Rods & Mortar - Curved Glass Block Walls

Curved glass block walls can only be constructed using Rods & Mortar.

Planning the design of a curved wall uses the same principles of constructing a flat wall. Additional considerations to address are calculating the opening size, ensuring the internal radius is sufficient in respect of the block size being used and positioning of intermediate vertical slip joints.

Expansion joints and curved glass block walling

Curved walls are very stable, due to the shape. However, ensuring they are restrained sufficiently to the perimeter opening is important. Between the opening and glass blocks, should be an expansion joint (soft joint) incorporated to the head and jambs. A bitumen fibre or high-density neoprene should be inserted at the base.

The perimeter soft joint should be sealed by caulking with silicone and not grouted over with mortar as bridging the joint will restrict expansion and contraction and may lead to either the blocks or mortar joints cracking. Intermediate vertical expansion joints are also required whenever the curve changes plane. The joint only needs to be incorporated vertically and is designed to cope with lateral forces – the opposite flows of the curve expand towards each other, absorbing the compression.

A joint caulked with a Rods & Mortar white sealant will visually look similar to a standard mortar joint.

Joint Sizes and Minimum Radii

When designing or building a curve, the internal radius dimension is one of the first items to consider to ensure the external vertical joint is not too wide and looks aesthetically in proportion with the horizontal joints. Also it is crucial that it does not exceed 22mm, as it may be susceptible to cracking.

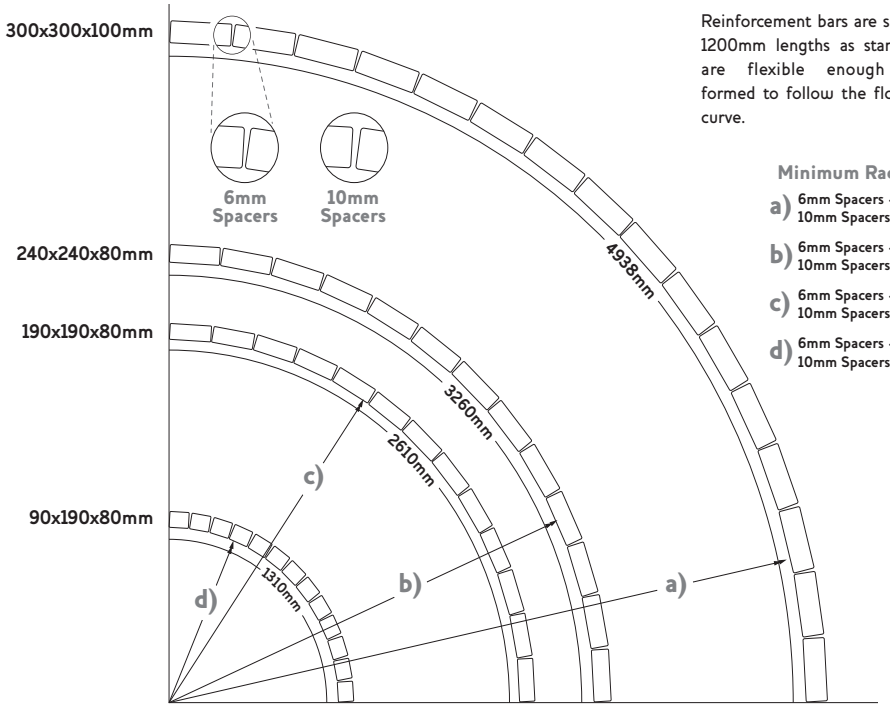
The radius is calculated in conjunction with the block dimension, so a smaller radius is possible with a 90x190mm block in comparison with a 190x190mm block.

A 6mm spacer used internally will achieve a narrower external vertical joint. This works well in conjunction with smaller format or half blocks, resulting in slimline vertical and horizontal internal and external joints.

Opening size & Restraint

To set out the opening size dimensions for a curved glass block wall panel, the calculation is done in the same manner as a straight panel. However the calculation should be done from the inside face of the curve (shortest radii). The outer width of the curve will be wider because the vertical joint is opened to form a curve (longest radii).

Reinforcement bars are supplied in 1200mm lengths as standard and are flexible enough to be formed to follow the flow of the curve.



Minimum Radius:

a) 6mm Spacers - 2200mm
10mm Spacers - 3100mm

b) 6mm Spacers - 1400mm
10mm Spacers - 2000mm

c) 6mm Spacers - 1125mm
10mm Spacers - 1600mm

d) 6mm Spacers - 550mm
10mm Spacers - 800mm

Mulia Clear Flemish 1/2 glass blocks and end blocks, sandblasted one side. Constructed with Rods & Mortar.