



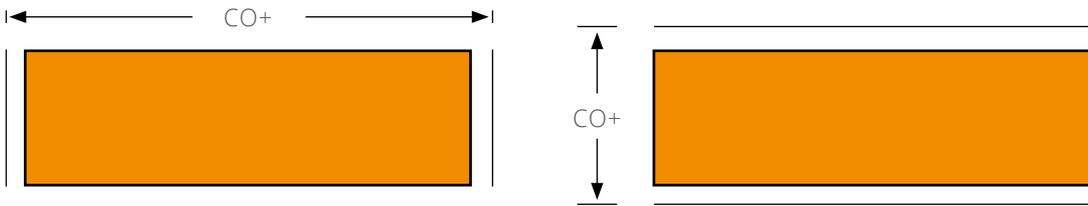
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BONDS & DIMENSIONS

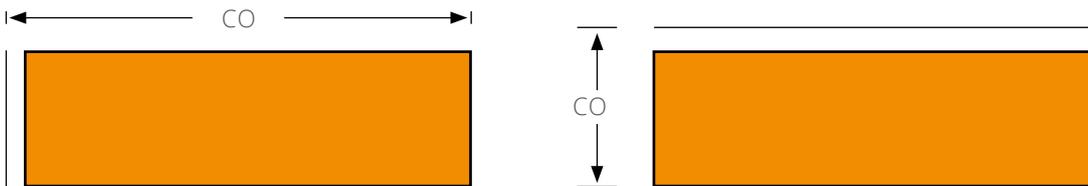
BONDS AND DIMENSIONS

If possible, it is desirable to lay brickwork according to the module used normally in the UK, the standard brick is 215mm long by 102.5mm wide and 65mm thick. It is common for vertical and horizontal joints to be specified as 10mm. Proper layout and planning will minimise the cutting of bricks thereby reducing costs. Usually large or small joints should be avoided thereby damaging the appearance of the brickwork. The brick joints should be consistent with each other. The minimum practical distance for a mortar joint is 5mm. The maximum general dimension for a joint is not agreed but has been suggested as 15mm. Both these maximum and minimum joints can be used to moderate the bricks to suit the designed dimension. Below are the co-ordination factors depending on the wall configuration you are designing.

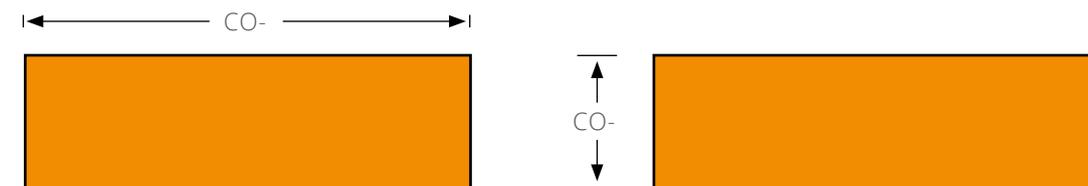
Co-ordinated size plus joint on each side. brick height or length, plus 2 joints CO+



Co-ordinated size plus one joint. So, the brick height or length, plus 1 joint. CO

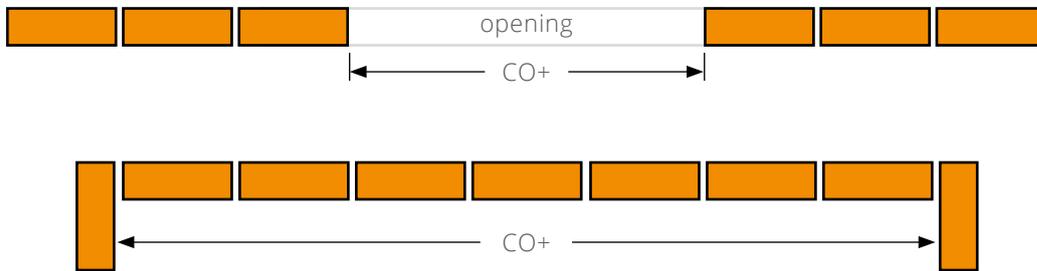


Co-ordinated size with no joints. So, the brick height or length. CO-

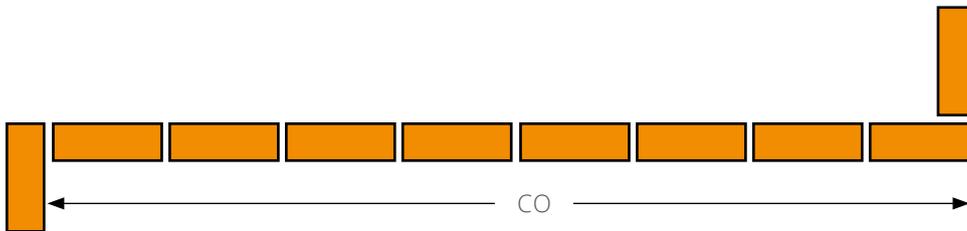


All brickwork dimensions in the table are determined by one of three options that relate to specific wall configurations.

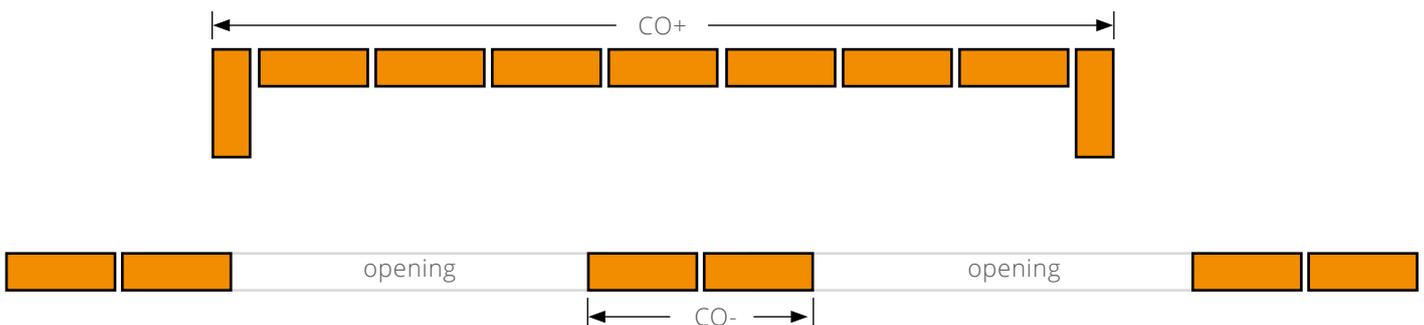
1: CO +Co-ordinated size plus a joint on each side.
Door and window openings



2: CO Co-ordinated size with one joint. Return end (external to internal corner)



3: CO-Co-ordinated size – no joint. brick piers or panel between openings.



A universal rule in brickwork is that perpends should not vertically align in any two successive courses. Brickwork observing either or both of the convention is described as being laid in one or another bond.

For all brick laid in ½ bond the module is decided as follows.

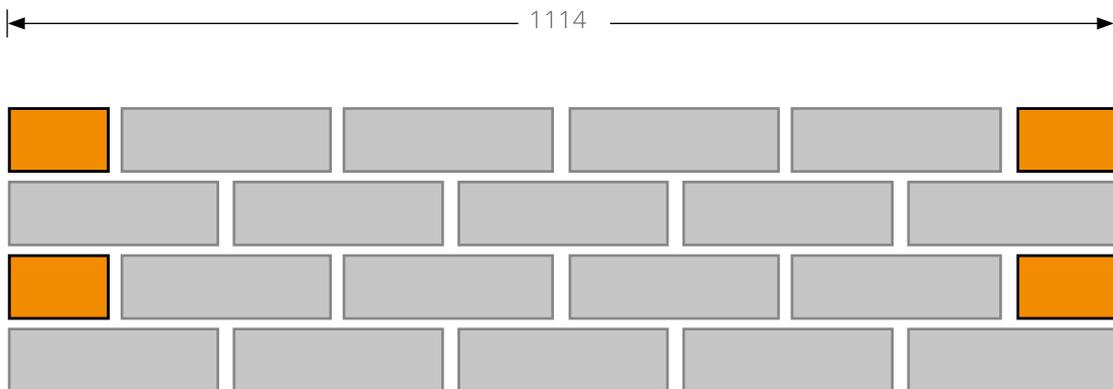
Horizontal module = ½ (brick length + joint)

Vertical module = brick height + joint

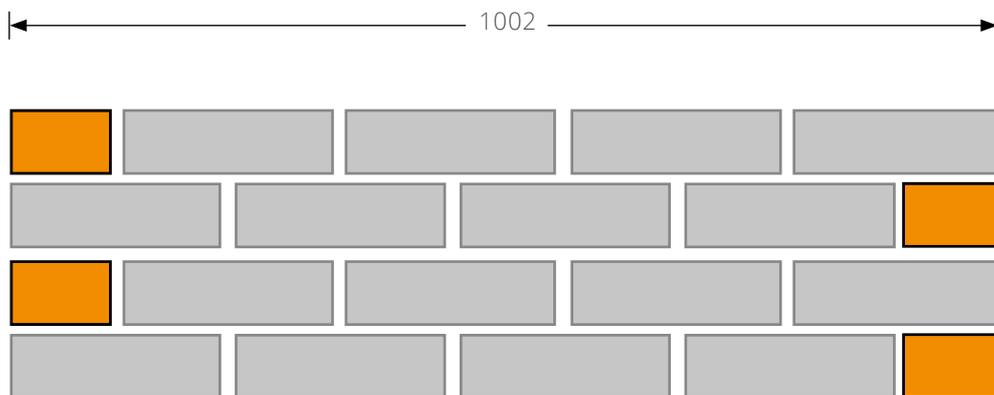
The brick may be within EN771-1 tolerance T2 at say 211mm long in this case the joint could be opened reasonably to 14mm. This is neither unsightly or unusual. The planed brickwork dimensions will still apply. The brick may be oversized and still be within EN771-1 tolerance T2 at say 219mm long in this case the joint could be closed to 6mm. The planned brickwork dimensions will still apply. The same principle applies to bedjoints although large variation would be more unusual and the visual appearance should be confirmed as acceptable. If a brick is substantially under or oversized, it is a requirement on the bricklayer to reject the occasional brick which should not be built in to the wall. For many reasons brick bonds may not be as designed, for example the frame may be inaccurately constructed. In this event the following strategy is generally advised. This advice is for stretcher bond walls

- *Open or close the mortar joint by 50% to consider the dimensional difference*
- *If the dimension needs to be reduced replace a stretcher brick with a header (1/2 brick)*
- *To increase or decrease a brickwork length introduce a ¾ batt not on the corner but one brick in from the corner or end panel. This is always unnoticed.*
- *A Queen closer or ¼ brick can be used alternate courses again one brick in from corner or end of panel. This is after all used on 100% of Flemish or English bond walls prior to the cavity wall.*

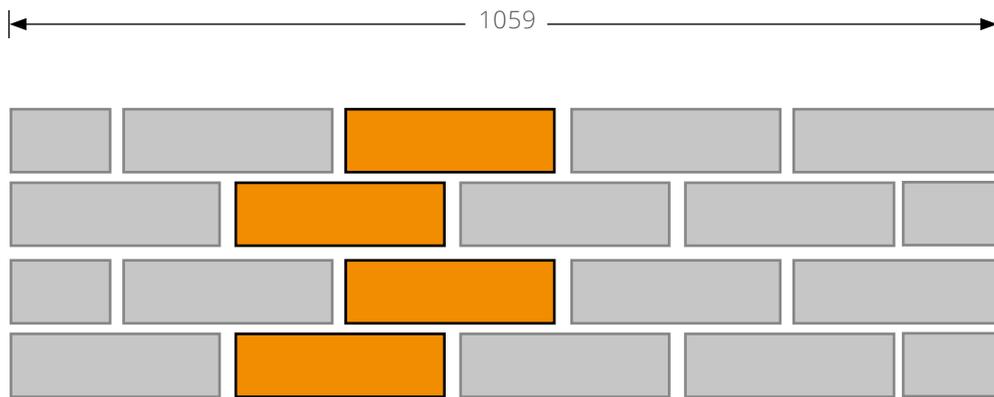
Wall designed to be 1114mm



Reverse bond enables Wall to be built without extra cutting to 1002



Using a $\frac{3}{4}$ bonding brick enables 1059 to be achieved.



These examples show there are no circumstances where a bricklayer cannot overcome a bonding issue by using these or additional techniques. It is always suggested that the wall is initially laid out dry before work commences to see if there is a particular issue which needs addressing.

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