TRIGGERS for 2013 Title 24, Part 6

Commercial Refrigeration

Refrigeration System Features

Application: Retail food stores with 8,000 square feet or more of conditioned area, and that utilize either: refrigerated display cases, or walk-in coolers or freezers connected to remote compressor units or condensing units

	Mandatory Measures							
					Lighting Control [D] §120.6(b)3A, B			**Heat Recovery** [E] §120.6(b)4
Refrigeration Component Utilized	**Variable Speed Fan Control**[A] §120.6(b)1A	**Variable Setpoint Control** §120.6(b)1B, C	**Floating Suction Pressure** [B] §120.6(b)2A	**Liquid Subcooling** [C] §120.6(b) 2B	Timed Overrides: Allow ON <1 hour	Manual Overrides: Turn OFF after <1 hour	Motion Sensor: Reduce power by 50% (min.) within 30 min. after the area is vacated	Minimum 25% of THR
Condensers [F]	**YES**	**YES** [G]	no	no	no	no	no	no
Compressors [H]	no	no	**YES**	**YES**	no	no	no	no
Refrigerated Display Cases	no	no	no	no	**YES**	**YES**	**YES**	no
Associated HVAC	no	no	no	no	no	no	no	**YES**

[A] For fan-powered condensers

[B] Not applicable to: (1) single compressor systems without continuous variable capacity; (2) suction groups that comprise the high side of a two-stage or cascade system, have design saturated suction temperature of >30°F, or primarily serve chillers.

[C] Not Applicable to: (1) low temperature cascade systems condensing into additional refrigeration system; (2) existing systems being reused for an addition or alteration.

[D] Not applicable to stores open 140 hours or greater per week.

[E] Only if *Total Heat of Rejection (THR)* for individual refrigeration system is greater than 150,000 Btu/h at design conditions. Refrigerant charge in additional piping and equipment cannot exceed 0.35 lbs. per 1,000 Btu/h of recovery capacity. Exempt where: (1) site in climate zone 15; (2) systems are reused for an addition or alteration.

[F] Minimum condensing temperature set point less than or equal to 70°F. Refer to Table 1 (attached) for Minimum Specific Efficiency Requirements.

[G] Based on ambient drybulb or ambient wetbulb for air-cooled or evaporative-cooled applications respectively.

[H] Only for low temperature systems: (1) having design capacity equal or greater than 100,000 Btu/h; (2) design saturated suction temperature of l -10°F or less; (3) subcooled liquid temperature at 50°F or less; (4) saturated suction temperature operation at 18°F or higher.

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Table 1: Fan-powered Condensers Minimum Efficiency Requirements [I]

Condenser Type	Minimum Specific Efficiency	Rating Condition
Evaporative-Cooled	160 Btuh/Watt	100°F Saturated Condensing Temperature (SCT), 70°F Entering Wetbulb Temperature
Air-Cooled	65 Btuh/Watt	105°F Saturated Condensing Temperature (SCT), 95°F Entering Drybulb Temperature

[I] Referenced from Table 120.6-C in §120.6(b)

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