

MULTIFAMILY DWELLING UNIT CONTINUOUS VENTILATION ACCEPTANCE

CEC-NRCA-MCH-20-H (Revised 01/20)

CALIFORNIA ENERGY COMMISSION



CERTIFICATE OF ACCEPTANCE		NRCA-MCH-20-H
MULTIFAMILY DWELLING UNIT CONTINUOUS VENTILATION 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:	

Compliance Results (technician): <input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply	HERS Rater in receipt of document (Signature / Date)
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Intent:	Submit one Certificate of Acceptance for each dwelling unit to verify that the CONTINUOUS ventilation airflow conforms to the requirements of the Energy Standards §120.1(b)2 Nonresidential Reference Appendices NA7.18.1.1 and NA2.2 , and California Energy Commission adopted version of ANSI/ASHRAE Standards 62.2-2016 . If using Supply-only or Exhaust-only ventilation, Certificate of Acceptance NRCA-MCH-21-H must be completed prior to beginning this acceptance test. NOTE: HERS Verification required.
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A. Construction Inspection			
Building:	Floor:	Room/Area/Zone:	Control System:
Prior to Functional Testing, verify and document all of the following.			
1	Required documentation (check all of the following):		
<input type="checkbox"/>	a	Design, drawings, and cut-sheets as approved by the authority having jurisdiction.	
<input type="checkbox"/>	b	NRCC-MCH-E , as approved by the authority having jurisdiction. (§10-103(a)2A)	
<input type="checkbox"/>	c	NRCA-MCH-21-H , if using Supply-only or Exhaust-only ventilation.	
2	System installation (check all of the following):		
<input type="checkbox"/>	a	Verify that the system uses a fixed minimum setting for outside air when the unit is operating. (NA7.18.1.1.1(a) , ASHRAE 62.2.7.3)	
<input type="checkbox"/>	b	Specify the ventilation system type (NA7.18.1.1.1(b)): Choose an item.	
<input type="checkbox"/>	c	Method of control (NA7.18.1.1.1(c)) must be CONTINUOUS only	
<input type="checkbox"/>	d	Central ventilation system serving multiple dwelling-units; specify balancing system (§120.1(b)2Av): Choose an item.	
<input type="checkbox"/>	e	Confirm the kitchen range hood is ventilated to outside. (NA7.18.1.1.1(d))	
<input type="checkbox"/>	f	Kitchen range hood manufacturer name. (NA7.18.1.1.1(e) , NA2.2.4.1.3(a))	
		Equipment model number. (NA7.18.1.1.1(e) , NA2.2.4.1.3(a))	
<input type="checkbox"/>	g	Confirm the kitchen range hood is HVI certified (NA7.18.1.1.1(f) , NA2.2.4.1.3(b) , §120.1(b)2Bii). https://www.hvi.org/hvi-certified-products-directory/	
<input type="checkbox"/>	i	Record the rated airflow value listed in the HVI directory. (NA2.2.4.1.3(c))	CFM
<input type="checkbox"/>	ii	Record the sound rating value listed in the HVI directory. (NA2.2.4.1.3(d))	Sone
<input type="checkbox"/>	h	Verify that a manual ON/OFF switch associated with dwelling unit ventilation system is operational and labeled with the following text, or equivalent text: "This switch controls the indoor air quality ventilation for the home. Leave it on unless the outdoor air quality is very poor." (§120.1(b)2Aviii)	
Instrumentation Specification Requirements			
3	Verify the instrumentation specifications of the ventilation system airflow rate measurement equipment: (check all of the following): (NA 2.2.2)		
<input type="checkbox"/>	a	The pressure measurement instrumentation is: (NA 2.2.2.1) <ul style="list-style-type: none"> Accurate to plus or minus 0.2 Pa or plus or minus 1% of the pressure reading Includes a sensor plus data acquisition system Makes use of a static pressure probe 	
<input type="checkbox"/>	b	Ventilation system airflow rate measurement apparatus is: (NA 2.2.2.2 , NA2.2.3) <ul style="list-style-type: none"> listed on the Energy Commission website: https://www2.energy.ca.gov/title24/equipment_cert/ama_vs/index.html Calibrated according to the manufacturer procedures 	
Construction Inspection Compliance Results: <input type="checkbox"/> Complies <input type="checkbox"/> Does Not Comply			

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B. Functional Testing

Building:	Floor:	Room/Area/Zone:	Control System:
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STEP	Procedures (NA2.2.4)																											
1	If multiple fans are specified to operate simultaneously to provide the total required ventilation airflow, the measurements within this functional test must be made with all applicable fans operating simultaneously. (NA2.2.4.1)																											
2	Activate the ventilation system using the system control. (NA2.2.4.1, NA2.2.4.1.1(b))																											
3	Measure and record the ventilation airflow(s) of each operating fan as either an exhaust fan or supply fan (not both), using an airflow capture hood (see Construction Inspection 3b): (NA2.2.4.1.1(a), NA2.2.4.1.1(a), NA2.2.4.1.1(b), NA2.2.4.1.1(c), NA2.2.4.1.1(d))																											
	<table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 35%;">Fan Location/ID</th> <th style="width: 35%;">Exhaust Measurement (CFM)</th> <th style="width: 30%;">Supply Measurement (CFM)</th> </tr> </thead> <tbody> <tr><td>a</td><td></td><td></td></tr> <tr><td>b</td><td></td><td></td></tr> <tr><td>c</td><td></td><td></td></tr> <tr><td>d</td><td></td><td></td></tr> <tr><td>e</td><td></td><td></td></tr> <tr><td>f</td><td></td><td></td></tr> <tr> <td style="text-align: right;">TOTALS:</td> <td></td> <td></td> </tr> <tr> <td style="text-align: right;">AVERAGES:</td> <td></td> <td></td> </tr> </tbody> </table>	Fan Location/ID	Exhaust Measurement (CFM)	Supply Measurement (CFM)	a			b			c			d			e			f			TOTALS:			AVERAGES:		
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4	Calculations																											
a	Calculate the percent difference between the exhaust and supply airflow rates for Balanced Systems Only . $(100 \times (\text{Exhaust}(3g) - \text{Supply}(3g)) \div \text{Exhaust}(3g))$ (NA2.2.4.1.1(e))																											
b	Record the design ventilation air flow rate for the dwelling unit: (NRCC-MCH-E, Table J)																											
5	PASS or FAIL																											
Ventilation systems that serve one dwelling-unit																												
a	Supply Only or Exhaust Only Ventilation System passes if ALL of the following are true: <ul style="list-style-type: none"> $3g \geq 4b$, (NA2.2.4.1.1(c)) NRCA-MCH-21-H is completed and complies. (\$120.1(b)2Aivb2) 																											
b	Balanced Only Ventilation System passes if ALL of the following are true: (NA2.2.4.1.1(g)) <ul style="list-style-type: none"> $4a < 20\%$, AND $\text{Exhaust}(3h) \geq 4b$, AND $\text{Supply}(3h) \geq 4b$ 																											
c	Kitchen Range Hood passes if ALL of the following are true: (NA2.2.4.1.3(e), \$120.1(b)2Avi, \$120.1(b)2Bii) <ul style="list-style-type: none"> Construction Inspection (g)(i) \geq the design value in (NRCC-MCH-E, Table J) CFM Construction Inspection (g)(ii) \leq the design value in (NRCC-MCH-E, Table Q) CFM 																											
Central ventilation systems that serve multiple dwelling-units ONLY																												
d	Supply Only or Exhaust Only Ventilation System passes if ALL of the following are true: (\$120.1(b)2Av) <ul style="list-style-type: none"> 5a Passes, AND $3g < (1.2 \times 4b)$ 																											
e	Balanced Ventilation System passes if ALL of the following are true: (\$120.1(b)2Av) <ul style="list-style-type: none"> 5b Passes, AND $\text{Exhaust}(3h) < (1.2 \times 4b)$, AND $\text{Supply}(3h) < (1.2 \times 4b)$ 																											
6	Return system to normal operating condition.																											

Functional Test Compliance Results: ☐ Complies ☐ Does Not Comply

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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:	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"> 1. The information provided on this Certificate of Acceptance is true and correct. 2. I am the person who performed the acceptance verification reported on this Certificate of Acceptance (Field Technician). 3. 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. 4. 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:	ATT Certification Identification (if applicable):	
Address:	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"> 1. 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. 2. 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). 3. 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. 4. I understand that a HERS rater will check the installation to verify compliance, and that if such checking identifies defects the responsible builder/installer shall be required to take corrective action at his expense. I understand that Energy Commission and HERS Provider representatives will also perform quality assurance checking of installations, including those approved as part of a sample group but not checked by a HERS rater, and if those installations fail to meet the requirements of such quality assurance checking, the required corrective action and additional checking/testing of other installations in that HERS sample group will be performed at the responsible builder/installer's expense. 5. 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. 6. 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: