



## Carno Premium HCS-PN-LS Air to water heat pump 4.6 – 10.8 kW with refrigerant R407c

Compact air-water heat pump with defrosting device using external air as a heat source. In comparison to most of air-water heat pumps, the actual heating equipment is fitted inside, so there is no external heat loss, and the weather doesn't have any effect on the equipment. In combination with the external air-brine heat exchanger, the heat energy is provided all the year round. The Carno brine-water heat pump and the air-brine heat exchanger are connected by brine liquid. The distance between heat pump and the external air-brine heat exchanger may be some metres. With the automatically adjustable ventilator, the equipment operates quietly all year round. The heat pump defrosts automatically when necessary.

The HAUTEC HCS-PN-LS is also suitable for higher capacity demand. Several air-brine heat exchangers may be connected together to the heat pump. Better efficiency may be achieved by increasing the underground collector area. The easy to install heat pump has built-in brine and heating kit, high efficiency suction gas cooled compressor, 2 stainless steel plate heat exchangers, one for the heating circuit and one for the source circuit is built on a proven Hautech chassis in a sound insulated housing. The heat pump is controlled with weather compensation and is supplied with a separate remote control.

HCS-PN-LS-set comprises: Carno - S Premium absorber-brine-water-heat pump with controller, heating kit, brine kit, electric heating element, defrosting device and air-brine heat exchanger and an automatically adjustable ventilator.

### Configuration:

- **built-in heat pump controller with plain text display**
- **mixing circuit control ( temperature sensor must be ordered separately)**
- **high efficiency**
- **quiet**
- **easy assembly and easy operation**
- **built-in electric heating element**
- **built-in circulating pump for heat circuit**
- **built-in circulating pump for brine circuit**
- **built-in soft starter (from type 35 onwards)**
- **built-in pressure transmitter (depending on the version)**
- **flow temperature: R407c max. 65°C**
- **cooling operation**

### Optional:

- **built-in hot water priority switch**
- **built-in heat meter**
- **electronic circulating pumps**

SPLIT Air-brine



HAUTEC comfort heat pump controller HSC6001WPC, microprocessor controlled with weather compensation. It can control up to 2 heat generators for heating and hot water generating and optional cooling, including 1 mixing circuit.

#### Features:

Output related switch of first heat generator (compressor), which can be operated in two power levels and additional 2nd heat generator ( e.g. electric heating element).

Digital clock with perpetual calendar, clock change summer/winter time, several adjustable time programs, separate counting of operation hours and number of starts for every heat generator, plain text display. Showing the flow and return temperature of the heating system and source entry and exit temperatures, outside and inside temperatures. Easy operation with two buttons and error diagnostics.

With the master remote control it is possible to display up to 14 temperature values. Depending on the system configuration 4 - 8 of these will be available for use.

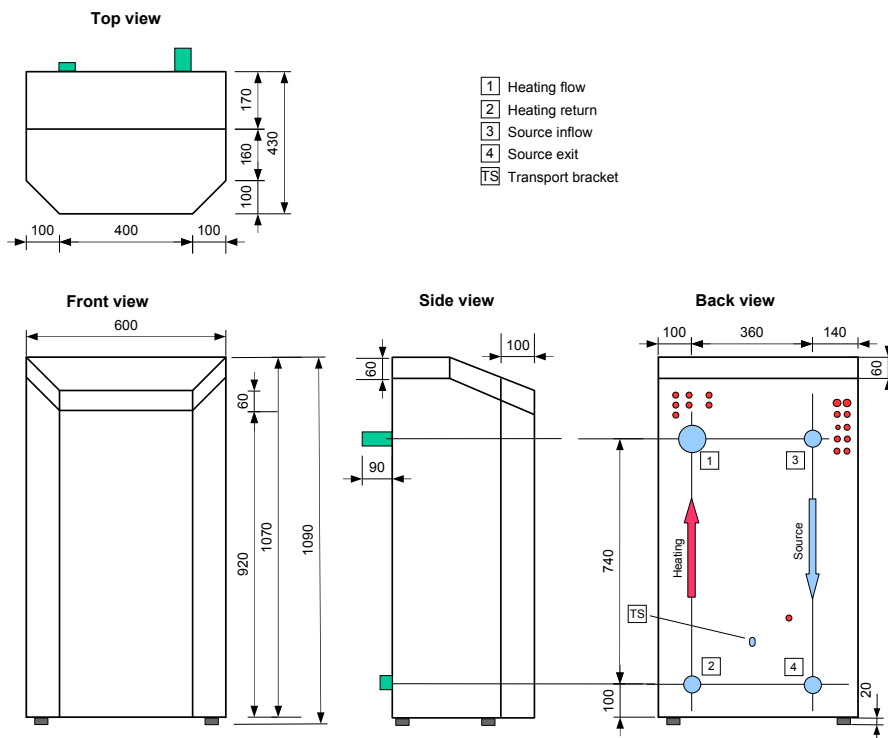
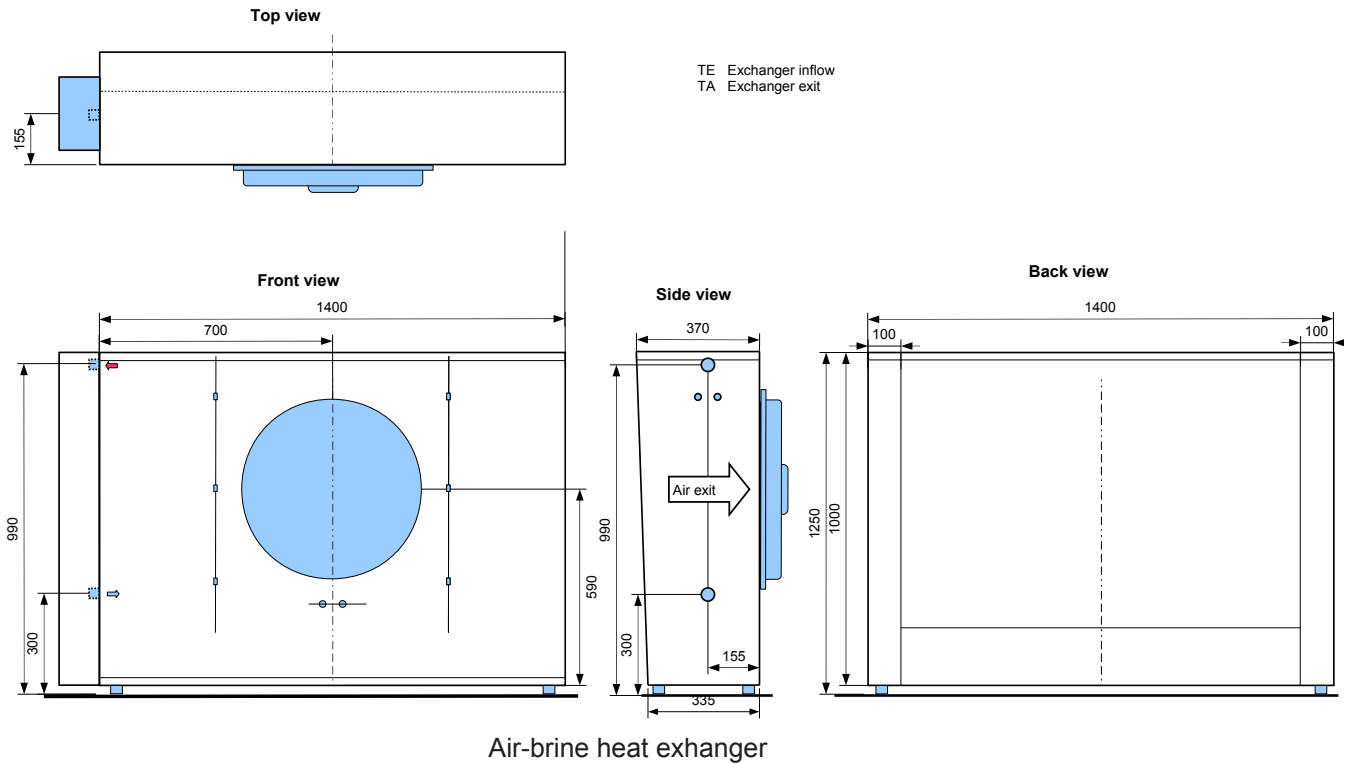
#### Optional:

Radio clock module, remote control with space temperature sensor, diagnostic module for data transmission to a PC.



HAUTEC digital remote control with plain text display and room temperature sensor to adjust the time, heating mode, automatic programs, holiday program or party mode. With the remote control the main values can be read out. A button for showing error messages, operation hours and number of starts for every heat generator, flow and return temperature of the heating system, source entrance and exit temperatures, outside and inside temperatures. The technician can use it as a master remote control to get other important informations such as temperature and low and high pressure of the refrigerant circuit.

### Carno HCS-PN-LS Split Air to water heat pump 4.6 – 10.8 kW with refrigerant R407c



SPLIT Air-brine

## Carno HCS-PN-LS Split Air to water heat pump 4.6 – 10.8 kW with refrigerant R407c

Type		HCS PN 19 LS-E	HCS PN 25 LS-E	HCS PN 35 LS-E	HCS PN 48 LS-E
Refrigerant		R407c	R407c	R407c	R407c
Refrigerant filling weight	kg	1,05	1,15	1,40	1,55
Compressor Oil (Polyol-Ester SEZ 68)	kg	0,9	1,5	1,5	1,5
Primary-SOURCE (Air-brine-water)		x	x	x	x
Setting-up inside / outside		+ / -	+ / -	+ / -	+ / -
Heating capacity A7/W35	kW	4,7	5,7	9,8	11,0
Power consumption A7/W35	kW	1,04	1,25	2,14	2,50
Coefficient of performance A7/W35 (EN 255)		4,5	4,6	4,6	4,4
HEATING capacity A7/W35 (EN 14511)	kW	4,6	5,5	9,6	10,8
Power consumption A7/W35 (EN 14511)	kW	1,07	1,32	2,22	2,60
Coefficient of performance A7/W35 (EN 14511)		4,3	4,2	4,3	4,1
Heating capacity A7/W50	kW	3,6	4,4	8,2	8,8
Coefficient of performance A7/W50 (EN 255)		3,4	3,5	3,5	3,4
Coefficient of performance A7/W50 (EN 14511)		3,2	3,3	3,3	3,2
COOLING capacity A30 (Flow 16°C / Return 21°C)	kW	3,8	4,9	9,1	9,9
Power consumption A30 (Flow 16°C / Return 21°C)					
Coefficient of performance A30 (Flow 16°C / Return 21°C)	EER	3,3	3,4	3,4	3,2
Source nominal air volume flow	m³/h	2800	3000	4000	3000 / 6000
Source min. volume flow (at 5K)	m³/h	0,74	0,87	1,54	1,71
Source nominal volume flow (at 3K)	m³/h	1,23	1,46	2,57	2,85
Source internal pressure drop (at 3K)	hPa	105	189	165	156
Source connection dimensions	Inch	1	1	1	1
Source entrance heat flow <40°C min.	°C	-15	-15	-15	-15
Source entrance heat flow <55°C min.	°C	-10	-10	-10	-10
Source entrance max.	°C	35	35	35	35
Source frost resistance	°C	-25	-25	-25	-25
Source entrance brine min.	°C	-18	-18	-18	-18
SOURCE volume heat exchanger (water-side)	l	1,1	1,3	1,7	1,9
Heating min. volume flow (at 10K)	m³/h	0,40	0,48	0,84	0,94
Heating nominal volume flow (at 5K)	m³/h	0,81	0,96	1,68	1,89
Heating internal pressure drop (at 5K)	hPa	40	52	52	72
Heating connection dimensions	Inch	1	1	1	1
HEATING flow temperature minimal	°C	25	25	25	25
HEATING flow temperature temporary max. (at 10 K)	°C	65	65	65	65
HEATING volume heat exchanger (water-side)	l	1,1	1,3	1,9	2,2
Nominal voltage	V	230	230	230	230
Number of phases		1~	1~	1~	1~
Frequency	Hz	50	50	50	50
Nominal current	A	5,1	6,0	10,0	12,3
cos φ		0,9	0,9	0,7	0,7
Starting current	A	30	46	70	91
Starting current (limited)	A		28	40	50
Fuse (delay)	A	20	20	25	35
Protection class		IP 21	IP 21	IP 21	IP 21
Sound power level (EN 12102)	dB(A)	51	51	51	51
Measurement height	mm	1080	1080	1080	1080
Measurement width	mm	600	600	600	600
Measurement depth	mm	430	430	430	430
Weight	kg	118	118	141	150

SPLIT Air-brine

All technical data were determined according to EN 255 and EN 14511.

Source entrance temporary (max. 30 min.) till 40°C allowed.

The electric heating element is to be secured depending on the power input. - 3 kW / 230V~N/PE Fuse 1x16A - 9 kW / 400V~3/N/PE Fuse 3x16A - 18 kW / 400V~3/N/PE Fuse 3x35A

As an antifreeze HAUTEC Frostcare is to be used. Other antifreezes and brines on inquiry.

A change-over of the refrigerant circuit (heating / cooling) is available for all devices.

Subject to technical modifications.

## Carno HCS-PN-LS Split Air to water heat pump 4.6 – 10.8 kW with refrigerant R407c

**Carno HCS-PN-LS** with 3 years cooling circuit material warranty<sup>1</sup>

Product code WP	Order number	Heating capacity A7/W35 [kW]	air volume flow	number of outside units	HCS-PN 19	HCS-PN 25	HCS-PN 35	HCS-PN 48
HCS-PNX-19LS-E <sup>2</sup>	88SLE19AHBPZ5	4,6	2800	1	9.486,-			
HCS-PNX-25LS-E <sup>2</sup>	88SLE24AHBPZ5	5,5	3000	1		9.953,-		
HCS-PNX-35LS-E <sup>2</sup>	88SLE38AHBPZ5	9,6	4000	1			10.715,-	
HCS-PNX-48LS-E <sup>2</sup>	88SLE46AHBPZ5	10,8	3000/6000	2				15.394,-

heat pump controller<sup>5</sup> and remote control ready for operation, urgent necessary and pre-programmed

heat pump controller with remote control		1.302,-	1.302,-	1.302,-	1.302,-
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<b>Total with Controller</b>		<b>10.788,-</b>	<b>11.255,-</b>	<b>12.017,-</b>	<b>16.696,-</b>
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**Accessories** - (optional). Further information in the accessories list

Connecting kit with reinforced hoses (supplied as separate unit)

HWAS01L	89WA00100HOND		148,-	148,-	148,-	148,-
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**Hot water priority switch** inclusive sensor (connected and ready for operation)

HBUV00	89BU0000VHOND		338,-	338,-	338,-	
HBUV01	89BU0010VHOND					349,-

Swimming pool kit (connected and ready for operation) - Material for the direct operation with chlorine water is to be requested separately!

HSUS01	89HSKS010HOND		1.027,-	1.027,-	1.027,-	1.027,-
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When ordering please use product code e.g.: HCS-PN-235K with order number.

- 1) The warranty for parts of refrigerant circuit comes into effect only if the equipment is used for its intended purpose and the installation and commissioning have been examined and approved of an authorized HAUTEC customer service technician. An extended warranty of 2 years is available (refrigerant circuit) for a surcharge of 2% on the selected equipment price.
  - 2) Also available in 230V AC. See separate price list. Please check delivery time when ordering.
  - 3) Source circulating pump is sufficient for e.g. HAUTEC double U pipe probes of maximum length of 50 m (each); mind the maximum pressure head.
  - 4) For use with HELN - mind the maximum pressure head
  - 5) The Hautec Heat Pump controller must be used with these models.
- More accessories may be found in the accessory section page 94 onwards.