

DEMAND CONTROL VENTILATION SYSTEMS ACCEPTANCE

CEC-NRCA-MCH-06-A (Revised 01/16)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF ACCEPTANCE		NRCA-MCH-06-A
Demand Control Ventilation Systems Acceptance		(Page 1 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:
System Name or Identification/Tag:	System Location or Area Served:	

<i>Note: Submit one Certificate of Acceptance for each system that must demonstrate compliance.</i>	Enforcement Agency Use: Checked by/Date
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Intent:	<i>Verify that systems required to employ demand Controlled ventilation (refer to §121(c)3) can vary outside ventilation flow rates based on maintaining interior carbon dioxide (CO₂) concentration setpoints</i>
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A. Construction Inspection	
1	Instrumentation to perform test may include, but not limited to: <ul style="list-style-type: none"> a. Calibrated hand-held CO₂ analyzer b. Manufacturer's calibration kit c. Calibrated CO₂/air mixtures
2	Installation: <ul style="list-style-type: none"> <input type="checkbox"/> The sensor is located in the high density space between 3 ft and 6 ft above the floor or at the anticipated level of the occupants' heads.
3	Documentation of all carbon dioxide control sensors includes: <ul style="list-style-type: none"> a. Calibration method (check one of the following) <ul style="list-style-type: none"> <input type="checkbox"/> Factory-calibration (certificate calibration cert must be attached) <input type="checkbox"/> Field calibrated b. Sensor accuracy <ul style="list-style-type: none"> <input type="checkbox"/> Certified by manufacturer to be no more than +/- 75 ppm calibration cert must be attached

B. Functional Testing	Results
Step 1: Prepare for Functional Testing	
a. Disable economizer controls	
b. Outside air CO ₂ concentration (measured dynamically using CO ₂ sensor)	_____ ppm
c. Interior CO ₂ concentration setpoint (Outside CO ₂ concentration + 600 ppm)	_____ ppm
Step 2: Simulate a signal at or slightly above the CO₂ setpoint or follow manufacturers recommended testing procedures.	
a. For single zone units, outdoor air damper modulates opens to satisfy the total ventilation air called for in the Certificate of Compliance.	Y / N
b. For multiple zone units, either outdoor air damper or zone damper modulate open to satisfy the zone ventilation requirements.	Y / N
Step 3: Simulate signal well below the CO₂ setpoint or follow manufacturers recommended procedures.	
a. For single zone units, outdoor air damper modulates to the design minimum value.	Y / N
b. For multiple zone units, either outdoor air damper or zone damper modulate to satisfy the reduced zone ventilation requirements.	Y / N
Step 4: System returned to initial operating conditions	Y / N

C. Testing Results	PASS / FAIL	
Step 2: Simulate a high CO ₂ load (check box complete)	<input type="checkbox"/>	<input type="checkbox"/>
Step 3: Simulate a low CO ₂ load (check box complete)	<input type="checkbox"/>	<input type="checkbox"/>

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D. Evaluation
<input type="checkbox"/> PASS: All Construction Inspection responses are complete and all Testing Results responses are "Pass"

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DOCUMENTATION AUTHOR'S DECLARATION STATEMENT		
1. I certify that this Certificate of Acceptance documentation is accurate and complete.		
Documentation Author Name:	Documentation Author Signature:	
Documentation Author Company Name:	Date Signed:	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	
FIELD TECHNICIAN'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"> The information provided on this Certificate of Acceptance is true and correct. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). The construction or installation identified on this Certificate of Acceptance complies with the applicable acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and signed by the responsible builder/installer and has been posted or made available with the building permit(s) issued for the building. 		
Field Technician Name:	Field Technician Signature:	
Field Technician Company Name:	Position with Company (Title):	
Address:	ATT Certification Identification (if applicable):	
City/State/Zip:	Phone:	Date Signed:
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"> I am the Field Technician, or the Field Technician is acting on my behalf as my employee or my agent and I have reviewed the information provided on this Certificate of Acceptance. I am eligible under Division 3 of the Business and Professions Code in the applicable classification to accept responsibility for the system design, construction or installation of features, materials, components, or manufactured devices for the scope of work identified on this Certificate of Acceptance and attest to the declarations in this statement (responsible acceptance person). The information provided on this Certificate of Acceptance substantiates that the construction or installation identified on this Certificate of Acceptance complies with the acceptance requirements indicated in the plans and specifications approved by the enforcement agency, and conforms to the applicable acceptance requirements and procedures specified in Reference Nonresidential Appendix NA7. I have confirmed that the Certificate(s) of Installation for the construction or installation identified on this Certificate of Acceptance has been completed and is posted or made available with the building permit(s) issued for the building. I will ensure that a completed, signed copy of this Certificate of Acceptance 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 signed copy of this Certificate of Acceptance is required to be included with the documentation the builder provides to the building owner at occupancy. 		
Responsible Acceptance Person Name:	Responsible Acceptance Person Signature:	
Responsible Acceptance Person Company Name:	Position with Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed:

NRCA-MCH-06-A User Instructions

This compliance document is used to document results of operational tests for HVAC systems required to utilize demand ventilation control. A separate compliance document should be completed for each system tested. The compliance document is separated into several basic sections: construction inspection; functional testing; testing calculations and results; and pass/fail evaluation. Each section consists of a combination of data entry requirements and check boxes.

Section A. Construction Inspection

This pre-test section consists of check boxes. Complete check boxes as instructed.

Section B. Functional Testing

This section consists of both check boxes and data entry for each test procedure. Complete all check boxes and enter data as instructed.

Section C. Testing Results

This section consists of data entry requirements for all tests. Enter data as instructed.

Section D. Evaluation

Check the appropriate box as instructed.

Declaration Statements of Acceptance

This section contains fillable fields for three declaration statements: one from the Documentation Author, one from the Field Technician, and one from the Responsible Person. Each area contains a number of data entry requirements, including signature; date; and license number.

The Documentation Author is the person completing the compliance document. The Field Technician is responsible for performing and documenting the results of the acceptance procedures on the Certificate of Acceptance compliance documents. The Field Technician must sign the Certificate of Acceptance to certify that the information he or she provides on the Certificate of Acceptance is true and correct. It is important to note that the Field Technician is not required to have a contractor's, architect's or engineer's license. A Responsible Person is eligible under Division 3 of the Business and Professions code in the applicable classification to take responsibility for the scope of work specified by the Certificate of Acceptance document. The Responsible Person can also perform the field testing and verification work, and if this is the case the Responsible Person must complete and sign both the Field Technician's signature block and the Responsible Person's signature block on the Certificate of Acceptance compliance document. The Responsible Person assumes responsibility for the acceptance testing work performed by the Field Technician agent or employee.