

AWH(R)PC 5 - 50

Heat Pump type "air-to-water".

Heat Pump completely capable to satisfy the internal need for heating and cooling the premises.

Heat Pump are offered in 26 modifications for using in residential, commercial and industrial facilities.

Designed to operate in ambient temperatures to -15°C provide heating or cooling and hot water up to 55°C.

Programmable microprocessor controller completely capable to control work of Heat Pump.

The units are factory tested and complete the installation by connecting water and power supply only.

Heat Pumps are completed by equipment leading world companies.

Constructive particularities

Structure

Panels and base frame are made from galvanized steel protected with polyester powder painting to ensure total resistance to atmospheric agents.

Compressor

Compressor is used with built-in thermal overload cut-out and crankcase heater, mounted on rubber vibration dampers.

Axial fan

External rotor type axial fans, equipped with single or three-phase direct drive motor, low noise 6 poles, protection level IP54, provided with a protective outlet grille.

Evaporator

High efficiency and low pressure drop stainless steel heat exchanger, with anti-freeze heating element (option) and differential pressure switch, factory insulated with flexible close cell material.

Condenser

Coil are consisting of seamless copper tubes mechanically expanded into blue hydrophilic aluminum fins, 100% fully quality tested, sub cooling circuit to prevent freezing at the base (optional), protected with outlet metal grill.

Desuperheater (option)

High efficiency stainless steel brazed plate heat exchanger, factory insulated with flexible close cell material are using to provide hot water for every day living.

Refrigerant circuit

Copper tube connection with charge valves, filter, sight glass, thermostatic expansion valve, gas-liquid separator, high pressure switch with manual reset and low pressure switch with automatic reset. The heat pump unit is completed also with 4-way valve, liquid receiver and one way valves.

Hydraulic circuit

Built with air vent valve, water drain connection, and female-threaded hydraulic connectors.

Model 5-30 is complete water pump, differential pressure switch, expansion tank.

Technical data

AWH(R)PC		5	8	10	12	14	16	20	25	30	35	40	45	50
Cooling capacity	kW	5.9	8.3	10.3	12.3	14.4	15.2	20.2	24.8	29.9	35	39	43	50
Heating capacity	kW	6.3	9.6	12.1	12.5	15.6	16.4	21.2	28.8	32.6	38	43	50	58
Heating recovery capacity	kW	1.39	2.11	2.3	3.12	3.4	3.73	4.66	5.84	6.86	7.6	8.6	10	12.5
Compressor														
Quantity	nr.	1	1	1	1	1	1	1	1	1	2	2	2	2
Type		rotary				scroll								
Cooling power input 1*	kW	2.2	3.3	3.7	4.3	4.9	5.4	7.2	8.8	10.3	11	12.8	14.1	19.3
ERR		2.68	2.51	2.78	2.86	2.93	2.81	2.8	2.81	2.9	3.18	3	3	2.59
Heating power input 2*	kW	2.1	3.2	3.93	3.6	4.6	5.5	7.1	9.2	11.3	11.5	13.7	16.3	20
COP		3	3	3	3.47	3.39	2.98	2.98	3.13	2.88	3.3	3.13	3	2.9
Heating power input 3*	kW	1.74	2.64	3.36	3.45	4.29	4.69	5.86	8	8.81	10.56	11.94	13.74	16.11
COP		3.62	3.63	3.6	3.62	3.6	3.5	3.62	3.6	3.7	3.6	3.6	3.64	3.6
Refrigerant type		R407c												
Heat exchanger user side														
Type		tube in tube												
Pressure drop	kPa	14	18	46	48	52	56	26	30	55	60	62	66	71
Water flow	m ³ /h	0.91	1.45	1.7	2.09	2.76	2.75	3.5	4.3	5.1	6.67	6.91	7.33	8.57
Connection size	inch	1"	1"	1"	1"	1"	1"	1½"	1½"	1½"	1½"	2"	2"	2"
Circulating pump power	kW	0.24	0.24	0.24	0.24	0.24	0.45	0.75	0.75	0.92	-	-	-	-
Desuperheater														
Type		tube in tube												
Water flow	m ³ /h	0.25	0.38	0.49	0.56	0.6	0.67	0.84	1.05	1.23	1.5	1.83	2.75	3.4
Connection size	inch	½"	½"	½"	½"	½"	½"	¾"	¾"	¾"	¾"	¾"	¾"	¾"
Axial fans														
Quantity	nr.	1	1	2	2	2	2	2	2	2	2	2	2	2
Air flow	m ³ /h	2180	3800	4400	5500	6100	6600	9000	11200	13000	14400	16500	18700	21800
Dimension features														
Length	mm	1180	1180	1250	1250	1250	1250	1600	1600	1600	1600	2006	2006	2006
Width	mm	460	460	452	452	452	452	900	900	900	900	900	900	900
High	mm	980	980	1180	1180	1180	1180	1100	1100	1100	1100	1140	1140	1140
Noise and weight features														
Sound pressure level 4*	dB	53	55	60	60	60	62	65	65	67	63	65	68	68
Net weight	kg	95	110	135	140	160	190	270	290	295	360	380	410	465

Performance values refer to the following conditions:

1* Ambient temperature 35°C, user side water inlet/outlet temperature 12°C/7°C,

2* Ambient temperature 7°C, user side water inlet/outlet temperature 40°C/45°C,

3* Ambient temperature 7°C, user side water inlet/outlet temperature 30°C/35°C,

4* Sound pressure measured at a distance of 10 m and a height of 1.5 m above the ground in a normal field (fan side).