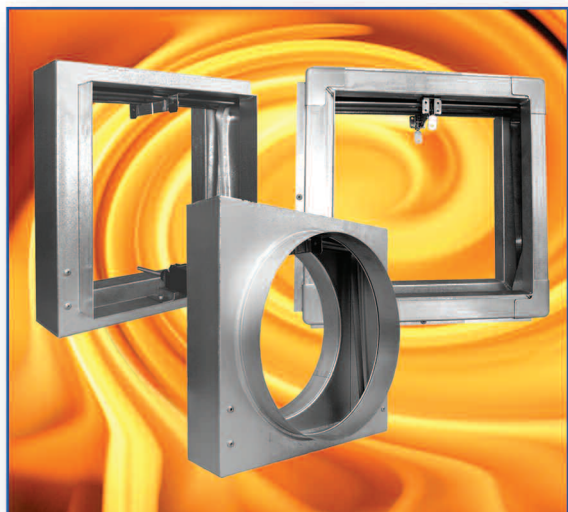


FD Series



Fire Dampers

- Complies to BS EN 15650
- Tested installation methods in differing supporting constructions (BS EN 1366-2)
- 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 options
- Microswitch option for remote indication



A brand of
MAICO

MANUFACTURERS OF AIR, FIRE AND SMOKE CONTROL PRODUCTS

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 360m³/hr/m² (100 l/s/m²) throughout the fire test period.

Fire dampers should be installed as tested.

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 airstream on heights greater than 300mm.

B - Blades held clear of the airstream.

Type FD Circular Spigot

C - Blades held clear of the airstream.

Type FD Flat Oval Spigot

O - Blades held clear of the airstream.



FD Features and Benefits

- Tested and classified installation variants of the FD are available to cover masonry walls, dry walls and concrete floors. These cover the majority of applications/supporting constructions that are required to maintain compartmentation.
- All BSB tested installation methods give the highest E120 classification.
- Angle frame methods, HEVAC frame methods and cleat and drop rod methods are available.
- Minimum size 100mm x 100mm.
- Maximum single section size 1200mm x 1000mm.
- 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.

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 120 - Masonry Wall

E Classification (BS ISO 21925-1)

- 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

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 up to 120 minutes.

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.

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 15650

Fire Damper product standard. Ventilation for Buildings.

BS EN 1366-2

The fire resistance test standard for fire dampers.

BS EN 13501-3

Classification standard for fire dampers.

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. Normal operating conditions - not exceeding 1000Pa, Classes A & B of DW 144 2016 Specification will apply.

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.

Typical Tender/Specification Text

Dampers to comply with EN15650.

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

Folding blade (E class) 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 and bottom blade arrangement ring pull 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. Normal operating conditions - not exceeding 1000Pa, Classes A & B of DW 144 2016 Specification will apply.

FD Series

Fire Dampers - Product Specification

Fusible Link Bracket

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

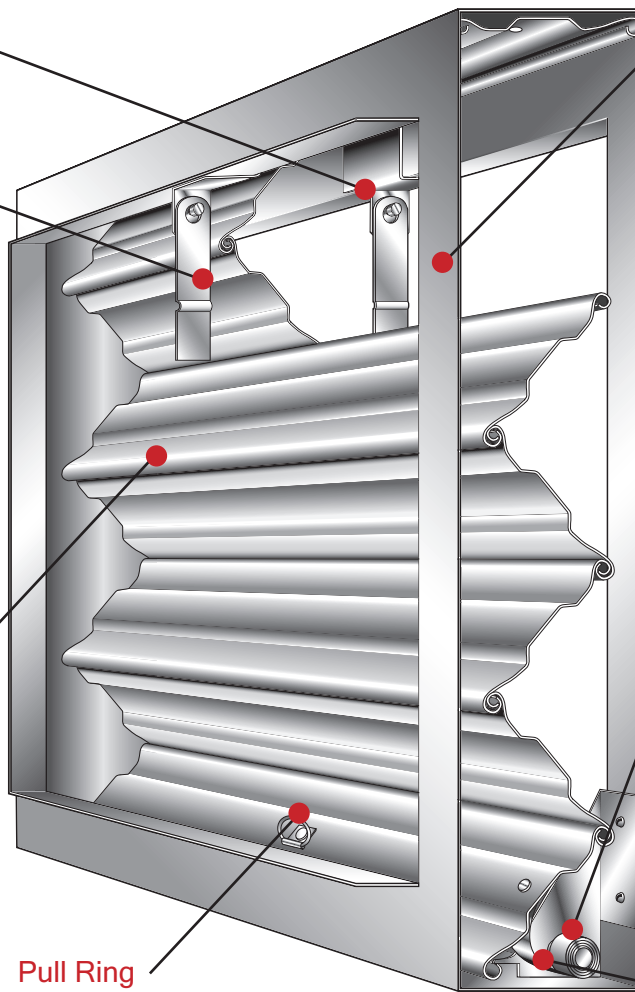
Fusible Link

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.

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.

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 EN 10151.

Locking Ramps

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

Paint

All welds are cleaned and sprayed with commercial grade water based protective paint.

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

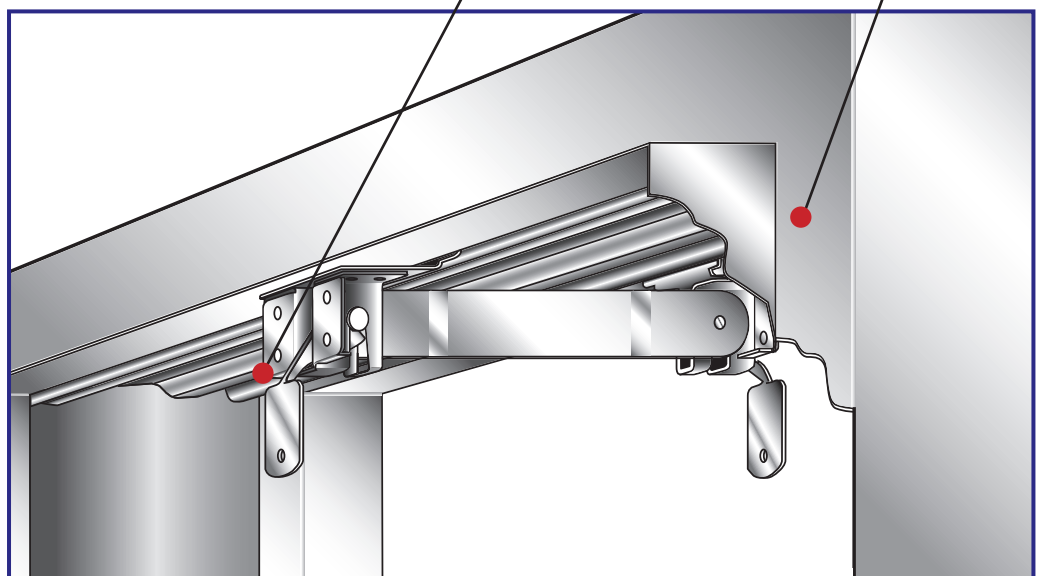
Optional mechanism for electrical release when required. Rated 72°C (162°F),

Microswitches

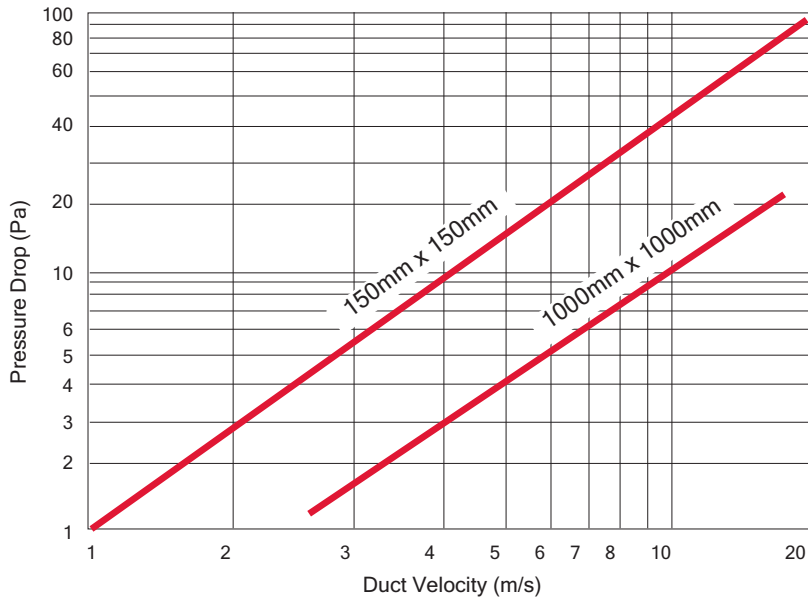
All BSB FD Fire Dampers are available with factory fitted single pole microswitches as optional extras. (See page 13)

Mechanical Visual Indicator

Local visual indication of the blade status is available as an optional extra. (See page 13)



Performance Data

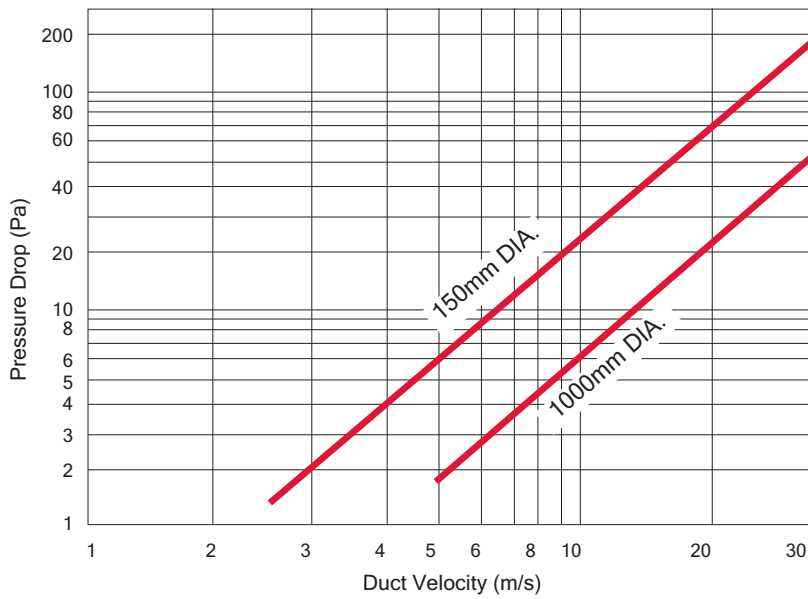


Pressure Drop Graph

Type A

Minimum free area = 91%

Velocity range 0 to 12.5 m/s

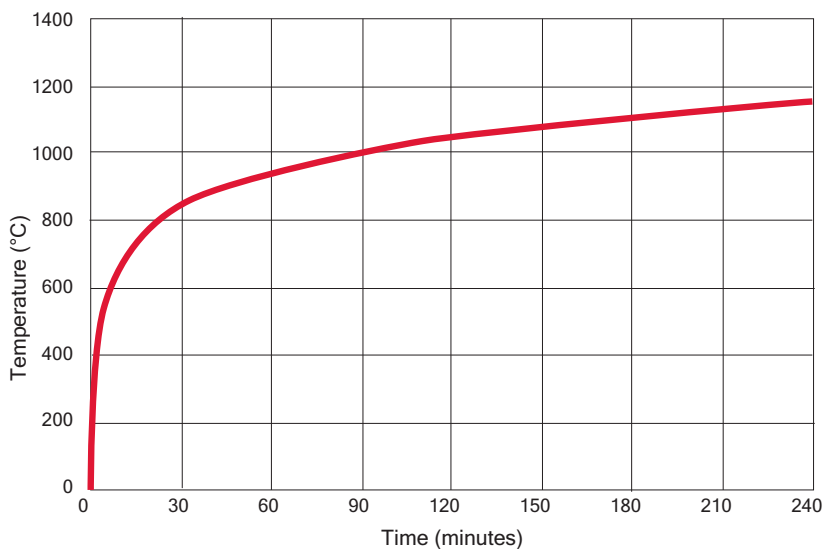


Pressure Drop Graph

Type B, Type C and Type O

Maximum unrestricted airflow

Velocity range 0 to 30 m/s

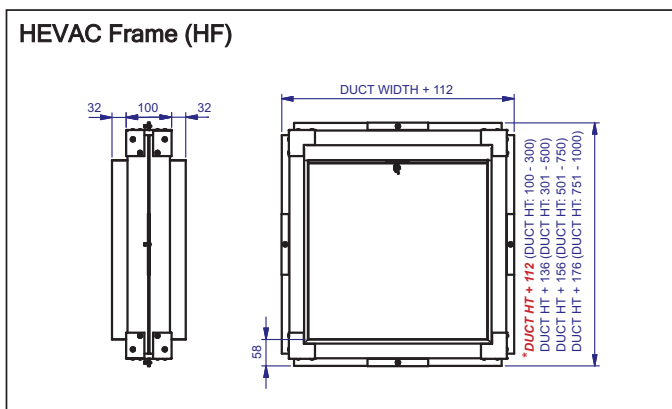
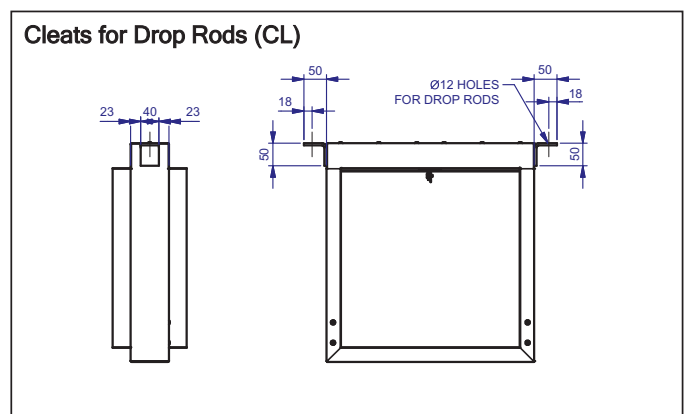
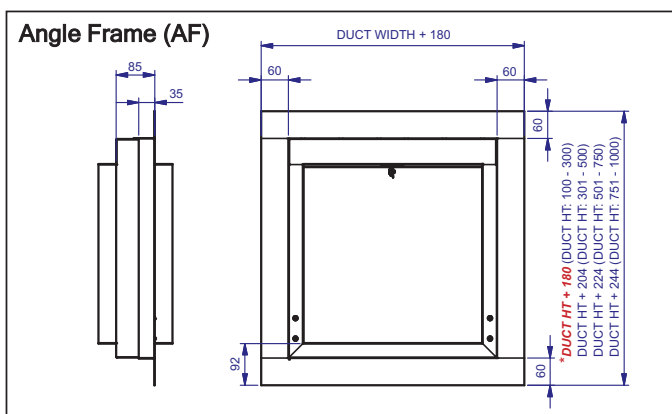
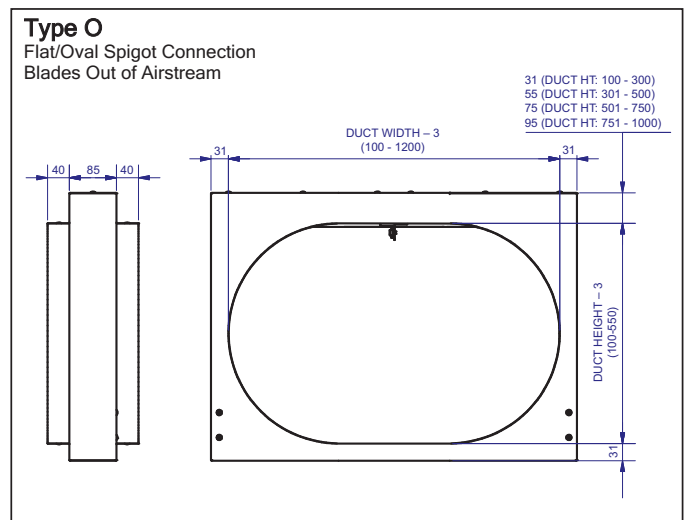
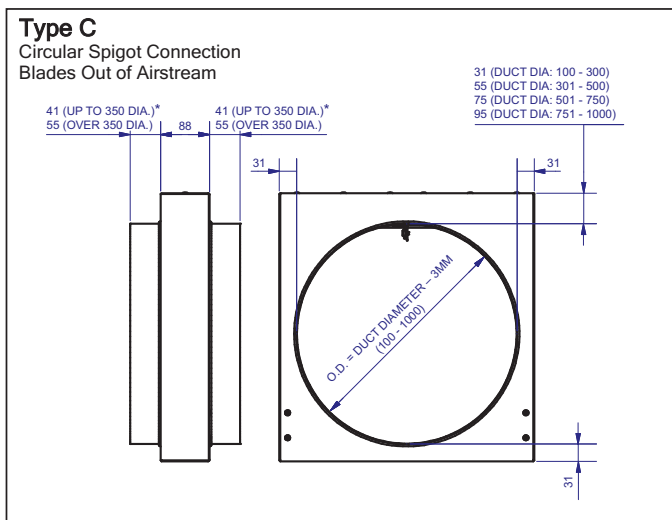
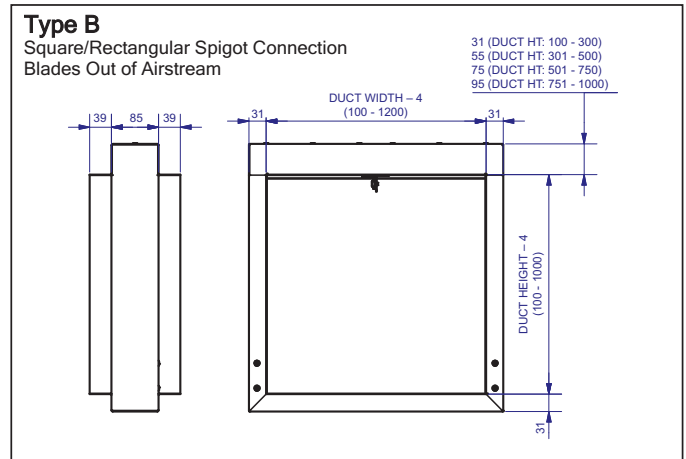
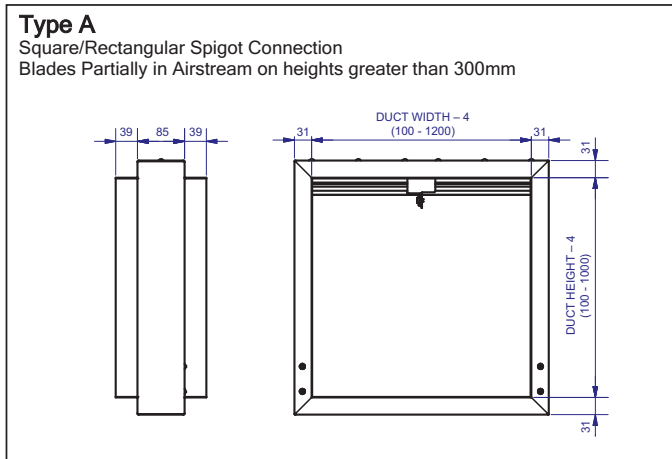


Standard Time/Temp. Curve (4 hours)

As specified in EN 1363-1

FD Series

Fire Dampers - Dimensions



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

Fire Dampers - Angle Frame (AF) Installation Method

Angle Frame (AF) Installation Method

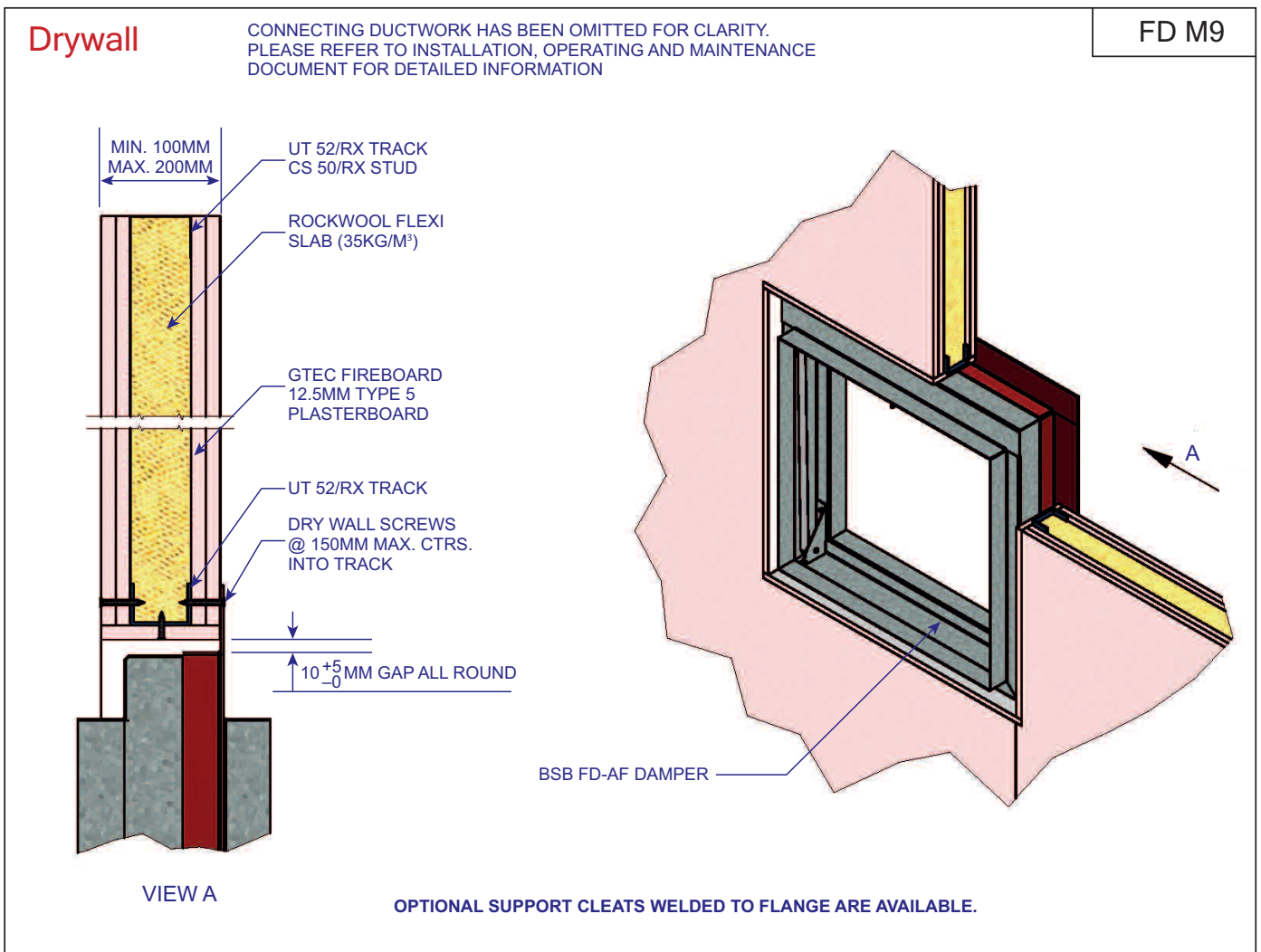
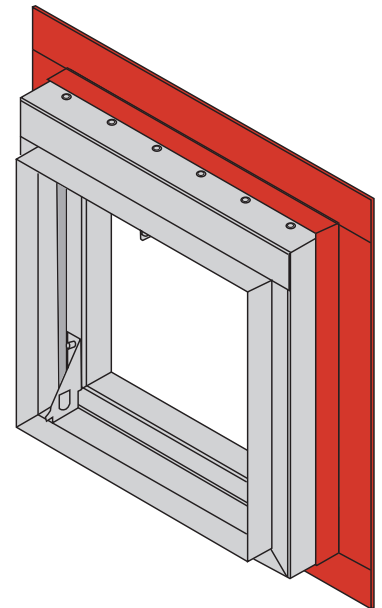
The Angle Frame (AF) method offers a comprehensive installation solution for masonry walls, partition walls and concrete floors. It is CE marked for both vertical and horizontal applications and has been fire tested vertically from both sides.

Dampers are supplied with a factory fitted 1.2mm thick welded 60mm galvanised steel angle to the damper case periphery.

Installation in masonry walls and concrete floors is effected without the need for backfilling with mortar around the damper casing.

Dampers in partition walls are installed without having to seal around the aperture with plasterboard on the non-framed side.

Cleats are available factory fitted to the front face of the AF fixing frame. 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.



TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING.	
BSB FD-AF ANGLE FRAME Fitted	CE 120 MINUTES FIRE RESISTANCE E120 (ve i↔o)
Single section sizes(mm) 100 x 100 to 1200 x 1000	BS EN1366-2 TEST REFERENCE: 284776 AND 303868 BRE CERTIFICATE OF CONSTANCY 0832-CPR-P0006

FD Series

Fire Dampers - Angle Frame (AF) Installation Method

FD M10

Masonry Wall

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY. PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION

MASONRY/CONCRETE WALL

M5 STEEL ANCHORS @ MAX. 150MM PITCH

VIEW A

BSB FD-AF DAMPER

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING.

BSB FD-AF ANGLE FRAME Fitted	CE 120 MINUTES FIRE RESISTANCE E120 (ve i ↔ o)
Single Section Sizes (mm) 100 x 100 to 1200 x 1000	BS EN1366-2 TEST REFERENCE: 284776 AND 303868 BRE CERTIFICATE OF CONSTANCY 0832-CPR-P0006

FD M11

Concrete Floor

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY. PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION

Ø6.5MM x 60MM LONG STEEL FIXINGS @ 150MM CTRS

MIN. 150MM

10 +5/-0MM

VIEW A

BSB FD-AF DAMPER

NOTE: THIS INSTALLATION WAS SUCCESSFULLY TESTED FOR 4 HOURS

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING.

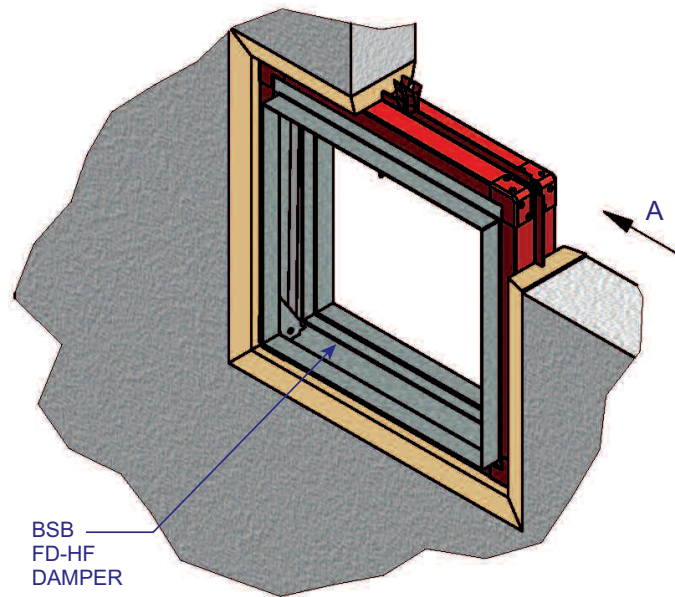
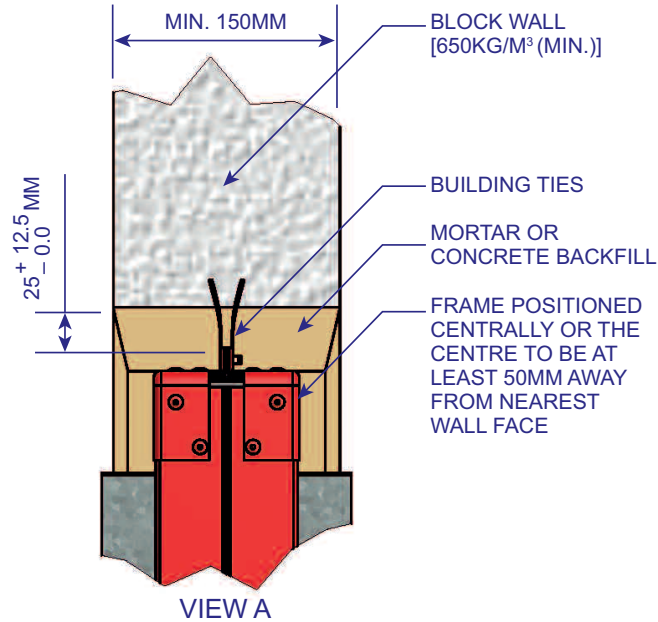
BSB FD-AF ANGLE FRAME Fitted	CE 120 MINUTES FIRE RESISTANCE E120 (ho i → o)
Single Section Sizes (mm) 100 x 100 to 1200 x 1000	BS EN1366-2 TEST REFERENCE: 282572 BRE CERTIFICATE OF CONSTANCY 0832-CPR-P0006

Block/Masonry Wall

FD M2

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY

DW/145 M3



SECURING OF BUILDING TIES:

EITHER, CUT 150MM LONG X 50MM DEEP POCKETS INTO SURROUNDING CONSTRUCTION, BEND OUT TABS INTO POCKETS AND BACKFILL.

OR, USE 5MM DIA STEEL ANCHORS (MIN) AND 1.5MM DIA STEEL WIRE (MIN) AROUND BENT-OUT TABS & ANCHORS TO FIX TO SURROUNDING CONSTRUCTION, PRIOR TO BACKFILL.

NOTE: THIS INSTALLATION WAS SUCCESSFULLY TESTED FOR 4 HOURS

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING.

BSB FD-HF
HEVAC FRAME Fitted

CE 120 MINUTES FIRE RESISTANCE
E120 (ve i → o)

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

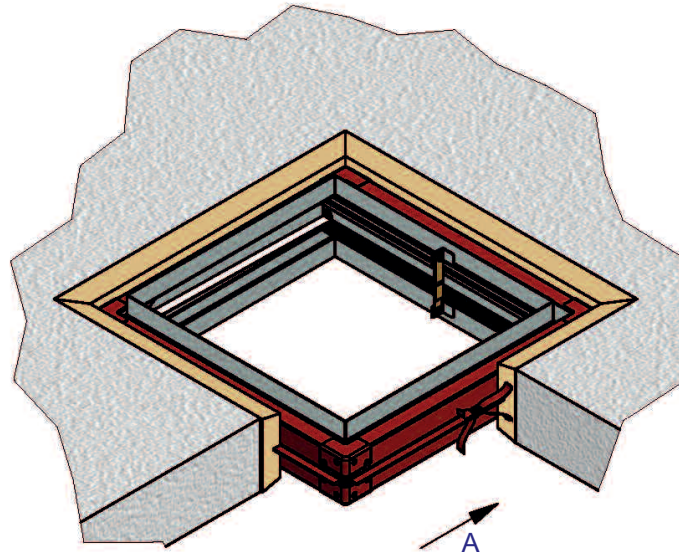
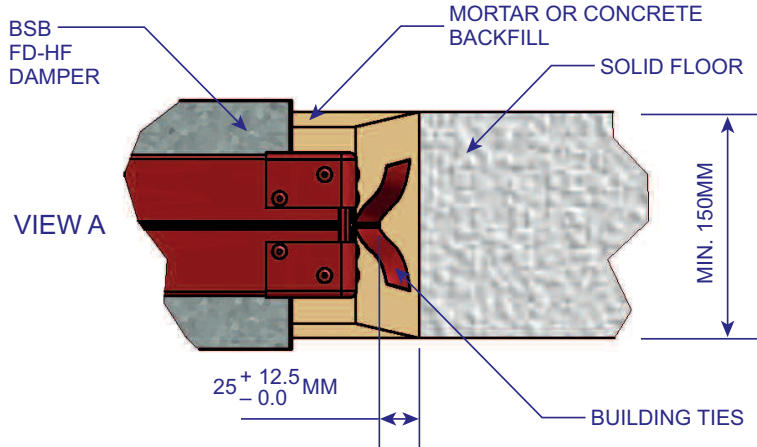
BRE CERTIFICATE OF CONSTANCY: 0832-CPR-P0006

Concrete Floor

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE
DOCUMENT FOR DETAILED INFORMATION

FD M1

DW/145 M3



SECURING OF BUILDING TIES:

EITHER, CUT 150MM LONG X 50MM DEEP POCKETS INTO SURROUNDING CONSTRUCTION, BEND OUT TABS INTO POCKETS AND BACKFILL.
OR, USE 5MM DIA STEEL ANCHORS (MIN) AND 1.5MM DIA STEEL WIRE (MIN) AROUND BENT-OUT TABS & ANCHORS TO FIX TO SURROUNDING CONSTRUCTION, PRIOR TO BACKFILL.

NOTE: THIS INSTALLATION WAS SUCCESSFULLY TESTED FOR 4 HOURS

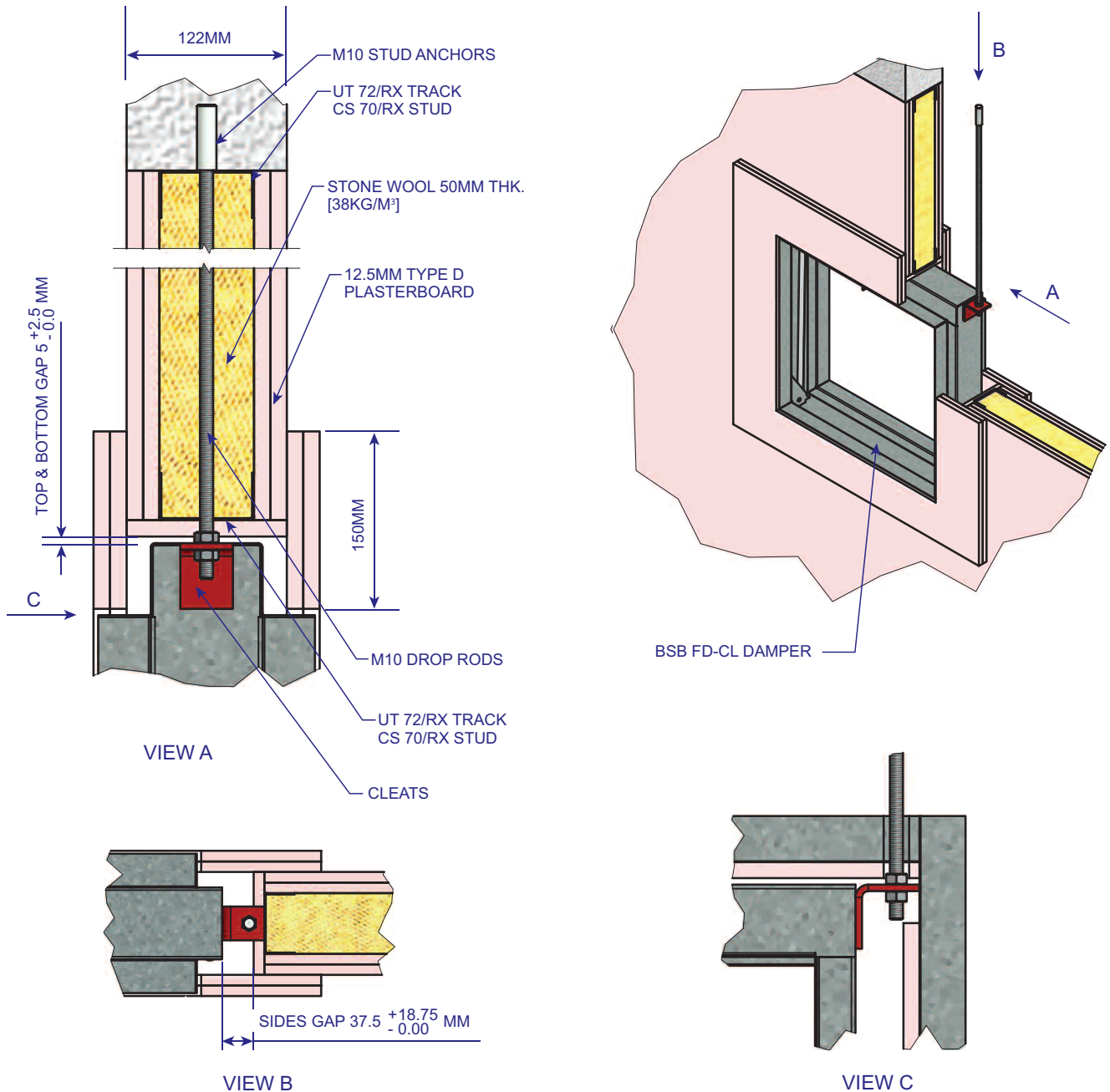
TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING.

<p>BSB FD-HF HEVAC FRAME Fitted</p>	<p>CE 120 MINUTES FIRE RESISTANCE E120 (ho i → o)</p>
<p>Single Section Sizes (mm) 100 x 100 to 1200 x 1000</p>	<p>BRE CERTIFICATE OF CONSTANCY 0832-CPR-P0006</p>

FD M6-r5

Drywall

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY.
PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR
DETAILED INFORMATION.



CLEATS:
THE INSTALLATION SHOWN REFERS TO A PATTRASS INSTALLATION METHOD
WITH CLEATS FITTED AS AN ACCESSORY.

TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS, MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED FIRE TESTS / DOCUMENTS CONTAINED HEREIN IN ORDER TO CONSIDER APPROVAL.

BSB FD-CL

CE 120 MINUTES FIRE RESISTANCE
E120 (ve i → o)

Single section sizes(mm)
100 x 100 to 1200 x 1000

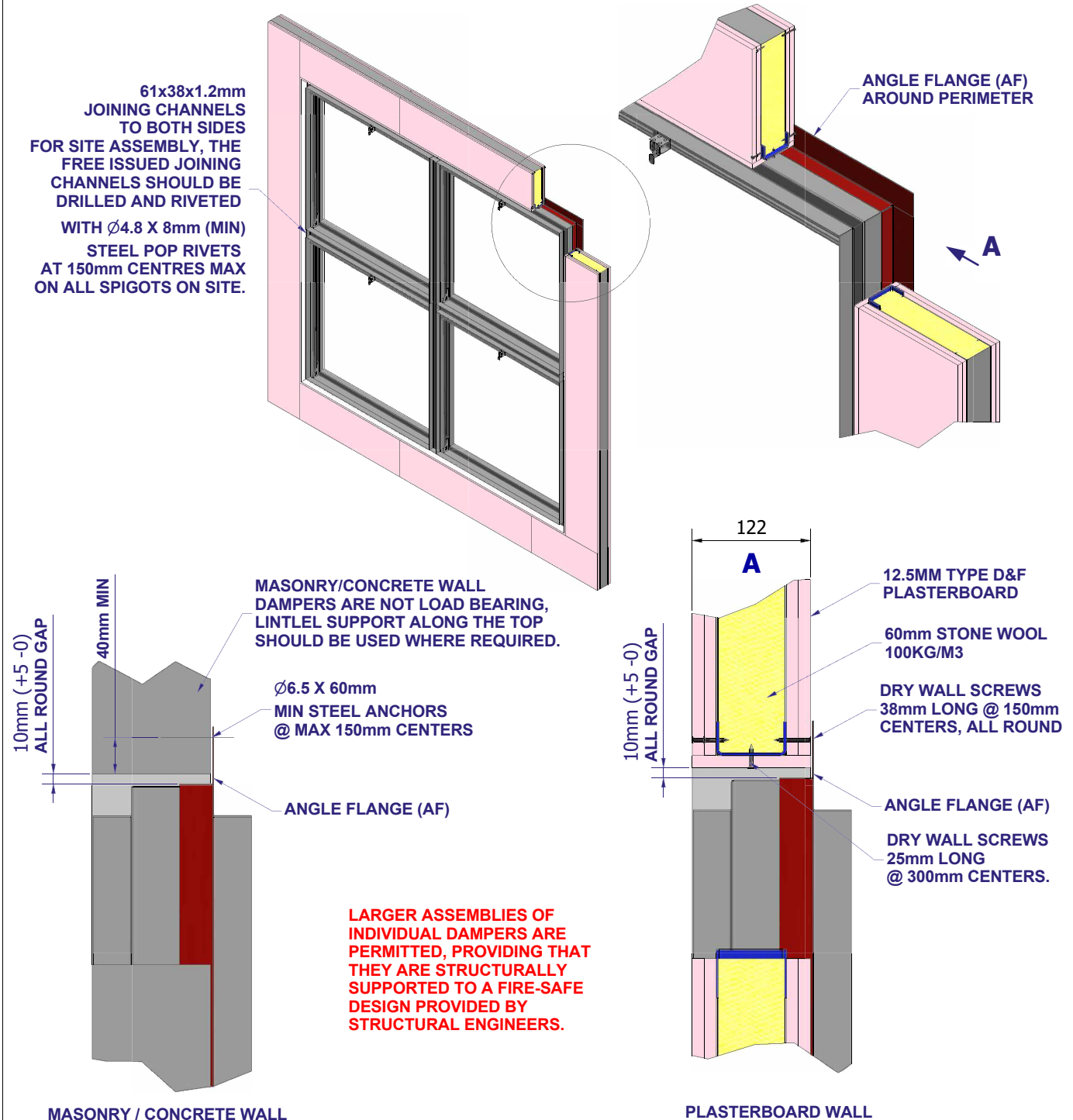
BS EN1366-2 TEST REFERENCE: 258320
BRE CERTIFICATE OF CONSTANCY 0832-CPR-P0006

FD Series

Fire Dampers - Angle Frame (AF) Multiple Installation Method

CONNECTING DUCTWORK HAS BEEN OMITTED FOR CLARITY. USE BREAK-AWAY JOINTS (ALUMINIUM RIVETS). PLEASE REFER TO INSTALLATION, OPERATING AND MAINTENANCE DOCUMENT FOR DETAILED INFORMATION.
* TOLERANCE FOR GAP BETWEEN DAMPER AND EDGE OF OPENING +50% (RULE X.45 OF EN15882-2)

FD-AF M12



TESTED INSTALLATION METHOD SHOWN. DIFFERING INSTALLATION METHODS TO THIS MUST BE APPROVED BY THE BUILDING CONTROL AUTHORITY (BCA) BEFORE PROCEEDING. THEY WILL NEED TO REFER TO THIS DOCUMENT AND ASSOCIATED FIRE TESTS / DOCUMENTS CONTAINED HEREIN IN ORDER TO CONSIDER APPROVAL.

**DRY PARTITION AND MASONRY/CONCRETE WALLS
BSB FD-AF MULTIPLE DAMPER ARRANGEMENTS
ANGLE FRAME**



**120 MINUTES FIRE RESISTANCE
E 120 (ve i ↔ o)**

Single section sizes(mm)
100 x 100 to 1200 x 1000

TESTED IN ACCORDANCE WITH EN 15882-2
GENERALLY AS EN1366-2 & CLASSIFIED TO EN13501-3

ECN: 0190

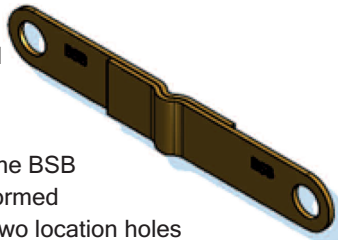
DATE: 19/09/2019

www.bsb-dampers.co.uk

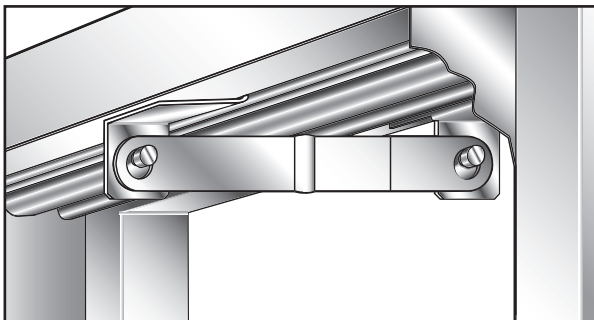
Fire Dampers - Fusible Link Release and Multiple Assemblies

Straight Bar Standard Fusible Link Release

The standard fusible link will be supplied and rated at 72°C unless otherwise specified.

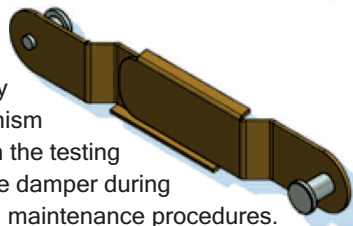


Supplied as standard, the BSB straight bar link has a formed reinforcing swage and two location holes (125mm long x 18mm wide, with 2 off 10mm diameter holes at 107mm centres).



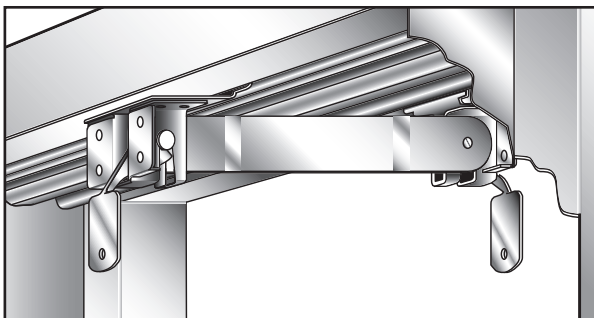
Gate Latch Fusible Link Release

Providing a trigger release option, this self-locating and easily resettable link mechanism assists the engineer in the testing and 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.

Used with the Gatelatch release mechanism. 120mm long x 23mm wide with 2 x 10mm dia flange pins at 103mm centres.



BSB FD series folding blade fire dampers are supplied with fusible links rated and designed to operate at 72°C as standard and as tested.

Fire dampers fitted with links rated at any other temperature other than 72°C will not be CE marked and will require BCA approval.

Replacement links for existing fire dampers will need to match the type of link bracket that has been supplied (please see above). If in doubt, please refer to our Sales Office.

Multiple Assemblies

Vertical Mounting

FD Series fire dampers can be supplied in multiple module sections to achieve requested sizes larger than the maximum manufactured single section tested unit. Please refer to drawing FD-AF M12 for vertical wall mounting. This drawing refers to a CE marked fire damper assembly with an AF fixing frame, 2 sections wide by 2 sections high.

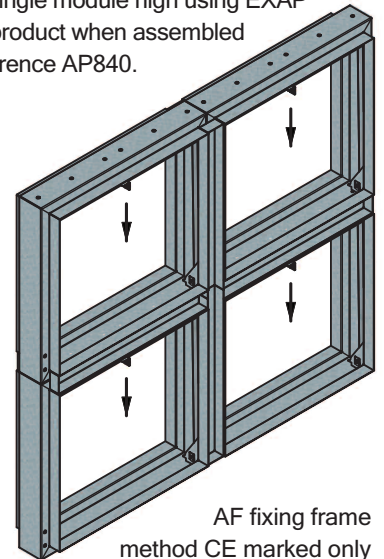
Suitable for both Dry Line walls and Blockwork/Concrete walls as tested.

Also available in any size wide by a single module high using EXAP rules to EN 15725, as a CE marked product when assembled on site to the BSB detail drawing reference AP840.

Consideration must be given to additional structural steelwork that may be needed to support the weight of the damper and position within the wall aperture. BSB cannot offer or approve supporting structures for multiple assemblies.

The drawing to the right shows a multiple of four dampers for Vertical Installation and the correct blade path of each damper section.

The installation fixing method has been purposely removed for clarity of assembly.



AF fixing frame method CE marked only

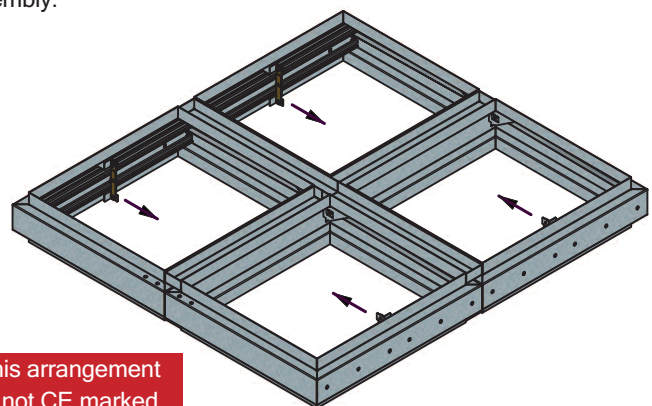
Horizontal Mounting

Multiple module sections for horizontal mounting are not CE marked and will require approval by the BCA before purchasing.

Where the use of a multiple section damper is the only option for installation, these can be supplied with either a HEVAC installation frame or the AF fixing frame depending on preference and specification.

The drawing below shows the blade path of each damper section and this should be noted together with the assembled dimensions.

The installation fixing method has been purposely removed for clarity of assembly.



This arrangement is not CE marked

Transportation

When there are transportation restrictions, large multiple units will be shipped in individual sections for site assembly by others, using un-drilled joining channels provided. Large multiple assemblies required to be shipped fully assembled will incur additional packing/shipping costs.

Please contact our sales office for further information.

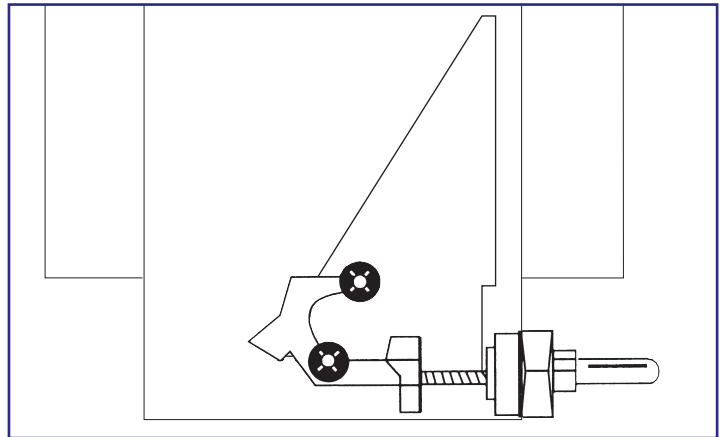
FD Series

Fire Dampers - Status Indication

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.



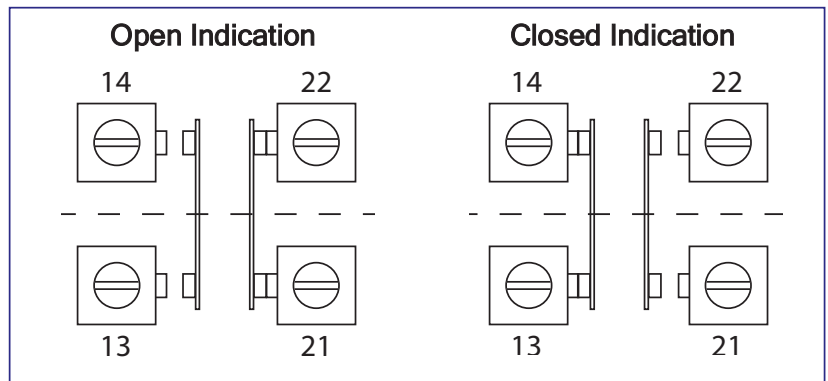
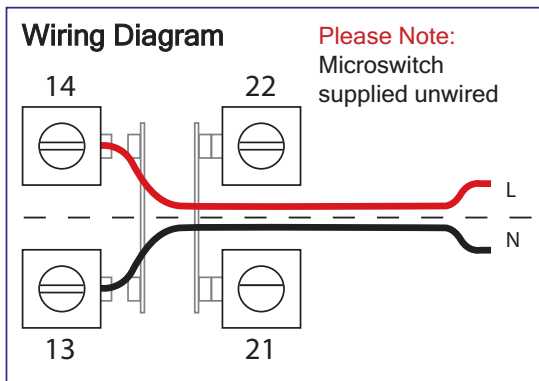
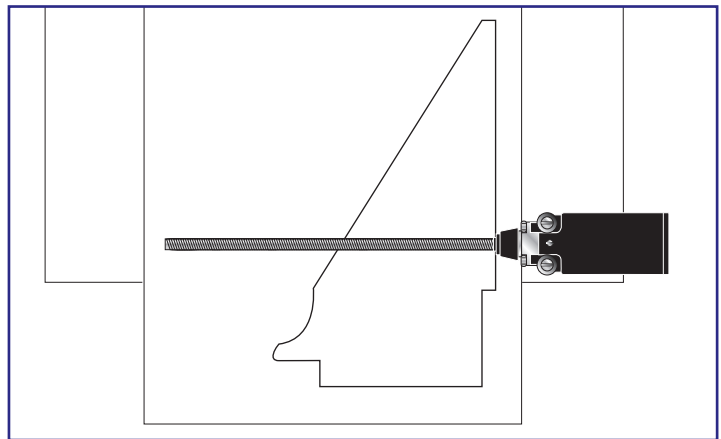
Single Pole Microswitch

To provide remote indication of the blade status. As the leading blade travels close towards the locking ramp, it makes contact with the arm and operates the change over switch to provide a remote closed signal.

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.



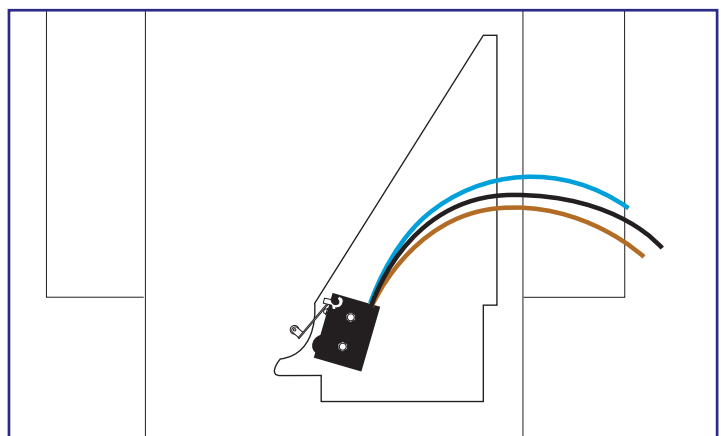
V4 Sealed Microswitch

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



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 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

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

FD Series

Fire Dampers - General Information

Fire Dampers - Testing and Maintenance

It is a requirement for fire protection systems to be regularly inspected, tested and maintained. As integral components of such systems, BSB FD Series fire dampers should be subjected to a planned maintenance programme.

In accordance with BS 9999 Annex W.1, inspection should be undertaken every year, though local regulations may override this, with periodic inspection being carried out more frequently where corrosive or dirty conditions prevail.



BSB recommend a maximum of one year between inspections. We also recommend that inspections begin more frequently and are only reduced to one year if conditions are proven to allow. The maintenance log should be reviewed at each inspection and the frequency adjusted as required dependent upon findings.

Testing and resetting will need to be undertaken through an access panel. The internal damper elements will need to be checked for corrosion, obstructions and accumulated dirt/dust. Cleaning should be undertaken using a soft cloth with a light application of light lubricant. Only a thin film of lubricant should be applied.



Please refer to our Operation and Maintenance details for further information and instructions for drop testing.

A regular test and maintenance programme will extend the working life of the fire safety system.

BSB are pleased to offer a comprehensive fire damper maintenance service. Please contact our Sales Office for details.

FD Series dampers are designed for normal dry filtered air systems and should be included within a programme of planned inspections.

Records of each damper installation and location are recommended and should include the condition of the dampers at each inspection with any action taken recorded and kept in an accessible location, as these products come under the requirements of the Regulatory Reform (Fire safety) Order (RRFSO).

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

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.

Separation between fire dampers and between fire dampers and construction elements

In accordance with EN 1366-2 and the direct application rules, where two fire dampers are installed side by side within a fire separating element. There must be 200mm clear separation between damper casings.

Dampers installed must also be a minimum of 75mm between the damper casing and the construction element.

Please refer to EN 1366-2 section 13.6.

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.

Recycling

BSB recognises the need to preserve resources and reduce emissions and are actively working towards and introducing more efficient ways of manufacturing.

BSB supports and recommends that good waste management practice be adopted on all new and refurbishment projects, regardless of size. This not only reduces emissions, preserves raw materials and saves energy, but also reduces costs long term.

BSB are proud that their dampers are 95% minimum recyclable.

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					
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					
CL Cleats					
Accessories	_____				
VI Visual Indicator					
GL Gate Latch Release Mechanism					
MS Single Pole Microswitch Factory Fitted.					

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.



BSB Engineering Services Limited

Unit 56, Trinity Trade Centre, Mill Way, Sittingbourne, Kent ME10 2PD, UK • Tel: +44 (0)1795 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. (FD-11-2021)