



Technical Manual

# Hebel Walls



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MASONRY + CONCRETE WALLS

FIRE RATED CSR HEBEL® WALL SYSTEM

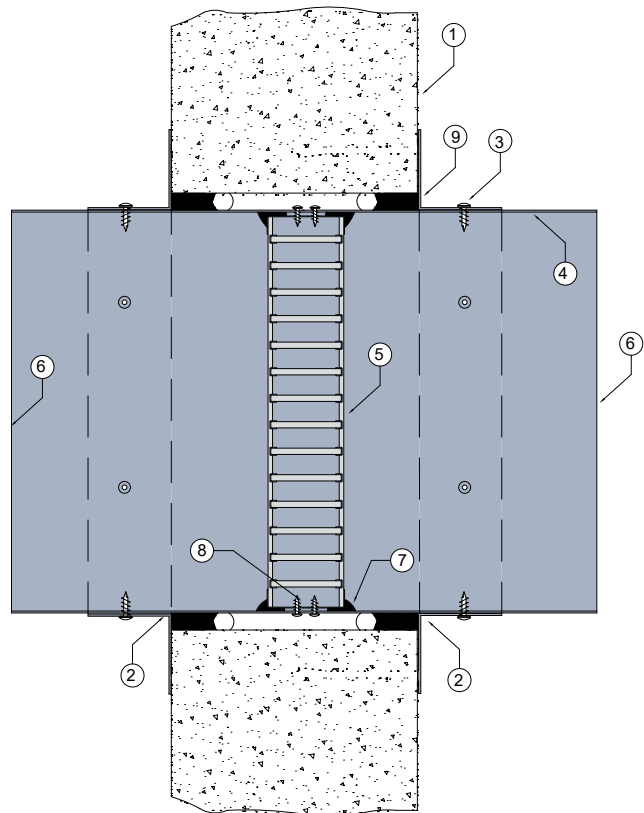
# WALL 7 - Angles Both Sides

Minimum 90mm thick



DESCRIPTION

- 1 CSR Hebel® wall with prepared aperture (minimum 75mm thick).
- 2 0.6mm (min) Z275 galvanised steel angles to all four sides. Angle dimensions shall be continuous and at least 2 x the dimension of the gap between the damper casing and the penetrated element.
- 3 Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
- 4 Z275 galvanised steel casing minimum thickness 0.6mm.
- 5 Lorient LVH44 intumescent fire damper screw fixed into casing.
- 6 Casing terminates with breakaway joints, as per AS1682.2
- 7 Fire damper perimeter sealed with Lorient intumescent sealant.
- 8 LVH44 fixed to casing with 2 x steel screws (100mm centres).
- 9 Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 25mm. Maximum annular gap between casing and wall 25mm.



**LVH44 in steel casing penetrating fire rated CSR Hebel® wall**

**FRL -/120/30**

**Fire Resistance in accordance with**

AS1530.4 2014

**Approval Ref**

EXOVA EWFA 33233400

**Max single cell size**

600mm x 600mm

**INSTALLATION INSTRUCTIONS**

- ▶ Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
  - ▶ Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
  - ▶ Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 2 & 3.
  - ▶ Ductwork shall be connected with breakaway joints, as per point 6.
  - ▶ Ensure product identification labels are conspicuously positioned for easy identification.
  - ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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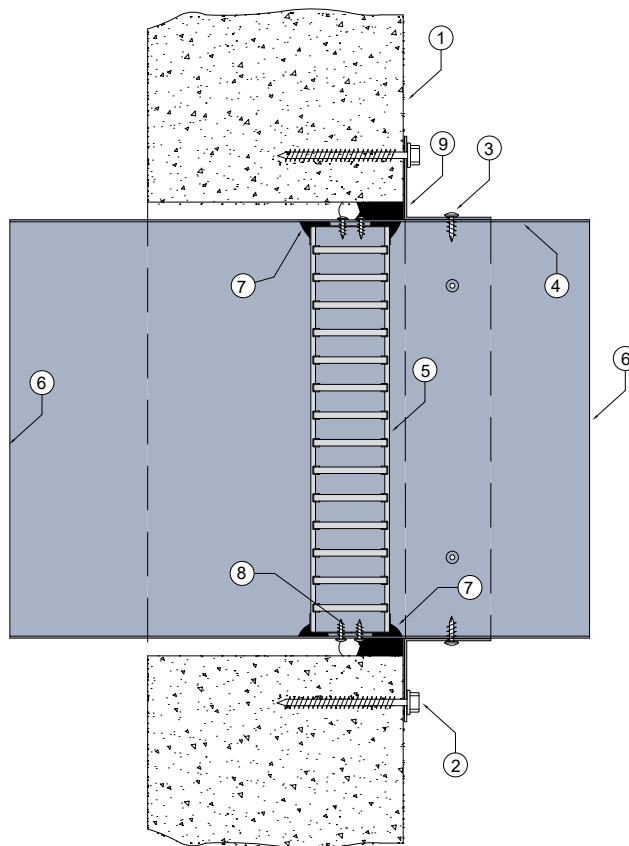
# WALL 8 – One Sided Install

Minimum 75mm thick



**DESCRIPTION**

- 1 CSR Hebel® wall with prepared aperture (minimum 75mm thick).
- 2 Angles fixed to wall with No.10-14 x 65mm Hex head Type 17 coarse thread screws at 150mm centres.
- 3 0.6mm (min) Z275 galvanised steel angles to all four sides. Angle dimensions shall be continuous and at least 2 x the dimension of the gap between the damper casing and the penetrated element.  
Each angle fixed to damper casing with steel fasteners at 150mm centres.
- 4 Z275 galvanised steel casing minimum thickness 0.6mm.
- 5 Lorient LVH44 intumescent fire damper screw fixed into casing.
- 6 Casing terminates with breakaway joints, as per AS1682.2.
- 7 Fire damper perimeter sealed with Lorient intumescent sealant.
- 8 LVH44 fixed to casing with 2 x steel screws (100mm centres).
- 9 Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 50mm. Maximum annular gap between casing and wall 25mm.



**LVH44 in steel casing penetrating fire rated CSR Hebel® wall**

**FRL -/120/30**

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

**INSTALLATION INSTRUCTIONS**

- ▶ Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- ▶ Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- ▶ Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 2 & 3.
- ▶ Ductwork shall be connected with breakaway joints, as per point 6.
- ▶ Ensure product identification labels are conspicuously positioned for easy identification.
- ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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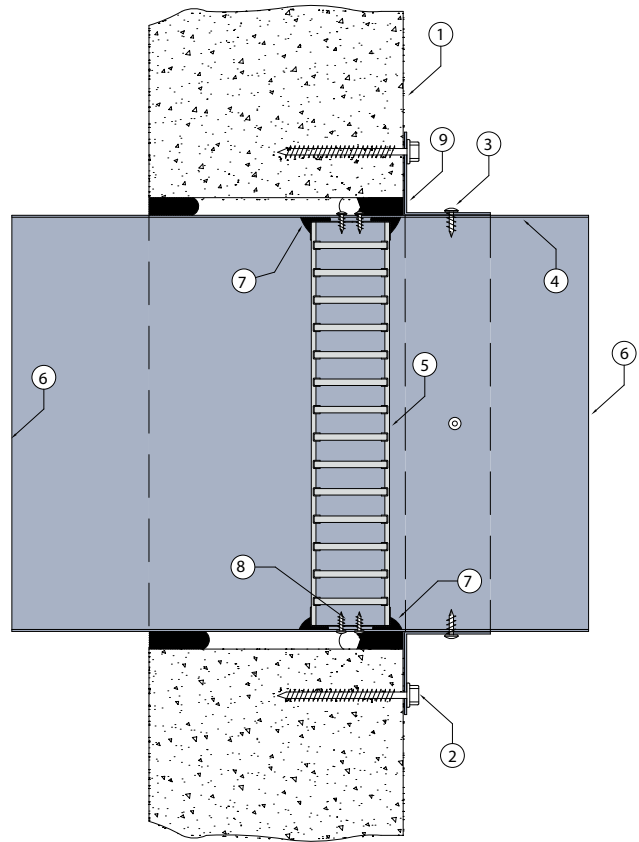
# WALL 9 – One Sided Install (Circular)



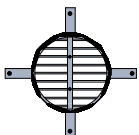
Minimum 75mm thick

DESCRIPTION

- |   |  |
|---|--|
| 1 | CSR Hebel® wall with prepared aperture (minimum 75mm thick).   |
| 2 | Angles fixed to wall with No.10-14 x 65mm Hex head Type 17 coarse thread screws at 150mm centres.  |
| 3 | 40 x 40 x 1mm Z275 galvanised steel angle brackets<br>3 off brackets for up to 300mm diameter and 4 brackets for larger sized up to 450mm diameter.<br>Each angle fixed to damper casing with steel fasteners. |
| 4 | Z275 galvanised steel casing minimum thickness 0.6mm.  |
| 5 | Lorient LVH44C intumescent fire damper screw fixed into casing.  |
| 6 | Casing terminates with breakaway joints, as per AS1682.2   |
| 7 | Fire damper perimeter sealed with Lorient intumescent sealant.   |
| 8 | LVH44C fixed to casing with 2 x steel screws.  |
| 9 | Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 25mm. Maximum annular gap between casing and wall 25mm.        |



MASONRY + CONCRETE WALLS



3 off fixing angles up to 250mm diameter  
4 off fixing angles 300mm to 450mm diameter



**LVH44C in steel casing penetrating fire rated CSR Hebel® wall**

**FRL Up to -/120/30**

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

Note: LVH44C up to 250mm diameter can achieve up to -/120/120 when fitted with R1.0 Polyester insulated flexible duct.

INSTALLATION INSTRUCTIONS

- ▶ Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
  - ▶ Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
  - ▶ Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 2 & 3.
  - ▶ Ductwork shall be connected with breakaway joints, as per point 6.
  - ▶ Ensure product identification labels are conspicuously positioned for easy identification.
  - ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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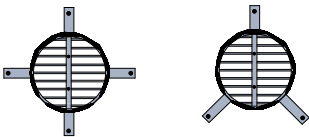
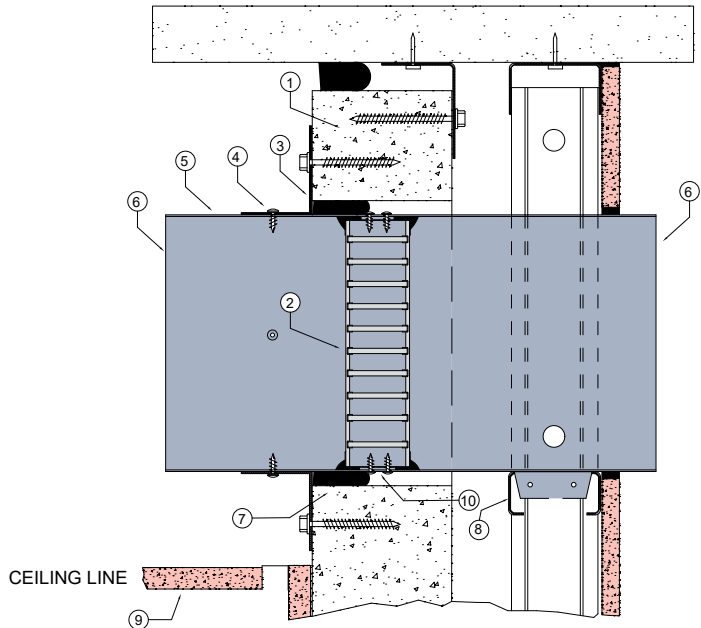
# WALL 11 – Combined Wall Install (Circular)



Minimum 152mm overall thickness

**DESCRIPTION**

- |    |   |
|----|---|
| 1  | CSR Hebel® wall installed as per manufacturers instructions (minimum 75mm thick).   |
| 2  | Lorient LVH44C circular intumescent fire damper.  |
| 3  | 40 x 40mm x 25 x 1mm (min) Z275 galvanised steel angle fixed to wall with No.14-10 x 65mm Hex head Type 17 screw.   |
| 4  | Angle brackets fixed to damper casing with steel fixings.   |
| 5  | Z275 galvanised steel casing minimum thickness 0.6mm.   |
| 6  | Casing terminates with slip joints in accordance with AS1682.1.   |
| 7  | Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 50mm. Maximum annular gap between casing and wall 25mm. |
| 8  | Duct supported on non-fire side with noggin between studs.  |
| 9  | AS1851 fire damper maintenance access point required this side.   |
| 10 | LVH44C fixed to casing with 2 x steel screws (100mm centres).   |



3 off fixing angles up to 250mm diameter  
4 off fixing angles 300mm to 450mm diameter



**LVH44C in steel casing penetrating fire rated CSR Hebel® wall**

**FRL -/120/30**

**Fire Resistance in accordance with**

AS1530.4 2014

**Approval Ref**

EXOVA EWFA 33233400

**Max single cell size**

450mm diameter

Note: LVH44C up to 250mm diameter can achieve up to -/120/120 when fitted with R1.0 Polyester insulated flexible duct  
Approval Ref: EXOVA EWFA 55205900

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**INSTALLATION INSTRUCTIONS**

- ▶ Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- ▶ Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 7.
- ▶ Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- ▶ Ductwork shall be connected with breakaway joints, as per point 6.
- ▶ Ensure product identification labels are conspicuously positioned for easy identification.
- ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.

▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

MASONRY + CONCRETE WALLS

# FIRE RATED CSR HEBEL® WALL SYSTEM

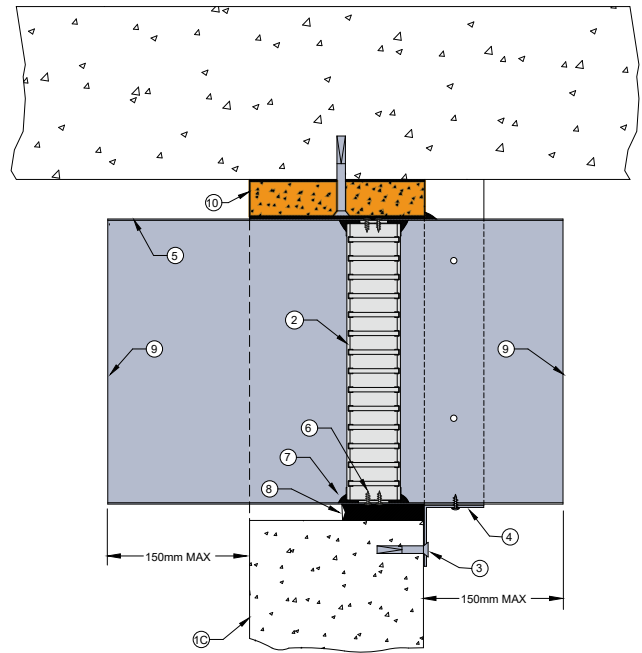
## WALL 12 – Slab Mounted Damper



Minimum 75mm thick

### DESCRIPTION

- 1C CSR Hebel® wall (minimum 75mm thick).
- 2 Lorient LVH44 intumescent fire damper.
- 3 Angles fixed to wall with steel masonry anchors at 150mm centres or at least 2 per side.
- 4 0.6mm (min) Z275 galvanised steel angles to all three sides Angle dimensions shall be continuous and at least 2 x the dimension of the gap between the damper casing and the penetrated element. Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
- 5 Z275 galvanised steel casing min thickness 0.6mm.
- 6 Fire damper fixed to casing with 2 x steel screws (100mm centres).
- 7 Fire damper perimeter sealed with Lorient intumescent sealant.
- 8 Gap between casing and aperture filled full depth (at least 50mm depth) with Lorient intumescent sealant. Maximum annular gap between casing and wall is 25mm.
- 9 Casing terminates with breakaway joint as per AS1682.2.
- 10 100mm wide x min. 25mm Trafalgar Corex (or 30-60mm Maxilite) board running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



**LVH44 in steel casing penetrating fire rated CSR Hebel® wall – tight to slab**  
**FRL -/120/30**

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

600mm x 600mm

### INSTALLATION INSTRUCTIONS

- ▶ Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- ▶ Non-combustible TBA Intubatt block is fixed to slab, as per point 10.
- ▶ Lorient intumescent sealant liberally applied to block and duct containing damper is positioned and pushed up tight to block.
- ▶ Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 8.
- ▶ 3 off perimeter angles are mechanically fixed to bottom and sides of casing with steel self drilling screws and fixed to wall with masonry anchors, as detailed in point 3.
- ▶ Ductwork shall be connected with breakaway joints, as per point 9.
- ▶ Ensure product identification labels are conspicuously positioned for easy identification.
- ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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ANGLE FREE SYSTEMS

FIRE RATED CSR HEBEL®

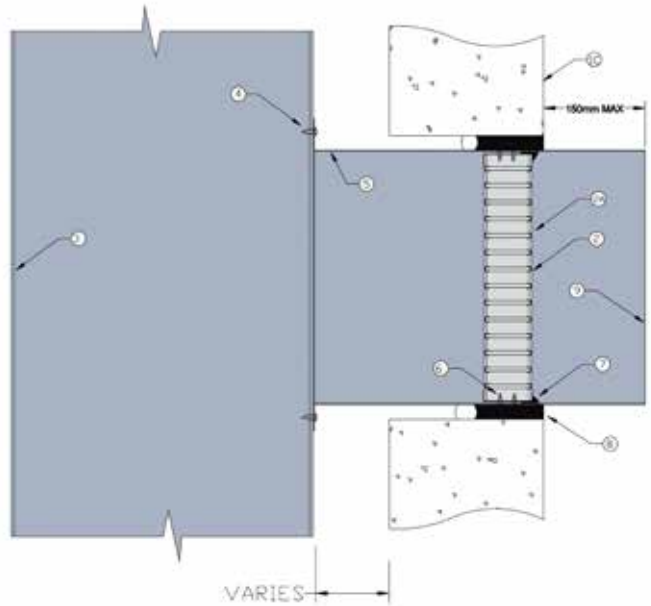
# WALL 34 – ANGLE FREE

Minimum 75mm overall thickness



## DESCRIPTION

- 1C Hebel® wall minimum 75mm thick.
- 2 Lorient LVH44 intumescent fire damper.
- 3 Protected sheet metal riser.
- 4 Horizontal branch connected to riser with steel fixings or pop rivets.
- 5 Z275 galvanised steel branch min thickness 0.6mm.
- 6 Fire damper fixed to casing with 2 x steel screws (100mm centres).
- 7 Fire damper perimeter sealed with Lorient intumescent sealant.
- 8 Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 50mm. Maximum annular gap between casing and wall is 25mm.
- 9 Casing terminates with breakaway joint as per AS1682.2.



## FIRE DAMPER

Angle free LVH44 in steel casing connected to sheet metal riser penetrating fire rated Hebel® shaft wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

### INSTALLATION INSTRUCTIONS

- ▶ Measure and mark the position of the damper in the horizontal branch, ensuring that it will be aligned within the shaft wall once the branch is attached to the riser and the shaft wall is constructed.
- ▶ Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- ▶ Mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4).
- ▶ Once shaft wall has been constructed, firestop the gap between the casing and the wall with Lorient intumescent sealant – note fill depth details in point 8.
- ▶ Ductwork shall be connected with breakaway joints, as per point 9.
- ▶ Ensure product identification labels are conspicuously positioned for easy identification.
- ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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ANGLE FREE SYSTEMS

FIRE RATED CSR HEBEL®

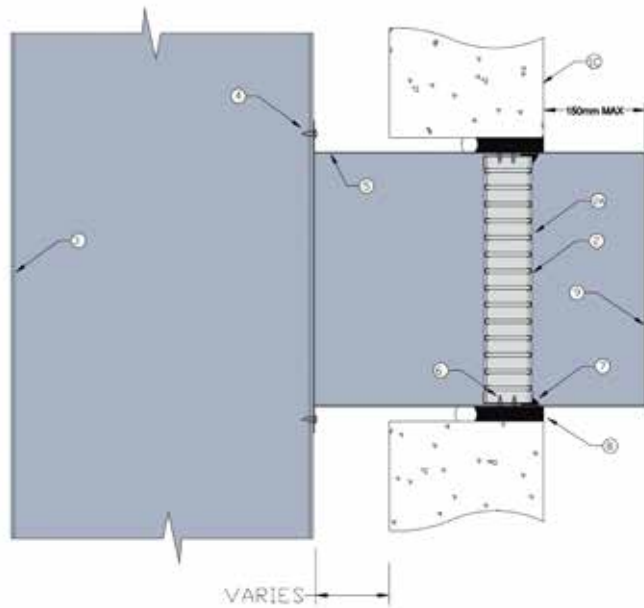
# WALL 35 – ANGLE FREE (Circular)

Minimum 75mm overall thickness



## DESCRIPTION

- 1C Hebel® wall minimum 75mm thick.
- 2 Lorient LVH44C intumescent fire damper.
- 3 Protected sheet metal riser.
- 4 Horizontal branch connected to riser with steel fixings or pop rivets.
- 5 Z275 galvanised steel branch min thickness 0.6mm.
- 6 Fire damper fixed to casing with 2 x steel screws (100mm centres).
- 7 Fire damper perimeter sealed with Lorient intumescent sealant.
- 8 Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth to at least 50mm. Maximum annular gap between casing and wall is 25mm.
- 9 Casing terminates with breakaway joint as per AS1682.2.



## FIRE DAMPER

Angle free LVH44C in steel casing connected to sheet metal riser penetrating fire rated Hebel® shaft wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

450mm diameter

### INSTALLATION INSTRUCTIONS

- ▶ Measure and mark the position of the damper in the horizontal branch, ensuring that it will be aligned within the shaft wall once the branch is attached to the riser and the shaft wall is constructed.
- ▶ Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- ▶ Mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4).
- ▶ Once shaft wall has been constructed, firestop the gap between the casing and the wall with Lorient intumescent sealant – note fill depth details in point 8.
- ▶ Ductwork shall be connected with breakaway joints, as per point 9.
- ▶ Ensure product identification labels are conspicuously positioned for easy identification.
- ▶ Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- ▶ **Note: Damper casings and mounting flanges supplied by Trafalgar Fire.**

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