

2015 International Mechanical Code Errata

(Portions of text and tables not shown are unaffected by the errata)

1ST PRINTING (September 1, 2015)

CHAPTER 5 EXHAUST SYSTEMS

[E] 513.5.3.1 Group I-1 Condition 2; Group I-2 and ambulatory care facilities. In Group I-1 Condition 2; Group I-2 and *ambulatory care facilities*, where doors are installed across a *corridor*, the doors shall be automatic closing by smoke detection in accordance with Section 716.5.9.3 of the *International Building Code* and shall have a vision panel with fire-protection-rated glazing materials in fire-protection-rated frames, the area of which shall not exceed that tested.

[F] 513.11.1 Equipment room. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour fire-resistance-rated fire barriers constructed in accordance with Section 707 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both. **Power distribution from the two sources shall be by independent routes.**

513.5 Smoke barrier construction. Smoke barriers required for passive smoke control and a smoke control system using the pressurization method shall comply with **Section 709 of the *International Building Code*.** ~~Smoke barriers shall be constructed and sealed to limit leakage areas exclusive of protected openings.~~ The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

1. Walls: $A/A_w = 0.00100$
 2. Interior exit stairways and ramps and exit passageways: $A/A_w = 0.00035$
 3. Enclosed exit access stairways and ramps and all other shafts: $A/A_w = 0.00150$
 4. Floors and roofs: $A/A_F = 0.00050$
- where:

A = Total leakage area, square feet (m^2).

A_F = Unit floor or roof area of barrier, square feet (m^2).

A_w = Unit wall area of barrier, square feet (m^2).

The leakage area ratios shown do not include openings created by gaps around doors and operable windows. The total leakage area of the smoke barrier shall be determined in accordance with Section 513.5.1 and tested in accordance with Section 513.5.2.

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[F] 513.5 Smoke barrier construction. Smoke barriers required for passive smoke control and a smoke control system using the pressurization method shall comply with the *International Building Code*. ~~Smoke barriers shall be constructed and sealed to limit leakage areas exclusive of protected openings.~~ The maximum allowable leakage area shall be the aggregate area calculated using the following leakage area ratios:

1. Walls: $A/A_w = 0.00100$
2. Interior exit stairways and ramps and exit passageways: $A/A_w = 0.00035$
3. Enclosed exit access stairways and ramps and all other shafts: $A/A_w = 0.00150$
4. Floors and roofs: $A/A_f = 0.00050$

where:

A = Total leakage area, square feet (m^2).

A_f = Unit floor or roof area of barrier, square feet (m^2).

A_w = Unit wall area of barrier, square feet (m^2).

The leakage area ratios shown do not include openings created by gaps around doors and operable windows. The total leakage area of the smoke barrier shall be determined in accordance with Section 513.5.1 and tested in accordance with Section 513.5.2.

[F] 513.6.2 Maximum pressure difference. The maximum air pressure difference across a smoke barrier shall be determined by required door-opening or closing forces. The actual force required to open exit doors when the system is in the smoke control mode shall be in accordance with the *International Building Code*. Opening and closing forces for other doors shall be determined by standard engineering methods for the resolution of forces and reactions. The calculated force to set a side-hinged, swinging door in motion shall be determined by:

$$F = F_{dc} + K(WA\Delta P)/2(W-d) \quad \text{(Equation 5-1)}$$

where:

A = Door area, square feet (m^2).

d = Distance from door handle to latch edge of door, feet (m).

F = Total door opening force, pounds (N).

F_{dc} = Force required to overcome closing device, pounds (N).

K = Coefficient 5.2 (1.0).

W = Door width, feet (m).

ΔP = Design pressure difference, inches (Pa) water gage.

[F] 513.10.1 Exhaust fans. Components of exhaust fans shall be rated and certified by the manufacturer for the probable temperature rise to which the components will be exposed. This temperature rise shall be computed by:

$$T_s = (Q_c/mc) + (T_a) \quad \text{(Equation 5-2)}$$

where:

c = Specific heat of smoke at smoke-layer temperature, Btu/lb°F (kJ/kg °K).

m = Exhaust rate, pounds per second (kg/s).

Q_c = Convective heat output of fire, Btu/s (kW).

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T_a = Ambient temperature, °F (K).

T_s = Smoke temperature, °F (K).

Exception: Reduced T_s as calculated based on the assurance of adequate dilution air.

[F] 513.11.1 Equipment room. The standby power source and its transfer switches shall be in a room separate from the normal power transformers and switch gear and ventilated directly to and from the exterior. The room shall be enclosed with not less than 1-hour fire-resistance-rated fire barriers constructed in accordance with Section 707 of the *International Building Code* or horizontal assemblies constructed in accordance with Section 711 of the *International Building Code*, or both. **Power distribution from the two sources shall be by independent routes.**

[F] 502.4 Stationary storage battery systems. Stationary storage battery systems, as regulated by Section 608 of the *International Fire Code*, shall be provided with ventilation in accordance with this chapter and Section 502.4.1 or 502.4.2.

Exception: Lithium-ion **and lithium metal polymer** batteries shall not require **additional** ventilation **beyond that which would normally be required for human occupancy of the space.**

[F] 502.4.3 Supervision. Mechanical ventilation systems required by Section 502.4 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.

[F] 502.5.3 Supervision. Mechanical ventilation systems required by Section 502.5 shall be supervised by an approved central, proprietary or remote station service or shall initiate an audible and visual signal at a constantly attended on-site location.