Air Cooled Screw Chiller and Heat Pump

150kW-1180kW

Application areas

- Offices, Hotels, Hospitals
- Industry
- Administration
- Medium and large commercial buildings

Why this choice?

- High efficiency with R410A
- Very low noise operation
- R410A screw compressors
- Advanced control
- Reduced total cost of ownership

Characteristics

The compressor

The unit is equipped with semi-hermetic screw compressor, compared with the piston compressor, semi-hermetic screw compressor has two advantages:

• Less parts(About 1/3 of the piston compressor), simple structure, less wearing parts, high reliability and long life.
• Compressor suction and exhaust uniform, exhaust temperature is low, vibration is small, not sensitive to wet compression, anti-liquid strike ability.

Tube-fin air-cooled condenser

The tube-fin air-cooled condenser adopts the inverted "V" type layout, on the one hand, it improves the space utilization ratio, increases the heat exchange area, on the other hand, it improves the airflow and heat transfer efficiency, so that improve the unit's cooling and heating capacity.

Throttling equipment

For expansion valve, we select the most advanced products, with a compact overall design, rugged stainless steel diaphragm, and in a wide range of operating conditions to provide stable and accurate control.

Tube-shell evaporator

Using shell and tube structure, the outside is proceeded with fire-retardant,waterproof insulation materials, water side of the working pressure is 1.0MPa.

Evaporator with PVC plastic water board, corrosion resistance. Chilled water along the diaphragm up and down circuitous flow, in order to increase the spoiler effect to improve the evaporator heat transfer capacity.

Using the latest DAC corrugated spiral high efficiency heat transfer tubes, strengthen the fluorine side heat transfer capacity, improve the heat transfer coefficient to ensure that the unit good refrigeration and heating performance.

Electronic control

Air-cooled hot and cold water unit uses a microcomputer as the core of the control system, the control system control precision, anti-interference ability to ensure that the unit safe, reliable and economical operation.
Energy regulation automatic control can make the unit always in the best economic mode point efficient operation.
Protection function complete unit with overload, short circuit protection, frost protection, high and low voltage protection, overheating protection and other functions.

Technical Data

Model	Unit	AW150	AW180	AW250	AW320	AW380	AW430	AW500
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	8	8
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	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

Technical Data

Model	Unit	AW570	AW640	AW700	AW760	AW870	AW930	AW1000	AW1180
Cooling capacity *	kW	568	637.8	700	758	868	923.8	992.8	1172
Heating capacity *	kW	630	706	772	827	953	1014	1086	1264
Compressor									
Qty	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	10000	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.