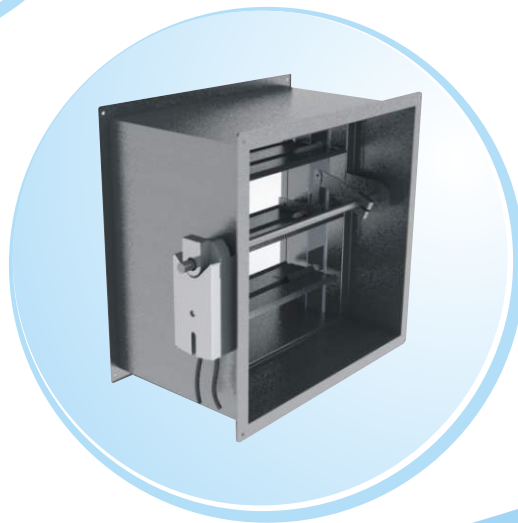




**COSMOS**<sup>®</sup>  
Air Distribution Products



# Fire Damper

A Wide Range of High Quality Air Distribution Products.

Grilles • Diffusers • Dampers • Louvers • VAV Boxes • Sound Attenuators

**Spectrum Industries**

## Fire Damper Application

Fire damper are required by all buildings codes to maintain the required fire resistance rating of wall, partition and floor when they are penetrated by air ducts or other ventilation openings. One of the basic requirements of building fire protection as required by all building codes is the compartmentation or dividing up of building using fire rated walls, floor or other partitioning method.

The compartmentation concept is intended to contain any fire to the compartment of fire origin and thereby minimize damage to property and protect the lives of people living and / or working the building. A duct or ventilation opening in any of the fire rated partition would permit a fire to spread from the compartment of origin to adjoining compartments or spaces. Fire dampers are installed in these ventilation openings. Fire Dampers are qualified under CBRI, Roorkee. They are always supplied with an appropriate CBRI label.

A fire damper can be defined as “a device installed in ducts and air transfer opening of an air distribution or smoke control system designed to close automatically upon detection of heat. It also serves to interrupt migratory airflow, resist the passage of flame, and maintain the integrity of the fire rated separation. Its primary function is to prevent the passage of flame from one side of a fire-rated separation to the other.

When rise in temperature occurs, fire damper will close and prevent the spread of flame through the barrier. Damper will close (shut) when a fusible link melts. The fusible link typically melts at temperature 165° F (74° C).

In motorized models, when the fire damper is used to prevent the spread of fire, damper closes upon receiving a signal from fire sensor or detector. It has to close after it has received a signal from the fire detector which is located in the duct or other suitable location.

- The fire damper is open during normal ventilation.
- When the fire detector detects fire, the power supply to the actuator is interrupted and the damper closes automatically.
- The fire damper is equipped with electrical switches for indicating the end positions of the damper (open/closed).
- The air flow direction has no effect on the functioning of the fire damper.

## Damper Selection Process

Five basics decisions are required to select the damper

- Blade style: 3V, V groove or aerofoil blade
- Fire resistance rating
- Leakage rating: Class I, II and III
- Elevated temperature: 250° F of 350° F (121° C or 177° C)
- Operational rating: Velocity and pressure differential the damper will see in its applications

## Specifications

MODEL	FD-MO-500	FD-FL-375	FD-MO-300-F	FD-FL-225-F
BLADE TYPE	V Groove type (16 G) equivalent thickness			
FRAME MATERIAL (NOM.)	165 X 1.6 mm (16 G) galvanized Steel hat channel			
LINKAGE MATERIAL (NOM.)	Concealed in Frame			
CASING	20 D G.I. 500 mm Length	20 D G.I. 375 mm Length	20 D G.I. 300 mm length	20 D G.I. 225 mm length
BEARING & AXLES	Brass bush pressed into frame 10 mm square plated mild steel			
SEALS	Flexible stainless steel jam seals			
FUSIBLE LINK	UL-555 Approved. Melting point temperature 165° F / 74° C			

## Cosmos Fire Damper Models

### FD-F Series

- FD-F-A** GI constucted spring return type fusible link fire damper. (Without flange)
- FD-FS-A** GI constucted spring return type fusible link fire damper with limit switch. (without flange)
- FD-F-B** GI constucted spring return type fusible link fire damper. (With flange)

**FD-FS-B** GI constucted spring return type fusible link fire damper with limit switch. (with flange)

## **FD-M Series**

**FD-M-R-A** GI constucted spring return type motorized (Electric actuator) fire damper. External control on right side. (Without flange)

**FD-MP-R-A** GI constucted spring return type motorized (Electric actuator) fire damper with control panel. External control on right side. (Without flange)

**FD-MPS-R-A** GI constucted spring return type motorized (Electric actuator) fire damper with control panel and limit switch. External control on right side. (Without flange)

**FD-M-L-A** GI constucted spring return type motorized (Electric actuator) fire damper. External control on left side. (Without flange)

**FD-MP-L-A** GI constucted spring return type motorized (Electric actuator) fire damper with control panel. External control on left side. (Without flange)

**FD-MPS-L-A** GI constucted spring return type motorized (Electric actuator) fire damper with control panel and limit switch. External control on left side. (Without flange)

**FD-M-R-B** GI constucted spring return type motorized ( Electric actuator ) fire damper. External control on right side. ( With flange )

**FD-MP-R-B** GI constucted spring return type motorized ( Electric actuator ) fire damper with control panel. External control on right side. ( With flange )

**FD-MPS-R-B** GI constucted spring return type motorized ( Electric actuator ) fire damper with control panel and limit switch. External control on right side. ( With flange )

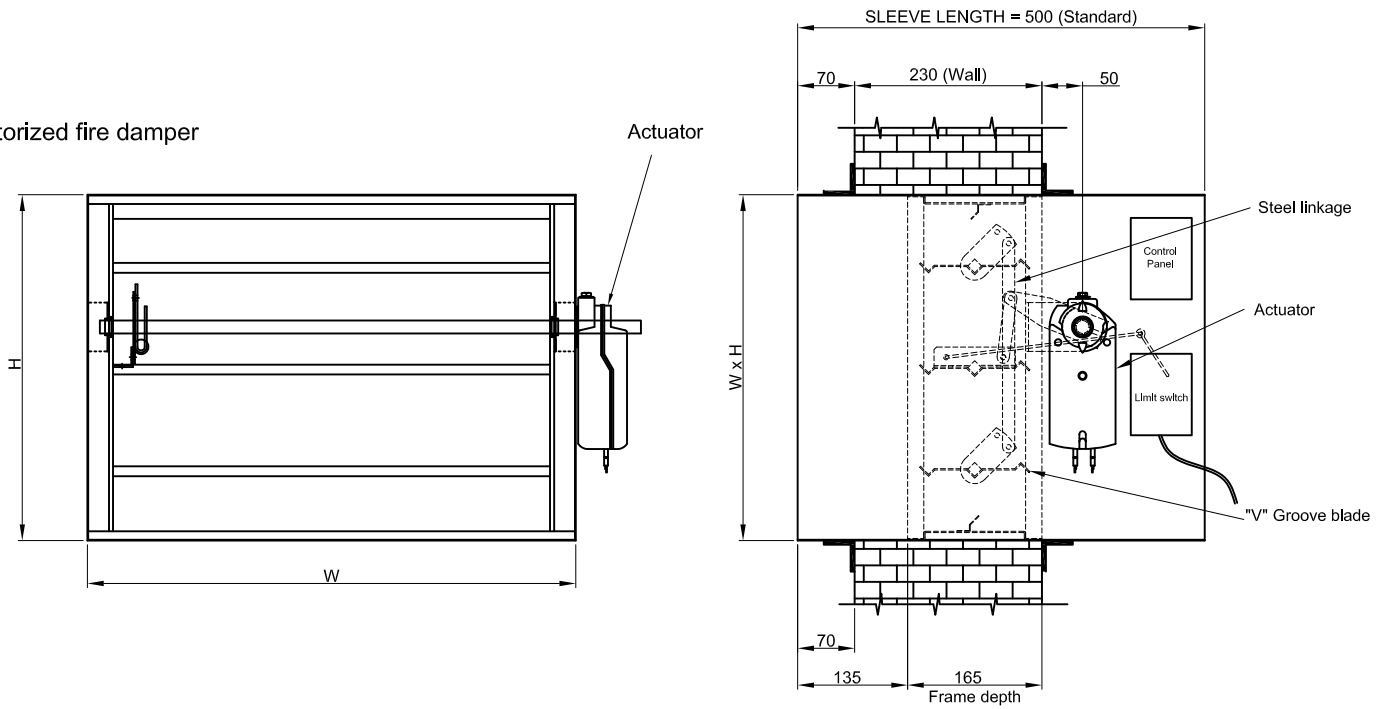
**FD-M-L-B** GI constucted spring return type motorized ( Electric actuator ) fire damper. External control on left side. ( With flange )

**FD-MP-L-B** GI constucted spring return type motorized ( Electric actuator ) fire damper with control panel. External control on left side. ( With flange )

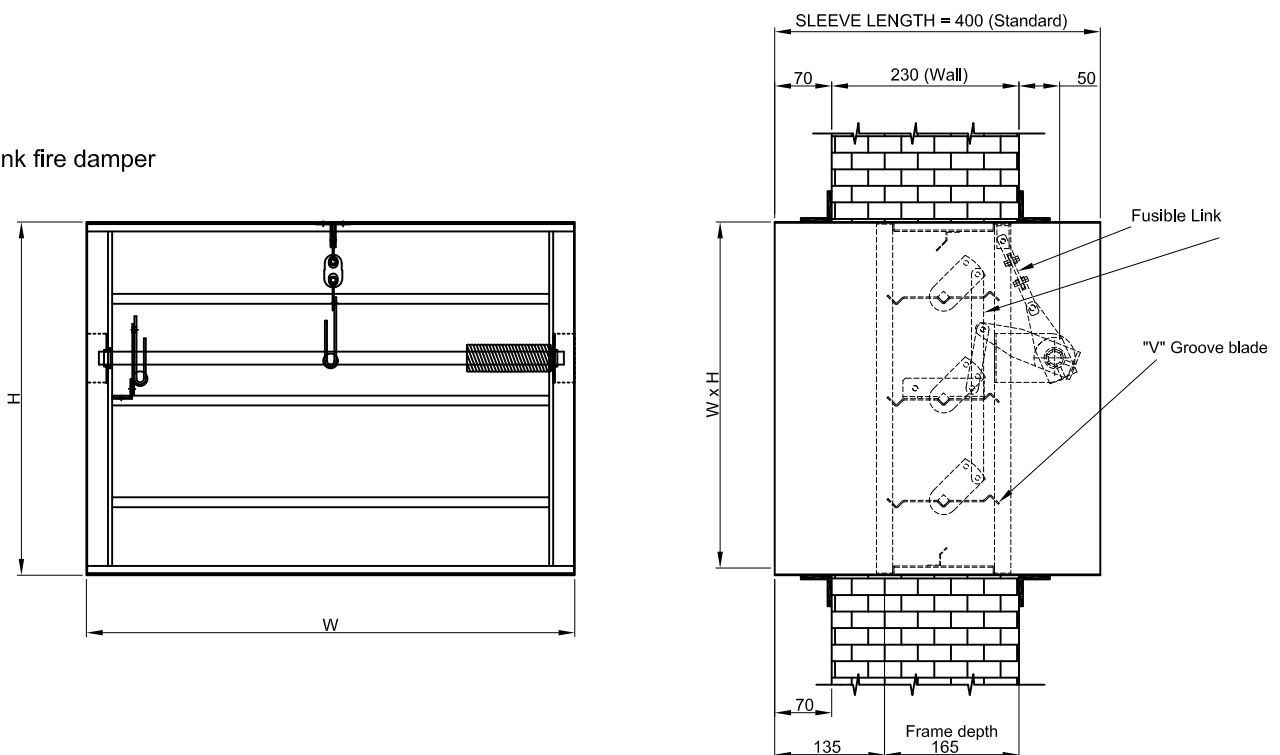
**FD-MPS-L-B** GI constucted spring return type motorized ( Electric actuator ) fire damper with control panel and limit switch. External control on left side. ( With flange )

Dimensional data  
**FIRE DAMPER**

Motorized fire damper

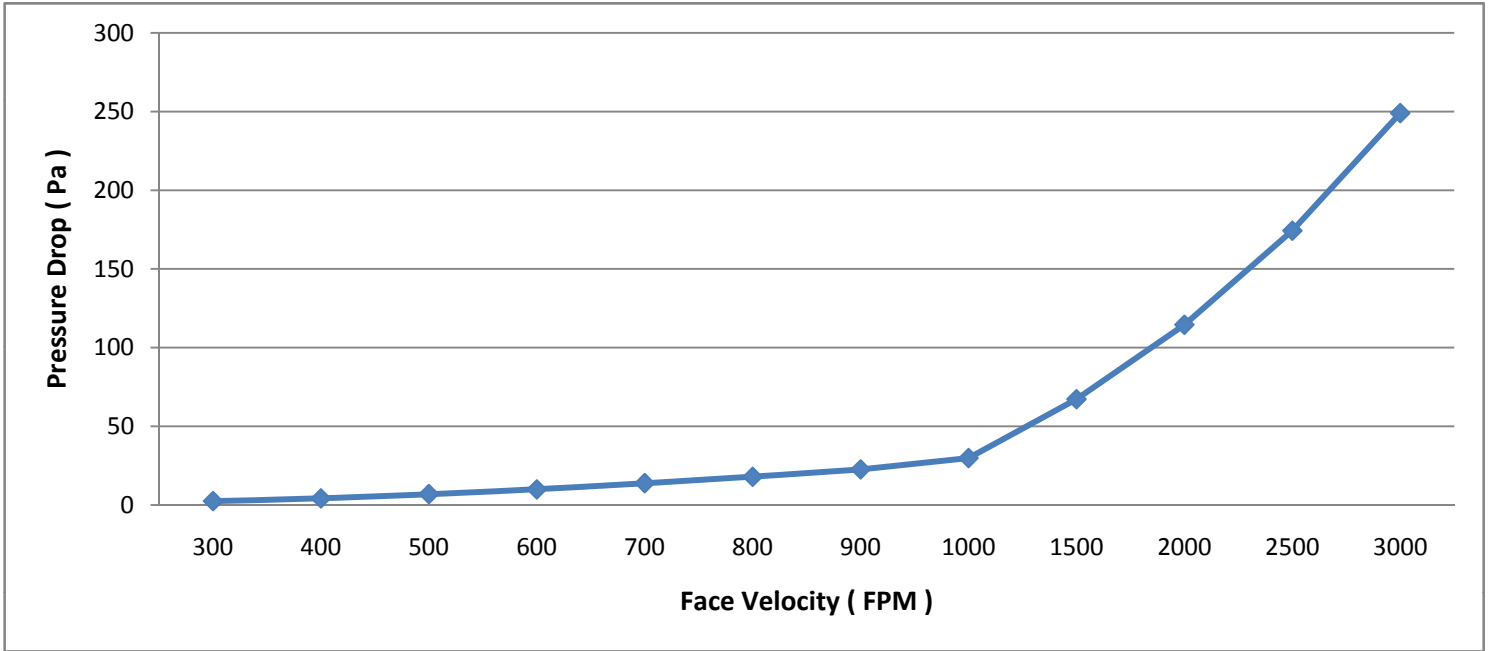


Fusible link fire damper

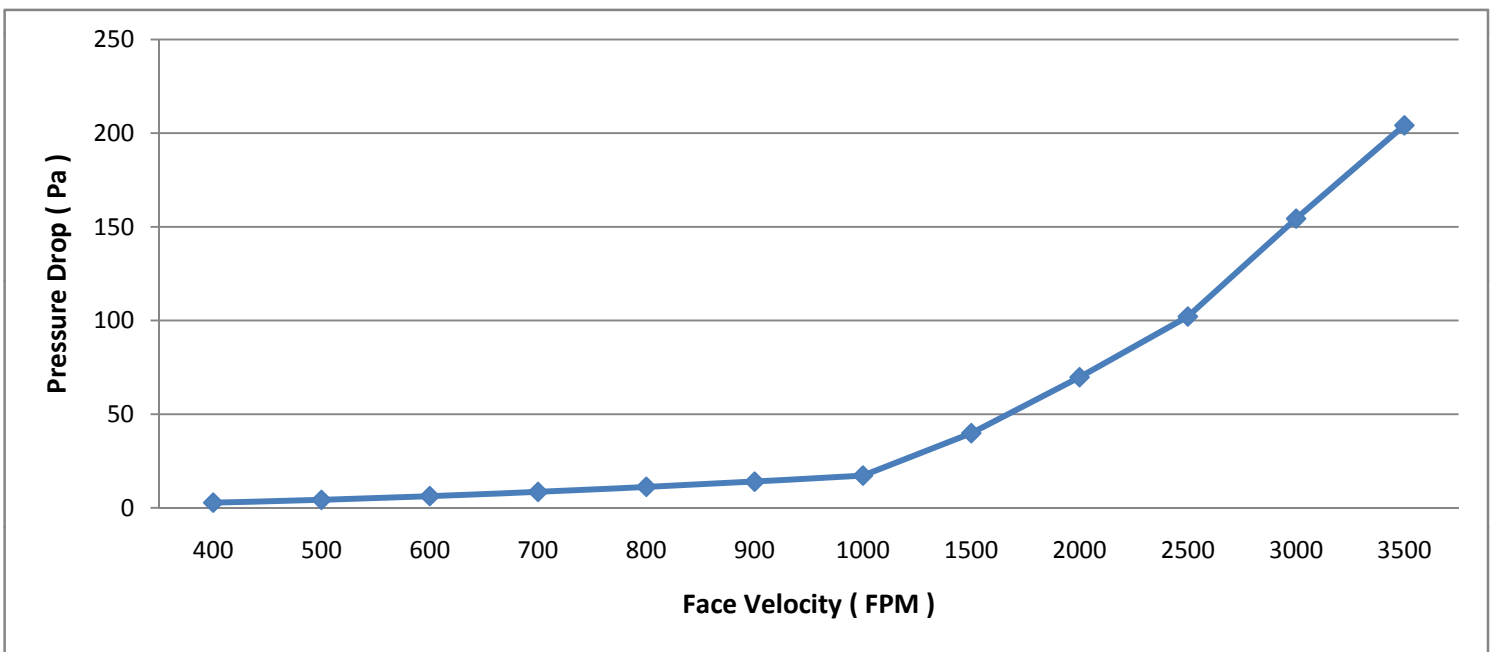


**Performance Data: Velocity vs. Pressure Drop**

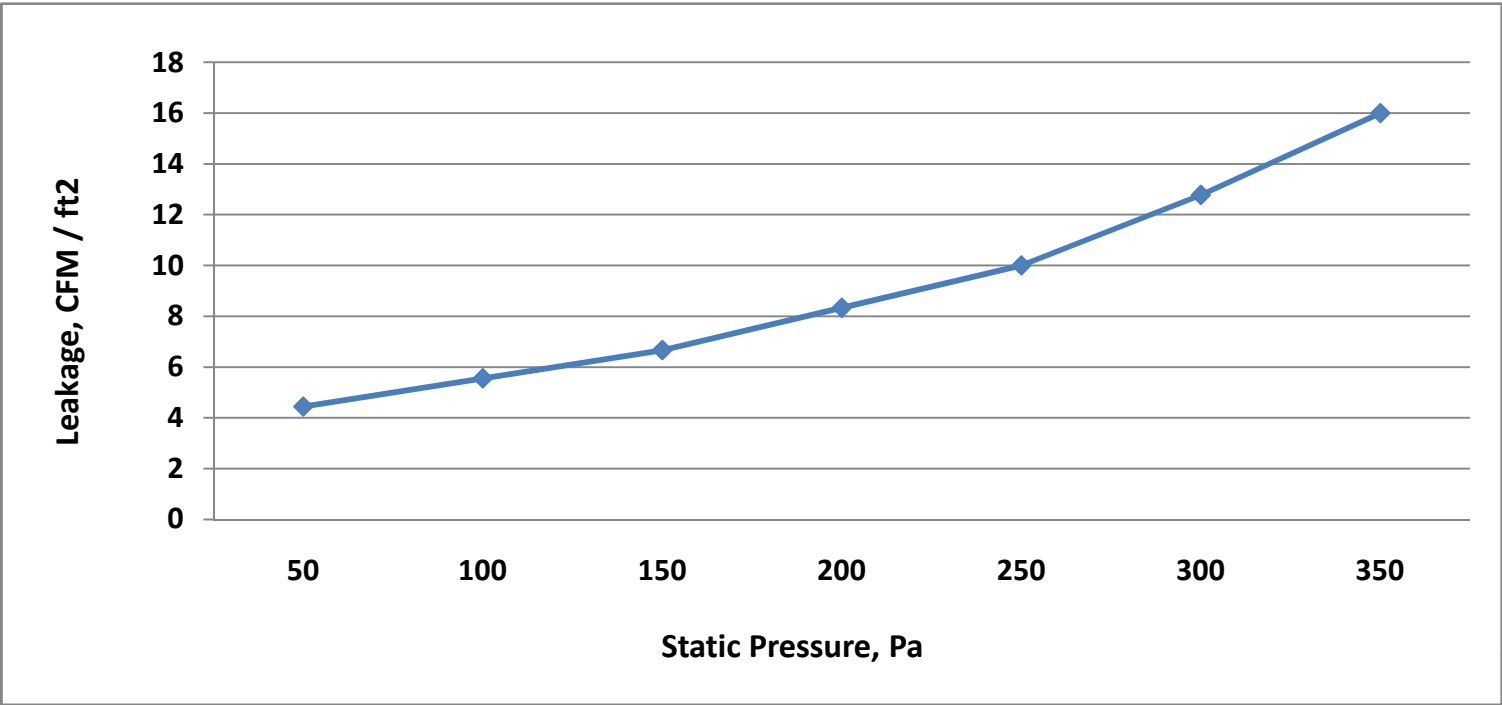
**Damper Size: 300 X 300**



**Damper Size: 600 X 600**



**Fire Damper Leakage Data:**



Spectrum Industries began its journey in 1994 with the brand name Cosmos. Today, 17 years hence, Cosmos has delivered promise growing vertically and horizontally. The company has diversified into 3 brands :

- Spectrum Industries (Air Distribution Products Manufacturing )
- Space HVAC Systems Pvt. Ltd. (H.V.A.C.system design / planning / Execution and after sales)
- Savitru Aircon Pvt.Ltd. ( Indian partner for various international brands)

## Spectrum Industries

Spectrum Industries manufacture "Cosmos Air Distribution Products". Cosmos enjoys being a leading brand in India. It has a wide product range of Air Distribution Products. It is one of the most preferred air distribution products by HVAC consultants across India and is recommended for various projects.

## Highlights

- 2 modern factories with a total area of 35000 sq.ft.
- One manufacturing facility is for Aluminum products
- The other for sheet metal products
- Both the factories are equipped with modern machines like CNC Turret punching presses, Press Breaks, Clinching machines and Welding (CMT) Robot
- The assembly shop is equipped with pneumatically operated tools.
- A third manufacturing facility is under construction with a total area of 25000 sq.ft.
- Sound reverberation room for noise testing is under construction. It is supported by Indian Institute of Science, Bengaluru
- The factory has a special wind tunnel for VAV calibration & testing. It is the only company in India to supply dynamically calibrated VAVs
- Team strength : 100 +
- The sales are handled by Head Office in Mumbai
- Clients are from across India and world.

CNC Turret punching



CNC Press Break



Clinching Machine



Welding Robot



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**A Wide Range of High Quality Air Distribution Products.**

## SPECTRUM INDUSTRIES

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