



City of Carpinteria

Building & Safety Division

Roof Top Mechanical Units (New & Replacements)

REQUIREMENTS FOR ROOF TOP UNITS

- #1. **NEW** roof top unit (i.e. roof has never had a roof top unit):
- Provide necessary structural calculations (vertical and seismic analysis), stamped & signed by licensed engineer.
 - Provide necessary structural details/drawings for curb attachment.
 - Provide necessary specification sheet with weight of unit highlighted.
 - Provide necessary California Energy Standards compliance worksheets as applicable (MCH-04-E and MCH-05-E).
 - Note: ceiling insulation will be required.
- #2. **CHANGE-OUT** of existing roof top unit (replacement unit is less than 400 lbs):
- Provide necessary specification sheet with weight of unit highlighted.
 - Provide necessary California Energy Standards compliance worksheets as applicable.
 - Note: no calculations required.
 - Note: no ceiling insulation required.
- #3. **CHANGE-OUT** of existing roof top unit (replacement unit is more than 400 lbs but less than 100 lbs over previous unit):
- Provide necessary structural calculations (seismic analysis only), stamped & signed by licensed engineer
 - Provide necessary structural details/drawings for curb attachment
 - Provide necessary specification sheet with weight of unit highlighted
 - Provide necessary California Energy Standards compliance worksheets as applicable.
 - Note: no ceiling insulation required
- #4. **CHANGE-OUT** of existing roof top unit (replacement unit is more than 100 lbs over previous unit):
- Same requirements as #1 New roof top unit

Hours: Monday - Friday 8:00 AM - 5:00 PM

City of Carpinteria City Hall
5775 Carpinteria Avenue
Carpinteria, CA 93013
805-684-5405



CERTIFICATE OF COMPLIANCE

NRCC-MCH-03-E

Mechanical Ventilation & Reheat

(Page 1 of 2)

Project Name: _____ Date Prepared: _____

ACTUAL DESIGN INFO (FROM EQUIPMENT SCHEDULES, ETC)				E	F	AREA BASIS			OCCUPANCY BASIS			MINIMUM		VAV Reheated Primary Air CFM		Q	VAV Deadband Primary Air CFM		T
A	B	C	D			G	H	I	J	K	L	M	N	O	P		R	S	
ZONE/SYSTEM/ VAV BOX TAG	DESIGN PRIMARY COOLING AIRFLOW (CFM)	DESIGN PRIMARY DEAD-BAND AIRFLOW (CFM)	DESIGN PRIMARY HEATING AIRFLOW (CFM)	CNTRL TYPE DDC (Y/N)	TRANSFER AIRFLOW (CFM)	CONDI-TIONED AREA (ft ²)	MIN CFM PER AREA	MIN CFM BY AREA	NUM. OF PEOPLE	CFM PER PERSON	MIN CFM BY OCCU- PANT	REQ'D VENT AIRFLOW (MAX OF I OR L) (CFM)	COM-PLIES	PRIMARY COOLING AIR (50% DDC, 30% NON-DDC) (CFM)	MAXIMUM REHEAT CFM (MAX OF M OR O)	COM-PLIES?	(20% DDC, N/A NON-DDC) (CFM)	(larger of M or R, N/A for NON- DDC) (CFM)	COM-PLIES

Yellow shaded cells require user input. Remaining cells are protected and automatic

B. The largest amount of primary air supplied by the terminal unit when it's operating in the cooling mode.

C. The smallest amount of primary air supplied by the terminal unit in the deadband mode.

D. The largest amount of primary air supplied by the terminal unit when it's operating in the heating mode.

E. A terminal unit can be controlled with DDC controls, or non-DDC controls. Each control category has different reheat limitations in code.

F. Transfer Air must be provided where Required Ventilation Airflow (Column M) is greater than the Design Primary Deadband Airflow (Column C).

H. Minimum ventilation rate per Section §120.1. Table 120.1-A.

J. Based on number of fixed seats where applicable or the greater of the expected number of occupants and 50% of the CBC occupant load for egress purposes for spaces without fixed seating.

M. Required Ventilation Airflow (Req'd Ventilation Airflow) is the larger of the ventilation rates calculated on an AREA BASIS or OCCUPANCY BASIS (Column I or L)

N. This column identifies whether or not the Design Primary Deadband Airflow complies or not. It compares the value in column M to the value in column C and column F.

O. Design Primary Cooling Airflow * 0.50 for DDC, Design Primary Cooling Airflow * 0.30 for Non-DDC. If the Design Primary Cooling Airflow is less than 300 cfm, then this is not applicable.

P. Maximum of Column M and Column O. If the Design Primary Cooling Airflow is 300 cfm or less, then this is not applicable.

Q. This column identifies whether or not the Design Primary Reheat Airflow at the zone level, complies or not. It compares the value in column P to the value in column D.

R. Design Primary Cooling Airflow * 0.20 for DDC. Not applicable for Non-DDC zones or zones where Design Primary Cooling Airflow is 300 cfm or less.

S. Maximum of Column M and Column R. Not applicable if the Design Primary Cooling Airflow is 300 cfm or less.

T. This column identifies whether or not the Design Primary Deadband Airflow at the zone level, complies or not. It compares the value in column S to the value in column C.

MECHANICAL VENTILATION AND REHEAT

CEC-NRCC-MCH-03-E (Revised 05/15)



CERTIFICATE OF COMPLIANCE		NRCC-MCH-03-E
Mechanical Ventilation & Reheat		(Page 2 of 2)
Project Name:	Date Prepared:	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (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:	
<ol style="list-style-type: none"> 1. The information provided on this Certificate of Compliance is true and correct. 2. I am eligible under Division 3 of the Business and Professions Code to accept responsibility for the building design or system design identified on this Certificate of Compliance (responsible designer). 3. 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 California Code of Regulations. 4. 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. 5. I will ensure that a completed signed copy of this Certificate of Compliance shall be 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 completed signed copy of this Certificate of Compliance is required to be included with the documentation the builder provides to the building owner at occupancy. 	
Responsible Designer Name:	Responsible Designer Signature:
Company :	Date Signed:
Address:	License:
City/State/Zip:	Phone:

REQUIRED ACCEPTANCE TESTS

CEC-NRCC-MCH-04-E (Revised 05/15)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 1 of 3)
Project Name:	Date Prepared:

A. MECHANICAL COMPLIANCE FORMS & WORKSHEETS

(indicate if worksheet is included)

For detailed instructions on the use of this and all Energy Efficiency Standards compliance forms, refer to the 2013 Nonresidential Manual

Note: The Enforcement Agency may require all forms to be incorporated onto the building plans. Forms NRCC-MCH-04-E and NRCC-MECH-05-E are alternative forms to NRCC-MCH-01-E, NRCC-MCH-02-E and NRCC-MCH-03-E for projects using only single zone packaged HVAC systems.

YES	NO	Form	Title
		NRCC-MCH-04-E (1 of 2)	Certificate of Compliance. Required on plans when used.
		NRCC-MCH-04-E (2 of 2)	Mechanical Acceptance Tests. Required on plans when used.
		NRCC-MCH-05-E (1 of 2)	HVAC Prescriptive Requirements. It is required on plans when used.
		NRCC-MCH-05-E (2 of 2)	Mechanical SWH Equipment Summary is required for all submittals with service water heating, pools or spas. It is required on plans where applicable.

REQUIRED ACCEPTANCE TESTS

CEC-NRCC-MCH-04-E (Revised 05/15)



CERTIFICATE OF COMPLIANCE	NRCC-MCH-04-E
Required Acceptance Tests	(Page 2 of 3)
Project Name:	Date Prepared:

Designer:
 This form is to be used by the designer and attached to the plans. Listed below are all the acceptance tests for mechanical systems. The designer is required to check the applicable boxes by all acceptance tests that apply and list all equipment that requires an acceptance test. If all equipment of a certain type requires a test, list the equipment description and the number of systems. The NA number designates the Section in the Appendix of the Nonresidential Reference Appendices Manual that describes the test. Since this form will be part of the plans, completion of this section will allow the responsible party to budget for the scope of work appropriately.

Enforcement Agency:
Systems Acceptance. Before occupancy permit is granted for a newly constructed building or space, or a new space-conditioning system serving a building or space is operated for normal use, all control devices serving the building or space shall be certified as meeting the Acceptance Requirements for Code Compliance.

Systems Acceptance. Before occupancy permit is granted. All newly installed HVAC equipment must be tested using the Acceptance Requirements. .
 The NRCC-MCH-04-E form is not considered a completed form and is not to be accepted by the building department unless the correct boxes are checked. The equipment requiring testing, person performing the test (Example: HVAC installer, TAB contractor, controls contractor, PE in charge of project) and what Acceptance test must be conducted. The following checked-off forms are required for ALL newly installed and replaced equipment. In addition a Certificate of Acceptance forms shall be submitted to the building department that certifies plans, specifications, installation certificates, and operating and maintenance information meet the requirements of Section 10-103(b) and Title 24 Part 6. The building inspector must receive the properly filled out and signed forms before the building can receive final occupancy.

Test Description		MCH-02-A	MCH-03-A	MCH-04-A	MCH-05-A	MCH-06-A	MCH-07-A	MCH-11-A	MCH-12-A	MCH-14-A	MCH-18-A	Test Performed By:
Equipment Requiring Testing or Verification	# of units	Outdoor Air	Single Zone Unitary	Air Distribution Ducts	Economizer Controls	Demand Control Ventilation (DCV)	Supply Fan VAV	Automatic Demand Shed Control	FDD for Packaged DX Units	Distributed Energy Storage DX AC Systems	Energy Management Control System	

REQUIRED ACCEPTANCE TESTS

CEC-NRCC-MCH-04-E (Revised 05/15)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF COMPLIANCE		NRCC-MCH-04-E
Required Acceptance Tests		(Page 3 of 3)
Project Name:	Date Prepared:	

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT	
1. I certify that this Certificate of Compliance documentation is accurate and complete.	
Documentation Author Name:	Documentation Author Signature:
Company:	Signature Date:
Address:	CEA/ HERS Certification Identification (if applicable):
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RESPONSIBLE PERSON'S DECLARATION STATEMENT	
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