

**DOCKETED**

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<b>Project Title:</b>	2019 ENERGY CODE COMPLIANCE MANUALS
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**Central Fan Ventilation Cooling Systems (VCS)**

CEC-CF3R-MCH-30-H (Revised 01/19)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF VERIFICATION		CF3R-MCH-30-H
Central Fan Ventilation Cooling Systems (VCS)		(Page 1 of 2)
Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City:	Zip Code:

**NOTE:** When the Certificate of Compliance indicates a Central Fan Ventilation Cooling system is installed, the following items must be verified.

A. Central Fan Ventilation Cooling System (VCS) Equipment Information	
01	Space Conditioning System Identification or Name
02	Space Conditioning System Location or Area Served
03	Central Fan VCS Equipment - Manufacturer Name
04	Central Fan VCS Equipment - Manufacturer Model #
05	Central Fan VCS Equipment - Fan Type Required
06	Central Fan VCS Equipment - Fan Type Installed
07	Central Fan VCS Equipment - Manufacturer Documentation Status
08	Duct Leakage Verification Status
09	Airflow Rate Verification Status
10	Fan Efficacy Verification Status
11	Compliance Statement:

B. Additional Requirements	
01	When the Central Fan Ventilation Cooling system directs its relief airflow into the dwelling's attic, the attic vent free area shall be equal to or greater than 1 ft <sup>2</sup> per 750 CFM of the system's rated Ventilation Cooling airflow.
02	Variable speed motor systems shall be capable of varying system airflow rate in a continuous range between full airflow rate (100%) and a minimum airflow rate of no more than 25% of the full airflow rate.
03	Central fan ventilation cooling system controls shall include proper installation of an indoor thermostat.
04	Central fan ventilation cooling system controls shall include installation of an outdoor temperature sensor to initiate or terminate ventilation cooling operation automatically in response to user preference or availability of ventilation cooling capacity of outside air.
05	Central fan ventilation cooling system controls shall include proper installation of an air handler temperature sensor, or damper end switches, or other control device(s) that ensure correct outdoor air damper position.
06	The central fan ventilation cooling system manufacturer shall provide detailed system operation documentation to the building owner that describes how to configure the system controls and operate the system to obtain the maximum energy savings benefit. The manufacturer's system operation documentation shall also describe how the system's control strategy is implemented; how the fan speed is controlled during ventilation cooling mode; and how ventilation cooling rates are determined. System target ventilation cooling rate calculations (if applicable) shall occur at time intervals of 24 hours or less to ensure the system responds correctly to changes in weather patterns.
07	Verification Status: <ul style="list-style-type: none"> <li><input type="checkbox"/> <u>Pass</u> - all applicable requirements are met; or</li> <li><input type="checkbox"/> <u>Fail</u> - one or more applicable requirements are not met. Enter reason for failure in corrections notes field below; or</li> <li><input type="checkbox"/> <u>All N/A</u> - This entire table is not applicable</li> </ul>
08	Correction Notes:
<b>The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met unless otherwise noted in the Verification Status and the Corrections Notes in this table.</b>	

C. Determination of HERS Verification Compliance	
All applicable sections of this document shall indicate compliance with the specified verification protocol requirements in order for this Certificate of Verification as a whole to be determined to be in compliance.	
01	

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CERTIFICATE OF VERIFICATION		CF3R-MCH-30-H
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Project Name:	Enforcement Agency:	Permit Number:
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**DOCUMENTATION AUTHOR'S DECLARATION STATEMENT**

1. I certify that this Certificate of Verification documentation is accurate and complete.

Documentation Author Name:	Documentation Author Signature:
Company:	Date Signed:
Address:	CEA/HERS Certification Information (if applicable):
City/State/Zip:	Phone:

**RESPONSIBLE PERSON'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 Verification is true and correct.
- I am the certified HERS Rater who performed the verification identified and reported on this Certificate of Verification (responsible rater).
- The installed features, materials, components, manufactured devices, or system performance diagnostic results that require HERS verification identified on this Certificate of Verification comply with the applicable requirements in Reference Appendices RA2, RA3, and the requirements specified on the Certificate of Compliance for the building approved by the enforcement agency.
- The information reported on applicable sections of the Certificate(s) of Installation (CF2R) signed and submitted by the person(s) responsible for the construction or installation conforms to the requirements specified on the Certificate(s) of Compliance (CF1R) approved by the enforcement agency.
- I will ensure that a registered copy of this Certificate of Verification shall be posted, or made available with the building permit(s) issued for the building, and made available to the enforcement agency for all applicable inspections. I understand that a registered copy of this Certificate of Verification is required to be included with the documentation the builder provides to the building owner at occupancy.

**BUILDER OR INSTALLER INFORMATION AS SHOWN ON THE CERTIFICATE OF INSTALLATION**

Company Name (Installing Subcontractor, General Contractor, or Builder/Owner):	
Responsible Builder or Installer Name:	CSLB License:

**HERS PROVIDER DATA REGISTRY INFORMATION**

Sample Group Number (if applicable):	Dwelling Test Status in Sample Group (if applicable):
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**HERS RATER INFORMATION**

HERS Rater Company Name:	
Responsible Rater Name:	Responsible Rater Signature:
Responsible Rater Certification Number w/ this HERS Provider:	Date Signed:

**CF2R-MCH-30-E User Instructions****Section A. Central Fan Ventilation Cooling System (VCS) Equipment Information**

1. Enter the Central Fan Ventilation Cooling System (VCS) Name or identification tag to help identify this system from other systems in the house. This field is automatically filled in as referenced from the MCH-01 description for this system.
2. Enter the Location or Area Served by the Central Fan VCS. This is a tag to distinguish this system from other systems in the house. This field is automatically filled in as referenced from the MCH-01 description for this system.
3. Enter the Central Fan VCS Manufacturer Name.
4. Enter the Central Fan VCS Manufacturer Model Number.
5. The Central Fan VCS Fan Type Required is specified by the performance approach software. This field is filled in automatically as referenced from the CF1R.
6. Enter the Central Fan VCS Fan Type Installed. The choices are “Fixed Flow” or “Variable Flow”. Variable fans receive more compliance credit. The installed fan type should match the fan type specified on the CF1R.
7. Installer must verify/confirm that the Central Fan VCS Equipment is included in the Energy Commission listing of approved VCS devices and that the fan type, “Fixed” or “Variable”, matches what is shown on the list.
8. Compliance Credit for Central Fan VCS also requires that the system conforms to the maximum Duct Leakage verification requirements. This row automatically queries the project data to confirm that a MCH-20 has been registered indicating that the system passed the duct leakage criterion.
9. Compliance Credit for Central Fan VCS also requires that the system pass the Airflow Rate requirements. This row automatically queries the project data to confirm that the applicable MCH-23 Airflow Rate verification has been registered indicating that the system passed.
10. Compliance Credit for Central Fan VCS also requires that the system pass the Fan Efficacy requirements. This row automatically queries the project data to confirm that a MCH-22 Fan Efficacy verification has been registered indicating that the system passed.
11. Compliance Statement. The system must comply with all verification requirements in Section A in order to pass.

**Section B. Additional Requirements**

The System must comply with all of the additional requirements that are applicable in order to be in compliance with the Central Fan Ventilation Cooling System compliance credit requirements.

1. This field must be a true statement for the system to comply.
2. This field must be a true statement (or not applicable) for the system to comply.
3. This field must be a true statement for the system to comply.
4. This field must be a true statement (or not applicable) for the system to comply.
5. This field must be a true statement (or not applicable) for the system to comply.
6. This field must be a true statement for the system to comply.