Water Source Heat Pump

10kW-133kW

Application areas

- Offices, Hotels, Hospitals, Schools
- Industry
- Administration
- Commercial buildings

Why this choice?

- High efficiency PHE
- Very low noise operation
- Single / three phase scroll compressors
- Advanced control
- Reduced total cost of ownership

Characteristics

Structure

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

Hermetic compressor

Single phase (mod. 10, 12,15) and 3-phase (mod.17 to 130) scroll type compressors, with built-in thermal overload cut-out and crankcase heater, mounted on rubber vibration dampers.

Evaporator

High efficiency plate type heat exchanger, factory insulated with flexible close cell material.

Condenser

High efficiency plate type heat exchanger, factory insulated with flexible close cell material.

Desuperheater

High efficiency stainless steel brazed plate heat exchanger, factory insulated with flexible close cell material.

Refrigerant circuit

Copper tube connection with charge valves, filter drier, thermostatic expansion valve (capillary for mod.10 to 15), gas-liquid separator, high pressure switch and low pressure switch
The heat pump units are complete also with 4-way valve and one way valve

Hydraulic circuit

Built with user side and source side water inlet/ outlet connectors, water discharge connectors, air vent valve (mod.10 to 30 the user side is complete also with expansion vessel, water pump and flow switch.)

Electric panel

- Compressor contactor
- Compressor protection breaker
- User side water pump contactor (for mod.10 to 30)
- User side water pump breaker (for mod.10 to 30)
- Microprocessor with function display

Optional

- Sight glass which must be installed in factory
- Source side flow switch
- Source side water pump
- Anti-vibration rubber
- Metallic filter for the water circuit
- Heat recovery exchanger
- Tube in tube heat exchanger

Technical Data

Model	Unit	10	12	15	17	20	25	30	36	40
Nominal cooling capacity*	kW	10	12	15	17	20	25	30	36	41
Nominal heating capacity**	kW	12.1	14	15.7	19.8	23.2	28	33.9	40.3	46.3
Power supply	V/PH/Hz	220/1/50					380/3/50			
Hermetic compressor										
Qty	Nr.	1	1	1	1	1	2	2	2	2
Cooling power input*	kW	2.75	3.16	3.49	4.25	4.9	5.99	6.85	8.32	9.62
Cooling current*	A	13.2	14.8	16	8	9.3	11.6	13.6	15.7	17.9
Heating power input**	kW	3.67	4.2	4.71	5.75	6.65	8.01	9.35	11.24	13.12
Heating current*	A	17.6	19.7	21.2	10.1	11.8	14.6	17.4	20.1	22.9
User side heat exchanger										
Pressure drop	kPa	33	33	36	36	38	38	38	39	40
Water flow	m³/h	1.7	21	2.6	2.9	3.4	4.3	5.2	6.2	7.1
Water pipe	DN	25	25	25	25	25	40	40	40	40
Source side heat exchanger										
Pressure drop	kPa	33	33	36	36	38	38	38	39	40
Water flow	m³/h	0.7	0.8	0.9	1.1	1.3	1.7	2	2.5	2.9
Water pipe	DN	25	25	25	25	25	40	40	40	40
Water pump										
Power input	kW	0.4	0.49	0.49	0.55	0.55	0.75	0.75	0.92	0.92
Current	A	2.2	2.4	2.4	1.1	1.1	1.2	1.2	1.5	1.5
Water head	m	17	20	18	19	16	19	16	20	17
Dimension (mm)	L	820	820	820	820	820	1400	1400	1400	1400
	W	575	575	575	575	575	850	850	850	850
	H	910	910	910	910	910	1050	1050	1050	1050
Sound pressure level***	dB(A)	56	58	62	62	62	62	64	64	64
Net weight	kg	130	140	150	160	180	265	280	300	320

Technical Data

Model	Unit	45	50	55	60	68	75	90	100	130
Nominal cooling capacity*	kW	45	50	55	60	68	75	90	100	133
Nominal heating capacity**	kW	53.3	55.6	62.2	71	78.1	80.6	106.4	117.2	156.2
Power suplly	V/PH/Hz					380/3/50				
Hermetic compressor										
Qty	Nr.	2	2	2	2	2	4	3	3	4
Cooling power input*	kW	10.69	11.24	11.5	12.98	14.3	14.8	19.47	21.45	28.6
Cooling current*	A	20.4	21	21.1	23.8	25.8	28.4	35.7	38.7	51.6
Heating power input**	kW	14.45	15.17	15.97	17.92	19.74	20.64	26.88	29.61	39.48
Heating current*	A	26.2	26.9	27.6	31.2	33.8	37.2	46.8	50.7	67.6
User side heat exchanger										
Pressure drop	kPa	40	42	42	48	48	50	52	52	55
Water flow	m³/h	7.7	8.6	9.5	10.3	11.7	12.9	15.5	17.2	22.9
Water pipe	DN	40	40	50	50	50	50	65	65	80
Source side heat exchanger										
Pressure drop	kPa	40	42	42	48	48	50	52	52	55
Water flow	m³/h	3.2	3.3	3.7	4.1	4.6	4.7	6.2	6.8	9.1
Water pipe	DN	40	40	50	50	50	50	65	65	80
Water pump										
Power input	kW	1.05	1.05	/	/	/	/	/	/	/
Current	A	2	2	/	/	/	/	/	/	/
Water head	m	18	17	/	/	/	/	/	/	/
Dimension (mm)	L	1400	1400	1400	1400	1400	1400	1400	1850	1850
	W	850	850	850	850	850	850	850	880	880
	H	1050	1050	1050	1050	1050	1050	1050	1250	1250
Sound pressure level***	dB(A)	66	66	68	72	72	72	73	73	74
Net weight	kg	340	360	280	300	340	360	460	500	550

Performance values refer to the following conditions:
* Source side water inlet/outlet temperature 18ºC/29ºC, user side water inlet/outlet temperature 12ºC/7ºC.
** Source side water inlet/outlet temperature 15ºC/7ºC, user side water inlet/outlet temperature 40ºC/45ºC.
*** Sound pressure measured at a distance of 1 m and a height of 1.5 m above the ground in an open field.