SPH / SPH-R

SPLIT AIR TO WATER HEAT PUMP RANGE

Airwell

Airwell

OUTDOOR UNIT
SPH/SPH-R 08-10-12

INDOOR UNIT
SPH/SPH-R 08-10-12

TO GUARANTEE AN EFFICIENT INSTALLATION

Included components:
- High-efficiency Scroll compressor
- 2 stages electric heater (4+2 kW) with external calibrated adjustment (SPH)
- Water circulation pump
- Water flow switch
- Softstarter device (single phase models)
- Electronic regulation system
- Evaporator protection grille
- Coaxial heat exchanger.
- Room thermostat (SPH)
- HP-LP pressostats.
- 5-litre expansion tank (SPH)

Accessories (to be installed on-site):
- Water flexible connection
- Hydraulic connection kit supplied with or without 3-way zone valve (SPH-R)
- Room thermostat with timer (SPH-R)
- Regulation kit with ambient thermostat with timer (SPH-R)
- Regulation kit with wireless thermostat with timer (SPH-R)
- 3 way valve (SPH-R)

Factory options (fitted prior to delivery):
- High performing ZH compressor (models 8 and 10 single or three phase, and model 12 three phase)
- Copper/copper evaporator (anticorrosion)
- "Blygold" anticorrosion treatment on the evaporator

COAXIAL HEAT EXCHANGER

The SPH / SPH-R range of split air to water heat pumps is equipped with a coaxial heat exchanger combing high performance with safe operation and almost insensible to clogging.

FINNED EVAPORATOR

The finned evaporator, with a big exchange surface, is designed to improve drain operation of condensation water, de-icing and maintains maximum efficiency at low temperature.

ACOUSTIC INSULATION

The indoor units are equipped with acoustic insulation (inclusing insulation of the compressor) ensuring quiet operation. For floor installation, the units are controlled with "silent blocks" preventing and minimizing the transmission of vibrations.

REGULATION KIT (SPH-R)

The regulation kit simplifies electrical connection work and ensures economical operation.
Two types of regulation kit are available:
- Regulation kit with ambient thermostat
- Regulation kit with wireless thermostat

ROOM THERMOSTAT (SPH-R)

The SPH-R room thermostat allows to pilot the operating mode and regulate the ambient temperature. It can be used to program various functions, programming and others.

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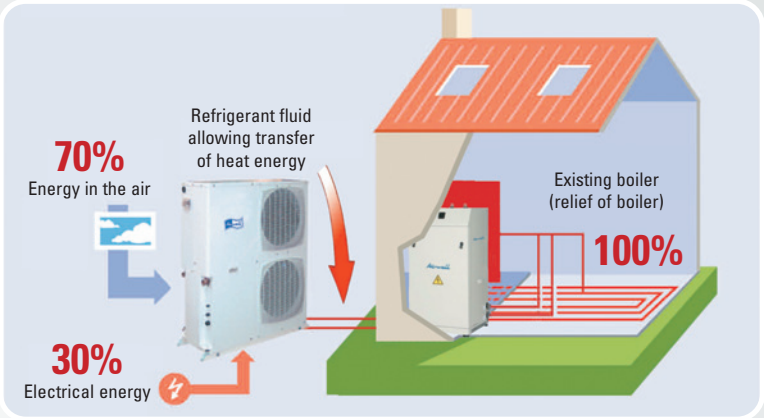
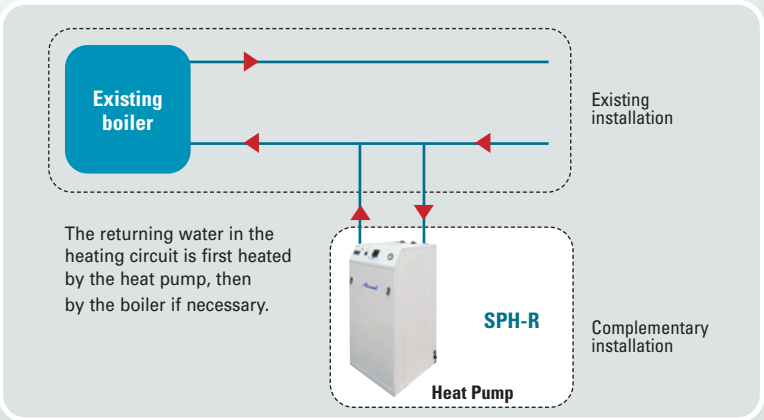
HOW DOES IT WORK?

Air accumulates heat energy throughout the year as a result of solar radiation, water and wind. Therefore, this natural element represents an inexhaustible, clean and – most importantly – a free source of energy, which can now be exploited thanks to thermodynamic heating, also known as aerothermic heating.
The Airwell SPH / SPH-R Split air to water heat pump range, enables this natural form of heat energy to be transferred into the residential environment: energy saving, comfort and respect for the environment are the primary advantages of this technology.



The SPH-R range of heat pumps is intended to function combined with a conventional existing boiler, which means that the machines are integrated into an existing heating installation (gas or fuel or electrical boiler)



ENERGY SAVING

For 1 kWh of electrical power consumed, Airwell heat pumps deliver for free 3 kWh of heat throughout the winter, down to outdoor temperatures of -15°C.

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SPLIT AIR TO WATER HEAT PUMP

The SPH / SPH-R range of air to water heat pumps includes three models with heating capacities from 8 to 14 kW. This range is specifically made for residential applications, ensuring the highest level of performance. Since the heating system configuration of every household is different, the SPH/SPH-R heat pump range is manufactured to suit all requirements.

- **SPH**: Intended to be linked to a heating/cooling floor system, radiators or chilled indoor units, SPH heat pumps enable "all seasons" (summer/winter) comfort to be achieved at the lowest cost.
- **SPH-R**: Designed to be connected to existing heating installations, SPH-R heat pumps can warm a habitat throughout the winter and generate significant savings in energy bills.

PRODUCT BENEFITS

Easy installation:
- Single-phase or three-phase range
- Electronic regulation with water law for optimum comfort
- Chargeless up to 8 meters between indoor and outdoor units.
- Compatible with chilled indoor units and heating floor.

Performance:
- 8-14kW heating capacity
- COP >3.50
- Heating mode operation down to outdoor -15°C.
- Water outlet temperature range 25/55°C.

Discretion:
- Quiet operation
- Low noise fan.
- Compressor included in the indoor unit

Reliability:
- Coaxial heat exchanger
- Anti-corrosion treatment

TWO VERSIONS AVAILABLE TO FIT YOUR NEEDS

SPH:
- Designed to be linked to a heating/cooling floor system, radiators or chilled indoor units
- Reversible system: heating mode and cooling mode
- 2 stage electric heater (4+2 kW) with external calibrated adjustment
- Soft starter device (single phase models)
- 5 litres expansion tank integrated
- Room thermostat included

SPH-R:
- Intended to be connected to an existing heating installation
- Heating mode only
- Regulation kit with wireless thermostat (option)
- Regulation kit with ambient thermostat (option)

R-407C

RESPECT OF THE ENVIRONMENT

Up to 80 % less CO_2 emissions per year

SPH/SPH-R heat pumps operate by means of a closed circuit, which means zero smoke emissions and a cleaner environment. Moreover, beside of being harmless for the ozone layer the use of eco-friendly R-407C refrigerant fluid ensures energy consumption to be three times lower as compared to conventional heating systems. Finally, only water is used to heat interior living spaces.

SPH / SPH-R

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			SPH/SPH-R 08	SPH/SPH-R 10	SPH/SPH-R 12
Heating/Cooling floor application					
Heating	Capacity[1]	kW	8.1	11.2	14.1
	Power input*	kW	2.3	3.1	3.9
	COP		3.53	3.60	3.63
	Capacity at - 7°C	kW	5.1	7.2	8.7
	Power input at - 7°C	kW	2.3	3.1	3.7
	Water flow (Heating)	m^3/h	1.43	1.97	2.52
	Available pressure (HS)	kPa	41	26	59
	Outdoor temperature operating limits	°C	-15°C/20°C	-15°C/20°C	-15°C/20°C
	Outlet water temperature	°C	25°C/55°C	25°C/55°C	25°C/55°C
Cooling	Capacity[3] - SPH only	kW	7.2	8.9	9.8
	Power input	kW	2.5	3.7	4.5
	EER		2.84	2.42	2.21
	Outdoor temperature operating limits	°C	20°C/45°C	20°C/45°C	20°C/45°C
	Outlet water temperature	°C	7°C/18°C	7°C/18°C	7°C/18°C
Radiator and fan coils units application					
Heating	Capacity[2]	kW	7.7	10.7	13.6
	Capacity at - 7°C	kW	5.1	6.9	9.1
	Power input at - 7°C	kW	2.8	3.7	4.5
	Water flow (Heating)	m^3/h	1.36	1.90	2.43
	Available pressure (HS)	kPa	45	29	60
	Outdoor temperature operating limits	°C	-15°C/20°C	-15°C/20°C	-15°C/20°C
	Outlet water temperature	°C	25°C/55°C	25°C/55°C	25°C/55°C
Cooling	Capacity[4] - SPH only	kW	5.6	7.7	7.1
Outdoor unit	Sound pressure level at 5 m (Outdoor unit)	dB(A)	42	42	42
	Sound pressure level at 5 m (Indoor unit)	dB(A)	34	34	34
	Airflow	m^3/h	6000	6000	6000
	Number of fan		2	2	2
	Exchanger type		Coaxial	Coaxial	Coaxial
	Water circuit Inlet	Inches	1" female	1" female	1" female
	Water circuit Outlet	Inches	1" female	1" female	1" female
	Electric heater 2 stages (Only for SPH model)	kW	6 (4+2)	6 (4+2)	6 (4+2)
	Compressor type		Scroll	Scroll	Scroll
	Number of compressor		1	1	1
	Dimensions (WxDxH) - Indoor unit	mm	600x600x1232	600x600x1232	600x600x1232
	Dimensions (WxDxH) - Outdoor unit	mm	1000x400x1310	1000x400x1310	1000x400x1310
	Weight (Indoor unit)	kg	115	128	133
	Weight (Oudoor unit)	kg	90	90	98
Power supply 2~230V-50Hz	Power cable section (SPH/SPH-R)**	mm^2	3x10 / 3x2,5	3x16 / 3x4	3x16 / 3x6
	Fuse rating am (SPH/SPH-R)	A	50 / 20	63 / 25	63 / 32
Power supply 3~400V-50Hz	Power cable section (SPH/SPH-R)**	mm^2	5x2,5 / 5x2,5	5x4 / 5x2,5	5x4 / 5x2,5
	Fuse rating am (SPH/SPH-R)	A	20 / 12	20 / 16	25 / 16
Pipe line	Suction pipe diameter	inches	3/4	3/4	7/8
	Liquid pipe diameter	inches	1/2	1/2	1/2
	Max lenght	m	30	30	30
	Max height	m	3.5	3.5	3.5

[1] Heating capacity for air temperature 7°C, water temperature 30/35°C. / [2] Heating capacity for air temperature 7°C, water temperture 40/45°C.
[3] Cooling capacity for air temperature 35°C, water temperature 23/18°C. / [4] Cooling capacity for air temperature 35°C, water temperature 12/7°C. / * with deicing.
**** These values are given as an indication, they must be adjusted according to the existing standards: they depend on the installation and choice of the electrical conductors.**

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