



Tailor-made for you

Central Air Conditioner



Amrta Commercial A/C Model Line Up



Cooling



Heating



C&H



Free Cooling



Heat Recovery

Air to Water Series

■ Air Source Heat Pump

Page 1

Heating Capacity: 10kW/15kW/20kW



■ Air Cooled Mini Chiller and Heat Pump

Page 3

Cooling Capacity: 20kW/25kW/30kW/35kW/40kW/50kW



■ Air Cooled Modular Chiller and Heat Pump

Page 6

Cooling Capacity: 60kW/100kW/130kW/200kW/260kW



■ Air Cooled Screw Chiller and Heat Pump

Page 9

Cooling Capacity: 150kW/180kW/250kW/320kW/380kW/430kW/500kW
570kW/640kW/700kW/760kW/870kW/930kW/1000kW/1180kW



Water to Air Series

■ Water Cooled Packaged Unit

Page 12

Cooling Capacity: 2.5kW/3.5kW/5kW/7kW/10kW/12kW/14kW/18kW/23kW/30kW/35kW/45kW



Air to Air Series

■ Rooftop Packaged Unit

Page 16

Cooling Capacity: 12kW/15kW/18kW/24kW/30kW/35kW/45kW/50kW/60kW
72kW/90kW/105kW/120kW/140kW/150kW/180kW/210kW/300kW



■ Tent Packaged Unit

Page 21

Cooling Capacity: 14kW/28kW/42kW/56kW/84kW/100kW



■ Ducted Split Unit

Page 23

Cooling Capacity: 20kW/25kW/32kW/36kW/42kW/48kW/52kW/62kW/72kW/88kW/104kW



Water to Water Series

■ Water Cooled Scroll Chiller

Page 26

Cooling Capacity: 80kW/120kW/160kW



■ Water Cooled Screw Chiller

Page 28

Cooling Capacity: 130kW/170kW/200kW/240kW/280kW/310kW/360kW/420kW/480kW/530kW/610kW/710kW
760kW/860kW/960kW/1000kW/1200kW/1360kW/1470kW/1720kW/1840kW/2000kW/2500kW



Terminal

■ Chilled Water Fan Coil Unit

Page 31

Air Flow: 340m³/h, 510m³/h, 680m³/h, 850m³/h, 1020m³/h, 1360m³/h, 1700m³/h, 2040m³/h, 2380m³/h



■ Duct Fan Coil Unit

Page 35

Air Flow: 1020m³/h, 1360m³/h, 1700m³/h, 2040m³/h, 2380m³/h, 2720m³/h, 3060m³/h, 3400m³/h



Air Source Heat Pump

10kW-20kW



Why this choice?

Amrta's AC range of chillers with the EVI-cycle increase the maximum temperature difference remarkably and provide a COP up to 4.5, which makes the hot water system much more efficient. They can be widely used in the commercial situation.



Characteristics

High efficient

The application of EVI technology together with the high efficiency heat exchanger improves the heat exchanging rate.

Low working temperature

Units achieve optimum performance at ambient temperature as low as -25°C, ensuring 60°C hot water all year round.

Easy control

Intelligent control system with the Carel controller makes it much easier to control your unit whenever you need.

EVI technology

The EVI compressor ensures the unit operate safely at low ambient temperature with higher efficiency and less noise.

AMRTA
heatpump
TECHNOLOGY

Technical Data

Item			Model	ASHP-10L	ASHP-15L	ASHP-20L
DB/WB	In/Out water	Capacity	Unit			
7°C/6°C	36°C/41°C	Heating	kW	9.6	14.5	19.1
		Power input	kW	2.5	3.8	5.1
	50°C/60°C	Heating	kW	9.8	14.5	19.8
		Power input	kW	3.3	4.8	6.5
-12°C/-14°C	36°C/41°C	Heating	kW	6.1	9.2	11.8
		Power input	kW	2.32	3.70	4.70
	50°C/60°C	Heating	kW	6.6	9.8	12.8
		Power input	kW	3.2	4.8	6.4
-20°C/-°C	36°C/41°C	Heating	kW	5.2	7.7	10.3
		Power input	kW	2.30	3.60	4.60
	50°C/55°C	Heating	kW	5.4	8.1	10.8
		Power input	kW	2.9	4.3	5.8
-25°C/-°C	36°C/41°C	Heating	kW	4.5	6.0	8.9
		Power input	kW	2.40	3.40	4.80
	50°C/55°C	Heating	kW	4.7	6.8	9.5
		Power input	kW	2.9	4.5	5.9
35°C/---	12°C/7°C	Cooling	kW	7.2	10.2	14.2
		Power input	kW	2.7	3.7	5.2
Compressor	Type			Scroll	Scroll	Scroll
	Brand			Copeland	Copeland	Copeland
	Qty			1	1	1
Control methods			Electronic expansion valve			
Condensing fan	Type			Axial, plastic fan blade	Axial, plastic fan blade	Axial, plastic fan blade
	Qty			1	2	2
	Power input		w	90	90	90
Max power input			kW	4.1	5.8	8.2
Max working current			A	18	29	36
Pipe size				R1″	R1″	R1″
Evaporator type			High efficiency tank type heat exchanger			
Water flow	Cooling (△ 5k)		m³/h	1.24	1.75	2.4
	Heating (△ 5k/ △ 10k)		m³/h	1.58/0.79	2.49/1.25	2.9/1.45
Water resistance			kPa	40	45	46
Refrigerant	Type			R410A		
	Charge amount		kg	3.6	5.3	6.1
Working range			°C	-25°C-46°C		
Power supply				1N~220V 50Hz		
Dimension			mm	1200x560x858	1000x560x1316	1100x620x1316
Noise level			dB(A)	54	56	56
Weight			kg	122	150	170

Note: Without water pump and expansion tank, but with paddle flow switch.



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 ³ /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 ³ /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).



Air Cooled Modular Chiller and Heat Pump

65kW-260kW   

Application areas

- Offices, Hotels, Hospitals
- Industry
- Administration
- Light 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

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



- **High efficiency**
- **Low-sound levels**
- **High reliability**

Technical Data

Model		AW60	AW100	AW130	AW200	AW260
Cooling capacity*	kW	65	97.5	130	195	260
Cooling power input	kW	20.8	31.4	42.1	63.6	84.2
Heating capacity**	kW	68	102	136	204	272
Heating power input	kW	20.2	30.6	41	61.2	82
Max input power	kW	24	35.7	47.7	71.4	95.4
Max input current	A	50	74	97	148	194
Cooling running current	A	46	68	89	136	178
Start-up current	A	167	187	206	374	412
Compressor						
Power supply	/	380/3/50				
Brand/Type	/	Daikin/Scroll				
Refrigerant	/	R410a				
Qty/refrigerant circuit	Nr.	2	3	4	6	8
Cooling power input*	kW	2*9.4	3*9.63	4*9.77	6*9.63	8*9.77
Heating power input**	kW	2*9.1	3*9.36	4*9.5	6*9.36	8*9.5
Energy adjustment	%	0-25-50-75-100				
Axial fan						
Quantity	Nr.	2	2	2	4	4
Power input	kW	2	2.5	3	5	6
Airflow	m³/h	24000	36000	48000	72000	96000
Evaporator						
Type	/	Shell and tube heat exchanger				
Water flow when cooling	m³/h	11.2	16.8	22.4	33.6	44.8
Water flow when heating	m³/h	11.7	17.6	23.4	35.1	46.8
Water side pressure drop ***	kPa	46	52	55	52	55
Water connection size	DN	50	50	65	2x50	2x65
Noise level***	dB(A)	70	72	72	74	75
Dimensions						
V type coil	Length	mm	2000	2207	2207	2207
	Width	mm	1060	1300	1300	2207
	Height	mm	1957	2076	2076	2096
Net weight	kg	620	1060	1120	2160	2280
Working weight	kq	635	1090	1155	2220	2350

*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.



Air Cooled Screw Chiller and Heat Pump

150kW-1180kW

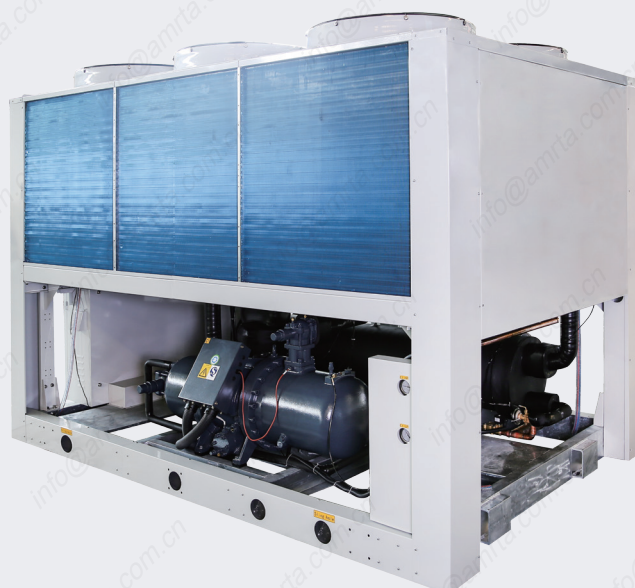


Application areas

- 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

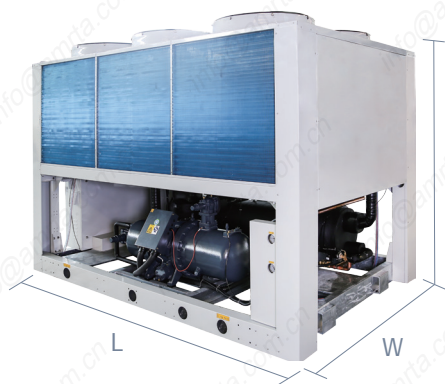
Model	Unit	AW570	AW640	AW700	AW760	AW870	AW930	AW1000	AW1180
Cooling capacity *	kW	568	637.8	700	758	868	923.8	992.8	1172
Heating capacity *	kW	630	706	772	827	953	1014	1086	1264
Compressor									
Qty	Nr.	2	2	2	2	3	3	3	3
Cooling power input *	kW	174.1	193.4	210.7	228	268.8	286.4	309.6	348.2
Cooling 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.



Water Cooled Packaged Unit

2.5kW-45kW



Application areas

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

Why this choice?

- Saving space
- Galvanised steel construction
- AMWCP are well insulated to minimise condensation and attenuate noise.



Characteristics

Structure

Galvanised steel construction, closed cell foam lined compressor and fan compartments, with an insulated and powder coated drain tray for complete moisture protection, the drain tray is easily removed for inspection and cleaning.

Refrigerant

Each unit is factory charged with refrigerant R410a, which is deemed to have zero ozone depletion potential.

Hermetic compressor

Single phase rotary compressor is used for this type unit, with built-in thermal overload cut-out, mounted on rubber vibration dampers.

Centrifugal fan

High efficiency, double inlet centrifugal fan
Protection level IP44. Low noise, low speed, big air flow and high ESP.

Water side heat exchanger

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

Air filter

An optional filter integrated return air spigot is available on all models. The filter is a washable polypropylene net media. Care should be taken, when locating each unit, that to enough space is provided to enable the one-piece filter to be withdrawn to its full length from either side of the unit.

Insulation

AMWCP are well insulated to minimise condensation and attenuate noise.

Electric heater(optional)

Electric heater is optional on cooling only versions. Electric elements have spirally wound stainless steel fins to give increased area and low surface temperature. They are totally enclosed within the unit and are supplied with safety cutouts. An optional fan run-on timer for rapid heat dissipation is available.

Electric panel

Consists of:

Compressor contactor

Compressor protection breaker

Microprocessor with function display

All models are equipped with wire controller with the following features

- 7 days programmable timer
- Auto random restart
- Error self diagnostic

Safety protection

High pressure switch

Low pressure switch

Discharge temperature protection

Anti freezing protection



Technical Data

Model		Unit	WCP2.5	WCP3.5	WCP5	WCP7	WCP10	WCP12
Nominal cooling capacity		kW	2.5	3.5	5	7	10	12.2
Cooling power input		kW	0.71	0.98	1.4	1.92	2.8	3.32
Nominal heating capacity		kW	3	4.5	6.4	8.1	12.2	14.5
Heating power input		kW	0.72	1.07	1.5	2	2.9	3.25
Power					220V/1Ph/50Hz			
Minimum wiring specification			2×1.5mm ² +1×1mm ²		2×2.5mm ² +1×1.5mm ²		2×4mm ² +1×2.5mm ²	
Compressor type					Rotary			
Air flow amount		m ³ /h	490	680	950	1280	1900	2160
External static pressure		Pa	60	60	120	120	160	200
Refrigerant	Type	R410A						
	Charge	Kg	0.4	0.6	0.85	1.1	1.7	1.9
Condenser	Type	Tube in tube coaxial heat exchanger						
Fan	Type	High efficiency low noise centrifugal fan						
	Power	220V/1Ph/50Hz						
Evaporator	Type	High efficiency copper tubes aluminum fins heat exchanger						
Water flow amount		m ³ /h	0.4	0.6	0.9	1.2	1.7	2.1
Water pressure drop		Kpa	8	8	10	14	16	20
Diameter of water in/out pipe		mm	DN20					
Diameter of condensing pipe		mm	DN25					
Dimension	L	mm	910	1260	1310	1210	1320	1410
	W	mm	660	660	710	790	790	790
	H	mm	350	350	450	450	450	450
Weight		kg	70	75	90	100	130	135
Noise level		dB(A)	54	54	57	57	60	60

Note:

1. Nominal cooling capacity test condition: Water side water inlet/outlet 30°C/35°C, Ambient temperature DB 27 °C, WB 19 °C.
2. Nominal heating capacity test condition: Water side water inlet 20°C, Ambient temperature DB 20 °C, WB 15 °C.
3. Noise level measured in the noise lab with background noise of 25 dB(A), at a distance of 1 m.
4. As our continuous products improvement, Amrta reserves the right to change specifications and design without notice.

Technical Data

Model		Unit	WCP14	WCP18	WCP23	WCP30	WCP35	WCP45
Nominal cooling capacity		kW	14.4	18	23	30	34	46
Cooling power input		kW	4.06	5.1	6.18	7.8	8.26	11.6
Nominal heating capacity		kW	17.3	22.6	25.9	30	35.4	49
Heating power input		kW	4	5.6	6.86	8.6	9.1	12.84
Power			220V/1Ph/50Hz		380V/3Ph/50Hz			
Minimum wiring specification			2×6mm²+1×4mm²		3×2.5mm²+1×1.5mm²		3×4mm²+1×2.5mm²	
Compressor type			Rotary			Scroll		
Air flow amount		m³/h	2500	3200	4000	5200	6200	8000
External static pressure		Pa	200	200	250	250	250	250
Refrigerant	Type		R410A					
	Charge	Kg	2.2	3	4	4.8	6	8
Condenser	Type		Tube in tube coaxial heat exchanger					
Fan	Type		High efficiency low noise centrifugal fan					
	Power		220V/1Ph/50Hz					
Evaporator	Type		High efficiency copper tubes aluminum fins heat exchanger					
Water flow amount		m³/h	2.4	3.1	4	5.2	5.8	7.9
Water pressure drop		Kpa	20	23	26	30	33	33
Diameter of water in/out pipe		mm	DN20			DN40		
Diameter of condensing pipe		mm	DN25					
Dimension	L	mm	1680	1680	2170	1975	2230	2430
	W	mm	930	930	1030	1030	1130	1130
	H	mm	450	600	500	650	650	900
Weight		kg	140	155	170	200	200	245
Noise level		dB(A)	63	66	66	68	68	69

Note:

1. Nominal cooling capacity test condition: Water side water inlet/outlet 30°C/35°C, Ambient temperature DB 27 °C, WB 19 °C.
2. Nominal heating capacity test condition: Water side water inlet 20°C, Ambient temperature DB 20 °C, WB 15 °C.
3. Noise level measured in the noise lab with background noise of 25 dB(A), at a distance of 1 m.
4. As our continuous products improvement, Amrta reserves the right to change specifications and design without notice.



Rooftop Packaged Unit

12kW-300kW



Application areas

- Large and light Commercial buildings (Retail, Airports, Restaurants, shops, petrol stations...)
- Cinemas, Theaters
- Industrial buildings and Logistic centers

Why this choice?

- Energy efficient solution
- Cost effective package for fast and easy installation
- Multiple heating options available
- Fresh air control and free cooling management
- Wide choice of communication interfaces



Characteristics

Structure

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

Direct expansion coils with condensate drain tray.

Hermetic compressor

High efficiency scroll compressor for the whole range, with built-in thermal overload cut-out and crankcase heater, mounted on rubber vibration dampers.

Ripple type acoustic insulation for compressor section, and thermal insulation for coil and fan section, low noise.

Centrifugal fan

Forward curve centrifugal fans for air treatment section and axial fans for condensation section. Front, side and underside air discharge of the treatment unit.

High external pressure, long air supply distance.

Electric panel

Electric panel consists of breakers and contactors for compressors and fan motors, phase sequence relay and other necessary protection devices for the main components.

Easy operation line controller

Cooling/Heating/Auto

Error indication

Timing on/off

Optional

Economizer with fresh, return air dampers and fresh air hood

Free cooling function for low ambient temperature

Low ambient control device for operation of outdoor units at ambient temperatures from less than 20°C down to -10°C

BMS devices

T3 (Tropical climate)

Roof curb

Metal/aluminum filter

Heat recovery to 100%

Evaporating section: double skin with 50mm polyurethane foam

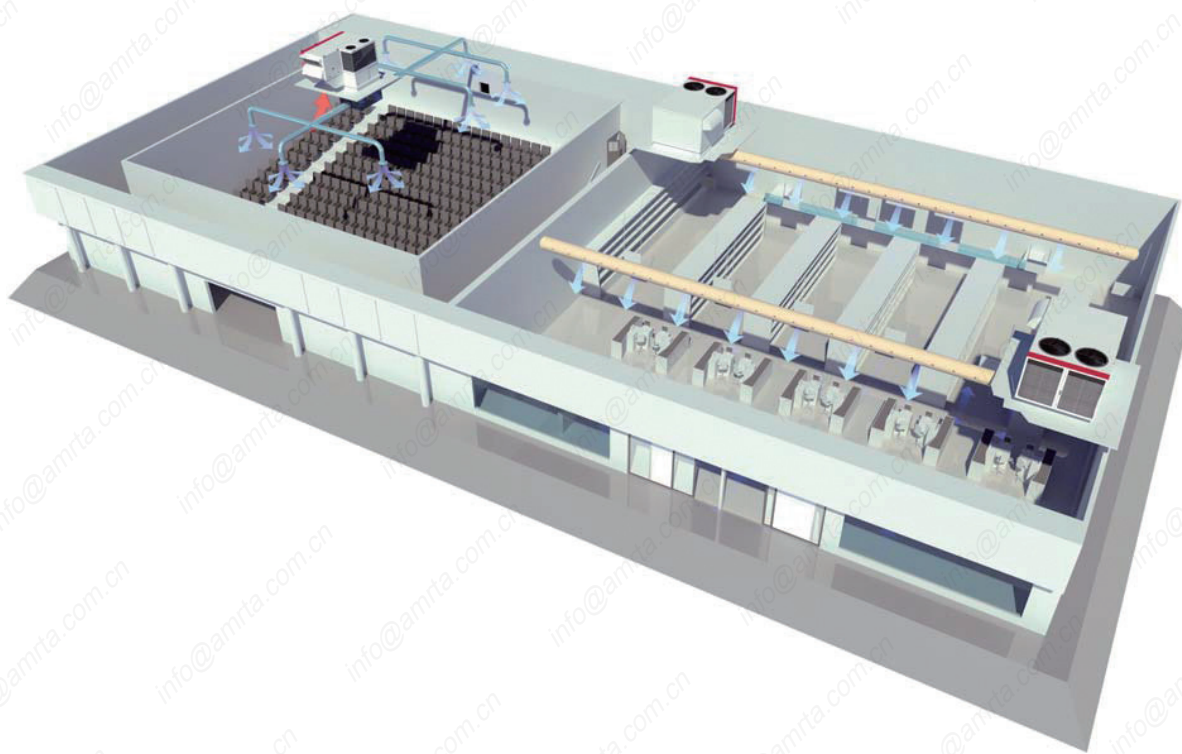
Optional water heating coil

Metal or plastic mesh on condenser coil

Optional supply/return air configurations

Upgraded plug fan

G4 filter, plate and bag filter



Technical Data

Model		RTU12	RTU15	RTU18	RTU24	RTU30	RTU35
Cooling capacity	kW	12	15.2	17.5	24	30.3	35.6
Heating capacity	kW	13.2	16.6	18.4	26.5	33.3	37.7
Power supply		380V / 3Ph / 50HZ					
Cooling power input	kW	4.1	5.3	5.5	8.8	11.3	12.3
Heating power input	kW	3.8	4.8	5.1	8.2	10.4	11.3
Start current	A	48	62	63	63	74	76
Working current in cooling	A	7.4	9.7	10.2	16.1	21.2	23.3
Working current in heating	A	6.9	9.2	9.7	15.1	20.1	22.2
Throttle methods		Thermal expansion valve					
Circuits		1	1	1	1	2	2
Refrigerant		R410A					
Comp.	Type	Scroll type		380V / 3Ph / 50HZ			
	Qty	1	1	1	1	2	2
Condensor side							
Condensor	Type	Al+copper tube					
	Qty	1	1	1	1	1	1
Axial fan	Drive	Direct drive					
	Motor power	kW	0.25	0.37	0.37	0.55	0.75
	Air flow	m ³ /h	4600	7800	7800	9000	12600
Evaporator side							
Evaporator	Type	Al+copper tube					
	Qty	1	1	1	1	1	1
Centrifugal fan	Motor power	kW	0.32	0.37	0.45	1.1	1.5
	Air flow	m ³ /h	2100	2600	3400	4100	5200
	Drive	Direct drive				Belt drive	
External static pressure (Pa)		100	100	100	200	200	250
Filter		Aluminum frame filter G3					
Noise level dB(A)		67	67	68	71	72	72
Dimension	L	mm	1410	1410	1410	1978	1978
	W	mm	1100	1100	1100	1175	1175
	H	mm	1095	1095	1095	1095	1095
Weight	kg	240	260	290	420	480	500

* Performance values refer to the following conditions:

Cooling: room air temperature 27.0°C DB RH 50%, ambient air temperature 35°C;

Heating: room air temperature 20.0°C DB, ambient air temperature 7°C DB / 6°C WB.

** Noise level measured by adopting average value in the noise lab with background noise of 25 dB(A), at a distance of 1.5m high fan speed.

Model		RTU45	RTU50	RTU60	RTU72	RTU90	RTU105
Cooling capacity	kW	44.5	50	60	70	90	105
Heating capacity	kW	48.7	54.3	64	75.4	96.2	113.2
Power supply		380V / 3Ph / 50HZ					
Cooling power input	kW	17	19.5	22.8	26.7	32.9	39.7
Heating power input	kW	15.6	18	21	24.8	30.4	36.7
Start current	A	168	186	175	199	197	266
Working current in cooling	A	31.7	35.6	39.9	48.3	61	70.6
Working current in heating	A	29.9	33.5	37.5	45.4	57.3	66.3
Throttle methods		Thermal expansion valve					
Circuits		2	2	2	2	3	3
Refrigerant		R410A					
Comp.	Type	Scroll type		380V / 3Ph / 50HZ			
	Qty	2	2	2	2	3	3
Condensor side							
Condensor	Type	Al+copper tube					
	Qty	1	1	1	1	2	2
Axial fan	Drive	Direct drive					
	Motor power	kW	1.1	1.5	1.5	2.2	2x1.1
	Air flow	m ³ /h	16500	21000	21000	27000	33000
Evaporator side							
Evaporator	Type	Al+copper tube					
	Qty	1	1	1	1	1	1
Centrifugal fan	Motor power	kW	3	3	4	4	5.5
	Air flow	m ³ /h	7600	8500	10900	12500	16000
	Drive	Direct drive			Belt drive		
External static pressure(Pa)		250	250	300	300	300	300
Filter		Aluminum frame filter G3					
Noise level dB(A)		73	73	73	75	74	75
Dimension	L	mm	2268	2268	2298	2298	2878
	W	mm	1440	1440	1650	1650	2140
	H	mm	1167	1167	1400	1400	1964
Weight	kg	750	770	830	860	1160	1350

* Performance values refer to the following conditions:

Cooling: room air temperature 27.0°C DB RH 50%, ambient air temperature 35°C;

Heating: room air temperature 20.0°C DB, ambient air temperature 7°C DB / 6°C WB.

** Noise level measured by adopting average value in the noise lab with background noise of 25 dB(A), at a distance of 1.5m high fan speed.

Model			RTU120	RTU140	RTU150	RTU180	RTU210	RTU300
Cooling capacity		kW	120	140	149	180	210	298
Heating capacity		kW	128.3	150	159.2	192.5	226	318
Power supply					380V / 3Ph / 50HZ			
Cooling power input		kW	45.1	55.7	55.1	69.9	83	106.7
Heating power input		kW	41.7	51.8	51.5	64.8	77	100
Start current		A	218	252	323	232	301	415
Working current in cooling		A	82.4	101.4	100.2	130.9	151	192.3
Working current in heating		A	77.4	95.7	95.1	123.5	142.3	184.3
Throttle methods					Thermal expansion valve			
Circuits			4	4	2	6	6	4
Refrigerant					R410A			
Compressor	Type	Scroll type			380V / 3Ph / 50HZ			
	Qty		4	4	2	6	6	4
Condensor side								
Condensor	Type	Al+copper tube						
	Qty		2	2	2	4	4	4
Axial fan	Drive	Direct drive						
	Motor power	kW	2x1.5	2x2.2	2x2.2	4x1.1	4x1.5	4x2.2
	Air flow	m³/h	42000	54000	54000	66000	84000	108000
Evaporator side								
Evaporator	Type	Al+copper tube						
	Qty		1	1	1	1	1	1
Centrifugal fan	Motor power	kW	7.5	11	11	15	15	18.5
	Air flow	m³/h	21000	25000	26000	32000	38000	54000
	Drive	Belt drive						
External static pressure(Pa)			400	400	400	500	500	500
Filter					Aluminum frame filter G3			
Noise level dB(A)			75	79	79	80	80	82
Dimension	L	mm	3626	3626	3626	4690	4690	5660
	W	mm	2200	2200	2200	2330	2330	2330
	H	mm	2047	2047	2047	2055	2055	2055
Weight	kg		1710	1820	1850	2180	2430	2860

* Performance values refer to the following conditions:

Cooling: room air temperature 27.0°C DB RH 50%, ambient air temperature 35°C;

Heating: room air temperature 20.0°C DB, ambient air temperature 7°C DB / 6°C WB.

** Noise level measured by adopting average value in the noise lab with background noise of 25 dB(A), at a distance of 1.5m high fan speed.



Tent Packaged Unit

14kW-100kW



Application areas

- Outdoor big tents
- Hospitals, warehouses, schools, offices, hotels, theaters
- Outdoor events: exhibitions, wedding ceremonies, birthday parties, beer festivals, sporting events

Why this choice?

- Self-contained packaged design
- Easy transportation
- Simple power connection
- Special unit structure design
- Long distance air supply

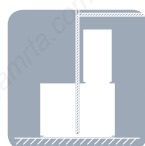


Characteristics



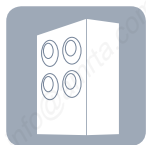
Self-contained package design

Easy installation with just connecting condensate drainage and electrical power supply, equipped with connecting plug.



Special unit structure design

The tent wall can be installed in between of evaporator and condenser with the gap of 100-150mm.



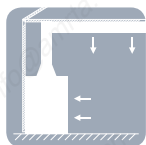
Plenum chamber

3 meter height with better air circulation and strong air flow.



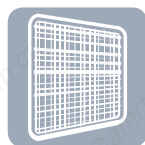
Digital controller

LED display, timer display, fan speed display, temperature display, error code display, mode display.



Long distance air supply

High external static pressure (max 350 pa) with 30 meter air throws.



Easy maintenance

Air filter is easily dismantled and cleaned.

Technical Data

Model			TA14	TA28	TA42	TA56	TA84	TA100
Power supply		V~/PH/HZ	380/3/50					
	Capacity	kW	14.0	28.0	42.0	56.0	84.0	100.0
		HP	5	10	15	20	30	36
		Btu/h	48000	96000	144000	192000	290000	340000
Cooling	Power input	kW	4.90	9.80	14.80	19.80	29.80	35.60
	Running current	A	8.7	17.5	26.1	34.9	51	71.7
	Start current	A	26.0	35.0	52	70	95	95
	EER	W/W	2.86	2.86	2.84	2.83	2.82	2.81
E.S.P		Pa	150	150	250	250	350	350
Evaporator	Fin material type		Hydrophilic louvered aluminum fin					
	Tube material type		Innergroover tube type					
	Number of row		3	4	4	4	5	5
Evaporator fan	Type		High efficiency centrifugal					
	Air discharge type		Top discharge					
	Rated ESP air flow	m ³ /h	2500/1800	5000/3200	8000/5500	10000/7000	12000	15000
Condenser	Fin material type		Hydrophilic louvered aluminum fin					
	Tube material type		Innergroover tube type					
	Number of row		2	4	3	3	4	4
Condensing fan	Type		High efficiency axial					
	Air discharge type		Top discharge					
	Rated air flow	m ³ /h	5000	11000	16000	22000	32000	35000
	Numbers	Pcs	1	1	2	2	2	2
Refrigerant	Type		R410A					
Unit dimension	Width	mm	1060	1060	1060	2200	2200	2200
	Depth	mm	1270	1700	1940	2360	2900	3600
	Height	mm	2210	2210	2660	2660	2660	2660
Unit noise level		dB(A)	65	67	70	75	71	71
Unit weight		kg	320	450	560	650	1680	1840

Notes:

Nominal cooling capacities are based on the following conditions: Indoor temp: 27°CDB, 19°CWB; Outdoor temp: 35°CDB;

Actual noise level may differ, depending on the room structure, etc, since these noise values are from an anechoic room.



Ducted Split Unit

20kW-104kW



Application areas

- Wide application as hotel, apartment, villa, factory, shopping center, office building, school, etc.

Why this choice?

- High efficiency: Adopts famous brand compressor, multi-level adjustment, high efficiency anti-corrosion hydrophilic aluminum foil, which make the efficiency up to 30%.
- Extraordinary performance: Adopts well-know brand opponents, such as EMERSON, SPORLAN, DANFOSS brand etc.
- Intelligent control: Micro computer control, cooling, heating, auto, ventilation can be free switching.



Characteristics

11 sizes available ranging from 19.5 kW to 103.7 kW cooling capacity.

Cooling only and heat pump version.

Wide application as hotel, apartment, villa, factory, shopping center, office building, school, etc.

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

High efficiency scroll compressor for the whole range, with built-in thermal overload cut-out and crankcase heater, mounted on rubber vibration dampers.

Compact indoor design, long air supply distance.

Outdoor units are equipped with low noise axial fans.

Indoor units are equipped with quiet centrifugal fans.

Split installation, connected by means of flare/welding coupling.

Easy operation line controller:

- Cooling/Heating/Fan/Auto
- Error indication
- Timing On/Off
- Multi safety protection
- High/low pressure protection

- Overheat protection
- Current overload protection
- Phase sequence relay
- Time delay and antifreeze switch

Optional

- Additional electric heater on indoor unit
- Additional heating coil on indoor unit

Technical Data

Model	Unit	AA20	AA25	AA32	AA36	AA42	AA48	
Nominal cooling capacity*	kW	19.5	24.8	31.2	35.6	41.3	47.4	
Nominal heating capacity**	kW	22.6	28.9	35.8	40.8	46.9	54.4	
Connection								
Method	/	Flare	Flare	Flare	Welding	Welding	Welding	
Liquid pipe diameter	ϕ mm	9.52x2	12.7x2	12.7x2	15.88x1	15.88/12.7	15.88/12.7	
Gas pipe diameter	ϕ mm	15.88x2	19.05x2	19.05x2	28x1	28/19.05	28/19.05	
Power supply	/	230V/3N/60Hz						
Outdoor unit	Compressor							
	Qty/refrigerant circuit	Nr.	2/2	2/2	2/2	1/1	2/2	2/2
	Cooling power input*	kW	7.2	9.3	11.8	12.8	15.1	17.9
	Heating power input**	kW	7.13	9.21	11.68	12.67	14.95	17.72
	Energy adjustment	%	50-100	50-100	50-100	0-100	40-60-100	33-66-100
	Axial fans							
	Quantity	Nr.	1	1	1	1	2	2
	Airflow	m ³ /h	9400	9400	12500	14200	18800	18800
	Sound pressure level***	dB(A)	67	67	68	70	71	71
	Net weight	kg	170	180	220	280	260	280
Indoor unit	Centrifugal fans							
	Quantity	Nr.	2	2	2	2	2	2
	Airflow	m ³ /h	3500	4500	5650	6450	7400	8550
	ESP	Pa	120	100	150	130	180	200
	Sound pressure level***	dB(A)	64	64	66	66	68	68
	Net weight	kg	90	100	150	160	180	200
Additional electric heater****	kW	2×3	2×4	2×5	2×6	2×6	2×8	
Additional heating coil****	kW	22.2	28.4	35.1	40.0	46.0	53.3	

Performance values refer to the following conditions:

* Cooling capacity is measured under the condition: indoor temperature DB 27°C / WB 19°C, ambient temperature DB 35°C / WB 24°C.

** Heating capacity is measured under the condition: indoor temperature DB 20°C / WB 15°C, ambient temperature DB 7°C / WB 6°C.

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

**** Optional as request.

Technical Data

Model	Unit	AA52	AA62	AA72	AA88	AA104	
Nominal cooling capacity*	kW	51.3	63.3	71.3	87.9	103.7	
Nominal heating capacity**	kW	58.9	72.6	81.9	100.0	115.8	
Connection							
Method	/	Welding	Welding	Welding	Welding	Welding	
Liquid pipe diameter	ϕ mm	15.88/12.7	15.88×2	15.88×2	15.88×2	19.05×2	
Gas pipe diameter	ϕ mm	28/19.05	28×2	28×2	28×2	35×2	
Power supply	/	230V/3N/60Hz					
Outdoor unit	Compressor						
	Qty/refrigerant circuit	Nr.	2/2	2/2	2/2	2/2	
	Cooling power input*	kW	18.4	23.1	26.6	28.1	39.3
	Heating power input**	kW	18.22	22.87	26.33	27.82	38.91
	Energy adjustment	%	30-70-100	50-100	50-100	50-100	50-100
	Axial fans						
	Quantity	Nr.	2	2	2	2	2
	Airflow	m³/h	21500	26500	29880	36500	43500
	Sound pressure level***	dB(A)	71	71	71	71	71
	Net weight	kg	330	460	460	780	800
Indoor unit	Centrifugal fans						
	Quantity	Nr.	2	2	2	2	2
	Airflow	m³/h	9250	11450	12900	14800	17100
	ESP	Pa	200	300	300	280	500
	Sound pressure level***	dB(A)	68	68	69	69	70
	Net weight	kg	220	230	300	320	400
Additional electric heater****	kW	2×8	2×10	2×10	2×12	2×14	
Additional heating coil****	kW	57.8	71.2	80.3	98.0	113.5	

Performance values refer to the following conditions:

* Cooling capacity is measured under the condition: indoor temperature DB 27°C / WB 19°C, ambient temperature DB 35°C / WB 24°C.

** Heating capacity is measured under the condition: indoor temperature DB 20°C / WB 15°C, ambient temperature DB 7°C / WB 6°C.

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

**** Optional as request.

Water Cooled Scroll Chiller

80kW-160kW



Application areas

- Industry process, precision, traditional manufacturing, food processing, government project, pharmaceutical.

Why this choice?

- High efficiency scroll compressor, shell and tube type and environment friendly R410a Refrigerant.
- Multi units parallel technology, more compressors parallel design to save more power, heat recovery function.
- Micro computer control, each modular unit running independently. Integrated control is an optional.



Characteristics

The master module can work independently or together with up to 7 slave modules, flexible design, stable performance, easy maintenance.

Reusable: using solar energy stored in earth as cooling & heating source.

Panels and frame 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.

Shell and tube type evaporator, factory insulated with flexible close cell material.
Shell and tube dry expansion type condenser, factory insulated with flexible close cell material.
The refrigerant circuit is complete with filter drier, direct expansion valve, high and low pressure switch.

Acting as multi-function unit such as cooling, heating, with heat recovery function producing hot water for domestic use.

LCD display as standard

Automatic operation dramatically reducing maintenance cost thanks to reliable microprocessor system.

Wide application as hotel, apartment, villa, factory, shopping center, office building, school, etc.

Electric panel

consists of:

Compressor breaker

Compressor contactor

Phase sequence relay

Control circuit breaker

Microprocessor with function display

Optional

Desuperheater as optional

Electronic controller with BMS system.

Technical Data

Model		WW80	WW120	WW160
Water cooled conditions	Cooling capacity(kW)	80	120	160
	Cooling power input(kW)	15.5	23.5	31.0
Compressor	Type	Danfoss/Copeland scroll compressor		
	Power input	380V/3N—50Hz		
	Qty	2	3	4
User side heat exchanger	Type	Shell and tube heat exchanger		
	Water resistance(kpa)	40-60		
	Fouling factor(m ² ·°C/kw)	0.086		
	Pipe size (mm)	DN65		DN80
	Connction type	Flange		
	Water flow rate(m ³ /h)	13.8	20.5	27.5
Source side heat exchanger	Type	Shell and tube heat exchanger		
	Water resistance(kpa)	40-60		
	Fouling factor(m ² ·°C/kw)	0.086		
	Pipe size (mm)	DN65		DN80
	Connection type	Flange		
	Water flow rate(m ³ /h)	16.5	24.5	32.8
Dimension	Length(mm)	2110	2110	2530
	Width(mm)	620	620	650
	Height(mm)	1365	1365	1410
Noise level≤dB(A)		67	67	67
Unit weight (kg)		560	800	1050

Note: 1. Cooling condition: User side water inlet/outlet 12°C/7°C, Source side water inlet/outlet 30°C/35°C.

2. Power supply: 3P-380V-50Hz.



Water Cooled Screw Chiller

130kW-2500kW



Application areas

- Industry process, precision, traditional manufacturing, food processing, government project, pharmaceutical.

Why this choice?

- High efficiency screw compressor, shell and tube type and environment friendly R410a refrigerant.
- Multi units parallel technology, more compressors parallel design to save more power, heat recovery function.
- Micro computer control, each modular unit running independently. Integrated control is an optional.



Characteristics

29 sizes available ranging from 130kW to 2500kW cooling capacity.

Acting as multi-function unit such as cooling, heating, sanitary hot water separately or simultaneously.

Wide application as hotel, apartment, villa, factory, shopping center, office building, school, etc.

Semi-hermetic screw compressor for the whole range. Each compressor is equipped with a crankcase heater and a built-in electronic

protection with temperature sensor located directly in the motor winding and on the discharge line.

The refrigerant circuit is complete with sight glass, filter drier, high and low pressure gauges, solenoid valve, electronic expansion valve, high and low pressure switch.

Shell and tube dry expansion type condenser, factory insulated with flexible close cell material.

Shell and tube evaporator, higher efficiency less water consumption, easy maintenance and cleaning, factory insulated with flexible close cell material.

The electric panel consists of compressor breaker, compressor contactor, phase sequence relay, control circuit breaker, microprocessor control with function display.

LCD display, touch screen control panel as standard.

Automatic operation dramatically reducing maintenance cost thanks to reliable microprocessor system.

An infinitely variable capacity control system that is capable of exactly matching the demand requirement of the system is to be supplied. This system is to provide precise and stable control of supply water temperature over the complete range of operating conditions.

Optional

Desuperheater as optional.

Electronic controller with BMS system.

Technical Data

Model	Unit	WW130	WW170	WW200	WW240	WW260	WW280	WW310	WW360	WW380	WW420
Cooling capacity*	kW	130	170	200	240	260	280	310	360	380	420
Power supply	380-415V/3Ph/50Hz										
Compressor											
Qty/refrigerant circuit	Nr.	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
Cooling power input*	kW	26	33	39	47	51	55	61	71	75	83
Energy adjustment steps	step	25%-100%									
Max.current for writing	A	69	87	108	128	154	158	161	165	175	185
Refrigerant charge	kg	32	39	46	55	60	64	68	85	100	107
Evaporator											
Water side pressure drop	kPa	42	45	45	45	45	46	46	46	47	46
Pipe size	mm	DN65	DN80	DN100	DN100	DN100	DN100	DN100	DN125	DN125	DN125
Water flow rate in cooling*	m³/h	22	29	34	41	45	48	53	62	65	72
Condenser											
Water side pressure drop	kPa	42	45	44	44	45	45	44	44	44	42
Pipe size	mm	DN65	DN80	DN100	DN100	DN100	DN100	DN100	DN125	DN125	DN125
Water flow rate in cooling*	m³/h	27	35	41	49	54	58	64	74	78	86
Dimensions											
Length	mm	2685	2720	2660	2880	2870	3170	3270	3170	3180	3180
Width	mm	1090	1115	1175	1125	1125	1125	1230	1200	1285	1285
Height	mm	1625	1555	1650	1645	1685	1685	1685	1685	1805	1805
Net weight	kg	1600	1800	1900	2000	2100	2200	2250	2400	3000	3100
Noise level**	dB(A)	68	69	69	70	70	72	73	73	73	73

* Performance values refer to the following conditions:

Condenser water inlet/outlet temperature: 30°C/35°C, evaporator water inlet/outlet temperature: 12°C/7°C.

** Noise level measured in free field condition at distance of 1 meter.



Model	Unit	WW480	WW530	WW610	WW680	WW710	WW760	WW860	WW960	WW1000	WW1120
Cooling capacity*	kW	480	530	610	680	710	760	860	960	1000	1120
Power supply	380-415V/3Ph/50Hz										
Compressor											
Qty/refrigerant circuit	Nr.	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2	2/2
Cooling power input*	kW	94	104	120	134	140	150	169	189	197	220
Energy adjustment steps	step	25% - 100%					12.5% - 100%				
Max. current for wiring	A	258	292	302	335	2×165	2×175	2×175	2×185	2×246	2×258
Refrigerant charge	kg	126	142	160	167	171	199	210	220	242	261
Evaporator											
Water side pressure drop	kPa	46	46	46	47	47	46	47	46	46	46
Pipe size	mm	DN125	DN125	DN125	DN150	DN150	DN150	DN150	DN200	DN200	DN200
Water flow rate in cooling*	m³/h	83	91	105	117	122	131	148	165	172	193
Condenser											
Water side pressure drop	kPa	42	42	44	42	44	42	44	42	44	44
Pipe size	mm	DN125	DN125	DN125	DN150	2×DN125	2×DN125	2×DN125	2×DN125	2×DN125	2×DN150
Water flow rate in cooling*	m³/h	99	109	126	140	146	156	177	198	206	231
Dimensions											
Length	mm	3505	3505	3505	3520	4060	4505	4505	4505	4660	4660
Width	mm	1280	1315	1375	1380	1415	1415	1415	1415	1460	1460
Height	mm	1970	1990	1980	1980	1975	2000	2000	2000	2090	2090
Net weight	kg	3500	3800	4000	4100	4210	4400	4740	5600	6600	6800
Noise level**	dB(A)	74	74	74	73	74	74	74	74	74	74

Model	Unit	WW 1200	WW1250	WW1360	WW1470	WW1720	WW1840	WW2000	WW2350	WW2500
Cooling capacity*	kW	1200	1250	1360	1470	1720	1840	2000	2350	2500
Power supply	380-415V/3Ph/50Hz									
Compressor										
Qty/refrigerant circuit	Nr.	2/2	2/2	2/2	4/4	4/4	4/4	4/4	4/4	4/4
Cooling power input*	kW	236	246	268	289	339	362	394	463	492
Energy adjustment steps	step	12.5% - 100%					6.25% - 100%			
Max. current for wiring	A	2×292	2×302	2×315	4×175	4×185	4×246	4×258	4×258	4×292
Refrigerant charge	kg	295	302	327	338	393	430	453	494	537
Evaporator										
Water side pressure drop	kPa	46	46	46	45	45	46	46	47	47
Pipe size	mm	DN200	DN200	DN200	2×DN150	2×DN150	2×DN200	2×DN200	2×DN200	2×DN200
Water flow rate in cooling*	m³/h	206	215	234	253	296	316	344	404	430
Condenser										
Water side pressure drop	kPa	44	42	45	52	52	52	52	52	52
Pipe size	mm	2×DN150	2×DN150	2×DN150	2×DN200	2×DN200	2×DN200	2×DN200	2×DN200	2×DN200
Water flow rate in cooling*	m³/h	247	257	280	303	354	379	412	484	515
Dimensions										
Length	mm	4660	4660	4660	4600	4650	4690	4600	4780	4800
Width	mm	1585	1585	1585	2250	2270	2300	2450	2450	2450
Height	mm	2215	2215	2240	2350	2380	2410	2460	2470	2500
Net weight	kg	7000	7400	8000	8800	9000	9800	11600	12300	13000
Noise level**	dB(A)	74	74	75	76	80	80	81	81	81

* Performance values refer to the following conditions:

Condenser water inlet/outlet temperature: 30°C/35°C, evaporator water inlet/outlet temperature: 12°C/7°C.

** Noise level measured in free field condition at distance of 1 meter.

Chilled Water Fan Coil Unit

340m³/h-2380m³/h

Application areas

- Bureaux, business building, superstore, hotel, hospital, bank, apartment and amusement place.

Why this choice?

- Install type: horizontal concealed/exposed type and vertical concealed/exposed type
- External static pressure 12pa, 30pa and 50pa can be choosed
- Airfoil ABS wind wheel with high efficiency and U type bend pipe design



Characteristics

Efficient and energy saving

Efficient ABS blower which is light weighted while statically and dynamically balanced.

Excellent thinwall copper tube and efficient hydrophilic aluminum fin are under water pressure bonded treatment. Patent inverse crossing circuit to reach the best heat transfer efficiency. Brass water distributor is used for improving water flow distribution, in order to provide better heat transfer effect.

Quiet operation

Low noise and permanent capacity motor, unique ABS centrifugal blower, all of them pass dynamically balance test, to ensure unit operate quietly and efficiently.

3-speed motor, ball bearing, long lifespan; rubber vibration isolator reduces operation noise.

Stable and reliable

U-shaped tube bending, reducing soldered dot and leakage point.

Drain pan is made of high grade stainless steel plate, modeling processing; surface has been under hot dipped electroforming painting treatment. 7mm PE thermal insulation foam is applied on the drain pan to prevent condensation and leakage from occurring. Furthermore the width and length of the drain pan has been specifically designed to accommodate the water drop from the water inlet/outlet and electrically operated valve. There is fuse in power supply inlet side to prevent motor burned because of wrong wiring. Reliable and stable motor which enjoys good reputation in the market.

Different models

- Static pressure: 12Pa, 30Pa, 50Pa.
- Fan coil unit series: horizontal exposed type, horizontal concealed type, vertical concealed type, vertical exposed type, cassette type, large air volume FCU.
- Accessories: 3-speed switch, return air box, extended drain pan, electronic two-way valve, electrical heater, air cleansing module. All above are for your selection.

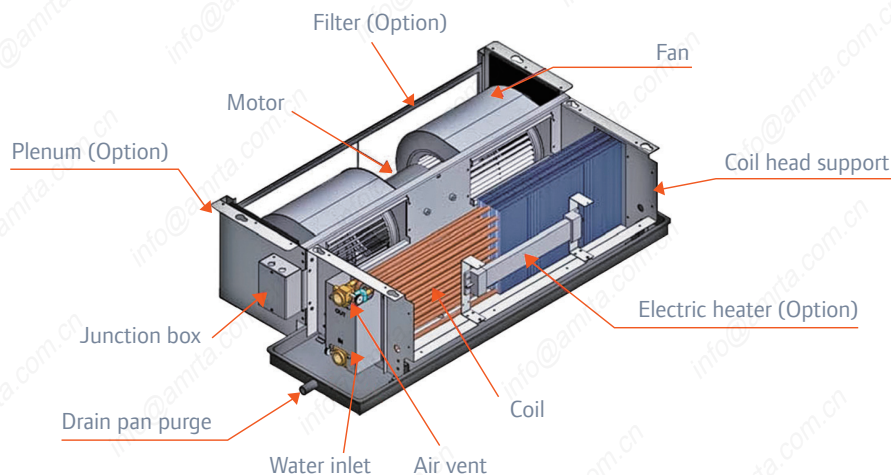


Technical Data (Ceiling Concealed Type)

Model		34WA	51WA	68WA	85WA	102WA	136WA	170WA	204WA	238WA
Rated air volume m ³ /h	H	340	510	680	850	1020	1360	1700	2040	2380
	M	255	383	510	638	765	1020	1275	1530	1785
	L	170	255	340	425	510	680	850	1020	1190
Rated cooling capacity W	H	1800	2700	3600	4500	5400	7200	9000	10800	12600
	M	1440	2160	2880	3600	4320	5760	7200	8640	10080
	L	1170	1755	2340	2925	3510	4680	5850	7020	8190
Rated heating capacity W	H	2700	4050	5400	6750	8100	10800	13500	16200	18900
	M	2160	3240	4320	5400	6480	8640	10800	12960	15120
	L	1755	2633	3510	4388	5265	7020	8775	10530	12285
Input power W	12Pa	H	37	52	62	76	86	134	152	189
	30Pa	H	44	59	72	87	100	156	174	212
	50Pa	H	49	66	84	100	108	174	210	250
Noise dB(A)	12Pa	H	37	39	41	43	45	46	48	50
	30Pa	H	40	42	44	46	47	48	50	52
	50Pa	H	42	44	46	47	49	50	52	54
Water volume kg/h		390	550	700	820	910	1340	1590	1800	2070
Water pressure loss kPa		≤30	≤30	≤30	≤30	≤40	≤40	≤40	≤40	≤50
Weight kg	Without plenum box	12.5	14	14	15.5	16.5	22.5	30	33	33.5
	With plenum box	14.5	16	17	19.5	20.5	27.5	35	38	39.5
Motor	Type	E class insulation, permanent capacitor, 3 speed fan								
	Qty	1	1	1	1	1	2	2	2	3
Fan	Type	Double inlet, forward curve, multi blades, centrifugal fan								
	Qty	1	2	2	2	2	3	4	4	4
Water connection pipe		3/4" (DN20)								
Condensed water pipe		3/4" (DN20)								
Max working pressure		1.6MPa								
Power supply		AC 220V/50Hz								

Note:

1. Cooling capacity is based on air inlet temperature 27°C DB/19.5°C WB, entering water temperature 7°C, $\Delta T 5^{\circ}\text{C}$.
2. Heating capacity is based on air inlet temperature 21°C, entering water temperature 60°C, air flow volume and water flow rate are the same with cooling mode.
3. MPT-Mole pipe thread, FPT-Female pipe thread.
4. ESP for C and F series is 0Pa.
5. For FVE, FVC series, there is no Model 140; the performance parameters of FVE and FVC are the same with FHC.
6. Specifications in this catalog are subject to change without notice.



Technical Data (Cassette Type)

Model		34KM	51KM	68KM	85KM	102KM	136KM	170KM	204KM	238KM
Air flow [m³/h]	H	340	510	680	850	1020	1360	1700	2040	2380
	M	280	390	520	640	790	1030	1290	1500	1800
	L	180	260	350	430	520	690	860	1030	1200
Total cooling capacity * [W]	H	2000	3000	3700	5000	5600	7300	9900	11000	12800
Heating capacity * [W]	H	3000	4800	5500	7200	8200	10800	14500	16800	19200
Fan motor										
Nominal power input	W	37	52	62	76	96	132	152	189	220
Nominal current input	A	0.162	0.23	0.276	0.338	0.417	0.588	0.663	0.824	0.976
Water flow rate	m³/h	0.42	0.522	0.62	0.86	0.98	1.22	1.58	1.92	2.2
Water pressure drop	kPa	14	14	16	18	22	25	39	44	44
Water connections	inch	ZG 3/4"								
Drain pipe	mm	26								
Sound pressure level ** [dB(A)]	H	37	39	41	43	45	46	47	50	52
	M	34	36	38	39	42	43	44	46	48
	L	30	32	35	36	38	39	40	42	44
Net Dimension	Unit	580*580*290			710*710*290			832*832*290		
W/D/H mm	Panel	680*680*30			830*830*30			980*980*30		
Power supply	/	220V/1Ph/50Hz								
Net weight kg	Unit	25	25	26	28	29	29	36	38	38
	Panel	2.5			4			5		

* The data are referred to the following conditions:

Cooling: room temperature: 27 °C, DB / 19.5 °C WB; water temperature: 7/12 °C, high speed.

Heating: room temperature: 21 °C, water inlet temperature: 70 °C, high speed. Water flow rate same as in cooling operation.

** Sound pressure measured in anechoic room 1.5 m away from the unit.



Duct Fan Coil Unit

1020m³/h-3400m³/h

Application areas

- Any light commercial building
- Offices and shops
- Hotels

Why this choice?

- Very high performances
- Easy and quick to install like a fan coil
- Many available configurations



Characteristics

Frame and structure

Panels and frame are made of galvanized steel, properly punched and punched for fixing both accessories and the unit itself.

Heating coil

The coils are made of seamless tubes expanded into aluminum fins in continuous block. The connections have brass headers with female fittings and provided with easily accessible vent and drainage valve.

Fan deck

The fan decks are composed of double suction centrifugal fans with aluminum impellers and 3-speed fan motors. Each fan motor assembly is dynamically balanced.

Drip tray

The drip trays are made from sheet metal treated with polyester powder coating to ensure total resistance to atmospheric agents.

Filter

The easily removable filter is made of filtering honeycomb polypropylene fabric and supported by an aluminum frame. The filter is installed on the units with plenum only.

Electrical connection box

All electric wires are connected to enclosed electrical terminal block, situated on the same side of the water connections.

Optional

3 speed switch

ON-BOARD THERMOSTART

Mechanical type for two pipe system exposed version use, working mode selection (OFF-Heating-Cooling), ventilation (HIGH-MED-LOW) and room temperature setting. LCD thermostat with display

Technical Data (Medium E.S.P. Type)

Model		102WAM	136WAM	170WAM	204WAM	238WAM	272WAM	306WAM	340WAM
Rated air volume m ³ /h	H	1020	1360	1700	2040	2380	2720	3060	3400
	M	765	1020	1275	1530	1785	2040	2295	2550
	L	510	680	850	1020	1190	1360	1530	1700
Rated cooling capacity kW		5.45	7.32	9.75	11.2	13.5	15.7	17.6	20.42
Rated heating capacity kW		8.18	10.98	14.63	16.80	20.25	23.55	26.40	30.63
Coil rows		3	3	3	3	3	3	3	3
Input power W		231	273	326	405	460	520	737	805
Noise dB(A)	H	47	49	50	52	54	56	57	59
	M	44	46	47	48	49	54	54	55
	L	41	42	43	44	46	47	49	51
Water volume l/h		937	1259	1677	1926	2322	2700	3027	3512
Water pressure loss kPa		20	12.4	20	29	12.7	23.5	25	36
Net weight kg		30	31	34	38	40	55	56	59
External static pressure Pa		100	100	100	100	100	100	100	100
Motor	Type	E class insulation, permanent capacitor, 3 speed fan							
	Qty	1	1	1	1	1	2	2	2
Fan	Type	Double inlet, forward curve, multi blades, centrifugal fan							
	Type	1	2	2	2	2	3	3	3
Water connection pipe		1" (DN25)							
Condensed water pipe		3/4" (DN20)							
Max working pressure		1.6MPa							
Power supply		AC 220V/50Hz							

Remarks:

1. The performance data is according to the test result of horizontal concealed type without plenum.
2. Cooling condition: inlet air DBT 27°C, WBT 19.5°C, inlet water temp. 7°C, temp. Difference 5°C.
3. Heating condition: inlet air DBT 21°C, inlet water temp. 60°C.

Technical Data (High E.S.P. Type)

Model		204WAH	238WAH	272WAH	306WAH	340WAH
Rated air volume m³/h	H	2040	2380	2720	3060	3400
	M	1530	1785	2040	2295	2550
	L	1020	1190	1360	1530	1700
Rated cooling capacity kW		11.2	13.5	15.7	17.6	20.42
Rated heating capacity kW		16.37	18.69	20.09	21.24	24.15
Coil rows		3	3	3	3	3
Input power W		405	460	520	737	805
Noise dB(A)	H	52	54	56	57	59
	M	48	49	54	54	55
	L	44	46	47	49	51
Water volume l/h		1926	2322	2700	3027	3512
Water pressure loss kPa		29	12.7	23.5	25	36
Net weight kg		38	40	55	56	59
External static pressure Pa		150	150	150	150	150
Motor	Type	E class insulation, permanent capacitor, 3 speed fan				
	Qty	1	1	2	2	2
Fan	Type	Double inlet, forward curve, multi blades, centrifugal fan				
	Type	2	2	3	3	3
Water connection pipe		1" (DN25)				
Condensed water pipe		3/4" (DN20)				
Max working pressure		1.6MPa				
Power supply		AC 220V/50Hz				

Remarks:

- 1. The performance data is according to the test result of horizontal concealed type without plenum.
- 2. Cooling condition: inlet air DBT 27°C, WBT 19.5°C, inlet water temp. 7°C, temp. Difference 5°C.
- 3. Heating condition: inlet air DBT 21°C, inlet water temp. 60°C.



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