HIGH RISE RESIDENTIAL/HOTEL/MOTEL CENTRAL HOT WATER SYSTEM DISTRIBUTION

CERTIFICATE OF INSTALLATION		NRCI-PLB-02-E
High Rise Residential/Hotel/Motel Central Hot Water System Distribution		(Page 1 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

A. DHW Distribution System		
01	Water Heating System Name:	
02	Distribution ~~t~~Type:	

B. Multiple Dwelling Units – Recirculation Temperature Modulation Control Requirements Systems that utilize this distribution type shall comply with these requirements	
01	Controls have been installed that reduce the hot water supply temperature when hot water demand is determined to be low by the control system. The control system may use a fixed control schedule or dynamic control schedules based measurements of hot water demand. ~~-~~(RA4.4.11).
02	Daily hot water supply temperature reduction (which is defined as the sum of temperature reduction by the control in each hour within a 24-hour period) shall be more than 50 degrees Fahrenheit. (RA4.4.11)
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

C. Multiple Dwelling Units – Recirculation Continuous Monitoring Systems Requirements Systems that utilize this distribution type shall comply with these requirements	
01	The water heating system must have a means of communicating with the remote monitoring facility. (RA4.4.12)
02	The monitoring system must record no less frequently than hourly measurement of key system operation parameters, including hot water supply and return temperatures, and status of gas valve relays. (RA4.4.12)
03	A current contract must be available that demonstrate the system will be monitored. (RA4.4.12)
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

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High Rise Residential/Hotel/Motel Central Hot Water System Distribution		(Page 2 of 3)
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D. Multiple Dwelling Units – Demand Recirculation Requirements Systems that utilize this distribution type shall comply with these requirements	
01	The system operates "on-demand", meaning that the pump begins to operate shortly before or immediately after hot water draw begins, and stops when the return water temperature reaches a certain threshold value. (RA4.4.13)
02	After the pump has been activated, the controls shall allow the pump to operate until the water temperature at the thermo-sensor rises to one of the following values: (RA4.4.13) • Not more than 10 degrees Fahrenheit (5.6 degrees Celsius) above the initial temperature of the water in the pipe • Not more than 102 degrees Fahrenheit (38.9 degrees Celsius).
03	The controls shall limit pump operation to a maximum of 10 minutes following any activation. This is provided in the event that the normal means of shutting off the pump have failed. (RA4.4.13)
04	Pump and control placement shall meet one of the following criteria: (RA4.4.13) • When a dedicated return line has been installed the pump, controls and thermo-sensor are installed at the end of the supply portion of the recirculation loop; or • The pump and controls are installed on the dedicated return line near the water heater and the thermo-sensor is installed in an accessible location as close to the end of the supply portion of the recirculation loop as possible, or • When the cold water line is used as the return, the pump, demand controls and thermosensor shall be installed in an accessible location at the end of supply portion of the hot water distribution line (typically under a sink).
05	Insulation is not required on the cold water line when it is used as the return. (RA4.4.13)
06	Manual or sensor controls shall be installed and, if powered, each control has standby power of 1 Watt or less. Controls may be located in individual units or on the loop. Controls may be activated by wired or wireless mechanisms, including buttons, motion sensors, door switches and flow switches. (RA4.4.13)
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

E. Multiple Dwelling Units – Non-Demand Control Recirculation Systems Requirements Systems that utilize this distribution type shall comply with these requirements	
01	The active control shall be either: timer, temperature, or time and temperature. Timers shall be set to less than 24 hours. The temperature sensor shall be connected to the piping and to the controls for the pump.
The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.	

HIGH RISE RESIDENTIAL/HOTEL/MOTEL CENTRAL HOT WATER SYSTEM DISTRIBUTION

CERTIFICATE OF INSTALLATION		NRCI-PLB-02-E
High Rise Residential/Hotel/Motel Central Hot Water System Distribution		(Page 3 of 3)
Project Name:	Enforcement Agency:	Permit Number:
Project Address:	City:	Zip Code:

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

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

Documentation Author Name:	Documentation Author Signature:
Documentation Author Company Name:	Date Signed:
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:

1. The information provided on this Certificate of Installation is true and correct.
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 Installation and attest to the declarations in this statement (responsible builder/installer), otherwise I am an authorized representative of the responsible builder/installer.
3. The constructed or installed features, materials, components or manufactured devices (the installation) identified on this Certificate of Installation conforms to all applicable codes and regulations, and the installation conforms to the requirements given on the plans and specifications approved by the enforcement agency.
4. I reviewed a copy of the Certificate of Compliance approved by the enforcement agency that identifies the specific requirements for the scope of construction or installation identified on this Certificate of Installation, and I have ensured that the requirements that apply to the construction or installation have been met.
5. I will ensure that a completed signed copy of this Certificate of Installation 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 completed signed copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.

Responsible Builder/Installer Name:	Responsible Builder/Installer Signature:	
Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)	Position With Company (Title):	
Address:	CSLB License:	
City/State/Zip:	Phone:	Date Signed:

NRCI-PLB-02 User Instructions

A. DHW Distribution System

Enter the water heating system name and the distribution type in this table. The type of distribution system that require for this form are:

* Recirculation Temperature Modulation Control
* Recirculation Continuous Monitoring Systems
* Demand Recirculation
* Non-Demand Control Recirculation Systems

B. Multiple Dwelling Units – Recirculation Temperature Modulation Control Requirements

This table only applies to systems indicated in Table A as **Recirculation Temperature Modulation Control.** -The installer must ensure the requirements on this table are met.

C. Multiple Dwelling Units – Recirculation Continuous Monitoring Systems Requirements

This table only applies to systems indicated in Table A as **Recirculation Continuous Monitoring Systems.** -The installer must ensure the requirements on this table are met.

D. Multiple Dwelling Units – Demand Recirculation Requirements

This table only applies to systems indicated in Table A as **Demand Recirculation.** The installer must ensure the requirements on this table are met.

E. Multiple Dwelling Units – Non-Demand Control Recirculation Systems Requirements

This table only applies to systems indicated in Table A as **Non-Demand Control Recirculation Systems.** -The installer must ensure the requirements on this table are met.