V016-EN-01

AIR TO WATER HEAT PUMPS 2016

HEART OF YOUR HOME

sinclair
HEAT PUMPS

Air To Water Heat Pumps

Nowadays, people are becoming increasingly focused on the costs of heating as well as on environmental issues. Traditional heating systems are less cost-efficient and are not environmentally friendly.

Thus, people are searching for new heating technology with higher efficiencies, low operation costs and eco-friendly features. Fortunately, this is possible with S-THERM+, S-THERM and SANITARY WATER HEATERS!

These are air to water heat pumps created for house and room heating, as well as for water heating.

S-THERM+ EVI SCROLL AIR TO WATER HEAT PUMPS

S-THERM+ series air source heat pumps are specially designed for cold climates and to work in outside air temperatures of -20ºC. Its core philosophy is to solve the user's home heating requirements during winter and spring and provide cooling during a hot summer and autumn. High temperature EVI Scroll compressors are equipped with a vapour injection connection for Economizer Operation. Effective enhancement is accomplished by utilising a sub cooling circuit, it also increases heating capacity. The system is readily capable of reaching an outlet water temperature of 65ºC.

S-THERM DC INVERTER AIR TO WATER HEAT PUMPS

Adopting advanced heat pump technology, the S-THERM air source water heaters absorb natural heat energy from the ambient air and increases it for room heating. Not only does it satisfy room heating requirements, it also supplies domestic hot water. Besides, S-THERM can provide you a cooler environment in a hot summer. If you choose S-THERM, you will enjoy a comfortable environment at your home all year round. It is an all-in-one! S-THERM adopts eco-friendly refrigerant R410A, which is harmless to the ozone layer. Moreover, with advanced heat pump technology and powerful hardware, the efficiency of S-THERM has been improved, resulting in lower CO_2 emissions. It is an eco-friendly product, which can reflect your awareness of social responsibility to the environment.

SANITARY WATER HEATERS

Sinclair heat pumps for water heating take advantage of the heat pump principle with environmentally-friendly refrigerants. They save energy compared to commonly used sources for sanitary water heating. Due to its automatic antilegionella function, the water in the tank remains harmless and ready for use.

S-THERM+ EVI Scroll Heat Pumps

HEART OF YOUR HOME

More Advanced Technology for Water Up to 65 ºC

A heat pump absorbs energy from the surroundings and transfers it to heat the water. So the house could be warmed by pumping this warm water to an underfloor pipe heating system or radiators.

The indoor unit is designed for super low noise operation. All moving parts are set on a suspended base with the pipe system carefully designed and arranged to reduce vibration. The Inside of the cabinet is fully insulated. All this ensures that the unit operates stably and quietly

EVI COMPRESSOR SYSTEMS BENEFIT OVER STANDARD REFRIGERATION COMPRESSOR SYSTEMS OF EQUIVALENT CAPACITY DUE TO THE FOLLOWING:

CAPACITY IMPROVEMENT

Since the added capacity achieved by enhanced subcooling provides a higher enthalpy gain across the evaporator, the compressor displacement required can be reduced by the percentage enthalpy gain for the same evaporator capacity.

INCREASED COP

In a vapour-injected scroll compressor cycle, the efficiency is higher than in a conventional single-stage compressor delivering the same capacity. This is because the capacity increase from the extra subcooling is achieved from less input power. The vapour created in the sub-cooling process is then compressed only from the higher interstage pressure rather than from the lower suction pressure.

EVI COMPRESSOR SYSTEM BENEFITS

EVI SCROLL COMPRESSORS HAVE THE FOLLOWING FEATURES

- Higher volume efficiency
- Low noise level
- Reliability
- Easy construction solution
- Suitability for heat pumps

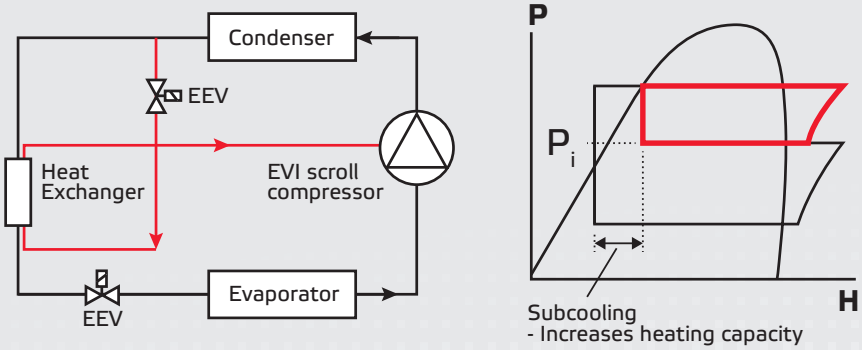
The vapour-injected scroll compressor cycle is similar to a two-stage compressor with interstage cooling, but is performed by using a single compressor.

The high phase is accomplished by extracting a portion of the condenser liquid and expanding it through an expansion valve into a counter flow brazed-plate heat exchanger acting as a subcooler.

The superheated vapour is then injected into an intermediate vapour injection port in the scroll compressor.

This additional subcooling increases the evaporator capacity by reducing its inlet enthalpy.

EVI SCROLL COMPRESSOR CYCLE



INDOOR UNITS

SHP-140IRC
SHP-180IRC

STANDARD UNIT COMPOSITION

- New EVI compressor specially designed for high water temperature.
- Base frame and external panels made of galvanized powder coated steel.
- Wilo EC water pump installed inside.
- Copeland compressor with R407c refrigerant.
- Flow sensor for water flow protection.
- Fully sealed control box to IP60.
- Intelligent Smart Sinclair controller and adjustment by quick mind microprocessor.
- New lattice LCD display of wire controller with JOG wheel.
- 3kW bivalent electric heater inside the indoor unit.
- Danfoss soft starter.
- Outflow water temperature up to 65ºC.
- 5 years warranty.

European Quality Label for Heat Pumps
ehpa

ASSIGNED IN THE CZECH REPUBLIC

INDOOR UNIT			SHP-140IRC	SHP-180IRC
Temperature Outdoor Air / Outflow Water (ºC) *	**A10 / W35**	**Heating Capacity (kW)**	15,55	17,88
		Power Input (kW)	3,28	3,90
		COP (-)	4,75	4,58
	A7 / W35	**Heating Capacity (kW)**	14,73	16,79
		Power Input (kW)	3,28	3,94
		COP (-)	4,49	4,26
	A2 / W35	**Heating Capacity (kW)**	11,38	13,27
		Power Input (kW)	3,06	3,77
		COP (-)	3,72	3,52
	A-7 / W35	**Heating Capacity (kW)**	10,30	11,09
		Power Input (kW)	3,17	3,85
		COP (-)	3,25	2,88
	A-15 / W45	**Heating Capacity (kW)**	8,81	10,43
		Power Input (kW)	4,09	4,95
		COP (-)	2,16	2,11
	A20 / W35	**Heating capacity (kW)**	18,28	22,32
		Power input (kW)	3,28	3,83
		COP (-)	5,58	5,82
	A35 / W12	**Cooling Capacity (kW)**	10,90	12,50
		Power Input (kW)	3,41	4,46
		EER (-)	3,20	2,80
Technical Specifications	Power Supply	V / Ph / Hz	400 / 3 / 50	400 / 3 / 50
	Outdoor Temperature Range	ºC	-20 ~ +40	-20 ~ +40
	Temperature of Leaving Water	ºC	+12 ~ +65	+12 ~ +65
	Refrigerant / Charge	- / kg	R407c / 8,0	R407c / 9,5
	Electric Heater	kW	3,0	3,0
	Compressor QTY	-	1	1
	Compressor	Type	COPELAND EVI scroll	COPELAND EVI scroll
	Refrigerant Liquid pipe	mm (inch)	12 (1/2")	12 (1/2")
	Refrigerant Gas pipe	mm (inch)	22 (7/8")	22 (7/8")
	Water Pipe Inlet / Outlet	-	DN 25 (1")	DN 25 (1")
	Sound pressure level L_{pA} at 1 m / 10 m	dB	51 / 31	51 / 31
	Net Dimensions	mm	602 x 638 x 1035	602 x 638 x 1035
	Net Weight	kg	159	150

***Values were measured according to EN 14511-2:2012 / EHPA standards including**
The specifcation of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label.
Contains fuorinated greenhouse gases covered by the Kyoto Protocol. R407C (23% R32, 25% R125, 52% R134a), GWP of refrigerant used: 1774.

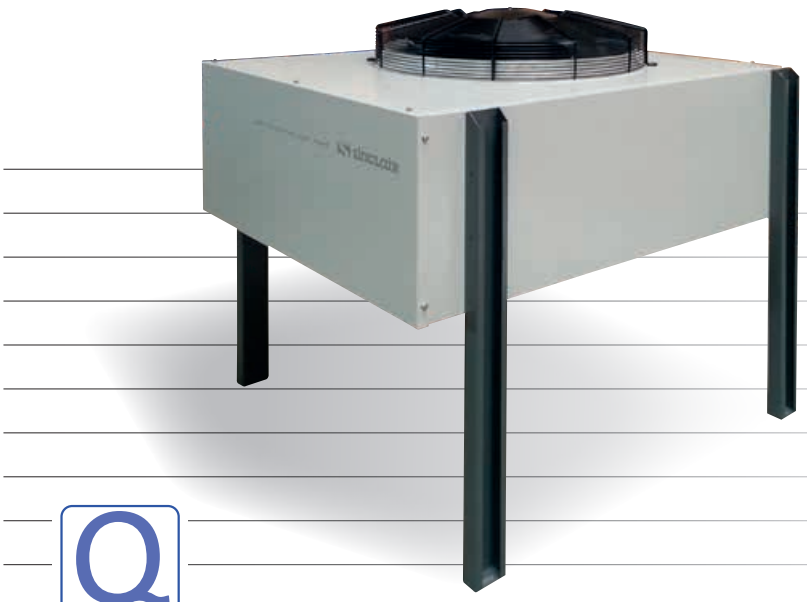
S-THERM+ by sinclair

OUTDOOR UNITS

SHP-140ERC
SHP-180ERC

STANDARD UNIT COMPOSITION

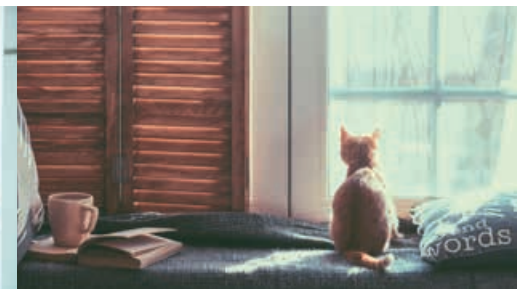
- Air / refrigerant heat exchanger (fins & coil) with hydrophylic coating.
- Electronic expansion valve.
- Automatic intelligent defrosting function.
- General testing and operational test carried out for every unit before package.
- Fan with EC motor.
- Anti-snow function.
- 5 years warranty.



European Quality Label for Heat Pumps
ehpa

ASSIGNED IN THE CZECH REPUBLIC

OUTDOOR UNIT		SHP-140ERC	SHP-180ERC
Power supply	V / Ph / Hz	230 / 1 / 50 (from indoor unit)	
Fan Quantity	pcs	1	
Fan Power Input	W	182	
Fan Direction	-	Vertical	
Air Flow	m^3 / h	4995	
Refrigeration Gas Pipe	mm (inch)	12 (1/2")	
Refrigeration Liquid Pipe	mm (inch)	22 (7/8")	
Sound pressure level L_{pA} at 1 m / 10 m	dB	58,2 / 38,2	
Unit Dimension (L*W*H)	mm	1168 x 1063 x 1102	
Net Weight	kg	94	

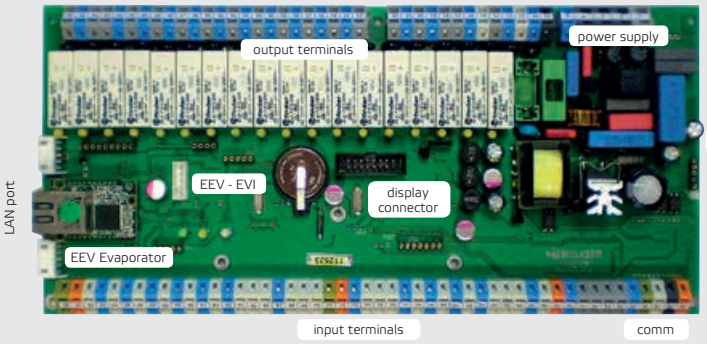


SMART SINCLAIR CONTROL SYSTEM

FEATURES

- Controls the heating of two independent reservoirs (tank for sanitary water and tank for heating water)
- Control of two equitherm circuits heating (i.e. floor heating and radiator heating)
- Controlling of EVI system for high COP and capacity
- System is more economical by using load management
- System monitors power input to prevent damage by wrong connection, over or under voltage
- Controls defrost mode depending on time, temperature and outdoor weather
- Automatic alarm and error reports

INDOOR UNIT
CONTROL PANEL



CONTROL AND COMMUNICATION OPTIONS

Standard

- Built-in LCD panel and JOG wheel
- USB port (universal serial bus)
- Industrial communication standard line RS485
- Long-distance monitoring via internet and remote access from the service center
- Using your PC- ethernet connection (via LAN / WAN) - tablet, smart phone

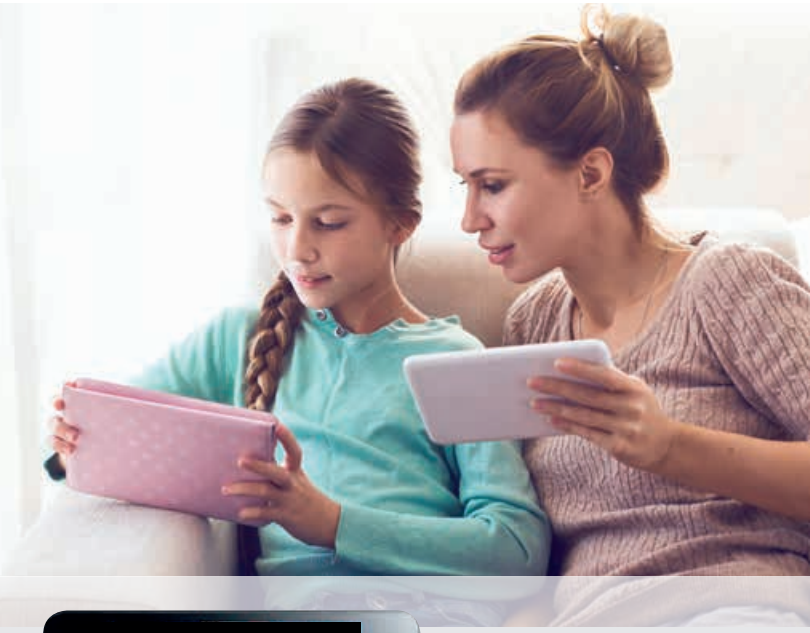
Optional

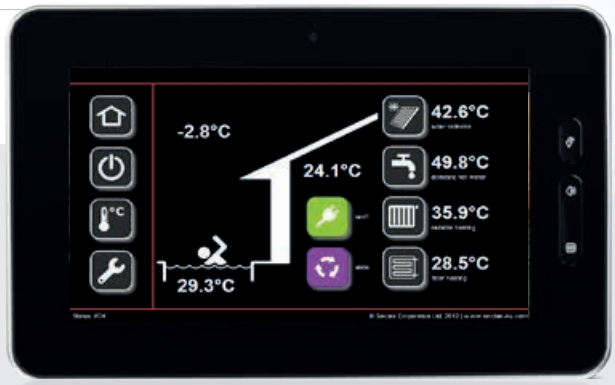
- Using your mobile phone GSM (by calling or SMS)

REMOTE CONTROL

CONTROL ON THE LOCAL NETWORK

- Comfort control with tablet or PC
- User-friendly interface
- Well-arranged display and quick orientation in menus
- Simple setup
- Quick access to basic information about the system





BASIC INFORMATION WINDOW

- Overview of basic temperatures
- Indication of operating mode and load management
- Icon to enter the menu (home, heat pump control, temperature, settings)

COMFORTABLE SETTINGS MENU

- Adjustment of temperatures
- Priorities
- Runtime parameters
- Equitherm
- LAN, GSM
- Remote monitoring
- Language

REMOTE CONTROL

CONTROL OVER THE INTERNET

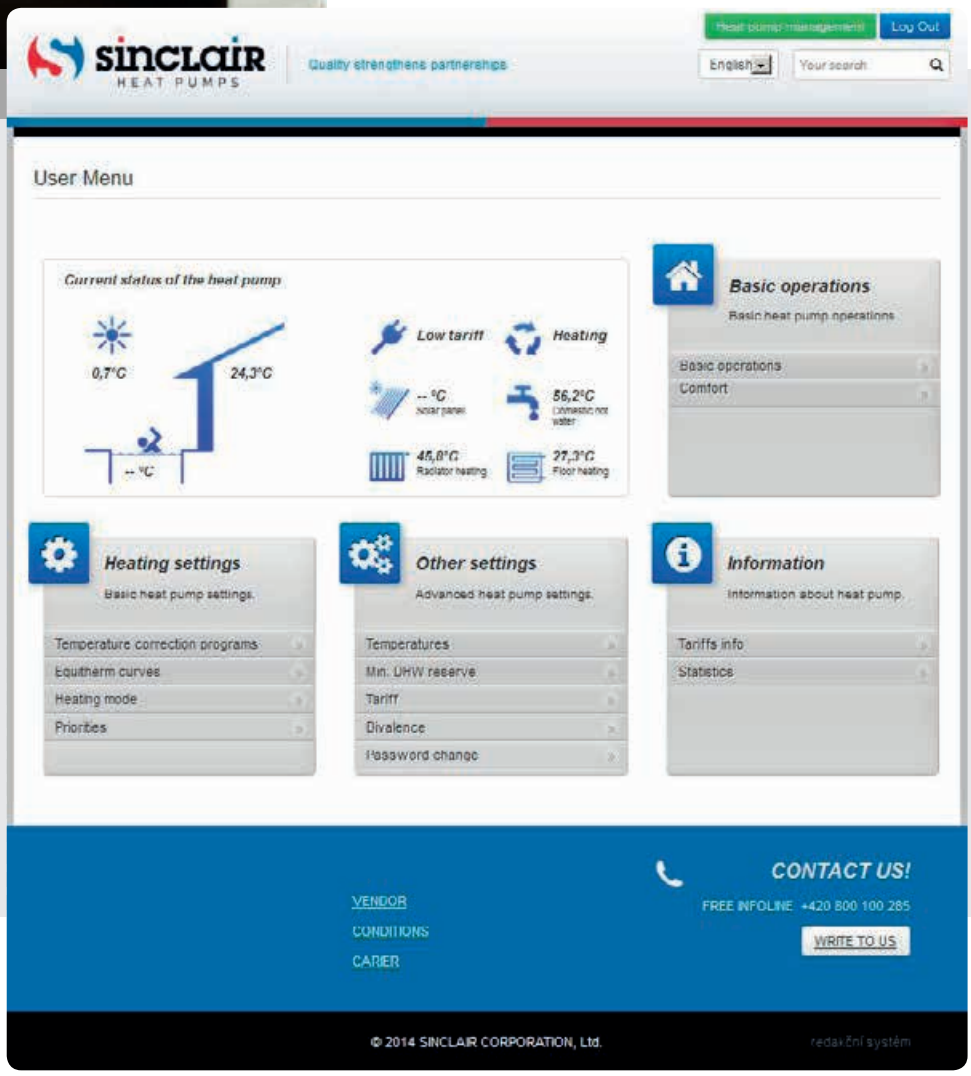
- Access from anywhere via the internet.
- Easy access through the web interface on www.sinclairheatpumps.eu
- Founding of account and service of account is free of charge
- Interactive interface (equitherm curve shows actuals set temperatures)
- Interface is optimized for use on touch-screen devices

DISPLAYED INFORMATION

- Basic overview of the system (temperatures, electrical tariff, etc.)
- Currently set values for each item
- Possibility to view statistics of heat pump

OPTIONS

- Possibility to set all parameters as shown on the control panel of the unit
- User and service levels of the access



WATER PIPING DIAGRAM

WITH COMBINED ACCUMULATION TANK

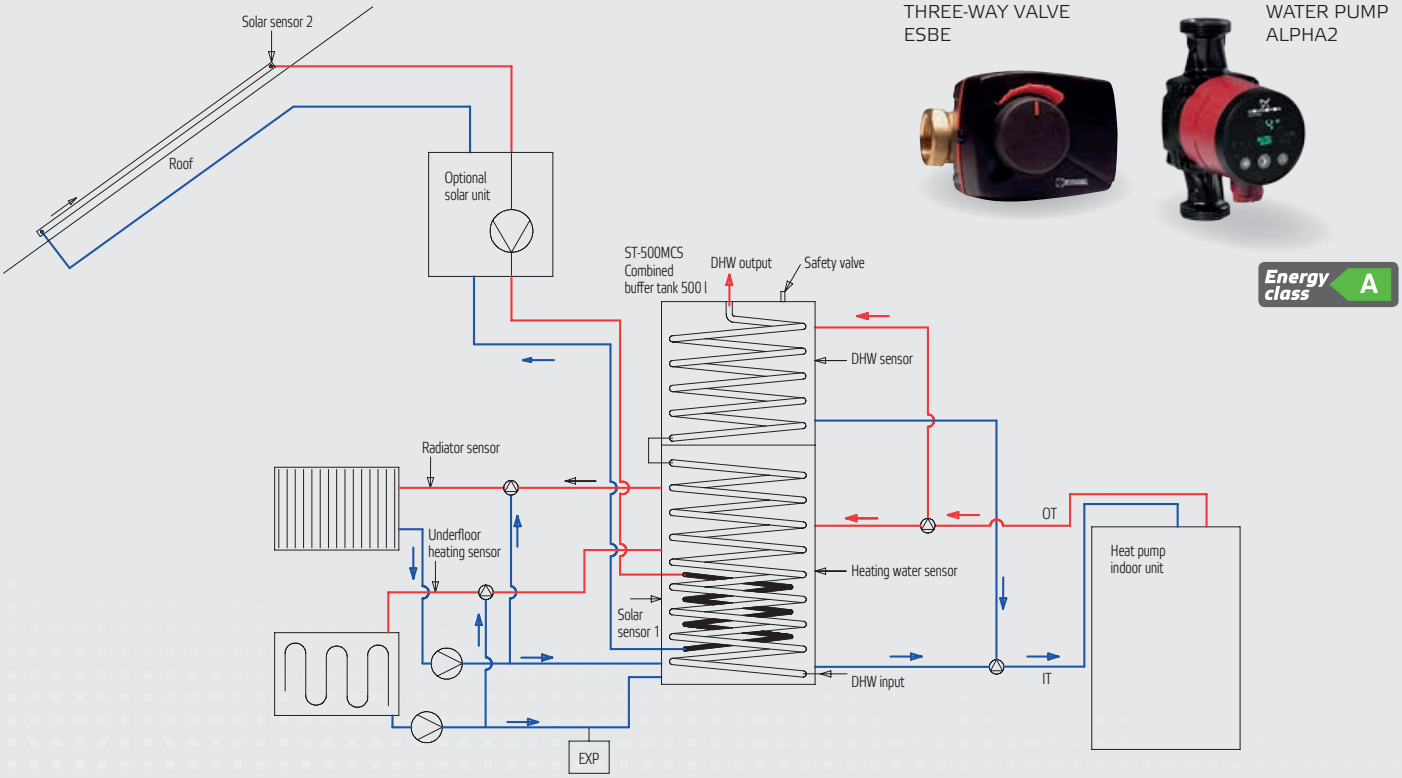
COMBINED BUFFER TANK ST-500MCS, ST-500MC

- Steel storage tank of 500 liters with stainless steel heat exchanger
- DHW flow heater
- Possibility of connecting to solar heating
- Compact, grey leatherette body with black plastic top cover
- 50 mm polyurethane foam insulation
- 2 years warranty

RECOMMENDED COMPONENTS

- Three-way valves for switching between the upper 1/3 tank for DHW and the lower 2/3 tanks for heating circuit ESBE series VRG 131 / 132 with electronic control type ESBE Series 641 (running time 30 seconds)
- Three-way valves for equithermal control of the temperature in the radiators or underfloor heating system with electronic control type ESBE Series 671 (running time 240 seconds)
- Circulator pump for water circulation in heating systems Grundfos Alpha2

ST-500MCS



THREE-WAY VALVE ESBE

WATER PUMP ALPHA2

Energy class A

COOLING CANNOT BE USED IN THIS CONNECTION

WATER PIPING DIAGRAM

WITH SINCLAIR WATER HEATER

BUFFER TANK ST-400A, ST-500A

- Simple storage tank of 400 or 500 litres
- Compact, grey leatherette body with black plastic top cover
- 50 mm polyurethane foam insulation
- 2 years warranty

RECOMMENDED COMPONENTS

- Three-way valves for equithermal control of the temperature in the radiators or underfloor heating system with electronic control type ESBE Series 671 (running time 240 seconds)
- Circulator pump for water circulation in heating systems Grundfos Alpha2

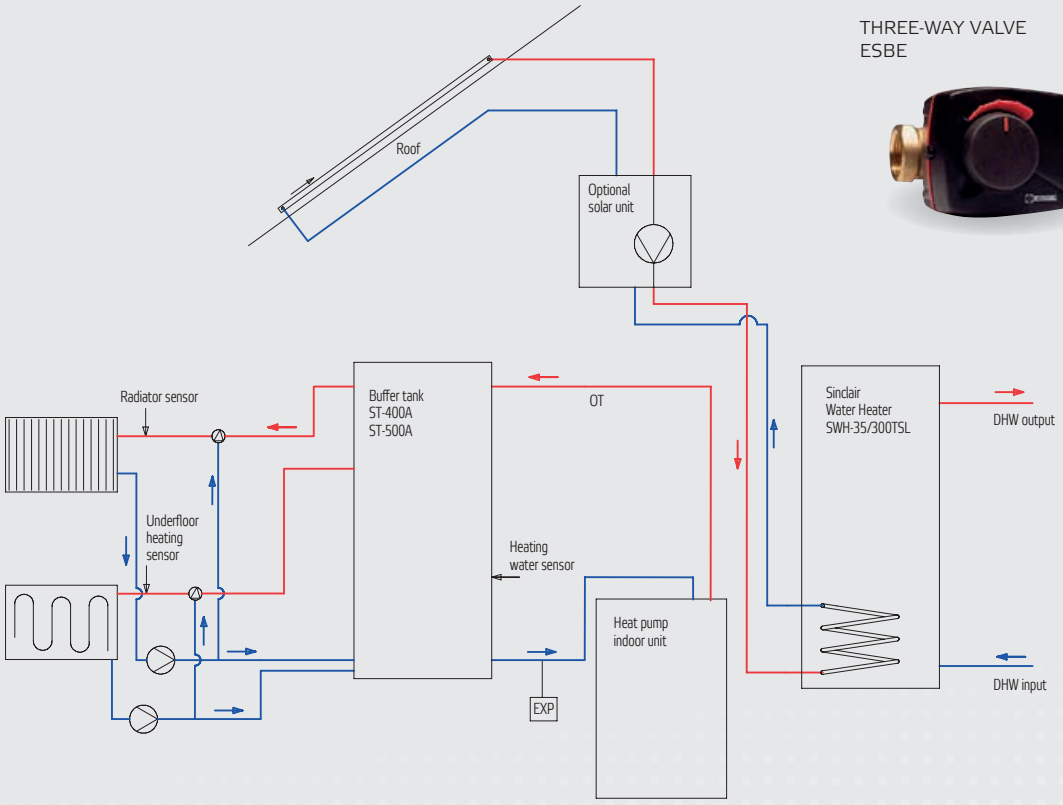
SINCLAIR WATER HEATER
SWH-35 / 300TSL

ST-400A

THREE-WAY VALVE
ESBE

WATER PUMP
ALPHA2

Energy class A



FAN COIL UNIT MAY BE USED IN COOLING MODE IN THIS CONNECTION

WATER PIPING DIAGRAM

INDIRECT WATER HEATERS

INDIRECT WATER HEATERS ST-200D, ST-300D

- Cylindrical hot water tank
- Compact, grey leatherette body with black plastic top cover
- 50 mm polyurethane foam insulation
- 2 years warranty

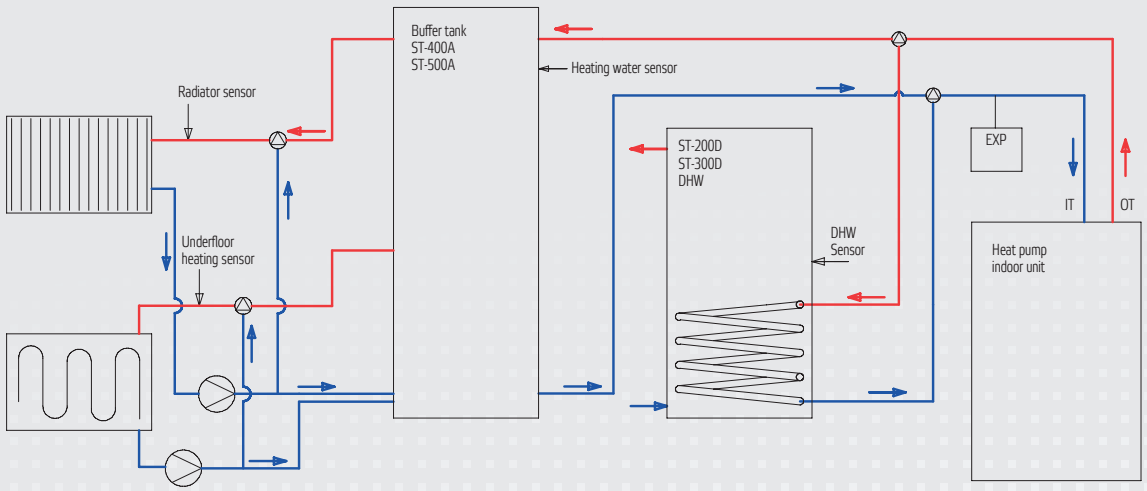
RECOMMENDED COMPONENTS

- Three-way valves for switching between the tank for DHW and buffer tank ESBE series VRG 131 / 132 with electronic control type ESBE Series 641 (running time 30 seconds)
- Three-way valves for equithermal control of the temperature in the radiators or underfloor heating system with electronic control type ESBE Series 671 (running time 240 seconds)
- Circulator pump for water circulation in heating systems Grundfos Alpha2

ST-400A ST-200D

THREE-WAY VALVE ESBE

WATER PUMP ALPHA2



Energy class A

FAN COIL UNIT MAY BE USED IN COOLING MODE IN THIS CONNECTION

CASCADE MODE

GENERAL PROPERTIES

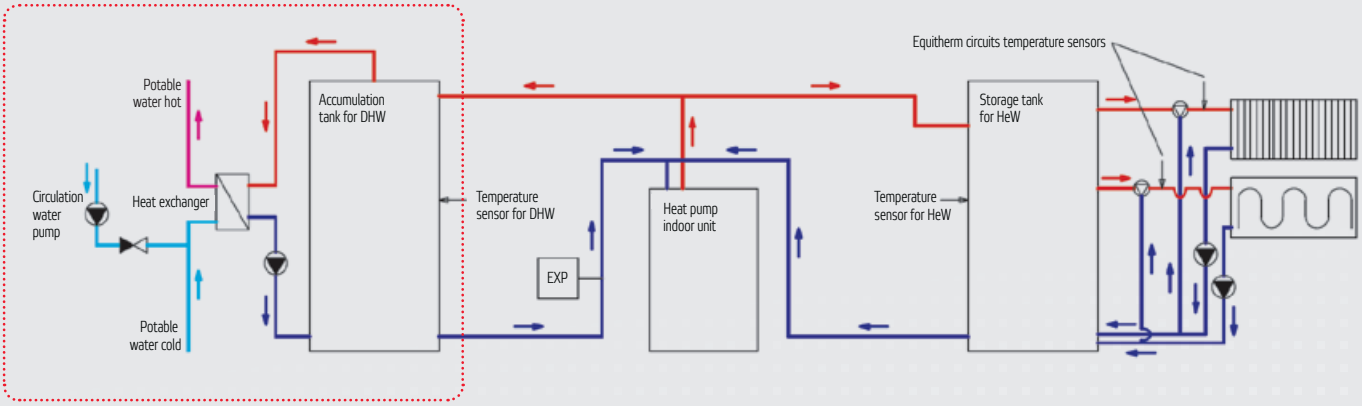
- Possibility to heat buildings with high heating requirements
- Convenient for heating residential or office buildings
- Standard software option no need for upgrades

CONTROL SYSTEM

- Master and slave connection, one unit controls others
- Eight units can be connected together in one cascade (up to 144 kW)
- Alternating units increase life of units
- Some of the units can heat the hot water while others can provide the water for heating

SPECIAL ACCESSORIES FOR CASCADES

- Station for instantaneous heating of domestic hot water (fresh station)
- Storage tank with 1000 L volume designed for optimal heating of heating water
- Distributor connecting units to the storage tank



WATER PIPING DIAGRAM WITH FRESH STATION FOR DHW

OPTIONAL ACCESSORIES

ROOM THERMOSTAT SAU-1000

- Easy to use thanks to location in room
- Modification of requested temperature by ±4 ºC
- Easy installation with 3-core cable

OUTDOOR UNIT COVER ZG6009

- Protective cover for outdoor unit
- Reduces the amount of leaves falling into the evaporator
- Prevents the ingress of water and rain into the evaporator

GSM MODULE SHP-GSM

- Possibility of controlling the unit through a gsm network
- Information about status of unit and main temperatures
- Switching the modes on and off
- SMA connector for antenna
- Standard accessories (included in package) are battery and antenna

ROOM THERMOSTAT SAU-1000

OUTDOOR UNIT COVER ZG6009

GSM MODULE SHP-GSM

S-THERM 3rd Gen DC Inverter Heat Pumps

HEART OF YOUR HOME

Basic System Configuration

S-THERM 3RD GENERATION DC INVERTER AIR TO WATER HEAT PUMPS

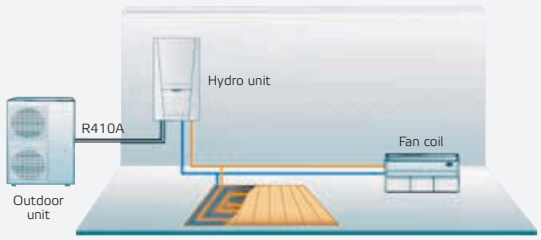
DC Inverter Air to Water Heat Pump is composed of outdoor unit, hydro box (indoor unit) and optional water tank.

OPERATION FUNCTIONS

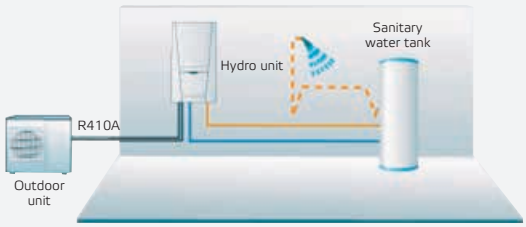
- Cooling & heating
- Water heating
- Cooling + water heating
- Heating + water heating
- Emergency mode
- Quick water heating
- Holiday mode
- Forced operation mode
- Silent mode
- Disinfection mode
- Water-dependent heating mode

COMBINATION EXAMPLES

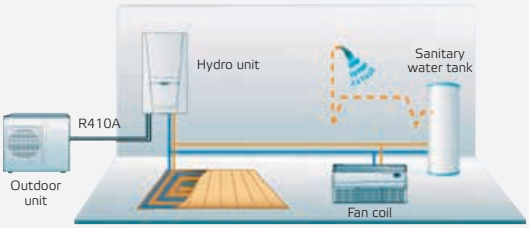
Heating / cooling



Water heating



Heating / cooling with water heating



INDOOR UNITS (HYDROBOX)

NEW

GSH-IRAD

FEATURES

- Compact and modern design
- Adopts high efficiency plate heat exchanger
- User friendly control panel
- Easy installation and maintenance
- Safe and reliable
- 5 years warranty

Model				GSH-IRAD
Rated input			V / Ph / Hz	380-415 / 3 / 50
Connecting pipe (refrigerant)		Gas	inch / mm	5 / 8 / 16,0
		Liquid	inch / mm	3 / 8 / 9,5
Connecting pipe (water)		Water inlet	inch	G1
		Water outlet	inch	G1
Safety valve			Bar	2,5
Leaving Water Temperature		Cooling (Fan coil unit)	ºC	7~25
		Cooling (Floor cooling)	ºC	18~25
		Heating (Fan coil unit)	ºC	25~55 (High Temperature Cycle)
		Heating (Floor heating)	ºC	25~45 (Low Temperature Cycle)
Main components	Pump	Type	-	ErP PWM
		Speed	-	Automatic
		Power input	W	4 - 75
	Expansion Vessel	Volume	l	10
		Water Pressure (Max)	Bar	3
		Water Pressure (Pre)	Bar	1
	Electric heater	Operation	-	Automatic
		Capacity	KW	6
		Combination	-	2+2+2
		Power input	V / Ph / Hz	380-415 / 3 / 50
	Heat Exchanger	Type	-	Brazed Plate HEX
		Quantity	-	1
Sound Pressure Level			dB (A)	42
Dimensions	Outline (W x D x H)		mm	570 x 650 x 300
	Packaged (W x D x H)		mm	610 x 1010 x 430
Weight	Net		kg	64
	Gross		kg	65

*Values were measured according to EN 14511-2:2012
The specifcation of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label.
Contains fuorinated greenhouse gases covered by the Kyoto Protocol. R410A (50% HFC-32, 50% HFC-125), GWP of refrigerant used: 2088.

OUTDOOR UNITS

NEW

GSH-70ERAD
GSH-90ERAD
GSH-110ERAD
GSH-130ERAD

FEATURES

- High efficiency and energy saving
- Comfortable
- Intelligent control
- PFC control technology
- BLDC motor control technology
- 5 years warranty

Model			GSH-70ERAD	GSH-90ERAD	GSH-110ERAD	GSH-130ERAD
Voltage / Frequence		V / Ph / Hz	220-240 / 1 / 50		380-415 / 3 / 50	
A7 / W35	Heating Capacity	kW	6,40	8,50	10,50	13,20
	Power Input	kW	1,56	1,99	3,33	4,49
	COP	-	4,10	4,27	3,15	2,94
A2 / W35	Heating Capacity	kW	4,85	6,50	9,30	11,59
	Power Input	kW	1,43	2,01	3,08	4,14
	COP	-	3,40	3,23	3,02	2,80
A-7 / W35	Heating Capacity	kW	3,90	5,20	7,20	8,20
	Power Input	kW	1,70	2,36	2,88	3,73
	COP	-	2,30	2,20	2,50	2,20
Max. noise level	max	dB (A)	53		57	
Refrigerant		typ	R410A			
Refrigerant charge		kg	3,5		5,3	
Sanitary water temperature		°C	40-80			
Outer diameter	Liquid pipe	inch / mm	3 / 8 / 9,5			
	Gas pipe	inch / mm	5 / 8 / 16,0			
Dimensions (W x D x H)		mm	980 x 427x 847		900 x 412 x 1345	
Net weight		kg	85		126	

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S-Therm Monoblock

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S-Therm Monoblock
DC Inverter Heat Pumps

ALL-IN-ONE DEVICE

- Cooling & heating
- Water heating
- Cooling + water heating
- Heating + water heating
- Emergency mode
- Quick water heating
- Holiday mode
- Forced operation mode
- Disinfection mode
- Water-dependent heating mode

EASY CONTROL

To control the unit wired controller, which can be placed inside the building, is used. Controller is userfriendly and easy to operate.

TWO STAGE ROTARY COMPRESSOR

New two-stage compressor with inverter achieves high efficiency even at low temperatures. On the other hand at high temperatures it can lower its speed to prevent cycling of the unit.

MONOBLOCK DESIGN

Due to the monoblock design of the unit is installation very easy. You can simply connect unit to the electricity and heating system and it is done. Because of this are costs for installation smaller than for split units.

WATER PUMP WITH REGULATED SPEED

In the unit is used WILO water pump with regulated speed. Because of this can heat pump keep requested temperature difference between inlet and outlet water. This water pump has also high efficiency and meets all requirements for energy efficiency.

EC FAN MOTOR

Unit is equipped with EC fan motor (motors) with high efficiency. Speed of the fan is regulated according to the refrigerant pressure. Due to this type of control high efficiency of the system is various conditions is achieved.

EXPANSION VALVES CONTROL BASED ON REFRIGERANT PRESSURE

Electronic expansion valves which provide better regulation than thermostatic expansion valves are used in the unit. Valve opening is based on information from sensors in refrigerant circuit to provide optimal capacity and efficiency of the unit.

MONOBLOCK UNITS

NEW

SMH-100IRA
SMH-140IRA

Model				SMH-100IRA	SMH-140IRA
Capacity1		Heating (underfloor)	kW	9,5	14,2
		Cooling (undefloor)	kW	9,8	14,5
Power input1		Heating (underfloor)	kW	2,2	3,35
		Cooling (undefloor)	kW	2,5	3,70
COP1		Heating (underfloor)	-	4,3	4,24
EER1		Cooling (undefloor)	-	3,92	3,92
Capacity2		Heating (fan coils, radiators)	kW	9,5	13,0
		Cooling (fan coils)	kW	7,4	10,3
Power input2		Heating (fan coils, radiators)	kW	2,69	3,60
		Cooling (fan coils)	kW	2,38	3,3
COP2		Heating (fan coils, radiators)	-	3,53	3,61
EER2		Cooling (fan coils)	-	3,11	3,12
Energy class			-	A+	A+
SCOP			-	3,7	4,3
Voltage / phase / frequency			V / Ph / Hz	210-240 / 1 / 50	380-415 / 3 / 50
Max. power input (without e-heater)		Heating	kW	3,1	4,3
		Cooling	kW	4,0	4,8
Max. current (without e-heater)		Heating	A	14,0	8,1
		Cooling	A	16,5	8,9
Refrigerant		Type	-	R410A	R410A
		Charge	-	3,5	4,0
Water pipes		Inlet	mm	DN25	
		Outlet	mm	DN25	
Water temperatures range		Heating	ºC	25~60	
		Cooling	ºC	7~25	
Main components	Water pump	Number of speeds	-	externally controlled	
		Power input	W	140	
	Water flow switch	Minimum flow	l / min	9,2	
	Expansion tank	Volume	l	10	
		Maximum pressure	Bar	3	
		Precharged pressure	Bar	1	
	Electric heater	Mode	-	automatic	
		Steps	-	2	
		Capacity	kW	6	
		Combination	kW	3+3	
		Voltage / phase / frequency	V / Ph / Hz	210-240 / 1 / 50	380-415 / 3 / 50
	Heat exchanger	Type	-	plate	
		Quantity	-	1	
	Safety valve	Pressure	bar	3	
Sound pressure level LpA		Heating	dB	56	57
		Cooling	dB	53	54
Unit dimensions		W*D*H	mm	1390 x 412 x 890	1350 x 384 x 1438
Package dimension		W*D*H	-	1463 x 428 x 1020	1440 x 430 x 1500
Weight		Net / Gross	kg	148 / 161	205 / 220

1 Capacities and power inputs are based on the following conditions:
Cooling conditions:
Indoor Water Temperature 23ºC / 18ºC;
Outdoor Air Temperature 35ºCDB / 24ºCWB
Heating conditions:
Indoor Water Temperature 30ºC / 35ºC
Outdoor Air Temperature 7ºCDB / 6ºCWB

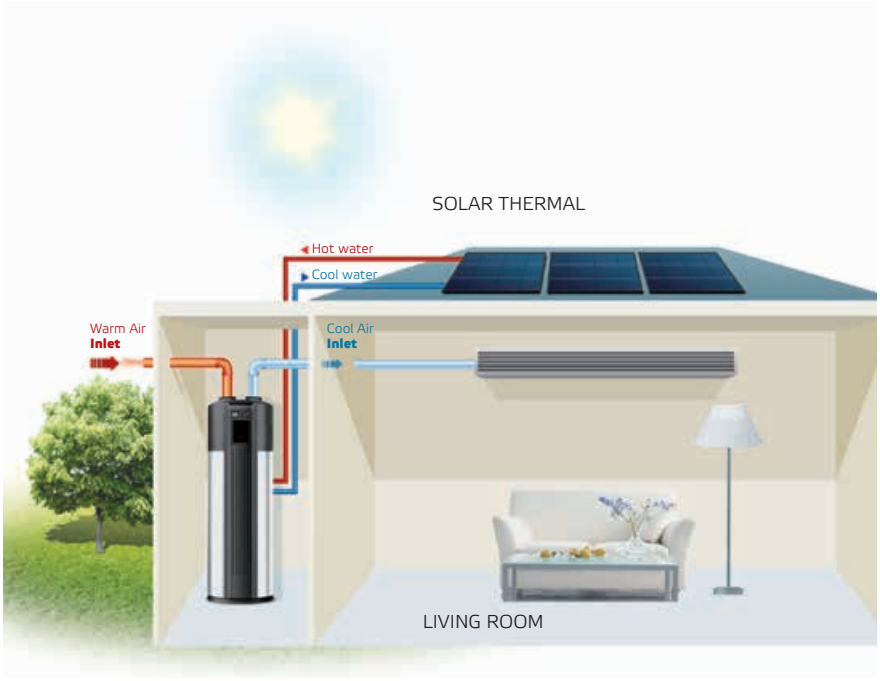
2 Capacities and power inputs are based on the following conditions:
Cooling conditions:
Indoor Water Temperature 12ºC / 7ºC;
Outdoor Air Temperature 35ºCDB / 24ºCWB
Heating conditions:
Indoor Water Temperature 40ºC / 45ºC;
Outdoor Air Temperature 7ºCDB / 6ºCWB

The specifcation of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label.
Contains fuorinated greenhouse gases covered by the Kyoto Protocol. R410A (50% HFC-32, 50% HFC-125), GWP of refrigerant used: 2088.

Sanitary Water Heaters

HEART OF YOUR HOME

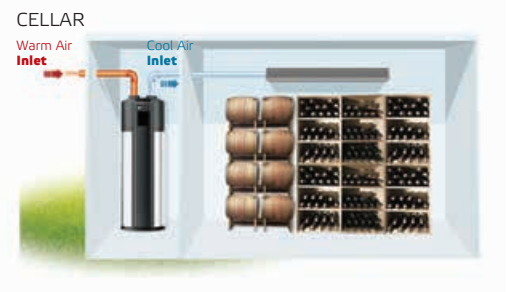
Sanitary Water Heaters



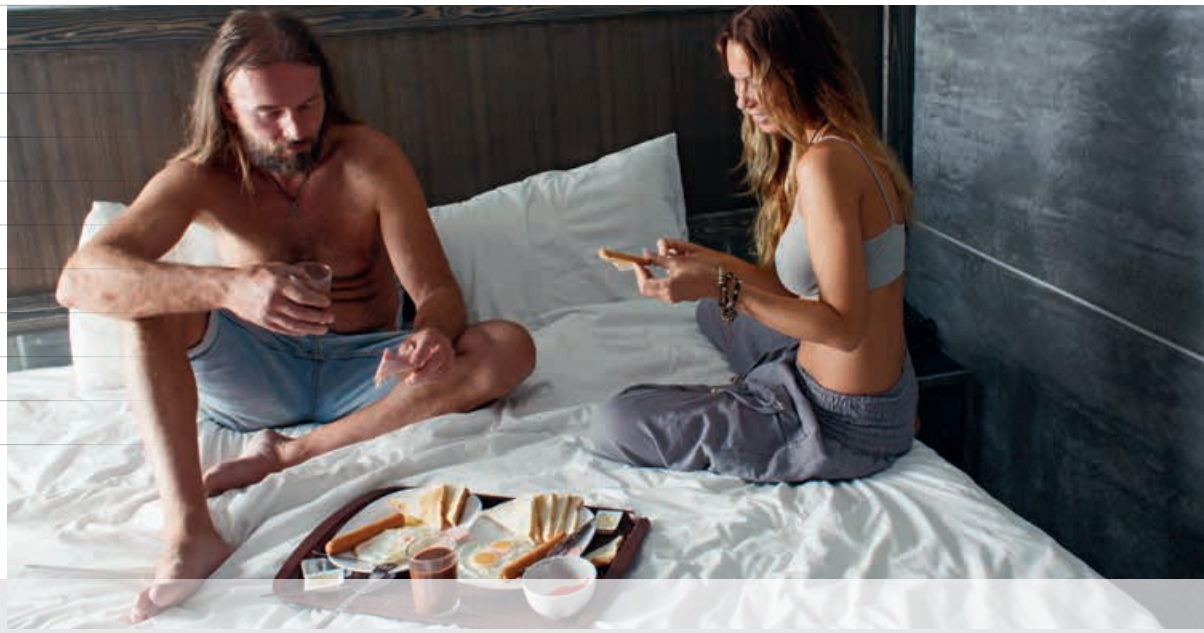
ADVANTAGE OF HEAT PUMPS

SINCLAIR heat pumps for water heating takes the advantage of heat pump principle with environmentally-friendly R134a refrigerant. It saves energy compared to commonly used sources of sanitary water heating.

Due to its automatic antilegionella function, the water in the tank remains harmless and ready for use.



FEATURES



SAFETY

Complete insulation between water and electricity. No potential electric shock problem. No fuel pipes and storage, no potential danger from oil leakage, fire, explosion etc.

HIGH EFFICIENCY

Adopts heat pump principle, which absorbs heat from outdoor air and produces hot water, thermal efficiency can be up to 450%.

ENERGY SAVING

Lower power consumption compared to traditional systems.

WEATHER INDEPENDENT

Ambient temp: -30 to 43ºC, not affected by night-time temperatures, overcast sky, rain and snow.

AUTOMATIC CONTROL

Automatic start-up and shutdown, automatic defrosting without any attention.

ENVIRONMENTALLY FRIENDLY

No discharge of toxic gas. No pollution of the atmosphere or environment.

EASY TO OPERATE

User-friendly LCD display for easy interaction.

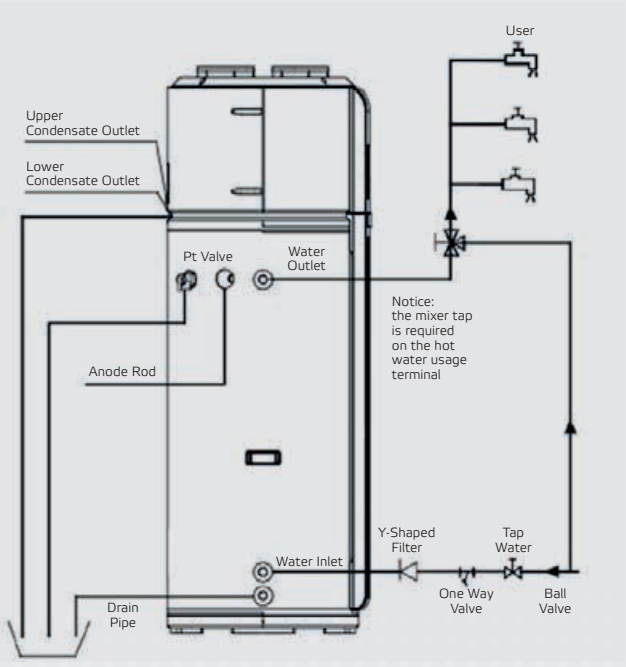
EASY FOR INSTALLATION AND MAINTENANCE

Just need to connect water pipes.

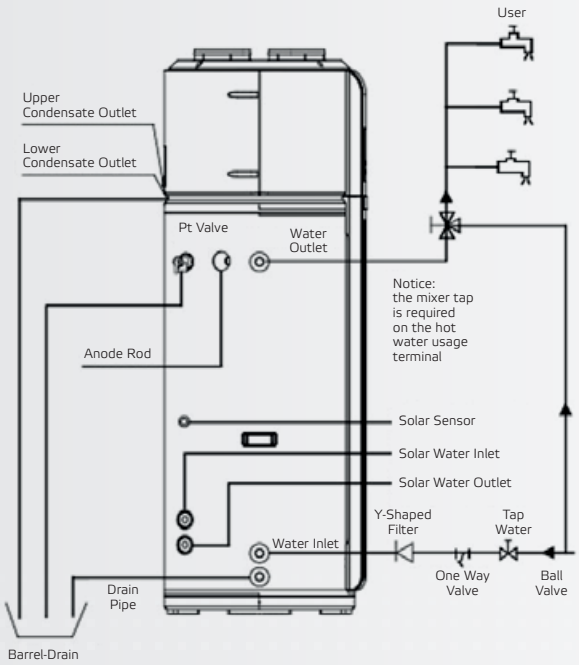
Effective Water Heating

FEATURES

- No cross contamination potential, refrigerant coil is wrapped around the outside of the tank and insulated
- High efficiency
- Possible installation inside or outside
- Closed refrigerant circuit, easy for installation
- Automatic weekly anti-legionella function
- Multi protection (PT valve, double high water temp. protection switches)
- Thermal expansion valve
- Built-in heat exchanger, compatible with solar thermal or boilers (optional)
- Four-way valve for automatic defrosting



SWH-15 / 190T



SWH-35 / 300TSL, SWH-35 / 300TL

WATER HEATERS

SWH-35/300TL
SWH-35/300TSL
SWH-15/190T

- Water tank volume 190 liters or 300 liters
- Environmentally friendly refrigerant R134a
- Two operation modes: economy, e-heater
- Stainless steel solar heat exchanger
- Outlet water temperature 38-60 ºC
- Operation temperature range -30-43 ºC
- 3 years warranty

Model		SWH-15 / 190T		SWH-35 / 300TSL, SWH-35 / 300TL	
Running mode power input		Economy	E-heater	Economy	E-heater
Running ambient temp.	ºC	-7-43	-30-43	-7-43	-30-43
Output water Temp.	ºC	Default 55ºC,38ºC~70ºC		Default 55ºC,38ºC~60ºC	
Power supply	V / Ph / Hz	220-240 / 1 / 50		220-240 / 1 / 50	
Storage size	L	190		300	
Water heating Capacity	kW	1,50	3,00	3,0	3,0
COP	-	3,60	1,00	3,6	1,0
Max. power input	kW	3,8		4,3	
Max. current	A	3,5	13,0	5,7	13,0
Ambient temp.	ºC	-30-43		-30-43	
Dimension (DxH)	mm	Φ568 x 1640		Φ650 x 1920	
Net weight	kg	96		123	
Sound pressure level L_{pA}	dB	38		48	
Refrigerant type / Charged volume	kg	R134a / 0,95		R134a / 1,2	
Refrigerant design pressure	MPa	3,0 / 1,2		3,0 / 1,2	
Tank design pressure	MPa	0,15-1,0		1	
Air flow volume	m³ / h	218 / 202 / 178		414 / 355 / 312	
Water inlet pipe	mm	DN20		DN20	
Water outlet pipe	mm	DN20		DN20	
Max. pressure	MPa	1.2		1,2	
Design pressure	MPa	0,15-1,0		1	
Solar water inlet pipe	mm			DN20	
Solar water outlet pipe	mm			DN20	
Solar pipe max. pressure	MPa			0,7	
E-heater	kW	3,0		3,0	
Hot water yield	m³ / h	0,045	0,075	0,086	

1. The test conditions: outdoor temp. 15 / 12ºC (DB / WB), inlet water temp. 15ºC, outlet water temp.45ºC.
2. The specification may be changed for product improvement, please refer to the nameplate.

The specifcation of products is subject to change based on further development of the units by the producer and can be changed without prior notice. Refer to rating label.
Contains fuorinated greenhouse gases covered by the Kyoto Protocol. R134a (100% HFC-134a), GWP of refrigerant used: 1430.

SPLIT WATER HEATER

NEW

SWH-35ERA + SWH-200IRA

FEATURES

- No cross contamination potential, refrigerant coil is wrapped around the outside of the tank and insulated.
- High efficiency

OUTDOR UNIT			SWH-35ERAD
Rated Heating Capacity		W	3500
Rated Input Power (*)		W	850
COP (*)		W / W	4,10
COP DHW (**)		W / W	3,17
Energy Efficiency Class (**)		-	A
Water Heating Energy Efficiency		-	129%
Annual electricity consumption (average climate conditions)		kWh	795
Maximum Input Power		W	1500+1500 (Electric Heater)
Outlet Water T emperature		ºC	Default: 55ºC, 35ºC~55ºC
Power Supply		V / Ph / Hz	220-240 / 1 / 50
Insulation Level		-	I
Protection of Ingression		-	I PX4
Refrigerant	Type	-	R410A
	Charge	kg	1,40
Dimension (w x h x d)		mm	842 x 320 x 591
Package dimension (w x h x d)		mm	941 x 371 x 660
Gross / Net Weight		kg	44,5 / 38,5
Sound Power Level (***)		dB (A)	63
Operating Range		ºC	-25 ~ 45

(*) Value obtained with the following conditions: Outdoor temperature: 20ºC DB / 15ºC WB; Water tank temperature (start / end): 15ºC / 55ºC.
(**) Value obtained with an air temperature of 7ºC and a water inlet at 10ºC, as per EN16147-2011, (EU) No 814 / 2013.
(***) Value obtained as per EN 12102-2008.

INDOR UNIT			SWH-200IRAD
Volume		l	185
Power Supply to E-heater		V / Ph / Hz	220-240 / 1 / 50
Heating Power of E-heater		W	1500
Dimension (w x h x d)		mm	545 x 545 x 1919
Net Weight		kg	52
Outer diameter	Liquid pipe	mm	6,0
	Gas pipe	mm	9,5
Water Pipe Outlet		-	DN15

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CONTENT

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HEART OF YOUR HOME

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HEAT PUMPS

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CZECH HEAT PUMP ASSOCIATION
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