

REVERSIBLE AIR-TO-WATER HEAT PUMP



Compact, silent high efficiency heat pump.

Natural R290 refrigerant with very low GWP (3).

Built-in hydraulic module.

30AWH-P



Nominal heating capacity: 4 - 14 kW ⁽¹⁾
Nominal cooling capacity : 4 - 14 kW ⁽²⁾

The 30AWH-P air-to-water heat pump is designed for heating and cooling applications in new and existing individual homes and small businesses.

When installed alone, the 30AWH-P is compatible with low to medium temperature emitters (underfloor heating, fan coil units, water cassettes, radiators, mixed installations, etc.).

The 30AWH-P is also compatible with medium to high temperature emitters for boiler back up operation.

The 30AWH-P heat pump is installed outside in an open area, ideally as close as possible to the boiler room.

Each device is tested in the factory and delivered ready for operation.

(1) @ condition outdoor air temperature +7°C, water inlet/outlet temperature +30°C/+35°C
(2) @ condition outdoor air temperature +35°C, water inlet/outlet temperature +23°C/+18°C



CARRIER participates in the ECP programme for LCP/HP
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RANGES

The 30AWH-P range of reversible heat pumps comprises 6 single-phase models and 2 three-phase models.

DESCRIPTION

Operation in cooling mode with an outdoor temperature of 10 °C to 46 °C.

Operation in heating mode with an outdoor temperature of -20 °C to 40 °C.

If the heat pump is the only source of heat:

Below the equilibrium temperature, heating must be provided by another heating source or using an additional electrical supply actuated by the 30AWH-P.

For a boiler backup heat pump installation: operates down to the equilibrium point (temperature below which the heat pump can no longer keep up with heating requirements); below this point, the heat pump and boiler run alternatively.

CONFORMITY

- 2006/42/EC Machinery Directive
- 2014/30/EU Electromagnetic Compatibility Directive
- 2014/68/EU Pressure Equipment Directive
- 2009/125/CE Ecodesign Directive
- Ecodesign regulation (EU) No 813/2013
- Energy Labelling regulation (EU) No 811/2013
- 2011/65/EU Restriction of Hazardous Substances Directive (RoHS)
- REACH regulation (EC) No 1907/2006

DESCRIPTION OF THE MAIN COMPONENTS

The new 30AWH-P air-to-water reversible heat pumps, with Inverter technology, have been designed for residential applications and for small commercial installations.

They offer excellent energy efficiency and exceptionally quiet operation.

These units integrate the very latest technological innovations: R290 propane refrigerant fluid which does not contribute to ozone depletion, nor climate change. R290 is a natural refrigerant which has very low Global Warming Potential (GWP), and by consequence low CO₂ emissions, Twin Rotary DC Inverter compressors, a low-noise fan with an electronic control.



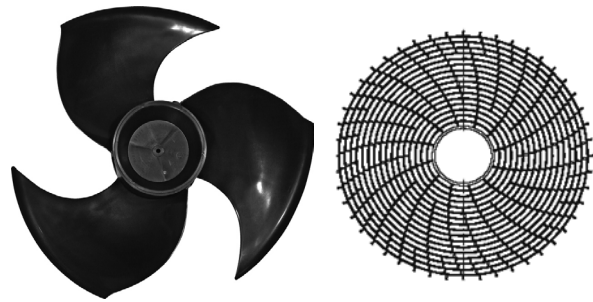
Ecodesign is the European ecodesign directive, aimed at improving the energy efficiency of energy-related products (ErP) through regulation. Carrier supports initiatives to reduce the environmental impact of its products.

Specifications

- A vast operating range, both in cooling and heating mode, offering great performance across a broad range of temperatures.
- Twin Rotary DC Inverter compressors with frequency modulation are used for increased reliability, reduced energy consumption and operation without vibration, whatever the operating conditions.
- Variable speed fans with a patented innovative blade shape, ensuring better distribution of air at exceptionally low sound levels.
- Pre-configured or customisable water laws, for stable power levels which correspond to the thermal losses.
- The option to connect and integrate the unit into existing heat sources or into an auxiliary heating source (using a single or dual energy source), which allows for increased savings and optimal comfort in any weather conditions.
- Inlet and outlet connections to the three-way valve, to enable connection to a domestic hot water tank, increase the flexibility of use, regardless of the application.
- A water outlet temperature of up to 75 °C for heating and domestic hot water in residential applications.
- Plug and play control for intrinsic maintenance and servicing safety.
- For enhanced safety, an incoming alarm signal can force the unit to shut down, and is compatible with external safety devices or control systems.
- Outgoing signal making it possible to control the operation of a customer's accelerator pump or additional pump to increase the versatility of the installation.

Advanced technology

- Electronic system management: several sensors placed in key positions within the refrigerant circuit detect the operating status of the system. Two integrated electronic boards receive the signals sent by the sensors; they manage them using advanced control algorithms and optimise the refrigerant fluid flow rate and the operation of all the main components – the compressor, the fan motors and the electronic expansion valve.
- The electronic expansion valve is a dual flow electronic device that optimises the volume flow of refrigerant in the circuit and overheats it, preventing liquid fluid from returning to the compressor. This device further improves system performance and reliability.
- The air management system, which comprises the axial flow fan, the orifice and the air discharge grille, guarantees minimised sound levels and maximized air flow.



New patented fan blade shape and low pressure drop grille

- The new coil has a blue hydrophilic coating which allows water to migrate more easily to the bottom of the exchanger using gravity.

In particular, this innovation enables:

- The frosting time to be increased by reducing the accumulation of frost on the coil
- Better defrosting by improving the flow of water over the fins

Operation in heating mode is thereby improved.

Advanced performances

- The 30AWH-P offers extremely high energy efficiency, both in heating mode and in cooling mode, thereby guaranteeing significant energy savings. Large coils with high efficiency and optimised circuits ensure that all the combinations meet the European objectives concerning tax deductions relating to energy savings. The part load efficiency (seasonal energy efficiency) reaches the highest level in this residential sector.
- Year-round comfort – the advanced technology used in the 30AWH-P provides users with optimised levels of comfort, in terms of water temperature regulation and the low sound level.

The required temperature is obtained rapidly, and kept constant, without any fluctuations. The 30AWH-P offers optimised levels of comfort in both winter and summer.
- The 30AWH-P can operate at low ambient temperatures in cooling mode (from outdoor temperatures of 0 °C to 46 °C). To guarantee user comfort, the units operate down to an outdoor temperature of -20 °C in heating mode, while in summer, they can produce hot water up to 75 °C, at an outdoor temperature of up to 40 °C for domestic hot water applications.

FEATURES AND BENEFITS

- The 30AWH-P also has new Energy Soft technology. This advanced control logic allows energy to be extracted from the outside air to guarantee energy-optimised defrosting without the use of the compressor.

Unlike traditional defrosting technology, Energy Soft has virtually no thermal impact on the water loop.

Environmental care

- Non-ozone depleting and very low climate change R290 refrigerant.
- Fluid from the HC family, a chlorine-free product which does not deplete the ozone layer.
- Very light, so a smaller amount is required than other fluids.
- Highly efficient, it enables a high energy efficiency ratio (COP and EER) to be obtained.
- The packaging offers increased protection during transport and handling, and is 100% recyclable.

Quick and simple to install and maintain

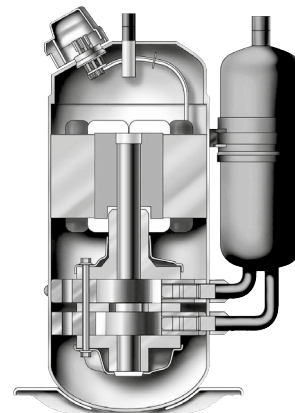
- Easy access to all internal components: simply undo three screws to remove the entire front and lateral panels, in order to access all of the components.
- The advanced circuit design and choice of components has enabled a compact unit to be created, with an exceptionally small footprint that is easy to transport even through narrow doors.
- The reduced weight of the unit, and the possibility to use slings securely, ensure it is easy to transport.
- 3 bar water safety valve fitted as standard.
- Protection against high refrigerant temperatures.
- Water flow controller to ensure that the circuits contain enough water to operate correctly.
- The 30AWH-P has standard 1/2 UNF gas type male couplings.
- The built-in hydraulic module reduces the space required and simplifies installation. Simply connect up all the connections: electrical, water supply, and return pipes.
- The mounting brackets have a specially designed shape to ensure that the unit is safely and securely attached to its base.
- The mounting brackets also allow the safe use of slings for lifting without risk of fall.

Twin Rotary DC Inverter compressors

- Advanced technology, which offers maximum energy efficiency, with high capacity available under peak conditions, and optimised efficiency at low and moderate compressor speeds. The 30AWH-P heat pump uses IPDU (intelligent power drive unit) inverter technology, which combines advanced variable frequency and best conversion efficiency to ensure the compressor provides optimised operation under all conditions, to minimise temperature fluctuations, and ensure perfect control of individual comfort, whilst significantly reducing energy consumption.

The compressor speed is precisely adjusted, and the system offers an enhanced level of comfort (no fluctuations in temperature) in operating conditions with exceptional efficiency.

- The compressor frequency is increased continuously up to the maximum level. This ensures there are no current peaks during the start-up phase, and provides a secure connection to a single-phase current supply, even for large capacity systems. The maximum operating current of the 30AWH-P is less than 23 A (for systems up to 4 kW) and less than 35 A for larger systems (14 kW). The inverter warm-up speed makes soft starts unnecessary by ensuring maximum capacity immediately.
- The two rotating compression cylinders, offset from one another by 180°, and the brushless DC motor with a perfectly balanced shaft, ensure that vibrations and noise are reduced to a minimum, even at very low operating speeds. This gives a very wide operating range between the minimum capacity and the maximum capacity in continuous operation, which guarantees that the system is always optimised and provides maximum comfort at exceptionally high levels of energy efficiency.
- The two rotating compression cylinders, the low vibrations and the low load imposed on the shaft ensure the compressor offers the best possible reliability and a long and trouble-free operational life.
- All two-cylinder rotary compressors with a brushless DC inverter motor are equipped with internal coil heaters as standard.
- An acoustic treatment of the external panels of the unit, further reducing the sound levels.



FEATURES AND BENEFITS

Absolute reliability

- Exceptional endurance tests:
 - All the units undergo tests at various stages of their manufacture to ensure tightness of the circuits, electrical conformity, and to check the water and refrigerant pressure.
 - At the end of production, all the unit's operating parameters are thoroughly tested.
 - Corrosion durability test.
 - Accelerated ageing test on the critical components and on the fully-assembled units, simulating thousands of hours of continuous operation.
 - Impact testing on the packaging, to ensure that the units are suitably protected against accidental impacts.
 - Numerous, comprehensive tests on-site.

Economical operation

- High energy efficiency:
 - The exceptionally high energy efficiency of 30AWH-P heat pumps is the result of a long selection and optimisation process.
 - The use of ambient air as the main energy source in residential heating applications considerably reduces energy consumption and CO₂ emissions.
 - Sleep mode, with reduced compressor speed at night, provides a low operating sound level, and significant reductions in energy consumption.
 - An easily adjustable and economical silent mode reduces the compressor speed.
 - Natural R290 refrigerant offers long term climate change solution.

NHC Control

NHC control associate with compressor and fan variable frequency driver combines intelligence with operating simplicity. The control constantly monitors all machine parameters and precisely manages the operation of compressor, expansion devices, fans and of the water heat exchanger water pump for optimum energy efficiency.

Ease of use

- The NHC controller can be associated with any room thermostat or compatible user interface which allows easy access to the configuration parameters (compressor frequency, refrigerant temperature, setpoints, air temp., water inlet temp., alarm report, etc.).
- This user interface is also very intuitive in its use. It allows the operating mode to be easily read and selected. The functions are represented by icons on the LCD backlit screen.

To facilitate the use of this interface, 3 access levels are available: end user, installer and factory.

Key features

- Predefined climatic curves (12) or customized climatic curve (water temperature setpoint control)
- Air temperature setpoint control
- Scheduling mode
- Low noise level or night mode
- Antifreeze protection by triggering the internal accelerator pump
- Backup electric heater controlled in 1/2/3 heat stage(s)
- Backup by oil or gas boiler
- Hydraulic module with control of the flow rate
- Manages an additional pump
- Management of swimming pool heating during autumn and winter
- Manages domestic hot water with or without
 - Anti-legionella mode
 - DHW backup
 - DHW backup + boosted by 1, 2 or 3 electric heating stage(s)
- Master-slave control of 4 units operating in parallel with runtime balancing and automatic changeover in case of a unit fault (sensor available as an accessory).
- ModBus protocol

Choice of control product

Two options are available to actuate the 30AWH-P heat pump:

- Room thermostat or compatible user interface
- ModBus protocol

ModBus

Direct access with ModBus connection to set, configure and monitor the 30AWH-P unit.

Large choice of input contacts:

- Remote on/off contact
- Remote heating/cooling contact: this contact is used to select cooling mode (contact closed) or heating mode (contact open).
- Remote economy contact: this contact is used to select the presence mode when the contact is open or the economy absence mode when the contact is closed.
- Safety input contact: this contact is normally closed and, depending on the configuration, is used to stop the unit, disable heating mode or disable cooling mode when open.

FEATURES AND BENEFITS

Several functions can be configured by the installer.

They can be used to adapt to the machine environment:

- Night mode/power limitation: this contact reduces the compressor maximum frequency to prevent noise.
- Off-peak times: if the general purpose contact, configured to "off-peak times", is closed, then the electric heating stages are not allowed.
- Offloading request: if the general purpose contact, configured to "Offloading request", is closed, then the unit must be stopped as soon as possible.
- Solar input: If the general purpose contact, configured to "Solar Input", is closed, then the unit is not allowed to run in heating or DHW mode because hot water is produced from a solar source.
- DHW priority: when this input is closed, the unit switches to domestic hot water production regardless of the space heating demand and the current DHW schedule (requires DHW temperature sensor supplied as an accessory).
- Anti-legionella cycle request: when this input is closed, domestic hot water production is requested with the anti-legionella setpoint.
- Summer contact: this contact is used to select winter (contact open) or summer mode (contact closed).
- Electric energy meter input: this input is used to count the number of pulses received from an external electric energy meter (not supplied).
- External alarm indication input: when this input is open, the alarm is tripped. This alarm is for information only, it does not affect unit operation.

Remote output contact available

Two output contacts can be chosen on the NHC control, based on the desired configuration:

State: alert (unit still operates), Alarm, Standby, Cooling or Heating or DHW or Defrosting operation),

Cooling operation, Heating operation, DHW operation, Defrosting operation, indoor air temperature reached, electric stage 2 activated, electric stage 3 activated.

TECHNICAL CHARACTERISTICS

30AWH-P				004 (1Ph)	006 (1Ph)	008 (1Ph)	010 (1Ph)	012 (1Ph)	014 (1Ph)	012 (3Ph)	014 (3Ph)	
Heating												
Nominal performances ⁽¹⁾	HA1	Nominal capacity	kW	3,9	5,8	7,8	9,8	11,4	13,8	11,4	13,8	
		COP	kW/kW	4,9	4,8	4,9	4,4	4,6	4,3	4,7	4,4	
	HA2	Nominal capacity	kW	3,8	5,5	7,9	9,7	10,8	13,6	10,8	13,6	
		COP	kW/kW	3,6	3,7	3,8	3,5	3,7	3,4	3,7	3,4	
	HA3	Nominal capacity	kW	3,7	5,3	7,7	9,5	11,0	13,3	11,0	13,3	
		COP	kW/kW	2,9	2,9	3,1	3,0	3,1	2,9	3,1	2,9	
	Seasonal efficiency ⁽²⁾	HA1	SCOP	kWh/kWh	4,7	4,8	4,6	4,6	4,7	4,7	4,7	4,7
			η _s heat	%	185	191	185	185	188	188	188	188
P _{rated}			kW	4	5	6	6	9	9	9	9	
Annual Energy consumption			KWh	1612	2077	2831	2831	4031	4031	4031	4031	
Energy class				A+++	A+++	A+++	A+++	A+++	A+++	A+++	A+++	
HA3		SCOP	kWh/kWh	3,3	3,3	3,3	3,3	3,3	3,3	3,3	3,3	
		η _s heat	%	134	135	131	131	134	134	134	134	
		P _{rated}	kW	3	5	6	6	9	9	9	9	
		Annual Energy consumption	KWh	2054	2922	3963	3963	5610	5610	5610	5610	
		Energy class		A++	A++	A++	A++	A++	A++	A++	A++	
		Cooling										
		Nominal performances ⁽¹⁾	CA1	Nominal capacity	kW	3,3	4,7	6,5	7,4	9,6	10,7	9,6
EER	kW/kW			3,2	3,3	3,0	2,9	3,0	2,9	3,1	3,0	
CA2	Nominal capacity		kW	4,0	6,8	8,6	8,9	13,2	14,6	13,2	14,6	
	EER		kW/kW	4,1	3,8	3,9	3,7	3,9	3,7	3,9	3,8	
Seasonal efficiency		SEER	kW/kW	192	194	197	195	203	196	203	196	
Sound levels												
Standard unit												
Sound power level ⁽³⁾			dB(A)	49	49	49	49	57	58	57	58	
Sound pressure level at 10 m ⁽⁴⁾			dB(A)	24	25	26	27	28	29	28	29	
Dimensions												
Length			mm	946	946	946	946	946	946	946	946	
Width			mm	430	430	430	430	430	430	430	430	
Height			mm	927	927	927	927	1375	1375	1375	1375	
Operating weight ⁽⁵⁾												
Standard unit			kg	78	84	91	93	126	126	128	128	
Compressors			Rotary compressor	1	1	1	1	1	1	1	1	
Refrigerant				R290								
Charge ⁽⁵⁾			kg	0,39	0,58	0,76	0,76	1,07	1,07	1,07	1,07	
Capacity control												
Minimum capacity ⁽⁶⁾			%	40%	32%	34%	27%	25%	21%	25%	21%	

(1) In accordance with standard EN 14511-3:2022

(2) In accordance with standard EN 14825:2022, Average climate

C1 Cooling mode conditions : evaporator water entering/leaving temperature 12°C/7°C, outside air temperature 35°C, evaporator fooling factor 0m² K/W

C2 Cooling mode conditions : evaporator water entering/leaving temperature 23°C/18°C, outside air temperature 35°C, evaporator fooling factor 0m² K/W

H1 Heating mode conditions : Water heat exchanger water entering/leaving temperature 30°C/35°C, fooling factor 0m² K/W. Outside air temperature 7°C db / 6°C wb

H2 Heating mode conditions : Water heat exchanger water entering/leaving temperature 40°C/45°C, fooling factor 0m² K/W. Outside air temperature 7°C db / 6°C wb

H3 Heating mode conditions : Water heat exchanger water entering/leaving temperature 47°C/55°C, fooling factor 0m² K/W. Outside air temperature 7°C db / 6°C wb

(3) In dB ref=10⁻¹² W, (A) weighting. Declared dualnumber noise emission values in accordance with EN 12102-1 (with an associated uncertainty of +/-2dB(A)).

as required by Ecodesign regulation and Eurovent certification. Measured in accordance with ISO 9614-1 at ErP C condition (A7/W55) and certified by Eurovent.

(4) In dB ref 20 µPa, (A) weighting. Declared dualnumber noise emission values in accordance with EN 12102-1 (with an associated uncertainty of +/-2dB(A)).

For information, calculated from the sound power level Lw(A) at ErP C condition (A7/W55).

(5) Values are guidelines only. Refer to the unit nameplate.

(6) Heating Eurovent condition

(7) Min. water-side operating pressure with variable speed pump is 110 kPa.



Eurovent certified values

TECHNICAL CHARACTERISTICS

30AWH-P		004 (1Ph)	006 (1Ph)	008 (1Ph)	010 (1Ph)	012 (1Ph)	014 (1Ph)	012 (3Ph)	014 (3Ph)
Air heat exchanger		Grooved copper tubes, aluminium fins							
Fans		Axial type							
Quantity		1	1	1	1	2	2	2	2
Maximum total air flow	l/s	800	800	800	800	1800	1800	1800	1800
Maximum rotational speed	rps	730	730	820	820	820	820	820	820
Water heat exchanger		Braze plate heat exchanger							
Water volume	l	0,6	0,9	0,9	0,9	1,5	1,5	1,5	1,5
Hydronic module		Circulator & relief valve							
Circulator		Centrifugal pump (variable speed)							
Max. water-side operating pressure ⁽⁷⁾	kPa	300	300	300	300	300	300	300	300
Water connections									
Inlet diameter (BSP GAS)	inch	1	1	1	1	1	1	1	1
Outlet diameter (BSP GAS)	inch	1	1	1	1	1	1	1	1
Casing paint colour	Colour code:	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035	RAL 7035

(7) Min. water-side operating pressure with variable speed pump is 110 kPa.

ELECTRICAL DATA

30AWH-P (full options)		004 (1Ph)	006 (1Ph)	008 (1Ph)	010 (1Ph)	012 (1Ph)	014 (1Ph)	012 (3Ph)	014 (3Ph)
Power circuit									
Nominal power supply	V-ph-Hz	230-1+N-50	230-1+N-50	230-1+N-50	230-1+N-50	230-1+N-50	230-1+N-50	400-3+N-50	400-3+N-50
Voltage range	V	220-240	220-240	220-240	220-240	220-240	220-240	380-415	380-415
Control circuit supply		24V AC via internal transformer							
Maximum unit power input (Un) ⁽¹⁾	kW	3,5	4,4	5,0	6,4	7,1	7,1	10,5	10,5
Cos Phi unit at maximum power ⁽¹⁾		1,00	1,00	1,00	1,00	1,00	1,00	0,94	0,94
Maximum unit current drawn (Un-10%) ⁽²⁾	A	15,3	19,4	21,8	28,2	31,0	31,0	16,3	16,3
Maximum unit current drawn (Un) ⁽³⁾	A	15,1	19,2	21,6	27,9	30,8	30,8	16,1	16,1
Maximum Start-up current, standard unit ⁽⁴⁾	A	Not Applicable (less than the operating current)							

(1) Power input, compressors and fans, at the unit operating limits and nominal voltage (data given on the unit nameplate).

(2) Maximum unit operating current at maximum unit power input and at 207 or 360 V.

(3) Maximum unit operating current at maximum unit power input and at 230 or 400 V (values given on the unit nameplate).

(4) Maximum instantaneous start-up current at operating limits (maximum operating current of the smallest compressor(s) + fan current + locked rotor current of the largest compressor).

OPERATING RANGE

Cooling cycle

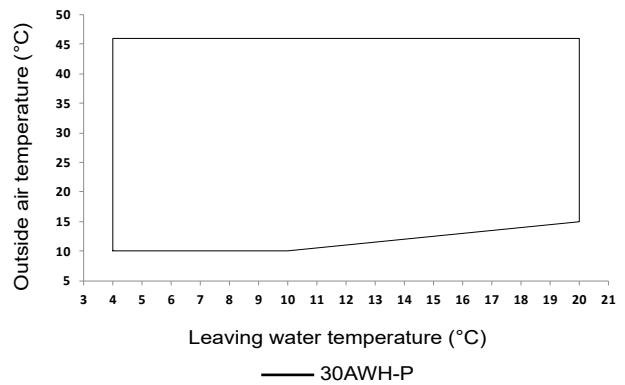
Evaporator Water Temperature °C	Minimum	Maximum
Entering water temperature at start-up	6	30
Leaving water temperature during operation	4	20
Condenser Air Temperature °C	Minimum	Maximum
Standard unit	10	46

Heating cycle

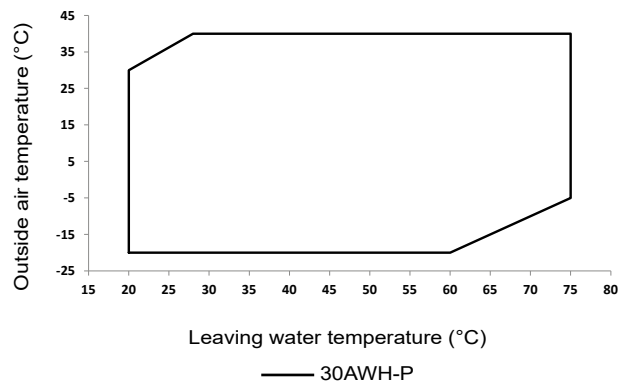
Condenser Water Temperature °C	Minimum	Maximum
Entering water temperature at start-up	15	65
Leaving water temperature during operation	20	75
Evaporator Air Temperature °C	Minimum	Maximum
Standard unit	-20 ⁽¹⁾	40

- (1) For operation at outdoor ambient temperature below 0°C (cooling mode and heating mode), the water freeze protection should be available and according to the water installation, the water loop can be protected against freeze by the installer, using an anti-freeze solution or trace heater.

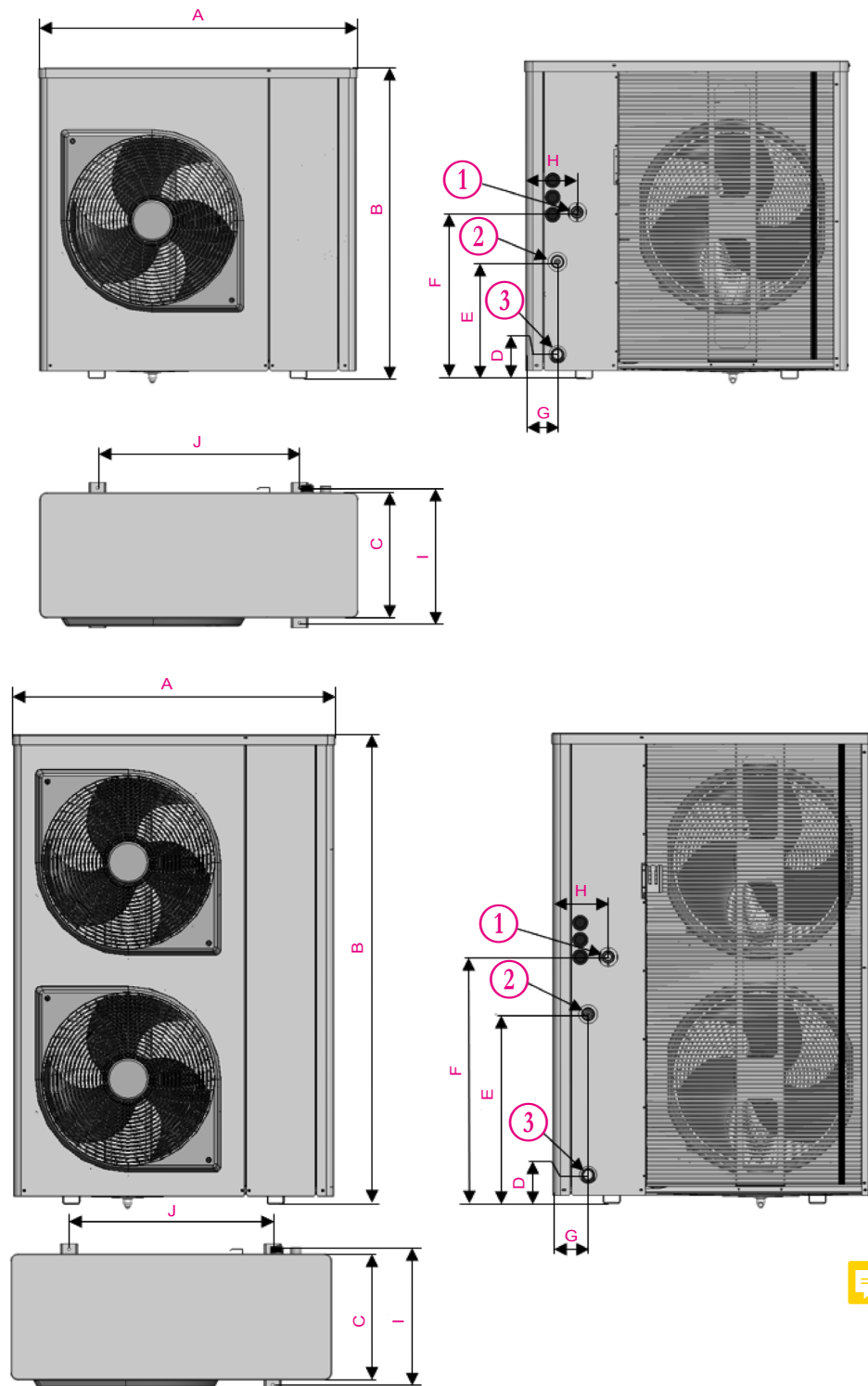
Operating range, cooling mode



Operating range, heating mode



DIMENSIONS



30AWH-P	A	B	C	D	E	F	G	H	I	J
004	946	927	372	71	341	485	93	150	400	600
006	946	927	372	71	341	485	93	150	400	600
008	946	927	372	71	341	485	93	150	400	600
010	946	927	372	71	341	485	93	150	400	600
012	946	1375	372	83	553	720	102	160	400	600
014	946	1375	372	83	553	720	102	160	400	600

Note : Dimensions are given in mm

PERFORMANCE DATA

HEATING MODE SELECTION TABLE

Outside air dry-bulb (wet-bulb) temperature (°C)															
	LWT °C	-20 (-21)							-15 (-16)						
		Qh			COP			q	Qh			COP			q
		kW			kW/kW			l/s	kW			kW/kW			l/s
		Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom
30AWH004HP-	35	1,92	1,29	3,08	1,69	1,54	1,84	0,09	2,43	1,67	5,05	2,21	2,12	2,10	0,12
30AWH006HP-		2,92	1,60	2,92	2,15	2,03	2,14	0,14	3,61	2,04	5,94	2,47	2,44	2,22	0,17
30AWH008HP-		2,93	2,34	2,92	2,25	2,17	2,25	0,14	5,10	2,98	7,38	2,54	2,56	2,18	0,24
30AWH010HP-		2,93	2,34	2,92	2,25	2,17	2,25	0,14	5,10	2,98	7,38	2,54	2,56	2,18	0,24
30AWH012HP-		6,48	3,11	6,87	2,39	2,31	2,34	0,31	7,47	3,68	10,68	2,60	2,59	2,20	0,36
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		6,46	3,11	6,87	2,36	2,31	2,33	0,31	7,46	3,68	10,68	2,58	2,59	2,20	0,36
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	45	1,86	1,21	2,98	1,40	1,24	1,52	0,09	2,35	1,59	4,91	1,79	1,66	1,75	0,11
30AWH006HP-		2,88	1,47	2,88	1,83	1,58	1,83	0,14	3,54	1,87	5,76	2,08	1,90	1,87	0,17
30AWH008HP-		2,81	2,25	2,80	1,89	1,80	1,88	0,13	4,89	2,83	6,97	2,18	2,08	1,96	0,23
30AWH010HP-		2,81	2,25	2,80	1,89	1,80	1,88	0,13	4,89	2,83	6,97	2,18	2,08	1,96	0,23
30AWH012HP-		6,19	2,91	6,58	2,09	1,88	2,08	0,30	7,18	3,45	10,31	2,27	2,10	2,06	0,34
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		6,17	2,91	6,56	2,07	1,88	2,06	0,30	7,15	3,45	10,31	2,25	2,10	2,05	0,34
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	55	1,79	1,12	2,99	1,16	0,99	1,32	0,05	2,32	1,51	5,00	1,46	1,30	1,54	0,07
30AWH006HP-		2,77	1,40	2,77	1,53	1,28	1,53	0,08	3,45	1,81	4,62	1,76	1,56	1,70	0,10
30AWH008HP-		2,75	2,20	2,74	1,61	1,51	1,60	0,08	4,75	2,75	6,56	1,89	1,73	1,76	0,14
30AWH010HP-		2,75	2,20	2,74	1,61	1,51	1,60	0,08	4,75	2,75	6,56	1,89	1,73	1,76	0,14
30AWH012HP-		5,95	2,75	6,32	1,82	1,52	1,81	0,18	6,96	3,29	10,03	1,98	1,71	1,90	0,21
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		5,93	2,75	6,32	1,80	1,52	1,81	0,18	6,94	3,29	10,03	1,96	1,71	1,89	0,21
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	65	-	-	-	-	-	-	-	2,19	1,37	3,06	1,20	1,02	1,28	0,05
30AWH006HP-		-	-	-	-	-	-	-	3,30	1,71	3,30	1,50	1,28	1,51	0,08
30AWH008HP-		-	-	-	-	-	-	-	2,93	2,57	2,93	1,48	1,41	1,48	0,07
30AWH010HP-		-	-	-	-	-	-	-	2,93	2,57	2,93	1,48	1,41	1,48	0,07
30AWH012HP-		-	-	-	-	-	-	-	5,39	3,12	5,37	1,64	1,37	1,61	0,13
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		-	-	-	-	-	-	-	5,37	3,12	5,37	1,62	1,37	1,61	0,13
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	75	-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH006HP-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH008HP-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH010HP-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH012HP-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-

Legend

LWT	Leaving water temperature, °C
Qh	Heating capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
COP	Coefficient of Performance net, kW/kW
q	Condenser water flow rate, l/s

Application data

Standard units, refrigerant: R290
 Condenser entering/leaving water temperature difference: according to NF414
 Condenser fluid: water
 Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

PERFORMANCE DATA

Outside air dry-bulb (wet-bulb) temperature (°C)															
	LWT °C	-10 (-11)							-7 (-8)						
		Qh			COP			q	Qh			COP			q
		kW			kW/kW			l/s	kW			kW/kW			l/s
		Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom
30AWH004HP-	35	2,95	2,08	4,90	2,77	2,72	2,09	0,14	2,79	1,28	5,16	2,68	2,75	2,19	0,13
30AWH006HP-		4,35	2,49	5,86	2,83	2,87	2,09	0,21	4,12	1,57	6,23	2,61	2,86	2,26	0,20
30AWH008HP-		5,99	3,68	8,30	2,78	3,01	1,92	0,29	5,80	2,36	8,87	2,69	2,90	2,05	0,28
30AWH010HP-		5,99	3,68	8,30	2,78	3,01	1,92	0,29	5,80	2,36	8,87	2,69	2,90	2,05	0,28
30AWH012HP-		8,56	4,31	10,45	2,80	2,94	2,10	0,41	8,16	2,57	11,07	2,68	2,59	2,20	0,39
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		8,56	4,31	10,45	2,79	2,94	2,10	0,41	8,15	2,56	11,07	2,67	2,59	2,20	0,39
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	45	2,83	1,96	4,79	2,24	2,13	2,02	0,14	2,65	1,16	4,98	2,40	2,05	2,13	0,13
30AWH006HP-		4,23	2,31	5,75	2,35	2,23	2,13	0,20	4,02	1,38	6,14	2,49	2,09	2,25	0,19
30AWH008HP-		5,77	3,46	7,95	2,37	2,40	1,95	0,28	5,58	2,20	8,58	2,53	2,21	2,04	0,27
30AWH010HP-		5,77	3,46	7,95	2,37	2,40	1,95	0,28	5,58	2,20	8,58	2,53	2,21	2,04	0,27
30AWH012HP-		8,25	4,05	10,19	2,44	2,37	2,16	0,39	7,86	2,34	10,83	2,57	2,02	2,25	0,38
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		8,24	4,05	10,19	2,42	2,37	2,16	0,39	7,86	2,34	10,83	2,56	2,02	2,25	0,38
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	55	2,78	1,88	4,83	1,81	1,65	1,64	0,08	2,62	1,06	4,99	1,78	1,51	1,72	0,08
30AWH006HP-		4,09	2,24	5,54	1,92	1,82	1,64	0,12	3,90	1,28	5,94	1,85	1,63	1,70	0,12
30AWH008HP-		5,64	3,34	7,56	2,05	1,96	1,65	0,17	5,45	2,09	8,21	1,97	1,72	1,72	0,16
30AWH010HP-		5,64	3,34	7,56	2,05	1,96	1,65	0,17	5,45	2,09	8,21	1,97	1,72	1,72	0,16
30AWH012HP-		8,09	3,87	10,08	2,13	1,93	1,83	0,24	7,70	2,17	10,70	2,03	1,57	1,88	0,23
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		8,03	3,87	10,04	2,11	1,93	1,82	0,24	7,69	2,17	10,70	2,02	1,57	1,88	0,23
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	65	2,71	1,76	4,26	1,43	1,27	1,52	0,06	2,50	1,99	3,82	1,36	1,41	1,45	0,06
30AWH006HP-		3,92	2,14	4,95	1,67	1,52	1,61	0,09	3,72	2,38	4,68	1,58	1,64	1,54	0,09
30AWH008HP-		5,28	3,14	5,66	1,74	1,59	1,73	0,13	5,12	3,55	6,43	1,67	1,73	1,62	0,12
30AWH010HP-		5,28	3,14	5,66	1,74	1,59	1,73	0,13	5,12	3,55	6,43	1,67	1,73	1,62	0,12
30AWH012HP-		7,79	3,67	8,88	1,82	1,54	1,82	0,19	7,48	4,01	8,48	1,75	1,64	1,74	0,18
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		7,78	3,67	8,87	1,81	1,54	1,81	0,19	7,61	4,01	8,51	1,76	1,64	1,74	0,18
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	75	-	-	-	-	-	-	-	2,11	1,64	2,84	0,98	1,03	1,02	0,05
30AWH006HP-		-	-	-	-	-	-	-	3,51	2,23	3,71	1,41	1,42	1,38	0,08
30AWH008HP-		-	-	-	-	-	-	-	3,53	3,00	3,52	1,30	1,33	1,30	0,08
30AWH010HP-		-	-	-	-	-	-	-	3,53	3,00	3,52	1,30	1,33	1,30	0,08
30AWH012HP-		-	-	-	-	-	-	-	3,27	3,79	3,27	1,13	1,30	1,13	0,08
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		-	-	-	-	-	-	-	3,27	3,79	3,27	1,13	1,30	1,13	0,08
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-

Legend

LWT	Leaving water temperature, °C
Qh	Heating capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
COP	Coefficient of Performance net, kW/kW
q	Condenser water flow rate, l/s

Application data

Standard units, refrigerant: R290
 Condenser entering/leaving water temperature difference: according to NF414
 Condenser fluid: water
 Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

PERFORMANCE DATA

Outside air dry-bulb (wet-bulb) temperature (°C)															
	LWT °C	2 (1)							7 (6)						
		Qh			COP			q	Qh			COP			q
		kW			kW/kW			l/s	kW			kW/kW			l/s
		Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom
30AWH004HP-	35	3,55	1,32	5,91	3,84	3,69	2,69	0,17	3,86	1,50	6,83	4,74	4,90	2,92	0,18
30AWH006HP-		4,88	1,65	7,22	3,93	3,76	3,06	0,23	5,65	1,87	8,80	4,72	4,93	3,39	0,27
30AWH008HP-		7,68	2,53	9,47	3,66	3,84	2,56	0,37	7,42	2,74	11,42	4,79	4,93	2,84	0,36
30AWH010HP-		8,29	2,44	9,47	3,18	3,68	2,56	0,40	9,55	2,74	11,42	4,24	4,93	2,84	0,46
30AWH012HP-		9,64	2,62	12,89	3,60	3,04	2,79	0,46	11,24	3,00	15,81	4,52	4,80	3,18	0,54
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		10,14	2,63	12,89	3,52	3,04	2,79	0,49	13,56	3,00	15,78	4,20	4,80	3,12	0,65
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	45	3,44	1,18	5,70	3,03	2,66	2,52	0,16	3,77	1,34	6,64	3,64	3,40	2,62	0,18
30AWH006HP-		4,72	1,46	7,11	3,14	2,73	2,62	0,23	5,35	1,69	10,45	3,60	3,47	2,87	0,26
30AWH008HP-		7,50	2,27	9,44	3,05	2,75	2,28	0,36	7,65	2,57	11,20	3,71	3,47	2,44	0,37
30AWH010HP-		8,27	2,27	9,44	2,75	2,75	2,28	0,40	9,54	2,57	11,20	3,42	3,47	2,44	0,46
30AWH012HP-		9,27	2,36	12,65	3,07	2,31	2,54	0,44	10,64	2,68	15,46	3,62	3,42	2,77	0,51
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		9,78	2,36	12,64	3,02	2,30	2,54	0,47	12,94	2,68	15,46	3,40	3,42	2,77	0,62
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	55	3,38	1,05	5,73	2,48	1,96	2,24	0,10	3,60	1,20	6,71	2,87	2,38	2,37	0,11
30AWH006HP-		4,59	1,34	6,94	2,53	2,06	2,23	0,14	5,20	1,56	10,40	2,90	2,56	2,47	0,16
30AWH008HP-		7,39	2,16	9,30	2,58	2,11	2,08	0,22	7,42	2,47	10,96	3,03	2,53	2,19	0,22
30AWH010HP-		8,23	2,16	9,29	2,39	2,11	2,08	0,25	9,40	2,47	10,96	2,86	2,53	2,19	0,28
30AWH012HP-		9,07	2,16	12,54	2,57	1,85	2,26	0,27	10,76	2,45	15,29	2,97	2,50	2,43	0,32
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		9,58	2,16	12,54	2,54	1,77	2,26	0,29	13,04	2,45	15,30	2,82	2,50	2,43	0,39
30AWH014HP9															
30AWH004HP-	65	3,47	2,53	4,36	1,94	1,83	1,94	0,08	3,36	2,81	6,16	2,20	2,11	2,12	0,08
30AWH006HP-		4,83	3,12	5,35	2,12	2,03	2,02	0,12	4,87	3,50	8,06	2,38	2,33	2,26	0,12
30AWH008HP-		7,06	4,66	8,08	2,17	2,09	2,04	0,17	7,06	5,24	9,00	2,46	2,40	2,22	0,17
30AWH010HP-		8,01	4,66	8,08	2,06	2,09	2,04	0,19	8,90	5,25	9,00	2,38	2,40	2,22	0,21
30AWH012HP-		8,81	5,15	10,16	2,16	2,01	2,10	0,21	10,32	5,65	13,78	2,42	2,40	2,29	0,25
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		9,31	5,15	10,16	2,15	2,01	2,10	0,22	12,61	5,64	13,78	2,35	2,40	2,29	0,30
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	75	3,00	2,15	3,57	1,36	1,28	1,46	0,07	2,91	2,43	4,57	1,53	1,47	1,62	0,07
30AWH006HP-		4,49	2,87	5,49	1,84	1,73	1,83	0,11	4,48	3,18	6,20	2,03	1,95	2,04	0,11
30AWH008HP-		6,25	3,99	6,44	1,77	1,61	1,77	0,15	6,17	4,58	8,12	1,95	1,84	1,92	0,15
30AWH010HP-		6,44	3,99	6,44	1,76	1,61	1,76	0,15	7,80	4,58	8,12	1,93	1,84	1,92	0,19
30AWH012HP-		8,06	4,91	8,07	1,77	1,59	1,78	0,19	9,63	5,25	10,70	1,92	1,83	1,93	0,23
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		8,04	4,82	8,04	1,75	1,57	1,75	0,19	10,68	5,24	10,68	1,92	1,83	1,91	0,25
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-

Legend

LWT	Leaving water temperature, °C
Qh	Heating capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
COP	Coefficient of Performance net, kW/kW
q	Condenser water flow rate, l/s

Application data

Standard units, refrigerant: R290
 Condenser entering/leaving water temperature difference: according to NF414
 Condenser fluid: water
 Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

PERFORMANCE DATA

Outside air dry-bulb (wet-bulb) temperature (°C)															
	LWT °C	10 (9)							20(19)						
		Qh			COP			q	Qh			COP			q
		kW			kW/kW			l/s	kW			kW/kW			l/s
		Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom
30AWH004HP-	35	4,05	1,64	7,26	5,07	5,38	3,24	0,19	5,15	2,18	10,63	6,42	7,74	3,98	0,25
30AWH006HP-		5,90	2,03	11,17	5,08	5,50	3,65	0,28	6,90	2,59	12,74	6,39	7,98	4,34	0,33
30AWH008HP-		7,88	2,98	12,30	5,21	5,58	3,05	0,38	9,20	3,98	18,50	6,65	8,87	3,79	0,44
30AWH010HP-		10,09	2,98	12,30	4,55	5,58	3,05	0,48	11,47	3,98	18,50	5,63	8,87	3,79	0,55
30AWH012HP-		11,81	3,30	19,37	5,19	5,48	3,42	0,57	15,18	4,69	22,25	7,23	9,25	4,26	0,73
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		14,41	3,30	19,37	4,66	5,48	3,42	0,69	17,73	4,69	22,25	6,19	9,23	4,26	0,85
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	45	3,98	1,46	7,16	3,87	3,68	2,80	0,19	5,01	1,94	10,94	4,67	4,88	3,30	0,24
30AWH006HP-		5,55	1,85	10,98	3,82	3,82	3,04	0,27	6,66	2,37	12,50	4,72	5,20	3,49	0,32
30AWH008HP-		7,93	2,82	12,01	3,98	3,88	2,61	0,38	9,50	3,82	16,40	4,87	5,84	2,97	0,45
30AWH010HP-		9,99	2,82	12,01	3,65	3,88	2,61	0,48	11,30	3,82	16,40	4,28	5,83	2,97	0,54
30AWH012HP-		11,06	2,94	18,84	4,09	3,81	2,96	0,53	14,23	4,11	21,82	5,43	5,93	3,56	0,68
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		13,64	2,94	18,84	3,79	3,81	2,96	0,65	16,86	4,12	21,52	4,82	5,94	3,52	0,81
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	55	3,75	1,30	8,81	3,00	2,55	2,63	0,11	4,77	1,70	10,60	3,60	3,24	2,99	0,14
30AWH006HP-		5,39	1,70	10,85	3,06	2,79	2,58	0,16	6,51	2,22	12,65	3,68	3,72	2,93	0,19
30AWH008HP-		7,85	2,72	11,72	3,18	2,81	2,30	0,23	9,35	3,72	15,99	3,88	4,09	2,54	0,28
30AWH010HP-		9,76	2,72	11,72	3,02	2,81	2,30	0,29	11,34	3,72	15,99	3,50	4,09	2,54	0,34
30AWH012HP-		10,89	2,68	18,55	3,21	2,77	2,58	0,33	14,13	3,70	21,26	4,13	4,12	2,95	0,42
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		13,65	2,68	18,57	3,08	2,77	2,58	0,41	16,83	3,70	21,39	3,76	4,12	2,97	0,50
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	65	3,53	2,97	6,56	2,30	2,21	2,31	0,08	4,47	3,84	8,35	2,75	2,71	2,79	0,11
30AWH006HP-		5,10	3,71	8,43	2,50	2,47	2,35	0,12	6,34	4,70	10,17	3,03	3,09	2,73	0,15
30AWH008HP-		7,45	5,53	11,41	2,57	2,55	2,31	0,18	8,86	6,98	12,92	3,04	3,18	2,51	0,21
30AWH010HP-		9,25	5,53	11,41	2,50	2,55	2,31	0,22	10,82	6,99	12,92	2,83	3,18	2,51	0,26
30AWH012HP-		10,65	6,05	14,63	2,61	2,57	2,45	0,25	13,47	7,98	17,41	3,22	3,47	2,85	0,32
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		13,24	6,05	14,64	2,54	2,57	2,48	0,32	16,15	7,97	17,40	2,99	3,47	2,85	0,39
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH004HP-	75	3,13	2,67	4,71	1,64	1,59	1,70	0,07	4,19	3,58	6,22	2,10	2,03	2,13	0,10
30AWH006HP-		4,70	3,37	6,44	2,13	2,06	2,10	0,11	5,92	4,29	8,08	2,58	2,56	2,50	0,14
30AWH008HP-		6,65	4,87	8,61	2,06	1,96	2,02	0,16	8,23	6,47	10,37	2,46	2,51	2,28	0,20
30AWH010HP-		8,31	4,87	8,61	2,06	1,96	2,02	0,20	10,03	6,47	10,37	2,34	2,51	2,28	0,24
30AWH012HP-		10,05	5,58	11,31	2,06	1,95	2,07	0,24	12,31	7,32	13,78	2,45	2,59	2,43	0,29
30AWH012HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-
30AWH014HP-		11,31	5,58	11,32	2,07	1,94	2,07	0,27	13,79	7,31	13,78	2,43	2,59	2,43	0,33
30AWH014HP9		-	-	-	-	-	-	-	-	-	-	-	-	-	-

Legend

LWT	Leaving water temperature, °C
Qh	Heating capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
COP	Coefficient of Performance net, kW/kW
q	Condenser water flow rate, l/s

Application data

Standard units, refrigerant: R290
 Condenser entering/leaving water temperature difference: according to NF414
 Condenser fluid: water
 Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

PERFORMANCE DATA

Cooling capacities in accordance with EN14511

LWT °C		Outside air Temperature, °C																				
		5							15							25						
		Qc			EER			q	Qc			EER			q	Qc			EER			q
		kW			kW/kW			l/s	kW			kW/kW			l/s	kW			kW/kW			l/s
		Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom
30AWH004HP	5	3,84	2,15	5,36	7,13	9,37	4,96	0,00	3,69	1,32	5,15	6,39	7,87	4,47	0,00	3,34	1,14	4,63	4,19	4,59	3,09	0,00
30AWH006HP		5,51	3,78	6,48	7,59	10,09	5,37	0,26	5,08	1,81	6,16	5,37	8,10	4,55	0,24	4,60	1,57	5,60	3,86	4,32	3,43	0,22
30AWH008HP		5,91	3,87	6,56	6,24	8,45	5,64	0,28	5,15	2,53	5,15	5,27	7,03	5,27	0,24	5,03	2,31	5,03	4,18	4,53	4,18	0,24
30AWH010HP		6,56	3,87	6,56	5,64	8,45	5,64	0,31	5,15	2,53	5,15	5,27	7,03	5,27	0,24	5,03	2,31	5,03	4,18	4,53	4,18	0,24
30AWH012HP		8,86	4,86	8,86	7,17	13,31	7,17	0,42	8,62	3,06	8,62	5,66	7,90	5,66	0,41	8,25	2,75	8,23	4,25	4,00	4,25	0,39
30AWH014HP		8,86	4,86	8,86	7,17	13,31	7,17	0,42	8,62	3,06	8,62	5,66	7,90	5,66	0,41	8,23	2,75	8,23	4,25	4,00	4,25	0,39
30AWH004HP	7	4,09	2,34	5,55	7,62	10,57	5,12	0,00	3,93	1,44	5,32	6,84	9,08	4,58	0,00	3,57	1,25	4,83	4,45	5,17	3,16	0,00
30AWH006HP		5,88	4,04	8,11	8,22	11,11	5,25	0,28	5,37	1,96	7,32	5,65	9,35	3,97	0,26	6,71	1,71	6,71	3,15	4,81	3,15	0,32
30AWH008HP		6,29	4,08	8,50	6,53	9,20	4,45	0,30	6,81	2,71	8,80	4,66	7,67	3,39	0,32	6,85	2,49	8,42	4,13	4,96	3,27	0,33
30AWH010HP		7,80	4,08	8,50	5,20	9,20	4,45	0,37	7,63	2,71	8,80	4,08	7,67	3,39	0,36	7,65	2,49	8,42	3,66	4,96	3,27	0,36
30AWH012HP		10,49	5,18	12,53	6,01	14,84	4,17	0,50	10,58	4,86	12,98	5,35	8,48	4,13	0,50	10,23	2,99	12,71	4,07	4,41	3,36	0,49
30AWH014HP		12,53	5,18	12,53	4,17	14,84	4,17	0,60	12,98	4,86	12,98	4,13	8,48	4,13	0,62	12,71	2,99	12,71	3,36	4,41	3,36	0,61
30AWH004HP	10	4,32	2,68	5,90	8,13	12,99	4,56	0,00	4,16	1,63	5,67	7,27	11,44	4,10	0,00	3,80	1,43	5,21	4,71	6,14	2,87	0,00
30AWH006HP		6,38	4,43	8,75	8,96	13,22	5,68	0,30	5,77	2,17	7,85	6,10	11,28	4,29	0,28	5,22	1,90	7,16	4,35	5,53	3,34	0,25
30AWH008HP		7,54	4,45	9,28	6,24	10,16	6,17	0,36	7,77	4,22	11,13	5,48	7,56	3,76	0,37	7,43	2,81	9,94	4,34	5,72	2,86	0,35
30AWH010HP		8,68	4,45	9,28	6,11	10,16	6,17	0,41	8,80	4,22	11,13	5,00	7,56	3,76	0,42	8,20	2,81	9,94	3,79	5,72	2,86	0,39
30AWH012HP		12,15	5,66	13,37	8,35	17,64	4,17	0,58	11,68	5,40	14,65	5,76	9,75	4,67	0,56	11,36	3,35	13,94	4,34	4,92	3,55	0,54
30AWH014HP		13,37	5,66	13,37	4,17	17,64	4,17	0,64	14,65	5,40	14,65	4,67	9,75	4,67	0,70	13,94	3,35	13,94	3,55	4,92	3,55	0,67
30AWH004HP	15	4,69	3,90	6,72	8,95	12,31	5,20	0,00	4,53	2,90	6,45	7,88	12,24	4,51	0,00	4,17	2,64	5,91	5,10	6,92	3,15	0,00
30AWH006HP		7,05	5,01	9,73	8,59	14,51	5,97	0,34	6,54	2,57	8,72	6,93	16,17	4,60	0,31	5,93	2,28	7,95	4,90	7,30	3,58	0,28
30AWH008HP		9,02	5,13	11,16	8,34	12,29	7,64	0,43	9,09	5,15	12,35	6,39	9,68	4,08	0,43	8,29	3,41	11,06	4,67	7,40	3,03	0,40
30AWH010HP		10,24	5,13	11,16	7,86	12,29	7,64	0,49	10,11	5,15	12,35	5,58	9,68	4,08	0,48	8,95	3,41	11,06	4,00	7,40	3,03	0,43
30AWH012HP		13,68	8,35	17,47	8,47	15,38	7,38	0,65	13,78	8,31	16,71	6,51	10,34	4,83	0,66	13,27	4,05	15,93	4,83	6,36	3,78	0,63
30AWH014HP		17,47	8,35	17,47	7,38	15,38	7,38	0,83	16,71	8,31	16,71	4,83	10,34	4,83	0,80	15,93	4,05	15,93	3,78	6,36	3,78	0,76
30AWH004HP	18	4,65	4,17	7,27	10,42	13,75	5,57	0,00	4,48	3,16	6,97	8,96	14,42	4,81	0,00	4,13	2,89	6,39	5,67	7,82	3,33	0,00
30AWH006HP		8,83	5,48	10,61	9,41	16,99	7,03	0,42	7,82	3,93	9,38	6,29	12,13	4,97	0,37	7,15	2,52	8,51	4,70	8,74	3,82	0,34
30AWH008HP		10,32	5,62	12,24	10,69	14,65	7,95	0,49	9,77	5,68	12,88	6,76	11,07	4,16	0,47	8,80	3,76	11,73	4,86	8,42	3,12	0,42
30AWH010HP		10,83	5,62	12,24	10,13	14,65	7,95	0,52	10,12	5,68	12,88	6,39	11,07	4,16	0,48	9,08	3,76	11,73	4,58	8,42	3,12	0,43
30AWH012HP		15,99	9,09	18,89	10,75	17,51	7,84	0,76	15,38	9,17	18,33	6,69	11,60	5,20	0,74	14,63	4,52	16,97	4,93	7,53	3,89	0,70
30AWH014HP		17,15	9,09	18,89	9,42	17,51	7,84	0,82	16,55	9,17	18,33	6,07	11,60	5,20	0,79	15,72	4,52	16,97	4,49	7,53	3,89	0,75

Legend

LWT	Leaving water temperature, °C
Qc	Cooling capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
EER	Energy Efficiency Ratio net, kW/kW
q	Evaporator water flow rate, l/s

Application data

Standard units, refrigerant: R-290
Evaporator entering/leaving water temperature difference: 5 K
Evaporator fluid: water
Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

PERFORMANCE DATA

Cooling capacities in accordance with EN14511

LWT °C		Outside air Temperature, °C													
		35							45						
		Qc			EER			q	Qc			EER			q
		kW			kW/kW			l/s	kW			kW/kW			l/s
Nom	Min	Max	Nom	Min	Max	Nom	Nom	Min	Max	Nom	Min	Max	Nom		
30AWH004HP	5	2,91	0,93	4,37	2,88	2,54	2,05	0,00	2,48	0,72	3,85	2,06	1,56	1,52	0,00
30AWH006HP		4,17	1,33	5,04	2,89	2,59	2,58	0,20	3,66	1,09	4,32	2,15	1,77	1,84	0,17
30AWH008HP		5,78	2,03	5,71	2,81	2,66	2,70	0,28	5,16	1,75	5,79	2,15	1,96	2,00	0,25
30AWH010HP		5,71	2,03	5,71	2,70	2,66	2,70	0,27	5,79	1,75	5,79	2,00	1,96	2,00	0,28
30AWH012HP		8,79	2,43	8,79	2,95	2,46	2,95	0,42	7,99	2,09	9,02	2,29	1,81	2,13	0,38
30AWH014HP		8,79	2,43	8,79	2,95	2,46	2,95	0,42	9,02	2,09	9,02	2,13	1,81	2,13	0,43
30AWH004HP	7	3,12	1,03	4,54	3,06	2,81	2,09	0,00	2,67	0,82	4,00	2,20	1,78	1,57	0,00
30AWH006HP		4,37	1,45	5,24	3,01	2,85	2,66	0,21	3,84	1,20	4,53	2,23	1,95	1,91	0,18
30AWH008HP		6,20	2,20	8,52	2,95	2,89	2,17	0,30	5,47	1,97	6,31	2,25	2,20	1,74	0,26
30AWH010HP		6,91	2,20	8,52	2,72	2,89	2,17	0,33	6,02	1,97	6,31	2,06	2,20	1,74	0,29
30AWH012HP		9,53	2,66	11,81	3,11	2,69	2,62	0,45	8,66	2,31	10,70	2,41	1,99	2,04	0,41
30AWH014HP		11,81	2,66	11,81	2,62	2,69	2,62	0,56	10,70	2,31	10,70	2,04	1,99	2,04	0,51
30AWH004HP	10	3,34	1,20	4,70	3,26	3,34	2,15	0,00	2,89	0,98	4,17	2,35	2,12	1,62	0,00
30AWH006HP		4,68	1,62	6,35	3,19	3,23	2,50	0,22	4,10	1,35	5,55	2,33	2,20	1,87	0,20
30AWH008HP		6,59	2,55	8,89	3,10	3,41	2,19	0,31	5,75	2,24	7,89	2,32	2,50	1,70	0,27
30AWH010HP		7,18	2,55	8,89	2,78	3,41	2,19	0,34	6,42	2,24	7,89	2,15	2,50	1,70	0,31
30AWH012HP		10,51	3,00	12,81	3,30	3,05	2,72	0,50	9,47	2,64	11,39	2,52	2,24	2,08	0,45
30AWH014HP		12,81	3,00	12,81	2,72	3,05	2,72	0,61	11,39	2,64	11,39	2,08	2,24	2,08	0,54
30AWH004HP	15	3,72	1,57	5,36	3,54	4,62	2,36	0,00	3,26	1,31	4,81	2,58	2,89	1,78	0,00
30AWH006HP		5,33	1,97	7,09	3,57	4,07	2,69	0,25	4,68	1,67	6,25	2,60	2,74	2,03	0,22
30AWH008HP		7,38	3,09	9,88	3,38	4,24	2,32	0,35	6,56	2,72	8,69	2,56	3,08	1,78	0,31
30AWH010HP		8,10	3,09	9,88	3,03	4,24	2,32	0,39	7,19	2,72	8,69	2,31	3,08	1,78	0,34
30AWH012HP		12,07	3,69	14,17	3,58	3,82	2,83	0,58	10,58	3,30	11,91	2,65	2,78	2,06	0,51
30AWH014HP		14,17	3,69	14,17	2,83	3,82	2,83	0,68	11,91	3,30	11,91	2,06	2,78	2,06	0,57
30AWH004HP	18	3,70	1,76	5,81	3,89	5,41	2,49	0,00	3,23	1,49	5,22	2,77	3,34	1,89	0,00
30AWH006HP		6,40	2,19	7,56	3,44	4,68	2,82	0,31	5,63	1,87	6,66	2,53	3,11	2,11	0,27
30AWH008HP		7,95	3,41	10,50	3,58	4,74	2,40	0,38	7,05	3,00	9,12	2,70	3,41	1,82	0,34
30AWH010HP		8,19	3,41	10,50	3,42	4,74	2,40	0,39	7,29	3,00	9,12	2,60	3,41	1,82	0,35
30AWH012HP		12,97	4,15	14,61	3,54	4,37	2,85	0,62	10,80	3,74	12,24	2,46	3,14	2,05	0,52
30AWH014HP		13,86	4,15	14,61	3,41	4,37	2,85	0,66	11,26	3,74	12,24	2,32	3,14	2,05	0,54

Legend

LWT	Leaving water temperature, °C
Qc	Cooling capacity net, kW
Nom	Nominal
Min	Minimum
Max	Maximum
EER	Energy Efficiency Ratio net, kW/kW
q	Evaporator water flow rate, l/s

Application data

Standard units, refrigerant: R-290
 Evaporator entering/leaving water temperature difference: 5 K
 Evaporator fluid: water
 Fouling factor: 0 m² K/W

Performances in accordance with EN 14511

