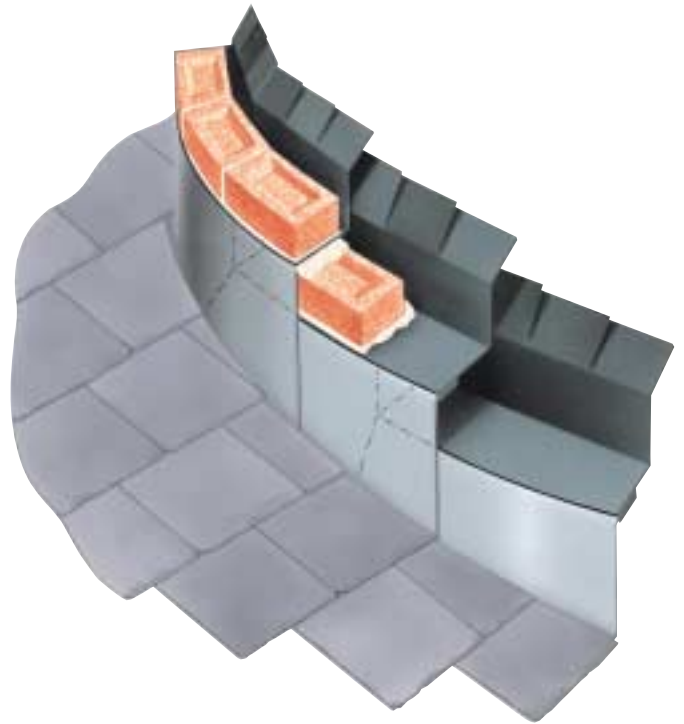


# Curved Cavitray

## -on plan

concave and convex



- Damp-proof trays and flashing in one unit
- Ready to use module cavitrays on bespoke basis
- Cavity width adjustment ensures compatibility
- Integral stopend and water-check
- Permits easy regulation compliance

### designers' comments

Give consideration to incorporating arresting barriers also, within any convex wall or concave structure where the amount of masonry (absorption area) above intersection exceeds 12 sq. metres. When the abutting roof is finished with plain tiles, the pitch is actually reduced as plain tiles slope less steeply than the rafters upon which they are laid. Check suitability when used at a low pitch. Secret gutters or similar weatherproof channels/ barriers are required where roof-slopes run into tapered, restricted or curved elevations. The cavity upstand on curved trays generally rises vertically and incorporates a sectioned hinged overlap top portion. The lead flashing is normally integral, but is occasionally supplied separately from the curved cavitray if the construction detail application dictates. Any masonry expansion joints should be identified to permit an appropriate movement link-tray to be incorporated across such joints. Curved trays are also available for use within diaphragm walls. Flush pointing is recommended on circular tower/curved structures and designers should consider carefully the masonry medium and type of mortar.



### problem

How to create damp courses for use within curved masonry, cylindrical towers and round structures.

### introduction

When a cavity wall is curved on plan, special consideration must be given to relationship between the masonry skins and the manner in which all damp courses and flashings function. The base of every cavitray must be shaped to match the masonry arc, whilst the cavity upstand is usually sectioned, to permit maximum flexibility and cavity protection. When curved cavitrays are supplied with an attached lead flashing to dress to an abutting roof, there is the additional consideration of pitch differential. A constant roof angle abutting a curved wall has numerous intersection angles at various points around the intersection arc. Concave and convex curved walls always require special attention.

### solution

There are four main types of concave or convex cavitrays, commonly employed within a curved cavity wall.

### common openings - curved

Window and door openings within a curved cavity wall are generally detailed with a matching curved lintel. In such instances, an arched version of our Type C common opening cavitray with a sectioned cavity upstand is usually appropriate.



Curved lintel and curved masonry protected by cavitray of equal radius.

Each curved cavitray harmonizes with the lintel shape, and is extended beyond the lintel length to ensure arrested water is discharged clear of the support medium, via weeps. In instances where the masonry curve is very slight, a decision to use straight lintels to cross and support through the projected curve of path is sometimes possible. The cavitray is likewise straight but widens at either end where the lintel line is

indented, to provide full DPC spread and cover.



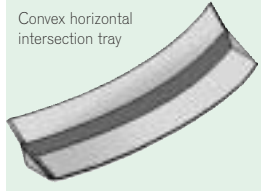
### arresting barriers - curved

These are similar to the above, but the dimension of the base within the exterior leaf is smaller, as an arresting barrier does not project through the full width of masonry. Its purpose is to arrest and minimise any wash of water prior to an exposed or otherwise vulnerable feature or detail.



### horizontal intersections - curved

Modified versions of the Type G general purpose cavitray are available for use at horizontal intersections with a curved wall. Typical applications include the abutment of a bay window or flat roof. Depending on the arc dimensions, an optional lead flashing can be supplied already attached.



### sloping abutments - curved

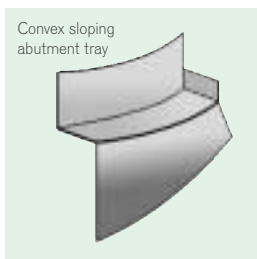
The intersection of a pitched roof against curved masonry necessitates a three-dimensional approach. The dimension of every cavitray is individually structured, to take into account the arc of the wall and the masonry coursing, whilst optimising cavitray length against roof pitch variance. A simple example is a pitched roof (P) partially or fully enclosing a convex wall of a masonry tower (similar to a lighthouse). The tray length (L) is established per masonry course (MC), whilst allowing for intersection pitch variance (IPV) around the tower diameter (D). The optimum flashing length is established to provide the requisite overlap protection. The length of every tray and the flashing shape is reviewed at every course, because the intersection pitch changes. In the case of a fully enveloped circular tower, this variance actually creates two horizontal

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intersection points (at the top and bottom of the circle) - regardless of the pitch of the abutting roof. We also calculate the maximum cavity compartment area that can be linked/over-sailed within the cavity, as curved structures tend to inhibit the conventional flow path of penetrating rainwater.

Please submit dimensioned elevations and plans showing the curved masonry and any abutting roofs. We will be pleased to advise product prices and quantities necessary to damp-proof and flash (if applicable) the curved abutment. Purpose-made in all sizes to suit individual projects.



## material

BS Polypropylene and Petheleyne, with BSEN 12588; 1999 lead flashing.

## colour

Black cavitray units with natural lead flashing attached if applicable.

## installation/site work

Specific instructions for installation accompany all goods.

Site instruction is also available to ensure building-in is in accordance with the relevant British Standards and codes of practice.

## bill of quantity wording

Purpose-made curved cavitrays

Incorporate when raising external skin of cavity wall in accordance with accompanying instructions

and good building practice. Request conformity/liability document upon completion.

## ordering/regulations

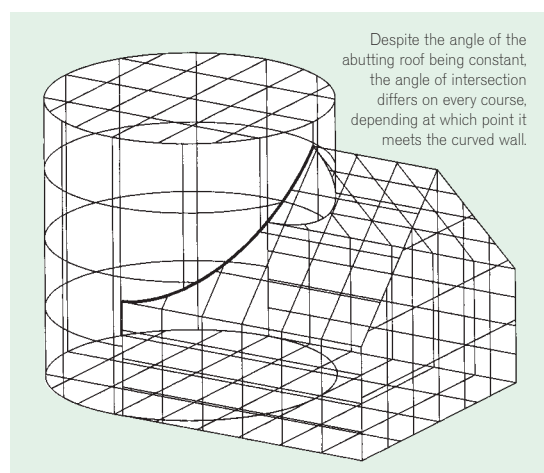
See inside back cover for details.

## related products and applications

For non-curved versions of cavitray, see individual pages of named products.



Typical example of gable abutment against convex masonry (see line drawing below).



Despite the angle of the abutting roof being constant, the angle of intersection differs on every course, depending at which point it meets the curved wall.

## technical observations

To three-dimensionally cut, form and build in appropriate dpc integrity up a slope is a difficult site undertaking, especially on curved work. The airtightness of the inner skin (and thus the requirements of Part L) can be compromised, if the inner skin bonding is regularly interrupted.

The cavity upstand of the Type X cavitray does not enter or interfere with the bonding. Thus the inner skin remains airtight.

Branded with name and logo as proof of type and accompanying warranty.

