UL Classified Fire Dampers by Air Master

Air Master, the pioneers, who introduced world class air distribution products for the first time in India in the year 1997 now once again bring to you the UL Certified fire and smoke dampers from their new plant located in Bangalore with state-of-the-art plant and machinery.

Facts about Fire

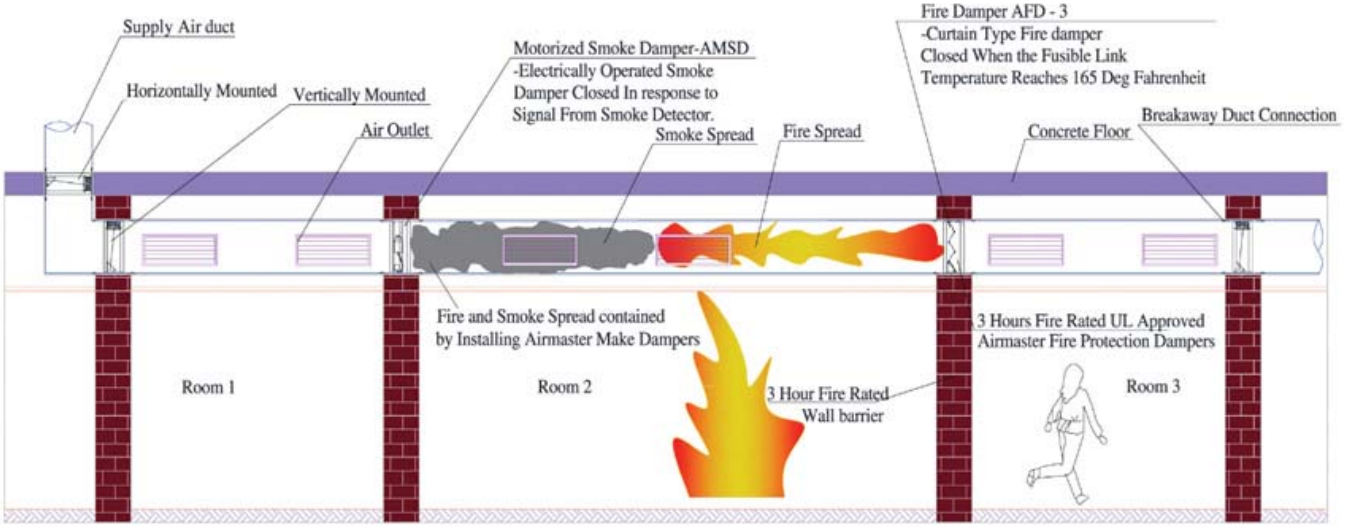
- Fire is a reality and time is a factor to save
- Fire occurs at any time any place irrespective of its occupancy
- Fire is a friend when it is with in limits but it become the worst enemy when it rages beyond our control
- Its a matter of seconds you will be left when fire changes from smoke to flaming state
- Fire is caused from our daily Living style which impossible for us to change.
- A Fire can cause potential damage to Life and severely damage the property and bring the business to a virtual halt and its another potential threat in todays era of highly competitiveness

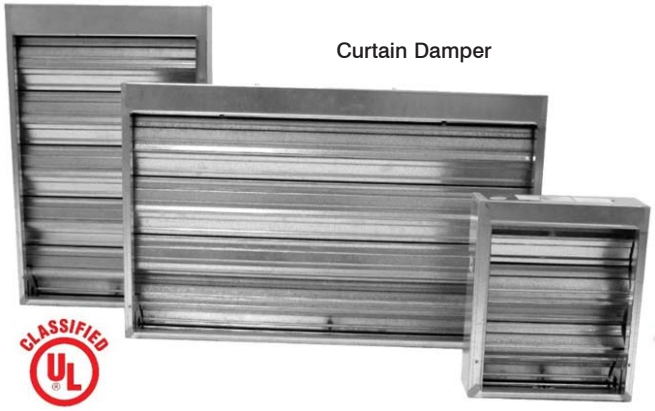
Smoke and Flames rising from residential buildings, hotels, warehouses have become a common sight now-a-days. Out of 1.2 million fires reported in the USA in 2013, almost 39% of the cases were structural fires causing more than 2800 deaths and $9.5 billion in property damage. The Centre for Disease Control and Prevention notes death from fires and burns are the fifth most common cause of unintentional injury deaths and third leading cause of unintentional injury deaths and third leading cause of fatal home injury. Smoke inhalation during fire accidents is another major reason for deaths in such cases.

In a case study conducted by NFPA, it was found that the HVAC system was not linked to smoke detector system and did not shut off during fire accident. The air from the operating HVAC system and natural ventilation increased the growth of the fire. It is, therefore, important to cut-off air supply by shutting down the HVAC system during fire thereby, preventing the spread of fire and smoke. Various fire safety equipment are prescribed by national authorities in their building codes to overcome fire hazards in order to save life and property. One such requirement is the use of Fire Dampers in the HVAC system.

What is a Fire Damper?

Fire damper is a device installed in an air distribution system or an air transfer opening designed to close automatically upon detection of heat interrupting airflow and thereby, restricting the passage of fire in the process. Fire dampers are installed in fire rated walls or barriers or partitions where the HVAC ductwork penetrates ensuring that their integrity is maintained. The location and installation procedure of fire dampers should be in accordance with the widely accepted and recommended NFPA 90A – Standard for installation of Air-Conditioning.





Curtain Damper

How are UL Fire Dampers different from other Fire Dampers?

UL Dampers are of very precise quality and reliable in the outbreak of a fire. They are thoroughly tested at factory and each component comprised in the UL damper is a UL Listed component including Actuators, Thermoelectric Tripping Device, Electrical Cables, Flexible Conduit, Silicon and Rubber Sealants etc. The GI sheets are also of special quality with a higher GSM coating as compared to regular dampers.

Smoke Damper

What sets UL dampers apart?

The most prominent testing laboratories globally for evaluating resistive materials and assemblies is the Underwriters Laboratory (UL), USA. Air Master has taken great efforts in developing fire dampers and getting it certified from UL after passing their stringent testing procedures successfully. Our dampers have withstood the demanding test requirements of UL 555 and UL 555S standards. Both these standards call for a series of tests like: cycling test for operational reliability, salt water spray test, fire endurance test followed by high pressure hose stream test, leakage test, dynamic closure test and overall integrity of the damper is also checked.

The factory visits by UL on a continuous basis and their quality audits ensures that manufactures strictly hang on to the UL procedures and quality standards ensuring zero defect delivery to customers. This implies that manufacturers cannot deviate to any small extent from the UL procedures. UL listed products are finally dispatched after UL labels are proudly pasted on each and every fire damper. The installation has to be carried out strictly as per the installation instructions that is sent along with every shipment.

Air Master UL Fire Dampers

All Air Master fire dampers are tested and certified by UL. Air Master fire dampers are developed with the intention of maximizing the occupant's safety. The UL directory online can be checked on www.ul.com for the listing by filling in the company name, country and the code EMME which pertains to fire dampers. Air Master has multiple listing for both Middle East and India.

Types of Fire Dampers

There are two basic types of damper operations: a) Curtain type b) Multiple blade type. Though construction of both dampers are different, the purpose is the same – to interrupt airflow in order to restrict the passage of fire & smoke. The following types of models are manufacture by Air Master:

1. AFD-3 - Curtain Type Fire Damper (3 hour rated)
2. AMFD - Air Master Fire Damper
3. AMFSD - Air Master Fire and Smoke Damper
4. AMSD - Air Master Smoke Damper

Curtain type: The blades are folded and held under spring tension using a bi-metal fusible link. Heat of 165°F (74°C) inside the duct is sufficient for fusible link to melt and break, thus, allowing blades to shut like a curtain under the force of the springs attached. The fire damper acts as a barrier between fire and non-fire zones thus containing the fire in the compartment from which it originated. This gives sufficient time for occupants to escape and move into safety.

Multiple blade type: This model operates mainly using an electric actuator. Based on the application – i.e. Fire, Smoke, Combination Fire & Smoke, the actuator can be configured with the Building Management System (BMS) or a smoke detector. The electric actuator is energized with power supply to keep the damper open under normal conditions. When heat or smoke is detected by the thermal responsive device (TRD) or smoke detector, power supply to actuator will be disconnected.

Should the BMS be used to close the actuator, it has to be configured to disconnect the power supply to the actuator. Once the circuit is open, the damper closes automatically by the force of the springs inside the actuator. Such actuators are otherwise known as spring return actuators. TRDs are supplied with a rest button to re-establish power supply, thereby, keeping the damper in open position.

The open close position can be monitored by introducing a limit switch or auxiliary switch in the damper which communicates the open or close status to the BMS or a standalone control panel. As a result, further actions could be programmed like switching off all HVAC units or informing Fire department and so on. ■

For further information, visit us at
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