

## Operating instructions and installation of ONE2 heat pump Hotjet



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# 1. User instructions

## 1.1. General information

Congratulations on your purchase of heat pump Hotjet. Get familiar with these instructions to get the best use and a long service from the pump.

The heat pump is a compact unit designed for heating water for hot service water and for heating.

The source of heat is the external air, of which heat is transferred to water in an exchanger. The heat pump is a long service life and a very safe product.

We wish you a trouble-free operation and a lot of thermal comfort.

### 1.1.1. System description

The Hotjet heat pumps are compact units designed for outdoor and indoor installation. The series Hotjet i units are intended for indoor installation in an object, and the series Hotjet e units are an alternative for external installation out of the object. These models take the energy from the air, and that is why it is not necessary to bore holes or to install ground collectors.

The series Hotjet w are intended for the ground-water or water-water systems. The heat source is a borehole, a ground collector or a technological or waste heat.

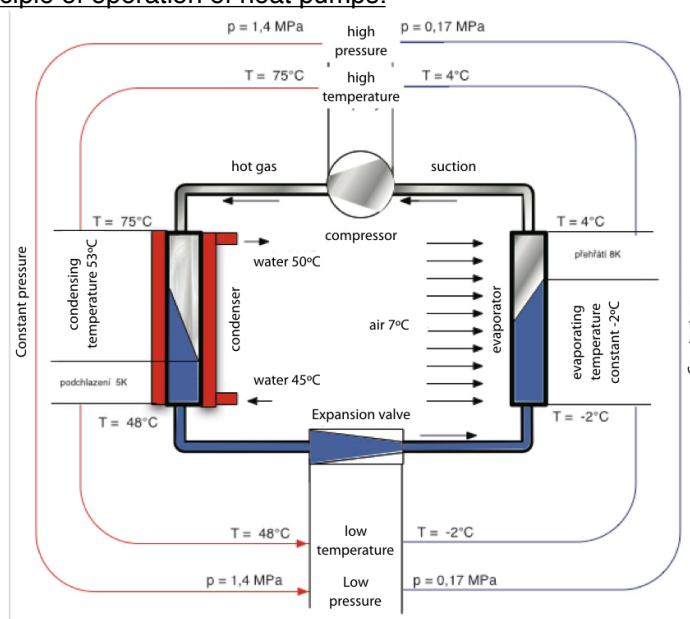
The heat pump is equipped with the Siemens RVS41 or RVS21 or RVS61 regulators. The regulators controls the running of the actual heat pump, heating of the hot service water, charging of the storage reservoir, controlling the three-stage bivalent source, directional and heating radiators circuits, swimming pool water heating and many other parts of the heating and cooling system.

The regulators algorithms are practically identical, and differ only by the number of inputs, therefore the number of simultaneously connected and regulated subsystems. Each series RSV regulator is extensible by 3 input and 3 output module.

Up to two AVS75 modules can be connected to one RVS.

It is possible to interconnect up to 16 heat pumps of various models and outputs into the so called cascade and in this way increase the total output capacity of the installation. At the same time, the stage regulation becomes also available.

Principle of operation of heat pumps:



### 1.1.2. Warning

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- **BEWARE: The device contains electrical components under tension.**
- **The device may be opened only by a person with relevant electrical qualification. Risk of electric shock.**
- ! The power supply circuit of the heat pump must comply with standard ČSN 33 2000 !
- We recommend installation of an 30mA tripping current earth leakage relay (ČSN EN 60335-2-40 ed.) and a lockable main switch.
- The device must be connected only to properly earthed power supply.
- Before connecting equipment or removing any panel always switch off the power supply and exercise maximum caution.
- The heat pump is not intended for operation with a frequency converter.
- The heat pump must never be switched on if it is not connected to the heating circuit filled with water.
- The heat pump must never be switched on with the covers removed or when the safety features are out of operation.
- Arbitrary manipulation with connected heating system, heat pump and electrical power supply is dangerous and can lead to serious injuries.
- The device service may be performed only by qualified and authorised service personnel.
- Do not tamper with the equipment and do not interfere with its assembly arrangement.
- Do not use any equipment if it has been dropped, or has been mechanically or otherwise damaged.
- Never cover the heat pump, the air inlet and discharge must be always free and open.
- Do not place the outdoor heat pump version inside enclosed premises – it will cool down and its efficiency will be affected.
- Do not install the heat pump in position, which can be flooded.
- The device should not be installed in close proximity of flammable liquids and fumes.
- Do not store or handle flammable substances near the equipment.
- Piping and the compressor contain cooling mixture under high pressure, and therefore should not Hotjet CZ s.r.o. !! 4 z 46 Operating instructions and installation of heat pumps Hotjet (3.08/2010/01) be exposed to high temperatures and the danger of perforation.
- Hot water above 52° C temperature may cause serious burns or death by scalding.
- Never remove or cover any of the markings, labels and warnings placed on the heat pump, as these should be visible at all times. Replace the damaged ones with new ones.
- The control panel must be out of reach of children.
- Be careful to avoid injuries on sharper edges and projections.
- Implementation of any technical changes on the equipment is possible only with the prior written consent of HOTJET CZ s.r.o.

## 1.2. Disposal

Disposal facility to a professional company specialized in the field of refrigeration or contact the manufacturer. The product contains a filling (refrigerant oil), which must be disposed of properly.

## 1.3. Routine maintenance

Proper maintenance is very important to optimise the operation and to ensure long service life of the heat pump. The following points should serve as general instructions; always consult your installation company for specific maintenance requirements.

The evaporator should be cleaned at least twice per year and each time when it is visibly fouled. Fouled evaporator lowers the efficiency of the operation. The external surfaces of the heat pump may be washed with a

sponge and a warm soap water. Do not use bleach, abrasives or solvents, which could damage the surface of the device. The detergent should not contain acids, soda or chlorides. Make sure that the parts with electrical installation are protected against ingress of water !!

Check regularly the outdoor unit at below zero temperatures if there isn't an excessive built up of frost or ice under the pump. Snowing or strong wind can cause obstruction or snowbound closure of the evaporator inlets. Icing and snow must be removed.

#### **Filters:**

The heating circuit of the pump is fitted with filters, which can be clogged. Check these at last twice a year. Close the nearest valves before and after the filter and remove the sieve. After installation deaerate the heating system and fill up the water in the heating circuit.

**ATTENTION:** *The heat pump air-water contains a fan, which can be revolving.*

***Before maintenance of the evaporator part of the heat pump always disconnect the power supply and wait until all moving parts of the fan come to standstill!***

#### **Water draining at shut-down:**

If the outdoor heat pump is out of operation for a longer period or if it is disconnected from the power supply, drain the water out of the unit to prevent its freezing with the disconnected power supply. The indoor unit placed inside premises free of the danger of frost does not have to be drained .

**Warning:** The water being discharged from the heat pump could be hot, beware of the danger of scalding.

#### **ATTENTION:**

**If the heat pump does not start or if it does not heat, consult the situation with your installation company. The heat pump cover should be removed only by a qualified worker.**

#### **The following should be checked by a competent service technician:**

Electrical installation:

**Check the connection and the condition of the electrical**

#### **Heating system:**

The functioning of the heating system must be checked prior to the heating season.

## **2. Installation Instructions**

This part of the documentation is intended for qualified installation and service staff as an assistant for proper installation, operation and maintenance of the heat pump HOTJET. Read it carefully, failure to comply with instructions may lead to malfunctioning of the heat pump, damage to property, scalding or electrocution injuries.

### **2.1. Handling refrigerant**

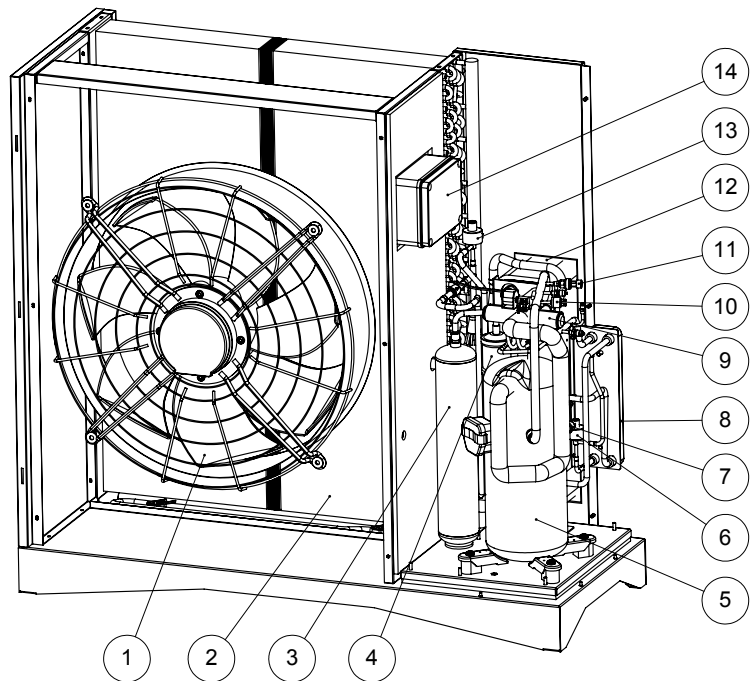
- Heat pump refrigeration circuit includes Hotjet filled with refrigerant.
- Interventions in the cold circuit can only company with the appropriate qualifications.  
(Business license: installation, repair and reconstruction of refrigeration and heat pumps)
- Refrigerant, the heat pump which has been delivered, it is stated on the label: for example, R404A, R407C, R134a.
- Complete safety data sheets according to the refrigerant needs to ask [info@hotjet.cz](mailto:info@hotjet.cz).

#### **SAFETY WARNING**

- *The most serious adverse effects on human health when using the substance / preparation:*  
*Refrigerant vapors are heavier than air, can cause oxygen displacement.*  
*Rapid evaporation of liquid may cause frostbite.*
- *First aid instructions:*  
*General advice: return the affected person to fresh air, keep calm and warm. Call a doctor. Breathing, perform artificial respiration.*  
  
*Inhalation: Go to fresh air, apply artificial respiration or oxygen.*  
*Skin contact: take off all contaminated clothing, wash with plenty of lukewarm water.*  
*Eye Contact: Rinse with plenty of water for about 15 minutes, Consult with your doctor.*  
*Ingestion is not considered a likely route of exposure.*  
*More information: Do not administer adrenaline or its derivatives.*  
*Handling and Storage:*  
*Handling: Use only in well ventilated areas. Do not breathe. Ensure adequate ventilation, smoke.*  
*Protection: Eyes -> Glasses, Hands -> insulating gloves.*

## 2.2. Parts of heat pump

### 2.2.1. Construction of heat pump



Position	Description	Position	Description
1	Fan with difusor	8	EVI exchanger
2	Evaporator	9	4 Ways valve
3	Coolant collector	10	Low pressure pressostat
4	Filter drier	11	Pressure sensor
5	Compressor	12	Condenser
6	EVI expansion electric valve	13	Expansion electric valve
7	High pressure pressostat	14	Terminal block

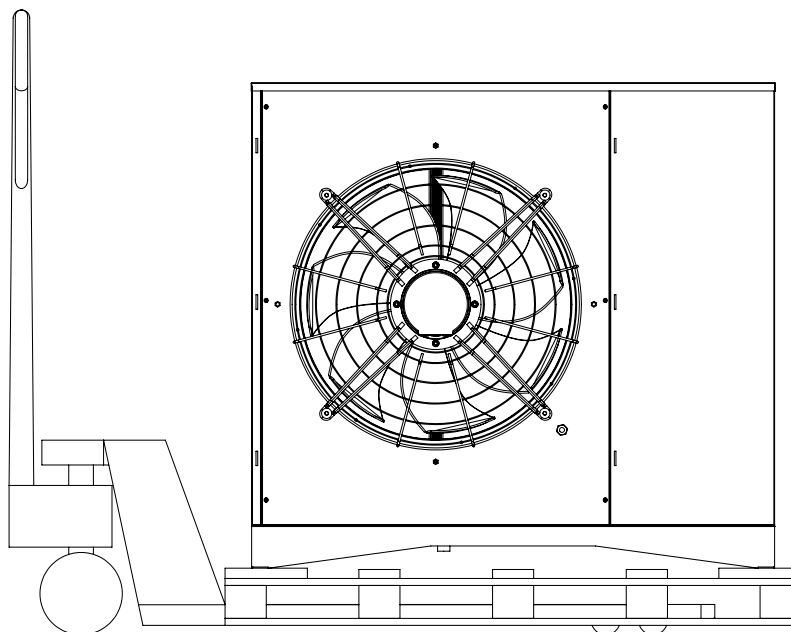
## 2.3. Location and connection

### 2.3.1. Transport and storage

For the transport of heat pump is placed on a pallet. The heat pump should never be stored or installed on the side. Maximum angle of tilt in any direction is 45 degrees. It is recommended to transport in an upright position. Carriage on its side would like a written agreement. If transportation is an unavoidable side, it is necessary to leave the device in an upright position at least 24 hours before starting. Failure to follow these instructions may result in damage to the heat pump.

After taking heat pump equipment unpack, remove the panel cover and check to avoid damage during shipping. Identified damage fails

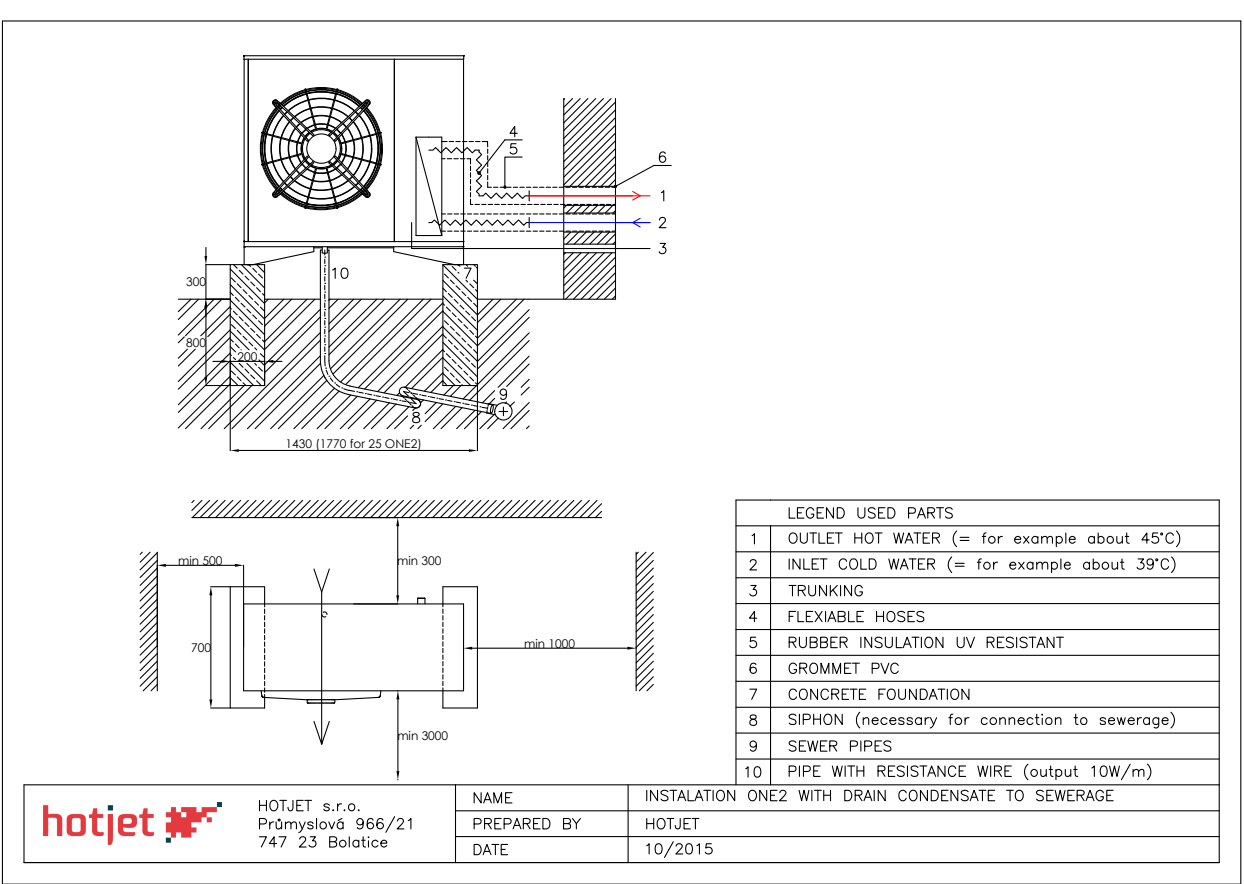
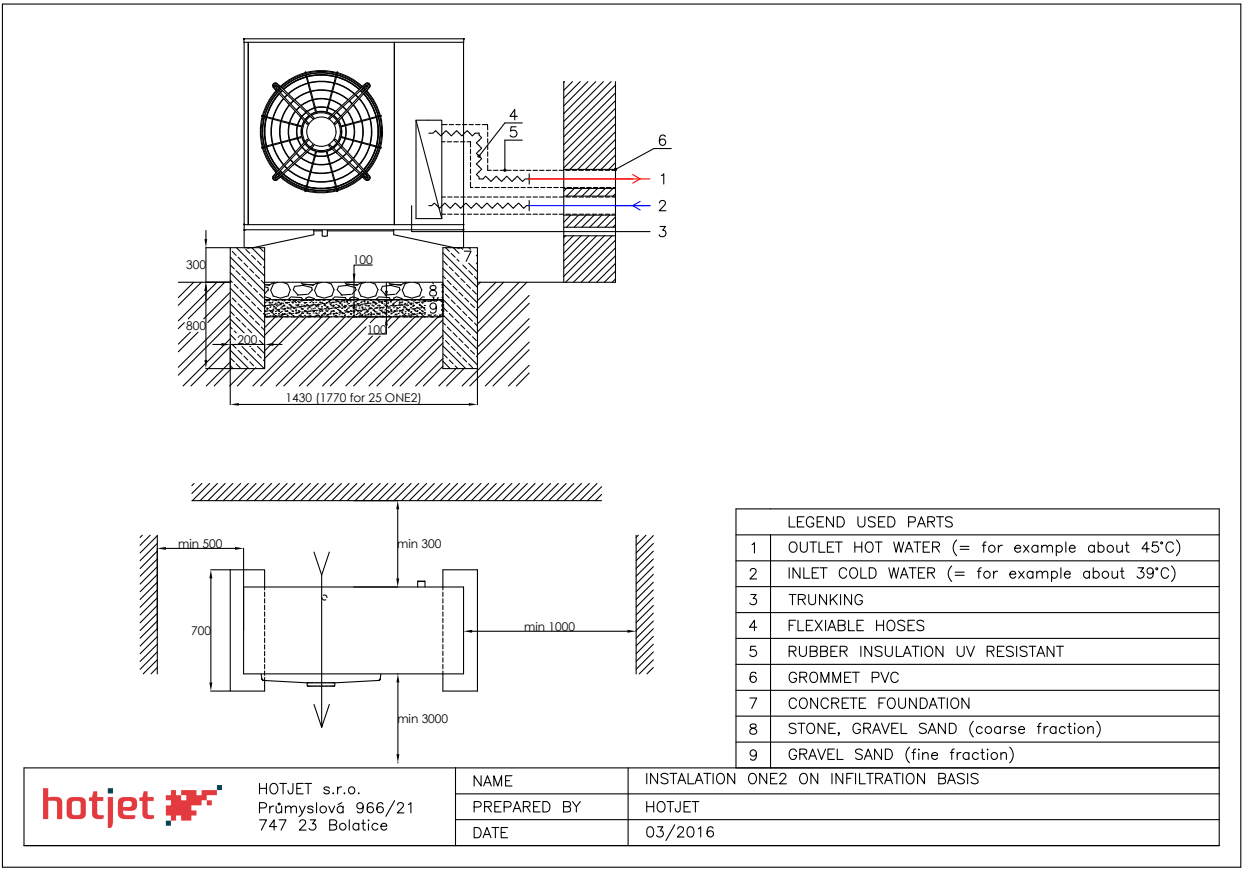
transport companies and ask for their review, a copy of messages you send to HOTJET CZ, s.r.o



### 2.3.2. Base and pedestal for „ONE2“

- The heat pump is equipped with side pedestals comprising adjustable legs to support the evaporator above ground in elevated position.
- The heat pump can be installed on a solid base, which consists of concrete footing or paving. • The heat pump horizontal plane is set with the use of the adjustable legs.
- The base material should be filled with material that drains well, e.g. crushed stone, as the condensate is discharged along the entire width of the evaporator.
- It is not advisable to place the heat pumps on larger areas – e.g. parking lots, pavements - as these do not muffle noise well.





### 2.3.3. Model , base and pedestal „ONE2“

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- Check the place of operation of the equipment before its positioning. If possible, place the pump in a covered place (e.g. a sheltered place, roof overhang, etc.). Exposure of the equipment to unfavourable climatic conditions may cause its lower efficiency.
- The air heat pump cannot be operated in enclosed spaces without air supply and extraction. In the indoor unit this problem is solved with the use of special air ducts.

### 2.3.4. Model , base and pedestal „ONE2“

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- Place the heat pump on a solid surface, which preferably consists of a concrete base, concrete footing or paving
- It is not advisable to place the heat pumps on larger areas – e.g. parking lots, pavements - as these do not muffle noise well.
- Install the heat pump at least 0,3 m above the surface.
- The free space between the heat pump and the surface should be at least 0,2m high to prevent connection between the heat pump and the surface of the base in instances when ice is created.

### 2.3.5. Rules for placement of heating valves at outdoor unit “ONE2”

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Component	Position
Safety valve	Inside the building
Drain Valve	At the lowest point between HP and the inner part of the installation
Ball valves	Inside the building
Filter	The object inside the pipe towards the heat pump
Petcock valve	The highest point of connection inside or outside
Pipe insulation	Exterior of at least 20 mm, we recommend synthetic rubber

### 2.3.6. Noise and vibration

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- Do not place outdoor heat pumps near walls of bedrooms, under their windows. Make sure your neighbours will not be bothered by noise.
- To reduce vibrations of indoor units you can use suitable anti-vibration mountings or a vibration-absorbing pad. This pad should be a little larger than the bottom part of the heat pump to ensure separation of the heat pump from the floor.
- We do not recommend you to firmly attach the outdoor base to the building.
- In the case of the indoor units the wear and the possible noise insulating layer should be separated with a groove up to the impact insulation.

### 2.3.7. Load-bearing capacity of the structure

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- If you install the equipment on a higher floor, in the attic or on the roof, verify the load-bearing capacity of the building structure.
- Installation on wooden structures should be considered carefully as such structures may transmit vibrations.
- Façade installation: With regard to a high quantity of condensate suitability of suspension on the facade should be considered carefully as uncontrolled condensate drain may occur resulting e.g. in soiling of the wall.

### 2.3.8. Roof installation

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- Load-bearing capacity of the roof must be verified.
- In winter, condensate will freeze under the unit.
- We recommend you to drain the condensate to the sewerage system to avoid accumulation of ice on the roof

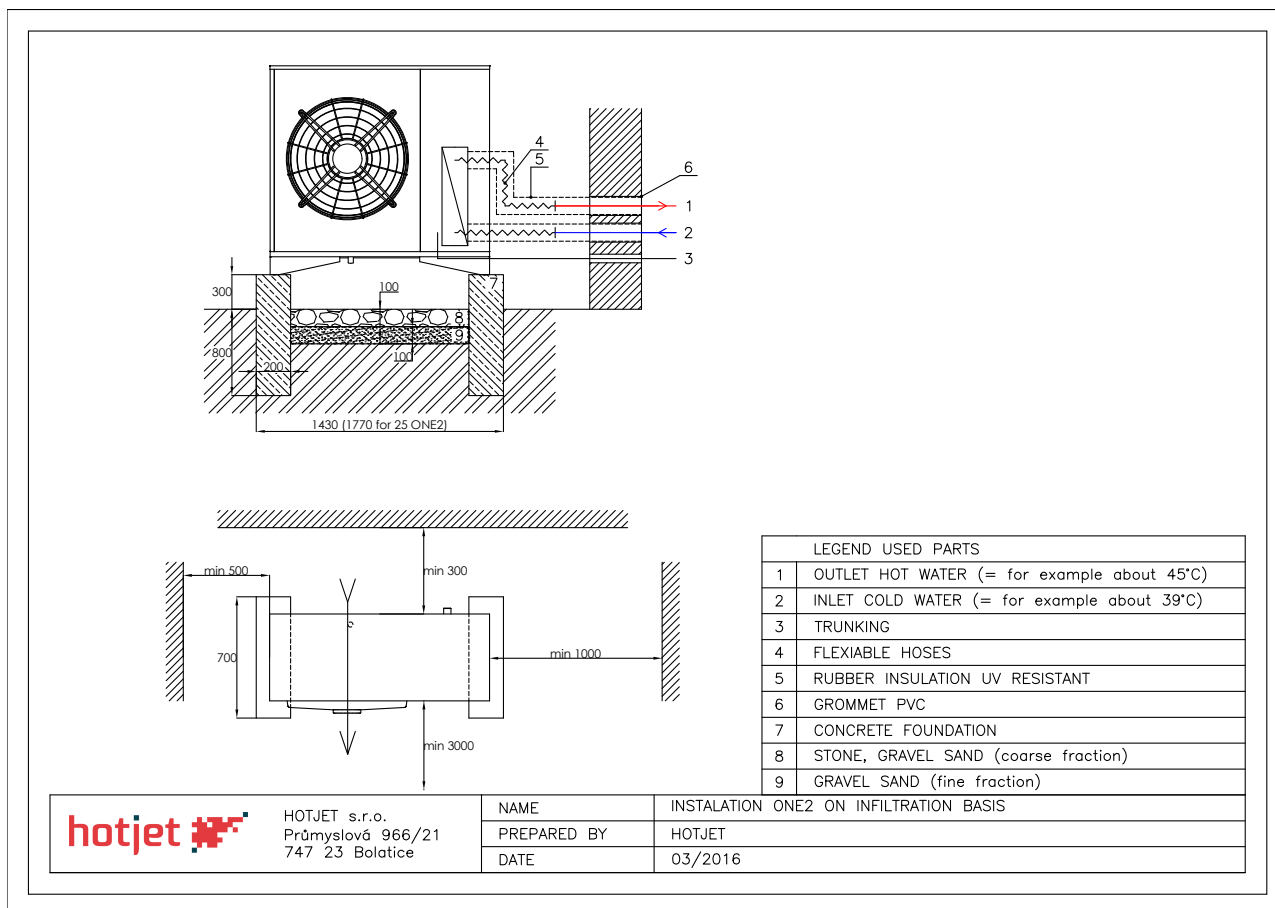
## 2.4. Condensate drain

- During operation, higher quantities of condensate may be generated. Ensure drainage of the place of installation of the outdoor unit. Make sure that water cannot escape and freeze on a path or pavement. In an ideal case drain condensate to the sewerage system via a smell trap. In case of improper condensate draining the building may get underflooded.
- As regards the outdoor installation the best way of draining consists in routing of water to the sewerage system via a duct protected from frost.
- To achieve a gradient of the condensate drain, install the heat pump in a suitable height.

## 2.5. Connection to the heating system

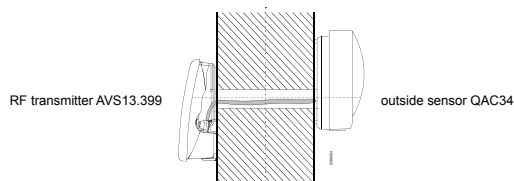
- Caution: Danger of burns at a water temperature over 55°C.
- The connection pipeline must be designed in accordance with valid regulations and standards.
- The connection pipeline must have at least the same diameter as the outlets on the pump. We recommend you to use Cu pipes with the diameter of 28mm. If you use hoses, never use hoses of a smaller diameter than the outlets of the heat pump. Make sure the hoses and pipes correspond to pressure in the system and are sized to the required flow.
- Pipes and hoses routed through the outdoor space should be heat-insulated with at least 19mm synthetic rubber insulation.
- Polyethylene foam insulation, e.g. Mirelon, is not suitable for insulation of outdoor lines.
- Rubber insulating hoses are not usually resistant to UV radiation. If they are installed outdoors, they should be coated with a covering layer or with UV-resistant paint.
- In the place of the exchanger the unit is equipped with a drain valve.
- A bleeding valve is part of the heat pump unit.
- Install a filter in the water supply pipeline of the heat pump (we recommend you to install it in the building). After commissioning of the system we recommend you to check it after a few days.
- Before the connection rinse the pipes of the heating system to avoid clogging of the condenser of the heat pump or circulation pumps.
- Before putting the heat pump in operation fill and bleed the heating system and check it for leaks.
- Maintain the standard pressure in the heating system (max. 1.5 bar).
- Implement the particular hydraulic connection in accordance with the connection recommendations in the "Control documentation".

#### **Detail of a typical connection to the heating System.**



## 2.6. Connection of the outdoor sensor

- The outdoor sensor is connected to the BX4 input.
- The outdoor sensor is an important component of the control system as without it the equithermal control and antifreeze protection of the heating system (the antifreeze protection of the heat pump does not require the outdoor sensor) do not work.
- We supply the QAC34 outdoor sensor as an accessory; its installation is not mandatory, but it is recommended.
- The type of the sensor is: NTC1k.
- **Wireless outdoor sensor:** The standard sensor QAC34 can be converted to a wireless sensor through the AVS13.399 module. This solution is suitable for situations when QAC34 cannot be interconnected with RVS with a wire for various reasons. A precondition is that RVS in the boiler plant must already be equipped with an AVS71.390 radio transmitter. Due to protection of batteries the transmitter module is installed in a wall structure.

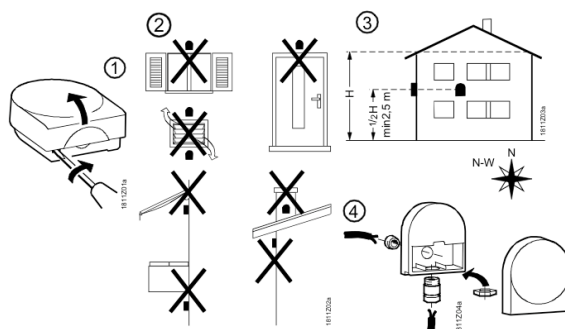


**CAUTION:** The outdoor sensor has a different characteristic from the other sensors used by RVS; they cannot be interchanged. The sensor is delivered in the “white box” design.

### Rules for positioning of the outdoor sensor:

- The coldest wall of the house, usually facing north
- It must not be exposed to direct sunshine
- Minimum height 2.5m
- Preferred position: in the middle of the wall

- It must not be positioned: over windows, doors, ventilation outlets or other sources of heat, under balconies, roof or eaves.
- It must not be repainted



Outside sensor QAC34

## 2.6.1. Connecting conductors of sensors

If an extension of sensors is necessary, select a connection conductor (Cu, twisted pair) in accordance with the table:

Conductor cross-section (mm <sup>2</sup> )	0.25	0.5	0.75	1.0	1.5
maximum length (m)	20	40	60	80	120

## 2.7. Antifreeze protection

### **NEVER SWITCH OFF THE ELECTRIC POWER SUPPLY OF THE HEAT PUMP SWITCHBOARD**

The antifreeze protection of the heat pump only works if the heat pump is connected to the power supply and if the circulation pump of the condenser Q9 is on.

*If there is a danger of frequent or prolonged power supply failures, the heating system must be filled with an antifreeze mixture. This also holds good for installations where a power supply failure cannot be detected (e.g. huts).*

#### **WARNING FOR THE USER:**

##### **Draining the outdoor unit:**

In case of a **shutdown** in the winter period heating water must be drained from the condenser of the "ONE" model.

The outdoor unit does not have any indoor drain valves. The drain valve is part of the connection to the heating system.

##### **Draining procedure:**

- Close the supply valves of heating water from the system to the heat pump.
- Open all the drain valves in the circuit to the heat pump.

When the unit has been filled again, the system must be properly bled before you switch the heat pump on.

#### **WARNING FOR INSTALLATION COMPANIES:**

In case of frost the heating circuit of the outdoor unit must not be filled before the electric installation is connected and the basic settings of the control system configured. If you do not manage to complete the installation, until continuation water must be drained from the outdoor part of the installation again if temperatures are below zero.

## **3. Electric installation**

- You will find electric diagrams in the final part of the documentation.
- The heat pump must be connected by an electrician with the required qualifications.
- We recommend you to install an earth-leakage circuit-breaker with IAN 30 mA (in accordance with Art. 13.2 and 16.2 of ČSN EN 60335-2-40 ed.) in the main switchboard of the building for the heat pump power supply.
- Caution: If there is an earth-leakage circuit-breaker in the main switchboard of the building, do not install it in the heat pump or the switchboard of the heat pump.

### **3.1. Control and electronic instruments**

#### **3.1.1. Three versions of Hotjet „ONE2“**

##### **Basic:**

*Components of the basic version of HOTJET ONE:*

- HOTJET ONE heat pump with a Siemens RVS21 controller and AVS55
- Outdoor temperature sensor
- Siemens QAA75 room thermostat (wired version)

##### **Installation:**

*In this basic version all the supplementary parts of the heating system must be connected to the RVS21 controller, which is located in the electric switchboard within the heat pump. The circuit-breaker of the heat pump or possibly the bivalent source must be installed in the main switchboard of the building.*

#### **3.1.2. Monitoring the power supply phases (3-ph version)**

The HOTJET ONE heat pump has external protection against a wrong sequence of phases or a voltage drop in all the three phases. Thus, the heat pump is resistant to interchanging of the sequence of phases and subsequent reverse operation of the compressor and its destruction. As a wrong sequence of phases generally occurs during the initial installation or subsequent installation only, due to the limited number of inputs of protective elements this protection is connected in series with the protective element indicating a high pressure. And since the high pressure error occurs during operation, this function is preferred. For this reason the high pressure monitoring function is set for the multifunctional EX input in the configuration.

**How can you recognize the wrong sequence of phases error if the E10 high pressure error is indicated?**

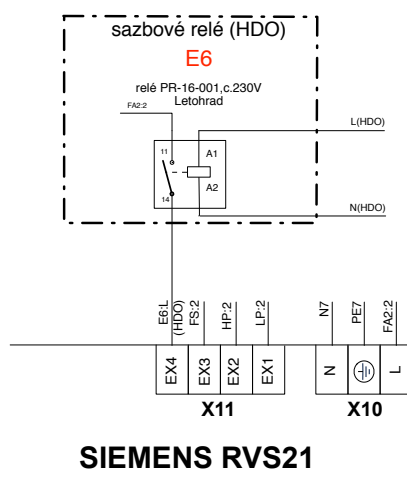
*The heat pump indicates the high pressure error soon after the start.*

- *In the case of the first start of the heat pump (commissioning) = you have selected a wrong sequence of phases (switch off the power supply of the pump, interchange the side power supply conductors and switch on the circuit-breaker of the heat pump power supply again).*
- *In the case of a subsequent installation in the heat pump or the house switchboard (changing the sequence of conductors, etc.) repeat the procedure of the previous point.*
- *The operator of the power supply mains carried out repairs, adaptation, etc. in the place of your connection and interchanged the sequence of phases.*
- *If you performed all the above mentioned steps and the high pressure error indication persists, check the phase protection indicators in the electric switchboard (red indicator on = error; green indicator on = normal condition). The procedure of disassembly of the heat pump and electric switchboard cover is described in chapter (). If the green indicator is lit, it is not the case of 3-ph asymmetry, but high pressure only.*
- **Indication of the high pressure error shortly after the start of the heat pump can be caused by:**
  - air in the heating circuit
  - low flow (circulation pump with insufficient capacity)
  - clogged filter
  - closed valves

### 3.1.3. Connection of block remote control (blocking in high-tariff periods)

In accordance with the diagram you can connect blocking of the heat pump and electric cartridges in periods of high tariff. To activate the function no other settings are necessary.

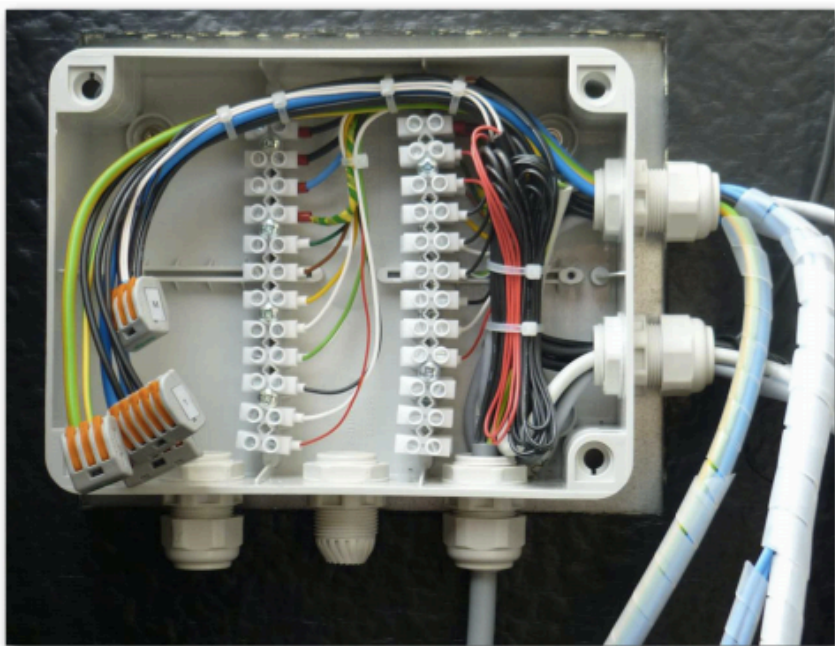
The tariff relay can be installed in the production already (on request) or additionally during the installation of the heat pump.



## 3.2. Power supply connection:

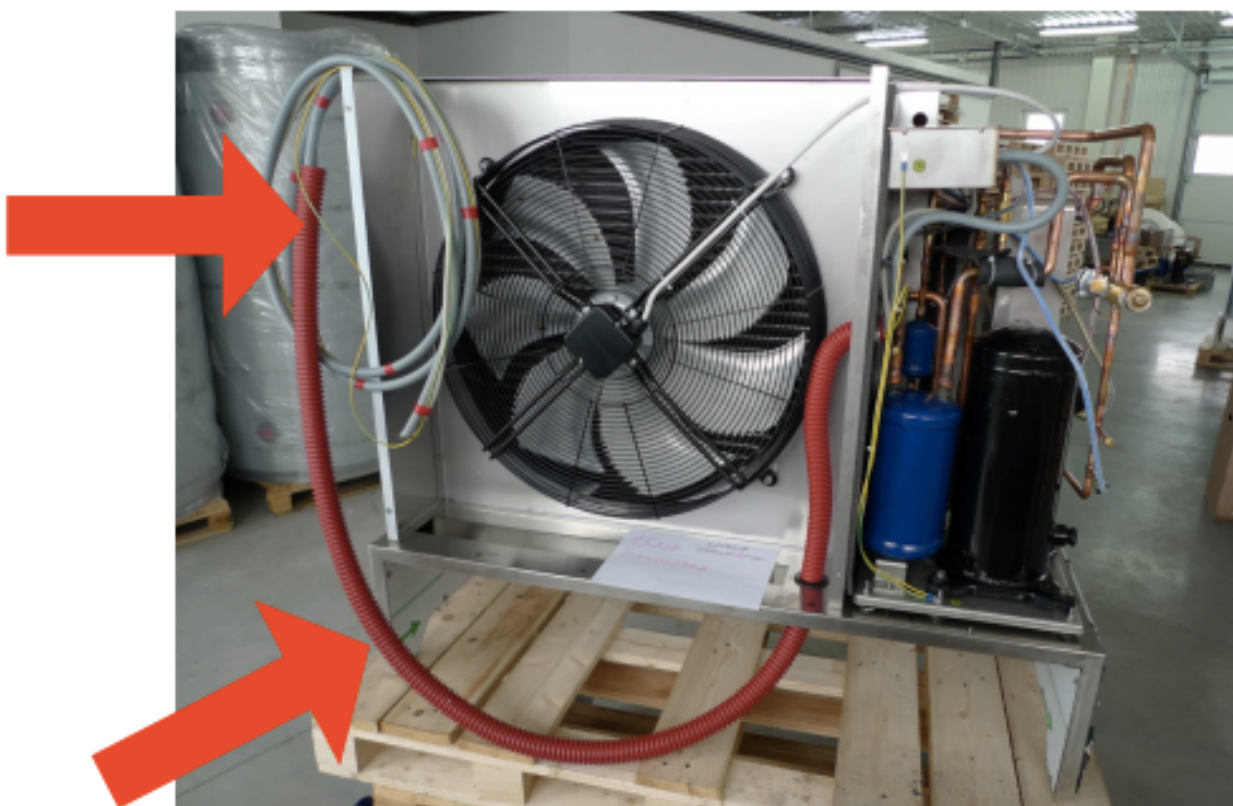
### 3.2.1. Terminal Block of HOTJET ONE2





Preassembled from production, is closed, it is not necessary fitted !!!

### 3.2.2.Wiring



The delivery includes an external cabinet is 5m connecting the wiring harness partly with a shield. Longer needs to be specified when ordering.

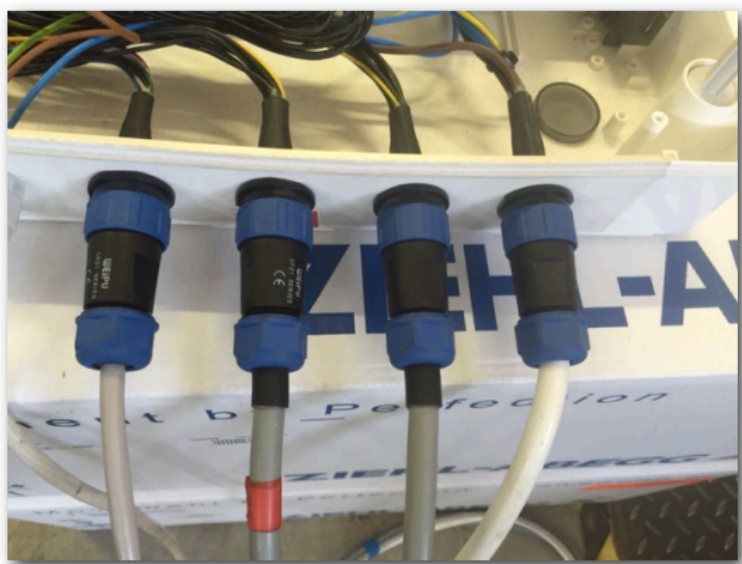


### 3.2.3.Plug connectors

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At the cabinet socket are key.



At the end of the wiring harness connectors.

### 3.2.4. BASIC VERSION OF HOTJET ONE2



#### The delivery contains:

- HOTJET ONE2 heat pump with an External electric switchboard
- RVS21 controller
- Siemens AVS37 / AVS74 / QAA75 space device
- Outdoor temperature sensor

## 3.3. Commissioning

#### Preparation and checks:

- **Precondition for trouble-free commissioning:** The heating system is filled with water and properly bled, the filters are cleaned and ball valves opened. In the case of control of heating circuits it is absolutely necessary to bleed the floor heating or radiator system as well.
- Check whether the water inlets and outlets on the heat pump are correctly connected.
- With the power supply off check whether the evaporator is clean and the fan is not blocked by foreign objects.
- Check whether the electric installation has been completed.

#### Startup:

1. Check whether the controller and compressor circuit-breakers are on.
2. Switch on the main power supply.
  - CAUTION: If everything is all right, the heat pump may already start or attempt to start in this stage.
  - Some errors have a number of repeated occurrences that are accepted. Therefore, after a short operation the heat pump may stop and after forced shutdown for several minutes it may start again!
  - If you have the QAA78 wireless space and control device (after unpacking and releasing of the batteries it usually reports “no connection” as it requires the setting which RVS it should work with).
3. If the red indicator on the controller flashes and the “bell” on the LCD panel is lit, press the INFO key repeatedly to get the description of the error.
4. Remove all errors, mainly problems related to the phase protection.
5. Perform all specific settings, especially in the “Configuration” errors. Define all multifunctional inputs and outputs.
6. Having remedied errors and done the configuration check the functions in the “test of inputs/outputs” menu on line 7700 and verify all the options of your installation. Perform the “relay test”, when after setting of line 7700 all the circulation pumps and valves are gradually started and checked. You can also test switching of the

compressor (after a few seconds it will be switched off automatically), and the fan. Also, check the values of all the temperature sensors in this menu.

7. **Reset** the reduced outdoor temperature ("Consumption diagnostics", line 8703). In case of a high outdoor temperature you can simulate the outdoor temperature on line 7150. (It will be automatically reset after 5 hours)
8. Check the messages on lines 8000 - 8010 in the "Equipment status" menu.
9. You can carry out detailed diagnostics of the equipment in the "Source diagnostics" and "Consumption diagnostics" menu.
10. Use the "rotary knob" to increase the required space temperature, confirm the setting with OK. Or you can invoke a requirement for heating or cooling via Hx inputs.
  - First, the circulation pumps will be started (at least Q9 - circulation pump of the condenser) and then the heat pump.
  - At the water outlet from the heat pump the temperature should rise by several degrees within a few tens of seconds.

**Note:** The heat pump does not behave e.g. like a gas boiler; during normal operation the difference between the inlet and outlet temperature is usually about 5°C.

**The maximum acceptable difference between the inlet and outlet is 10°C.**

In the ideal case < 5°C. A higher temperature difference indicates a problem of the hydraulic connection and low flow through the condenser of the heat pump, which may be caused by a too small circulation pump, its setting to a low speed, throttled valves, blocked armored hoses, clogged filter or air in the heating circuit.

## 3.4. Common problems during the startup

The status should be checked in the STATUS menu on the technician level. ON THE "TECHNICIAN" LEVEL THE MESSAGES ON THE DISPLAY FOR THE END USER ARE BROKEN DOWN INTO FURTHER DETAILED INFORMATION (see the example in the table below). All messages are described in detail in chapter 4.5.

- The end user can see a limited set of messages (that can be displayed by repeatedly pressing the INFO key).
- Technician -> Status -> lines 8000 to 8010 should be checked (heating circuits, hot service water, heat pump).

If the bell icon is lit on the display, one or more errors have occurred. After pressing of the INFO key the description of the error will appear.

### 3.4.1. The display of QAA78 shows the "no connection" message

After unpacking QAA78 is not set to communicate with your RVS control units and it must be "coupled". You will find a detailed description of the procedure in the "Radio" chapter of the "Setting and programming manual" part. The coupling should be done for each QAA78.

#### Simplified description of initial coupling:

- Connect the wireless module in RVS to the "blue" connector (marked X60) on the RVS controller.
- Hold down the micro-switch for 8s until the diode on the module starts flashing quickly.
- On QAA78 shortly press OK and then press and hold the INFO key for at least 3 seconds.
- Use the rotary knob to select the "Commissioning" level, press OK and in the menu select "Radio"; confirm your selection with the OK key, select line 120 "Activate radio connection", press OK, "No" will start flashing, select "Yes" with the rotary knob and confirm with OK.
- When the connection has been established, data will be read for about 2 minutes and the percentage of read data displayed.

If a connection failure occurs during use, we recommend you to open the rear cover of QAA78 and take the battery slightly out. After its re-insertion the connection should be established again.

The standard reach of the radio components is 30 m or 2 floors while the distance may differ by the type of structure of the building.

To accelerate the configuration via QAA78 we recommend you to use the AVS82.495/101 service cable (used to interconnect QAA78 and RVS) or to carry out configuration via a computer with the use of the OCI700 service case.

**NOTE:** Experience shows that the radio connection may be disturbed by mobile phone calls, especially if you are standing with QAA78 next to RVS. Radio operation of a mobile phone interferes with both the sides, RVS as well as QAA78. In such a case move QAA78 from RVS to a distance of 5-10m.

### 3.4.2. Error No.356 Flow switch consumers

---

The flow switch installed in the heat pump or the heating circuit was not activated. The function, causes and remedial measures are described in chapter 2.8

### 3.4.3. Error No.222 Hi-pressure on HP op

---

The error is caused by air in the heating circuit, low flow (circulation pump with insufficient capacity), clogged filter, closed valves.

### 3.4.4. Error No.225 Low-pressure

---

It means that there is low flow in the primary circuits. It is caused by air in the heating circuit, low flow (circulation pump with insufficient capacity), clogged filter, closed valves.

### 3.4.5. Error No.10 Outside sensor

---

Connection without an outdoor sensor -> The antifreeze protection of the equipment must be switched off on line 6120 in the configuration.

The antifreeze protection of the heat pump depends on the condition of parameter 6120.

The error may still be displayed for some time after deactivation of the antifreeze protection.

### 3.4.6. Error: "No function of Bx sensor" (can be BX1, BX2..)

---

A sensor is connected to the Bx input and its function has not been set in the configuration. Define it on the "technician" level in the "configuration" menu.

### 3.4.7. Error: "Actuator missing"

---

A partial diagram is not completely configured. E.g.: you have a solar system, connect a B6 sensor and define it, but you have not defined connection of the Q5 solar system circulation pump at one of the Qx multifunctional outputs. RVS does not know which relay should be actuated and where the circulation pump is "hung".

### 3.4.8. Status message: "External blocking"

---

At an Ex input the function of external blocking of the heat pump is activated, e.g. block remote control.

### 3.4.9. Error No. "247 Defrosting error" due to a low temperature of water in the heating circuit and its limitation

---

The minimum temperature of water in the heating system is limited by the manufacturer for the air-water heat pump to 12°C. If the heating water temperature at the inlet or outlet drops below this temperature, after 3 attempts the defrosting will be stopped with error 247 "Defrosting error". Since defrosting is not carried out properly, frost usually occurs on the evaporator. Defrosting is a process that is run in certain intervals at outdoor temperatures below 10°Cm when condensed air humidity gets frozen on the heat pump evaporator.

**Note:** Error 247 always occurs after several unsuccessful attempts to defrost the evaporator. Another cause may be a failure to achieve the required temperature on the evaporator within the time period defined as maximum duration of defrosting.

## 3.5. Note concerning new buildings or refurbishment

A new or refurbished building may have up to 50% higher demand for heat during the first 2 heating seasons, which must be covered by a bivalent source.

## 3.6. Internal protection of the compressor

The compressor is equipped with internal protection against overheating that behaves in two ways:

- The compressor of the heat pump is equipped with internal protection against overheating. If this situation occurs, a bimetallic plate releases pressure to a pressure switch that will disconnect the supply of the motor winding in the compressor until cooling (usually more than 30 min.). Caution - the compressor will then start automatically! In this case switch off the heat pump and wait until it cools down (up to 2 hours). Then, switch on the heat pump again.

Advanced Scroll Temperature Protection:

Protection of bigger compressors (indicated on the compressor by the manufacturer as Advanced Scroll Temperature Protection (abbreviation: ASTP) switches off the compression at a temperature of about 150°C with the motor still running. Caution - the motor of the heat pump compressor is running, but the heat pump does not effectively heat. Do not consider such a situation as a compressor error, it is its characteristic. If this situation occurs, switch off the heat pump and wait until it cools down (up to 2 hours). Then, switch on the heat pump again.

#### Specimen of the warning label





## 4. Technical data of heat pump

### 4.1. Technical data of “ONE2”



The latest range of the air-to-water compact design heat pumps for external installation feature advanced design and high heating factor at affordable price.

#### Basic information :

- Compact dimensions
- Air is the source of heat
- Intended for attendance-free water heating up to 55°C. / 65°C.
- ! Suitable for floor and radiator heating systems
- ! Compressor cooling support
- Hot water for space heating and service hot water supply central control by means of supplied regulation system
- Choice from two regulators and an option for further extension
- Wired or wireless control
- Powder coat, unpainted finish
- Wide range of accessories

#### Advantages :

- Ideal for new objects without internal spaces.
- State-of-the-art technology with a front-end electronics for affordable price.

#### Installation position :

Intended for outdoor installation next to a building structure or on its roof

#### Characteristics

**Heat source:** Air

##### Noise suppression:

- Use of scroll compressor design eliminates traditional pistons and valves
- Compressor and cooling circuit multiple spring suspension
- Solid and compact foundation slab
- Multiple layer noise-proof insulation on covers
- Low speed, 630mm large diameter serrated blades fan

##### Control units:

- AVS37 (standard) control panel in switchboard without space temperature sensing (resolved with the use of an external thermostat)
- QAA75 (standard) combined space and service device
- QAA78 wireless unit (optional) combined space and service device

##### QAA78 advantages:

- the heat pump and the hot water for space heating and service hot water supply can be controlled from anywhere in the house/building
- space thermostat function, informs the regulator of the local unit's temperature status

##### Heating system connection support / alternatives:

- direct connection to the heating system without using a storage reservoir
- Two or four-point connection to the storage reservoir
- Storage reservoir support by means of a floating boiler

##### Storage reservoir (accumulation tank):

- is not required (subject to evaluation)
- equithermal charging availability
- availability of so-called forced charging, when the required temperature is reached through charging. The function's initiation can be linked to time or command controlled switching between electricity tariffs. The advantage is the possibility of heat “collection” during favourable weather conditions, e.g. during higher air temperatures

**Bivalent source:**

- electrical cartridges support in the flow or in the reservoir
- External sources support (existing gas, electricity and other energy driven boilers)
- Three or single-stage bivalent control

**Heating system :**

- Purely equithermal control (by the external temperature only)
- Control according to space temperature
- Equithermal coupled with space control
- One regulator manages up to two mixing heat circuits and one pump circuit
- Each heating circuits can be controlled fully independently with the use of its own space unit
- The existing ON/OFF switching mode thermostats can be used
- Addition of more heating circuits with the use of zone regulators RVS
- Integration with a higher level regulators, e.g. individual rooms temperature control through separate heating circuits can be achieved
- Hot service water heating
- Reservoir heating with an independent boiler
- Storage reservoir heating with the use of floating boiler
- Internal or external boiler heat exchangers without internal exchanger or in case of inadequate size
- flow heating
- forced heating
- combined with solar heating
- Hot service water heating external source or boiler electrical heating element adjustment
- function of heat transfer between the storage reservoir and the boiler (a typical case when the reservoir heating is supplied by a solid fuel boiler or a fireplace water heating insert)

**Solar system :**

- over 50 connecting methods
- definition of 3 take-offs (hot service water, storage reservoir, swimming pool)

- integration with a heat pump (hp functions as a second hot service water)

**Swimming pool heating**

Is supported

**Fireplace water heating insert:**

- the heat pump is switched off when the reservoir is supplied by the fireplace water heating insert
- Overheated reservoir cool-down function  
A fireplace or solid fuel boiler circulating pump can be directly controlled in combination with RVS63, including other functions such as monitoring of burning intensity to prevent a fire going out.

**Cooling:**

- cooling support
- heating as well as cooling support in two-pipe and four- pipe distribution systems
- support of interchangeable cooling and hot service water heating or swimming pool heating
- dew-point check
- dehumidifier control

**Cascade :**

- The standard regulation supports connecting of up to 16 heat pumps or other sources is available already at the standard regulation level
- Various type of sources are supported in a cascade (gas, electrical and solid fuel boilers)
- Gas boilers with Siemens regulation can be cascade connected with our heat pumps. On the Czech market this applies to the trade marks Geminox, Brötje, Baxi and Viadrus, equipped with the LMU units.

**Additional functions :**

- Centralised ripple control input (blocking electrical heating)
- External 0-10V heat requirement input, mode changeover switching, heat pump start.

#### 4.1.1. Data sheet

MODEL	HOTJET 10ONE2	HOTJET 15ONE2	HOTJET 20ONE2	HOTJET 25ONE2	HOTJET 35ONE2	HOTJET 45ONE2
Performance data						
	Heating power [kW] / Power [kW] / Coefficient [COP]					
Heating: A7/W35 1)	11,34 / 2,68 / 4,23	13,25 / 3,10 / 4,26	18,81 / 4,18 / 4,50	30,10 / 6,99 / 4,30	33,6 / 7,34 / 4,58	40,2 / 9,1 / 4,42
Heating: A2/W35 2)	8,71 / 2,61 / 3,33	11,07 / 3,16 / 3,50	15,62 / 4,21 / 3,71	25,20 / 6,97 / 3,62	28,0 / 7,29 / 3,84	33,6 / 8,85 / 3,74
Heating: A-7/W35	6,48 / 2,63 / 2,46	9,34 / 3,20 / 2,91	13,01 / 4,21 / 3,09	20,64 / 6,95 / 2,97	22,83 / 7,23 / 3,16	27,35 / 8,87 / 3,08
Heating: A7/W55	9,88 / 3,69 / 2,68	14,05 / 4,98 / 2,82	18,87 / 6,58 / 2,87	29,99 / 10,99 / 2,73	33,47 / 11,66 / 2,87	40,10 / 14,32 / 2,80
Heating: A2/W55	8,89 / 4,09 / 2,18	11,41 / 4,83 / 2,37	16,15 / 6,53 / 2,47	25,73 / 10,90 / 2,36	28,67 / 11,47 / 2,50	34,35 / 14,08 / 2,44
Heating: A-7/W55	7,34 / 4,08 / 1,80	9,94 / 4,87 / 2,04	13,71 / 6,44 / 2,13	21,94 / 10,74 / 2,04	24,38 / 11,14 / 2,19	29,21 / 13,66 / 2,14
Energy efficiency class 35°C	A+	A++	A++	A++	A++	A++
Energy efficiency class 55°C	A+	A+	A+	A++	A+	A+
Cooling: A35/W7 4)	8.50 / 3.40 / 2.50	10.20 / 4.20 / 2.40	14.00 / 5.80 / 2.40	18.00 / 7.50 / 2.40	23.87 / 9.61 / 2.48	28.32 / 11.79 / 2.4
Technical data						
Temperature operating limits for air [°C]	-22°C to 40°C					
Temperature limit of heating system min./max. [°C]	20°C to 62°C (to -10°C)					
Heating and reversing water communication pipe	outside G 5/4"					
Nominal flow rate on the heating side of $\Delta t = 5^\circ\text{C}$ [m <sup>3</sup> · h <sup>-1</sup> ]	1,95	2,34	3,37	5,18	6,1	7,64
Minimum flow rate on the heating side of $\Delta t = 7^\circ\text{C}$ [m <sup>3</sup> · h <sup>-1</sup> ]	1,39	1,67	2,4	3,69	4,36	5,46
Pressure loss [kPa]	5,5	6	7	9	9,2	10,3
Flow coefficient Kvs [-]	8,3	9,4	12,7	17,2	X	X
Protection against freezing water heating	Yes (must be switched on power supply)					
Air flow rate [m <sup>3</sup> · h <sup>-1</sup> ]	4 000	4 500	5 000	8 400	10 500	12 300
Refrigerant circuit						
Expansion valve	Electronic controlled: 1x Main 1 x Refrigerant injection EVI					
Coolant injection system EVI	Yes					
Refrigerant type	R407C					
Defrosting	Automatic or on-demand					
Refrigerant quantity [kg]	4	4,5	5	11,5	14,5	15,4
Type of defrosting	Hot refrigerant (reversing circuit)					
Heating the condensate pan	By residual heat of the refrigerant					
Condensate drain [mm]	Ø 30					
Heating the condensate drain pipe	Optimized functions in regulating prepared					
Tripping the low-pressure pressure switch [MPa]	0,05					
Cut-off pressure of high pressure pressurestat [MPa]	3,2					



MODEL	HOTJET 10ONE2	HOTJET 15ONE2	HOTJET 20ONE2	HOTJET 25ONE2	HOTJET 35ONE2	HOTJET 45ONE2
Technical information, weight						
Width x Depth x Height [mm]	1 271 x 500 x 1 211			1 621 x 600 x 1 483	1 721 x 700 x 1 680	
Weight [kg]	200	205	205	250	350	370
Installation site	Outdoor					
Cabinet	Powder coat					
Color	RAL 7016 (color on demand)					
Electrical connection						
Nominal voltage	400V / 3 phase / 50Hz					
Compressor	Scroll EVI					
Nominal current A7/W35 [A]	5,2	5,8	8,4	11,2	14,7	16,4
Maximum current [A]	7,9	9	16,5	22	27	30
Starting current [A]	66	66	73	80	96	96
Starting current with soft starter	39,6	39,6	43,8	48	58	58
Compressor fuse with soft starter	10C/3	10C/3	20C/3	25C/3	32C/3	32C/3
Fusing	20B/3 nebo 16C/3	20B/3 nebo 16C/3	25B/3	32B/3	40C/3	40C/3
Compressor supply line CYKY [n x mm2]	5 x 4	5 x 4	5 x 6	5 x 10	5 x 10 5)	5 x 10 5)
Electrical data with Hydroboxe						
Main for Heat Pump with Hydrobox	20C/3	20C/3	25C/3	32C/3	X	X
Supply distributor for HP with Hydroboxes CYKY [n x mm2]	5 x 4	5 x 4	5 x 4	5 x 6	X	X
Degree of protection IPX ( EN 60 529 )	With the installed control panel IP40					
Sound level	according to EN 12102 at A7 / W55 (the highest)					
Sound power level Lwa [dB]	max: 67			max: 71,5	max 73,5	max 76,5
Sound pressure level at Lpa 1 m [dB]	60			63	X	X
Sound pressure level at Lpa 5 m [dB]	46			52,5	54,5	57,5
EC FAN	630mm			800mm	900mm	900mm
Change fan speed	Plynulé, z regulace 0-10V signálem. Funkce: dle teploty, noční útlum atd..					
Equipment						
Electric Switchboard	External ( 398x647x166 - w/d/h ) 16 kg				Internal	
Operator panel	remote AVS37 or AVS74					
Electric cable (between outdoor unit and control box)	5m satandard (up tp 25m, above 25m change cable type)					
Siemens regulator	RVS21+ AVS55.199 + AVS75.370			RVS21 + AVS55.196		
Drive expansion valves	By RVS21			Carel or emerson		
Phase control	Yes (for RVS21 external, RVS61 internal)					
Room wired controller	QAA75 (wired), QAA78 (wireless)					
Outside sensor	QAC34					
Control via internet	es (via web-server for 1, 4 or 16 regulators)					
Cascade	Yes, up-to 16 HPs (RVS21 with OCI345 , RVS61 standard)					
MODBUS communication	Yes (With extension Modbus communication module)					

\*\*1) According to European standard EN 14511

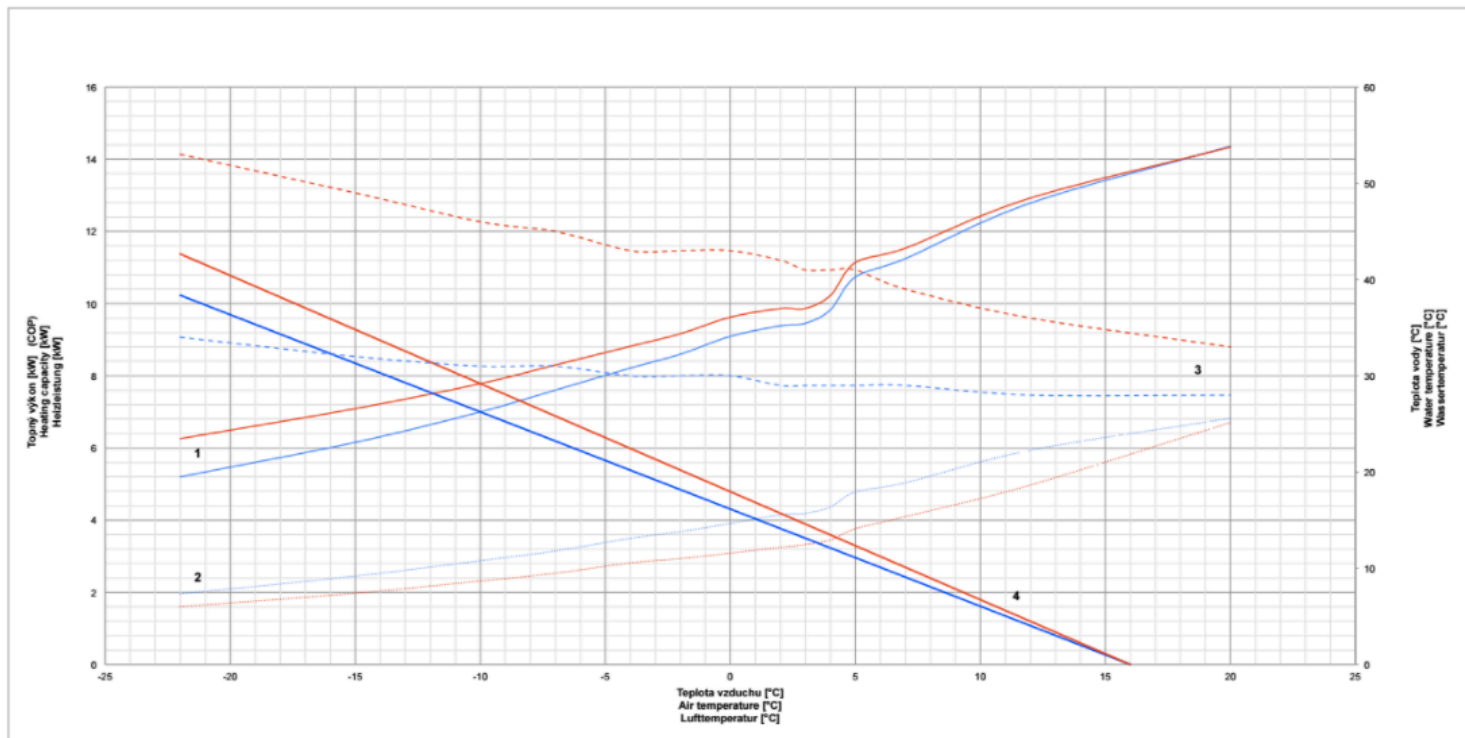
2) According to European standard EN 14825 for mid climate.

3) Dimensions of cable and size circuit breakers are designed for basic configuration of the heat pump compressor, fan, circulation pump and control.

In the case of installation of circuit breakers and contactors electrical heater and other appliances must be recalculated according to the planned collection

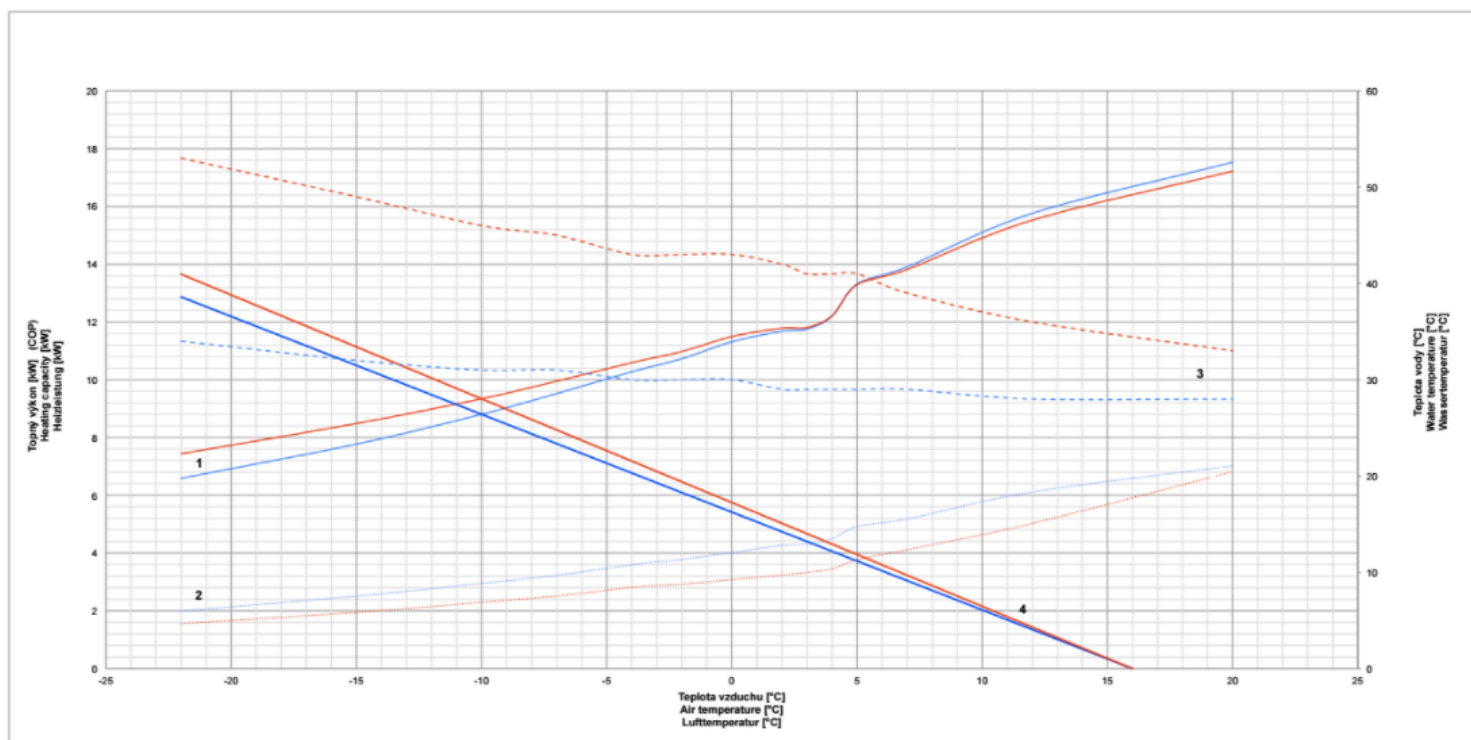
## 4.1.2. Characteristic Curves

Výkonové křivky HOTJET 10ONE2 - Vzduch / Voda  
Characteristic curve HOTJET 10ONE2 - Air / Water  
Kennlinien HOTJET 10ONE2 - Luft / Wasser



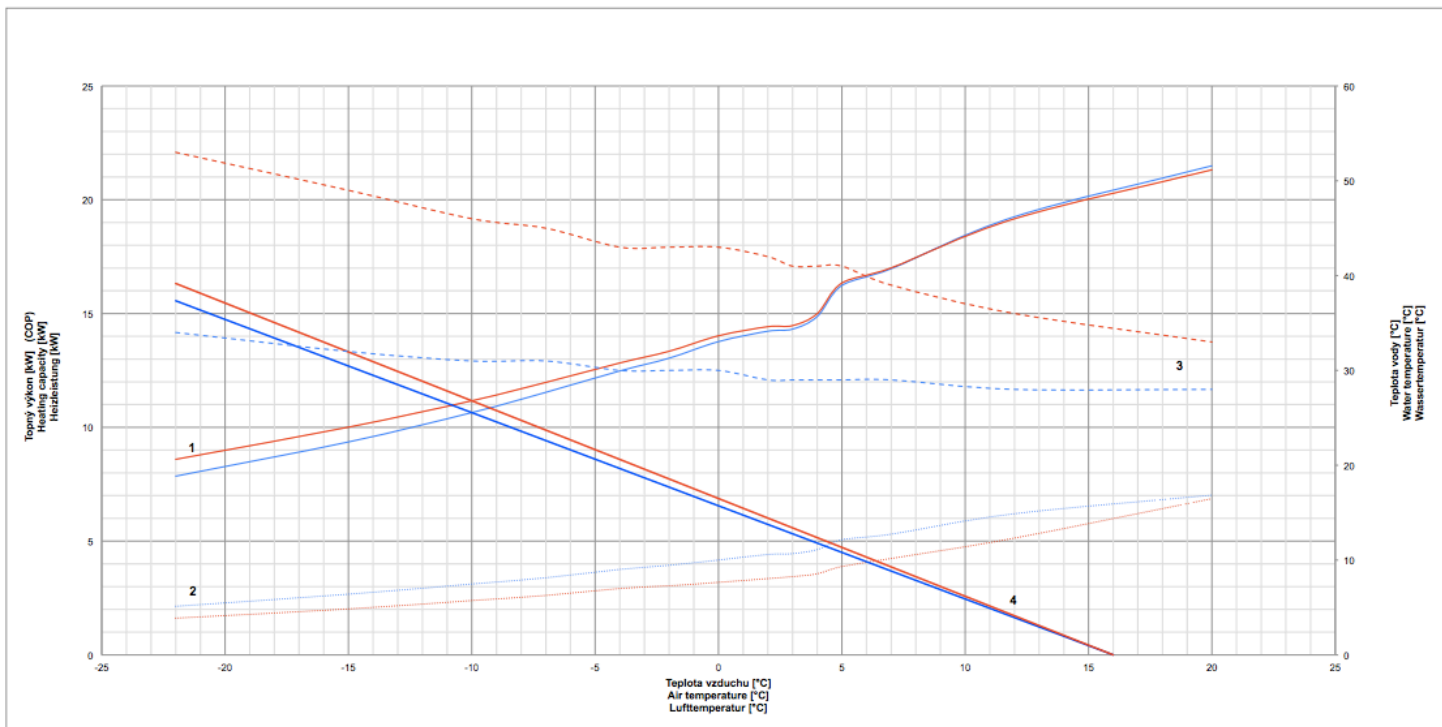
Voda, Water, Wasser 55°C - červená / red / rot  
Voda, Water, Wasser 35°C - modrá / blue / blau  
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung  
2 - COP  
3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur

Výkonové křivky HOTJET 15ONE2 - Vzduch / Voda  
Characteristic curve HOTJET 15ONE2 - Air / Water  
Kennlinien HOTJET 15ONE2 - Luft / Wasser



Voda, Water, Wasser 55°C - červená / red / rot  
Voda, Water, Wasser 35°C - modrá / blue / blau  
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung  
2 - COP  
3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur  
4 - Pdesign - chladné pásmo / Colder area / Kaltteklima

## Výkonové křivky HOTJET 20ONE2 - Vzduch / Voda Characteristic curve HOTJET 20ONE2 - Air / Water Kennlinien HOTJET 20ONE2 - Luft / Wasser



Voda, Water, Wasser 55°C - červená / red / rot

Voda, Water, Wasser 35°C - modrá / blue / blau

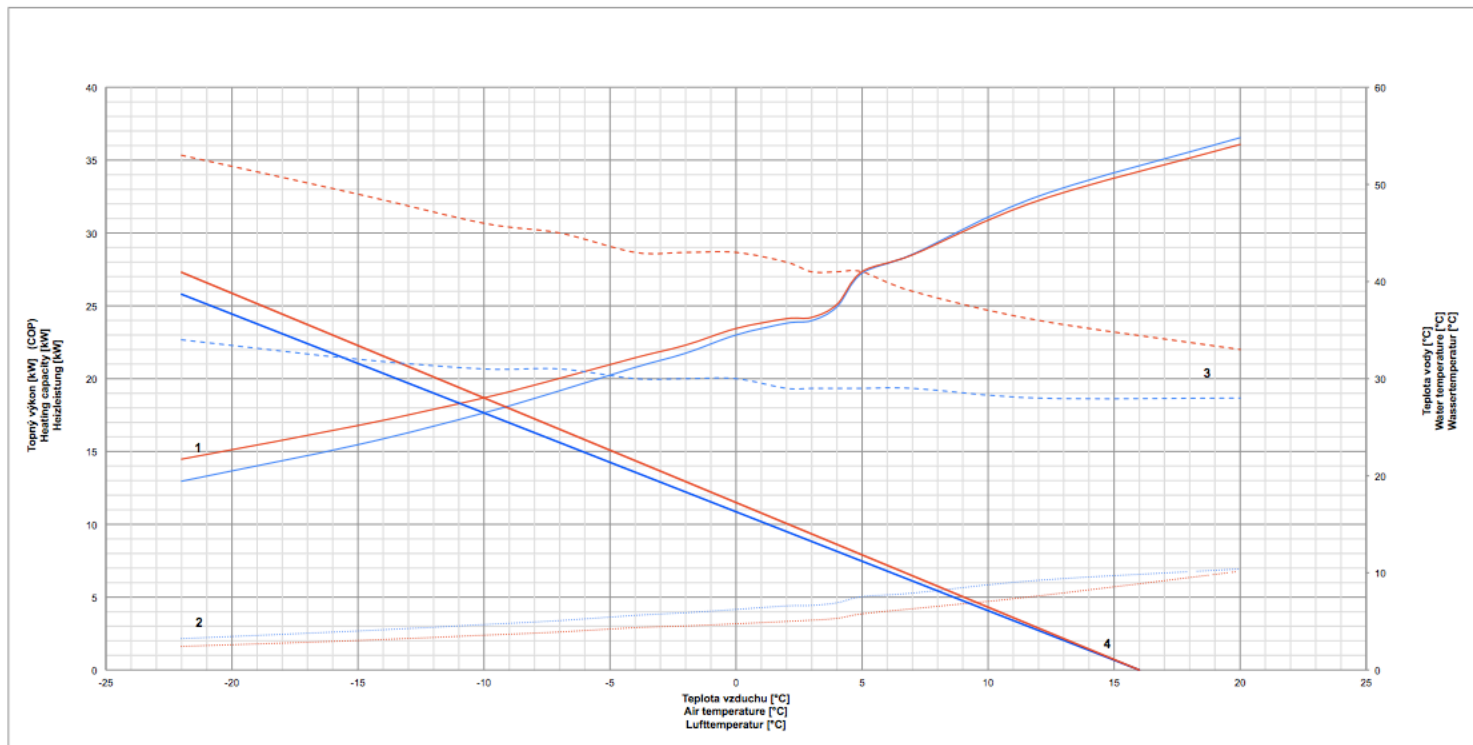
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung

2 - COP

3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur

4 - Pdesign - chladné pásmo / Colder area / Kalteklima

## Výkonové křivky HOTJET 25ONE2 - Vzduch / Voda Characteristic curve HOTJET 25ONE2 - Air / Water Kennlinien HOTJET 25ONE2 - Luft / Wasser



Voda, Water, Wasser 55°C - červená / red / rot

Voda, Water, Wasser 35°C - modrá / blue / blau

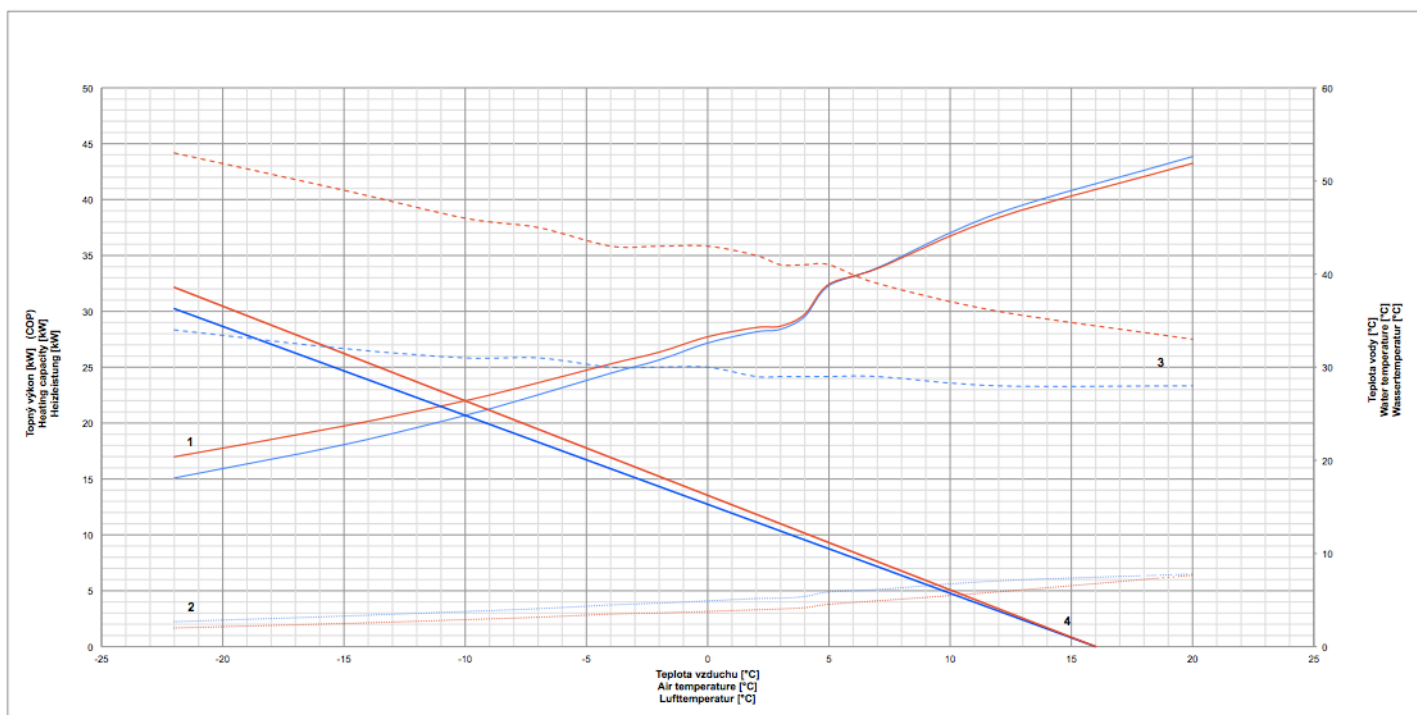
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung

2 - COP

3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur

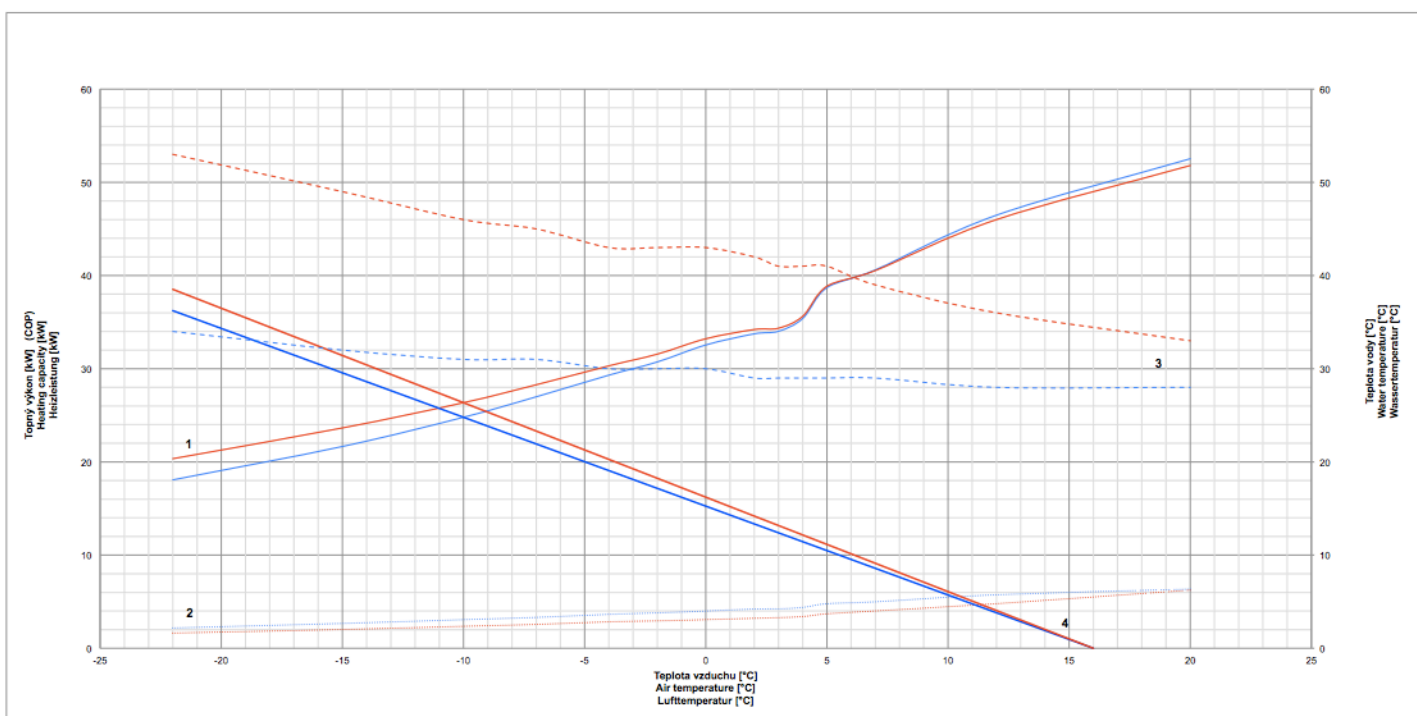
4 - Pdesign - chladné pásmo / Colder area / Kalteklima

## Výkonové křivky HOTJET 35ONE2 - Vzduch / Voda Characteristic curve HOTJET 35ONE2 - Air / Water Kennlinien HOTJET 35ONE2 - Luft / Wasser



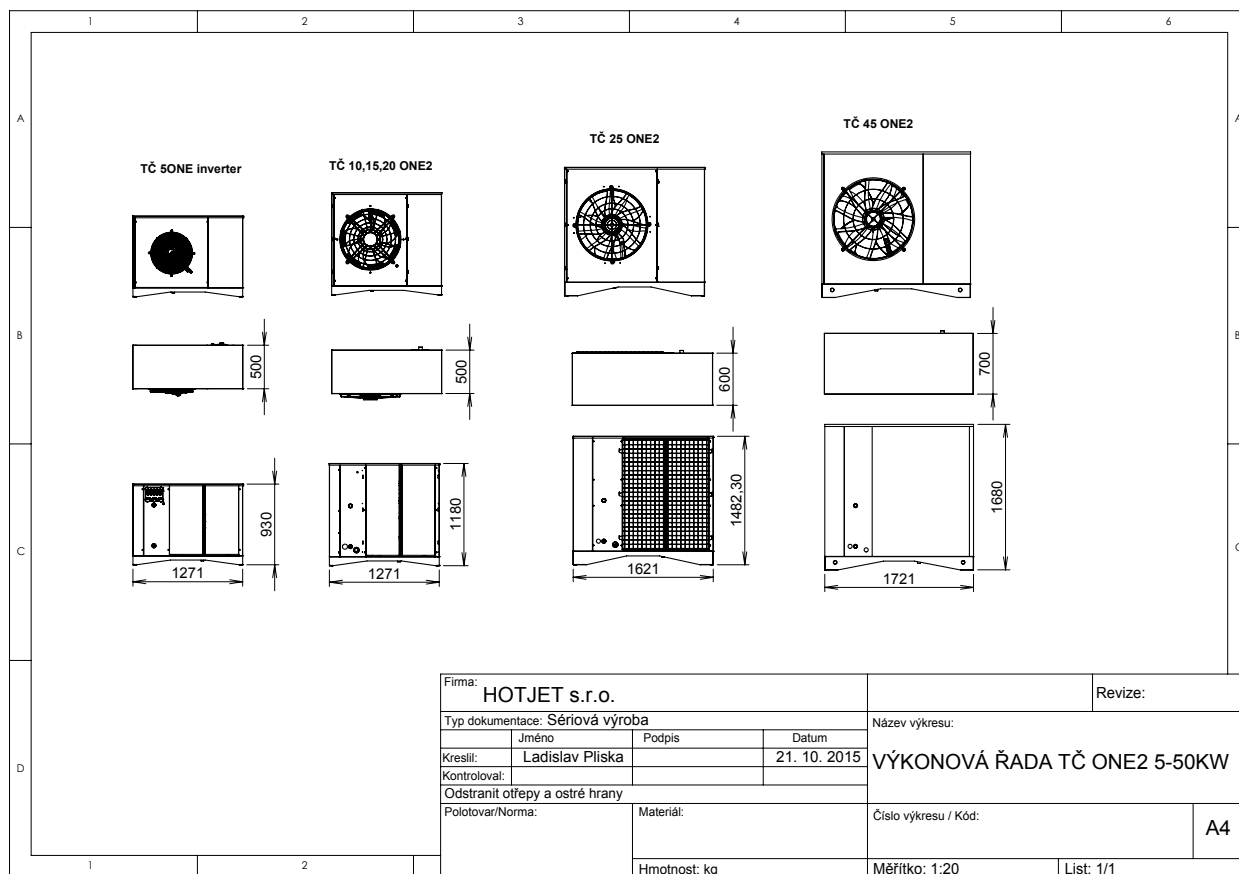
Voda, Water, Wasser 55°C - červená / red / rot  
Voda, Water, Wasser 35°C - modrá / blue / blau  
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung  
2 - COP  
3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur

## Výkonové křivky HOTJET 45ONE2 - Vzduch / Voda Characteristic curve HOTJET 45ONE2 - Air / Water Kennlinien HOTJET 45ONE2 - Luft / Wasser

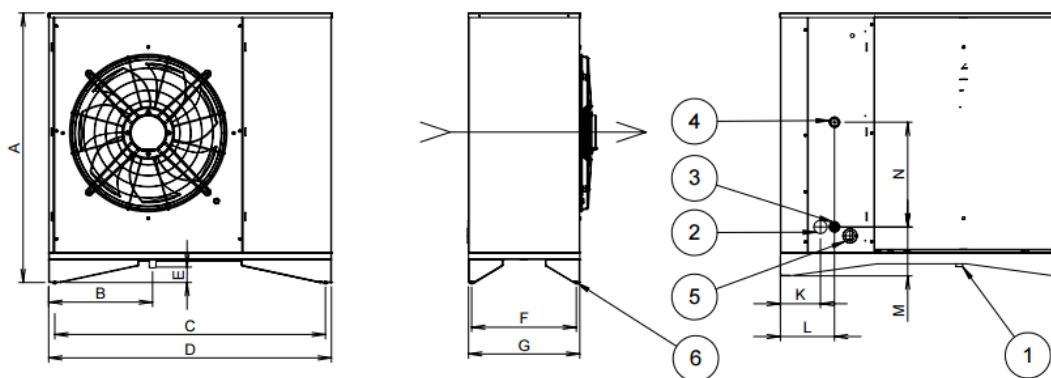


Voda, Water, Wasser 55°C - červená / red / rot  
Voda, Water, Wasser 35°C - modrá / blue / blau  
1 - Ekvitermní topný výkon / Equiterm heating capacity / Equiterm Heizleistung  
2 - COP  
3 - Ekvitermní teplota vody / Equiterm water temperature / Equiterm Wassertemperatur  
4 - Pdesign - chladné pásmo / Colder area / Kälteklima

## 4.1.3.Dimension Drawing

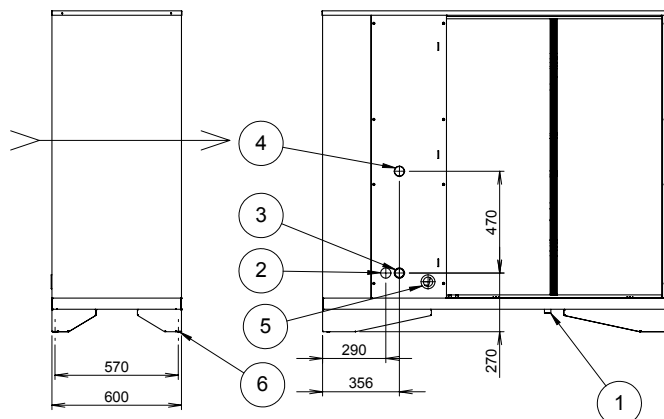
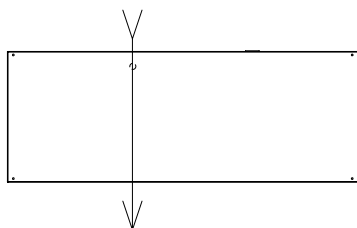
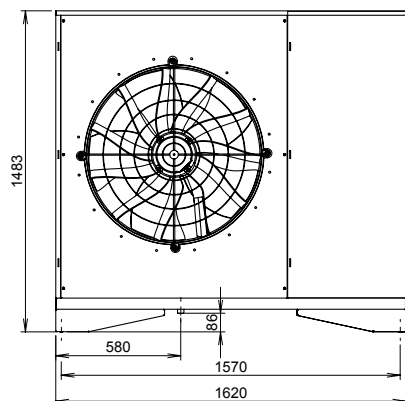


ONE2	A	B	C	D	E	F	G	K	L	M	N
10-20	1210	470	1220	1270	70	470	500	180	240	220	470
25	1480	580	1570	1620	90	570	600	290	360	270	470
35-45	1670	650	1670	1720	100	670	700	290	360	270	470



1) ONE2 35-45 platí/ valid M10

Typ	Popis/ Description	
1	-	Odvod kondenzátu/ Condensate drain
2	SPLIT-LITE	Vstup kapalného chladiva/ Liquid connection
3	SPLIT-LITE	Výstup plynného chladiva/ Suction connection
3	KOMPAKT	Vstupní topná voda ( např. 39°C)/ Heating water return (e.g. 39°C)
4	KOMPAKT	Výstupní topná voda ( např. 45°C)/ Heating water flow (e.g. 45°C)
5	-	Průchodka pro elektrické kabely/ Cable entry
6	-	Uchycení rámu/ Fixing frame

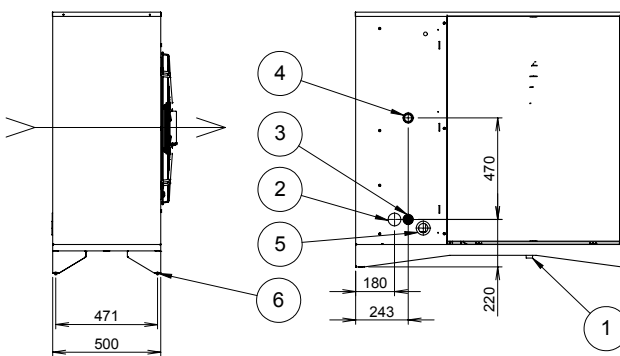
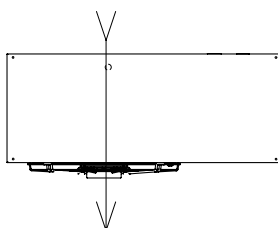
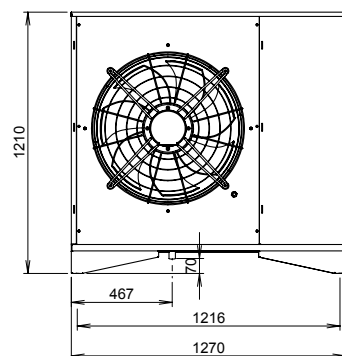


Pos	Type	Description	Connection
1	-	Drain of condensate	Ø 30 mm
2	SPLIT-LITE	Inlet for liquid refrigerant	Ø 12 mm
3	SPLIT-LITE	Outlet for gaseous refrigerant (= hot gas)	Ø 22 mm
3	COMPACT	Inlet cold water (= for example about temperature 39 °C)	G 5/4"
4	COMPACT	Outlet hot water (= for example about temperature 45 °C)	G 5/4"
5	-	Cable gland for electrical power and control system	Ø 43 mm
6	-	Fixing base	M8

NAME	HEAT PUMP 25 ONE2
PREPARED BY	HOTJET
DATE	03/2016



HOTJET s.r.o.  
Průmyslová 966/21  
747 23 Bolatice



Pos.	Type	Description	Connection
1	-	Drain of condensate	Ø 30 mm
2	SPLIT-LITE	Inlet for liquid refrigerant	Ø 12 mm
3	SPLIT-LITE	Outlet for gaseous refrigerant (= hot gas)	Ø 18 mm
3	COMPACT	Inlet cold water (= for example about temperature 39 °C)	G 5/4"
4	COMPACT	Outlet hot water (= for example about temperature 45 °C)	G 5/4"
5	-	Cable gland for electrical power and control system	Ø 43 mm
6	-	Fixing base	M8

NAME	HEAT PUMP 10-20 ONE2
PREPARED BY	HOTJET
DATE	03/2016



HOTJET s.r.o.  
Průmyslová 966/21  
747 23 Bolatice

## 5. Warranty, Post Warranty Terms and Conditions and Liability for Defect

- HOTJET CZ s.r.o. (hereinafter only "HOTJET"), shall be liable for the delivery performance in the quantity, quality and design according to the purchase contract..
- HOTJET shall be liable for defects demonstrated within the warranty period, which is 24 months for the final consumer - non-entrepreneur, unless agreed upon otherwise. The warranty period for entrepreneurs is 12 months, unless agreed upon otherwise in writing. Existence of the warranty period for HOTJET products is subject to fulfillment of the terms and conditions set out in this Warranty Certificate.
- The warranty covers defects in material, function and/or workmanship. The warranty is not applicable to defects caused by incorrect project, incorrect installation, handling, wiring or incorrect operation, improper electrical fuses and installation, failure to comply with the specified voltage, unprofessional or inadequate interference and manipulation, modification or dismantling (in case of subsequent installation the preservation of rights resulting from the warranty is a subject to completion of all protocols relating to the assembly), misuse, natural disasters, Force Majeure, violent damage and maintenance neglect. The warranty shall expire also should an unauthorized person interfere into the product. Normal wear and tear of operating fillings is not covered by the warranty. Operating fillings are not covered by the warranty. The warranty covers only the Goods supplied by HOTJET. Responsibility for the product selection and use rests entirely with the buyer. The product must be used in the manner and for the purpose for which it is intended. The installing company provides the warranty adequate to the warranty period provided for the delivered equipment. If specific warranty conditions are applicable to certain types of products and services, these shall be specified in the warranty certificate accompanying the product, whereat the scope and terms of warranty provided to individual product groups may vary.
- The warranty period commences as of the so-called authorized commissioning of the heat pump. The authorized commissioning means the process of control activities and the heat pump starting by an authorized technician certified by HOTJET, however not later than upon expiry of two months from the date of the goods take over by the buyer. The buyer means HOTJET's direct business partner to whom the relevant goods are sold as to the first in the order. The delivery date and the person, to whom the goods were delivered, are always written and confirmed in the warranty certificate. The period, during which the buyer cannot use the goods due to a warranty defect, shall not be included into the warranty period.
- The buyer is entitled and obliged to claim visible defects, quantity and completeness of the goods within 3 days from the goods take over. Any later claims of this nature will be disregarded. Should a defect appear during the warranty period, the buyer shall inform HOTJET in writing or by e-mail on the defect occurrence, it shall describe the defect and indicate how its manifested, furthermore, the buyer shall indicate the manufacturing number, and send the relevant warranty certificate containing the date of sale, invoice number and place of installation. The parties have agreed that by the aforementioned claim submission it shall be deemed that the buyer requires a free of charge removal of the defect – by delivery of the material. Based on the defect description, consultations and possible technical inspections of the equipment, HOTJET shall decide on the manner of the claim solution or the claim process commencement. HOTJET has the right to require other documents, e.g. photographs of the installation place, equipment to which the complaint relates, respectively, from the buyer.
- In case of a justified claim process according to this warranty certificate, HOTJET shall provide the buyer with repair materials for putting the product into operable condition. The costs associated with repairs shall not be paid by HOTJET. Parts and materials to which the claim relates shall be send by the buyer to the HOTJET's address without any delay.
- If HOTJET, based on an expert's opinion on the parts received from the buyer in the claim process, determines that the claim is unjustified, the buyer shall be obliged to pay to HOTJET all costs associated with the claim process, as well as the handling fee in the amount EUR 150.
- The warranty under this warranty certificate and the HOTJET's General Terms and Conditions of Contract, is provided only outside the territories of the Czech Republic and Slovakia. The warranty for other countries of the world community shall also be applicable to these goods, i.e. to warranty repairs, in case of which the goods shall be shipped to the HOTJET's registered office at the buyer's expense and shipped to the buyer after repairing also at the buyer's expense.



## 6. EC declaration of conformity to the heat pump



Manufacturer: HOTJET CZ s.r.o.  
Průmyslová 966/21  
747 23 Bolatice  
Czech Republic  
<http://www.hotjet.eu>

Hereby confirm that the design and construction of the product(s) listed below, in the version(s) placed on the market by us, conform to the relevant requirements of the applicable EC directives.

This declaration becomes invalidated if any modifications are made to the product(s) without our prior authorisation.

Designation of the product(s):

Air-to-water heat pumps for outdoor installation: and Split-Lite:

<b>5ASK</b>	<b>8ASK/EVI</b>	<b>11ASK/EVI</b>	<b>15ASK/EVI</b>
<b>8ONE/EVI</b>	<b>11ONE/EVI</b>	<b>15ONE/EVI</b>	
<b>8ONE</b>	<b>15ONE</b>		
<b>10ONE2</b>	<b>15ONE2</b>	<b>20ONE2</b>	<b>25ONE2</b>
<b>35ONE2</b>	<b>45ONE2</b>		
<b>27S</b>	<b>35S</b>	<b>50S</b>	<b>100S</b>
<b>10ZET</b>	<b>20ZET</b>		

Brine-to-water, water-to-water heat pumps for indoor installation:

<b>5W</b>	<b>10W</b>	<b>15W</b>	<b>16W</b>	<b>20W</b>	<b>33W</b>	<b>50W</b>	<b>100W</b>
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System units: **Hydrobox 300, Hydrobox 500**

### EC Directives:

**Low Voltage directive 2014/35/CE**

**EMC directive 2014/30/CE**

### Applied Standards:

- ČSN EN 60 335-1:2001-1 ed.2: Zm. A11:2004, Zm. A1:2005; ČSN EN 60 335-2-34:2012; ČSN EN 60 335-2-40:2004 zm. A11:2005, zm. A12:2005
- ČSN EN 55011 ed2: 2007
- ČSN EN 55014-1 ed. 2: 2001, Zm. A1:2002, Zm. A2:2003; ČSN EN 55014-2: 1998, Zm. A1:2002
- ČSN EN 14511-2:2014; ČSN EN 14511-3:2014; ČSN EN 14511-4:2014
- ČSN EN 12102:2014
- ČSN EN 61000-3-2 ed.2; ČSN EN 61000-3-3

Authorized Body 211

CE mark added :

2016

Technical Director

Bolatice , 10.05.2016



ing. Richard Köhler