

iClimate

Ventilation units with integrated air-source heat pumps

Fresh indoor air through energy
efficient ventilation.



 **GLOBALVENT**

The iClimate standard series is suitable for buildings with a floor area of 60–800 m²* such as larger single-family homes, apartments, office buildings, hotels, restaurants, swimming pool, etc. The unit is sized to ensure efficient cooling and heating. This results in ventilation air flow greater than the minimums required by the Building Codes, which guarantees an excellent indoor atmosphere and air quality. The iClimate series requires no external units, as the integrated heat pump is contained within the device. This process makes the series highly suitable for areas with strict limitations on altering facades.

***Other Upon Request**



Fresh air Ventilation brings fresh, clean air into the space and channels used air out. The system automatically provides specific parameters of air temperature regardless of the environment. iClimate uses automatic reduction of air consumption at extreme settings for controlling filters. iClimate fans use Green Tech EC-motors, which produces high fan speed at high pressure with minimal energy consumption. EC-fans have high performance characteristics giving the units the ability of modulating from 0 to 100%.



iClimate units have a superior heat recovery capacity from extracted air. Heated and cooled air supply is carried out with the energy efficient mode, COP, ERR 3 to 6,5.



iClimate units are controlled by a built-in controller using a single microprocessor automation unit. A compact panel is mounted in a convenient position for the user. The iClimates' automatic controller allows the user free adjustments and settings at all times regardless of outdoor temperature changes.



In iClimate units, heating and ventilation recovery are integrated with an air source heat pump. This provides part of the heating required by the premises, and can be used as an auxiliary system to any type of main heating systems. iClimate units are also capable of cooling in summer using freon inverter compressors. These inverter compressors give a wide range of variation of both thermal and refrigerating power. This process provides a stepless control of supply air temperature, greater margin of cooling and thermal capacity. Our technology provides a significant improvement in energy efficiency in the summer and especially in winter time. This is due to substantial increase in thermal capacity of the inverter heat pump is 15-20 degrees down shifted the threshold of activation of the electric heaters and supply air heating is carried out in an energy-efficient mode of electricity consumption in 4-8 times less than it would be necessary for the operation of heaters of the same capacity. iClimate devices are designed to provide ventilation for premises in constant use, such as residential buildings.



iClimate units can be controlled through smartphone applications.



Quick and easy installation

Integrated mounting system ensures maximum installation versatility and requires only fastening the system with ducts, condensation drain and lead power supply.



High reliability

Globalvent only uses proven components from world leading manufacturers in our designs. With over 15 years of experience, we have confidence in the quality and reliability of our systems that allows us to offer all customers extended warranties of up to 3 years.



Ergonomics

Small dimensions, low weight and low noise level of this system allow you to mount it above the suspended ceiling. Easy installation – requires only replacing the filter 1 time per year (excluding the heavily polluted air).



Clear-cut savings

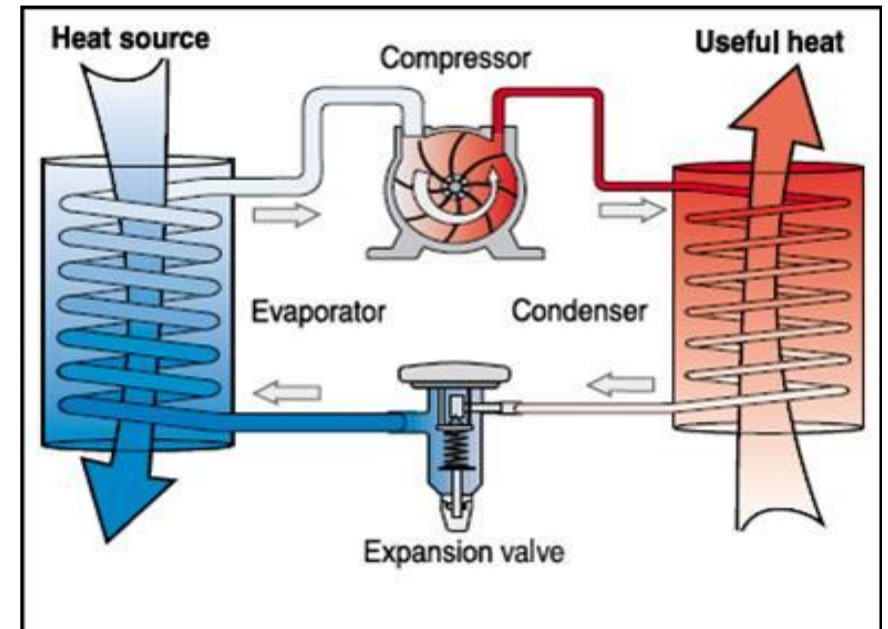
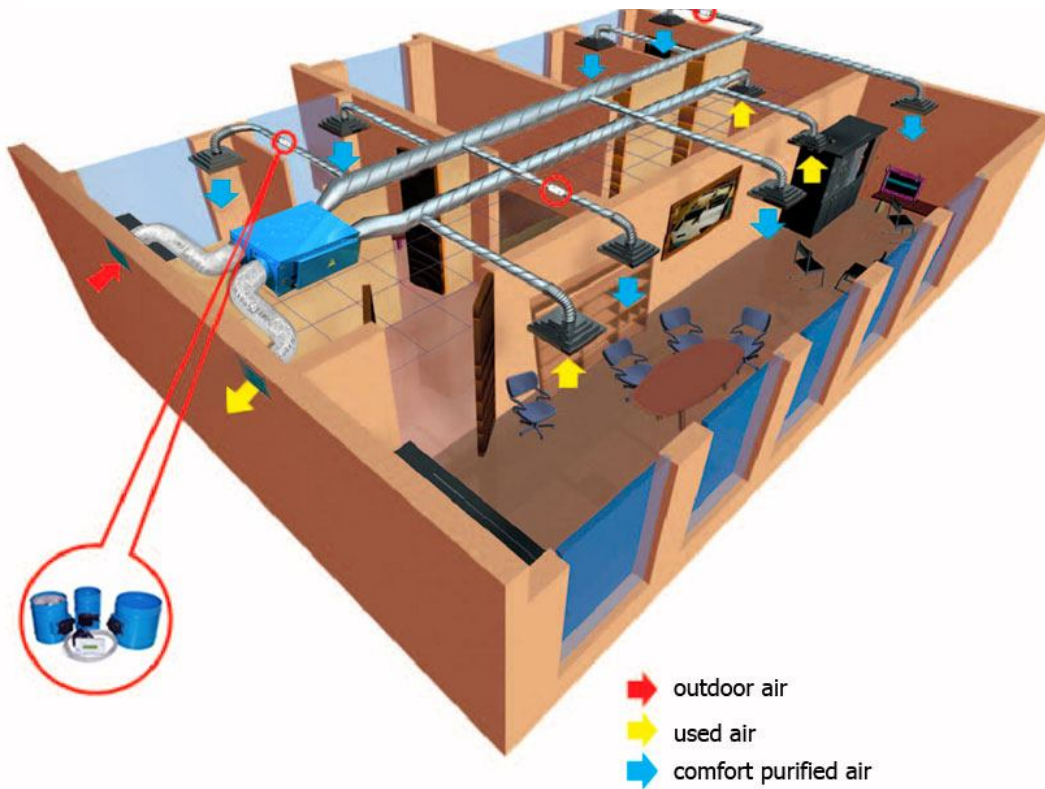
The iClimate series units recover heat from extract air and use it to heat supply air. This creates considerable savings. Replacing two separate units with a single integrated unit not only saves space, but installation costs as well. Ecologically clean heat pump (inverter compressor) of air-forced unit makes it possible to “extract” the significant part of environment heating energy under efficiency (so called “Coefficient of Performance” – COP) of 3 to 6,5! It means that one gets 3 – 6,5 kW from every spent kW/h under moderate European climate or with available recuperator this coefficient could be increased up to 10 and over. In spring and autumn time as well as during the cool periods, when central heating systems are out of operation, additional heating sources are not required due to the energy of a heat pump.



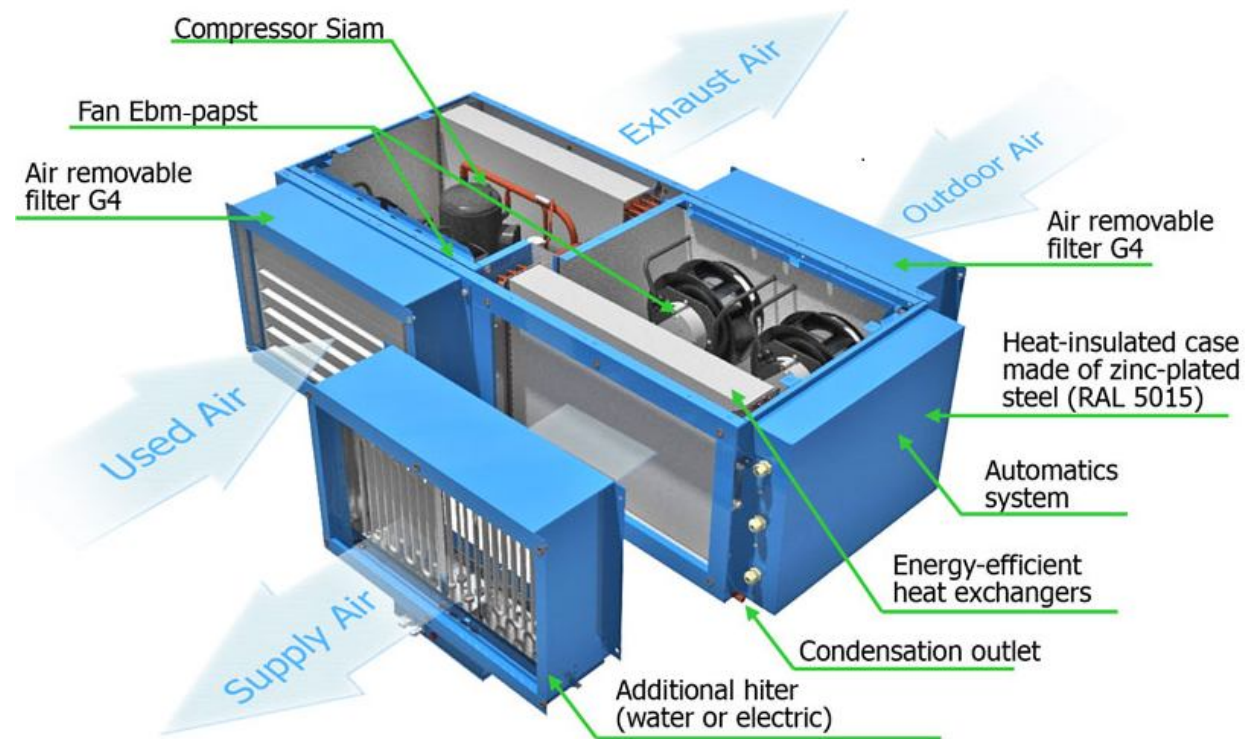
A green choice

The iClimate series units use heat-recovery methods – a heat pump by inverter compressor. Thanks to this they are significantly more energy-efficient and save enormous amounts of heating energy.

The HEAT RECOVERY EFFECT is obtained by the use of exhausted air energy for heating or cooling of intake air. Thus, in major cases there is no need to mix outdoor and indoor air (partial recalculation) to economize power expenses for the heating of air up to the required temperature.



COP up to 6



function of both condenser and heat exchanger-evaporator positioned in exhaust channel absorbs heat energy of removed air. This process consumes less energy compared to direct electric heating of inflow air.

NEW AUTOMATED CONTROL SYSTEM

Independent control of inflow and exhaust fans

- Complete self-diagnostics while turned off
- Registration of unit operation with recording in Ferroelectric Random Access Memory(FRAM)
- Easy software upgrading available
- Optional integration in dispatching system, remote control, “smart house” system
- Automatic switching between “heating/cooling” modes according to the temperature sensors data and user’s settings
- Inflow air temperature regulation by automated selection of inflow and exhaust fan’s speed (both in heating and cooling modes)
- Available service regime – check of temperature sensor readings

Connect CO2 sensors to prevent over-ventilation, while ensuring the correct amount of oxygen (option).

OPERATION PRINCIPLE OF CLIMAT UNIT

“iClimate” consists of an inflow and exhaust ventilation unit (IEVU) enclosed with a heat-insulated case made of zinc-plated steel, painted blue (RAL 9015). Separate inflow and exhaust channels made up from two radial fans, two cassette filters, reversible heat pump block, electric/water heater and automatic control system.

The reversible heat pumps is a factory charged, airtight freon tank circuit using copper-aluminum plate-type heat exchangers installed in both the inflow and exhaust channels. While in cooling mode, the heat exchanger in the inflow channel acts as an evaporator and cools the inflow air. IClimate’s heat exchanger/condenser is cooled by the air exhausted from the room.

While in heating mode, the inflow of outdoor air is heated by the heat exchanger. This performs the

CONTROL CONVENIENCE

iClimate control is performed by a single microprocessor software system by means of a compact remote control mounted in any location convenient for the user.

Remote control functions:

Setting required indoor temperature (heating/cooling modes)

- Only ventilation mode (supply of outdoor air without any charge of temperature characteristic); step regulation of fan speed;
- TIMER setting of daily/weekly schedules of unit run;
- Indication of preset temperature, indoor temperature, outdoor temperature, unit run regimes, compressor performance;
- Entirely automated control which allows the user to keep all settings with no charging during the whole period of unit operation independently of outdoor temperature changes.

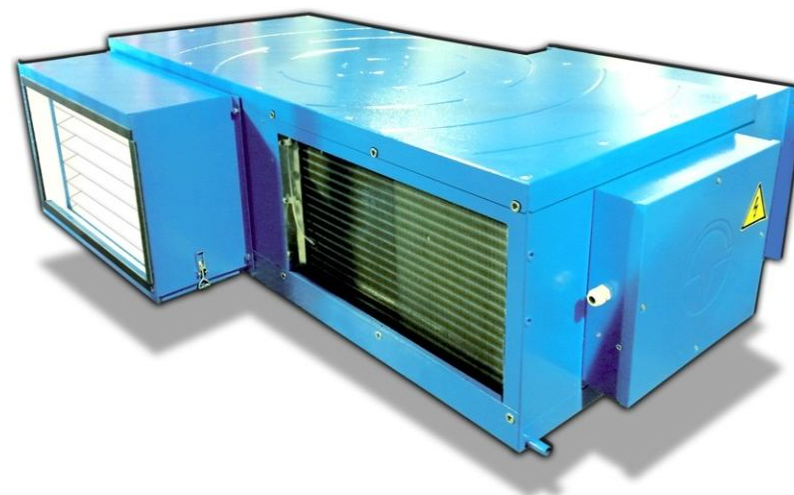
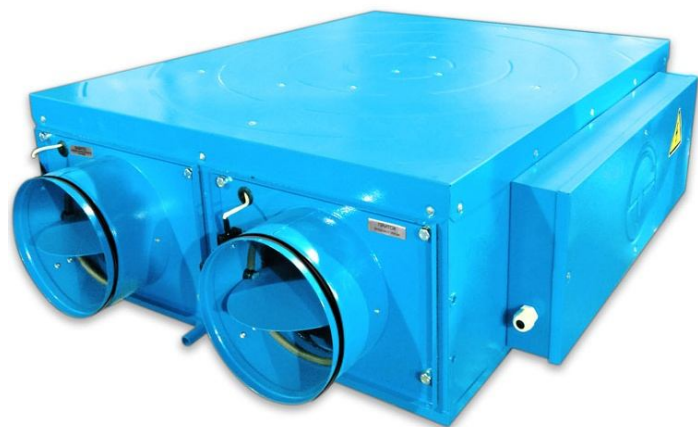


TECHNICAL DATA							
Designation and specification	Measurement unit	iClimate - 031	iClimate - 038	iClimate- 038 BOOST	iClimate- 042	iClimate - 050	iClimate- 050 BOOST
Air performance intake and supply							
Nominal	m ³ /hour	900	1200	1500	2200	3000	4500
	liters per second	250	333	416	611	833	1250
	Pa	175	60	240	280	260	230
Maximum	m ³ /hour	1100	1300	1650	2800	4000	5500
	liters per second	305	361	458	777	1111	1527
Cooling the intake air							
Cooling capacity of fresh air ⁽¹⁾	kW	1,18-5,5	1,55-8,04	1,55-9,96	2,77-13,8	4,24-20,7	4,24-26,7
	Btu/hour	4026-18766	5288-27432	5288-33983	9451-47086	14466-70628	14466-91101
	USRT	0,34-1,56	0,44-2,28	0,44-2,83	0,78-3,92	1,2-5,88	1,2-7,59
Power consumption of the compressor heat pump	kW	0,43-0,88	0,57-1,12	0,57-1,85	1,07-3,14	1,54-3,46	1,54-4,66
Supply air heating							
Heater power of inlet air with heat pump ⁽²⁾	kW	1,4-5,75	1,93-11,8	1,93-13,2	3,21-16,47	5,27-24,29	5,27-27,8
	Btu/hour	4776-19619	6585-40261	6585-45038	10952-56195	17981-82877	17981-94853
	USRT	0,39-1,64	0,55-3,35	0,55-3,75	0,91-4,68	1,49-6,9	1,49-7,93
Power consumption of the compressor heat pump	kW	0,35-0,72	0,46-1,56	0,46-1,82	0,83-2,69	1,17-3,06	1,17-3,49
COP		2,7-6,25	2,71-6,43	2,71-5,38	2,6-4,39	2,75-5,9	2,75-5,72
Fans power consumptions							
Maximum	kW	0,32	0,32	0,73	1,38	1,66	2,0
Minimum	kW	0,02	0,05	0,05	0,09	0,15	0,15
Additional heating capacity							
Electric heater (standard)	kW	4, 1~/50Hz+N+P E	6, 3~/50Hz+N+P E	6, 3~/50Hz+N+PE	8, 3~/50Hz+N+PE	12, 3~/50Hz+N+P E	18, 3~/50Hz+N+PE
Water heater (water 90 °C/70 °C)	kW	9	23	23	37	50	76
Overall dimensions							
Height	mm	304	394	394	436	505	505

Width	mm	786	1063	1063	1550	1710	1710
Length (during the air)	mm	1202	1380	1380	1035	1119	1119
Weight (without additional units)	kg	60	97	97	134	152	152
Mounting dimensions	mm	200	315	315	600x300	700x400	700x400
Diameter of outletdrain	mm	16	16	16	16	16	16
Maximum power consumption							
Working on heating, electric heater	kW	5,04	7,9	8,55	11,51	16,72	23,49
Working on heating, water heater	kW	1,04	1,9	2,55	4,07	4,72	5,49
Working on cooling	kW	1,2	1,44	2,58	4,52	5,12	6,66
Freon (R410A)	kg	0,8	1,3	1,3	1,8	3,2	3,2
The amount of condensate (at 25 °C, 70 % RH)	liters per hour	2	4	5	6	8	10
Class filtration air filters	G4						
The enclosure protection	IP 44						
The type of fans	EC-motor						
Installation power		220V/1~/50H z+N+PE	220V/1~/50Hz +N+PE	220V/1~/50Hz+ N+PE	380V/3~/50Hz+ N+PE	380V/3~/50Hz +N+PE	380V/3~/50Hz+ N+PE
Noise level through the corps beyond 1 m., not more	db (A)	46	46	46	55	58	61
Operation	Automatic microprocessor via remote control with LCD display						

1 – The cooling output is based on an extraction temperature of 22 °C/50% RH and a nominal air volume.

2 – Heat output is based on an extraction temperature of 20 °C/40% RH and a nominal air volume.



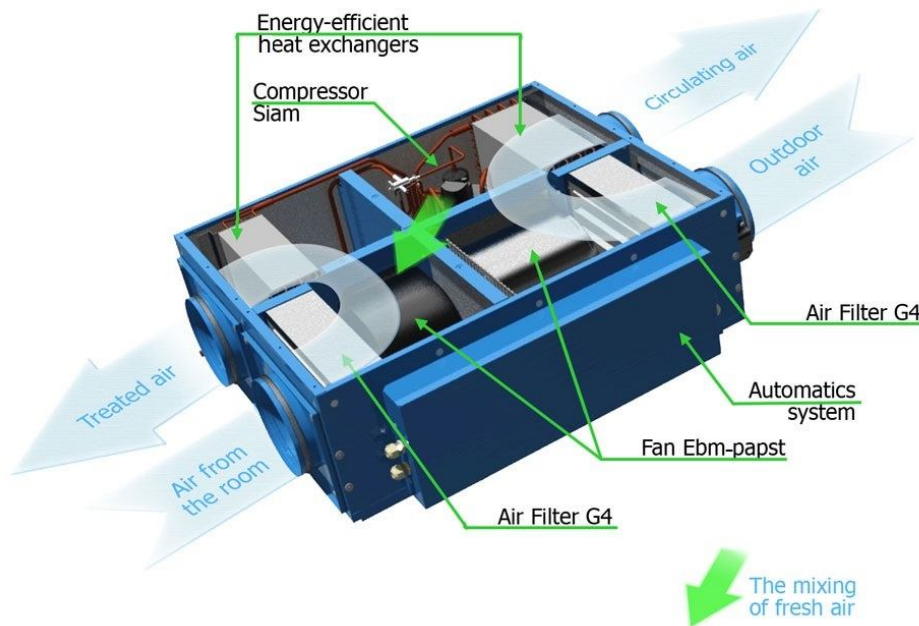
Climate PACKAGE

Multi-packaged air conditioner which guarantees the freshness of the air in your home



Climate package – is a multi-packaged air conditioner which guarantees the freshness of the air in your home and maintains the desired temperature at any time of the year.

Climate package - does not require installation of the outdoor unit and provides the mixing of fresh air.



MICROCLIMATE COMFORTABLE

Increased productivity. Superior mode is automatically activated at start-up. It means that for user the microclimate provided almost immediately. In order to save energy the air conditioner operates in mode of increased performance up to optimal temperature after which time the air conditioner starts to operate in economy mode.

Double purification from dust particles and unpleasant odors atmospheric and inner air in the outer and inner contour of the installation increases life of the filter and the autonomy of the installation **Package.**

System of fresh air from 50 to 1000 m³/h (20% of the installation capacity). In air-conditioning facilities provide the necessary level of ventilation. The volume of air is completely replaced in 1 hour of continuous operation.

HEALTH AND COMFORT

Warm start – eliminates the flow of cold air into the room in first moments of operation of the air conditioner when heating.

Fan speed control is carried out automatically to provide a low noise level when is comfortable microclimate.

INTELLIGENCE MANAGEMENT

One-touch control is carried out by simply pressing the start button on remote and it activates the same settings of the air conditioner which operated until their shutdown.

Online controller to control air conditioning through the Internet connection via smartphones, computers (requires Internet with "white" ip address).

Centralized management of the Software controller allows you to implement functionality manage multiple installations.

Self-diagnosis function is designed to quickly find possible malfunctions of the air conditioner and to reduce the time and costs of their removal.

24 hour timer allows you to automatically adjust the air conditioner according to the daily program.

Automatic mode selection frees the user from frequent switching from heating to cooling and back manually which occurs in the off-season. Regardless of the temperature outside the room is constantly supported optimum temperature; creating comfort and coziness in your home.

ECONOMY

Environmentally heat pump (freon R-410A) installation Package allows to part the energy "away" from the environment with greater efficiency ("Coefficient of Performance" COP) from 3.9 to 7! It means that for each invested kilowatt/hour you really get from 3.9 to 7 kilowatts of thermal energy into the room.

HIGH RELIABILITY

Installation Climate Package is made in the monoblock and in the system of used components only the best manufacturers; it allows for years don't think about the cost of new equipment. Production experience in the field of ventilation with integrated heat pump for over 20 years which gives the opportunity to offer customers extended warranty up to three years.

EASY MAINTENANCE

It requires only one changing of the filters.

WARRANTY AND SERVICE SUPPORT Authorized service keeps working air conditioner during and after the factory warranty.

TECHNICAL DATA							
Designation and specification	Measurement unit	Package 031	Package 035	Package 038	Package 042	Package 050	Package 067
Air performance intake and supply							
Nominal	m ³ /hour	500	600	1200	2000	3000	4500
	liters per second	139	166	332	555	833	1250
Maximum	m ³ /hour	750	900	1600	2950	4000	5900
	liters per second	208	250	444	820	1110	1638
The fresh air flow 20%	m ³ /hour	100	120	240	400	600	900
Cooling the intake air							
Cooling capacity ⁽¹⁾	kW	3	4,5	7	12	17	24
	Btu/hour	10236	15354	23884	40944	58004	81888
	USRT	0,85	1,28	1,99	3,41	4,83	6,82
Power consumption of the compressor heat pump	kW	0,68	0,98	1,5	2,59	3,55	4,82
Supply air heating							
Heater power of air with heat pump ⁽²⁾	kW	3,21	4,9	7,29	12,4	17,21	24,23
	Btu/hour	10952	16718	24900	42308	58720	82672
	USRT	0,91	1,39	2,07	3,52	4,89	6,88
Power consumption of the compressor heat pump	kW	0,46	0,69	1,05	1,85	2,81	3,59
COP		4,41	4,59	4,66	4,63	4,78	4,96
Fans power consumptions:							
Maximum:	kW	0,37	0,39	0,98	1,72	2,28	3,24
Minimum:	kW	0,02	0,03	0,05	0,09	0,15	0,18
Additional heating capacity							
Electric heater (standard)	kW	1,5	2	4	6	8	12
Overall dimensions							
Height:	mm	304	355	394	436	505	691

Width:	mm	786	888	1063	1550	1710	1710
Length (during the air)	mm	1030	1137	1270	1035	1119	1129
Weight (without additional units)	kg	60	76	97	134	152	198
Mounting dimensions	mm	200	250	315	600x300	700x400	700x600
Diameter of outletdrain	mm	16	16	16	16	16	16
Maximum power consumption							
Working on heating, Electric	kW	κBT	2,33	3,08	6,03	9,57	13,09
Working on cooling	kW	κBT	1,05	1,37	2,48	4,31	8,06
Freon (R410A)	kg	0,68	0,72	1,16	1,8	2,2	3,6
The amount of condensate (at 25 °C/70% RH.)	liters per hour	1,5	3	4	5	6	8
Class filtration air filters	G4						
The enclosure protection	IP 44						
Installation power		220V/1~/50 Hz+N+PE	220V/1~/50Hz +N+PE	220V/1~/50Hz +N+PE	380V/3~/50Hz +N+PE	380V/3~/50Hz +N+PE	380V/3~/50Hz+N+PE
Noise level through the corps beyond 1 m., not more	db (A)	46	46	46	55	58	61
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