



Hidden Strength

Ancon AMR Masonry Reinforcement

Fabricated steel reinforcement, located in the bed joint to strengthen masonry panels without thickening the wall

The longitudinal steel wires are flattened to ensure good mortar cover is maintained, even when lapped or used with wall ties



Materials	Stainless steel, galvanised steel
Wire Diameters	3.0, 3.5, 4.0, 4.5, 5.0mm (equivalent diameter after flattening)
Depth	Flattened to less than 3mm
Widths	60, 100, 150, 175mm
Length	2700mm

**Minimise wall thickness.
Maximise structural performance.**



Ancon AMR Masonry Reinforcement

Ancon AMR is used to improve the structural performance of masonry walls, in accordance with BS5628-2: 2005, by providing additional resistance to lateral loads e.g. wind. It can also be used to reduce the risk of cracking either at stress concentrations around openings or as a result of movement, in accordance with BS5628-3: 2005.

Available in various standard configurations, the Ancon AMR suits a wide range of structural load conditions and wall widths. The longitudinal wires have a minimum characteristic yield strength of 500N/mm².

Materials

Ancon AMR is available in Austenitic stainless steel (ref. S) and galvanised steel (ref. G). Stainless steel provides the greatest corrosion resistance and life-cycle costing benefits, and is suitable for use in any application. Galvanised steel is not suitable for use in the external leaf of a cavity wall.

Wire Diameters

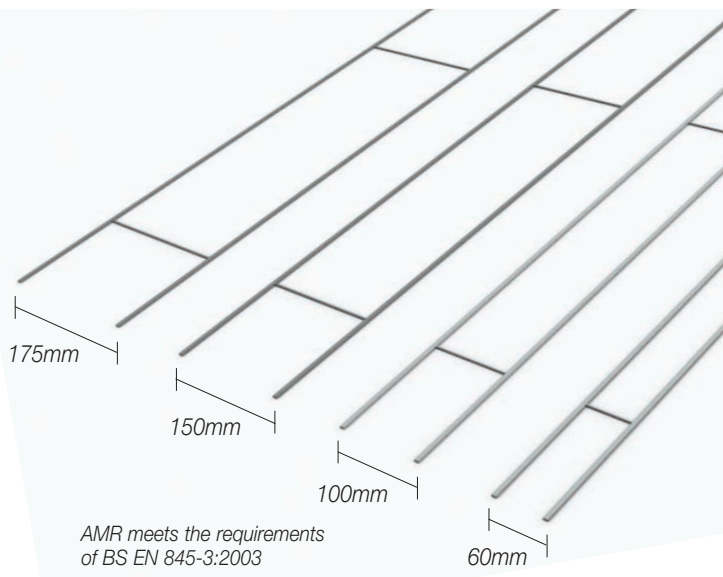
The Ancon AMR is manufactured from five wire sizes which, after flattening, have an equivalent wire diameter of 3.0, 3.5, 4.0, 4.5 and 5.0mm. This range suits the majority of load conditions.

Depth

The main longitudinal wires are flattened to less than 3mm. These wires are joined by cross wires welded in the same plane at 450mm centres. This profile ensures good mortar cover is maintained, even when the product is lapped or used with wall ties.

Widths

Available in four standard widths (60, 100, 150, 175mm), the Ancon AMR can be used in wall widths from 100mm to 215mm.



Brick/Block Width	Recommended AMR Width
100mm - 125mm Brick/Block	60mm
140mm or 150mm Block	100mm
190mm or 200mm Block	150mm
215mm Block	175mm

Length

Ancon AMR is manufactured in standard lengths of 2700mm.

Specification/Identification

AMR is specified using the simple reference structure shown below. Each length of AMR is marked with the appropriate reference to aid identification on site.

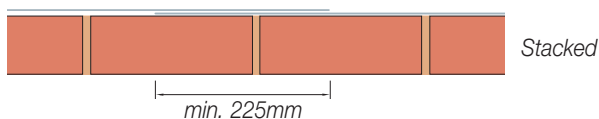
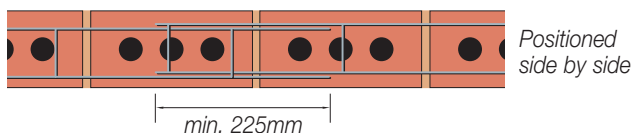


Corners

Prefabricated corner units can be manufactured to provide true continuity of reinforcement. Alternatively, Ancon AMR can be cut and bent on site.

Laps and Positioning

Laps should be a minimum of 225mm in length and can be achieved by either stacking the product or positioning lengths side by side. The position of laps should be staggered throughout the masonry panel.



Overall thickness when lapped is less than 6mm

Masonry Panel Design

Ancon provides a free masonry panel design service. A standard design sheet is available to summarise details of your specific application. Contact Ancon for more information.



Ancon AMR Masonry Reinforcement is featured in CADS Masonry Wall Panel Designer.

CE Marking

This product is supplied with a CE marking to demonstrate compliance with BS EN 845: Part 3.



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Design Sheet - Masonry Panel Design to BS EN 1996 (UK National Annex)

Please ensure all fields marked with an asterisk * are completed.

1. CONTACT DETAILS

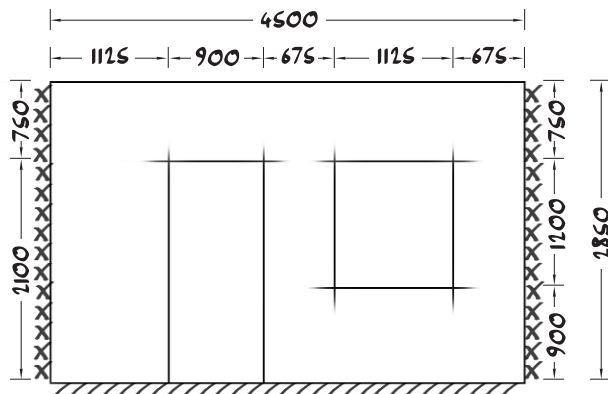
- * Contact name.....
- * Company.....
- * Address.....
-
- * Tel.....
- * Email.....
- * Project name and town.....
-

KEY TO SUPPORT CONDITIONS

- Free edge 
- Simply supported 
- Full continuity 

Note: The information that you provide below will be applied to both the inner and outer leaves unless otherwise specified.

EXAMPLE SKETCH



2. DESIGN CONDITIONS

Type of Wall:

* Single Leaf or Cavity Wall

* Cavity Width (mm)

Outer leaf:

* Material¹

* Width (mm)

* Unit Strength (N/mm²)

* Density as laid (kN/m³)

Inner leaf:

* Material¹

* Width (mm)

* Unit Strength (N/mm²)

* Density as laid (kN/m³)

Loads:

* Characteristic lateral load (kN/m²)

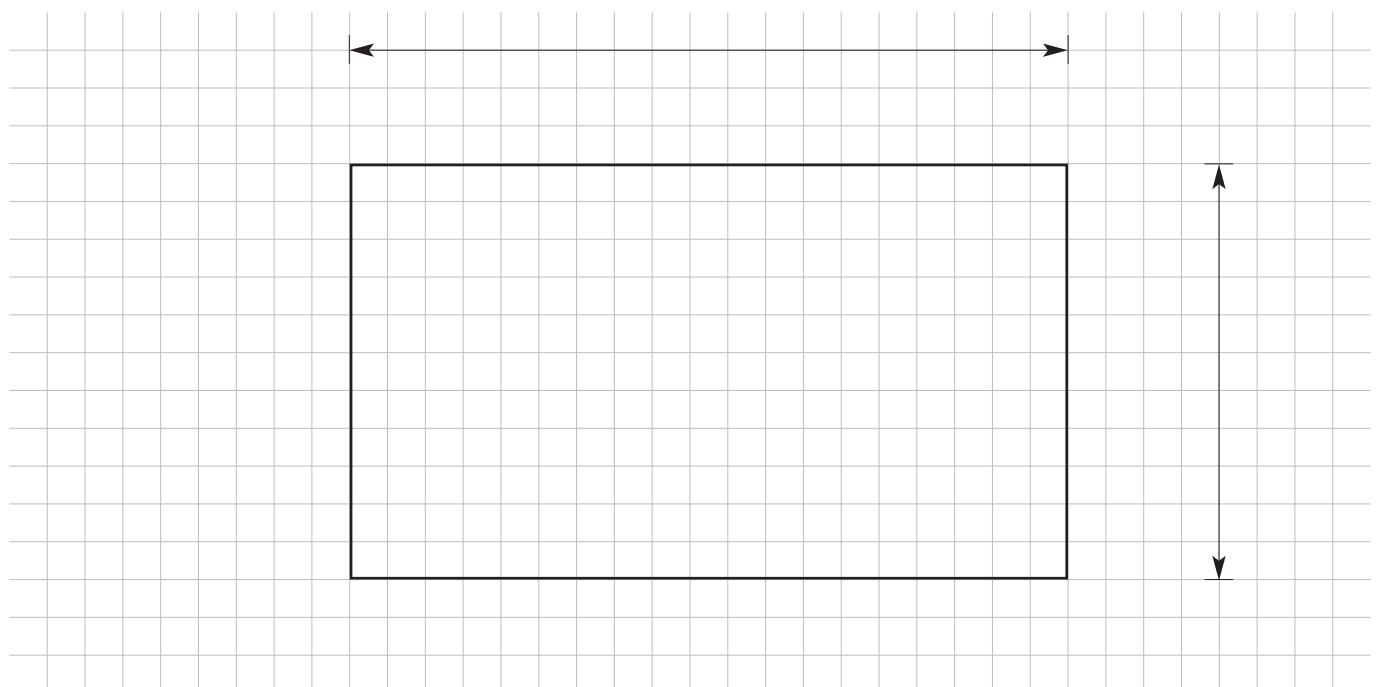
* Characteristic vertical dead load on panel (kN/m)

¹Please select from the following materials:

- | | |
|--------------------------|---------------------------|
| Clay brick | Aerated concrete block |
| Calcium silicate brick | Aggregate concrete block |
| Aggregate concrete brick | Clay block |
| Aerated concrete brick | Manufactured stone |
| | Dimensioned natural stone |

3. PANEL REF.

* Add all support conditions (see key) and dimensions below



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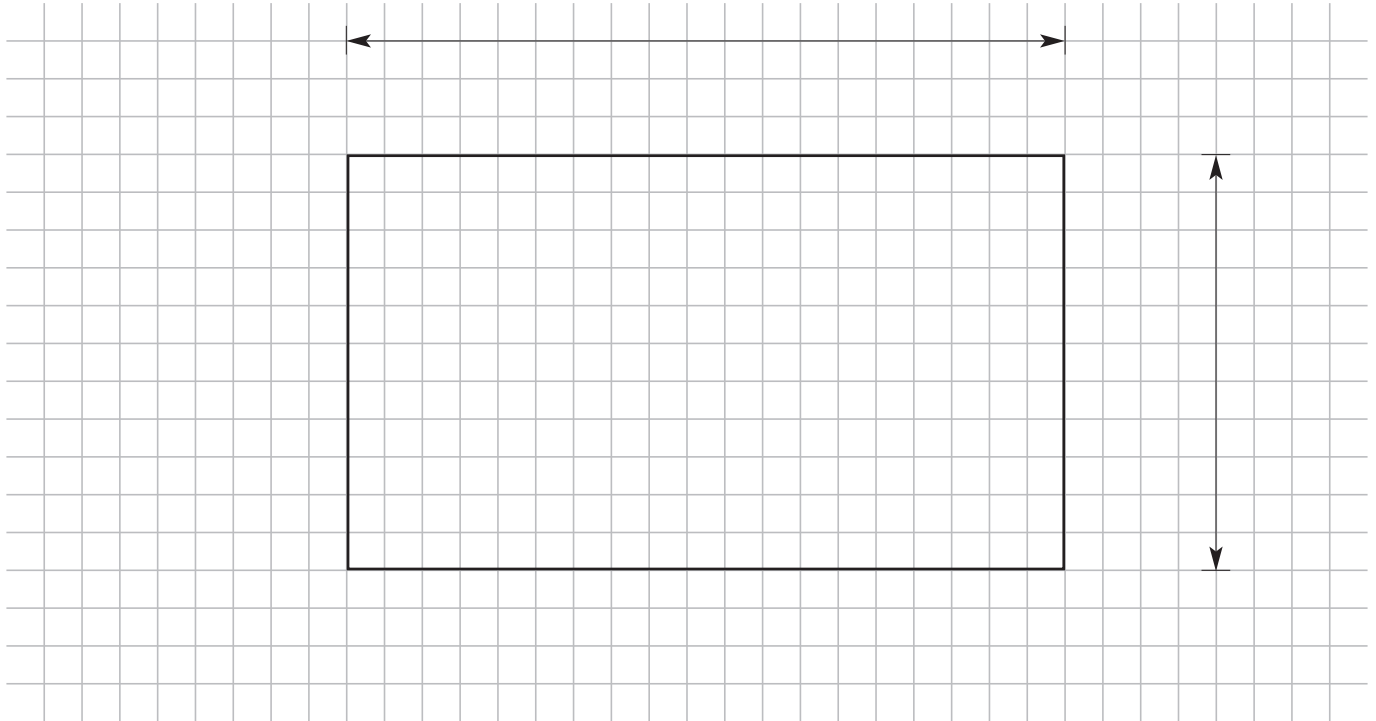
Design Sheet - Masonry Panel Design to BS EN 1996 (UK National Annex)

Only for use as a continuation page to an Ancon design sheet and where all loads and wall construction details are unchanged

COMPANY **PROJECT NAME & TOWN**

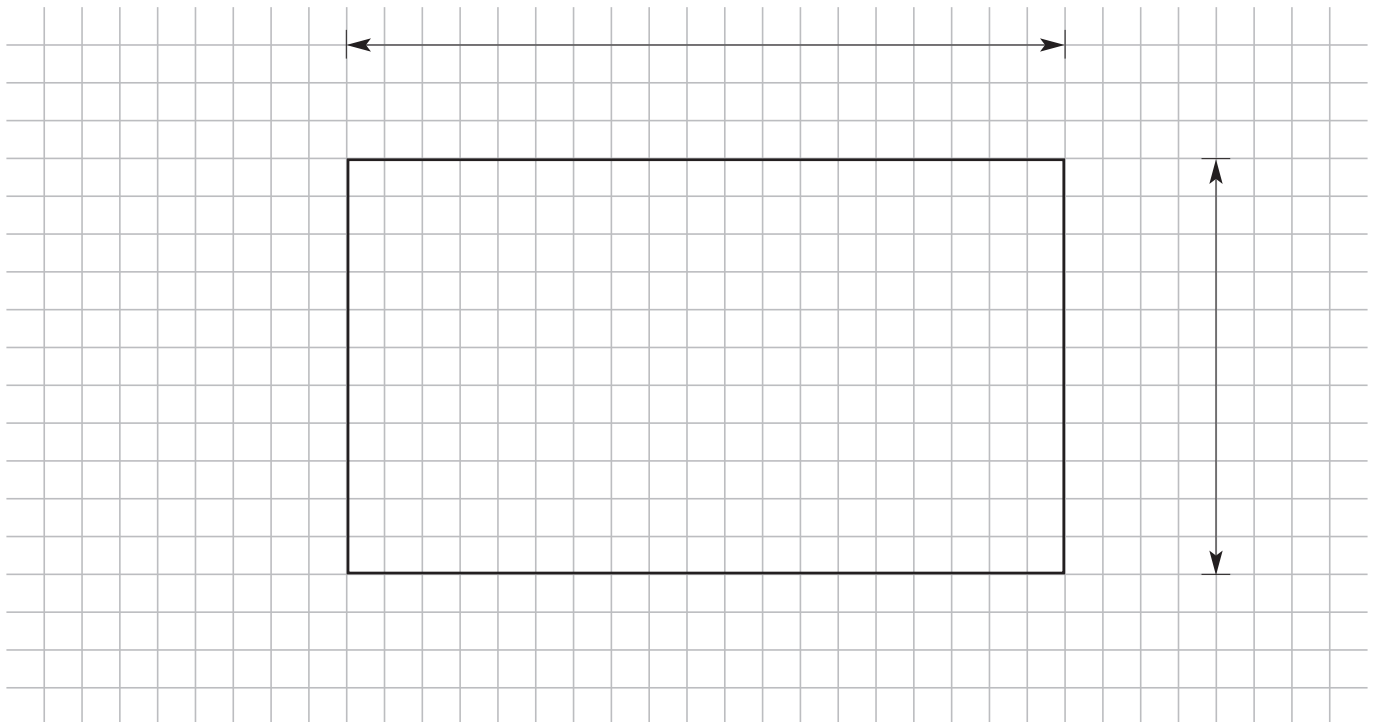
PANEL REF.

Add all support conditions and dimensions



PANEL REF.

Add all support conditions and dimensions



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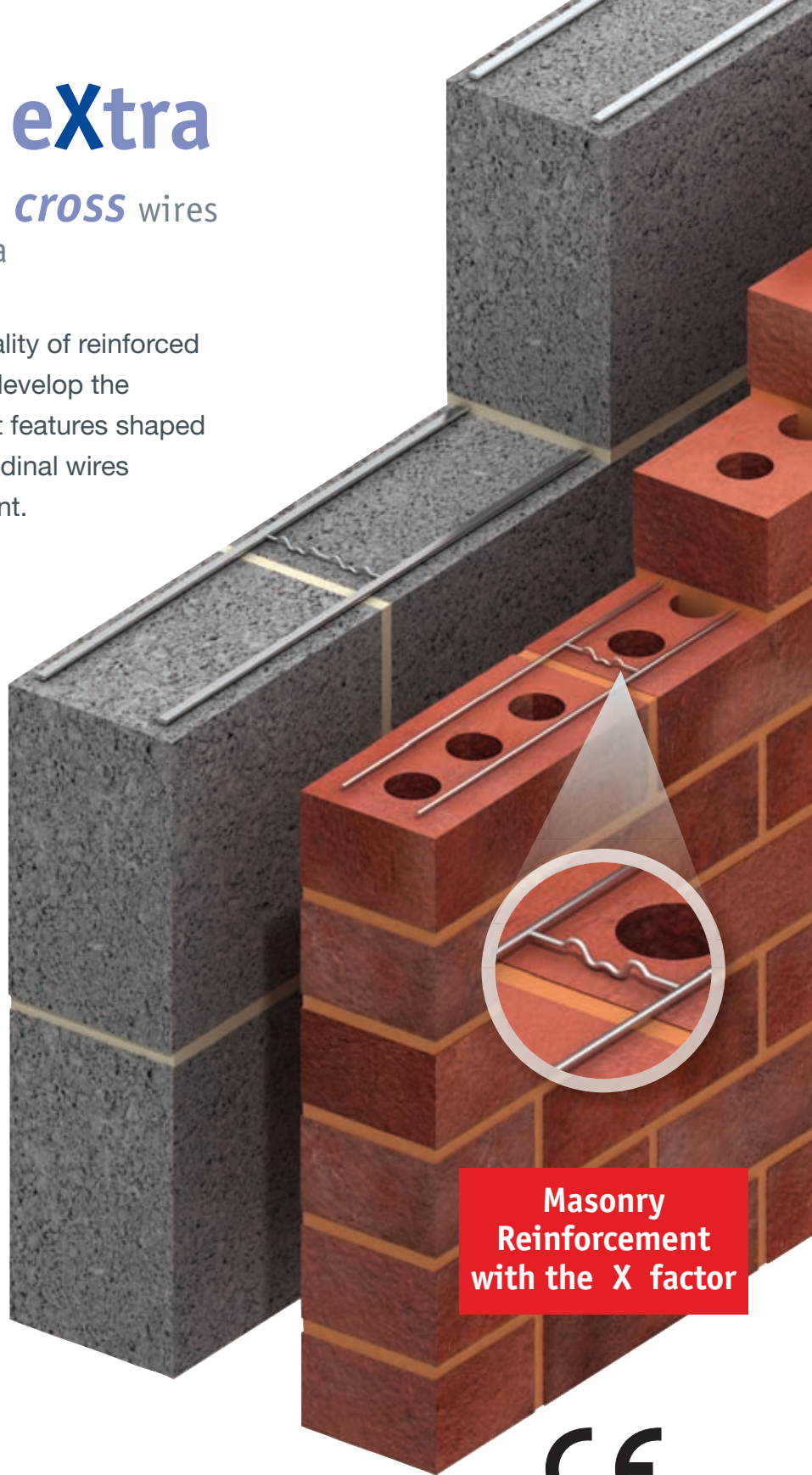
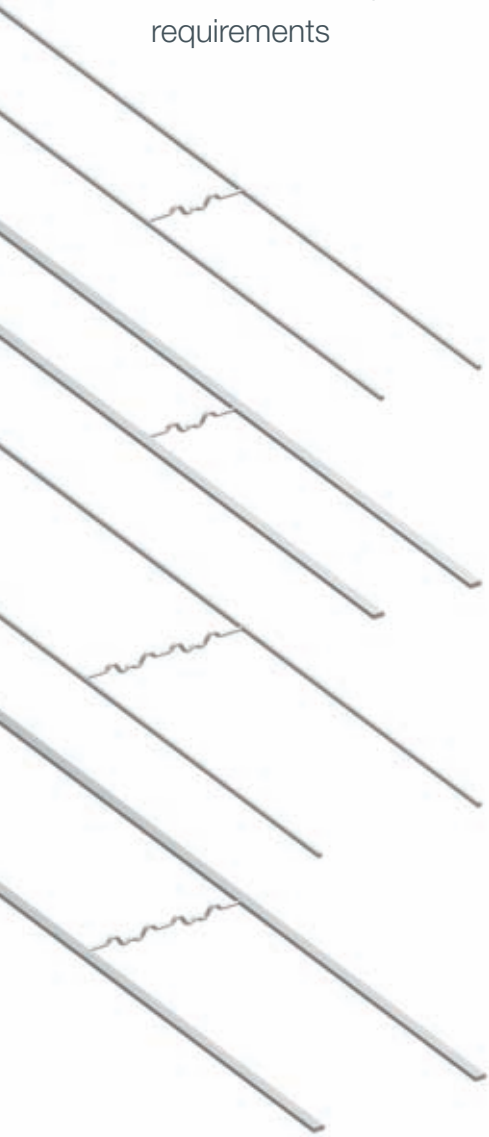
Ancon AMR eXtra

Masonry reinforcement with **CROSS** wires which offer something extra

Industry concerns over the build quality of reinforced masonry panels have led Ancon to develop the innovative AMR-X. This new product features shaped cross wires which ensure the longitudinal wires are located in the centre of a bed joint.

AMR-X:

- Accelerates construction times
- Improves build quality
- Reduces site supervision requirements



Masonry
Reinforcement
with the X factor

CE

AMR-X has been designed to be installed either way up and is available in two wire diameters and two widths.

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BUILDING PRODUCTS

Ancon AMR-X

When compared to other ladder-type reinforcement, Ancon AMR-X can accelerate the speed of construction, improve build quality and reduce the requirement for site supervision.

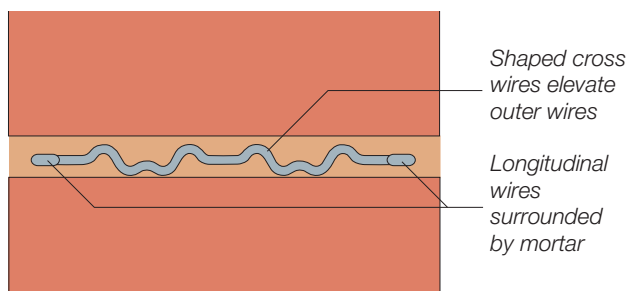
Ladder-type reinforcement is located in bed joints to provide additional resistance to lateral loads and improves the structural performance of a masonry wall. It is important that the steel is surrounded by mortar to ensure the designed performance is achieved on site.

A number of construction managers have expressed their concerns to Ancon that standard masonry reinforcement can easily be installed incorrectly. The design performance of a wall panel may not be achieved if the bed joint reinforcement is simply laid directly onto dry masonry with a mortar layer applied above. Unfortunately, research has shown that this is common site practice. To ensure an adequate bond, standard reinforcement demands two layers of mortar to be laid; one below the steel and one above.

This industry anxiety over build quality has led Ancon to develop the new AMR-X reinforcement. The product is based on the existing Ancon AMR masonry reinforcement, but with shaped rather than straight cross wires. This innovative design is a simple, cost-effective way to correct poor site practice.

If applied to dry bricks or blocks, only the modified cross wires are in contact with the masonry; the longitudinal wires are elevated. When the next masonry unit is lowered, the mortar layer disperses around the steel, leaving the reinforcement fully surrounded.

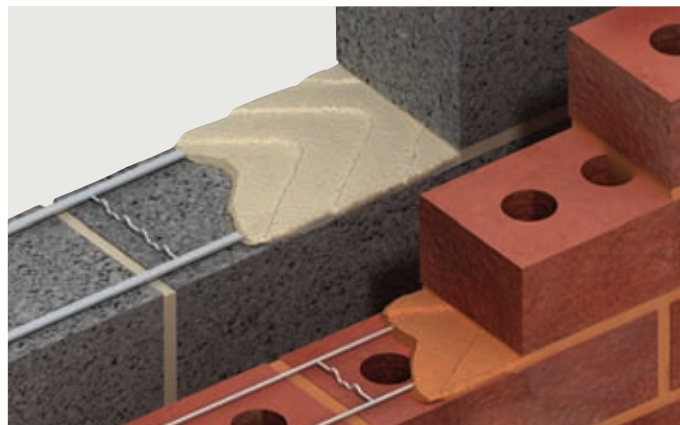
The cross wires have been designed so the AMR-X can be installed either way up.



AMR-X is available in various configurations, suitable for brickwork or blockwork, internal or external walls and the majority of load applications.

'Bed joint reinforcement should be completely surrounded with mortar'.

Recommendation given in PD6697: 2010



Material

Ancon AMR-X is manufactured from stainless steel wire. It is suitable for use in internal and external wall panels.

Depth

The main longitudinal wires are flattened to less than 3mm to allow the product to be lapped or used in the same joint as cavity wall ties.

Wire Diameters

The longitudinal wires are manufactured in two sizes which, after flattening, have an equivalent wire diameter of 3mm and 5mm. This range suits the majority of load conditions.

Length

Ancon AMR-X is available in a standard length of 2700mm.

Widths

Available in two standard widths (60mm, 100mm), Ancon AMR-X can be used in masonry units from 100mm to 150mm wide.

Wall Thickness	Product Reference
100mm-125mm Brick/Block	AMR-X/S/D3.0/W60 AMR-X/S/D5.0/W60
140mm-150mm Block	AMR-X/S/D3.0/W100 AMR-X/S/D5.0/W100

Product References

AMR-X is specified using the simple reference system shown below. Each length is marked with the product reference to aid identification on site.

Product Family	Material Reference	Wire Reference	Width Reference
e.g. AMR-X	S	D3.0	W60

CE Marking

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Ancon AMR-CJ for Collar Jointed Walls

Ancon AMR-CJ masonry reinforcement allows the construction of collar-jointed walls i.e. two leaves of thin masonry used in place of a single leaf of wider, heavier blockwork. Ancon AMR-CJ is used to tie the two leaves together, so it acts as a single unit.

The product consists of 20 x 2.5mm flat ties welded to flattened longitudinal wires at 450mm centres. The longitudinal wires have a minimum characteristic yield strength of 500N/mm².

Product Width

AMR-CJ is supplied in a standard width of 175mm to suit wall widths of 215mm comprising two leaves of either standard bricks or 100mm blocks.

Longitudinal Wire Diameters

3.0, 3.5, 4.0, 4.5 and 5.0mm (equivalent diameter after flattening). Selection is based on calculation.

Materials

Austenitic stainless steel (ref. S)

Galvanised steel (ref. G)

Stainless steel provides the user with the greatest corrosion resistance and life-cycle costing benefits, and is suitable for use in any application. Galvanised steel is not suitable for use in an external leaf.

Length

Ancon AMR-CJ is manufactured in a standard length of 2700mm.

Specification

AMR-CJ / Material / Wire / Width

e.g. AMR-CJ / S / D3.0 / W175

Corner Units and T-Sections

Pre-fabricated corner units and T-sections can be manufactured to provide true continuity of reinforcement.

Product Codes

Stainless Steel	Galvanised Steel
AMR-CJ / S / D3.0 / W175	AMR-CJ / G / D3.0 / W175
AMR-CJ / S / D3.5 / W175	AMR-CJ / G / D3.5 / W175
AMR-CJ / S / D4.0 / W175	AMR-CJ / G / D4.0 / W175
AMR-CJ / S / D4.5 / W175	AMR-CJ / G / D4.5 / W175
AMR-CJ / S / D5.0 / W175	AMR-CJ / G / D5.0 / W175

Masonry Panel Design

Ancon provides a free masonry panel design service.

Download a standard design sheet from www.ancon.co.uk to summarise details of your application.

CE Marking

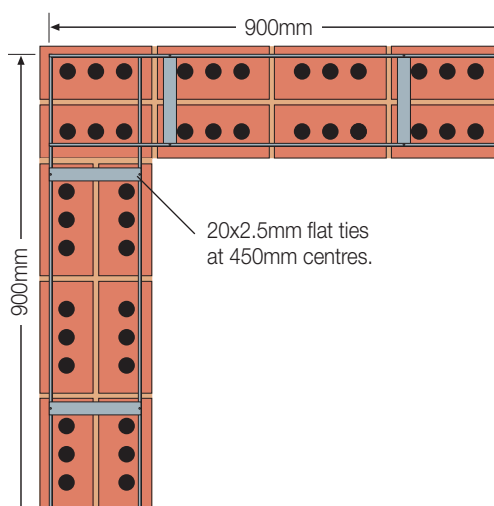
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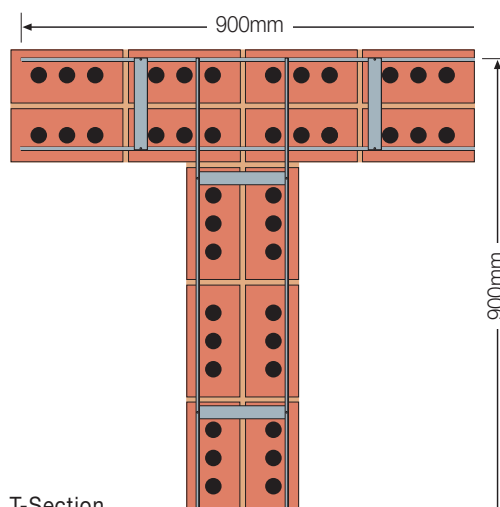
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Corner Section



T-Section

