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2019 Building Energy Efficiency Standards

SUBCHAPTER 3

Section 120.0

NONRESIDENTIAL, HIGH-RISE RESIDENTIAL, HOTEL/MOTEL OCCUPANCIES, AND COVERED PROCESSES—MANDATORY REQUIREMENTS

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§120.1(a) General Requirements (New)

Edits to the scope of this section outlining the building types that are impacted by these ventilation standards:

120.1(b) - highrise residential

120.1(c) – nonresidential, hotel/motel

Noted in 120.1(a) – healthcare facilities are subject to the ventilation requirements of the California Mechanical Code as amended by OSHPD

§120.1(b) High-rise Residential Buildings (New)

New ventilation requirements for highrise residential dwelling units based on ASHRAE 62.2.

The new requirements include:

- Air Filtration of MERV 13
- Min 2 inch filters
- Balanced ventilation; or
- Continuously operating supply or exhaust with a maximum dwelling unit envelope leakage of 0.3 cfm/ft^2 of envelope surface area
  - Field verification of envelope leakage
- Field verification of minimum airflow
- Field verification of kitchen range hoods

§120.1(c) Nonresidential and Hotel/Motel Buildings (New)

New ventilation requirements for nonresidential and hotel/motel buildings based on ASHRAE 62.1.

The new requirements include:

- Air Filtration of MERV 13
- Min 2 inch filters
- Alignment with the Natural Ventilation Procedure
- Alignment with the Ventilation Rate Procedure for single zone and 100% outside air systems
- Altered the mulizone calculation as proposed by *addendum f* to 62.1-2016, which is currently out for public review
- Alignment with the Exhaust Ventilation

§120.1 Tables (New)

Table 120.1-B min ventilation rates for the breathing zone (including air classification)

Table 120.1-C – Zone air distribution effectiveness

Table 120.1-D – Min exhaust rates

Note:

Table 120.1-A – System Ventilation Efficiency

Used for the simplified multizone calculation

§120.1(g) Recirculation Limitations (New)

- Recirculation Limitations based on the requirements in ASHRAE 62.1-2016
- Includes specification on recirculation or transfer of air based on air classification, as listed in Table 120.1-B
- Includes specifications on transfer of mixed air and guidance on how to classify air for spaces not listed in Table 120.1-B

§120.1(d)3 Required DCV (New)

New requirements for demand control ventilation (DCV).

- New trigger for DCV for *all* spaces with an occupant density of 25 people per 1000 ft^2 with:
  - an air economizer; *or*
  - modulating outside air control; *or*
  - design outside airflow rate > 3,000 cfm

§120.2(e)3 Occupancy Sensing Zone Controls (New)

- Occupied standby – for specific spaces:
  - Occupancy sensor present for lighting controls; and
  - Table 120.1-B identified as eligible; and
- During occupied standby:
  - Cooling/heating setpoints reset by 2° F or 0.5° F if DDC
  - Zone ventilation reduced to zero while within active setpoints

§120.2(h) and (i) (New)

- Automatic Demand Shed Controls:
  - The entire section of 120.2(h) was moved to 110.12.

- Economizer Fault Detection and Diagnostics (FDD):
  - Expanded to apply to all cooling systems greater than 4.5 tons of cooling capacity what also include an air economizer

§120.3 through 120.5 (New)

- Clarification:
  - Added hot refrigerant lines under space heating systems
  - Clarified the pipe insulation requirement was “minimum”
  - Added exceptions for healthcare facilities where appropriate

§120.6(a) Refrigerated Warehouses (New)

- Added requirements for adiabatic (hybrid) condensers:
  - New design saturated condensing drybulb temperatures (dry mode):
    - 20°F for freezers
    - 30°F for coolers
  - Condenser fan control
  - Minimum condensing temperature ≤ 70°F
  - Condensing temperature reset while operating in drymode
  - Minimum Condenser efficiency while operating in drymode
    - 45 Btuh/W for systems using halocarbon refrigerants

§120.6(b) Commercial Refrigeration (New)

- Added requirements for adiabatic (hybrid) condensers:
  - New design saturated condensing drybulb temperatures (dry mode):
    - 20°F for freezers
    - 30°F for coolers
  - Condenser fan control
  - Minimum condensing temperature ≤ 70°F
  - Condensing temperature reset using variable setpoint control logic
  - Minimum Condenser efficiency while operating in drymode
    - 45 Btuh/W for systems using halocarbon refrigerants

§120.7(b) Wall Insulation (New)

- Reclassified light mass and heavy mass walls
  - Light Mass Walls – masonry wall with a density ≤ 95 pounds per cubic foot
  - Heavy Mass Wall – masonry wall with a density > 95 pounds per cubic foot
- Clarified:
  - Heated Slab “On Grade” Floor

KEY WEB-LINK

2019 Title 24 Utility-Sponsored Stakeholder
http://title24stakeholders.com/

Building Energy Efficiency Program
http://www.energy.ca.gov/title24/

Comments to be submitted to
https://efiling.energy.ca.gov/EComment/EComment.aspx?docketnumber=17-BSTD-01

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