MV 160 element is made up to the full slab height of 200mm by using 20mm thick polystyrene make-up strips glued to the top and bottom edges.

Similar detailing principles will apply to recessed balconies.



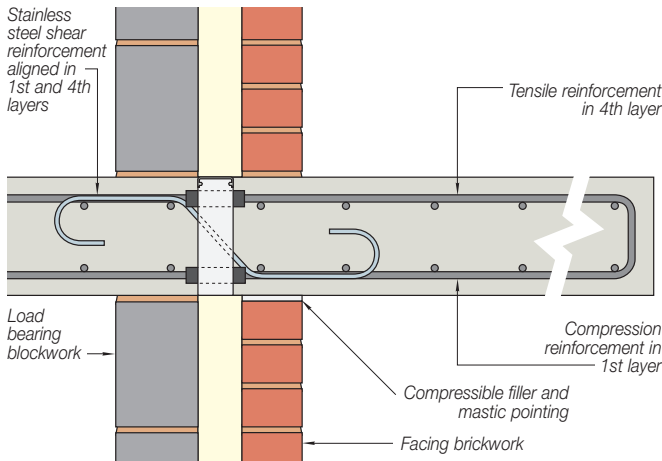
Key to Reinforcement Layers

Plan View of Cantilever Balcony and Sections

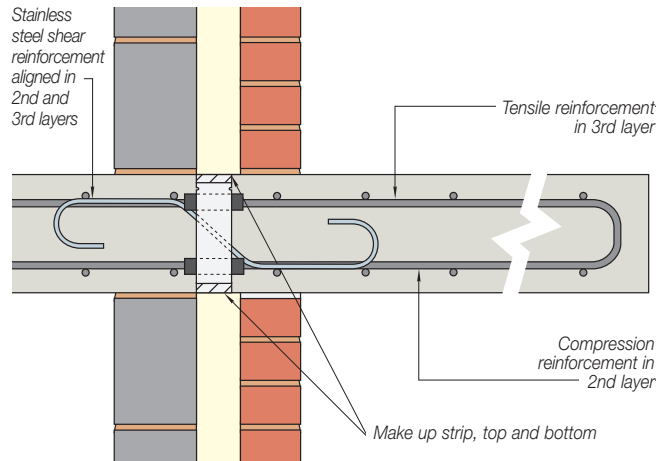


Notes:

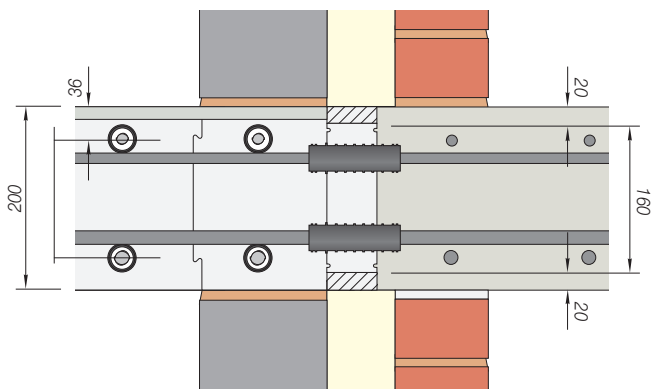
1. Stainless steel shear bars provided with the Isolan system. All other reinforcement to be provided and detailed by others.
2. The above plan is indicative and for the purposes of clarity does not show all reinforcement required.
3. For anchorage lengths refer to table on page 17.



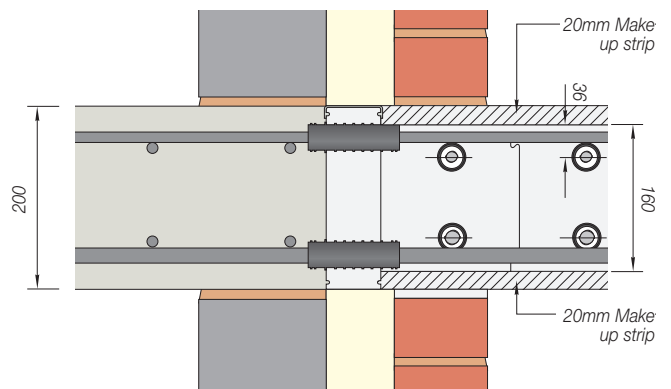
Section 1-1



Section 2-2



Section 3-3



Section 4-4

Note: For clarity, shear reinforcement has been omitted from Section 3-3 and Section 4-4 above.

REINFORCEMENT ANCHORAGE LENGTHS: MV ELEMENT/V ELEMENT

The information noted in the table shown provides the minimum anchorage lengths for the Grade 500B tension and compression reinforcement; Ancon does not supply this reinforcement with the Isolan system, only the stainless steel shear bars are provided. The Grade 500B anchorage reinforcement must be detailed with the general balcony reinforcement and provided by others.

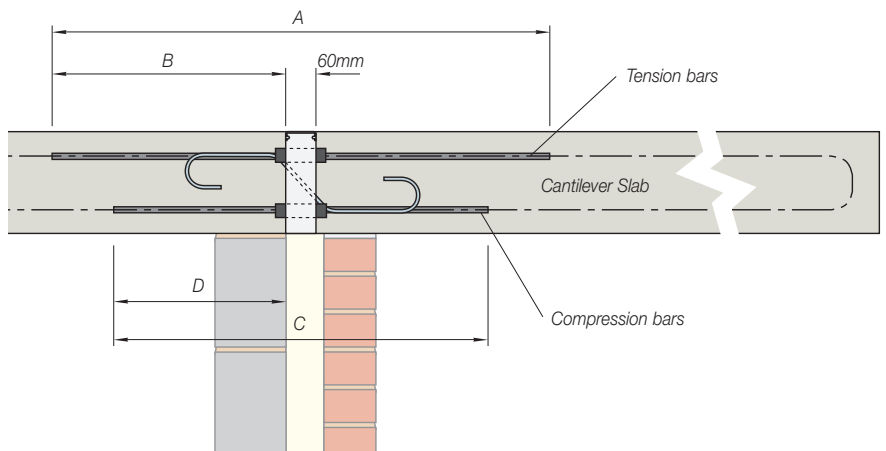
The minimum length of the tension anchorage rebar shall be 50D where D is the nominal rebar diameter.

The minimum length of the compression anchorage rebar shall be 35D where D is the nominal rebar diameter.

The structural slab shall have a minimum concrete strength Class C25/30 (cylinder/cube compressive strengths). Durability considerations may result in the selection of a higher strength class for most UK applications.

| Rebar size (mm) | Tension anchorage (mm) | Compression anchorage (mm) | Tension Bars | | Compression Bars | |
|-----------------|------------------------|----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| | | | Dimension A min. (mm) | Dimension B min. (mm) | Dimension C min. (mm) | Dimension D min. (mm) |
| 10 | 500 | 350 | 1060 | 500 | 760 | 350 |
| 12 | 600 | 420 | 1260 | 600 | 900 | 420 |
| 16 | 800 | 560 | 1660 | 800 | 1180 | 560 |
| 20 | 1000 | 700 | 2060 | 1000 | 1460 | 700 |

Note: The tension anchorage length is longer than required by BS 8110-1:1997, Table 3.25



Isolan[®] Insulated Balcony Connectors

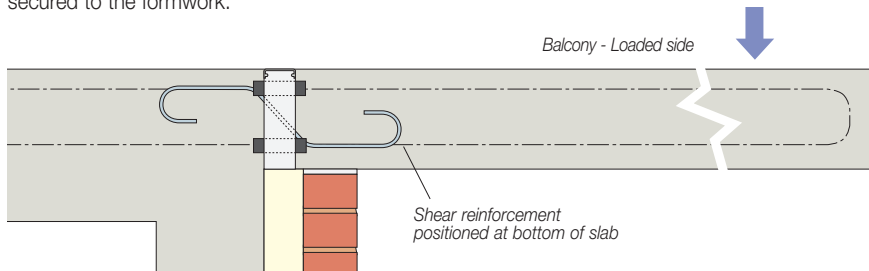
INSTALLATION

Ancon Isolan components are fast and simple to install. These steps are provided as guidance and should be followed in conjunction with the site engineer's instructions and structural engineer's reinforcement details.

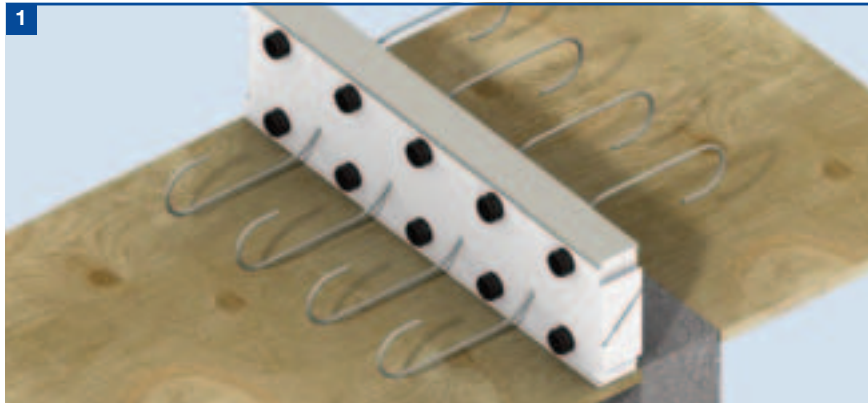
Any polystyrene which is damaged must be replaced or alternatively, where possible, patched with polyurethane foam to maintain the insulation properties.

Step 1

The Isolan system should always be orientated so the stainless steel shear reinforcing bars are at the bottom of the slab on the side of the load (the balcony side). The unit is then positioned and secured to the formwork.



Note: For clarity, not all reinforcement is shown.



Step 2

Insert the compression bars and tension bars, supplied by others, through the polypropylene tubes, and secure them to the main floor slab and balcony reinforcement. The minimum anchor length must be achieved either side of the Isolan system, see page 17 for detailed dimensions.

Care should be taken to ensure that any misalignment of the compression bars does not exceed 25mm in 1000mm (1 in 40) as illustrated in the Part Plan View diagram.

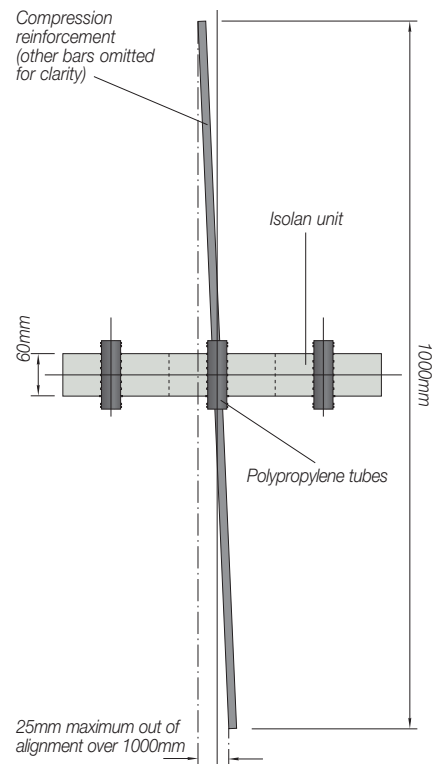


Step 3

The concrete should preferably be poured adjacent to the Isolan system and simultaneously to either side to avoid any displacement of the polystyrene units. If the concrete is poured on one side only, the second side being at a later date, then the Isolan units must be securely fixed to avoid displacement.

Installation is shown for the MV system but is the same for the V system where the tension bars are excluded.

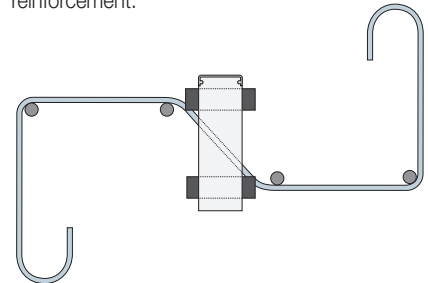
Misalignment of Compression Bars



Part Plan View

Special Configurations

Load distribution reinforcing bars must be installed at the bends of the shear reinforcement.



On-site Storage

Care should be taken to avoid damaging any Isolan components prior to installation. Special care should be taken of the polystyrene units. All components should be stored under cover and away from direct sunlight.

THE ANCON 'PRODUCTS FOR STRUCTURAL CONCRETE' DIVISION

Ancon operates a dedicated service to clients in the concrete sector. Products include, but are not restricted to, balcony connectors and those shown on this page. The 'Products for Structural Concrete' team provides technical advice, pricing information, guidance on product selection and order fulfilment. Enquiries from overseas are also dealt with by the team. Please email concrete@ancon.co.uk, fax +44 (0) 114 238 1240 or call +44 (0) 114 275 5224.

ANCON PRODUCTS

Stainless Steel Reinforcement

Ancon supplies stainless steel plain and ribbed reinforcing bar direct from stock. Grade 304 stainless steel is readily available. Other grades, including high proof strength material, can be obtained on request. Bar is normally available in 6, 8, 10, 12, 16, 20, 25 or 32mm diameter. Other diameters can be obtained on request. Bars are stocked to a maximum length of 6 metres throughout the size range and can be supplied cut to length, bent and threaded to suit requirements.



Special Stainless Steel Fabrications

Ancon has a wealth of experience in working with different types and grades of stainless steel. Advanced manufacturing facilities enable one-off or volume orders to be fabricated to individual project requirements and to exacting quality standards. Considerable material stocks are maintained in order to meet urgent delivery deadlines.



Reinforcement Continuity Systems

Reinforcement Continuity Systems are an increasingly popular means of maintaining continuity of reinforcement at construction joints in concrete; they eliminate the need to drill shuttering and can simplify formwork design, thereby accelerating the construction process. The Ancon Eazistrip System is CARES approved and is available in both standard units and special configurations.

Reinforcing Bar Couplers

The use of reinforcing bar couplers can provide significant advantages over lapped joints. Design and construction of the concrete can be simplified and the amount of reinforcement required can be reduced. The joint can also remain unaffected by any loss of cover because the strength of a mechanical splice is independent of the concrete in which it is located. The range includes threaded and mechanically bolted couplers.

Shear Load Connectors

Ancon DSD Shear Load Connectors are used to transfer shear across expansion and contraction joints in concrete. They are more effective at transferring load and allowing movement to take place than plain dowels, and can be used to eliminate double columns at structural movement joints in buildings. The two-part construction of these connectors ensures alignment, vital where movement is required. The Ancon DSDQ features a rectangular box section to allow lateral movement in addition to longitudinal movement.

Punching Shear Reinforcement

Used within a slab to provide additional reinforcement around columns, Ancon Shearfix is the ideal solution to the design and construction problems associated with punching shear. The system consists of double-headed studs welded to flat rails, positioned around the column head. The shear load from the slab is transferred through the studs into the column.

Channels and Bolts for Fixing to Concrete

Cast-in channels are used for fixing masonry support systems to the edges of concrete floors and beams. Channels are available in different sizes ranging from simple self-anchoring channels for restraints, to large capacity channels with integral anchors. A selection of channels can also be supplied plain-backed for surface fixing. Stainless steel expansion bolts and resin anchors complete the range.



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These products are available from:

The construction applications and details provided in this literature are indicative only. In every case, project working details should be entrusted to appropriately qualified and experienced persons.

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