

Firex™

Natural Heat & Smoke Relief



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Firex Product Details

PRODUCT DESCRIPTION

The Firex is an economical automatic heat and smoke vent designed to allow heat and smoke to escape in the event of a fire. Firex units have been manufactured continuously since 1956, with tens of thousands of units installed around the world. While the core concept has remained the same for the last sixty years, the Firex has been continuously upgraded and improved to stay up to date to meet customers' needs.

STANDARD FEATURES

- Closed Height: 15 ¾ inches
- Opening width: 4 ft. - 6 ft.
- Opening length range: 4 ft. – 9 ft.
- Venting area range: 16 ft² - 54 ft²
- Wind uplift: 40 lbs./ ft²
- Snow load: 10 lbs./ft²
- Net weight range: 345 lbs. - 590 lbs.
- Automatic or Manual Operator
- Aluminum Door Panels

OPTIONAL FEATURES

- Aluminum base option
- Polycarbonate lids for natural daylighting*
- 16 ga galvanized steel lids with G90 mill finish
- Custom lid finishes
- Burglar bars
- Bridge splices available to join multiple units
- Electric, thermos resettable links available
- Electrical Testing Lab (ETL) registered links

PRODUCT BENEFITS

- Lids open automatically when subjected to elevated temperatures from fires.
- Lids have a positive lock in the open position against untimely closing.
- Double-wall lids have laminated honeycomb insulation between them to protect against condensation and heat loss.
- Low-profile design does not detract from the architectural concept of modern buildings.

INDUSTRY APPLICATIONS

- Breweries
- Chemical plants
- Emergency Stairwells
- Food Handling Areas
- Foundries
- Printing presses
- Breweries
- Leather Manufacturing
- Machine shops
- Metal stamping plants
- Painting departments
- Paper mills
- Leather Manufacturing
- Performance Halls
- Universities & Schools
- Warehouses
- Combustible Chemicals
- Theaters
- + Others

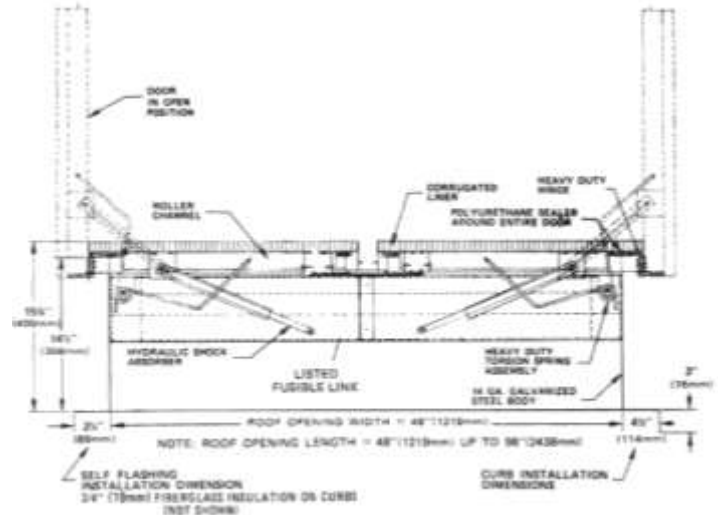
Firex™ Submittal Data

STANDARD FEATURES

- Closed Height: 15 ¾"
- Opening width: 4'
- Opening length: 4' - 8'
- Venting area: 16 - 54 ft²
- Net weight: 345 lbs. - 590 lbs.
- Wind uplift: 120 lbs./ft²
- Snow load: 10 lbs./ft²
- Automatic or Manual Operator
- Aluminum Lids

OPTIONAL FEATURES

- Aluminum base option
- Polycarbonate lids for natural daylighting*
- 16 gauge galvanized steel lids with G90 mill finish - *other finishes available*
- Electric, thermos resettable links available
- Electrical Testing Lab (ETL) registered links available
- Burglar bars
- Bridge splices available to combine multiple units



MODULE NUMBER	INSIDE DIMENSIONS (W × L)	VENT AREA (FT ²)	NET WT. (LBS)
FX-44	48" x 48"	16	345
FX-45	48" x 60"	20	380
FX-46	48" x 72"	24	415
FX-47	48" x 84"	28	450
FX-48	48" x 96"	32	485
FX-55	60" x 60"	25	425
FX-56	60" x 72"	30	465
FX-57	60" x 84"	35	520
FX-58	60" x 96"	40	540
FX-66	72" x 72"	36	525
FX-67	72" x 84"	42	545
FX-68	72" x 96"	48	565
FX-69	72" x 108"	54	590

Firex™ – Designing for Smoke Relief

The proper size and quantity of fire ventilators required is generally based on the occupancy class of the building relating to the combustible nature of its contents. Listed below are general classes of occupancy and recommended vent areas. These are intended as a general guide only and designers should consult NFPA 204M or Moffitt if specific questions arise.

HOW TO SPECIFY

1. Determine total square feet in space to be protected.
2. See Table (1) to determine classification of occupancy, i.e. low, moderate or high.
3. See Table (2) to determine floor area protection required in square feet.

OCCUPANCY TYPES			
LOW	MODERATE	HIGH	
Metal Stamping	Automobile Assembly	Rubber Products	
Machine Shops	Leather Goods Mfg.	Paper Mills	
Foundries	Printing Presses	Chemical Plants	
Breweries	Combustible chemicals areas	Painting Areas	
Food Processing	Warehouses	Oil Quenching	

Table 1

Type of Occupancy Based on Heat Release	Max. Distance between center lines of any two vents	Max. Ratio of effective vent area to floor area	Max. Area in sq. ft. per 32 ft² FIREX
Low	150	1:150	4800
Moderate	120	1:100	3200
High	75 - 100	1:30 - 1.50*	960 - 1600*

Table 2

Venting requirements based on tests and experience compiled by the national fire protection association (NFPA)

- Building designers and fire protection engineers cannot rely on casual inclusion of skylights, windows, or monitors as adequate venting means.
- The vent opening should measure at least four (4) feet in any direction.
- Opening mechanism must operate automatically in the event of a fire, without the use of electricity or manual activation.
- All automatic vents should be designed to also open manually.
- Opening mechanisms must be made of non-corrodible materials.
- Vents are not a substitute for sprinklers or other fire extinguishing equipment.
- Vents should remain securely closed against internal pressure build-up during wind and rain.
- Vents should be regularly inspected and manually tested to assure proper operation.
- The fusible link should never be painted or tampered with.
- In the case of gravity operated vents (dropout panels) the vents should be kept clean of dirt, airborne debris, ice, and snow to insure proper operation.
- Vent spacing should be based on the building occupancy and the heat release potential of the contents as detailed in NFPA 204M dated 1991.
- Noncombustible curtain boards should also be utilized inside a building to assist in directing smoke and heat towards the vents for relief.
- Vent spacing should be based on building occupancy and the heat release potential of the building contents.

Firex – The Need for Fire Venting

*Without MOFFITT FIREX™ heat & smoke ventilator
Solid Roofs Spread Heat & Flames*



When floor areas are large there is a rapid lateral fire spread in an un-vented building.

Temperature rise in a building without fire ventilation was over three times the temperature rise in the building with fire venting. Where fire venting was absent, the temperature exceeded that point at which the structural steel would become buckled and distorted.

The hot gases from a fire which involves only part of the floor area of the building rise to the ceiling and form a layer which does not usually mix to any extent with the underlying cold air. The layer of hot gases will gradually build down to floor level.

*With MOFFITT FIREX™ heat & smoke ventilator
Ventilated Roofs Allow Smoke & Heat to Escape*



PREVENTS SMOKE LOGGING: First and foremost, by automatically releasing the heat, smoke and general products of combustion Fire venting enables firemen to see the fire, to approach the source and tackle it without breathing apparatus.

PREVENTS EXPLOSION: Automatic fire venting quickly removes the partially burnt gases which would otherwise accumulate in the roof space and present a danger of explosion.

REDUCES LATERAL SPREAD OF FIRE: By preventing heat from mushrooming over the fire area and heating materials to the point of ignition, fire venting has a marked effect on reducing the lateral spread of fire.

REDUCES WATER DAMAGE: By enabling jets to be applied straight onto the fire, instead of being directed generally towards the smoke logged areas. Fire venting reduces water damage throughout the building. Furthermore, where fire venting is used in conjunction with sprinkler systems, the prevention of lateral heat spread reduces the number of sprinkler heads in operation to only those directly centered over the fire.

LIMIT ROOF TEMPERATURE: A well designed fire venting system will limit the temperature in the roof space of a building to well within the softening temperature of structural steel. This prevents distortion and collapse of the building. Heat and smoke venting keeps temperatures from reaching extremes that can ultimately result in keeping the building standing.