



Air to Water Screw Chiller & Heat Pump Unit

Cooling capacity from 150 to 1164 kW

Heating capacity from 170 to 1250 kW

Functions



Cooling



C&H



Heat Recovery



Characteristics

- 15 sizes available ranging from 150 kW to 1164 kW cooling capacity
- Semi-hermetic screw compressor for mod.150 to 1170. Each compressor is equipped with a crankcase heater and a thermal overload cut-out; the screw compressor is also complete with a built-in electronic protection with temperature sensor located directly in the motor winding and on the discharge line
- External rotor type axial fans, equipped with three phase direct drive motors, low noise 8 poles, protection level IP54, provided with a protective outlet grille
- Evaporator built with high efficiency shell and tube type heat exchanger, factory insulated with flexible close cell material.
Condenser built with seamless copper tubes mechanically expanded into blue hydrophilic aluminum fins
- Refrigerant circuit complete with charge valves, filter drier, sight glass, gas-liquid separator, thermostatic expansion valve, high & low pressure switch. The heat pump unit is completed also with 4-way valve, liquid receiver and one way valve
- Hydraulic circuit built with galvanized pipe, complete with water discharge connection for shell and tube heat exchanger and flange type hydraulic connectors
- Electric panel consist of: compressor contactor, fan motor contactor, compressor isolating switch, fan protection breaker, phase sequence relay and microprocessor with function display
- Automatic operation dramatically reducing maintenance cost thanks to reliable microprocessor system

OPTIONAL

- ◆ Metallic filter for hydraulic circuit
- ◆ Rubber antivibration mounting
- ◆ Remote condenser
- ◆ BMS
- ◆ Modular design
- ◆ T3 (Tropical climate)
- ◆ Heat recovery
- ◆ Plate heat exchanger



Nomenclature

L AW H R S C 150

① ② ③ ④ ⑤ ⑥ ⑦

- ① L: Lark air product
 ② Unit type
 AW: Air to Water
 AA: Air to Air

- ③ C: Cooling only
 H: Heat pump
 ④ Heat recovery type
 --: Without heat recovery
 R: With heat recovery
 ⑤ Heat exchanger
 T: Tube in tube type

- P: Plate type
 S: Shell and tube type
 ⑥ Refrigerant type
 --: R22
 A: R407C
 B: R134a
 ⑦ Model



Technical Data

Model	Unit	150	180	250	320	380	430	500
Cooling capacity *	kW	150	180	250	320	380	428	498
Heating capacity *	kW	170	202	276	357	425	476	550
Compressor								
Qty/refrigerant circuit	Nr.	1	1	1	1	1	2	2
Cooling power input *	kW	50	60.4	81	103	126	141.4	162
Cooling current *	A	85	104	137.6	174	213.3	241.6	275.2
Heating power input *	kW	48.7	58.8	79	100.5	123	137.8	158
Heating current *	A	83	101.4	134	170	208	235.4	268
Energy adjustment steps	step	4	4	4	4	4	8	8
Evaporator								
Water flow rate	m ³ /h	25.7	31	42.8	54.9	65	74	85.6
Water side pressure drop	kPa	41	41	42	42	42	42	43
Water pipe	DN	100	100	100	125	125	125	125
Axial Fan								
Fan motor number	Nr.	4	4	6	6	8	10	12
Power input	kW	4*2.2	4*2.2	6*2.2	6*2.2	8*2.2	10*2.2	12*2.2
Current input	A	4*5.6	4*5.6	6*5.6	6*5.6	8*5.6	10*5.6	12*5.6
Air flow	m ³ /h	68000	96000	144000	144000	196000	240000	288000
Dimensions								
Length	mm	2500	2500	3300	3590	4680	5800	6790
Width	mm	2160	2160	2160	2160	2160	2160	2160
Height	mm	2450	2450	2450	2450	2450	2450	2450
Sound pressure level **	dB(A)	73	73	75	75	78	80	81
Net weight	kg	2050	2350	2750	3150	3650	4800	5250

Model	Unit	570	640	700	760	870	930	1000	1170
Cooling capacity *	kW	563	632	699	760	865	925.6	992	1164
Heating capacity *	kW	627	710	780	850	967	1012	1088	1250
Compressor									
Qty/refrigerant circuit	Nr.	2	2	2	2	3	3	3	3
Cooling power input *	kW	184	206	229	252	288	303.7	324.4	368.6
Cooling current *	A	311.6	348	387.3	426.6	488.2	516.8	550.4	623.2
Heating power input *	kW	179.5	201	223.5	246	281	295.8	316	359
Heating current *	A	304	340	378	416	476	503.7	536.4	607.2
Energy adjustment steps	step	8	8	8	8	12	12	12	12
Evaporator									
Water flow rate	m ³ /h	96.5	108.7	120	130.7	148.8	159	170.6	200
Water side pressure drop	kPa	43	44	45	45	45	45	45	45
Water pipe	DN	125	150	150	150	150	150	150	200
Axial Fan									
Fan motor number	Nr.	12	12	14	16	18	18	18	20
Power input	kW	12*2.2	12*2.2	14*2.2	16*2.2	18*2.2	18*2.2	18*2.2	20*2.2
Current input	A	12*5.6	12*5.6	14*5.6	16*5.6	18*5.6	18*5.6	18*5.6	20*5.6
Air flow	m ³ /h	288000	288000	333600	384000	432000	432000	432000	576000
Dimensions									
Length	mm	6790	7190	8280	9370	10290	10580	10980	11780
Width	mm	2160	2160	2160	2160	2160	2160	2160	2160
Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
Sound pressure level **	dB(A)	81	81	82	83	83	83	83	83
Net weight	kg	5600	6150	6900	7600	8900	9650	1000	11000

* The performance values refer to the following conditions:

Cooling: ambient air temperature 35°C; evaporator water in/out temperature 12/7°C.

Heating: ambient air temperature DB 7°C, WB 6°C; condenser water in/out temperature 40/45°C.

** Sound pressure measured at a distance of 1 m and a height of 1.5 m above the ground in a clear field.



Model	Unit	150	180	250	320	380	430	500
Cooling capacity *	kW	156	180	250	320	380	428	497.6
Heating capacity *	kW	180	198	276	353	416	474	550
Compressor								
Qty	Nr.	1	1	1	1	1	2	2
Cooling power input *	kW	49.3	54.2	77.4	96.7	114	131.6	154.8
Cooling current *	A	87.8	95.2	134	166	199	229.2	268
Heating power input *	kW	48.4	53.2	76	95	112	129.2	152
Heating current *	A	86.5	93.7	132	164	196	225.7	264
Energy adjustment steps	step	4	4	4	4	4	4	4
Evaporator								
Water flow rate	m ³ /h	26.7	31	42.8	54.8	65	74	85.6
Water side pressure drop	kPa	41	41	42	42	42	42	43
Water pipe	DN	100	100	100	125	125	125	125
Axial Fan								
Fan motor number	Nr.	4	4	6	6	8	10	12
Power input	kW	4*2.2	4*2.2	6*2.2	6*2.2	8*2.2	10*2.2	12*2.2
Current input	A	4*5.6	4*5.6	6*5.6	6*5.6	8*5.6	10*5.6	12*5.6
Air flow	m ³ /h	68000	96000	144000	144000	196000	24000	288000
Dimensions								
Length	mm	2500	2500	3300	3590	4680	5800	6790
Width	mm	2160	2160	2160	2160	2160	2160	2160
Height	mm	2450	2450	2450	2450	2450	2450	2450
Sound pressure level **	dB(A)	73	73	75	75	78	80	81
Net weight	kg	2050	2350	2750	3150	3650	4800	5250

Model	Unit	570	640	700	760	870	930	1000	1180
Cooling capacity *	kW	568	637.8	700	758	868	923.8	992.8	1172
Heating capacity *	kW	630	706	772	827	953	1041	1086	1264
Compressor									
Qty/refrigerant circuit	Nr.	2	2	2	2	3	3	3	3
Cooling power input *	kW	174.1	193.4	210.7	228	268.8	286.4	309.6	348.2
Cooling current *	A	300	332	365	398	467	497.2	536	600.4
Heating power input *	kW	171	190	207	224	264	281.2	304	342
Heating current *	A	296	328	360	392	460	489.7	528	591.2
Energy adjustment steps	step	8	8	8	8	12	12	12	12
Evaporator									
Water flow rate	m ³ /h	97.4	109.7	120	130	149	159	170.8	201.6
Water side pressure drop	kPa	43	44	45	45	45	45	45	45
Water pipe	DN	125	150	150	150	150	150	150	200
Axial Fan									
Fan motor number	Nr.	12	12	14	16	18	18	18	20
Power input	kW	12*2.2	12*2.2	14*2.2	16*2.2	18*2.2	18*2.2	18*2.2	20*2.2
Current input	A	12*5.6	12*5.6	14*5.6	16*5.6	18*5.6	18*5.6	18*5.6	20*5.6
Air flow	m ³ /h	288000	288000	333600	384000	432000	432000	432000	576000
Dimensions									
Length	mm	6790	7190	8280	9370	10290	10580	10980	11780
Width	mm	2160	2160	2160	2160	2160	2160	2160	2160
Height	mm	2450	2450	2450	2450	2450	2450	2450	2450
Sound pressure level **	dB(A)	81	81	82	83	83	83	83	83
Net weight	kg	5600	6150	6900	7600	8900	9650	1000	11000

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