NIRVANA

HEAT PUMP

Owner's manual for swimming pool heat pump

ECO 50/E50/E65/E80/E95/E116/E140/C95

nirvanahp.com

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HOW IT WORKS

"Congratulations on the purchase of your Nirvana heat pump. In was designed and manufactured in Canada and is renowned for its efficiency and reliability."

How it works

This heat pump is equipped with a large surface evaporator that allows heat to be extracted from surrounding air. This heat is transferred to the pool water by the titanium heat exchanger. This method generates substantial energy savings compared to conventional electric resistance, natural gas or propane pool heaters

Using a pool heat pump to continuously maintain water temperature at a constant 80oF or 27oC from May to September costs approximately 1/6 of what it would cost with a conventional heater.

IMPORTANT FACTS

The water pressure should be maintained in the green section of the presure gauge. If the pressure is in the yellow section, you should perform a backwash of your filter or clean your filter cartridge. If the pressure is in the red section, check your water outlet. If everything there seems normal, all your dealer.

Your pool pumps should always be "on" when your heat pump is in operation.

Installation Site

To get the best results from your pool heat pump, its location is critical. The heat pump takes hot air from its surroundings and transfers it to the pool water.

To get the best performance from your unit, there must be 24'' (60cm) of clearance around and 48" (120cm) above the heat pump. The heat pump must be installed on a level surface.

We recommend a concrete slab or patio stone that is detached from the foundation of the house (image 1). The heat pump should not be installed in an enclosed space (e.g., under a deck or in a shed)

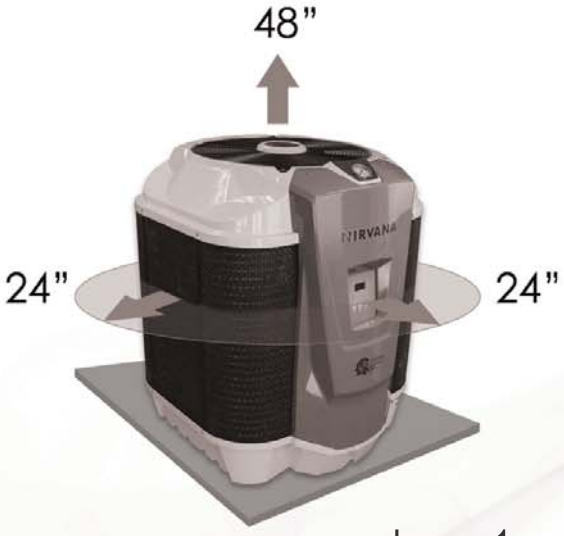


Image 1

BYPASS System

Although a bypass system is not necessary for your heat pump to operate properly, we strongly recommend the use of a bypass system to make the maintenance and winterizing of the heat pump easier.

Bypass System

Electrical Connection

WARNING

The electrical connection should be done by a professional according to national, state or provincial, and city codes.

The unit should be connected with a sufficient GFCI.

The electrical diagram is located inside the electrical panel. Connection requires a 240V single phase panel.

INSTALLATION

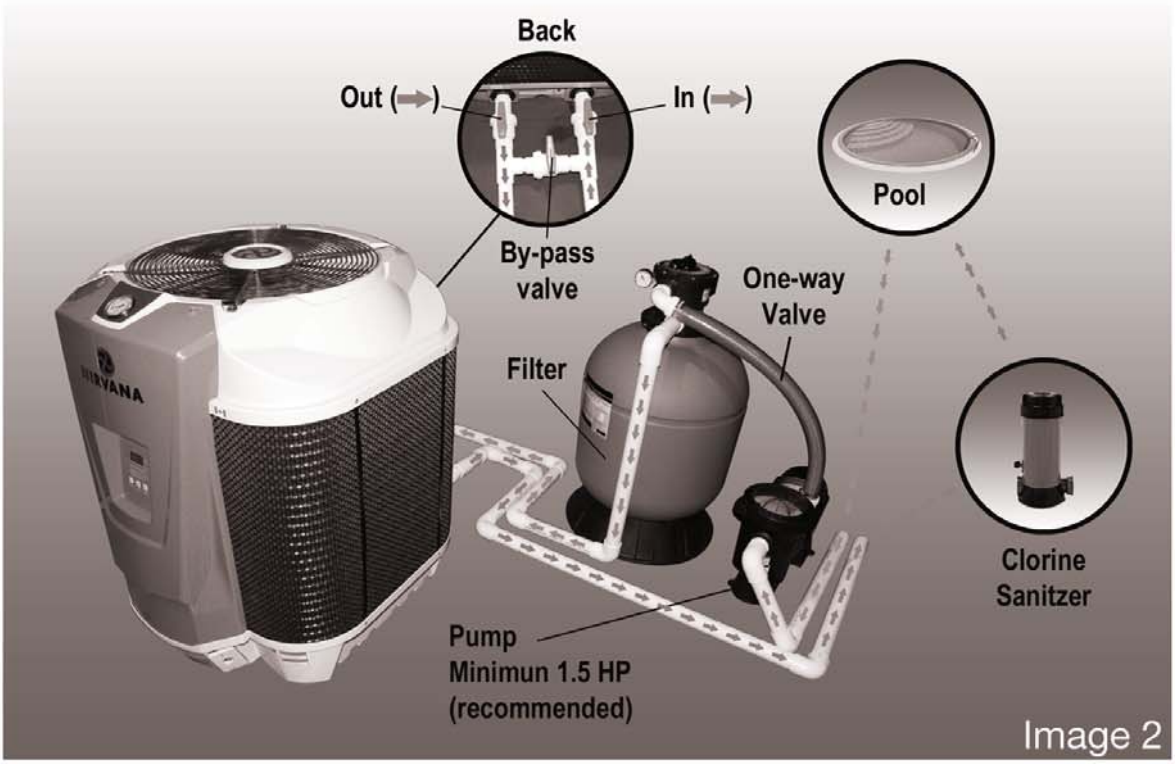


Image 2

Water Connection

1. Connect the water line from the swimming pool circulating pump to the water inlet connector located on the base of the heat pump.

2. Connect the water line returning water to the swimming pool to the water outlet connector on the base of the heat pump.

3. Once all the connections have been made, turn the circulating pump to “ON” to check water pressure and to ensure that connections are water-tight. The flow rate should be at between 42 and 80 gallons per minute (gpm) or 10-18m3/hr. Higher flow will improve heat pump performance.

WARNING !

The Nirvana heat exchanger works best at higher flow rates up to 80gpm (18m3/h)

Connections from your heat pump to your pool water line can be done either by a certified technician or by you. It is an easy task that requires 1 ½” flexible pipes and stainless steel clamps.

It is also possible to use rigid PVC pipe although this can be more expensive and harder to install (image 2).

SETTINGS

Electronic card settings

❶ Displays actual pool water temperature and error codes; can also show other parameters while programming.

❷ SET - To select a different operating menu.

❸ DECREASE - Decrease the water temperature requested.

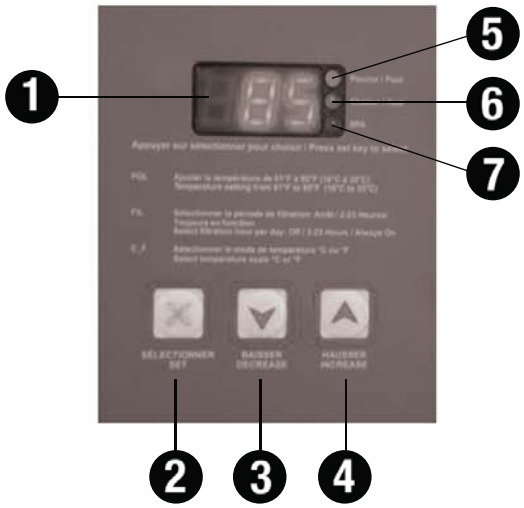
❹ INCREASE - Increase water temperature requested.

❺ The green light means the unit is on pool mode.

❻ The red light means the unit is in operation.

❼ The green light means the unit is on spa mode.

When the heat pump is first turned on, temperature will be scanned and updated after 5 minutes. Afterwards, The temperature will be updated in real time.



Temperature adjustment

POOL mode
Between 16° C and 35° C
(61° F and 95° F)

SPA mode
Between 16° C and 40° C
(61° F and 104° F)

The heat pump will shut off if a temperature below 16° C (61° F) is requested.

In OFF mode, the screen will display the actual pool water temperature.

Use the SET button to choose POOL or SPA mode.

SETTINGS

The heat pump cannot be set under 61F (16° C). It will shut down if the temperature requested is below 61F (16° C) . Above this temperature setting the heat pump wil automatically maintain the desired temperature.

Changing the Display from Fahrenheit to Celsius

Unit is preprogrammed in Fahrenheit

.

Press the SET key until F_C is displayed

Press ▲ for F° or ▼ for C°

FIL Mode (Optional)

THIS OPTION REQUIRES THE INSTALLATION OF A SECONDARY CONTACTOR IN YOUR HEAT PUMP'S ELECTRIC BOX AND WIRING TO YOUR CIRCULATION (POOL) PUMP.

A day is divided into 6 sections of 4 hours each. The adjustable parameter represents the minimum length of time the filter should be in operation.

OFF: This is the factory default setting and is used when an another device controls circulation pump run time
The circulation pump must always be ON or must be set with a timer when your heat pump is in operation.

2 hours to 23 hours: The pump is in operation 2 to 23 hours per day.

ON:
The circulating pump is always ON

The minimum filtration time selector is divided into 6 cycles per day, e.g., selection of 4 hours / 6 periods = 40 minutes per cycle. The circulating pump will operate for 40 minutes every 4 hours. The minimum filtration time that can be selected is 2 hours (6 periods of 20 minutes each).

When the FIL Mode is active, the circulation pump will folow the below schedule:

1. The circulating pump will stay ON until the pool reaches the desired temperature.

2. The minimum filtration time counter will continue to count down the hours spent heating that day.

3. If the minimum filtration time is reached and the desired pol temperature is also reached, the pump wil turn on automatically for 15 minutes every 4 hours to check the water temperature and activate the heater as needed.

De-Icing Mode

De-icing is a normal cycle that takes a few minutes. While the evaporator is de-icing, FS will be displayed.

During that process, the fan will operate but the compressor will be turned off.

WARNING

Improper installation, adjustment, alteration, service, maintenance or use can cause fire, electrical shock or other conditions which may cause injury or property damage.

Consult a qualified technician or service agency for information or assistance.

All service calls under warranty should be authorized by Nirvana Heat Pump Inc.

Start-up

1. Inspect the unit to ensure it is in good operating condition.

2. Clean the swimming pool filter.

3. Balance the PH level of the pool water.

4. Reconnect all water inlets and outlets.

5. Turn on the circuit breaker.

WINTERIZING

Winterizing

WARNING

All water connections to the pool should be disconnected for winter to allow complete drainage of the heat pump.

The winterizing must be done before air temperature reaches the freezing point.

1. Turn off the circuit breaker.

2. Drain the heat pump. Loosen all water connections

3. Rinse the interior of the heat exchanger cylinder with a stream of tap water for about 15 minutes to remove any chlorine residue that could cause damage to the heat exchanger. Tilt the unit towards the back to remove all water from the unit.

WARNING

Your unit should never be tilted more then 30-35°, even during transportation.

Block water inlet and outlet with a cloth or plastic to prevent mice or other animals from entering the unit.

For better protection, cover your heat pump with the Nirvana winter cover; call your dealer to get details.

Maintenance

WARNING

To prevent injuries, death or property damage, read and follow all instructions and warnings.

SAFETY TIPS
Always disconnect the heat pump before:

- Opening the access door
- Cleaning the cabinet or evaporator.

Never sit or place a heavy object on the heat pump.

Never put objects in or on the protective grid, to avoid risk of injuries or damage to the unit.

A heat pump requires professional maintenance and repair. All "do-it-yourself" repairs on a unit under warranty may void the remainder of the manufacturer's warranty

Maintenance or adjustments other than those recommended in this owner's manual should not be attempted. Contact your dealer for any questions or problem you may have with your unit.

Regular maintenance

1. Inspect and clean the pool filter regularly to ensure adequate water flow to the heat pump.

2. Inspect the evaporator and rinse it using a garden hose. Wash, with a stream of water from top to bottom to remove any grass, leaves or other objects that could obstruct the evaporator.

3. Clean the heat pump casing with a mild soap (dishwashing liquid). Do not use an abrasives or bleach.

4. Inspect the skimmer regularly.

Never use the skimmer to add pool chemicals.

The PH should be maintained between 7.2 and 7.8. A higher level could result in damage to your unit and could void warranty.

TROUBLESHOOTING

PROBLEM	CAUSE
Digital control displays	
CODE: FLO	❖ The water flow inside the heat pump is insufficient ❖ There is no water circulation inside the heat pump ❖ The flow switch is defective
CODE: FL3	❖ The heat pump flow switch has cut off three (3) times in the same hour for one of the reasons above (code FLO)
CODE: FS	❖ The heat pump is in de-icing mode
CODE: LP	❖ Ventilation on the evaporator is insufficient ❖ The fan does not work ❖ Refrigerant leak ❖ The outside temperature is too low
CODE: LP3	❖ The heat pump low pressure switch has cut off three (3) times in the same hour for one of the reasons above (code LP)
CODE: HP	❖ The water flow inside the heat pump is insufficient ❖ The bypass valves are in the wrong position ❖ The water exit is blocked ❖ There is an obstruction in the refrigeration circuit (piping blocked)
CODE: HP3	❖ The heat pump high pressure switch has cut off three (3) times in the same hour for one of the reasons above (code HP)
CODE: SPI	❖ The digital control is defective
CODE: DPO	❖ The de-icing sensor is not properly connected or is not receiving power
CODE: PO	❖ The water temperature sensor is not properly connected or is not receiving power
CODE: DPC	❖ The de-icing sensor is defective
CODE: PC	❖ The water temperature sensor is defective
Heat is needed, the fan is functioning, no code is displayed and the compressor does not start.	❖ Electrical problem in the compressor circuit ❖ Capacitor defective ❖ Compressor defective

TROUBLESHOOTING

WHAT TO DO

❖ Make sure the circulating pump works; ❖ Make sure the bypass valves are properly positioned; ❖ Check the skimmer (no obstruction); ❖ Check the water pressure gauge of the heat pump, it should read between 10 and 15 psi.
❖ The heat pump will not re-start after one of the protection devices shuts it down for the third time in the same hour; ❖ Close the circuit breaker to reset the heat pump.
❖ Wait until the end of the de-icing cycle. The heat pump will restart automatically
❖ Check that the evaporator is not obstructed by pollen, grass, leaves; see the user's manual for safety and maintenance tips ❖ Be sure there is enough free space around the heat pump (see the Installation Guide) ❖ Check that the fan is powered ON
❖ The heat pump will not re-start after one of the protection devices shuts it down for the third time in the same hour ❖ Close the circuit breaker to reset the heat pump
❖ Check whether there is adequate water circulation inside ❖ Check that the bypass valves are properly positioned ❖ Check if there is an object obstructing the water hose
❖ The heat pump will not re-start after one of the protection devices shuts it down for the third time in the same hour ❖ Close the circuit breaker to reset the heat pump
❖ Close the breaker switch and re-open it. If the problem is not resolved, the digital control will have to be changed. In this case, call your dealer
❖ Call your dealer
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TROUBLESHOOTING

Before placing a service call

There is always a possibility of condensation, especially on days with a high humidity level. If you see water near the heat pump, there's a good chance it comes from condensation. To make sure it is water from condensation you can shut the heat pump off, leaving the circulation pump running. Within a few hours, if you see that the water around the unit is drying up, it is indicative of normal condensation.

Before calling your dealer, follow the steps below to avoid any unnecessary cost for a service call not covered by warranty.

1. Make sure the breaker is ON, the fuses are functional and the heat pump is connected properly (green light on the unit).

2. Make sure that the circulation pump is running at full capacity, has sufficient flow, and that the filter is clean.

3. Make sure that the pressure gauge on the heat pump indicates sufficient flow (between 10 and 15 PSI). If it does not indicate 10 to 15 PSI, start a backwash.

4. Make sure that the water inlet and outlet are open and bypass valve is closed.

5. Check whether the temperature set is higher than the actual pool temperature.

6. Check that the plumbing is positioned in a way to enable sufficient water flow.

7. Check that the evaporator is not obstructed by pollen, leaves, grass, etc. (see maintenance for washing instructions).

8. When the temperature goes down to about 7°C, the heat pump may switch to de-icing mode; it will then start a cycle that stops the compresor while letting the fan continue running. Once the cycle is complete, it will resume normal operation.

9. Frost may appear on the evaporator during cold weather and this is normal; however, if there is ½'' of ice or more on the evaporator, contact us immediately.

If your heat pump does not operate properly after following these steps, contact your dealer.

All replacements must be made using Nirvana parts to maintain your heat pump performance, durability and safety, as well as keeping your warranty valid.

WARNING

DO NOT modify or remove a safety device. The manufacturer disclaims all responsibility if installation or maintenance instructions are not followed or if electrical or mechanical components and/or safety devices have been modified in any way.

Warranty

Please visit our website to register your unit online within 10 days after the installation of the unit. This information could be needed in the event of a product recall. To help you keep the information you might need in the future, please record the information below:

Model: _____
Serial number: _____
Installation date: _____

Make sure you keep your original invoice. A proof of purchase is requested on any service call request.

Manufacturer's Limited Warranty

Nirvana Heat Pump Inc. offers a limited warranty against defects in the operation of the heat pump. This warranty becomes effective upon installation and is valid for new heat pumps only (residential use only). A proof of the date of installation will be requested.

The heat pump must be installed according to manufacturer's specifications and must be operated under normal conditions of use as described in this owner manual. This warranty does not cover damage due to improper installation or use such as: inappropriate power of the unit for the size of the pool, improper use or maintenance according to the owner manual or national, state or municipal codes, installation by a person not authorized by Nirvana Heat Pump, flood, tornado, earthquake and other events known as an "act of god", improper winterizing of the unit, frozen pipes, poor water quality or infiltration of abrasives substances or sand in the components of the unit, premature corrosion of the titanium coil resulting from improper use of chemicals (chlorine or salt level above or below standards), modification, alteration, repair or replacement of parts made without the authorization of the manufacturer.

Nirvana Heat Pump Inc. agrees to repair or replace at its own discretion any parts deemed defective by an authorized dealer or technician. Heat pumps are not household appliances and should be repaired by a recognized technician. Evidence of servicing or repair by an unauthorized person will result in a cancellation of the manufacturer's limited warranty.

The manufacturer will not be liable for direct or indirect damaged caused by improper use or installation or for the inability to use the heat pump. The manufacturer does not offer any other warranty of any kind. No distributor or dealer is authorized to modify the terms and conditions of this warranty. Coverage under any additional warranty provided by a distributor or dealer is the sole responsibility of the dealer or distributor.

The warranty applies to the original purchaser and is transferable to successors only if the heat pump remains at the owner's original address and was installed according to standards and recommendations of this owner's manual, and until the expiry of the warranty. $100 is requested to transfer the warranty. Please contact **1-866-443-4476** to get the details.