

PRIME DROP-IN CHILLER™

Instructions for Drop-In Coil Model
#2600,2601,2602,2603

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WHAT'S NEXT

EMAIL: INFO@CURRENT-USA.COM

WWW.CURRENT-USA.COM

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SAFETY INSTRUCTIONS

WARNING

To guard against injury, basic safety precautions should be observed, including the following:

READ AND FOLLOW ALL SAFETY INSTRUCTIONS

DANGER

To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself. Return the appliance to your retailer or discard the appliance.

- If the appliance falls into the water, or water drips onto the unit, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately.
- Always unplug appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank cord to pull plug from outlet. Grasp the plug fully and pull out to disconnect.
- Carefully examine the appliance after replacement. It should not be plugged in if there is water on parts not intended to be wet.
- Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
- Exposing chiller/power cords to water may cause electrical short and fire.
- Do not allow water or salt to come in contact with thermostat or power cords.
- Do not operate chiller without water flow to the coil. This may cause the evaporator to freeze up and result in damage to the unit.

SAVE THESE INSTRUCTIONS

GROUND FAULT CIRCUIT INTERRUPTER PROTECTION

To comply with the National Electrical Code (NFPA 70), and to provide additional protection from the risk of shock, this unit **MUST** be connected to a ground fault circuit interrupter (GFCI) outlet at all times. Do not use extension cords. **WARNING** - To reduce the risk of electrocution, keep all connections dry and off the ground. Do not touch plug with wet hands.



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WHAT'S NEXT

CHILLER INSTALLATION

1. Before removing your Prime Chiller from the box, please note any exterior shipping damage to the box. It is strongly recommended to keep the box and packaging material in the unlikely event there is shipping damage or service is required.
2. Remove the chiller and controller from the box and inspect thoroughly for any signs of damage, even if the box does not show damage. If you notice any damage (cracked or bent cover, damaged condenser, fins, etc...) please stop and contact your dealer immediately.
3. Remove the 8 screws that hold the front cover in place and tilt the chiller up to remove the wooden brace from underneath. The wooden brace is used to secure the motor during shipping. Keep wooden brace with other packaging materials.
4. Make sure the chiller is placed on a firm, level surface in a location that has plenty of ventilation and will not be exposed to salt or saltwater. Do not use an extension cord for the chiller or the thermostat.

THE REQUIREMENTS FOR VENTILATION ARE:

- a) Back/Sides: Condenser (radiator) requires at least 24" clearance to allow air into the chiller.
 - b) Front: Requires at least 24" clearance to allow for proper air flow.
 - c) Chiller must not be placed in a closed closet or cabinet.
 - d) The warm air from the chiller must be completely evacuated from the chiller location. A fan may be necessary to draw warm air away from the chiller. The maximum operating temperature is 95 F.
5. The drop-in cooling coil is designed to be placed below the water in a sump or tank. The coil **MUST** be submersed in the water at all times to prevent damage to the coil or the chiller. Installing the coil at a right angle will ensure a high surface area for maximum cooling.
 6. The black flexible connection line **MUST** remain out of the water at all times. Failure to do so may result in damage to the line. Do not kink the hose or bend to extreme angles. See Figure A.
 7. Before turning on chiller, ensure the following:
 - a) The drop-in coil must have adequate water flow for proper operation.
- | <u>Model</u> | <u>HP</u> | <u>Min/Max Flow</u> |
|--------------|-----------|---------------------|
| 2600 | 1/4 | 9-16 gpm |
| 2601 | 1/3 | 12-22 gpm |
| 2602 | 1/4 | 9-16 gpm |
| 2603 | 1/3 | 12-22 gpm |
- b) Make sure the pump will operate normally without any blockage.
 - c) Make sure the chiller is plugged into a GFCI protected 110V power outlet.
8. Set the temperature controller to the desired temperature as instructed next.



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CHILLER INSTALLATION

ENSURE THAT BOTH FRONT AND BACK OF UNIT ARE AT LEAST 24" FROM ANY WALL TO ALLOW PROPER AIR FLOW.



FIGURE A



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WHAT'S NEXT

TEMPERATURE CONTROLLER SPECIFICATIONS/INSTALLATION

PRIME CHILLER TEMPERATURE CONTROLLER

This microprocessor based electronic temperature controller is designed to provide on/off control of heating and cooling. It is equipped with an easy to read Liquid Crystal Display (LCD) that displays a constant readout of actual temperature, control settings, relay status and system diagnostics. The simple keypad allows programming of set point temperature, selectable Fahrenheit/Celsius scale, temperature differential and cooling/heating mode of operation. Lockout feature prevents tempering from unauthorized personnel. Controller is housed in water tight Nema type 4X housing rated for outdoor use.

SPECIFICATIONS

Set point Temperature	
Range	-30° F to 220° F
Differential Adjustment	1° F to 30° F
Sensor	Thermister, 2" L x 0.25" dia., 8 ft. cable
Display	LCD
Enclosure	Nema Rated
Environment	-20° F to 140° F, RH 0-95%
Dimensions	175 x 41 x 23 mm (7.9"x1.8"x1")

INSTALLATION

1. The sensor may be placed directly in your water. Place sensor either in the sump or directly into the tank..
2. Plug the power cord from the chiller into the female outlet on the temperature controller and plug the controller's power cord into a 120V GFCI protected wall outlet. Do NOT use an extension cord between the chiller and controller, or between the controller and wall outlet.
3. Set the controller to the desired temperature and differential (see Programming the Controller.) A differential of 2 degrees (2° F/C) is recommended with many heat load situations to allow the chiller to completely cycle and prevent damage to the start-up components and compressor.



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WHAT'S NEXT

PROGRAMMING TEMPERATURE CONTROLLER

1. Press the SET key once to access the Fahrenheit/Celsius mode. Press the UP or DOWN arrow to modify the setting.
2. Press the SET key again to access the set point. The LCD displays the set point and S1 will be blinking on and off indicating it is in the set point mode. Press the UP or DOWN arrow to modify the set point.
3. Press the SET key again to access the differential. The LCD will display the differential and DIF1 will be blinking on and off indicating it is in the differential mode. Press the UP or DOWN arrow to modify the differential. Two degrees (2° F/C) is the optimum setting.
4. Press the SET key again to access the cooling or heating mode. The LCD will display either C1 for cooling or H1 for heating. Press the UP or DOWN arrow to change between C1 and H1. To operate a chiller thermostat must be set to C1. To operate a heater, thermostat must be set to H1. The factory setting is C1.

Proceed to #5 for Dual Thermostats or press the SET key again to view current temperature and resume the normal operating mode.

5. Press the SET key again to access the heater set point. The LCD displays the set point and S2 will be blinking on and off indicating it is in the heat set point mode. Press the UP or DOWN arrow to modify the set point.
6. Press the SET key again to access the heat stage differential. The LCD will display the differential and DIF2 will be blinking on and off indicating it is in the differential mode. Press the UP or DOWN arrow to modify the differential. Two degrees (2° F/C) is the optimum setting.
7. Press the SET key again to access the cooling or heating mode. The LCD will display either C2 for cooling or H2 for heating. The LCD will display either C2 for cooling or H2 for heating. Press the UP or DOWN arrow to change between C2 and H2. This mode should be set to H2. This means stage 2 is for the heater.
8. If your heater has a built-in thermostat it must be turned up above the heat set point on the LCD thermostat. Example: if you have set the heater set point on the LCD thermostat to 76°F, you must turn the thermostat on the heater to at least 78°F. The LCD thermostat will now control the chiller and the heater.



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WHAT'S NEXT

ERROR MESSAGES/ TROUBLESHOOTING

DISPLAY	ERROR MESSAGE	TO CORRECT
E1	Appears when either the up or downkey is pressed when not in the programming mode.	If the E1 message appears even when no keys are being pressed, replace control.
E2	Appears if the control settings are not properly stored in memory.	Check all settings and correct if necessary.
EP	Appears when the probe is open, shorted or sensing a temperature that is out of range.	Check to see if the sensed temperature is out of range. If not, check for probe damage by comparing it to a known ambient temperature between -30°F and 220°F. Replace the probe if necessary.
EE	Appears if the EPROM data has been corrupted.	This condition cannot be field repaired. Replace the control.
CL	Appears if calibration mode has been entered.	Remove power to the control for at least five seconds. Reapply power. If the CL message still appeared, replace the control.



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WHAT'S NEXT

WARRANTY

CURRENT USA, INC. ONE-YEAR LIMITED WARRANTY

Current USA, Inc. warrants this product against defects in materials and workmanship for a period of ONE (1) YEAR from the date of original retail purchase. Light Bulbs carry a 3 month warranty.

Note: Current-USA, Inc. One-Year Limited Warranty does not cover damage caused by the following: Improper installation, saltwater corrosion, and electrical surges.

If you discover a defect, Current USA, Inc. will, at it's option, repair or replace the product at no charge to you, provided you return it during the warranty period. It is required that you present this warranty card and a copy of the bill of sale as proof of original purchase date, in the event the product needs repairs, within the warranty period. Please see your dealer for return options. This warranty applies only to products by or for Current USA, Inc. that can be identified by trade name, or logo affixed to them. Current-USA, Inc. does not warrant any products that are not Current-USA, Inc. products. This warranty does not apply if the product has been damaged by accident, abuse, misuse or misapplication or if the product has been modified without the written permission of Current-USA, Inc.; or if any Current-USA, Inc. logos have been removed or defaced.

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