LORIENT

LVH44+LVH44C INTUMESCENT FIRE DAMPERS

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MESCEI
FIRE
DAMPEI

LORIENT

We've been designing and manufacturing high performance fire dampers for more than 40 years.

Fire and smoke protection measures are essential, life-saving precautions in a building. What's more, they protect the property from the devastating consequences of the fire itself, and the damaging effects of hot and cold smoke. So it's essential to get the product selection right, every time.

Lorient has an international reputation for designing and manufacturing a wide range of innovative sealing solutions for the containment of fire, smoke, sound and energy.

With over 40 years of accumulated knowledge we pride ourselves on offering products that are designed to save lives, preserve property and enhance quality of life.

We recognise our responsibility to create well-designed products that will perform; products which are durable and reliable, and which genuinely improve the buildings they protect. By doing so, we can play our part in improving life safety, amenity and reducing building damage and loss.

INTUMESCENT FIRE DAMPERS

Manufactured for over 25 years, the original Lorient LVH44 Intumescent Fire Damper is the trusted, versatile fire containment solution.

Design needs

Sub-dividing buildings into smaller fire resisting compartments is a recognised method to limit the spread of fire. Building a fire resistant wall or floor to construct an enclosed compartment is relatively simple. However, building design becomes much more complex when the compartments need to be linked for everyday use.

Ventilation through ducting

Designers recognise the need for buildings to be well ventilated for the health and comfort of occupants. Frequent changes of air are required to flush out airborne infections, and warm and cool air needs to be circulated to maintain a comfortable temperature.

Experience has shown that ductwork can, in the event of fire, provide a conduit for fire, as well as the hot smoke and toxic gases it produces.

As HVAC systems frequently penetrate fire compartment boundaries, it is these points that must be treated in an approved manner to preserve the integrity of the fire compartment.

The Lorient solution is to install a LVH44 intumescent fire damper into the duct at the point where it penetrates the fire resistant construction.

This will effectively limit the spread of fire and restrict the passage of hot smoke and toxic gases.

What are intumescent fire dampers and how do they work?

The Lorient LVH44 intumescent fire damper comprises a rigid galvanised steel framework that supports a series of evenly spaced reinforced parallel slats that contain an intumescent material.

Under normal circumstances they allow air to pass freely but a sudden increase in temperature, resulting from the presence of hot flames or gases, will cause the slats to expand to many times their original thickness fusing together to form a stable fire resistant barrier, which restricts fire and limits the spread of hot smoke and toxic gases.

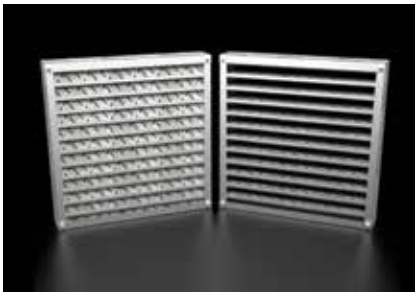

Image: Showing Lorient Damper activated and Lorient Damper normal

AUSTRALIAN MADE

Lorient LVH44 Intumescent Fire Dampers are a recognised and well respected brand. Lorient is proud to continue to offer the LVH44 and LVH44C Intumescent Fire Dampers to the Australian and New Zealand markets.

Australian made

Manufactured in Sydney to the highest quality, Lorient intumescent fire dampers are designed and approved for use in a host of different applications, providing a range of proven versatile solutions all in accordance with the latest Australian standards – see our system selector for full details.

AUSTRALIAN MADE®

Reliability

Lorient intumescent fire dampers offer a rugged, reliable solid state design that unlike conventional mechanical fire dampers do not contain any moving parts.

Their symmetrical construction allows for bi-directional airflow and they are simply activated by a rise in temperature. The LVH44 fire damper produces a tightly sealed, highly insulative intumescent mass that provides a barrier to fire, and also restricts the spread of hot smoke and radiated heat.

Product identification

All Lorient intumescent fire dampers are supplied with Lorient branded foil to allow for easy identification.

LVH44 Insulating Fire Rated Air Transfer Grilles.

LVH44 Fire Rated Air Transfer Grilles

Lorient LVH44 fire rated air transfer grilles provide air transfer between compartments without the need for connecting sheet metal ductwork. They are able to provide both insulating and non-insulating performance depending upon construction requirements.

Lorient LVH44 fire rated air transfer grilles are tested and approved to Section 10 of AS1530.4 2014 and offer designers, specifiers and mechanical consultants a simple and compliant air transfer solution.

System features include

Lorient intumescent fire dampers offer a rugged, reliable solid state design, that unlike conventional mechanical fire dampers do not contain any moving parts.

Tested and approved in accordance with the very latest standards they offer designers, specifiers and mechanical contractors a simple and compliant fire damper solution.

LORIENT LVH INTUMESCENT FIRE DAMPER SYSTEM SELECTOR

	System Number	Building Element	Product	Max Size
MASONRY + CONCRETE	Wall 1	Masonry or Concrete wall	LVH44	Up to 1.2m x 0.6m
	Wall 2	Masonry or Concrete wall	LVH44	Up to 1.2m x 0.6m
	Wall 3	Masonry or Concrete wall	LVH44	Up to 1.2m x 0.6m
	Wall 4	Masonry or Concrete wall	LVH44	Up to 1.2m x 0.6m
	Wall 5	Masonry or Concrete wall	LVH44	Up to 1.2m x 0.6m
	Wall 6	Masonry or Concrete wall	LVH44C Circular	Up to 450mm diameter
	Wall 7	CSR Hebel® wall	LVH44	600mm x 600mm
	Wall 8	CSR Hebel® wall	LVH44	600mm x 600mm
	Wall 9	CSR Hebel® wall	LVH44C Circular	Up to 450mm diameter
	Wall 10	CSR Hebel® wall	LVH44	600mm x 600mm
	Wall 11	CSR Hebel® wall	LVH44C Circular	Up to 450mm diameter
	Wall 12	CSR Hebel® wall	LVH44	600mm x 600mm
FIRE RATED PLASTERBOARD	Stud Wall 1	FR Plasterboard steel stud wall	LVH44C Circular	Up to 450mm diameter
	Stud Wall 2	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 3	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 4	FR Plasterboard steel stud wall	LVH44C Circular	Up to 450mm diameter
	Stud Wall 5	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 6	FR Plasterboard steel stud wall	LVH44C Circular	Up to 450mm diameter
	Stud Wall 7	FR Plasterboard steel stud wall	LVH44C Circular	Up to 450mm diameter
	Stud Wall 8	FR Plasterboard steel stud wall	LVH44	450mm x 450mm
	Stud Wall 9	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 10	FR Plasterboard steel stud wall	LVH44	450mm x 450mm
	Stud Wall 11	FR Plasterboard steel stud wall	LVH44	450mm x 450mm
	Stud Wall 12	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 13	FR Plasterboard steel stud wall	LVH44	450mm x 450mm
	Stud Wall 14	FR Plasterboard timber stud wall	LVH44	600mm x 600mm
	Stud wall 15	FR Plasterboard timber stud wall	LVH44	600mm x 600mm
	Stud wall 16	FR Plasterboard timber stud wall	LVH44	600mm x 600mm
	Stud Wall 17	FR Plasterboard timber stud wall	LVH44	600mm x 600mm
	Stud Wall 18	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 19	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
	Stud Wall 20	FR Plasterboard steel stud wall	LVH44	600mm x 600mm
SHAFT	Shaft Wall 1	FR Plasterboard riser shaft wall	LVH44	450mm x 450mm
	Shaft Wall 2	FR Plasterboard riser shaft wall	LVH44	450mm x 450mm
	Shaft Wall 3	FR Plasterboard riser shaft wall	LVH44	450mm x 450mm
	Shaft Wall 4	FR Plasterboard laminated shaft wall	LVH44	600mm x 600mm
	Shaft Wall 5	FR Plasterboard laminated shaft wall	LVH44C Circular	Up to 450mm diameter

NOTE Mechanical Services Engineers, Specifiers and Certifiers should always request access to manufacturers' primary fire test approvals and satisfy themselves that these relate to the products they are specifying or certifying.

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FRL	System Detail	Approval Reference	Relevant Standard	
Up to -/120/30	In duct angles both sides	EXOVA EWFA 33233400	AS1530.4 2014	MASONRY + CONCRETE
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct terminating with wall grille	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct tight to slab	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct tight to adjacent wall	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angles both sides	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angle to one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/120/30	Duct to duct - tight to slab	EXOVA EWFA 33233400	AS1530.4 2014	
-/60/30	13mm + 13mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	FIRE RATED PLASTERBOARD
-/60/30	13mm + 13mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/90/30	16mm + 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/90/30	16mm + 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 13mm + 2 x 13mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 13mm + 2 x 13mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 16mm + 2 x 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/60/-	13mm + 13mm steel stud wall	CSIRO FCO 3487	AS1530.4 2014	
UP TO -/120/30	2 x 13mm + 2 x 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/-	2 x 13mm + 2 x 13mm steel stud wall	CSIRO FCO 3487	AS1530.4 2014	
-/90/-	16mm + 16mm steel stud wall	CSIRO FCO 3487	AS1530.4 2014	
UP TO -/90/30	2 x 16mm steel stud wall	CSIRO FCO 3487	AS1530.4 2014	
-/120/-	2 x 16mm + 2 x 16mm steel stud wall	CSIRO FCO 3487	AS1530.4 2014	
-/60/30	13mm + 13mm timber stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/90/30	16mm + 16mm timber stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 13mm + 2 x 13mm timber stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 16mm + 2 x 16mm timber stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/60/30	13mm + 13mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/90/30	16mm + 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/30	2 x 13m or 2 x 16mm steel stud wall	EXOVA EWFA 33233400	AS1530.4 2014	
Up to -/60/60	25mm shaft wall liner + 16mm FR plasterboard	CSIRO FCO 3487	AS1530.4 2014	SHAFT
Up to -/120/120	25mm shaft wall liner + 2 x16mm FR plasterboard	CSIRO FCO 3487	AS1530.4 2014	
Up to -/90/90	25mm shaft wall liner + 2 x13mm FR plasterboard	CSIRO FCO 3487	AS1530.4 2014	
-/120/-	3 x 13mm or 3 x 16mm laminated FR plasterboard	EXOVA EWFA 33233400	AS1530.4 2014	
-/120/-	3 x 13mm or 3 x 16mm laminated FR plasterboard	EXOVA EWFA 33233400	AS1530.4 2014	

LORIENT LVH INTUMESCENT FIRE DAMPER SYSTEM SELECTOR

	System Number	Building Element	Product	Max Size
ANGLE FREE SYSTEMS	**Angle Free 1**	Masonry or concrete wall minimum 90mm thick	LVH44 or LVH44C Circular	600mm x 600mm or 450mm diameter
	Angle Free 2	Hebel® wall minimum 75mm thick	LVH44 or LVH44C Circular	600mm x 600mm or 450mm diameter
	Angle Free 3	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 4	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 5	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 6	FR laminated plasterboard wall	LVH44	600mm x 600mm
	Angle Free 7	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 8	Masonry or concrete wall minimum 90mm thick	LVH44	600mm x 600mm
	Angle Free 9	Hebel® wall minimum 75mm thick	LVH44	600mm x 600mm
	Angle Free 10	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 11	FR Plasterboard wall	LVH44	600mm x 600mm
	Angle Free 12	FR Plasterboard shaft wall	LVH44	600mm x 600mm
	Angle Free 13	FR Plasterboard laminated shaft wall	LVH44	600mm x 600mm
	Angle Free 14	25mm shaft wall liner	LVH44	600mm x 600mm
SPEEDPANEL®	**Speedpanel® Wall 1**	51mm, 64mm, 78mm Speedpanel® wall	LVH44	1000mm x 1000mm
	Speedpanel® Wall 2	51mm, 64mm, 78mm Speedpanel® wall	LVH44	600mm x 600mm
	Speedpanel® Wall 3	51mm, 64mm, 78mm Speedpanel® wall	LVH44	600mm x 600mm
	Speedpanel® Wall 4	51mm, 64mm, 78mm Speedpanel® wall	LVH44C Circular	Up to 450mm diameter
PRONTO PANEL™	**Pronto Panel™ 1**	LVH44 penetrating Pronto Panel™ wall system	LVH44	600mm x 600mm
	Pronto Panel™ 2	LVH44C penetrating Pronto Panel™ wall system	LVH44C Circular	Up to 450mm diameter
	Pronto Panel™ 3	LVH44 penetrating Pronto Panel™ wall system	LVH44	600mm x 600mm
	Pronto Panel™ 4	LVH44C penetrating Pronto Panel™ wall system	LVH44C Circular	Up to 450mm diameter
	Pronto Panel™ 5	LVH44 penetrating Pronto Panel™ wall system	LVH44	600mm x 600mm
	Pronto Panel™ 6	LVH44C penetrating Pronto Panel™ wall system	LVH44C	Up to 450mm diameter
	Pronto Panel™ 7	LVH44 angle free system in Pronto Panel™ wall system	LVH44	600mm x 600mm
	Pronto Panel™ 8	LVH44 duct to duct tight to slab in Pronto Panel™ wall system	LVH44	600mm x 600mm
	Pronto Panel™ 9	LVH44C angle free system in Pronto Panel™ wall system 60	LVH44C	Up to 450mm diameter

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FRL	System Detail	Approval Reference	Relevant Standard
Up to -/120/30	FR masonry or concrete shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	FR Hebel® shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/60/30	13mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/90/30	16mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/120/30	13mm or 16mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/120/-	25mm FR plasterboard shaft wall liner	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/90/30 or -/120/30	FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	FR masonry or concrete shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	FR Hebel® shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/60/30	13mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/90/30	16mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/120/30	13mm or 16mm FR plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/120/-	13mm or 16mm FR laminated plasterboard shaft wall	EXOVA EWFA 33233400	AS1530.4 2014
-/120/30	25mm shaft wall liner + 13mm or 16mm FR plasterboard	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/-	General installation detail	EXOVA EWFA RIR 21622-31	AS1530.4 2005
Up to -/120/30	In duct angles both sides	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles both sides	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles both sides	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	Fitted tight to slab duct to duct	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	In duct angles to one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	Attached to riser angles one side	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	Fitted tight to slab - duct to duct	EXOVA EWFA 33233400	AS1530.4 2014
Up to -/120/30	Attached to riser angles one side	EXOVA EWFA 33233400	AS1530.4 2014

LORIENT LVH INTUMESCENT FIRE DAMPER SYSTEM SELECTOR

	System Number	Building Element	Product	Max Size
XLAM	**Xlam CLT Wall 1**	Cross laminated timber wall	LVH44	Not to exceed 0.2m²
	Xlam CLT Wall 2	Cross laminated timber wall	LVH44	Not to exceed 0.2m²
TBA FIREFLY INTUBATT	**TBA Firefly Intubatt 1**	Masonry, Concrete or Hebel® wall	LVH44	450mm x 450mm
	TBA Firefly Intubatt 2	Masonry, Concrete or Hebel® wall	LVH44	450mm x 450mm
	TBA Firefly Intubatt 3	FR Plasterboard stud wall	LVH44	450mm x 450mm
	TBA Firefly Intubatt 4	FR Plasterboard stud wall	LVH44	450mm x 450mm
	TBA Firefly Intubatt 5	FR Plasterboard stud wall	LVH44	450mm x 450mm
	TBA Firefly Intubatt 6	Speedpanel® wall	LVH44	450mm x 450mm
PROMAT	**Promat Wall 1**	PROMASIL® 1100	LVH44	800mm x 800mm
	Promat Wall 2	PROMASIL® 1100	LVH44	800mm x 800mm
CEILING	**Ceiling 1**	60/60/60 RISF Plasterboard ceiling	LVH44	500mm x 500mm
	Ceiling 3	60/60/60 RISF Plasterboard ceiling	LVH44C Circular	150mm diameter
FIRE RATED AIR TRANSFER GRILLES	**FR Air Transfer Grille Wall 1**	Masonry or concrete walls	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 2	CSR Hebel® wall	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 3	Pronto Panel™	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 4	Masonry or concrete walls	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 5	CSR Hebel® wall	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 6	Speedpanel®	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 7	Pronto Panel™	LVH44	1200mm x 2400mm
	FR Air Transfer Grille Wall 8	Masonry or concrete walls	LVH44	Max aperture size: 1000mm x 500mm
	FR Air Transfer Grille Wall 9	CSR Hebel® wall	LVH44	Max aperture size: 1000mm x 500mm
	FR Air Transfer Grille Wall 10	Pronto Panel™	LVH44	Max aperture size: 1000mm x 500mm
	FR Air Transfer Grille Wall 11	Pronto Panel™	LVH44	1000mm x 500mm
VENTILATION GRILLES	**Fire Door 1**	E-core® fire doors	LVH-Door	600mm x 300mm, 450mm x 450mm, 300mm x 300mm
	Fire Door 2	Firecore TVC fire doors	LVH-Door	600mm x 300mm, 450mm x 450mm, 300mm x 300mm
	Fire Door 3	Pyropanel® FR & Pandor fire doors	LVH-Door	600mm x 600mm, 600mm x 300mm, 450mm x 450mm, 300mm x 300mm

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FRL	System Detail	Approval Reference	Relevant Standard
Up to -/120/60	13mm or 16mm FR plasterboard	CSIRO FCO 3300	AS1530.4 2014
Up to -/120/60	13mm or 16mm FR plasterboard	CSIRO FCO 3300	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 fitted in wall aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 overlapping wall aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 fitted in wall aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 overlapping wall aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 fitted in Intubatt lined aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Intubatt & LVH44 overlapping wall aperture	EXOVA EWFA RIR 34088500	AS1530.4 2014
Up to -/120/-	Mounted in PROMASIL® 1100 board	BRANZ FAR 3404, FAR 4810	AS1530.4 2014
Up to -/120/-	Mounted in PROMASIL® 1100 board	BRANZ FAR 3404, FAR 4810	AS1530.4 2014
60/60/60 RISF 60 min	Lightweight clad plenum box	BRANZ 4581	AS1530.4 2014
60/60/60 RISF 60 min	Ceiling installation suitable for in-line fans	BRANZ FP5859	AS1530.4 2014
Up to -/240/120	Insulating LVH44 air transfer grille in masonry or concrete walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/120	Insulating LVH44 air transfer grille CSR Hebel® walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/120	Insulating LVH44 air transfer grille Pronto Panel™ walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/240/-	Fire rated air transfer grille in masonry or concrete walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/-	Fire rated air transfer grille in CSR Hebel® walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/-	Fire rated air transfer grille in Speedpanel® wall	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/-	Fire rated air transfer grille in Pronto Panel™ walls	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/240/120 One direction only	Surface mounted over aperture concrete or masonry wall	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/120 One direction only	Surface mounted over aperture CSR Hebel® wall	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/120 One direction only	Surface mounted over aperture in Pronto Panel™ wall	EXOVA EWFA 55205900	AS1530.4 2014
Up to -/120/120 One direction only	Surface mounted over aperture in Pronto Panel™ wall	EXOVA EWFA 55205900	AS1530.4 2014
Up to -120/30	Mini & Maxi doors up to 2 grilles per leaf	CSIRO FCO 3462	AS1530.4 2014
Up to -/120/30	Mini & Maxi doors up to 1 grille per leaf	CSIRO FCO 3457	AS1530.4 2014
Up to -/120/30	Mini & Maxi doors up to 2 grilles per leaf	EXOVA EWFA 27704400	AS1530.4 2014

STANDARDS + REGULATORY REQUIREMENTS

In Australia, building construction is regulated under a framework of provisions detailed within the National Construction Code and associated Building Code of Australia. These codes set out a uniform set of technical provisions that allow for the design and construction of buildings; they also make reference to a number of Australian and International standards to ensure that materials, systems, products and services provide a consistent and quantifiable performance level to ensure the safety of occupants in the event of a fire.

NCC BCA 2022 Section C3.15 (b)

This section requires that ventilation and air-conditioning ducts or associated equipment are installed in accordance with AS1668.1 2015.

AS1668.1 2015: The Use of Ventilation & Air Conditioning in Buildings - Part 1: Fire & Smoke Control in Buildings

This recently revised standard sets out the minimum requirements for the design, construction, installation and commissioning of mechanical smoke control systems in buildings and requires that fire dampers – both mechanical and intumescent types are manufactured and installed in accordance with AS1682.1 2015 and AS1682.2 2015. This 2015 version standard now mandates new insulation performance criteria for fire dampers that are not installed in shaft walls or connected to 2m of ductwork. It requires such fire dampers to match the FRL (including insulation) of the walls that they penetrate.

AS1682.1 2015: Fire Dampers: Specification

This standard specifies requirements for the materials, design, manufacture, performance, and labelling of fire dampers. In all cases it requires that fire dampers are tested and approved in accordance with the fire test method detailed in AS1530.4 2014.

AS1682.2 2015: Fire Dampers: Installation

This standard specifies the requirements for the selection, installation and commissioning of fire dampers complying with AS1682.1.

AS1530.4 2014: Fire Resistance Tests on Elements of Construction

This standard provides methods for determining the fire resistance of various elements of construction when subjected to standardised range of fire exposure conditions. Depending upon the fire damper location and installation method the following sections apply.

Section 4: Floors, Roofs, Ceilings & Horizontal Separating Elements

This section sets out the procedures for determining the fire resistance of loadbearing and non-loadbearing incipient rated ceilings and elements penetrating them and is typically used to determine the fire resistance of ceiling mounted fire dampers.

Section 10: Service Penetrations & Control Joints

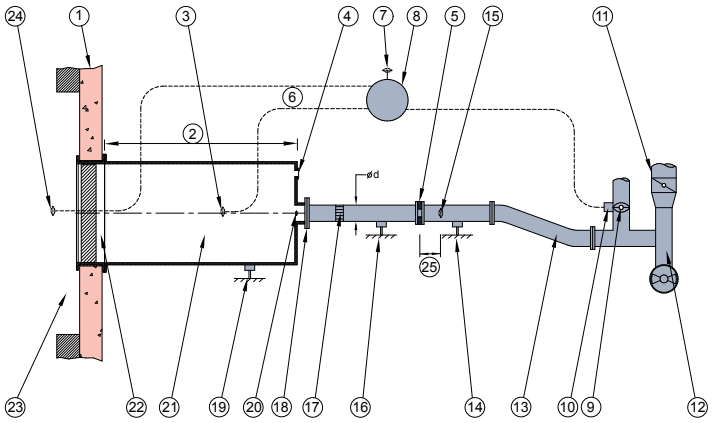
This section sets out the procedure for determining the fire resistance of elements of construction fitted with Fire Rated Air Transfer Grilles - Not connected to ductwork.

Section 11: Fire Damper & Air Transfer Grille Assemblies in Ducts

This section specifies the procedure for determining the fire resistance of fire dampers and air transfer grilles in ducts that are used to prevent the passage of fire from one fire compartment to another.

Current AS1530.4 Fire Test Methods for dampers and air transfer grilles installed in ducts

Figure 1: Example of a general test arrangement - dampers



Legend

1. Supporting construction (wall)
2. 2 x diagonal (to a maximum of 2m)
3. Pressure sensor (on centreline)
4. Observation port
5. Orifice plate or venturi
6. Pressure differential (300 Pa)
7. Pressure sensor in laboratory
8. Pressure differential control box
9. Pressure control dilution damper
10. Pneumatic actuator or manual control
11. Balancing damper
12. Fan
13. Flexible connecting duct
14. Support
15. Thermocouple
16. Support
17. Flow straightener
18. Flange
19. Support
20. Thermocouple at exit from connecting duct
21. Connecting duct
22. Test damper
23. Furnace chamber
24. Pressure sensor (on centreline of damper)
25. Distance: thermocouple to orifice = 2d

Maintenance Requirements AS1851 : 2012 Routine Service of Fire Protection Systems & Equipment

This standard sets out requirements for the routine servicing (inspection, testing, preventive maintenance and survey) of fire protection systems and equipment.

Section 13: Fire & Smoke Control Features of Mechanical Services

This section sets out the requirements for routine service of fire and smoke control features of mechanical services in buildings covered by AS/NZS1668.1, AS1682.1, AS1682.2 and for fire dampers it requires that 20% of the fire dampers within a building are inspected annually so that all dampers have been inspected by the end of the fifth year. (Table 13.4.1.4 contained within the standard provides detailed guidance on maintenance and inspection requirements for intumescent fire dampers).

Lorient LVH44 intumescent fire dampers are approved in accordance with the latest fire damper test method detailed in AS1530.4 2014

This stringent new test method is based on a fire test with the additional burden of a negative 300Pa pressure differential applied to the unexposed face of the fire damper during the test period (essentially drawing hot furnace gasses through the fire damper). Failure is now determined when the leakage rate exceeds 360m^3/hr/m^2 (corrected to STP).

Specifiers should ensure that fire dampers are approved in accordance with the latest test requirements rather than relying on data that relates to old superseded test methods.

Image: Lorient LVH intumescent fire damper

Image: AS1530.4 2014 fire damper testing

LVH44+LVH44C INTUMESCENT FIRE DAMPER AIR FLOW & ACOUSTIC PERFORMANCE DATA

LVH44, LVH44C + LVH-D ACOUSTIC, AIRFLOW AND PRESSURE LOSS CHARACTERISTICS

Knowing the pressure drop through a fire damper is a critical consideration when designing a new system or upgrading an existing layout. It is therefore critical that accurate information is available to the designer.

Lorient sponsored and undertook extensive independent testing at the Noise Control Research Laboratories (NCRL) in accordance with the following standards:

ISO 5221: 1984

Air distribution and air diffusion – Rules to methods of measuring air flow rate in an air handling duct.

IS EN 1751: 2014

Ventilation for buildings. Air terminal devices. Aerodynamic testing of dampers and valves.

ISO 5135: 2020

Acoustics. Determination of sound power levels of noise from air-terminal units, dampers and valves.

ISO3741 :2010

Acoustics – Determination of sound power levels of noise sources using sound pressure.

NCRL test report BF2001-SP 22/06/00 outlines the pressure loss and acoustic characteristics of Lorient LVH44 intumescent fire dampers. Test data has been summarised and presented in various nomograms to allow engineers to make accurate informed decisions that allow specification of the correct product at the optimum size.

Images: NCRL Acoustic and pressure loss test

LORIENT INTUMESCENT FIRE DAMPER SELECTION NOMOGRAM FOR DETERMINING PRESSURE, FLOW AND ACOUSTIC CHARACTERISTICS

Guide on how to use the Lorient Nomogram Tool

LVH44 INTUMESCENT FIRE DAMPER SELECTION NOMOGRAM PRESSURE, FLOW & ACOUSTIC DATA

TABLE 1

Obtaining pressure loss and acoustic information for a Lorient LVH44 of a known size

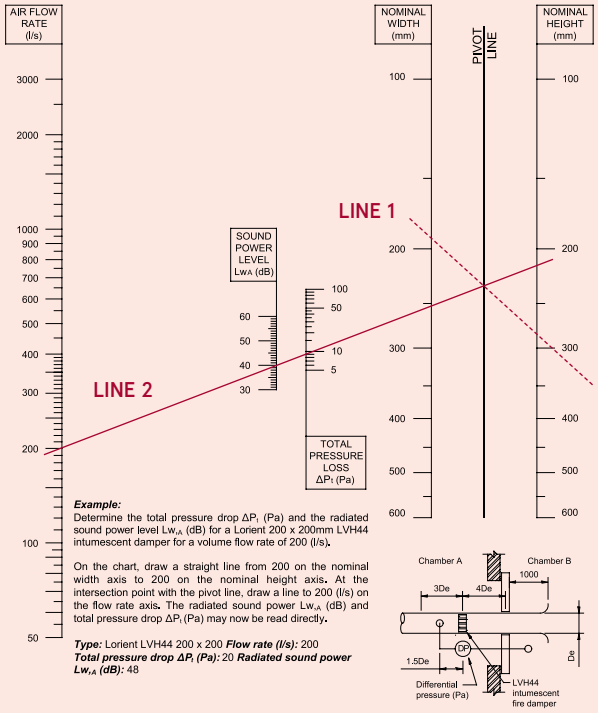
Draw a line to connect the width and height dimensions of the damper (Line 1).

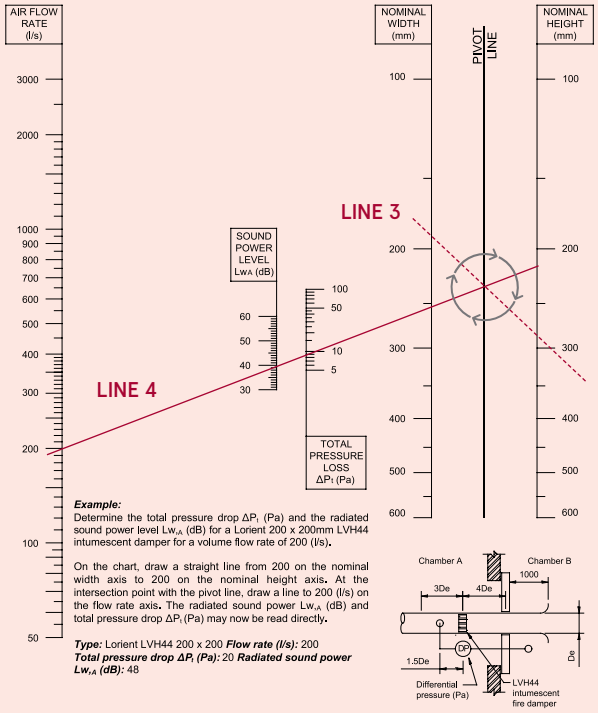
Select the desired system airflow rate value and connect this to the point where Line 1 intersects the Pivot Line (Line 2). Pressure loss and acoustic sound power levels can now be read off the two scales.

TABLE 2

Selecting an appropriate size Lorient LVH44 when system pressure drops and airflow rates are known

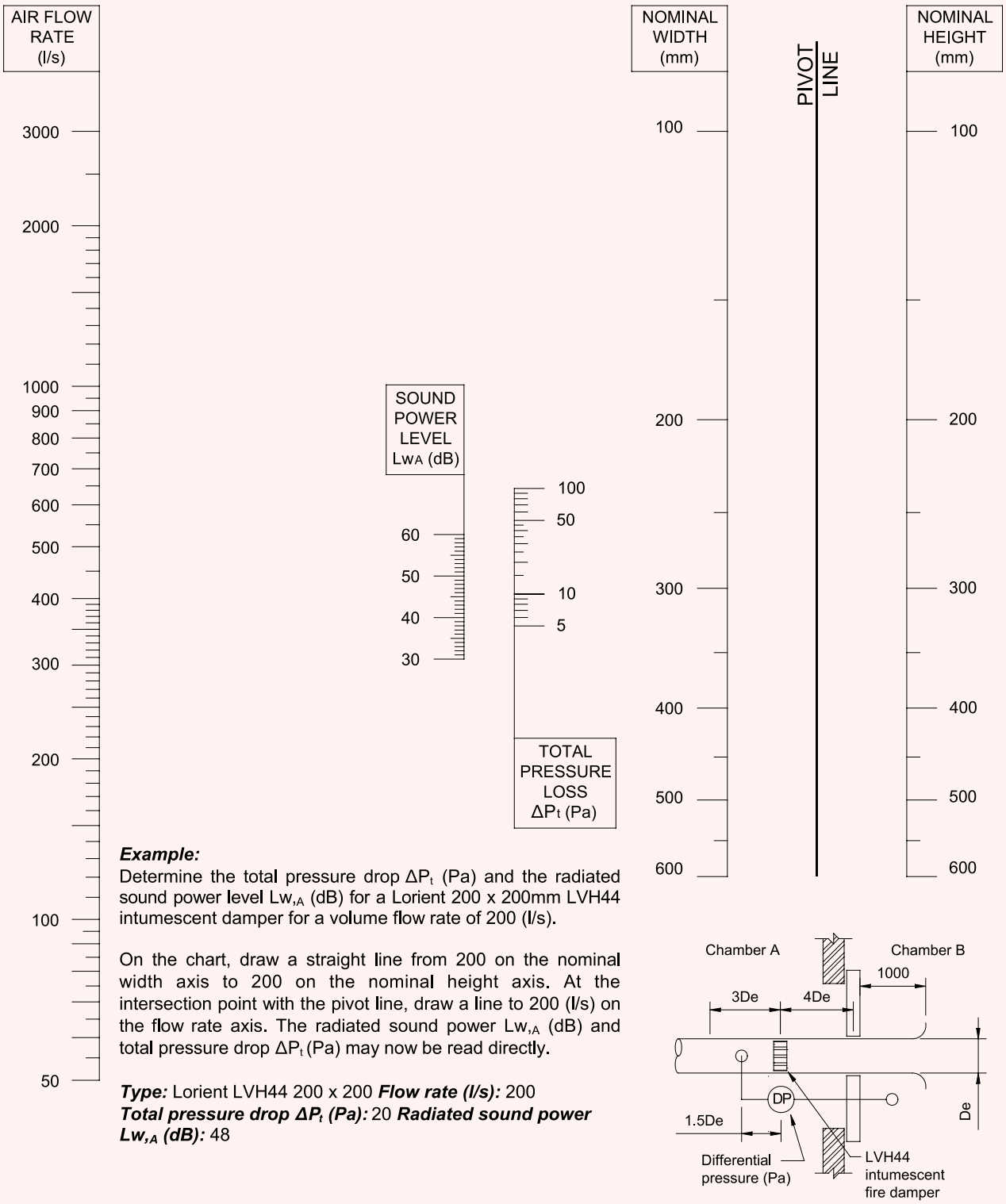
Draw a line between the known flow rate and pressure loss values and extend this to the pivot line (Line 3). A line can now be drawn through this pivot line intersection (Line 4) and rotated to choose an appropriate damper height and width.





▸ Note: Nomogram information based on Lorient sponsored test: NCRL report BF2001-SP 22/06/00

LORIENT LVH44 INTUMESCENT FIRE DAMPERS SELECTION NOMOGRAM FOR DETERMINING PRESSURE, FLOW AND ACOUSTIC CHARACTERISTICS



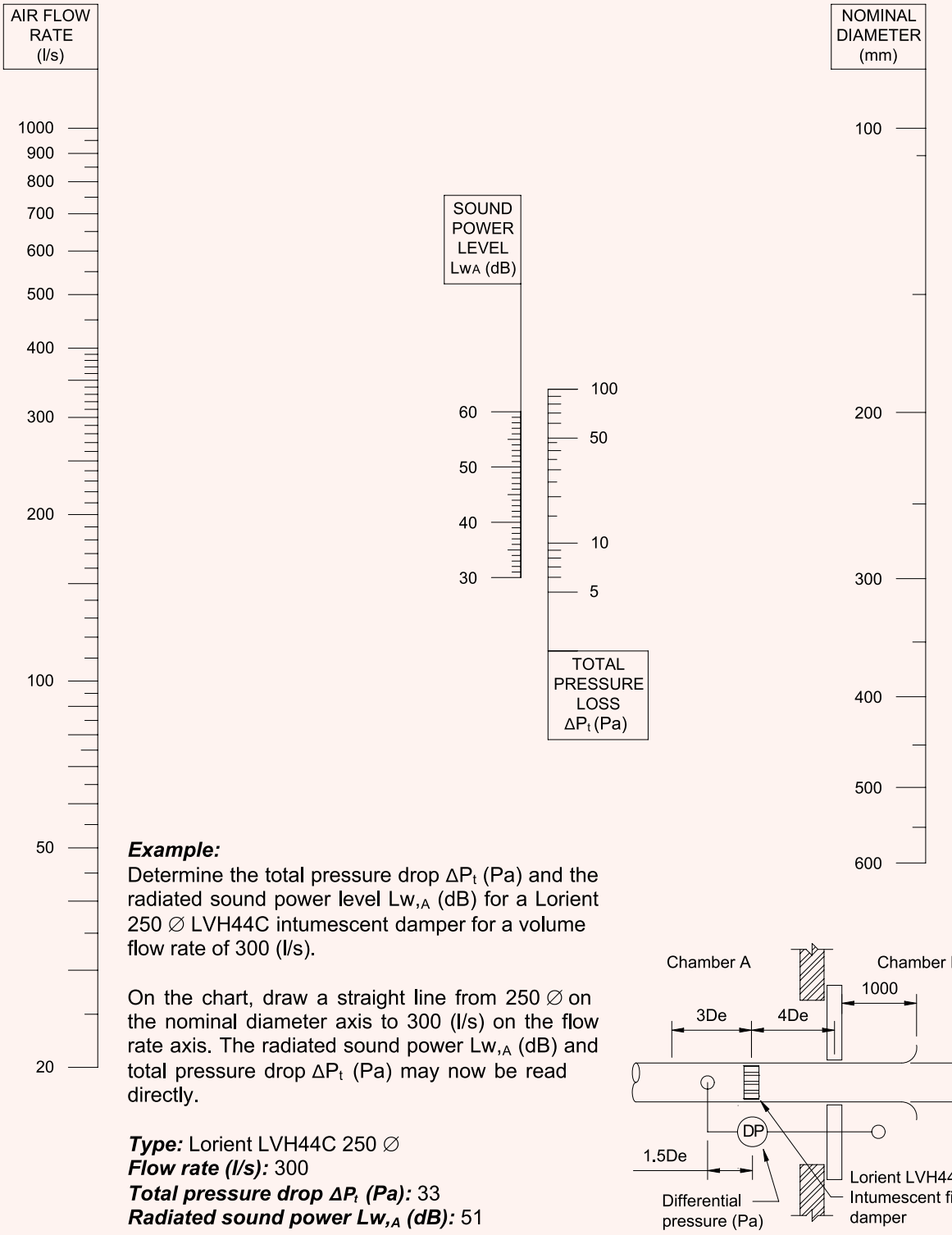
Example:
Determine the total pressure drop ΔP_t (Pa) and the radiated sound power level $Lw_{,A}$ (dB) for a Lorient 200 x 200mm LVH44 intumescent damper for a volume flow rate of 200 (l/s).

On the chart, draw a straight line from 200 on the nominal width axis to 200 on the nominal height axis. At the intersection point with the pivot line, draw a line to 200 (l/s) on the flow rate axis. The radiated sound power $Lw_{,A}$ (dB) and total pressure drop ΔP_t (Pa) may now be read directly.

Type: Lorient LVH44 200 x 200 ***Flow rate (l/s):*** 200
Total pressure drop ΔP_t (Pa): 20 ***Radiated sound power $Lw_{,A}$ (dB):*** 48

Note: Nomogram information based on Lorient sponsored test: NCRL report BF2001-SP 22/06/00

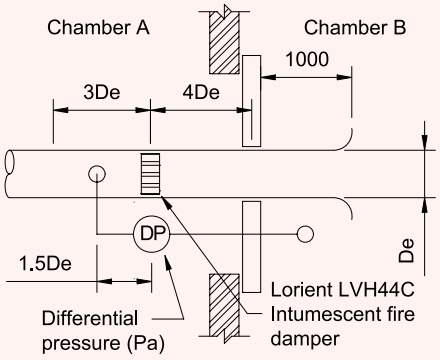
LORIENT LVH44C INTUMESCENT FIRE DAMPERS SELECTION NOMOGRAM FOR DETERMINING PRESSURE, FLOW AND ACOUSTIC CHARACTERISTICS



Example:
Determine the total pressure drop ΔP_t (Pa) and the radiated sound power level $Lw_{,A}$ (dB) for a Lorient 250 ∅ LVH44C intumescent damper for a volume flow rate of 300 (l/s).

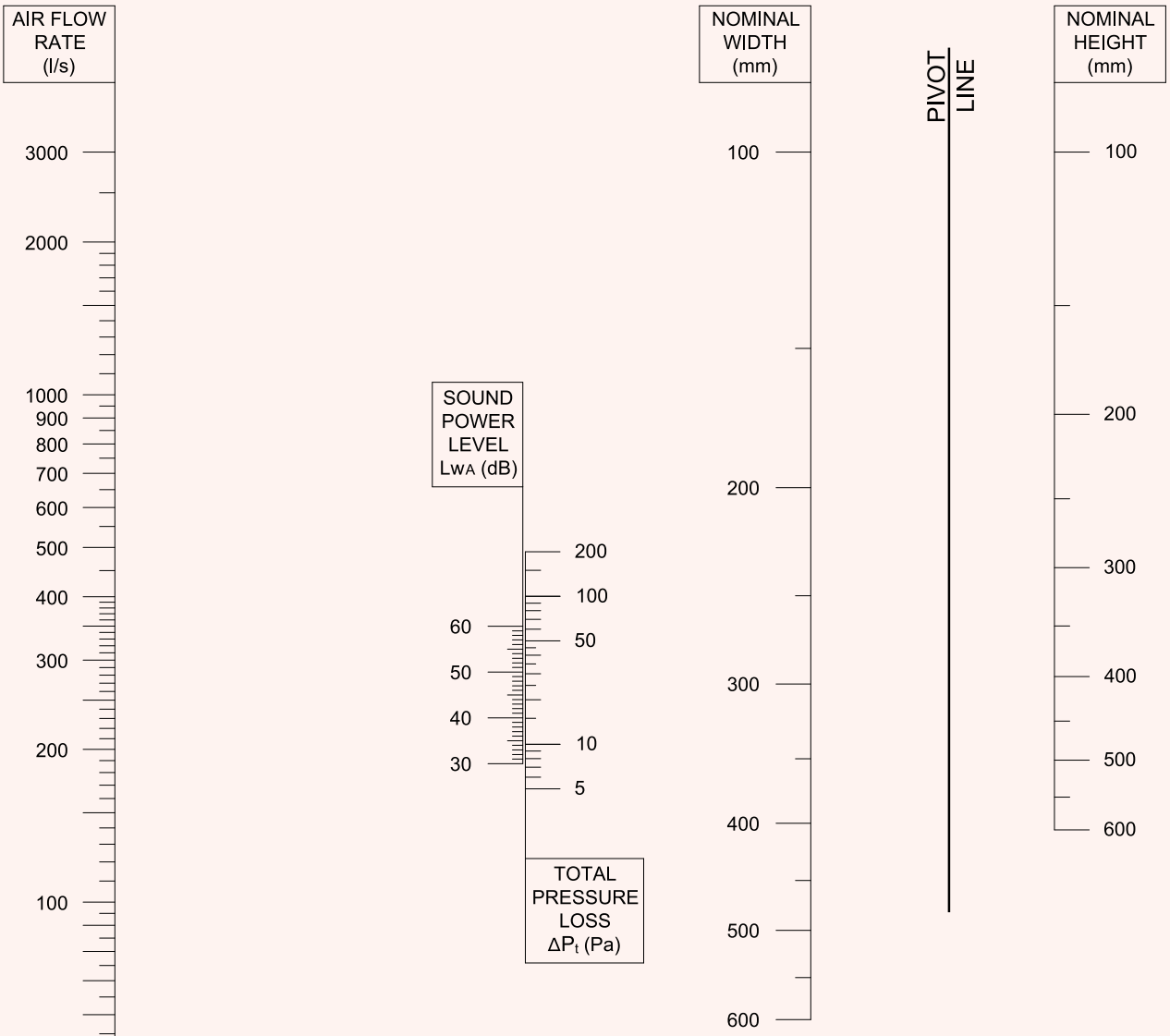
On the chart, draw a straight line from 250 ∅ on the nominal diameter axis to 300 (l/s) on the flow rate axis. The radiated sound power $Lw_{,A}$ (dB) and total pressure drop ΔP_t (Pa) may now be read directly.

Type: Lorient LVH44C 250 ∅
Flow rate (l/s): 300
Total pressure drop ΔP_t (Pa): 33
Radiated sound power $Lw_{,A}$ (dB): 51



Note: Nomogram information based on Lorient sponsored test: NCRL report BF2001-SP 22/06/00

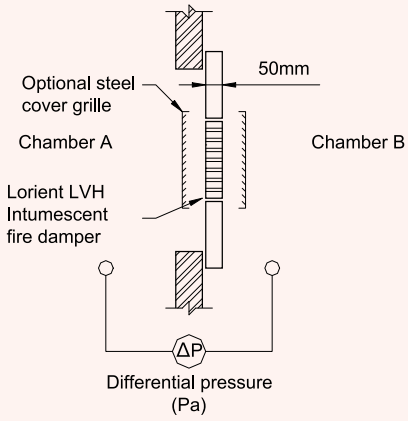
LORIENT LVH INTUMESCENT DOOR GRILLE NOMOGRAM FOR DETERMINING PRESSURE LOSS AND ACOUSTIC CHARACTERISTICS



Example:
Determine the total pressure drop ΔP_t (Pa) and the radiated sound power level $Lw_{,A}$ (dB) for a 450 x 450mm Lorient LVH Door grille for a volume flow rate of 500 (l/s).

On the chart, draw a straight line from 450 on the nominal width axis to 450 on the nominal height axis. At the intersection point with the pivot line, draw a line to 500 (l/s) on the flow rate axis. The radiated sound power $Lw_{,A}$ (dB) and total pressure drop ΔP_t (Pa) may now be read directly.

Type: Lorient LVH Door grille 450 x 450 ***Flow rate (l/s): 500 Total pressure drop ΔP_t (Pa): 35 Radiated sound power $Lw_{,A}$ (dB): 52***



Note: Nomogram information based on Lorient sponsored test: NCRL report BF2001-SP 22/06/00

LORIENT INTUMESCENT SEALANT

Lorient intumescent sealant is an integral part of Lorient's approved intumescent fire damper systems.

It is used to seal the fire damper perimeter and also provide fire stopping between the damper casing and the penetrated element (as shown in our system installation details).

When exposed to fire, Lorient intumescent sealant expands in volume to fill cavities and provides a stable barrier to restrict the spread of fire and hot gases.

KEY BENEFITS

- Use to ensure compliance with Lorient's approved installation methods.
- Approved for use and tested to AS1530.4 2014.
- Provides effective acoustic containment.
- Specially formulated for adhesion to a wide range of materials including wood, metal, concrete, masonry and plasterboard materials.
- Flexible – it tolerates differential movement in everyday service.
- Water based for easy clean up.
- Easily applied with conventional sealant applicators.
- It can be neatly injected into otherwise inaccessible areas.
- Smooth gunnability and tool off finish.

AVAILABILITY

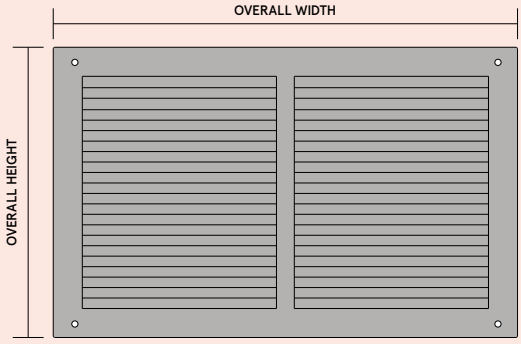
- Supplied as 310cc cartridges in box quantities of 25 units in white or grey.

FIRE DAMPER COVER GRILLES

These cover grilles come with a decorative and protective silver powdercoat finish – they are face fixed to walls or doors to provide an aesthetic appearance to rectangular and circular intumescent fire dampers.

Lorient LVH cover grilles are available in the following nominal sizes (AxB):

Product code	Cover grille (overall) outside dimensions	To suit Lorient LVH damper size	Free area
SPFDK/350X350COV/SIL	350 x 350mm	300 x 300mm	67%
SPFDK/500X500COV/SIL	500 x 500mm	450 x 450mm	67%
SPFDK/650X350COV/SIL	650 x 350mm	600 x 300mm	67%
SPFDK/650X650COV/SIL	650 x 650mm	600 x 600mm	67%



Other sizes of cover grilles are available.
Minimum quantities apply.

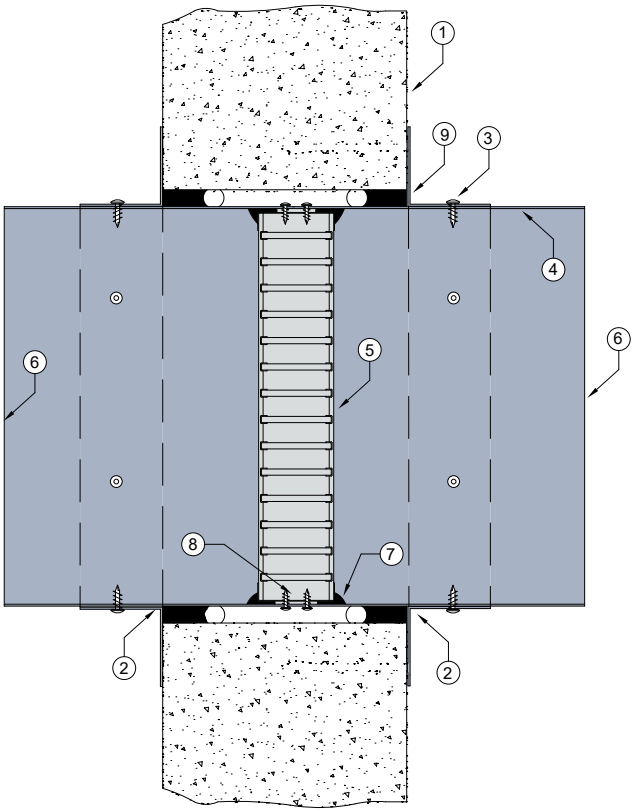
Lorient cover grilles are designed for internal use only and supplied with a powdercoat finish.

If intended for exterior use they must be treated with an appropriate weather proof finish (supplied by others).

WALL 1

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall (minimum 90mm or thicker)
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 Masonry / Concrete wall

FRL -/120/30 (up to 1200mm x 600mm)

Fire Resistance in accordance with
AS1530.4 2014

Approval Ref
EXOVA EWFA 33233400

Max single cell size
600mm x 600mm

Fire Resistance in accordance with
AS1530.4 2014

Approval Ref
EXOVA EWFA 33233400

Max modular size
600mm x 1200mm / 1200mm x 600mm

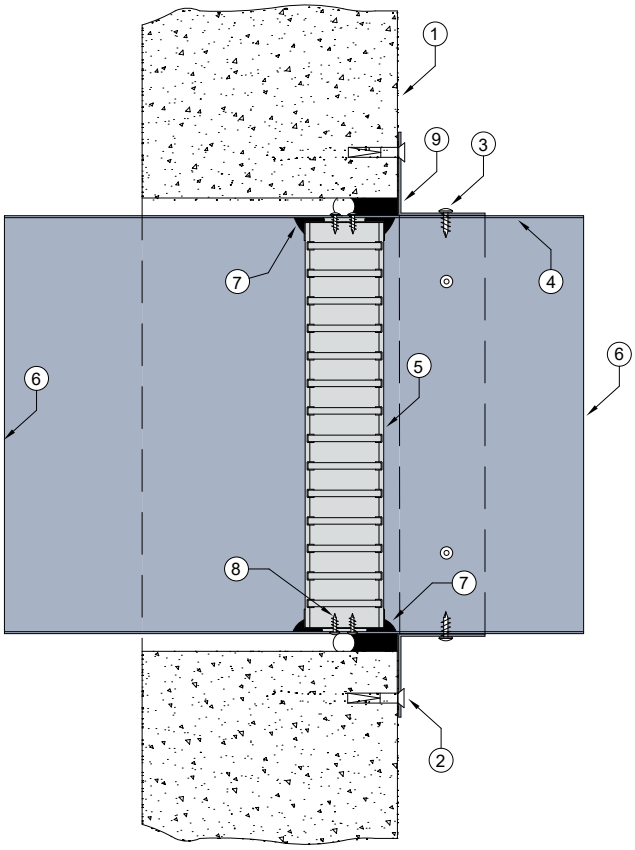
INSTALLATION INSTRUCTIONS

- 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, angles and fixings supplied by others.**

WALL 2

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall (minimum 90mm or thicker)
2	Angles fixed to wall with steel masonry anchors at 150mm centres or at least 2 per side.
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 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 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 Masonry / Concrete wall

FRL -/120/30 (up to 1200mm x 600mm)

Fire Resistance in accordance with	**Fire Resistance in accordance with**
AS1530.4 2014	AS1530.4 2014
Approval Ref	**Approval Ref**
EXOVA EWFA 33233400	EXOVA EWFA 33233400
Max single cell size	**Max modular size**
600mm x 600mm	600mm x 1200mm / 1200mm x 600mm

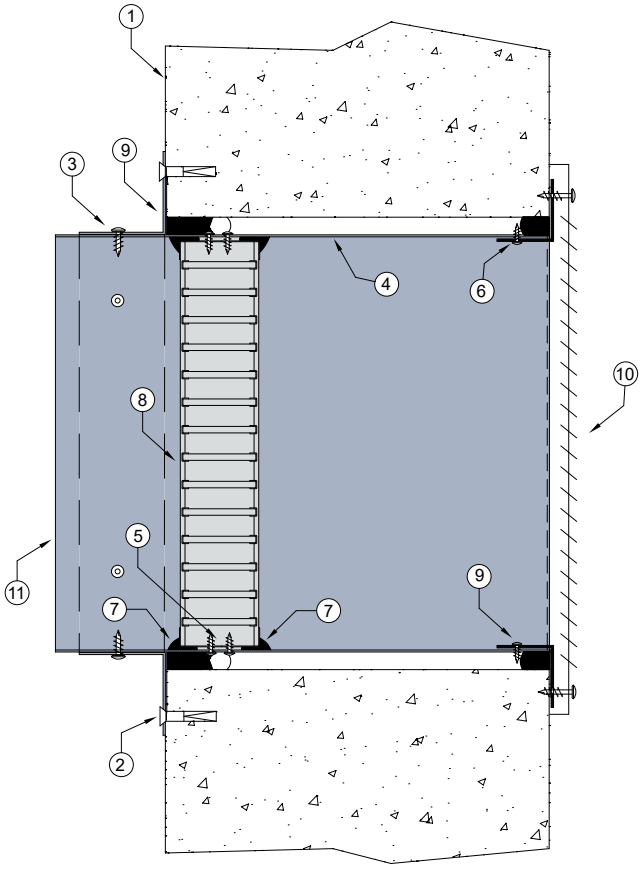
INSTALLATION INSTRUCTIONS

- 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 and to wall with steel masonry anchors, 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, angles and fixings supplied by others.**

WALL 3 DUCT WITH GRILLE

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall: Minimum 90mm or thicker.
2	Angles fixed to wall with steel masonry anchors at 150mm centres or at least 2 per side.
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 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 either turned out or fitted with angles to all four sides fixed in place with steel self drilling screws.
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.
10	Cover grille (by others) screw fixed in place to cover aperture.
11	Breakaway joint as per AS1682.2 as required.



LVH44 in steel casing penetrating fire rated Masonry / Concrete wall

FRL -/120/30 (up to 1200mm x 600mm)

Fire Resistance in accordance with
AS1530.4 2014

Approval Ref
EXOVA EWFA 33233400

Max single cell size
600mm x 600mm

Max modular size
600mm x 1200mm / 1200mm x 600mm

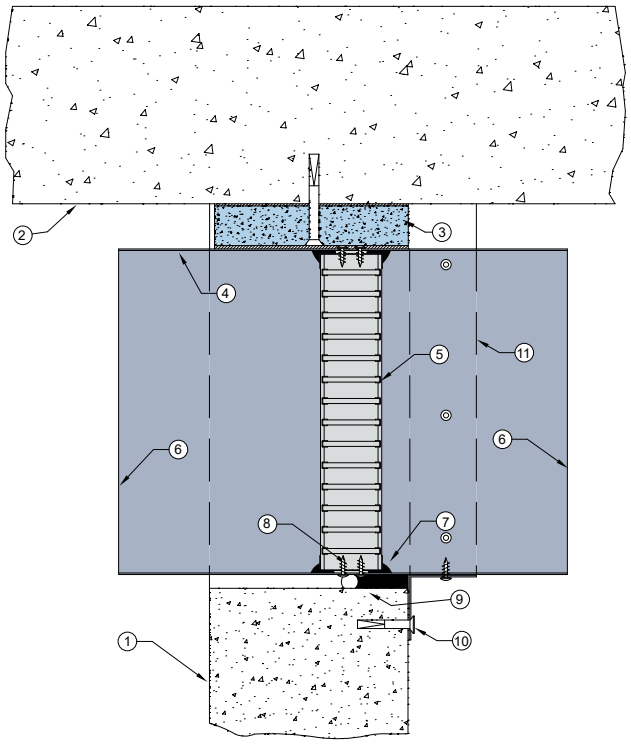
INSTALLATION INSTRUCTIONS

- 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 and to wall with steel masonry anchors, 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, angles and fixings supplied by others.**

WALL 4 DUCT TIGHT TO SLAB

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall (minimum 90mm or thicker).
2	Concrete floor slab.
3	100mm wide x min 25mm thick non-combustible block bedded in intumescent sealant and running across width of aperture. Block mechanically fixed to slab with expanding steel anchors.
4	Z275 galvanised steel damper casing 0.6mm minimum thickness.
5	Lorient LVH44 intumescent fire damper.
6	Casing terminates with breakaway joints, as per AS1682.2.
7	Fire damper perimeter sealed with Lorient intumescent sealant.
8	Fire damper 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.
10	Angles fixed to wall with steel masonry anchors at 150mm centres or at least 2 per side.
11	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.



LVH44 in steel casing penetrating fire rated Masonry / Concrete wall

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

Max modular size

600mm x 1200mm / 1200mm x 600mm

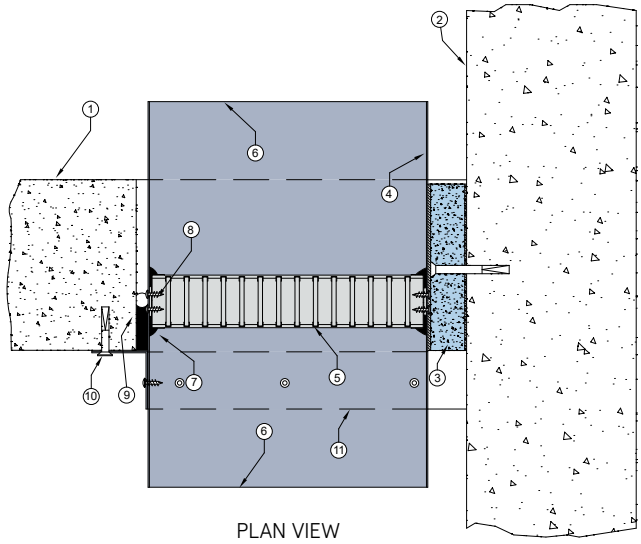
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Non-combustible block is fixed to slab, as per point 3.
- Lorient intumescent sealant liberally applied to block and duct containing damper is positioned and pushed up tight to packing block.
- Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- 3 off perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets and fixed to wall with masonry anchors, as detailed in point 10.
- 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, angles and fixings supplied by others.**

WALL 5 DUCT TIGHT TO WALL

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall (minimum 90mm or thicker).
2	Adjacent masonry or concrete wall.
3	100mm wide x min 25mm thick non-combustible block bedded in intumescent sealant and running across width of aperture. Block mechanically fixed to wall with expanding steel anchors.
4	Z275 galvanised steel damper casing 0.6mm minimum thickness.
5	Lorient LVH44 intumescent fire damper.
6	Casing terminates with breakaway joints, as per AS1682.2.
7	Fire damper perimeter sealed with Lorient intumescent sealant.
8	Fire damper 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.
10	Angles fixed to wall with steel masonry anchors at 150mm centres or at least 2 per side.
11	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.



PLAN VIEW

LVH44 in steel casing penetrating fire rated Masonry / Concrete wall

FRL -/120/30 (up to 1200mm x 600mm)

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

Max modular size

600mm x 1200mm / 1200mm x 600mm

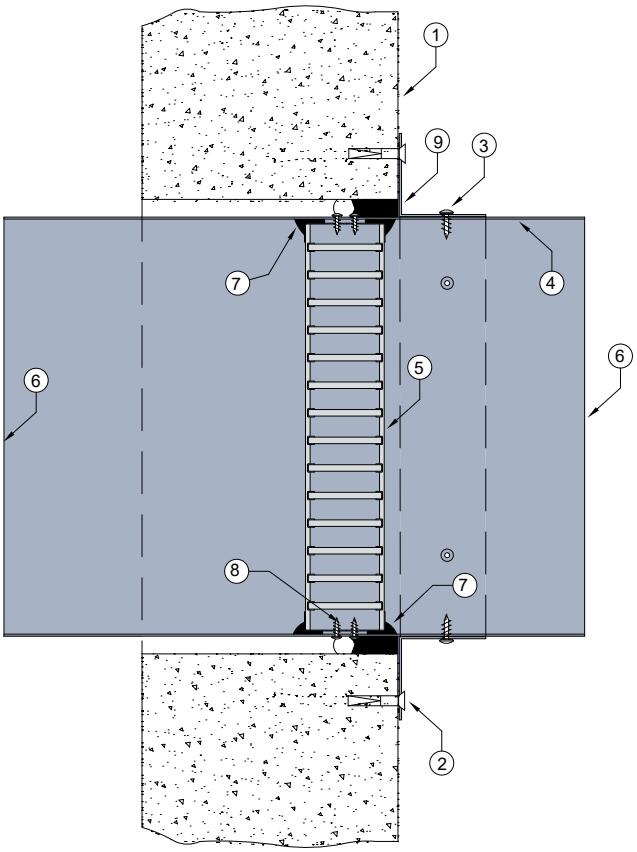
INSTALLATION INSTRUCTIONS

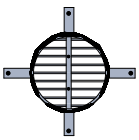
- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Non-combustible block is fixed to wall, as per point 3.
- Lorient intumescent sealant liberally applied to block and duct containing damper is positioned and pushed up tight to packing block.
- Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- 3 off perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets and fixed to wall with masonry anchors, as detailed in point 10.
- 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, angles and fixings supplied by others.**

WALL 6

FIRE RATED MASONRY / CONCRETE WALL SYSTEM

	DESCRIPTION
1	Masonry or concrete wall (minimum 90mm or thicker).
2	Angles brackets fixed to wall with steel masonry anchors.
3	25mm x 40mm x 40mm x 0.6mm (min) Z275 galvanised steel angle brackets fitted to damper casing with steel screws and the gap between the damper casing and wall filled with Lorient intumescent sealant.
4	Z275 galvanised steel casing minimum thickness 0.6mm.
5	Lorient LVH44C intumescent fire damper.
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 50mm.. Maximum annular gap between casing and wall 25mm.





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

LVH44C in steel casing penetrating fire rated Masonry / Concrete wall

FRL -/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.

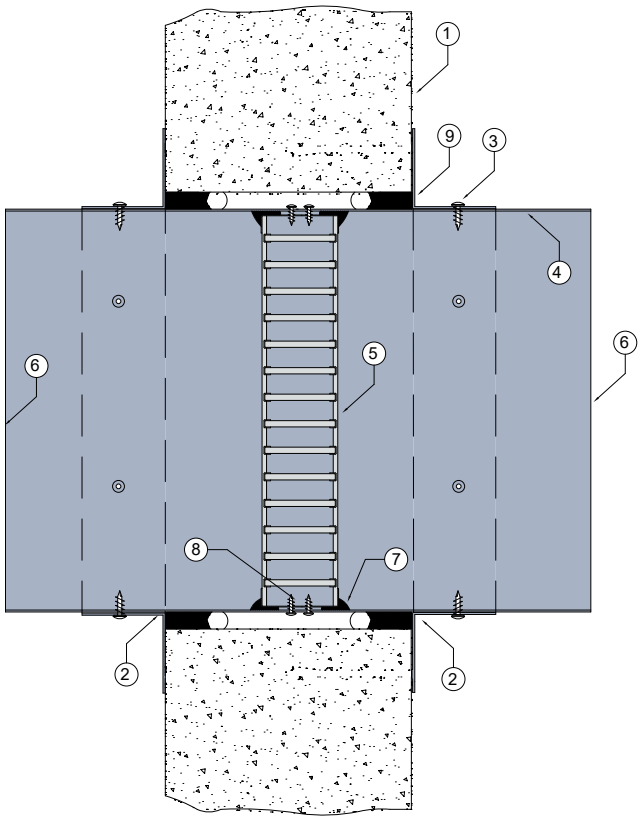
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 2 & 3.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- 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: Fixings supplied by others.**

WALL 7

FIRE RATED CSR HEBEL® WALL SYSTEM

	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

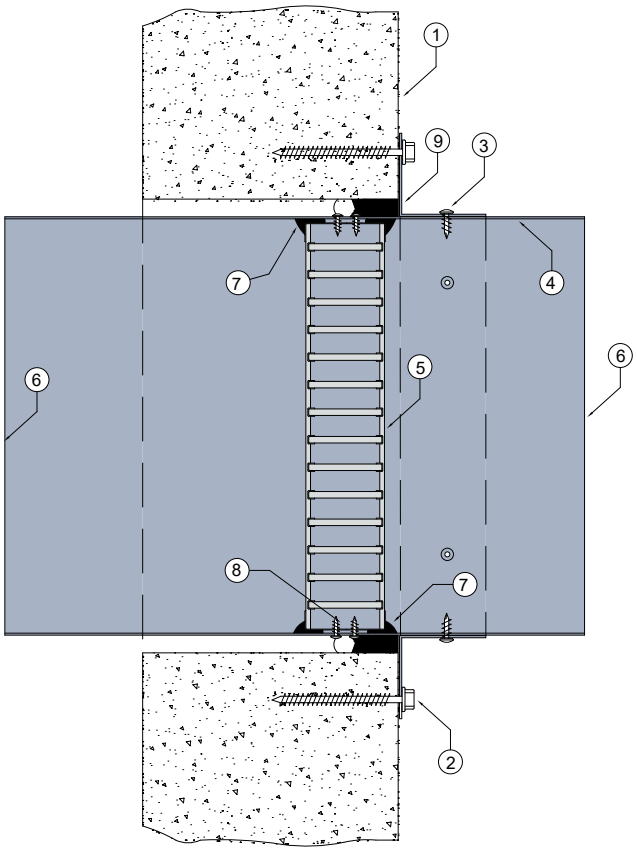
INSTALLATION INSTRUCTIONS

- 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, angles and fixings supplied by others.**

WALL 8

FIRE RATED CSR HEBEL® WALL SYSTEM

	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 bewteen 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

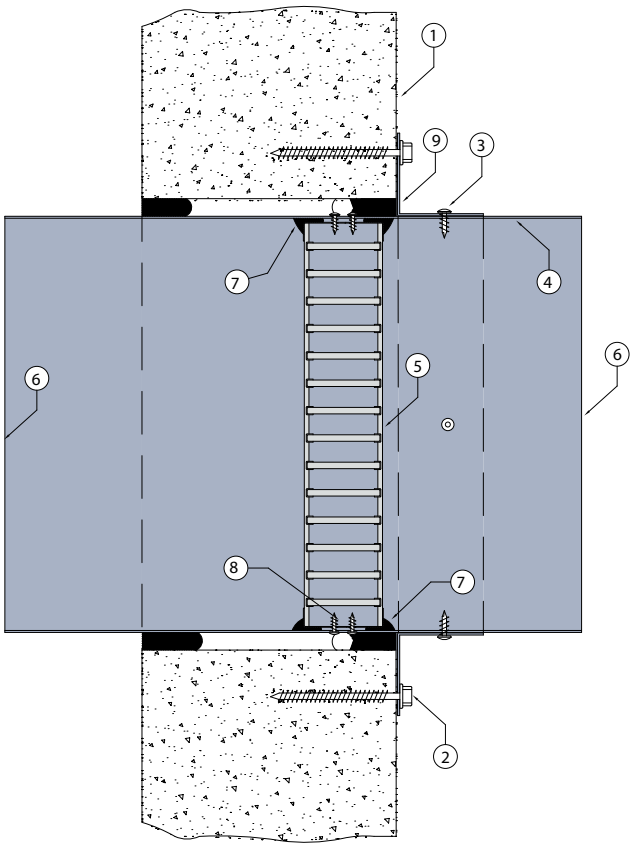
INSTALLATION INSTRUCTIONS

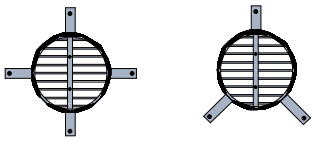
- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- Perimeter angles are mechanically fixed to casing with steel 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, angles and fixings supplied by others.**

WALL 9

FIRE RATED CSR HEBEL® WALL SYSTEM

	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 3 off brackets for up to 300mm diameter and 4 brackets for larger sized up to 450mm diameter. 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.





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.

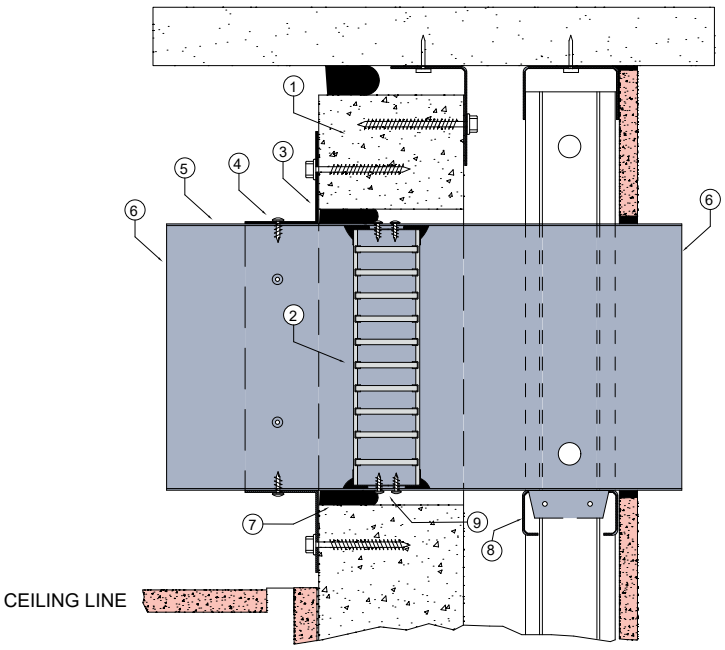
INSTALLATION INSTRUCTIONS

- 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: Fixings supplied by others.**

WALL 10

FIRE RATED CSR HEBEL® WALL SYSTEM

	DESCRIPTION
1	CSR Hebel® wall installed as per manufacturers guidelines (minimum 75mm thick).
2	Lorient LVH44 intumescent fire damper.
3	40mm x 40mm x 0.6mm (min) Z275 galvanised steel angles to all four sides fixed to wall with No.10-14 x 65mm Hex head Type 17 screw.
4	Angles fixed to damper casing with steel fixings.
5	Z275 galvanised steel casing minimum thickness 0.6mm.
6	Casing terminates with breakaway joints, as per 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	LVH44 fixed to casing with 2 x steel screws (100mm centres).



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

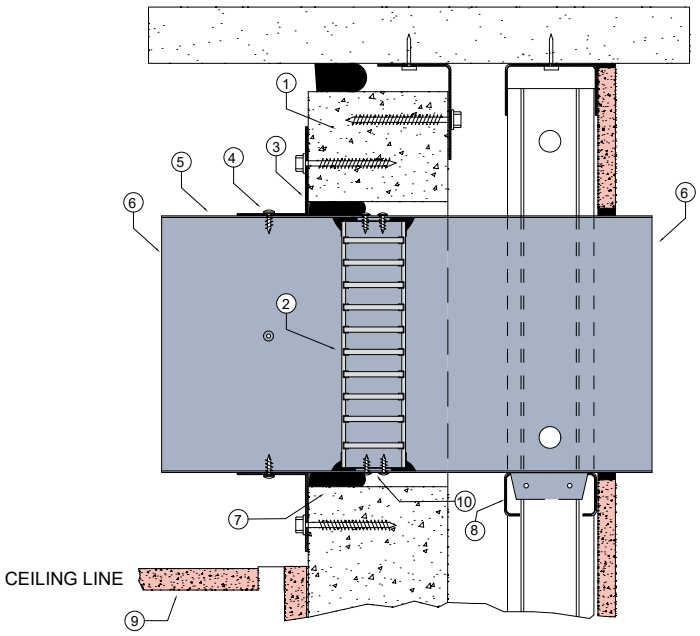
INSTALLATION INSTRUCTIONS

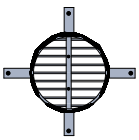
- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 7 for fill details.
- Perimeter angles are mechanically fixed to casing with 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, angles and fixings supplied by others.**

WALL 11

FIRE RATED CSR HEBEL® WALL SYSTEM

	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 across 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

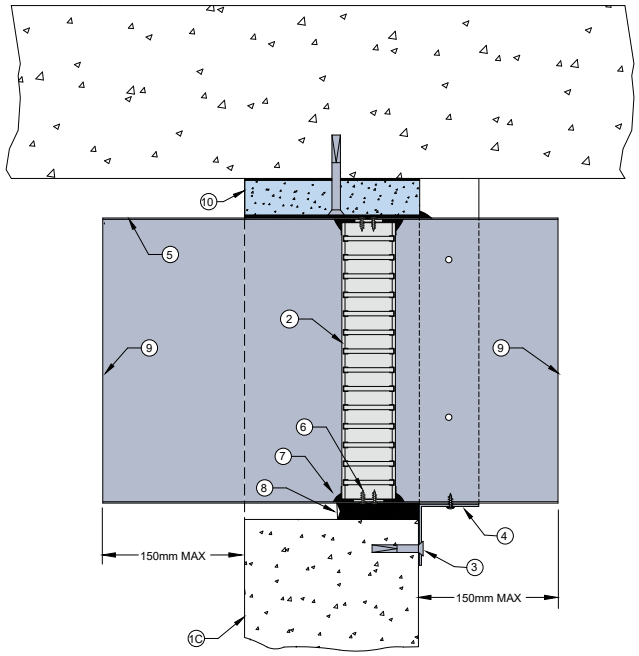
INSTALLATION INSTRUCTIONS

- 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: Fixings supplied by others.**

WALL 12 TIGHT TO SLAB

FIRE RATED CSR HEBEL® WALL SYSTEM

	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 50mm thick TBA Firefly Intubatt or 100mm wide x 25mm thick non-combustible block 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

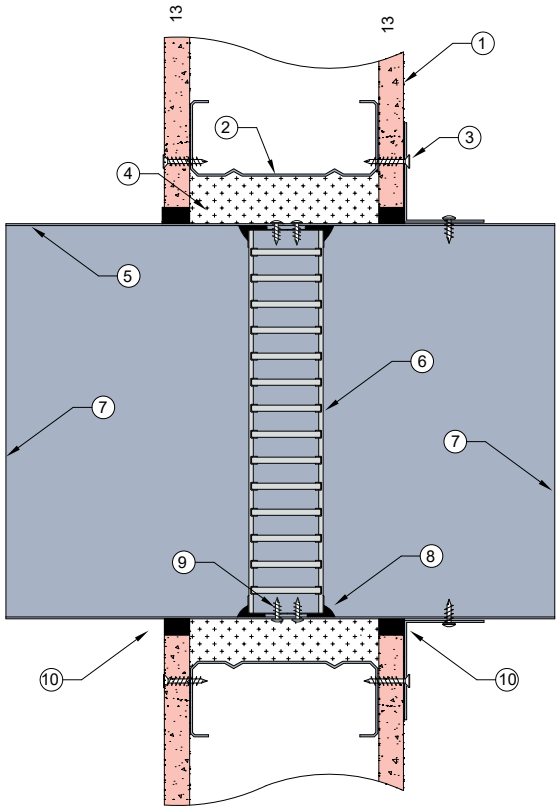
INSTALLATION INSTRUCTIONS

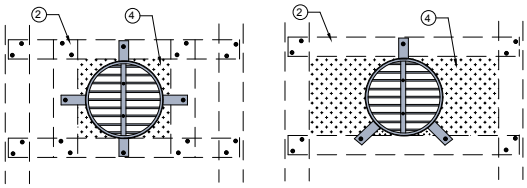
- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Non-combustible TBA Intubatt block is fixed to slab, as per point 10.
- Lorient intumescent sealant liberally applied to block and duct containing damper is positioned and pushed up tight to block.
- 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: Fixings supplied by others.**

STUD WALL 1

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	13mm fire rated plasterboard.
2	Steel channel lining out aperture to all four sides.
3	25mm x 40mm x 40mm x 1mm steel angle brackets fixed to steel framing and damper casing with steel fixings.
4	Cavity around penetration filled with rockwool.
5	Z275 galvanised steel casing minimum thickness 0.6mm.
6	Lorient LVH44C circular intumescent fire damper screw fixed into casing.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	Fire damper fixed to casing with 2 x steel screws.
10	Gap between casing and aperture filled full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.





Circular LVH44 tied back to studs with steel track to ensure damper is fully supported within the framing structure of the wall.

Internal cavity around LVH44C packed out with rockwool to retain wall insulation.

LVH44C in steel casing penetrating fire rated Plasterboard wall

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max cell size

450mm diameter

Note: LVH44C can achieve -/60/60 when fitted with R1.0 Polyester insulated flexible duct.

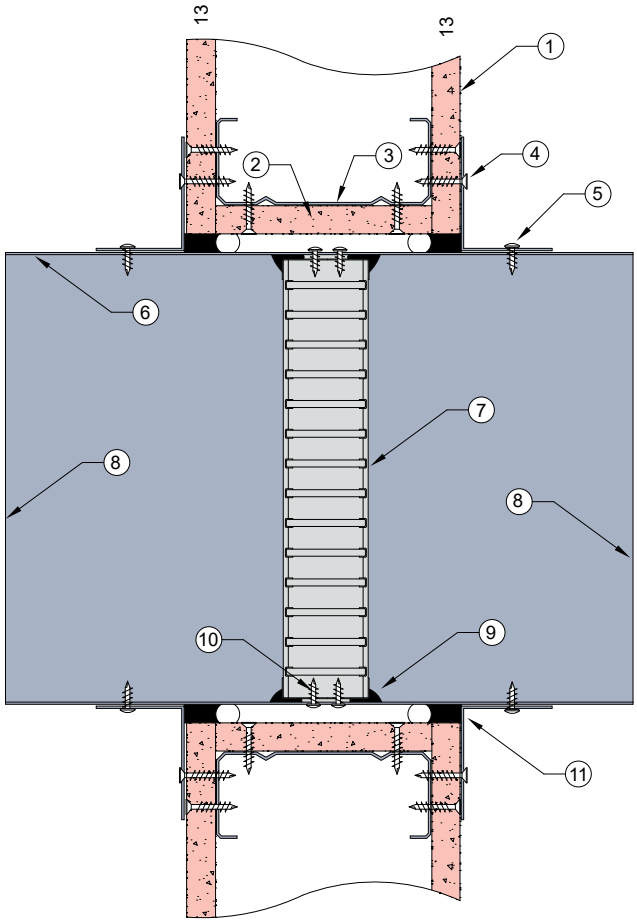
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall as shown in this system detail.
- Fill cavity around penetration with rockwool, as per point 4.
- Fix angle brackets to casing with steel self drilling screws or pop rivets as detailed in points 3.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 10.
- Ductwork shall be connected with breakaway joints, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Fixings and rockwool supplied by others.**

STUD WALL 2

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	13mm fire rated plasterboard.
2	13mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	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 Plasterboard wall

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

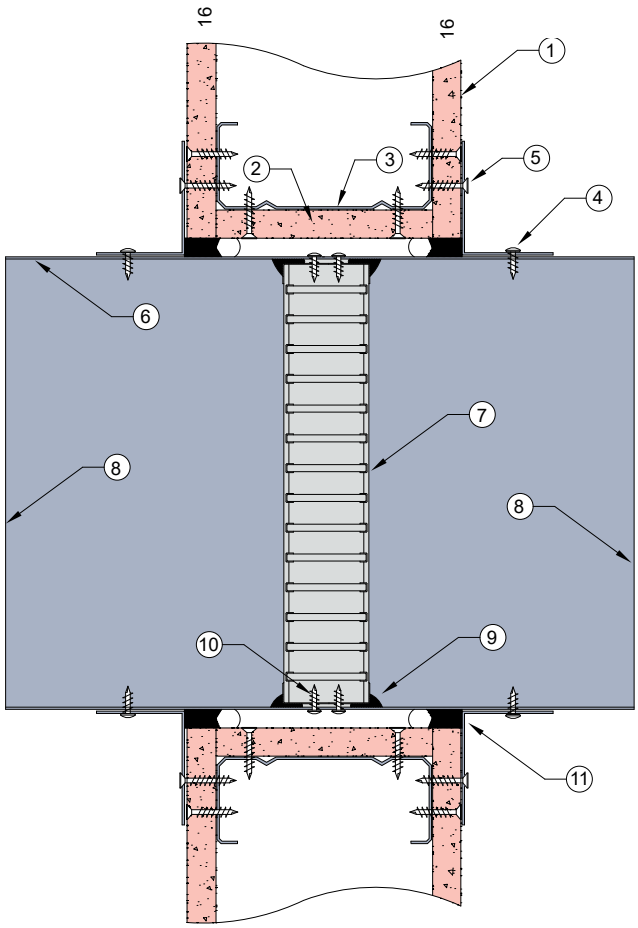
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 3

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	16mm fire rated plasterboard.
2	16mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	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 Plasterboard wall

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

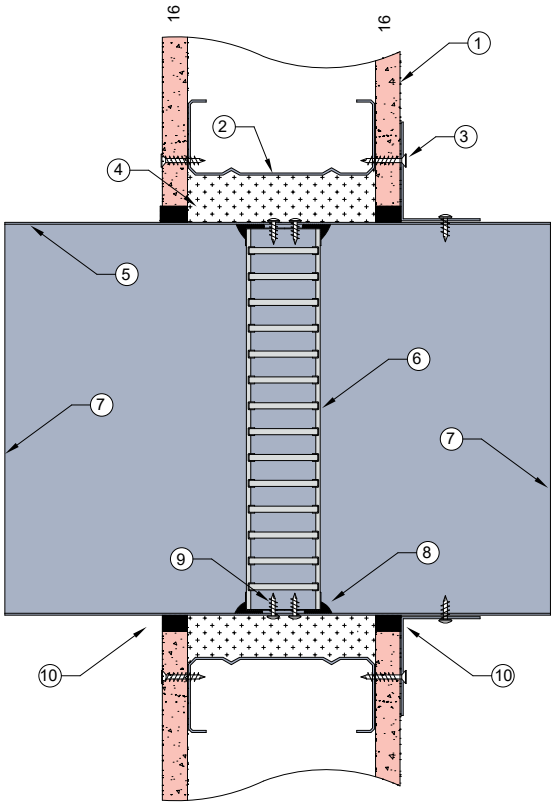
INSTALLATION INSTRUCTIONS

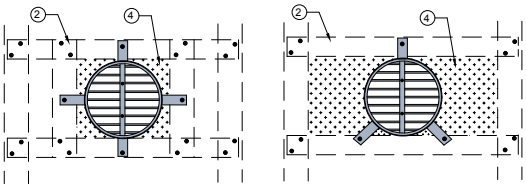
- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 4

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	16mm fire rated plasterboard.
2	Steel channel lining out aperture to all four sides.
3	25mm x 40mm x 40mm x 1mm galvanised steel angle brackets fixed to steel framing and damper casing with steel fixings.
4	Cavity around penetration filled with rockwool.
5	Z275 galvanised steel casing minimum thickness 0.6mm.
6	Lorient LVH44C circular intumescent fire damper screw fixed into casing.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	LVH44C fixed to casing with 2 x steel screws.
10	Gap between casing and aperture filled full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.





Circular LVH44 tied back to studs with steel track to ensure damper is fully supported within the framing structure of the wall.

Internal cavity around LVH44C packed out with rockwool to retain wall insulation.

LVH44C in steel casing penetrating fire rated Plasterboard wall

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max cell size

450mm diameter

Note: LVH44C can achieve -/90/90 when fitted with R1.0 Polyester insulated flexible duct.

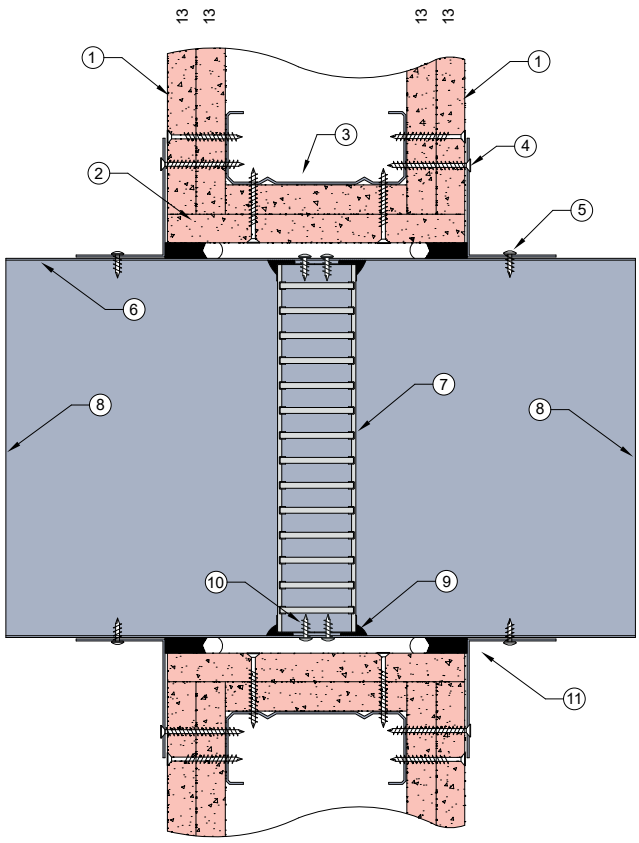
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall as shown in this system detail.
- Fill cavity around penetration with rockwool, as per point 4.
- Fix angle brackets to casing with steel self drilling screws or pop rivets as detailed in points 3.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 10.
- Ductwork shall be connected with breakaway joints, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Fixings and rockwool supplied by others.**

STUD WALL 5

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 13mm fire rated plasterboard.
2	2 x 13mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws.
11	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 Plasterboard wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

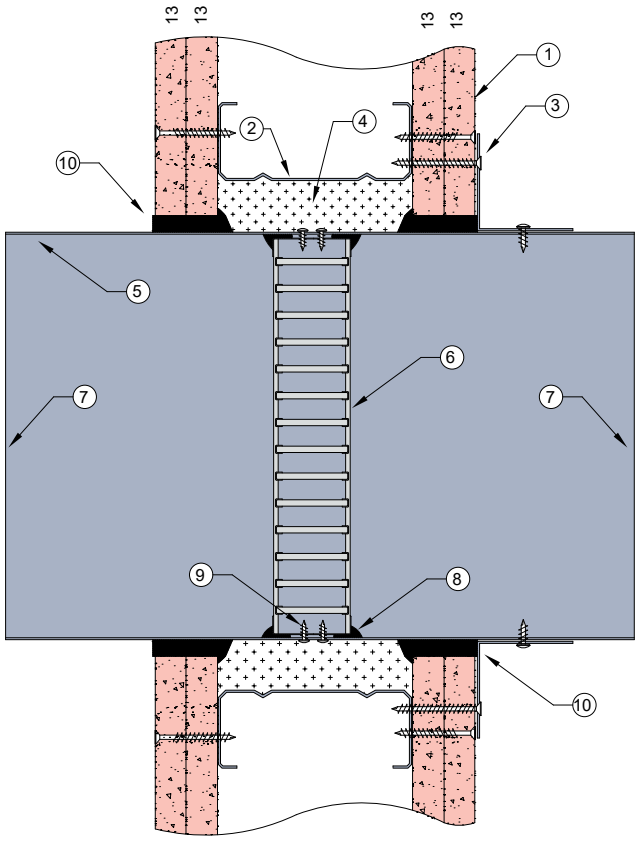
INSTALLATION INSTRUCTIONS

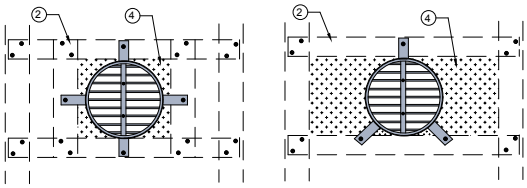
- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 6

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 13mm fire rated plasterboard wall.
2	Steel channel lining out aperture to all four sides.
3	25mm x 40mm x 40mm x 1mm steel angle brackets fixed to steel framing and damper casing with steel fixings.
4	Cavity around penetration filled with rockwool.
5	Z275 galvanised steel casing minimum thickness 0.6mm.
6	Lorient LVH44C intumescent fire damper screw fixed into casing.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	Fire damper fixed to casing with 2 x steel screws.
10	Gap between casing and aperture filled full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.





Circular LVH44 tied back to studs with steel track to ensure damper is fully supported within the framing structure of the wall.

Internal cavity around LVH44C packed out with rockwool to retain wall insulation.

LVH44C in steel casing penetrating fire rated Plasterboard wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max cell size

450mm diameter

Note: LVH44C can achieve -/120/120 when fitted with R1.0 Polyester insulated flexible duct.

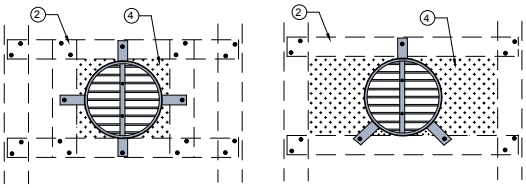
INSTALLATION INSTRUCTIONS

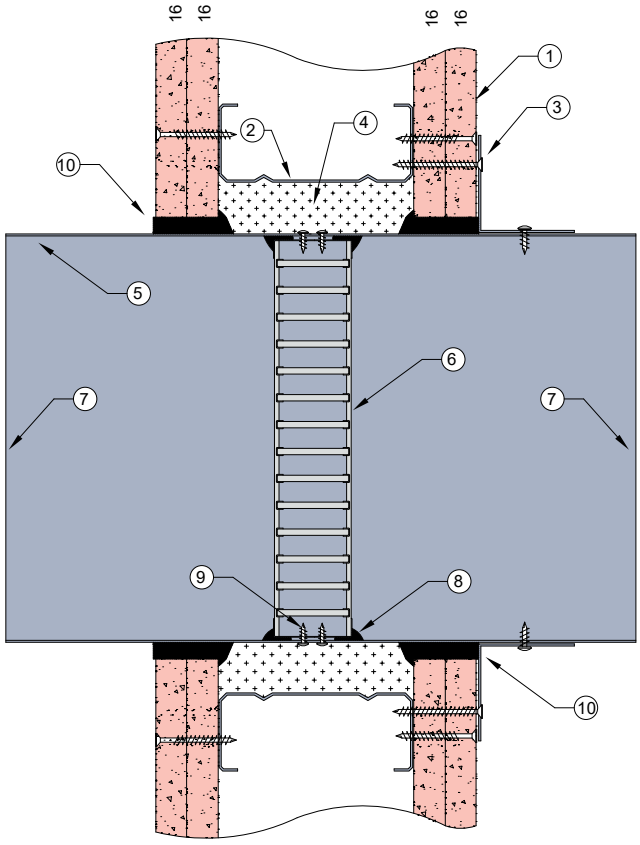
- Prepare the wall opening to accept the fire damper and install in wall as shown in this system detail.
- Fill cavity around penetration with rockwool, as per point 4.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 10.
- Ductwork shall be connected with breakaway joints, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Fixings and rockwool supplied by others.**

STUD WALL 7

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 16mm fire rated plasterboard wall.
2	Steel channel lining out aperture to all four sides.
3	25mm x 40mm x 40mm x 1mm steel angle brackets fixed to steel framing and damper casing with steel fixings.
4	Cavity around penetration filled with rockwool.
5	Z275 galvanised steel casing minimum thickness 0.6mm.
6	Lorient LVH44C circular intumescent fire damper screw fixed into casing.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	Fire damper fixed to casing with 2 x steel screws.
10	Gap between casing and aperture filled full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.





Circular LVH44 tied back to studs with steel track to ensure damper is fully supported within the framing structure of the wall.

Internal cavity around LVH44C packed out with rockwool to retain wall insulation.

LVH44C in steel casing penetrating fire rated Plasterboard wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max cell size

450mm diameter

Note: LVH44C can achieve -/120/120 when fitted with R1.0 Polyester insulated flexible duct.

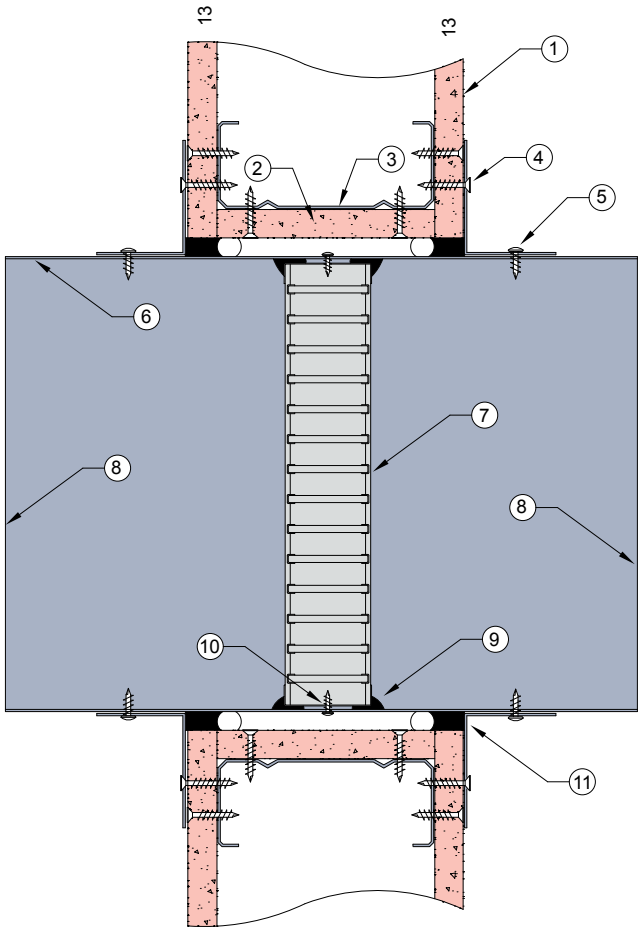
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall as shown in this system detail.
- Fill cavity around penetration with rockwool, as per point 4.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 10.
- Ductwork shall be connected with breakaway joints, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Fixings and rockwool supplied by others.**

STUD WALL 8

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	13mm fire rated plasterboard.
2	13mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with steel screws.
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth. Maximum annular gap between casing and wall 25mm.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL -/60/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3149

Max single cell size

600mm x 600mm

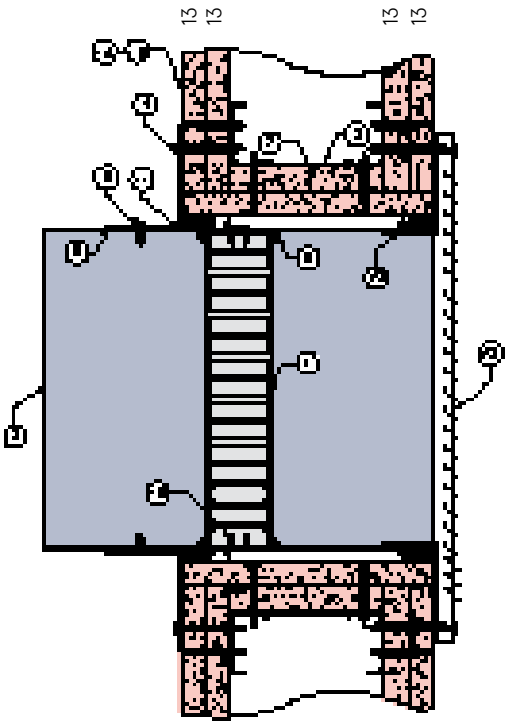
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 9

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1A 1B	2 x 13mm fire rated plasterboard, or 2 x 16mm fire rated plasterboard
2	Fire rated plasterboard lining aperture (To be the exact same as selected 1A or 1B selection).
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	0.6mm (min) Z275 Gal 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 or at least 2 per side.
6	Steel damper casing 0.6mm (min) Z275 Gal steel.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control depth to 25mm deep. Maximum annular gap between casing and wall is 25mm.
12	Casing either turned out or fitted out with angles to all four sides fixed in place with steel self-drilling screws.
13	Cover grille (by others) screw fixed in place to cover aperture.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL Up to -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

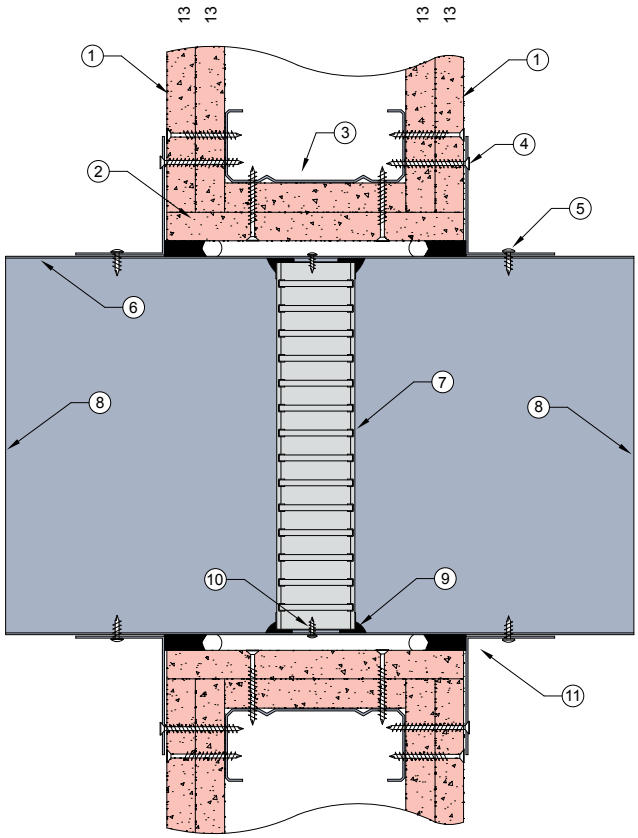
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between gap and casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self-drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5 & 12.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Cover grille screw fixed with appropriate length screws, ensuring screws fixed into steel stud.
- Ensure product identifications labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

STUD WALL 10

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 13mm fire rated plasterboard.
2	2 x 13mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with steel screws.
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth. Maximum annular gap between casing and wall 25mm.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3149

Max size

600mm x 600mm

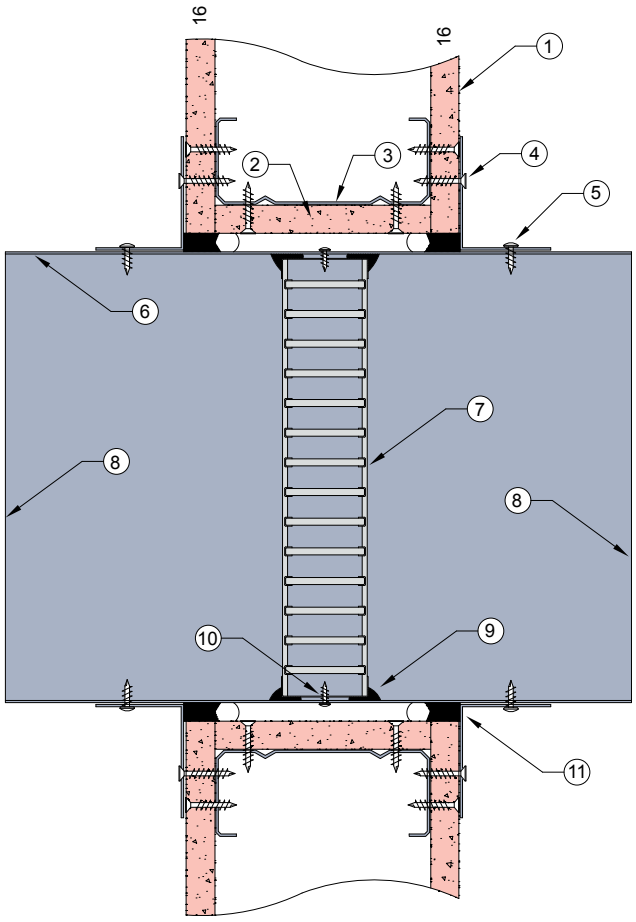
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 11

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	16mm fire rated plasterboard.
2	16mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with steel screws.
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth. Maximum annular gap between casing and wall 25mm.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL -/90/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3149

Max single cell size

600mm x 600mm

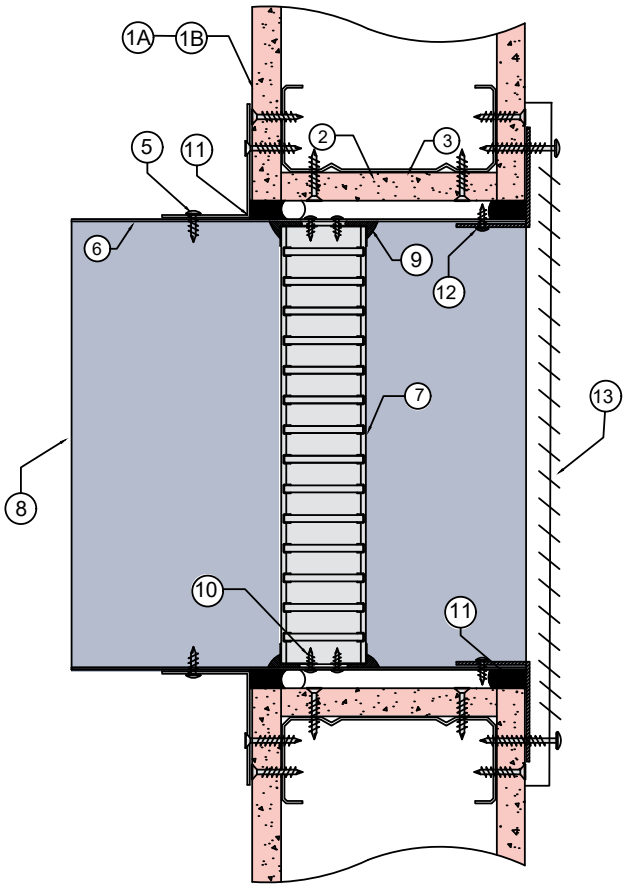
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 12

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1A	16mm fire rated plasterboard
1B	13mm fire rated plasterboard *FRL will vary depending on plasterboard thickness
2	Fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	0.6mm (min) Z275 Gal 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 or at least 2 per side.
6	Steel damper casing 0.6mm (min) Z275 Gal steel.
7	Lorient LVH44 Intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control depth to 25mm deep. Maximum annular gap between casing and wall is 25mm.
12	Casing either turned out or fitted out with angles to all four sides fixed in place with steel self-drilling screws.
13	Cover grille (by others) screw fixed in place to cover aperture.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL Up to -/90/30
(with 16mm FR plasterboard)

Up to -/60/30
(with 13mm FR plasterboard)

Fire Resistance in accordance with
AS1530.4 2014

Approval Ref
EXOVA EWFA 33233400

Max single cell size
600mm x 600mm

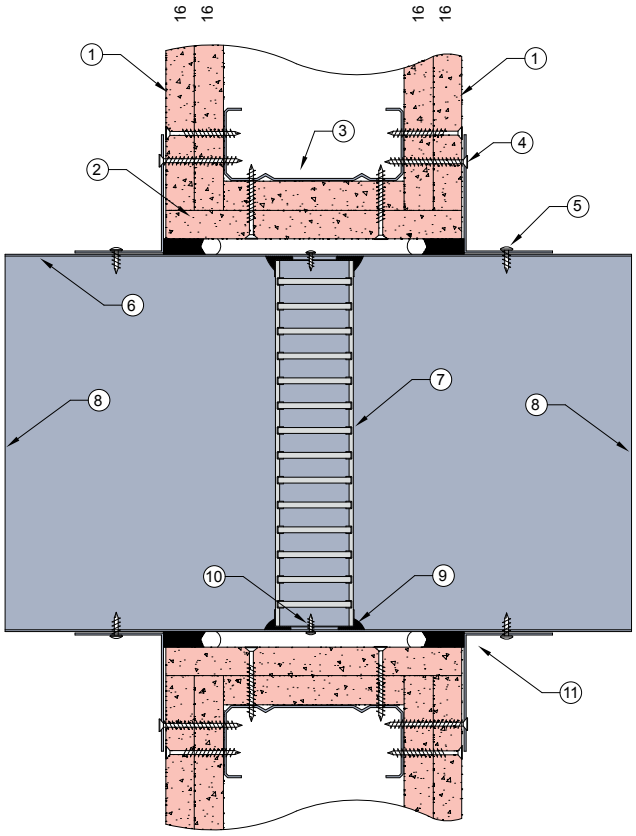
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between gap and casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self-drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5 & 12.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Cover grille screw fixed with appropriate length screws, ensuring screws fixed into steel stud.
- Ensure product identifications labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

STUD WALL 13

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 16mm fire rated plasterboard.
2	2 x 16mm fire rated plasterboard lining aperture.
3	Steel stud framing out aperture.
4	Angles fixed to steel framing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with steel screws.
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth. Maximum annular gap between casing and wall 25mm.



LVH44 in steel casing penetrating fire rated Plasterboard wall

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3149

Max single cell size

600mm x 600mm

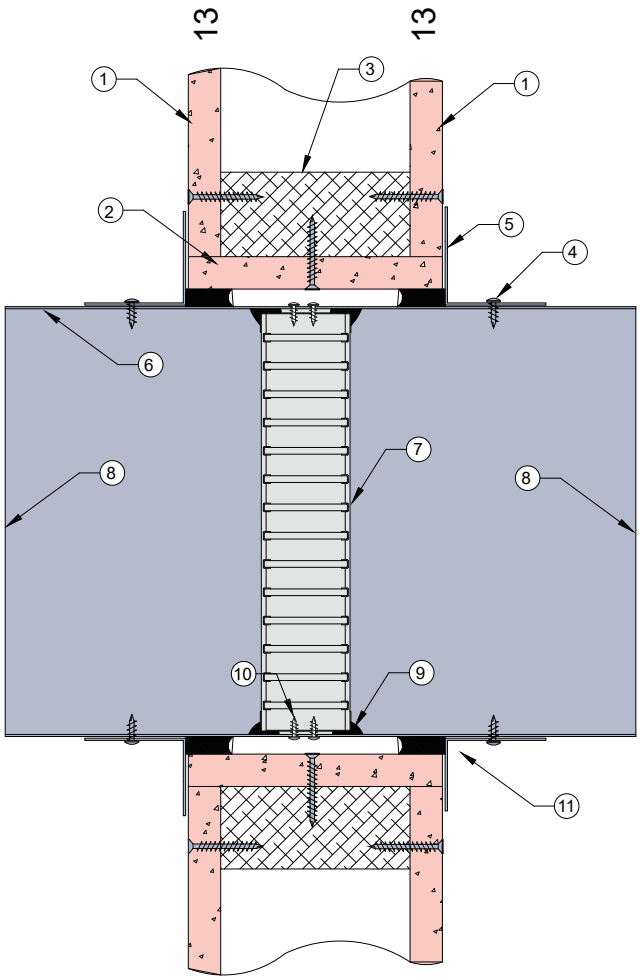
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

TIMBER STUD WALL 14

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	13mm fire rated plasterboard.
2	13mm fire rated plasterboard lining aperture.
3	Timber stud / noggin min 70mm thick.
4	Angles fixed to casing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws.
11	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 Plasterboard wall

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

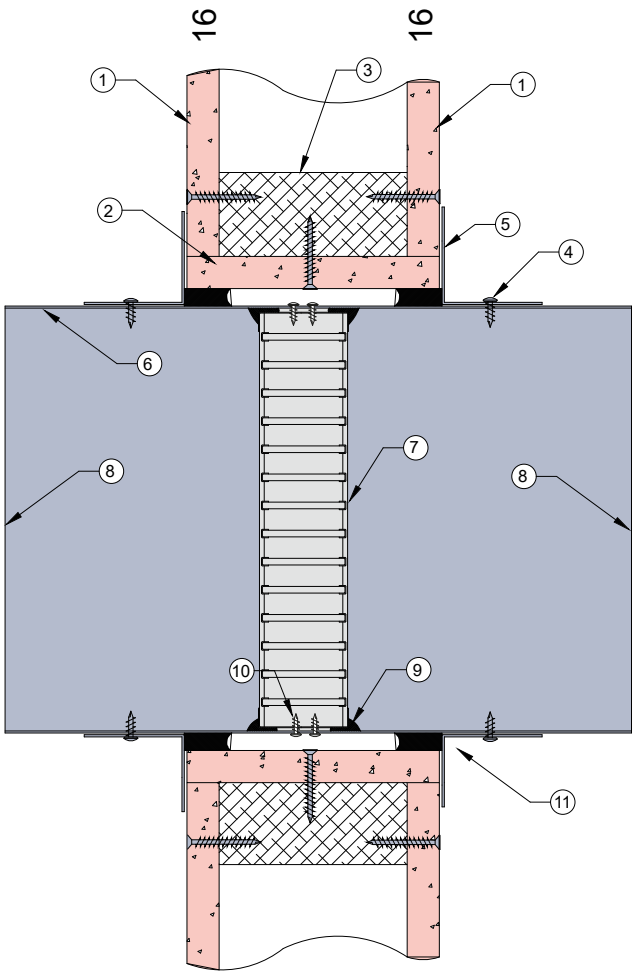
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

TIMBER STUD WALL 15

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	16mm fire rated plasterboard.
2	16mm fire rated plasterboard lining aperture.
3	Timber stud / noggin min 70mm thick.
4	Angles fixed to casing at 150mm centres or at least 2 per side.
5	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 or at least 2 per side.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	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 Plasterboard wall

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

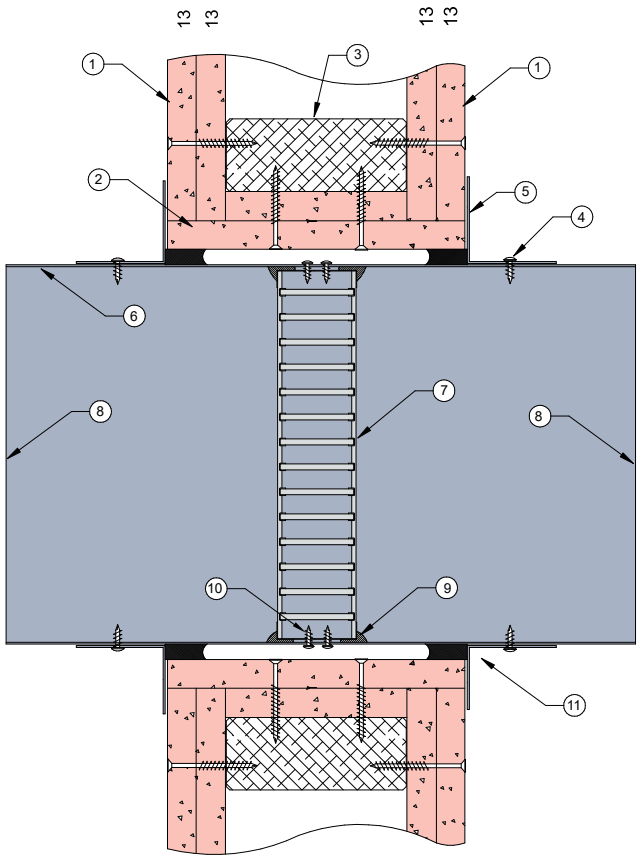
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

TIMBER STUD WALL 16

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 13mm fire rated plasterboard.
2	2 x 13mm fire rated plasterboard lining aperture.
3	Timber stud framing out aperture.
4	Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
5	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.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing 2 x steel screws (100mm centres).
11	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 Plasterboard wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

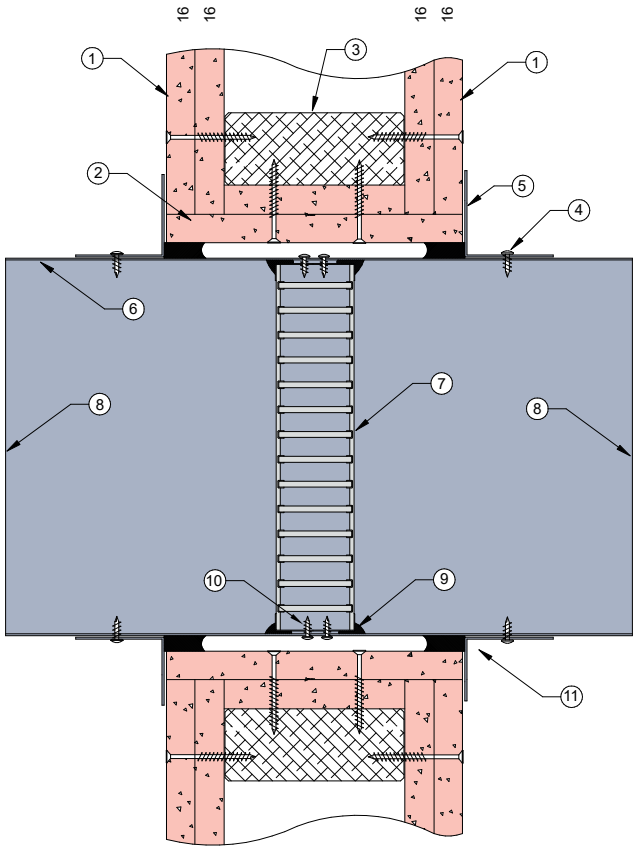
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

TIMBER STUD WALL 17

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1	2 x 16mm fire rated plasterboard.
2	2 x 16mm fire rated plasterboard lining aperture.
3	Timber stud framing out aperture.
4	Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
5	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.
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel screws (100mm centres).
11	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 Plasterboard wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

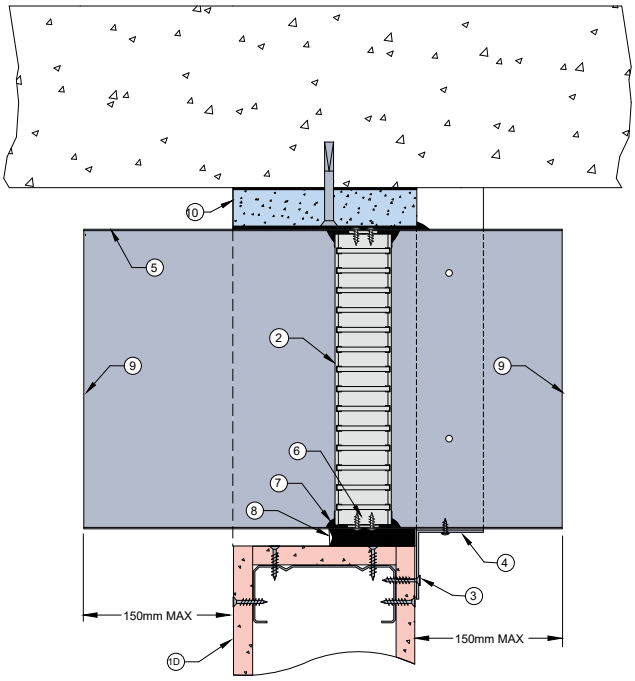
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

STUD WALL 18 TIGHT TO SLAB

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1D	13mm fire rated plasterboard.
2	Lorient LVH44 intumescent fire damper.
3	Angles fixed to wall with steel screws 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 50mm thick TBA Firefly Intubatt or non-combustible block 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 Plasterboard wall – tight to slab

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

600mm x 600mm

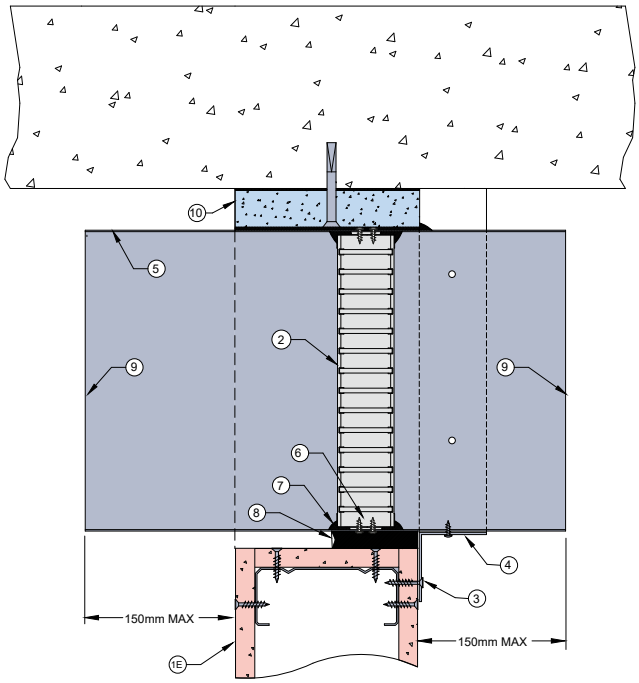
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Non-combustible or 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, angles and fixings supplied by others.**

STUD WALL 19 TIGHT TO SLAB

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1E	16mm fire rated plasterboard.
2	Lorient LVH44 intumescent fire damper.
3	Angles fixed to wall with steel screws 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 50mm thick TBA Firefly Intubatt or non-combustible block 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 Plasterboard wall – tight to slab

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

600mm x 600mm

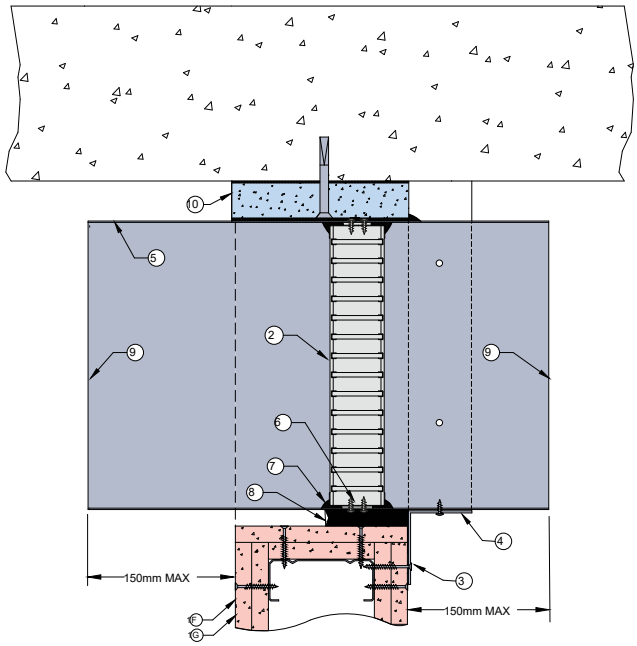
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this 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 casing, angles and fixings supplied by others.**

STUD WALL 20 TIGHT TO SLAB

FIRE RATED PLASTERBOARD WALL SYSTEM

	DESCRIPTION
1F 1G	2 x layers of 13mm or 2 x layers of 16mm fire rated plasterboard
2	Lorient LVH44 intumescent fire damper.
3	Angles fixed to wall with steel screws 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 50mm thick TBA Firefly Intubatt or non-combustible block 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 Plasterboard 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

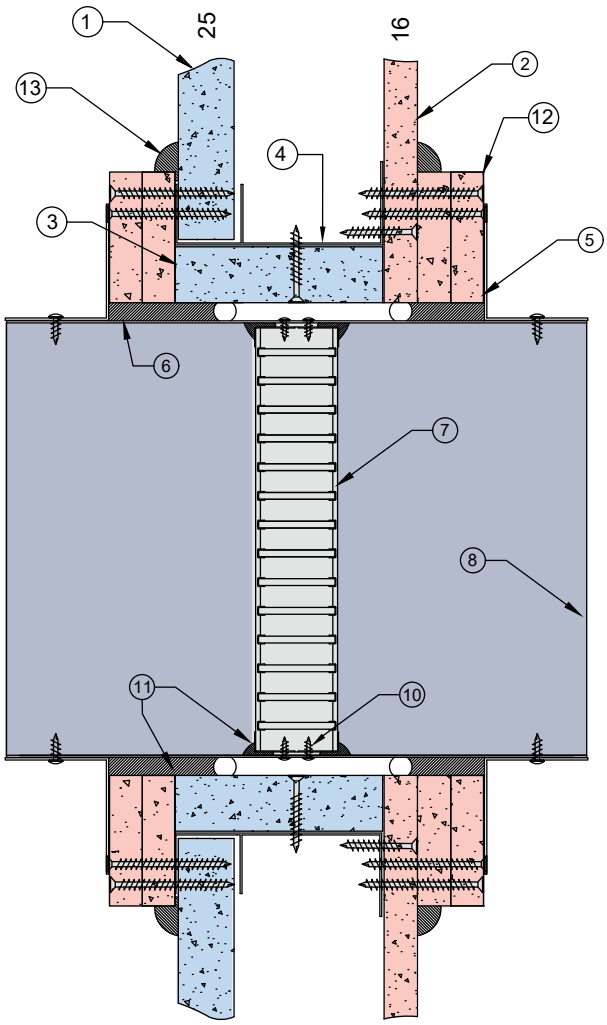
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Non-combustible or 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, angles and fixings supplied by others.**

SHAFT WALL 1

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1	25mm fire rated plasterboard shaft wall liner.
2	16mm fire rated plasterboard.
3	25mm fire rated shaft liner fully lining the aperture.
4	Steel CH section or J track used to line all sides of aperture.
5	0.6mm (min) Z275 Gal 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 into: Casing: Wafer button head screws 6g x 16mm (max. 150mm centres) Studs: Bugle head needle point screws 6g x 40mm (max. 100mm centres)
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel wafer head screws (10g x 22mm 100mm centres).
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control depth to 40mm deep. The gap between casing and wall shall be between 15-25mm
12	2 layers of 100mm x 16mm plasterboard support pad. Fitted with laminating screws no more than 100mm centres.
13	Plasterboard support pad treatment – 5mm of Lorient intumescent sealant



LVH44 in steel casing penetrating fire rated Plasterboard Shaft wall

FRL Up to -/60/60

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3487

Max single cell size

450mm x 450mm

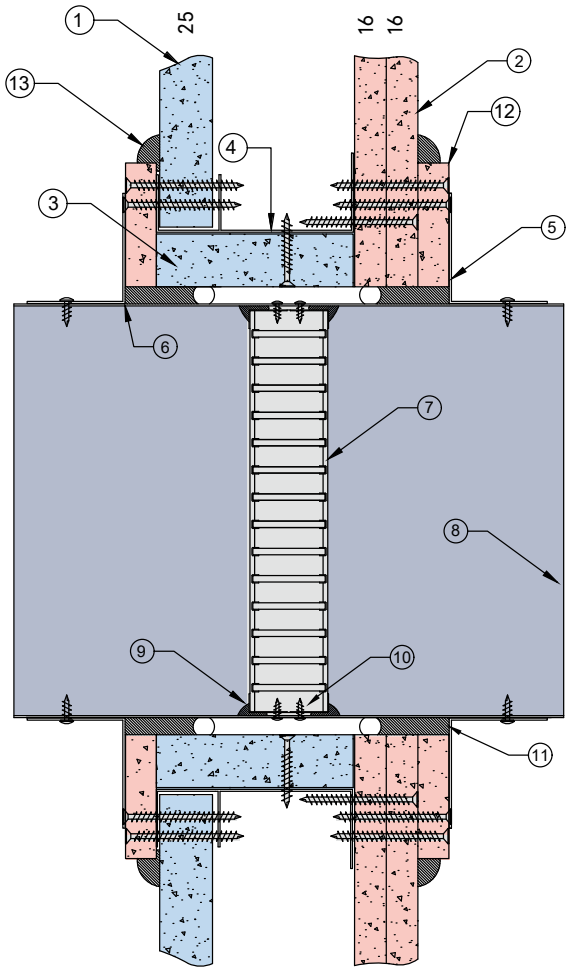
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between gap and casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing and to wall with screws specified in points 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Ensure product identifications labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

SHAFT WALL 2

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1	25mm fire rated plasterboard shaft wall liner.
2	2 x 16mm fire rated plasterboard.
3	25mm fire rated shaft liner fully lining the aperture.
4	Steel CH section or J track used to line all sides of aperture.
5	0.6mm (min) Z275 Gal 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 into: Casing: Wafer button head screws 6g x 16mm (max. 150mm centres). Studs: Bugle head needle point screws 6g x 40mm (max. 100mm centres).
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel wafer head screws (10g x 22mm 100mm centres).
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control depth to 40mm deep. The gap between casing and wall shall be between 15-25mm.
12	1 layer of 100mm x 16mm plasterboard support pad. Fitted with laminating screws no more than 100mm centres.
13	Plasterboard support pad treatment – 5mm of Lorient intumescent sealant.



LVH44 in steel casing penetrating fire rated Plasterboard Shaft wall

FRL Up to -/120/120

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO-3487

Max single cell size

450mm x 450mm

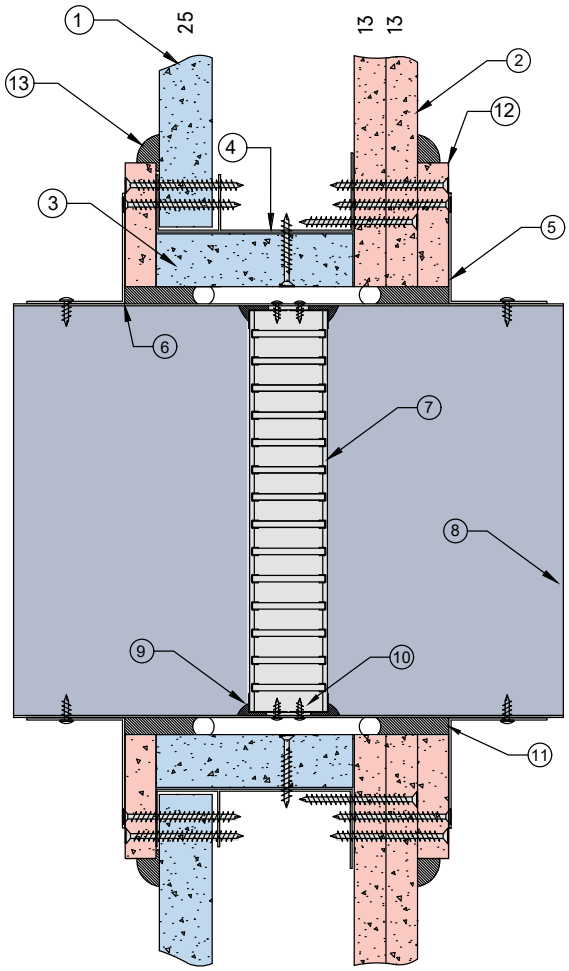
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in system detail.
- Centralise the damper casing and firestop the gap between the casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws and to wall with appropriate length needle point drywall screws, as detailed in point 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- 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, angles and fixings supplied by others.**

SHAFT WALL 3

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1	25mm fire rated plasterboard shaft wall liner.
2	2 x 13mm fire rated plasterboard.
3	25mm fire rated shaft liner fully lining the aperture.
4	Steel CH section or J track used to line all sides of aperture.
5	0.6mm (min) Z275 Gal 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 into: Casing: Wafer button head screws 6g x 16mm (max. 150mm centres) Studs: Bugle head needle point screws 6g x 40mm (max. 100mm centres)
6	Z275 galvanised steel casing minimum thickness 0.6mm.
7	Lorient LVH44 intumescent fire damper screw fixed into casing.
8	Casing terminates with breakaway joints as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	Fire damper fixed to casing with 2 x steel wafer head screws (10g x 22mm 100mm centres).
11	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control depth to 40mm deep. The gap between casing and wall shall be between 15-25mm
12	1 layer of 100mm x 16mm plasterboard support pad. Fitted with laminating screws no more than 100mm centres.
13	Plasterboard support pad treatment – 5mm of Lorient intumescent sealant.



LVH44 in steel casing penetrating fire rated Plasterboard Shaft wall

FRL Up to -/90/90

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3487

Max single cell size

450mm x 450mm

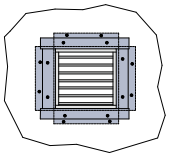
INSTALLATION INSTRUCTIONS

- Line out the wall opening to accept the fire damper, as shown in this system detail.
- Centralise the damper casing and firestop the gap between gap and casing and wall with Lorient intumescent sealant, see point 11 for fill details.
- Perimeter angles are mechanically fixed to casing and to wall with screws specified in points 5.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Ensure product identifications labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

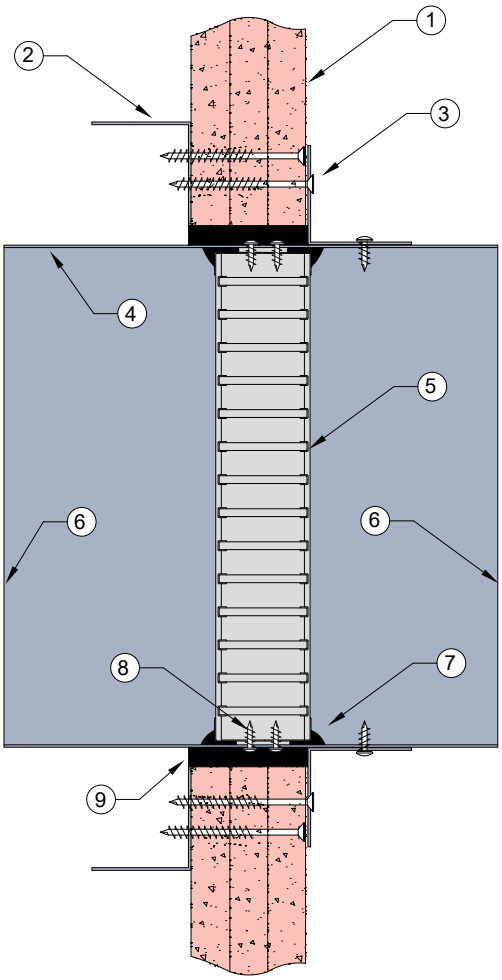
SHAFT WALL 4

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1	3 x 13mm or 3 x 16mm fire rated plasterboard.
2	40mm x 40mm 0.6mm Z275 steel angle fixed through wall with 60mm long steel needle point screws.
3	40mm x 40mm x 0.6mm 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 60mm long steel needle point screws 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	Fire damper fixed to casing with 2 x steel screws (100mm centres).
9	Gap between casing and aperture filled with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.



Rondo 40 x 40mm equal angle fixed around aperture to provide anchor point for fixing angle brackets 4 off fixing angles required as shown.



LVH44 in steel casing penetrating fire rated laminated Plasterboard Shaft wall

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

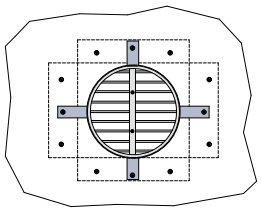
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Fix reinforcing angles to inside of wall as shown above. Fix angle brackets to damper casing, as per point 2 & 3.
- Centralise in aperture and mechanically fix through wall into opposing angle. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- 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, angles and fixings supplied by others.**

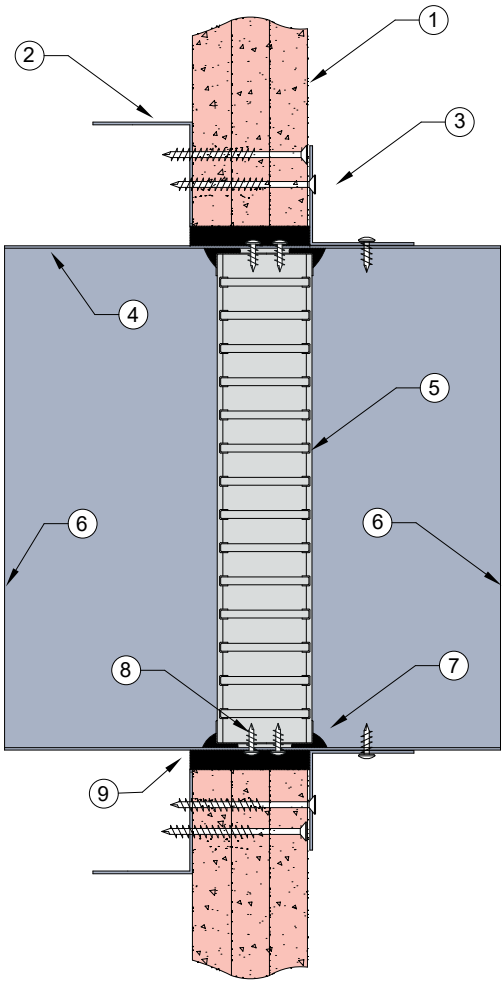
SHAFT WALL 5

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1	3 x 13mm or 3 x 16mm fire rated plasterboard.
2	40mm x 40mm x 0.6mm Z275 galvanised steel reinforcing angles fixed around aperture with 60mm long steel needle point screws.
3	0.6mm (min) 25mm x 40mm x 40mm Z275 galvanised steel angles fitted to casing with steel self drilling screws or pop rivets. Damper angles fixed through wall into reinforcing angles with 60mm needle point self drilling screws as shown.
4	Z275 galvanised steel casing minimum thickness 0.6mm.
5	Lorient LVH44C circular 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	Fire damper 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. Maximum annular gap between casing and wall 25mm.



Rondo 40mm x 40mm equal angle fixed around aperture to provide anchor point for fixing angle brackets 4 off fixing angles required as shown.



LVH44C in steel casing penetrating fire rated Plasterboard Shaft wall

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

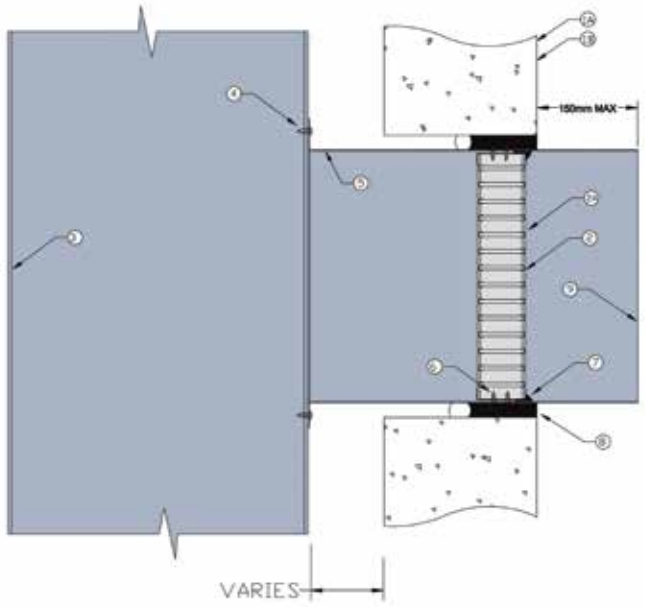
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in system detail.
- Fix reinforcing angles to inside of wall as shown above. Fix angle brackets to damper casing, as per point 2 & 3.
- Centralise in aperture and mechanically fix through wall into opposing angle. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 9.
- 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: Fixings and angles supplied by others.**

SHAFT WALL ANGLE FREE 1

FIRE RATED MASONRY / CONCRETE SHAFT WALL SYSTEM

	DESCRIPTION
1A 1B	Masonry or concrete wall minimum 90mm thick.
2	Lorient LVH44 intumescent fire damper.
2A	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.



Angle free LVH44 or LHV44C in steel casing connected to sheet metal riser penetrating fire rated Masonry or Concrete 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 or 450mm diameter

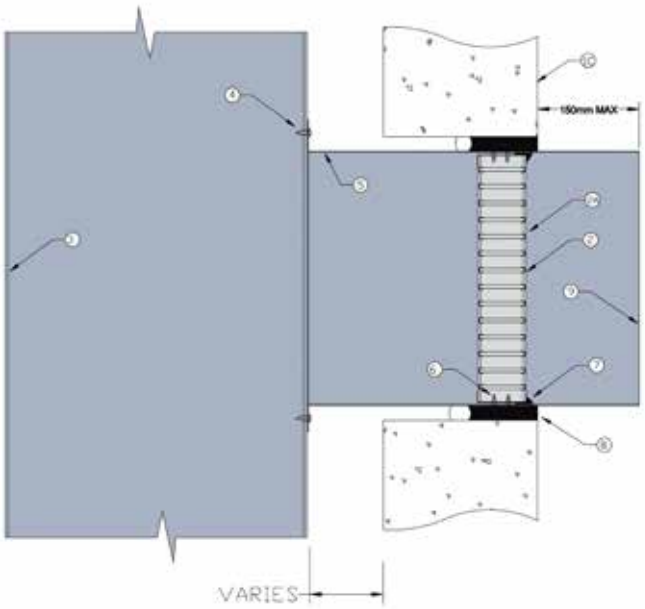
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 2

FIRE RATED HEBEL®
SHAFT WALL SYSTEM

	DESCRIPTION
1C	Hebel® wall minimum 75mm thick.
2	Lorient LVH44 intumescent fire damper.
2A	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.



Angle free LVH44 or LHV44C 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 or
450mm diameter

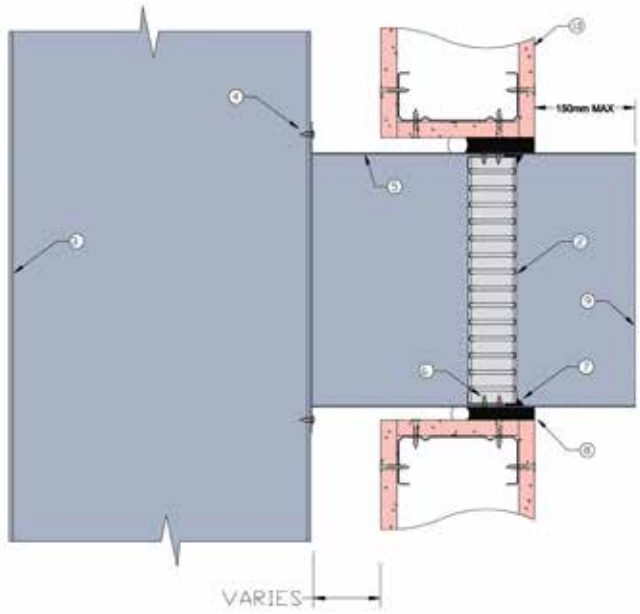
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 3

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1D	13mm fire rated plasterboard wall.
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.



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

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

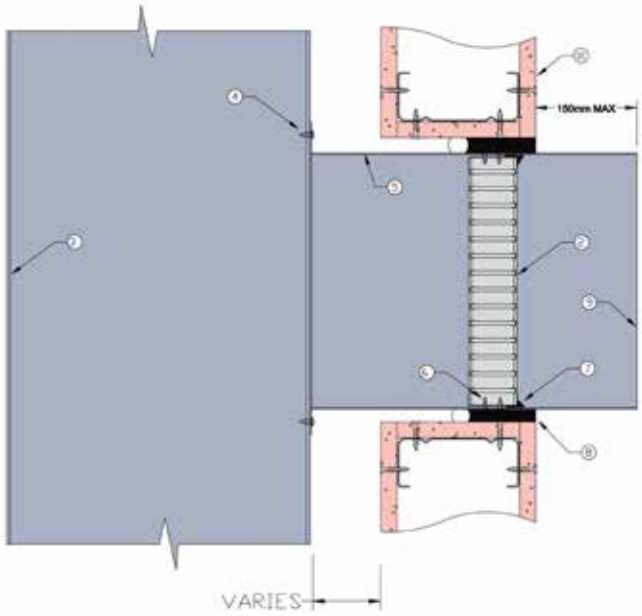
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 4

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1E	16mm fire rated plasterboard wall.
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.



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

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

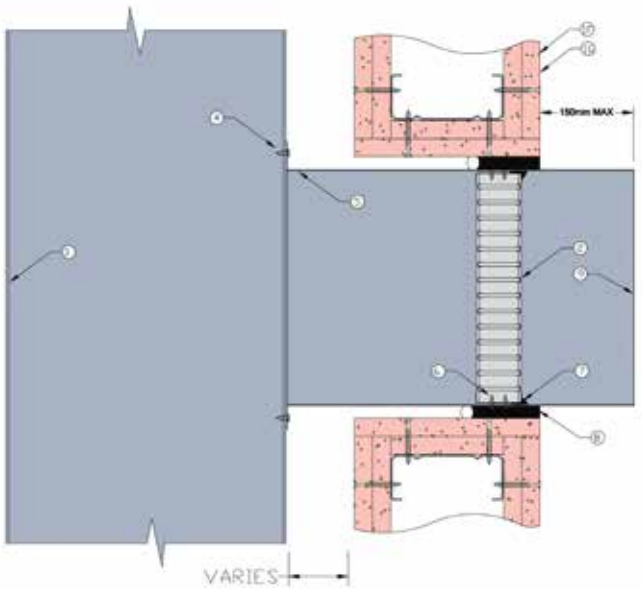
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 5

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1F	2 x layers of 13mm fire rated plasterboard wall or
1G	2 x layers of 16mm fire rated plasterboard wall.
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.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating fire rated Plasterboard 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

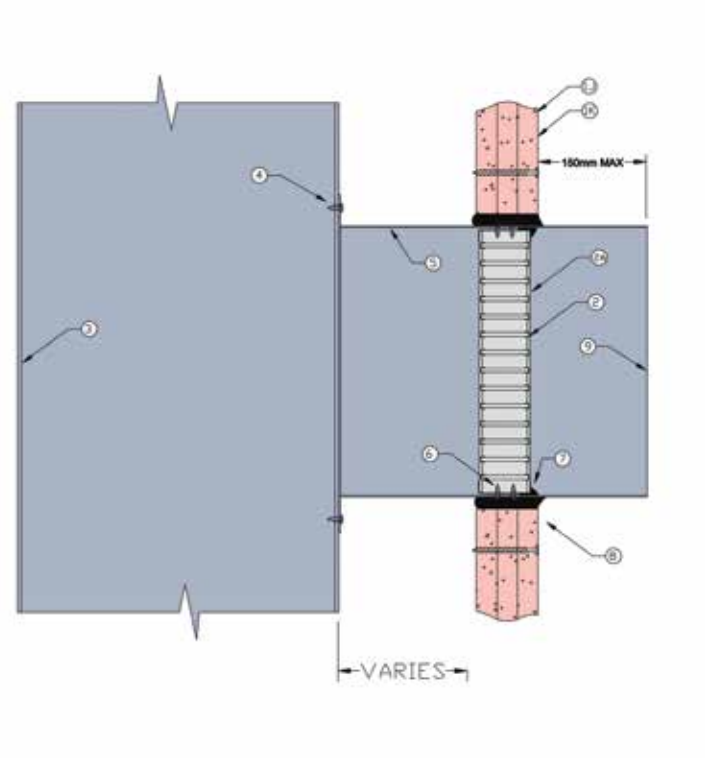
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 6

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1J	3 x 13mm fire rated laminated plasterboard or
1K	3 x 16mm fire rated laminated plasterboard.
2	Lorient LVH44 or 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 full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall is 25mm.
9	Casing terminates with breakaway joint as per AS1682.2.



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

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm or
450mm diameter

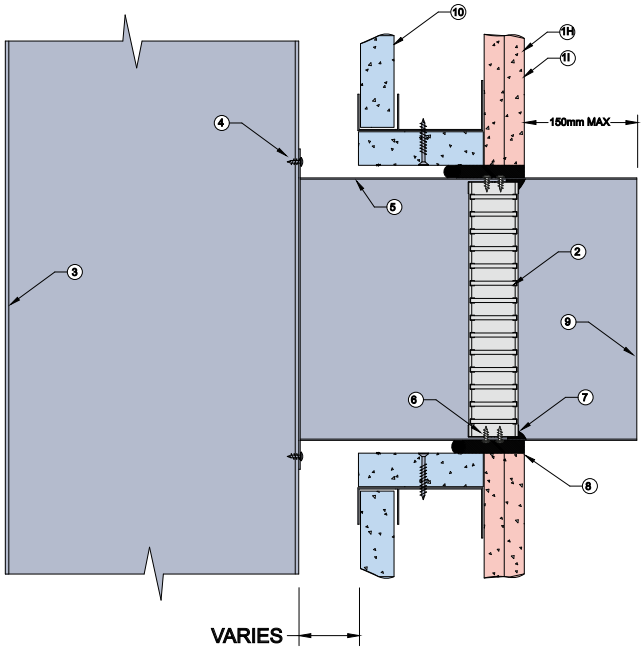
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 7

FIRE RATED PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1H	2 x layers of 13mm fire rated plasterboard or
1I	2 x layers of 16mm fire rated plasterboard.
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.
10	25mm fire rated shaftwall liner.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating fire rated Plasterboard 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

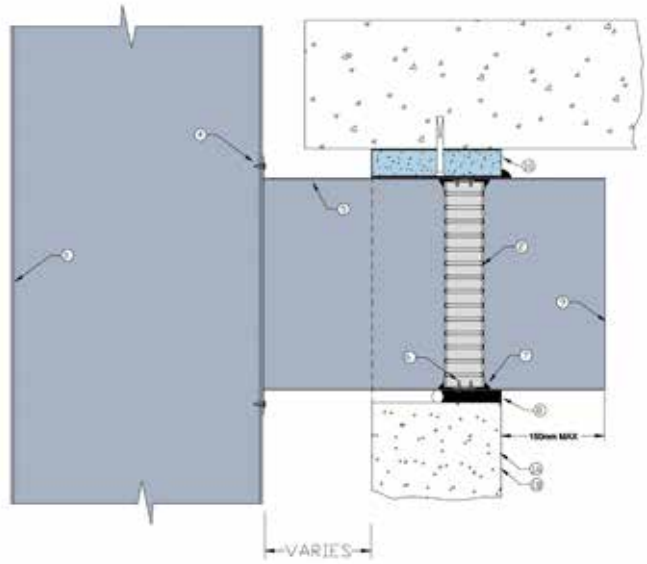
INSTALLATION INSTRUCTIONS

- 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: Branch / casing and fixings supplied by others.**

SHAFT WALL ANGLE FREE 8 TIGHT TO SLAB

FIRE RATED MASONRY / CONCRETE SHAFT WALL SYSTEM

	DESCRIPTION
1A 1B	Masonry or concrete wall minimum 90mm 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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating fire rated Masonry or Concrete 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

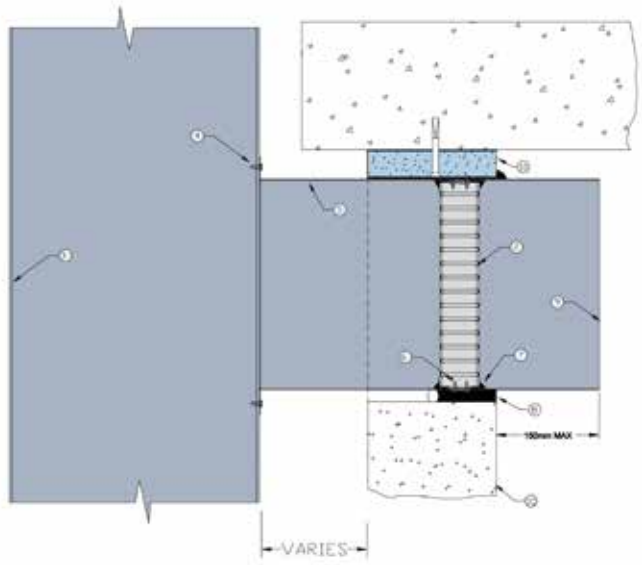
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to Intubatt or non-combustible block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the Intubatt block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 9 TIGHT TO SLAB

FIRE RATED HEBEL® SHAFT WALL SYSTEM

	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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



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

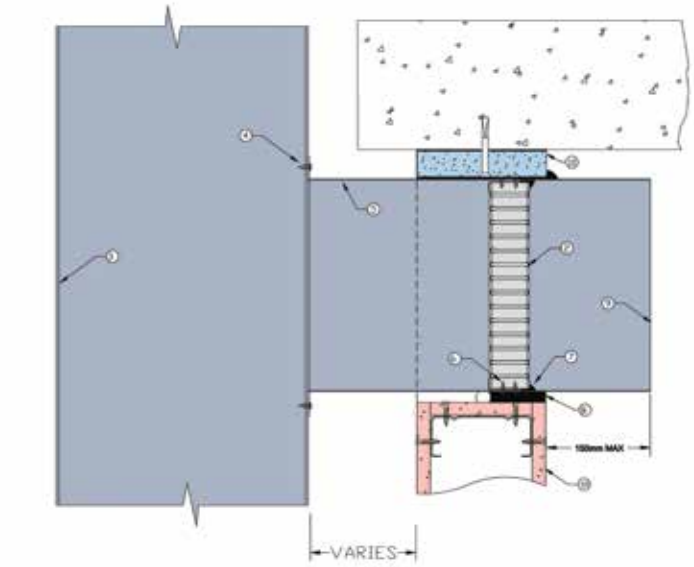
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to the block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 10 TIGHT TO SLAB

FIRE RATED 13MM PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1D	13mm fire rated plasterboard.
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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating 13mm fire rated Plasterboard shaft wall

FRL -/60/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

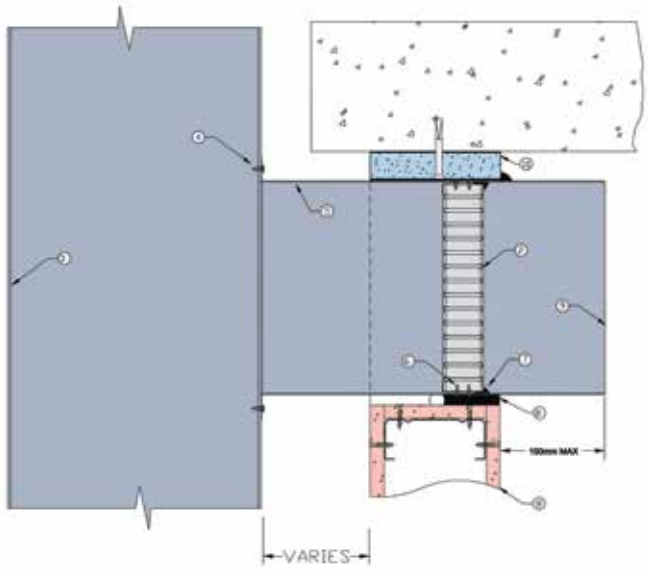
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to the block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 11 TIGHT TO SLAB

FIRE RATED 16MM PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1E	16mm fire rated plasterboard.
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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating 16mm fire rated Plasterboard shaft wall

FRL -/90/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

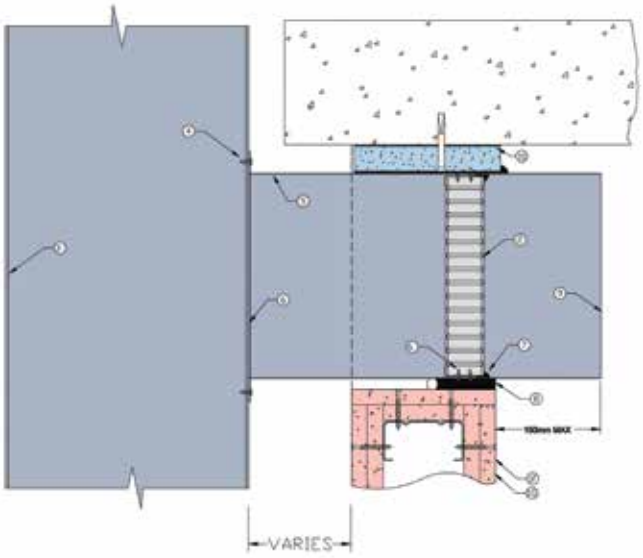
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to the intubatt or non-combustible block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 12 TIGHT TO SLAB

FIRE RATED 13MM OR 16MM PLASTERBOARD SHAFT WALL SYSTEM

	DESCRIPTION
1F 1G	13mm or 16mm fire rated plasterboard.
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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating 13mm or 16mm fire rated Plasterboard 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

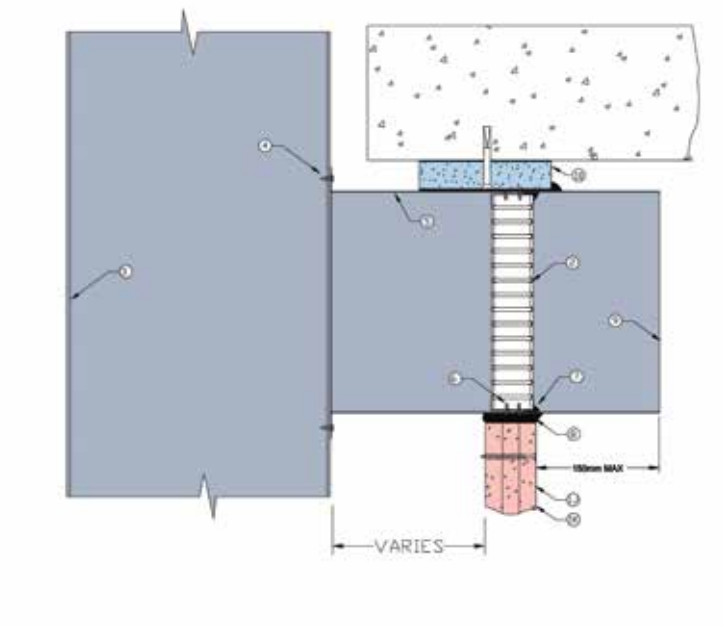
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to intubatt or non-combustible block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 13 TIGHT TO SLAB

FIRE RATED 13MM OR 16MM PLASTERBOARD LAMINATED SHAFT WALL SYSTEM

	DESCRIPTION
1J 1K	13mm or 16mm fire rated plasterboard.
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 full 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 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating 13mm or 16mm fire rated laminated Plasterboard shaft wall

FRL -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max cell size

600mm x 600mm

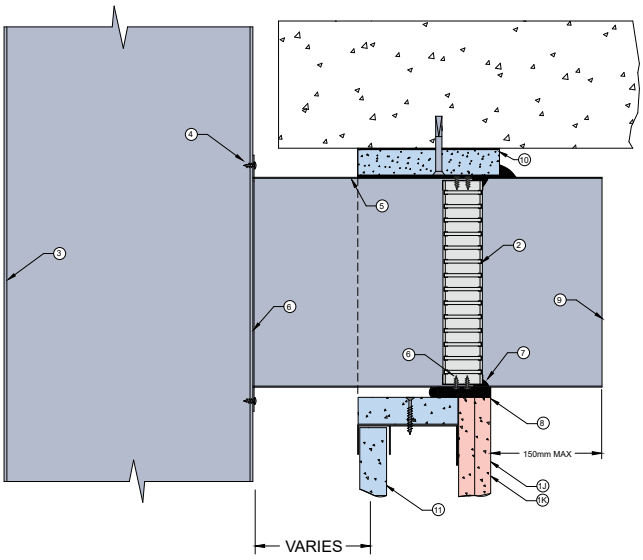
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to intubatt or non-combustible block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SHAFT WALL ANGLE FREE 14 TIGHT TO SLAB

FIRE RATED 25MM SHAFT LINER WITH 13MM OR 16MM PLASTERBOARD

	DESCRIPTION
1J 1K	13mm or 16mm fire rated plasterboard.
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.
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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block running full width of aperture. Bedded in Lorient intumescent sealant and mechanically fixed to slab with steel expanding anchors.
11	25mm fire rated shaft wall liner.



Angle free LVH44 in steel casing connected to sheet metal riser penetrating 25mm shaft liner with 13mm or 16mm fire rated Plasterboard 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

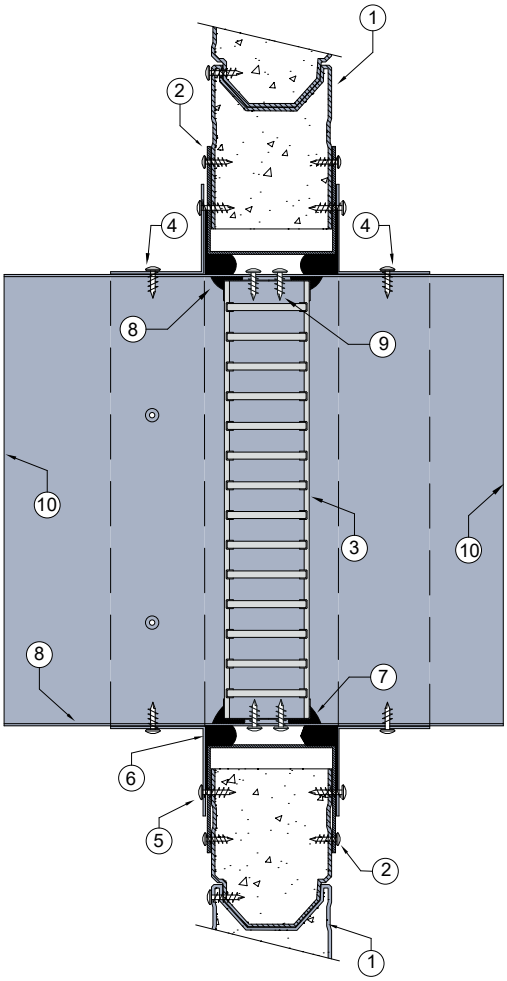
INSTALLATION INSTRUCTIONS

- 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.
- Fix damper into branch with steel screws (point 6) and seal perimeter with Lorient intumescent sealant (point 7).
- Measure branch width and cut to corresponding length, bed and mechanically fix the Intubatt block into position so that it will create the top edge of the aperture once the shaft wall is constructed.
- Liberally apply Lorient intumescent sealant to intubatt or non-combustible block then position & mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 4) ensuring that the top edge of the duct branch is hard up against the block and all gaps are filled full depth with intumescent sealant.
- Once shaft wall has been constructed firestop the remaining 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: Branch casing and fixing supplied by others.**

SPEEDPANEL® 1

FIRE RATED SPEEDPANEL® WALL SYSTEM

	DESCRIPTION
1	Speedpanel® wall system.
2	Aperture lined out with galvanised steel C track section and screw fixed to wall with steel fixings as per Speedpanel® test approvals.
3	Lorient LVH44 intumescent fire damper.
4	Angles fixed to casing with steel self drilling screws at 150mm centres.
5	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.
6	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.
7	Fire damper perimeter sealed with Lorient intumescent sealant.
8	Z275 galvanised steel casing minimum 0.6mm.
9	LVH44 fixed to casing with 2 x steel self drilling screws or pop rivets.
10	Casing terminates with breakaway joints, as per AS1682.2.



LVH44 in steel casing penetrating fire rated Speedpanel® wall

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA RIR 21622-31

Max size

1000mm x 1000mm

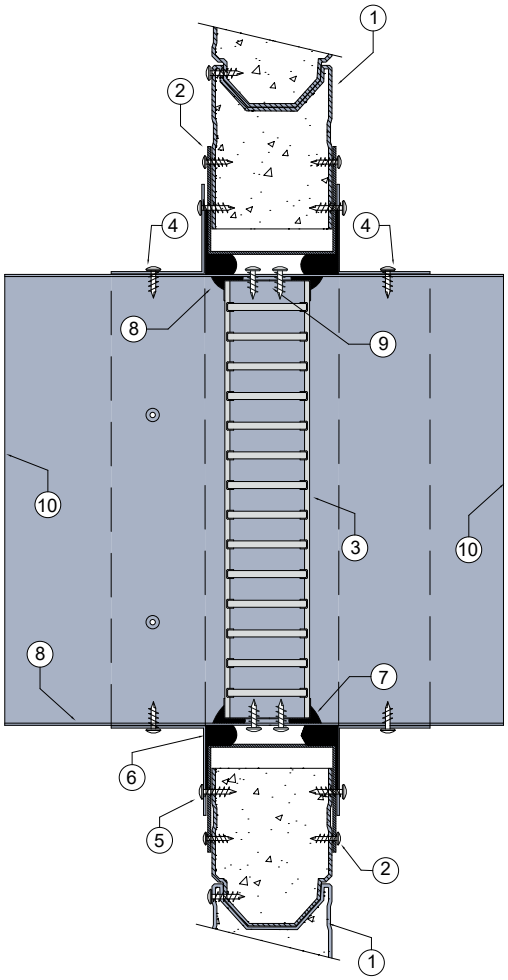
INSTALLATION INSTRUCTIONS

- 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 6.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 10.
- 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, angles and fixings supplied by others.**

SPEEDPANEL® 2

FIRE RATED SPEEDPANEL® WALL SYSTEM

	DESCRIPTION
1	Speedpanel® wall system.
2	Aperture lined out with galvanised steel C track section and screw fixed to wall with steel fixings as per Speedpanel® test approvals.
3	Lorient LVH44 intumescent fire damper.
4	Angles fixed to casing with steel self drilling screws at 150mm centres.
5	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.
6	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.
7	Fire damper perimeter sealed with Lorient intumescent sealant.
8	Z275 galvanised steel casing minimum 0.6mm.
9	LVH44 fixed to casing with 2 x steel self drilling screws or pop rivets.
10	Casing terminates with breakaway joints, as per AS1682.2.



LVH44 in steel casing penetrating fire rated Speedpanel® wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

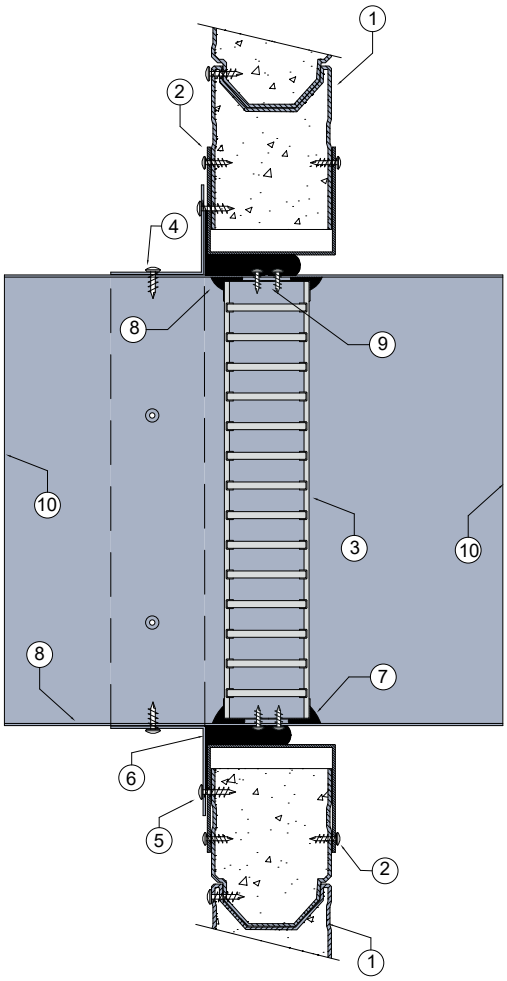
INSTALLATION INSTRUCTIONS

- 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 6.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 10.
- 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, angles and fixings supplied by others.**

SPEEDPANEL® 3

FIRE RATED SPEEDPANEL® WALL SYSTEM

	DESCRIPTION
1	Speedpanel® wall system.
2	Aperture lined out with galvanised steel C track section and screw fixed to wall with steel fixings, as per Speedpanel® test approvals.
3	Lorient LVH44 intumescent fire damper.
4	Angles fixed to casing with steel self drilling screws at 150mm centres.
5	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.
6	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.
7	Fire damper perimeter sealed with Lorient intumescent sealant.
8	Z275 galvanised steel casing minimum 0.6mm.
9	LVH44 fixed to casing with 2 x steel self drilling screws or pop rivets.
10	Casing terminates with breakaway joints, as per AS1682.2.



LVH44 in steel casing penetrating fire rated Speedpanel® wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

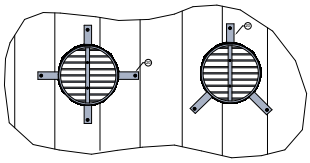
INSTALLATION INSTRUCTIONS

- 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 6.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 4 & 5.
- Ductwork shall be connected with breakaway joints, as per point 10.
- 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, angles and fixings supplied by others.**

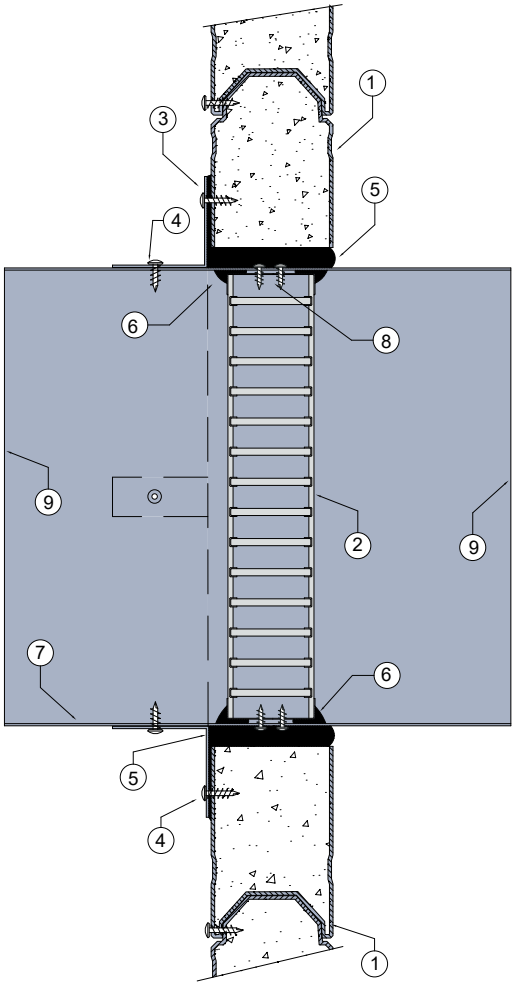
SPEEDPANEL® 4

FIRE RATED SPEEDPANEL® WALL SYSTEM

	DESCRIPTION
1	Speedpanel® wall system with cored out circular aperture.
2	Lorient LVH44C intumescent fire damper.
3	25mm x 40mm x 40mm x 0.1mm (min) Z275 galvanised steel angle brackets fixed with self drilling screws.
4	Angles fixed to wall and casing with steel self drilling screws.
5	Gap between casing and aperture filled full depth with Lorient intumescent sealant. Maximum annular gap between casing and wall 25mm.
6	Fire damper perimeter sealed with Lorient intumescent sealant.
7	Z275 galvanised steel casing minimum 0.6mm.
8	LVH44C fixed to casing with 2 x steel self drilling screws or pop rivets.
9	Casing terminates with breakaway joints, as per AS1682.2.



Circular aperture cored straight through wall.
3 off fixing angles up to 250mm diameter.
4 off fixing angles 300mm to 450mm diameter.



LVH44C in steel casing penetrating fire rated Speedpanel® wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

Note: LVH44C can achieve -/120/120 when fitted with R1.0 Polyester insulated flexible duct

Approval Ref: EXOVA EWFA 55205900

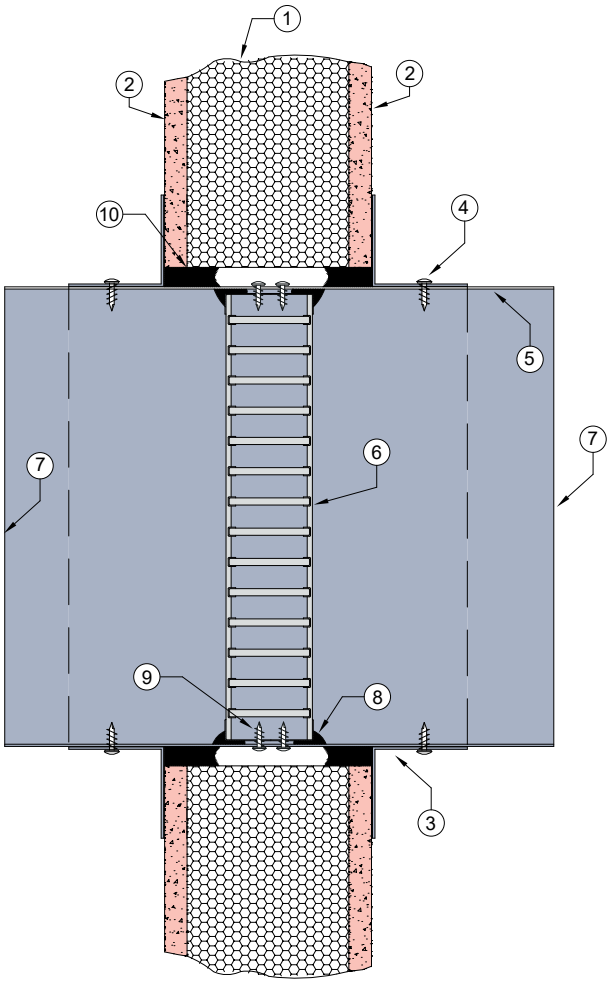
INSTALLATION INSTRUCTIONS

- 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 6.
- Perimeter angles are mechanically fixed to casing with steel self drilling screws or pop rivets, as detailed in points 4 & 5.
- 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: Fixings supplied by others.**

PRONTO PANEL™ 1

FIRE RATED

	DESCRIPTION
1	Brickworks Pronto Panel™ wall as per manufacturers test report.
2	10mm plasterboard fitted as per Pronto Panel™ Wall System 1C.
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.
4	Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
5	Z275 galvanised steel casing minimum thickness minimum 0.6mm.
6	Lorient LVH44 intumescent fire damper.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	LVH44 fixed to casing with 2 x steel screws (100mm centres).
10	Gap between casing and aperture filled with Lorient intumescent sealant to at least 25mm depth. Backing rod used as required to control sealant fill depth. Maximum annular gap between casing and wall 25mm.



LVH44 in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

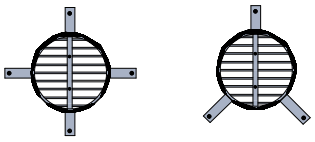
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Centralise the casing and firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 11.
- 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 8.
- 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, angles and fixings supplied by others.**

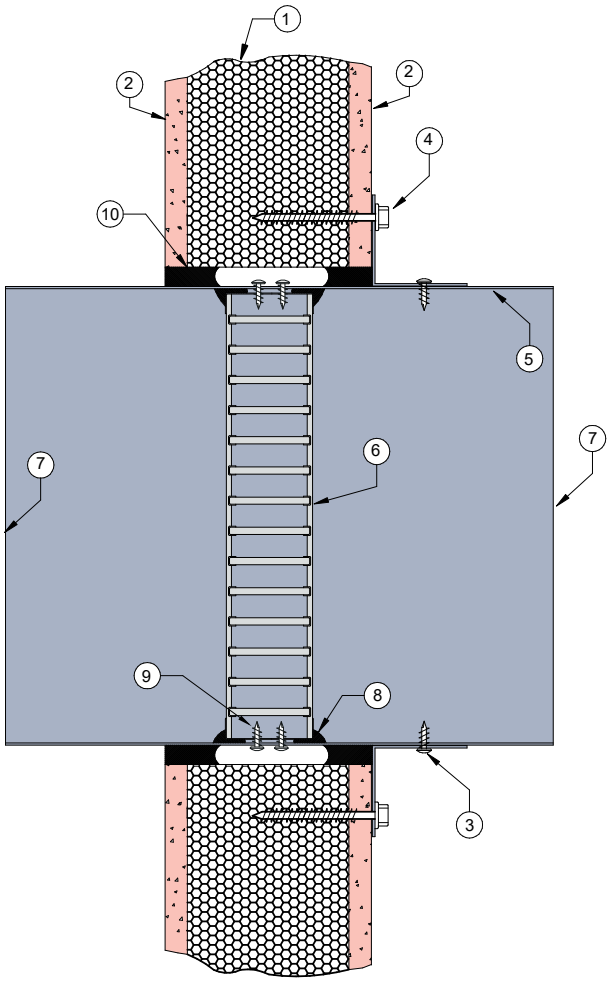
PRONTO PANEL™ 2

FIRE RATED

	DESCRIPTION
1	Brickworks Pronto Panel™ wall as per manufacturers test report.
2	10mm plasterboard fitted as per Pronto Panel™ Wall System 1C.
3	40mm x 40mm x 25mm x 1mm steel angles fixed to casing with steel screws.
4	Angle bracket fixed to wall with number 10 x 50mm steel Hex Head Type 17 screws.
5	Z275 galvanised steel casing minimum thickness minimum 0.6mm
6	Lorient LVH44C intumescent fire damper.
7	Casing terminates with breakaway joints, as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	LVH44C fixed to casing with 2 x steel screws.
10	Gap between casing and aperture filled with Lorient intumescent sealant. Backing rod used as required to control sealant fill depth of at least 25mm. Maximum annular gap between casing and wall 25mm.



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



LVH44C in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

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

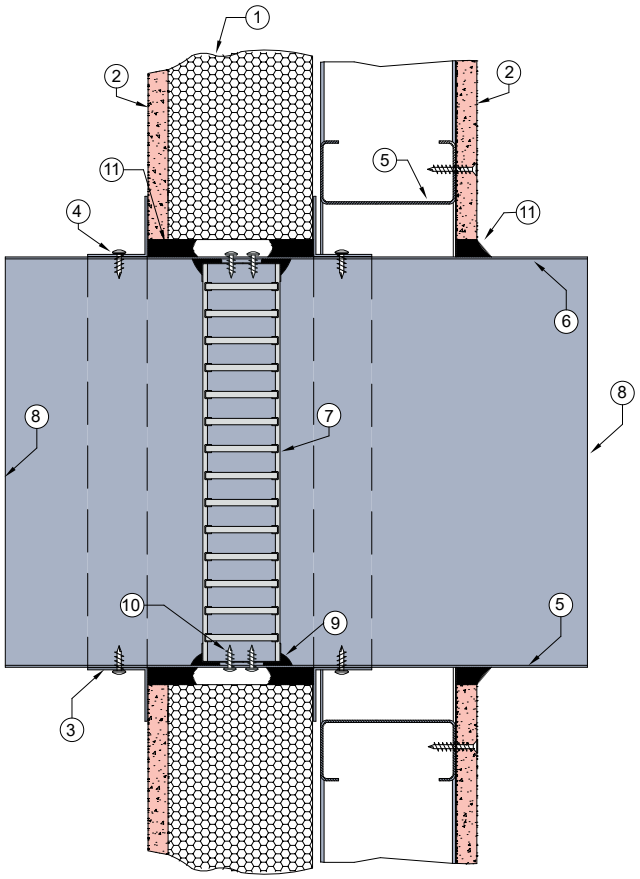
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- Centralise within the aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 10.
- Ductwork shall be connected with breakaway joints, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for maintenance routines.
- **Note: Fixings supplied by others.**

PRONTO PANEL™ 3

FIRE RATED

	DESCRIPTION
1	Brickworks Pronto Panel™ wall as per manufacturers test report.
2	Plasterboard and cavity infill as per Pronto Panel™ wall system 1A or 1B.
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.
4	Each angle fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
5	Steel stud supporting plasterboard sheet. Steel track used to frame out aperture around damper penetration.
6	Z275 galvanised steel minimum thickness minimum 0.6mm.
7	Lorient LVH44 intumescent fire damper.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	LVH44 fixed to casing with 2 x steel screws.
11	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 Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

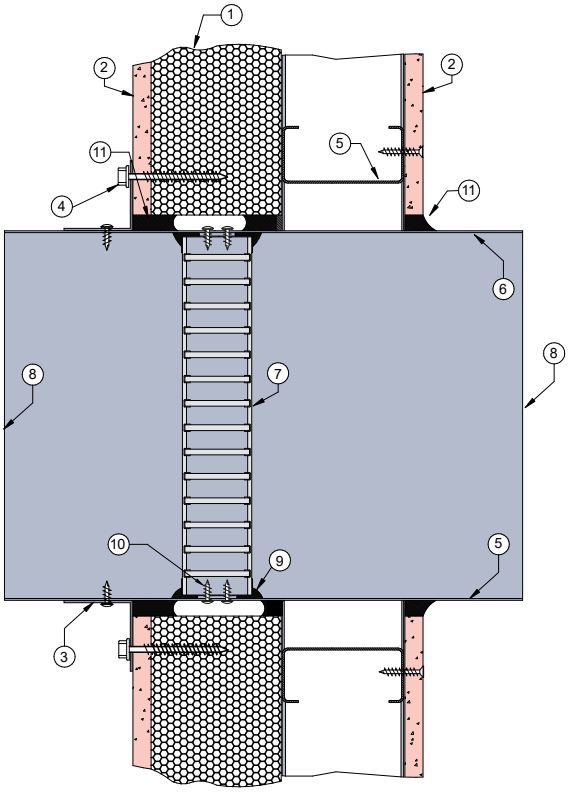
INSTALLATION INSTRUCTIONS

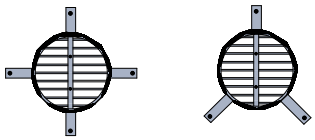
- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 11.
- Fit additional studwork and plasterboard as per Brickworks system details and seal gap between wall as per point 11.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

PRONTO PANEL™ 4

FIRE RATED

	DESCRIPTION
1	Brickworks Pronto Panel™ wall as per manufacturers test report.
2	Plasterboard and cavity infill as per Pronto Panel™ wall system 1A or 1B.
3	40mm x 40mm x 25mm x 1mm steel angles fixed to casing with steel screws.
4	Angle bracket fixed to wall with number 10 x 50mm steel Hex Head Type 17 screws.
5	Steel stud supporting plasterboard sheet. Steel track used to frame out aperture around damper penetration.
6	Z275 galvanised steel casing minimum thickness minimum 0.6mm.
7	Lorient LVH44C intumescent fire damper.
8	Casing terminates with breakaway joints, as per AS1682.2.
9	Fire damper perimeter sealed with Lorient intumescent sealant.
10	LVH44C fixed to casing with 2 x steel screws.
11	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.





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

LVH44C in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

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

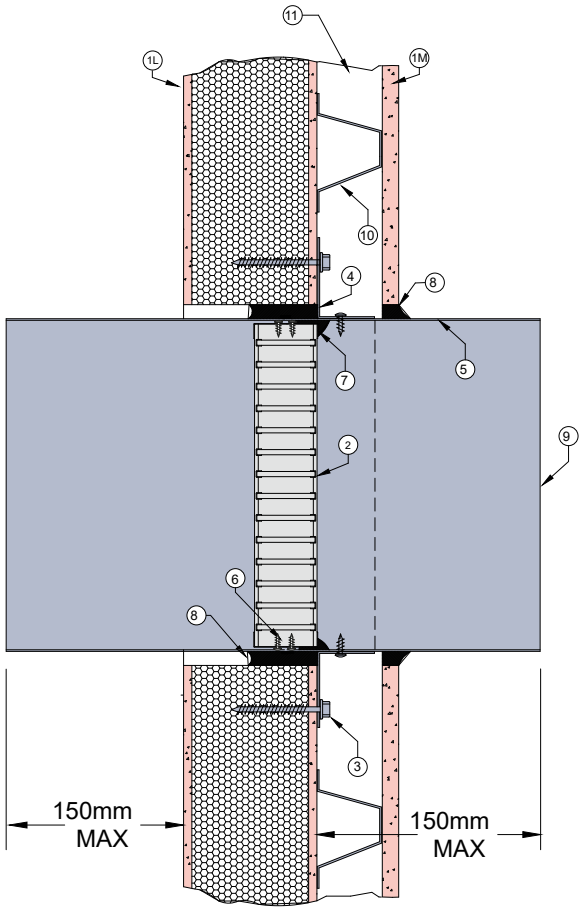
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- Centralise in aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 11.
- Fit additional studwork and plasterboard as per Brickworks system details and seal gap between wall as per point 11.
- Ductwork shall be connected with breakaway joints, as per point 8.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for maintenance routines.
- **Note: Fixings supplied by others.**

PRONTO PANEL™ 5

FIRE RATED

	DESCRIPTION
1L	60mm thick Pronto Panel™.
1M	13mm thick fire rated plasterboard.
2	Lorient LVH44 intumescent fire damper.
3	Angles fixed to wall with steel screws at 150mm centres or at least 2 per side.
4	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 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.
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.
10	40 x .048 BMT top hat section or 28mm furring channel and clip min 40mm cavity.
11	50mm thick 14kg/m^3 glass wool insulation.



LVH44 in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

600mm x 600mm

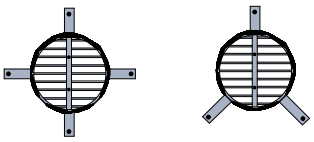
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- Centralise damper in pronto panel aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 8.
- Fit additional plasterboard as per Brickworks system details and seal gap between wall as per 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 maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

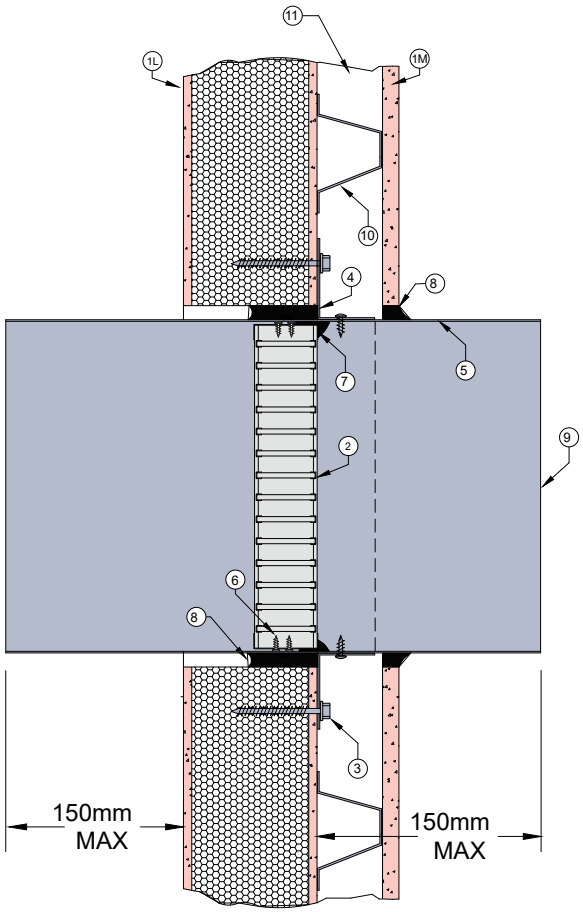
PRONTO PANEL™ 6

FIRE RATED

	DESCRIPTION
1L	60mm thick Pronto Panel™.
1M	13mm thick fire rated plasterboard
2	Lorient LVH44C intumescent fire damper.
3	Brackets fixed to wall with steel 10 x 50mm hex head type 17 screws.
4	40mm x 40mm x 25mm x 1mm steel angles fixed to casing with steel self drilling screws.
5	Z275 galvanised steel casing min thickness 0.6mm.
6	Fire damper fixed to casing with 2 x steel screws.
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.
10	40 x .048 BMT top hat section or 28mm furring channel and clip min 40mm cavity.
11	50mm thick 14kg/m³ glass wool insulation.



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



LVH44C in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

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

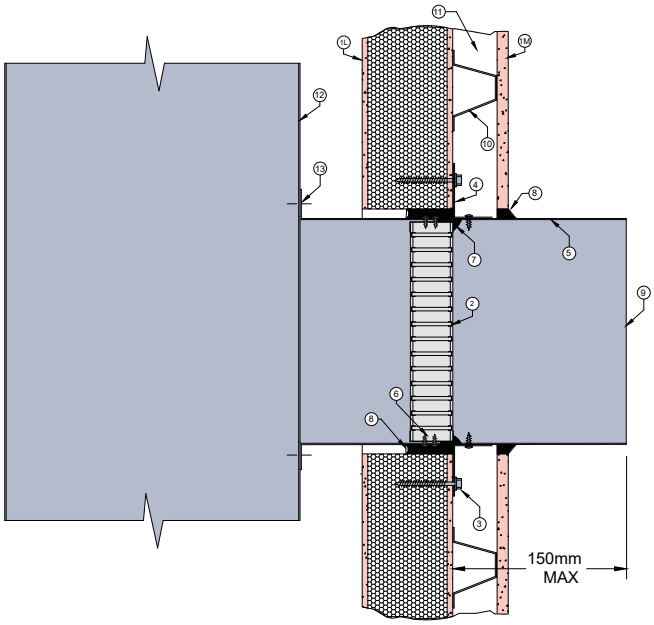
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Fix angle brackets to casing with steel self drilling screws or pop rivets, as detailed in points 3 & 4.
- Centralise damper in pronto panel aperture and mechanically fix to wall. Firestop the gap between the casing and wall with Lorient intumescent sealant, note fill details in point 8.
- Fit additional plasterboard as per Brickworks system details and seal gap between wall and casing as per 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 maintenance routines.
- **Note: Damper casings, angles and fixings supplied by others.**

PRONTO PANEL™ 7

FIRE RATED

	DESCRIPTION
1L	60mm thick Pronto Panel™.
1M	13mm thick fire rated plasterboard.
2	Lorient LVH44 intumescent fire damper.
3	Angles fixed to wall with steel 10 x 50mm hex head type 17 screws at 150mm centres.
4	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 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.
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.
10	40 x .048 BMT top hat section or 28mm furring channel and clip min 40mm cavity.
11	50mm thick 14kg/m3 glass wool insulation.
12	Protected sheet metal riser.
13	Riser branch mechanically connected to riser with steel fixing.



LVH44 in steel casing penetrating fire rated Pronto Panel™ wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max single cell size

600mm x 600mm

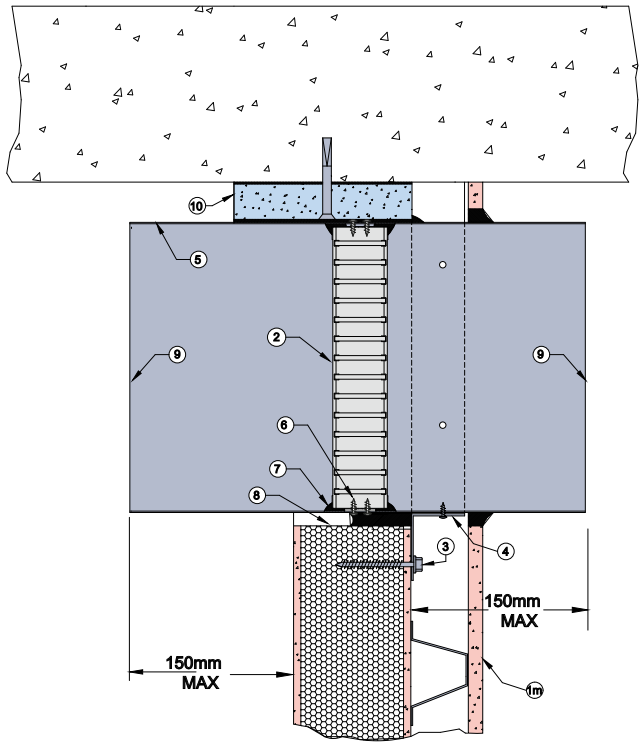
INSTALLATION INSTRUCTIONS

- 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 5) and seal perimeter with Lorient intumescent sealant (point 7).
- Mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 13).
- 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 breakawayjoints, 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, angles and fixings supplied by others.**

PRONTO PANEL™ 8

FIRE RATED

	DESCRIPTION
1L	60mm thick Pronto Panel™.
1M	13mm thick fire rated plasterboard.
2	Lorient LVH44 intumescent fire damper.
3	Each angle fixed to damper casing with steel fasteners 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.
5	Z275 galvanised steel casing min thickness 0.6mm.
6	Fire damper fixed to casing with 2 x steel screws.
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.
10	100mm wide x 50mm thick TBA Firefly Intubatt or non-combustible block 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 Pronto Panel™ 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

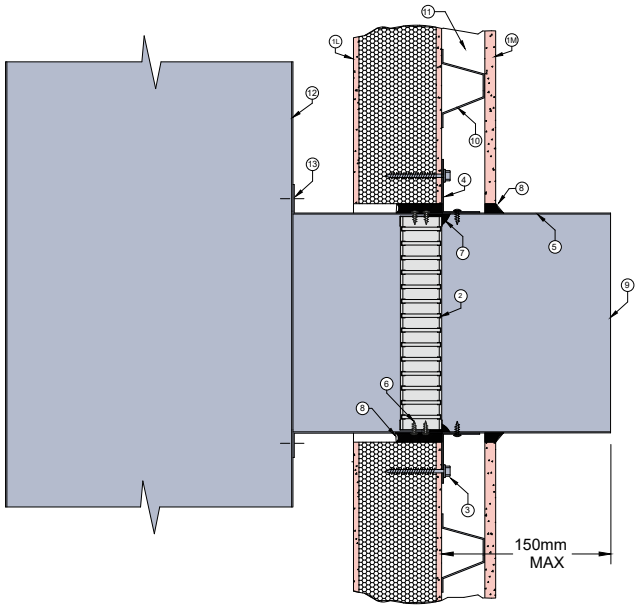
INSTALLATION INSTRUCTIONS

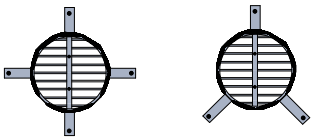
- Prepare the wall opening to accept the fire damper and install in wall, as shown in this system detail.
- Non-combustible or TBA Intubatt block is fixed to slab, as per point 10.
- Lorient intumescent sealant liberally applied to block and duct containing damper is positioned and pushed up tight to 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 & 4.
- Fit additional plasterboard as per Brickworks system details and seal gap between wall as per 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 casing, angles and fixings supplied by others.**

PRONTO PANEL™ 9

FIRE RATED

	DESCRIPTION
1L	60mm thick Pronto Panel™.
1M	13mm thick fire rated plasterboard.
2	Lorient LVH44C circular intumescent fire damper.
3	40mm x 40mm x 25mm x 1mm brackets fixed to wall with steel 10 x 50 hex head type 17 screws.
4	Angle brackets fixed to damper casing with steel self-drilling screws.
5	Z275 galvanised steel casing min thickness 0.6mm.
6	Fire damper fixed to casing with 2 x steel screws.
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.
10	40 x .048 BMT top hat section or 28mm furring channel and clip min 40mm cavity.
11	50mm thick 14kg/m3 glass wool insulation.
12	Protected sheet metal riser.
13	Branch mechanically connected to riser with steel fixings.





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

LVH44C in steel casing penetrating fire rated Pronto Panel™ shaft wall

FRL -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 33233400

Max size

450mm diameter

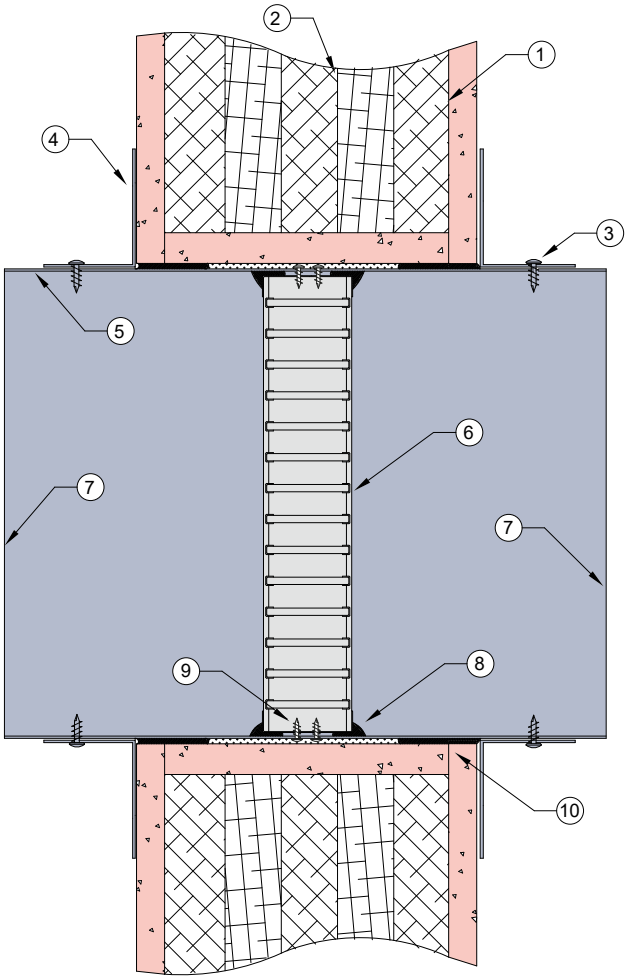
INSTALLATION INSTRUCTIONS

- 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 5) and seal perimeter with Lorient intumescent sealant (point 7).
- Mechanically fix the branch to the vertical riser with steel screws or pop rivets (point 13).
- 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, angles and fixings supplied by others.**

SYSTEM XLAM 1

CROSS LAMINATED TIMBER WALL

	DESCRIPTION
1	Plasterboard fixed to wall and aperture: 1 layer of 16mm or 2 layers of 13mm fire rated plasterboard (FRL 90 minutes) OR 2 layers of 16mm fire rated plasterboard (FRL 120 minutes)
2	XLam CLT panel. Thickness: 85mm to 315mm.
3	Angles fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
4	0.6mm (min) Z275 galvanised steel angles to all four sides. Angles shall be continuous and at least 2 x the dimension of the gap between the damper casing and the wall.
5	Z275 galvanised steel casing min thickness 0.6mm.
6	Lorient LVH44 intumescent fire damper.
7	Casing terminates with breakaway joints as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	Fire damper fixed to casing with 2 x steel screws.
10	Gap between damper and aperture filled with Lorient Intumescent sealant.



LVH44 in steel casing penetrating a fire rated XLam CLT Wall

FRL Up to -/120/60

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3300

Maximum size

Area not to exceed 0.2m²

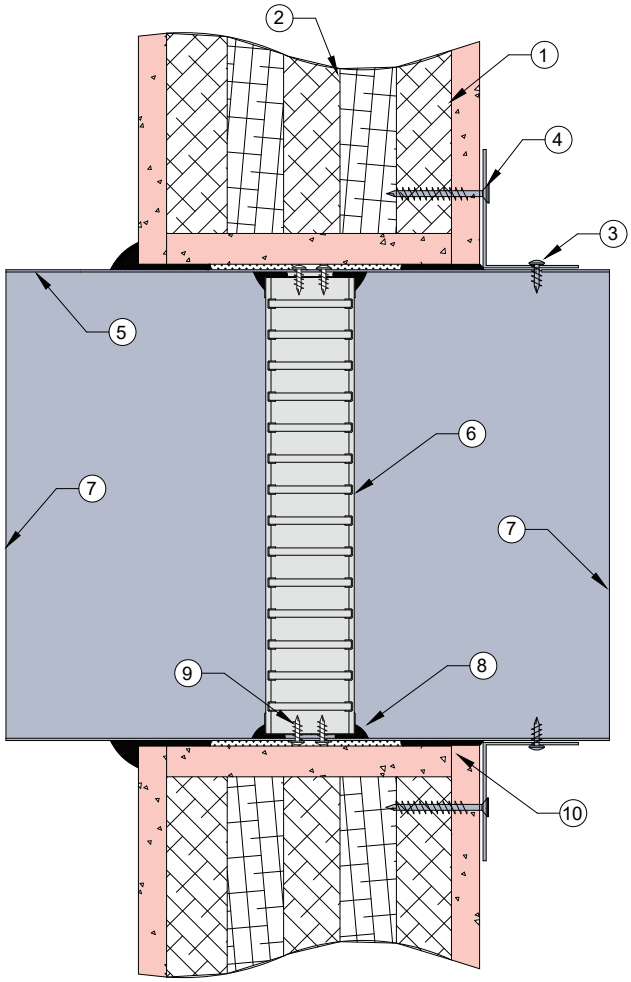
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper as per point 1.
- Mechanically fix angle brackets to one side of damper casing with steel screws as per point 3.
- Install casing into wall aperture and firestop the gap between the casing and wall with Lorient intumescent sealant.
- Fix angle brackets to reverse side with steel self drilling screws as per point 3.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

SYSTEM XLAM 2

CROSS LAMINATED TIMBER WALL

	DESCRIPTION
1	Plasterboard fixed to wall and aperture: 1 layer of 16mm or 2 layers of 13mm fire rated plasterboard (FRL 90 minutes) OR 2 layers of 16mm fire rated plasterboard (FRL 120 minutes)
2	XLam CLT panel. Thickness: 85mm to 315mm.
3	Angles fixed to damper casing with steel fasteners at 150mm centres or at least 2 per side.
4	0.6mm (min) Z275 galvanised steel angles to all four sides. Angles shall be continuous and at least 2 x the dimension of the gap between the damper casing and the wall. Angles fixed to wall with 50mm long coarse thread screws at 150mm centres or at least 2 per side.
5	Z275 galvanised steel casing min thickness 0.6mm.
6	Lorient LVH44 intumescent fire damper.
7	Casing terminates with breakaway joints as per AS1682.2.
8	Fire damper perimeter sealed with Lorient intumescent sealant.
9	Fire damper fixed to casing with 2 x steel screws.
10	Gap between damper and aperture filled with Lorient Intumescent sealant.



LVH44 in steel casing penetrating a fire rated XLam CLT Wall

FRL Up to -/120/60

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

CSIRO FCO 3300

Maximum size

Area not to exceed 0.2m²

INSTALLATION INSTRUCTIONS

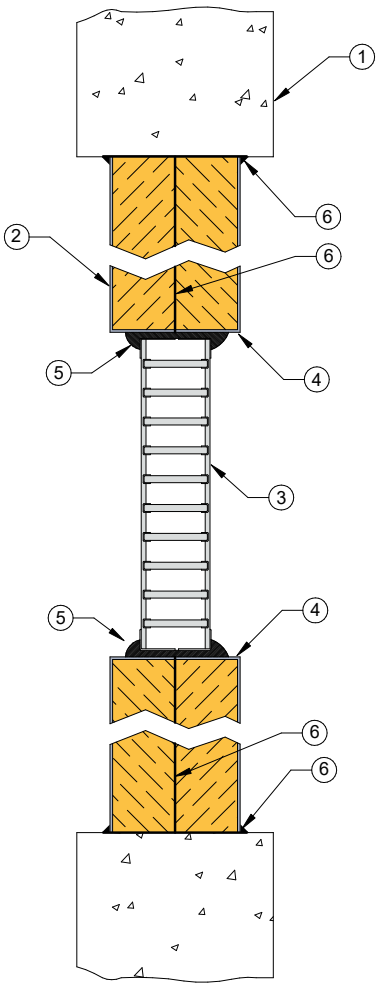
- Prepare the wall opening to accept the fire damper as per point 1.
- Mechanically fix angle brackets to one side of damper casing with steel screws as per point 3.
- Install casing in aperture and firestop the gap between the casing and wall as per point 10.
- Fix angles to wall steel screws as per point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INTUBATT 1

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	100mm minimum thick Masonry, Concrete or Hebel® wall.
2	2 x 50mm thick TBA Firefly Intubatt friction fitted centrally into wall aperture.
3	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
4	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant as per test approvals.
5	Lorient LVH44 intumescent fire damper glued into TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
6	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit: www.tbafirefly.com.au



Masonry, concrete or Hebel® wall with TBA Firefly Intubatt containing Lorient LVH44 intumescent damper

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

INSTALLATION INSTRUCTIONS

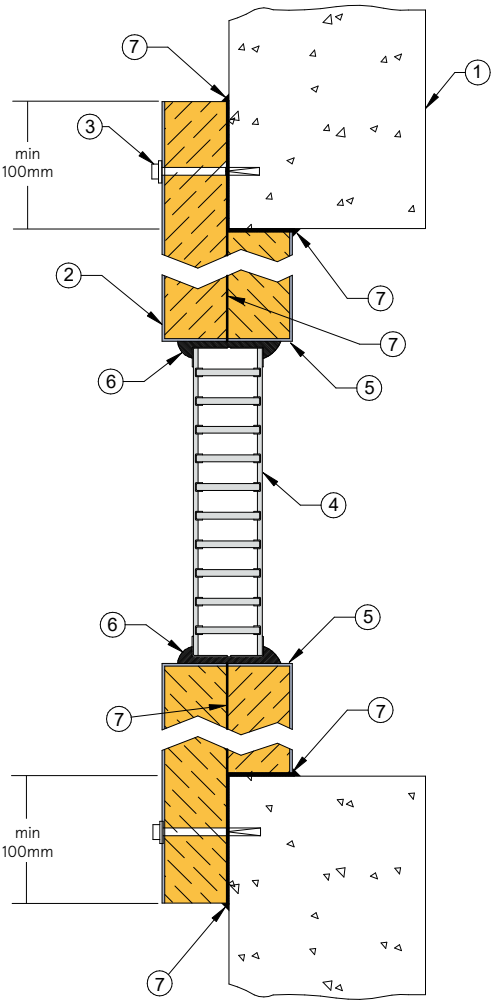
- Prepare opening in wall to accept the TBA Firefly Intubatt.
- Friction fit Intubatt into wall aperture as per test approval and see point 2.
- Cut hole for LVH44 and prepare aperture in Intubatt, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 5.
- Ensure all joints are sealed, 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: TBA Intubatt and TBA intumastic sealant supplied by others.**

INTUBATT 2

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	100mm minimum thick Masonry, Concrete or Hebel® wall.
2	2 x 50mm thick TBA Firefly Intubatt one friction fit and one overlapping aperture (min. 100mm).
3	TBA Firefly Intubatt panel mechanically fixed to wall with 75mm masonry anchors at 300mm centres, as per test approvals.
4	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
5	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant, as per test approvals.
6	Lorient LVH44 intumescent fire damper glued into TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
7	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit:
www.tbafirefly.com.au



Masonry, concrete or Hebel® wall with TBA Firefly Intubatt containing Lorient LVH44 intumescent damper

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

INSTALLATION INSTRUCTIONS

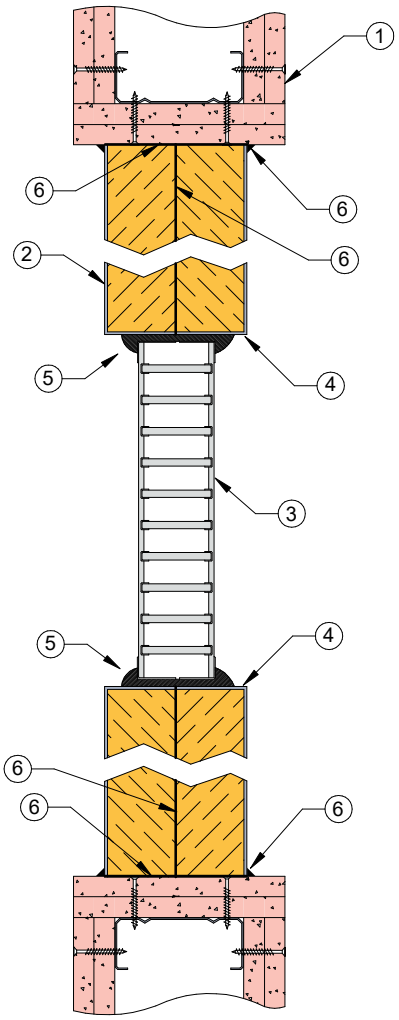
- Prepare wall opening to accept TBA Firefly Intubatt.
- Cut and friction fit Intubatt into wall aperture and fix with masonry anchors as per test approval - see points 2 & 3.
- Cut hole for LVH44 and prepare aperture in Intubatt cut edges, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 6.
- Ensure all joints are sealed, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: TBA Intubatt and TBA intumastic sealant and metal fixings supplied by others.**

INTUBATT 3

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	116mm minimum thick Plasterboard stud wall with plasterboard lined aperture.
2	2 x 50mm thick TBA Firefly Intubatt friction fitted centrally into wall aperture.
3	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
4	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant as per test approvals.
5	Lorient LVH44 intumescent fire damper glued into TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
6	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit: www.tbafirefly.com.au



Fire rated plasterboard stud wall with TBA Firefly Intubatt containing Lorient LVH44 intumescent damper

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

INSTALLATION INSTRUCTIONS

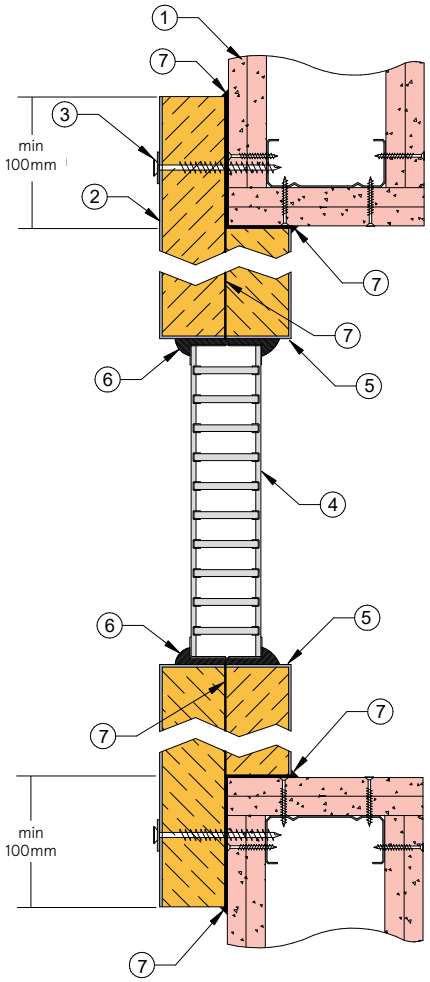
- Prepare opening in wall to accept the TBA Firefly Intubatt.
- Friction fit Intubatt into wall aperture, as per test approval and see point 2.
- Cut hole for LVH44 and prepare aperture in Intubatt, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 5.
- Ensure all joints are sealed, 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: TBA Intubatt and TBA intumastic sealant supplied by others.**

INTUBATT 4

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	116mm minimum plasterboard stud wall with plasterboard lined aperture.
2	2 x 50mm thick TBA Firefly Intubatt friction fit and one overlapping aperture (min. 100mm).
3	TBA Firefly Intubatt panel mechanically fixed to wall with 75mm needle point screws and penny washers at 300mm centres as per test approvals.
4	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
5	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant, as per test approvals.
6	Lorient LVH44 intumescent fire damper glued into TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
7	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit:
www.tbafirefly.com.au



Fire rated plasterboard stud wall with TBA Firefly Intubatt containing Lorient LVH44 intumescent damper

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

INSTALLATION INSTRUCTIONS

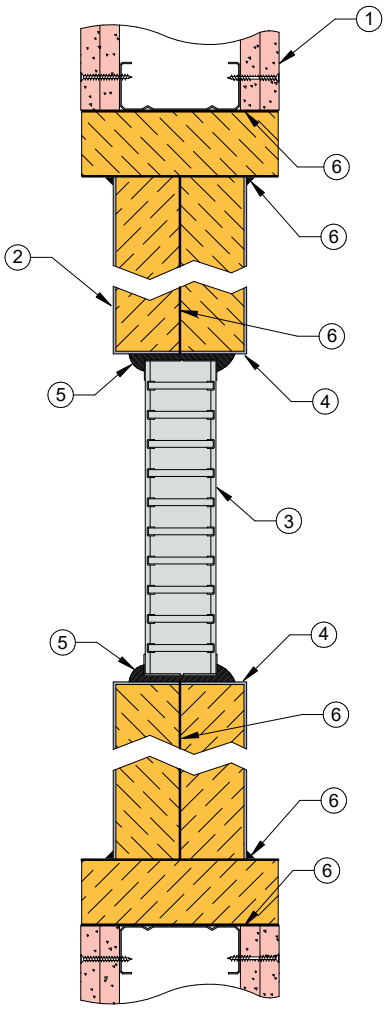
- Prepare wall opening to accept TBA Firefly Intubatt.
- Cut and friction fit Intubatt into wall aperture and fix with screws and washers, as per test approval - see points 2 & 3.
- Cut hole for LVH44 and prepare aperture in Intubatt cut edges, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 6.
- Ensure all joints are sealed, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: TBA Intubatt and TBA intumastic sealant supplied by others.**

INTUBATT 5

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	116mm minimum thick Plasterboard stud wall with TBA Firefly Intubatt aperture lining.
2	2 x 50mm thick TBA Firefly Intubatt friction fitted centrally into wall aperture.
3	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
4	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant as per test approvals.
5	Lorient LVH44 intumescent fire damper glued into TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
6	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit: www.tbafirefly.com.au



Fire rated plasterboard stud wall with TBA Firefly Intubatt containing Lorient LVH44 intumescent damper

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

INSTALLATION INSTRUCTIONS

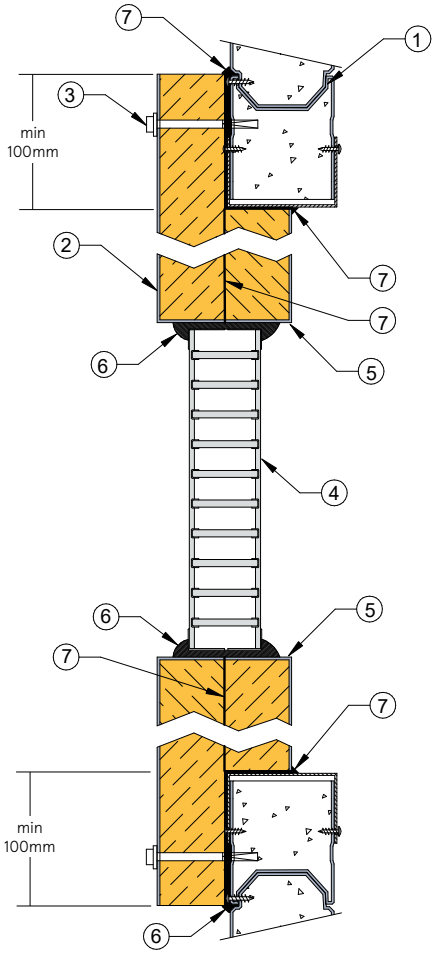
- Prepare opening in wall to accept the TBA Firefly Intubatt.
- Line aperture with Intubatt as per test approvals.
- Friction fit Intubatt into wall aperture as per test approval - see point 2.
- Cut hole for LVH44 and pepare aperture in Intubatt, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 5.
- Ensure all joints are sealed, 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: TBA Intubatt and TBA intumastic sealant supplied by others.**

INTUBATT 6

FIRE RATED WALL FITTED WITH TBA FIREFLY INTUBATT SYSTEM

	DESCRIPTION
1	78mm Speedpanel® wall.
2	2 x 50mm thick TBA Firefly Intubatt friction fit and one overlapping aperture (min. 100mm).
3	TBA Firefly Intubatt panel mechanically fixed to wall with 75mm masonry anchors, as per test approvals.
4	TBA Firefly Intubatt incorporates Lorient LVH44 intumescent fire damper max. 450mm x 450mm.
5	TBA Firefly Intubatt aperture raw edges treated with brushable TBA Firefly intumastic sealant as per test approvals.
6	Lorient LVH44 intumescent fire damper glued in to TBA Firefly Intubatt with TBA Firefly intumastic sealant (full depth).
7	All other joints sealed with TBA Firefly intumastic sealant.

For TBA Firefly product enquiries visit:
www.tbafirefly.com.au



LVH44 fitted into TBA Firefly Intubatt panel

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA FAS190234
EXOVA EWFA FAS190235

Max size

450mm x 450mm

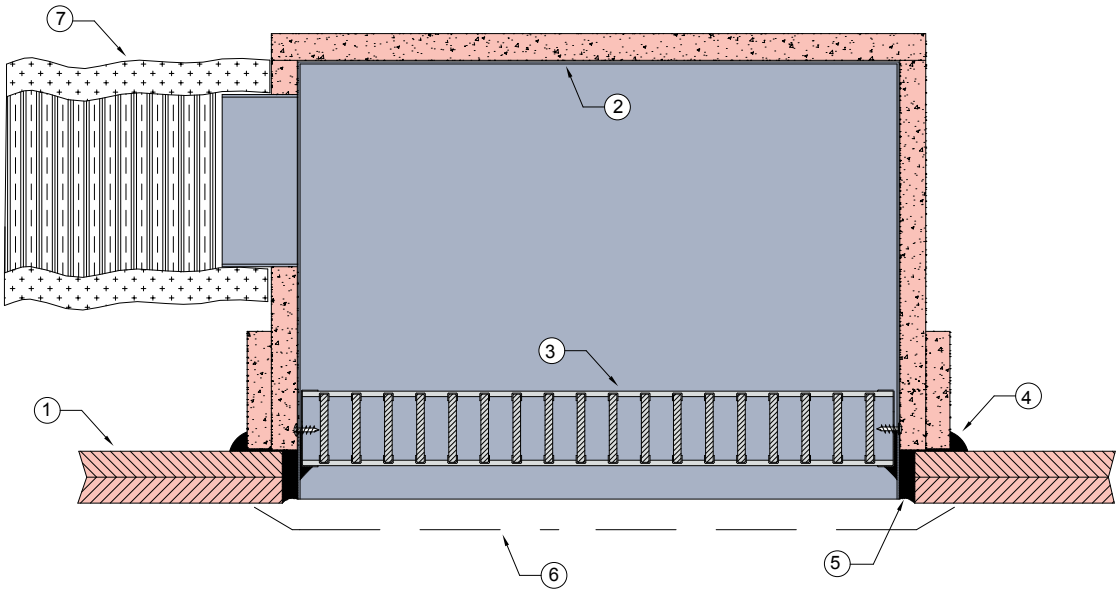
INSTALLATION INSTRUCTIONS

- Prepare wall opening to accept TBA Firefly Intubatt.
- Cut and friction fit Intubatt into wall aperture and fix with masonry anchors as per test approval - see points 2 & 3.
- Cut hole for LVH44 and prepare aperture in Intubatt cut edges, as per point 4.
- Fit LVH44 into prepared Intubatt aperture and adhere in place using TBA Firefly intumastic sealant. Note fill details in point 6.
- Ensure all joints are sealed, as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: TBA Intubatt and TBA intumastic sealant and metal fixings supplied by others.**

CEILING 1

FIRE & INCIPIENT RATED CEILINGS

	DESCRIPTION
1	Dual layer fire rated plasterboard ceiling.
2	LOR-LITE fire rated plenum box.
3	Lorient LVH44 intumescent grille.
4	Plenum box bedded in Lorient intumescent sealant.
5	Gap between casing and plasterboard filled full depth with Lorient intumescent sealant.
6	Aluminium diffuser fitted to underside as required.
7	Insulated flexible duct connected to box.



LVH44 installed in ceiling

FRL 60/60/60

Fire Resistance in accordance with

AS1530.4 2014

60 minutes resistance to the incipient spread of flame (RISF)

Approval Ref

BRANZ FAR 4581

Max single cell size

Max area 0.25sqm

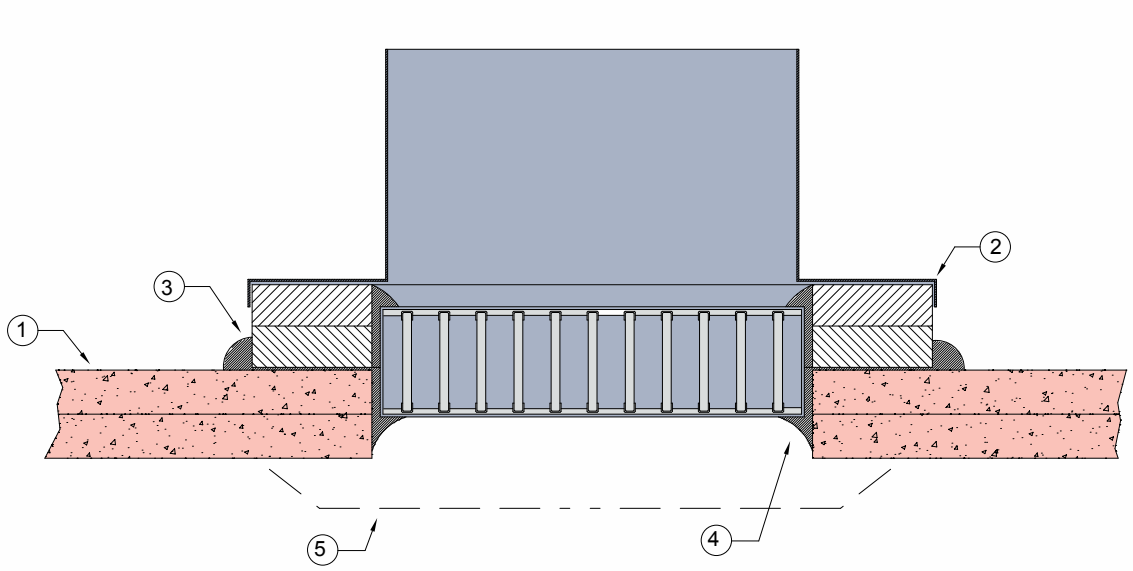
INSTALLATION INSTRUCTIONS

- Prepare aperture in ceiling to accept installation.
- Fit supplied plenum box to aperture as detailed.
- Liberally apply Lorient intumescent sealant around aperture and bed box into sealant, as per point 4.
- Seal gap between box and aperture full depth with Lorient intumescent sealant, as per point 5.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Air diffuser supplied by others.**

CEILING 3

FIRE & INCIPIENT RATED CEILINGS

	DESCRIPTION
1	Dual layer rated plasterboard ceiling.
2	Lorient fire rated inline fan connection block.
3	Base plate bedded in Lorient intumescent sealant.
4	Perimeter gap filled full depth with Lorient intumescent sealant.
5	Aluminium return / supply air cover grilles as required.



LVH44C installed in ceiling

FRL 60/60/60

Fire Resistance in accordance with

AS1530.4 2014

60 minutes resistance to the incipient spread of flame (RISF)

Approval Ref

BRANZ FP 5859

Max cell size

150mm diameter

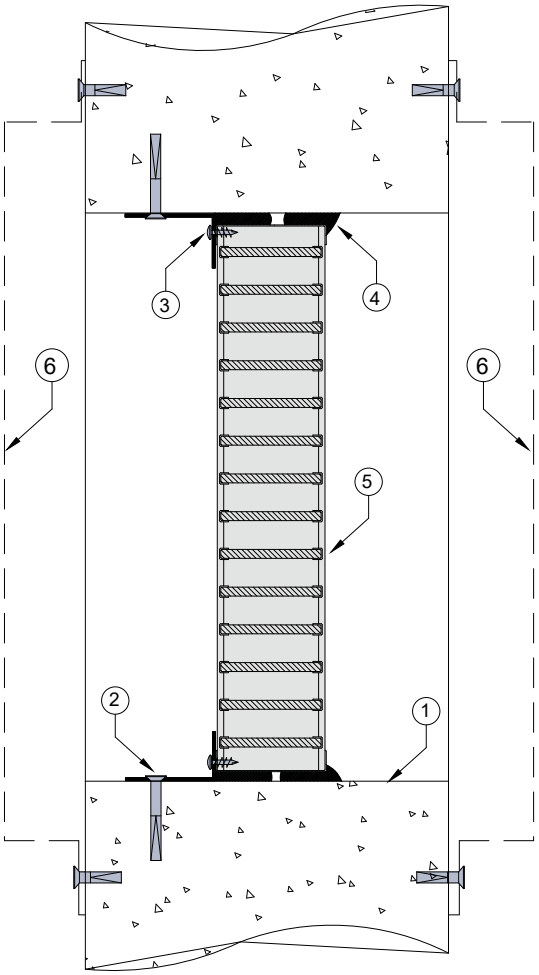
INSTALLATION INSTRUCTION

- Determine location and prepare 165mm diameter hole in ceiling.
- Liberally apply Lorient intumescent sealant to the damper baseplate and a 25mm band around the aperture.
- Fit damper centrally within the aperture and push into the intumescent sealant ensuring that is completely bedded in.
- Connect flexible ductwork to casing spigot.
- On the underside of the ceiling seal fill the gap between damper and aperture full depth with Lorient intumescent sealant.
- Fit face cover plate as required.
- **Note: Air diffuser / cover plate supplied by others.**

INSULATING WALL 1

MASONRY OR CONCRETE WALLS

	DESCRIPTION
1	Masonry or concrete wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.
6	12mm x 24mm wire mesh with 75mm projection and 40mm aperture overlap fixed to wall with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/240/120

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

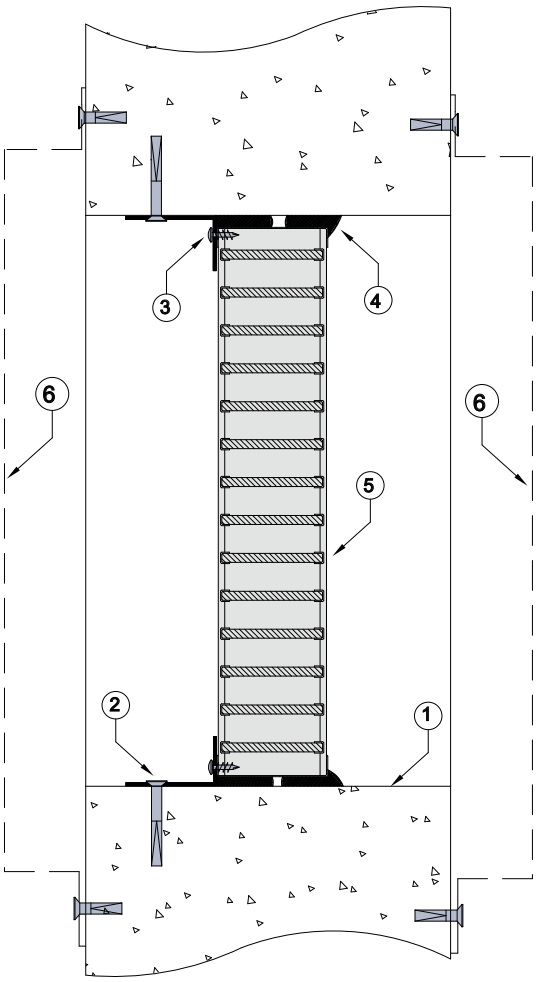
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the LVH44 perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING WALL 2

CSR HEBEL® WALL

	DESCRIPTION
1	CSR Hebel® wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.
6	12mm x 24mm wire mesh with 75mm projection and 40mm aperture overlap fixed to wall with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/120/120

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

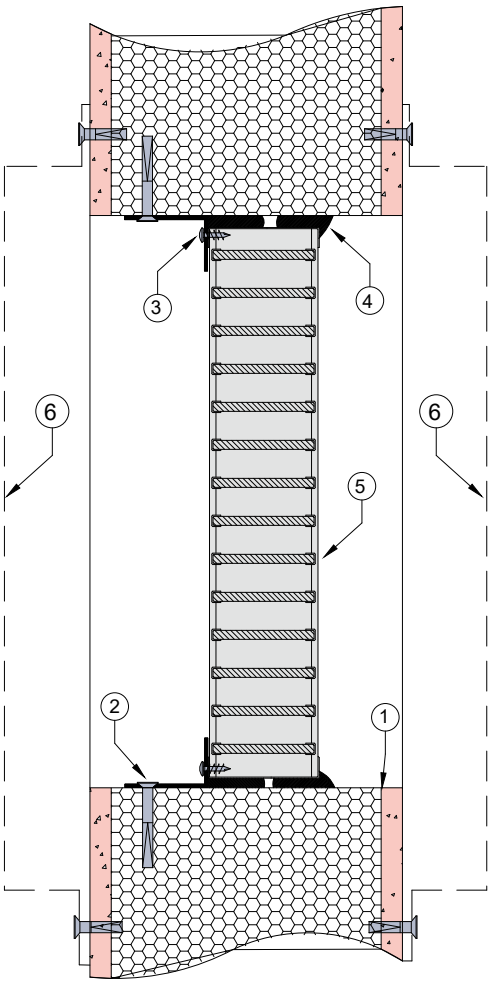
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix Angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the LVH44 perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING LVH44 WALL 3

PRONTO PANEL™

	DESCRIPTION
1	Pronto Panel™ wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.
6	12mm x 24mm wire mesh with 75mm projection and 40mm aperture overlap fixed to wall with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/120/120

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

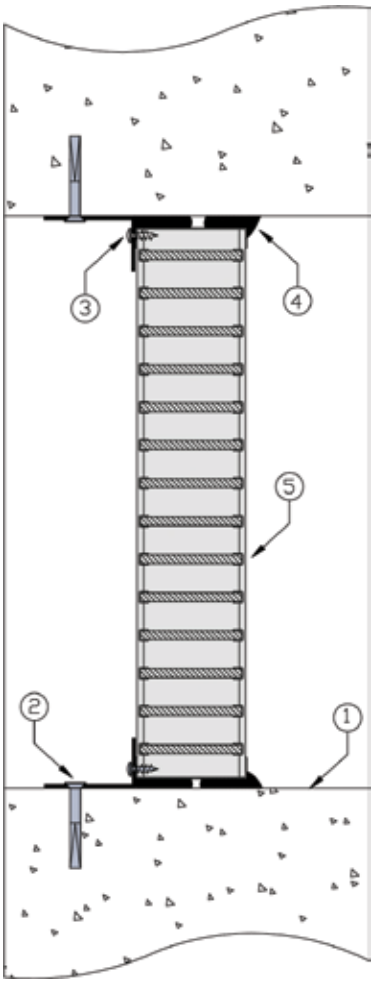
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix Angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the LVH44 perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

NON-INSULATING WALL 4

MASONRY OR CONCRETE WALLS

	DESCRIPTION
1	Masonry or concrete wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.



LVH44 Air Transfer Grille

FRL Up to -/240/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

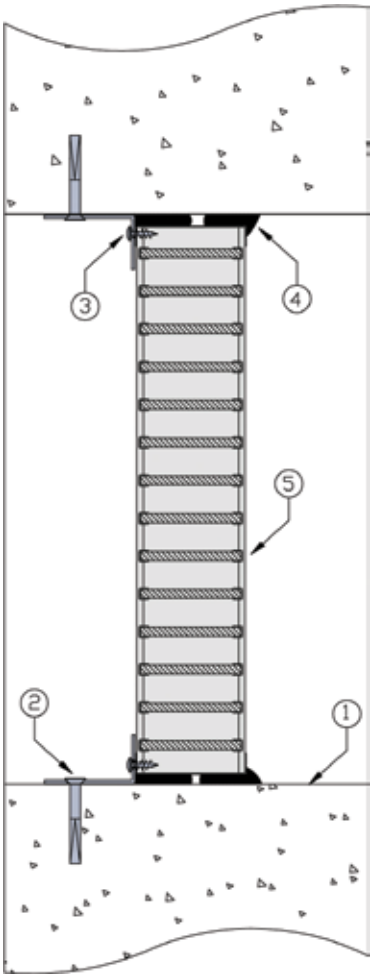
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix Angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

NON-INSULATING WALL 5

CSR HEBEL® WALL

	DESCRIPTION
1	CSR Hebel® wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.



LVH44 Air Transfer Grille

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

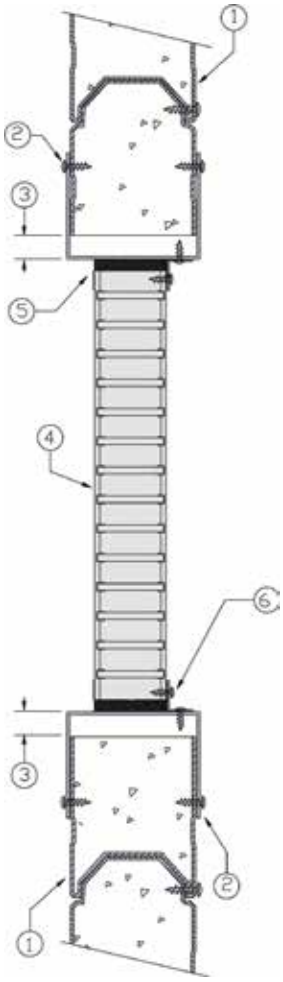
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

NON-INSULATING WALL 6

SPEEDPANEL®

	DESCRIPTION
1	51mm, 64mm or 78mm Speedpanel® wall system.
2	Aperture lined out with box track section screw fixed to wall with 10G self drill steel screws at 400mm centres (or min 2 per side).
3	Gap between box channel and aperture varies - max 20mm.
4	Lorient LVH44 intumescent fire damper.
5	Gap between damper and aperture filled with Lorient Intumescent sealant mm centres.
6	Angles fixed to damper with steel fasteners at 150mm centres.



LVH44 Air Transfer Grille

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

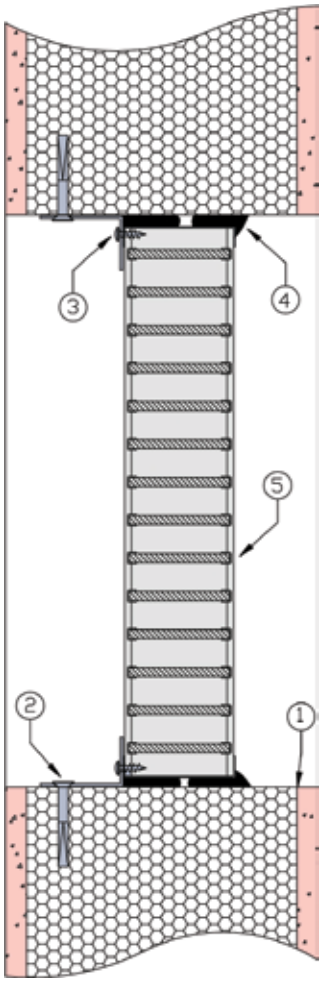
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

NON-INSULATING WALL 7

PRONTO PANEL™

	DESCRIPTION
1	Pronto Panel™ wall with prepared aperture.
2	40mm x 40mm x 25mm x 1mm Z275 galvanized steel angle brackets to all four sides fixed to wall with steel anchors at 200mm centres.
3	Angles fixed to damper with steel fasteners at 150mm centres.
4	Gap between damper and aperture filled with Lorient Intumescent sealant.
5	Lorient LVH44 intumescent fire damper.



LVH44 Air Transfer Grille

FRL Up to -/120/-

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1200mm x 2400mm

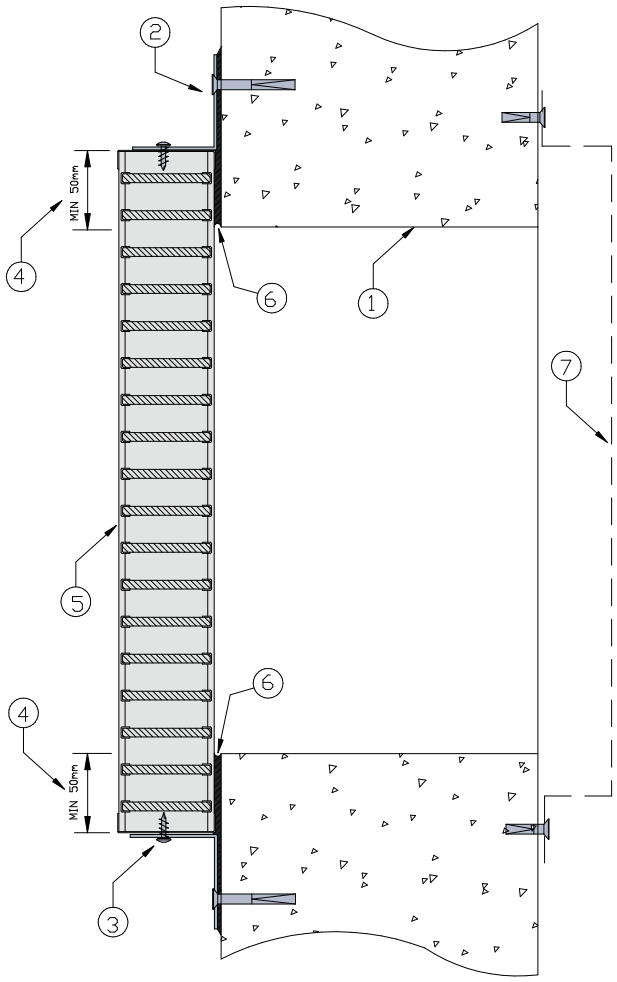
INSTALLATION INSTRUCTIONS

- Prepare the wall opening to accept the fire damper, as per point 1.
- Mechanically fix angle brackets to aperture with steel anchors, as per point 2.
- Install LVH44 in aperture, and fix to angle brackets with steel self drilling screws as per point 3.
- Firestop the gap between the perimeter and wall with Lorient intumescent sealant, note fill details in point 4.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING OVER APERTURE WALL 8

MASONRY OR CONCRETE WALLS

	DESCRIPTION
1	Masonry or concrete wall 120mm thick.
2	Full length 40mm x 40mm x 1mm angles fixed to wall with steel anchors.
3	Angles fixed to damper perimeter with steel self- drilling screw at 150mm centres.
4	Damper to overlap aperture by 50mm (minimum).
5	Lorient LVH44 damper.
6	Damper bedded in Lorient intumescent sealant.
7	12mm x 12mm steel mesh with 40mm (nominal) projection and 70mm aperture overlap fixed in place with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to-/240/120*

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max wall aperture size

1000mm x 500mm

* One direction only (i.e. LVH44 positioned in fire compartment)

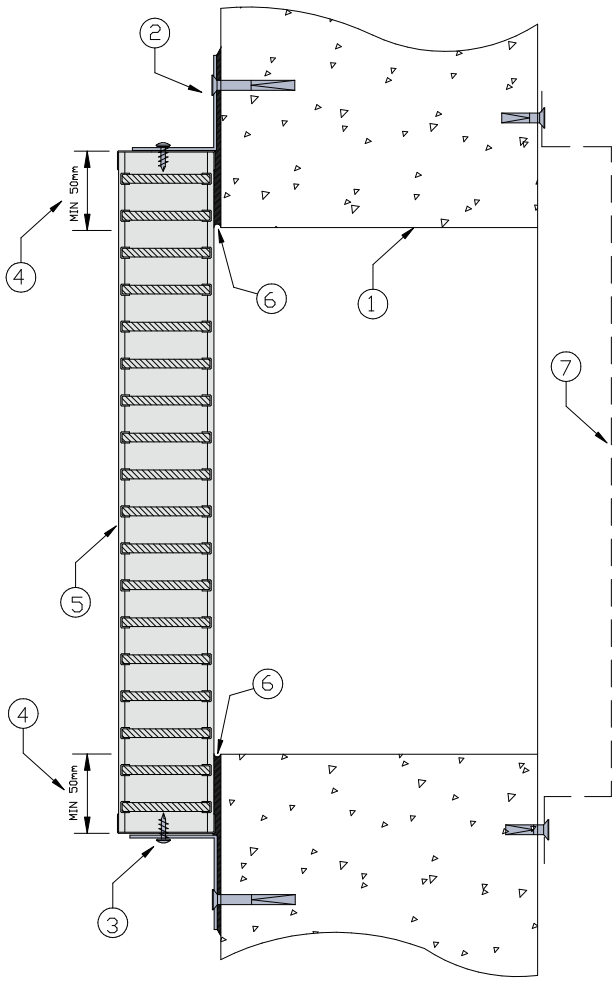
INSTALLATION INSTRUCTIONS

- Fit 40mm x 40mm x 1mm angles to damper as per point 3.
- Position damper over aperture ensuring minimum distance of 50mm as per point 4. Mark and drill fixing holes.
- Liberally apply Lorient intumescent sealant to area where damper and angles are to be fitted.
- Bed damper into intumescent sealant and fix to wall using steel anchors at min 200mm centres.
- Fix wire mesh grill to opposite side as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING OVER APERTURE WALL 9

CRS HEBEL® WALL

	DESCRIPTION
1	CSR Hebel® wall.
2	Full length 40mm x 40mm x 1mm angles fixed to wall with steel anchors.
3	Angles fixed to damper perimeter with steel self- drilling screw at 150mm centres.
4	Damper to overlap aperture by 50mm (minimum).
5	Lorient LVH44 damper.
6	Damper bedded in Lorient intumescent sealant.
7	12mm x 12mm steel mesh with 40mm (nominal) projection and 70mm aperture overlap fixed in place with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/120/120*

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max wall aperture size

1000mm x 500mm

* One direction only (i.e. LVH44 positioned in fire compartment)

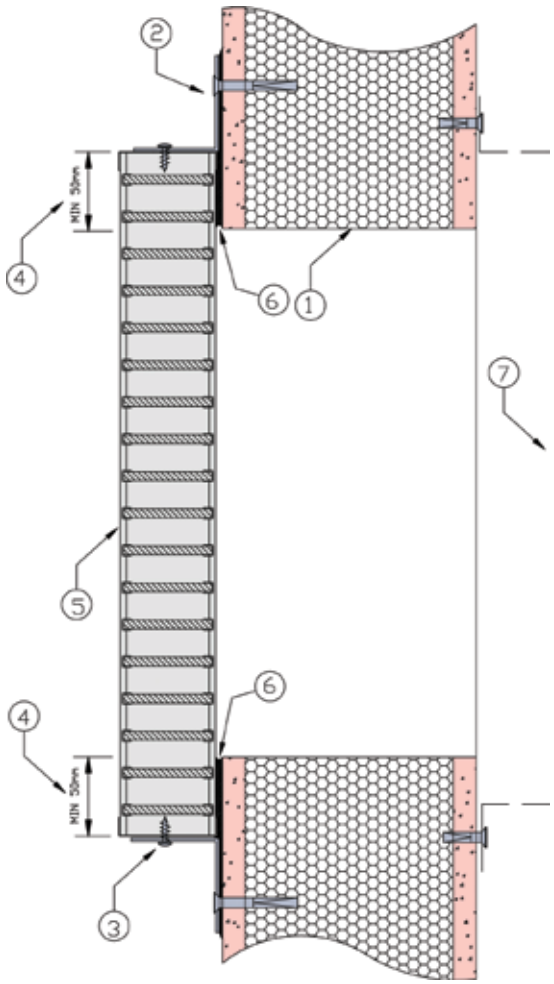
INSTALLATION INSTRUCTIONS

- Fit 40mm x 40mm x 1mm angles to damper as per point 3.
- Position damper over aperture ensuring minimum distance of 50mm as per point 4. Mark and drill fixing holes.
- Liberally apply Lorient intumescent sealant to area where damper and angles are to be fitted.
- Bed damper into intumescent sealant and fix to wall using steel anchors at min 200mm centres.
- Fix wire mesh grill to opposite side as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING OVER APERTURE WALL 10

PRONTO PANEL™

	DESCRIPTION
1	Pronto Panel™ wall.
2	Full length 40mm x 40mm x 1mm angles fixed to wall with steel anchors.
3	Angles fixed to damper perimeter with steel self- drilling screw at 150mm centres.
4	Damper to overlap aperture by 50mm (minimum).
5	Damper bedded in Lorient intumescent sealant.
6	12mm x 24mm wire mesh with 75mm projection and 40mm aperture overlap fixed to wall with steel anchors and penny washers.
7	12mm x 12mm steel mesh with 40mm (nominal) projection and 70mm aperture overlap fixed in place with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/120/120*

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max wall aperture size

1000mm x 500mm

* One direction only (i.e. LVH44 positioned in fire compartment)

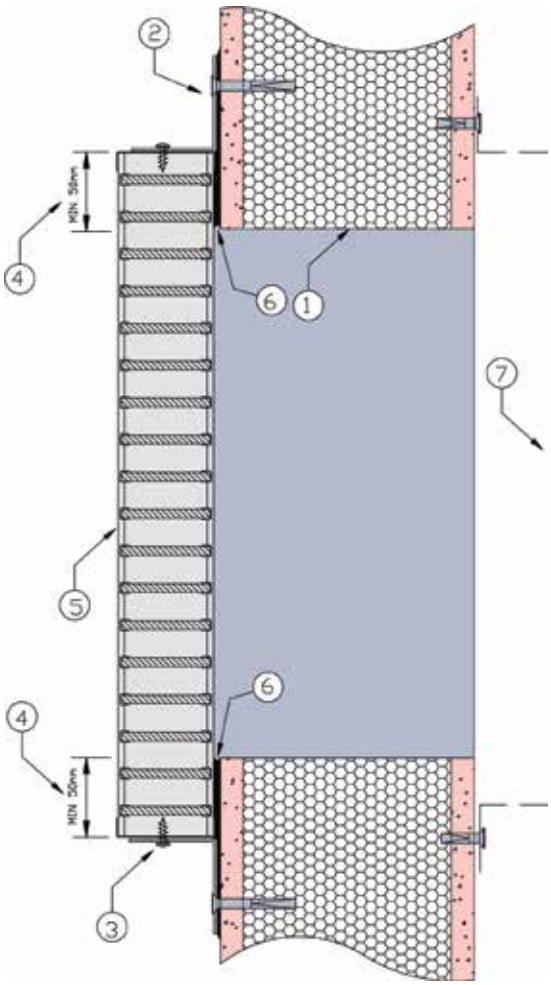
INSTALLATION INSTRUCTIONS

- Fit 40mm x 40mm x 1mm angles to damper as per point 3.
- Position damper over aperture ensuring minimum distance of 50mm as per point 4. Mark and drill fixing holes.
- Liberally apply Lorient intumescent sealant to area where damper and angles are to be fitted.
- Bed damper into intumescent sealant and fix to wall using steel anchors at min 200mm centres.
- Fix wire mesh grill to opposite side as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

INSULATING OVER APERTURE WALL 11

PRONTO PANEL™

	DESCRIPTION
1	Pronto Panel™ wall.
2	Full length 40mm x 40mm x 1mm angles fixed to wall with steel anchors.
3	Angles fixed to damper perimeter with steel self- drilling screw at 150mm centres.
4	Damper to overlap aperture by 50mm (minimum).
5	Lorient LVH44 damper.
6	Damper bedded in Lorient intumescent sealant.
7	12mm x 12mm steel mesh with 40mm (nominal) projection and 70mm aperture overlap fixed in place with steel anchors and penny washers.



LVH44 Air Transfer Grille

FRL Up to -/120/120*

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 55205900

Max size

1000mm x 500mm

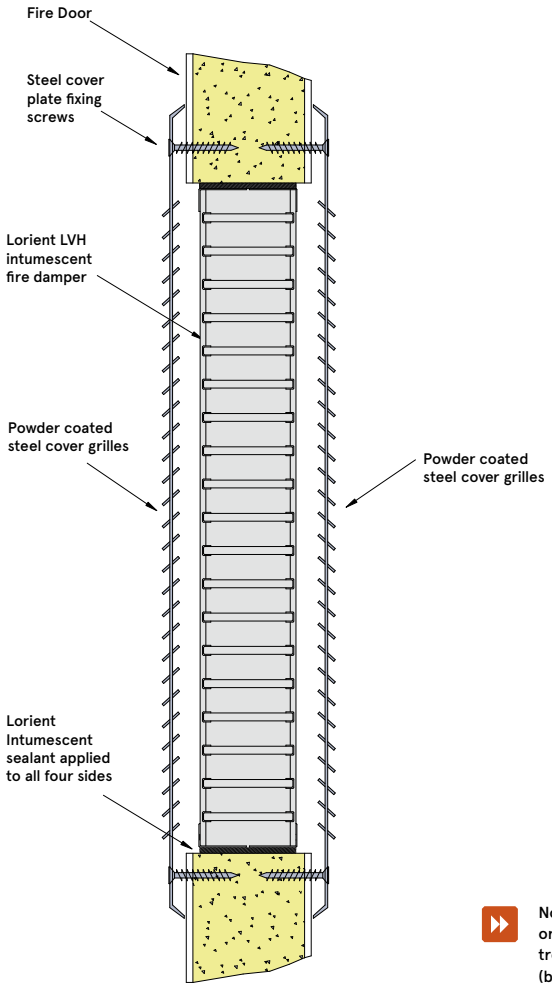
* One direction only (i.e. LVH44 positioned in fire compartment)

INSTALLATION INSTRUCTIONS

- Fit 40mm x 40mm x 1mm angles to damper as per point 3.
- Position damper over aperture ensuring minimum distance of 50mm as per point 4. Mark and drill fixing holes.
- Liberally apply Lorient intumescent sealant to area where damper and angles are to be fitted.
- Bed damper into intumescent sealant and fix to wall using steel anchors at min 200mm centres.
- Fix wire mesh grill to opposite side as per point 7.
- Ensure product identification labels are conspicuously positioned for easy identification.
- Ensure convenient access is provided to allow for AS1851 inspection and maintenance routines.
- **Note: Angles and fixings supplied by others.**

FIRE DOOR 1

E-CORE® FIRE DOORS



Note: Cover grilles are designed for internal use only. If intended for exterior use they must be treated with an appropriate weather proof finish (by others).

LVH-Door grille installed in E-core® fire door assemblies

FRL Up to -/120/30

Fire Resistance in accordance with

As1530.4 2014

Approval Ref

CSIRO FCO 3462

Approved sizes

600mm x 300mm
450mm x 450mm
300mm x 300mm

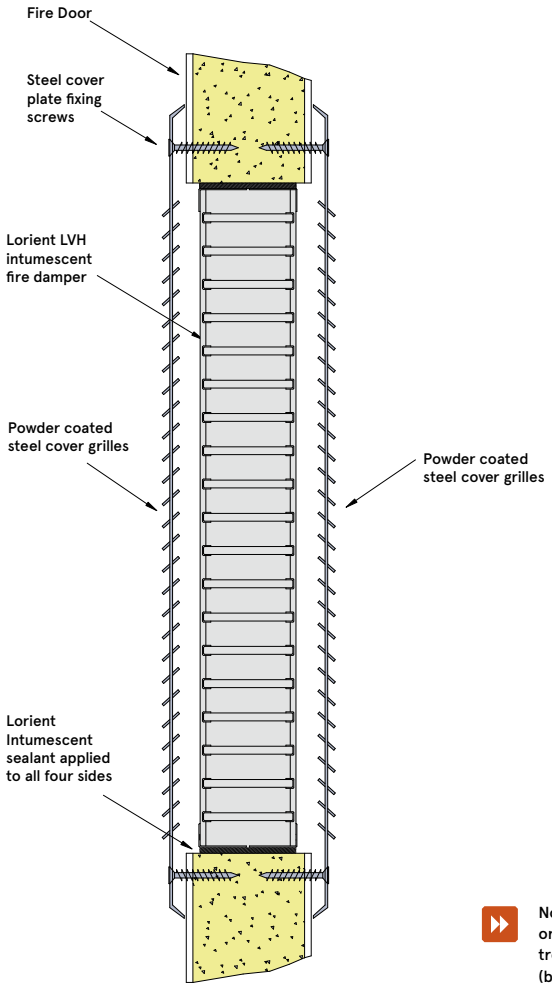
Up to 2 grilles per door - refer to our technical department for installation requirements

INSTALLATION INSTRUCTIONS

- Identify fire door type and check manufacturer's approvals to ensure that cutting an aperture in the door will not detract from the integrity of the door leaf.
- Establish the number of allowable openings, their maximum size and if there are any positioning limitations.
- Carefully cut the aperture to the required size allowing an additional 5mm clearance to all sides (for application of intumescent sealant).
- Ensure aperture is square and true and position the damper into the cut-out so perimeter gaps between the aperture and damper are even.
- Apply Lorient intumescent sealant to both sides, making sure the perimeter gap is completely filled.
- Position pressed steel cover grilles centrally over the damper and fix to the door leaf using supplied screws.

FIRE DOOR 3

PYROPANEL® FIRE DOORS



Note: Cover grilles are designed for internal use only. If intended for exterior use they must be treated with an appropriate weather proof finish (by others).

LVH-Door grille installed in Pyropanel® fire door assemblies

FRL Up to -/120/30

Fire Resistance in accordance with

AS1530.4 2014

Approval Ref

EXOVA EWFA 27704400

Approved sizes

600mm x 600mm
600mm x 300mm*
450mm x 450mm*
300mm x 300mm*

* Grilles to be installed at a minimum of 500mm from the bottom - refer to our technical department for installation requirements

INSTALLATION INSTRUCTIONS

- Identify fire door type and check manufacturer's approvals to ensure that cutting an aperture in the door will not detract from the integrity of the door leaf.
- Establish the number of allowable openings, their maximum size and if there are any positioning limitations.
- Carefully cut the aperture to the required size allowing an additional 5mm clearance to all sides (for application of intumescent sealant).
- Ensure aperture is square and true and position the damper into the cut-out so perimeter gaps between the aperture and damper are even.
- Apply Lorient intumescent sealant to both sides, making sure the perimeter gap is completely filled.
- Position pressed steel cover grilles centrally over the damper and fix to the door leaf using supplied screws.

NOTES

COMPREHENSIVE SUPPORT

We continue to lead the way in research and development; as a company we have over 40 years' experience, so our experts are well equipped to listen, help and advise you on your acoustic, smoke and fire containment needs.

Technical Service + Customer Support

By keeping abreast of technical developments and changes to codes, regulations and standards we can ensure we're always providing the highest level of expertise.

A trusted source for advice – we offer prompt service and comprehensive technical support for the design, specification and installation of our LVH44 fire dampers.

Call our Sales Team who are well equipped to listen, help and advise you on any queries you may have.

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customerservice.au@assaabloy.com
www.lorient.com.au

Please note: Recommendations as to methods, use of materials and construction details are based on the experience and knowledge of Lorient and are given in good faith as a general guide and service to designers, contractors and manufacturers. Lorient reserves the right to make alterations or delete installation detail without prior notice. Installers must ensure that installation details are fully complied with to ensure installations fulfil the requirements of relevant test approvals.

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