

RPR ZAHN

ELECTRONICS

RPR ZAHN Model: REC-H1000 - Instruction and Operating Manual



The REC-H1000 Water Heater/Circulation System is designed to re-circulate water. Before using this product with other liquids; first consult with the RPR Zahn Technical Support team. The system is designed as a temperature control and circulation device for closed-loop systems at atmospheric pressure. This product is not designed to operate under pressure and should not be attached to building, plant or other pressurized systems.

The REC-H1000 system is intended to maintain a process temperature between 24°C (75°F) and 60°C (140°F). As the system heats the water the solid-state temperature controller, using feedback from a thermistor will maintain the reservoir temperature to an accuracy of +/- ¼°C, (½ °F).

If your process requires tempered water above 60°C RPR Zahn, LLC can provide systems direct from our manufacturing facility with ratings to 90°C+, please visit us @ www.rprcorp.com

RPR Zahn Electronics Model Number: REC – H1000 Specifications			
Input Power:	10.0 Amp	Auto Temp Cut Off:	60°C (140°F) +/-5F
Input Voltage:	120VAC @ 60HZ	Fuse Type:	15A-ABC Slow Blow
Heating Power	1000 Watts	Water flow rate:	6.8 Liters/min./1.8GPM
Heating Rate:	0.7°C/Liter/min.	Dimensions:	8"W x 7"H x 16"D
Heating Rate:	4.0°F/Gal./min.	Weight:	14.0lbs. / 6.4kg

Proper Installation of the Model: REC-H1000

- Do not connect the power cord until the Model: REC-H1000 installation is complete.
 - Do not run the REC - H1000 motor/pump assembly without water in the system or damage to the pump impeller may result.
 - Install the REC- H1000 at an elevation below the water level of the system/reservoir it is servicing.
 - Ensure there is adequate ventilation and air circulation through and around the enclosure.
 - A 15Amp electrical power circuit equipped with a GFCI ground fault circuit interrupt is required for safe installation and operation of the REC-H1000.
1. The hose connections for the REC – H1000 are labeled “IN” and “OUT.”
 2. Attach the hoses to the REC – H1000 and securely tighten the hose clamps.
 3. Connect the “intake” hose to the REC – H1000 port marked “IN”. This hose should pull from a low point in the system being serviced or from the bottom of the reservoir. The “intake” or “IN” port is connected to the suction side of the pump and MUST be flooded for the pump to operate properly.
 4. Connect the “discharge” hose to the REC – H1000 port marked “OUT” this hose connection should be connected at a point on the system or reservoir, which is not lower than the connection of the intake hose.
 5. When all the connections have been securely tightened, fill the reservoir to the proper level.
 6. Place the REC – H1000 at an elevation lower than the surface of the reservoir or the system being serviced. and proceed to “prime” the pump.

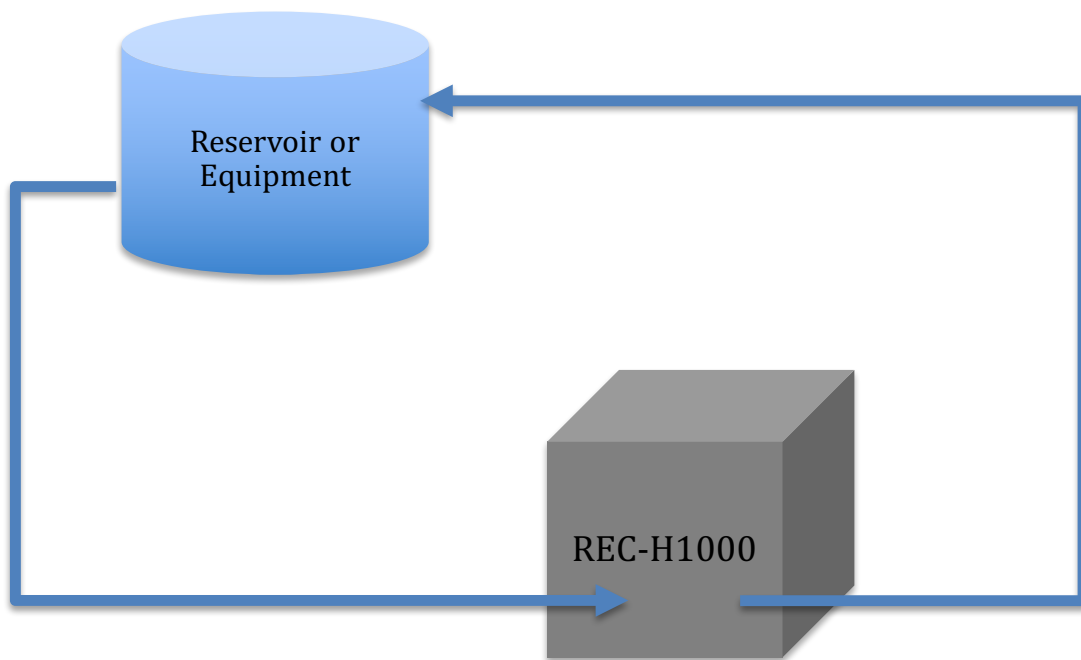


Priming the Pump

1. Press the power switches on and off in short sequences until water is visible in the “IN” hose. When this occurs, leave the motor on only until a continuous flow of water is emerging from the “OUT” hose.
2. It may be necessary to roll the REC – H1000 from side to side to clear entrapped air in the system and prime the pump. If the air bubbled cannot be totally removed, check for loose connections, especially on the suction side of the system. You may be drawing air into the system.
3. Be certain that the hoses have no kinks. If your installation does not require the 6-foot lengths of hose supplied, then trim to length the hoses to avoid kinking and reduce losses.
4. Minimize the discharge side hose lengths.
5. Maintain hose sizes at 5/8” ID on the suction side and 1/2” ID on the discharge side.

Setting the Temperature of the System

1. Turn the “FINE” adjustment dial fully counter-clockwise to “zero”. Place the “COARSE” adjust dial to the mid-point, the system will hold a temperature of approximately 42°C (108°F).
2. Use a thermometer to check the temperature of the water jacket or reservoir. Rotate the “COARSE” adjustment dial to bring the temperature close to the desired temperature. The “FINE” adjustment dial will provide a precise adjustment allowing the system to hold temperature to an accuracy of +/- 1/4°C, (1/2 °F).
3. After the system reaches the desired temperature re-tighten all the external hose connections and fittings.



The Heater Circulator is not self-priming
and must be located below the tank or equipment

SAFETY – Shutdown for High Temperature

Occasionally, during start-up or operation, the controller can experience an over temperature condition, and the controller's thermal overload switch will automatically cut-off power to the unit. Let the unit cool down (approx. 30 minutes). The thermal overload switch will *automatically* reset itself. Then, simply restart the pump using the "ON" rocker switch. The following checks should be made if the controller continues to overload or becomes inoperative.

Intermittent Shutdown

1. Check for kinked or collapsed hoses and refer to the section: "Priming the Pump".
2. Ensure the REC – H1000 is at an elevation below the reservoir or equipment being serviced.
3. Ensure the REC – H1000 installed to allow circulation of air around the cabinet.

Non-Operative "won't start or pump"

1. Ensure that the power switch is "ON"
2. Check the building circuit breaker and the GFCI receptacle.
3. Check the REC – H1000, 15 Amp fuse located on the back of the chassis.
4. Check that the power cord is connected to the power entry on the back of the chassis.
5. After checking these possibilities; call us for assistance in trouble-shooting OR to obtain a return authorization for RPR Zahn repair service.

Maintenance

All parts that are in immediate contact with water, including the pump and heat exchanger assembly and components, are made of brass, stainless steel and inert plastic. However, for maximum life of the impeller housing, O-ring gasket, heater, and other operating parts, it is suggested that the water reservoir be emptied at least once a week and flushed with clean water, including running fresh water through the pump system. This prevents build-up of calcium, chloride, and algae, which will eventually cause failure of the pump seal or impeller performance. Hard water containing iron and other minerals will cause early failure to the heater element. Filter the main water supply.

Lubrication

The recirculating pump bearings must be lubricated once every 6 months. Use a light machine oil product. Place four (4) drops in the front and rear motor bearings.

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