

Multifamily Central Hot Water System Distribution

Project Name:	Enforcement Agency:	Permit Number:
Dwelling Address:	City	Zip Code

A. SYSTEM TYPE

1.	HERS-Verified Multiple Recirculation Loops for DHW Systems Serving Multiple Dwelling Units
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B. HERS VERIFICATION REQUIREMENTS FOR ALL CENTRAL DOMESTIC HOT WATER RECIRCULATION SYSTEMS

Verified	Measure
1.	Outlet temperature controls: On systems that have a total capacity greater than 167,000 Btu/hr, outlets that require higher than service water temperatures as listed in the ASHRAE Handbook. (Section 110.3 (c)1)
2.	Controls for hot water distribution systems: Service hot water systems with circulating pumps or with electrical heat trace systems shall be capable of automatically turning off the system. (Section 110.3(c)2).
3.	Unfired Storage Tanks: Must be insulated with an external R-12 or combination of R-16 internal and external Insulation. (Section 110.3(c)4).
4.	Air release valve or vertical pump installation: (Section 110.3(c)5A).
5.	Recirculation loop backflow prevention: (Section 110.3(c)5B).
6.	Equipment for pump priming: (Section 110.3(c)5C).
7.	Pump isolation valves: (Section 110.3(c)5D).
8.	Cold water supply and recirculation loop connection to hot water storage tank: (Section 110.3(c)5E).
9.	Cold water supply backflow prevention: (Section 110.3(c)5F).
10.	System must have a dedicated return line which is insulated.(Section:120.3)
11.	All pipes are insulated per the insulation requirements of Table 120.3A(Section 120.3)
12.	Where insulation is installed there is no piping visible due to insulation voids
13.	All insulation tight against the pipe with no gaps between the pipe and insulation
14.	All elbows and tees fully insulated

The responsible person's signature on this Certificate of Installation indicates the system identified on this Certificate has complied with all applicable requirements specified in this Table.

C. HERS-VERIFIED MULTIPLE RECIRCULATION LOOPS FOR DHW SYSTEMS SERVING MULTIPLE DWELLING UNITS

Verified	Measure
1.	Recirculation loop has at least 2 recirculation loops serving roughly the same number of dwelling units

The responsible person's signature on this Certificate of Installation indicates the system identified on this Certificate has complied with all applicable requirements specified in this Table.

DOCUMENTATION AUTHOR'S DECLARATION STATEMENT

1. I certify that this Certificate of Installation documentation is accurate and complete.	
Name:	Signature:
Company:	Date:
Address:	CEA or CEPE or HERS Certification # If Applicable:
City/State/Zip:	Phone:

RESPONSIBLE PERSON'S DECLARATION STATEMENT

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Project Name:	Enforcement Agency:	Permit Number:
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1. I certify under penalty of perjury, under the laws of the State of California, 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 to accept responsibility for construction, or an authorized representative of the person responsible for construction (responsible person).
3. I certify that the installed features, materials, components, or manufactured devices identified on this certificate (the installation) conforms to all applicable codes and regulations, and the installation is consistent with the plans and specifications approved by the enforcement agency.
4. I understand that a HERS rater will check the installation to verify compliance, and that if such checking identifies defects, I am required to take corrective action at my 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 my expense.
5. I reviewed a copy of the Certificate of Compliance (CF1R) approved by the enforcement agency that identifies the specific requirements for the installation. I certify that the requirements detailed on the CF1R that apply to the installation have been met.
6. **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 signed copy of this Certificate of Installation is required to be included with the documentation the builder provides to the building owner at occupancy.** I will ensure that all Certificates of Installation are registered with a HERS Provider Data Registry for projects that require HERS verification.

Company Name: (Installing Subcontractor or General Contractor or Builder/Owner)

Responsible Person's Name:		Responsible Person's Signature:
CSLB License:	Date Signed:	Position With Company (Title):
Is this installation monitored by a Third Party Quality Control Program (TPQCP)? <input type="checkbox"/> Yes <input type="checkbox"/> No		Name of TPQCP (if applicable):

INSTRUCTIONS:**System Type****Definitions of system types**

HERS-Verified Multiple Recirculation Loops for DHW Systems Serving Multiple Dwelling Units: This measure requires on site HERS verification that at least two central recirculation loops are included in the system design. This credit is available to buildings with 8 or more units. The recirculation loops must be relatively equal in length and supply approximately the same number of dwelling units.