



Air Cooled Mini Chiller and Heat Pump

8kW~50kW



2.5Ton~14.5Ton

Application areas

- Small Offices, Hotels, Hospitals
- Industry
- Administration
- Small commercial and residential buildings

Why this choice?

- Very high efficiency with R410A
- Very low noise operation
- R410A scroll compressors
- Advanced control
- Unit with pump and optional buffer tank
- Very compact for outdoor or indoor installation



Characteristics

Structure

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

Compressor

Hermetic scroll type compressor, equipped with the crankcase heater and thermal protection with thermal overload cut-out and crankcase heater mounted on rubber vibration isolators.

Axial fan

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

Evaporator

High efficiency and low pressure drop stainless steel (AISI 316) water exchangers, with anti-freeze heating element (option) and differential pressure switch, factory insulated with flexible close cell material.

Condenser

Coils 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 metal grill.

Desuperheater

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

Refrigerant circuit

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

Water circuit

Built with air vent valve, water drain connection, and female-threaded hydraulic connectors
Water pump (8kW-30kW), differential pressure switch

Expansion tank (8kW-30kW)

Electric panel

Compressor contactor

Compressor protection breaker

Fan motor protection breaker

Control circuit protection breaker

Phase sequence relay (only for 3-phase)

Programmable microprocessor controller

Optional

Additional electric heater embedded in the coils for defrosting in low temperature ambient. It must be factory installed

Stainless steel covering

Remote condenser

Tube in tube heat exchanger

Water circuit electric heater





Technical Data

Model	Unit	AW8	AW10	AW12	AW16	AW20	AW25	AW30	AW35	AW40	AW50
Cooling *											
Cooling capacity	kW	8.7	10.7	12.5	15.8	21.5	24.8	30	35.6	41	50.6
	Ton	2.5	3.1	3.6	4.5	6.1	7.1	8.6	10.2	11.7	14.5
Cooling input (without water pump)	kW	3.2	4.01	4.56	5.79	8.2	9.03	9.39	13.2	15.02	18.8
EER	/	2.72	2.67	2.74	2.73	2.62	2.75	3.19	2.7	2.73	2.69
Heating **											
Heating capacity	kW	10.3	13.5	14	17.8	26.3	29	34	41.8	47.2	60
	Ton	2.9	3.9	4	5.1	7.5	8.3	9.7	11.9	13.5	17.1
Heating input (without water pump)	kW	3.5	4.55	4.58	5.81	8.7	9.23	9.43	14.3	15.57	20.45
COP	/	2.94	2.97	3.06	3.06	3.02	3.14	3.61	2.92	3.03	2.93
Hermetic compressor											
Type	/	Scroll									
Quantity/ circuit	/	1	1	1	1	2/2	2/2	2/2	2/2	2/2	2/2
Evaporator											
Type	/	Plate heat exchanger									
Water flow	m ³ /h	1.5	1.8	2.1	2.7	3.7	4.3	5.2	6.1	7.1	8.7
Water side pressure drop	kPa	33	33	33	36	38	39	42	50	52	52
Water connection size	mm	DN25	DN25	DN25	DN25	DN40	DN40	DN40	DN40	DN40	DN40
Circulating pump											
Power input	kW	0.4	0.4	0.35	0.35	0.75	0.75	0.92	-----	-----	-----
Axial fans											
Quantity	Nr.	1	1	1	2	1	1	1	2	2	2
Airflow	m ³ /h	4500	4500	4500	9000	9000	9000	12580	17000	17000	22000
Overall dimension											
Length	mm	1250	1250	1250	1250	1600	1600	1600	2000	2000	2000
Width	mm	452	452	452	452	900	900	900	900	900	900
Height	mm	1180	1180	1180	1180	1080	1080	1080	1080	1080	1080
Noise level ***	dB(A)	58	58	60	64	66	66	68	70	70	70
Net weight	kg	145	145	150	190	270	290	310	360	380	465

* Ambient temperature 35°C; user side water in/out 12/7°C.

** Ambient temperature 7°C; user side water in/out 40/45°C.

*** Sound pressure measured at a distance of 1 m and a height of 1.5 m above the ground in an ideal field (fan side).



Air Cooled Modular Chiller and Heat Pump

60kW~128kW



17.1Ton~37.8Ton

Application areas

- Offices, Hotels, Hospitals
- Industry
- Administration
- Light commercial and residential buildings

Why this choice?

- Very low noise operation
- R410A scroll compressors
- Advanced control
- Unit with pump and optional buffer tank
- Very compact for outdoor or indoor installation



Characteristics

The master module can work independently or together with up to 16 slave modules. Units with V type heat exchanger: panels, frame and base are made from galvanized steel protected with polyester powder painting to ensure total resistance to atmospheric agents. 3-phase scroll type compressor, with built-in thermal overload cut-out and crankcase heater, mounted on rubber vibration dampers. 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 tube in tube heat exchanger and flange type hydraulic connectors in two directions easy for connections from both sides of the units.



Electric panel consist of:
 compressor contactor, fan motor contactor,
 compressor protection breaker, fan
 protection breaker, phase sequence relay and
 microprocessor with function display (display
 only for master/packaged unit)
 Automatic operation dramatically reducing
 maintenance cost thanks to reliable
 microprocessor system.

Optional

Paddle flow switch;
 Metallic filter for hydraulic circuit;
 Water pump;
 Rubber antivibration mounting.
 Heat recovery functions

Technical Data

Model	Unit	AW60	AW68	AW88	AW88	AW108	AW108	AW128
Capacity								
Cooling capacity*	kW	60	68	88	88	108	108	132
	Ton	17.1	19.4	25.1	25.1	30.9	30.9	37.8
Cooling power input*	kW	22.34	20.94	27.7	26.62	35.28	38.91	46.24
Heating capacity**	kW	62	70	95	95	115	119	150
	Ton	17.7	20	27.1	27.1	32.9	34	42.9
Heating power input**	kW	22.42	21.1	27.32	26.25	35.28	39.1	46.24
Compressor								
Type	/				Scroll			
Qty/refrigerant circuit	Nr.	4/4	2/2	2/2	4/4	3/3	6/6	4/4
Axial fan								
Quantity	Nr.	2	2	2	2	3	3	2
Airflow	m ³ /h	24000	24000	35800	35800	39000	39000	48000
Evaporator								
Type	/	S	T	S	S	S	S	S
Water flow	m ³ /h	10.3	11.7	15.1	15.1	17.2	17.2	22.7
Water side pressure drop ***	kPa	43	43	42	42	41	41	41
Connect pipe	DN	65	125	65	65	65	65	80
Noise level****	dB(A)	70	74	72	72	73	73	77
Dimensions								
Length	mm	1980	2110	2200	2200	3100	3100	2200
Width	mm	1005	1080	1270	1270	1050	1050	1560
Height	mm	1750	1900	2050	2050	1900	1900	2160
Net weight	kg	700	800	950	920	1000	1000	1450

*Ambient temperature 35°C; evaporator water in/out 12/7 °C;

** Ambient temperature DB 7 °C, WB 6 °C; condenser water in/out temperature 40/45 °C;

*** In the nominal water flow condition the pressure drop is between this range.

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