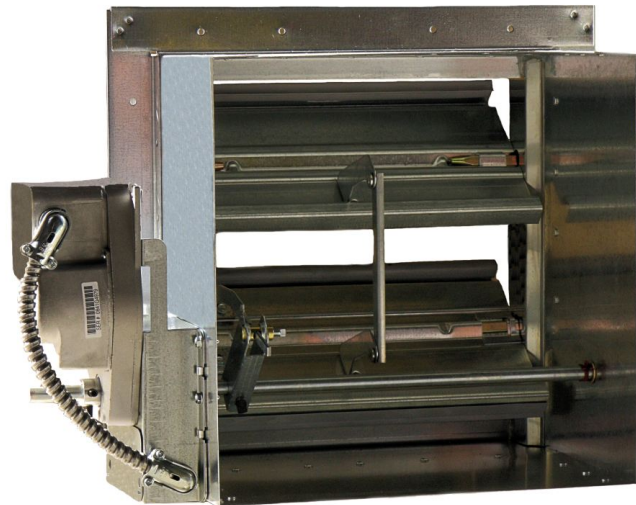




Air flow AC MIDDLE EAST FZE -LLC

Specification

The combination Fire and Smoke Dampers shall be the 150mm aerodynamic interlocking blades double skin of 0.7mm galvanized sheet steel or stainless steel grade 430 or single skin 1.2mm galvanized sheet steel or grade 430 stainless steel. Required on a 12mm dia. galvanized steel drive shaft. The blade drive linkage shall be fully enclosed and outside of the air stream for protection against damage or air contamination.

Side seals gasketing between the blade ends and inner damper case shall be 0.2mm spring steel. The fully welded damper case shall be formed from 1.5mm galvanized sheet steel suitable for square, rectangular, round duct connections, and shall meet the air tightness test requirements of HVCA specification of DW144 to class A, B and C upto 1500Pa. Damper blades shall be held open by a replaceable combined thermally activated thermal trip device designed for 72 Deg. C. with spring return actuator 230 or 24V as required.

Casings

Casings shall be from 1.5mm (16swg) hot dipped zinc coated steel to BS EN 10142. The bearing channel from 1.2mm mild steel incorporates an integral formed low friction bush for the blades to rotate freely. All welds, seams and joints are coated with commercial grade Zinc based aluminium paint. Where Seams and joints shall be filled with sealant to comply with the requirements of duct work specification DW144.

Linkage, Blade Shafts and Bearings

The opposed blade action linkage shall be fully enclosed and outside the air stream. Bearing with be bronze and stainless steel bearing can be provided as optional.

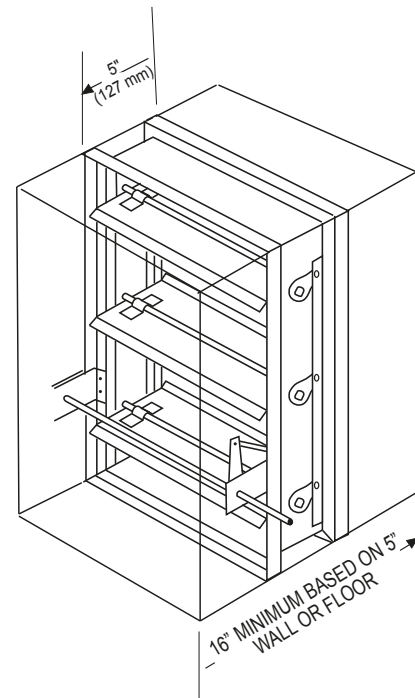
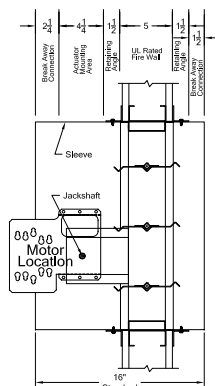
Shaft will be galvanized mild steel 12mm dia. Stainless steel shaft as optional.

Side Jamb Gasket Seal

A formed 80mm wide stainless steel side seal gasket to provide low leakage to be fitted to jamb on each side of the casing will be from 0.3mm stainless steel.

Blades

The blades shall be single skin 3V blades 1.2mm or double skin aerofoil section 0.7mm galvanized sheet steel. Stainless steel blades as optional.



Multiple Assembly-3000mm(w) x 2400mm(h)

Finish:	Mill galvanized.
Sizes:	Minimum Size: 200mm(w) x 150mm(h)
	Maximum UL Listed Size:
	Single Section: 900mm(w) x 1200mm(h)
1-1/2 Hr. Vertical:	Multiple Assembly-3.0mts(w) x 2.4mts(h)
1-1/2 Hr. Horizontal:	Multiple Assembly-1.8mts(w) x 2.4mts(h)
3 Hr. Vertical:	Multiple Assembly-3.0mts(w) x 1.2mts(h)
3 Hr Horizontal:	Maximum UL Listed Size:
	1800mm x 1200mm
Maximum Velocity:	10.2 m/s on sizes
Maximum Pressure:	4" wg (1kPa)

Notes: • Sleeved dampers are furnished approx. same size as given duct dimension, unless otherwise noted.

Manufacturer's Recommendations

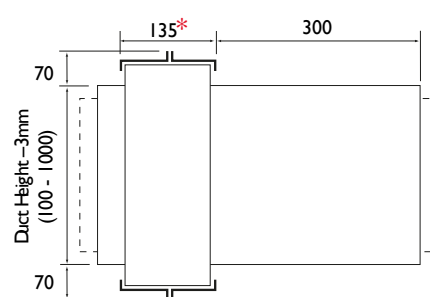
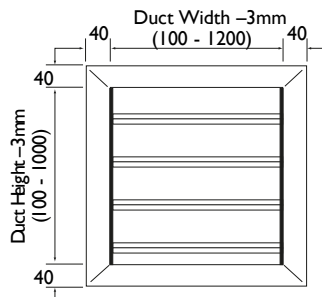
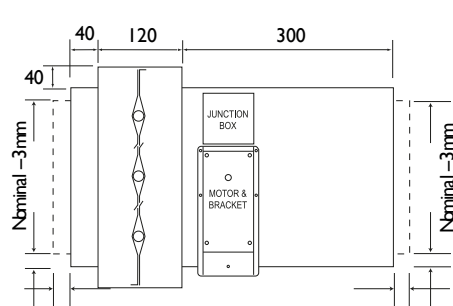
All moving parts of the damper must be inspected and cycled at intervals not greater than every twelve months or in accordance with the latest edition of NFPA 90A local codes and the actuator manufacturer. In addition, the damper shall be inspected for corrosion. Dry lubricants are recommended.

edition of NFPA 80, 90A, 92A, local codes and the actuator manufacturer. In addition, the damper shall be inspected for corrosion. Dry lubricants are

Dimensional Data

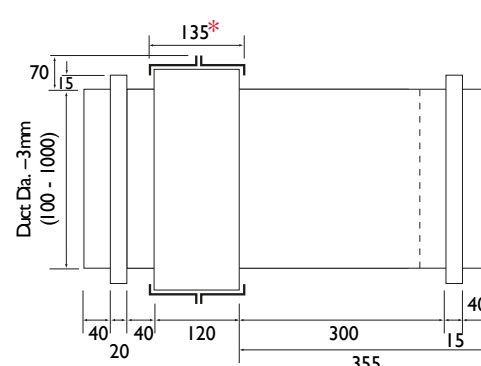
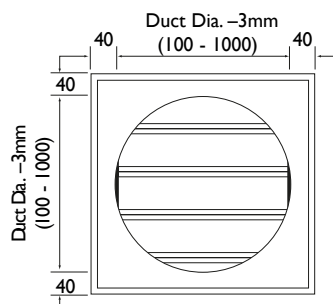
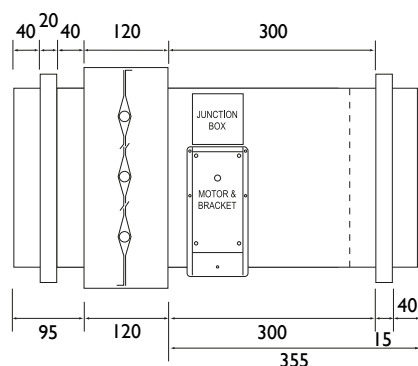
Model MSFD-2 Square/Rectangular Spigotfit Vertical or Horizontal Mounting

Overall dimensions of installation frame is duct dimension + 140mm

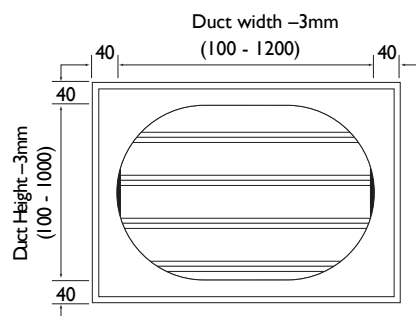
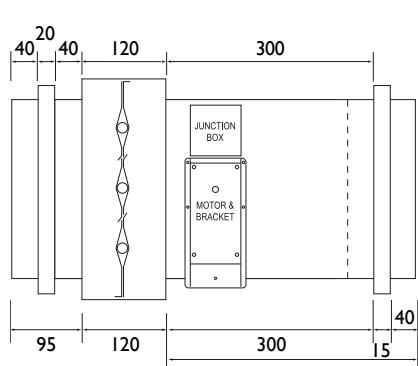


Model MSFD-3 Circular Spigotfit Vertical or Horizontal Mounting

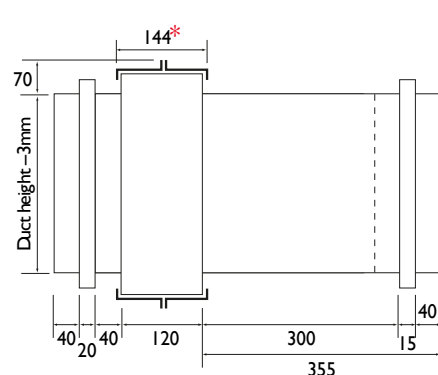
Overall dimensions of installation frame is duct dimension + 140mm



Model MSFD-4 Flat Oval Spigotfit Vertical or Horizontal Mounting



Overall dimensions of installation frame is duct dimension + 140mm

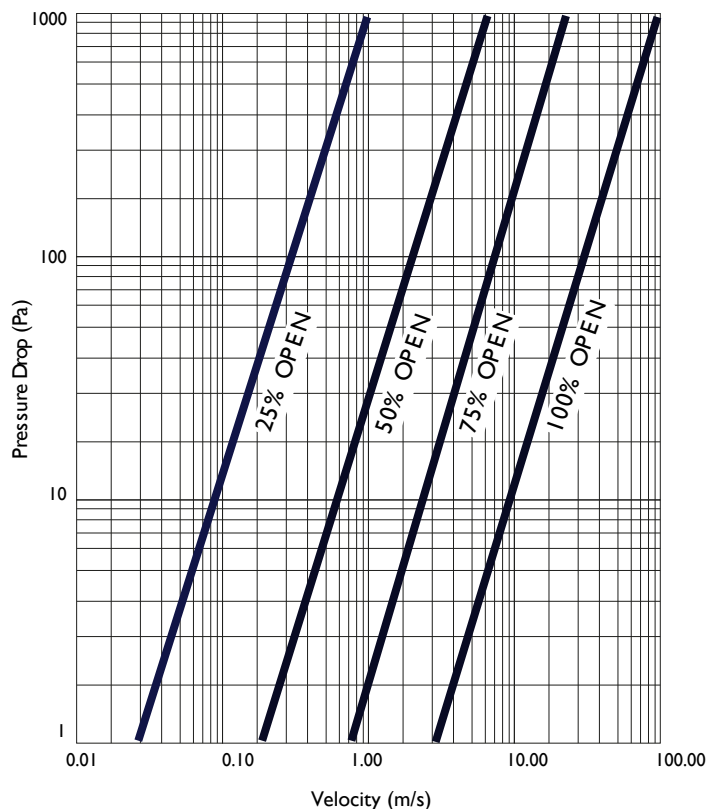


* Dimension marked thus indicates overall dimension including HEVAC Frame.

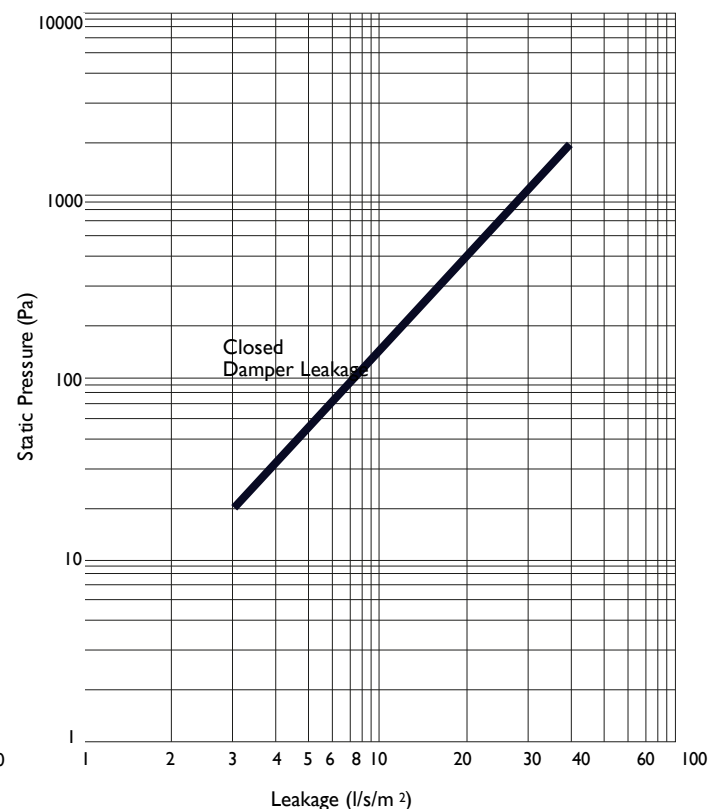
Performance Data

Pressure Drop

Calculated performance at various damper settings



Leakage



Weight Chart (Kg) Model MSFD-2

Damper Height (mm)	Fire/Smoke Damper with Motor - Width (mm)											
	150	200	300	400	500	600	700	800	900	1000	1100	1200
150	10	10	11	12	13	14	15	16	17	18	19	20
200	10	11	12	13	14	15	16	17	19	20	21	22
300	12	13	14	15	16	17	19	20	21	22	23	25
400	13	14	15	17	18	19	21	22	23	25	26	27
500	15	16	17	18	20	21	23	24	26	27	28	30
600	16	17	19	20	22	23	25	27	28	30	31	33
700	18	18	20	22	24	25	27	29	31	32	34	36
800	19	20	22	23	26	27	29	31	33	35	36	39
900	20	21	23	25	28	29	31	34	35	37	39	42
1000	22	23	25	27	30	31	33	36	38	40	41	45
1100	23	24	27	29	31	33	35	38	40	42	44	48
1200	25	26	28	30	33	35	37	40	43	45	47	50

1. The reference values below are for Model MSFD-2 2. For Models MSFD-3, apply the following respective multiplier: 1.1
3. To include a HEAC/HVCA Installation Frame, apply the following respective multiplier: 20%

Motorized Smoke Damper

Type MFD, MSD, MSFD



Description

Product description

Each damper/actuator combination shall have a UL555S elevated temperature rating of 250°F (121°C) minimum and shall be operational at maximum design air flow at its installed location. Each damper shall be supplied with an appropriate actuator installed by the damper manufacturer at the time of damper fabrication. Damper actuator shall be electric spring return type suitable for 24v or 230 V.

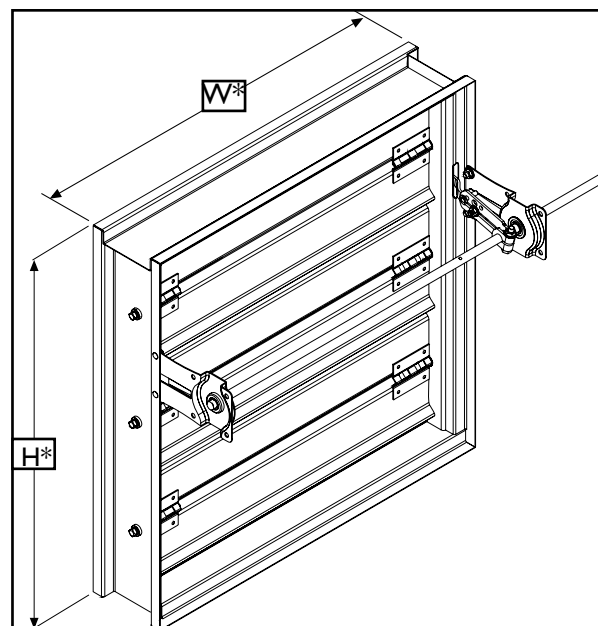
Damper blades shall be 1.2mm galvanized steel 3V type with three longitudinal grooves for reinforcement. Damper frame shall be galvanized steel formed into a structural hat channel shape with reinforced corners. Bearings shall be sintered bronze sleeve type rotating in extruded holes in the damper frame. Blade edge seals shall be silicone rubber designed to inflate and provide a tighter seal against leakage as pressure on either side of the damper increases. Jamb seals shall be stainless steel compression type. Blades shall be completely symmetrical relative to their axle pivot point, presenting identical resistance to airflow in either direction or pressure on either side of the damper.

Damper must be rated for mounting vertically (with blades running horizontal) or horizontally and be UL 555S rated for leakage and airflow in either direction through the damper.

Ratings

Leakage:	UL 555S leakage class II
Pressure:	6 in. wg (1.5 kPa) - differential pressure
Velocity:	Operational rated to 2000 fpm (10.2 m/s) Rating is for airflow in either direction through damper
Temperature:	350°F (177°C) depending on the actuator.

UL 555S Leakage Class II



* W&H dimensions furnished approximately (6mm) undersize.
(Add sleeve thickness for overall sleeved damper dimension)
Right hand drive is shown. Left hand drive is available upon request.

Construction	Standard	Optional
Frame Material	Galvanized steel	-
Frame Material Thickness	16 ga. (1.5mm)	-
Frame Type	127mm x 25mm hat channel	Double Flange
Blade Material	Galvanized steel	-
Blade Material Thickness	16 ga. (1.5mm)	-
Blade Type	3V	-
Linkage	Plated steel out of airstream, concealed in jamb	304SS
Axle Bearings	Bronze	304SS
Axle Material	Plated steel	304SS
Blade Seals	Silicone	-
Jamb Seals	304SS	-

Size Limitations

W x H	Minimum Size	Maximum Size	
		Single Section	Multiple Section
4 in. wg (1 kPa) pressure			
mm	200 x 150	800 x 1200 or 900 x 1200	3000 x 2400 or 7000 x 1200

Features:

- Frames fully welded corners from 1.5mm galvanized sheet steel or stainless steel.
- Blades are reinforced with 3 longitudinal structurally designed vee's.
- Actuators: UL listed spring return 24V, 230V

