

COMBINATION FIRE AND SMOKE DAMPER



INTRODUCTION

Combination Fire/Smoke dampers function as both a fire damper and a smoke damper in a single unit. HVAC system designers often combine smoke barriers and fire rated partitions, requiring both a fire damper and a smoke damper to be installed in the same location. A combination fire/smoke damper is recommended in this situation.

They are used in HVAC penetrations where a wall, floor, or ceiling is required to have both a fire damper and smoke damper.

All combination fire/smoke dampers require factory installed electric actuators. They are controlled by a smoke or heat detector signal, fire alarm or other building control system to prevent the spread of smoke.

Manual or automatic override allows the damper to be used as part of an engineered smoke control system. When temperatures exceed the closure temperature of the damper, the blades close and lock to protect the integrity of the fire rated partition.

The things to consider when selecting and applying a combination fire smoke damper are the same as those for fire dampers and smoke dampers. They are:

- Hourly Fire Resistance Rating
- Leakage Rating
- Elevated Temperature Rating
- Operational Rating
- Blade Design

The COSMOS model FSD is designed to prevent the spread of fire and smoke through ventilation ductwork in walls and floors. From receiving an alarm the power to the damper actuator is removed releasing the actuator spring to release closing the damper.

The dampers also include electrical thermal sensor and a secondary mechanical fusible link that prevent the damper from opening if the temperature has reached 74 °C.

COSMOS make fire/smoke dampers are always supplied with the appropriate factory-mounted actuator.

STANDARD CONSTRUCTION

Frame: 16 gauge (1.6mm) galvanized steel interlocking hat section channel frame construction.

Blade: 16 gauge (1.6mm) galvanized 3 “V” formed.

Sleeve: 20 gauge (1.0mm) galvanized construction.

Closure Devise: Electric actuator or fusible link with closure temperature of 165 °F (74 °C). Others are available.

Bearings: Brass bushing for friction free operation.

Axial: 16mm dia. MS steel.

Linkage: Stainless steel concealed in the channel frame.

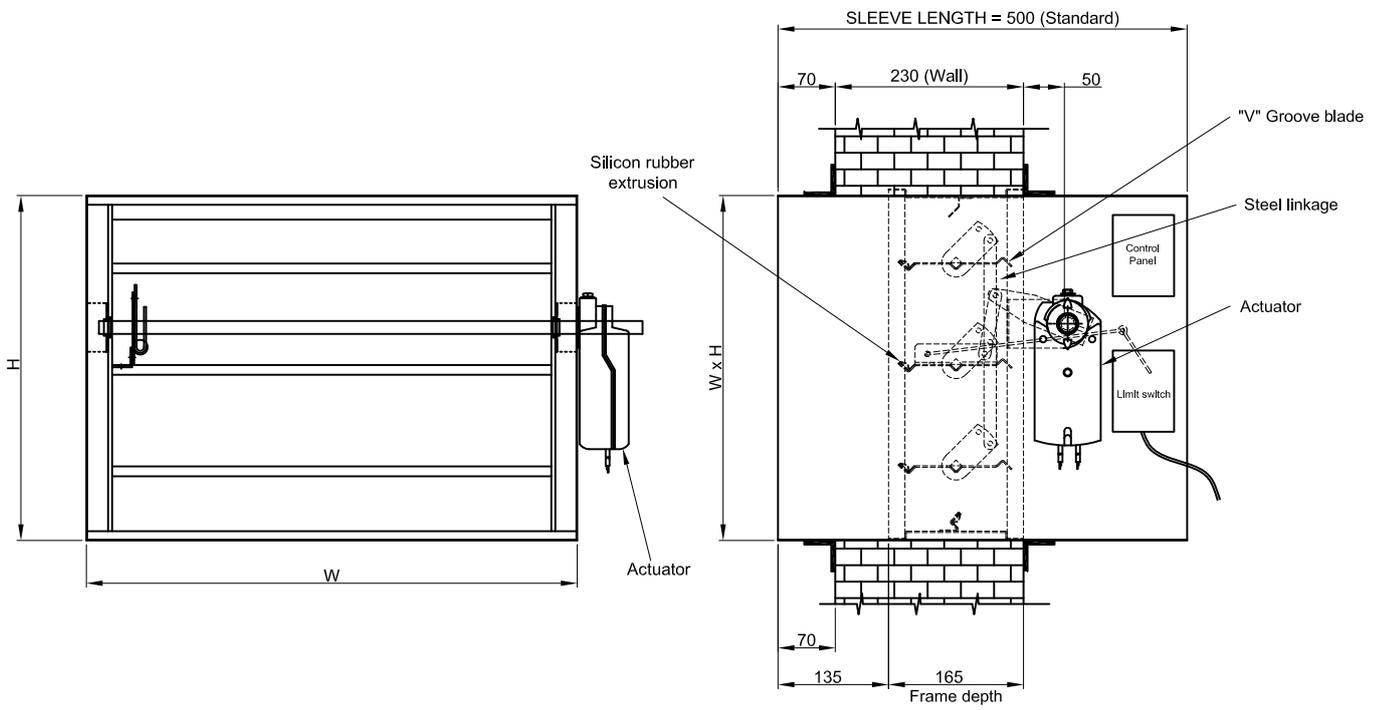
Blade Seal: Mechanically fixed Silicon on “V” groove blade.

Jamb Seal: Stainless steel.

Linkage: Stainless steel concealed in the channel frame

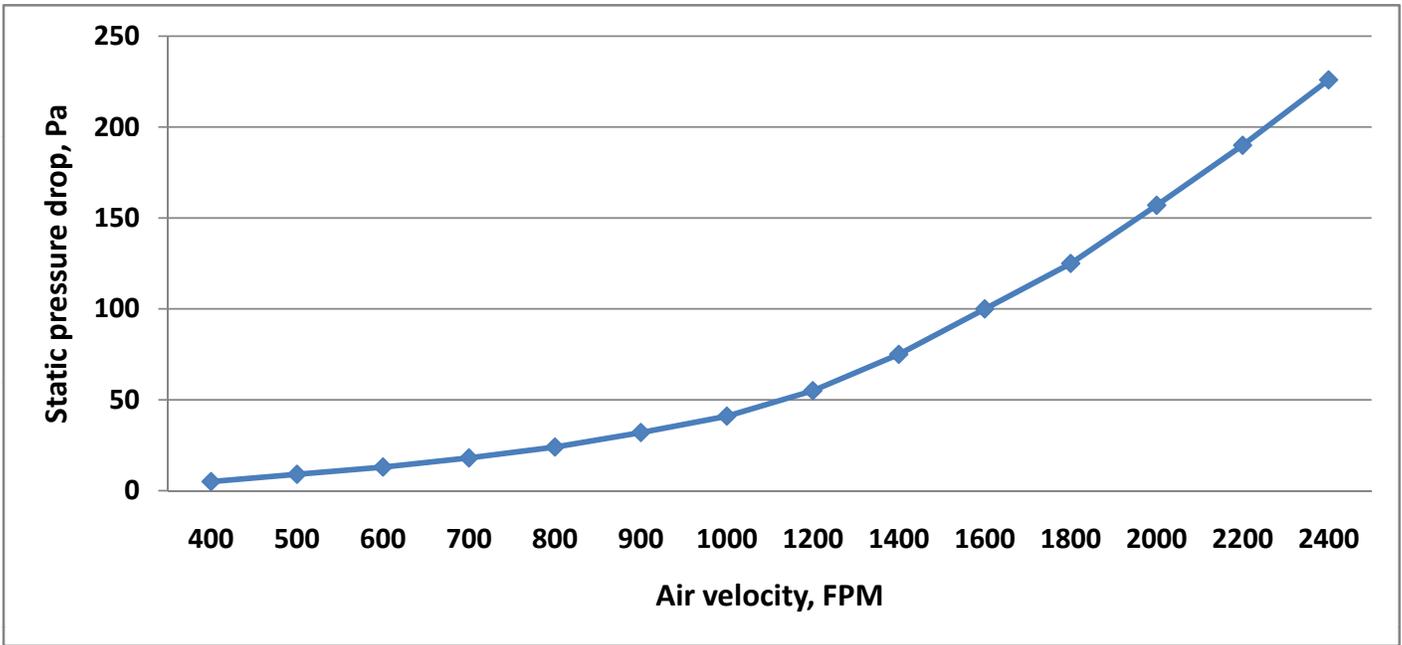
Dimensional data

FIRE & SMOKE DAMPER



Pressure Drop Data:

Fire and Smoke Damper size: 300 X 300



Fire and Smoke Damper size: 600 X 600

