2016 ENERGY CODE



Nonresidential Built-up HVAC Alterations

	Mandatory Requirements								Prescriptive Requirements							
Change This ^A (and nothing else)	Required Controls §120.2	Supply & Exhaust Dampers §120.2(f)	Venti- lation Calcs §120.1	Demand Control Ventilation ^E §§120.1(c)3,4		Space- Conditioning Equipment Requirements §110.2	Required Accep- tance §120.5	Equipment Sizing (per load calcs) §§140.4(a),(b)	Fan Power ^F §140.4(c)	Econo- mizer ^{F, G} §140.4(e)	SAT Reset Controls, Fan Control §§140.4(f),(m)		Heat Rejection and Chillers §§140.4 (h),(i),(j)	Electric Resistance §140.4(g)	Hydronic Measures §140.4 (k)	
Entire Unit	YES ^B	YES	YES	YES	no	YES	YES	YES	YES	YES ^H	YES	YES	YES	YES	YES	
Cooling Coil	YES ^c	no	no	no	no	no	no	no	no	no	no	YES	no	no	no	
Heating Coil, Burner	YES ^c	no	no	no	no	no	no	no	no	no	no	YES	no	no	no	
Duct System	no	no	YESD	no	YES	no	YES	no	YES	no	no	YES	no	no	no	
Dampers	no	YES	YES	YES	no	no	no	no	no	no	no	no	no	no	no	
Control Equipment	YES	no	no	no	no	no	no	no	no	no	YES	no	no	no	no	
Economizers	no	YES	YES	YES	no	no	no	no	no	YES	no	no	no	no	no	

Note: For Nonresidential HVAC systems, a change in blower motor, compressor, or condenser coil is considered a repair and does not trigger the Title 24, Part 6 Standards. However, repairs shall not increase the preexisting energy consumption of the repaired component, system, or equipment.

- A Exception: when heating or cooling are provided by expanding existing systems, the existing systems and equipment need not comply with §110.0 through §120.9, §140.4 or §140.5.
- B Section 120.2(i) does not apply
- C Only Section 120.2(j) applies if it is a fan coil.
- D Only Sections 120.1(d) and (e) apply.
- E Required if HVAC system is either a single zone system with any controls or a multiple zone system with DDC to the zone level, has an air economizer; and serves a space with a design occupant density or a maximum occupant load factor ≥ 25 people per 1000 ft² (40 ft² or less per person). Exceptions may apply.
- F If total system fan power is > 25 hp.
- G If > 54,000 Btu/h nominal cooling capacity (4.5 tons).
- H Exceptions may apply.
- If system is a constant-volume, single zone unit that serves < 5,000 ft² conditioned floor area and > 25% of the duct surface is outdoors or in unconditioned space, leakage should not exceed 6% of the nominal air handler airflow rate. Typically this will not apply to built-up systems.





For More Information

Primary Sources

- Energy Standards Section 120.1, Requirements for Ventilation: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1201requirementsforventilation.htm
- Energy Standards Section 120.2, Required Controls for Space Conditioning Systems: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/ section1202requiredcontrolsforspaceconditioningsystems.htm
- Energy Standards Section 140.4, Prescriptive Requirements for Space Conditioning Systems: energycodeace.com/site/custom/public/reference-ace-2016/index.html#!Documents/section1404prescriptiverequirementsforspaceconditioningsystems.htm
- Energy Standards Nonresidential Compliance Manual Chapter 4.3, Ventilation Requirements: energy.ca.gov/2015publications/CEC-400-2015-033/chapters/chapter_04_mechanical_systems.pdf
- Energy Standards Nonresidential Compliance Manual Chapter 4.5, HVAC System Control Requirements:

energy.ca.gov/2015publications/CEC-400-2015-033/chapters/chapter_04_mechanical_systems.pdf

California Energy Commission Information & Services

- Energy Standards Hotline: 1-800-772-3300 (Free)
- Title 24, Part 6 Sub-site: energy.ca.gov/title24/
 - The Energy Commission's main web portal for Title 24, Part 6, including information, documents, and historical information

Additional Resources

• Energy Code Ace:

EnergyCodeAce.com

An online "one-stop-shop" providing free resources and training to help appliance and building industry professionals decode and comply with Title 24, Part 6 and Title 20.
 The site is administered by California's investor-owned utilities.

Please register with the site and select an industry role for your profile in order to receive messages about all our free offerings!









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