



SMOKE DAMPERS

**SD SERIES****SD for Use in Dynamic Systems**

Leakage Resistance: Class I - 350 °F and Class II - 250 °F
 Dynamic Closure Ratings: 2000 FPM and 4000 FPM Air Velocity
 Closure Damper Pressure Rating: 4 inch W.G.
 UL File No.: R22165

**Product Description**

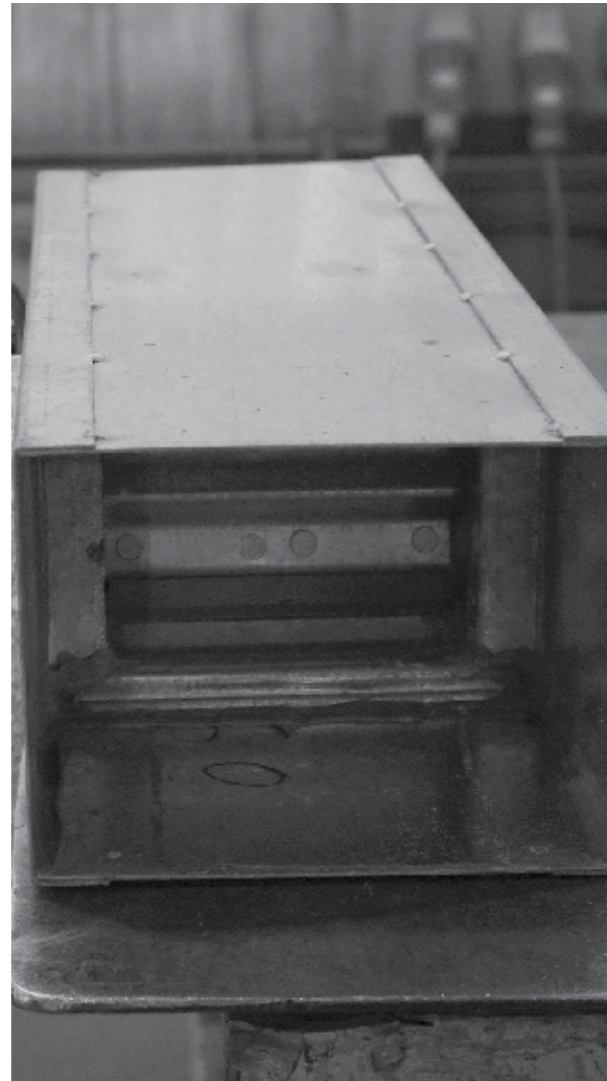
Smoke dampers provide an automatic means of isolating the smoke zones where the fire is located to prevent the spread of smoke in adjacent areas or in exit passageways which is greatly contribute to the safety of life and property in the early stage of fire. It is suitable for installation in sheet metal ductworks, openings in walls or floor slabs made from concrete, bricks and in lightweight partition walls.

These type of dampers offer an effective smoke barrier maintaining the integrity in a fire situation which has a very low leakage characteristic, tested / evaluated by Underwriters Laboratories Inc. (UL) as per UL 555S Standard for Safety Smoke Dampers, which complies with the requirements of NFPA 90A for use in engineered Smoke Control Systems.

SAFID smoke dampers are UL Classified and has a Leakage Ratings of Class I at 350°F and Class II at 250°F elevated temperature.

Smoke dampers will be controlled by an automatic alarm initiating device which is interlocked with damper actuator. The Smoke dampers do not need to be equipped with a fusible link or tripping device.

In today's life safety products markets, many building code require smoke dampers to be inspected for proper operation. 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: SD - 40 - 100
2. Circular Type, Model: SD - 50 - 100
3. Oval Type, Model: SD - 60 - 100
4. With factory installed Sleeve, Model: SD - 80 - 100

Optional Construction:

Same as the standard construction but blades, stub shaft (latch) with 4 pieces Ø6mm bolts & 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: SD - 40 - 110
2. Circular Type, Model: SD - 50 - 110
3. Oval Type, Model: SD - 60 - 110
4. With factory installed Sleeve, Model: SD - 80 - 110

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

Standard Construction

Finish:
Mill Galvanized

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

Frame:
130 x 24.5 x 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 x 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 and Horizontal

UL Test Ratings

Air Leakage Test: Class I and Class II
Elevated Temp. Test: 350°F and 250°F

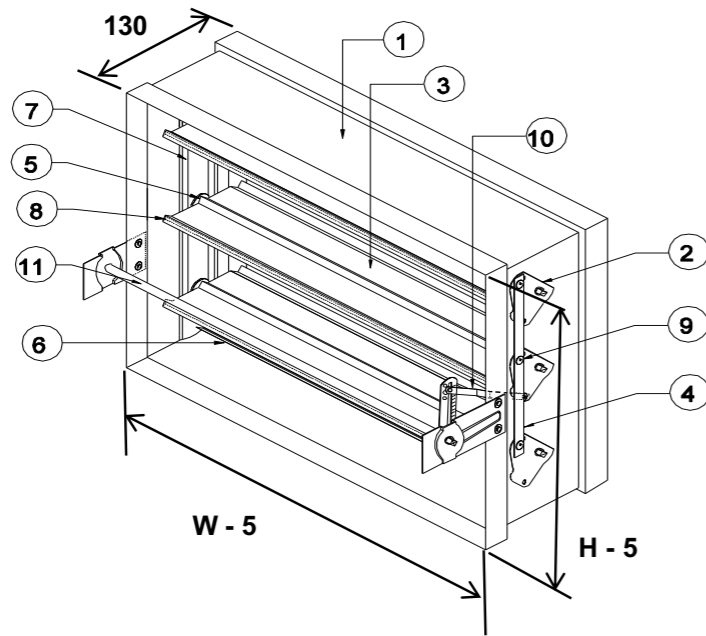
Dynamic Closure Test: Rated at 2000 FPM and 4000 FPM Air Velocity

Rated Pressure: Tested to 4.5 inch W.G. and rated at 4 inch W.G.



Types

Sleeve Type
Model: SD - 40

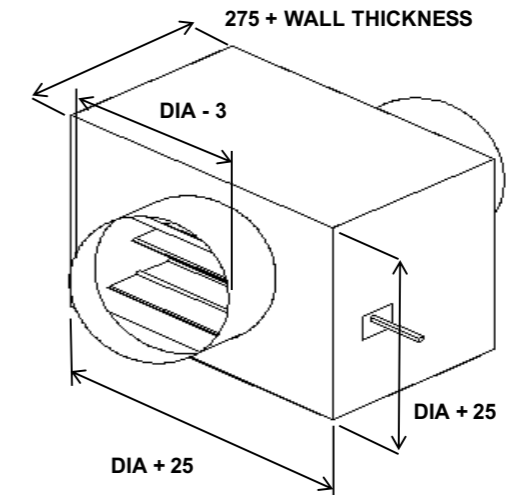


- 1. Casing (Frame)
- 2. Linkage Bracket
- 3. Blade
- 4. Linkage Bar
- 5. Bearings
- 6. Blade Stop
- 7. Side Seal
- 8. Blade Tip Seal
- 9. Lock Washer and GI Round Washer
- 10. Kneelock
- 11. Jackshaft

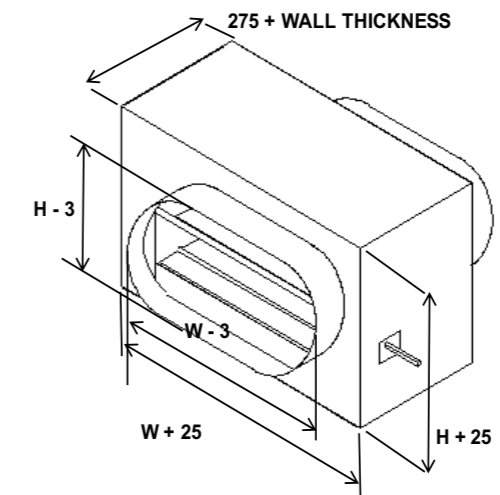


Types

Circular Type
Model: SD - 50



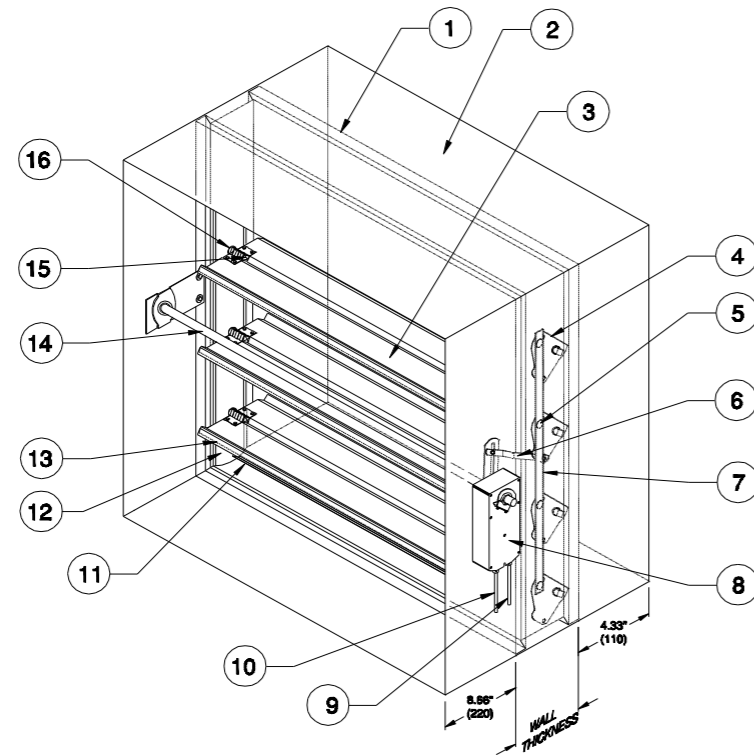
Flat Oval Type
Model: SD - 60



Types

Smoke Damper with Factory Installed Sleeve and Actuator

Model: SD - 80



- | | |
|--|---|
| 1. Damper Frame | 9. Auxiliary Switch Cable for Indicating Damper Blades Position |
| 2. Sleeve | 10. Power Supply |
| 3. Blade | 11. Blade Stop |
| 4. Linkage Bracket | 12. Stainless Steel Side Seal |
| 5. Lock Washer and Galvanized Round Washer | 13. Blade Tip Seal |
| 6. Kneelock | 14. Jackshaft |
| 7. Linkage Bar | 15. Axle |
| 8. Actuator | 16. Bearing |

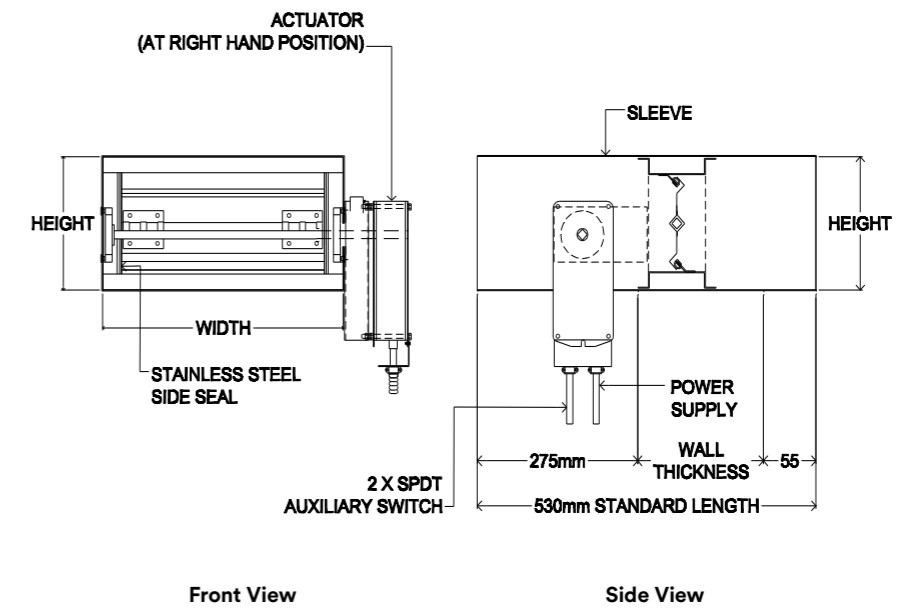


Dimensions - Single Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80

Height: Up to 220 mm



Schedule of Damper Sizes and Actuator Types

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

- BELIMO Model: FSLF-S-US (24 / 230VAC) with built-in auxiliary switch.
Torque: 3.5Nm for W = 610 mm maximum.
- Model: MS8104F1210 / MS4604F1210 (24 / 230VAC) with built-in auxiliary switch.
Torque: 3.5Nm for W = 610 mm maximum.
- BELIMO Model: BF-S-ME (24 / 230VAC) with built-in auxiliary switch.
Torque: 15 Nm for W = 914 mm maximum.

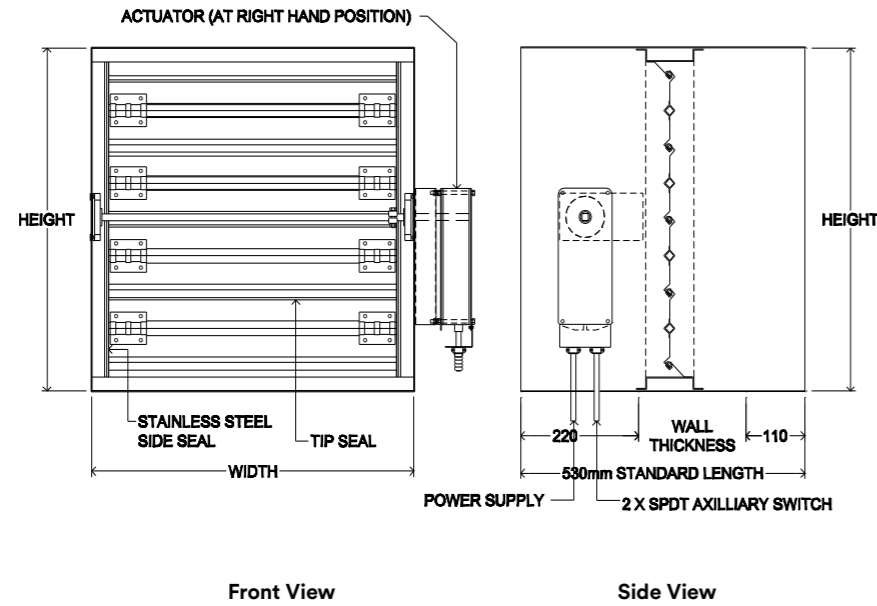
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.



Dimensions - Single Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80
Height: Up to 914 mm



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
Damper size: W=610mm maximum, H=406mm maximum
2. Model: MS8104F1210/MS4604F1210 (24 / 230VAC) with built-in auxiliary switch.
Torque: 3.5 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. BELIMO Model: BF-S-ME (24 / 230VAC) with built-in auxiliary swith.
Torque: 15 Nm
Damper size: W= 914mm maximum, H= 914mm maximum

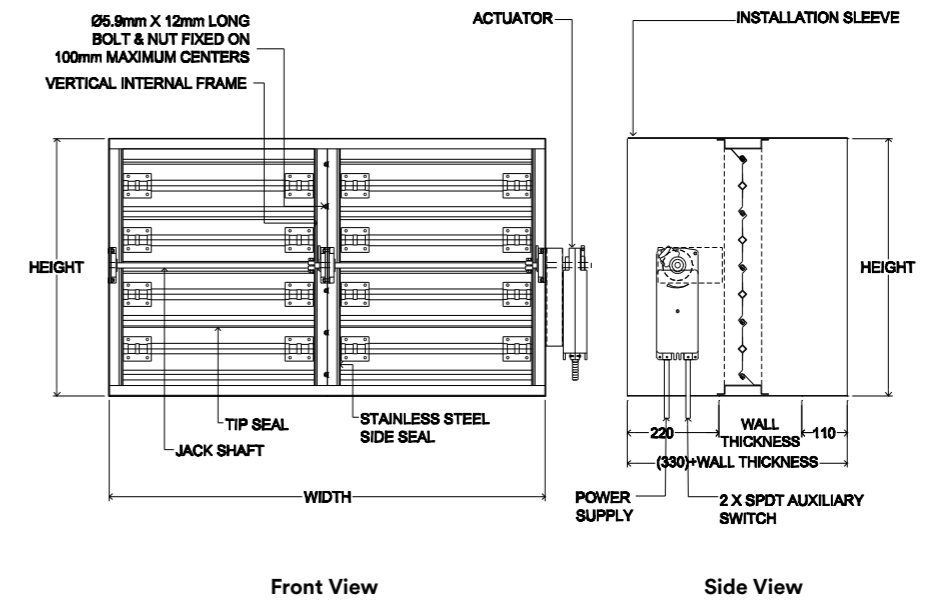
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.



Dimensions - Multiple Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80
Width: Up to 1200 mm
Height: Up to 914 mm



Schedule of Damper Sizes and Actuator Types

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

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

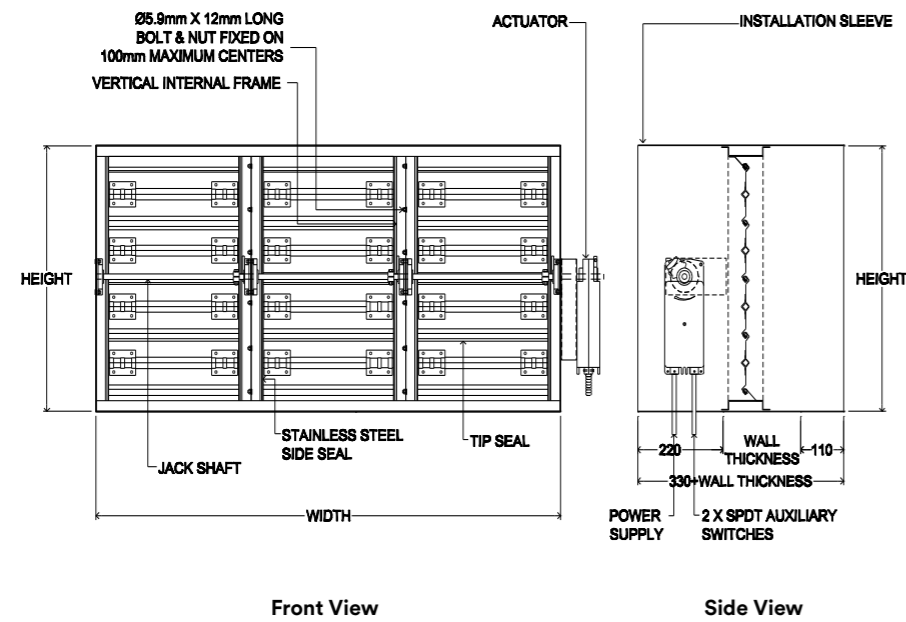
Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.



Dimensions - Multiple Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80
 Width: Up to 1828 mm
 Height: Up to 914 mm



Schedule of Damper Sizes and Actuator Types

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

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

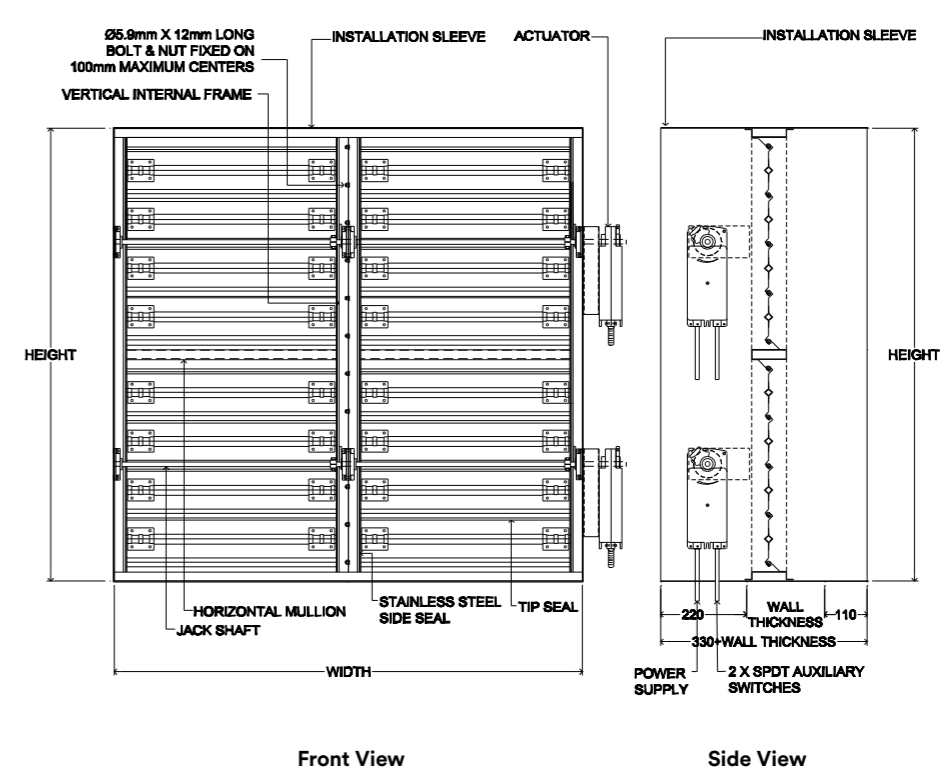
Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
 Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.



Dimensions - Multiple Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80
 Width: Up to 1200 mm
 Height: Up to 1828 mm



Schedule of Damper Sizes and Actuator Types

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

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

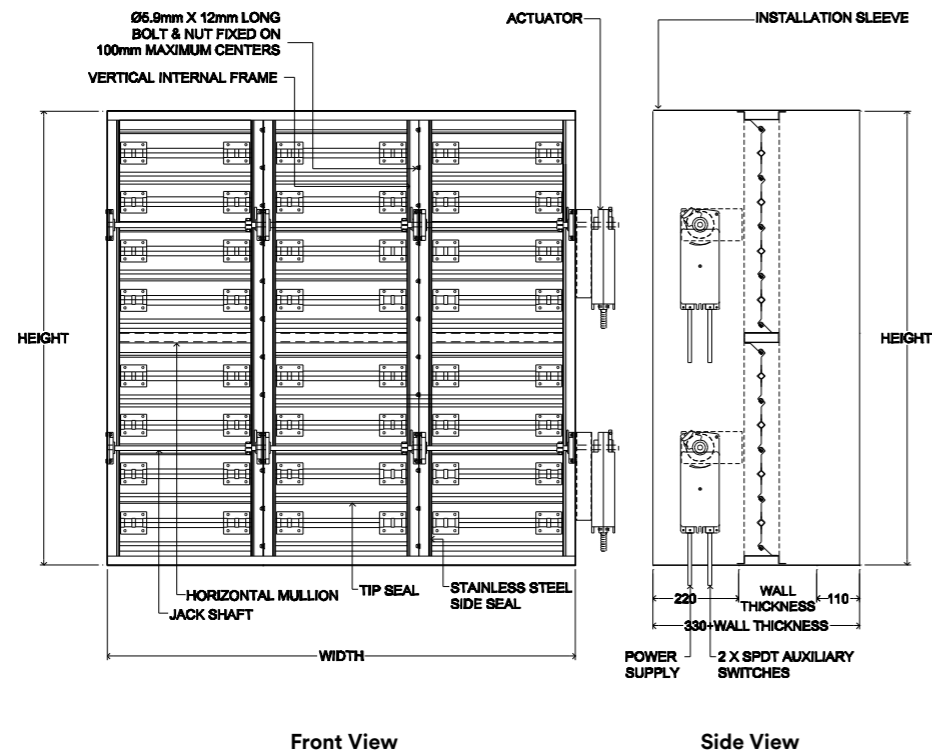
Note: Location of the actuator can be INSIDE or OUTSIDE the airstream.
 Refer to technical data sheet of actuator or contact SAFID for the actuator specifications.



Dimensions - Multiple Section

SD With Factory Installed Sleeve and Actuator

Model: SD - 80
 Width: Up to 1828 mm
 Height: Up to 1828 mm



Schedule of Damper Sizes and Actuator Types

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

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

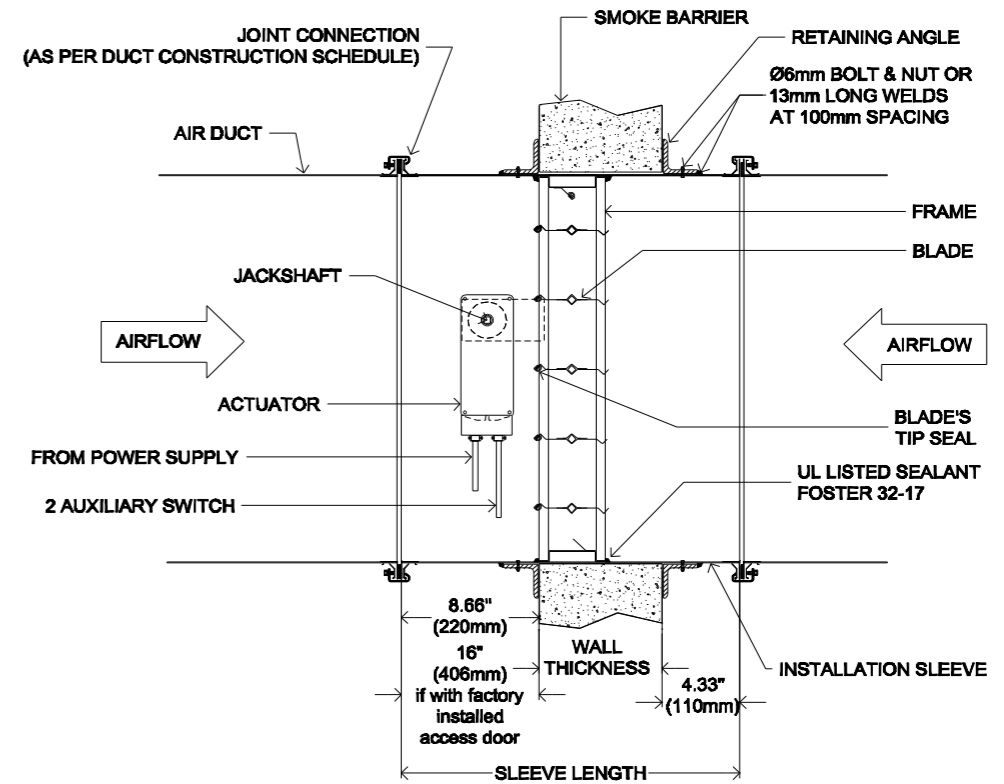


Installation Details

SD with Factory Installed Sleeve and Actuator

Model: SD - 80

Typical Installation



Notes:

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

The Smoke Damper will be installed at the smoke barrier penetrations in accordance with NFPA 90A.

Actuators



Belimo Actuator
Model: FSLF



Belimo Actuator
Model: FSNF



Belimo Actuator
Model: BF

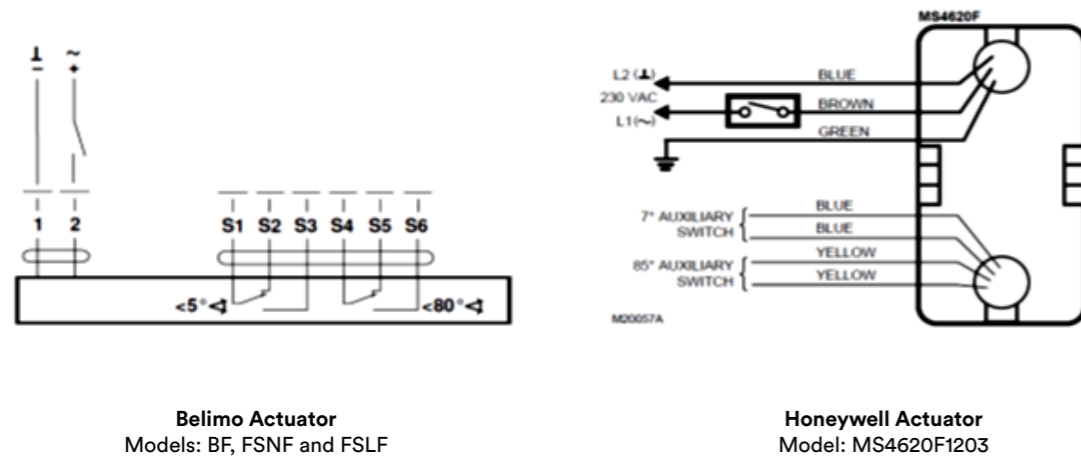


Honeywell Actuator
Model: MS4620F1203

Sequence of Operation

Smoke Mode: When a signal detected through normally closed smoke detector (by others) connection, the power supply to the fire and smoke damper actuator will be interrupted. The energy stored in the damper actuator moves the damper back to its safe position and remain closed until the smoke signal close down. The system will reset after power is reapplied to the actuator and damper will open. By placing an optional control switch (by others), the damper blades at open position can be closed at any time if required.

Typical Wiring Diagram

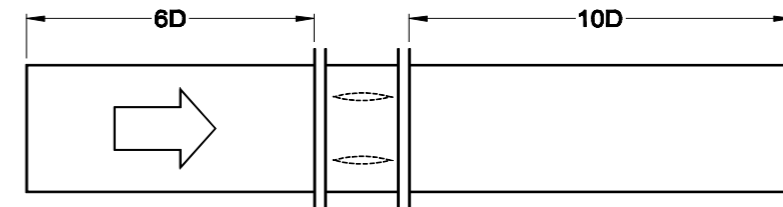


Air Performance

Pressure Drop

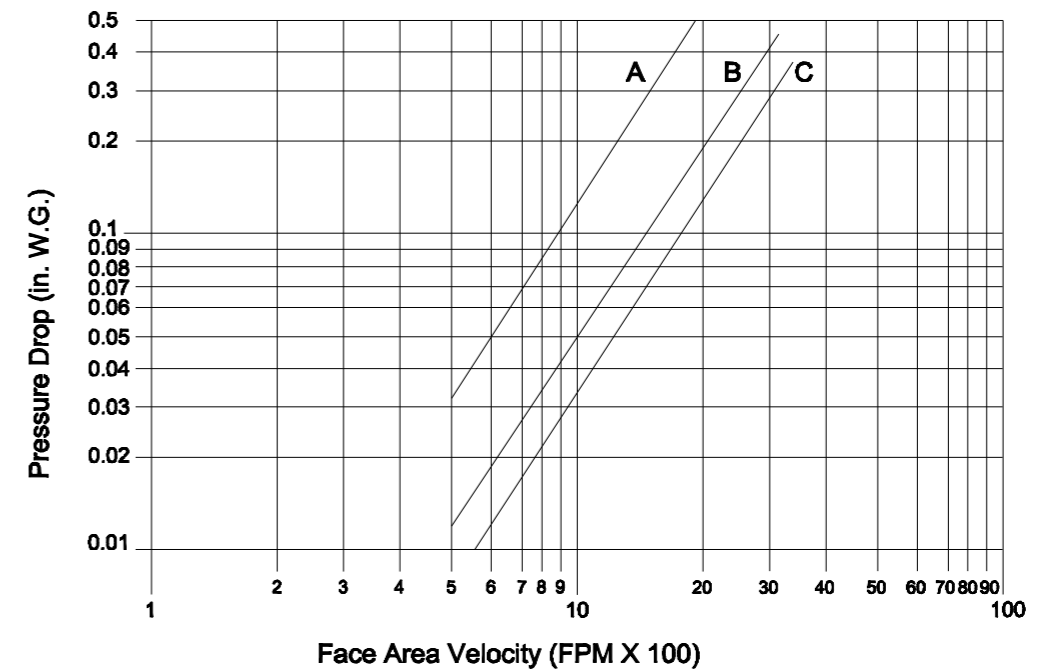
The test method for the pressure drop of the Smoke Damper was conducted as per ANSI/AMCA Standard 500-D, Figure 5.3 which simulate the actual site condition when installed in ventilation, supply and return air conditioning ductworks.

AMCA Test Figure 5.3



Pressure Drop at Face Area Velocity

- A- Damper Size: 12in. x 12in. - Fully open blades
- B- Damper Size: 24in. x 24in. - Fully open blades
- C- Damper Size: 36in. x 36in. - Fully open blades



Order Details

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

Variants

- SD-40 = Sleeve Type
- SD-50 = Circular Spigot
- SD-60 = Oval Spigot
- SD-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.

Power Supply

- V1 = 24 VAC
- V2 = 230 VAC

Specifications

Smoke 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 light partition walls designed as smoke barrier to restrict the spread of smoke. It shall be also used in Smoke Exhaust System and in Smoke Proof Stair Enclosure in accordance to NFPA 90A Standard for Installation of Air Conditioning and Ventilating Systems, and to NFPA 101 Life Safety Code.

Smoke dampers will be tested and classified by Underwriters Laboratories Inc. (UL) in accordance with the standards, UL 555S Standard for Safety, Smoke Dampers.

Smoke dampers will have a Leakage Resistance Rating of Class I at 350°F or Class II at 250°F elevated temperature. It shall be tested for heated air operation test with air velocity of 2400 FPM to be rated at 2000 FPM and the test pressure shall be 4.5 inch W.G. static pressure to be rated at 4 inch W. G. Pressure Class.

Smoke Damper shall be fitted with UL Listed BELIMO spring return actuator and shall be controlled by smoke detector. The power supply to the actuator shall be cut-off as soon as the smoke detector detect the smoke.

Damper blades will 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 9.5mm square forced-fit to one stub shaft, secured to blade with 4 pieces of bolt and nut, and with sintered bronze oilite axle bearing. Jamb seal/side seal shall be stainless steel to fill gap between blade's end and frame. Jackshaft shall be Ø12mm galvanized steel with a crank and kneelock secured to the linkage bracket. Damper frame shells will be Ga.16 galvanized steel formed into hat channel shape.

Order Example

SAFID Smoke 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.

Make: SAFID

Type: SD-80-100-3V-PB-R-A1S-V2

Size: 500 W x 500 H

Qty: 1



SMD 30 - 100

SMD SERIES
FLANGE TYPE

Description

Smoke dampers type SMD 30 provide an automatic means of localizing areas of smoke in ventilation systems. It prevent the distribution of smoke through ventilation ductworks. SMD combined with low leakage characteristic for smoke management, is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. SMD is available for rectangular, square, circular and flat oval duct fixings.

Standard Construction

Frame:
160mm x 30mmx1.5mm (16 ga.) galvanized steel, formed channel for flange connections.

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

Finish:
Mill galvanized.

Linkage:
Side linkage concealed in frame for parallel blade operation is standard.
Face linkage available (optional).
Linkage consist of 6mm dia. S/S pivot pins.

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

Axles and Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:
100 x 100mm, damper up to 250mm high is single blade construction.

Maximum Size:
1200 x 1800mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SMD 30 - 110
General construction as type SMD 30 - 100 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SMD 30 - 120
General construction as type SMD 30 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

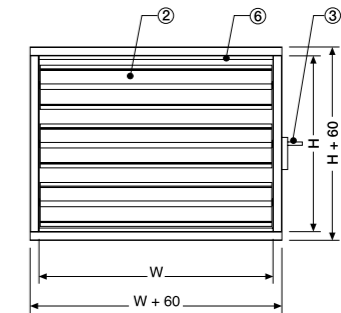
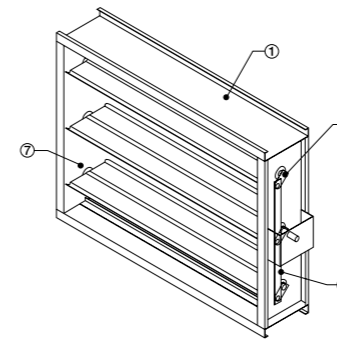
SMD SERIES [SMD 30 - 100, SMD 30 - 110, SMD 30 - 120]

Dimensions

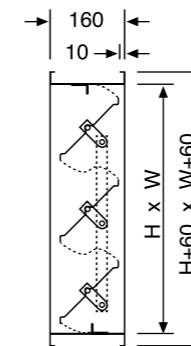
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|------------------|-----------------|--------------------|
| 1 - Casing | 2 - Blade | 3 - Drive Shaft |
| 4 - Side Linkage | 5 - Linkage Bar | 6 - Landing Angles |
| 7 - Bearing | | |

Flange Type

SMD 30 - 100, 110, 120



Flange Type, Parallel Blades



Parallel Blade (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	2
350	350	2
400	400	2
450	450	2
500	500	3
550	600	3
600	700	4
650	800	5
700	900	5
750	1000	6
800	1100	7
850	1200	7
900	1300	8
950	1400	9
1000	1500	9
1050	1600	10
1100	1700	11
1200	1800	12



Description

Smoke dampers type SMD 40 provide an automatic means of localizing areas of smoke in ventilation systems. It prevent the distribution of smoke through ventilation ductworks. SMD combined with low leakage characteristic for smoke management, is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. SMD is available for 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:
Face linkage for parallel blade operation is standard. Face linkage parallel blades available (optional). Linkage consist of 6mm dia. S/S pivot pins.

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

Axles and Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:
100 x 100mm, damper up to 300mm high is single blade construction.

Maximum Size:
1200 x 1800mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

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

SMD 40 - 120
General construction as type SMD 40 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

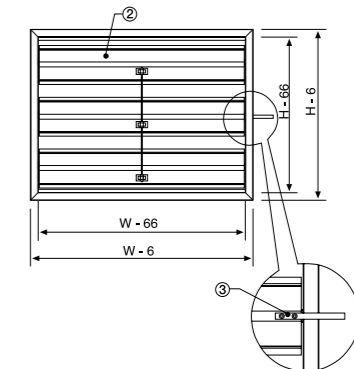
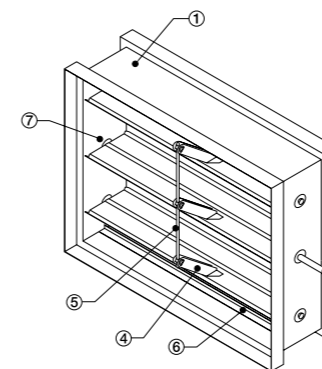
SMD SERIES [SMD 40 - 100, SMD 40 - 110, SMD 40 - 120]

Dimensions

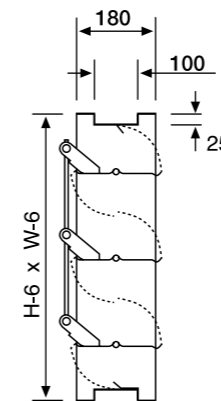
- 1 - Casing
- 2 - Blade
- 3 - Drive Shaft /Removable Spindle (when required)
- 4 - Side Linkage
- 5 - Linkage Bar
- 6 - Landing Angles

Circular Spigot Type

SMD 40 - 100, 110, 120



Sleeve Type, Parallel Blades



Parallel Blade (PB)

Standard Sizes

Width (mm)	Height (mm)	No. of Blades
100	100	1
150	150	1
200	200	1
250	250	1
300	300	1
350	350	2
400	400	2
450	450	2
500	500	2
550	600	3
600	700	4
650	800	4
700	900	4
750	1000	6
800	1100	6
850	1200	7
900	1300	8
950	1400	8
1000	1500	9
1050	1600	10
1100	1700	11
1200	1800	12
1200		



SMD 50 - 100

SMD SERIES
CIRCULAR SPIGOT TYPE

Description

Smoke dampers type SMD 50 provide an automatic means of localizing areas of smoke in ventilation systems. It prevent the distribution of smoke through ventilation ductworks. SMD combined with low leakage characteristic for smoke management, is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick and lightweight partition walls. SMD is available for rectangular, square, circular and flat oval duct fixings.

Standard Construction

- Frame:**
180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with circular spigot duct connection.
- Blades:**
250mm max. width, 1.5mm (16 ga.) galvanized steel.
- Finish:**
Mill galvanized.
- Linkage:**
Side linkage for parallel blade operation is standard. Face linkage parallel blades available (optional). Linkage consist of 6mm dia. S/S pivot pins.
- Case Bearings:**
Made of sintered bronze (oilite), operational temp. resistance up to 200 °C.
- Axles and Control Shaft:**
12mm diameter zinc plated mild steel.
- Minimum Size:**
100 mm diameter, damper up to 250mm dia. is 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.

SMD 50 - 110
General construction as type SMD 50 - 100 damper but blades, shafts and blade to shaft fixing in stainless steel (Grade 304).

SMD 50 - 120
General construction as type SMD 50 - 100 damper but with frame, blades shafts and blade to shaft fixing and linkage all from stainless steel (Grade 304).

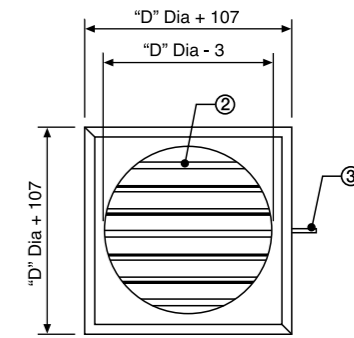
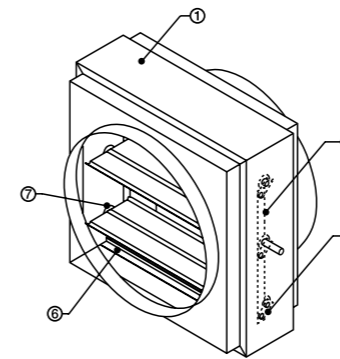
SMD SERIES [SMD 50 - 100, SMD 50 - 110, SMD 50 - 120]

Dimensions

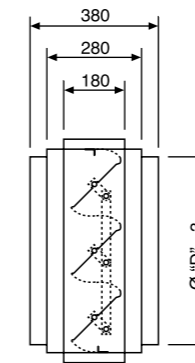
- 1 - Casing
- 2 - Blade
- 3 - Drive Shaft
- 4 - Side Linkage
- 5 - Linkage Bar
- 6 - Landing Angles
- 7 - Bearing
- 8 - Spigot Case

Circular Spigot Type

SMD 50 - 100, 110, 120



Circular Spigot Type, Parallel Blades



Parallel Blade (PB)

Standard Sizes

Diameter (mm)	No. of Blades
100	1
150	1
200	1
250	2
300	2
350	2
400	2
450	3
500	4
600	4
700	4
800	5
900	6
1000	7



SMD 60 - 100

SMD SERIES
OVAL SPIGOT TYPE

Description

Smoke dampers type SMD 60 provide an automatic means of localizing areas of smoke in ventilation systems. It prevent the distribution of smoke through ventilation ductworks. SMD combined with low leakage characteristic for smoke management, is suitable for installation in sheet metal ductworks or in walls or ceiling slabs made from concrete, brick & lightweight partition walls. SMD is available for rectangular, square, circular & flat oval duct fixings.

Standard Construction

Frame:
180mm x 1.5mm (16 ga.) galvanized steel, spigot type 380mm wide with oval spigot duct connection.

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

Finish:
Mill galvanized.

Linkage:
Side linkage for parallel blade operation is standard. Face linkage parallel blades available (optional). Linkage consist of 6mm dia. S/S pivot pins.

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

Axles & Control Shaft:
12mm diameter zinc plated mild steel.

Minimum Size:
200 x 100mm, damper up to 250mm high is single blade construction.

Maximum Size:

1000 x 900mm, as single section.
Multiple section assembly with unlimited size, where each section operates independently.

For details of multiple sections consult SAFID.

SMD 60 - 110

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

SMD 60 - 120

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

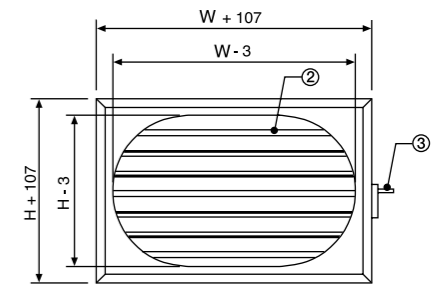
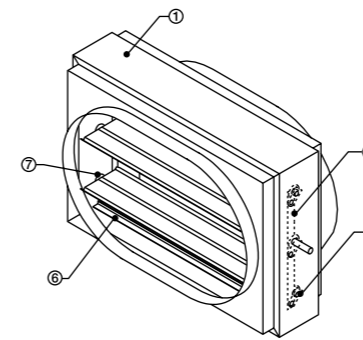
SMD SERIES [SMD 60 - 100, SMD 60 - 110, SMD 60 - 120]

Dimensions

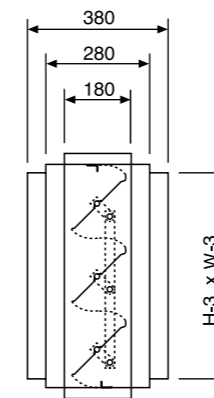
- | | | |
|------------------|-----------------|--------------------|
| 1 - Casing | 2 - Blade | 3 - Drive Shaft |
| 4 - Side Linkage | 5 - Linkage Bar | 6 - Landing Angles |
| 7 - Bearing | 8 - Spigot Case | |

Oval Spigot Type

SMD 60 - 100, 110, 120



Oval Spigot Type, Parallel Blades



Parallel Blade (PB)

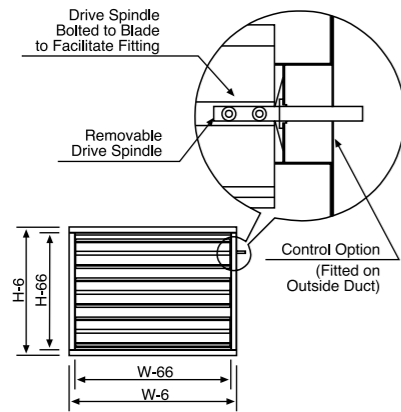
Standard Sizes

Width (mm)	Height (mm)	No. of Blades
200	100	1
250	150	1
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	5
800	900	6
850		
900		
950		
1000		

Materials Construction

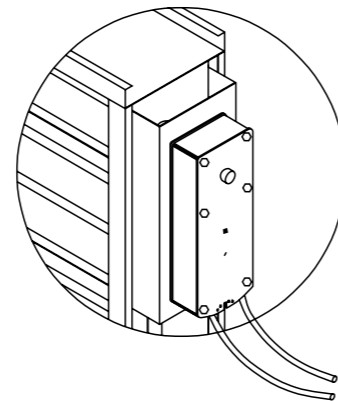
Removable Spindle

For Sleeve Type Only



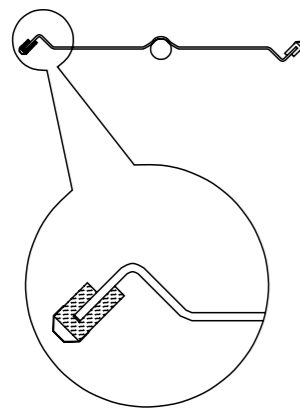
Mounting Bracket

Damper with Mounting Bracket for Actuator



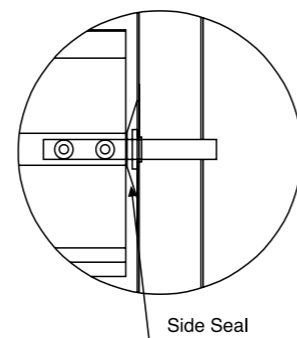
Blade Seal

Type S1 (Silicone Rubber)



Side Seal (Jamb Seal)

Type S2 (Stainless Steel Type 304)

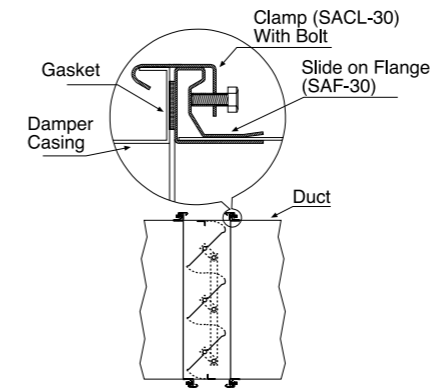


Note: Type S3 (Combination of S1 & S2)

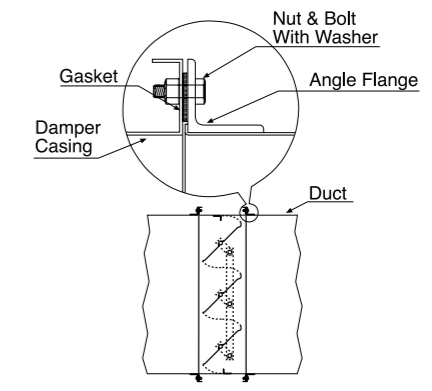
Installation Details

Flange Type SMD 30

Damper to Slide On Flange Connection

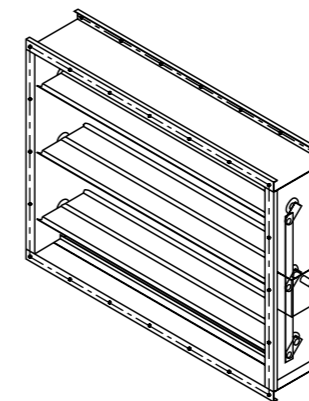


Damper to Flange Connection



Flange Installation Detail

Flange Drilling Details, Type SMD 30

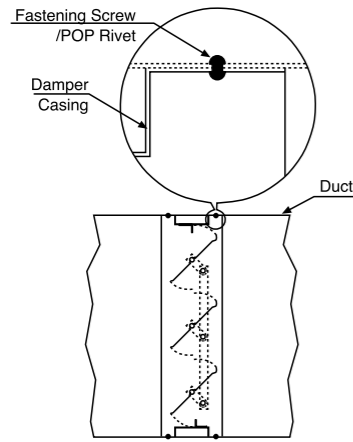


Flange Drilling Details

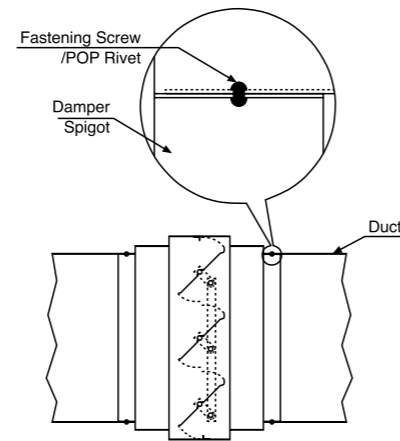
Width (mm)	Height (mm)	No. of Holes B Dim.	No. of Holes H Dim.
100	100	1	2
150	150	2	2
200	200	2	2
250	250	2	3
300	300	3	3
350	350	3	4
400	400	4	4
450	450	4	4
500	500	4	5
600	600	5	6
700	700	6	6
800	800	7	7
900	900	8	8
1000	1000	8	9
1100	1100	9	10
1200	1200	10	10
	1300		11
	1400		12
	1500		13
	1600		14
	1700		14
	1800		15

Installation Details

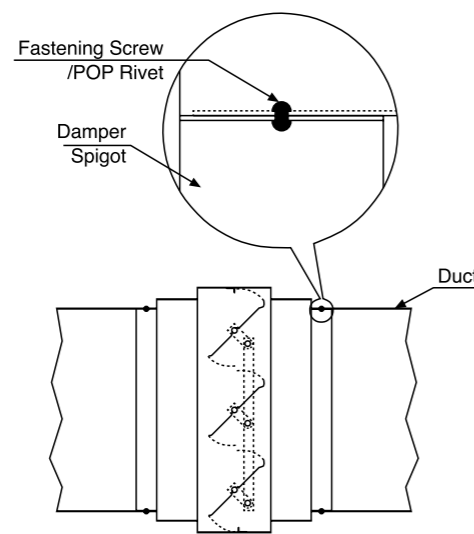
For Sleeve type, SMD 40



Circular Type, SMD 50



Oval type SMD 60



Product Range

Seals

Construction Variants	Description
S	No seals. Not applicable.
S1	Blade edge seal to seal blades to blade joint. Blade seal is silicone rubber with temperature resistance up to 175 °C, for low leakage characteristic. Not applicable.
S2	Side seals. Fitted to close gap between frame and blades. Not applicable.
S3	Combination of S1 & S2, fitted to close gap between frame and blades and blade edge seals to seal blade to blade joint. Blade seals is silicone rubber with temperature resistance up to 175 °C, for ultra low leakage characteristic.

Linkage

Construction Variants	Description
PB	Side linkage concealed in frame for parallel blade operation. Face linkage available (optional).

Bearings

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

Belimo Actuators

Code	Type/Model
A01	BF230 spring return
A02	BF24 spring return
A03	AF230 spring return
A04	AF230-S spring return with limit switch
A05	AF230 US spring return
A06	AF120 US spring return
A07	AF230-S US spring return with limit switch
A08	AF120-S US spring return with limit switch
A09	AF24 US spring return
A10	AF24-S US spring return with limit switch
A11	AF24-SR spring return
A12	NF24 US spring return
A13	NF120 US spring return
A14	NF24-S US spring return with limit switch
A15	NF120-S US spring return with limit switch
A16	NF24-SR US Modulating
A17	SM230A open/closed
A18	SM24A open/closed
A19	SM230A-SR Modulating
A20	NM230 open/closed
A21	NM24 open/closed
A22	NM24 SR Modulating
A23	GM240 open/closed
A24	GM24 open/closed
A25	GM24-SR Modulating

Note:
For Belimo Actuators details, models and voltages see pages 230 - 249 or contact SAFID.

Order Details

Order Code SMD 30 - 100 - PB - S1 - B1 - R / 500 x 500 - A01

Variants

- *SMD 30 = Flange (Standard Supply)
- SMD 40 = Sleeve
- SMD 50 = Circular Spigot
- SMD 60 = Oval Spigot

Types

- *100 (Standard Supply)
- 110
- 120

Variants - Blade Operation

- *PB = Side Linkage Parallel (Standard Supply)
- Face Linkage (optional)

Variants - Seals

- S = None (not applicable)
- S1 = Blade Seals Only (not applicable)
- S2 = Side Seal (not applicable)
- *S3 = Side Seal & Blade Seals (Standard Supply)

Variants - Bearings

- *B1 = Sintered Bronze (oilite)
- B2 = Stainless Steel

Actuators

(See page 225)

Duct Size

- Square or rectangular Dimensions 'W' x 'H' mm.
- Circular 'D' mm dia.
- Flat oval 'W' x 'H' mm.
- All damper spigots are manufactured down on duct size to fit inside ductwork connections.

External Controls

- * "R" = Right Hand (Standard Supply)
- "L" = Left Hand

*-Stands for Standard Supply

Specifications

Rectangular, square, circular and flat oval Smoke Dampers designed for the smoke isolation of sections of ducting in ventilation systems. Flanged casing, shut off blades with overlapping interlocking joints and with side seals and blade seals for low leakage options (when required). Blades are connected by side linkage for parallel action and face linkage parallel action also available.

Order Example

Standard
Make: SAFID
Type: SMD 30 - 100 PB - S3 - B1 - R - 500x500 / A01
Qty: 1

