BLADE TYPE FIRE DAMPERS

سـافيد
SAFID

BLADE TYPE FIRE DAMPER

MFD SERIES

MFD for Use in Dynamic Systems

Fire Resistance: 1 1/2 HR and 3 HRS
Dynamic Closure Ratings: 2000 FPM and 4000 FPM Air Velocity
UL File No.: R22165

Product Description

Blade type fire dampers provide an automatic means of localizing areas of fire in ventilation systems that is greatly contribute to the safety of life and property in the early stage of fire. It prevents the spread of fire through ventilation ductworks or wall openings. These type of dampers offer an effective fire barrier maintaining the integrity in a fire situation. It is suitable for installation in sheet metal ductworks, openings in walls or floor slabs made from concrete, bricks and in lightweight partition walls.

SAFID introduces “ERL” Thermoelectric Tripping Device (heat sensor) to replace the existing high torque spring/fusible link fire closure mechanism in all Blade Type Fire Dampers. The “ERL” is thermally responsive bimetal disc/sensor that open and close the electrical contacts at a specific factory calibrated temperature setting. The “ERL” is available in fixed temperature setting at 165°F (74 °C) only.The “ERL” requires factory installation and wiring together with the qualified actuator to meet “UL” requirements.

Dampers which allow remote resetting of the damper from a remote location are dangerous. All damper moving parts must be inspected and cycled at every six months and in accordance to the latest NFPA90A/92A and local codes.

Types

Galvanized Steel Construction as Standard.
1. Sleeve Type, Model: MFD - 40 - 100
2. Circular Type, Model: MFD - 50 - 100
3. Oval Type, Model: MFD - 60 - 100
4. With factory installed Sleeve, Model: MFD - 80 - 100

Optional Construction:
Same as the standard construction but blades, stub shaft (latch) with 4 pieces Ø6mm bolts and nuts, axles and linkage brackets with axle in stainless steel Grade 304.

Optional: Blades from stainless steel Grade 316 or 316L.

1. Sleeve Type, Model: MFD - 40 - 110
2. Circular Type, Model: MFD - 50 - 110
3. Oval Type, Model: MFD - 60 - 110
4. With factory installed Sleeve, Model: MFD - 80 - vv110

Same as the standard construction but frame, blades, installation sleeve and all accessories in stainless steel Grade 304.

Optional: Frame, blades and installation sleeve from stainless steel Grade 316 or 316L.

1. Sleeve Type, Model: MFD-40-120
2. Circular Type, Model: MFD-50-120
3. Oval Type, Model: MFD-60-120
4. With factory installed Sleeve, Model: MFD-80-120

Standard Construction

Finish:
Mill Galvanized

Sleeve:
1.5mm thick (Ga.16) galvanized steel sheet.

Frame:
130 × 24.5 × 1.5mm thick (Ga.16) galvanized steel hat channel.

Blades:
1.5mm thick (Ga.16) galvanized steel “Triple Vee” (3V) groove type (standard).

Blade Stop:
1.5mm thick (Ga.16) galvanized steel sheet bend at 45° angle.

Linkage:
Side linkage concealed in frame (Standard).

Linkage Bar:
Stainless steel type 304, 15mm x 3mm thick.

Linkage Bracket:
GI 50mm x 60mm x 3mm thick, fixed with 1 square axle 9.5 mm and Ø6.3mm Pin.

Crank:
3mm thick galvanized steel sheet 32mm x 107mm with 6.6mm wide slot.

Axle:
Zinc plated steel square bar 9.5 × 9.5 mm.

Stub Shaft (Latch):
Die pressed galvanized steel sheet, 58mm x 68mm x 1.5mm thick (Ga.16).

Bearings:
Sintered bronze oilite type.

Side Seal (Jamb Seal):
Compression type SS grade 304, 0.3mm thick.

Blade Tip Seal:
Blade tip seals are high temperature Durometer Dense Silicone.

Jack Shaft:
GI rod Ø12mm across the blade length with 10mm square end x 25mmL to suit actuator.

Jack Shaft Holder:
Die pressed GI steel 152.9mm x 82.2mm x 1.5mm thick with Ø12.7mm ball bearing.

Minimum Size:
200W x 150H mm with single blade construction up to 250mm height.

Maximum Size:
914W x 914H mm - Single section and 1828W x 1828H - Multiple Section.

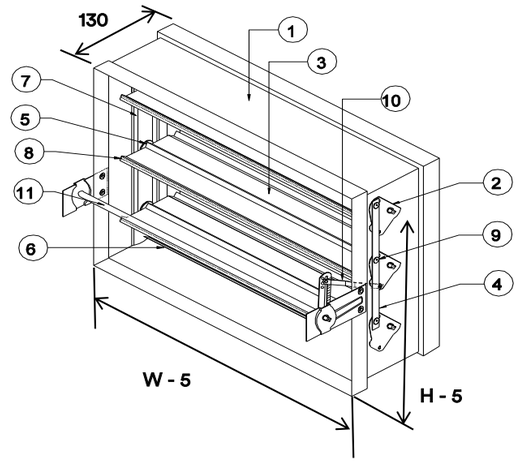
Mounting:
Vertical

UL Test Ratings

Fire Resistance: 1 1/2 Hour and 3 Hours

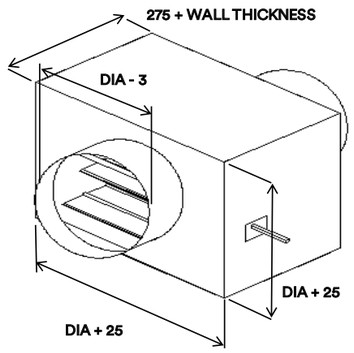
Types

Sleeve Type
Model: MFD - 40

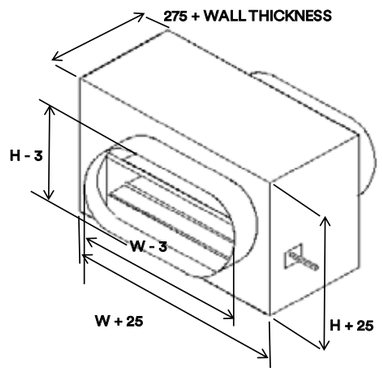


1. Casing (Frame)
2. Linkage bracket
3. Blade
4. Linkage bar
5. Bearings
6. Blade stop
7. Slide seal
8. Blade tip seal
9. Lock washer and GI round washer
10. Kneelock
11. Jackshaft

Circular Type
Model: MFD - 50

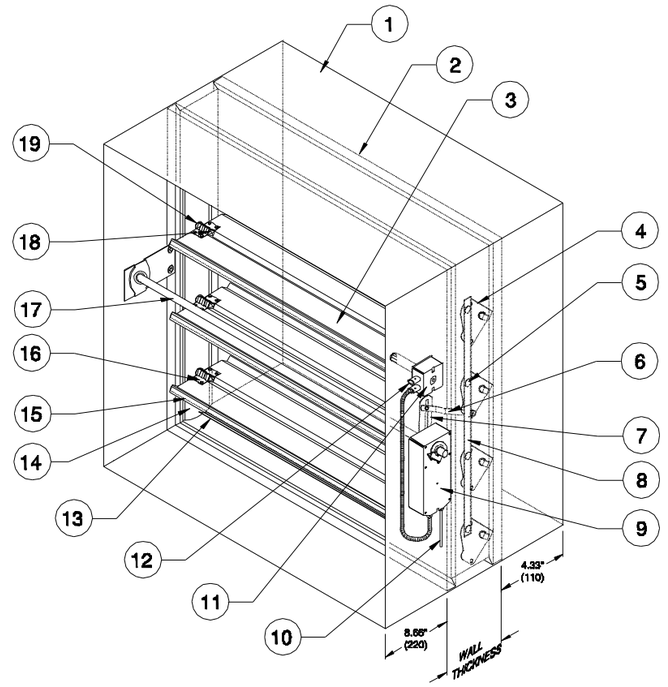


Flat Oval Type
Model: MFD - 60



Types

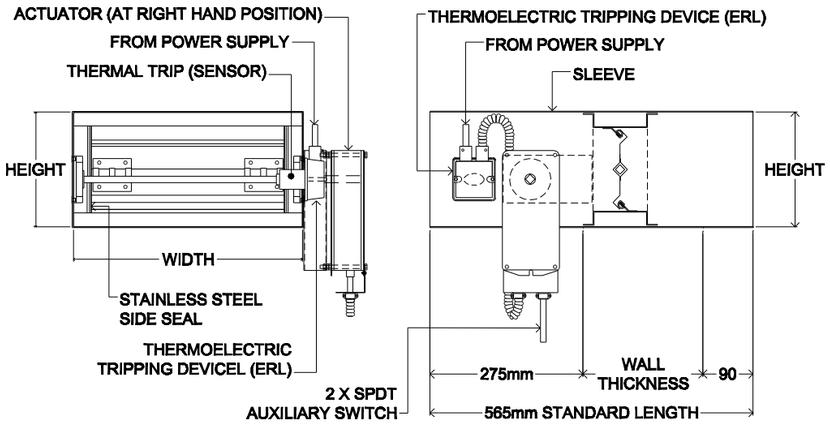
MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80



1. Sleeve
2. Damper Frame
3. Blade
4. Linkage Bracket
5. Lock Washer and Galvanized Round Washer
6. Kneelock
7. Crank
8. Linkage Bar
9. Actuator
10. Auxillary Swicth Cable for Indicating Damper Blades Position
11. Thermoelectric Tripping Device (ERL)
12. Power Supply
13. Blade Stop
14. Stainless Steel Side Seal
15. Blade Tip Seal
16. Stub Shaft (Latch)
17. Jackshaft
18. Axle
19. Bearing

Dimensions - Single Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Height: Up to 220 mm



Front View **Side View**

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Damper Sizes and Actuator Types

A. Single section damper with two position (open/close) spring retrun type actuators:

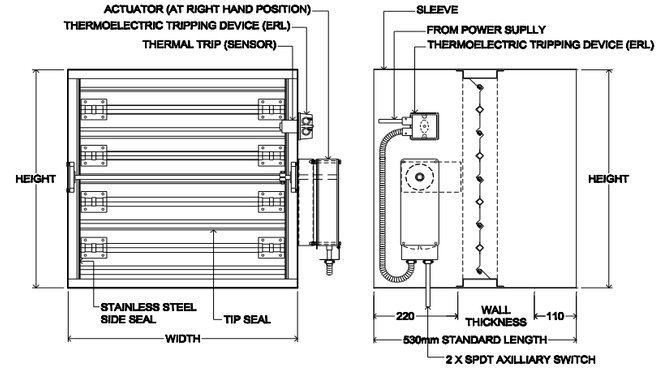
1. BELIMO Model: FSLF-S-US (24 / 230VAC) with built-in auxiliary switch.
2. FSNF-S-US (24 / 230VAC) with built-in auxiliary switch.
Torque: 3.5Nm for W = 610 mm maximum.
3. Model: MS8104F1210 / MS4604F1210 (24 / 230VAC) with built-in auxiliary switch.
4. ML8115B / ML4115D (24 / 230VAC) Rotation CW, without built-in auxiliary switch.
Torque: 3.4Nm for W = 610 mm maximum.
5. Model: MS8109F1210 / MS4609F1210 (24 / 230VAC) with built-in auxiliary switch.
6. MS8209F / MS4709F (24 / 230VAC) Rotation CW, without built-in auxiliary switch.
Torque: 9Nm for W = 914 mm maximum.
7. BELIMO Model: BF-S-ME (24 / 230VAC) with built-in auxiliary swith.
Torque: 15 Nm for W = 914 mm maximum.

Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

BLADE TYPE FIRE DAMPER

Dimensions - Single Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Height: Up to 914 mm



Front View **Side View**

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Damper Sizes and Actuator Types

A. Single section damper with two position (open/close) spring retrun type actuators:

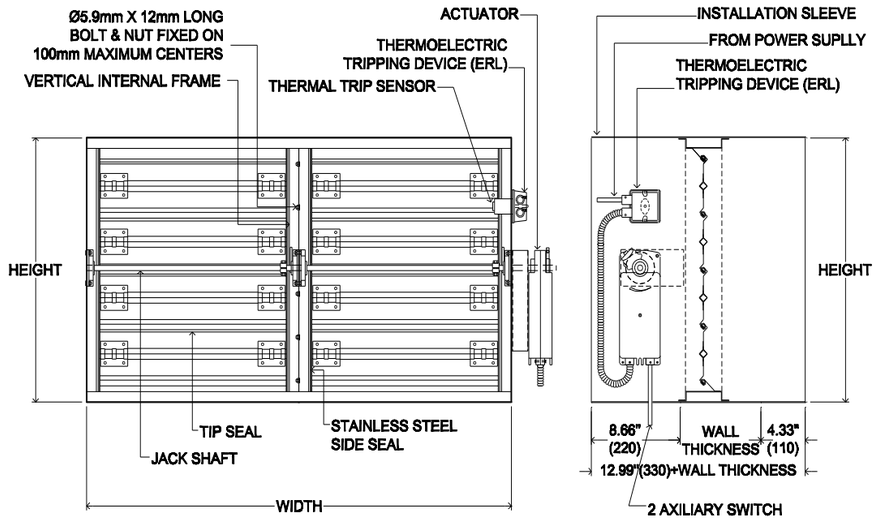
1. BELIMO Model: FSLF-S-US (24 / 230VAC) with built-in auxiliary switch.]
Torque: 3.5 Nm
2. Model: MS8104F1210/MS4604F1210 (24 / 230VAC) with built-in auxiliary switch.
Torque: 3.4 Nm
Damper size: W=610mm maximum, H=406mm maximum
3. BELIMO Model: FSNF-S-US (24 / 230VAC) with built-in auxiliary switch.
Torque: 8 Nm
Damper size: W=610mm maximum, H=610mm maximum
4. Model: MS4609F1210/MS8109F1210 (24 / 230VAC) with built-in auxiliary switch.
5. MS8209F / MS4709F (24 / 230VAC) Rotation CW, without built-in auxiliary switch.
Torque: 9 Nm
Damper size: W=914mm maximum, H=610mm maximum
6. BELIMO Model: BF-S-ME (24 / 230VAC) with built-in auxiliary swith.
Torque: 15 Nm
Damper size: W= 914mm maximum, H= 914mm maximum
7. Model: MS8120F1200 / MS4620F1203 (24 / 230VAC) with built-in auxiliary switch.
8. MS8120F1002 / MS4620F1005 (24 / 230VAC) Rotation CW, without auxiliary switch.
Torque: 20 Nm
Damper size: W=914mm maximum, H=914mm maximum

Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

BLADE TYPE FIRE DAMPERS

Dimensions - Multiple Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Width: Up to 1118 mm
Height: Up to 610 mm



Front View

Side View

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Actuator Types

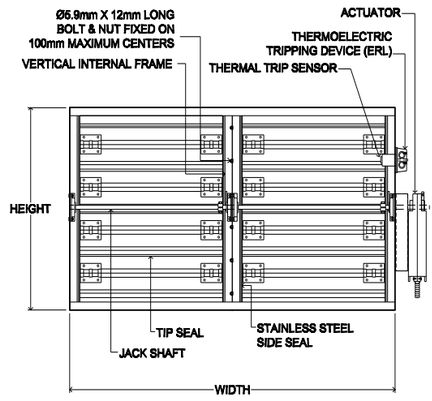
A. Multiple section damper with two position (open/close) spring retrun type actuators:

1. Model: MS8109F1210 / MS4609F1210 (24/230VAC) with built-in auxiliary switch.
MS8209F / MS4709F (24/230VAC) Rotation CW, without built-in auxiliary switch.
Torque: 9 Nm

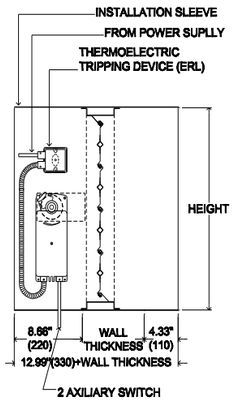
Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

Dimensions - Multiple Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Width: Up to 1828 mm
Height: Up to 914 mm



Front View



Side View

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Damper Sizes and Actuator Types

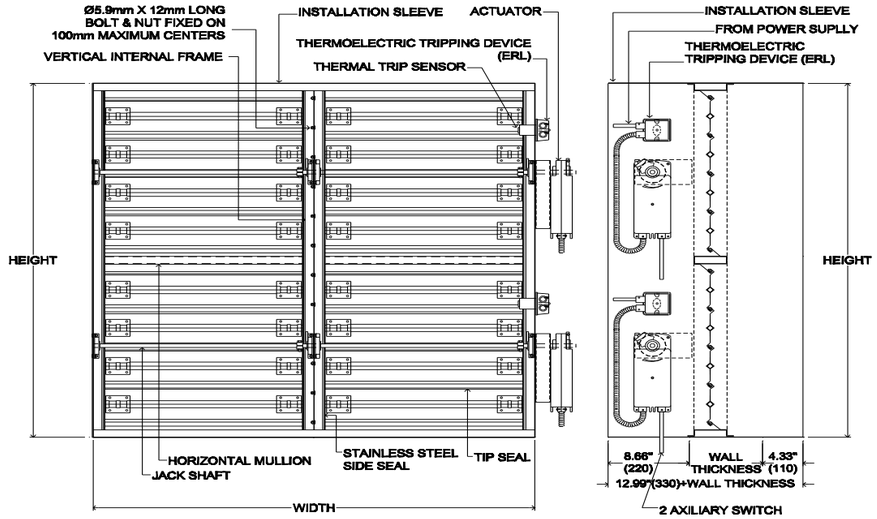
A. Multiple section damper with two position (open/close) spring retrun type actuators:

1. Model: MS8120F1200 / 4620F1203 (24/230VAC) with built-in auxiliary switch.
Torque: 20 Nm

Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

Dimensions - Multiple Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Width: Up to 1118 mm
Height: Up to 1220 mm



Front View **Side View**

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Actuator Types

A. Multiple section damper with two position (open/close) spring retrun type actuators:

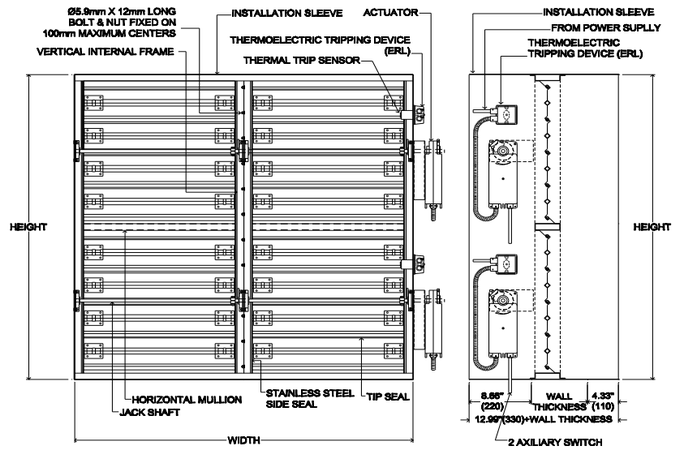
1. Model: MS8109F1210 / MS4609F1210 (24/230VAC) with built-in auxiliary switch.
MS8209F / MS4709F (24/230VAC) Rotation CW, without built-in auxiliary switch.
Torque: 9 Nm

Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

BLADE TYPE FIRE DAMPER

Dimensions - Multiple Section

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80
Width: Up to 1828 mm
Height: Up to 1828 mm



Front View **Side View**

Thermoelectric Tripping Device (ERL)

Model:
BAE165 US or SF74 (165°F Klixon)
Bimetallic Manual Reset Type
165°F (74°C) rated
UL Classified components

Schedule of Damper Sizes and Actuator Types

A. Multiple section damper with two position (open/close) spring retrun type actuators:

1. Model: MS8120F1200 / MS4620F1203 (24/230VAC) with built-in auxiliary switch.
Torque: 20 Nm

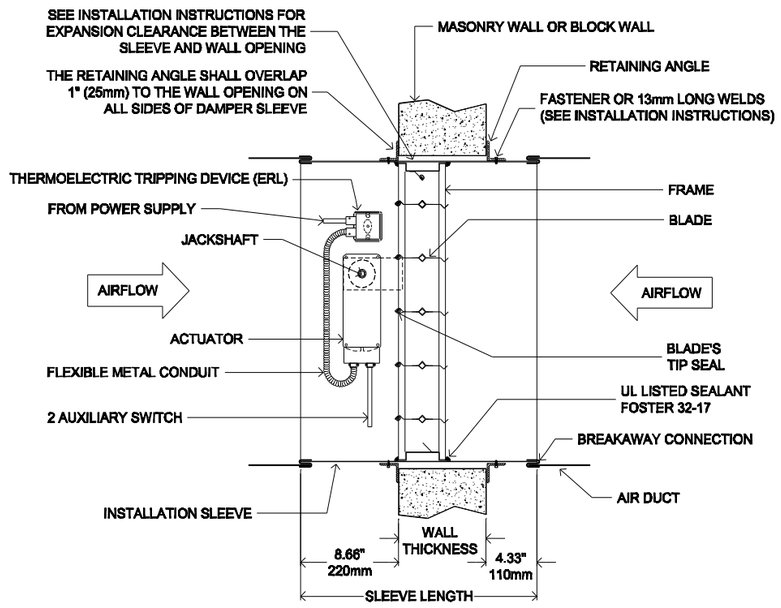
Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.

BLADE TYPE FIRE DAMPERS

Installation Details

MFD With Factory Installed Sleeve, ERL and Actuator
Model: MFD - 80

Typical Installation



Notes:

1. Airflow can be at opposite direction.
2. The actuator and ERL can be located in either side of the wall.
3. Refer to installation manual for further installation detail.

Actuators

BELIMO Actuator
Model: FSLF

BELIMO Actuator
Model: FSNF

BELIMO Actuator
Model: BF

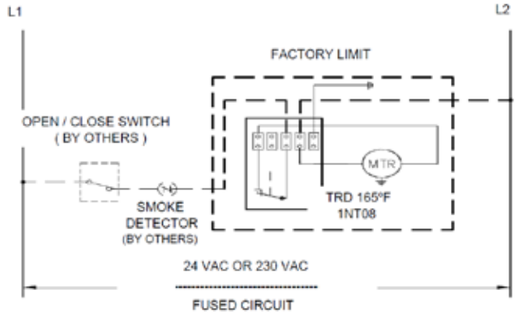
Honeywell Actuator
Model: MS4620F1203

Thermoelectric Tripping Device (ERL)
Model: BAE165 US or SF74 (165 °F) Klixon

Sequence of Operation

The ERL (Thermoelectric Tripping Device) resettable link has a thermal sensor switch that interrups the power supply to the fire damper actuator as soon as the duct temperature exceeds 165°F caused by a fire. When the power supply is interrupted, the energy stored in the spring of the fire damper actuator moves the damper blades back to its safe position. The damper blades can be open again by pressing the reset button on ERL after the temperature cooled down below 165°F.

Typical Wiring Diagram

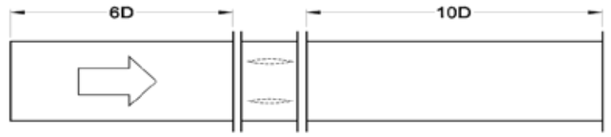


Air Performance

Pressure Drop

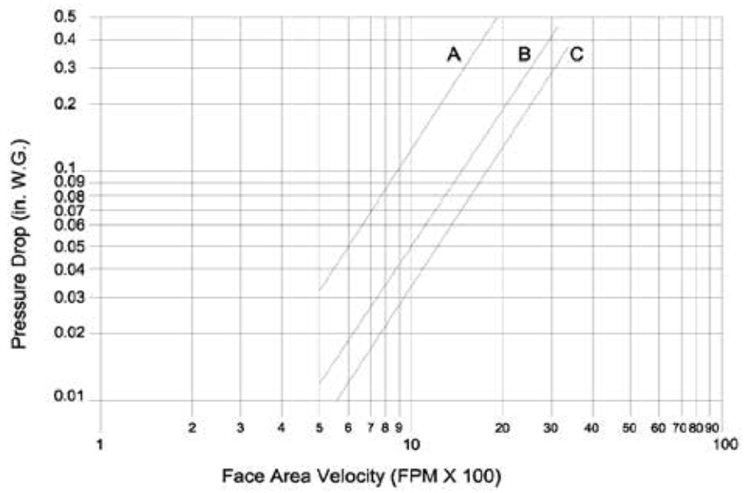
The test method for pressure drop of Combination Fire/Smoke Damper was conducted as per ANSI / AMCA Standard 500-D, Figure 5.3 which simulate the actual site condition when installed in ventilation, supply and return air conditioning ductworks.

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

A. Damper Size 12 in. x 12 in. - Fully Open Blades
B. Damper Size 24 in. x 24 in. - Fully Open Blades
A. Damper Size 36 in. x 36 in. - Fully Open Blades



Order Details

Order Code MFD-80 - 100 - 3V - PB - R - A1S - V1 - ER / 500 x 500

Variants
MFD-40 = Sleeve Type
MFD-50 = Circular Spigot
MFD-60 = Oval Spigot
MFD-80 = Factory Installed Sleeve

Types
100 = Galvanized Steel Construction
110 = Blades of Stainless Steel Grade 304
Optional: Grade 316 or 316L
120 = Stainless Steel Construction S/S Grade 304
Optional: Grade 316 or 316L

Types of Blades
3V = V Groove Type

Linkage
PB = Slide Linkage Parallel Blades Operation

External Controls
R = Right Hand (Standard Supply)
L = Left Hand

Actuators
BELIMO, BF-S-ME
BELIMO, FSNF-S-US
BELIMO, FSLF-S-US
Honeywell, MS4620F1203

Duct Size
Width x Height or Diameter. All damper's spigot sizes (slip-in type) will be manufactured less than duct size to fit inside the ductwork connections.

Type of Sensor
ERL = Thermoelectric Tripping Device Model: BAE165 US, SF74 (165 °F Klixon)

Power Supply
V1 = 24 VAC
V2 = 230 VAC

ORDER REFERENCE DETAILS

Specifications

Blade type fire dampers with the following specifications shall be used in Heating, Ventilating and Air Conditioning (HVAC) duct systems passing through openings in masonry walls, concrete floor slabs, and in gypsum walls or partitions which required to have a fire resistance rating to restrict the spread of fire. It shall be also used in Smoke Proof Stair Enclosure if the wall penetrations required to be fire rated in accordance with NFPA 90A Standard for Installation of Air Conditioning and Ventilating Systems, and with NFPA 101 Life Safety Code.

Blade type fire dampers shall be tested and classified by Underwriters Laboratories Inc. (UL) in accordance with the standards; UL 555 Standard for Safety, Fire Dampers.

Blade type fire dampers with Fire Resistance Rating of 1½ hour shall be used in fire barrier with Fire Resistance Rating of less than 3 hours, and dampers with 3 hours Fire Resistance Rating shall be used in fire barrier with Fire Resistance Rating of 3 hours or more.

The fire dampers shall be fitted with UL Listed spring return actuator and Thermoelectric Tripping Device (ERL) with temperature rating of 165°F (74°C). ERL shall cut-off power supply to the actuator in case of fire that will activate the built-in spring return to close the damper blades.

Damper blades shall be with external linkage and parallel action, Ga.16 galvanized steel with 3V groove type for longitudinal reinforcement. Blade's tip seal shall be Type 60 Durometer Dense Silicone, meets gasket requirements in accordance with UL 555S. Blade's axel shall be 9.5 X 9.5 mm square forced-fit to one stub shaft, secured to blade with 4 pieces of bolt & nut, and with sintered bronze oilite axle bearing. Jamb seal/side seal shall be stainless steel to fill gap between blade's end and vertical frame. Jackshaft shall be Ø12 mm galvanized steel with a crank and kneelock secured to the linkage bracket. Damper frame shall be Ga.16 galvanized steel formed into hat channel shape.

Order Example

SAFID blade type fire damper, galvanized steel construction, 3V groove blade for parallel blades operation, 500mm width X 500mm height duct size and right hand side external controls. Damper shall be with factory installed sleeve and 230 VAC BELIMO actuator with built-in auxiliary switch and with thermoelectric tripping device (ERL) with temperature rating of 165°F (74°C).

Make: SAFID
Type: MFD-80-100-3V-PB-R-A1S-V2-ERL
Size: 500 W x 500 H
Qty: 1

BLADE TYPE FIRE DAMPERS

FD 30 - 100

FD SERIES
FLANGE TYPE

Constructed and in accordance to the ULL555 standard.

Description

Blade type fire dampers type FD 30 provide means of localizing areas of fire in ventilation systems. It prevents the distribution of fire through ventilation ductworks. FD offers an effective barrier maintaining integrity in a fire situation. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. FD is available in rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame:
180mm x 30mm x 1.5mm (16 ga.) galvanized steel, formed channel for flange connections.

Blades:
250mm max. width,1.5mm (16 ga.) galvanized steel.

Finish:
Mill galvanized.

Linkage:
Parallel blade have standard face linkage operation. Linkage consist of 6mm dia. S/S pivot pins.

Case Bearings:
Made sintered bronze (oilite), operational temp resistanace up to 200 ˚C.

Fusible Link:
Standard release 74 ˚C (165 ˚F) UL listed
Other temperatures available on request.

Spring:
Stainless steel closure spring mounted internally with catch device to prevent blades from opening until manually released.

Minimum Size:
100 × 200mm, dampers up to 250mm high are single blade construction.

Maximum Size:
1000 × 1000mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

FD 30 - 110

General construction as type FD 30 - 100 damper but blades, shafts and blade to spindle fixing in stainless steel (Grade 304).

FD 30 - 120

General construction as type FD 30 - 100 damper but with case, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

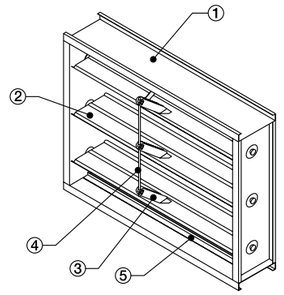
FD SERIES [FD 30 - 100, FD 30 - 110, FD 30 - 120]

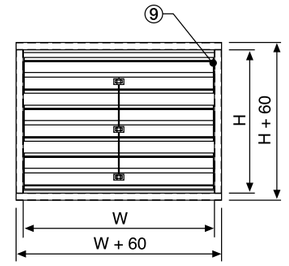
Dimensions

1 - Casing
2 - Blade
3 - Face Linkage
4 - Linkage Bar
5 - Landing Angles
6 - Fusible Link 74 ˚C (UL listed)
7 - Catch Device
8 - Closing Spring
9 - Side Seal

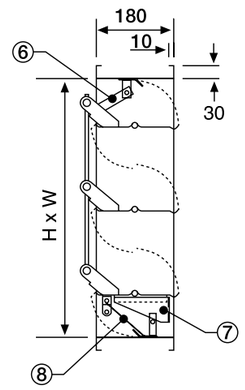
Flange Type, Parallel Blades

FD 30 - 100, 110, 120





Flange Type



Parallel Blade (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
100	200	1
150	250	1
200	300	2
250	350	2
300	400	2
350	450	2
400	500	3
450	600	3
500	700	4
550	800	4
600	900	5
650	1000	6
700		
750		
800		
850		
900		
950		
1000		

FD 40 - 100

FD SERIES
SLEEVE TYPE

Constructed and in accordance to the ULL555 standard.

Description

Blade type fire dampers FD 40 provide an automatic means of localizing areas of fire in ventilation systems. It prevent the distribution of fire through ventilation ductworks. FD offer an effective barrier maintaining integrity in a fire situation up to 3 hrs. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. FD is available in rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame:
100mm x 40mm x 1.5mm (16 ga.) galvanized steel, structurally designed hat section.

Blades:
300mm max. width,1.5mm (16 ga.) galvanized steel.

Finish:
Mill galvanized.

Linkage:
Parallel blade have standard face linkage operation. Linkage consist of 6mm dia. S/S pivot pins.

Case Bearings:
Made sintered bronze (oilite), operational temp. resistanace up to 200 ˚C.

Fusible Link:
Standard release 74 ˚C. (165 ˚F) UL listed.
Other temperatures available on request.

Spring:
Stainless steel closure spring mounted internally with catch device to prevent blades from opening until manually released.

Minimum Size:
150 x 200mm, dampers up to 300mm high are single blade construction.

Maximum Size:
1000 x 1000mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

FD 40 - 110
General construction as type FD 40 - 100 damper but blades, shafts and blade to spindle fixing in stainless steel (Grade 304).

FD 40 -1 20
General construction as type FD 40 - 100 damper but with case, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

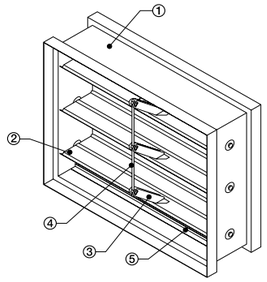
FD SERIES [FD 40 - 100, FD 40 - 110, FD 40 - 120]

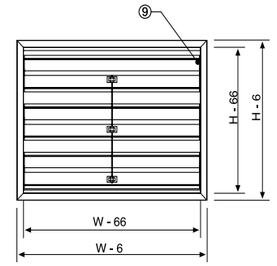
Dimensions

1 - Casing
2 - Blade
3 - Face Linkage
4 - Linkage Bar
5 - Landing Angles
6 - Fusible Link 74 ˚C (UL listed)
7 - Catch Device
8 - Closing Spring
9 - Side Seal

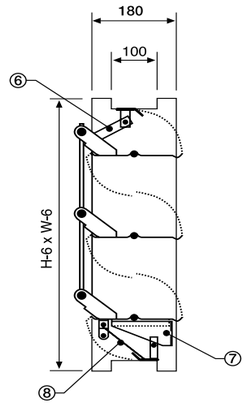
Sleeve Type, Parallel Blades

FD 40 - 100, 110, 120





Sleeve Type



Parallel Blade (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
100	200	1
150	250	1
200	300	1
250	350	2
300	400	2
350	450	2
400	500	3
450	600	3
500	700	4
550	800	4
600	900	5
650	1000	6
700		
750		
800		
850		
900		
950		
1000		

FD 50 - 100

FD SERIES
CIRCULAR SPIGOT TYPE

Constructed and tested in accordance with ULL555 standard.

Description

Blade type fire dampers FD 50 provide an automatic means of localizing areas of fire in ventilation systems. It prevent the distribution of fire through ventilation ductworks. FD offer an effective barrier maintaining integrity in a fire situation up to 3 hrs. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. FD is available in rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame:
180mm x 1.5mm (16 ga.) galvanized steel, L = 405mm.

Blades:
250mm max. width,1.5mm (16 ga.) galvanized steel.

Finish:
Mill galvanized.

Linkage:
Parallel blade have standard face linkage operation. Linkage consist of 6mm dia. S/S pivot pins.

Case Bearings:
Made sintered bronze (oilite), operational temp. resistanace up to 200 °C.

Fusible Link:
Standard release 74 °C. (165 °F) UL listed.
Other temperatures available on request.

Spring:
Stainless steel closure spring mounted internally with catch device to prevent blades from opening until manually released.

Minimum Size:
200mm diameter, dampers up to 250mm high are single blade
construction.

Maximum Size:
1000mm diameter, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

FD 50 - 110

General construction as type FD 50 - 100 damper but blades, shafts and blade to spindle fixing in stainless steel (Grade 304).

FD 50 - 120

General construction as type FD 50 - 100 damper but with case, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

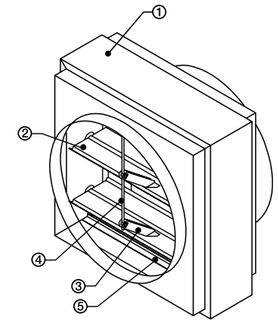
FD SERIES [FD 50 - 100, FD 50 - 110, FD 50 - 120]

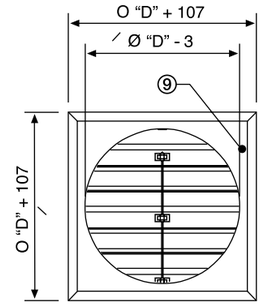
Dimensions

1 - Casing
2 - Blade
3 - Face Linkage
4 - Linkage Bar
5 - Landing Angles
6 - Fusible Link 74 °C (UL listed)
7 - Catch Device
8 - Closing Spring
9 - Side Seal

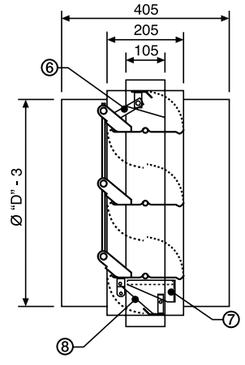
Circular Spigot Type, Parallel Blades

FD 50 - 100, 110, 120





Circular Spigot Type



Parallel Blade (PB)

Standard Sizes

Diameter (mm)	No. of Blades
200	1
250	1
300	2
350	2
400	2
450	2
500	3
600	3
700	4
800	4
900	5
1000	6

FD 60 - 100

FD SERIES
OVAL SPIGOT TYPE

Constructed and in accordance to the ULL555 standard.

Description

Blade type fire dampers FD 60 provide an automatic means of localizing areas of fire in ventilation systems. It prevent the distribution of fire through ventilation ductworks. FD offer an effective barrier maintaining integrity in a fire situation up to 3 hrs. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. FD is available in rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame (Spigot Type):
180mmx1.5mm (16 ga) galvanized steel, L=405mm.

Blades:
250mm max. width,1.5mm (16 ga.) galvanized steel.

Finish:
Mill galvanized.

Linkage:
Parallel blade have standard face linkage operation. Linkage consist of 6mm dia. S/S pivot pins.

Case Bearings:
Made sintered bronze (oilite), operational temp. resistanace up to 200 °C.

Fusible Link:
Standard release 74 °C. (165 °F) UL listed
Other temperatures available on request.

Spring:
Stainless steel closure spring mounted internally with catch device to prevent blades from opening until manually released.

Minimum Size:
300 × 200mm, dampers up to 250mm high are single blade construction.

Maximum Size:
1000 × 900mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

FD 60 - 110

General construction as type FD 60 - 100 damper but blades, shafts and blade to spindle fixing in stainless steel (Grade 304).

FD 60 - 120

General construction as type FD 60 - 100 damper but with case, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

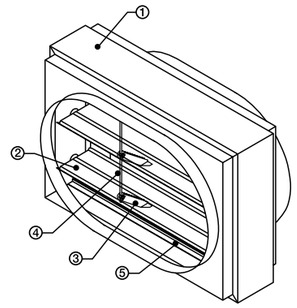
FD SERIES [FD 60 - 100, FD 60 - 110, FD 60 - 120]

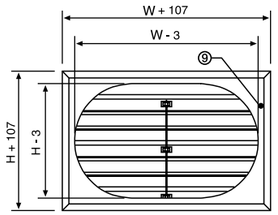
Dimensions

1 - Casing
2 - Blade
3 - Face Linkage
4 - Linkage Bar
5 - Landing Angles
6 - Fusible Link 74 °C (UL listed)
7 - Catch Device
8 - Closing Spring
9 - Side Seal

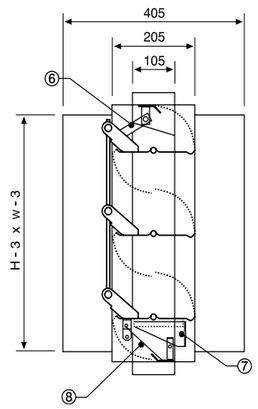
Oval Spigot Type, Parallel Blades

FD 60 - 100, 110, 120





Oval Spigot Type



Parallel Blade (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
300	200	1
350	250	1
400	300	2
450	350	2
500	400	2
550	450	2
600	500	3
650	600	3
700	700	4
750	800	4
800	900	5
850		
900		
950		
1000		

RECTANGULAR SPIGOT TYPE BLADE TYPE FIRE DAMPER

FD 70 - 100

FD SERIES
RECTANGULAR SPIGOT TYPE

Constructed and in accordance to the ULL555 standard.

Description

Blade Type Fire Dampers FD 70 provide an automatic means of localizing areas of fire in ventilation systems. It prevent the distribution of fire through ventilation ductworks. FD offer an effective barrier maintaining integrity in a fire situation up to 3 hrs. It is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. FD is available in rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame (Spigot Type):
180mmx1.5mm (16 ga) galvanized steel, L=405mm.

Blades:
300mm max. width,1.5mm (16 ga.) galvanized steel.

Finish:
Mill galvanized.

Linkage:
Parallel blade have standard face linkage operation. Linkage consist of 6mm dia. S/S pivot pins.

Case Bearings:
Made sintered bronze (oilite), operational temp. resistanace up to 200 °C.

Fusible Link:
Standard release 74 °C. (165 °F) UL listed
Other temperatures available on request.

Spring:
Stainless steel closure spring mounted internally with catch device to prevent blades from opening until manually released.

Minimum Size:
150 × 200mm, dampers up to 300mm high are single blade construction.

Maximum Size:
1000 × 1000mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

FD 70 - 110

General construction as type FD 70 - 100 damper but blades, shafts and blade to spindle fixing in stainless steel (Grade 304).

FD 70 - 120

General construction as type FD 70 - 100 damper but with case, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

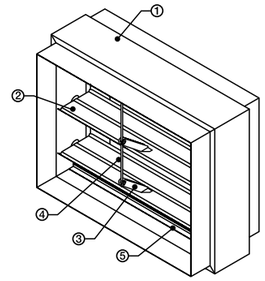
FD SERIES [FD 70 - 100, FD 70 - 110, FD 70 - 120]

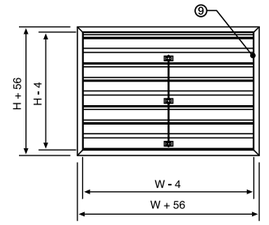
Dimensions

1 - Casing
2 - Blade
3 - Face Linkage
4 - Linkage Bar
5 - Landing Angles
6 - Fusible Link 74 °C (UL listed)
7 - Catch Device
8 - Closing Spring
9 - Side Seal

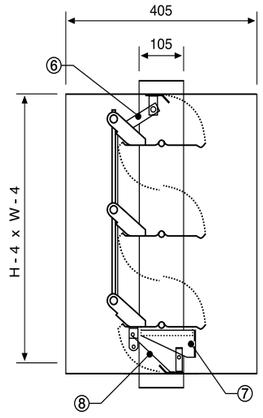
Rectangular Spigot Type, Parallel Blades

FD 70 - 100, 110, 120





Rectangular Spigot Type



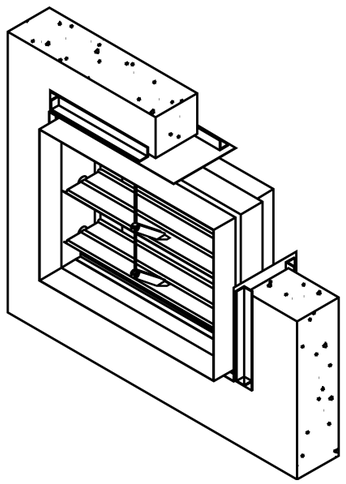
Parallel Blade (PB)

Standard Sizes

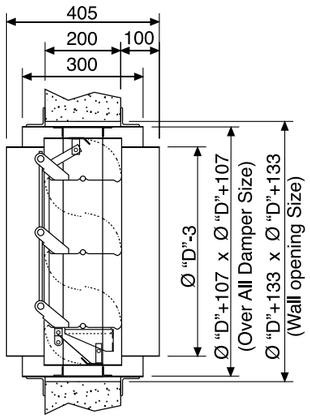
Width (mm)	Height (mm)	No. of Blades
100	200	1
150	250	1
200	300	1
250	350	2
300	400	2
350	450	2
400	500	3
450	600	3
500	700	4
550	800	4
600	900	5
650	1000	6
700		
750		
800		
850		
900		
950		
1000		

Installation Details with Sleeve and Peripheral Angle

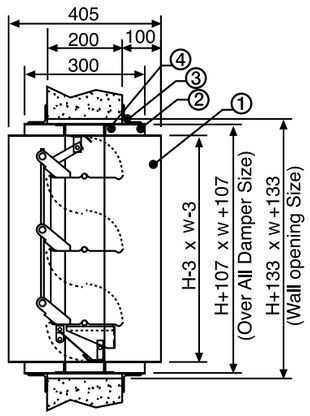
FD



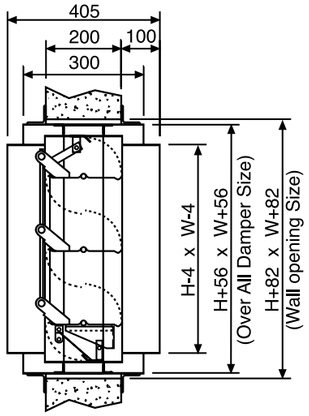
FD 50, Circular Spigot Type



FD 60, Oval Spigot Type

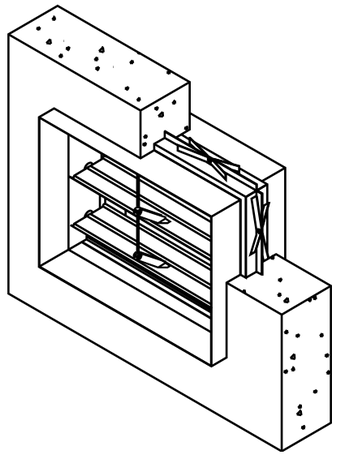


FD 70, Rectangular Spigot Type

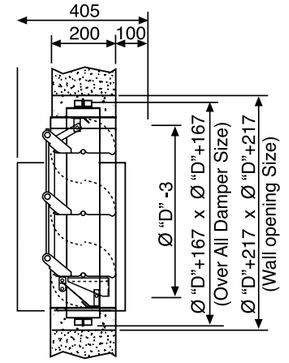


Installation Details with HEVAC Frame

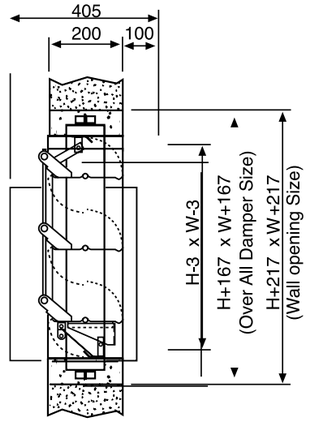
FD



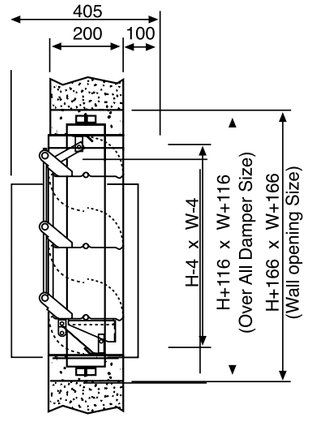
FD 50, Circular Spigot Type



FD 60, Oval Spigot Type



FD 70, Rectangular Spigot Type



Product Range

Construction Variants - FD - 100, 110, 120 - Casing

	Description
FD 30	Standard supply construction flange type frame 180mm x 30mm from 1.5mm (16 gauge) galvanized steel sheet.
FD 40	Sleeve case inverted channel frame 180mm width from 1.5mm (16 gauge) galvanized steel sheet.
FD 50	Spigot case detail from 1.5mm galvanized steel sheet. Total length 405mm including circular spigot.
FD 60	Spigot case detail from 1.5mm galvanized steel sheet. Total length 405mm including oval spigot.
FD 70	Spigot case detail from 1.5mm galvanized steel sheet. Total length 405mm including rectangular spigot.

Linkage

Construction Variants	Description
PB	Standard supply construction internal face linkage, parallel blade operation only.

Bearings

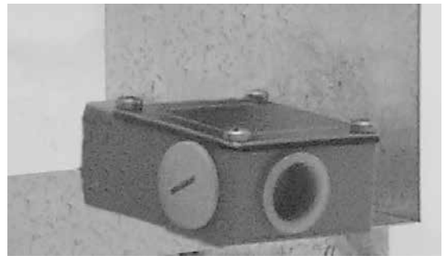
Construction Variants	Description
B1	Construction sintered bronze oilite.
B2	Stainless steel

Seals

Construction Variants	Description
S	No seals Not applicable
S1	Side seals. Fitted to close gap between case and blades.

Switches

Accessories & Types	
S01	Microswitch



Order Details

Order Code FD 30 - 100 - PB - S1 - B1 / 500 x 500

Variants
*FD 30 = Flange (Standard Supply)
FD 40 = Sleeve
FD 50 = Circular Spigot
FD 60 = Oval Spigot
FD 70 = Rectangular Spigot

Types
*100 (Standard Supply)
110
120

Linkage
*PB = Parallel Blades

Variants - Seals
S = No Seal, not applicable for FD Type
*S = Side Seal Only (Standard Supply)

Duct Size
- Square or rectangular dimensions ‘W’ x ‘H’ mm.
- Circular ‘D’ mm diameter.

- Flat Oval ‘W’ x ‘H’ mm.

- All damper spigots are manufactured down on duct size to fit inside ductwork connections.

Variants - Bearings
*B1 = Sintered Bronze (oilite0
B2 = Stainless Steel

***Stands for Standard Supply**

Specifications

Rectangular, square, circular and flat oval blade type fire damper designed for fire isolation of sections of ducting in ventilation systems. Basically consisting of a flanged casing, shut off blades with overlapping interlocking joints with side seals to close gap between case and blades, with internal fusible link control and stainless steel closing spring. Blades are connected by internal linkage for parallel blade operation.

Order Example

Standard
Make: SAFID
Type: FD 30 - 100 - S1 - B1 - 500 × 500
Qty: 1