

Mechanical Smoke Ventilation Systems

Mechanical smoke ventilation is designed to speedily remove smoke from common areas such as corridors and lobbies.

Dyer's systems control fire rated fans, dampers, grills and vents in order to manipulate smoke and poisonous gasses up and out of the building.

Dyer supply, install and commission the complete mechanical ventilation system.



The basic principle:

When smoke is detected in the protected area, a smoke sensor sends a signal to the main operational control panel.

An electro-mechanical damper will open on the "fire floor" into the protected vertical smoke shaft. This is the escape route for the smoke laden air.

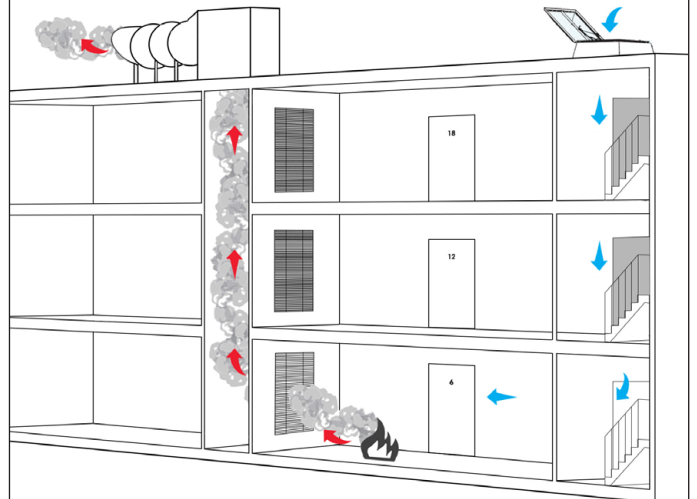
Fire rated smoke ventilation fans, located at the top of the shafts, will draw the smoke / air mixture up and out of the exhaust duct.

The pressure created by the fans in the stairway will pull the door open. At the same time, a Smoke Heat Exhaust Vent will open at the top of the stairs to allow fresh air into the staircase.

These systems are fully automatic to allow safe escape for residents and clear access for firefighters.



Example of application in case of fire:



Damper opens and fan starts. The smoke and gas is drawn up and out via the exhaust duct.

Pressure causes the stairway fire door to open. The top of stair SHEV opens to bring fresh air in.

Resulting in a safe smoke-free area with clear escape routes.

