



INTELLITEMP

Variable Flow technology embedded



Pentair Temp



INSTALLATION AND OPERATING MANUAL

IMPORTANT SAFETY INSTRUCTIONS,
PLEASE READ AND FOLLOW ALL THE INSTRUCTIONS,
KEEP THESE INSTRUCTIONS

PENTAIR AQUATIC SYSTEMS
(Rev. 01/06/2023)



ITTP-5M-V
ITTP-6M-V
ITTP-8T-V



SWIMMING POOL INTELLITEMP VERTICAL HEAT PUMP

Pentair thanks you for your trust and for purchasing the Pentair IntelliTemp, the full inverter swimming pool vertical heat pump with variable flow inside. In this manual, the heat pump is referred to as HP.

To fully enjoy all the features of your IntelliTemp HP, please read this operating manual carefully. Store it carefully so that it can be consulted at any time.



Declaration of conformity

Guidelines – Harmonised standards

Pentair International Sarl – Avenue de Sévelin 20 – 1004 Lausanne – Switzerland

We hereby declare under our sole responsibility that this product complies with the relevant guidelines

| | | | | |
|---------------|--------------------------|-----------------------------|-------------------------------|-----------------|
| SAFETY | EN 60335-1:2012/A15:2021 | EN 60335-2-40:2003/A13:2012 | EN 62233:2008 | |
| EMC | EN IEC 55014-1:2021 | EN 55014-1:2017/A11:2020 | EN IEC 61000-3-2:2019/A1:2021 | |
| | EN IEC 61000-3-2:2019 | EN 61000-3-3:2013/A2:2021 | EN 61000-3-3:2013/A1:2019 | |
| NOISE | EN IEC 61000-3-11:2019 | EN 61000-3-12:2011 | EN IEC 55014-2:2021 | EN 55014-2:2015 |
| | 200/14/CE | | | |

INTELLITEMP

ITTP-5M-V / ITTP-6M-V / ITTP-8T-V

Other normative documents

RoHS 2011/65/EU

WEEE 2012/19/EU



Operating temperature: -15° to 38° C

IP: X4

Maximum operating altitude: 2000 m

- **Product:** ITTP-5M-V

Power supply: 230 V ~, 50 Hz

Maximum power consumption: 3.2 kW

Weight: 75.0 kg

- **Product:** ITTP-6M-V

Power supply: 230 V ~, 50 Hz

Maximum power consumption: 4.2 kW

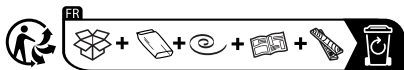
Weight: 75.5 kg

- **Product:** ITTP-8T-V

Power supply: 400 V ~, 50 Hz

Maximum power consumption: 7.1 kW

Weight: 92.0 kg



Processing by individuals of electronic appliances reaching the end of their lifespan:

The symbol depicting a barred waste bin that features on the main parts constituting the product indicates that it must not be discarded alongside household waste. It must be returned to an appropriate collection point for electronic device recycling (information available from the local household waste collection service). This product contains potentially dangerous substances which may have adverse effects on the environment and human health.

- Hotline After sales service / SAV : +33(0)1 84 28 09 40

- Internet site: www.pentairpouleurope.com

- Guarantee excluding consumables: 3 years

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- The document is subject to change without notice

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This symbol indicates that the device uses R32, a coolant featuring a low combustion speed.



This symbol indicates that a maintenance technician must handle this equipment according to the operating manual.



This symbol indicates that the operating manual should be read attentively prior to use.



WARNING: In normal conditions, a suitable HP can heat the water of the pool by 1°C to 2°C per day.

It is therefore quite normal not to feel a temperature difference at the outlet of the circuit when the HP is operating. A heated pool should be covered to prevent heat losses.

The appliance is designed to be used in a swimming pool as described in standard NF-EN-16713.

- Failure to comply with the warnings could cause damage to the swimming pool equipment as well as severe injuries or death.
- Only a qualified person possessing the adequate technical skills (electricity, hydraulic, refrigeration) is authorised to undertake maintenance operations or repairs on the device. A qualified technician working on the device must use/wear personal protective equipment (safety goggles, protection gloves, etc...) to avoid all risk of injury arising during work on the device.
- Prior to any intervention on the device, ensure that it is powered down and has undergone the lock-out-tagout procedure.
- The device is designed specifically for use in swimming pools and spas; it must not be used for purposes other than the ones it was designed for.
- This device is not intended for children.
- This device is not intended to be used by persons (including children, of 8 or more) who lack experience or who suffer from physical, sensory, or mental impairment, except;
 - If it is operated under supervision or with operating instructions issued by a person responsible for their safety; and
 - if they understand the risks taken.
- Children must be supervised to ensure that they do not play with the device.
- The installation of the device should be carried out according to the manufacturer's instructions and in compliance with local and national applicable standards. The installer is responsible for the installation of the device and for compliance with national regulations relating to installation procedures. The manufacturer will not be liable in case of non-compliance with the installation standards that apply locally.
- For any action other than simple maintenance operations by the user as described in this manual, the product should be maintained by a certified professional.
- Any improper installation and/or use can cause damages and severe injuries (and even death).
- Do not touch the fan or the moving parts, and do not insert objects or your fingers close to the moving parts when the device is operating.
- Moving parts can cause severe injuries and even death.
- Do not pull on the hoses and the connections to move the machine.

WARNINGS CONCERNING ELECTRICAL APPLIANCES:

- The power supply of the device must be protected by a 30-mA security residual current protection system, as per the standards that apply in the country of installation.
- Do not use an extension to connect the device; only connect the device directly to a suitable power outlet.
- If a fixed device does not feature a power cord and a plug, or any other means to disconnect from the power supply with a separation of the contacts in all the poles, enabling total disconnection in case of a category III electrical surge, the manual will mention that the disconnection means must be integrated in the fixed wiring, as per relevant wiring rules.
- An adapted disconnection method, complying with all local and national requirements relating to category III electrical surges, and that disconnects all the poles of the supply circuit, must be installed in the supply circuit of the device. This disconnection method is not provided with the device and should be provided by the installation technician.
- Prior to installation, check that:
 - The voltage featuring on the information plate of the device matches the voltage of the power supply,
 - The power supply is suitable for operating the device and has an earthing connection.
 - The plug (as necessary) adapts to the plughole.
- If the power cord is damaged, it should imperatively be replaced by the manufacturer, a technician or a person qualified to ensure safety.

WARNINGS RELATING TO DEVICES CONTAINING A COOLANT:

- The coolant R32 is a coolant of category A2L, which is considered as potentially flammable.
- Do not release R32 or R410A fluid into the atmosphere. This fluid is a greenhouse effect fluorinated gas, covered by the Kyoto Protocol, with a global warming potential (GWP) = 675 for R32 and 2088 for R410A (European regulation EU 517/2014).
- The device must be stored in a well-ventilated place and kept away from flames.
- Install the unit outdoors. Do not install the unit indoors or in an outdoor area that is closed and poorly ventilated.
- To comply with the relevant standards and regulations in terms of the environment and installation procedures, and in particular with decree N° 2015-1790 and/or European regulation EU 517/2014, a search for leaks of the cooling circuit must be conducted at least once a year. This operation should be carried out by a certified specialist of cooling devices.
- Please keep and transmit these documents for reference throughout the lifespan of the device.

TABLE OF CHARACTERISTICS

| Models | INTELLITEMP 5M-V ITTP-5M-V | INTELLITEMP 6M-V ITTP-6M-V | INTELLITEMP 8T-V ITTP-8T-V |
|--|---------------------------------------|---------------------------------------|---|
| SCOP according to EN 17645 | 8,2 | 8,3 | 7,6 |
| Classification according to EN 17645 | A | A | A |
| Recommended basin size (May to September with tarpaulin) | 15-85 m ³ | 85-105 m ³ | 105-160 m ³ |
| Air 26°C / Water 26°C / 80%RH | | | |
| Heating Capacity (boost Mode) | 15,8 kW | 18,5 kW | 30,2 kW |
| Coefficient of Performance (COP) (boost Mode) | 6,1 | 5,6 | 5,4 |
| Heating Capacity (Smart mode) | 15,8 kW ~ 6,6 kW | 18,5 kW ~ 7,7 kW | 30,2 kW ~ 13,0 kW |
| Coefficient of Performance (COP) (Smart mode) | 6,1 ~ 12,1 | 5,6 ~ 12,4 | 5,4 ~ 10,9 |
| Heating Capacity (Eco-silence) | 6,6 kW | 7,7 kW | 13,0 kW |
| Coefficient of Performance (COP) (Eco-silence) | 12,1 | 12,4 | 10,9 |
| Air 15°C / Water 26°C / 70%RH | | | |
| Heating Capacity (boost Mode) | 12,9 kW | 14,9 kW | 23,7 kW |
| Coefficient of Performance (COP) (boost Mode) | 5,0 | 4,8 | 4,6 |
| Heating Capacity (Smart mode) | 12,9 kW ~ 5,4 kW | 14,9 kW ~ 5,9 kW | 23,7 kW ~ 9,7 kW |
| Coefficient of Performance (COP) (Smart mode) | 5,0 ~ 7,0 | 4,8 ~ 7,7 | 4,6 ~ 7,7 |
| Heating Capacity (Eco-silence) | 5,4 kW | 5,9 kW | 9,7 kW |
| Coefficient of Performance (COP) (Eco-silence) | 7,0 | 7,7 | 7,7 |
| Air 7°C / Water 26°C / 90%RH | | | |
| Heating Capacity (boost Mode) | 10,6 kW | 12,8 kW | 19,9 kW |
| Coefficient of Performance (COP) (boost Mode) | 4,4 | 4,2 | 4,1 |
| Sound level CTTM min-max (at 10m) depending on EN ISO 3741 : 2010 | 29 ~ 40 dB(a) | 33 ~ 42 dB(a) | 32 ~ 42 dB(a) |
| Sound level CTTM min-max (at 10m) depending on EN ISO 3744 : 2010 | 21 ~ 30 dB(a) | 21 ~ 25 dB(a) | 26 ~ 32 dB(a) |
| Operating temperature | -15°C -> 38°C | | |
| Components | | | |
| Cabinet | ABS, UV protection | | |
| Refrigerant | R32 | | |
| Installation | | | |
| Hydraulic connection | 1,5"/50 mm | | |
| Supply voltage | 230 V / 1~+N / 50 Hz | | 400 V / 3~+N / 50 Hz |
| Nominal Current (Maximal) | 12 A (14 A) | 15 A (17 A) | 11 A (15 A) |
| Cable protection and size (for 20 m) | C 16 A (3G 2,5 mm ²) | C 20 A (3G 2,5 mm ²) | 3P+N C 20 A (5G 2,5mm ²) |
| Power absorbed Max | 3,2 kW | 4,2 kW | 7,1 kW |
| Minimum water flow | 5 m ³ /h | 7 m ³ /h | 10 m ³ /h |
| Losses of charges | 77 kPa | 77 kPa | 77 kPa |
| Dimensions (L x l x h) | 979 x 695 x 837 mm | 979 x 695 x 837 mm | 979 x 695 x 837 mm |
| Net weight (gross) | 75 kg (99 kg) | 75,5 kg (99,5 kg) | 92 kg (116 kg) |

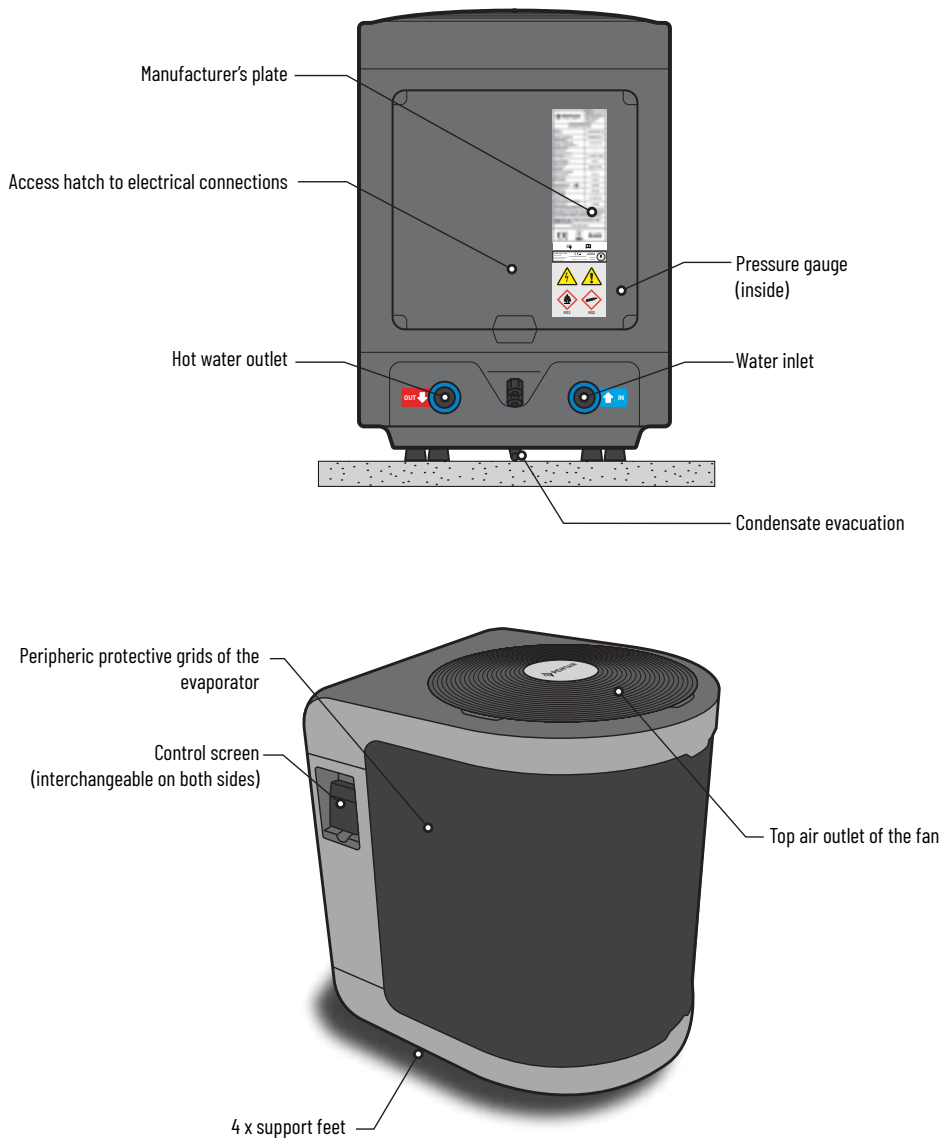
DELIVERY TRANSPORT

When you have unpacked the HP, please check the content to report any damage. Please also check that the pressure reading on the pressure gauge (open the back visit hatch) is equal to the pressure mentioned p.15, depending on the measured outdoor temperature, as different values might indicate a leak.

The HP should always be stored and transported in a vertical position, on a pallet and inside its original packaging.

Transporting and/or storing the HP horizontally will void the guarantee.

GENERAL DESCRIPTION



INSTALLATION (SITE, TYPE OF SUPPORT, NECESSARY FREE SPACE)

- Install the HP outdoors at more than 3.5 meters from the pool, as per applicable laws (in France NF C 15 100).
- Place the HP on a surface that is stable, solid (able to bear the weight of the device) and level (**prepare a concrete base if necessary, see below dimensions advised**).
- Maintain 1 m (30 cm minimum) of open space in front of the vertical air intake grids (3 side of the HP), 1m at the back is recommended to facilitate the access to the visit hatch and 3 m at the outlet of the fan (on the top) of open space without any obstacles.
- Do not lean, walk or place heavy objects on the upper grill. Do not obstruct the upper grill.
- Prepare sufficient space around the HP for maintenance operations.
- Prepare a water evacuation system close to the HP to protect the installation zone.
- Keep the HP out of the reach of children, insofar as possible.
- The side where the display is installed can be reversed (see p12).

The HP should never be installed:

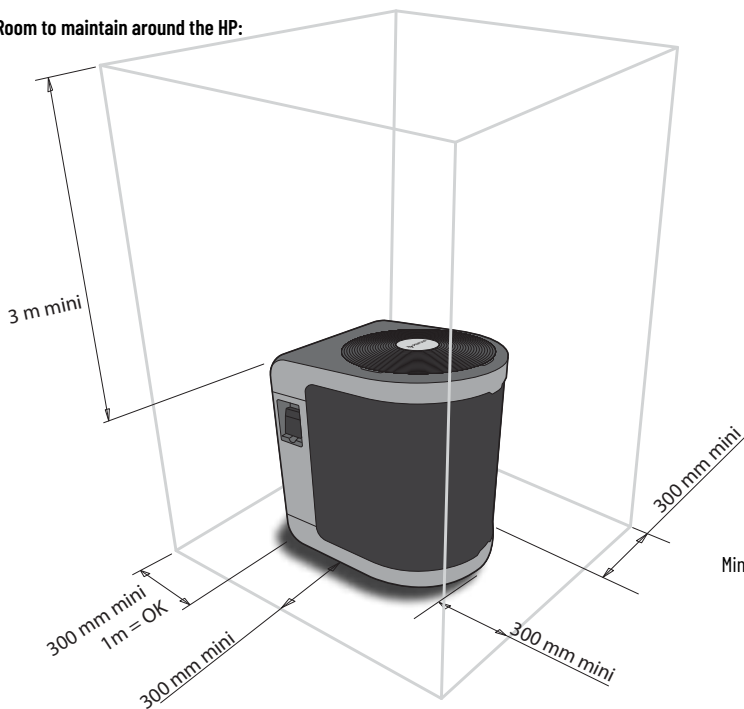
- In an area covered by sprinkling systems, or subject to spray or running water or mud (close to a road, take into account the effects of wind),
- Under a tree,
- Close to a source of heat or of flammable gas,
- In an area where it would be exposed to oil, flammable gases, corrosive products, and compounds containing sulphur,
- Close to equipment operating at high frequencies,
- In a place where snow is likely to accumulate,
- In a place where it could be flooded by the condensates produced by the device as it operates,
- On a surface that could transfer the vibrations to the house.

Advice: dampen the possible noise nuisance caused by your HP:

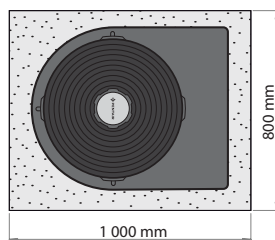
- Do not install it close to or underneath a window.
- Install it in an open area (sound waves bounce off surfaces).
- Install a sound barrier around the HP, making sure to maintain the required distances.
- Install 50 cm of PVC piping at the water inlet and outlet of the HP.

To improve its performance, it is recommended to insulate the piping between the HP and the swimming pool, especially if the distance is significant.

Room to maintain around the HP:

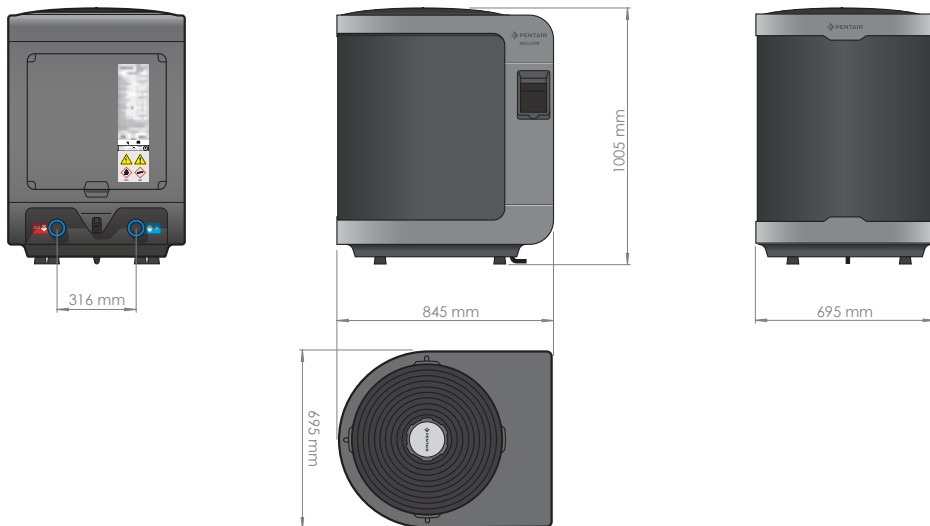


Minimum dimensions of the concrete slab



The HP must be installed on a fixed and solid basis. Use the adjustable feet to level the HP.

DIMENSIONS :

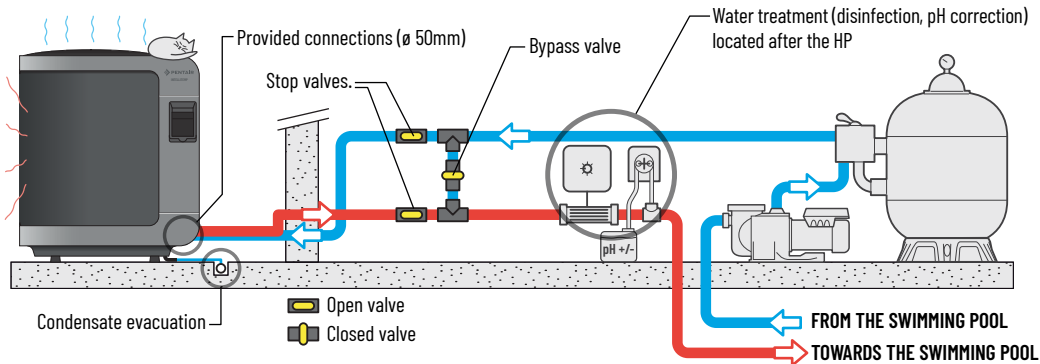


HYDRAULIC CONNECTIONS:

- Water quality necessary for this device: NF-EN-16713-3
- The HP is compatible with all types of water treatment. The HP must imperatively be connected by a PVC pipe of \varnothing 50mm to the swimming pool's hydraulic circuit, after the filter and before the treatment system, regardless of its type (Cl, pH, Br metering pumps and/or electrolyser).
- Follow the hydraulic connection order (blue = water in, red = water out)
- A bypass must be installed to facilitate work on the HP. In normal operation, the bypass is fully closed and the stop valves are open. During a maintenance, the bypass valve is fully open and the stop valves are closed. The flow rate in the heat pump is adjusted automatically by the Variable Flow Technology.
- Before connecting the PVC pipes to the HP, make sure the circuit is clean of any work residue (stone, soil, etc.).

Connection of the condensate evacuation pack:

During operations, the HP is subject to a condensation phenomenon. This translates into a water flow, which can be more or less important depending on the degree of humidity. To channel this flow, which can represent several litres of water per day, we recommend you install the provided condensate evacuation pack and connect it to a suitable water evacuation circuit.



ELECTRICAL CONNECTIONS:

Connection of the power supply:

- Prior to undertaking any intervention inside the HP, it is imperative to disconnect the power supply from the HP: there is a risk of electrocution that can cause damages, severe injuries, and even death.
- Only a certified and experienced technician is authorised to conduct cabling work in an HP or to replace the power cable.
- The power supply should match the voltage featuring on the information plate of the HP.
- The HP must be connected to an earthing connection.

Electric installation:

To ensure safe operations and to protect the integrity of your electric installation, the HP should be connected to the electrical mains according to the following rules:

Upstream, the electrical mains should be protected by a 30-mA differential switch.

The HP should be connected to a suitable class C circuit-breaker (see the table below) according to the standards and regulations in force in the country where the system is installed.

The power cord should be adapted to the power of the HP and the length of cable required for the installation (see the table below). The cable must be suitable for outdoor use.

In the case of a three-phase system, it is imperative to follow the connection order of the phases.

If phases are inverted, the compressor of the HP will not work and an EAO8 error code will appear on the display.

In public spaces, the installation of an emergency stop button close to the HP is mandatory.

The voltage must match the voltage mentioned on the HP.

The connections must be sized based on the power of the HP and on the installation state.

| Models | Power supply | Max current | Diameter of the R02V cable and maximum cable length | Magnetic-thermal protection (C) |
|-----------|--------------------------------|-------------|--|---------------------------------|
| ITTP-5M-V | Single-phase 230 V ~, 50 Hz | 14.0 A | 3x4 mm ² / 30m 3x6 mm ² / 40m 3x10 mm ² / 70m | 20 A |
| ITTP-6M-V | | 17.0 A | | |
| ITTP-8T-V | Triple-phase 380 V ~, 50 Hz | 15.0 A | 5x4 mm ² / 70m | 20 A |

- Use the cable-gland and the pass-through provided inside the HP for the passage of the cables.
- As the HP is installed outdoors, the cable must pass through a protection sheath provided for that purpose. The power supply of the HP must be provided with a protection system according to applicable law.
- The electric cables must be buried at a depth of 50 cm (85 cm under a road or a path) in an electric sheath (ringed and red). When a buried sheathed cable intersects with another cable or a duct (water, gas...), the distance between the two must be greater than 20 cm.

ELECTRICAL WIRING RULES :

This product must be installed by a licensed or certified electrician or a qualified pool professional in accordance with the local regulation depending on the country :

A = ÖVE 8001-4-702

CZ = CSN 33 2000 7-702

E = UNE 20460-7-702 1993, RECBT ITC-BT-31 2002

F = NF C15-100

H = MSZ 2364-702/1994/MSZ 10-553 1/1990

IRL = Wiring Rules + IS HD 384-7-702

M = MSA HD 384-7-702.S2

P = RSUIEE

SK = STN 33 2000-7-702

TR = TS IEC 60364-7-702

B = AREI / RGIE

D = DIN VDE 0100-702

EW = EVHS-HD 384-7-702

GB = 6S7671:1992

I = CEI 64-8/7

LUX = 384-7.702 S2

NL = NEN 1010-7-702

PL = PN-IEC 60364-7-702:1999

SLO = SIST HD 384-7-702.S2

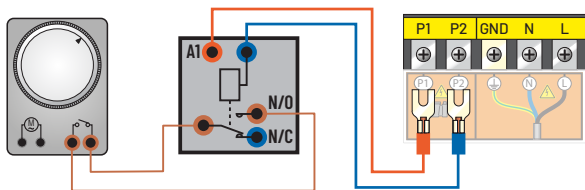
All applicable local installation codes and ordinances must also be adhered to. Improper installation will create an electrical hazard which could result in death or serious injury to pool users, installers or others due to electrical shock, and may also cause damage to power source. Always disconnect the power of any equipment at the circuit breaker before installing or removing the equipment. Failure to do so could result in death or serious injury.

Heating priority:

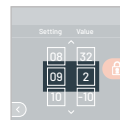
The filtration pump can be connected to the HP to force the filtration to operate if the water is not at the desired temperature. Prior to this connection, a "dry contact" (normally open relay or connector) with a 230V AC coil should be provided.

Electrical connections:

- Connect the coil of this relay (A1 and A2) on the P1 and P2 terminals of the HP.
- Connect the input and the output of the dry contact (normally open) in parallel with the dry contact of the filtration clock of the swimming pool.



Parameter for taking the connection into account: Check that the setting of the filtration pump parameter (parameter #9) is set to "2" (access described p11). If this is not the case, please contact us to change the setting.



IMMERSION AND STARTING THE HP AT THE BEGINNING OF THE SEASON:

Once the HP is connected to the water circuit with the bypass, and is connected to the power supply by a professional, ensure that:

- The HP is horizontal (level).
- The HP is secured and stable.
- The water circuit has been purged of air that has been trapped in the piping of the HP.
- The pressure gauge, visible by opening the visit hatch, shows a temperature that is equal to the ambient outdoor temperature.
- The water circuit is properly connected (no leaks or damage to the hydraulic connections, the connections are properly tightened).
- The electric circuit is properly connected (the cables are tightly secured to the terminals and intermediate circuit-breaker), properly insulated, and connected to the earthing connection.
- The conditions of installation and use described above have all been met.
- The outdoor temperature is between 0 and +35°C.
- The water temperature is of 15°C minimum.
- The evaporator on the sides of the HP is clean (leaves, dust, pollen, cobwebs...)

You can now start your device by following, in the given order, the following steps:

- Close the By-pass valve and open the two stopping valves (refer to the hydraulic diagram).
- Remove all unused items or tools from the area surrounding the HP.
- Start the pump of the filtration system.
- Power up the HP by engaging the circuit-breaker and using the ON/OFF button of the display.
- Check that the HP starts and stops in sync with the filtration circuit: if no water is detected in the HP, the display shows "FLO"
- The HP starts after a delay of a few minutes.
- Adjust the temperature ("Regulation" chapter).

ELECTRICAL CONNECTIONS:

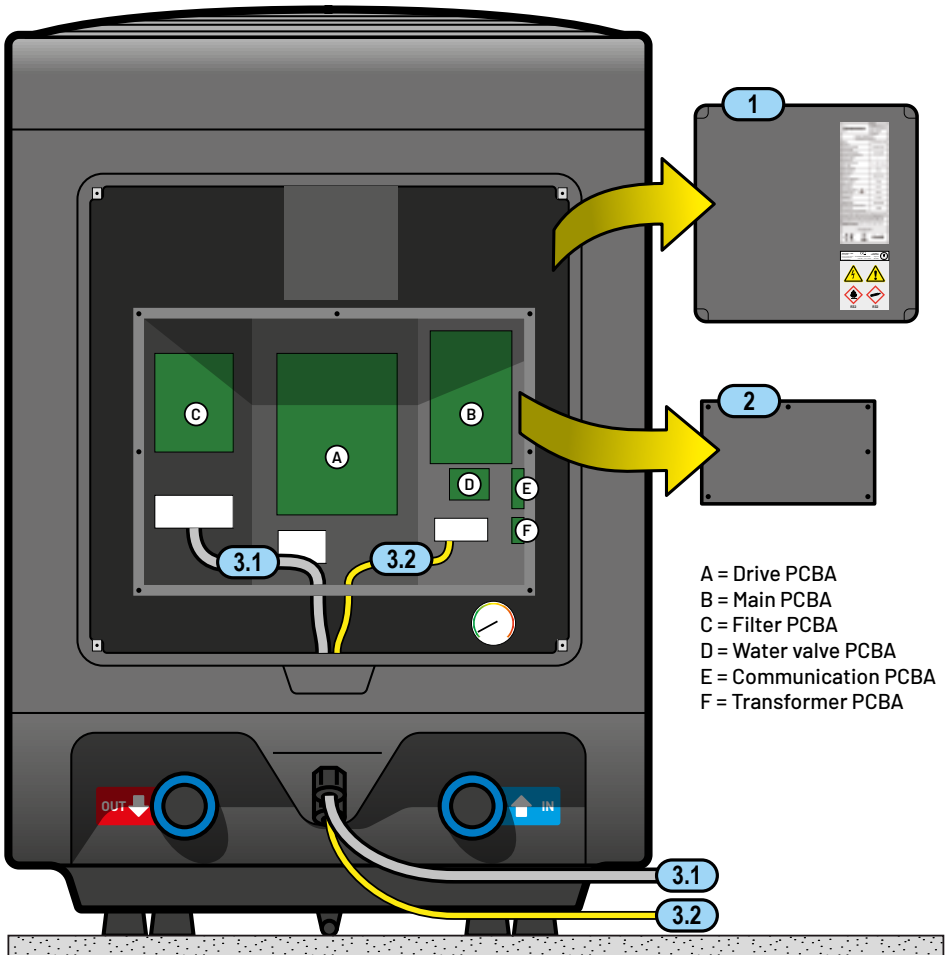
As the HP is installed outdoors, the cable must pass through a protection sheath provided for that purpose. The power supply of the HP must be provided with a protection system according to the applicable law.

- The electric cables must be buried at a depth of 50 cm (85 cm under a road or path) in an electric sheath (ringed and red). When a buried sheathed cable intersects with another cable or a duct (water, gas...), the distance between the two must be greater than 20 cm.

Electrical connections (power supply, remote control (RS-485) as an option)

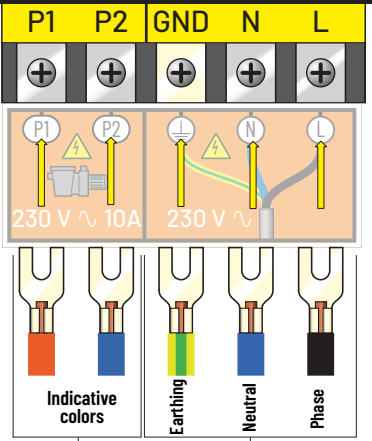
Note: It is possible to control your HP via a dry contact (switch) or the Pentair RS-485 bus.

- 1: Remove the access hatch by unscrewing the four screws
- 2: Remove the front panel of the electrical box by unscrewing 7 screws
- 3: Use the existing cable pullers to pull each cable of a suitable cross section (see the diagram below) into the free strain relief bushing (3.1 for the supply, 3.2 for the switch / RS-485).
- 4: Lead the cable up to the respective terminal and tightly secure the cable clamp. Pull on the cable to check that it does not slip.
- 5: Connect the supply (3 strands for single phase, 5 strands for three phase) in accordance with the diagrams below.
- 6: Connect the switch or BUS RS-485 in accordance with the diagram below
- 7: Replace and rescrew the front panel of the electrical box
- 8: Replace and screw on the access hatch again



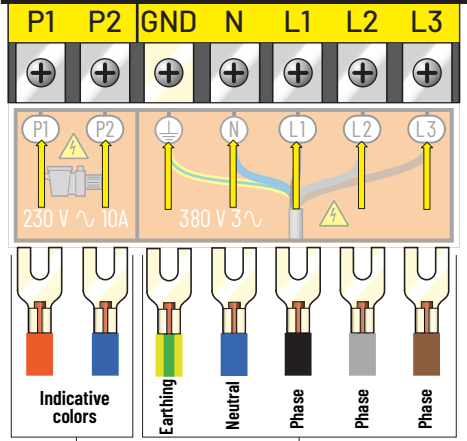
3.1 Power supply the HP, terminal connections:

Single-phase version (ITTP-5M-V & ITTP-6M-V)



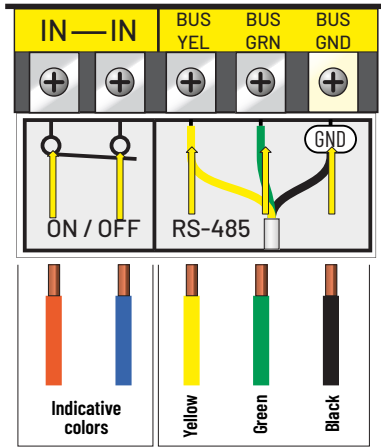
Filtration pump relay outlet
Inlet - General power supply
230 V ~ 50 Hz

Triple-phase version (ITTP-8T-V)



Filtration pump relay outlet
Inlet - General power supply
380 V ~ 50 Hz

3.2 Pilot remotely the HP trough Pentair's automation devices:



Dry contact input
(remote ON-OFF)

Connection bus
(Modbus card option)
Pentair (IntelliPool, Speedo...)

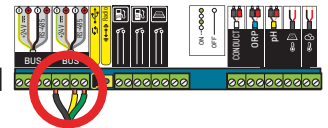
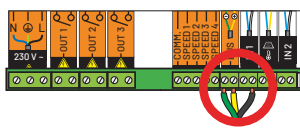
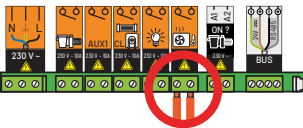
Dry contact input (remote ON-OFF), remove the shunt that is present

Pentair connection Bus (IntelliPool, Speedo ...)

Connection to Maestro :

Connection to Speedo :

Connection to IntelliPool :



GENERAL USE:

Water quality (standard):

- The recommended water quality must comply with the following standards.
- Chlorine concentration less than 2.5 ppm
- pH between 6.9 and 8
- In case of sudden chlorination, isolate the heat pump by shutting the inlet and outlet valves of the device, and reset them to their initial positions after treatment.

USE

- Cover the pool with a cover (bubble cover, shutter...) to reduce heat losses.

Maintaining the temperature:

- Once the desired temperature has been reached, you can set the daily filtration time according to your habits (8 to 10 hours per day minimum during the season). The heat pump will start automatically whenever necessary. The minimum operating time varies based on the time of use, please contact your distributor for further information.

If you notice the water temperature of the pool is falling, despite the device operating continuously, increase the daily filtration time.

Do not forget to cover the pool with an insulated cover when you are not using it, to limit heat losses.

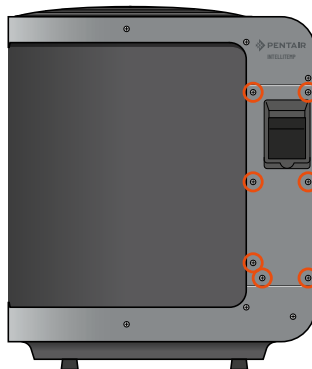
IMPORTANT: a swimming pool without a cover will lose 4 times more energy than the same pool with a cover.

The choice of the heat pump should always take into account the presence of a tarpaulin, a rolling shutter, or any other type of protection of the pool when it is not being used.

REVERSIBLE DISPLAY LOCATION:

This HP is designed to make it possible to choose the side on which the screen will be positioned.

- 1: Open the access hatch
- 2: From the inside, unplug the display connector from the white cable
- 3: From the outside, unscrew the lateral steel panel with the opening for the display (7 screws)
- 4: From the outside, unscrew the opposite steel panel as well
- 5: Unclip the display from his position and clip it on the opposite niche.
- 6: From the inside, move the connector + white cable to the opposite side
- 7: Reconnect the display and check if the display is correctly running
- 8: Put the steel panel with an opening on the display side.
- 9: Replace the screws back and tight.
- 10: Apply the same process to the complete steel panel
- 11: Close the access hatch



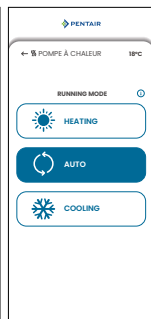
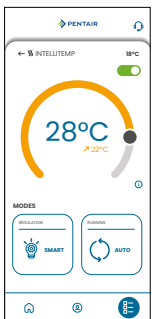
PENTAIR TEMP App

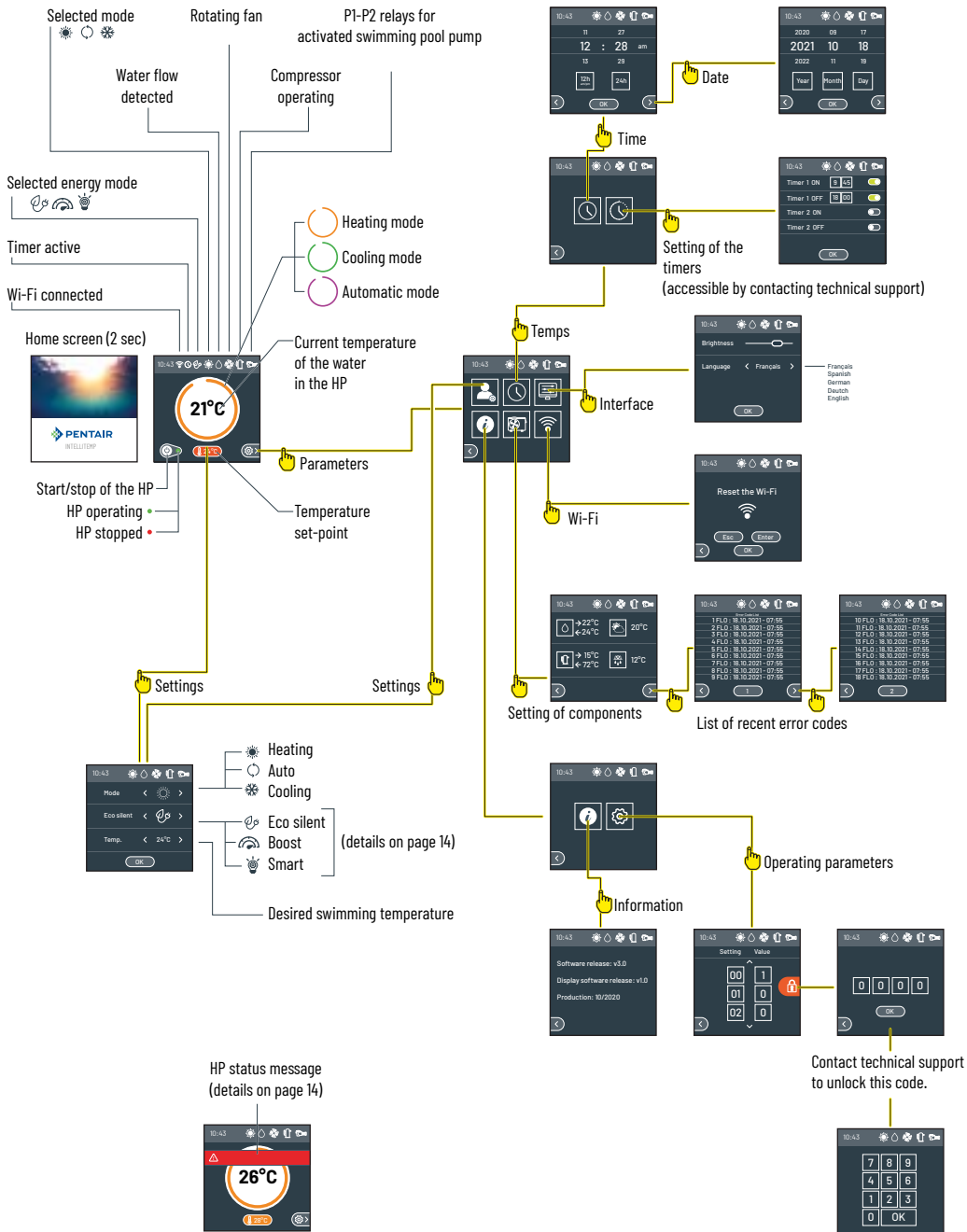
Make sure the heat pump can receive a WiFi signal. Take a recent smartphone, activate Bluetooth.

- On Apple and Android store, download the Pentair Temp App then create your account by following the steps.

- Scan the QR code located behind the access hatch to connect your IntelliTemp. You can now control your heat pump remotely. Activate the Bluetooth connection of your HP by pressing the pairing button on the WiFi module installed on top of the electrical box for 10 seconds.

- You can now control your heat pump remotely. Once the heat pump is connected, our technicians can intervene remotely if necessary.





OPERATING MODES

- ECO-SILENCE heating or cooling mode: the most economical and silent.

The HP varies the component speed to maintain an optimum sounds level and yield.

Use of 30% to 60% of the power. The COP and sound level are prioritised, the fan works at min. speed and the compressor runs to optimise the COP.

- SMART heating or cooling mode: the most intelligent mode adapts to your requirements and to the environment.

The HP varies the speed of the components to maintain an optimum power/sound level ratio.

Use of 30% to 100% of the power. The power and sound level automatically adjust depending on the external temperature and the temperature of your pool water.

- BOOST heating or cooling mode: maximum HP power.

BOOST heating or cooling mode: maximum HP power.

The HP can vary the component speed to maintain maximum power. Use of 85% to 100% of the power to quickly increase the temperature.

TABLE OF THE DIFFERENT STATES OF THE DISPLAY

| Display | Meaning | Verification | Action required |
|------------------------------------|---|--|---|
| St-by | Stand-by | | |
| FLO | No/insufficient water flow | <ul style="list-style-type: none"> - Check the water flow in the device. - Check the clogging of the filter. - Check the bypass setting. - Check the direction of the passage of water in the device (inlet bottom, outlet top). | |
| AL10 / AL11 | HP error | | |
| AL15 / AL16 | Excessive temperature difference between water outlet/inlet | | |
| AL18 | Excessive temperature at the compressor outlet | | |
| AL17 | Temperature protection too low in cooling mode | | |
| AL7 / AL8 | Communication error. | Check the connections between the display and the electronic card in the device. | Contact your distributor. |
| AL3 | Sensor error (water inlet) | Check that the sensor in question is correctly connected.. | |
| AL4 | Sensor error (water outlet) | | |
| AL5 | Sensor error (evaporator) | | |
| AL1 | Sensor error (compressor outlet) | | |
| AL2 | Sensor error (compressor inlet) | | |
| AL6 | Sensor error (ambient) | | |
| AL9 | Fan error | Check the fan connections. | |
| AL14 | Temperature too low | The outdoor temperature is < 0°C. | Wait for the temperature to rise. |
| AL19 / AL20 | Power supply issue | Have the installation checked by a qualified technician. | |
| AL21 / AL22 AL23 / AL24 AL25 | Electronic/overheating problem. | Power down the device for 5 to 10 minutes, check that it is properly ventilated, and that the air flow is not blocked or slowed down. Power the device back up. | Contact your distributor. |
| EA08 | Phase inversion | Power down the device , check the global wiring and the compressor wiring | Reconnect the phases and ensure that the markings are respected |
| EA09 | Phase loss | | |

MAINTENANCE

- Prior to undertaking any maintenance operation on the HP, it is imperative to disconnect the power supply from the HP: there is a risk of electrocution that can cause damages, severe injuries, and even death. Maintenance operations are to be conducted by a qualified technician.

Cleaning (must be conducted by a qualified technician at least once yearly):

- The cleaning of the inlet of the evaporators and of the outlet of the fan are necessary to maintain a sufficient yield.
- The HP outer casing must be cleaned with a damp soft cloth (microfibre for example). The use of detergent and other household products might damage the surface of the casing and change its properties.
- The evaporator can be cleaned carefully using a soft brush vacuum cleaner, just a soft brush, or a stream of soft water; never use a high-pressure hose.

Early maintenance, safety checks (must be conducted by a qualified technician at least once yearly):

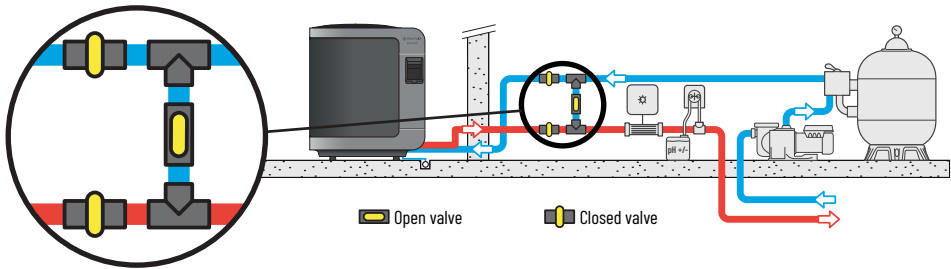
Prior to any maintenance operation, it is imperative to power down the device and to wait a few minutes before installing pressure control devices, as the high pressure and temperature in some parts of the cooling circuit could cause severe burns.

- Check that the electric cables are properly connected.
- Check that the earth terminals are properly connected to the earth.
- Check the state of the pressure gauge, and that the pressure is aligned with the temperature (table below), and for the presence of coolant.

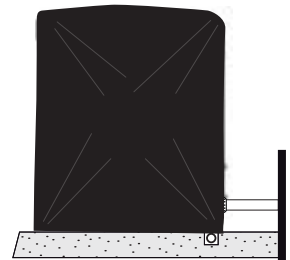
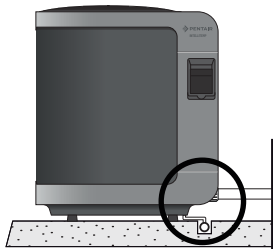
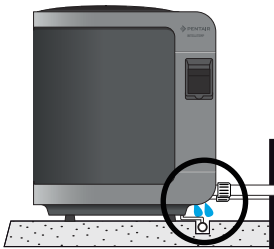
| | | | | | |
|------------------|------------------|------------------|----------------|-----------------|-----------------|
| +60°C = 38.3 bar | +32°C = 19.3 bar | +20°C = 13.7 bar | +8°C = 9.4 bar | -4°C = 6.1 bar | -16°C = 3.7 bar |
| +55°C = 34.2 bar | +30°C = 18.3 bar | +18°C = 12.9 bar | +6°C = 8.8 bar | -6°C = 5.7 bar | -18°C = 3.3 bar |
| +50°C = 30.4 bar | +28°C = 17.3 bar | +16°C = 12.2 bar | +4°C = 8.2 bar | -8°C = 5.2 bar | -20°C = 3.0 bar |
| +45°C = 26.9 bar | +26°C = 16.3 bar | +14°C = 11.4 bar | +2°C = 7.6 bar | -10°C = 4.8 bar | |
| +40°C = 23.8 bar | +24°C = 15.4 bar | +12°C = 10.7 bar | 0°C = 7.1 bar | -12°C = 4.4 bar | |
| +35°C = 20.9 bar | +22°C = 14.5 bar | +10°C = 10.0 bar | -2°C = 6.6 bar | -14°C = 4.0 bar | |

WINTERING

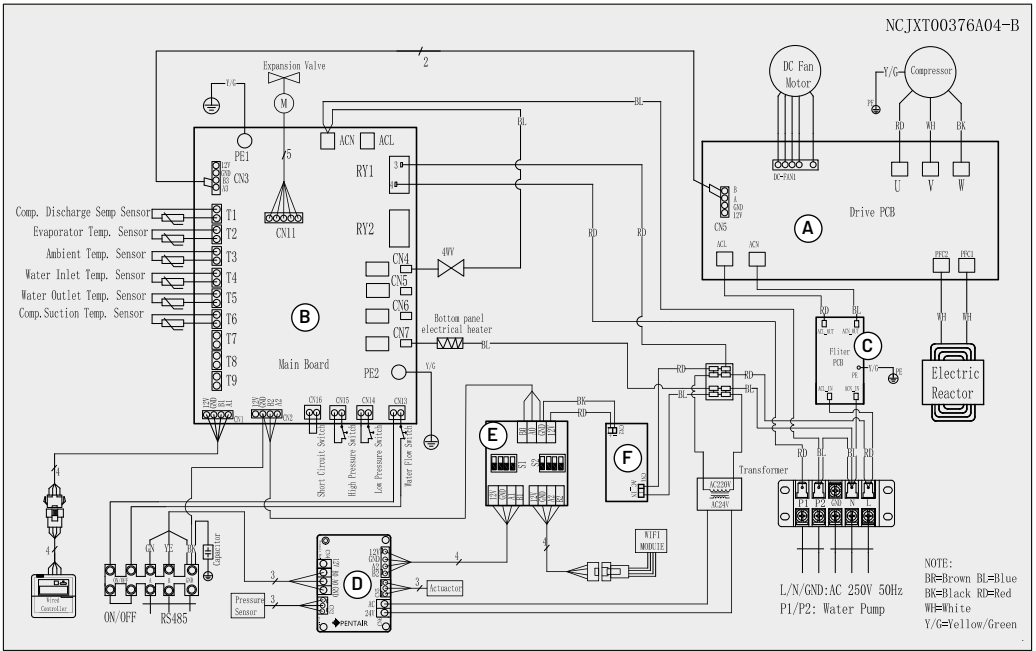
- 1 - Turn off the power supply to the HP
- 2 - Fully open the bypass valve and close the HP inlet and outlet valves.



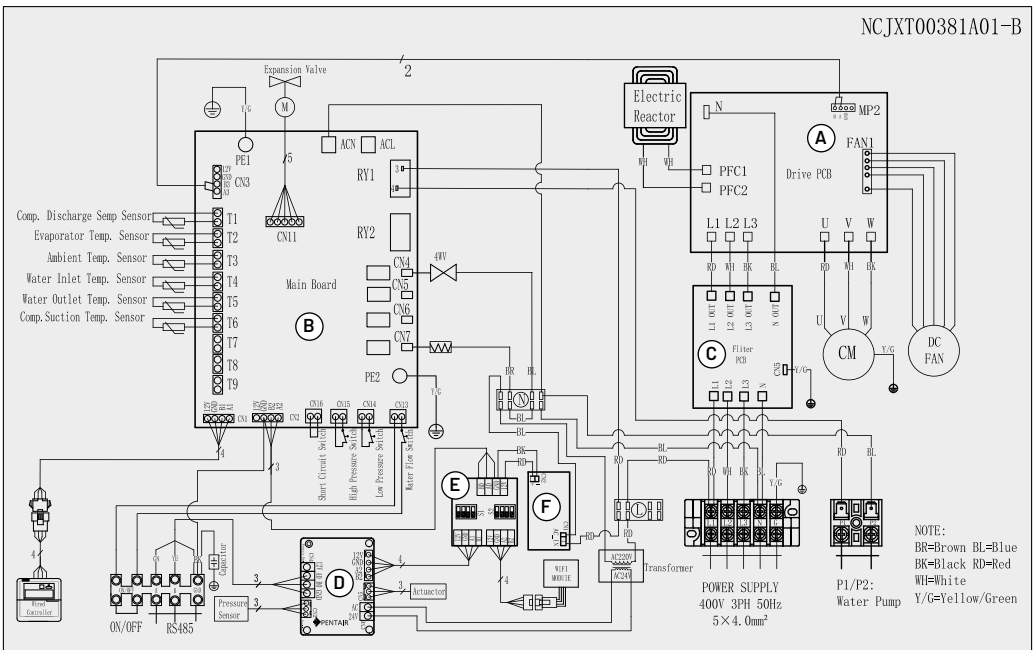
- 3 - Unscrew the junctions to evacuate all the water contained in the HP.
- 4 - Reconnect and slightly tighten the junctions by hand to prevent the introduction of foreign objects into the HP
- 5 - Place the provided winter cover over the HP



ITTP-5M-V / ITTP-6M-V



ITTP-8T-V

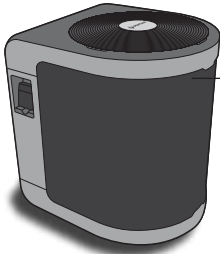


When your HP reaches the end of its lifespan and you do not wish to keep it, do not throw it out with household waste.

The HP must be brought to a selective recycling point for its reuse or recycling.

It contains potentially hazardous substances that may harm the environment and that must, during recycling, be eliminated or neutralised.

One of the following solutions should therefore be selected:

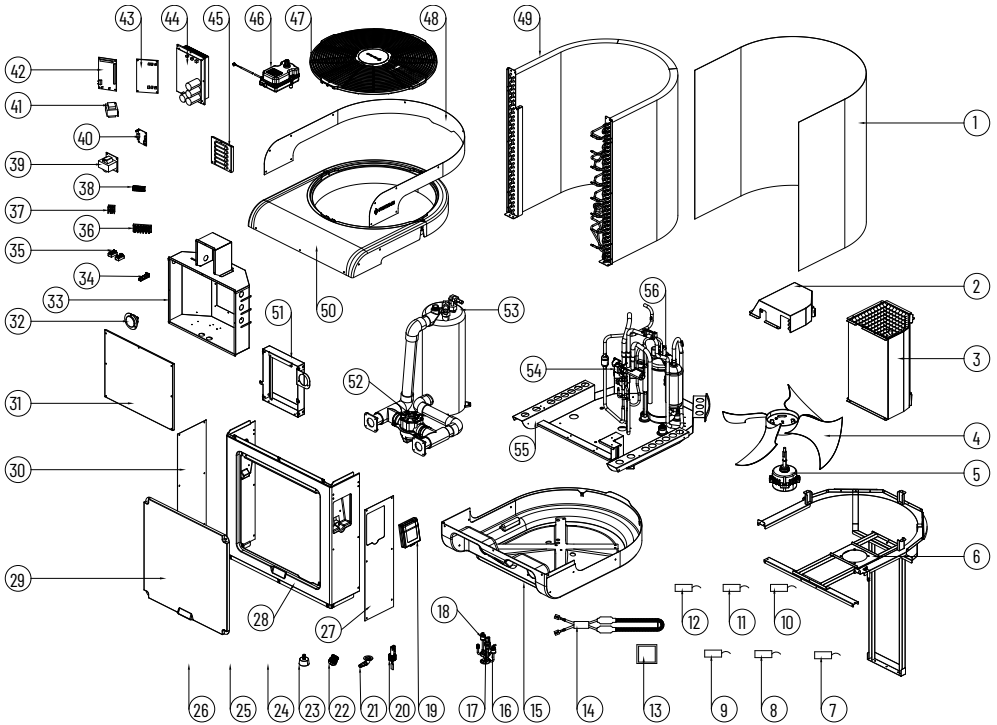


Bring the HP to a recycling centre

Give the HP to a not-for-profit organisation so that it can be repaired and reused

Give the HP to the shop when buying a new unit

DETAIL OF INTERNAL COMPONENTS



- | | | | | | |
|------------------------|------------------------------|----------------------|------------------------------|-----------------------|------------------------------|
| 1. Evaporator grill | 11. Ambient temp. sensor | 21. Drain | 31. Electrical box cover | 41. Transformer | 51. Electrical box supporter |
| 2. Compressor box 1 | 12. Coil sensor | 22. Cable gland PG21 | 32. Pressure gauge | 42. Main PCB | 52. Water valve |
| 3. Compressor box 2 | 13. Display | 23. Rubber feet | 33. Electrical box | 43. Filter PCB | 53. Heat exchanger |
| 4. Fan blade | 14. Bottom electrical heater | 24. 4WV COIL | 34. Compressor cable fixture | 44. Drive PCB | 54. 4WV BODY |
| 5. Fan motor | 15. Bottom plastic panel | 25. 4WV COIL | 35. 2 terminal board 2 | 45. Reactor box cover | 55. Bottom metal panel |
| 6. Fan motor supporter | 16. HP | 26. EEV COIL | 36. 5 terminal board | 46. Valve actuator | 56. Compressor |
| 7. Discharge sensor | 17. High pressure sensor | 27. Right side panel | 37. 2 terminal board | 47. Fan grill | |
| 8. Suck sensor | 18. Low pressure sensor | 28. Back panel | 38. 12 terminal board | 48. Top metal panel | |
| 9. Water in sensor | 19. Display box | 29. Service panel | 39. Reactor | 49. Evaporator | |
| 10. Water out sensor | 20. Water flow switch | 30. Left panel | 40. Water valve PCB | 50. Top plastic panel | |



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