

**HYDRONIC SYSTEM VARIABLE FLOW CONTROL ACCEPTANCE**

CEC-MECH-10A (Revised 08/09)

CALIFORNIA ENERGY COMMISSION



<b>CERTIFICATE OF ACCEPTANCE</b>		<b>MECH-10A</b>
<b>NA7.5.9 Hydronic System Variable Flow Control Acceptance</b>		<b>(Page 1 of 3)</b>
Project Name/Address:		
System Name or Identification/Tag:	System Location or Area Served:	
Enforcement Agency:	Permit Number:	
<i>Note: Submit one Certificate of Acceptance for each system that must demonstrate compliance.</i>	Enforcement Agency Use: Checked by/Date	

**FIELD TECHNICIAN'S DECLARATION STATEMENT**

- I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is true and correct.
- I am the person who performed the acceptance requirements verification reported on this Certificate of Acceptance (Field Technician).
- I certify that the construction/installation identified on this form 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 Installation Certificate(s) for the construction/installation identified on this form has been completed and is posted or made available with the building permit(s) issued for the building.

Company Name:		
Field Technician's Name:	Field Technician's Signature:	
	Date Signed:	Position With Company (Title):

**RESPONSIBLE PERSON'S DECLARATION STATEMENT**

- I certify under penalty of perjury, under the laws of the State of California, that 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 form.
- I am a licensed contractor, architect, or engineer, who is eligible under Division 3 of the Business and Professions Code, in the applicable classification, to take responsibility for the scope of work specified on this document and attest to the declarations in this statement (responsible person).
- I certify that the information provided on this form substantiates that the construction/installation identified on this form 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 Installation Certificate(s) for the construction/installation identified on this form 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.

Company Name:		Phone:
Responsible Person's Name:	Responsible Person's Signature:	
License:	Date Signed:	Position With Company (Title):



<b>CERTIFICATE OF ACCEPTANCE</b>		<b>MECH-10A</b>
<b>NA7.5.9 Hydronic System Variable Flow Control Acceptance</b>		<b>(Page 2 of 3)</b>
Project Name/Address:		
System Name or Identification/Tag:	System Location or Area Served:	

**Intent:**

*Ensure that when loads within the building fluctuate, control valves modulate the amount of water passing through each coil and add or remove the desired amount of energy from the air stream to satisfy the load.*

<b>Construction Inspection</b>	
1 Instrumentation to perform test includes, but not limited to: <ol style="list-style-type: none"> <li>a. Calibrated differential pressure gauge</li> </ol>	
2 Installation <ul style="list-style-type: none"> <li><input type="checkbox"/> Pressure sensors are either factory calibrated or field-calibrated.</li> <li><input type="checkbox"/> Pressure sensor location, setpoint, and reset control meets the requirements of Standards section 144(j)6B</li> </ul>	
3 Documentation of all control pressure sensors including (check one of the following): <ol style="list-style-type: none"> <li>a. Factory-calibrated (proof required)               <ul style="list-style-type: none"> <li><input type="checkbox"/> Factory-calibration certificate</li> </ul> </li> <li>b. Field-calibrated               <ul style="list-style-type: none"> <li><input type="checkbox"/> Calibration complete, all pressure sensors within 10% of calibrated reference sensor</li> </ul> </li> </ol>	
<b>A. Functional Testing</b>	<b>Results</b>
<b>Step 1: Design flow test</b>	
a. Open control valves to achieve a minimum of 90% of design flow	Y / N
b. Verify that the pump speed increases	Y / N
c. Are the pumps operating at 100% speed?	Y / N
d. Record the system pressure as measured at the control sensor	Ft. W.C. =
e. Record the system pressure setpoint	Ft. W.C. =
f. Is the pressure reading 1d within 5% of pressure setpoint 1e?	Y / N
g. Did the system operation stabilize within 5 minutes after completion of step 1a?	Y / N
<b>Step 2: Low flow test</b>	
a. Close coil control valves to achieve a maximum of 50% of design flow	Y / N
b. Verify that the current operating speed decreases (for systems with DDC to the zone level)	Y / N
c. Verify that the current operating speed has not increased (for all other systems that are not DDC)	Y / N
d. Record the system pressure as measured at the control sensor	Ft. W.C. =
e. Record the system pressure setpoint	Ft. W.C. =
f. Is the setpoint in 2e is less than the setpoint in 1d?	Y / N
g. Is the pressure reading 2d within 5% of pressure setpoint 2e?	Y / N
h. Did the system operation stabilize within 5 minutes after completion of step 2a?	Y / N
<b>Step 3: System returned to initial operating conditions</b>	<b>Y / N</b>

