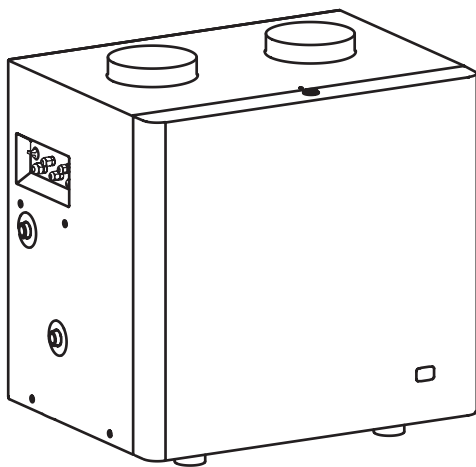


HEAT PUMP



HPI-4

Safety instructions

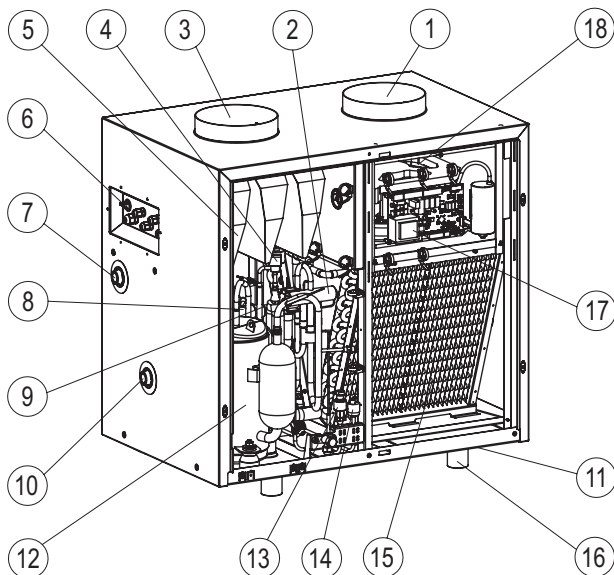
1. Please read and follow the Installation and Operating Instructions carefully, to ensure the long life and reliable operation of this appliance.
2. Installation and use of heat pump inconsistent with this instruction is not permitted - may cause malfunction and will void the warranty.
3. The device must not be installed in unheated rooms.
4. The minimum air intake temperature 5°C.
5. Mounting and commissioning of the heat pump and accompanying installation should be entrusted to a specialist service company.
6. The heat pump should be installed only in horizontal position on a flat surface with appropriate lifting capacity or on a suitable supports on the wall.
7. The device must be installed in such a place and in a such a way that the emergency leakage from connectors would not cause flooding of the room.
8. The room must have a possibility to drain condensate to the sewer.
9. After setting up, the device must be connected to the cylinder as described in contained manual. Inconsistence with the description of the connection invalidates the warranty and may cause malfunction.
10. The heat pump unit is designed to connect to installation with pressure not exceeding 0,6 MPa. If the water pressure exceeds 0,6 MPa, install a pressure reducing valve in front of the machine.
11. During a break in operation, turn off the device by switching the power switch to „off“. Do not disconnect the power supply from the device.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the device.

Description

The heat pump HPI-4 is used to heat sanitary water. The unit derives heat from surrounding air and passes through the water by electrically powered compressor refrigerant circuit.

The heat pump HPI-4 can be used to supply water storage tanks with a capacity of 100 - 400dm³.

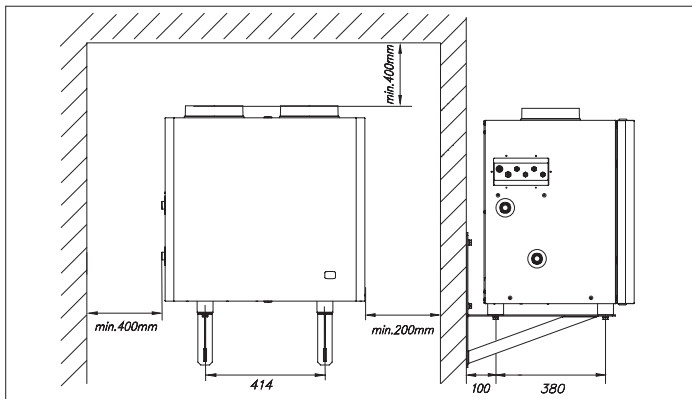


- [1] - air outlet
- [2] - pipecross valve
- [3] - air inlet
- [4] - expansion valve
- [5] - air filter
- [6] - power button/power indication
- [7] - water inlet G3/4"
- [8] - pump
- [9] - condenser

- [10] - water outlet G3/4"
- [11] - condensate outlet
- [12] - compressor
- [13] - pressure transducer
- [14] - pressure switch
- [15] - evaporator
- [16] - vibro-isolator
- [17] - heat pump driver
- [18] - fan

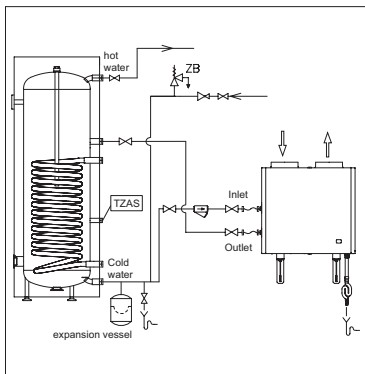
Assembly

The heat pump should be installed only in a horizontal position on a flat surface with appropriate lifting capacity. The device can also be bolted to brackets mounted on the wall. To fasten the device to the brackets use screw holes M10 in vibro-isolators. During installation, ensure for good levelling the device which will allow for proper drainage of condensate.



Connection to the hydraulic installation

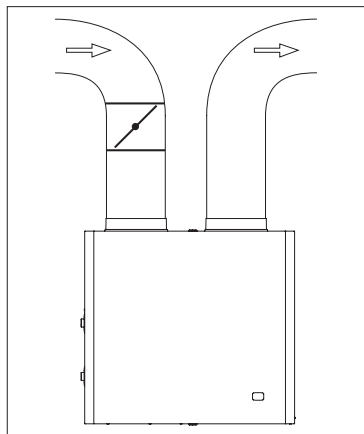
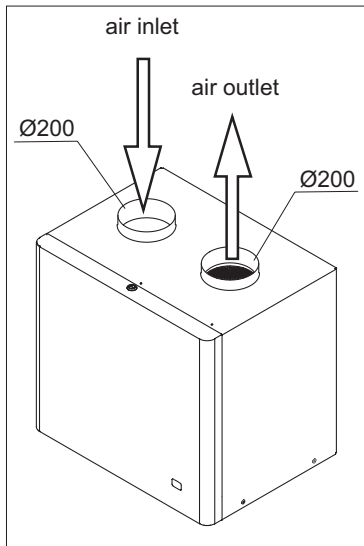
The device is designed for co-operating with hot water cylinder connected to plumbing and protected against excessive pressure according to PN-76 /B-02440. The heat pump HPI-4 is a pressure device adapted to connection to plumbing pressure not exceeding 0,6MPa. At the inlet of water into the device there should be installed a strainer. We recommend to connect the device using hoses to eliminate the transmission of vibrations to the hydraulic system.



Air cables connection

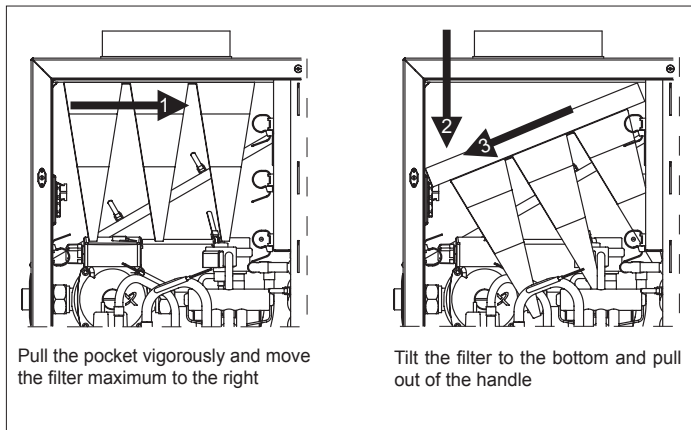
Air can be extracted from the room in which the device is mounted, another room or from the outside of the building. In the second and third case, the device should result in appropriate air ducts. In the case where the air intake on the air outlet are on one wall at a distance of less than 4 meters, on the air there must be a moulder directing air flow in a direction opposite to the air intake. At the inlet and air outlet there are DN200 connectors. The installation should be made of DN200 pipe using reducing heat pump fittings on a connections. In order to achieve optimal device parameters, ensure that the air flow of at 800 m³/h. To minimize losses associated with air resistance, the cable must be performed in a straight line. For DN200 the total length of the inlet and air outlet should not exceed 10m. For wiring with the change of direction should be taken that the resistance of air flow through one knee correspond to the air flow resistance by 2 m pipe. These remarks apply to bend pipe.

During the winter, where the air temperature outside can drop below 0, there is a risk of water freezing in the circulation pump and the hydraulic system. This can lead to damages of the elements mentioned above, in order to prevent it on the inlet channel - shut-off valve of air supply should be installed.



Air filter

On the inlet of the device there is an air filter mounted, and at least once a year the cleanness should be checked and replaced if necessary. Designation of filter - pocket filter 287 x 287 x 200 with filtration class G3.



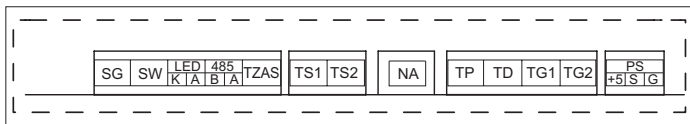
Connecting of the condensate hose

During normal operation, moisture in the air condenses on the walls of evaporator. Condensates flow into the drip tray where are led to the tube nozzle on the outside of the device. During the operation of the pump, fan creates under pressure inside, to allow free drainage of condensate, siphon should be installed to the drain pipe.

Connection to the electric installation

The device must be connected to the electrical system using the attached cable section 3 x 1mm² ended with a plug.

The electrical system shall be equipped with a residual current protective devices.



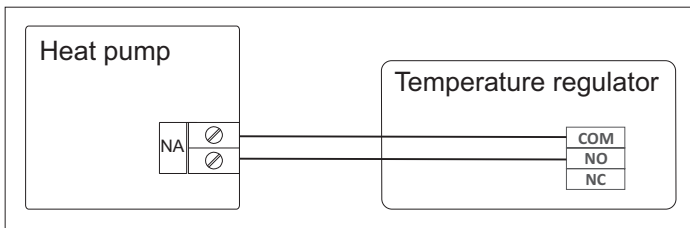
In order to allow interaction with other devices the driver is equipped with SG and NA clamps.

SG (max.0,1A 250V ~) - relay output excluding slave device; during operation of the heat pump output circuit connected to SG is open.

„NA” (input voltage free) - input of the master device; opening the contact of „NA” disables starting the device. While connecting to the clamps

„NA” the master device (eg. time switch or temperature regulator) switch pos. [6] switch to „ON” , and in the case of connecting temperature regulator the N03 setting should be changed to „OFF” position and then unplug TZAS sensor.

Connecting the clamps SG and NA should be carried out with 2 x 0,5mm² wire, leading it along the existing electrical wiring inside the unit. Connection should be performed by qualified person.



Before connecting the temperature controller remove the jumper on the input NA of heat pump.

Start-up

Before starting the unit, visually check the connection of the device and proper installation in accordance with the diagrams.

The tank must be filled with water:

- open the valve on the cold water inlet,
- open the valve on the hot water outlet installation (full flow of the water stream, without air bubbles indicates that the tank is full,
- close the taps.

Check for leaks of the sanitary hot water side.

Check the operation of the safety valve (in accordance with the valve's manufacturer instruction).

Check the connection of air ducts.

Check the electrical connection.

Connect the switch [6] on the "ON" position, the unit will process with factory settings.

The heat pump controller

The heat pump controller is located under the cover. To remove the cover twist locks on the upper and lower part thereof as shown on the picture.

Functions of the controller buttons:

- a) Selection mode of displayed information.

Indication markings:

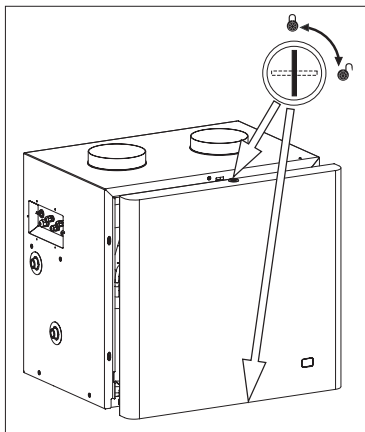
- B** (ERRORS) - Error display mode, available if the device diagnoses the fault,

- S** (SERVICE) - service mode,

- N** (SETTINGS) - setting mode

- P** (PREVIEW) - preview mode for settings,

- b) selection of the parameter or increase of the parameter value,
- c) selection of the parameter or decrease of the parameter value,
- d) settings mode,
- e) display,
- f) status indicators of the device:



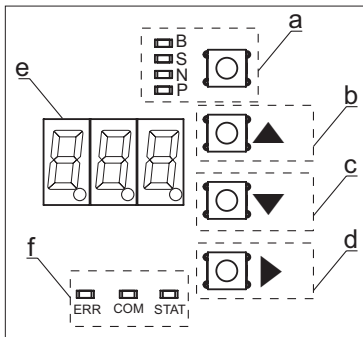
ERR error

COM communication with the master device

STAT status of the device

Modes B; S and P

are available for service purposes.



P01	Temperature of cylinder 0°C, if N03 setting chosen - „off” displayed value „0”
P05	Intake air temperature °C

Change parameters of settings:

1. Select (a) setting mode (highlighted indicator N), then sequentially on the display will appear setting number and setting value.
2. Select setting using (b) and (c).
3. Using button (d) enter setting change mode (indicator N starts flashing).
4. Change setting by using (b) and (c).
5. Using button (d) exit change setting mode (indicator N stops flashing).

N01	set point temperature in the tank 20 - 55°C - factory setting 50°C
N02	minimum temperature for the lower source (air) 5 - 15°C - factory setting 10°C
N03	deactivating of the temperature sensor in the tank „on-off” factory setting „on”

Technical data

Model			HPI-4
Heating power (wg EN 14511)	A20/W35	kW	3,7
	A7/W35		3,0
	A20/W45		3,4
	A7/W45		2,7
COP (wg EN 14511) efficiency factor	A20/W35	-	3,8
	A7/W35		3,1
	A20/W45		3,2
	A7/W45		2,5
Power supply		~V/Hz	230/50
Power consumption		A	5,7
Number of compressors		pcs.	1
The maximum pressure of the refrigerant		MPa	3,1
Refrigerant type		-	R407C
Refrigerant volume		g	1250
Maximum water temperature		°C	60
Rated water pressure		MPa	0,6
Water flow rate		m ³ /h	0,6
Available pump pressure		kPa	15
Air flow		m ³ /h	800
Available static pressure		Pa	200
Surrounding temperature		°C	5 ÷ 40
Dimensions (H x W x D)		mm	673 x 690 x 520
Weight		kg	65
Noise level		dB(A)	53



This product must not be treated as a communal waste. Dismantled appliance ought to be given to an appropriate recycling point for electrical and electronic waste. Appropriate disposal of the used product prevents potential negative influence on the environment, which could occur in case of an improper waste disposal.

In order to obtain more detailed information on the recycling of the product, contact your local authority, refuse disposal services or the store, where the product has been purchased.

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