

# Air Cooled Mini Chiller and Heat Pump

20kW-50kW 

## 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	AW20	AW25	AW30	AW35	AW40	AW50
Cooling *							
Cooling capacity	kW	21.5	24.8	30	35.6	41	50.6
Cooling input (without water pump)	kW	8.2	9.03	9.39	13.2	15.02	18.8
EER	/	2.62	2.75	3.19	2.7	2.73	2.69
Heating **							
Heating capacity	kW	26.3	29	34	41.8	47.2	60
Heating input (without water pump)	kW	8.7	9.23	9.43	14.3	15.57	20.45
COP	/	3.02	3.14	3.61	2.92	3.03	2.93
Hermetic compressor							
Type	/						
Quantity/ circuit	/	2/2	2/2	2/2	2/2	2/2	2/2
Evaporator							
Type	/						
Water flow	m <sup>3</sup> /h	3.7	4.3	5.2	6.1	7.1	8.7
Water side pressure drop	kPa	38	39	42	50	52	52
Water connection size	mm	DN40	DN40	DN40	DN40	DN40	DN40
Circulating pump							
Power input	kW	0.75	0.75	0.92	-----	-----	-----
Axial fans							
Quantity	Nr.	1	1	1	2	2	2
Airflow	m <sup>3</sup> /h	9000	9000	12580	17000	17000	22000
Overall dimension							
Length	mm	1600	1600	1600	2000	2000	2000
Width	mm	900	900	900	900	900	900
Height	mm	1080	1080	1080	1080	1080	1080
Noise level ***	dB(A)	66	66	68	70	70	70
Net weight	kg	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).

