

U.S. SMOKE & FIRE Escalator Shield™

Protects escalator openings from fire and smoke in accordance with NFPA 13 8.14.4. Prevents vertical smoke migration to other floors, and allows for a safe egress from building.



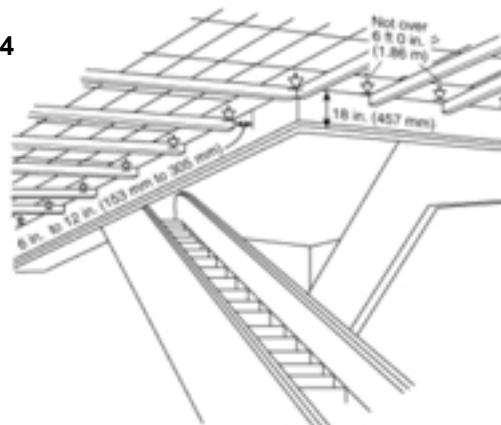
Life Safety, Accessibility, Design Freedom

US Smoke & Fire Curtain LLC provides a robust and effective means of achieving smoke and fire protection for escalators and convenience stairs. NFPA 13, the Standard for sprinklers, requires protection of openings between two floors. Where moving stairways, staircases, or similar floor openings are unenclosed, the floor openings involved shall be protected by closely spaced sprinklers in combination with smoke draft curtains. The draft curtains shall be located immediately adjacent to the opening, shall be at least 18 inches deep, and shall be of noncombustible or limited-combustible material that will stay in place before and during sprinkler operation.

Our gravity fail-safe smoke draft curtains have market-leading features and meet demanding specifications, yet offer a cost-effective and flexible solution to fire and smoke control and are UL listed as an opening protective. Our exclusive light-weight curtain material is UL Listed, Fire Rated at 1800°F for one hour or two hours, and offers an optional smoke seal rating carrying the UL S label for full smoke curtains used in conjunction with escalators.

Under normal conditions our Escalator Shield™ Smoke and Draft Curtains are retracted in a steel head box hidden from view in the ceiling. Upon receipt of a signal from the fire alarm system, or the complete loss of power or communication, the system descends by gravity. Thus deployment is Gravity Fail Safe and does not require battery-backup to descend. Our Smoke and Draft Curtain systems integrate with existing fire and alarm systems and provide Fail Safe Deployment. In the event the main power or the back-up generator fails, our Smoke Curtains will independently deploy.

NFPA 13 8.14.4 (2002)



Escalator Shield™ Features:

- Smoke and Fire Protection in One Solution: UL Listed opening protective for 1 or 2 hour fire rating
- UL 10B, 10D, UL S Label
- Advanced & Mature Technology
- Controlled Descent
- Lightweight, easy to lift by hand
- Installs Compactly Overhead—as little as 6” of ceiling headroom
- Available in Sizes up to 90 feet wide x 42 feet high
- Low Life Cycle Cost
- Fail Safe Design
- Battery Back-up standard, NOT Required for Gravity Fail Safe Deployment



We offer the Escalator Shield™ in two variations: **DRAFT** and **SMOKE CURTAIN**.

AUTOMATIC ESCALATOR SHIELD™ DRAFT CURTAIN

When sprinklers are installed in a building, the lower level opening shall have sprinklers on 6-foot centers and a minimum 18-inch draft curtain around the entire opening. When not in use, our Automatic Escalator Shield™ Draft Curtain remains retracted above the ceiling, concealed by a 2" shadow gap (picture, right, shows curtain descended). The purpose of the draft curtain is to force the heat down and back on itself, which will result in a curtain wall of sprinklers operating in the fire area. This function is to keep the fire from wrapping up the balcony/opening and spreading to the floor above. This requirement is significant with respect to sizing the sprinkler design area and number of potentially flowing heads.



Escalator Draft Curtain descended

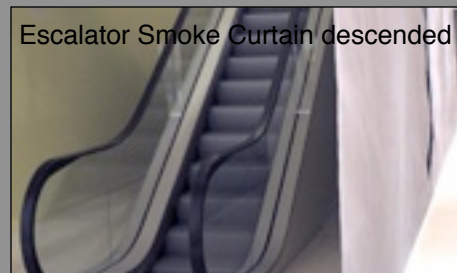
AUTOMATIC ESCALATOR SHIELD™ SMOKE CURTAIN

Escalators can form a direct means for hot smoke to enter floors above. For the project shown on the right, automatic smoke curtains were installed on the three open sides to the escalator. Upon receipt of a fire signal, the curtain along the length of the opening will drop to full height, the two end curtains will descend part way until a brake is energized in the motor. The partial drop will prevent the hot smoke entering the floor above and also allow egress from the escalator.

Optional Two Stage Descent – Upon activation of the fire alarm system our smoke curtains can be partially deployed (typically to 6' 8") for a specified period of time, followed by full deployment after the time elapses, to allow a ready means of egress.

Optional Remote Key Switch – Smoke Curtains will deploy upon receipt of an active fire alarm. The remote key switch provides the ability to retract the curtain for re-set, testing, and maintenance.

Optional Audible and/or Visible Alerts – Upon activation audible and visible alarms can be triggered to notify those in the proximity that the Smoke Curtains are descending.



Escalator Smoke Curtain descended



Escalator Smoke Curtain descending