

FB-LVV40/LVH44

Intumescent Air Transfer Grille



Quick Facts

- Fits directly into ducts, doors and wall apertures
- FB-LVV40 - Up to 60% free area (Fire core)
- FB-LVH44 - Up to 65% free area (Fire core)
- No moving parts
- Robust construction
- Simple installation
- No maintenance required
- FB-LVV40 - 40mm thick
- FB-LVH44 - 44mm thick
- Tested in accordance with BS476 Pts 20 & 22 and BS EN 1643-1:2000

Contents

FB-LVV40.....	3
Technical description.....	3
Design.....	3
Materials and surface treatment.....	3
Model types	3
Accessories	3
Installation.....	3
Maintenance.....	3
Environment.....	3
FB-LVH44	4
Technical description.....	4
Design.....	4
Materials and surface treatment.....	4
Model types	4
Accessories	4
Installation.....	4
Maintenance.....	4
Environment.....	4
Sizing.....	5
Dimensions	5
LVV40 Performance Nomogram.....	6
LVH44 Performance Nomogram.....	7
Order key.....	8
Specification text.....	8

Technical Description

Design

The LVV40 is a intumescent fire core that can be used to provide up to 60 minutes resistance to fire. EI rating of 120 minutes when used in conjunction with a cover grille.

Can be supplied with a single or pair of pressed steel air transfer grilles that cover the aperture and allows for good airflow. Suitable for installation in wall apertures, doors or directly into ductwork.

Material and Surface Treatment

The intumescent core is made up of slatted construction of a sodium silicate. It is encapsulated in PVC extrusion to prevent moisture being absorbed into the sodium silicate.

The pressed steel grille element is manufactured from 20 SWG mild steel. Grilles are supplied white or silver as standard but can be painted to other standard RAL colours at extra cost.

Model Types

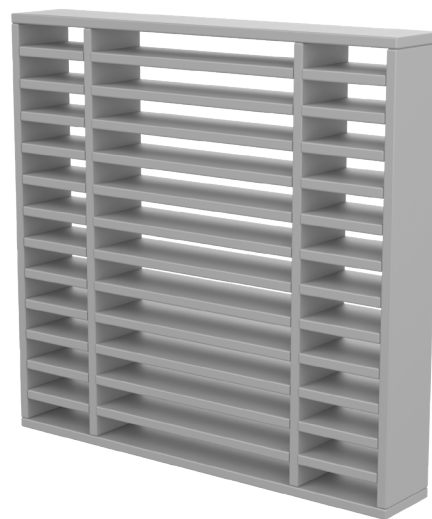
FB-LVV40 (60 mins)

- Width 100-600mm in 50mm increments.
- Height 100-600mm in 50mm increments.
- Each intumescent block is manufactured -2mm to the nominal aperture size provided.
- E.G for a 300x 300mm aperture size a 298x 298mm block will be provided.
- Excellent fire integrity & insulation performance
- Only 40mm thick

Note: In applications where high levels of humidity or wetness are anticipated, it is recommended that an LVH44 product should be employed

Accessories

- Pressed steel cover grille (Singular or matching pair)
- Intumescent sealant
- Intumescent liner



Installation

For Installation details please refer to IOM documentation

Maintenance

For maintenance details please refer to IOM documentation

Environment

Cover grilles are powder coated to be suitable for C3 internal environment classification. Marine or coastal specific finishes can be applied at additional cost.

Technical Description

Design

The LVH44 is a intumescent fire core that can be used to provide up to 120 minutes resistance to fire. EI rating of 120 minutes when used in conjunction with a cover grille. Can be supplied with a single or pair of pressed steel air transfer grilles that cover the aperture and allows for good airflow for transfer air applications. The LVH44 is suitable for installation in wall apertures, doors or directly into ductwork.

Material and Surface Treatment

The intumescent core is made up of slatted construction of Z275 galvanised steel protecting a graphite based intumescent core.

The pressed steel grille element is manufactured from 20 SWG mild steel. Grilles are supplied white or silver as standard but can be painted to other standard RAL colours at extra cost.

Model Types

FB-LVH44 (120 mins)

- Width 100-600mm in 50mm increments.
- Height 100-600mm in 50mm increments.
- Each intumescent block is manufactured -2mm to the nominal aperture size provided.
- E.G for a 300x 300mm aperture size a 298x 298mm block will be provided.
- Tolerant of high Humidity
- Withstands harsh Environments
- Suitable for external application
- 44mm Thick

Accessories

- Pressed steel cover grille (Singular or matching pair)
- Intumescent sealant
- Intumescent liner



Installation

For Installation details please refer to IOM documentation

Maintenance

For maintenance details please refer to IOM documentation

Environment

Cover grilles are powder coated to be suitable for C3 internal/external environment classification. Marine or coastal specific finishes can be applied at additional cost.

Sizing

LVV40/LVH44 sizes

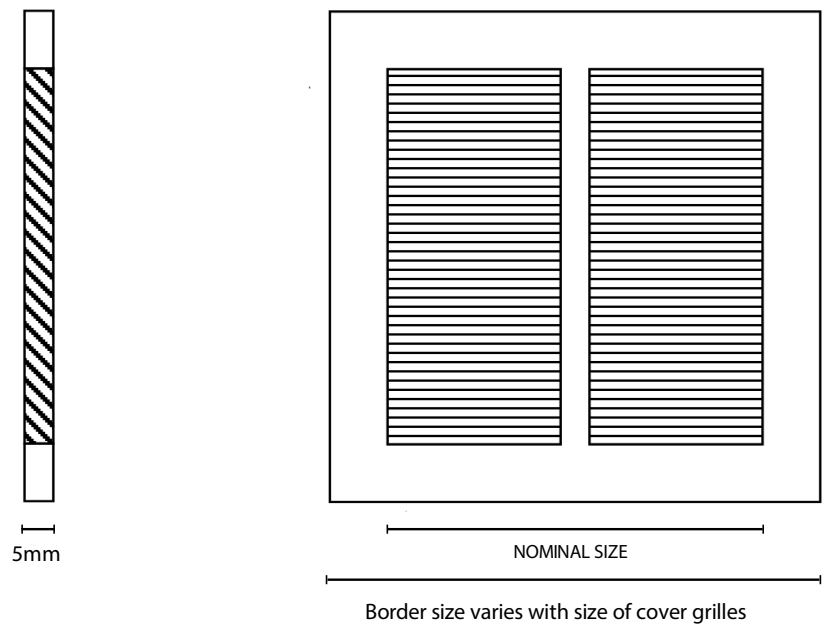
- Width 100-600mm (In 50mm increments)
- Height 100-600mm (In 50mm increments)
- Available in both square and rectangular sizes.

Cover grille sizes

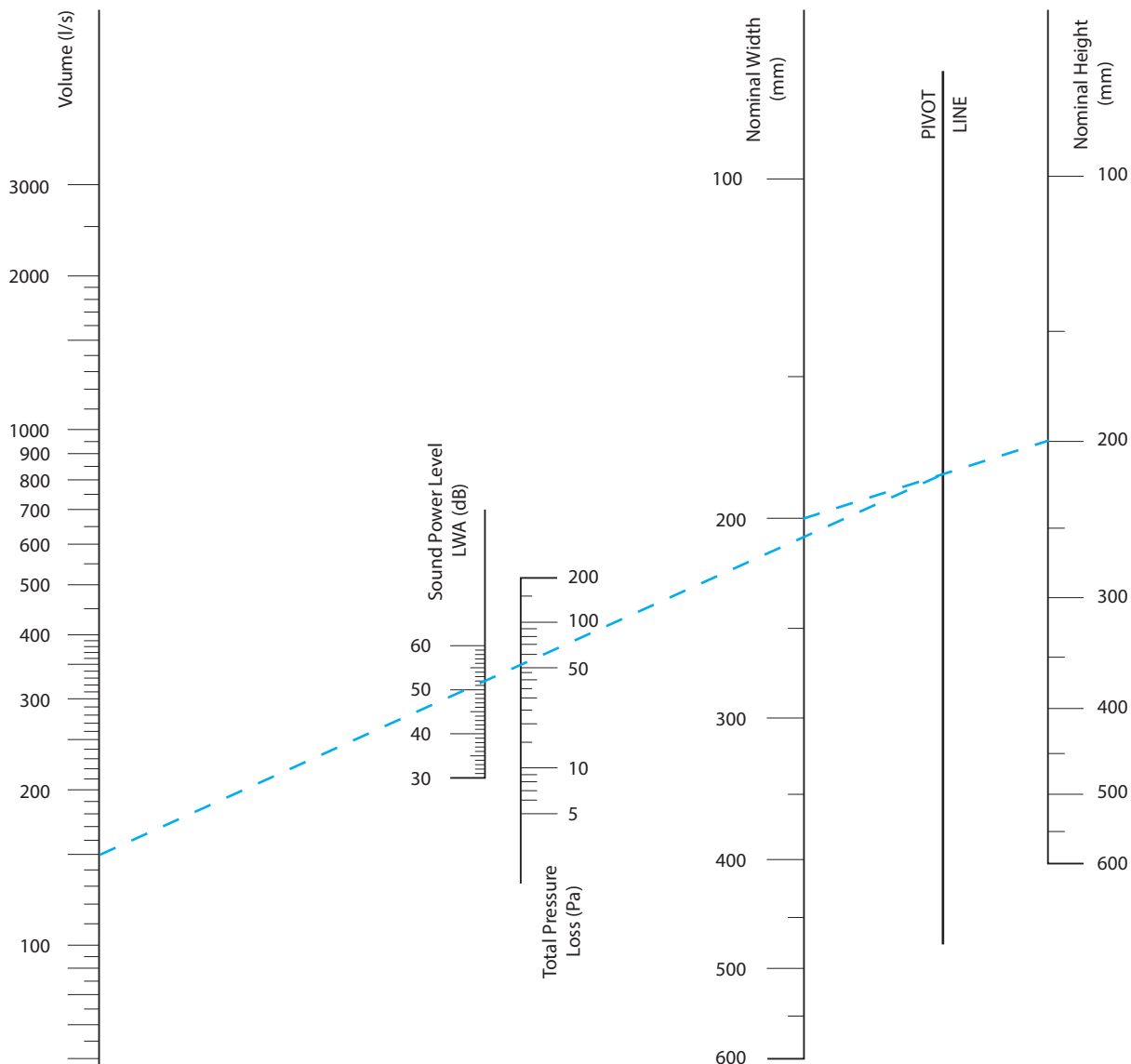
- Cover grilles made to suit the intumescent fire core.
- Width 100-600mm (In 50mm increments)
- Height 100-600mm (In 50mm increments)
- Cover grilles are manufactured to nominal sizes +51mm

Nominal Size	Intumescent Block Size	Cover Grille O/A Size
100 x 100	98 x 98	151 x 151
200 x 200	198 x 198	251 x 251
300 x 300	298 x 298	351 x 351
400 x 400	398 x 398	451 x 451
500 x 500	498 x 498	551 x 551
600 x 600	598 x 598	651 x 651

Dimensions



LVV40 Performance Nomogram



Example

Determine the total pressure drop ΔP_t (Pa) and the radiated sound power level L_{WA} (dB) for a LVV40 200 x 200 intumescent block for a volume flow rate of 150 (l/s).

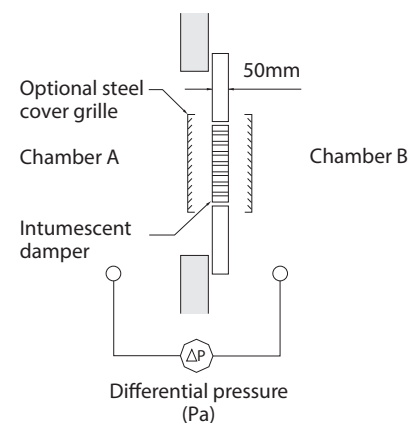
On the chart, draw a straight line from 200 on the nominal width axis to 200 on the nominal height axis. At the intersection point with the pivot line, draw a line to 150 (l/s) on the flow rate axis. The radiated sound power L_{WA} (dB) and total pressure drop ΔP_t (Pa) may now be read directly.

Type: FB-LVV40 - PSI 200 x 200

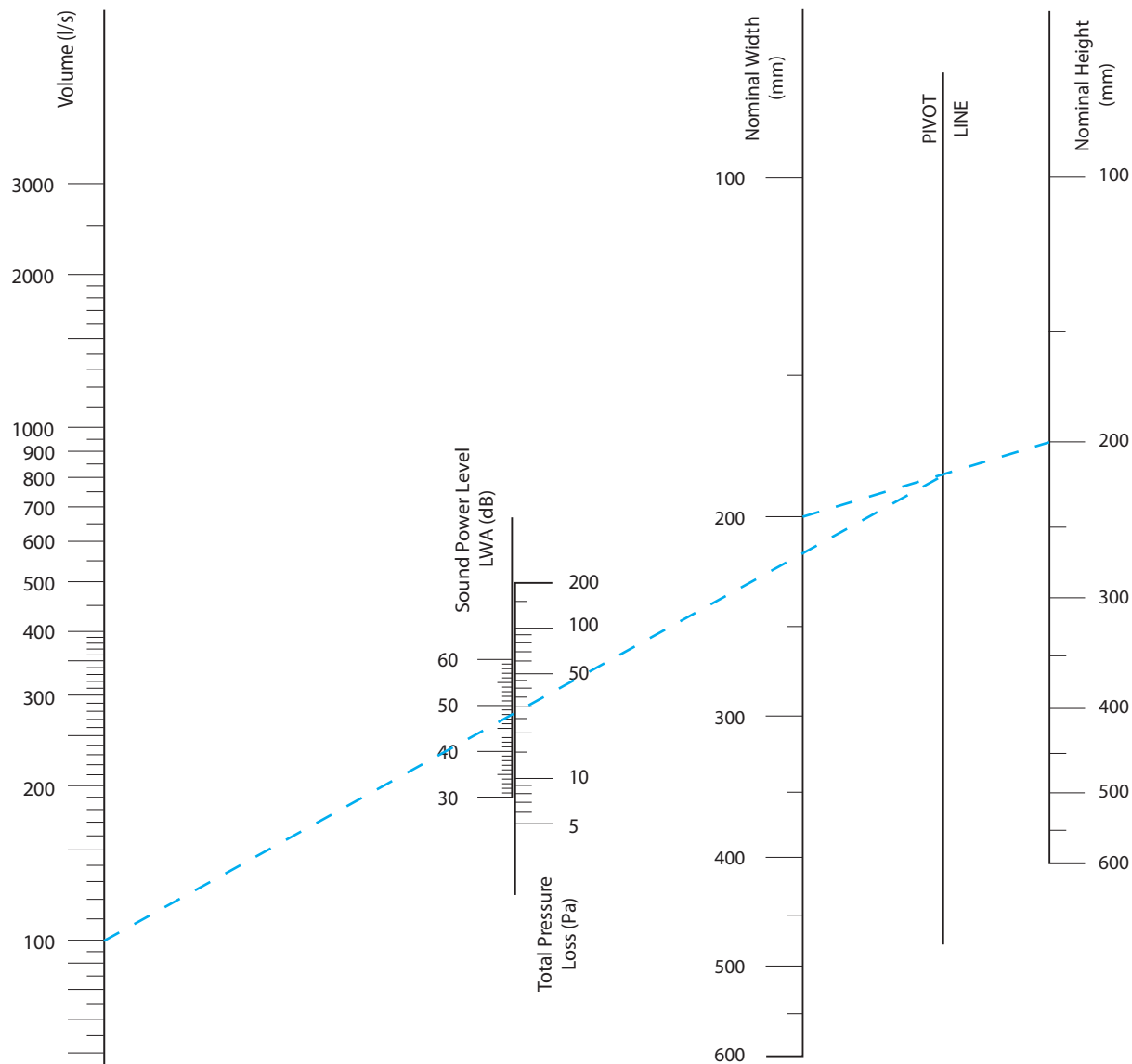
Flow rate: (l/s): 150

Total pressure drop: ΔP_t (Pa): 52

Radiated sound power L_{WA} (dB): 52



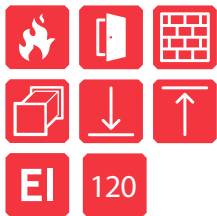
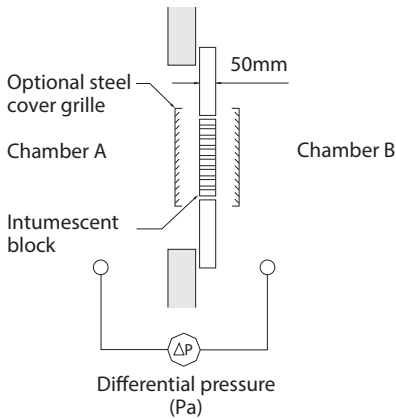
LVH44 Performance Nomogram



Example
Determine the total pressure drop ΔP_t (Pa) and the radiated sound power level L_{WA} (dB) for a LVH44 200 x 200 intumescent block for a volume flow rate of 100 (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 100 (l/s) on the flow rate axis. The radiated sound power L_{WA} (dB) and total pressure drop ΔP_t (Pa) may now be read directly.

Type: FB-LVH44 - PSI 200 x 200
Flow rate: (l/s): 100
Total pressure drop: ΔP_t (Pa): 28
Radiated sound power L_{WA} (dB): 48



Free area	
LVV40	60%
LVH44	65%
Cover Grille	67-70%

Order Key

Composite Reference: FB-LVV40/PS2/IS/300/300/9010

Diffuser Order Key		1	2	3	4	5	6
Order example:		FB-LVV40	PS2	IS	300	300	9010
Fire Block Type1:		FB-LVV40 FB-LVH44	PS0 PS1 PS2	IS	300	300	9010
Pressed Steel Grilles:							
Accessories							
IS	Intumescent Sealant	ISL	Intumescent Sealant & Liner	IS	300	300	9010
ISL	Intumescent Sealant & Liner						
Nominal Width;		100-600	Available in 50mm increments	IS	300	300	9010
Nominal Height:							
100-600		100-600	Available in 50mm increments	IS	300	300	9010
Finish:							
9010	White RAL 9010 Matt (20%) finish	SPC	Other colours available to special order	IS	300	300	9010
9005	Black RAL 9005 Matt (30%) finish						
9006	Silver RAL 9006 Matt (40%) finish						
9016	White RAL 9016 Matt (20%) finish						
9003	White RAL 9003 Matt (40%) finish						
SPC	Other colours available to special order						

Intumescent sealant to be mandatory for LVV40.

Intumescent sealant or Intumescent liner to provided for LVH44

Specification Text

- Intumescent fire core with pressed steel cover face plates
- Used for transfer air applications
- For installation into walls and doors
- LVV40 will achieve up to 60 mins fire resistance
- LVH44 will achieve up to 120 mins fire resistance
- EI rating of 120 minutes when used with cover grille
- Sizes from 100x 100mm up to 600x 600mm in 50mm increments
- Tested to BS476-20 & 22:1987
- BS EN 1634-1:2014
- BS EN 1364-5:2017
- NEN 6069:2005+A1:2016