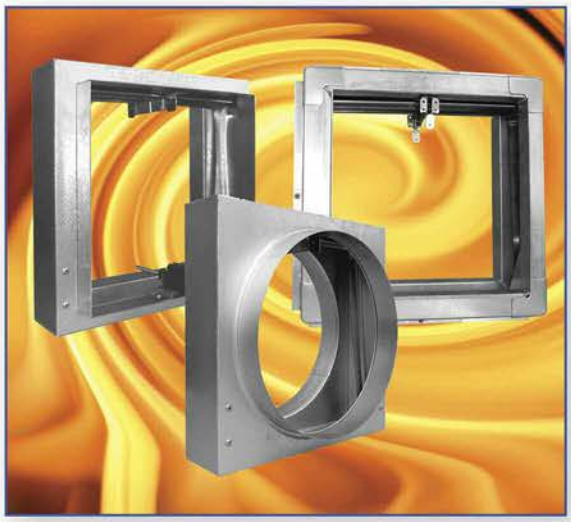
V1155

FD Series



Fire Dampers

- LPCB certificated fire dampers (LPS 1162)
- Tested and assessed installation methods to BS EN 1366-2 and BS 476-20/22
- E classified fire dampers complying with BS EN 13501-3
- FD-AF has been tested both vertically and horizontally. It is installed using single side access without the need to provide fire rated infill material
- Galvanised and stainless steel blade options
- Microswitch option for remote indication
- Complies with the temperature/time curve as specified in ISO 834 and EN 1363-1

MADE IN BRITAIN

MANUFACTURERS OF AIR, FIRE AND SMOKE CONTROL PRODUCTS

BSB

FD Series
Fire Dampers – Introduction

Introduction

What is a fire damper and why might they be needed?

The FD Series Steel Curtain Fire Damper is designed to stop the spread of fire through ducts, walls, floors and ceilings.

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/medium and high velocity applications.

What is the 'E' classification?

To achieve the classifications to EN13501-3, fire dampers and fire and smoke dampers shall be tested to EN1366-2 and 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 150mm x 6mm. 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 360m^3/hr/m^2 (100 l/s/m^2) throughout the fire test period.

Fire dampers should be installed as tested.

Test reports showing testing to EN 1366-2 should be acceptable to meet the requirements of BS 476-20/22, but the reverse is definitely not the case and no classifications are available.

Some applications (fan off) allow the use of tests undertaken to BS 476-20/22 and this is allowed worldwide in areas outside of the EU.

However, as a word of caution, in whichever case, the correct model must be selected, to match fire resistance time with installation method and with the supporting construction (wall or floor).

To ensure that all testing and assessments are traceable back to initial fire test reports, the BSB FD series is product certificated by the Loss Prevention Certification Board (LPCB). This means that in addition to normal BS EN ISO 9001 compliance, the product is also checked to ensure that same product is being manufactured that has been tested or assessed.

BSB have a policy of continued testing and product certification to try and provide as broad a number of installation methods as possible.

BSB also follow regulation and standards development very carefully to provide input on changes and to be able to pass on relevant information to designers, specifiers, building control authorities (BCA's) and installers.

The FD Series Range

The BSB FD series is available in a variety of vertical or horizontal mounting configurations from 100mm x 100mm to 1200mm wide x 1000mm high.

Type FD Rectangular Spigot

A - Blades in air stream on heights greater than 300mm.
B - Blades held clear of the air stream.

Type FD Circular Spigot

C - Blades held clear of the air stream.

Type FD In-Duct

I - Blades and case within air stream.

Type FD Flat Oval Spigot

O - Blades held clear of the air stream.

Testing and Conformities

See installations section for full details.

E Classification (BS EN 1366-2/BS EN 13501-3)

- BSB FD fitted with HEVAC frame
  - E 120 - Blockwork/masonry wall
  - E 120 - Concrete floor
- BSB FD fitted with cleats
  - E 120 - Dry partition wall
- BSB FD fitted with angle frame
  - E 120 - Dry partition wall
  - E 120 - Concrete floor

E Classification (BS ISO 10294-1/2)

- As BS EN 1366-2/BS EN 13501-3 above

Corrosion testing (ASTM B117)

- Tested and satisfies LPS 1162

FD Blade leakage (BS EN 1751)

- Class 2

FD Features and Benefits

- The majority of the FD product variants are covered by third party Loss Prevention Certification Board (LPCB) product certification. This represents both full BS EN ISO 9001 quality compliance and a guarantee that the products are fully representative of those actually tested.
- Tested and certified installation variants of the FD are available to cover masonry walls, dry walls, batt walls and floors. These cover the majority of applications/supporting constructions that are required to maintain compartmentation.
- All BSB tested installation methods give at least a E120 classification, usually only limited by the wall construction used.
- Sleeve and angle methods, HEVAC frame methods, cleat and drop rod methods and batt infill methods are available.
- Some rarer installation applications are covered by assessment/test information to BS 476-20/22.
- Minimum size 100mm x 100mm.
- Maximum single section size 1200mm x 1000mm, available from the smallest size up to this in millimetre increments.
- Multi-section configurations are available to specific customer requirements, but will be subject to BCA approval.
- Standard construction is a fully welded galvanised steel case, which gives a casing leakage that complies with Class C ductwork leakage specifications.
- Other combinations of galvanised mild steel, type 1.4016 (430) and 1.4401 (316) stainless steels for the blades and case are available to specific customer requirements.
- The BSB FD has a strong and robust design to both meet the exacting fire testing requirements and be resilient to site handling. This is supported by sound production techniques which result in a quality product.
- All the above, supported with BSB's enviable delivery performance, provide an unbeatable combination.

Regulations and Standards

Approved Document B: Fire safety (ADB)
ADB is the UK government's guide to fulfilling the Building Regulations in terms of fire safety. It is available as a free download from the planning portal website.

It gives clear guidance on where fire dampers are to be used and what their performance or classification shall be. The BSB FD fulfils the E classification and reference should be made to the installation method to confirm exact time periods. These will generally be 120 minutes, but may be up to 240 minutes (limited by wall construction).

Health Technical Memo 05/02 (HTM05/02)
HTM05/02 is the Department of Health Firecode - fire safety in the NHS: Guidance in support of functional provisions for healthcare premises.

It basically underlines the requirements stated in ADB, requiring fire damper testing to BS EN 1366-2 and classification to BS EN 13501-3.

It supersedes HTM81 and should be read in conjunction with HTM2025: Ventilation in healthcare premises, as it gives guidance on maintenance and testing.

Building Bulletin 100
BB100 is the Department for Children, Schools and Families document on Fire safety in schools.

It basically underlines the requirements stated in ADB, requiring fire damper testing to BS EN 1366-2 and classification to BS EN 13501-3.

It also states: "For property protection, fire dampers should also satisfy LPS 1162".

Regulatory Reform (Fire safety) Order (RRFSO)
This is the regulatory requirement that allows people to self fire certificate their buildings. There are requirements for keeping testing and maintenance records for all passive fire protection equipment, which includes fire dampers.

BS EN 1366-2
The fire resistance test standard for fire dampers.

BS EN 15650
Fire Damper product standard. Ventilation for Buildings.

BS EN 1751
The standard for aerodynamically testing dampers. This includes casing leakage.

Other publications

DW 144 (HVCA)
This states the general requirements for HVAC ductwork, including the use of fire dampers. It also states ductwork leakage limits. The BSB FD fulfils the requirements of classes A, B & C.

DW 145 (HVCA)
This document will give guidance on the whole process of the selection and installation of fire dampers, with responsibilities and project planning etc.

The Grey Book (ASFP)
This gives further guidance on the application and installation of fire dampers.

Scotland
These are technical standards (AMD's). They give similar guidance to ADB. They already include direct references to the application of European standards. They are obtainable as a free download from the Scottish Executive website.

FD Series

Fire Dampers – Product Specification

Fusible Link Bracket
The Fusible Link Bracket is manufactured from galvanised steel as standard.

Fusible Link
Blades are held in the open position by a straight bar link (fitted as standard) rated at 72°C (162°F) with a formed reinforcing swage and two location holes.

- BSB can supply the FD Series Fire Damper with the alternative rated fusible link for higher temperature applications as follows:

  95°C (202°F)

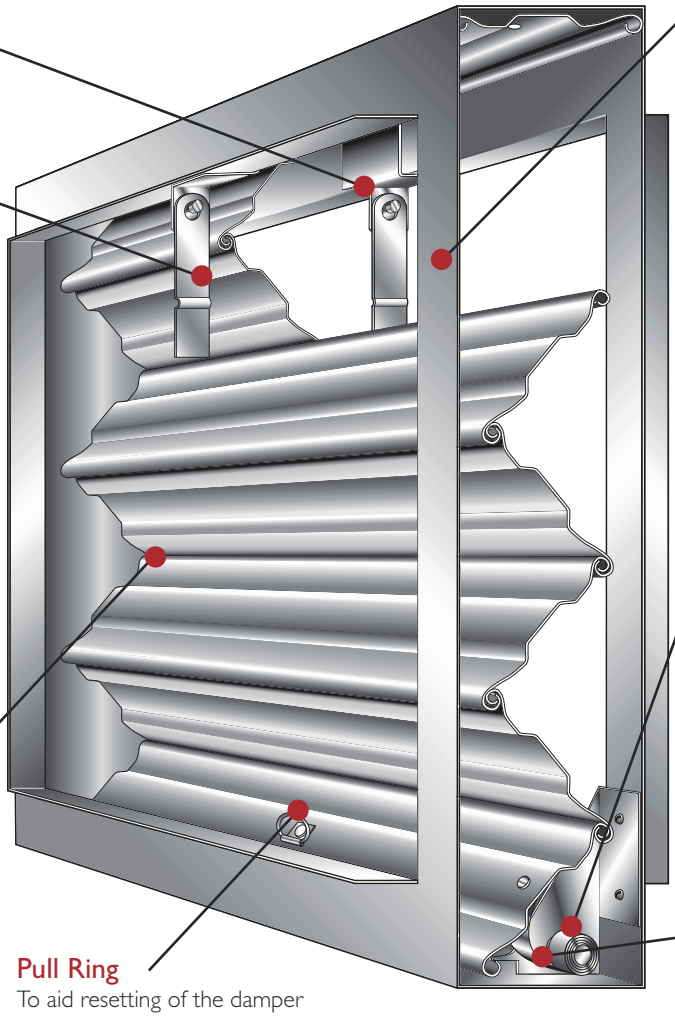
  124°C (260°F)

  145°C (286°F)

  182°C (360°F)

Blades
Formed to provide a continuous interlocking hinge extending the full length with dual swages providing maximum strength and rigidity. Nominally 0.7mm (22swg) thick cold reduced hot dipped galvanised mild steel to BS EN 10346 Grade DX51D + Z275.

Blade material options to order are Ferritic 430 type 1.4016 grade or Austenitic 316 type 1.4401 grade to BS EN 10088-2.



Casing
Formed to provide two continuous internal flanges not less than 30mm.
Casing and components not less than 1.2mm thick cold reduced hot dipped galvanised mild steel to BS EN 10346 Grade DX51D + Z275.

Casing material options to order are Ferritic 430 type 1.4016 grade or Austenitic 316 type 1.4401 grade to BS EN 10088-2.

Side Seals
0.20mm gauge 301 stainless steel to BS EN 10088-2, available to order.

Closure Springs
Dampers are supplied with two constant force coil springs exerting a pull of not less than 35N, with one end fixed to the leading blade by rivets and the coil fitted on the spindle of the locking ramp. The spring is manufactured from Grade 302 stainless steel to BS 5770, 4 hard.

Locking Ramps
Dual locking ramps ensure positive closing action of the blade pack in horizontal or vertical installations.

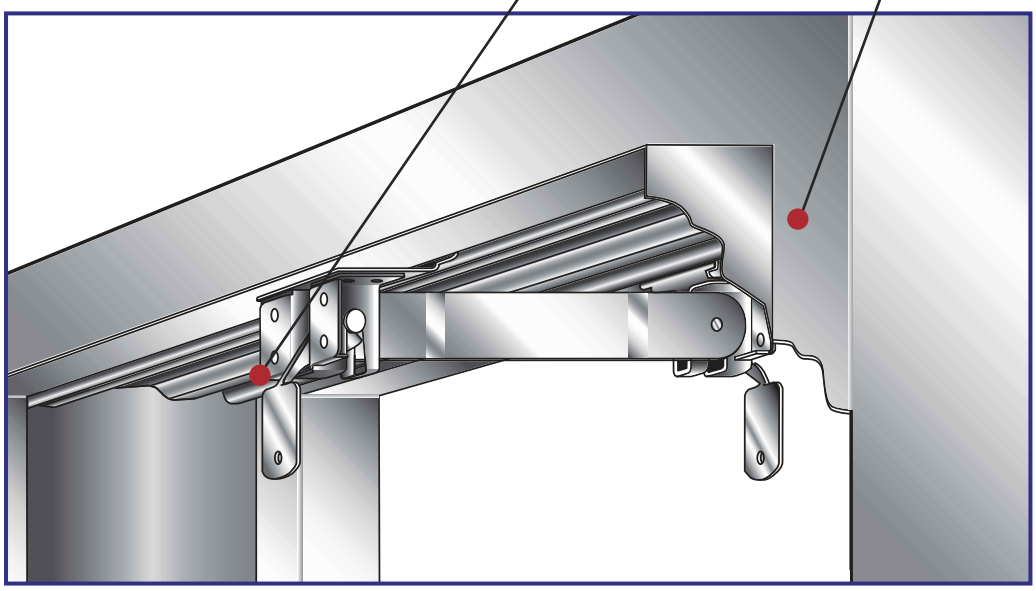
Pull Ring
To aid resetting of the damper blade pack, the bottom closing blade will be fitted with a single pull ring centrally to the width for dampers up to and including 500mm wide or 500mm diameter. For all dimensions above this, two equally spaced pull rings will be fitted.

Gate Latch Release
Optional mechanism for electrical release when required. Rated 72°C (162°F), alternative ratings available as per standard straight bar link.

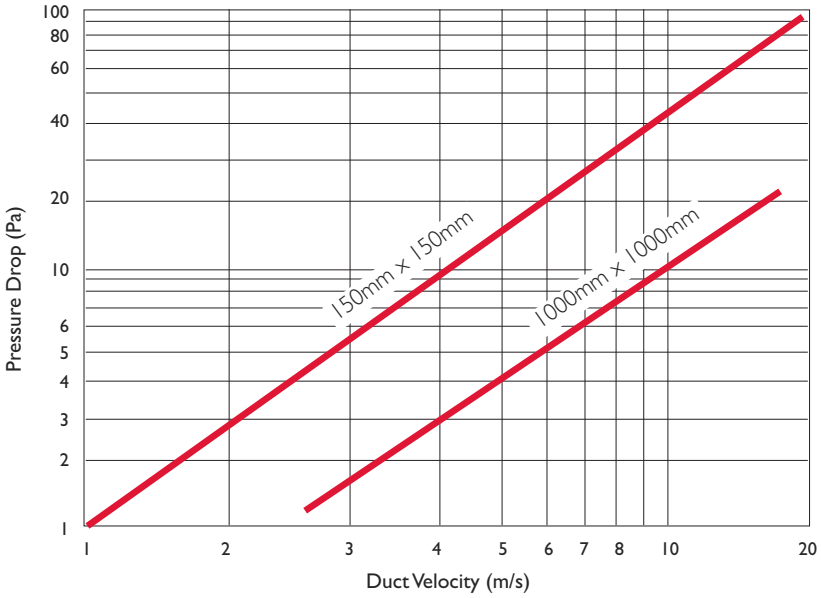
Paint
All welds, seams and joints are sprayed with commercial grade aluminium paint.

Microswitches
All BSB FD Fire Dampers are available with factory fitted single or double pole microswitches as optional extras. (See page 9)

Mechanical Visual Indicator
Local visual indication of the blade status is available as an optional extra. (See page 9)



Performance Data

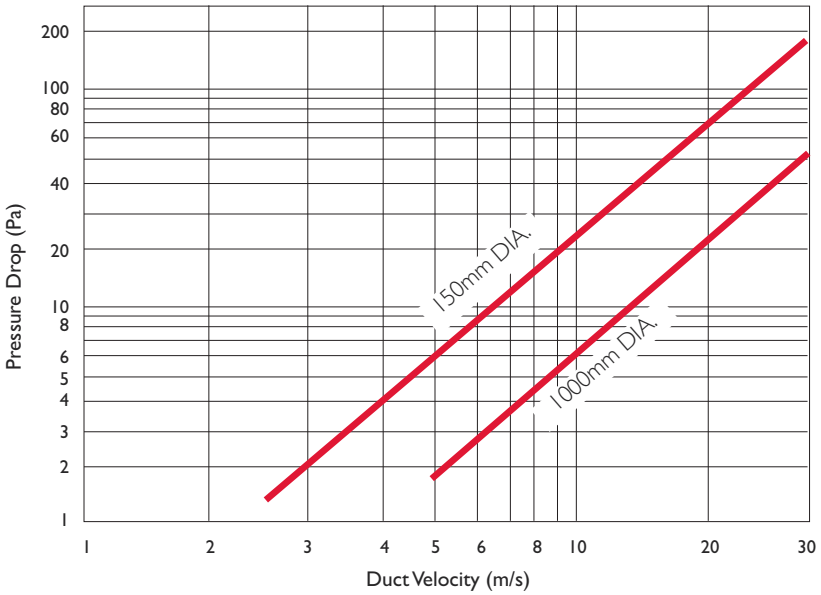


Pressure Drop Graph

Type A and Type I

Minimum free area = 91%

Velocity range 0 to 12.5 m/s

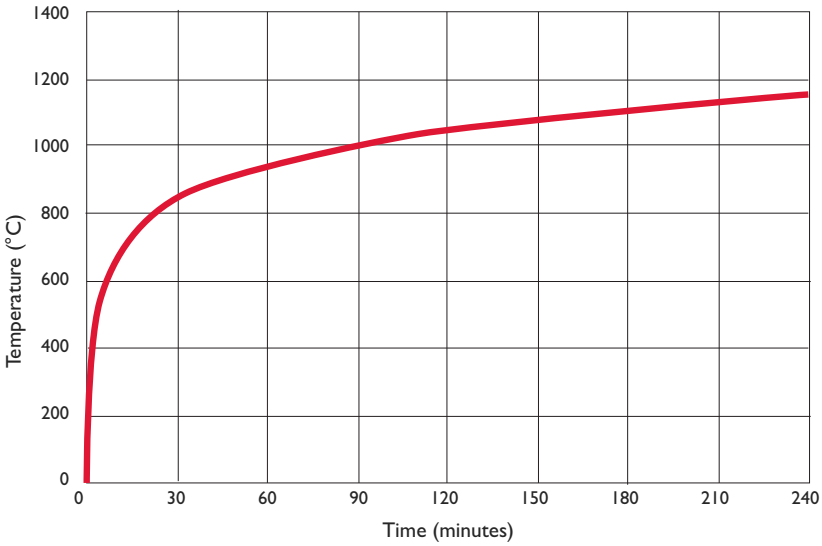


Pressure Drop Graph

Type B, Type C and Type O

Maximum unrestricted airflow

Velocity range 0 to 30 m/s



Standard Time/Temp. Curve (4 hours)

As specified in ISO 834

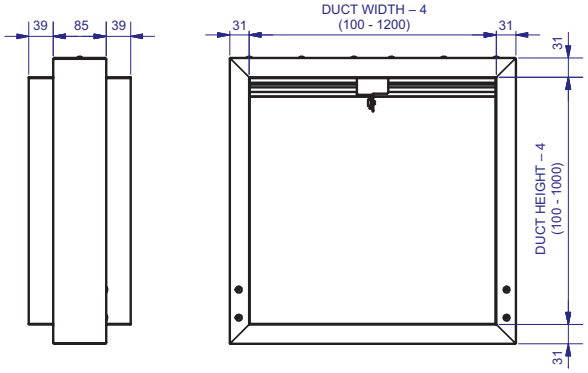
EN1366-2 Vertical Test Report TE201633

FD Series

Fire Dampers – Base Dimensions

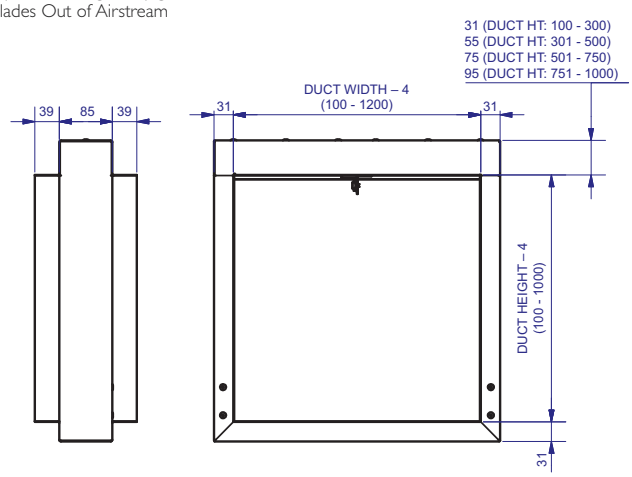
Type A

Square/Rectangular Spigot Connection
Blades Partially in Airstream
on heights greater than 300mm



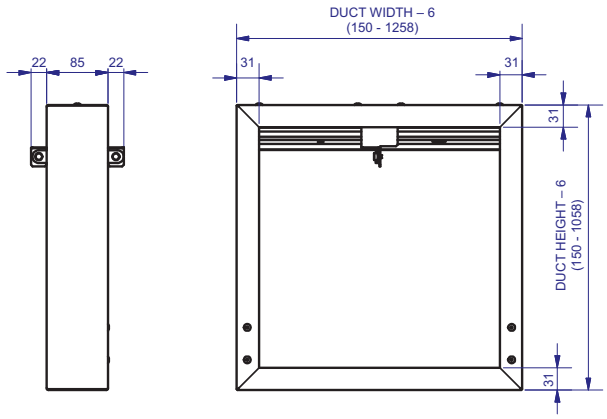
Type B

Square/Rectangular Spigot Connection
Blades Out of Airstream



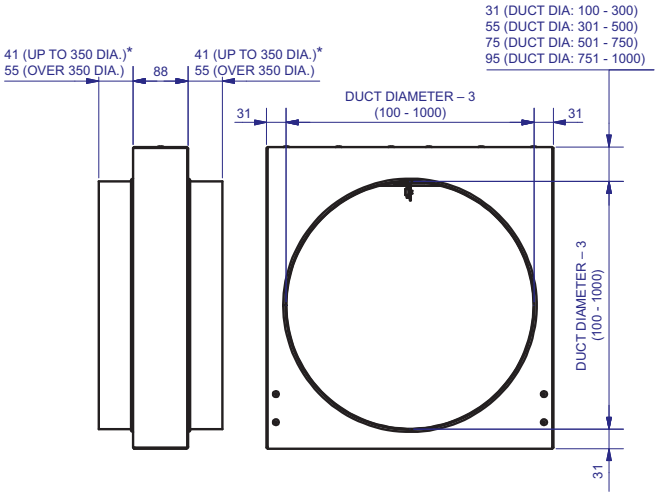
Type I

Square/Rectangular Case Induct Connection
Blades Partially in Airstream



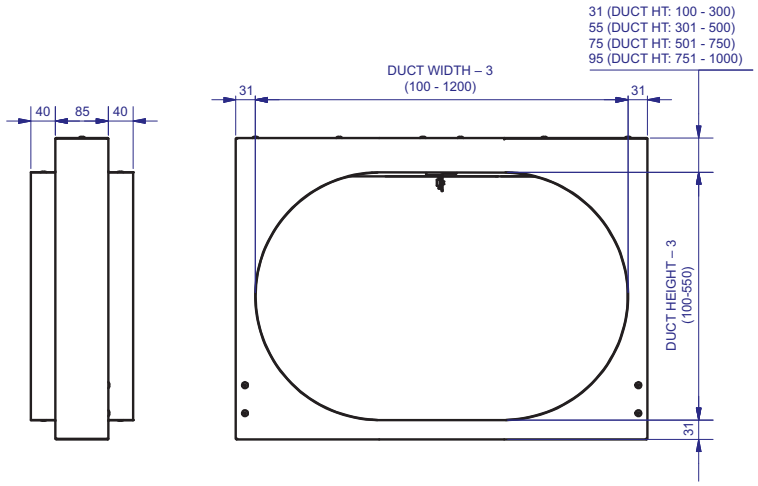
Type C

Circular Spigot Connection
Blades Out of Airstream



Type O

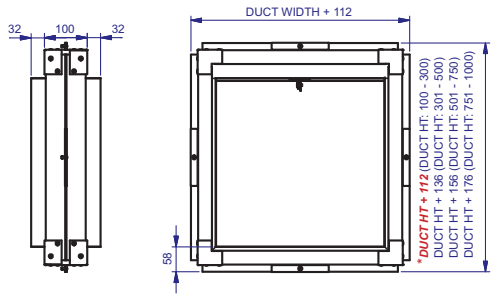
Flat/Oval Spigot Connection
Blades Out of Airstream



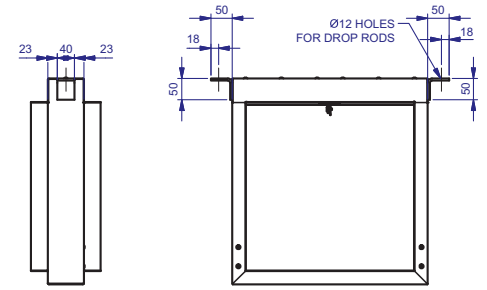
Notes:

1. All dimensions are in mm.
2. Rectangular spigoted models are supplied with actual spigot dimensions nominal less 4mm ± 1mm.
3. Circular and Flat Oval spigoted models are supplied with actual spigot dimensions nominal less 3mm ± 1mm.
4. For sizes greater than detailed maximum sizes, multiple section units will be supplied.
5. Where gate latches are fitted on dampers below 150mm in height or diameter release testing is only possible from opposite to ramp side. Please refer to our sales office.

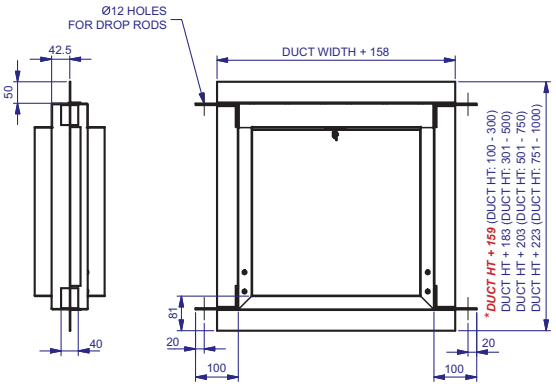
HEVAC Frame (HF)



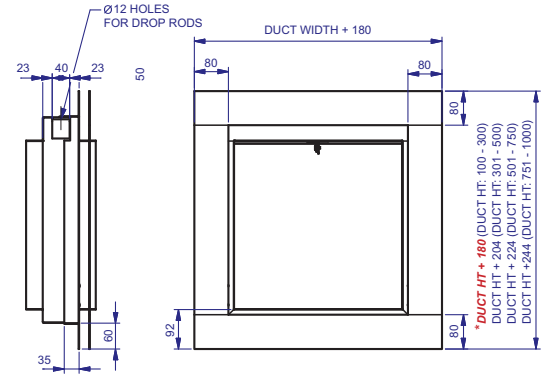
Cleats for Drop Rods (CL)



Batt Frame (BF)

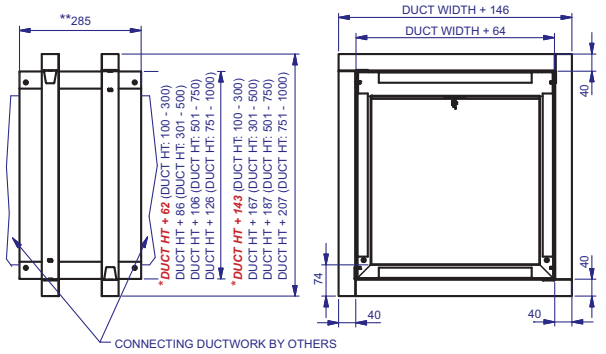


Fire Curtain (FC)

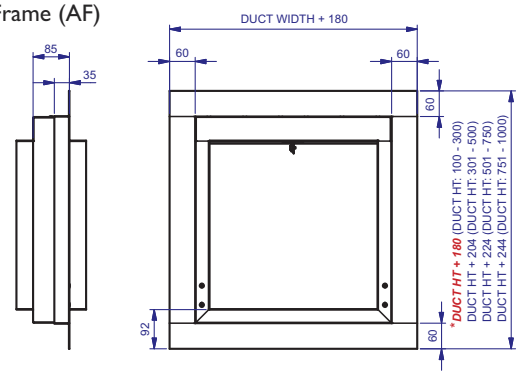


Sleeve and Angle (SA)

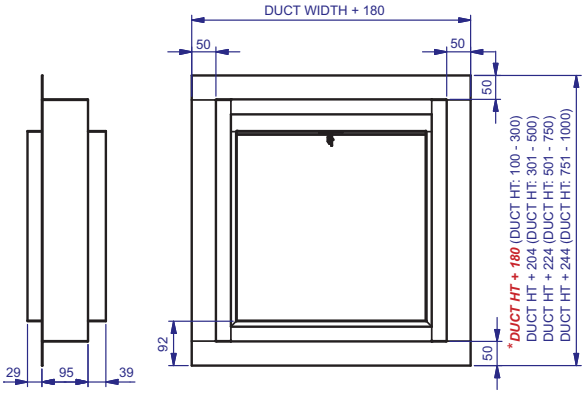
** Suitable for walls up to 200mm thick.
Above this width refer to our technical sales office.



Angle Frame (AF)



Z Frame (ZF)



Notes:

1. Dimensions with * apply for a type A damper at any height.

FD Series
Fire Dampers – Installation Notes

HEVAC/HVCA Frames

The HEVAC/HVCA approved factory fitted Installation Frame is designed to allow expansion of the damper under fire conditions, without affecting its integrity or the construction it is installed within.

Fixing Tie Tabs

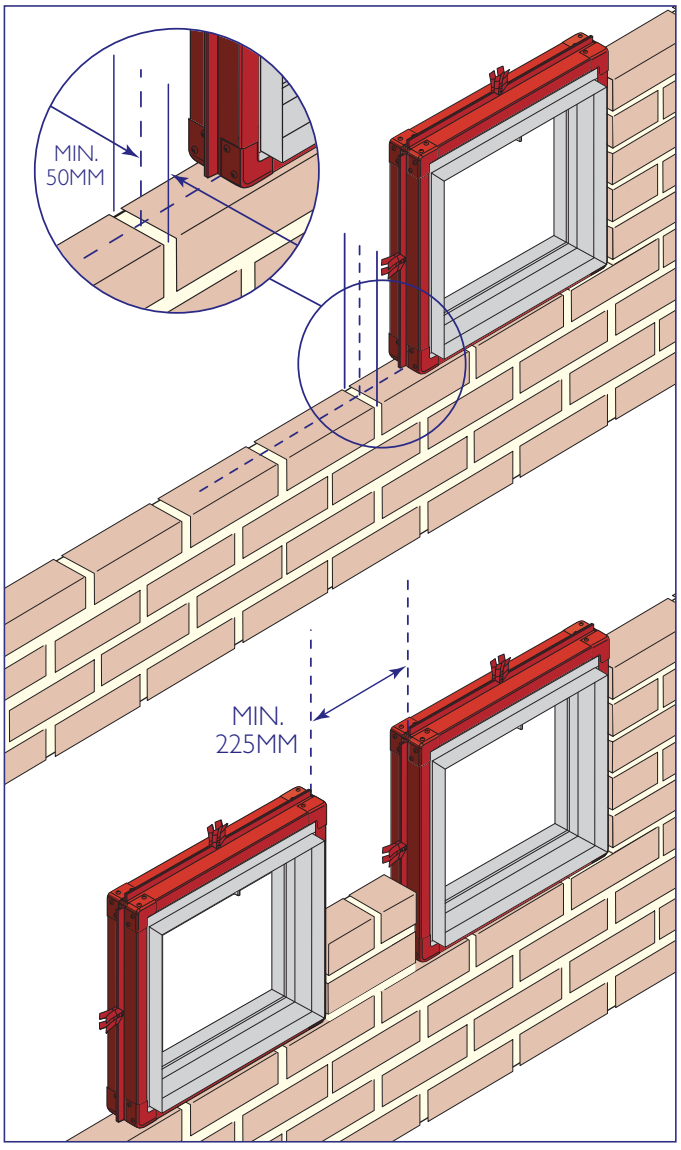
For securing the assembly into the builders work structure as specified by the specifying/authorising authority. In brick or Blockwork walls the fixing tie tabs must be bent out and be securely built into the mortar joints between the brick or Blockwork.
Installation within reinforced concrete walls and floors, the fixing tie tabs shall be bent out and tied back with stainless steel wire to the reinforcing bars that should be left protruding into the structural opening or to "eye bolts" but so as not to interfere with the installation of the damper. The gap between the installation frame and the builders work shall be backfilled with mortar or concrete on both sides of the upstand flange to the satisfactory requirements of the approving authoritative body.

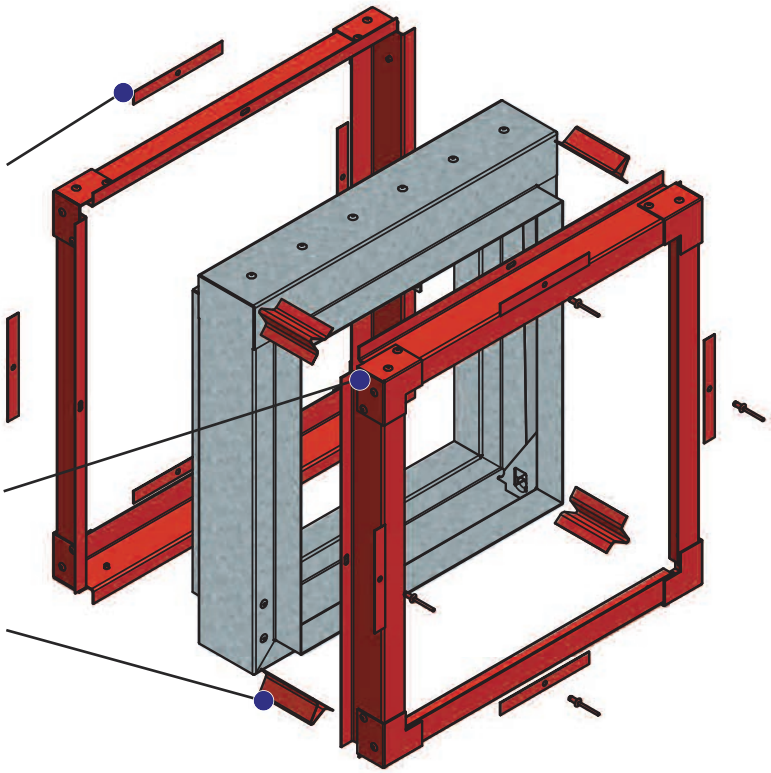
One Piece Corner Bracket

The one piece pressed corner bracket is rivetted (using aluminium rivets) to the "Z" Section which makes the frame. This bracket allows the frame to expand under fire conditions without affecting the integrity of the construction it is installed within.

Expansion Spacers

These pressed spacers are fitted into each corner to permit expansion of the fire damper within the construction of the frame.





Installation Codes of Practice

The frame should be installed centrally within the thickness of the surrounding wall or floor. Or, in the case of thick walls or floors, the centre line of the frame should be at least 50mm away from the nearest face.

Where more than one duct penetrates a wall or floor, adjacent fire damper assemblies should be separated by builder's work of a minimum thickness of 225mm. During installation, all fixing tabs should be bent out and built into the surrounding structure so as to ensure "positive fixing into the surrounding builder's work".

The illustrated detail on this page is BSB's interpretation of the HEVAC/HVCA Installation Frame specification. For additional details, contact our sales office.

Special Note:
All fire damper installations should be carried out to the satisfaction of the appropriate district surveyor, fire officer, building control authority and/or specifying authority as other approved methods of installation may well be used.

Installation Parameters

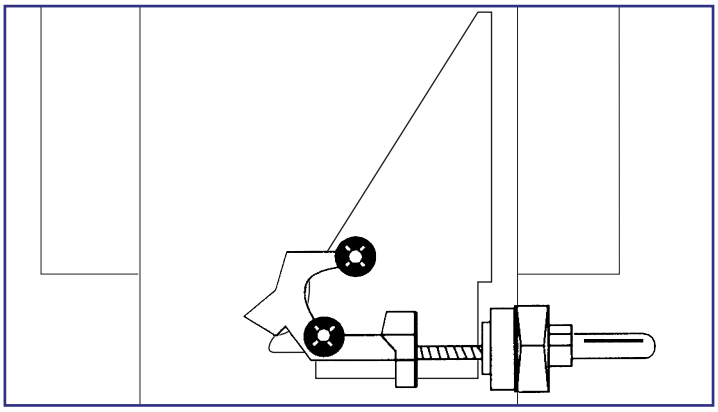
FD Series Fire Dampers are designed for application in normal dry filtered air systems. If exposed to fresh air intakes and/or inclement conditions the damper should be subject to a planned inspection programme.

Installations involving corrosive and/or aggressive hostile environmental conditions (e.g. swimming pools) may invalidate our warranty and should be referred to our Sales Office.

Mechanical Visual Indicator

To provide local indication of the blade status.

When the indicator appears in the bulb, this shows that the blades are closed.

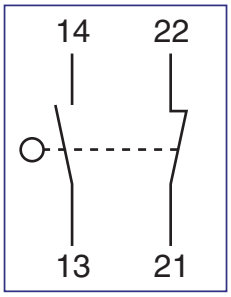


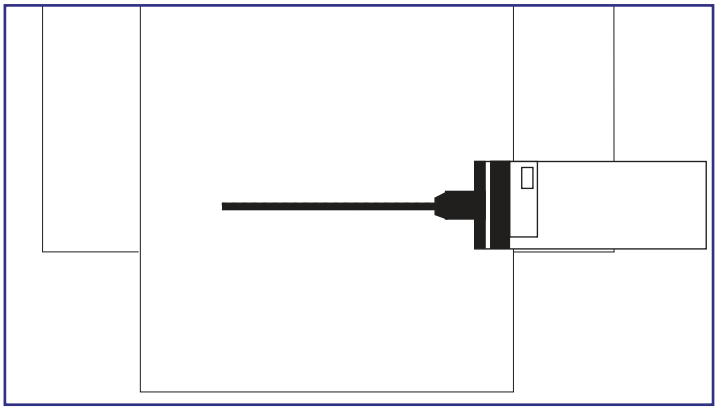
Single Pole Microswitch

To provide remote indication of the blade status. As the leading blade travels to the locking ramp, it contacts the arm and operates the switch. Factory Fitted.

The Single Pole Microswitch is supplied as a dependent snap action contact 1NO + 1NC.

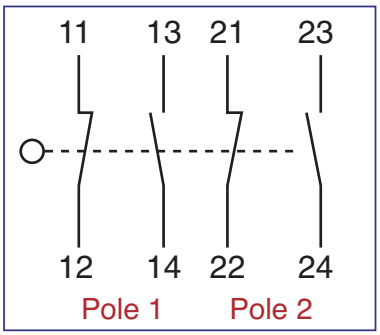
For indication of damper closed, terminals 13 and 14 should be used. Degree of protection: IP66.

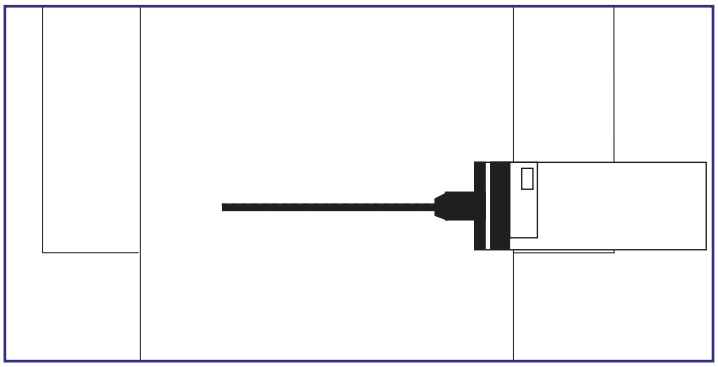




Double Pole Microswitch

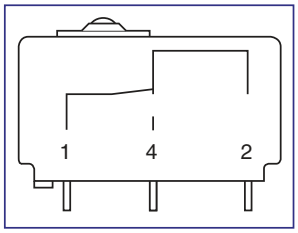
Operates as above but with two switches for double pole operation. Can also provide a signal to a control panel enabling isolation of plant in case of fire. Factory fitted.





V4 Sealed Microswitch

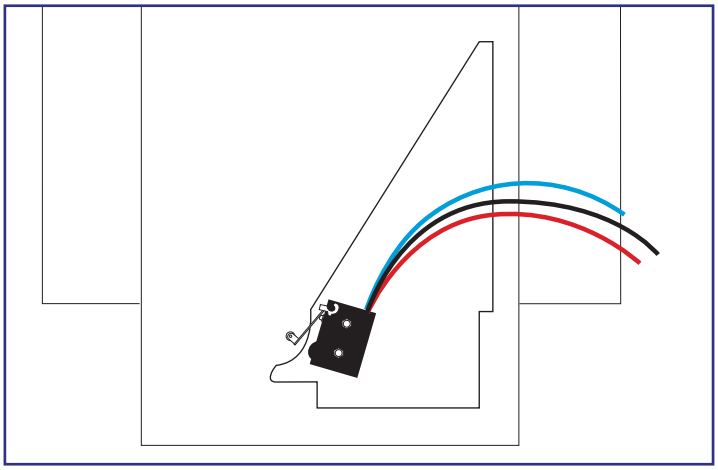
To provide remote indication of the blade status.
As the leading blade travels over the locking ramp, the lever is depressed and operates the switch. Factory fitted.



Degree of protection: Casing and Outlet IP67
Lead Length: 460mm

Connection details:

Common (1)	Black lead
Normally open (4)	Blue lead
Normally closed (2)	Brown lead

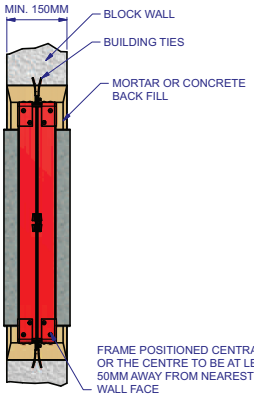


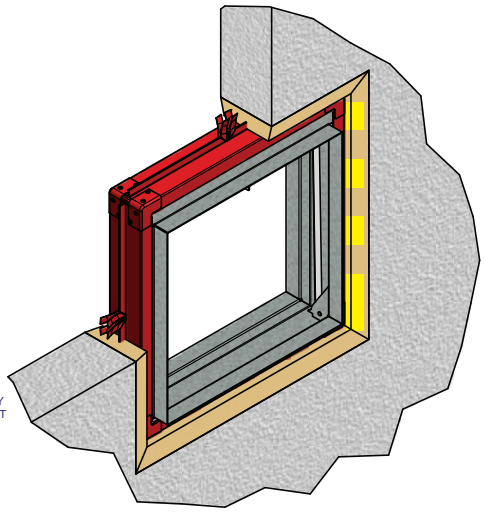
FD Series

Fire Dampers – Installation

BLOCK/MASONRY WALL - HEVAC FRAME Fitted

Single Section Sizes (mm)
100 x 100 to 1200 x 1000

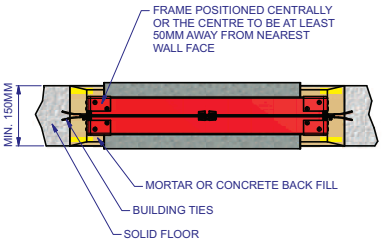


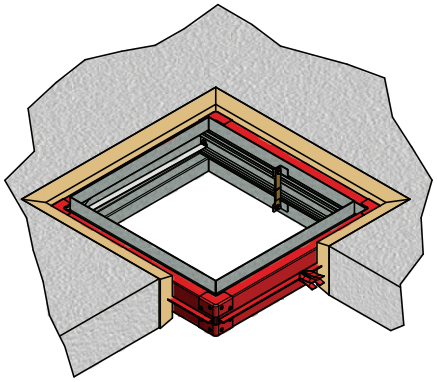


TESTED TO BS EN 1366-2 FOR 4 HOURS
BS EN 13501-3 CLASSIFICATION: E120
BRE GLOBAL CLASSIFICATION REPORT NO: 274347.2
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

CONCRETE/MASONRY FLOOR - HEVAC FRAME Fitted

Single Section Sizes (mm)
100 x 100 to 1200 x 1000

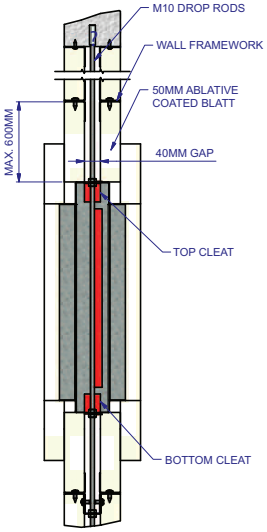


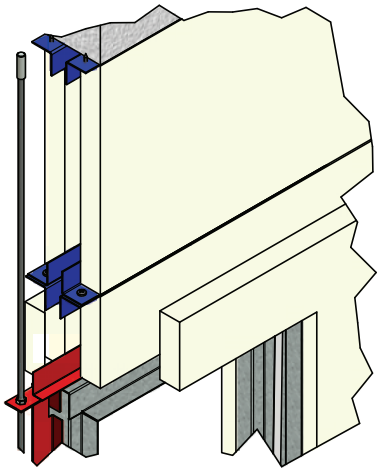


TESTED TO BS EN 1366-2 FOR 4 HOURS
BS EN 13501-3 CLASSIFICATION: E120
BRE GLOBAL CLASSIFICATION REPORT NO: 274347.2
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

BATT WALL - BATT FRAME Fitted

Single Section Sizes (mm)
100 x 100 to 1200 x 1000



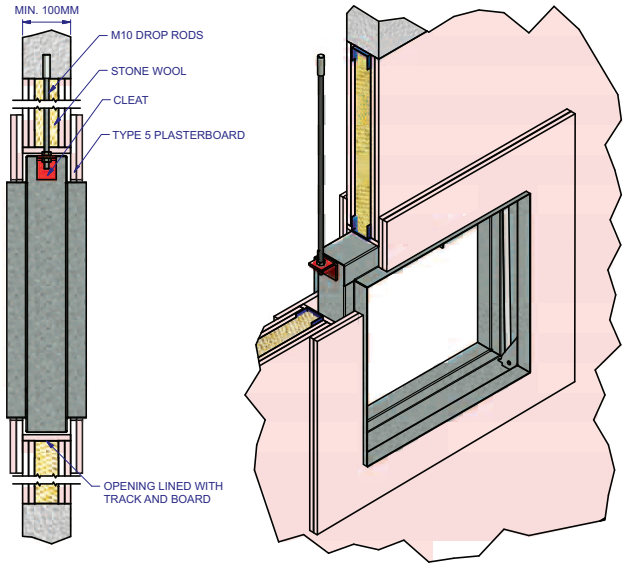


ASSESSED TO BS EN 1366-2 FOR 2 HOURS
BS EN 13501-3 CLASSIFICATION: E120
BS EN 1366-2 ASSESSMENT REFERENCES: CC 261451
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

* If your proposed installation method has minor variations to that shown, please confirm acceptance with the local Building Control Authority (BCA) before proceeding. Manufacturers are not able to "approve" specific installation methods. It is generally accepted that EN 1366-2 tested installations will fulfil any requirements to BS 476-20/22 as the test method is much more severe.

DRY WALL - CLEATS Fitted

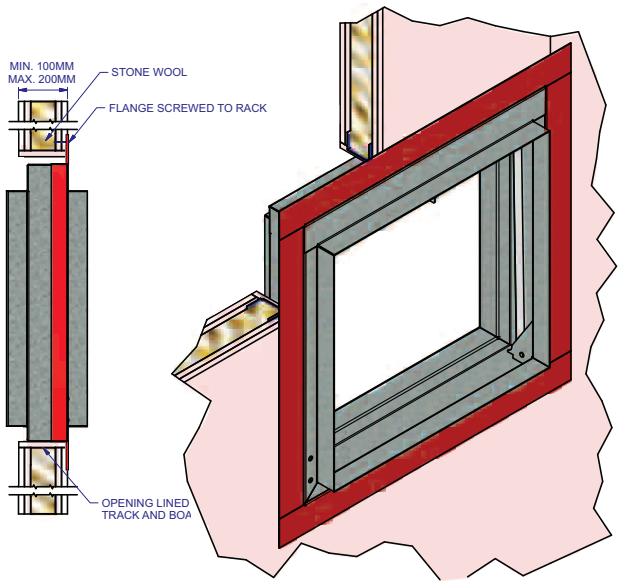
Single Section Sizes (mm)
100 x 100 to 1200 x 1000



TESTED TO BS EN 1366-2 FOR 2 HOURS
BS EN 13501-3 CLASSIFICATION: E120
BRE GLOBAL CLASSIFICATION REPORT NO: 287718C
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

DRY WALL - ANGLE FRAME Fitted

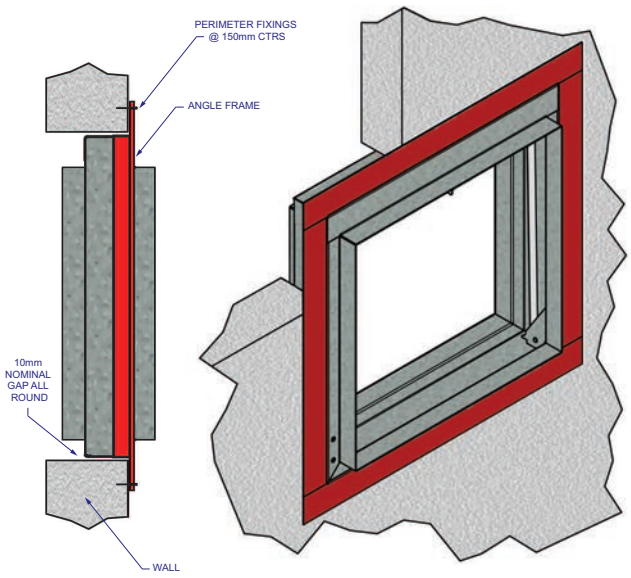
Single Section Sizes (mm)
100 x 100 to 1200 x 1000



TESTED TO BS EN 1366-2 FOR 2 HOURS
BS EN 13501-3 CLASSIFICATION: E120
BRE GLOBAL CLASSIFICATION REPORT NO: 287718A
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

MASONRY WALL - ANGLE FRAME Fitted

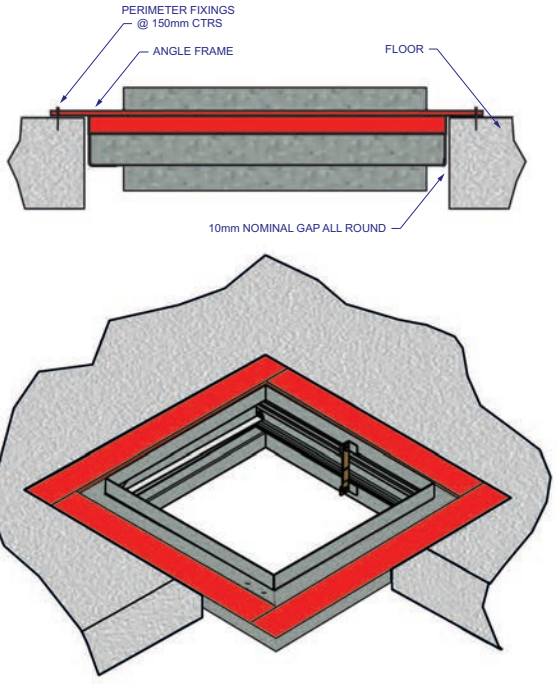
Vertical Application:
Single Section Sizes (mm) 100 x 100 to 1200 x 1000



TESTED TO BS EN 1366-2 FOR 4 HOURS
BS EN 13501-3 CLASSIFICATION: E120
MASONRY WALL BRE GLOBAL CLASSIFICATION REPORT NO: 287718A
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

CONCRETE FLOOR - ANGLE FRAME Fitted

Horizontal Application:
Single Section Sizes (mm)100 x 100 to 1200 x 1000

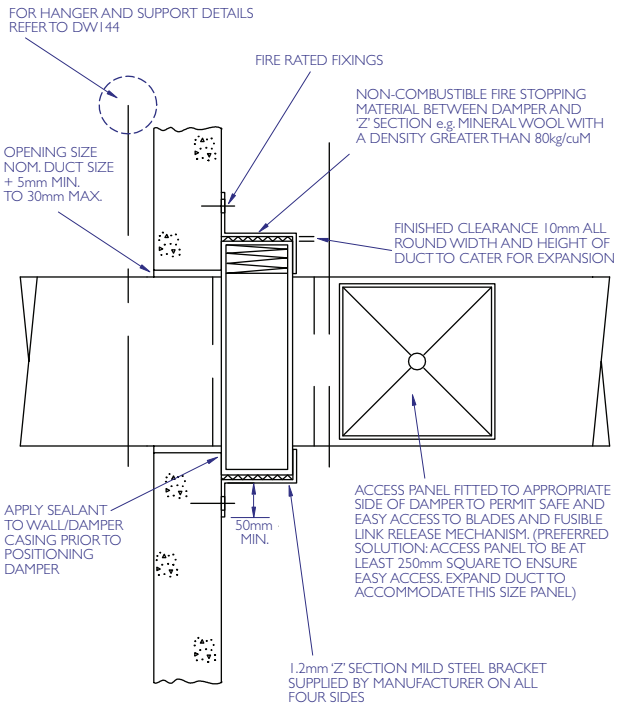


TESTED TO BS EN 1366-2 FOR 4 HOURS
BS EN 13501-3 CLASSIFICATION: E120
MASONRY WALL BRE GLOBAL CLASSIFICATION REPORT NO: 287718B
MEETS THE REQUIREMENTS OF BS 476-20/22 - REFER TO BS 476-10.6.6.3

Tested or assessed to BS 476-20/22 for up to 2 hours

CONCRETE/DRY WALL
FD ZF

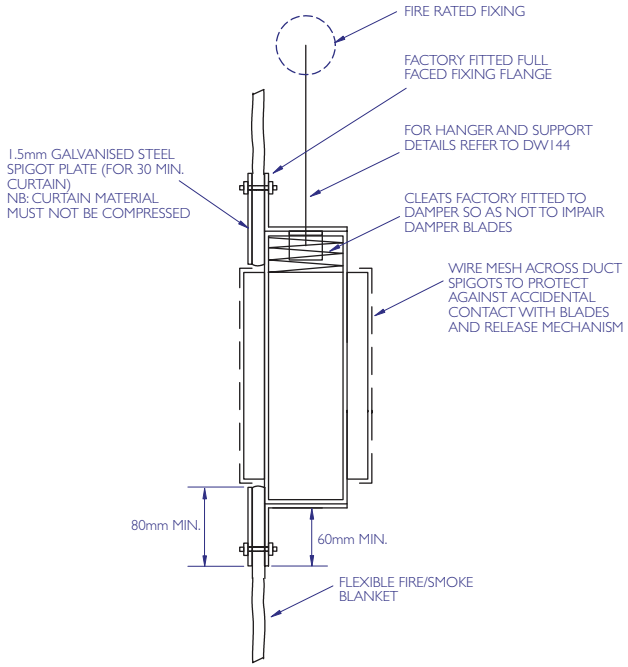
Damper size:
Min. 100mm x 100mm.
Max. 1000mm x 1000mm



Assessment reference: CC256681
BS 476-20/22: 2 hours

FIRE CURTAIN - ANGLE FRAME AND CLEATS
FD FC

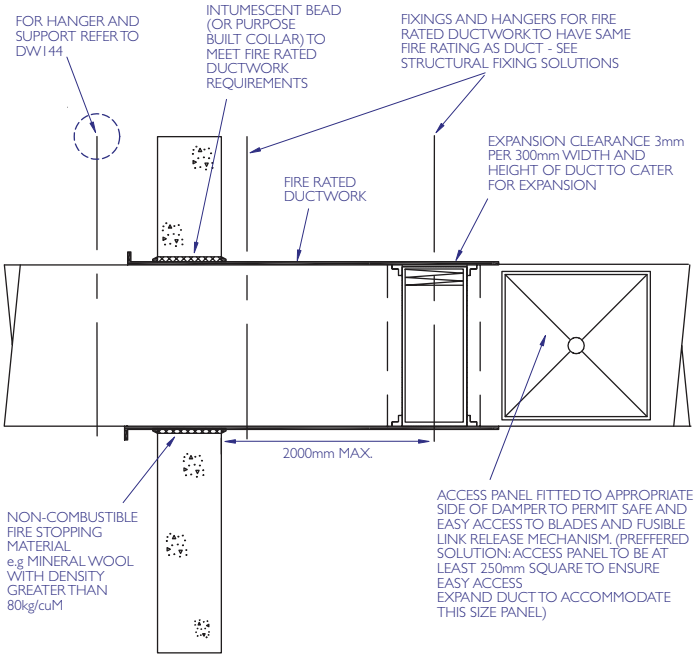
Damper size:
Min. 100mm x 100mm.
Max. 1000mm x 1000mm



Assessment reference: CC256681
BS 476-20/22: 2 hours

REMOTE FROM WALL
FD I

Damper size:
Min. 100mm x 100mm.
Max. 1000mm x 1000mm



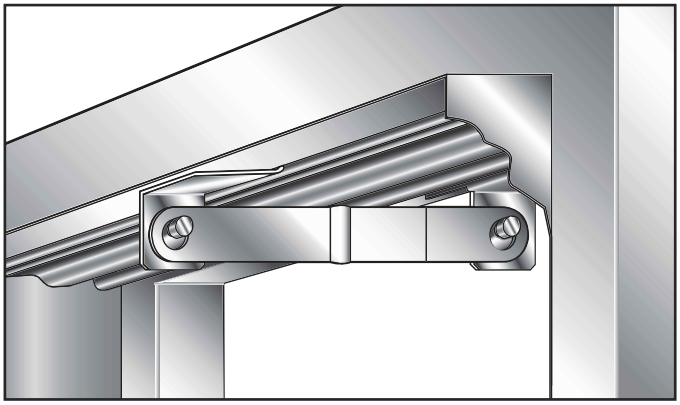
Assessment reference: CC256680
BS 476-20/22: 30 minutes

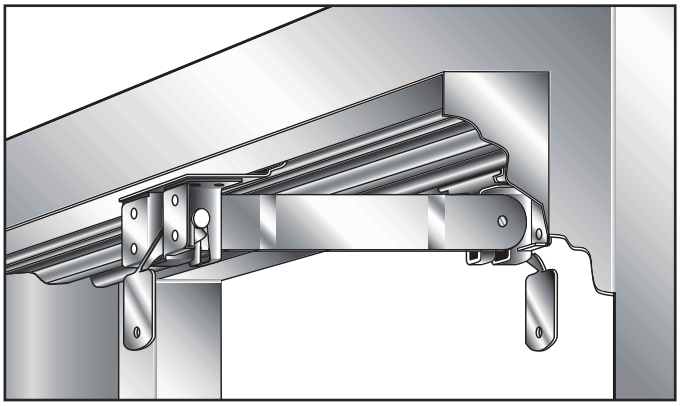
* If your proposed installation method has minor variations to that shown, please confirm acceptance with the local Building Control Authority (BCA) before proceeding. Manufacturers are not able to "approve" specific installation methods. It is generally accepted that EN 1366-2 tested installations will fulfil any requirements to BS 476-20/22 as the test method is much more severe.

Fusible Link Release

Straight Bar Fusible Link *(Standard)*
The standard fusible link will be supplied and rated at 72°C unless otherwise specified.

Gate Latch Link Option
Providing a trigger operation feature, this self-locating and easily resettable cassette can be used with either the solenoid or electro-magnet controls - or, as a standard component to assist the engineer in the resetting of the fire damper during regular inspection and maintenance procedures.
Below 150mm in height or diameter release testing only possible from opposite to ramp side.





Maintenance Notes

FD 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 5588-12 and 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 developed based on site experience.

Multiple Assemblies

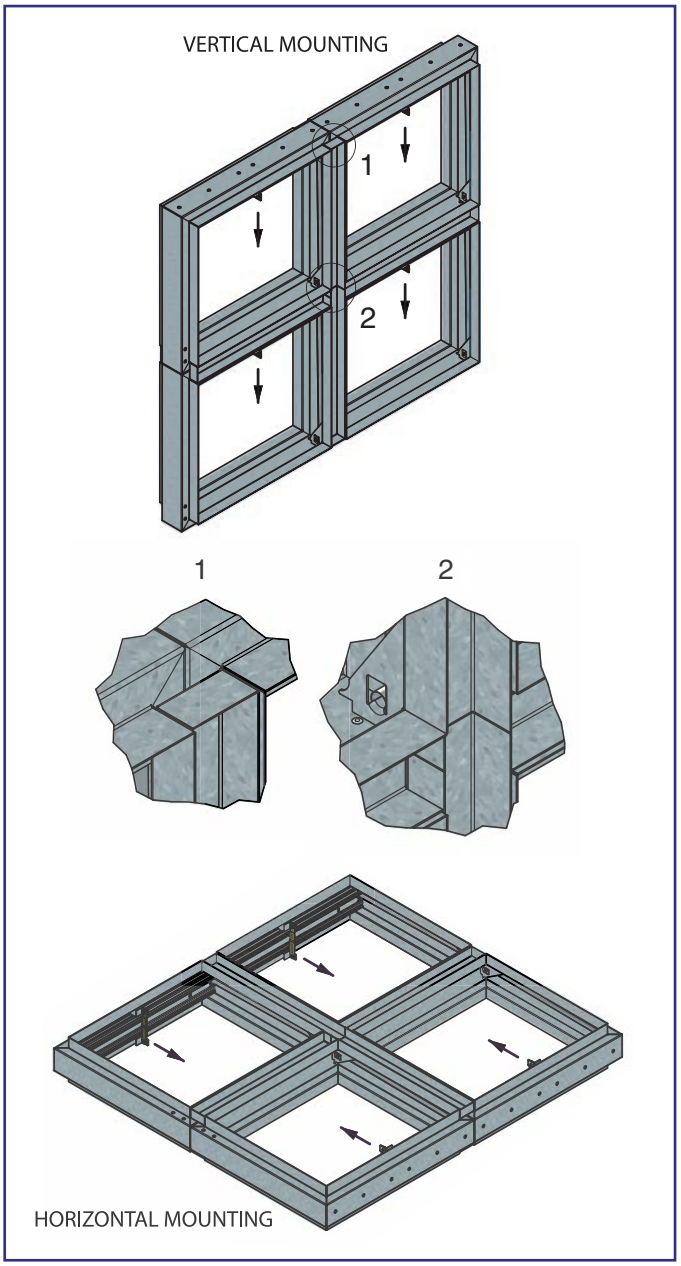
FD Series dampers can be supplied in multiple module sections to achieve requested sizes larger than the maximum manufactured single module units.

Such units and their installation method must be approved by the BCA before installation. For this, consideration must be given to additional structural steelwork that might be needed to support the weight of the damper. BSB cannot offer or approve supporting structures for multiple assemblies.

Illustrated are several variants of multiple module arrangements.

When there are transportation restrictions, large multiple units will be shipped in individual sections for site assembly by others. Joining strips are supplied un-drilled unless requested otherwise. Large multiple units required to be shipped fully assembled will incur additional packing/shipping costs. Please contact our sales office for further information.

BSB can manufacture to individual specifications and applications. Illustrated above are standard variants with other variants available to order.



FD Series

Fire Dampers – Weight Charts

Weight Chart (kg approx.)

Height (mm)	Width (mm)											
	100	200	300	400	500	600	700	800	900	1000	1100	1200
100	2.0	2.5	3.0	4.0	4.5	5.0	5.5	6.5	7.0	8.0	8.5	9.0
200	2.5	3.0	4.0	4.5	5.0	6.0	6.5	7.5	8.0	9.0	9.5	10.5
300	3.0	4.0	4.5	5.5	6.0	7.0	8.0	9.0	9.5	10.5	11.0	12.0
400	3.5	4.5	5.5	6.5	7.5	8.5	9.5	10.5	11.5	12.5	13.5	14.5
500	4.5	5.5	6.5	7.5	8.5	9.5	10.5	12.0	13.0	14.0	15.0	16.0
600	5.0	6.0	7.5	8.5	9.5	11.0	12.0	13.5	14.5	16.0	17.0	18.5
700	5.5	6.5	8.0	9.0	10.5	11.5	13.0	14.5	15.5	17.0	18.0	19.5
800	6.0	7.5	9.0	10.5	11.5	13.0	14.5	16.0	17.5	19.0	20.5	21.5
900	6.5	8.0	9.5	11.0	12.5	14.0	15.5	17.5	19.0	20.5	22.0	23.5
1000	7.0	9.0	10.5	12.0	13.5	15.0	17.0	18.5	20.5	22.0	23.5	25.0

Weight Chart + Hevac Frame (kg approx.)

Height (mm)	Width (mm)											
	100	200	300	400	500	600	700	800	900	1000	1100	1200
100	3.5	4.5	5.5	6.5	7.5	8.5	8.5	11.0	12.0	13.0	14.0	15.0
200	4.5	5.5	6.5	7.5	8.5	10.0	11.0	12.0	13.5	14.5	15.5	16.5
300	5.5	6.5	8.0	9.0	10.0	11.5	12.5	14.0	15.0	16.0	17.5	18.5
400	6.5	8.0	9.0	10.5	11.5	13.0	14.5	16.0	17.5	18.5	20.0	21.5
500	7.5	9.0	10.5	11.5	13.0	14.5	16.0	17.5	19.0	20.5	22.0	23.5
600	8.5	10.0	11.5	13.0	14.5	16.5	18.0	19.5	21.5	23.0	24.5	26.0
700	9.5	11.0	12.5	14.0	15.5	17.5	19.0	21.0	22.5	24.0	26.0	27.5
800	10.5	12.0	14.0	15.5	17.5	19.0	21.0	23.0	24.5	26.5	28.5	30.0
900	11.5	13.0	15.0	17.0	18.5	20.5	22.5	24.5	26.5	28.5	30.5	32.5
1000	12.0	14.0	16.0	18.0	20.0	22.0	24.0	26.0	28.5	30.5	32.5	34.5

Weight Chart + Angle Frame (kg approx.)

Height (mm)	Width (mm)											
	100	200	300	400	500	600	700	800	900	1000	1100	1200
100	2.5	3.5	4.5	5.0	6.0	6.5	7.5	8.5	9.5	10.0	11.0	12.0
200	3.5	4.5	5.0	6.0	7.0	7.5	8.5	9.5	10.5	11.5	12.5	13.0
300	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
400	5.0	6.0	7.5	8.5	9.5	10.5	11.5	13.0	14.0	15.5	16.5	17.5
500	6.0	7.0	8.5	9.5	10.5	12.0	13.0	14.5	16.0	17.0	18.5	19.5
600	6.5	8.0	9.5	11.0	12.0	13.5	15.0	16.5	18.0	19.5	20.5	22.0
700	7.5	9.0	10.0	11.5	13.0	14.5	16.0	17.5	19.0	20.5	22.0	23.5
800	8.0	10.0	11.5	13.0	14.5	16.0	17.5	19.5	21.0	22.5	24.0	26.0
900	9.0	10.5	12.5	14.0	15.5	17.5	19.0	21.0	22.5	24.5	26.0	27.5
1000	10.0	11.5	13.5	15.0	17.0	18.5	20.5	22.5	24.5	26.0	28.0	29.5

Weight Chart Circular (kg approx.)

Nom dia. (mm)	Width (mm)		
	FDC	FDC+HF	FDC+AF
100	1.5	3.5	3.0
150	2.5	4.5	4.0
200	3.0	5.5	4.0
250	3.5	6.5	5.0
300	4.5	7.5	6.0
350	6.5	10.0	8.0
400	8.0	11.5	10.0
450	9.0	13.5	11.0
500	10.5	15.0	13.0
550	12.0	17.0	15.0
600	13.5	19.0	16.0
650	15.0	21.0	18.0
700	16.5	22.5	20.0
750	18.0	24.5	22.0
800	20.5	27.5	24.0
850	22.5	29.5	26.0
900	24.5	32.0	28.0
950	26.5	34.5	31.0
1000	28.5	37.0	33.0

Damper Control Panels

BSB offer two alternative panels when monitoring and controlling dampers. the Electro Mechanical System and the fully Addressable System.

Electro mechanical panels are generally used for up to 30 dampers and where hard wiring costs are not an issue. The damper logic being hardwired and the facia being engraved, means that any changes will require physical alterations and additional costs.

The fully addressable panel is fully software programmable allowing for additional dampers or changes to the "cause and effect" being reprogrammed by an engineer on site.

For additional functions and options to meet all site and system requirements, please contact our sales office.

Standard Electro Mechanical Control and Monitoring System

Provides a straight forward control panel offering the most common features called for as standard.

Due to differing site control and monitoring properties, damper actuators will be connected to site wiring when installed by the contractor to provide the relevant functions.

Premier Electro Mechanical Control and Monitoring System

Controls and monitors a number of smoke/fire dampers hard wired individually or in groups, in a single or multiple zone arrangement.

Dampers can be individually or collectively controlled and are continuously monitored.

Due to differing site control and monitoring properties, damper actuators will be connected to site wiring when installed by the contractor to provide the relevant functions.

Fully Addressable Control and Monitoring System

Software driven panel simplified installation and commissioning. Utilises data wiring in a loop configuration.

Can be configured to suit all types of system. Fully integrated and secure network provides an intelligent interface for building control.

Touch screen options are available allowing system interrogation, Touch screen with Graphic CAD based floor plans, mimic style displays and optional BACnet interface complete the range. Please contact the BSB sales office for further information.

Access Doors

BSB offer a range of Access Doors designed to provide vital, quick and efficient access for inspection and cleaning of in-duct items such as control dampers, filters and fire dampers.

Suitably sized access panels should be provided adjacent to all dampers to permit safe and easy access for regular commissioning, servicing and inspection to ensure correct operation can be observed in accordance with DW145 G.3.1.5.

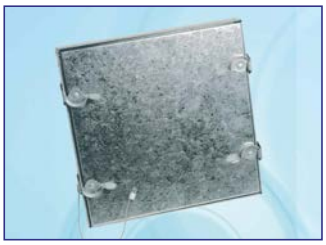
Dampers with multiple sections will require one access panel per section.

Access doors should comply with DW 144 leakage specification.

Consideration should be given to ensure that the installed access panels are not covered or obstructed by other surfaces or temporary/permanent structures.

Contact our sales office for details.

ADC Series
Duct Access Doors



ADF and ADF-F Series
Insulated Duct Access Doors

ADO Series
Duct Access Doors

Typical Tender/Specification Text

The BSB FD curtain bladed fire dampers shall be LPCB certificated and pass the test requirements stated in EN 1366-2.

For maintenance of the integrity of compartmentation the fire dampers shall have an E classification to EN 13501-3.

Curtain fire dampers shall not be used for protection of escape routes and areas with sleeping risk.

Refer to Approved Document B (ADB).

The interlocking ribbed blades shall be held out of the airstream against constant force springs by a fusible link.

The fusible link shall have a melting temperature of 72°C. The link melting shall allow the springs to close the damper.

The fusible link assembly shall be installed so that test release may be made safely from either side of the damper.

The fire damper case shall be fully welded to meet the air tightness test requirements of HVCA specification DW144 to classes A, B and C up to 1500 Pa.

The BSB FD fire damper shall have a tested installation method that matches the requirement of the supporting construction into which it is built.

(Tests or assessments of installation methods to BS 476-20/22 may be acceptable if the ventilation design causes the fans to be turned off in the event of a smoke or fire alarm and escape routes and areas of sleeping risk are not being protected).

FD Series

Fire Dampers – Ordering Codes

FD A G HF SS

FD Fire Damper

Case Type

- A Square/Rectangular - Low/Medium Velocity
- B Square/Rectangular - High Velocity
- C Circular - High Velocity
- I Square/Rectangular - Low/Medium Velocity
- O Flat Oval - High Velocity

Blade Material

- G Galvanised Mild Steel
- S 430 grade Stainless Steel
- * 316 grade Stainless Steel available on request

Installation Frame

- HF HEVAC/HVCA Installation Frame
- AF Angle Frame
- FC Fire Curtain Frame
- ZF Z-Frame
- CL Cleats
- SA Sleeve and Angles
- BF Batt Frame

Accessories

- SS Side Seal Gasket
- VI Visual Indicator
- GL Gate Latch Release Mechanism
- MS Microswitch Factory Fitted. Please state single or double pole

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.

BSB Engineering Services Limited

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For purchase orders and order related enquiries, please email: orders@bsb-dampers.co.uk
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