Section 7
Ventilation

1. System Description
2. Fault Finding
3. Maintenance Schedule
4. Spares & Consumables
5. Testing & Commissioning Certificate
6. Technical Information/Product Datasheets

1. **System Description**

Ventilation is fitted to serve the open plan, Wc and binstore.

2. **Fault Finding**

In the event of a fault occurring a specialist contractor should be contacted.

System Installer – AC1 Construction - Suite 107, 1 Balloon Street, Manchester, M4 4BE

Contact Number: 020 8427 58 23

3. **Maintenance Schedule**

Quarterly tests should be carried out in accordance with manufacturers guidance.

4. **Spares & Consumables**

There is no requirement for spare parts to be stocked on site, and there is no consumable items requied.

All items should be replaced & commissioned by a specialist.

5. **Testing & Commissioning Certification**

Please see commissioning certification attached.

6. **Technical Information/Product Data Sheets**

Please see attached.

Technical/Product Data Submission Sheet

Issuing Company: AC1 Construction **Date of Issue**: 15.10.25 **Technical Submittal No:** TSM-001 **Revision No:** 0 **Issued By:** Martin Paladino	**Issued To**: FEC Development Management Ltd **Project:** VR Commercial Units, Manchester **Project No:** MP201
Title: Ventilation	**No of pages inc cover:**
Confirmation Required By: 17.10.25	x Specified Item — x Equal or Approved x Preferred Supplier — x VE Agreed

Manufacturers:

- Lossnay unit – Mitsubishi
- Fire Damper – BSB
- Inline Fan – Versaline
- Ductwork – Alpha air
- Controller – Mitsubishi
- Diffuser – HVC

Contents List:

- Lossnay Range – Commercial Lossnay, Model – LGH-250RVXT3-E

Anticipated occupancy levels within the café could reach around 2m² per person. Taking account of the seating areas only, The proposed Lossnay LGH-250RVXT3-E has a maximum duty of 694l/s which is adequate for 69 people, therefore a single unit of this type would be required to accommodate the anticipated occupancy.

- Fire Damper – FD-C Series-1
- Inline Fan – VL Centrifugal inline fan
- Ductwork – Spiral duct, galvanised steel construction
- Controller – PZ-62DR-EB
- Diffuser – Series JFD

Control Strategy

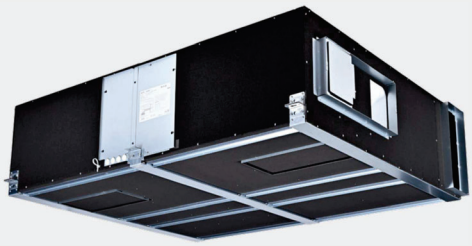
- Main controller to control the fan speed.
- WC – vent to activate when lights are switched on and go off on a timer.
- Bin store – trickle vent.

LGH-RVXT3-E

Commercial Series

The Commercial Lossnay (LGH) Mechanical Ventilation Heat Recovery (MVHR) systems are designed to supply clean, fresh air into commercial buildings, whilst simultaneously extracting stale air.

The **RVXT3** units offer a significantly reduced height whilst maintaining a large airflow, allowing easy installation in ceiling voids.



Key Features & Benefits:

- Mitsubishi Electric pioneered heat exchanger enables maximised latent heat exchange, resulting in cost and carbon savings
- Low unit height (500mm) and lightweight structure, ideal for ceiling installation
- Four commissionable fan speeds, settable between 25-100%, with independent supply and return fan control offering low running costs and easier compliance to Part L
- Optional Mitsubishi Electric energy saving CO_2 sensors allow automatic incremental fan control for a healthy indoor environment; sensors powered by Lossnay unit
- No condensate drain required allowing for easy design and installation
- Dual-barrier coated fans, prevents dust and grease accumulation, ensuring long-term efficient fan operation
- Constant pressure control available with 0-10V pressure transducer (field supplied), for variable airflow requirements across multiple zones
- Compatible with Mr Slim and City Multi air conditioning systems for a complete and highly effective system operation
- Duct handing selectable via dipswitch, for easy and flexible installation
- Optional high efficiency filters available



LGH-RVXT3-E
Commercial Series



MODEL			LGH-160RVXT3-E	LGH-200RVXT3-E	LGH-250RVXT3-E
25% (Default speed 1)	Air Volume	m^3/h	400	500	625
		l/s	111	139	174
	External Static Pressure	Pa	12	12	12
	Temperature Exchange Efficiency	Heating %	88.0	86.0	84.0
		Cooling %	83.0	82.0	81.0
	Enthalpy Exchange Efficiency	Heating %	85.5	84.5	81.5
		Cooling %	78.0	75.0	73.0
	Specific Fan Power	W/(l/s)	0.41	0.40	0.50
	Input Power	W	46	56	86
	Sound Pressure Level	dB(A)	19.5	21.0	23.0
50% (Default speed 2)	Air Volume	m^3/h	800	1000	1250
		l/s	222	278	347
	External Static Pressure	Pa	48	48	48
	Temperature Exchange Efficiency	Heating %	85.5	83.0	80.0
		Cooling %	79.0	78.0	76.5
	Enthalpy Exchange Efficiency	Heating %	83.0	81.5	78.0
		Cooling %	73.0	67.5	66.0
	Specific Fan Power	W/(l/s)	0.65	0.69	0.82
	Input Power	W	144	192	284
	Sound Pressure Level	dB(A)	26.0	28.0	31.5
75% (Default speed 3)	Air Volume	m^3/h	1200	1500	1875
		l/s	333	417	521
	External Static Pressure	Pa	107	107	107
	Temperature Exchange Efficiency	Heating %	83.0	81.0	78.0
		Cooling %	75.0	73.0	70.5
	Enthalpy Exchange Efficiency	Heating %	81.0	79.5	76.0
		Cooling %	65.5	61.0	59.0
	Specific Fan Power	W/(l/s)	1.10	1.20	1.34
	Input Power	W	368	498	696
	Sound Pressure Level	dB(A)	33.0	35.0	38.0
100% (Default speed 4)	Air Volume	m^3/h	1600	2000	2500
		l/s	444	556	694
	External Static Pressure	Pa	190	190	190
	Temperature Exchange Efficiency	Heating %	82.0	80.0	77.0
		Cooling %	70.0	67.5	65.0
	Enthalpy Exchange Efficiency	Heating %	80.0	78.5	75.0
		Cooling %	61.5	56.5	54.0
	Specific Fan Power	W/(l/s)	1.59	1.88	2.09
	Input Power	W	708	1044	1448
	Sound Pressure Level	dB(A)	38.0	40.0	44.0
DUCT SIZE		mm	Outlets (SA/EA): 250 x 650 / Inlets (RA/OA): 465 x 220		
WEIGHT		kg	172	172	172
DIMENSIONS	Width x Depth x Height	mm	2100 x 1600 x 500		
ELECTRICAL POWER SUPPLY			3-phase, 380-415V, 50Hz*2		
MAXIMUM CURRENT		A	3.0	3.9	5.0
HEAT EXCHANGER			Paper with Specially Treated Cellulose Membrane		
STANDARD FILTER			ISO 16890 Coarse 60%*1		

Notes: Running current, power consumption, recovery efficiency, and sound levels are based on the above default airflow rates at 25%, 50%, 75%, and 100%. Specific duty point data is available upon request. Supply and exhaust fan speeds can be individually commissioned between 25% and 100% in 5% increments. Sound Pressure Level measured at 1.5m under the centre of the bottom panel. Air flow rates, external static pressure and specific fan powers tested to BS EN13053: 2019. Energy recovery efficiencies tested to BS EN308: 2022.

*1: EN 779 G4 equivalent according to 'REHVA Filter Class Conversion between EN 779 and EN ISO 16890-1'

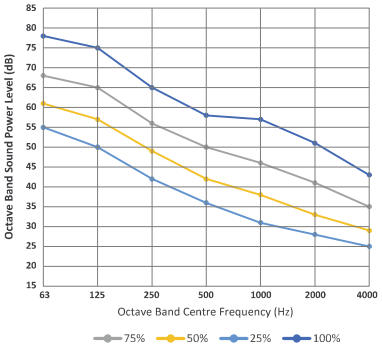
*2: 3 phase 4 wire power must be connected. The unit only uses loads L2 and L3, meaning L1 does not draw load

ACCESSORIES		LGH-160RVXT3-E	LGH-200RVXT3-E	LGH-250RVXT3-E
Remote Controller		PZ-62DR-EB		
Filters	Standard Replacement Filter (Coarse 60%)	PZ-250TRF-E		
	ISO 16890 ePM1 75%, ePM2.5 80%, ePM10 95%	PZ-250TPF-E		
CO_2 Sensors		PZ-70CSW-E (Wall mounted) / PZ-70CSD-E (Duct mounted)		
External signal relay		PZ-4GS-E		

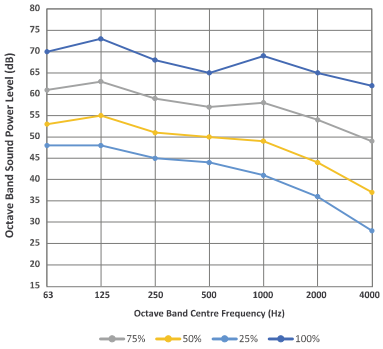


LGH-160RVXT3-E SOUND POWER OCTAVE LEVELS

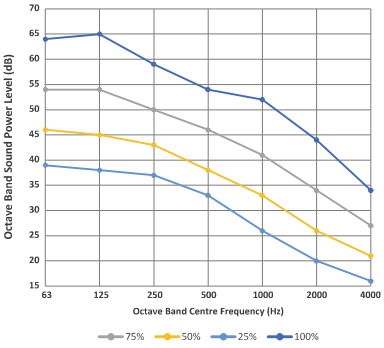
Case Radiated Breakout



In-Duct Outlet (Supply Air & Exhaust Air)

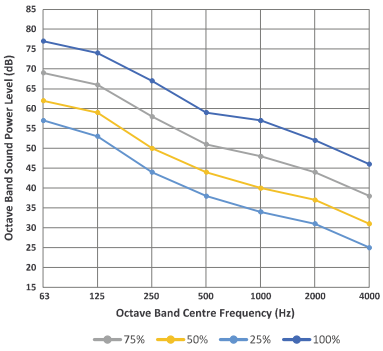


In-Duct Outlet (Return Air & Outside Air)

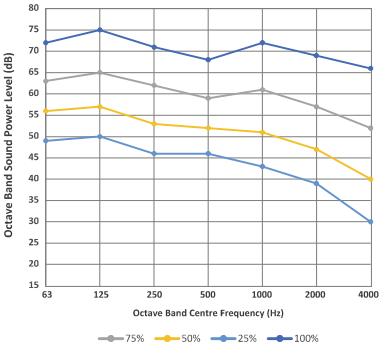


LGH-200RVXT3-E SOUND POWER OCTAVE LEVELS

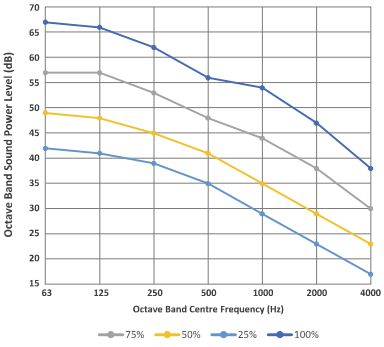
Case Radiated Breakout



In-Duct Outlet (Supply Air & Exhaust Air)

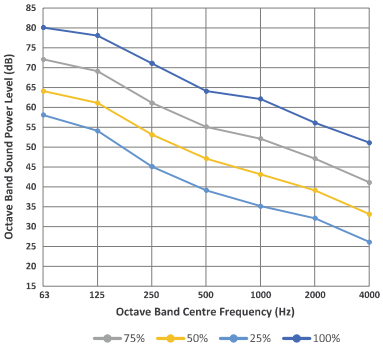


In-Duct Outlet (Return Air & Outside Air)

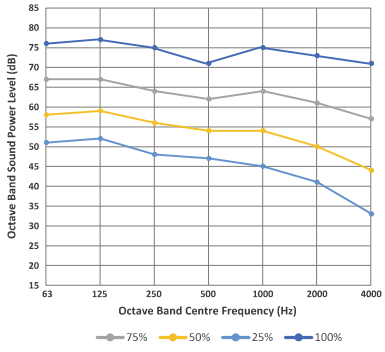


LGH-250RVXT3-E SOUND POWER OCTAVE LEVELS

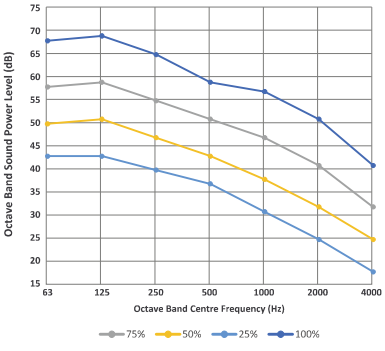
Case Radiated Breakout



In-Duct Outlet (Supply Air & Exhaust Air)



In-Duct Outlet (Return Air & Outside Air)

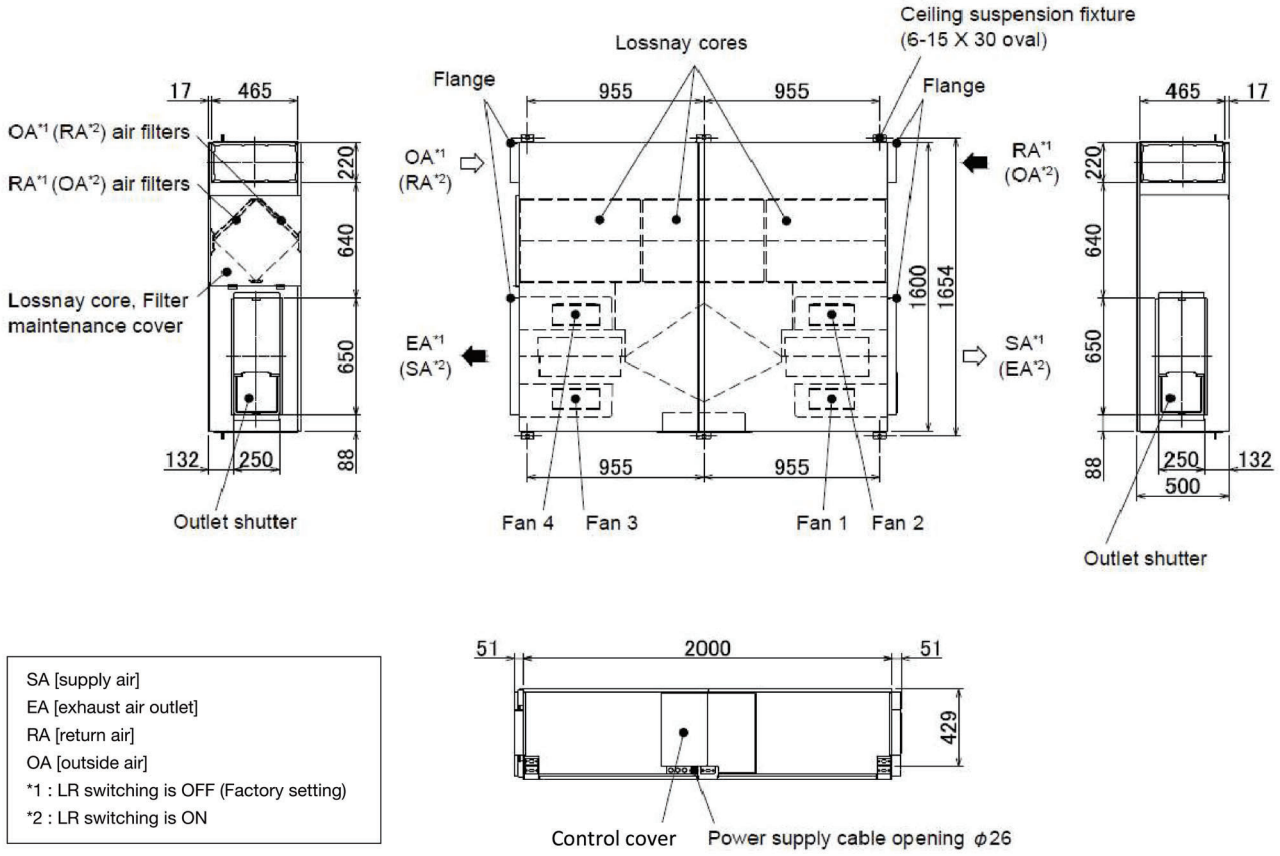


Notes:
Sound power octave band test based on ISO 3744:2010 at standard operating conditions. For duty point specific data contact Mitsubishi Electric.
Measurements below 15dB are shown as <15 in the table and omitted from the graph.

LGH-RVXT3-E
Commercial Series



LGH-160/200/250RVXT3-E DIMENSIONS



SA [supply air]
EA [exhaust air outlet]
RA [return air]
OA [outside air]
*1 : LR switching is OFF (Factory setting)
*2 : LR switching is ON

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Note: The fuse rating is for guidance only and please refer to the relevant databook for detailed specification. It is the responsibility of a qualified electrician/electrical engineer to select the correct cable size and fuse rating based on current regulation and site specific conditions. Mitsubishi Electric's air conditioning equipment and heat pump systems contain a fluorinated greenhouse gas, R410A (GWP:2088), R290 (GWP:3), R32 (GWP:675), R407C (GWP:1774), R134a (GWP:1430), R513A (GWP:631), R454B (GWP:466), R454C (GWP:148), R1234ze (GWP:7) or R1234yf (GWP:4). *These GWP values are based on Regulation (EU) No 517/2014 from IPCC 4th edition. In case of Regulation (EU) No.626/2011 from IP CC 3rd edition, these are as follows. R410A (GWP:1975), R32 (GWP:550), R407C (GWP:1650) or R134a (GWP:1300).

Effective as of September 2024

Green Gateway greengateway.mitsubishielectric.co.uk

V60424

FD-C Series



Circular Single Blade Externally Resettable Fire Damper

- Conforms to fire damper product standard EN15650
- ES classified fire dampers with reduced smoke leakage characteristics EN 13501-3
- Aerodynamically Air Control tested to BS EN 1751
- Tested installation methods in differing supporting constructions (BS EN 1366-2)
- Integrated volume control capability
- Replaceable fusible link from outside of the ductwork
- Commissioning friendly
- External blade position indicator
- Damper casing sizes and tolerances conform to BS EN 1506

BSB
A brand of MAICO

CE

MANUFACTURERS OF AIR, FIRE AND SMOKE CONTROL SYSTEMS

FD-C Series

Single Blade Circular Fire Dampers - Introduction



The FD-C Series

The FD-C Manual Operation Single Blade Fire Damper with volume control facility has been designed specifically for installations where space is at a premium.

The testing and resetting of the damper and thermal fuse external of the duct allows for ease of commissioning and maintenance.

NB: Access panels may be required to comply with DW145 G.3.1.5.

The installation plate, with its engineered installation perforations, acts as a template to allow the marking of the fixing positions on the surface of the structure to which the plate will be affixed, allowing for a quick and efficient install.

Introduction

What is a fire damper and why might they be needed? The FD-C Series Single Blade Circular Fire Damper is designed to stop the spread of fire through ducts, walls and floors.

The product range has many features and options to meet the requirements of specifiers, contractors, local and national authorities. Dampers are available to suit both low and medium velocity applications.

What are the 'E' and 'ES' classifications?
To achieve the classifications to EN13501-3, fire dampers and fire and smoke dampers shall meet product standard 15650 be tested to EN1366-2 where a 300Pa pressure difference is applied across the damper. During the fire test period, the integrity of the seal between the damper and the structure shall not have any gaps larger than 6mm x 150mm. There shall not be any sustained flaming. The largest size of damper to be manufactured for sale as a single section shall be fire tested.

E = Integrity
The maximum leakage permissible at 300Pa corrected to 20°C is 360$m^3/hr/m^2$ (100 $l/s/m^2$) throughout the fire test period.

ES = Integrity with Smoke Leakage Performance
The maximum leakage permissible at 300Pa corrected to 20°C is 200$m^3/hr/m^2$ (55.5 $l/s/m^2$) at ambient prior to the fire test and throughout the fire test period. In addition, for the ES classification to be attained, the smallest damper must also meet the 200$m^3/hr/m^2$ maximum ambient leakage with a 300Pa pressure across the damper. (This is equivalent to just 0.55 l/s on a 100 dia. damper).

Fire dampers should be installed as tested.

FD-C Features and Benefits

- Tested and certified installation variants of the FD-C are available for dry walls, masonry walls, flexible fire curtain and concrete floors.
- All BSB tested installation methods give at least a E60 classification. see DoP and installation drawing for full details

Leakage Classification

Blade leakage classification is given numerically 1 – 4 and case leakage classification is given using capital letters A – C of EN1751 (sections C.2 and C.3).

The FD-C series damper meets Class 3 blade leakage section C.2 refers and Class C case leakage section C.3 of the EN1751 standard, section C.2 refers.

Normal operating conditions - not exceeding 1100Pa, Classes A, B & C of DW 144 2016 Specification will apply.

The FD-C Series Range

The BSB FD-C series is available in the following case diameters:

FD-C100 - 100mm diameter
FD-C125 - 125mm diameter
FD-C150 - 150mm diameter
FD-C160 - 160mm diameter
FD-C200 - 200mm diameter
FD-C250 - 250mm diameter
FD-C300 - 300mm diameter
FD-C315 - 315mm diameter

Testing and Conformities

CE marked to EN1366-2
See installation details for full details.
Tested and achieved classification to:
ES Classification (BS EN 1366-2/BS EN 13501-3)

Classification	Supporting Construction	Drawing
E 120 (ho i←o) S	Masonry Floor with Batt Infill	FD-C M7
E 120 (ve i↔o) S	Masonry Wall with Batt Infill	FD-C M8
E 60 (ve i↔o) S	Drywall Partition	FD-C M9
E 90 (ve i↔o) S	Drywall Partition	FD-C M9
E 120 (ve i↔o) S	Masonry Wall	FD-C M9
E 120 (ho i←o) S	Masonry Floor	FD-C M10
E 120 (ho i←o) S	Masonry Floor	FD-C M11
E 60 (ve i↔o) S	Fire Curtain	FD-C M14
Refer to CE-DoP-FD-C for full details		

FD-C Blade leakage (BS EN 1751)
• Class 2

FD-C Case leakage
• Eurovent 2.2 Class C

Corrosion testing (BRE)
• Tested and satisfies LPS1162
• Complying with test method BS EN 60068-2-11

Typical Tender/Specification Text

The BSB FD-C Fire Damper shall pass the test requirements stated in EN 1366-2 and conforms to the product standard for fire dampers EN15650.
For maintenance of the integrity of compartmentation the fire damper shall have an E classification to EN 13501-3.

The damper shall have an ES classification complying with EN1366-2 and EN 13501-3 and have a minimum ES60 rating.

Damper casings shall conform to BS EN 1506.

For the protection of escape routes and areas with sleeping risk, the FSD-C fire/smoke damper should be used. Please refer Approved Document B (ADB).

The single blade layered design shall be held open against a torsion spring that is released via a fusible link having an alloy component that melts at 72°C allowing the spring mechanism to close the damper.

The damper assembly and fusible link shall be safely tested and released closed externally to the damper without the need for specialist tools or access panels. NB: Access panels may be required to comply with DW145 G.3.1.5.

The fire damper body shall be stitch welded to meet the air tightness test requirements of HVCA specification. Normal operating conditions - not exceeding 1000Pa, Classes A & B of DW 144 2016 Specification will apply.

The closed blade shall meet the air tightness test requirement of BS EN 1751 Class 2.

The BSB FD-C fire damper shall have a tested installation method that matches the requirement of the supporting construction. DW145 Method 4 Blockwork Walls, Dry Walls and Concrete Floors refers.

Weight Chart (approx.)

Nom. Dia. (mm)	Kg
100	1.2
125	1.6
150	2.0
160	2.1
200	2.8
250	4.0
300	5.0
315	5.1

Damper Free Area (fully open)

Model	Free Area	Model	Free Area
FD-C100	64%	FD-C200	85%
FD-C125	73%	FD-C250	88%
FD-C150	79%	FD-C300	91%
FD-C160	81%	FD-C315	91%

Micro Switch

The factory fitted micro switch to provide remote indication of the damper blade status. The micro switch is fitted on the opposite side to the operating handle where a purpose designed cam fitted to the protruding blade operating spindle allows the release of the micro switch actuating lever, allowing the snap action contacts 1NO + 1NC to change state.

Wiring connections are made via M3, 5 terminal screw fixings.

Mechanical life: 1 million cycles

Complies with EN60204 and EN292 standards

Electrical data:

Thermal current (Ith): 16A

Rated insulation voltage: 250VAC 300VDC

Protection against short circuits: fuse 10A 500V type gG

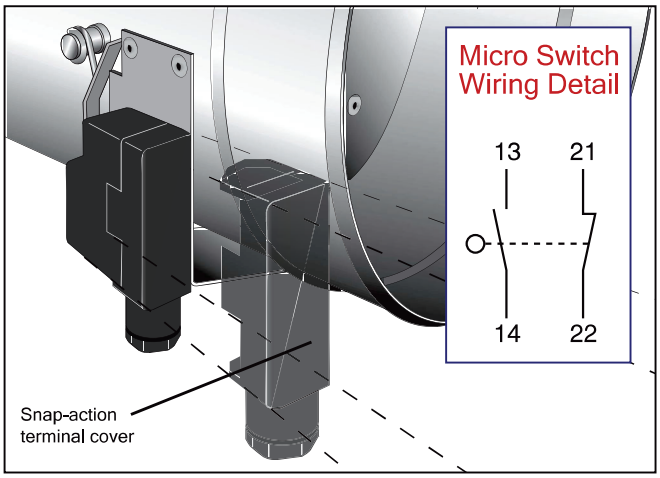
Utilisation categories:

Alternate current: AC15 (50 ... 60Hz)

Ue (V)	250
Ie (A)	5

Direct current: DC13

Ue (V)	24	125	250
Ie (A)	4	1,1	0,4



FD-C Series Dampers - Testing and Maintenance

FD-C Series dampers are designed for normal dry filtered air systems. A programme of planned inspections should be carried out to include full operational checks, correct interface with, and function of, any control systems, cleaning and light lubrication.

As a guide, this should take place on a maximum of six months intervals.

Reference should be made to BS 9999 for more information.

Records of damper installation and position shall be kept. Records of the condition of the dampers and their functionality/repair etc should be kept as these products come under the requirements of the Regulatory Reform (Fire Safety) Order (RRFSO).

These inspection and maintenance programmes may need to be repeated more regularly if the dampers are exposed to inclement/dusty conditions or fresh air intakes and the frequency of such checks should be reviewed based on site experience.

Storage

Dampers received on site should be stored in a purpose made storage area, where they can be protected from moisture, dust and impact damage until required.

FD-C Series

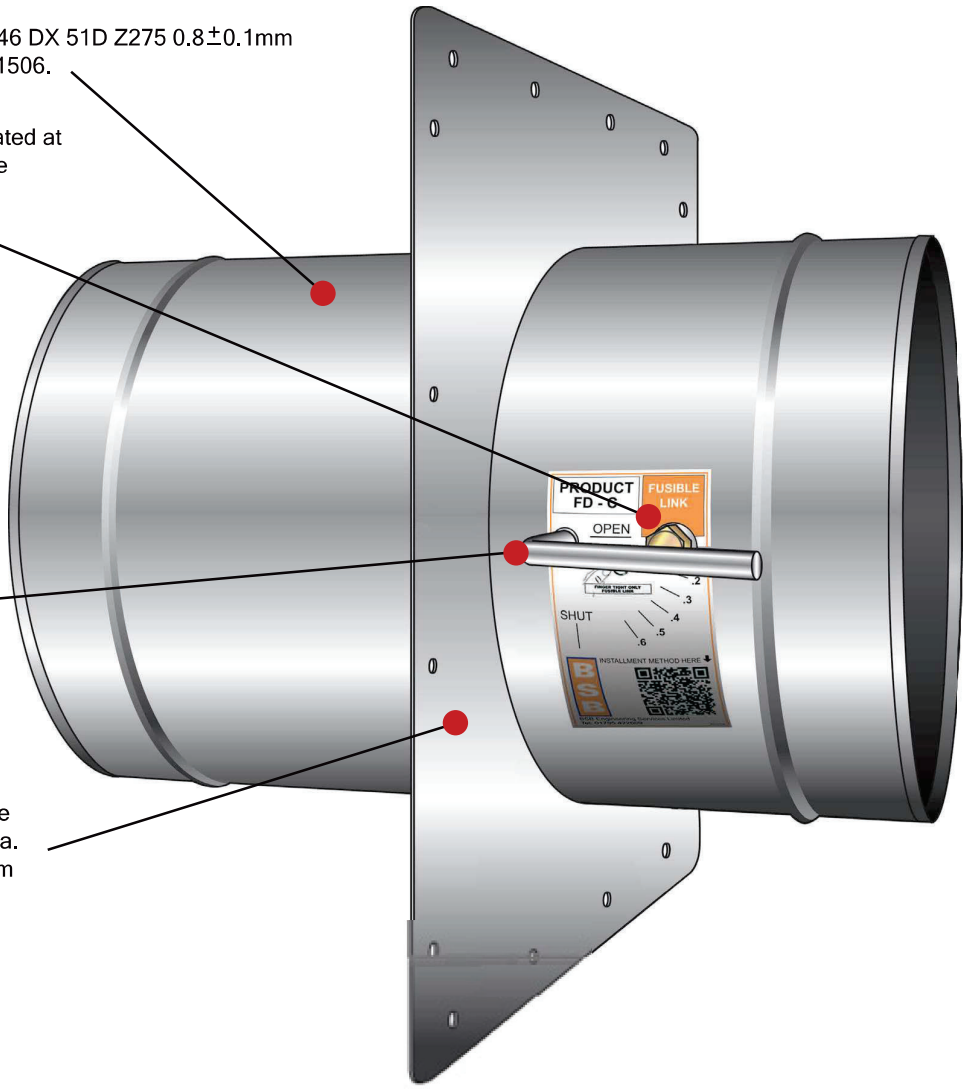
Single Blade Circular Fire Dampers - Product Specification

Case
Galvanised mild steel to BS EN 10346 DX 51D Z275 0.8±0.1mm
Damper casing conforms to BS EN 1506.

Fusible Link
Fusible link externally replaceable rated at 72°C has been designed to eliminate linear creep of the solder joint.
The thermal link is screwed into position via the 12.5mm diameter brass holder activating the locking assembly from outside the case in any position from fully open to fully closed, allowing air balance during the commissioning of the ducted system.

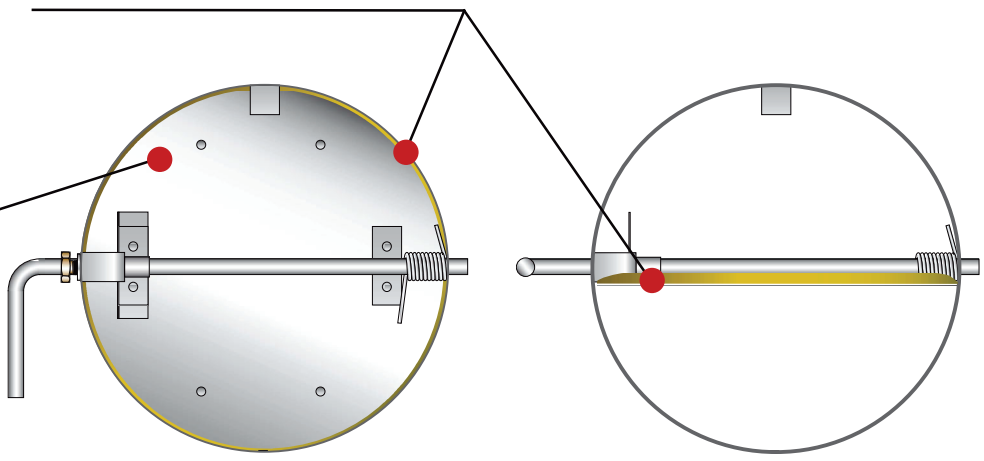
Handle
The handle is an 8mm dia. preformed 400 series ferritic stainless steel rod that allows the setting of the damper to any set point or fully open position.
The blade angle is shown via the graduated affixed label.

Installation Plate
The installation plate allows the damper to be fixed into place from one side only with no infill material required on the non-handle side. Use either of the two appropriate 5mm dia. corner fixing holes and all of the 5mm dia. mid span fixing holes to secure the plate into position.



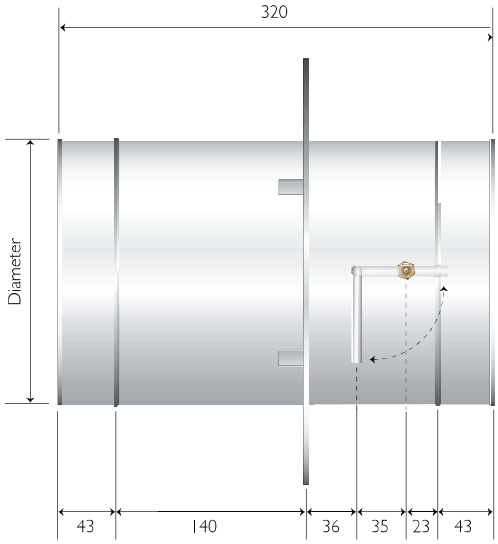
Blade Seal (patented)
Layered glass woven sheets and central intumescent disc to a patented design that allows the blade assembly to be of minimal thickness, thus minimising pressure loss with fully open damper, and an effective seal when fully closed to comply with EN 1366-2 achieving ES classification.

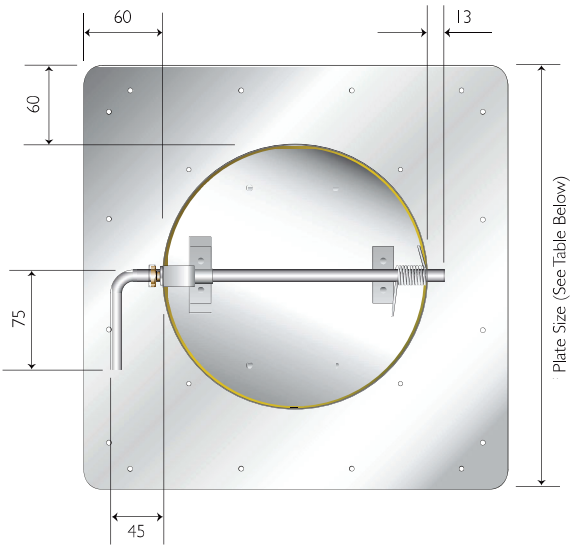
Blade
Galvanised 1.2mm one piece circular steel discs either side of the patented seal design providing a 5mm thick assembly affixed by blade brackets to the reset handle.



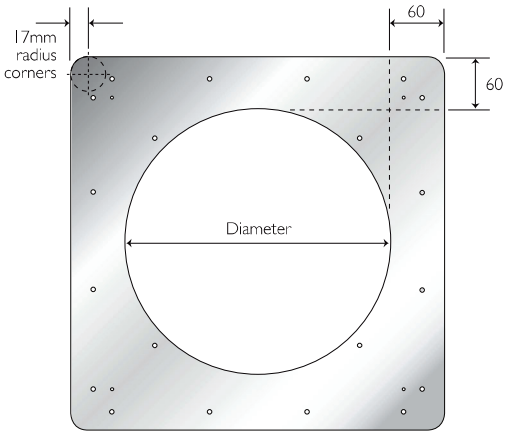
Blade Closed Blade Open

The FD-C Series

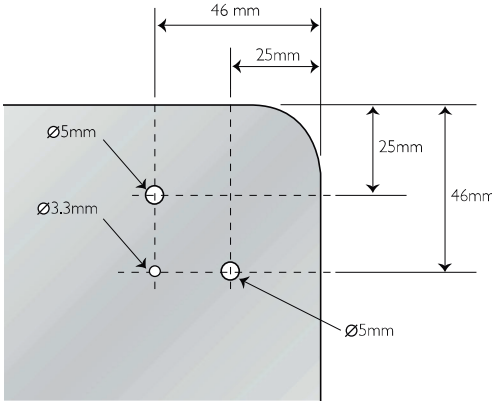




Installation Plates



Model	Dia. (mm)	Square Plate Size (mm)
FD-C100	100	220
FD-C125	125	245
FD-C150	150	270
FD-C160	160	280
FD-C200	200	320
FD-C250	250	370
FD-C300	300	420
FD-C315	315	435



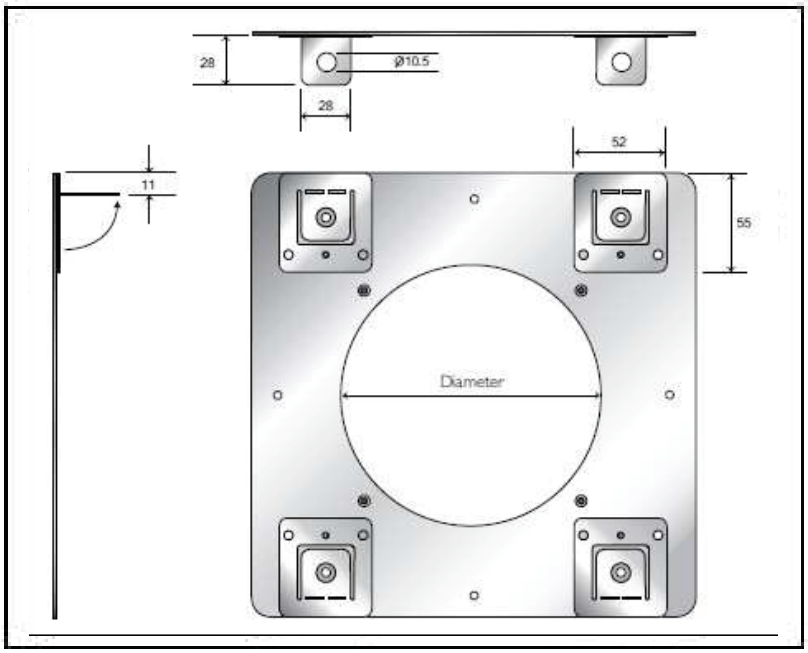
NB: Use either of the two appropriate 5mm dia. corner fixing holes and all of the 5mm dia. mid span fixing holes to secure the plate to the steelwork within the dry wall/into masonry wall/floor.

Cleats (Not FC)

Rotatable cleats are available as an optional accessory where requested and will be provided factory fitted as shown right.

The FD-C series damper must be installed as per BSB installation, operating and maintenance document to comply with CE marking.
The use of cleats as the sole installation/support method will not comply with CE marking rules.

Where cleats are requested to be fitted and local authority approval has been given, the drop rod system will be the responsibility of others.



Fixing Kit

Fixing cleat (4) kits are available for retro fixing, please refer to the sales office.

Clamp Plate Flexible Fire Curtain

FD-C-FC

In addition to the installation plate secured to the damper, the FD-C-FC damper has an additional clamp plate for installation.
The clamp plate has thread forms to receive the safety self-tapping screws through the fire curtain material.



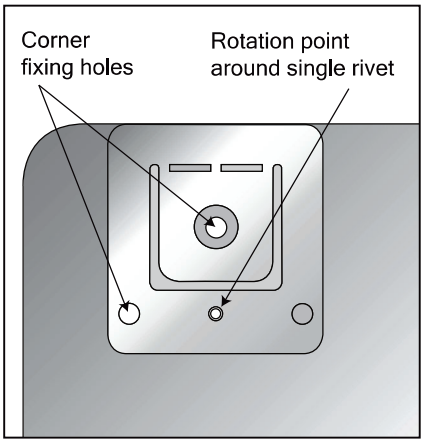
Rotatable Easy Bend Cleats (Not FC)

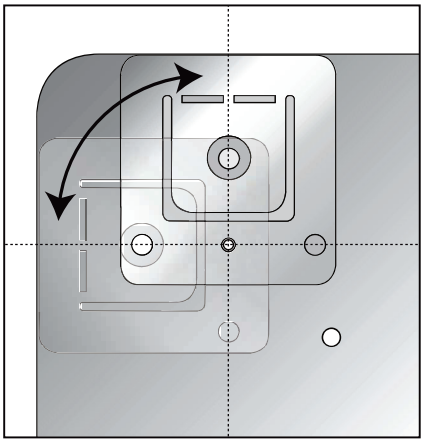
The optional Rotatable Cleat Easy Fix System will be supplied factory fitted to the FD-C Series dampers.

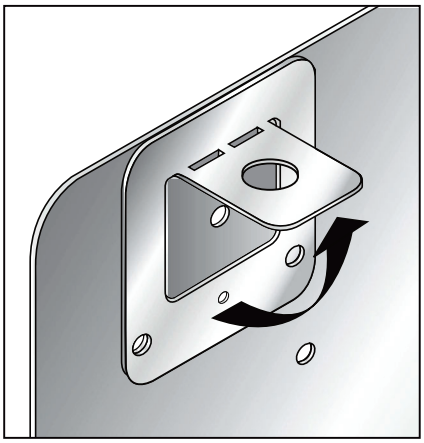
The installation plate should be fitted to the fire separation barrier to ensure test conformity is maintained. The Easy Bend Cleat is available factory fitted four per plate. The cleats should only be used where the fire separation element is not yet in place, offering a temporary installation support. The cleats must not be the sole independent method of supporting the fire damper.

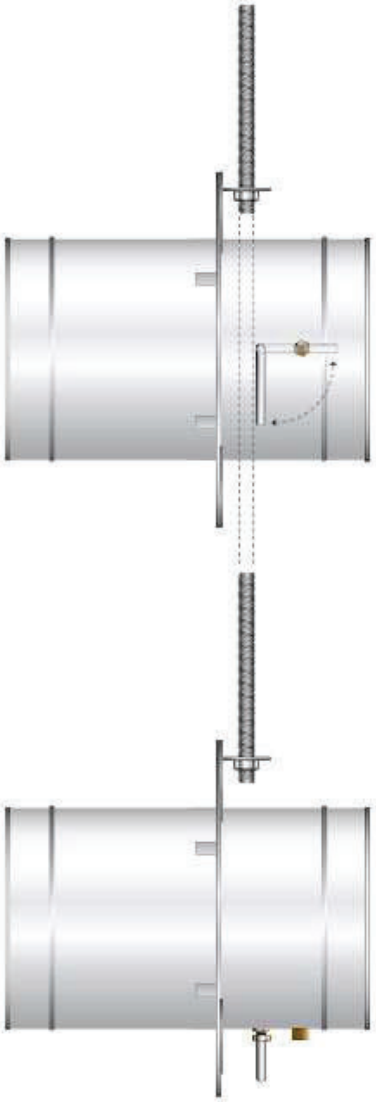
The cleats can easily be bent out using a flat head screwdriver. Supporting drop rods are used in the normal way.

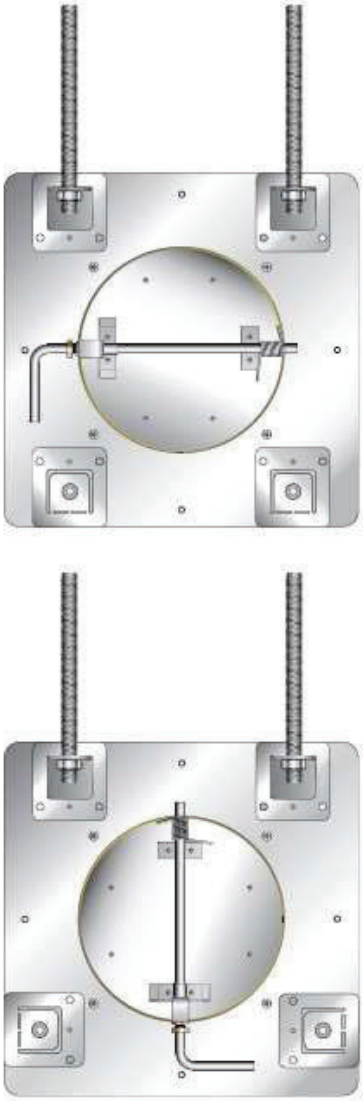
The cleats can be rotated through 90 degrees to suit handle position where the damper requires to be installed with the handle of either left, right, top or bottom giving full flexibility during installation.

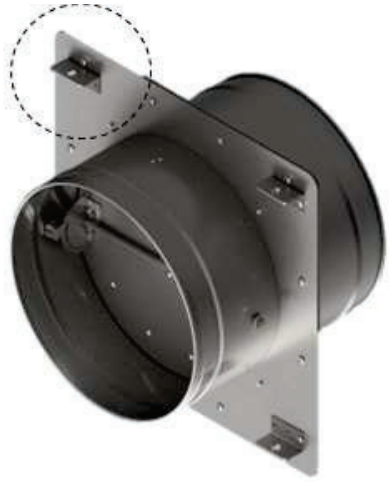












FD-C-FC Cleats

These cleats are supplied factory fitted for the FD-FC damper. These cleats are specific only to the Fire Curtain installation type.

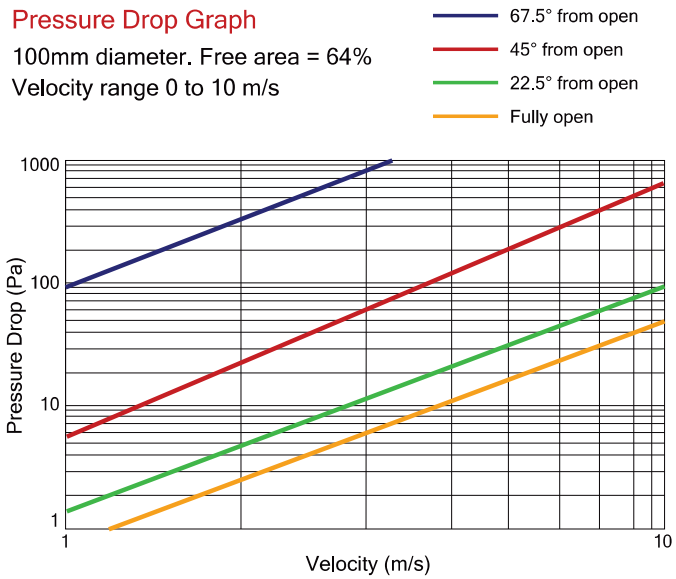
FD-C Series

Single Blade Circular Fire Dampers - Performance Data

Performance Data

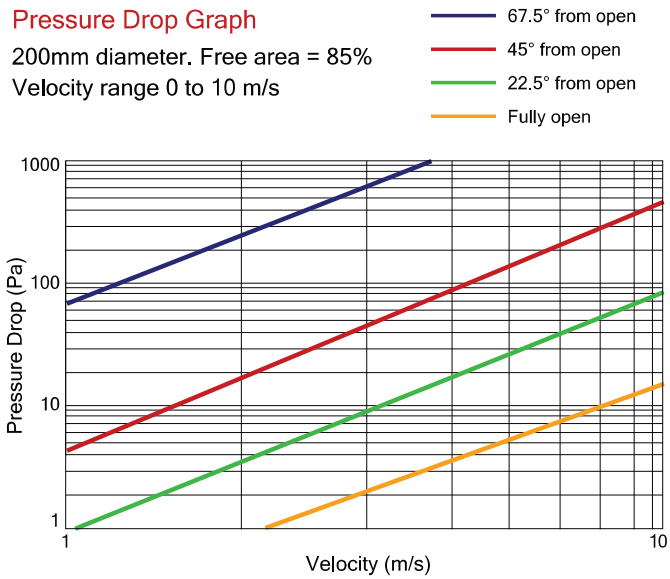
Pressure Drop Graph

100mm diameter. Free area = 64%
Velocity range 0 to 10 m/s



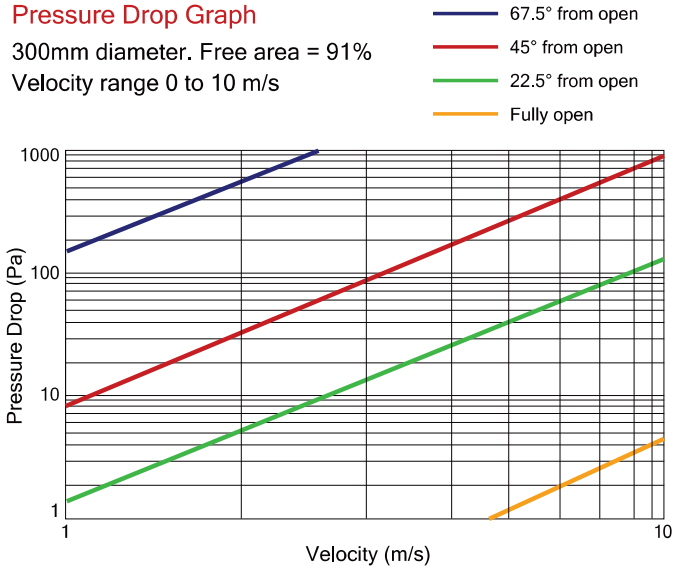
Pressure Drop Graph

200mm diameter. Free area = 85%
Velocity range 0 to 10 m/s



Pressure Drop Graph

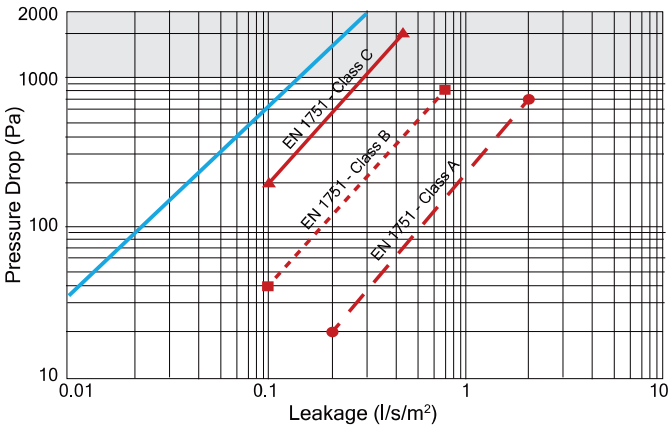
300mm diameter. Free area = 91%
Velocity range 0 to 10 m/s



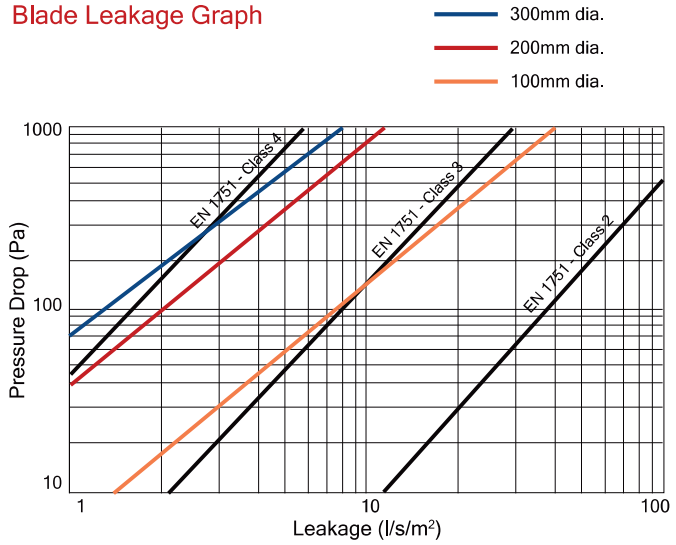
Case Leakage Curve

Model FD-C100 to BS EN 1751

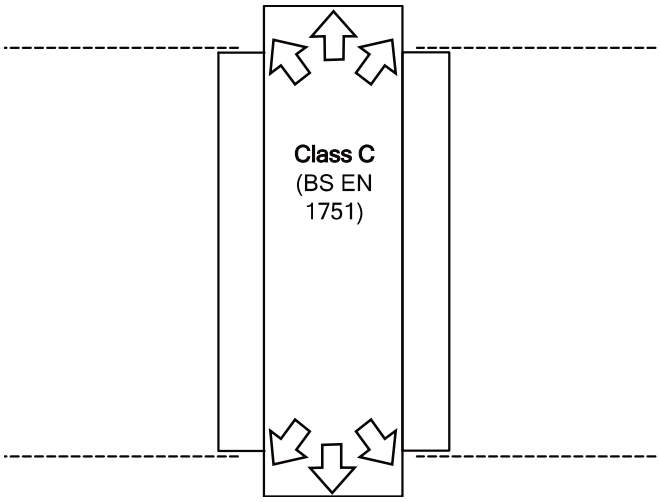
Shaded area - above 1000Pa for system pressure test only.
Normal operation maximum 1000Pa



Blade Leakage Graph



Ambient Case Leakage



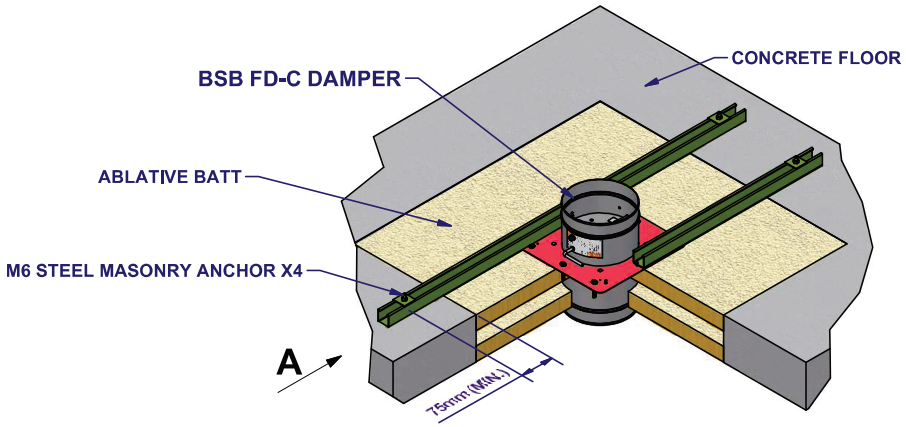
INSTALLATION METHOD
FD-C MASONRY FLOOR BATT

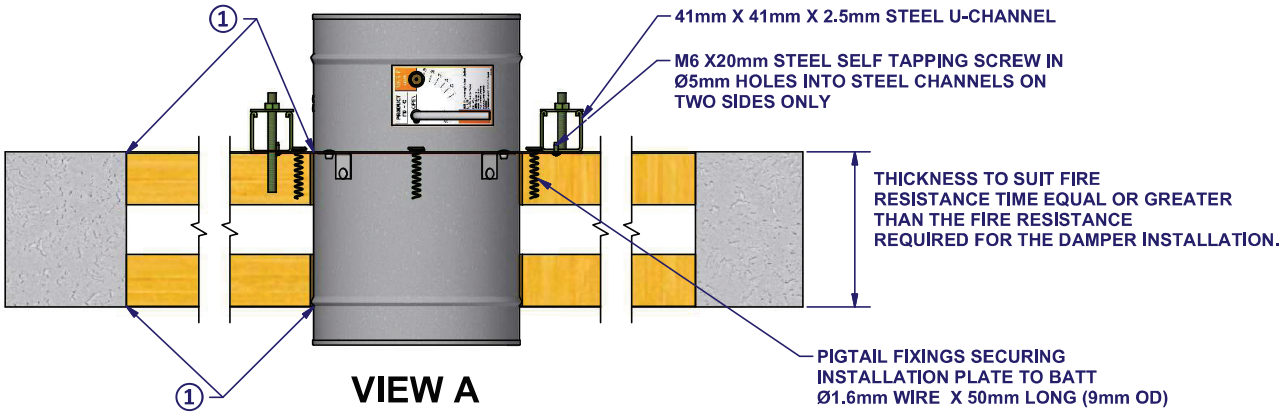
A brand of MAICO

A brand of MAICO

FD-C M7-r1

PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.





VIEW A

CLASSIFICATION		
MINIMUM CONSTRUCTION	CASE / BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
150mm Thick Masonry Density 580kg/m³ 2 x Layers of 50mm Ablative Coated Batt Density 140kg/m³	Galvanised Steel	E 120 (ho i←o) S

ECN 302

① 10-15mm BEAD OF INTUMESCENT MASTIC AROUND PERIMETERS.

A MINIMUM OF 60mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

GREEN COLOURED ITEMS MUST BE STEEL AND ARE SUPPLIED BY OTHERS. TESTED EXAMPLE SHOWN, HOWEVER CONSTRUCTION CAN DEVIATE TO A FIRE-SAFE DESIGN PROVIDED APPROVAL FROM A STRUCTURAL ENGINEER HAS BEEN ACQUIRED.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

www.bsb-dampers.co.uk

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I,O&M

CE DoP-FD-C-06

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3

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CE

INSTALLATION METHOD
FD-C MASONRY WALL / BATT

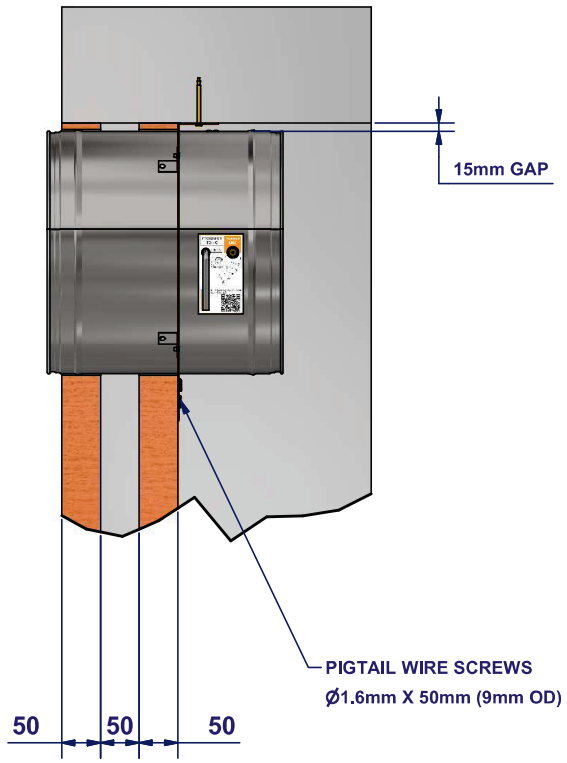
A brand of MAICO

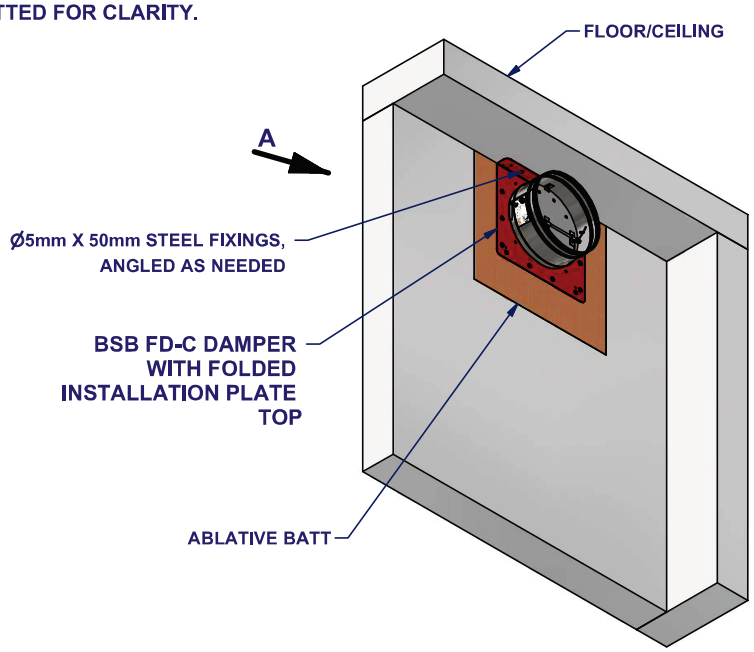
A brand of MAICO

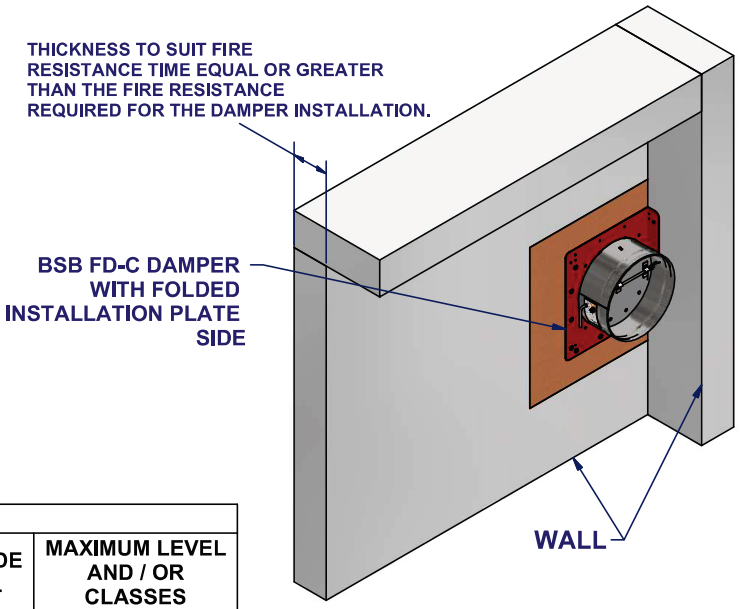
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK AND FIRE BATT HAVE BEEN OMITTED FOR CLARITY.
DAMPER INCLUDES ABLATIVE BATT PENETRATION SEAL.

FD-C M8-r3

VIEW A







CLASSIFICATION		
MINIMUM CONSTRUCTION	CASE / BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
150mm Thick Masonry Density 650kg/m³ 2 x Layers of 50mm Ablative Coated Batt Density 140kg/m³	Galvanised Steel	E 120 (ve i↔o) S

ECN 302

ALL FIXINGS HOLES ARE TO BE USED TO SECURE THE DAMPER TO THE ABLATIVE BATT/ WALL/CEILING.
DAMPER MAY BE INSTALLED WITH HANDLE IN ANY ORIENTATION.
IT IS ACCEPTABLE TO INSTALL WITH A CUT DOWN PLATE AND 40 X 40 X 2mm MILD STEEL ANGLE, CONTACT BSB FOR FURTHER DETAILS.
A MINIMUM OF 10mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

www.bsb-dampers.co.uk

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CE DoP-FD-C-06

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3

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INSTALLATION METHOD
FD-C DRY WALL

A brand of MAICO

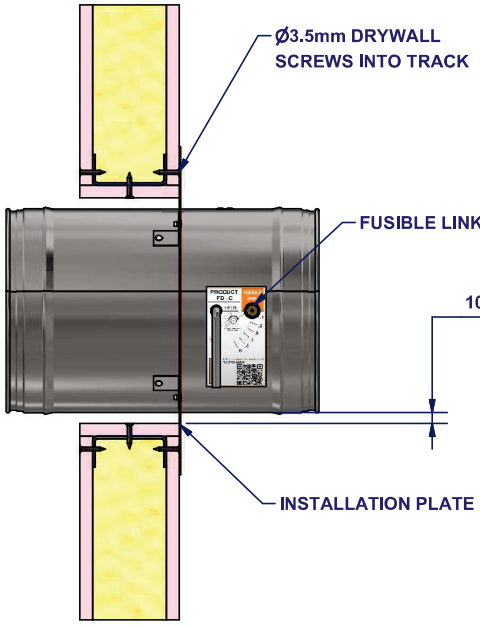
A brand of MAICO

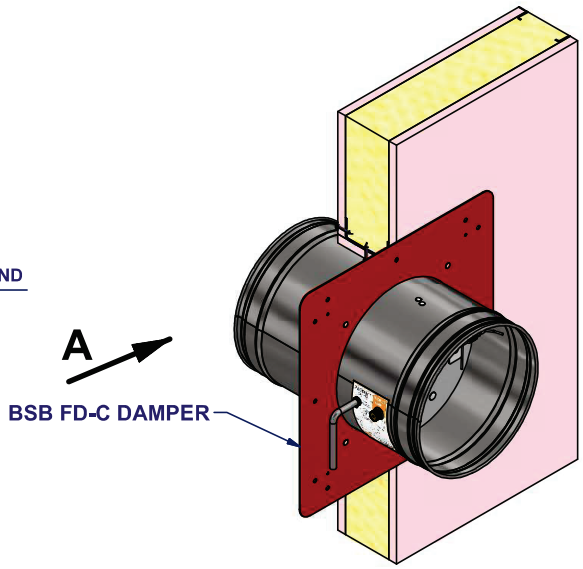
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.

FD-C M9-r2

INSTALLATION METHOD	
SHEET	METHOD
1	SINGLE SKIN
2	DOUBLE SKIN
3	WALL + ADJACENT STRUCTURE

VIEW A



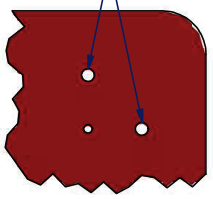


THE DAMPER IS CLASSIFIED TO BE INSTALLED IN EI 30 AND EI 60 SYMMETRICAL WALLS, WITH AND WITHOUT ACOUSTIC INSULATION.

THE SUPPORTING CONSTRUCTION MUST BE OF THE SAME TYPE WITH A FIRE RESISTANCE EQUAL TO EI 30 OR GREATER THAN THAT OF THE SUPPORTING CONSTRUCTION USED IN THE TEST (THICKER, DENSER, MORE LAYERS OF BOARD, AS APPROPRIATE).

CLASSIFICATION		
MINIMUM CONSTRUCTION	CASE / BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
Group A 50mm Steel Stud 1 Layer of 12.5mm Type F Board Each Side (EI 30 Fire Resistance)	Galvanised Steel	E 60 (ve i↔o) S

SEE NOTE ①



ECN 302

① ONLY ONE FIXING IS REQUIRED PER CORNER. ALL INTERMEDIATE FIXING HOLES ARE TO BE USED.
ALL FIXING SCREWS SHOULD BE SECURELY SCREWED TO THE TRACK LINING THE OPENING.
THE OPENING IN THE WALL MUST BE LINED.
THERE IS NO NEED TO FILL THE OPENING VOID.
DAMPER MAY BE INSTALLED WITH HANDLE IN ANY ORIENTATION.

A MINIMUM OF 75mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 200mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

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CE DoP-FD-C-06

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3

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INSTALLATION METHOD
FD-C DRY WALL

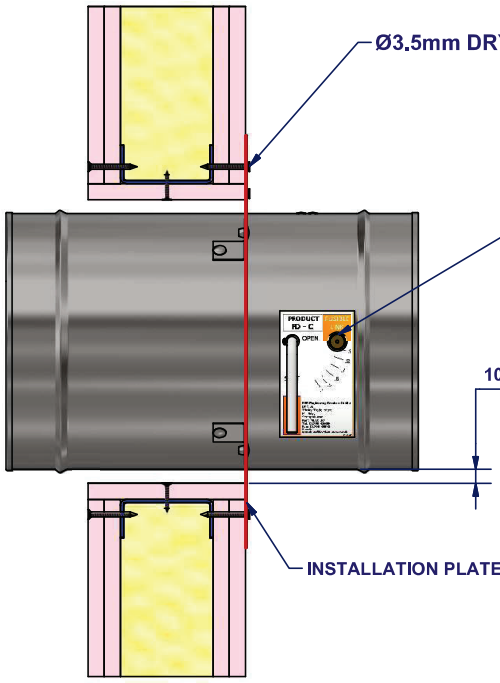
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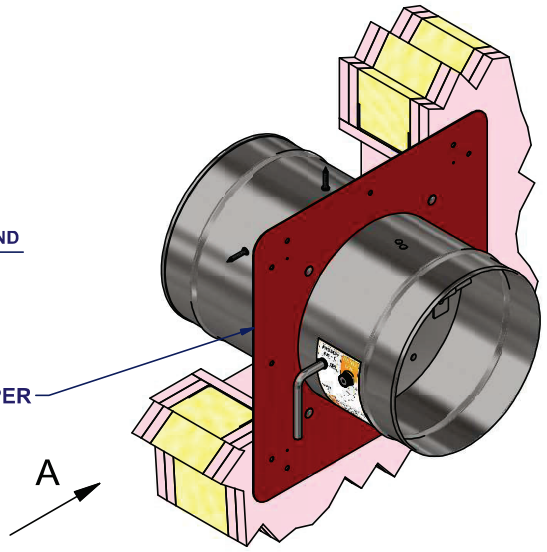
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.

FD-C M9-r2

INSTALLATION METHOD	
SHEET	METHOD
1	SINGLE SKIN
2	DOUBLE SKIN
3	WALL + ADJACENT STRUCTURE

VIEW A



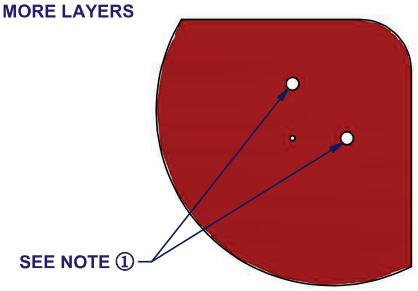


THE DAMPER IS CLASSIFIED TO BE INSTALLED IN EI 90 AND EI 120 SYMMETRICAL WALLS, WITH AND WITHOUT ACOUSTIC INSULATION.

THE SUPPORTING CONSTRUCTION MUST BE OF THE SAME TYPE WITH A FIRE RESISTANCE EQUAL TO EI 90 OR GREATER THAN THAT OF THE SUPPORTING CONSTRUCTION USED IN THE TEST (THICKER, DENSER, MORE LAYERS OF BOARD, AS APPROPRIATE).

CLASSIFICATION		
MINIMUM CONSTRUCTION	BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
Group B 70mm Steel Stud 2 Layers of 12.5mm Type F Board Each Side (EI 90 Fire Resistance)	Galvanised Steel	E 90 (ve i↔o) S
Group B 70mm Steel Stud 2 Layers of 12.5mm Type F Board Each Side (EI 90 Fire Resistance)	430 Stainless Steel	E 60 (ve i↔o) S*

* For reduced case length option, use 430 stainless steel classification.



ECN 302

① ONLY ONE FIXING IS REQUIRED PER CORNER. ALL INTERMEDIATE FIXING HOLES ARE TO BE USED.
ALL FIXING SCREWS SHOULD BE SECURELY SCREWED TO THE TRACK LINING THE OPENING.
THE OPENING IN THE WALL MUST BE LINED.
THERE IS NO NEED TO FILL THE OPENING VOID.
DAMPER MAY BE INSTALLED WITH HANDLE IN ANY ORIENTATION.

A MINIMUM OF 60mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

CE DoP-FD-C-06

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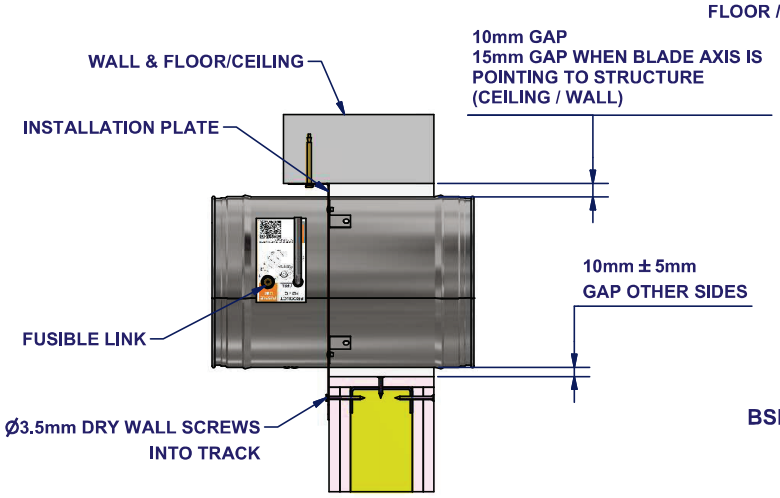
INSTALLATION METHOD
FD-C DRY WALL

A brand of

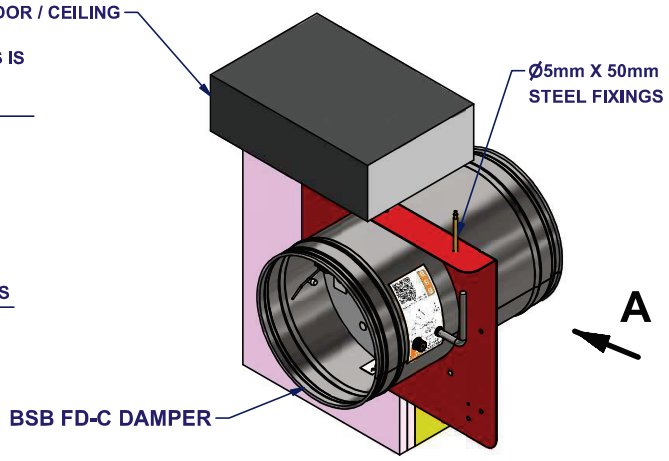
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.

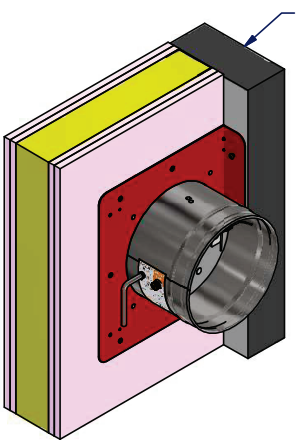
FD-C M9-r2

INSTALLATION METHOD	
SHEET	METHOD
1	SINGLE SKIN
2	DOUBLE SKIN
3	WALL + ADJACENT STRUCTURE



VIEW A





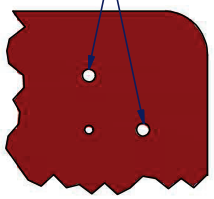
THE DAMPER IS CLASSIFIED TO BE INSTALLED IN EI 90 AND EI 120 SYMMETRICAL WALLS, WITH AND WITHOUT ACOUSTIC INSULATION.

THE SUPPORTING CONSTRUCTION MUST BE OF THE SAME TYPE WITH A FIRE RESISTANCE EQUAL TO EI 90 OR GREATER THAN THAT OF THE SUPPORTING CONSTRUCTION USED IN THE TEST (THICKER, DENSER, MORE LAYERS OF BOARD, AS APPROPRIATE).

CLASSIFICATION		
MINIMUM CONSTRUCTION	BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
Group B 70mm Steel Stud 2 Layers of 12.5mm Type F Board Each Side (EI 90 Fire Resistance)	Galvanised Steel	E 120 (ve i↔o) S
Group B 70mm Steel Stud 2 Layers of 12.5mm Type F Board Each Side (EI 90 Fire Resistance)	430 Stainless Steel	E 60 (ve i↔o) S*

* For reduced case length option, use 430 stainless steel classification.

SEE NOTE ①



ECN 302

① ONLY ONE FIXING IS REQUIRED PER CORNER. ALL INTERMEDIATE FIXING HOLES ARE TO BE USED.
ALL FIXING SCREWS SHOULD BE SECURELY SCREWED TO THE TRACK LINING THE OPENING.
THE OPENING IN THE WALL MUST BE LINED.
THERE IS NO NEED TO FILL THE OPENING VOID.
DAMPER MAY BE INSTALLED WITH HANDLE IN ANY ORIENTATION.

A MINIMUM OF 10mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

CE DoP-FD-C-06

www.bsb-dampers.co.uk

SCAN ME

I,O&M

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3

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CE

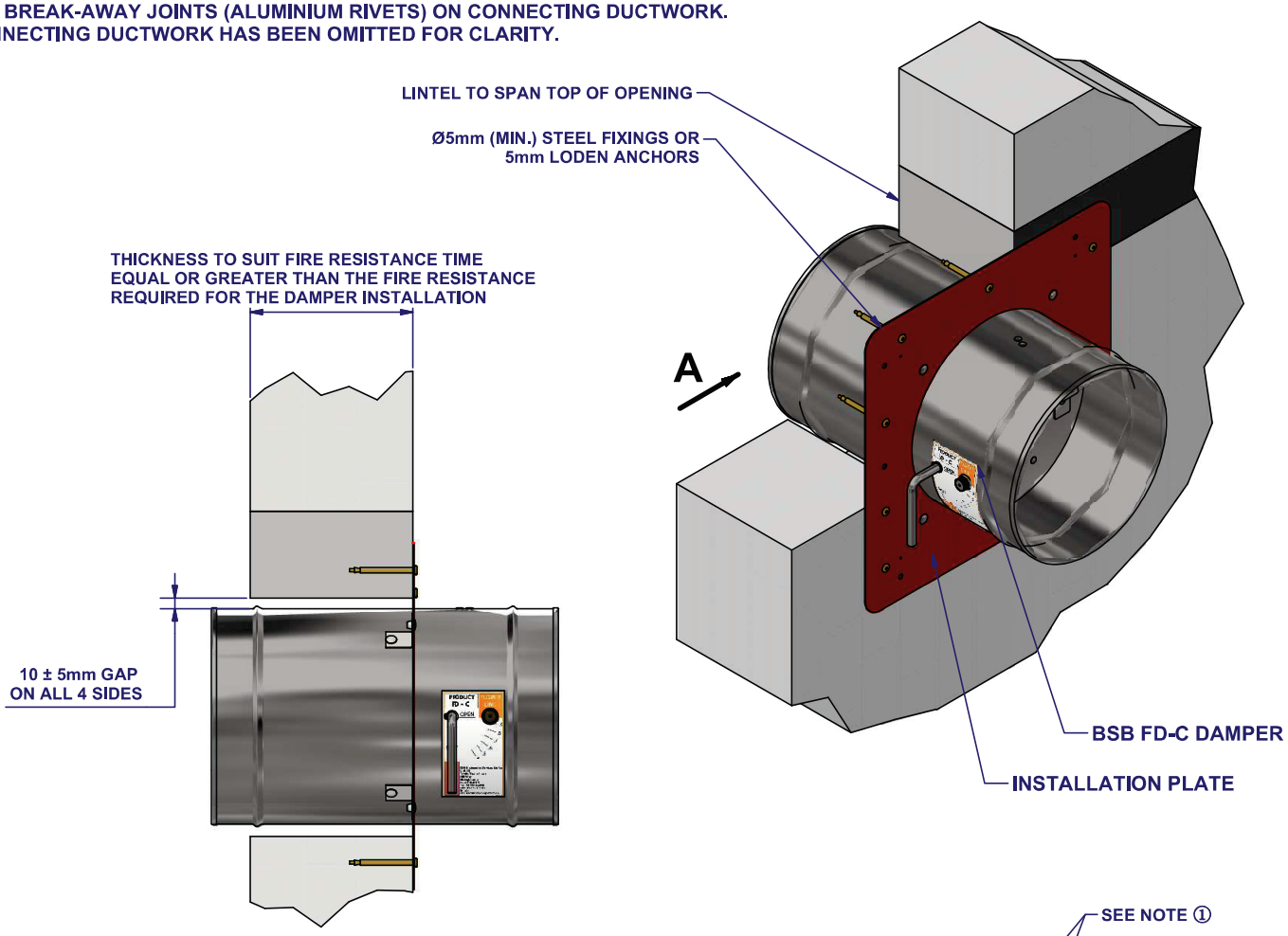
A brand of MAICO

INSTALLATION METHOD
FD-C MASONRY WALL

A brand of MAICO

FD-C M10-r2

PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.



VIEW A

CLASSIFICATION		
MINIMUM CONSTRUCTION	BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
150mm Thick Masonry Density 650kg/m³	Galvanised Steel	E 120 (ve i←o) S
150mm Thick Masonry Density 650kg/m³	430 Stainless Steel	E 120 (ve i↔o) S*

* For reduced case length option, use 430 stainless steel classification.

ECN 302

① ONLY ONE FIXING IS REQUIRED PER CORNER. ALL INTERMEDIATE FIXING HOLES ARE TO BE USED.
THERE IS NO NEED TO FILL THE OPENING VOID.

A MINIMUM OF 60mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

www.bsb-dampers.co.uk

SCAN ME
I,O&M

CE DoP-FD-C-06

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CE

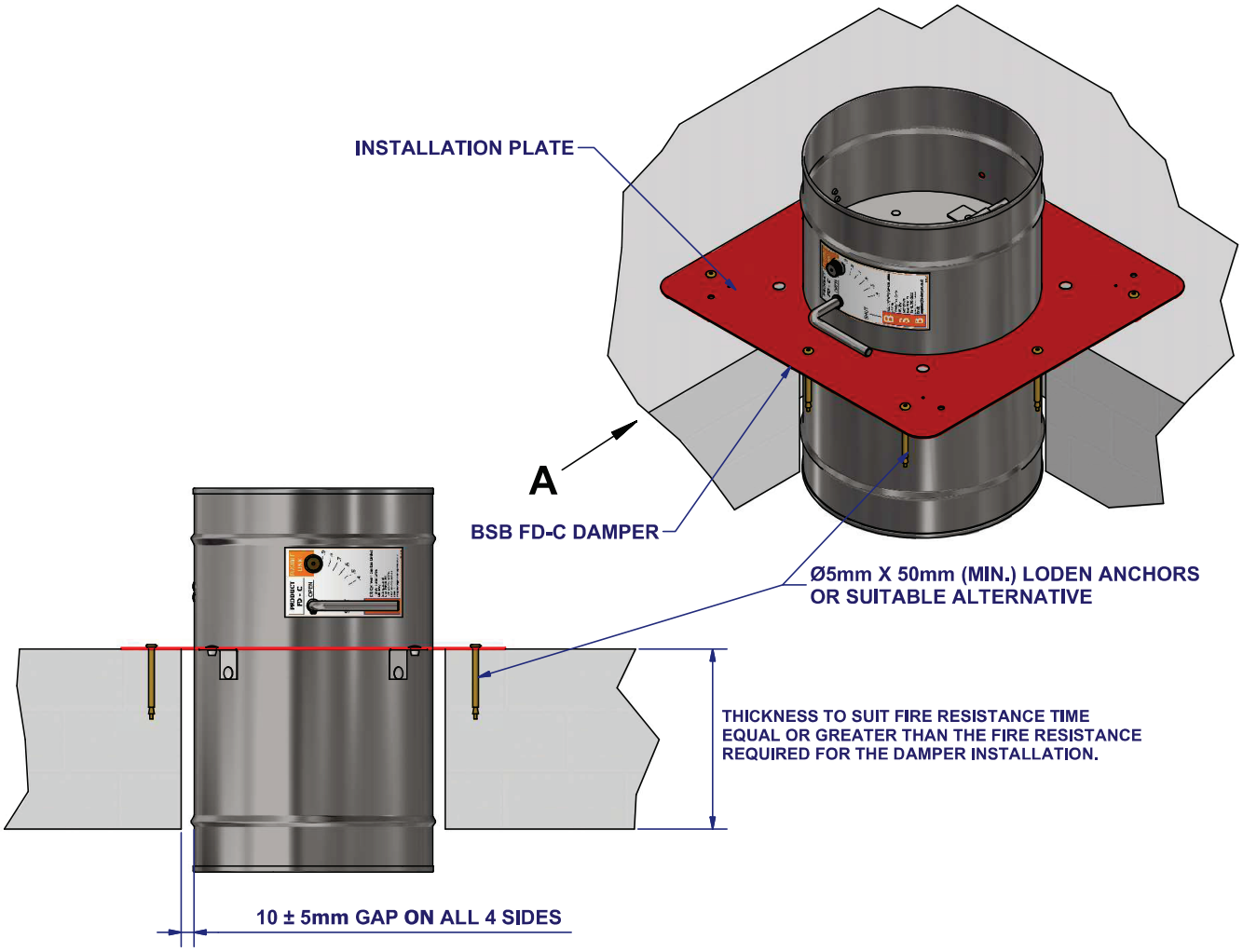
INSTALLATION METHOD
FD-C MASONRY FLOOR

A brand of MAICO

A brand of MAICO

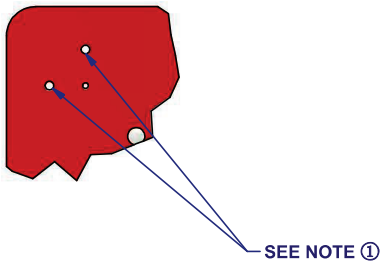
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
I, O & M AVAILABLE FROM QR CODE IN FOOTER.
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.

FD-C M11-r2



VIEW A

CLASSIFICATION		
MINIMUM CONSTRUCTION	CASE / BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
150mm Thick Masonry Density 580kg/m³	Galvanised Steel	E 120 (ho i↔o) S



ECN 302

① ONLY ONE FIXING IS REQUIRED PER CORNER. ALL INTERMEDIATE FIXING HOLES ARE TO BE USED.
THERE IS NO NEED TO FILL THE OPENING VOID.

A MINIMUM OF 60mm SEPARATION BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR, OR CEILING & 60mm BETWEEN SINGLE SECTION DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I, O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C

www.bsb-dampers.co.uk

SCAN ME
I,O&M

CE DoP-FD-C-06

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3

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CE

INSTALLATION METHOD
FD-C-FC FIRE CURTAIN FRAME

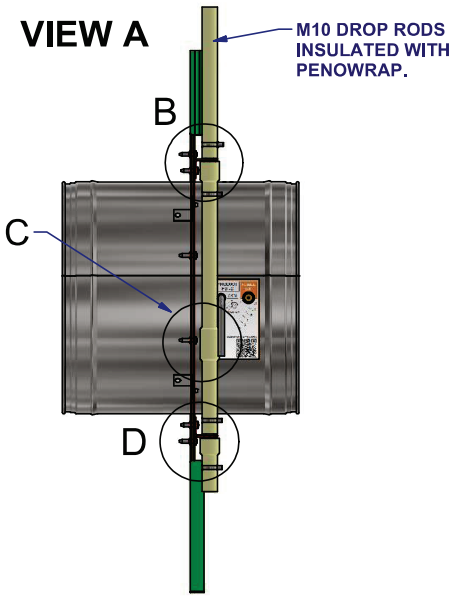
A brand of MAICO

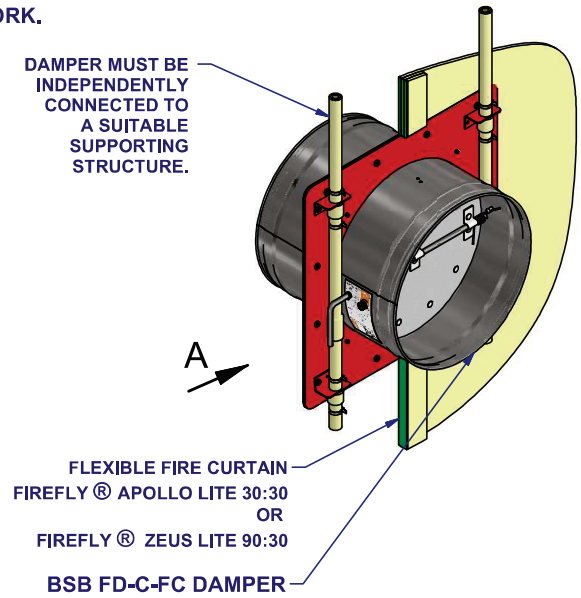
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FD-C M14-r0

PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION. FLEXIBLE FIRE CURTAIN TO BE INSTALLED TO FIREFLY ® INSTALLATION GUIDE.
I,O & M AVAILABLE FROM QR CODE IN FOOTER
USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS) ON CONNECTING DUCTWORK.
CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.

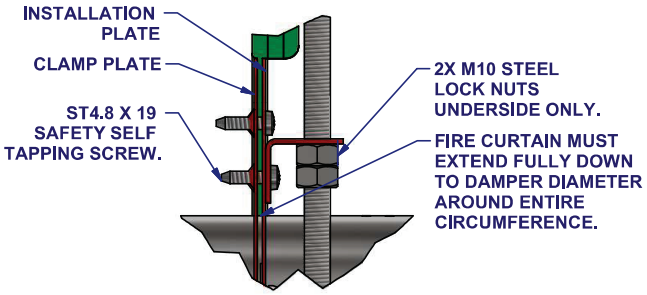
VIEW A





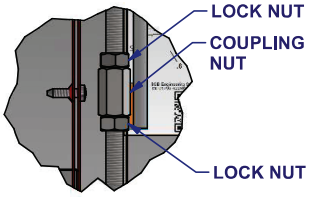
VIEW B

PENOWRAP OMITTED



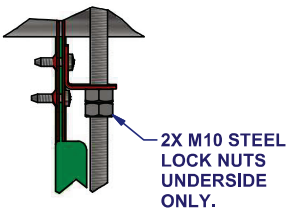
VIEW C

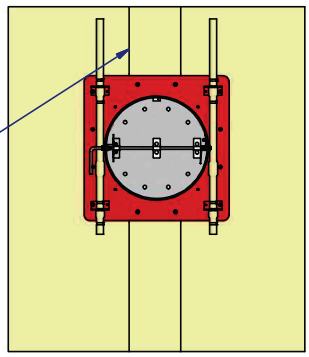
PENOWRAP OMITTED



VIEW D

PENOWRAP OMITTED





CLASSIFICATION		
MINIMUM CONSTRUCTION	CASE / BLADE MATERIAL	MAXIMUM LEVEL AND / OR CLASSES
Apollo Lite 30:30 Minimum Thickness 6mm	Galvanised Steel	E 60 (ve i↔o) S
Zeus Lite 90:30 Minimum Thickness 6mm	Galvanised Steel	E 60 (ve i↔o) S

ECN 307

ALL FIXING SCREWS MUST BE SECURELY FIXED TO CLAMP PLATE.
IT IS ACCEPTABLE TO USE A COUPLING NUT + LOCK NUT SHOWN IN VIEW C, POSITIONED ANYWHERE BETWEEN CLEATS.
A MINIMUM SEPARATION OF 75mm BETWEEN FIRE DAMPER AND ADJACENT WALL, FLOOR OR CEILING & 200mm BETWEEN DAMPERS.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE ACCEPTED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED I,O & M IN ORDER TO CONSIDER APPROVAL.

Damper size Ø100mm to Ø315mm

BSB FD-C-FC

CE DoP-FD-C-06

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SCAN ME
I,O&M

TESTED TO EN1366-2
CLASSIFIED TO EN13501-3
CE MARKING CoCoP PENDING

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CE

FD-C Series

Single Blade Circular Fire Dampers - Ordering Codes

A brand of MAICO

FD-C	200	G	MS

FD-C Externally Resettable Circular Single Blade Damper
FD-C-FC Fire Curtain Frame

Diameter:

Blade Material
G Galvanised Mild Steel
S 430 Grade Stainless Steel

Accessories
MS Single Pole Micro Switch
R-CL Rotatable Cleat

Other Air, Fire and Smoke Control Products in the BSB Range:



For full details of the complete BSB Product Range, please refer to our individual product brochures, sales office or website.

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BSB Engineering Services Limited

Unit 56, Trinity Trade Centre, Mill Way, Sittingbourne, Kent ME10 2PD, UK • Tel: +44 (01795 422609
For purchase orders and order related enquiries, please email: orders@bsb-dampers.co.uk
For pricing, technical and general enquiries, please email: enquiries@bsb-dampers.co.uk
Website: www.bsb-dampers.co.uk • A member of the Maico group

BSB Engineering Services Ltd. reserves the right to modify or withdraw any specification without prior notice that may result from continuous product development. The information contained within this brochure is correct at the time of going to press.

Assessed to ISO 9001:2015
Certificate No. 1464



VERSALINE VL

Centrifugal Inline Fan

» **Select** models available for next day delivery

VERSALINE VL

Product Overview



- 6 standard sizes from 100mm to 315mm
- Air volume flow rates up to 0.34 m³/s
- Static pressures up to 484 Pa
- Suitable for operating temperatures up to +50°C
- Available in **AC**

All metal in-line centrifugal fans which are ideally suited to a wide range of commercial and industrial applications. They provide the ideal solution for high performance requirements in low airflow, medium pressure systems.

Easy Installation

All models are designed for direct connection to standard diameter flexible or rigid circular ducting with 25mm long spigots for ease of connection.
The integral mounting bracket provides a fast, simple approach to fixing the fan in position.

Space Saving

A compact casing design, combined with high performance makes the product ideal for ceiling void mounting.

Efficient Performance

The single inlet, single width backward curved centrifugal impeller is designed to be non overloading and self cleaning ensuring efficiency.

Ease of Wiring

Fitted with flying lead and UK 3 Pin plug for quick electrical connection at full speed operation. Can be removed for speed control.

Warranty

Each Versaline has a 12 month warranty.

Construction

Casings have a galvanised pressed sheet steel construction, providing a robust, long lasting and corrosion resistant casing. All Versaline units are supplied complete with integral mounting brackets manufactured from galvanised sheet steel for horizontal or vertical mounting arrangements.

Motor

Motors have sealed for life ball bearings to enable the fan to be mounted at any angle. They are protected to IP44 with Class F insulation; suitable for speed control and ambient operating temperatures up to +50°C with built in thermal overload protection. Non self-resetting thermal cut-outs are fitted in accordance with EN60335-2-80. Motors are wound for 230V/1Ph/50Hz/60Hz supply.

Impeller

All impellers are single inlet backward curved centrifugal type. Impellers are balanced to ISO 14694 Grade G6.3.

Typical Applications

- Toilets
- Café
- Entrance Halls
- Duct Ventilation Boost
- Bathrooms
- Equipment Cooling
- Air Curtain Supply
- Restaurants

Contents

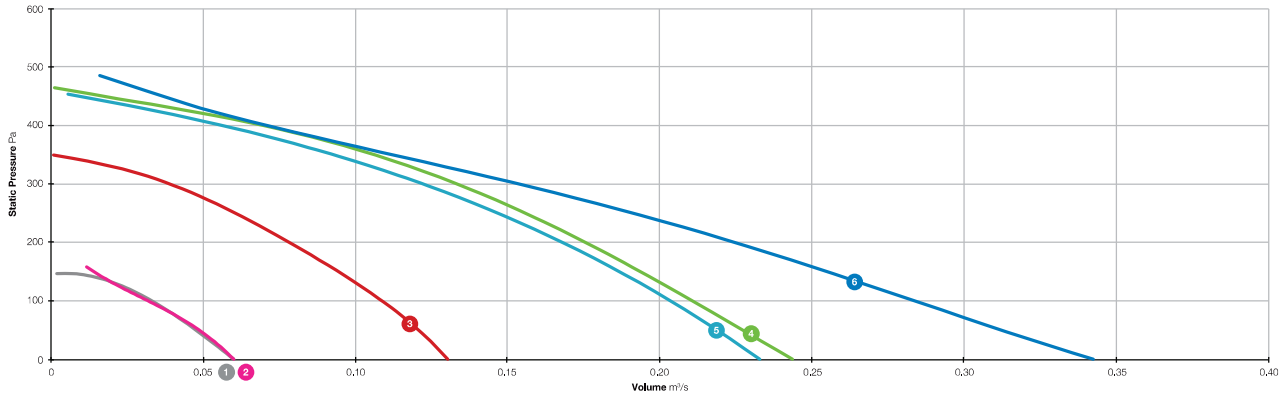
Page	Information
3	Performance Range Curves
4	Performance, SFP & Electrical Data
5	Sound Data
6	Dimensional Data
7	EcoDesign 1253/2014
8	Accessories
19	Notes

Tel **01384 275800** Fax **01384 275810** Email **info@eltafans.co.uk** Website **eltafans.com**

VERSALINE VL

AC

Performance Range Curves



1 VL100
2 VL125
3 VL150
4 VL200
5 VL250
6 VL315

VERSALINE VL

Performance, SFP & Electrical Data

AC

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min	Airflow SFP	Airflow m³/s @ Static Pressure Pa											At Best Efficiency Point		Electrical Data	dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	Overall Eff %	Input kW	Peak Amps		
VL100	2725	m³/s	0.060	0.053	0.047	0.040	0.033	-	-	-	-	-	-	13.5	0.025	0.14	Inlet	42
		W/(L/s)	0.42	0.47	0.53	0.61	0.73	-	-	-	-	-	-				Outlet	37
VL125	2690	m³/s	0.059	0.054	0.048	0.041	0.031	0.014	-	-	-	-	-	12.6	0.026	0.14	Inlet	43
		W/(L/s)	0.43	0.47	0.53	0.62	0.80	1.79	-	-	-	-	-				Outlet	38
VL150	2595	m³/s	0.130	0.125	0.120	0.115	0.108	0.094	0.078	0.060	0.039	0.001	-	25.2	0.062	0.28	Inlet	52
		W/(L/s)	0.49	0.52	0.53	0.55	0.56	0.62	0.70	0.85	1.20	44.13	-				Outlet	50
	2300	m³/s	0.112	0.108	0.101	0.092	0.081	0.065	0.051	0.036	0.015	-	-	20.3	0.051	0.26	Inlet	49
		W/(L/s)	0.48	0.52	0.55	0.59	0.64	0.75	0.86	1.08	2.15	-	-				Outlet	47
	2120	m³/s	0.090	0.081	0.065	0.055	0.049	0.038	0.029	0.017	-	-	-	13.0	0.045	0.25	Inlet	46
		W/(L/s)	0.59	0.67	0.85	0.97	1.04	1.21	1.43	2.06	-	-	-				Outlet	44
VL200	2565	m³/s	0.243	0.235	0.227	0.218	0.210	0.193	0.175	0.155	0.133	0.106	0.070	38.4	0.104	0.46	Inlet	46
		W/(L/s)	0.39	0.43	0.46	0.48	0.48	0.50	0.51	0.51	0.51	0.63	0.96				Outlet	45
	2395	m³/s	0.225	0.217	0.208	0.199	0.188	0.166	0.141	0.117	0.091	0.065	0.036	30.8	0.088	0.43	Inlet	44
		W/(L/s)	0.34	0.45	0.50	0.52	0.50	0.50	0.51	0.57	0.73	1.03	1.89				Outlet	43
	2100	m³/s	0.206	0.199	0.190	0.179	0.164	0.132	0.104	0.078	0.053	0.030	0.013	22.4	0.092	0.43	Inlet	42
		W/(L/s)	0.42	0.46	0.50	0.53	0.56	0.67	0.78	0.91	1.05	1.59	3.66				Outlet	41
VL250	2555	m³/s	0.232	0.225	0.218	0.211	0.203	0.186	0.168	0.146	0.122	0.092	0.056	35.3	0.105	0.48	Inlet	47
		W/(L/s)	0.42	0.46	0.48	0.50	0.51	0.53	0.55	0.57	0.62	0.79	1.31				Outlet	46
	2295	m³/s	0.216	0.208	0.199	0.189	0.179	0.156	0.131	0.104	0.077	0.049	0.018	26.5	0.100	0.45	Inlet	44
		W/(L/s)	0.43	0.47	0.51	0.53	0.55	0.60	0.67	0.75	0.88	1.29	3.42				Outlet	43
	2115	m³/s	0.204	0.194	0.184	0.172	0.158	0.127	0.099	0.075	0.052	0.030	-	20.2	0.099	0.44	Inlet	43
		W/(L/s)	0.45	0.49	0.54	0.58	0.62	0.74	0.88	1.04	1.25	1.98	-				Outlet	41
VL315	2190	m³/s	0.342	0.327	0.312	0.297	0.283	0.254	0.224	0.190	0.153	0.111	0.070	30.6	0.156	0.69	Inlet	46
		W/(L/s)	0.42	0.46	0.49	0.52	0.55	0.61	0.66	0.72	0.80	1.02	1.61				Outlet	47
	1965	m³/s	0.323	0.301	0.283	0.266	0.250	0.215	0.175	0.127	0.082	0.051	0.030	24.5	0.144	0.66	Inlet	44
		W/(L/s)	0.40	0.45	0.49	0.54	0.58	0.66	0.78	0.99	1.33	1.94	3.32				Outlet	44
	1785	m³/s	0.299	0.284	0.267	0.246	0.220	0.163	0.118	0.085	0.060	0.040	0.023	17.6	0.139	0.64	Inlet	42
		W/(L/s)	0.42	0.46	0.51	0.57	0.63	0.84	1.10	1.37	1.64	2.17	3.77				Outlet	43

Data provided is at standard air density of 1.2 kg/m³.
Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.
Peak Amps @ 230V / 1PH / 50Hz.
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

Tel **01384 275800** Fax **01384 275810** Email **info@eltafans.co.uk** Website **eltafans.com**

VERSALINE VL

Sound Data

AC

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
VL100	2725	Inlet	65	68	65	62	55	47	36	27	72
		Outlet	64	63	62	54	50	43	37	26	68
VL125	2690	Inlet	67	70	68	62	54	47	39	29	74
		Outlet	73	65	63	55	49	42	34	25	74
VL150	2595	Inlet	75	82	74	72	64	61	54	49	84
		Outlet	74	81	74	64	64	60	52	47	83
	2300	Inlet	73	79	70	69	61	58	50	44	81
		Outlet	72	80	70	61	60	56	47	42	81
	2120	Inlet	70	76	67	66	57	54	46	40	78
		Outlet	70	77	66	57	56	52	41	37	78
VL200	2565	Inlet	72	71	69	65	60	56	50	50	76
		Outlet	72	71	66	62	59	57	53	53	76
	2395	Inlet	70	72	66	63	57	54	47	45	75
		Outlet	70	70	65	59	57	54	50	50	74
	2100	Inlet	72	69	66	61	55	51	45	40	75
		Outlet	69	69	64	58	54	52	48	47	73
VL250	2555	Inlet	68	75	69	64	61	57	51	48	77
		Outlet	72	72	71	60	59	57	50	50	77
	2295	Inlet	69	73	66	62	58	55	48	45	75
		Outlet	71	70	66	59	57	55	48	45	75
	2115	Inlet	67	71	66	60	56	53	48	44	74
		Outlet	70	69	66	56	54	52	45	41	74
VL315	2190	Inlet	80	72	70	64	60	53	50	51	81
		Outlet	77	77	71	62	61	58	53	53	81
	1965	Inlet	76	70	69	61	56	48	50	47	78
		Outlet	76	72	67	58	58	54	51	51	78
	1785	Inlet	76	70	65	59	54	50	53	43	77
		Outlet	76	73	64	57	55	53	53	46	78

Data provided at standard air density of 1.2 kg/m^3.
Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
The Sound Power Level Spectra are in dB re-1pW.

Elta Fans Limited has a policy of continuous product development and improvement and therefore reserves the right to supply products which may differ from those illustrated and described in this publication.
Confirmation of dimensions and data will be supplied on request.

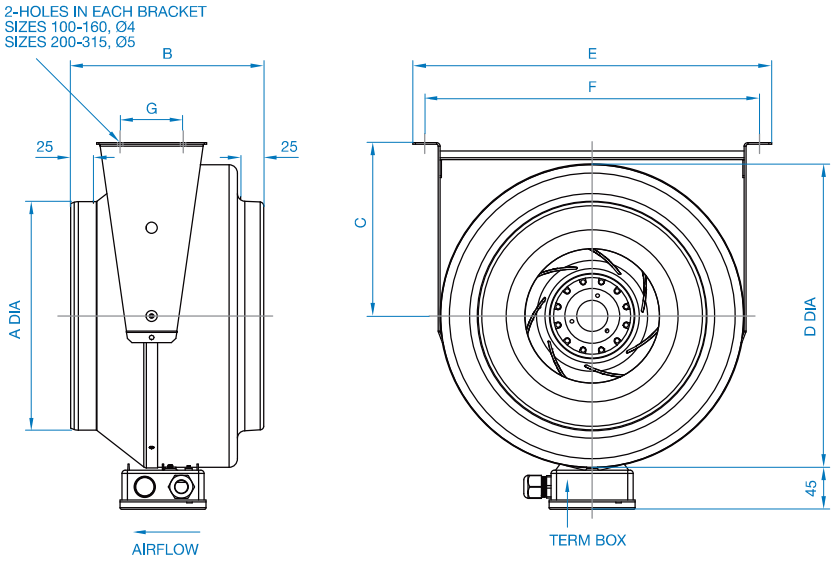
VERSALINE VL

Dimensional Data

AC

Single Phase

Product Code	A	B	C	D	E	F	G	Weight kg
VL100	98	204	130	237	284	270	47	3.7
VL125	123	202	130	237	284	270	47	3.7
VL150	148	195	165	278	326	312	47	3.6
VL200	198	242	190	333	392	372	100	5.5
VL250	248	210	190	333	392	372	100	5.3
VL315	313	280	227	400	460	440	100	8.8



Dimensions are in mm.

Tel **01384 275800** Fax **01384 275810** Email **info@eltafans.co.uk** Website **eltafans.com**

VERSALINE VL

EcoDesign 1253/2014 - Information Requirements

REV2 01/05/2018

A	B	C*			D	E	F	G	H	I	J	K	L	N	O	P	Q	R	S
		C.1	C.2	C.3															
Elta Fans Ltd	**VL100**	NRVU	UVU	2018	Single Speed	None	n/a	0.031	0.025	n/a	4	105.4	n/a	13.5	<5	n/a	n/a	42	www.eltafans.com
Elta Fans Ltd	**VL125**	NRVU	UVU	2018	Single Speed	None	n/a	0.035	0.026	n/a	2.83	92.8	n/a	12.6	<5	n/a	n/a	43	www.eltafans.com
Elta Fans Ltd	**VL150**	NRVU	UVU	2018	Multi-Speed	None	n/a	0.069	0.062	n/a	3.9	227.6	n/a	25.2	<5	n/a	n/a	52	www.eltafans.com
Elta Fans Ltd	**VL200**	NRVU	UVU	2018	Multi-Speed	None	n/a	0.134	0.104	n/a	4.25	300	n/a	38.4	<5	n/a	n/a	46	www.eltafans.com
Elta Fans Ltd	**VL250**	NRVU	UVU	2018	Multi-Speed	None	n/a	0.133	0.105	n/a	2.7	279.8	n/a	35.3	<5	n/a	n/a	47	www.eltafans.com
Elta Fans Ltd	**VL315**	NRVU	UVU	2018	Multi-Speed	None	n/a	0.188	0.156	n/a	2.42	253.7	n/a	30.6	<5	n/a	n/a	46	www.eltafans.com

A Manufacturer's Name
B Model Identifier
C.1 RVU or NRVU
C.2 UVU or BVU
C.3 ErP Compliance
D Type of Drive (MSD or VSD)
E Type of HRS (Run Around or Other or None)
F Thermal Efficiency (% or N/A)
G Nominal Flow Rate (m^3/s)
H Effective electrical power input (kW)
I SFP int ($W/m^3/s$)
J Face Velocity (m/s)
K Nominal External Pressure (Pa)
L Internal pressure drop of ventilation components (Pa)
N Static efficiency of fan used 327/2011
O Maximum external leakage rate (%)
P Energy Classification of filters
Q Description of visual filter warning
R Casing sound power level (LWA)
S Website for disassembly instructions

* Declared Typology C

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VERSALINE VL

Accessories

AC

Single Phase

Product Code	3 Speed Switch	Box Fan Flexible Connectors (each)	Damper	Electric Heater Battery	Fast Clamps (each)	Panel Filter
VL100	-	018-0100-FLEX	018-100-DAMPER	018-CV10-06-1M	018-100-CLAMP	018-0100-FILT-P
VL125	-	018-0125-FLEX	018-125-DAMPER	018-CV12-12-1M	018-125-CLAMP	018-0125-FILT-P
VL150	149-MTS10	018-0150-FLEX	018-150-DAMPER	018-CV15-27-1M	018-150-CLAMP	018-0150-FILT-P
VL200	149-MTS10	018-0200-FLEX	018-200-DAMPER	018-CV20-30-1M	018-200-CLAMP	018-0200-FILT-P
VL250	149-MTS10	018-0250-FLEX	018-250-DAMPER	018-CV25-30-1M	018-250-CLAMP	018-0250-FILT-P
VL315	149-MTS10	018-0315-FLEX	018-315-DAMPER	018-CV31-30-1M	018-315-CLAMP	018-0315-FILT-P

Product Code	Spigot Silencer 300mm Long	Spigot Silencer 600mm Long	Spigot Silencer 900mm Long	Spigot Silencer 1200mm Long	Transformer Controller	Wiring Diagram
VL100	068-0100-JF1	068-0100-JF2	068-0100-JF3	068-0100-JF4	149-TC12	152-549
VL125	068-0125-JF1	068-0125-JF2	068-0125-JF3	068-0125-JF4	149-TC12	152-549
VL150	068-0150-JF1	068-0150-JF2	068-0150-JF3	068-0150-JF4	-	152-529
VL200	068-0200-JF1	068-0200-JF2	068-0200-JF3	068-0200-JF4	-	152-529
VL250	068-0250-JF1	068-0250-JF2	068-0250-JF3	068-0250-JF4	-	152-529
VL315	068-0315-JF1	068-0315-JF2	068-0315-JF3	068-0315-JF4	-	152-529

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3 SPEED SWITCH

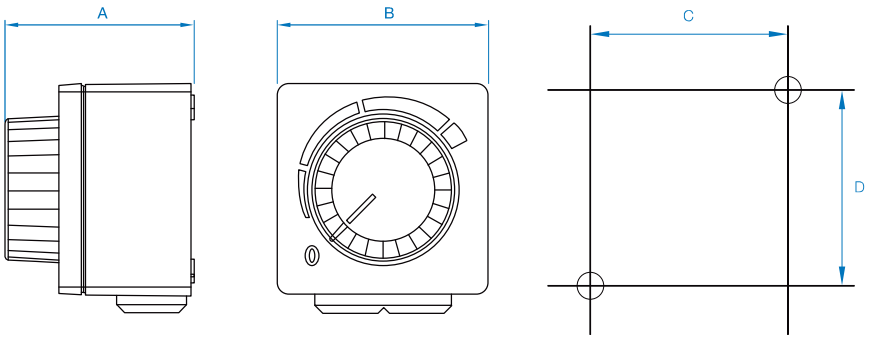
Accessories



- 3 step switch MTS
- Surface and flush mounting
- Maximum ambient temperature 50°C
- VDE
- Protection class IP44

Single Phase 220V to 240V / 50Hz or 60Hz

Product Code	ID	A	B	C	D	Weight kg
MTS10	128145	74	83	66.5	66.5	0.2



	U_{max}	Hz	I_{max}	P_{max}
CE	250V~	50Hz	4A	-
cULus	120V~ 240V	60Hz 60Hz	-	1hp 2hp

Legend

I_{max} Maximum operating current
U_{max} Maximum Voltage
P_{max} Maximum power

Dimensions are in mm.

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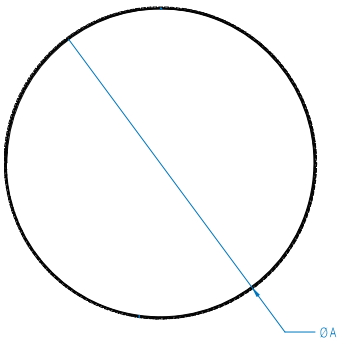
BOX FAN FLEXIBLE CONNECTOR

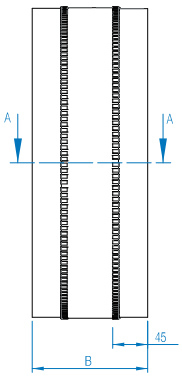
Accessories



- Fix directly on to spigot
- Provides flexible connection between fan and accessory or duct
- PVC coated polyester with galvanised sheet steel

Product Code	Fan Dia. A	B	Weight kg
018-0100-FLEX	100	150	0.2
018-0125-FLEX	125	150	0.2
018-0150-FLEX	150	150	0.2
018-0160-FLEX	160	150	0.2
018-0200-FLEX	200	150	0.3
018-0250-FLEX	250	150	0.4
018-0315-FLEX	315	150	0.5





Dimensions are in mm.

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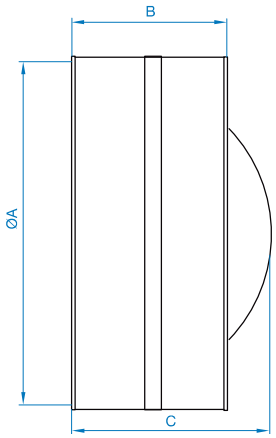
DAMPER

Accessories



- Prevents reverse flow of air when fan is not operating
- Galvanised sheet steel case
- Spring operated aluminium sheet blades

Product Code	Fan Dia. A	B	C	Weight kg
018-100-DAMPER	100	90	100	0.2
018-125-DAMPER	125	90	100	0.3
018-150-DAMPER	150	90	110	0.3
018-160-DAMPER	160	90	110	0.3
018-200-DAMPER	200	125	150	0.6
018-250-DAMPER	250	125	190	0.6
018-315-DAMPER	315	125	210	1.3

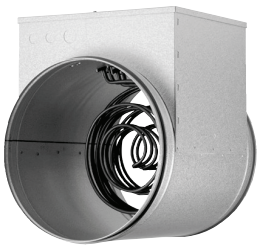


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ELECTRIC HEATER BATTERY

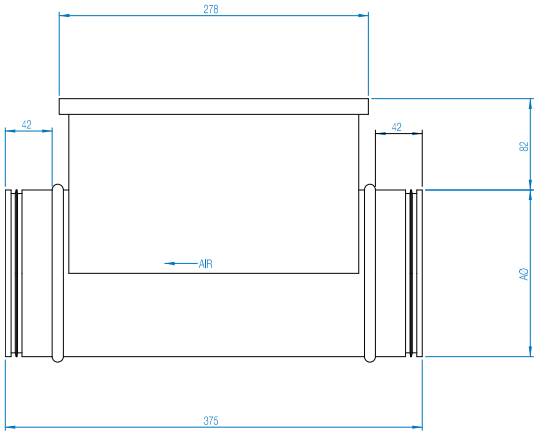
Accessories

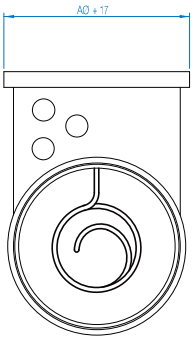


Type

CV – (E/M) duct heater with casing of Aluzinc-coated sheet steel and stainless steel heater element to EN 1.4301. The duct heaters conform to air tightness class C to EN 15727. Control takes place by an external regulator and sensor that must be ordered separately.

Product Code	kW	Phase	Airflow @ m³/s		A	Weight kg
			Min	Max		
018-CV10-06-1M	0.6	1	0.012	0.046	100	2.3
018-CV12-12-1M	1.2	1	0.019	0.093	125	3.0
018-CV15-27-1M	2.7	1	0.031	0.208	150	4.2
018-CV16-21-1M	2.1	1	0.031	0.162	160	4.3
018-CV20-30-1M	3.0	1	0.047	0.231	200	5.9
018-CV25-30-1M	3.0	1	0.075	0.231	250	7.8
018-CV31-30-1M	3.0	1	0.115	0.231	315	8.3





Dimensions are in mm.

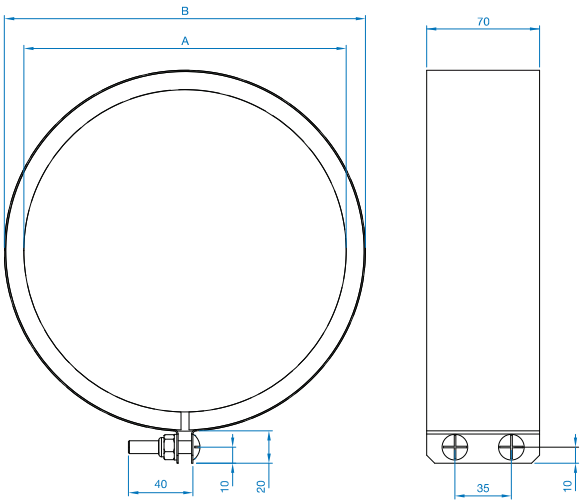
FAST CLAMPS

Accessories



- For quick connection of spigotted fans to circular duct or accessories
- Galvanised steel circular duct clamp with foam lining

Product Code	Fan Size	A Dia.	B Dia.	Weight kg
018-100-CLAMP	100	100	124	0.25
018-125-CLAMP	125	125	149	0.29
018-150-CLAMP	150	150	174	0.33
018-160-CLAMP	160	160	184	0.35
018-200-CLAMP	200	200	224	0.42
018-250-CLAMP	250	250	274	0.49
018-315-CLAMP	315	315	339	0.59

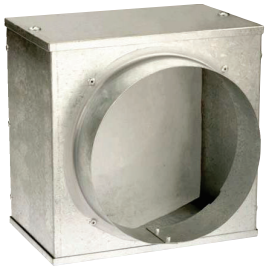


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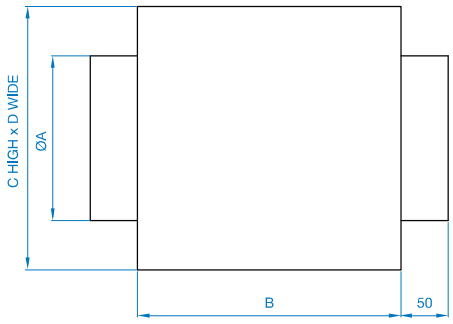
PANEL FILTER

Accessories



- Galvanised steel casing
- Filter media to BS EN 779 rating G2 with 85% arrestance
- Filter access with removable panel

Product Code	Fan Dia. A	B	C	D	Weight kg
018-0100-FILT-P	100	155	200	200	2
018-0125-FILT-P	125	155	200	200	2
018-0150-FILT-P	150	155	250	250	2
018-0160-FILT-P	160	155	250	250	2
018-0200-FILT-P	200	155	250	250	2
018-0250-FILT-P	250	200	300	300	3
018-0315-FILT-P	315	300	440	440	8



Dimensions are in mm.

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SPIGOT SILENCER

Accessories



- Small metric range of attenuators with spigot connection
- Ideal for small fans
- Ideal for cross talk elimination
- Ideal for flexible or spiral ducting

Construction

Both types are rigidly constructed in galvanised sheet steel, with a highly absorbent sound attenuating lining between the outer casing and the inner perforated steel lining. The end faces of the silencer do not have threaded holes for fixings, but has a steel spigot for ease of mounting.

Melinex lined silencers must be used to prevent grease impregnation into the acoustic media for kitchen extract applications as prescribed in DW/172 HVAC Specification For Kitchen Ventilation Systems. For Melinex insertion losses, please contact Elta Fans. Silencers can be provided with differing lengths: 300, 600, 900 and 1200mmm.

Silencer Attenuation

To determine the sound level of a fan fitted with a silencer, the dynamic insertion loss should be subtracted from the sound power level spectrum (dBW) of the fan. This should be done for the entire octave band mid-frequency spectrum. The fan dBW ratings and silencer attenuation apply equally to in duct applications, with a silencer connected between the fan and the duct system.

Dynamic Insertion Loss

The silencer attenuation is defined as the “dynamic insertion loss”. The values quoted in the tables represent the difference between the sound power level of a fan and silencer combination (dBW) and that of the fan alone (dBW). The dynamic insertion losses shown are the attenuations recorded under ideal working conditions. The achieved attenuation will vary according to the air velocity and flow pattern in the airways. Noise regeneration can occur at higher velocities, especially in EP silencers.

Square / Rectangular Silencers

In highly noise sensitive areas, where the circular silencers cannot achieve the necessary attenuation levels, Elta Fans can design and build optional splitter silencers for greater effect.

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SPIGOT SILENCER

Dynamic Insertion Loss

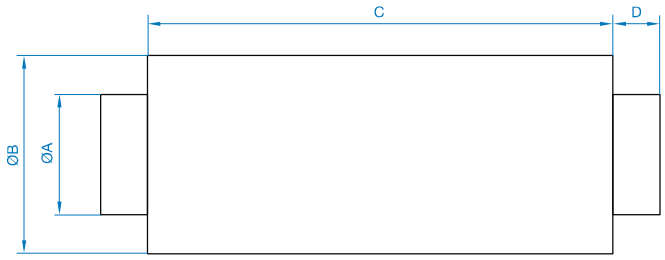
Product Code	Length	Insertion Loss @ Octave band (Hz)							
		63	125	250	500	1K	2K	4K	8K
068-0100-JF1	300mm	-3	-4	-9	-17	-23	-26	-25	-14
068-0100-JF2	600mm	-5	-8	-15	-33	-39	-40	-36	-20
068-0100-JF3	900mm	-10	-13	-21	-40	-45	-40	-36	-24
068-0100-JF4	1200mm	-12	-15	-23	-42	-47	-42	-38	-26
068-0125-JF1	300mm	-3	-3	-8	-16	-21	-24	-22	-12
068-0125-JF2	600mm	-4	-8	-13	-30	-35	-35	-31	-15
068-0125-JF3	900mm	-9	-12	-18	-37	-41	-38	-34	-20
068-0125-JF4	1200mm	-11	-15	-21	-40	-46	-41	-36	-23
068-0150-JF1	300mm	-3	-3	-6	-14	-19	-23	-22	-11
068-0150-JF2	600mm	-4	-7	-12	-23	-30	-36	-31	-15
068-0150-JF3	900mm	-8	-9	-15	-31	-37	-37	-34	-18
068-0150-JF4	1200mm	-10	-14	-17	-34	-41	-40	-36	-20
068-0160-JF1	300mm	-3	-3	-6	-14	-19	-23	-22	-11
068-0160-JF2	600mm	-4	-7	-12	-23	-29	-35	-30	-15
068-0160-JF3	900mm	-8	-9	-15	-31	-37	-37	-34	-18
068-0160-JF4	1200mm	-10	-14	-18	-33	-40	-39	-35	-18
068-0200-JF1	300mm	-2	-3	-6	-13	-17	-20	-18	-9
068-0200-JF2	600mm	-4	-6	-10	-20	-27	-32	-20	-11
068-0200-JF3	900mm	-7	-9	-14	-32	-39	-36	-26	-15
068-0200-JF4	1200mm	-10	-12	-17	-35	-41	-44	-28	-16
068-0250-JF1	300mm	-2	-3	-6	-12	-16	-19	-17	-8
068-0250-JF2	600mm	-3	-6	-10	-19	-25	-29	-18	-10
068-0250-JF3	900mm	-5	-8	-12	-24	-30	-30	-22	-14
068-0250-JF4	1200mm	-7	-10	-15	-31	-37	-38	-26	-15
068-0315-JF1	300mm	-1	-3	-6	-12	-15	-18	-16	-8
068-0315-JF2	600mm	-3	-5	-8	-16	-21	-22	-16	-14
068-0315-JF3	900mm	-4	-7	-10	-20	-31	-28	-17	-14
068-0315-JF4	1200mm	-6	-9	-14	-23	-32	-32	-18	-15

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SPIGOT SILENCER

Dimensional Data

Product Code	Fan Dia.	A	B	C	D	Weight kg
068-0100-JF1	100	98	204	300	40	2.5
068-0100-JF2	100	98	204	600	40	4.6
068-0100-JF3	100	98	204	900	40	6.7
068-0100-JF4	100	98	204	1200	40	8.7
068-0125-JF1	125	123	230	300	40	2.9
068-0125-JF2	125	123	230	600	40	5.4
068-0125-JF3	125	123	230	900	40	7.8
068-0125-JF4	125	123	230	900	40	10.2
068-0150-JF1	150	148	255	300	40	3.4
068-0150-JF2	150	148	255	600	40	6.1
068-0150-JF3	150	148	255	900	40	8.9
068-0150-JF4	150	148	255	1200	40	11.6
068-0160-JF1	160	158	265	300	40	3.5
068-0160-JF2	160	158	265	600	40	6.4
068-0160-JF3	160	158	265	900	40	9.3
068-0160-JF4	160	158	265	1200	40	12.2
068-0200-JF1	200	198	305	300	40	4.2
068-0200-JF2	200	198	305	600	40	7.6
068-0200-JF3	200	198	305	900	40	11.0
068-0200-JF4	200	198	305	1200	40	14.5
068-0250-JF1	250	248	355	300	40	5.0
068-0250-JF2	250	248	355	600	40	9.1
068-0250-JF3	250	248	355	900	40	13.2
068-0250-JF4	250	248	355	1200	40	17.3
068-0315-JF1	315	313	420	300	40	6.1
068-0315-JF2	315	313	420	600	40	11.1
068-0315-JF3	315	313	420	900	40	16.1
068-0315-JF4	315	313	420	1200	40	21.0



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TRANSFORMER CONTROLLER

Accessories



- IP40 enclosure
- Five speed stepped control
- Illuminated on/off switch (single phase units only)
- Fitted Motor Protection type D MCB (single phase units only)
- Suitable for operating temperatures up to 40°C
- Ideal for environments where noise is a primary consideration as these controls do not create magnetic hum associated with some step-less forms of speed control

Features & Benefits

A range of transformer voltage controllers used to provide five speed step control of single phase or three phase motors where the peak current of the motor does not exceed the rating of the controller. Speed control is via selector switch. Single phase units are complete with illuminated on/off switch.

Single Phase 220V to 240V / 50Hz

Product Code	Max Peak Current Amps	Weight kg	IP Rating
149-TC12	2	3	IP40

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VERSALINE VL

Notes

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VL-02-2021 Issue A

BS EN ISO 9001:2015 FM 556465

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ALPHA AIR
VENTILATION SUPPLIES

SPIRAL DUCT

TECHNICAL DATA SHEET

Standard ⌀ (mm)	Area (m2)	Standard L (mm)	Standard W (kg/m)		Standard ⌀ (mm)	Area (m2)	Standard L (mm)	Standard W (kg/m)
80	0.005	3000	0.91		**355**	0.099	3000	4.96
100	0.008	3000	1.14		**400**	0.126	3000	6.01
125	0.012	3000	1.41		**450**	0.159	3000	8.6
150	0.018	3000	1.89		**500**	0.196	3000	9.54
160	0.020	3000	2.02		**560**	0.246	3000	12.2
180	0.025	3000	2.26		**600**	0.283	3000	13.1
200	0.031	3000	2.56		**630**	0.312	3000	12
224	0.039	3000	3.42		**710**	0.396	3000	15.5
250	0.049	3000	3.18		**762**	0.456	3000	17.4
280	0.062	3000	3.92		**800**	0.503	3000	20.3
300	0.071	3000	4.2		**900**	0.636	3000	21.7
315	0.078	3000	4.41		**1000**	0.785	3000	24.1



Galvanised Steel construction

PZ-62DR-EB

LOSSNAY REMOTE CONTROL

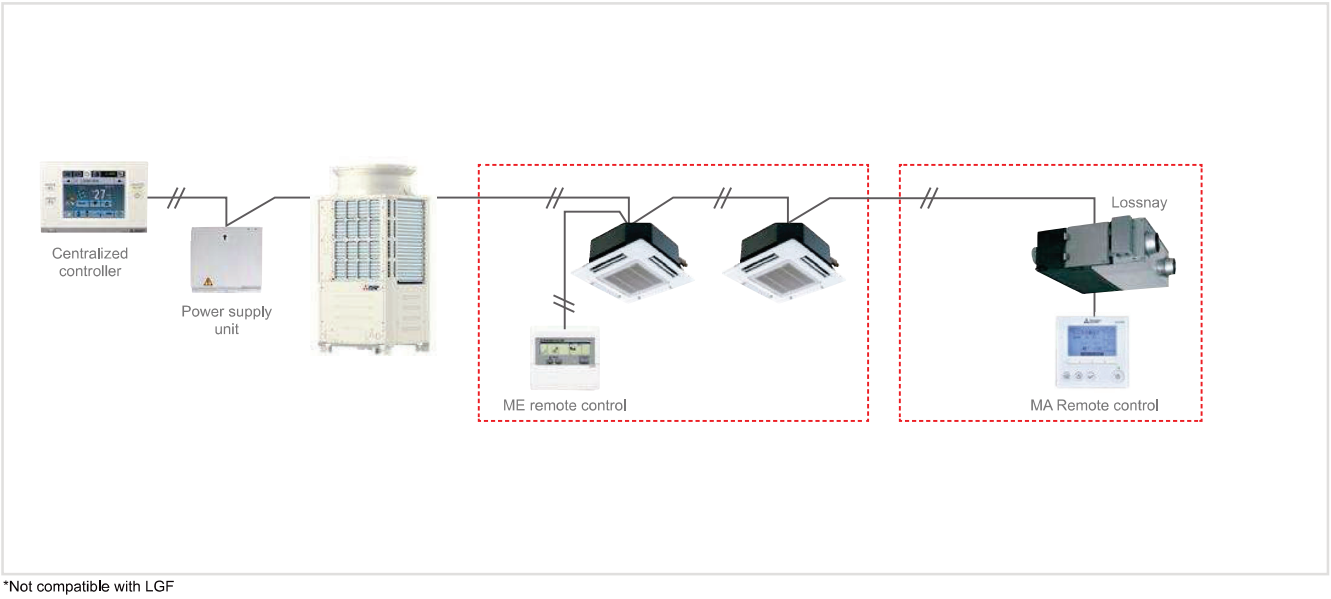


PZ-62DR-EB remote control for Lossnay

- Specific remote control for Lossnay heat recovery units.
- Usable to manage one group of up to 15 Lossnay units.
- Easy and intuitive with icon-based interface.
- Simple connection with single non-polarised two-core wire.
- Internal weekly timer.
- Custom ventilation strategies for mode switching (Auto/recovery/bypass).
- Night purge function for active night-time ventilation in summer.
- On-display service messages.
- Backlit LCD screen.
- Energy managemen

3 Languages are added
Greek,Slovenian, Denmark

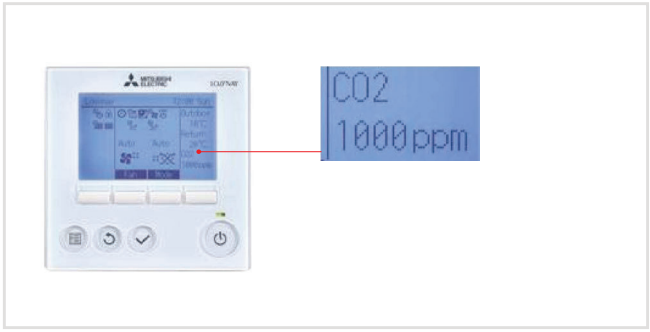
Compatibility
PZ-62DR-EB are compatible with both RVX and RVS.



*Not compatible with LGF

Dedicated PZ-62DR-EB wired controller

The new PZ-62DR-EB controller can be used to control all the functions of the LGH-RVS unit.
If the PZ-70CSW-E (optional) or PZ-70CSB-E (optional) CO_2 sensor is used, the carbon dioxide concentration in the room can be displayed on the control unit's display.



Function	PZ-62DR-E
Fan speed selection	4 fan speeds and Auto (Auto is available when using a CO2 sensor)
Control with a CO2 sensor	Yes (Fan speed automatically changes from 25% to 100% depending on the CO2 concentration*)
Ventilation mode selection	Energy recovery/Bypass/Auto
Night-purge	Yes
Function setting from remote controller	Yes
Bypass temp. free setting	Yes
Multi-stage air ow control	Yes (Both supply and exhaust fan speeds can be set separately from 25% to 100% in 5% pitches)
ON/OFF timer	Yes
Auto-off timer	Yes
Weekly timer	Yes
Fan speed timer	Yes
Operation restrictions (ON/OFF, ventilation mode, fan speed)	Yes
Operation restrictions (fan speed skip setting)	Yes
Screen contrast adjustment	Yes
Language selection	Yes
CO2 concentration indication	Yes (available when using a CO2 sensor)
Filter cleaning sign	Yes (maintenance interval can be changed)
Error indication	Yes (displays model name, serial number, contact information if they are input)
Error history	Yes
OA/RA/SA temp. display	Yes

* When using a CO_2 sensor. Upper and lower limits may be changed.

Incorporating

Grilles & Diffusers

Series JFD
Jet flow / eyeball diffusers

- Specialist diffuser designed for targeted throws over long distances
- Adjustable nozzle gives full control over throw direction
- Concealed mounting ring for tidy installation



JFD: May 2022

Series JFD

Series JFD jet flow diffusers are specialist units designed for large areas requiring a targeted, long distance throw. For example theaters, arenas and airport terminals.

The profiled outer fascia ring is removable, allowing access to a concealed flange which serves as a fixing point.

The inner ball is free to be adjusted a full 360 degrees.



Design features

Material	Pressed sheet aluminium
Sizes	Minimum: 125mm dia
	Maximum: 315mm dia
	For full list of dimensions see next page
Fixings	Concealed fixing flange, accessible behind fascia ring
Finish	Standard: RAL9010
	Optional: See page 4

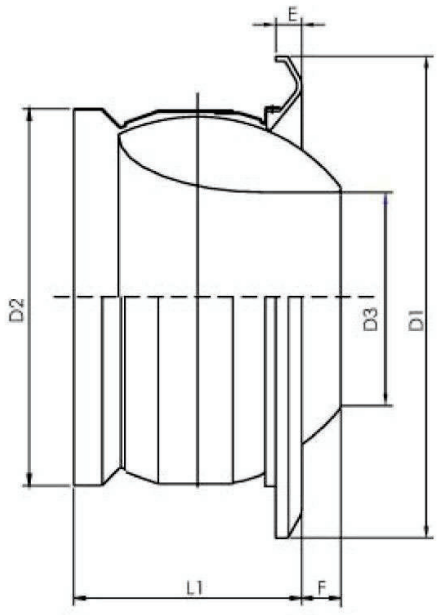
Quality assurance

HVC Supplies (Stourbridge) Ltd is an ISO 9001 certified company.

Assessed to ISO 9001
Cert/Ref No. 1186

Technical specifications

Size (mm)	D1 (mm)	D2 (mm)	D3 (mm)	E (mm)	F (mm)	L1 (mm)
125	185	123	64	10	4	89
160	216	158	82	11	10	106
200	273	198	108	16	14	127
250	318	248	136	16	23	159
315	400	313	174	23	29	189



Performance data										
	10m			20m			30m			
Size	**Air Volume (m^3/h)**	**Resistance loss (Pa)**	**Noise dB(A)**	**Air Volume (m^3/h)**	**Resistance loss (Pa)**	**Noise dB(A)**	**Air Volume (m^3/h)**	**Resistance loss (Pa)**	**Noise dB(A)**	**End airflow speed**
125	–	–	–	122	71	25	180	136	36	
160	82.8	11	<20	165	26	<20	250	98	35	
200	104	–	<20	220	29	<20	306	67	27	0.25
250	133	–	<20	272	8.3	<20	382	34	22	
315	180	–	<20	350	11	<20	540	36	20	
125	122	71	<20	245	265	46	–	–	–	
160	165	26	<20	330	113	44	497	200	55	
200	220	29	<20	435	123	38	655	218	50	0.5
250	274	8.3	<20	548	63	34	825	112	45	
315	350	11	<20	690	57	28	1055	104	40	
125	245	265	46	–	–	–	–	–	–	
160	330	113	44	–	–	–	–	–	–	
200	435	123	38	870	312	–	–	–	–	1.0
250	548	63	34	1100	160	53	–	–	–	
315	700	57	28	1400	150	48	2106	243	–	

Finish

Polyester powder coating to any RAL or BS colour



Ordering codes

Example

1 - 125 dia - JFD - RAL9010

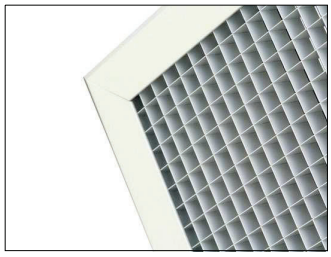
1)	**Quantity**		
2)	**Size**	(nominal diameter)	Nominal diameter
3)	**Series**	JFD	Jet flow diffuser
4)	**Finish**	RAL... BS...	Polyester powder coated to RAL... Polyester powder coated to BS...

HVC & NCA products

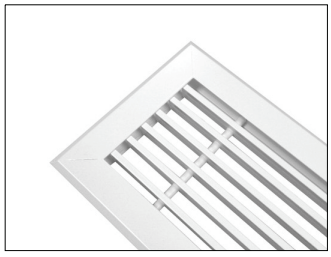
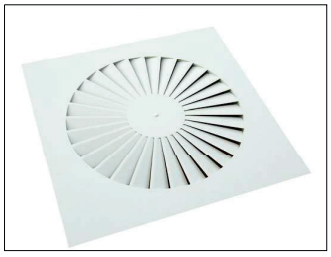
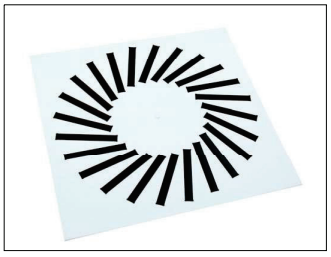
HVC offer the significant advantage of manufacturing both in duct and duct terminal equipment, making us a one stop shop for all your HVAC needs.

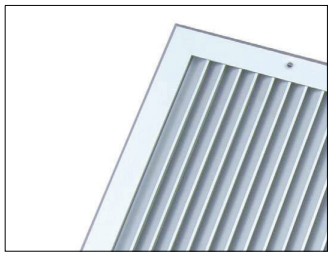
The products shown below are a selection, not an exhaustive list. Go to **www.h-v-c.com** for details on all HVC and NCA products.

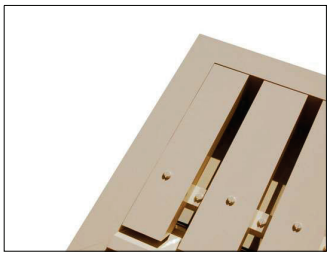
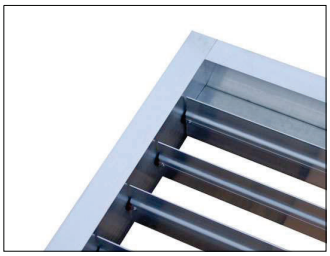
HVC: Grilles, Diffusers, Louvres and Volume Control Dampers







NCA: Fire and Volume Control Dampers













Assessed to ISO 9001
Cert/Ref No. 1186

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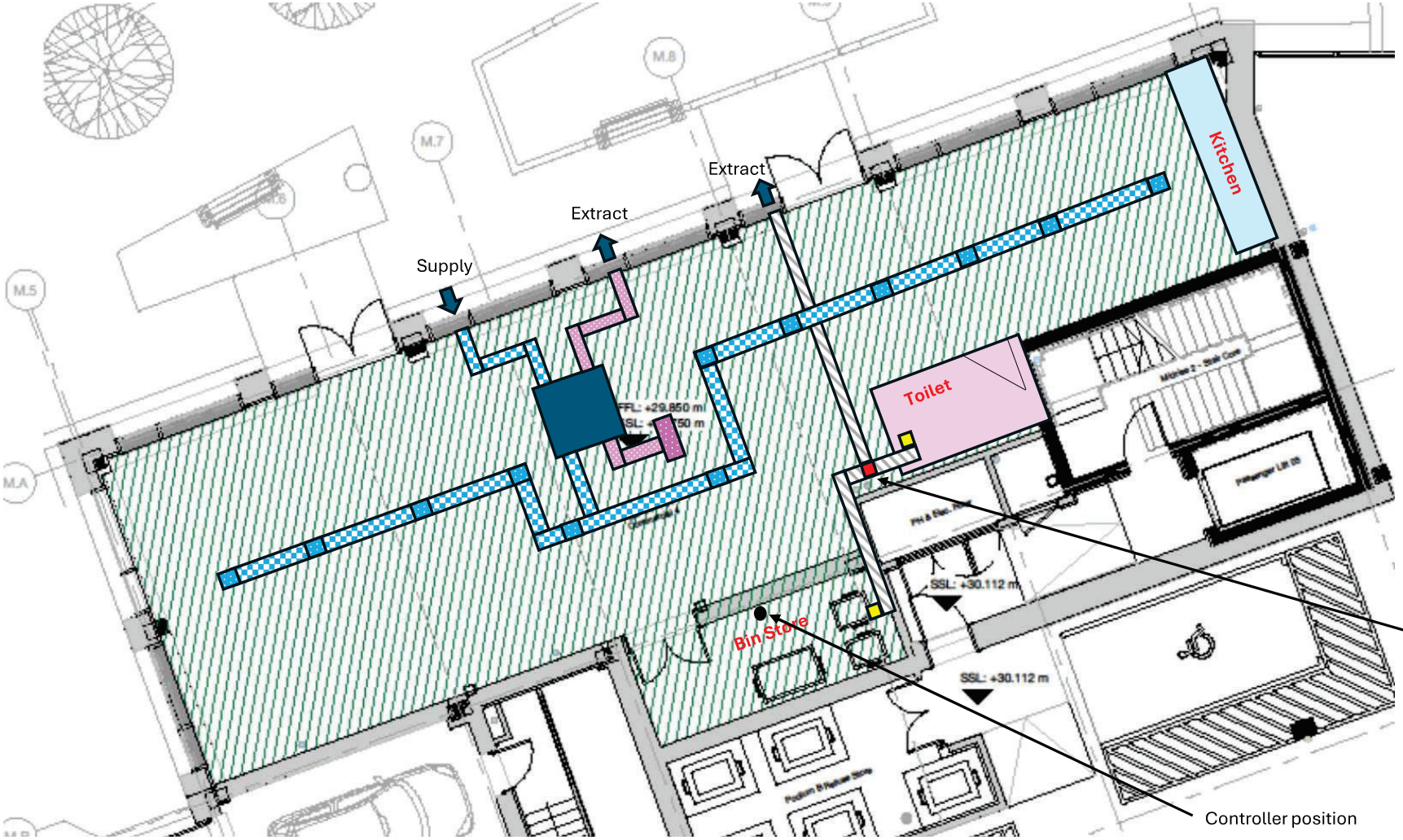
All references to companies not part of the HVC group of companies are used with the permission of their respective owners.

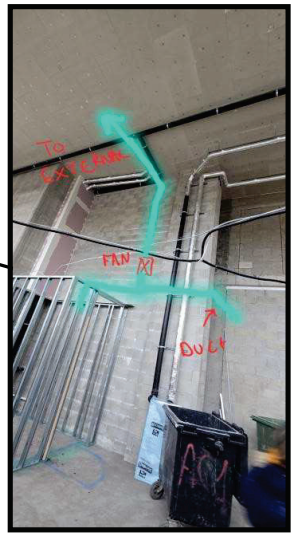
www.h-v-c.com

Victoria Riverside

Ventilation Layout - Commercial unit 4

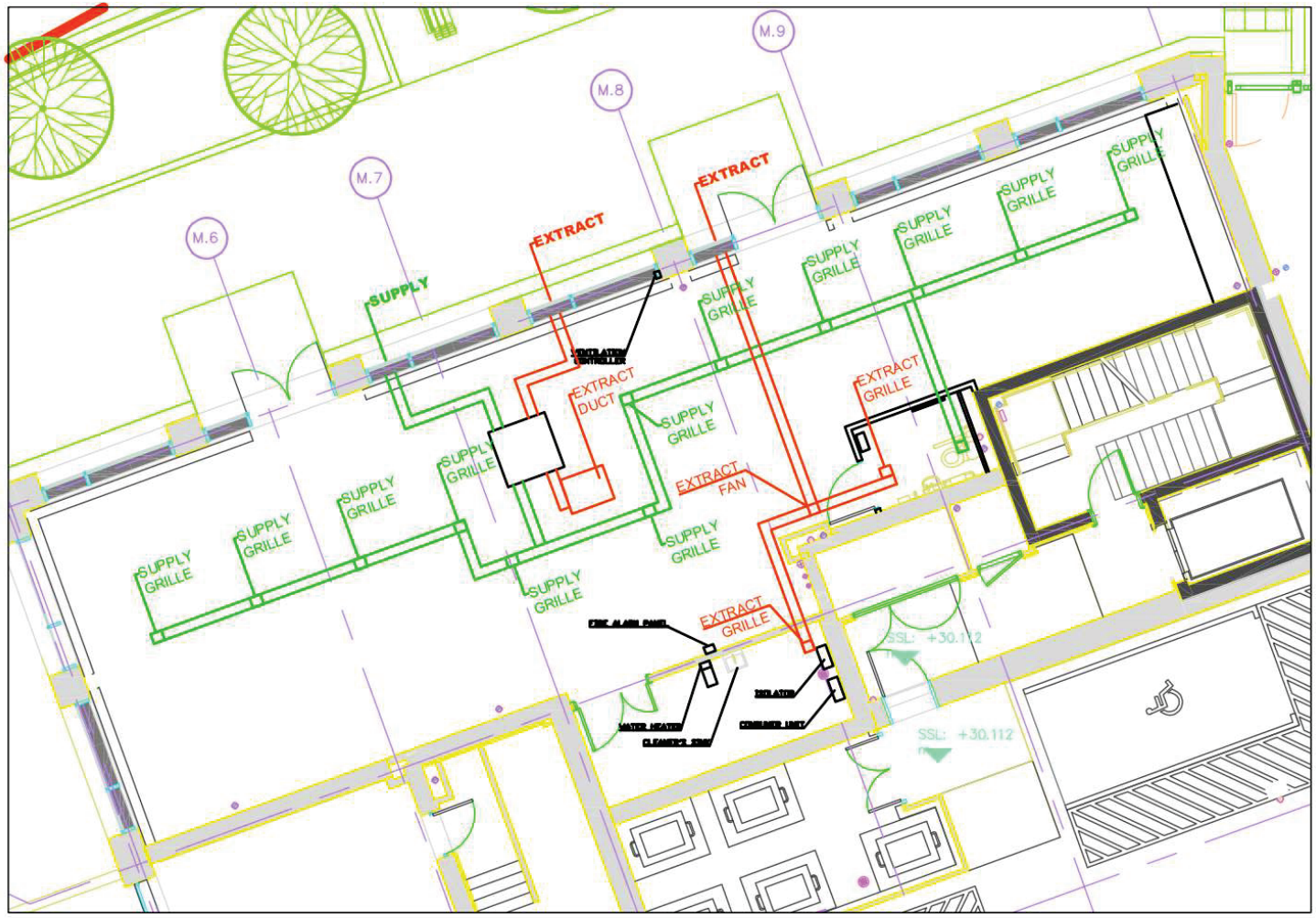
Extract Fan
Extract Grille
Extract Duct
Supply Grille
Extract Grille
Supply Duct
Extract Duct
Lossnay unit





Commercial Unit

Ventilation layout



COMMERCIAL UNIT 04 - VENTILATION

AS FITTED
25/11/25