



HES
HOME ELECTRO SYSTEM

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Heat pumps

5 – 16 kW

Water – Air (EVO)

Air – water (EVCO – M) monoblock

Air – water (EVCO – SM) modular

Air – water (EVCO – SM-i) inverter modular

Air – water (EVCO – SM-iG) inverter modular with hot water supply

HEAT PUMPS

HES EVO heat pump combines optimal power, compact size, easy mounting, smart monitoring and simple control. Extended model range, wide selection of functions and adaptability with different heating and ventilation systems give it the edge over the similar products in the market.

The heat pump can control secondary heat sources: diesel, gas, electric boilers. It is possible to install up to 128 pumps in a building to provide power output up to 3,200 kW.



Water – air

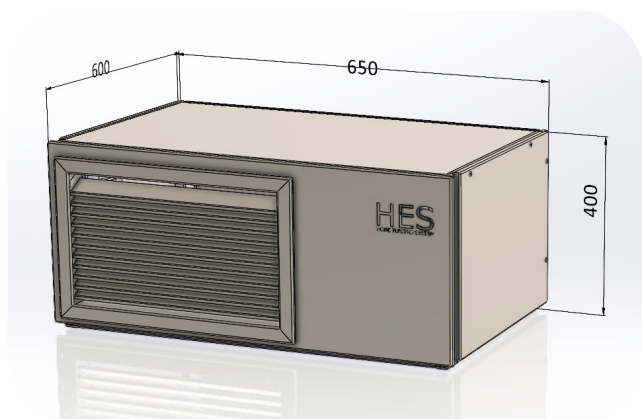
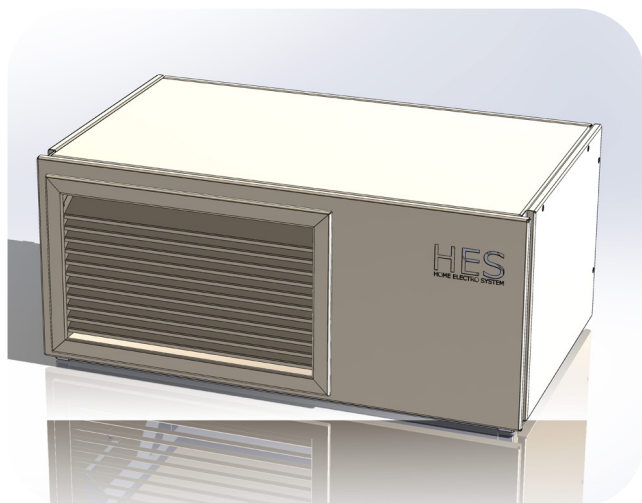
HES EVO HEAT PUMP “water – air”

The heat pump is used for space cooling and heating.

The heat pump is equipped with a hermetically sealed compressor, a phase relay, a starting current load relief, a condenser, an evaporator and safety actuators – high/low pressure relay.

Availability of weather compensation and clock/calendar functions as well as day/night mode allows to more precisely maintain indoor temperature and save resources.

Standard size for connection to air ducting.



DEVICE PARAMETERS

- ▶ Refrigerant R32;
- ▶ Modern easy-to-read color touchscreen;
- ▶ Ability to control additional power sources (diesel/electric boiler);
- ▶ Built-in system of recording heating capacity and efficiency factor;
- ▶ Models maintain specified indoor and domestic hot water temperature with accuracy of up to 1 degree;
- ▶ Coefficient of performance (COP) increased to 5;
- ▶ Heat source operation temperature WQA from + 5°C to +20°C;
- ▶ Air heating up to 55°C;
- ▶ Cooling down to +8°C;
- ▶ Dehumidification mode (built-in humidity sensor);
- ▶ Easy mounting;
- ▶ Quiet operation due to sound-proof body design;
- ▶ Indoor installation;
- ▶ Stainless steel body parts.

ESSENTIAL TECHNICAL SPECIFICATIONS:

Model		HES-EVO-5-A-em-4	HES-EVO-7-A-em-4	HES-EVO-10-A-em-4/ HES-EVO-10-A-em-6	HES-EVO-13-A-em-6	HES-EVO-16-A-em-6
Weight*	kg	107	113	120	128	131
Overall dimensions, WxDxH	mm	600x650x400			600x650x800	
Refrigerant		R32	R32	R32	R32	R32
Fan		ec	ec	ec	ec	ec
Connection of source circuit		G1"	G1"	G1"	G1"	G1"
Rotor compressor		SNB172FSHM1	SNB172FSHM1	SNB220FSHM1	SNB220FSHM1	SNB33FSHM1
Electricity consumption:						
Compressor	V/Hz	230 (380)/50	230 (380)/50	230 (380)/50	380/50	380/50
Control	V/Hz	230/50	230/50	230/50	230/50	230/50

* - item weight can change

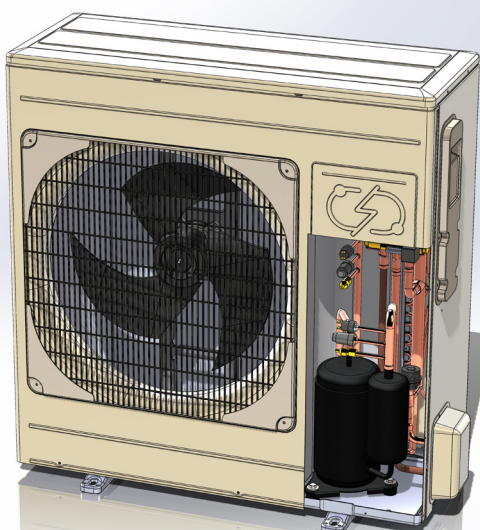
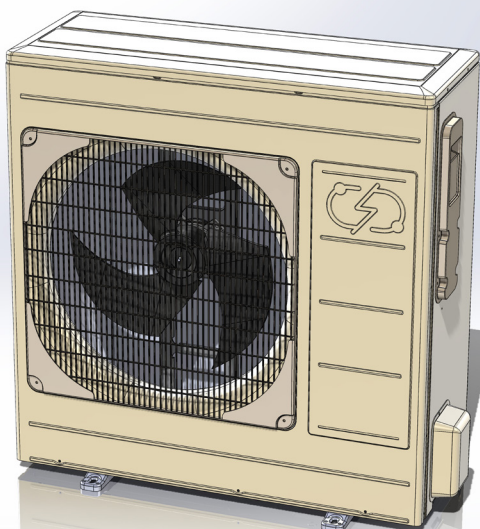
HES EVCO – M HEAT PUMP “AIR – WATER” (monoblock)

The heat pump is used for heating and hot water preparation.

The heat pump is equipped with a hermetically sealed compressor, a phase relay, a starting current load relief, a condenser, an evaporator and safety actuators – high/low pressure relay.

Availability of weather compensation and clock/calendar functions as well as day/night mode allows to more precisely maintain indoor temperature and save resources.

Priority in heating of hot water and legionella thermal disinfection.



DEVICE PARAMETERS

- ▶ Refrigerant R32;
- ▶ Modern easy-to-read color touchscreen;
- ▶ Built-in circuit circulation pump;
- ▶ Ability to control additional power sources (diesel/electric boiler);
- ▶ Built-in system of recording heating capacity and efficiency factor;
- ▶ Models maintain specified indoor and domestic hot water temperature with accuracy of up to 1 degree;
- ▶ Coefficient of performance (COP) increased to 5;
- ▶ Heating operation mode from -28°C to 40°C;
- ▶ Air heating up to 60°C;
- ▶ Cooling down to +8°C;
- ▶ Dehumidification mode (built-in humidity sensor);
- ▶ Easy mounting;
- ▶ Quiet operation;
- ▶ Outdoor installation;
- ▶ Stainless steel body parts.

ESSENTIAL TECHNICAL SPECIFICATIONS:

Model		HES-EVCO-EVI-i-SM-5-A-M-4	HES-EVCO-EVI-i-SM-7-A-M-4	HES-EVCO-EVI-i-SM-10-A-M-4/ HES-EVCO-EVI-i-SM-10-A-M-6	HES-EVCO-EVI-i-SM-13-A-M-6	HES-EVCO-EVI-i-SM-16-A-M-6
Weight*	kg	68	69	78	91	105
Overall dimensions, WxDxH	mm	800×348×715				
Refrigerant		R32	R32	R32	R32	R32
Fan		ec	ec	ec	ec	ec
Connection of source circuit		G1"	G1"	G1"	G1"	G1"
Rotor compressor		ZP29K5E-PFJ	ZP31K5E-PFJ	ZP42K5E-TFD	ZP54K5E-TFD	ZP61K5E-TFD
Electricity consumption:						
Compressor	V/Hz	230 (380)/50	230 (380)/50	230 (380)/50	380/50	380/50
Control	V/Hz	230/50	230/50	230/50	230/50	230/50

* - item weight can change

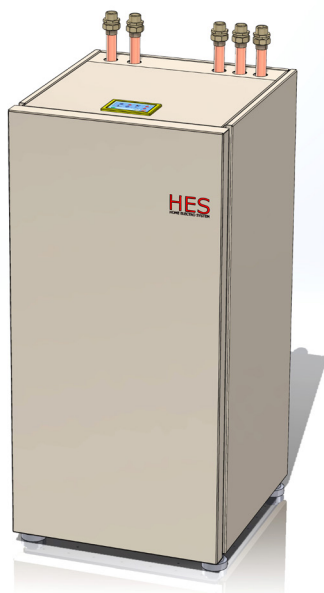
HES EVCO - SM HEAT PUMP “Air - water modular”

The heat pump with built-in electric heating element, three-way heating/hot water modes switching valve.

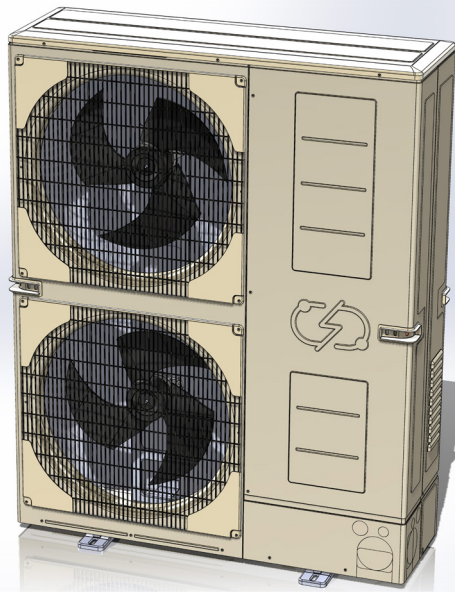
The heat pump is equipped with a hermetically sealed compressor, a phase relay, a starting current load relief, a condenser, an evaporator and safety actuators – high/low pressure relay.

Availability of weather compensation and clock/calendar functions as well as day/night mode allows to more precisely maintain indoor temperature and save resources.

Priority in heating of hot water and legionella thermal disinfection.

**DEVICE PARAMETERS**

- ▶ Refrigerant R32;
- ▶ Modern easy-to-read color touchscreen;
- ▶ Built-in circuit circulation pumps;
- ▶ Built-in electric heating element, three-way heating/hot water/active cooling modes switching valve;
- ▶ Built-in system of recording heating capacity and efficiency factor;



- ▶ Models maintain specified indoor and domestic hot water temperature with accuracy of up to 1 degree;
- ▶ Coefficient of performance (COP) increased to 5;
- ▶ System operation mode from -28°C to $+40^{\circ}\text{C}$;
- ▶ Heating water preparation up to 60°C ;
- ▶ Easy mounting;
- ▶ Quiet operation;
- ▶ Internal unit is installed indoor;
- ▶ External unit is installed outdoor;
- ▶ Stainless steel body parts.

ESSENTIAL TECHNICAL SPECIFICATIONS:

External unit		HES-EVCO-5-A-MV-4	HES-EVCO-7-A-MV-4	HES-EVCO-10-A-MV-6	HES-EVCO-13-A-MV-6	HES-EVCO-16-A-MV-6
Internal unit		HES-EVCO-SM-5-A-4	HES-EVCO-SM-7-A-4	HES-EVCO-SM-10-A-4	HES-EVCO-SM-13-A-4	HES-EVCO-SM-16-A-4
Weight* int/ext	kg	50/68	65/69	70/78	77/91	84/105
Internal unit, WxDxH	mm	600x650x1280				
External unit, WxDxH	mm	800x348x715 / 800x348x715/1050x1349x330				
Refrigerant		R32	R32	R32	R32	R32
Connection of heating circuit		G1"	G1"	G1"	G1"	G1"
Connection of Freon circuit	mm	6/9	9/12	9/12	9/15	12/15
Compressor		ZP29K5E-PFJ	ZP31K5E-PFJ	ZP42K5E-TFD	ZP54K5E-TFD	ZP61K5E-TFD
Electricity consumption:						
Compressor	V/Hz	230 (380)/50	230 (380)/50	230 (380)/50	380/50	380/50
Control	V/Hz	230/50	230/50	230/50	230/50	230/50

* - item weight can change

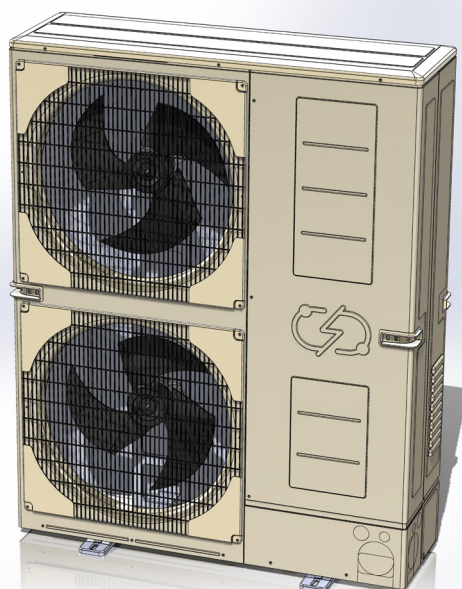
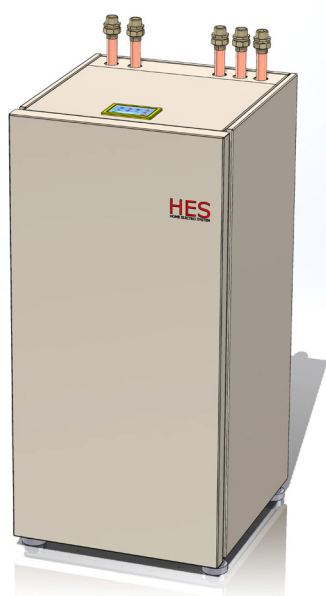
HES EVCO – SM-i HEAT PUMP “Air – Water modular”

The inverter heat pump with built-in electric heating element, three-way heating/hot water modes switching valve and active cooling function.

The heat pump is equipped with a hermetically sealed compressor, a phase relay, a condenser, an evaporator and safety actuators – high/low pressure relay.

Availability of weather compensation and clock/calendar functions as well as day/night mode allows to more precisely maintain indoor temperature and save resources.

Priority in heating of hot water and legionella thermal disinfection.



DEVICE PARAMETERS

- ▶ Refrigerant R32, inverter technology;
- ▶ Modern easy-to-read color touchscreen;
- ▶ Built-in circuit circulation pumps;
- ▶ Built-in electric heating element, three-way heating/hot water/active cooling modes switching valve;
- ▶ Built-in system of recording heating capacity and efficiency factor;
- ▶ Models maintain specified indoor and domestic hot water temperature with accuracy of up to 1 degree;
- ▶ Coefficient of performance (COP) increased to 5;
- ▶ System operation mode from -28°C to $+40^{\circ}\text{C}$;
- ▶ Heating water preparation up to 60°C ;
- ▶ Easy mounting;
- ▶ Quiet operation;
- ▶ Internal unit is installed indoor;
- ▶ External unit is installed outdoor;
- ▶ Stainless steel body parts.

ESSENTIAL TECHNICAL SPECIFICATIONS:

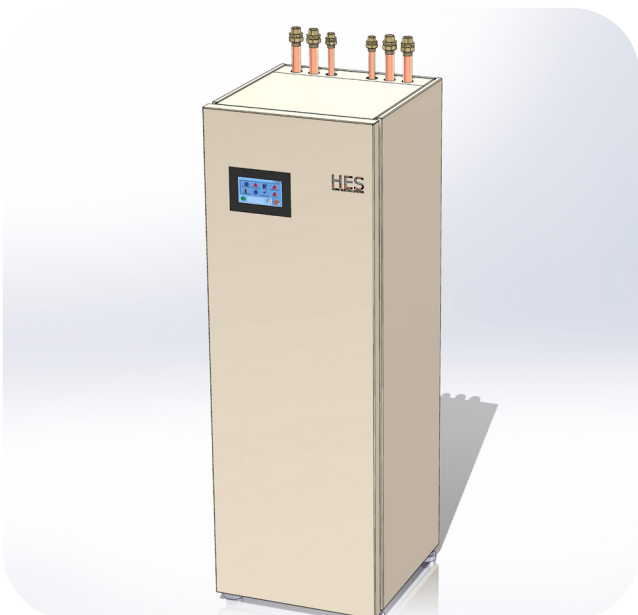
External unit		HES-EVCO-EVI-i-5-A-MV-4	HES-EVCO-EVI-i-7-A-MV-4	HES-EVCO-EVI-i-10-A-MV-6	HES-EVCO-EVI-i-13-A-MV-6	HES-EVCO-EVI-i-16-A-MV-6
Internal unit		HES-EVCO-SM-5-A-4	HES-EVCO-SM-7-A-4	HES-EVCO-SM-10-A-4	HES-EVCO-SM-13-A-4	HES-EVCO-SM-16-A-4
Weight* int/ext	kg	50/68	65/69	70/78	77/91	84/105
Internal unit, WxDxH	mm	600x650x1280				
External unit, WxDxH	mm	800x348x715 / 800x348x715/ 1050x1349x330				
Refrigerant		R32	R32	R32	R32	R32
Connection of heating circuit		G1"	G1"	G1"	G1"	G1"
Connection of Freon circuit	mm	6/9	9/12	9/12	9/15	12/15
Compressor		SNB172FSHM1	TNB220FLHMC	TNB306FPGMT	MNB33FEAMC	ANB42FNDMT
Electricity consumption:						
Compressor	V/Hz	230 (380)/50	230 (380)/50	230 (380)/50	380/50	380/50
Control	V/Hz	230/50	230/50	230/50	230/50	230/50

* - item weight can change

HES EVCO - SM - iG HEAT PUMP “air – water” (invertor modular with hot water supply)

The heat pump with built-in electric heating element, three-way heating/hot water modes switching valve, active cooling function and with built-in 180 l tank for hot water.

The heat pump is equipped with a hermetically sealed compressor, a phase relay, a condenser, an evaporator and safety actuators – high/low pressure relay.

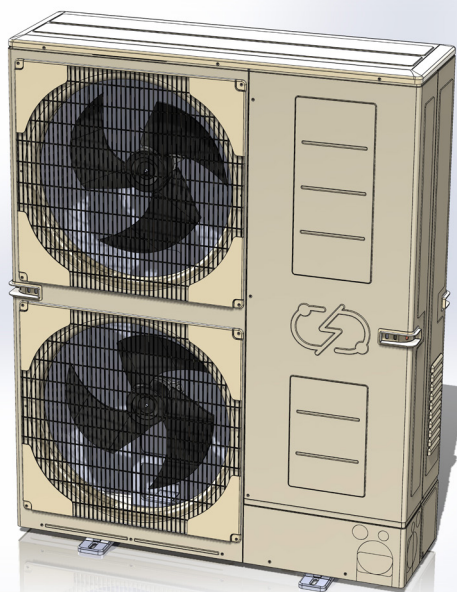


Availability of weather compensation and clock/calendar functions as well as day/night mode allows to more precisely maintain indoor temperature and save resources.

Priority in heating of hot water and legionella thermal disinfection.

DEVICE PARAMETERS

- ▶ Refrigerant R32;
- ▶ Modern easy-to-read color touchscreen;
- ▶ Built-in 180* l tank for hot water;
- ▶ Built-in circuit circulation pumps;



- ▶ Heating water preparation up to 60°C;
- ▶ Internal unit is installed indoor;
- ▶ External unit is installed outdoor;
- ▶ Stainless steel body parts.

- ▶ Easy mounting;
- ▶ Quiet operation;
- ▶ Built-in electric heating element, three-way heating/hot water modes switching valve;
- ▶ Built-in system of recording heating capacity and efficiency factor;
- ▶ Models maintain specified indoor and domestic hot water temperature with accuracy of up to 1 degree;
- ▶ Coefficient of performance (COP) increased to 5;
- ▶ Guaranteed trouble-free operation at down to -28°C;

ESSENTIAL TECHNICAL SPECIFICATIONS:

External unit		HES-EVCO-EVI-i-5-A-MV-4	HES-EVCO-EVI-i-7-A-MV-4	HES-EVCO-EVI-i-10-A-MV-6	HES-EVCO-EVI-i-13-A-MV-6	HES-EVCO-EVI-i-16-A-MV-6
Internal unit		HES-EVCO-SM-X-5-A-4	HES-EVCO-SM-X-7-A-4	HES-EVCO-SM-X-10-A-4	HES-EVCO-SM-X-13-A-4	HES-EVCO-SM-X-16-A-4
Weight** int/ext	kg	90/68	100/69	110/78	120/91	134/105
Internal unit, WxDxH	mm	600x650x1280				
External unit, WxDxH	mm	800×348×715 / 800×348×715/ 1050×1349×330				
Refrigerant		R32	R32	R32	R32	R32
Connection of heating circuit		G1"	G1"	G1"	G1"	G1"
Connection of Freon circuit	mm	6/9	9/12	9/12	9/15	12/15
Compressor		SNB172FSHM1	TNB220FLHMC	TNB306FPGMT	MNB33FEAMC	ANB42FNDMT
Electricity consumption:						
Compressor	V/Hz	230 (380)/50	230 (380)/50	230 (380)/50	380/50	380/50
Control	V/Hz	230/50	230/50	230/50	230/50	230/50

* - the volume of the DHW supply tank may vary

** - item weight can change

HES HEAT PUMP CONTROLLER is designed to control heating pump in residential, commercial, office and industrial buildings.



The controller features numerous combinations of control functions:

- ▶ Boiler station,
- ▶ Solar panels,
- ▶ Passive-active cooling,
- ▶ Hot water supply
- ▶ Under floor heating,
- ▶ Fan coil units,
- ▶ Swimming pool,
- ▶ Up to 128 heat pumps in a cascade.

A built-in intelligent algorithm of HES heat pump controller ensures maximum efficient resources consumption.



Control **HES HEAT PUMP** from anywhere in the world:

- ▶ Remote diagnostics and monitoring of heat pump technical conditions and its performance parameters using iOS and Android applications;
- ▶ Data storage on event server;
- ▶ Charts for systems operation analysis and optimization;
- ▶ Automatic and manual switching over to a secondary heat source.


DEFINITION OF MODEL NAMES

model **HES - EVCO - EVI - i - 10 - A - MV-6**

1 2 3 4 5 6 7

1	EVO	Heat pump of «water - air» series
	EVO+	Heat pump of «water - air» series
	EVCO	Heat pump of «air - water» series
2		without injection
	EVI	injection
3		start-stop
	i	inverter
4	5	5 kW
	7	7 kW
	10	10 kW
	13	13 kW
	16	16 kW
5	A	Freon R410A
	B	Freon R32
	C	Freon R134A
	D	Freon R454B
	E	Freon R454C
	F	Freon R1234ze
6	N	split-system external unit
	em	embeddable unit (into ventilation)
	MV	external modular unit
	M	monoblock
7	4	power supply 220-240 V; 1 phase; 50 Hz
	6	power supply 380 V; 3 phases; 50 Hz



info@hes-hp.com 

+7-800 333-63-71 

Russia, Vladimir region, Dobrograd
Special economic zone Dobrograd 1 



HES

HOME ELECTRO SYSTEM

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