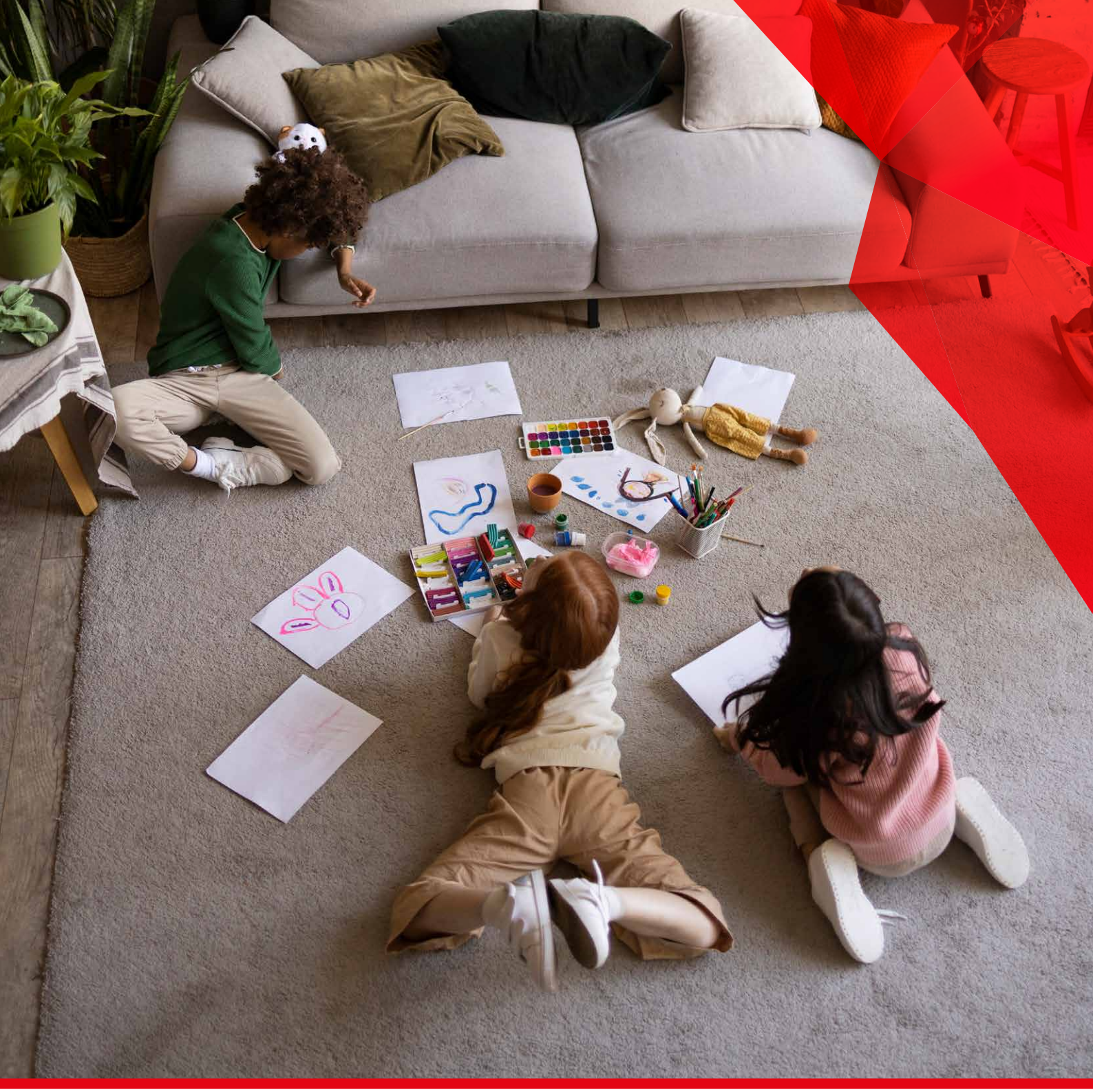
JBG HT

HEAT PUMPS

POLISH PRODUCTION

jbght.com

PRODUCTS CATALOGUE



POLISH HEAT PUMPS JBG HT

About us

JBG-2 has been present in the market of professional refrigeration and gastronomy equipment for over 30 years. In response to customer expectations, the company expanded its business profile to include renewable energy sources and created the **JBG^{PV}** brand. As a manufacturer of photovoltaic modules, we offer a range of photovoltaic panel models with various specifications.

In addition to this offering, we have begun producing **JBG^{HT}** heat pumps. We recommend solutions compliant with the technical requirements for new buildings. However, **JBG^{HT}** heat pumps are not limited to modern constructions alone. Our innovative heating devices, known for their high efficiency, can also be installed in traditional buildings undergoing thermal modernization.

Our production includes the following models: 6K, 10K, and 15K, available in various configurations. These devices are inverter heat pumps of the monoblock type, operating with the environmentally friendly refrigerant R290.

JBG2 JBG^{HT} JBG^{PV}

WE ENSURE COM

Up to three heating circuits

One device – many possibilities. Availability to connect even three heating circuits.

Inverter compressor

The use of an inverter compressor provides smooth power adjustment, resulting in energy savings and thermal comfort at home.

Monoblock

Quick and proficient installation, user-friendly servicing process, quality and durability of the equipment.

R290

Refrigerant of the future – efficient and environmentally friendly.

Polish production

We manufacture JBG^{HT} heat pumps in Poland, at two modern facilities in Żory and Warszowice.

Keymark

Craftsmanship quality - compliant with the highest European standards - and the location of heat pump production - in Poland - confirmed by an independent, European KEYMARK certification.

SG Ready

JBG^{HT} heat pumps are ready for integration with smart energy networks.

FORT

65°C

Feed water temperature

Modern design

Operation parameters in real time

Variable adjustment of efficiency due to the adjustable fan speed and water pump

Very low noise level

Reduced thawing time and condensate tray heating system

High heating output at low ambient air temperature

Wireless service remote control

Water flow transducer with water flow measurement

A+++

Energy Class

A+++ / A+++

35°C / 55°C

Easy installation of the entire unit outside of the building (installation without F-Gas certificate)

The possibility to modernise older installations due to the cooperation with traditional heaters

Wireless control of the device via a mobile phone app

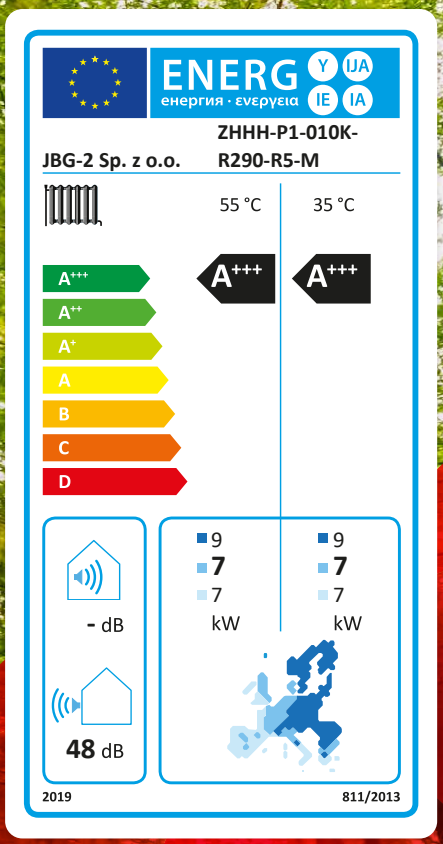
Mobile application

The application includes operation of central heating and DHW with display of consumption

Forcing DHW + possibility of setting temp modes.

Energy efficiency and ecology

Quality confirmed by **Keymark** certificate



ZHHH

ZHHH-01-10K-R290-V5-M

ZHHH-01-15K-R290-V5-M

HYDROBOX

HYDROTOWER

CONTROLLER

			6K	10K
			Performance data – heating (EN 14511)	
			ZHHH-P1-006K-R290-R5-M	ZHHH-P1-010K-R290-R5-M
				
① A7/W35	Power range (min-max) [1]	kW	1,93 - 6,03	1,93 - 11,14
	Partial load [1]	kW	6,03	6,78
	Power consumption [1]	kW	1,25	1,48
	COP [1]		4,81	4,58
② A7/W55	Maximum power [2]	kW	5,51	10,92
	Power consumption [2]	kW	1,77	2,8
	COP [2]		3,12	2,96
③ A2/W35	Maximum power [3]	kW	5,17	10,26
	Power consumption [3]	kW	1,22	1,62
	COP [3]		4,25	3,86
④ A-7/W35	Maximum power [4]	kW	3,97	8,25
	Power consumption [4]	kW	1,14	2,95
	COP [4]		3,48	2,80
	Performance data – cooling			
⑤ A35/W18	Partial load [5]	kW	5,00	6,67
	Power consumption [5]	kW	1,63	1,48
	EER [5]		3	4,52
⑥ A35/W7	Partial load [6]	kW	4,35	5,14
	Power consumption [6]	kW	1,44	1,6
	EER [6]		3,03	3,22
	Product data			
Pump type			air / water	
Refrigerant type			R290	
Refrigerant amount		kg	1,30	
Maximum working pressure		bar	31	
Compressor type			twin rotary	
Adjustment type			electronic	
	Heating			
Minimum working pressure		bar	1,0	
Maximum working pressure		bar	3,0	
Rated flow		m^3/h	1,17	
External operating temperature range		°C	from -22 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	
Water connections			G 5/4 "	
Sound power level		dB	48	
Sound pressure from a distance of 3 m		dB	30,5	
Air flow		m^3/h	2500	
	Electrical data			
Electrical connection		V/Ph/Hz	230 / 1~ / 50	
Protection rating			IP24	
Electric heater power (option with hydrobox / hydrotower)		kW	3 / 6 / 9	
Fan power consumption		W	50	
Number of fans			1	
SCOP			W35 4,95 / W55 3,54	W35 5,16 / W55 3,9
Energy efficiency class Device with a regulator – feed temperature 35°C / 55°C			A+++ W35 / A++ W55	A+++ W35 / A+++ W55

	①	②	③	④		⑤	⑥
Heating temperature: water I/O temperature:	30°C / 35°C	40°C / 45°C	50°C / 55°C	30°C / 35°C	Cooling temperature: water I/O temperature:	23°C / 18°C	12°C / 7°C
Ambient temperature:	DB 7°C / WB 6°C			DB 2°C / WB 1°C	Ambient temperature:	DB 35°C	

JBG HT ZHHH

10K 15K

			Performance data – heating (EN 14511)		
			ZHHH-Z1-010K-R290-R5-M	ZHHH-01-10K-R290-R5-M	ZHHH-01-15K-R290-R5-M
					
① A7/W35	Power range (min-max) [1]	kW	2,44 - 11,03	3,32 - 11,42	5,43 - 15,87
	Partial load [1]	kW	6,2	6,53	9,8
	Power consumption [1]	kW	1,43	1,53	2,1
	COP [1]		4,34	4,27	4,76
② A7/W55	Maximum power [2]	kW	10,81	11,15	13,9
	Power consumption [2]	kW	3,08	2,96	5,2
	COP [2]		2,69	2,88	2,7
③ A2/W35	Maximum power [3]	kW	10,15	10,03	13,77
	Power consumption [3]	kW	1,68	1,73	1,16
	COP [3]		3,63	3,48	4,16
④ A-7/W35	Maximum power [4]	kW	8,17	8,36	12,58
	Power consumption [4]	kW	2,98	2,08	3,66
	COP [4]		2,74	2,91	2,92
Performance data – cooling					
⑤ A35/W18	Partial load [5]	kW	8,63	-	
	Power consumption [5]	kW	1,44	-	
	EER [5]		4,52	-	
⑥ A35/W7	Partial load [6]	kW	7,84	-	
	Power consumption [6]	kW	1,59	-	
	EER [6]		3,11	-	
Product data					
Pump type			air / water		
Refrigerant type			R290		
Refrigerant amount		kg	1,30	0,63	0,8
Maximum working pressure		bar	31		
Compressor type			twin rotary		
Adjustment type			electronic		
Heating					
Minimum working pressure		bar	1,0		
Maximum working pressure		bar	3,0		
Rated flow		m^3/h	1,17	1,09	1,71
External operating temperature range		°C	from -22 to +35		
Feed water temperature		°C	from +20 to +65		
Physical dimensions					
Depth x width x height		mm	505 x 1155 x 935		505 x 1155 x 1530
Weight		kg	132		166
Water connections			G 5/4 "		
Sound power level		dB	50		54
Sound pressure from a distance of 3 m		dB	32,5		36,5
Air flow		m^3/h	2500		4000
Electrical data					
Electrical connection		V/Ph/Hz	400 / 3~ / 50		
Protection rating			IP24		
Electric heater power (option with hydrobox / hydrotower)		kW	3 / 6 / 9		
Fan power consumption		W	50		100
Number of fans			1		2
SCOP			W35 4,69 / W55 3,38	W35 4,56 / W55 3,53	W35 4,96 / W55 3,77
Energy efficiency class Device with a regulator – feed temperature 35°C / 55°C			A+++ W35 A++ W55	A+++ W35 A++ W55	A+++ W35 A++ W55

Heating temperature: water I/O temperature:	① 30°C / 35°C	② 40°C / 45°C	③ 50°C / 55°C	④ 30°C / 35°C	Cooling temperature: water I/O temperature:	⑤ 23°C / 18°C	⑥ 12°C / 7°C
Ambient temperature:	DB 7°C / WB 6°C			DB 2°C / WB 1°C	Ambient temperature:	DB 35°C	

JBG^{HT} heat pump configuration options

Heat pump + **controller**

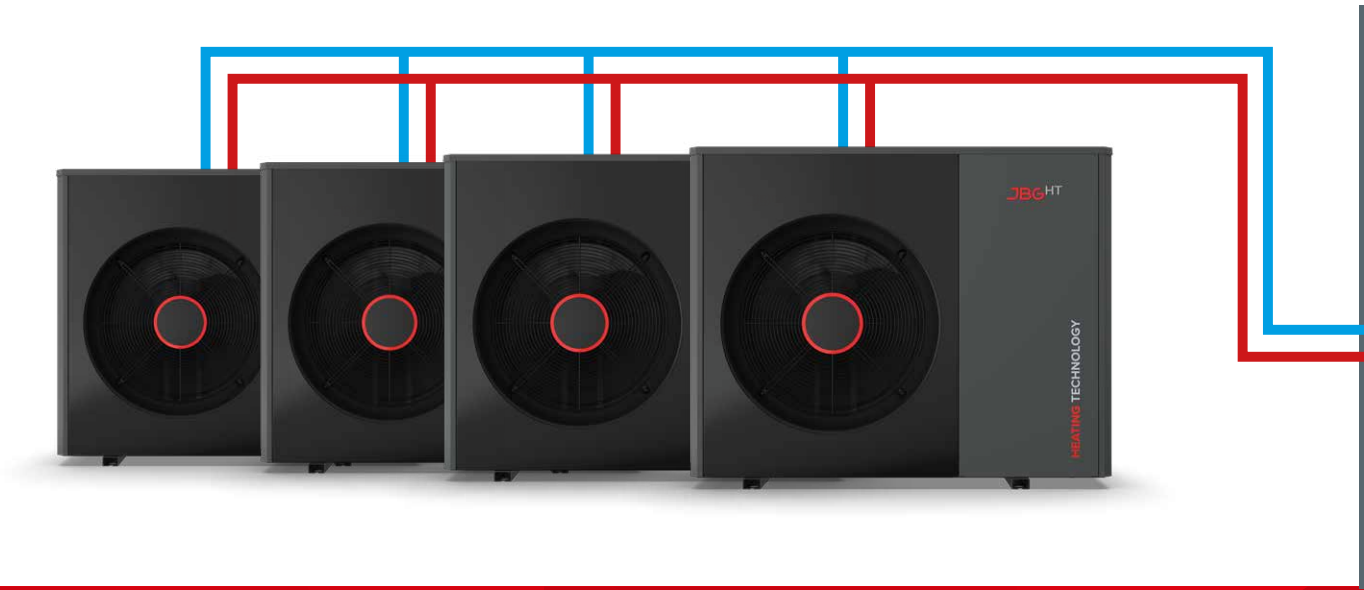
- Controller cooperating with heat pump

Heat pump + **Hydrobox**

- Controller cooperating with heat pump
- Safety pressure group for C.H.
- Expansion vessel
- Electric heater
- Three-way valve

Heat pump + **Hydrotower**

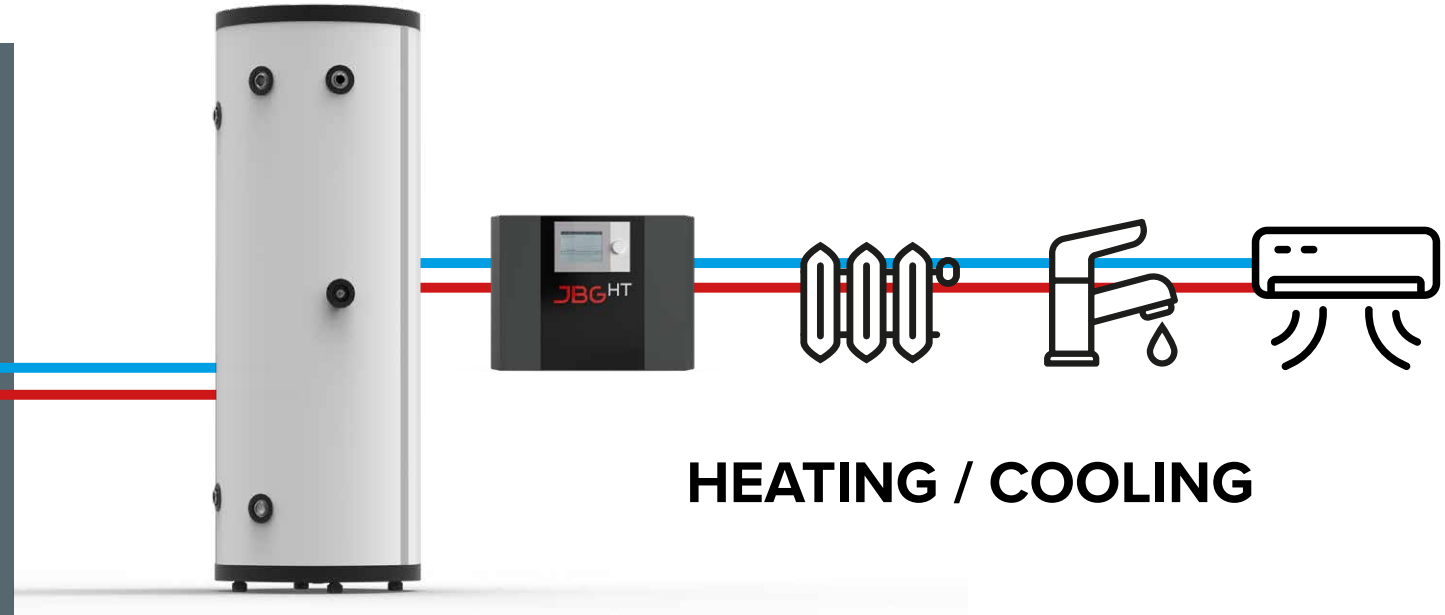
- 200l stainless steel tank for domestic hot water
- Controller cooperating with heat pump
- Safety pressure group for C.H.
- Expansion vessel
- Electric heater
- Three-way valve



Up to **16** devices

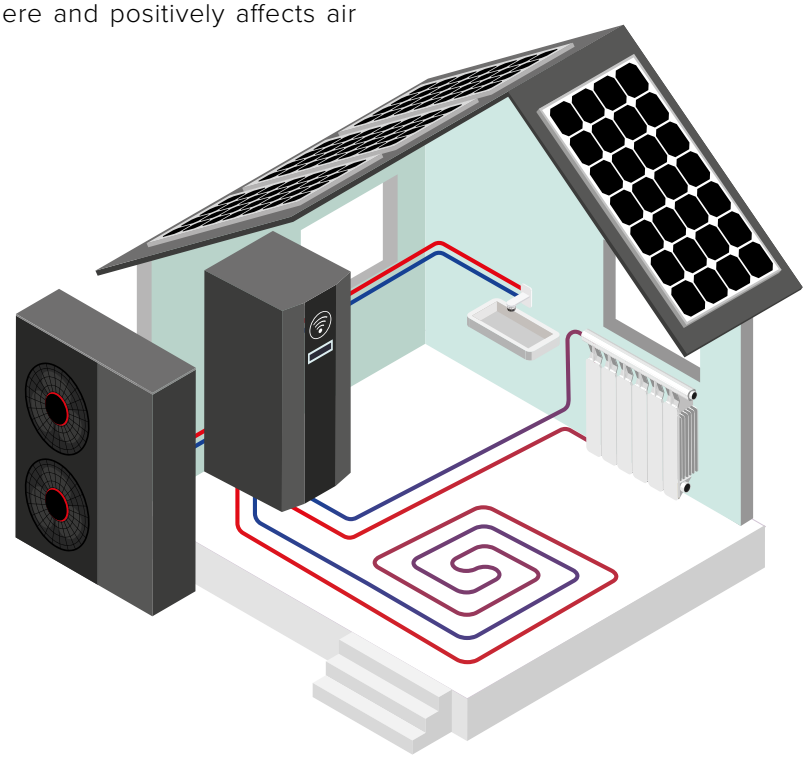
Heat pump cascade system

In buildings such as multi-family houses, guest houses, hotels, service or industrial buildings, the heating demand for heating energy is much higher than for single-family houses.
The specifics of the building determine how much energy is needed for central heating and domestic hot water.
Cascade heat pump systems are the perfect solution in these situations. Our inverter heat pumps adapt precisely to the needs of the building, minimising the number of on/off cycles.
With reversible operation, our heat pumps provide cooling in summer and heating in winter. **JBG^{HT}** units use modern R290 refrigerant, which has a very low carbon footprint.

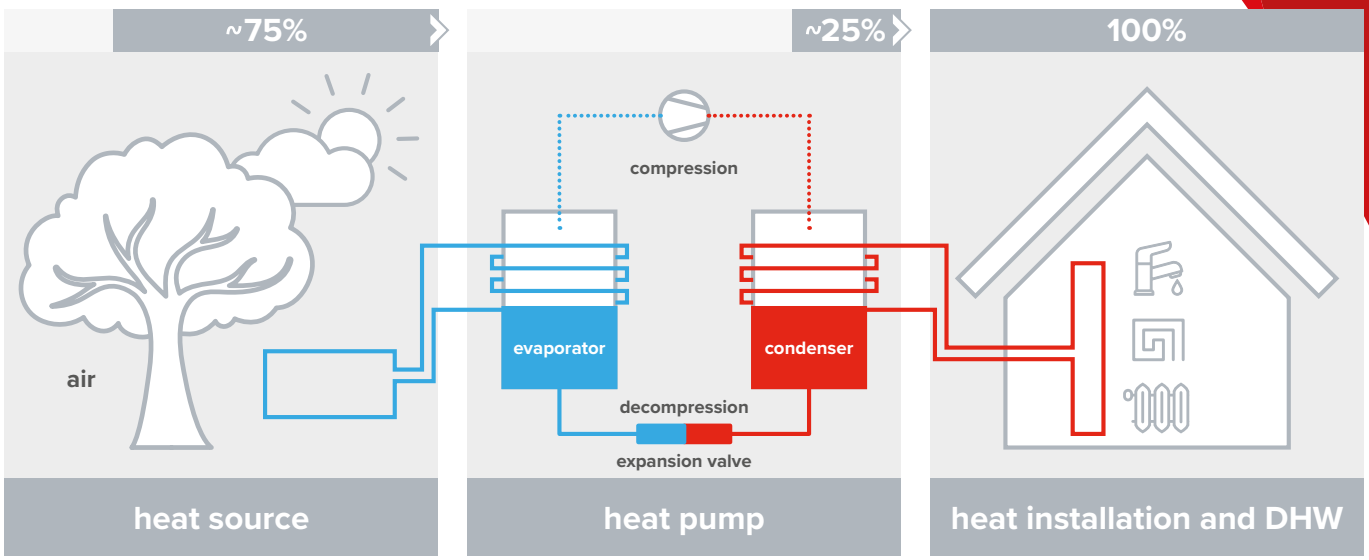


HEATING / COOLING

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.



ELEGANT DESIGN



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.

HEATING TECHNOLOGY

JBG HT

HEAT PUMPS

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