



2013 Building Energy Efficiency Standards Residential HVAC Alterations

BUSINESS AND PROFESSIONS CODE, SECTION 7110

Willful or deliberate disregard and violation of the building laws, including the California Building Code, and local permit requirements constitutes a cause for disciplinary action from the Contractors State License Board working in conjunction with the local building department. This action may consist of fines up to \$5,000 per violation or suspension/revocation of a contractor's license.

WHEN IS A PERMIT REQUIRED?

A written construction permit shall be obtained from the enforcement agency prior to the erection, construction, reconstruction, installation, relocation, or alteration of any mechanical system, except as permitted in Appendix Chapter 1, Section 112.2 of the 2013 California Mechanical Code. Projects requiring permits include, but are not limited to:

- New HVAC installation
- HVAC Changeout
- Replacement of furnace, coil, FAU, or condenser
- Relocation of an existing HVAC unit
- Adding or replacing more than 40ft ducting in unconditioned space

2013 BUILDING ENERGY EFFICIENCY STANDARDS (Title 24, Part 6) REQUIREMENTS INCLUDE:

1. Heating equipment must have a minimum 78% AFUE (Exception: Wall & floor furnaces; room heaters).
2. Central air conditioners & heat pumps less than 65,000 Btu/hr must have a minimum 13 SEER.
3. Newly installed or replaced ducts must have a minimum insulation value of R-4.2.
4. A setback type thermostat (24 hr clock with four set points) is required for all alterations.
5. New or replacement ducts must meet the mandatory requirements of Section 150(m):
 - All joints and openings in the in the HVAC system must be sealed.
 - Only UL 181, UL 181A, or UL 181B approved tapes or mastic shall be used to seal duct openings.
 - Connections of metal ducts and the inner core of flex ducts shall be mechanically fastened. Flex ducts must be connected using a metal sleeve/coupling.
 - Flex ducts that are suspended must be supported every 4ft. max for horizontal runs with no more than 2" of sag between supports and 6 ft. max for vertical runs.



CERTIFICATE OF COMPLIANCE	CF1R-ALT-03-E
Alterations - HVAC CZ 1, 3 to 7 and 16 (formerly CF-1R-ALT-HVAC)	(Page 1 of 1)

Site Address:		Enforcement Agency:		Date Prepared:	Permit#:
Equipment Type		Equipment Efficiency		New: Ducting, Plenums, Lineset Required R-value	Conditioned Floor Area (sq ft)
<input type="checkbox"/> Packaged System	<input type="checkbox"/> Evaporator Coil	_____ AFUE	_____ COP	<input type="checkbox"/> R-6 (CZ 1,3-7) Ducts	Served by system _____ sq ft
<input type="checkbox"/> Split System	<input type="checkbox"/> Condensing Unit	_____ SEER	_____ HSPF	<input type="checkbox"/> R-8 ¹ (CZ 16) Ducts	
<input type="checkbox"/> Furnace	<input type="checkbox"/> Lineset	_____ EER		<input type="checkbox"/> R-6 (all CZ's) Plenums	
				<input type="checkbox"/> R-5 or R7.5 Lineset ³	<input type="checkbox"/> Setback (If not already present, must be installed)

HERS VERIFICATION SUMMARY Installer determines work to be completed and matches to one of the options below. At permit application this form is allowed to be filled out by hand. For final inspection all forms are to be registered (no hand filled forms allowed) and a copy left on site.

<input type="checkbox"/> 1. HVAC Changeout/Repair Can include new ducting	Required Compliance Documents to be left on site for Final:
All Equipment, Condenser Unit, Evaporator Coil, Air Handler/Furnace	CF1R-ALT-02-E CF2R: MECH-01, MECH-20-HERS CF3R: MECH-20-HERS

Installer Requirement: Duct leakage ($\leq 15\%$ or, $\leq 10\%$ to outside, or seal all accessible leaks)
 Exempted from duct leakage testing if:
 1. Duct system registered with HERS provider as previously sealed, or 2. There is less than 40 linear feet of duct in unconditioned space, or 3. Existing duct systems are constructed, insulated or sealed with asbestos (list manufacture date of building _____)

<input type="checkbox"/> 2. New HVAC System	Required Compliance Documents to be left on site for Final:
All new equipment and All New Ducts ²	CF1R-ALT-02-E CF2R-MECH-01, MECH-20-HERS, MECH-22-HERS, MECH-(23 or 24)-HERS CF3R-MECH-20-HERS, MECH-22-HERS, MECH-(23 or 24)-HERS ²

Installer Requirement: Duct leakage $\leq 6\%$, Fan Efficacy (.58W/CFM), Air Flow ≥ 350 CFM/ton (or Standards Table 150.0-C / D alternative)

<input type="checkbox"/> 3. All New Ducts with Replacement	Required Compliance Documents to be left on site for Final:
Includes replacing or installing All New Ducts ² and one or more of the following: Condenser Unit, Evaporator Coil, Furnace	CF1R-ALT-02-E CF2R-MECH-01, MECH-20-HERS, MECH-(23 or 24)-HERS CF3R-MECH-20-HERS, MECH-(23 or 24)-HERS

Installer Requirement: Duct leakage $\leq 6\%$, Air Flow ≥ 350 CFM/ton (or Standards Table 150.0-C / D alternative)
 Exempted from duct leakage testing | existing duct systems are constructed, insulated or sealed with asbestos.

<input type="checkbox"/> 4. New Ducting over 40 feet	Required Compliance Documents to be left on site for Final:
Adding or replacing ducts in unconditioned space but less than All New Ducts ²	CF1R-ALT-02-E CF2R: MECH-20-HERS CF3R: MECH-20-HERS

Installer Required to: Duct leakage ($\leq 15\%$ or, $\leq 10\%$ to outside, or seal all accessible leaks)
 Exempted from duct leakage testing | existing duct systems are constructed, insulated or sealed with asbestos.

¹ All new ducting R-8 required when more than 40 ft installed and R-6 when less than 40 ft installed. This includes in walls, between floors etc.
² A New Duct system is when the duct system is constructed of at least 75 percent new duct material, and up to 25 percent may consist of reused parts from the dwelling unit's existing duct system (e.g., registers, grilles, boots, air handler, plenums, duct material).
³ R-5 (1" thick insulation) for linesets 1" and less. R-7.5 (1.5" thick insulation) for linesets over 1 inch. Most mfg will require Suction line Diameter with insulation as the following 1.5-2T-2 $\frac{3}{4}$ ", 2.5-3T-2 $\frac{3}{4}$ ", 3.5 to 4T-2 $\frac{3}{4}$ ", 5T-4 $\frac{1}{2}$ "

Contractor (Documentation Author's /Responsible Designer's Declaration Statement)

I certify the following under penalty of perjury, under the laws of the State of California:

- The information provided on this Certificate of Compliance is true and correct.
- I am eligible under Division 3 of the California Business and Professions Code to accept responsibility for the information on this document.
- That the energy features and performance specifications for the design identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations (CCR).
- That the energy features and performance specifications, materials, components, and manufactured devices for the building design or system design identified on this Certificate of Compliance conform to the requirements of Title 24, Part 1 and Part 6 of the CCR.
- The building design features or system design features identified on this Certificate of Compliance are consistent with the information provided on other applicable compliance documents, worksheets, calculations, plans and specifications submitted to the enforcement agency for approval with this building permit application.

Responsible Designer Name:	Responsible Designer Signature:	Date Signed:	License:
Company :	Address:	City/State/Zip:	Phone:

For assistance or questions regarding the Energy Standards, contact the Energy Hotline at: 1-800-772-3300