JBG HT

Heat pump 10K + Hydraulic tower

ZHHS-01-10K-R290-V5-M + WH-200-06-2-M

SG Ready
Smart Heat Pumps

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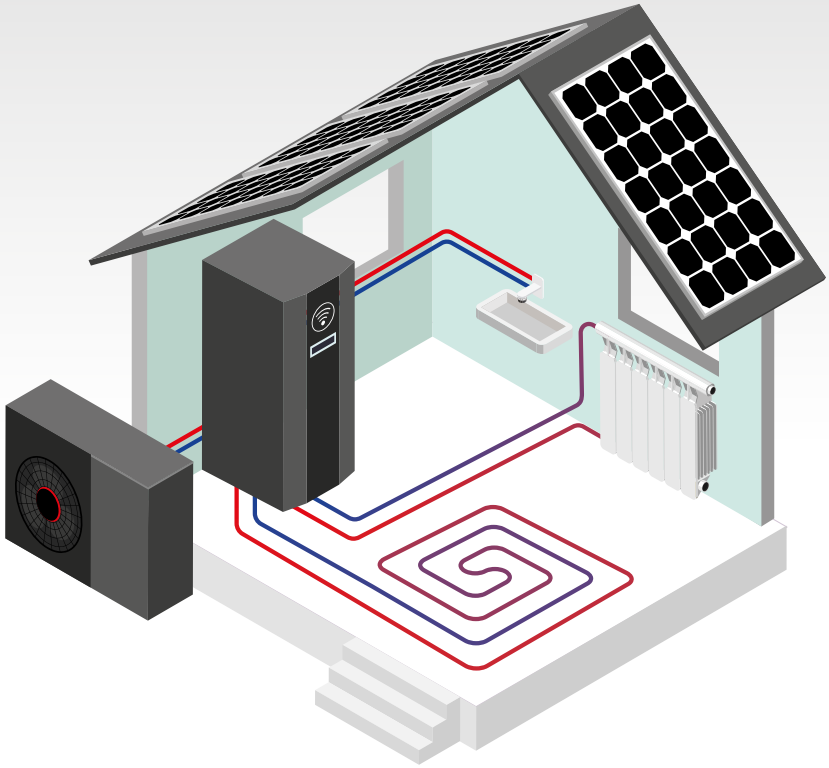
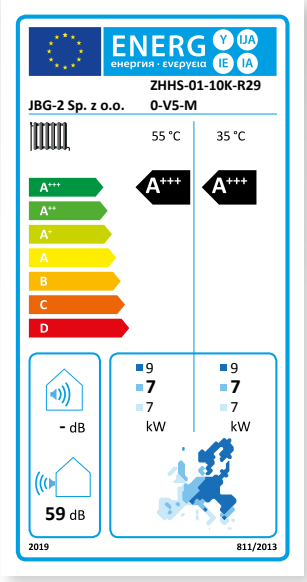




Heat pump is a heating device which allows to heat buildings through underfloor heating systems, as well as traditional heaters. It is also suitable for heating up domestic hot water. Certain pumps also have an option to cool down rooms, which is why they can replace air conditioning. The pump's general operation principle is based on collecting heat energy from the area surrounding the building and transporting it inside through the heating system. Heat pump is a modern, economic and eco-friendly home heating system. It uses completely free and natural resources, and power consumption is reduced to process drive and operation of the circulation pump. This reduces the heating costs. This type of device is an alternative solution to traditional heating systems, which are based on fossil fuels. Eliminating of the combustion process, limited emission of carbon monoxide to the atmosphere and positively affects air quality.

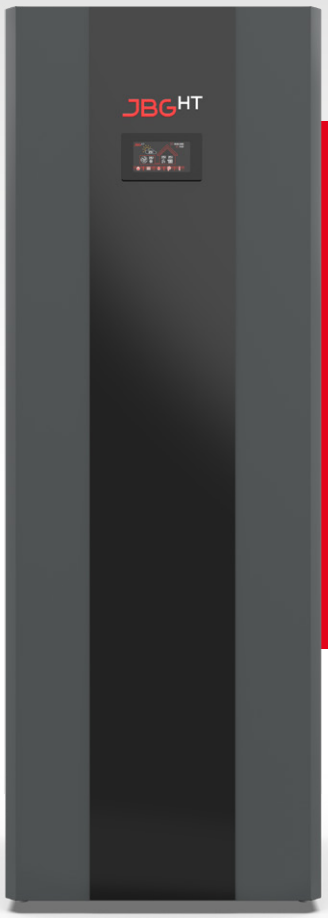
- Natural ecological refrigerant R290 (propane)
- Low energy consumption due to the inverter compressor
- Variable adjustment of efficiency due to the adjustable fan speed and water pump
- High heating output at low ambient air temperature
- Compact, monoblock type housing
- Energy Class A+++ / A+++ 35°C / 55°C
- Elastic and modern design
- Very low noise level
- Wireless remote control
- Easy installation of the entire unit outside of the building (installation without F-Gas certificate)
- Operation parameters in real time
- Reduced thawing time and condensate tray heating system
- Water flow transducer with water flow measurement
- The possibility to modernise older installations due to the cooperation with traditional heaters.

WATER-AIR MONOBLOCK TYPE HEAT PUMP

ZHHS-01-10K-R290-V5-M

Performance data – heating (EN 14511)			
① A7/W35	Power range (min-max) [1]	**kW**	3,38 ÷ 9,86
	Partial load [1]	**kW**	6,60
	Power consumption [1]	**kW**	1,45
	COP [1]		4,56
② A7/W45	Power range (min-max) [2]	**kW**	3,00 ÷ 8,89
	Partial load [2]	**kW**	5,29
	Power consumption [2]	**kW**	1,44
	COP [2]		3,67
③ A7/W55	Power range (min-max) [3]	**kW**	2,88 ÷ 8,51
	Partial load [3]	**kW**	5,50
	Power consumption [3]	**kW**	2,00
	COP [3]		2,75
④ A2/W35	Power range (min-max) [4]	**kW**	3,00 ÷ 9,01
	Partial load [4]	**kW**	3,00
	Power consumption [4]	**kW**	0,67
	COP [4]		4,48
⑤ A-7/W35	Maximum power [5]	**kW**	6,80
	Power consumption [5]	**kW**	2,47
	COP [5]		2,75
Cooling data			
Pump type			air / water
Refrigerant type			R290
Compressor type			inverter scroll
Heating + DHW			
External operating temperature range		**°C**	from -20 to +35
Feed water temperature		**°C**	from +20 to +65
Physical dimensions			
Depth x width x height		**mm**	505 x 1155 x 935
Weight		**kg**	132
Sound power level		**dB**	59
Electrical data			
Electrical connection		**V/Ph/Hz**	400 / 3~ / 50
Protection rating			IP24
Electric heater power (option with hydrobox / hydrotower)		**kW**	3 / 6 / 9
SCOP			**W35 5,04 / W55 3,92**
Energy efficiency class Device with a regulator – feed temperature 35°C / 55°C			**W35 A+++ / W55 A+++**

① Heating temperature: water I/O temperature: 30°C / 35°C, Ambient temperature: DB 7°C / WB 6°C;
② Heating temperature: water I/O temperature: 40°C / 45°C, Ambient temperature: DB 7°C / WB 6°C;
③ Heating temperature: water I/O temperature: 50°C / 55°C, Ambient temperature: DB 7°C / WB 6°C;
④ Heating temperature: water I/O temperature: 30°C / 35°C, Ambient temperature: DB 2°C / WB 1°C;
⑤ Heating temperature: water I/O temperature: 30°C / 35°C, Ambient temperature: DB -7°C / WB -8°C;



HYDRAULIC TOWER

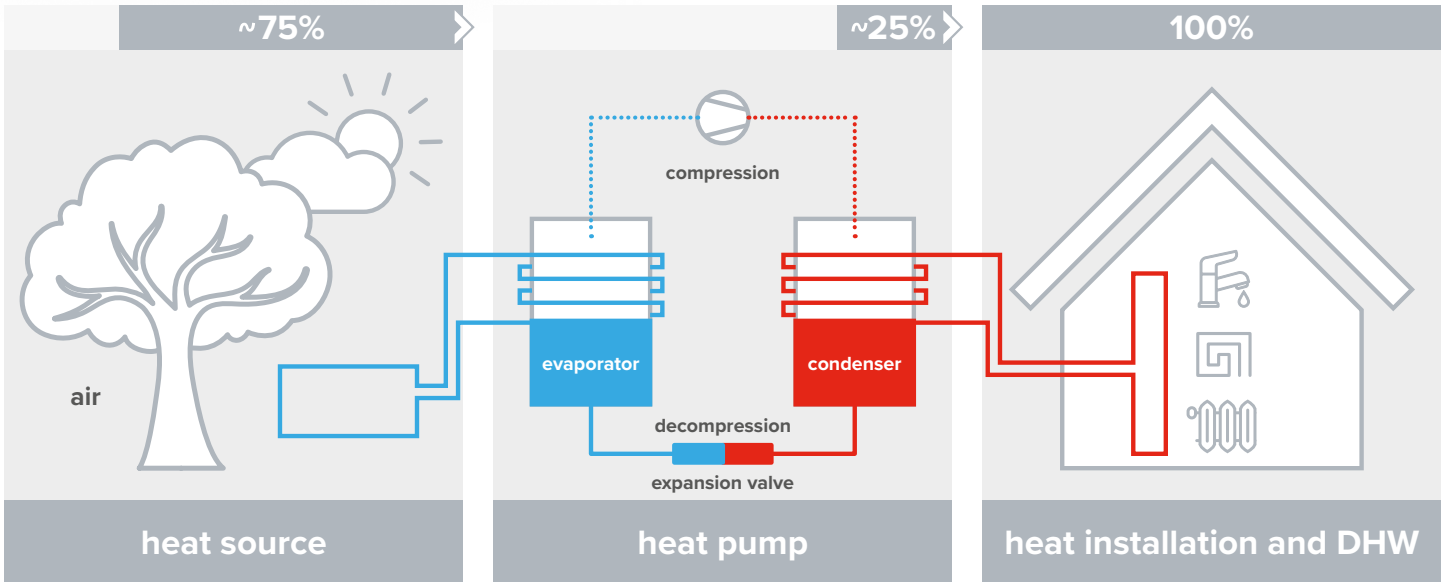
- Tank with a capacity of 200 litres allows to use approximately 400 litres of running water at a temperature of approx. 40°C.
- Fully integrated, necessary elements of hydraulic system, including a 10-litre expansion vessel, allowing to heat up to 160 m² of usable area.
- Auxiliary heater operating within the ranges of 3/6/9 kW
- 3-way valve switching over to domestic hot water.
- Compact construction that takes up minimal space.

Dimensions:
1700 x 595 x 760 mm

Polyurethane
insulation / δ 50 mm

Capacity:
200 l

Inner tank: stainless steel



The operation of a heat pump can be described as reversed operation of a fridge. Heat is always transferred from the warmer to the colder item. This principle is used, and that is why pumps operate. Just like a fridge transfers the heat from the inside and moves it outwards, heat pump removes the heat from the external area and transfers the energy inside the home in the form of warm air. The heat pump uses a principle known in physics as the Joule-Thomson effect. The energy from the environment is transferred to the refrigerant in the heat exchanger, the so-called evaporator. The refrigerant evaporates as a result. In the case of air source heat pumps, the external air is used to warm up the refrigerant. The vapour of the refrigerant is collected by the compressor. It increases the temperature or the refrigerant, which makes it warmer. In another heat exchanger, the so-called condenser, the hot refrigerator in the form of a highly-pressurised gas is condensed and gives out heat. Next, the condensed refrigerant makes its way to the expansion valve. Its pressure is reduced there again, and the refrigerant changes its physical state to liquid.

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