

SMOKE AND HEAT VENT STANDARDS

Dome or Metal Lid Mechanically Operated units

Standard		Requirements																					
		Approved & Labeled Listed	Rated to Open in Open Position against a 10 psf Live Load	Self-Locking in Open Position	Simulated Fire Test	Wind Uplift Test	Burning Brand Test	Wind driven Rain Test	Speed of Opening Test	Repetitive Cycles Test	Impact Test	UV Exposure Plastic Impact Test	Inside Manual release	Outside Manual Release	Smoke Generation Test	Self-Ignition Temp Test	Flame Spread Test	Minimum Vent Size	Corrosion Resistance	Dust Exposure Open/Lock	Quality Control Doc'n	Fusible Link	
UL 793	Prev (2003)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes - 250	Yes	Yes	Yes	Yes	No	No	No	16sf	YES	Yes-7 hr exposure	Yes	160-286°F	
	2008 (Listed)	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes-250	Yes	Yes	Yes	Yes	No	No	No	16sf	Yes	Yes-7 hr exposure	Yes	160-520°F	
FM 4430 ##	Prev	Yes	Yes	Yes	Yes	Yes	Yes	No	Yes	Yes - 60	Yes	Yes	Yes	Yes	No	No	No	16sf	?	?	?	?	
	2007 (Approved)	Yes	Yes	Yes	Yes	Yes-60psf load (plastic dome only)	Yes-60psf load =5psf incr	No	No	Yes-10 sec	Yes-60	Yes# +Hail test per FM4473	No	Yes	Yes	No	No	No	?	?	?	Yes - as described	N/A
ICC-ES AC331	Prev	Yes	Yes	Yes	No	Yes*	Yes	Yes	Yes**	Yes - 5	No	Yes***	No	Yes	Yes	Yes	Yes	16sf	?	?	?	?	
	2008 (Recognized)	Yes	Yes	Yes	Yes	Yes - 5 tests per op mode	Yes - 30psf load	No	Yes	Yes - 2.5 sec min	Yes - 250	Yes#	Yes-per ICC-ES AC16	Yes	Yes	No	No	No	16sf	Yes	Yes - 7 hr exposure	Yes (per ICC-ES AC10)	160°-286°F

* UBC 15-7 and ICC ES Acceptance Criteria AC16-7 (now ICC ES AC331)

** Units must operate within 5 minutes @ 500 deg F

*** Tensile test performed on low modulus materials; Charpy impact test performed on high modulus materials

Impact test not required for units with steel wire mesh/safety cage above nonmetallic cover

Provides for **optional** Early Suppression Fast Response (ESFR) sprinkler system compatibility test, windborne debris test per FM4350 and 5 psf windload resistance test on fully open vent

? Standard requirements not known