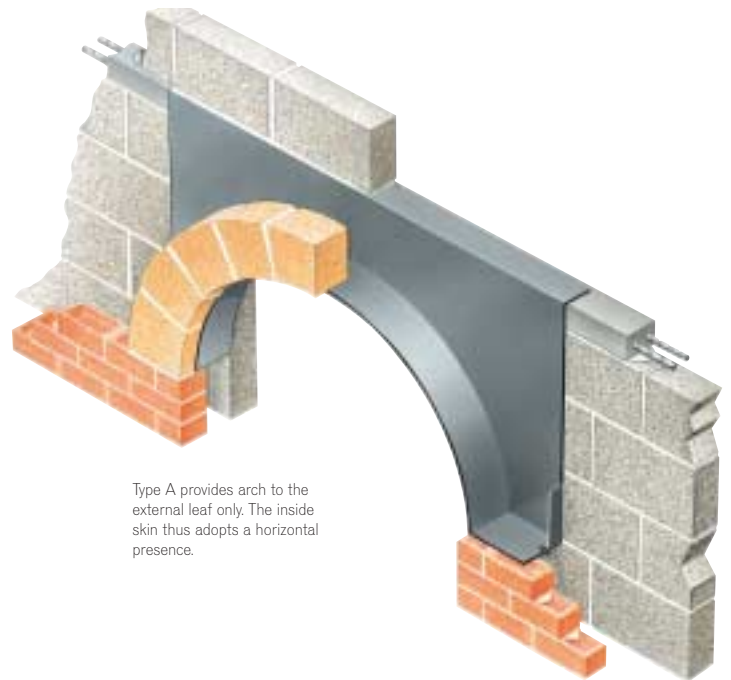


Type A and AA Cavitray

for arch openings

- Available in different arch styles and design
- Acts as masonry guide - eliminates need for traditional centring
- Provides DPC element
- Traditional or timber frame construction
- Ensures DPC integrity to entire head masonry



Type A provides arch to the external leaf only. The inside skin thus adopts a horizontal presence.

designers' comments

Any arch is effectively an assembly of curved voussoirs, buttressed solidly together so that the line of resistance at each end falls within the middle third of the depth of the overall arch ring. This avoids the development of tension at extrados or intrados levels. In determining arch solidity, we adopted the standard understanding that the voussoir sides radiate from the arch centre/centres and thus take up a normal curve in relation to the arch being approximately perpendicular to the internal line at the thrust.

technical observations

Provides DPC and brickwork guide. The need for conventional shuttering/formwork/centring is eliminated. Puncture-proof and robust. DPC element is established without doubt at intrados level. Cavity water discharge or external leaf weep discharge (recommended). Disposes of dangers associated with softer DPC materials. Branded with name and logo as proof of type and accompanying warranty.

problem

How to form DPC and brickwork guide to curved head openings.

introduction

When a curved head or arch is required over an external window or door opening, the task of incorporating an efficient DPC must be faced. By present methods, it is usual to position the DPC at the extrados level - being the first available horizontal run in which a conventional DPC can be accommodated. Such construction is suspect as it leaves the depth of the soldier or segmental arch stones unprotected by a DPC, and liable to accept dampness into the building. The Type A and Type AA cavitrays overcome such problems.

solution

The Type A tray provides an arch opening to the external leaf only of a cavity wall. Thus the inside skin adopts a horizontal presence. The Type AA tray provides an arch opening to both skins of a cavity wall, thus the curved feature is continued throughout the opening. Both trays are designed to dispel moisture above the spandrel of the arch (i.e. at intrados level, thus the DPC protects all the arch masonry). The advantages are numerous: conventional shuttering or formwork is eliminated, as the ready shaped Type A/AA provides a working form for the initial construction of the segmental arch in brick, block or stonework. Preformed Type A/AA cavitrays can achieve savings in both time and money.

sizes

To satisfy the aesthetic requirements of both modern and traditional architecture, our flexible standard design can be adapted to suit most requirements, and is offered on a tailor-made basis. Many styles of opening can be accommodated and our

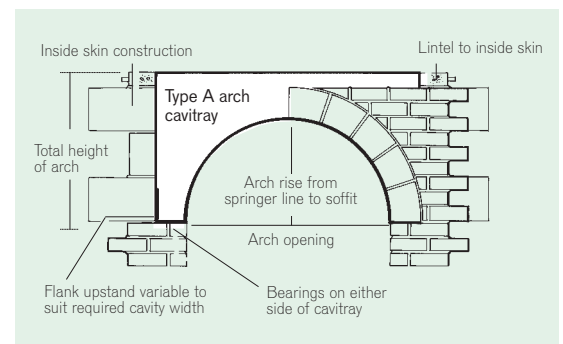
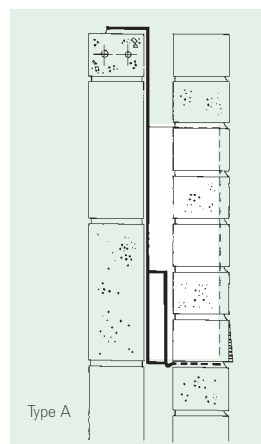
design department will be pleased to advise. Machining limitations and patent restrictions often dictate our undertakings. Therefore please contact our design department for guidance. Current maximum length including bearings is 2400mm. Recommended brickwork bearings 150mm. Minimum recommended rise/span ratio is 1:12. Tolerance factor 12mm ± voussoir/brick tolerance. Please note that Type A and AA cavitrays are not lintels, but are sufficiently robust to accept the initial arch masonry, following which triangulation support factor applies. A horizontal lintel is always required to the inside skin only, in the illustrated position.

variations

We are able to accommodate individual and special styles of arch opening. Please contact our Advice Bureau with details of your requirement.

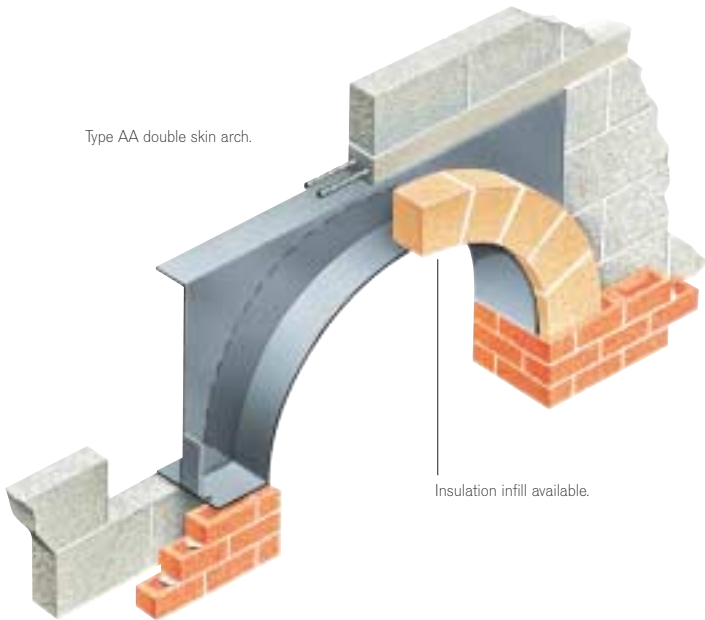
material

Austenitic stainless steel or galvanized steel. The lower half can be finished with a synergistic application of Bitutection impregnated with coarse sand, thus providing a key for mortar. Type AA arches can be supplied with a rendering mesh to the internal underside section of the arch opening. This aids rendering and plastering. Front undersides are left plain, as with normal metal lintels, etc. Type AA cavitrays can be supplied with infilling insulation quilt if requested.



Type A and AA Cavitray

for arch openings



Type AA double skin arch.

Insulation infill available.

- Available in different arch styles and design
- Acts as masonry guide - eliminates need for traditional centring
- Provides DPC element
- Traditional or timber frame construction
- Ensures DPC integrity to entire head masonry

colour

Natural stainless steel or galvanized steel. Black Bituctecton/coarse sand if requested.

installation/site work

Type A/AA cavitrays should be handled and bedded in position in the same manner as straight lintel trays. It is advisable to always provide a few temporary struts or props until arch completion/initial set of work. Masonry must always be introduced in an even manner, so that the arch and props accept same without distortion. Trays are

quite robust, eliminating danger or damage experienced with conventional materials. A/AA cavitrays are ideally bedded and positioned on the curved frame within the opening, prior to laying masonry.

bill of quantity wording

Type A cavitray (or Type AA cavitray)

Carefully place and mortar bed in position, whilst providing temporary props/struts as necessary.

Commence building of arch masonry, following manufacturer's instructions. Specify number and size of each arch design. Request liability/conformity document upon completion.

ordering/regulations

See inside back cover for details.

related products and applications

See also type BA Barrier Arch which provides DPC aspect only. For complete circle (360 degree) openings see type K. Water discharge

from these products may be via perp weepvents. See Type W, Type Euroweep-vent, beak weep and the small weepvent which is particularly suitable if the masonry arrangement dictates the perp space is restricted.

In a multi-arch arrangement with narrow piers between openings, consideration may be given to reducing internal water-wash by using a Type Q Arresting Barrier at higher level, see entry.

designers' comments

Generally, minor arches of segmental, semicircular or parabolic form within a two metre span, can be empirically proportioned. Adequate masonry over and around arches in accordance with BS 5628 should always exist.

technical observations

Provides DPC and brickwork guide. The need for conventional shuttering/formwork/centring is eliminated. Puncture-proof and robust. DPC element is established without doubt at intrados level. Cavity water discharge or external leaf weep discharge (recommended). Disposes of dangers associated with softer DPC materials. Branded with name and logo as proof of type and accompanying warranty.

Examples of arch styles/designs

