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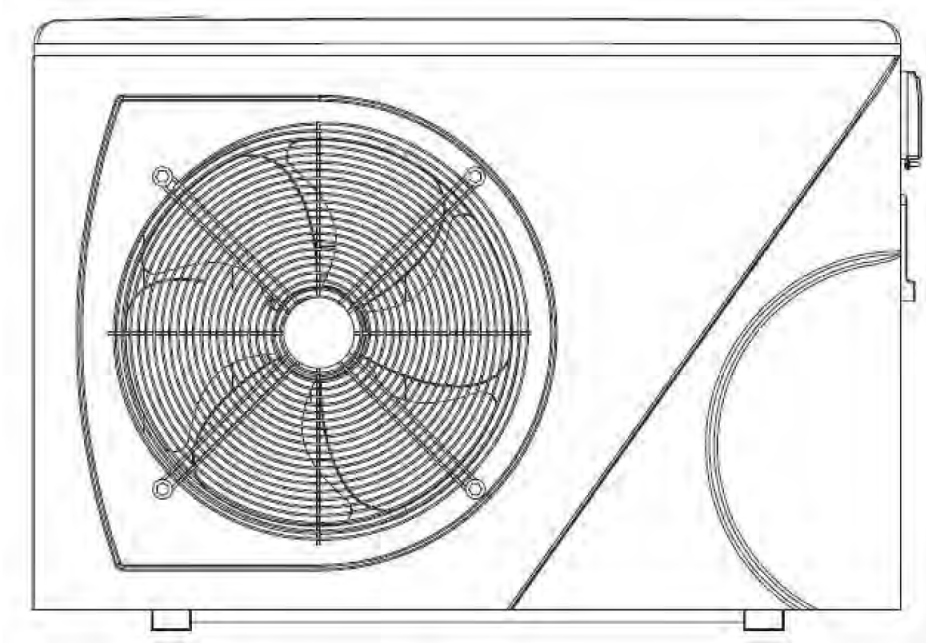
EN	**SWIMMING POOL HEAT PUMP**	**User and service manual**
FR	**POMPE À CHALEUR POUR PISCINE**	**Manuel d’installation et d’utilisation**
NL	**ZWEMBAD WARMTEPOMP**	**Gebruiker en service manual**
ES	**BOMBA DE CALOR PARA PISCINA**	**Manual del usuario y de servicio**
DE	**SCHWIMMBAD - WÄRMEPUMPE**	**Benutzer - und Wartungshandbuch**
IT	**PISCINA POMPA DI CALORE**	**Istruzioni per l'uso e di servizio**
PT	**BOMBA DE CALOR DE PISCINA**	**Manual do usuário e serviço**

PRO ELYO INVERBOOST NN



SWIMMING POOL HEAT PUMP

PRO ELYO INVERBOOST NN

INDEX

Thank you for using PRO ELYO INVERBOOST NN swimming pool heat pump for your pool heating, it will heat your pool water and keep the constant temperature when the air ambient temperature is at -20 to 50℃.

ATTENTION: This manual includes all the necessary information for the use and the installation of your heat pump.

- The installer must read the manual and follow the instructions of implementation and maintenance.
- The installer is responsible for the installation of the product and should follow all the instructions of the manufacturer and the regulations in application. Incorrect installation will invalidate the guarantee.
- The manufacturer declines any responsibility for the damage caused by any third party, object ingression and of the errors due to the installation that do not follow the manual guidelines. Any use that is not as intended by the manufacturer will invalidate the guarantee.

WARNING:

Important notice:

- **Please always keep the heat pump in a well ventilated place and away from anything which could cause fire.**
- **Do not braze or weld the pipe if there is refrigerant inside machine. Please do not charge the gas when in a confined space.**
- **Please always empty the water in heat pump during winter time or when the ambient temperature drops below 0℃, or else the Titanium exchanger will be damaged because of being frozen, in such case, your warranty will be lost.**
- **Please always cut the power supply if you want to open the cabinet to reach inside the heat pump.**
- **Please keep the display controller in a dry area to protect the display controller from being damaged by humidity.**

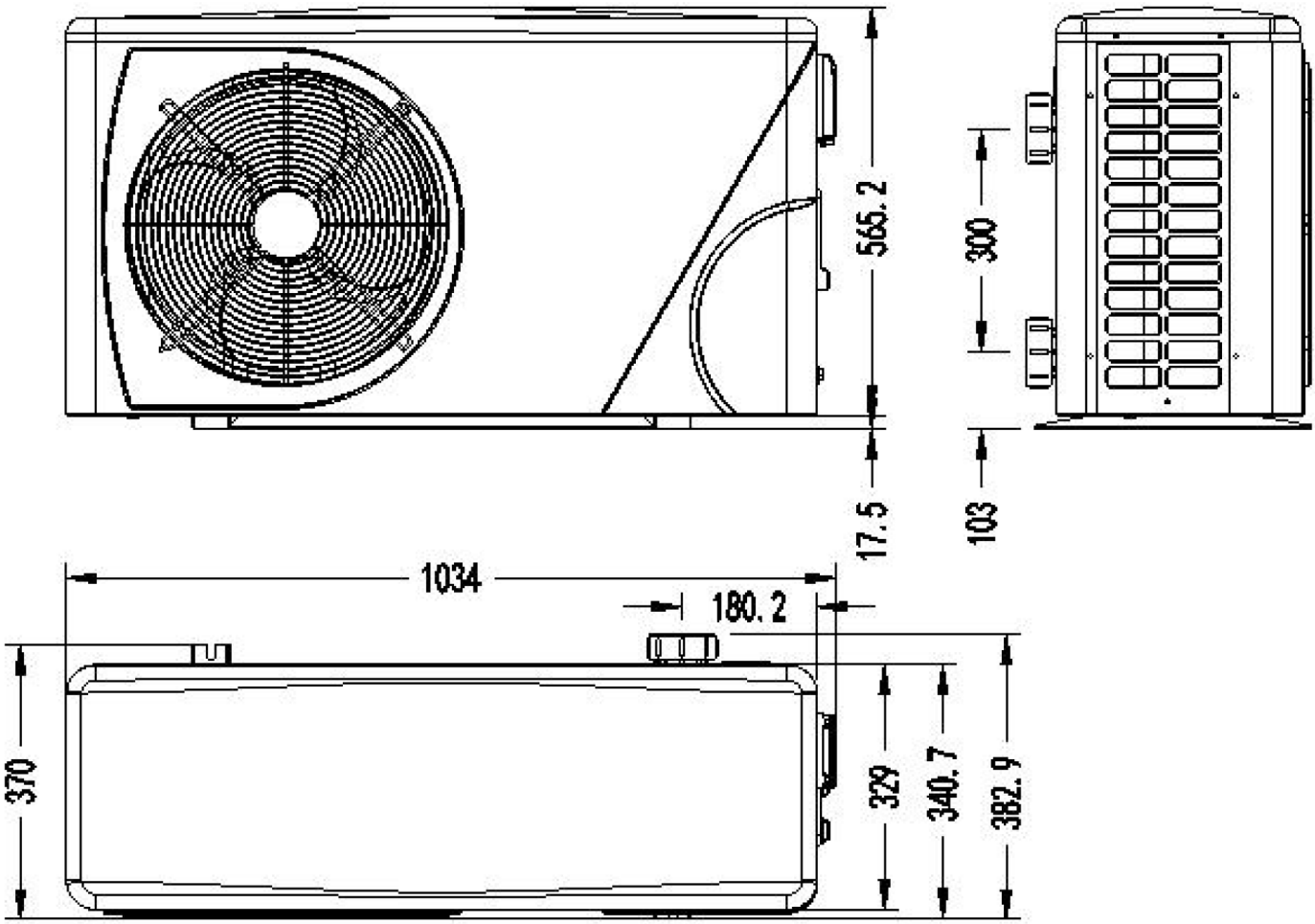
1. Description

1.1 Included with your Heat Pump

- Water connection assembly 50 mm (pcs: 2)
- User and service manual
- Reducer connection
- 10 meters' signal wire
- Waterproof box
- Winter cover
- Anti-vibration base (pcs: 4)

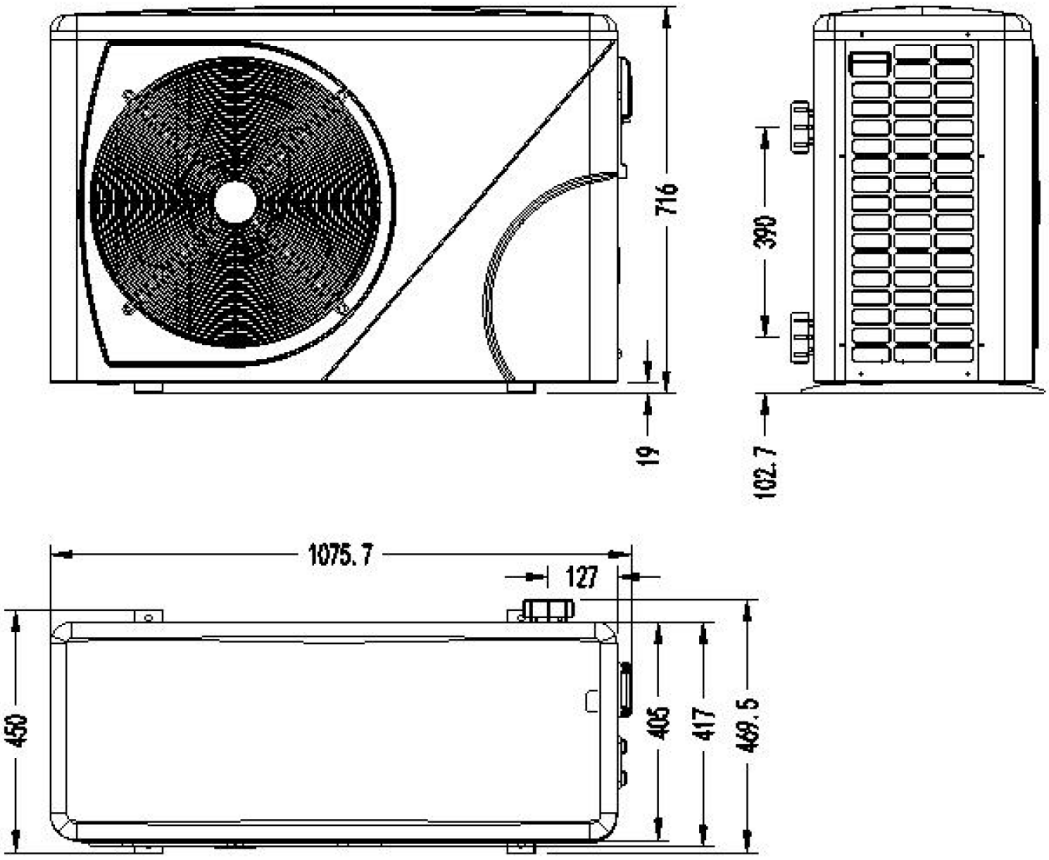
1.2 Dimension

Model: 71676

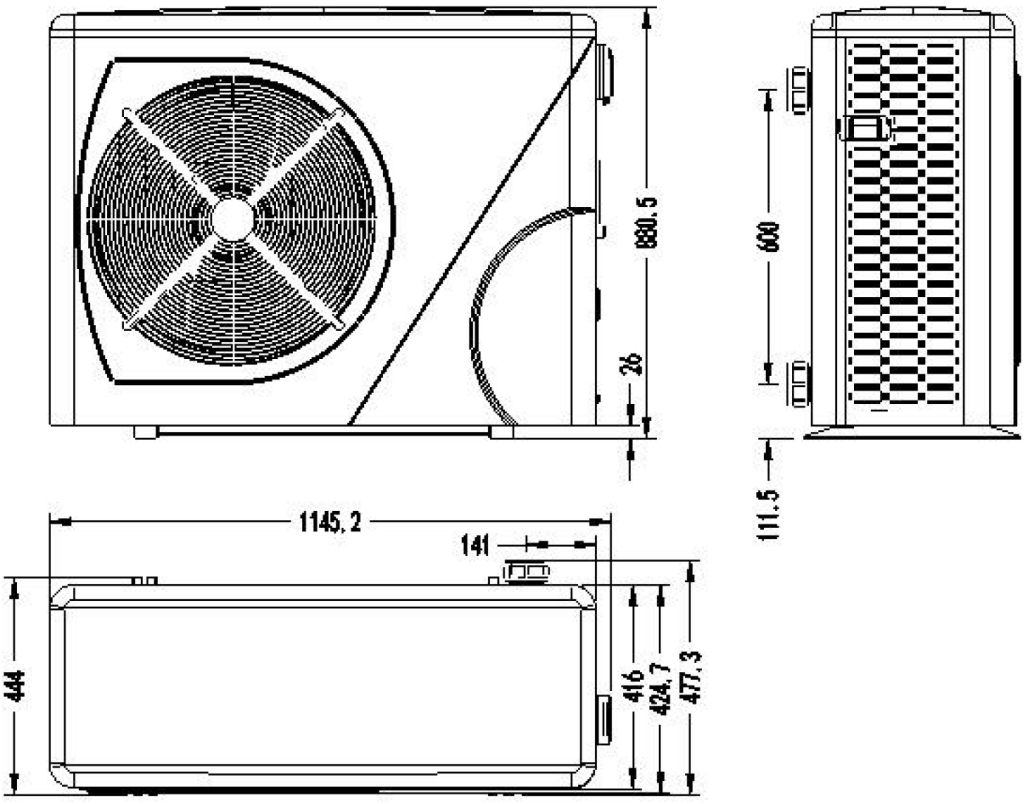


1. Description

Models: 71677/71678/71679

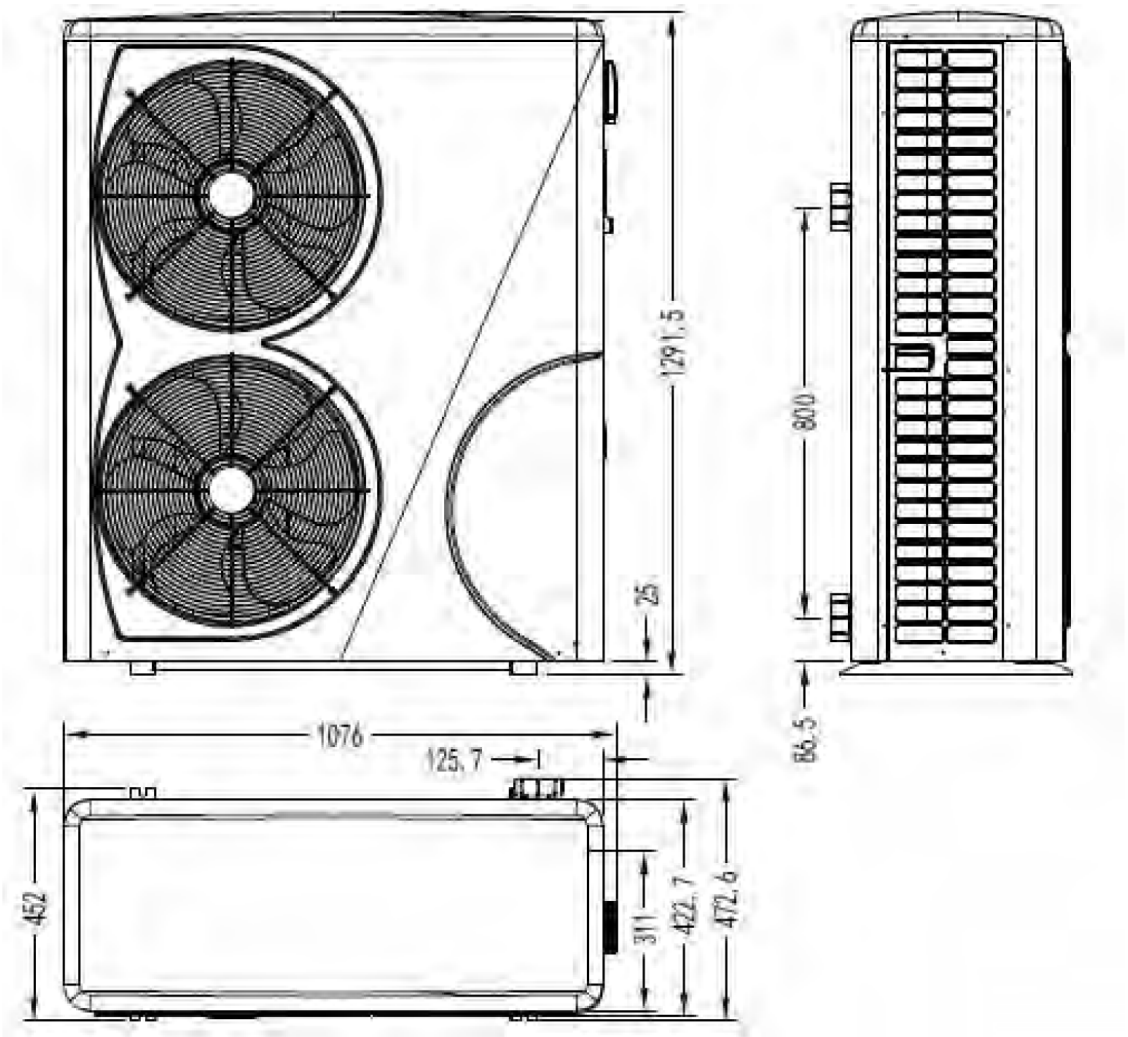


Models: 71680/71681



1. Description

Models: 71682/71683/68821/68822/68823



2. Transport information

2.1 Delivery of the unit

For the transportation, the heat pumps are fixed on the pallet and covered with a cardboard box.

To protect from any damage, the heat pump must be transferred in its package.
It is the responsibility of the addressee to notify of any damage incurred during delivery within 48 hours.
No responsibility can be taken once the unit has been signed for.

2.2 Stock advice

* The warehouse should be bright, spacious, open, well ventilated, have ventilation equipment and no fire source.

* Heat pumps must be stored and transferred in vertical position in its original packaging. If it is not the case, it cannot be operated until a minimum period of 24H has passed before the unit can have the electrical power turned on.

FORBIDDEN

2.3 Transfer to the final position

* During the unpacking of the product and the transfer from the pallet to the final place of installation, it is necessary to maintain the heat pump in a vertical position.

* Smoking and the use of flames are prohibited near R32 machine.
* Water connection are not to be used as load bearing handles. **The manufacturer would not take the responsibility in case of damage to the water pipes.**

3. Specifications

Technical data PRO ELYO INVERBOOST NN pool heat pumps

CE Standard, R32, ABS Cabinet

MODEL		PROELYXP07i	PROELYXP09i	PROELYXP11i	PROELYXP14i
CODE		71676	71677	71678	71679
*** Performance at Air 28℃, Water 28℃, Humidity 80%**					
Heating capacity	Kw	7-3.1	9-2.3	11-2.9	14-3.2
Power consumption	Kw	1.04-0.21	1.34-0.14	1.64-0.18	2.09-0.2
C.O.P.		15-6.7	16-6.7	16-6.7	16-6.7
*** Performance at Air 15℃, Water 26℃, Humidity 70%**					
Heating capacity	Kw	4.7-2.5	6.6-1.9	7.9-2	9.5-2.3
Power consumption	Kw	0.94-0.32	1.32-0.24	1.58-0.25	1.9-0.29
C.O.P.		7.9-5	8.0-5	8.0-5	8.0-5
*** Performance at Air 0℃, Water 26℃, Humidity 78%**					
Heating capacity	Kw	3.44-1.7	4.11-2.3	5.54-3.0	6.85-3.8
Power consumption	Kw	1.23-0.38	1.47-0.82	1.98-0.68	2.45-0.85
C.O.P.		4.5-2.8	4.4-2.8	4.4-2.8	4.5-2.8
*** Performance at Air -10℃, Water 26℃, Humidity 78%**					
Heating capacity	Kw	2.41-1.5	3.13-2.0	3.87-2.7	5.1-3.15
Power consumption	Kw	1.21-0.35	1.42-0.53	1.76-0.69	2.32-0.81
C.O.P.		4.3-2	3.8-2.2	3.9-2.2	3.9-2.2
*** General data**					
Compressor type		MITSUBISHI INVERTER COMPRESSOR			
Voltage	V	220-240V/50Hz or 60Hz/1PH			
Rated current	A	4.6	5.9	7.2	9.2
Minimum fuse	A	7	9	11	14
Advised pool volume	m^3	10-26	12-35	16-60	18-66
Advised water flux	m^3/h	2.5	3.0	3.7	4.0
Water pressure drop	Kpa	12	12	14	15
Heat exchanger		Twist-titanium tube in PVC			
Water connection	mm	50			
No. of Fan		1			
Ventilation type		Horizontal			
Fan speed	RPM	500-850		550-850	
Power input of Fan	W	6-35		22-82	32-110
Noise level(10m)	dB(A)	≤ 41	≤ 42	≤ 42	≤ 43
Noise level(1m)	dB(A)	38-51	39-52	40-52	40-54
Refrigerant (R32)	g	650	700	1000	1100
CO2 equivalent	Tonne	0.44	0.47	0.68	0.74
*** Dimension/ Weight**					
Net weight	kg	56	68	73	78
Gross weight	kg	68	73	78	83
Net dimension	mm	1008*380*577	1050*440*709		
Packing dimension	mm	1095*430*705	1130*470*850		

3. Specifications

Technical data PRO ELYO INVERBOOST NN pool heat pumps

CE Standard, R32, ABS Cabinet

MODEL		PROELYXP16i	PROELYXP20i	PROELYXP26i	PROELYXP30i
CODE		**71680**	**71681**	**71682**	**71683**
*** Performance at Air 28℃, Water 28℃, Humidity 80%**					
Heating capacity	Kw	16-3.8	20-4.7	26-5.9	30-6.8
Power consumption	Kw	2.39-0.24	2.99-0.29	3.88-0.37	4.55-0.43
C.O.P.		16-6.7	16-6.7	16-6.7	16-6.6
*** Performance at Air 15℃, Water 26℃, Humidity 70%**					
Heating capacity	Kw	11.2-3	14-3.9	18-5.4	22.8-5.6
Power consumption	Kw	2.24-0.38	2.8-0.49	3.6-0.68	4.56-0.68
C.O.P.		8.2-5	8.2-5	8.2-5	8.2-5
*** Performance at Air 0℃, Water 26℃, Humidity 78%**					
Heating capacity	Kw	7.4-4.1	9.79-4.8	13-6.7	15.89-8.5
Power consumption	Kw	2.64-0.91	3.5-1.09	4.64-1.52	5.68-1.93
C.O.P.		4.5-2.8	4.4-2.8	4.4-2.8	4.4-2.8
*** Performance at Air -10℃, Water 26℃, Humidity 78%**					
Heating capacity	Kw	5.8-3.6	7.58-4.3	10.4-5.9	12.74-7.4
Power consumption	Kw	2.64-0.92	3.45-1.1	4.73-1.51	5.79-1.95
C.O.P.		3.9-2.2	3.9-2.2	3.9-2.2	3.8-2.2
*** General data**					
Compressor type		MITSUBISHI INVERTER COMPRESSOR			
Voltage	V	220V-240V/50Hz or 60Hz/1PH			
Rated current	A	10.5	13.2	17.0	23.0
Minimum fuse	A	16	20	26	35
Advised pool volume	m^3	28-85	58-120	65-132	78-156
Advised water flux	m^3/h	5.0	6.0	8.0	10.0
Water pressure drop	Kpa	15	18	20	25
Heat exchanger		Twist-titanium tube in PVC			
Water connection	mm	50			
No. of Fan		1			
Ventilation type		Horizontal			
Fan speed	RPM	450-650		(550-850)*2	
Power input of Fan	W	35-130		(32-110)*2	
Noise level(10m)	dB(A)	≤ 43	≤ 45	≤ 49	≤ 49
Noise level(1m)	dB(A)	40-54	41-56	42-60	42-60
Refrigerant (R32)	g	1500	1900	2000	2600
CO2 equivalent	Tonne	1.01	1.28	1.35	1.76
*** Dimension/ Weight**					
Net weight	kg	98	117	128	130
Gross weight	kg	113	135	146	148
Net dimension	mm	1050*450*870		1050*452*1295	
Packing dimension	mm	1140*480*1010		1130*515*1430	

3. Specifications

Technical data PRO ELYO INVERBOOST NN pool heat pumps

CE Standard, R410A, ABS Cabinet

MODEL		Pro Elyo Inverboost NN26T	Pro Elyo Inverboost NN 35	Pro Elyo Inverboost NN35T
CODE		68821	68822	68823
*** Performance at Air 28℃, Water 28℃, Humidity 80%**				
Heating capacity	Kw	26-5.9	35-8	35-8
Power consumption	Kw	3.88-0.37	5.22-0.5	5.22-0.5
C.O.P.		16-6.7	16-6.7	16-6.7
*** Performance at Air 15℃, Water 26℃, Humidity 70%**				
Heating capacity	Kw	18-5.4	24-5.6	24-5.6
Power consumption	Kw	3.6-0.68	4.8-0.68	4.8-0.68
C.O.P.		8.2-5	8.2-5	8.2-5
*** Performance at Air 0℃, Water 26℃, Humidity 78%**				
Heating capacity	Kw	13-6.7	15.8-3.7	15.8-3.7
Power consumption	Kw	4.64-1.52	4.46-0.63	4.46-0.63
C.O.P.		4.4-2.8	5.8-3.6	5.8-3.6
*** Performance at Air -10℃, Water 26℃, Humidity 78%**				
Heating capacity	Kw	10.4-5.9	11.6-3.1	11.6-3.1
Power consumption	Kw	4.73-1.51	4.77-0.6	4.77-0.6
C.O.P.		3.9-2.2	5.2-2.45	5.2-2.45
*** General data**				
Compressor type		MITSUBISHI INVERTOR COMPRESSOR		
Voltage	V	380V/50Hz or 60Hz/3PH	220~240V /50Hz or 60Hz/1PH	380V/50Hz or 60Hz/3PH
Rated current	A	7	22.9	8.4
Minimum fuse	A	10.5	34	13
Advised pool volume	m^3	65-132	78-160	78-160
Advised water flux	m3/h	8.00	10.0	10.0
Water pressure	Kpa	20	25	25
Heat exchanger		Twist-titanium tube in PVC		
Water connection	mm	50		
No, of Fan		2		
Ventilation type		Horizontal		
Fan speed	RPM	(550-850)*2		
Power input of Fan	W	(32-110)*2		
Noise level(10m)	dB(A)	/	/	/
Noise level(1m)	dB(A)	42-60	42-60	42-60
Refrigerant (R410a)	g	3800	4000	4000
CO2 equivalent	Tonne	7.94	8.36	8.36
*** Dimension / Weight**				
Net weight	kg	128		
Gross weight	kg	146		
Net dimension	mm	1050*452*1295		
Packing dimension	mm	1130*515*1430		

* Above data are subject to modification without notice.

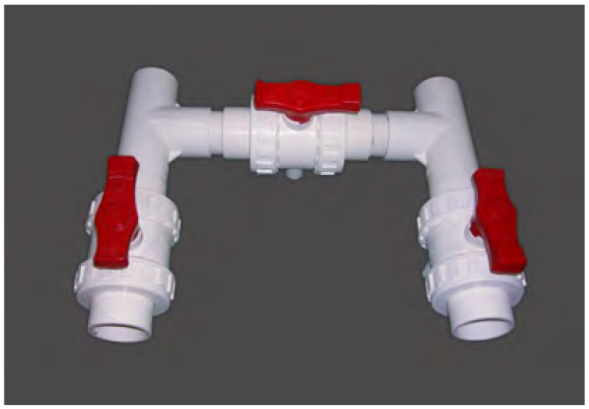
4. Accessories and options

4.1 Accessories list

 Anti-vibration base, 4 pcs	 Draining plug, 2 pcs	 Waterproof box, 1 pc
 10M signal wire, 1 pc Modbus signal wire, 1 pc	 Water connection assembly, 2 sets	 Winter Cover, 1 pc

4.2 The By-Pass Kit

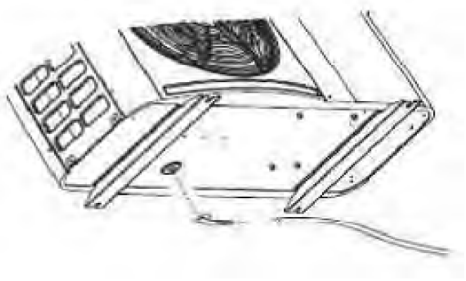
The By-Pass Kit is the essential accessory for the installation of your heat pump, it is also a tool for the optimization of the heating of the water. The valves allows the optimum flow of water using a manometer to make sure the optimized running of the compressor, see paragraph 5.6 controls of the pressure.



4.3 Accessories Installation

Anti-vibration bases

1. Take out 4 Anti-vibration bases
2. Install them on the bottom of machine.



Draining plug

1. Install the draining plug under the bottom panel
2. Connect with a water pipe to drain out the water.

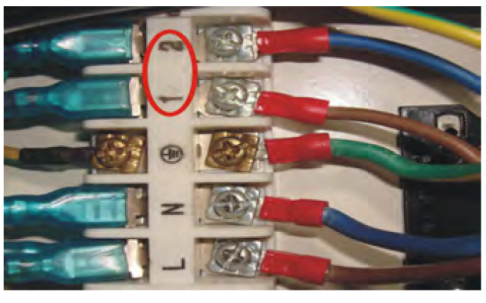
Note: Lift the heat pump to install the draining plug. Never overturn the heat pump, it could damage the compressor.

Water Inlet & outlet connection

1. Install the two joints like the picture shows
2. Screw them onto the water Inlet & outlet connection

Mains Cable wiring

1. Open the cover of the terminal box (marked red) on the side of machine
2. Tight the cables in the correct connections, L N E, inside the terminal block.



Filtration pump wiring (Dry contact)

1. Open the cover of the terminal box (marked red) on the side of machine
2. Tight the cables in the correct connections, 1 2, inside the terminal block.

5. Location and connection

ATTENTION:

Please observe the following rules when installing the heat pump:

1. Any addition of chemicals must take place in the piping located **downstream** from the heat pump.
2. Always keep the heat pump upright. If the unit has been held at an angle, wait at least 24 hours before applying mains power to the heat pump.

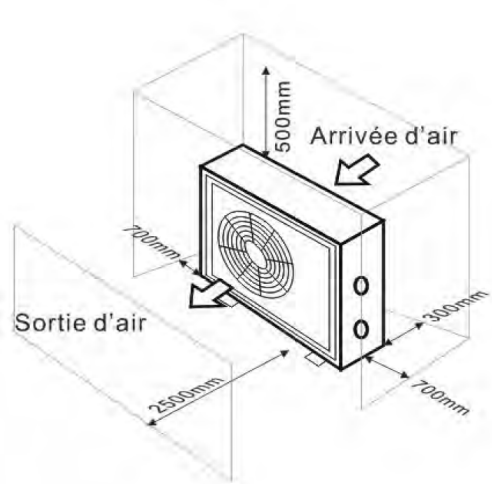
5.1 Heat pump location

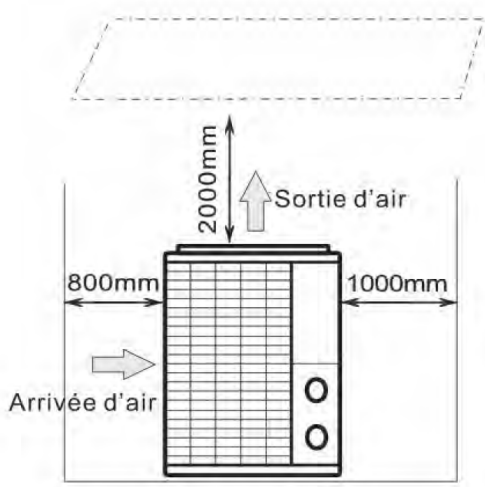
The unit will work properly in any desired location as long as the following three items are present:

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 (see drawing below). Please consult your installer for installation with an indoor pool. Installation in a windy location does not present any problem at all.

ATTENTION: Never install the unit in a closed room with a limited air volume in which the air expelled from the unit will be reused, or close to shrubbery that could block the air inlet. Such locations impair the continuous supply of fresh air, resulting in reduced efficiency and possibly preventing sufficient heat output.

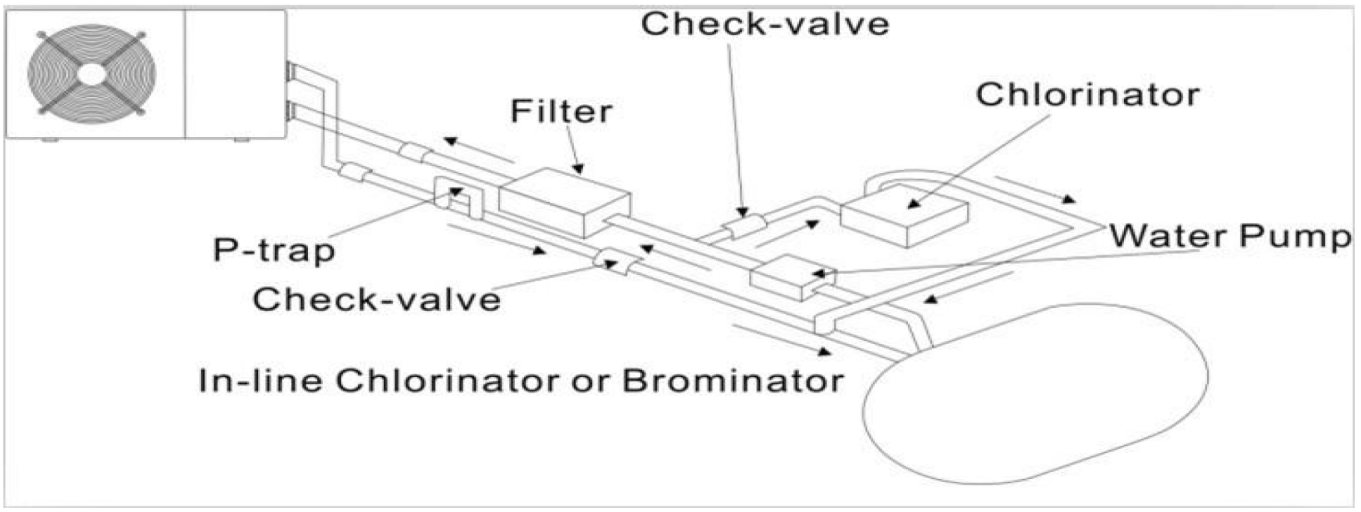




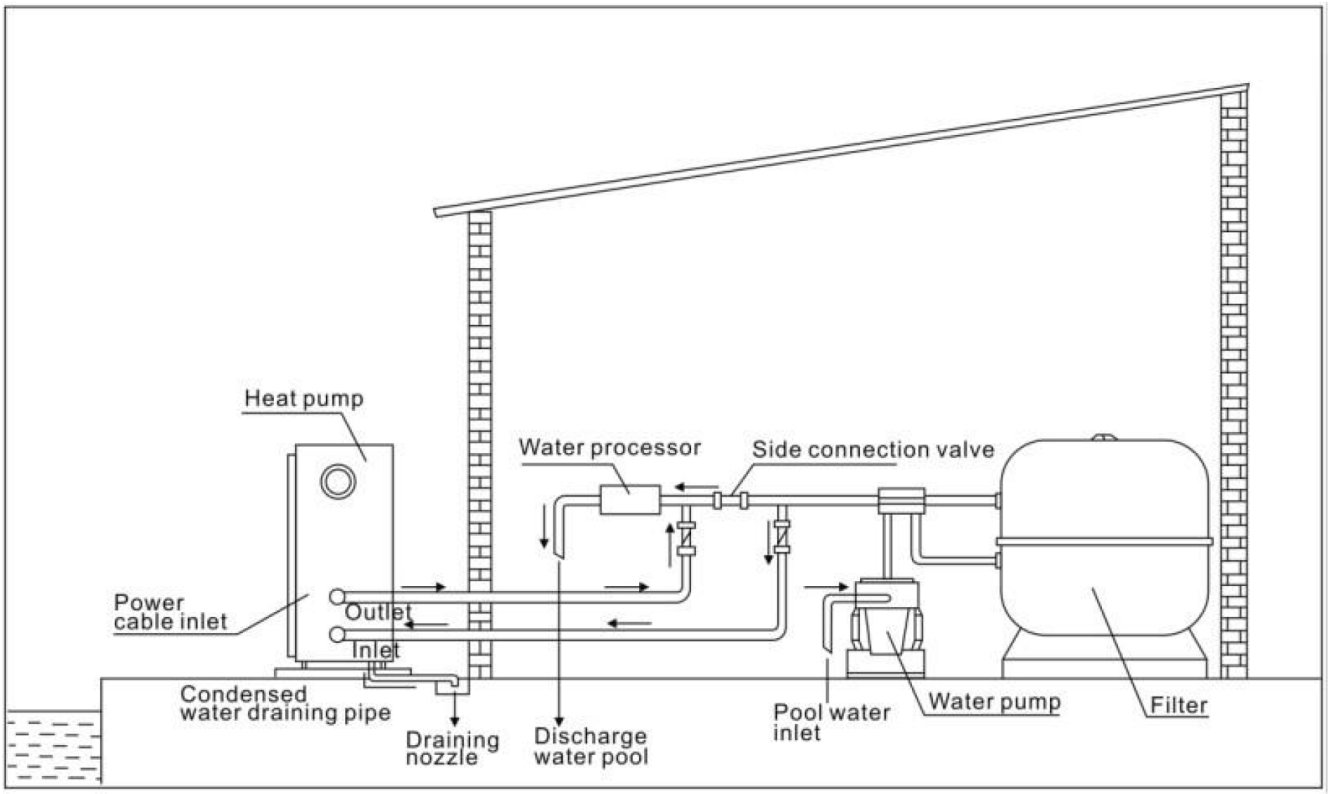
5.2 Check-valve installation

NOTE

Note: If automatic dosing equipment for chlorine and acidity (pH) is used, it is essential to protect the heat pump against excessively high chemical concentrations which may corrode the heat exchanger. For this reason, equipment of this sort must always be fitted in the piping on the **downstream** side of the heat pump, and it is recommended to install a check-valve to prevent reverse flow in the absence of water circulation.
Damage to the heat pump caused by failure to observe this instruction is not covered by the warranty.



5.3 Typical arrangement



This arrangement is only an illustrative example.

NOTE

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

ATTENTION:

In order to heat the water in the pool (or hot tub), the filtration pump must be running so the water is circulating through the heat pump. The heat pump will not start up if the water is not circulating.

5.4 Initial operation

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

1. Switch on the filtration 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 electronic control panel. The unit will start up after the time delay expires (see below).

3. After a few minutes, check whether the air blowing out of the unit is cooler.

4. When the filtration pump is turned off, the unit should also turn off automatically.

5. Allow the heat pump and the filtration pump to run 24 hours a day until the desired water temperature is reached. The heat pump will stop running at this point +1°C. After this, it will restart automatically (as long as the filtration pump is running) whenever the swimming pool water temperature drops 1 degree below the set temperature (for example, if you set the temperature 28°C, the heat pump will stop when the temperature at 29°C. While it will restart when the temperature of the water down to 27°C)

Depending on the initial temperature of the water in the swimming pool and the air temperature, it may take several days to heat the water to the desired temperature. A good swimming pool cover can dramatically reduce the required length of time.

NOTE

Water Flow Switch:
It is equipped with a flow switch for protecting the HP unit running with adequate water flow rate. It will turn on when the filtration pump runs and shut it off when the pump shuts off.

Time delay - The heat pump has a built-in 3-minute start-up delay to protect the circuitry and avoid excessive electrical contactor wear. The unit will restart automatically after this time delay expires. Even a brief power interruption will trigger this time delay and prevent the unit from restarting immediately. Additional power interruptions during this delay period do not affect the 3-minute duration of the delay.

5.5 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.

NOTE

The amount of condensation may be as much as several litters per hour at high humidity. The condensate will drain from the bottom of the heat pump. This is sometimes mistakenly regarded as a water leak.

5.6 Pressure gauge display (R32)

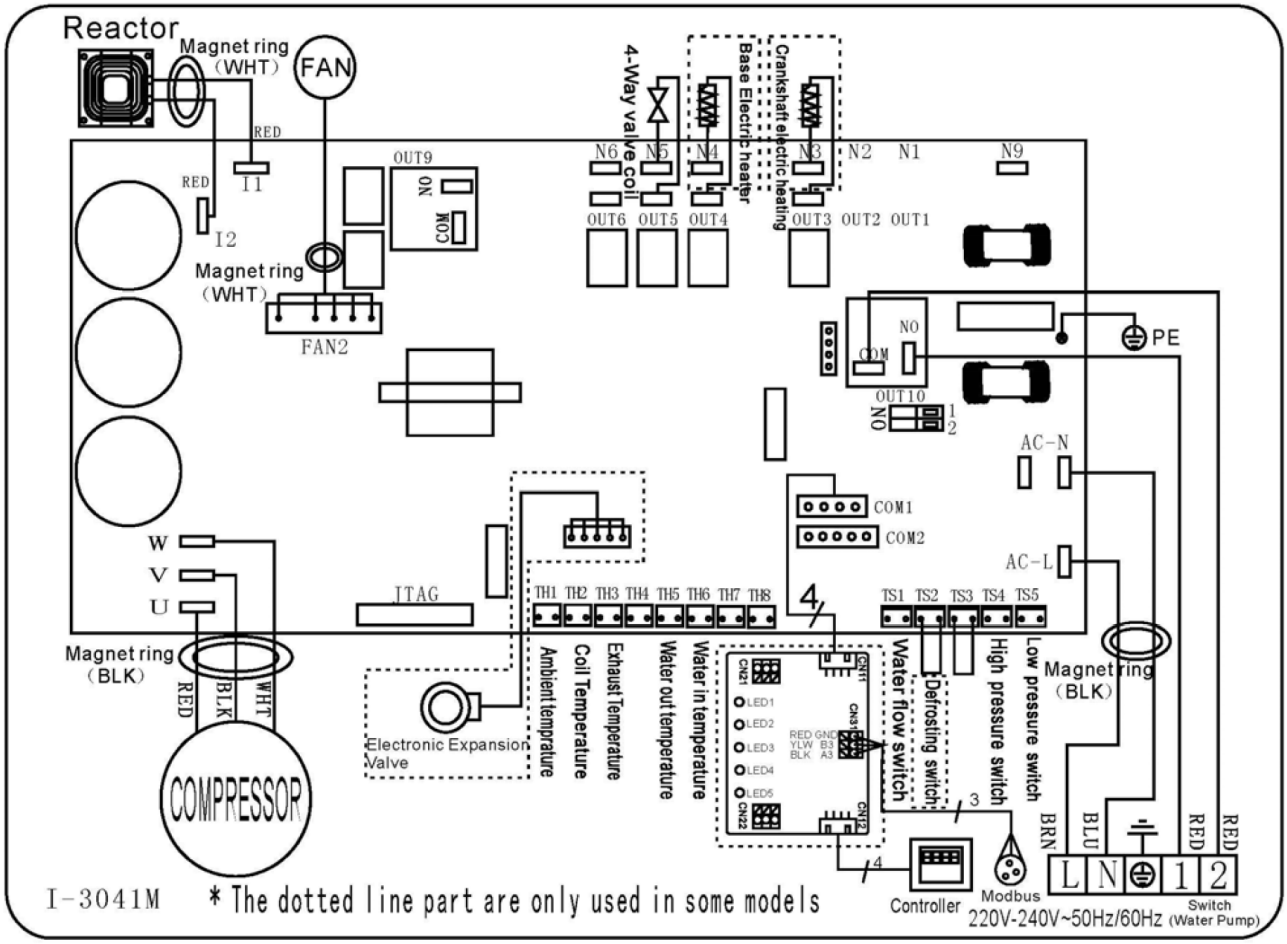
Examine the pressure gauge which indicates the refrigerant gas pressure of the unit, the below table shows the normal value of the gas pressure (R32) when the machine is in power off or running conditions.

Unit Condition	**Power Off**			
Ambient (℃)	-5~5	5~15	15~25	25~35
Water temp (℃)	/	/	/	/
Pressure gauge (Mpa)	0.59~0.85	0.85~1.18	1.18~1.59	1.59~2.1

Unit Condition	**Running**				
Ambient (℃)	/	/	/	/	/
Water temp (℃)	10~15	15~20	20~25	25~30	30~35
Pressure gauge (Mpa)	1.1~1.6	1.3~1.8	1.5~2.1	1.7~2.4	1.9~2.7

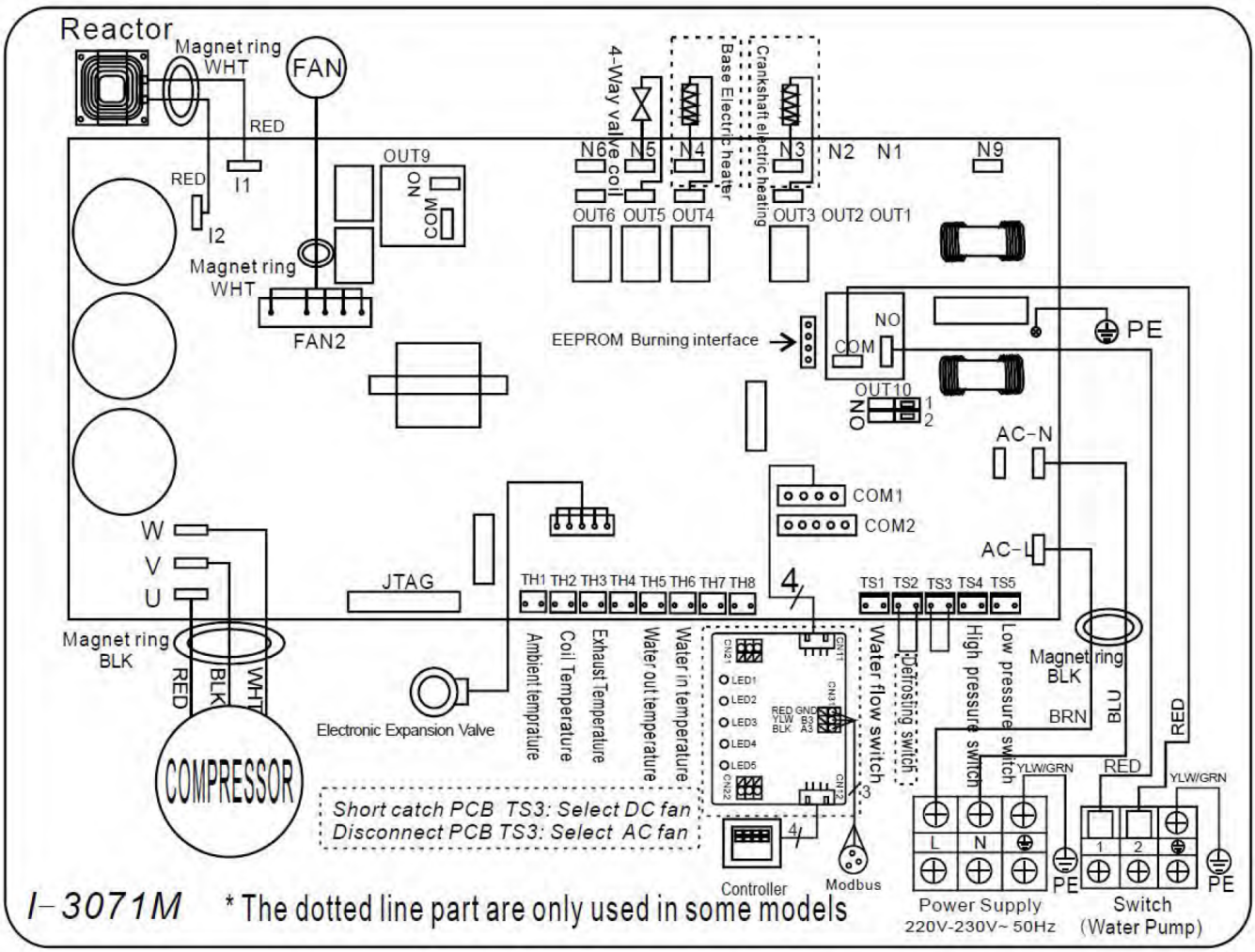
6.1 Inverter swimming pool heat pump wiring diagram

Ref. 71676/71677/71678/71679/71680



6.2 Inverter swimming pool heat pump wiring diagram

Ref: 71681



6.3 Inverter swimming pool heat pump wiring diagram

Ref: 71682/71683