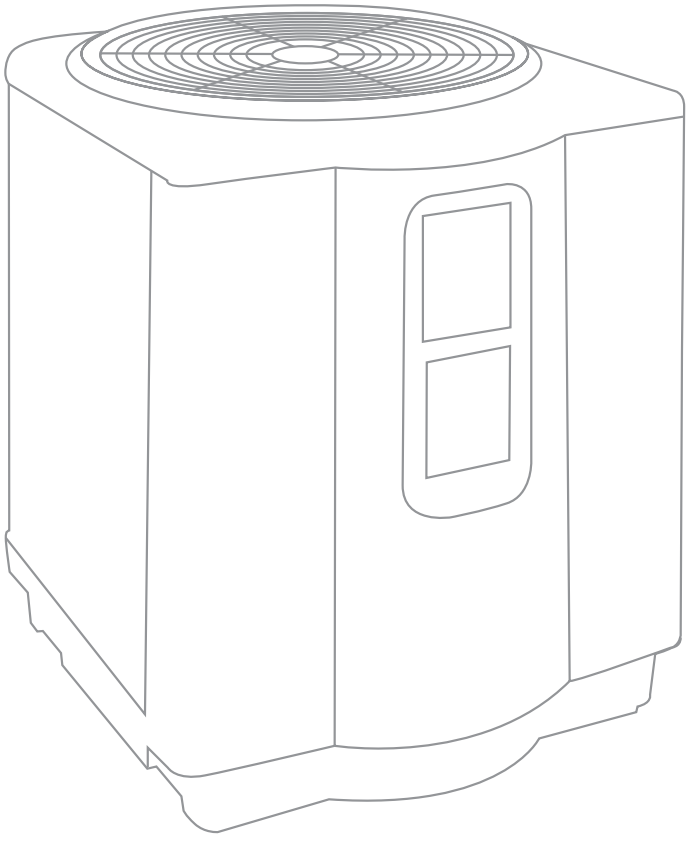
HeatPro™

HP13023646



OWNER'S Manual

PRINTED IN CANADA 10/2009

Table of contents

Introduction	2
General Safety Instructions	4
Installation Instructions	
Location	6
Water piping	7
Electrical	7
Bonding	8
Bonding and plumbing step-by-step instructions	8
Using an External Controller	10
Electrical Connections	11
Wiring Diagram	12
Service Analyzer Control	13
Operation	14
Caring for your Pool Heater	15
Initial Startup	16
Meaning of Display Codes	17
Troubleshooting	18
Requesting Assistance or Service	20
Maintenance	21
Winterizing	21
Hayward® Heat Pump Pool Heater Limited Warranty	22
International Warranty	23
Notes	24
Warranty Card Registration	25

Thank you for buying a HEATPRO pool heat pump.

The HEATPRO pool heat pump is a self-contained unit designed specifically for pool heating. Each component has been selected with care to achieve a high-quality product in an effort to exceed all industry standards.

All HEATPRO pool heat pumps have an electronic board with service analyzer, a titanium heat exchanger tube warranted for 10 years against corrosion and a UV-resistant plastic cabinet that eliminates all maintenance for life. All components are of superior quality, which presents you with an effective, state-of-the-art technology heat pump.

Compared to other types of pool heaters, such as gas or oil-fired, the HEATPRO pool heat pump has a lower heating capacity on a BTU/hr basis. Therefore, it needs to operate for a longer time to accomplish the desired results. Occasionally, it may be necessary to run the heat pump for up to 24 hours per day. However, this should not be of concern to the owner because the heater is designed to operate continuously. What's more, despite continuous operation, it will still heat the pool far more economically than other types of heaters.

As with all pool heaters, you are advised to use a pool cover at night and when the pool is not in use. The pool cover should be used if night temperatures are 15°F less than desired pool temperature. This will keep evaporation, the greatest source of heat loss, to a minimum, thus greatly reducing the overall pool heating costs. During warmer weather, the pool cover may not be required.

Please read carefully

Record your model's information

Please complete and mail in the ownership registration card provided with this guide. The return address is displayed on the front of your registration card. Simply mail it as you would a postcard. The card helps us notify you about any new information about your heater.

Whenever you call to request service for your heater, you must know your complete model and serial numbers. You can find this information on the plate located at the base of your heater.

Please also record the purchase date of your device and your dealer's name, address, and telephone number.

Model Number _____

Serial Number _____

Purchase Date _____

Dealer Name _____

Dealer Address _____

Dealer Phone _____

Keep this book and the sales slip together in a safe place for future reference.

Service can now be obtained by calling these phone numbers.

*CANADA: **1 888 238-7665***

*USA: **1 908 355-7995***

General Safety Instructions

We care for our customers

We have provided important safety messages in this manual and on your heater. Always read and obey all safety messages.

IMPORTANT

The IMPORTANT sign calls attention to a note that provides important information or information essential to the completion of a task.

CAUTION

The CAUTION sign denotes a hazard. It calls attention to an operating procedure, practice, or the like, which, if not correctly performed or adhered to, could result in material damage, particularly to the product, up to the destruction of part or all of the product.

WARNING

The WARNING sign denotes a hazard. It calls attention to a procedure, practice, or the like, which, if not correctly performed or adhered to, could result in personal injury or injury to a third party. These signs are rare, but are extremely important.

CAUTION

All electrical connections must be done by a qualified electrician and according to the local electrical codes. Always cut off the unit's main power whenever the access panel is open or removed. Always install the machine outdoors (unless otherwise approved by the manufacturer), while respecting the minimal clearances needed for proper operation and heating.

CAUTION

Proper pool chemistry is vital to the life of your heater. Pay particular attention to the total alkalinity and TDS. It is highly recommended that you have your pool chemistry checked often by an independent pool store.

Installation Instructions

Location

The placement of the pool heater is very important in keeping installation costs to a minimum while providing for maximum efficiency of operation, as well as allowing adequate access for service and maintenance.

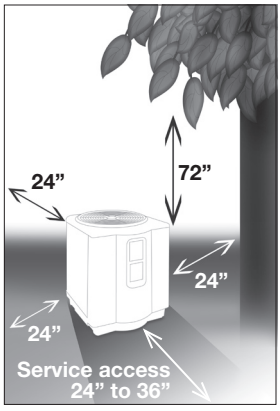
The pool heat pump is designed for outdoor installation and should not be installed in a fully enclosed area, such as a shed, garage, etc. Recirculation of cold discharged air back into the evaporator coil will greatly reduce unit heating capacity and efficiency.

The unit should be located as close as practical to the existing pool pump and filter to minimize water piping. However, do not forget to provide a 24”clearance at the very least all around your heat pump. The use of 90 degree bends and short radius elbows in the water piping should be kept to a minimum.

Mount the unit on a sturdy base, preferably a concrete slab or a set of blocks. The base should be completely isolated from the building foundation wall to prevent the possibility of sound or vibration transmission into the building. The size of the base should not be less than 36” x 36” (92 cm x 92 cm).

IMPORTANT

Air is pulled through the evaporator coil and discharged through the top grille. A minimum clearance of 72 inches should be allowed above the unit for unrestricted air discharge. The unit must not be installed under a porch. Any side of the unit should be located at least 24 inches from a wall or from any other obstruction for unrestricted air intake and service access.



Water piping

IMPORTANT

The piping sequence is as follows: pool > pool pump > filter > heater > check valve > chemical feeder > pool. Automated chlorine distribution systems, if used, must be placed downstream of the heater to minimize harm to the pool equipment. Use rigid PVC piping if possible (SCH40 or SCH80). All joints should be glued with PVC glue. When the piping installation is complete, operate the pool pump and check the system for leaks. Then, check the filter pressure gauge to verify that there isn't any indication of excessive pump head pressure.

You can also make the connections using high-pressure flexible hose, but make sure the hose can withstand high pressure. The installation of a heat pump bypass is not necessary unless the water flow exceeds 75 GPM.

Note: Certain installations have valves which isolate the heat pump from the water circuit. If the heat exchanger is deprived of water circulation for several days, high chlorine gas could cause excessive corrosion. If the disconnect switch is turned off, be sure that the pool water is allowed to circulate through the unit, or is drained out of it.

Electrical

CAUTION

The wiring of your pool heat pump should be performed by a qualified electrician in accordance with local requirements.

A properly-sized breaker and copper wire must be used.

Check the heat pump data label for required maximum breaker size.

WARNING

The unit must always be powered off before opening the access panel.

CAUTION

Because all metals have different electrical potentials, all metal and electrical components of the pool system must be bonded together. This includes the metal framework of the pool, the light, the pump, the filter (if made out of metal), the heater, any automatic chlorine generator, and any other metal or electrical equipment. On some older pools, this substructure bond wire may not exist. In these cases, a 6 to 8 foot solid copper rod must be driven into the ground near the equipment. All electric and metal components must then be bonded to each other, and then to the copper rod.

Bonding and Plumbing step-by-step instructions

1. A 1/3 lb check valve **must** be installed between the heater and any automatic chlorine distribution system (if used).
2. Any kind of automatic chlorine distribution system **must** be installed after or downstream of the heat pump.
3. The filter **must** be placed before or upstream from the heat pump.
4. A bypass and shut-off should be installed on all systems for ease of service, maintenance and to balance the water flow. Bypasses **must** be installed on any system with over a 3/4 HP pool pump. (see FIG.3 for bypass plumbing)

Bonding and Plumbing diagram

Fig. 2

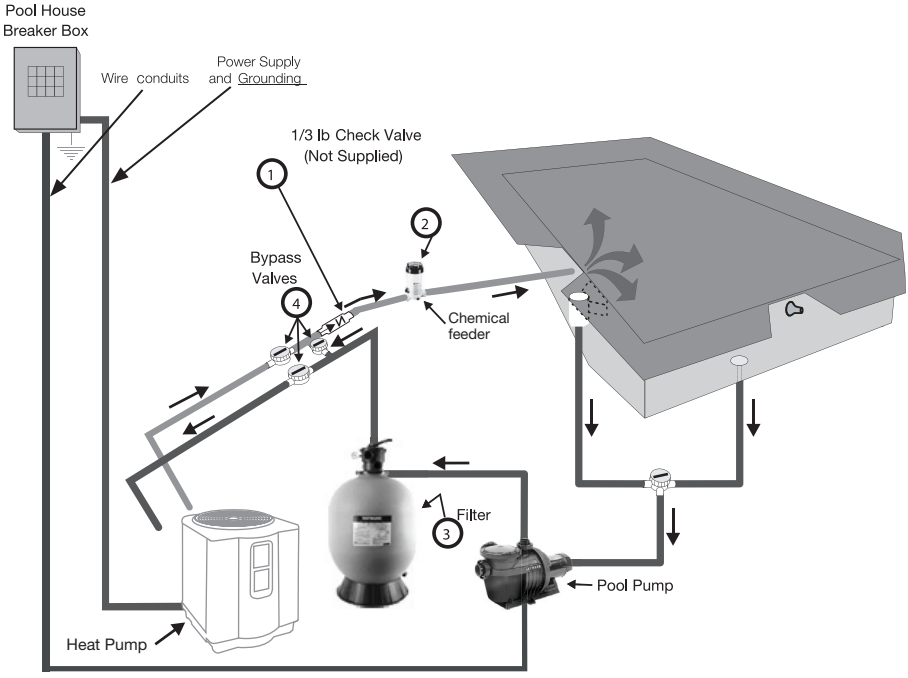
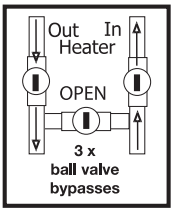


Fig. 3



Using an External Controller

To connect the electronic board in order to control it remotely, use the P_S terminals on the right side of the board. Next, access the P_S menu and select the desired mode. In internal mode, POOL or SPA mode can be adjusted by using this menu. In external mode, a normally open contact puts the board in POOL mode and a closed contact puts the board in SPA mode. Therefore, a board set to OFF in POOL mode and to 80 degrees in SPA mode can be controlled with an external switch to heat up to 80 degrees.

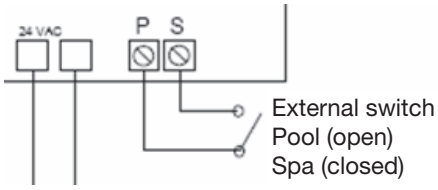
Internal mode: ***Use the P_S mode on the main menu***
External mode: ***• Open contact = POOL mode***
• Closed contact = SPA mode

Control using a switch

To control the board using an external switch, follow these steps :

- Turn on the heat pump.
- Set POOL mode to OFF.
- Set SPA mode to the desired temperature.
- Access the setup menu.
- Select mode E (external) on the P_S menu.
- Run two J7 (P_S) terminal wires from the HPEC-003 board to the NO switch terminals (see FIG. 4).
- You can now control the operating mode by turning off the switch (open = POOL, closed = SPA.)

Fig. 4



Electrical Connections

WARNING

The installation of the pool heater should be performed by a certified electrician. To connect the electricity, you must unscrew the five screws of the front panel, then slide the electric cable through the knock out located on the left or the right side of the base, and then insert it in the control box. The electrical diagram is located on the lid of the control box as well as in this manual.

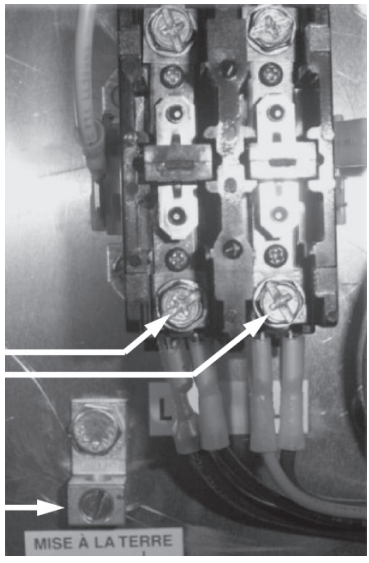
Power requirements

240 V, 1 PH, 60 Hz

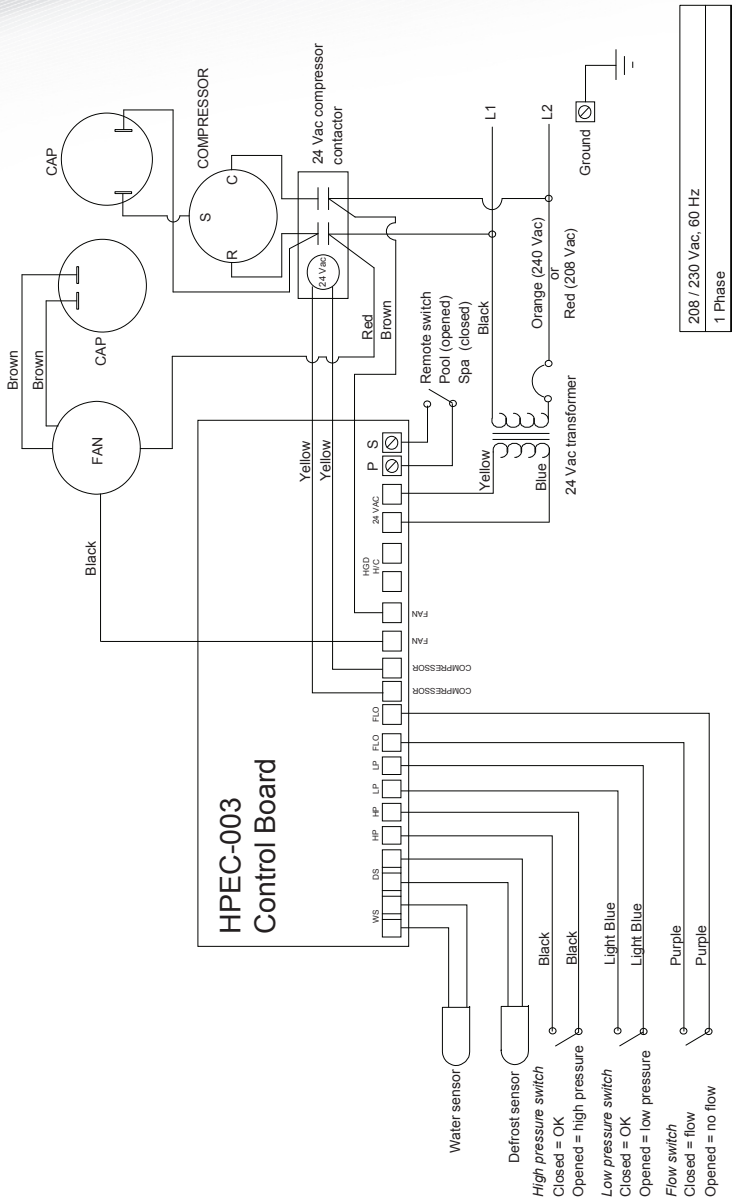
Look at the name plate located on the heat pump to know the required amperage.

Please refer to your local electrical code for additional wiring requirements.

Fig. 5

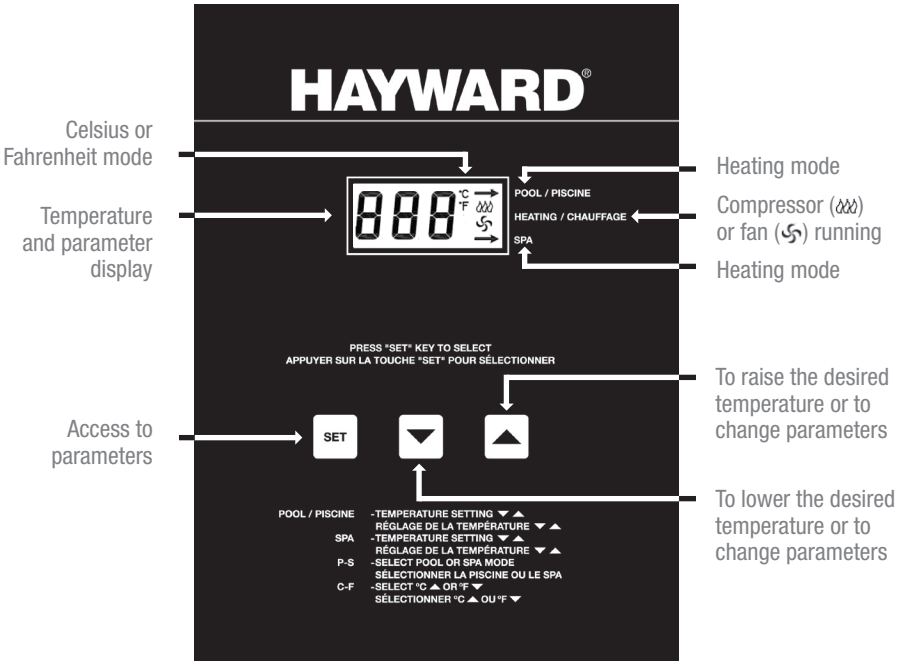


Wiring Diagram



Service Analyzer Control

The control panel is factory set to display the temperature in Fahrenheit degrees.



Operation

To increase the temperature

Push the **SET** key until you see **POL** or **SPA**. The programmed temperature will be displayed. Press the UP arrow ▲ to increase the temperature setting one degree at a time.

To lower the temperature

Proceed as explained above using the down arrow ▼.

To select the pool or spa mode

The unit can keep two temperature settings in memory: one for pool mode (max: 95°F/35°C), and the other for spa mode (max: 104°F/40°C). To have access to either program, press the **SET** key until you see **P_S** and by pressing one of the arrow keys, you can switch to **POL** or **SPA**. Once the heating mode has been programmed, it will be displayed for five seconds, and will then return to the actual pool water temperature. The lights on the right side of the display indicate the chosen heating mode.

To display the temperature in ˚F or in ˚C

Press the **SET** key until you see **F_C** and by pressing one of the arrow keys, you can switch to °F or °C. Once the tempurature unit has been programmed, it will be displayed for five seconds, and will then return to the actual pool water temperature in the mode that you have chosen.

Caring for your Pool Heater

How to protect your pool heater

This Flow Chart will teach you the steps to follow to protect your heater as well as your family by maintaining a corrosion free pool.

INSTALLATION
- Verify that the installation was done according to owner's manual instructions.

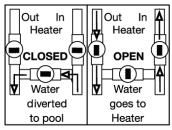
FIRST TIME OR SPRING STARTUP
- Hook up pool water piping but do not hook up the Heater yet.

VERIFY & BALANCE POOL CHEMICAL

POOL CHEMICAL OK?
NO

YES

FIG. 6



HOOK UP WATER PIPING TO HEATER

SET REQUIRED WATER TEMPERATURE ON TOUCH PAD

IMPORTANT FOR THE HEALTH OF YOUR FAMILY AND FOR YOUR POOL HEATER
- Verify Chlorine or Bromine level every 2-3 days
- Verify PH level once a week
- Verify Alkalinity level every 3-4 weeks (More often if you own an Automatic Chlorine or Bromine Feeder.)
  (Above tests can easily be done by yourself with a do it yourself kit)
- Verify Hardness and Total Dissolved Solids (TDS) once a month
  (Above tests must be done by your dealer)

INSTALLATION
When heating is not required for less than a week you **MUST** leave the Bypass valves open (See Fig.6) to let the water circulate in the unit. If the heat exchanger is deprived of water circulation for more than 72 hours, high chlorine gas could cause excessive corrosion.

HEATING WILL NOT BE REQUIRED FOR MORE THAN A WEEK?
NO

YES

Shut Bypass valves and disconnect waterlines to drain the HEATER.

HEATING NEEDED?
YES

NO

IS IT POOL CLOSING TIME?
NO

YES

CLOSE POOL PROTECT HEATER BY COVERING IT

Initial Startup

IMPORTANT

Before starting the pool heater for the first time, it is important to verify that the breaker is in the ON position.

Also make sure that the water circulates freely and that the pool pump is activited.

Then, you will need to set the water temperature you desire. The fan will immediately start. The compressor will start after a 3 to 4-minute delay.

When the compressor is running, the **HEATING/CHAUFFAGE** indicator located on the right (see "Service Analyzer Control," p. 13) should be lit. At initial startup, it is normal for the unit to run 24 hours a day.

It is also normal to see water dripping from the holes at the base of the unit. This is just condensation.

Meaning of Display Codes

Service Analyzer Codes

Most problems will be detected by the service analyzer and a code will be displayed on the digital display of your heater.

Display	Meaning of codes
OFF	The desired programmed temperature point is lower than 60°F (15°C).
LP & LP3	Shortage of refrigerant gas in the unit or faulty low pressure control. The digital display will show LP3 after 3 LP faults and shut down your pool heater. The pool pump will also be stopped for protection if the unit's internal time clock feature is used. If LP or LP3 occurs you should call for service.
HP & HP3	Low water flow to the unit or faulty high pressure control. Check water flow. Backwash filter and/or heater. The unit will show HP3 after 3 HP faults. This will stop your heater for protection.
Po	Water temperature probe connected to WS on the electronic board may be disconnected. If it is not, the probe may be open or defective.
Pc	Water temperature probe is short circuited or may be defective.
FLo	Possible causes: - The filter is in backwash position. - The filter pump is stopped. - The filter is dirty. - Shortage of water to pool pump. - Water pressure switch must be adjusted or it is broken.
dPo	Suction temperature probe connected to DS on the electronic board may be disconnected. If it is not, the probe may be open or defective.
dPc	Suction temperature probe is short circuited or may be defective.
FS	Unit currently in defrosting cycle (the fan works but the compressor is stopped). This is normal operation when outside temperatures are cold.

Troubleshooting

The pool heater is not running.

Heat pump control set to OFF.	••➔	Raise temperature set point above 60°F (15°C).
Desired water temperature is reached.	••➔	Unit will automatically restart when the water temperature goes below the set point.
Main breaker is tripped.	••➔	Reset main breaker and restart heat pump.

The heater is displaying "flo" and it will not start.

Pool pump is not running.	••➔	Turn the pool pump on.
Filter is dirty, restricting the water flow.	••➔	Backwash and clean filter.

The fan is running, but the compressor is not.

The heat pump is in protection mode.	••➔	In this case, there may be a 5-minute delay before restarting.
The unit is on defrost cycle.	••➔	Digital display should indicate FS. The compressor will automatically start again a few minutes after the display stops indicating FS.

There is no display and the fan is not running, but the compressor is running.

- Ask your electrician to verify your heat pump's power supply by checking over the L1 and L2 connections in the unit's service box.

There is water around the unit.

While your pool heater is in the heating mode, a large quantity of warm and humid air passes over the evaporator and causes condensation. It is normal to see condensation dripping under the heater.

- To check if the water really is a leak, you must stop the heater and leave the pool pump running for over 5 hours. If water is still coming out of your heater after this period, then call your dealer for service.

The heater is running but desired water temperature cannot be reached.

- Heat loss is too much for the heater; cover your pool as often as you can.

Evaporator is dirty.

- Clean it by running tap water over the coil without additional nozzel attachment. Do not use pressurized water as it can damage the coil and void warranty.

- Evaporator restricted due to improper location (see "Location", p.6).

Restricted water flow.

- Adjust water flow.

Note: If your pool heater does not operate for reasons other than those mentioned above, please contact **Consumer Assistance Center** (see "Introduction", p. 3) to obtain the proper authorization for the warranty to apply.

Requesting Assistance or Service

IMPORTANT

All service will be handled by an Authorized Service Center. Warranty may be voided if service is not done by an Authorized Service Representative. Do not return the heater to your dealer as they do not provide service.

Before calling for assistance or service, please check the “Troubleshooting” (pp. 18-19) and “Warranty” (pp. 22-23) sections or call your dealer. It may save you the cost of a service call. If you still need help, follow the instructions below.

Service can be obtained by calling one of these phone numbers.

CANADA: 1 888 238-7665

USA: 1 908 355-7995

When asking for help, please provide a detailed description of the problem, your heater’s complete model and serial number, and the purchase date (see p. 3). This information will help us respond properly to your request.

Keep a copy of the sales receipt showing the date of purchase. Proof of purchase will assure you warranty service.

Maintenance

Dirt can accumulate on the evaporator. You can easily remove it by using a non-pressured water spray without damaging the small aluminum fins.

The cleaning of the plastic cabinet can be done with the help of a brush and soap.

Winterizing

First, you must turn the breaker off. The unit must be drained of all its water. You will need to disconnect the IN and OUT water connections. Then the unit must be tilted or blown out with air until all water is out.

The next step is to reconnect your IN and OUT water connections that will have previously been drained.

It is recommended to cover the heat pump to prevent snow from getting inside. A protective winter cover is also offered by your retailer.

Hayward® Heat Pump Pool Heater Limited Warranty

The HAYWARD heat pump pool heater is warranted to be free of defects in materials and workmanship for a period of two (2) years for parts and (1) one year for labor. In the state of Florida, warranty labor is covered for (2) years. This warranty is applicable to the original location and owner only and is not transferable. The compressor component has a five (5) year limited warranty with parts and labor warranted the first two (2) years and parts only warranted in years three (3), four (4) and five (5). The titanium tube component of the heat exchanger has a ten (10) year warranty. HAYWARD will not void this warranty due to improper pool chemistry. This warranty is valid only if the product is installed according to the HAYWARD specifications.

This warranty does not include refrigerant or other expendable materials, or services such as inspection, maintenance, or unnecessary service calls due to erroneous operational reports, external valve position, or electrical service. It also does not include the repair of damage due to negligence, accident, freezing, installation in corrosive environments or atmospheres, conditions beyond the normal intended use of the unit, or acts of God. This warranty is void if the product is repaired or altered in any way by any persons or agencies other than those authorized by HAYWARD, and is in lieu of all other warranties, expressed or implied, written or oral. There are no implied warranties of merchantability or fitness for a particular purpose that apply to this product. This warranty applies to the continental USA, Hawaii, Alaska and Canada. For warranty outside these locations please visit www.haywardnet.com.

At its option, HAYWARD will replace or repair any HAYWARD part that proves defective if such parts are returned to our factory, freight collect, within the warranty period. It is agreed that such replacement or repair is the exclusive remedy available from HAYWARD. Unless authorized by HAYWARD and performed by a factory authorized service center, HAYWARD is not liable for any labor involved in the removal of defective parts or the installation of replacement parts. HAYWARD is not liable for damages of any sort whatsoever, including incidental and consequential damages. Parts returned and services performed under terms of this warranty must be approved by HAYWARD. All parts returned under terms of this warranty will be repaired or replaced and returned transportation charges prepaid, by best and most economical means.

International Warranty

The HAYWARD heat pump pool heater is warranted to be free of defects in materials and workmanship for a period of one (1) year. The compressor is warranted for two (2) years, and the titanium tube component of the heat exchanger has a ten (10) year warranty.

The above coverage begins from the date of purchase, or sixty days after product manufacture date and applies only if the product is installed according to the HAYWARD specifications. This warranty does not include the repair of damage due to negligence, accident, freezing, installation in corrosive environments or atmospheres, conditions beyond the normal intended use of the unit, or acts of God. There are no implied warranties of merchantability or fitness for a particular purpose that apply to this product.

These warranties apply to units shipped after October 1, 2008
Hayward Pool Products, Inc.
620 Division Street
Elizabeth, NJ 07207

Notes

Heat Pump

Warranty Card Registration

Register your warranty on-line at www.haywardnet.com

Please print clearly.

First Name _____ Last Name _____

Street Address _____

City _____ State _____ Zip _____

Phone Number _____ Purchase Date _____

E-mail address _____

Serial Number (10-17 Digit Number) | | | | | | | | | | | | | | | | |

Model Number _____

Pool Capacity _____ (U.S. Gallons)

☐ Please include me on all e-mail communications regarding Hayward equipment or promotions.

Years pool has been in service

☐ 1 year or less ☐ 2-3 ☐ 4-5 ☐ 6-10 ☐ 11-15 ☐ >16

Purchased from _____

☐ Builder ☐ Retailer ☐ Pool Maintenance ☐ Internet/Catalog

Company name _____

Address _____

City _____ State _____ Zip _____

Phone _____

Type of Pool:

☐ Concrete/Gunite ☐ Vinyl ☐ Fiberglass ☐ Other _____

☐ New Installation ☐ Replacement

Installation for:

☐ Inground ☐ Aboveground ☐ Spa

Mail to: Hayward Industries, Inc. 620 Division Street, Elizabeth, NJ 07207,
Attn: Warranty Dept. **or Register your warranty on-line at www.haywardnet.com**

WCRXXXXXXX07

HAYWARD® Pool Products
One source. Every pool.