User Manual

Heatseeker Nova
Inverter Heat Pump

NATIONAL AWARD WINNING TECHNOLOGY

SPASA AUSTRALIA 2015 NATIONAL AWARDS OF EXCELLENCE GOLD AWARD

SPASA VICTORIA Awards of Excellence 2015 GOLD AWARD

GOLD WINNER 2015

- >30% Higher Performance
- >30% Less Electricity Consumption
- Longer Lasting

25 YEARS OF POOL HEATING SOLUTIONS

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1. General Infornmation

1.1 Introduction to Heatseeker Nova

Supreme Heating, 2015 SPASA Australia Awards of Excellence winner, is proud to include the Heatseeker Nova inverter heat pump in it's range. Chosen by an expert panel of judges from numerous award entrants, the Heatseeker Nova inverter heat pump demonstrated the best savings of energy, being awarded Gold in the category of Sustainability.

The award winning Heatseeker Nova is an inverter heat pump designed to efficiently and consistently heat your pool year-round, while using up to 30 percent less electricity. The inverter heat pump heats your swimming pool water using the same principals of reverse cycle air-conditioner that heats your home.

This manual provides installation and operation instructions for the Heatseeker Nova Inverter Heat Pump. Read this manual carefully before proceeding with the installation and operation of your Heatseeker Nova Inverter Heat Pump. Consult your Heatseeker Nova distributor with any questions regarding this equipment.

Installation and service must be performed by a qualified installer. The manufacturer will not be responsible for any damage to the unit caused by improper installation, operation or maintenance.

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1.2 Consumer and Safety Infornmation

EARTHING
CONNECT THE GROUND WIRE BEFORE OPERATION.

CIRCUIT BREAKER
USE AN EXCLUSIVE POWER SOURCE WITH A CIRCUIT BREAKER.

POWER SUPPLY
TURN OFF THE POWER SUPPLY BEFORE OPENING THE CABINET WHEN PERFORMING MAINTENANCE.

EXCERCISE CAUTION
NEVER USE DAMAGED ELECTRIC WIRES OR UNSPECIFIED ELECTRIC WIRES.

KEEP CLEAR
DO NOT INSERT AY OBJECTS INTO THE VENT OUTLET.

DO NOT OBSTRUCT
DO NOT POUR WATER ON THE HEAT PUMP OR COVER WITH PAINT OR INSECTICIDAL MATERIAL.

WINTER COVER
PLACE THE WINTER COVER ON THE HEAT PUMP WHILE THE UNIT IS UNUSED DURING THE WINTER.

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Specifications
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2. Specifications
2.1 Technical Specifications

SPECIFICATIONS										
MODEL	10 kW	13 kW	17 kW	21 kW	26 kW	35 kW	13 kW	17 kW	26 kW
Discharge	Side Discharge						Top Discharge		
Heating Capacity at Air 27°C & Water 27°C									
Heat Output (Max/Std/Min) (kW)	10/7.5/5	12.5/9.3/6.3	17/12.8/8.5	21/15.8/10.5	26/19.5/13	33/24.8/16.5	12.5/9.3/6.3	17/12.8/8.5	26/19.5/13
Power Consumption (kW)	0.99	1.23	1.69	2.08	2.56	3.26	1.23	1.69	2.56
COP	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6	7.6
Heating Capacity at Air 15°C & Water 27°C									
Heat Output (Max/Std/Min) (kW)	7.2/5.4/3.6	9/6.8/4.5	12/9/6	15/11.3/7.5	20/15/10	25/18.7/12.5	9/6.8/4.5	12/9/6	20/15/10
Power Consumption (kW)	0.99	1.21	1.61	2.02	2.67	3.34	1.21	1.61	2.67
COP	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6
General									
Rated Current (Amps)	4.6	5.4	7.2	9	11.9	14.9	5.4	7.2	11.9
Fuse Current (Amps)	10	15	20	25	35	40	15	20	35
Pool Volume- Cold Climate (cm^3)	20,000L	30,000L	40,000L	50,000L	60,000L	80,000L	30,000L	40,000L	60,000L
Pool Volume- Warm Climate (cm^3)	30,000L	40,000L	50,000L	60,000L	80,000L	120,000L	40,000L	50,000L	80,000L
Advised Flow Rate	100 L/m	150 L/m	165 L/m	200 L/m	200 L/m	240 L/m	150 L/m	165 L/m	200 L/m
Inlet / Outlet	50mm	50mm	50mm	50mm	50mm	50mm	50mm	50mm	50mm
Compressor / Brand	Hitachi	Hitachi	Hitachi	Panasonic	Panasonic	Panasonic	Hitachi	Hitachi	Panasonic
Noise Level (1m)	49 db	52 db	53 db	56 db	59 db	60 db	52 db	53 db	59 db
Noise Level (10m)	40 db	43 db	44 db	47 db	50 db	52 db	43 db	44 db	50 db
Refrigerant (R410A)	1100g	1300g	1400g	2200g	2800g	3100g	1300g	1400g	2800g
Weight / Dimensions (L x W x H)									
Net Weight / Gross Weight (kg)	70/75	78/83	88/98	91/101	130/142	145/157	78/83	88/98	130/142
Net Dimensions (mm)	1010*355*560	1065*360*775	1065*360*775	1085*410*920	1085*410*920	1050*430*1215	850*750*1010	850*750*1010	910*800*1260
Packing Dimensions (mm)	1070*400*690	1160*387*820	1160*387*820	1145*450*1050	1145*450*1050	1110*480*1350	900*800*1100	900*800*1100	980*830*1320

**Cold Climate:- Air 15°C + Water 27°C* **Warm Climate:- Air 27°C + Water 27°C* ***Power Supply:- Single Phase 220-240v/50hz*

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2.2 Dimensions

SIDE DISCHARGE DIMENSIONS				
MODEL	CODE	A Length	B Depth	C Height
10kW	SHEATPUMP10CSI	1010mm	355mm	560mm
13kW	SHEATPUMPNI13kW	1065mm	360mm	775mm
17kW	SHEATPUMPNI17kW	1065mm	360mm	775mm
21kW	SHEATPUMP21CSI	1085mm	410mm	920mm
26kW	SHEATPUMPNI26kW	1085mm	410mm	920mm
35kW	SHEATPUMP35CSI	1050mm	430mm	1215mm

TOP DISCHARGE DIMENSIONS				
MODEL	CODE	A Length	B Depth	C Height
13kW	SHEATPUMPDCVI13	850mm	750mm	1010mm
17kW	SHEATPUMPDCVI17	850mm	750mm	1010mm
26kW	SHEATPUMPDCVI26	910mm	800mm	1260mm

3. Installation and Connection

3.1 Installation Safety Notes

The factory supplies the heat pump only. All other components, including a bypass if necessary, must be provided by the user or installer.

ATTENTION

THE FOLLOWING INSTRUCTIONS MUST BE FOLLOWED WHEN INSTALLING THE HEAT PUMP:

1. Any addition of chemicals must take in the piping located **down-stream** from the pump.

2. Install a bypass if the water flow from the swimming pool is more than 20% greater than the allowable flow through the heat exchanger.

3. Always place the heat pump on a solid foundation and use the included rubber mounts to avoid vibration and noise.

4. Always hold the heat pump upright. If the unit has been held at an angle, wait at least 24 hours before starting the heat pump.

3.2 Heat Pump Location

The unit will work properly in any location as long as the following three items are present :

1. Fresh Air **2.** Electricity **3.** Swimming pool filters

The unit may be installed in virtually any **outdoor** location as long as the specified minimum
distances to other objects are maintained (as per the following diagram). Please consult your installer for indoor pool applications.

ATTENTION

NEVER INSTALL THE UNIT IN A CLOSED ROOM WITH A LIMITED AIR VOLUME IN WHICH THE AIR EXPELLED FROM THE UNIT WILL BE RE-USED, OR CLOSE TO SHRUBBERY THAT COULD BLOCK THE INLET. SUCH LOCATIONS IMPAIR THE CONTINUOUS SUPPLY OF FRESH AIR, RESULTING IN REDUCED EFFICIENCY AND POSSIBLE PREVENTION OF SUFFICIENT HEAT OUTPUT.

SEE DRAWING ON THE FOLLOWING PAGE FOR MINIMUM CLEARANCE DIMENSIONS.

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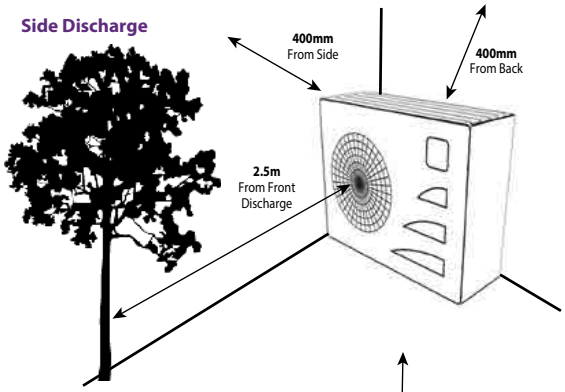
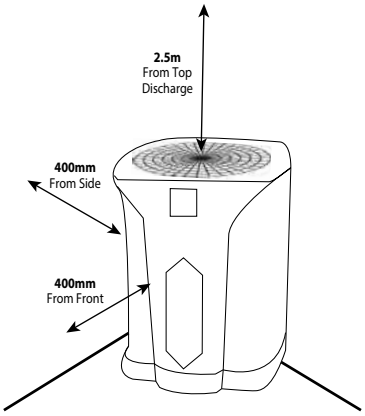
3.3 DISTANCE FROM YOUR SWIMMING POOL

The heat pump is usually installed within a perimeter area extending 7.5 m from the swimming pool. The greater the distance from the pool, the greater the heat loss in the pipes. As the pipes are mostly underground, the heat loss is low for distances up to 30m (15 m from and to the pump; 30 m in total) unless the ground is wet or the groundwater level is high. A rough estimate of the heat loss per 30 m is 0.6 kWh (2,000 BTU) for every 5 °C difference between the water temperature in the pool and the temperature of the soil surrounding the pipe. This increases the operating time by 3% to 5%.

Side Discharge



Top Discharge



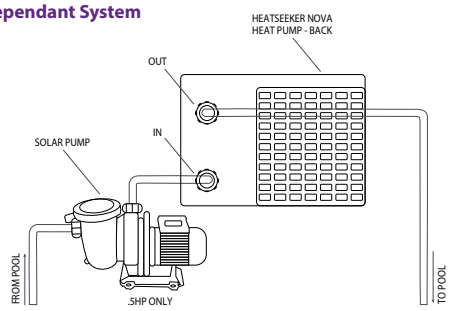
3.4 CHECK-VALVE INSTALLATION

AUTOMATIC DOSING

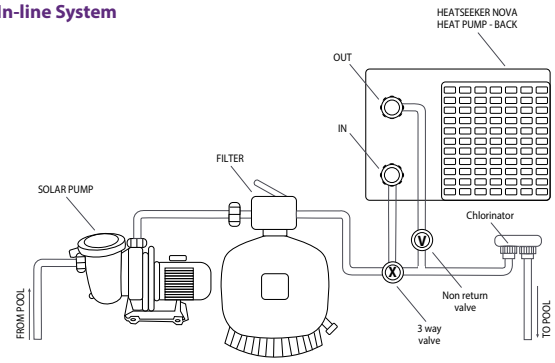
IF AUTOMATIC DOSING EQUIPMENT FOR CHLORINE AND ACIDITY (pH) IS USED- THIS EQUIPMENT MUST BE FITTED IN THE PIPING ON THE DOWNSTREAM SIDE OF THE HEAT PUMP WITH A CHECK VALVE TO PREVENT REVERSE FLOW. FAILURE TO OBSERVE THIS INSTRUCTION IS NOT COVERED WITHIN THE WARRANTY.

3.5 TYPICAL ARRANGEMENT

Independant System



In-line System



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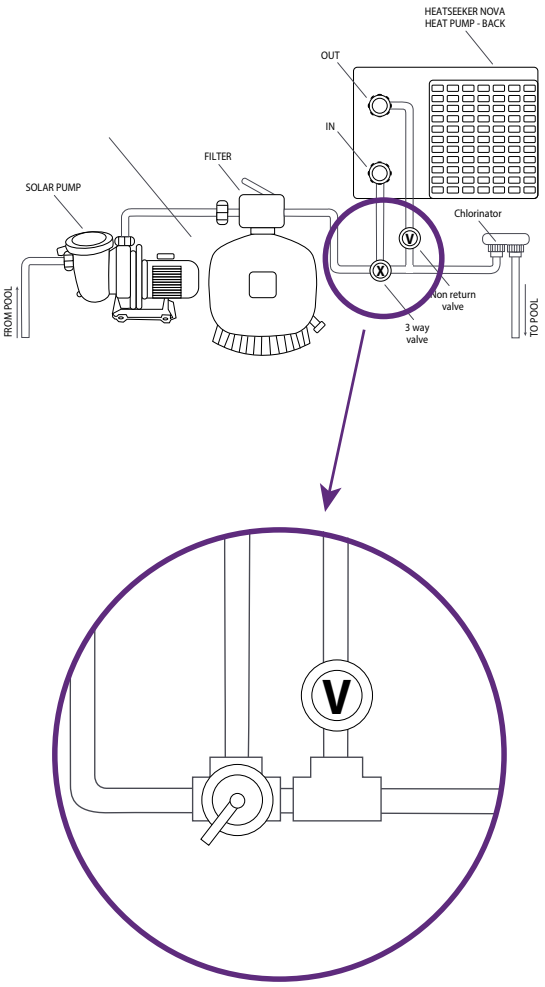
3.6 ADJUSTING THE BYPASS



Use the following procedure to adjust the bypass:
1. Open all three valves completely
2. Slowly close **Valve 1** until the water pressure is increased by approximately 100 to 200g
3. Close **Valve 3** approximately half-way to adjust the gas pressure in the cooling system

If the display shows **"ON"** or error code **EE3**, close **Valve 2** to increase water flow until the error display dissapears.

Optimal operation and water flow through the heat pump occurs when the cooling gas pressure is 22 ±2 bar.
This pressure can be read on the pressure gauge next to the control heat pump panel.

BYPASS INSTALLATION
OPERATION WITHOUT A BYPASS OR WITH IMPROPER BYPASS ADJUSTMENT MAY RESULT IN SUB-OPTIMAL HEAT PUMP OPERATION AND POSSIBLE DAMAGE TO THE HEAT PUMP.
FAILURE TO OBSERVE THIS INSTRUCTION IS NOT COVERED WITHIN THE WARRANTY.

3.7 ELECTRICAL CONNECTION

EARTHING
ALTHOUGH THE HEAT PUMP IS ELECTRICALLY ISOLATED FROM THE REST OF THE SWIMMING POOL SYSTEM, THIS ONLY PREVENTS THE FLOW OF ELECTRICAL CURRENT TO OR FROM THE WATER IN THE POOL. EARTHING IS STILL REQUIRED FOR PROTECTION AGAINST SHORT-CIRCUITS INSIDE THE UNIT.

Before connecting the unit, verify that the supply voltage matches the operating voltage of the heat pump. It is recommended to connect the heat pump to a circuit with its own fuse or circuit breaker (slow type; curve D) and to use adequate wiring (see following table).

Connect the electrical wires to the terminal block marked' POWER SUPPLY'. A second terminal block marked 'WATER PUMP' is located next to the first one. The filter pump (max. 5 A I 240 V) can be connected to the second terminal block here. This allows the filter pump operation to be controlled by the heat pump.

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THREE-PHASE MODELS
IN THE CASE OF THREE-PHASE MODELS, SWAPPING TWO PHASES MAY CAUSE THE ELECTRIC MOTORS TO RUN IN THE REVERSE DIRECTION, WHICH CAN CAUSE DAMAGE. AS A PREVENTATIVE MEASURE, THE UNIT HAS A BUILT-IN PROTECTIVE DEVICE THAT BREAKS THE CIRCUIT IF THE CONNECTION IS INCORRECT. IF THE RED LED ABOVE THIS SAFETY DEVICE LIGHTS UP, THE CONNECTIONS OF THE TWO PHASE WIRES MUST BE SWAPPED.

WIRING SPECIFICATIONS			
MODEL CODE	**13kW**	**17kW**	**26kW**
Voltage (V)	220 - 240	220 - 240	220 - 240
Fuse / Circuit Breaker (A)	28	40	60
Rated Current (A)	10	14	22
Wire Diameter mm² (with max 15m length)	3 X 6	3 X 6	3 X 6

3.8 INITIAL OPERATION

ATTENTION
IN ORDER TO HEAT THE WATER IN THE POOL (OR SPA), THE FILTER PUMP MUST BE RUNNING TO CAUSE THE WATER TO CIRCULATE THROUGH THE HEAT PUMP.
THE HEAT PUMP WILL NOT START IF THE WATER IS NOT CIRCULATING.

After all connections have been made and checked, carry out following procedure:

1. Switch on the filter pump. Check for leaks and verify that water is flowing to and from the swimming pool.
2. Connect power to the heat pump and press the **On/Off Button** on the automatic control panel. The unit will start up after the time delay expires.
3. After a few minutes, check whether the air blowing out of the unit is cooler.
4. When the filter pump is turned off; the unit should also turn off automatically. If this does not occur adjust the **Water Flow Switch** (detailed below).
5. Allow the heat pump and the filter pump to run 24 hours a day until the desired water temperature is reached.
   Once the temperature is reached, the heat pump will stop running. When the swimming pool water drops 2°C below the set temperature, the heat pump will restart automatically.

Dependant on the initial temperature of the water in the swimming pool and the air temperature, it may take several days for the water to heat to the water to the desired temperature.

A quality **Supreme** Heating Heatseeker Diamond Pool Cover & Roller System can dramatically reduce the required heat up time.

Water Flow Switch
The heat pump is equipped with a flow switch to ensure the unit is operating with an adequate water flow rate. The flow switch will detect flow through the heat exchanger and allow the heat pump to continue running. If the water flow is interrupted or stopped, the flow switch will trigger the heat pump to turn off.

Time Delay
The heat pump has a built-in 3 minute start-up delay to protect the circuitry and avoid excessive contact wear. The unit will restart automatically after this time delay expires. If a breif power interruption

occurs this will trigger the time delay and prevent the unit from restarting immediately.

3.8 CONDENSATION

The air drawn into the heat pump is cooled by the operation of the heat pump for heating the pool water, which may cause condensation on the fins of the evaporator. The amount of condensation may be as much as several liters per hour at high relative humidity.

4. ACCESSORIES

4.1 ACCESSORIES LIST


4 x Anti-vibration Base


Controller Cover


Extension Cable


2 x Draining Jet


2 x Water Connection Assembly


Winter Cover


Drainage Hose

4.2 INSTALLATION OF ACCESSORIES

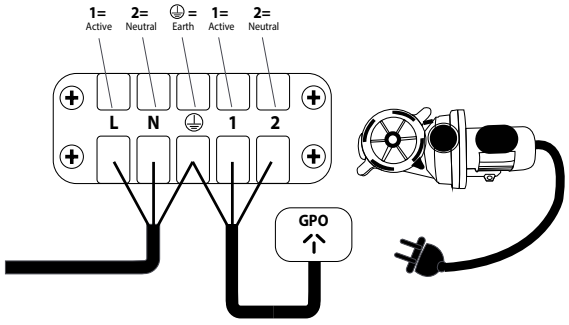
Anti-vibration bases

1. Place 1 anti-vibration base under each corner of the heat pump.

Drainage Point (SIDE DISCHARGE ONLY)

2. Install the drainage point under the bottom of the heat pump.
2. Connect with the draining hose to drain out the water.

Cable Wiring



1. Connect the power supply wire within the electric box.

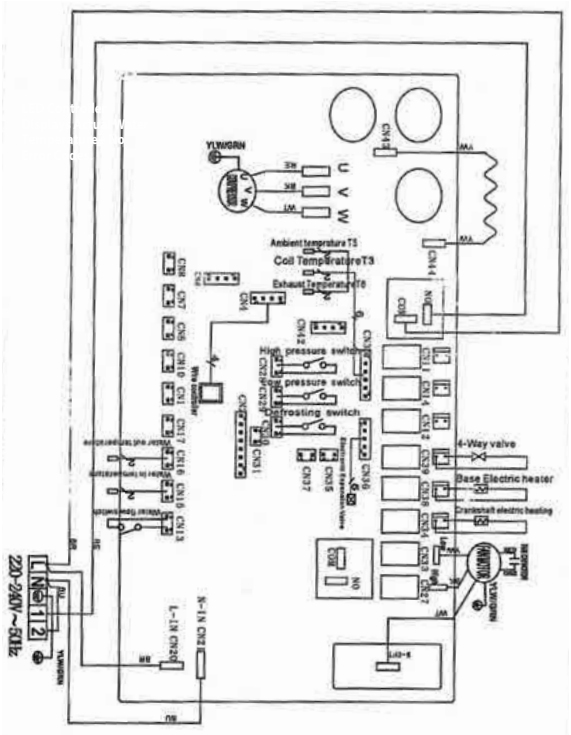
5. Electrical Wiring

ATTENTION

THE FOLLOWING ELECTRICAL WIRING DIAGRAMS ARE ONLY FOR YOUR REFERENCE, PLEASE CONSULT A SUPREME HEATING REPRESENTATIVE FOR MORE INFORNMATION.

DISCONNECT: A disconnect means (circuit breaker, fused or un-fused switch) should be located within sight of and readily accessible from the unit.
This prevents remotely-energizing unattended equipment and permits turning off power at the unit while the unit is being serviced.

WIRING APPLICABLE TO THE FOLLOWING MODEL:		
MODEL CODE	**Product Description**	**Discharge**
SHEATPUMPDCVI13	Heatseeker Nova 26kW Inverter Heat Pump	Top Discharge
SHEATPUMPDCVI17	Heatseeker Nova 17kW Inverter Heat Pump	Top Discharge



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Electrical Wiring

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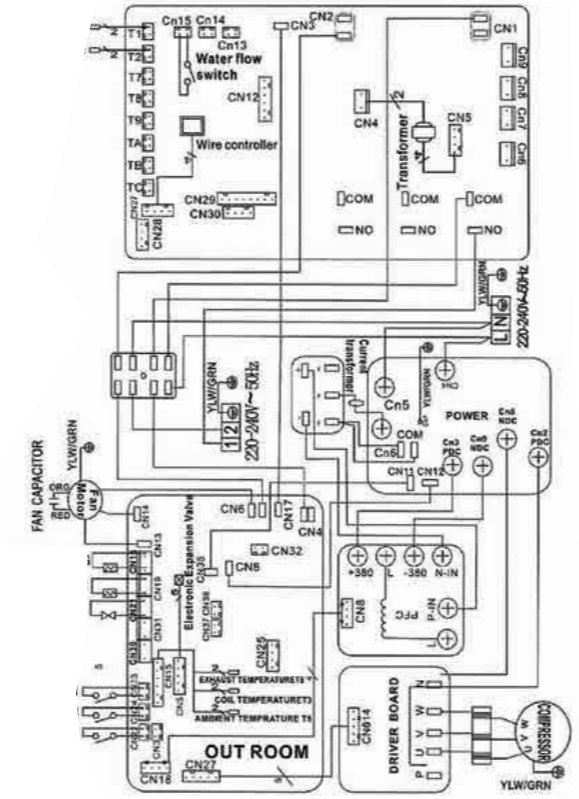
WIRING APPLICABLE TO THE FOLLOWING MODEL:		
MODEL CODE	**Product Description**	**Discharge**
SHEATPUMPDCVI26	Heatseeker Nova 26kW Inverter Heat Pump	Top Discharge



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Operation

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6. Operation

6.1 CONTROLLER OVERVIEW

6.1.2 START / STOP

TURNING YOUR HEAT PUMP ON/ OFF	
OVERVIEW:	⏻
STEP 1	**Press** ⏻ to start the heat pump. The LED display will show the desired water temperature for 5 seconds, followed by the inlet water temperature and the operation mode.
STEP 2	**Press** ⏻ to stop the heat pump and show "OFF".
NOTE:	During parameter checking and setting: **Press** ⏻ to quick-exit and save the current setting. **Press** ⏻ again to turn on/off the heat pump.

6.1.3 MODE CONTROLS

ADJUSTING THE HEAT OR COOL MODE	
OVERVIEW:	M + ▲ OR ▼
STEP 1	**Press** M for 5 seconds.
STEP 2	**Press** ▲ or ▼ to adjust the "Heat MODE" or "Cool MODE".

6.1.4 WATER TEMPERATURE SETTINGS

ADJUSTING THE WATER TEMPERATURE DIRECTLY	
OVERVIEW:	▲ OR ▼
STEP 1	**Press** ▲ or ▼ to adjust the water temperature.

6.1.5 CHECKING THE TIME

CHECK THE CURRENT TIME SETTINGS	
OVERVIEW:	M + ▼ + ▼ + ▼
STEP 1	Press M
STEP 2	Press ▼ to check the "Current Time".
STEP 3	Press ▼ a second time to check the "Automatic Start Time".
STEP 4	Press ▼ a third time to check the "Automatic Stop Time".

6.1.6 SETTING THE TIME

SETTING THE TIME	
STEP 2	Press M
STEP 3	Press ▼ to view the "Current Time" Display.
STEP 4	Press M to enter the "Hour" setting.
STEP 5	The "Hour" will flash, then **press** ▲ or ▼ to set the hour.
STEP 6	Press M to save the "Hour".
STEP 7	The "Minute" will now flash, then **press** ▲ or ▼ to set the minute.
STEP 8	Press M to save the current time setting.
STEP 9	Press ⏻ for quick-exit and saving.

6.1.7 SETTING THE AUTOMATIC START TIME

SET THE AUTOMATIC START TIME	
STEP 1	Press M
STEP 2	Press ▼ twice to reach the "Automatic Start Time" menu.
STEP 3	Press M to enter the menu.
STEP 4	The "Hour" will flash, then **press** ▲ or ▼ to set the hour.
STEP 5	Press M to save the "Hour".
STEP 6	The "Minute" will now flash, then **press** ▲ or ▼ to set the minute.
STEP 7	Press M to save the current time setting.
STEP 8	If the time is successfully set, the light ◷ will display.
STEP 9	If you wish to cancel the automatic start setting, set the time as 00.00

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6.1.8 SETTING THE AUTOMATIC STOP TIME

SET THE AUTOMATIC STOP TIME	
STEP 1	Once the Automatic Start Time is saved, the screen will enter into the "Automatic Stop Time" interface.
STEP 2	Press M to enter the menu.
STEP 3	The "Hour" will flash, then **press** ▲ or ▼ to set the hour.
STEP 4	Press M to save the "Hour".
STEP 5	The "Minute" will now flash, then **press** ▲ or ▼ to set the minute.
STEP 6	Press M to save the current time setting.
STEP 7	If the time is successfully set, the light ◷ will display.
STEP 8	If you wish to cancel the automatic stop setting, set the time as 00.00

ATTENTION

FAILURE TO CORRECTLY SET THE AUTOMATIC STOP TIME WILL ALLOW THE PUMP TO RUN IN THE CURRENT MODE FOR 24 HOURS, OR UNTIL SET TEMPERATURE IS REACHED.

ATTENTION

AFTER SETTING THE AUTOMATIC START AND STOP TIME, IF THE CURRENT TIME IS IN THE RANGE OF TIME OFF, THE HEAT PUMP WILL TURN OFF AUTOMATICALLY UPON EXITING THE MENU.

6.1.9 SYSTEM RESET FUNCTION

SYSTEM RESET FUNCTION	
OVERVIEW:	⏻ + M
STEP 1	**Press and hold** ⏻ M together for 10 seconds
STEP 2	The system will reset and display **"0000"** on the controller.

6.1.9 SYSTEM PARAMETERS

See Appendix 1

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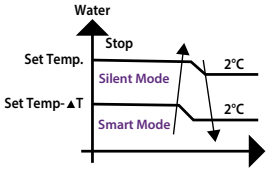
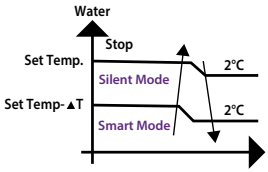
7. Heat Pump Modes

7.1 SILENT MODE



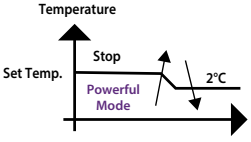
When operating in **Silent Mode,** the heat pump will operate at ***Silent and Smart Mode.*** When the water temperature is >=4°C lower than the setting temperature, the heat pump will operate in **Smart Mode**; if <=2°C lower, the heat pump will operate in **Silent Mode.**

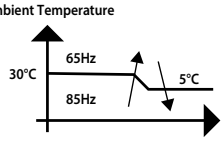
7.2 SMART MODE



When operating in **Smart Mode,** the heat pump will operate at ***Smart and Powerful Mode.*** When the water temperature is >=4°C lower than the set temperature, the heat pump will operate in **Powerful Mode**; if <=2°C lower, the heat pump will operate in **Smart Mode.**

7.3 POWERFUL MODE





ATTENTION

IF THE WATER FILTRATION SYSTEM STOPS BEFORE THE HEAT PUMP, THE UNIT WILL SHUT DOWN AS A SAFETY MEASURE. IT IS IMPORTANT TO PROGRAM THE HEAT PUMP IN CONJUNCTION WITH THE WATER FILTRATION PROGRAMING. TO RESTART THE HEAT PUMP, TURN THE HEAT PUMP OFF AND ON AT THE POWER SUPPLY.

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Troubleshooting
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8. Troubleshooting

8.1 Error Code Displayed on LED Controller

MALFUNCTIONS	ERROR	REASONS	SOLUTIONS
Inlet water temperature Sensor Failure	**PP01**	The sensor in open or short circuit	Check or change the sensor
Outlet water temperature Sensor Failure	**PP02**	The sensor in open or short circuit	Check or change the sensor
Heating Condenser Sensor Failure	**PP03**	The sensor in open or short circuit	Check or change the sensor
Gas Return Sensor Failure	**PP04**	The sensor in open or short circuit	Check or change the sensor
Ambient Temperature Sensor Sailure	**PP05**	The sensor in open or short circuit	Check or change the sensor
Condenser Gas Exit Failure	**PP06**	The sensor in open or short circuit	Check or change the sensor
Antifreeze Protection in Winter	**PP07**	Ambient temperature or water inlet temperature is too low	
Low Ambient Temperature Protection	**PP08**	Ambient temperature or water inlet temperature is too low	
High Pressure Failure	**EE01**	**1.** Too much refrigerant **2.** Insufficient air flow	**1.** Discharge redundant refrigerant from HP gas system **2.** Clean the air exchange
Low Pressure Failure	**EE02**	**1.** Insufficient refrigerant **2.** Insufficient water flow **3.** Filter or capiliary jammed	**1.** Check for gas leakage, re-fill the refrigerant **2.** Clean the air exchanger **3.** Replace the filter or capiliary
Water Flow Failure	**EE03 or "ON"**	Low water flow, wrong flow direction, or flow switch failure	Check if the water flow is high enough and flow is in the correct direction. Or the flow switch may have failed.
The Water Is Overheating	**EE04**	Water flow is not enough or no water	**1.** Repair the pump **2.** Clean the water pipe **3.** Check the water switch
Gas Exhaust Temperature Sensor Failure	**EE05**	**1.** Insufficient gas **2.** The throttling device is jammed **3.** Low water flow	**1.** Change the throtting device. **2.** Check the water pump
Controller Failure	**EE06**	**1.** Wire connection is not correct. **2.** Controller failure	**1.** Check or change the signal wire. **2.** Restart the power supply or change the controller.
Converter Failure	**EE07**	Converter Board Failure	Restart the power or change the converter board.

MALFUNCTION	ERROR	REASONS	SOLUTIONS
Communication Failure Between Controller and Converter Board	**EE08**	**1.** Insufficient Wire Connection **2.** Controller failure	**1.** Check the wire connection. **2.** Restart the power supply **3.** Change the controller.
Communication Failure Between Converter and Outdoor Board	**EE09**	Wire connection between communication wire and outdoor board is incorrect.	Restart the power supply or change the outdoor board.
Module Board Failure Between Outdoor Board And Module Board	**EE10**	**1.** Communication wire is broken. **2.** Outdoor board or module board failure.	Restart the power or change the broken board.
Module Board Failure	**EE11**	Data is incorrect or module board failure.	Restart the power or change the broken board.
Direct Main Current's Voltage Too High Or Too Low Protection	**EE12**	**1.** The pressure is too high or too low. **2.** The inner communication contractor is broken.	**1.** Check the power supply. **2.** Change the contactor.
Over Current Protection	**EE13**	**1.** Electric supply pressure is too low. **2.** The Heat Pump is overloaded.	**1.** Check the power supply. **2.** Check whether the water temperature is too high.
 **The Heating Light is on**	**Defrosting**		

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Troubleshooting
Heatseker Nova
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8.2 Other Malfunctions and Solutions- No LED Display

OBSERVING	MALFUNCTIONS	REASONS	SOLUTIONS
No Display on LED	Heat pump is not running.	No power supply.	Check cable + circuit breaker is connected
LED Controller Displays Real Time	Heat pump is not running.	Heat pump on standby.	Start heat pump to run.
LED Controller Displays The Actual Water Temperature	Heat pump is not running.	**1.** Water temp is reaching setting value, heat pump is under constant temperature status. **2.** Currently defrosting.	**1.** Verify water temp setting. **2.** Startup heat pump after a few minutes. **3.** LED controller should display: "Defrosting" 
LED Controller Displays Actual Water Temperature+ No Error Codes.	Water temperature is cooling when heat pump runs in heating mode.	**1.** The incorrect mode has been chosen. **2.** Figures show defects. **3.** Controller defect.	**1.** Adjust the Mode. **2.** Replace the defect LED wire controller, and then check the status, verifying the water inlet and outlet temperature. **3.** Replace or repair the heat pump unit.
LED Displays Actual Water Temperature, No Error Code Displays.	Short running.	**1.** Fan not running. **2.** Air ventilation is insufficient. **3.** Refrigerant is insufficient.	**1.** Check the cable connections between the motor and the fan- replace if necessary. **2.** Check the location of the heat pump unit and eliminate all obstacles to increase ventilation. **3.** Replace or repair the heat pump unit.
Water Stains on Heat Pump Unit	Water Stains.	**1.** Concreting. **2.** Water leakage.	**1.** No action required. **2.** Check the titanium heat exchanger carefully to observe any defects. **3.** LED controller should display: "Defrosting"
Ice On Evaporator	Too Much Ice On Evaporator.		**1.** Check the location of heat pump unit and eliminate any obstacles to increase ventalation. **2.** Replace or repair the heat pump unit.

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Maintenance
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9. Maintenance

1. You should check the water supply system regularly to avoid the air entering the system and occurrence of low water flow, because it would reduce the performance and reliability of heat pump unit.

2. Clean your pools and filtration system regularly to avoid the damage of the unit as a result of the dirty of clogged filter.

3.You should discharge the water from bottom of water pump if HP unit will stop running for a long time (expecially during the winter season).

4. In another way, you should check the unit is water fully before the unit start to run again.

5. After the unit is conditioned for the winter season, he is preconize to cover the heat pump with special winter heat pump.

6. When the unit is running, there is all the time a little water discharge under the unit.

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Appendix
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10. Appendix

CHECKING THE PARAMETERS

PARAMETERS	
OVERVIEW:	M + ▲
STEP 1	Press M
STEP 2	Press ▲ to scroll through the paramaters, from d1 - d9 as shown below

PARAMETER	NAME	RANGE	REMARKS
d1	Inlet water temperature	-9-99°C	Real testing value
d2	Outlet water temperature	-9-99°C	Real testing value
d3	Ambient temperature	-F(-30°C)-70°C	Real testing value
d4	Gas return temperature	-F(-30°C)-70°C	Real testing value
d5	Coil temperature	-F(-30°C)-70°C	Check or change the sensor
d6	Gas exhaust temperature	0-C5°C(125°C)	Check or change the sensor
d7	Steps of electronic expansion valve	0-99	N*5
d8	Compressor operating frequency: Powerful: 65,70,75Hz Smart: 50,55,60Hz Silent: 30,35,40,45Hz	0-99Hz	Real testing value
d9	**Compressor current**	0-30A	Real testing value

NOTES

1. When the Heatseeker Nova heat pump stops running for 30 seconds, the water pump will shut off automatically (in the case of an independant system).

2. The LED controller can operate the water pump by connecting an additional cable between the pump and the "PUMP" terminal on the heat pump.

3. It is necessary to put an extra 3-phase transfer device for a 3-phase water pump.

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Warranty Agreement

Heatseker Nova Inverter Heat Pump

11. Warranty Agreement

Definitions

1. All capitalised expressions used in this warranty are defined in paragraph 17.

Warranty

2. Supreme Solar Pty Ltd warrants that its services in installing the Product will be carried out with due care and skill and subject to clauses 3, 4, 5 and 6, that the installed Product will be free from defects in workmanship for a period of twenty four (24) months after installation (warranty includes in field labour costs.) The warranty is given subject to the terms of this warranty agreement.

3. The Heat Pump included in the Product carries:

(a) in the case of a Titanium Heat Exchanger, a ten (10) year limited warranty from Supreme Solar Pty Ltd, 2/19 Enterprise Drive, Bundoora, Victoria, 3083 (Phone: (03) 9460 4200, Email: info@supremeheating.com.au); or

(b) in the case of a Compressor and Evaporator, a three (3) year limited warranty from Supreme Solar Pty Ltd, 2/19 Enterprise Drive, Bundoora, Victoria, 3083 (Phone: (03) 9460 4200, Email: info@supremeheating.com.au); or

(c) in the case of a Thermostat and Switches, a twelve (12) month limited warranty from Supreme Solar Pty Ltd, 2/19 Enterprise Drive, Bundoora, Victoria, 3083 (Phone: (03) 9460 4200, Email: info@supremeheating.com.au);

In field labour warranty is applicable in Capital City Metropolitan areas or within a 25km radius of an Authorised Supreme Solar Service Agent.

Labour, travel and freight costs incurred as a result of product failure are excluded from this warranty after a period of twelve (12) months. Subsequent costs are to be paid by the original purchaser.

and is the only warranty given in respect of that that part of the Product.

4. The Automatic Controller included in the Product carries:

(a) in the case of an Aqua-Gen 3D Automatic Controller, a one (1) year limited warranty from Space Age Electronics Pty Ltd, PO Box 4382, Homebush South, New South Wales, 2140 (Phone: (03) 5629 5833, Email: spaceage@bigpond.net.au; or

(b) in the case of an Aqua-Gen 3/+, Aqua-Gen 3BR/+ & Aqua-Gen 3PV/+ or SSV Series of Automatic Controllers, a three (3) year limited warranty from Dontek Electronics Pty Ltd, 19 Melrich Road, Bayswater, Victoria, 3153 (Phone: (03) 9762 8800, Email: service@dontekelectronics.com.au); or

(c) in the case of an Aqua-Gen 2 Automatic Controller, a two (2) year limited warranty (temperature sensors not covered) from Dontek Electronics Pty Ltd, 19 Melrich Road, Bayswater, Victoria, 3153 (Phone: (03) 9762 8800, Email: service@dontekelectronics.com.au);

and is the only warranty given in respect of that part of the Product.

5. The Solar Pump included in the Product carries:

(a) in the case of an SSGL Series Solar Pump, a two (2) year limited warranty (six (6) months for commercial installations) from Supreme Solar Pty Ltd, 2/19 Enterprise Drive, Bundoora, Victoria, 3083 (Phone: (03) 9460 4200, Email: info@supremeheating.com.au); or

(b) in the case of an SunSol SS Series or Booster AB Series Solar Pump, a two (2) year limited warranty. Two (2) year warranty on the motor, pump body and seal plate, and a one (1) year warranty on the mechanical seal from Reltech Australia Pty Ltd, 43-45 Kylta Road, West Heidelberg, Victoria, 3081 (Phone: (03) 9459 3838, Email: office@reltech.com.au);

A twelve (12) month in field labour warranty is applicable in Capital City Metropolitan areas or within a 20km radius of an Authorised Supreme Solar P/L or Reltech Australia P/L Service Agent. and is the only warranty given in respect of that part of the Product.

6. All other components supplied by Supreme Solar Pty Ltd carry a twelve (12) month limited warranty and is the only warranty given in respect of these components of the Product.

Exclusions

7. Supreme Solar Pty Ltd will not be liable under this warranty where Supreme Solar Pty Ltd's reasonable opinion a defect is caused by:

(a) fair wear and tear;

(b) negligent, careless or improper use or handling;

(c) non-adherence to operating, cleaning or maintenance instructions;

(d) harsh or adverse Pool/Spa water conditions;

(e) repair to or alteration of any parts of the system by any person who has not been authorised by Supreme Solar Pty Ltd to perform such a repair or alteration;

(f) act of God, riot, fire or other occurrence outside normal working conditions; or

(g) by other abuse or misuse caused by the Purchaser or a third party.

8. Subject to clause 9, any condition or warranty which would otherwise be implied in this agreement or in relation to the Product is hereby excluded.

9. Where legislation implies in this agreement or in relation to the Product any condition or warranty, and that legislation avoids or prohibits provisions in a contract excluding or modifying the application of or exercise of or liability under such condition or warranty, the condition or warranty shall be deemed to be included in this agreement. However, the liability of Supreme Solar Pty Ltd for any breach of such condition or warranty shall be subject to clause 14 and any other applicable exclusions set out in this agreement, be limited, at the option of Supreme Solar Pty Ltd, to one or more of the following:

(a) if the breach relates to goods:

(i) the replacement of the goods or the supply of equivalent goods;

(ii) the repair of such goods;

(iii) the payment of the cost of having the goods repaired; and

(b) if the breach relates to services:

(i) the supplying of the services again; or

(ii) the payment of the cost of having the services supplied again.

What Supreme Solar Pty Ltd Will Do

10. For defects relating to installation of the Product, Supreme Solar Pty Ltd will, in its absolute discretion:

(a) repair the Product or pay for the cost of having the Product repaired; or

(b) replace the Product or supply an equivalent Product; or

(c) pay for the cost of replacing the Product or acquiring an equivalent Product;

if the terms and conditions of this warranty are satisfied. Supreme Solar Pty Ltd will not be liable for any other loss or damage (including cons equential or indirect damages).

11. Supreme Solar Pty Ltd reserves the right to charge the Purchaser, at Supreme Solar Pty Ltd's current hourly rate, for the cost of examining the Product if such examination by Supreme Solar Pty Ltd reveals that the Product:

(a) is not defective; or

(b) is defective as a result of any of the events specified in paragraph 7.

What the Purchaser must do

12. Any claim under this warranty must be made at the earliest stage that the defect becomes obvious to enable prompt action and to avoid further damage and must be made no later than one (1) month of the defect becoming obvious.

13. Any claim for warranty must be accompanied by appropriate documentation which stipulates the date of installation, the invoice number, the details of the alleged defect and any other information reasonably required by Supreme Solar Pty Ltd.

14. Purchaser agrees to pursue any claims in relation to defective parts against the manufacturers or suppliers referred to in clause 3, 4, 5 & 6.

Whole agreement

15. This warranty and any warranties implied by law which are not capable of being excluded or modified from the whole warranty agreement between Supreme Solar Pty Ltd and the Purchaser and all other warranties, express or implied, whether arising by statute or otherwise, are excluded and cancelled.

Governing law

16. This warranty is governed by the laws of the State specified in paragraph 17(c).

Defined terms

17. **(a)** Purchaser: The person who has purchased the Product and is able to produce proof of such purchase

(b) Product Supreme Solar Pty Ltd solar pool heating system

(c) Governing law (paragraph 16): Victoria, Australia

Consumer guarantee

18. This warranty is provided in addition to consumer guarantees and does not alter, limit or replace them.

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Warranty Agreement

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