

# RESIDENTIAL SWIMMING POOL REGULATIONS

CERTIFICATE OF INSTALLATION

CFR-PLB-03-E (revised)

Pool And Spa Heating Systems

(Page 1 of 2)

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

**A. POOL AND SPA SYSTEM TYPE**

<b>01</b>	<b>POOL AND SPA SYSTEM TYPE</b>	
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**B. POOL AND SPA SYSTEMS AND EQUIPMENT REQUIREMENTS (SECTION 110.4(a) and 110.5)**

01	Heater has a thermal efficiency that complies with the Appliance Efficiency Regulations.
02	A readily accessible on-off switch is mounted on the outside of the heater, which allows the heater to be shut off without the user adjusting the thermostat setting.
03	A weatherproof plate or card containing instructions for the energy-efficient operation of the pool or spa heater is permanently mounted.
04	No electric resistance heating except for listed package units that have fully insulated enclosures and tight fitting covers that are insulated to at least R-6. Or if documentation is provided that at least 60 % of the annual heating energy is from site solar energy or recovered energy.
05	Heating system has no pilot light.

**C. POOL AND SPA SYSTEM INSTALLATION REQUIREMENTS (SECTION 110.4(b))**

01	To allow for the future addition of solar heating equipment, at least 36" of pipe is installed between the filter and heater, or dedicated suction and return lines are installed. or built-in or built-up connections for future solar heating are provided.
02	A cover is provided for outdoor pools or spas that have a heat pump or gas heater.
03	Pool system has directional inlets to adequately mix the pool water
04	Pool system has a time switch that allows the pump to be set or programmed to run during off-peak periods only

**D. POOL PUMP SIZING AND FLOW RATE SPECIFICATION (SECTION 150.0(p))**

01	The pool pump specified is listed in the CEC database of certified pool pumps.
02	The pool pump flow rate shall not exceed the maximum pump flow rate calculated based on pool sizing in the table below. The return pipe diameter, suction pipe diameter, and filter area shall be at least as large as the required minimums shown in the table. Alternatively, a flow calculation or flow test result shall be provided to demonstrate that the pump flow rate is less than 6 hour filtration turnover, and the return pipe flow rate does not exceed 8 feet per second and that the suction pipe flow rate does not exceed 6 feet per second.
03	An alternative compliance calculation or a flow test result is provided for this pool or spa use (must attach flow calculation or flow test result to this form)
04	The pump is capable of operating at 2 or more speeds (not applicable if pump is less than 1 horsepower).
05	Each auxiliary pool load is served by either a separate pump, or the system is served by a multi-speed pump.
06	Volume of pool (gallons):
07	Filter Type (Cartridge, Sand, DE):
09	Required Return Pipe Diameter (inches).
10	Required Suction Pipe Diameter (inches).
11	Required Filter Surface Area (ft <sup>2</sup> ).
12	Max Pump Flow Rate (gallons per minute).
13	Measured flow rate return line (feet per second)
14	Measured flow rate suction line (feet per second)

**E. POOL SYSTEM PIPING (Section 150.0(p)2)**

01	The suction side pipe is straight for at least 4 pipe diameters before entering the pump (See table below for the required straight run lengths for various pipe sizes).
02	All elbows are sweep elbows, or an elbow type that has a pressure drop that is less than the pressure drop of a straight pipe with a length of 30 pipe diameters.

**F. POOL FILTERS AND VALVES (Section 150.0(p)3 and 4)**

01	If a filter is used in a pool intended for public use: The size of the filter is at least the size specified in NSF/ANSI 50.
02	If a backwash valve is used: The diameter of the backwash valve is at least 2 inches, or the diameter of the return pipe, whichever is greater.

**The responsible person's signature on this compliance document affirms that all applicable requirements in this table have been met.**

**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 registered 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 registered 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:	

**Table C**  
**Pool sizing (Values are based on a maximum allowable turnover rate of 6- hours)** Note: *For pumps greater than 1 hp. The maximum Pump Flow is the lowest speed default filtration*

Max Pool Volume (gallons)	Min Pipe D or Greater (inches)	Min Filter Area or more (square feet)	Max Pump Flow (gpm)
	Return	Suction	Cartridge
			Sand
			DE
13,000	1.5	1.5	100
17,000	1.5	2	130
21,000	2	2	160
28,000	2	2.5	210
42,000	2.5	3	320
48,000	3	3	360
			2.4
			3.1
			3.9
			5.2
			7.8
			8.9
			20
			25
			30
			40
			60
			70
			36
			47
			58
			78
			117
			133

**Table D**  
**Pipe Diameter/Pipe Length**

Pipe Diameter (inch)	Required Pipe Length leading into pump (inch)
1.5	6
2	8
2.5	10
3	12