

# COOLMASTER PRECISION

AIR CONDITIONER

The Integrated Solutions (25 - 200kW)



**ACSON**<sup>®</sup>  
International  
Air Conditioners

# COOLMASTER PRECISION

## AIR CONDITIONER

Acson CoolMaster is a type of precision air conditioner (PAC) with high density cooling capacity that applicable to medium-large data center and electronic equipment room. CoolMaster has variety of cooling methods, air-cooled, water-cooled, glycol-cooled, chilled water (single coil & dual coil) and dual cooled. It can work with room cooling or aisle containment with the feature of constant temperature and humidity, it is believed that Acson CoolMaster can always moulded to your needs.

### Application

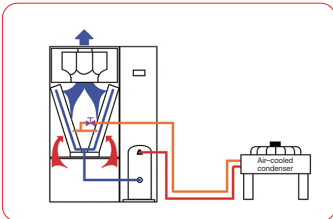
- Medium-large server room
- Industrial control room
- Precision processing equipment room
- UPS and battery room



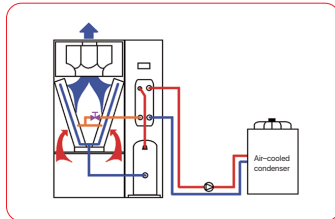
## Cooling Methods

### Air-Cooled and Water-Cooled Air Conditioner

Air-cooled type

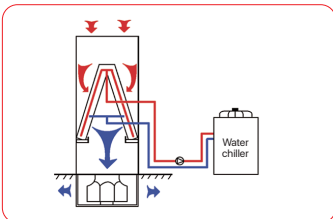


Water-cooled type

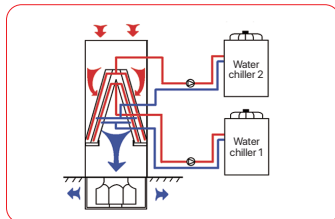


### Chilled Water Air Conditioner-Single Coil and Dual Coil

Single coil type

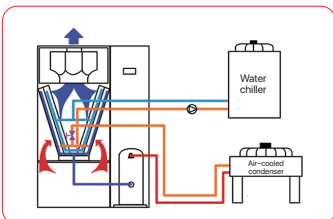


Dual coils type

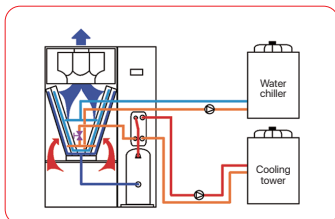


### Dual Cool Air Conditioner

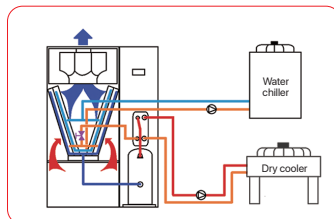
Air-cooled & chilled water type



Water-cooled & chilled water type



Glycol-cooled & chilled water type



## Features



### Diversified

- Cooling capacity: Air-cooled/Water-cooled/Glycol-cooled 25kW-120kW; Dual-cooled 30kW-100kW; Chilled water 31kW-200kW.
- Downflow and upflow.
- Cooling method: Air-cooled, water-cooled, chilled water, dual-cooled and glycol-cooled.



### Economize-Space Saving

- Acson CoolMaster occupied less space where it can be installed in a limited space.
- For example: The width of 50kW CoolMaster is 930mm; By taking a room length with 10m, 10 units of 50kW CoolMaster or 5 units of 100kW of CoolMaster PAC can be installed that are able to provide 500kW of total cooling capacity.



### Economize-Energy Saving

- Acson CoolMaster implement energy-saving design that feature high EER, high sensible heat ratio and low energy consumption.
- W/M type of evaporator is implemented to improve the heat exchange area per unit volume.
- Filter net is fitted closely with the evaporator that could decrease air resistance of filter net and reduce fan operating power due to its increased area of filter net.
- The down flow (air discharge direction) implement sunken fan design where the energy consumption can be lowered by 20%.
- ODU fan implement stepless inverter technology which features energy saving, noise reduction and long working life.
- Multi-unit control design that control number of operating unit to avoid competitive operation and more energy can be save as well.



### Intelligent Remote monitoring & control system

- Standard configured with RS485 port that compatible with Modbus and PMBus protocols (YD/T 1363.3). CoolMaster can connect with dynamic environment monitoring system, DCIM, BMS and remote monitoring system.
- TCP/IP communication card (optional): SNMP and direct access based on network IP address.
- Intelligent controller with microprocessor that can be used as terminal for IoT connection.
- Single control: Variable capacity unit (e.g: chilled water type and DX system with variable capacity component) which monitor the trend of heat load based on the collected data by adjusting the corresponding cooling capacity.
- Group control: Multiple units of CoolMaster PAC in a server room can control as a unit, this system monitor the trend of heat load based on the collected data by adjusting the corresponding cooling capacity.



### Quality-Constant temperature and humidity control

- Temperature control at  $\pm 1^{\circ}\text{C}$ ; relative humidity control at  $\pm 5\%$ .
- Temperature control at  $\pm 0.5^{\circ}\text{C}$ ; relative humidity control at  $\pm 2\%$  for warehouse with precision instruments and etc.



### Quality-Delicate design

- Implement frame-type structure design, high-strength and anti-vibration features.
- Electrical control system that use strong and weak current separation design.



### Rapid

- **Immediate refrigeration**  
Evaporator possess large heat exchange area, high air flow and large capacity compressor that enable PAC to produce corresponding cooling capacity
- **Immediate response**  
Cooling, heating and humidity capacity demand are calculated; command are sent to initiative corresponding function.

# High Efficiency Configurations



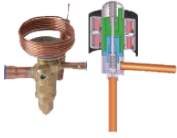
## Air Filter

Similar surface area as the evaporator that could increase the filter-contact area (improved filter effect & lowered air resistance).



## Pressure Difference Switch

To ensure fan operate in good condition.



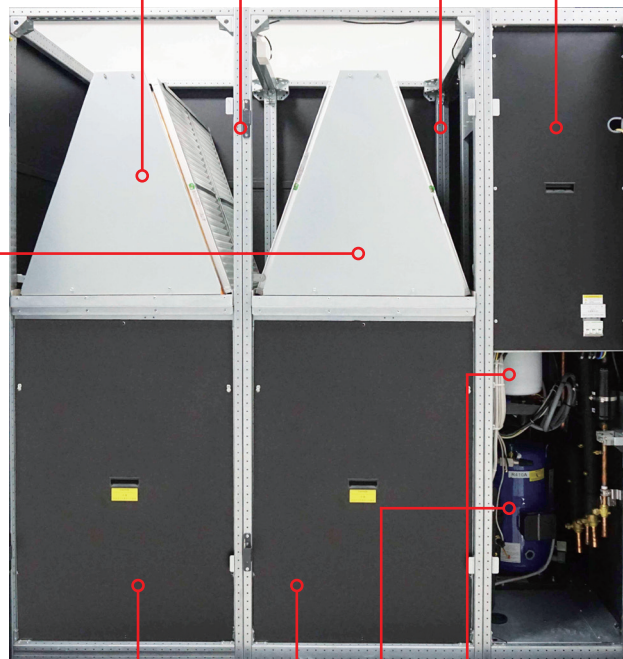
## Expansion Valve

- Precise control of refrigerant flow with better efficiency.
- TXV (standard configured) and EXV (optional)



## Advanced Control System

- Configured with RS485 port.
- 7-inch touchscreen display (standard configured).



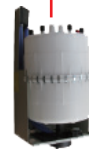
## Evaporator

- "M/W" type evaporator.
- Large heat exchange area, uniform air distribution and high heat exchange efficiency.



## Heater

- Electric heater configured with positive temperature coefficient (PTC) which features even heating and high thermal conductivity
- Overheat protection device.



## Humidifier

- Automatic washing function (boast high efficiency and large humidification volume).
- Infrared humidifier (optional).



## Compressor

- Scroll compressor (standard configuration).
- EC compressor (optional).



## Fan

- Standard configured with direct-driven backward curved centrifugal fan.
- Backward curved fan: fan will not overload by increasing the air resistance; stabilized air pressure; less power consumption.
- Direct-driven fan: less transmission loss and high efficiency. Less maintenance required.
- Optional: high efficiency backward curved EC centrifugal fan.

# Specifications

## CoolMaster Series (Air Cooled, Water Cooled and Glycol Cooled)

Model			A5PCM025	A5PCM030	A5PCM035	A5PCM040	A5PCM042	A5PCM045	A5PCM050	A5PCM052	
Air Discharge Direction			UP-FLOW, DOWN-FLOW								
Nominal Cooling Capacity		BTU/hr	85,600	102,700	121,400	137,100	138,100	156,200	170,900	171,600	
		kW	25.1	30.1	35.6	40.2	40.5	45.8	50.1	50.3	
Sensible Cooling Capacity		BTU/hr	79,100	94,500	111,900	126,200	127,200	143,900	157,300	157,900	
		kW	23.2	27.7	32.8	37.0	37.3	42.2	46.1	46.3	
Power	Power Source	V/Ph/Hz	380 ~ 415 / 3 / 50								
	FLA	A	32	32	34.3	42.8	46.7	47.1	47.1	50.6	
	Recommend Capacity For Air Switch	A	50	50	50	63	63	63	63	63	
Refrigerant Type			R410A								
Fan Type	Type		EC FAN								
	Quantity		1								
Air Filter			G4 FILTER								
Compressor Type	Type		FULLY HERMETIC SCROLL COMPRESSOR								
	Quantity		1		2		1		2		
Air Flow		m <sup>3</sup> /h (CFM)	7,500 / 4,400	8,500 / 5,000	9,000 / 5,200	11,000 / 6,400	11,000 / 6,400	12,000 / 7,000	13,000 / 7,600	13,000 / 7,600	
Water Cooled / Glycooled Unit		Water Valve Type	STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY VALVE (OPTIONAL)								
		Water Flow Rate	m <sup>3</sup> /h (l/s)	6.0 / 1.67	7.4 / 2.06	8.4 / 2.33	9.3 / 2.58	9.7 / 2.69	10.9 / 3.03	11.3 / 3.14	11.4 / 3.17
		Water Pressure Drop	kPa	45	52	48	53	40	59	75	45
		Water Pipe Size	mm/in	28.58 / 1-1/8"	28.58 / 1-1/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	28.58 / 1-1/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	28.58 / 1-1/8"
External Static Pressure		Pa	0 ~ 400 Pa								
Heating Capacity (Standard)		kW	6				9				
Humidifying Capacity (Standard)		kg/h	5				8				
Humidifier Pipe		mm/in	19 / 3/4"								
Pipe Connection	Size	Liquid	mm/in			16 / 0.63"		16X2 / 0.63" X2		16 / 0.63"	
		Gas	mm/in			19 / 3/4"		19X2 / 3/4" X2		19 / 3/4"	
Condensate Drain Pipe		mm/in	19 / 3/4"								
Unit Dimension	Height	mm/in	1975 / 77.76"								
	Width	mm/in	855 / 33.66"		930 / 36.61"		1380 / 54.33"		930 / 36.61"		
	Depth	mm/in	870 / 34.25"		998 / 39.29"						
	Occupied Space	m <sup>2</sup>	0.74	0.74	0.93	0.93	1.38	0.93	0.93	1.38	
Unit Weight	Air-Cooled Unit	kg/lb	275 / 606	290 / 639	297 / 654	305 / 672	424 / 934	395 / 870	415 / 914	490 / 1,080	
	Water Cooled or Glycol Cooled Unit	kg/lb	295 / 650	310 / 683	317 / 698	325 / 716	450 / 992	415 / 914	435 / 959	520 / 1,146	

Model			A5PCM060	A5PCM070	A5PCM080	A5PCM090	A5PCM100	A5PCM110	A5PCM120	
Air Discharge Direction			UP-FLOW, DOWN-FLOW							
Nominal Cooling Capacity		BTU/hr	208,400	239,500	273,300	309,800	341,800	378,400	411,100	
		kW	61.1	70.2	80.1	90.8	100.2	110.9	120.5	
Sensible Cooling Capacity		BTU/hr	193,100	218,300	251,400	284,900	311,100	341,500	375,300	
		kW	56.6	64.0	73.7	83.5	91.2	100.1	110	
Power	Power Source	V/Ph/Hz	380 ~ 415 / 3 / 50							
	FLA	A	59.4	64.1	76.6	80.9	85.2	89.5	89.5	
	Recommend Capacity For Air Switch	A	80	100	125	125	125	125	125	
Refrigerant Type			R410A							
Fan Type	Type		EC FAN							
	Quantity		2							
Air Filter			G4 FILTER							
Compressor Type	Type		FULLY HERMETIC SCROLL COMPRESSOR							
	Quantity		2							
Air Flow		m <sup>3</sup> /h (CFM)	17,000 / 10,000	18,000 / 10,500	21,000 / 12,300	24,000 / 14,100	25,000 / 14,700	26,000 / 15,300	27,000 / 15,800	
Water Cooled / Glycooled Unit		Water Valve Type	STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY VALVE (OPTIONAL)							
		Water Flow Rate	m <sup>3</sup> /h (l/s)	14.7 / 4.08	16.8 / 4.67	18.6 / 5.17	20.6 / 5.72	23.0 / 6.39	25.9 / 7.19	29.0 / 8.06
		Water Pressure Drop	kPa	47	48	54	71	80	83	89
		Water Pipe Size	mm/in	34.93 / 1-3/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	34.93 / 1-3/8"	34.93 / 1-3/8"
External Static Pressure		Pa	0 ~ 400 Pa							
Heating Capacity (Standard)		kW	9				12			
Humidifying Capacity (Standard)		kg/h	8				10			
Humidifier Pipe		mm/in	19 / 3/4"							
Pipe Connection	Size	Liquid	mm/in			16X2 / 0.63" X2		19X2 / 3/4" X2		
		Gas	mm/in			19X2 / 3/4" X2		25X2 / 0.98" X2		
Condensate Drain Pipe		mm/in	19 / 3/4"							
Unit Dimension	Height	mm/in	1975 / 77.76"							
	Width	mm/in	1830 / 72.05"				2280 / 89.76"			
	Depth	mm/in	998 / 39.29"							
	Occupied Space	m <sup>2</sup>	1.83	1.83	1.83	1.83	1.83	2.28	2.28	
Unit Weight	Air-Cooled Unit	kg/lb	610 / 1,344	730 / 1,609	740 / 1,631	780 / 1,719		910 / 2,006	950 / 2,094	
	Water Cooled or Glycol Cooled Unit	kg/lb	650 / 1,433	770 / 1,697	800 / 1,763	860 / 1,895		960 / 2,116	1,000 / 2,200	

### Notes:

- All specification are subjected to change by the manufacturer without prior notice.
- Nominal cooling capacity are based on the condition below:

Return air temperature	24°C / RH 50%
Condensing temperature (air-cooled and water cooled)	45°C
Cooling water supply temperature	32°C
Return water temperature	37°C

- FLA indicates maximum current of standard unit configuration, current of air-cooled ODU is not included.
- Water pressure drop and water flow rate of glycol-cooled unit changed as per glycol concentration.
- Unit dimension shown does not include the height of cap tyure where the standard height of cap tyure is 400mm. Other sizes available as well.
- Acson A5PCM040 has obtained Malaysia's Green Recognition Scheme, MyHijau.



# Specifications

## CoolMaster Series (Chilled Water Type)

Model	Indoor	APCM031C	APCM041C	APCM051C	APCM061C	
Air Discharge Direction		UP-FLOW, DOWN-FLOW				
Nominal Cooling Capacity		BTU/hr	103,000	137,000	170,900	206,000
		kW	30.2	40.2	50.1	60.4
Sensible Cooling Capacity		BTU/hr	103,000	137,000	170,900	206,000
		kW	30.2	40.2	50.1	60.4
Power	Power Source	V/Ph/Hz				380 ~ 415 / 3 / 50
	FLA	A				13.5
Fan Quantity		1				
Air Filter		G4 FILTER				
Air Flow		m <sup>3</sup> /h (CFM)	9,600 / 5,650	10,500 / 6,180	11,500 / 6,760	13,000 / 7,650
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)				
Water Flow Rate		m <sup>3</sup> /h (l/s)	4.5 / 1.25	6.1 / 1.70	7.5 / 2.08	9.0 / 2.5
Water Pressure Drop		kPa	<80kPa			
Chilled Water Pipe Size		mm/in	32 / 1.26"		42 / 1.63"	
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)			
Heating Capacity (Standard)		kW	6			
Humidifying Capacity (Standard)		kg/h	5			
Humidifier Pipe		mm/in	19 / 3/4"			
Condensate Drain Pipe	Size	mm/in	19 / 3/4"			
	Height	mm/in	1975 / 77.75"			
Unit Dimension (Single-Coil)	Width	mm/in	930 / 36.61"			
	Depth	mm/in	998 / 39.29"			
Occupied Space		m <sup>2</sup>	0.93			
Unit Weight		kg / lb	282 / 622	324 / 714	385 / 849	406 / 895

Model	Indoor	APCM071C	APCM081C	APCM091C	APCM101C	APCM110C	
Air Discharge Direction		UP-FLOW, DOWN-FLOW					
Nominal Cooling Capacity		BTU/hr	244,900	277,400	313,500	345,600	381,100
		kW	71.8	81.3	91.9	101.3	111.7
Sensible Cooling Capacity		BTU/hr	244,900	277,400	313,500	345,600	381,100
		kW	71.8	81.3	91.9	101.3	111.7
Power	Power Source	V/Ph/Hz				380 ~ 415 / 3 / 50	
	FLA	A	21.6	27.0	31.8	33.8	
Fan Quantity		2					
Air Filter		G4 FILTER					
Air Flow		m <sup>3</sup> /h (CFM)	18,000 / 10,590	20,500 / 12,060	21500 / 12,650	24,000 / 14,120	25,500 / 15,000
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)					
Water Flow Rate		m <sup>3</sup> /h (l/s)	10.7 / 2.97	12.2 / 3.39	13.8 / 3.83	15.5 / 4.31	17.0 / 4.72
Water Pressure Drop		kPa	<80kPa				
Chilled Water Pipe Size		mm/in	42 / 1.63"		54 / 2.13"		
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)				
Heating Capacity (Standard)		kW	9		12		
Humidifying Capacity (Standard)		kg/h	8		15		
Humidifier Pipe		mm/in	19 / 3/4"				
Condensate Drain Pipe	Size	mm/in	19 / 3/4"				
	Height	mm/in	1975 / 77.75"				
Unit Dimension (Single-Coil)	Width	mm/in	1630 / 64.17"				
	Depth	mm/in	998 / 39.29"				
Occupied Space		m <sup>2</sup>	1.63				
Unit Weight		kg / lb	374 / 825	374 / 825	385 / 849	415 / 915	425 / 937

Notes:

- All specification are subjected to change by the manufacturer without prior notice.
- Nominal cooling capacity are based on the condition below:

Return air temperature	24°C / RH 50%
Chilled water supply temperature	7°C
Return water temperature	12°C

- FLA indicates maximum current of standard unit configuration, air-cooled ODU is not included.
- Unit dimension shown does not include the height of cap tuyere where the standard height of cap tuyere is 400mm. Other sizes available as well.
- For requirement of chilled water dual-coil unit outside the range of 41.5 to 152.8kW, please contact Acson Malaysia for customized units.
- For requirement of static pressure more than 400Pa, please contact Acson Malaysia for customized units.

Model	Indoor	APCM120C	APCM130C	APCM140C	APCM150C			
Air Discharge Direction		UP-FLOW, DOWN-FLOW						
Nominal Cooling Capacity		BTU/hr	416,600	445,200	482,800	521,300		
		kW	122.1	130.5	141.5	152.8		
Sensible Cooling Capacity		BTU/hr	416,600	445,200	482,800	521,300		
		kW	122.1	130.5	141.5	152.8		
Power	Power Source	V/Ph/Hz				380 ~ 415 / 3 / 50		
	FLA	A		33.84		37.79		
Fan Quantity		2		3				
Air Filter		G4 FILTER						
Air Flow		m <sup>3</sup> /h (CFM)	26,500 / 15,590	33,000 / 19,420	33,500 / 19,710	34,000 / 20,010		
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)						
Water Flow Rate		m <sup>3</sup> /h (l/s)	18.5 / 5.14	19.8 / 5.50	21.4 / 5.94	23.0 / 6.39		
Water Pressure Drop		kPa	<80kPa					
Chilled Water Pipe Size		mm/in	54 / 2.13"					
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)					
Heating Capacity (Standard)		kW	12					
Humidifying Capacity (Standard)		kg/h	15					
Humidifier Pipe		mm/in	19 / 3/4"					
Condensate Drain Pipe		Size	mm/in				19 / 3/4"	
Unit Dimension (Single-Coil)		Height	mm/in				1975 / 77.75"	
		Width	mm/in		mm/in		1630 / 64.17"	2230 / 87.80"
		Depth	mm/in				998 / 39.29"	
Occupied Space		m <sup>2</sup>	1.63		2.23			
Unit Weight		kg / lb	436 / 961		527 / 1,162		547 / 1,206	560 / 1235

Model	Indoor	APCM152C	APCM160C	APCM170C	APCM180C	APCM190C	APCM200C				
Air Discharge Direction		UP-FLOW, DOWN-FLOW									
Nominal Cooling Capacity		BTU/hr	520,000	551,700	588,900	655,400	648,600	689,500			
		kW	152.4	161.7	172.6	182.1	190.1	202.1			
Sensible Cooling Capacity		BTU/hr	520,000	551,700	588,900	655,400	648,600	689,500			
		kW	152.4	161.7	172.6	182.1	190.1	202.1			
Power	Power Source	V/Ph/Hz						380 ~ 415 / 3 / 50			
	FLA	A						39.84			
Fan Quantity		3									
Air Filter		G4 FILTER									
Air Flow		m <sup>3</sup> /h (CFM)	37,000 / 21,770	37,500 / 22,070	38,000 / 22,360	38,500 / 22,660	39,000 / 22,950	40,000 / 23,540			
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)									
Water Flow Rate		m <sup>3</sup> /h (l/s)	22.9 / 6.36	24.2 / 6.72	25.9 / 7.19	27.4 / 7.61	28.6 / 7.94	30.5 / 8.47			
Water Pressure Drop		kPa	<80kPa								
Chilled Water Pipe Size		mm/in	66.8 / 2.63"								
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)								
Heating Capacity (Standard)		kW	12								
Humidifying Capacity (Standard)		kg/h	15								
Humidifier Pipe		mm/in	19 / 3/4"								
Condensate Drain Pipe		Size	mm/in						19 / 3/4"		
Unit Dimension (Single-Coil)		Height	mm/in						1975 / 77.75"		
		Width	mm/in		mm/in		mm/in		2530 / 99.61"		
		Depth	mm/in						998 / 39.29"		
Occupied Space		m <sup>2</sup>	2.53								
Unit Weight		kg / lb	563 / 1241		643 / 1,418		643 / 1,418		667 / 1,471	667 / 1,471	667 / 1,471

Notes:

- All specification are subjected to change by the manufacturer without prior notice.
- Nominal cooling capacity are based on the condition below:

Return air temperature	24°C / RH 50%
Chilled water supply temperature	7°C
Return water temperature	12°C

- FLA indicates maximum current of standard unit configuration, air-cooled ODU is not included.
- Unit dimension shown does not include the height of cap tuyere where the standard height of cap tuyere is 400mm. Other sizes available as well.
- For requirement of chilled water dual-coil unit outside the range of 41.5 to 152.8kW, please contact Acson Malaysia for customized units.
- For requirement of static pressure more than 400Pa, please contact Acson Malaysia for customized units.

# Specifications

## CoolMaster Series (Chilled Water Cooled Dual Coil Type)

Model	Indoor	APCM041C	APCM051C	APCM061C	APCM071C	APCM081C	
Air Discharge Direction		UP-FLOW, DOWN-FLOW					
Nominal Cooling Capacity		BTU/hr	141,600	175,300	209,800	244,900	277,400
		kW	41.5	51.4	61.5	71.8	81.3
Sensible Cooling Capacity		BTU/hr	124,500	153,500	184,200	214,900	249,000
		kW	36.5	45.0	54.0	63.0	73.0
Power	Power Source	V/Ph/Hz					380 ~ 415 / 3 / 50
	FLA	A			13.5	22.5	
Fan Quantity		1			2		
Air Filter		G4 FILTER					
Air Flow		m <sup>3</sup> /h (CFM)	9,600 / 5,650	10,200 / 6,000	12,000 / 7,060	17,000 / 10,000	20,400 / 12,000
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)					
Water Flow Rate		m <sup>3</sup> /h (l/s)	7.1 / 1.97	9.2 / 2.56	10.9 / 3.03	12.9 / 3.58	14.7 / 4.08
Water Pressure Drop		kPa	<80kPa				
Chilled Water Pipe Size		mm/in	32 / 1.26"	42 / 1.65"			
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)				
Heating Capacity (Standard)		kW	6			9	
Humidifying Capacity (Standard)		kg/h	5			8	
Humidifier Pipe		mm/in	19 / 3/4"				
Condensate Drain Pipe		Size	mm/in				19 / 3/4"
Unit Dimension (Dual-Coil)		Height	mm/in			1975 / 77.75"	
		Width	mm/in			1130 / 44.49"	
		Depth	mm/in			998 / 39.29"	
Occupied Space		m <sup>2</sup>	1.13			2.23	
Unit Weight		kg / lb	405 / 893	485 / 1,069	503 / 1,109	702 / 1,548	743 / 1,638

Model	Indoor	APCM091C	APCM101C	APCM110C	APCM120C	APCM130C	APCM140C	
Air Discharge Direction		UP-FLOW, DOWN-FLOW						
Nominal Cooling Capacity		BTU/hr	313,500	345,600	381,100	416,600	448,600	480,400
		kW	91.9	101.3	111.7	122.1	131.5	140.8
Sensible Cooling Capacity		BTU/hr	275,000	307,700	334,300	364,700	393,400	422,400
		kW	80.6	90.2	98.0	106.9	115.3	123.8
Power	Power Source	V/Ph/Hz					380 ~ 415 / 3 / 50	
	FLA	A			22.5	27.1		
Fan Quantity		2			3			
Air Filter		G4 FILTER						
Air Flow		m <sup>3</sup> /h (CFM)	21,300 / 12,530	22,200 / 13,060	23,500 / 13,830	25,500 / 15,000	26,500 / 15,590	28,000 / 16,480
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)						
Water Flow Rate		m <sup>3</sup> /h (l/s)	16.7 / 4.64	18.4 / 5.11	20.1 / 5.58	21.9 / 6.08	23.5 / 6.53	25.1 / 6.97
Water Pressure Drop		kPa	<80kPa					
Chilled Water Pipe Size		mm/in	54 / 2.13"					
External Static Pressure		Pa	0 ~ 400 Pa (AS PER REQUIREMENT)					
Heating Capacity (Standard)		kW	9		12			
Humidifying Capacity (Standard)		kg/h	8		15			
Humidifier Pipe		mm/in	19 / 3/4"					
Condensate Drain Pipe		Size	mm/in				19 / 3/4"	
Unit Dimension (Dual-Coil)		Height	mm/in			1975 / 77.75"		
		Width	mm/in			2230 / 87.80"		
		Depth	mm/in			998 / 39.29"		
Occupied Space		m <sup>2</sup>	2.23			3.33		
Unit Weight		kg / lb	762 / 1,680	790 / 1,742	835 / 1,841	896 / 1,975	935 / 2,061	966 / 2,130

**Notes:**

- All specification are subjected to change by the manufacturer without prior notice.
- Nominal cooling capacity are based on the condition below:

Return air temperature	24°C / RH 50%
Chilled water supply temperature	7°C
Return water temperature	12°C

- FLA indicates maximum current of standard unit configuration, air-cooled ODU is not included.
- Unit dimension shown does not include the height of cap tyure where the standard height of cap tyure is 400mm. Other sizes available as well.
- For requirement of chilled water dual-coil unit outside the range of 41.5 to 152.8kW, please contact Acson Malaysia for customized units.
- For requirement of static pressure more than 400Pa, please contact Acson Malaysia for customized units.



# Specifications

## CoolMaster Series (Dual Cool Type)

Model		Indoor	A5PCM030D	A5PCM040D	A5PCM042D	A5PCM050D	A5PCM052D
Air Discharge Direction		UP-FLOW, DOWN-FLOW					
Compressor Side	Nominal Cooling Capacity	BTU/hr	107,200	135,900	139,600	163,200	171,700
		kW	31.4	39.8	40.9	47.8	50.3
	Sensible Cooling Capacity	BTU/hr	96,600	122,500	126,300	147,100	154,600
		kW	28.3	35.9	37.0	43.1	45.3
Chilled Water Cooling Side	Nominal Cooling Capacity	BTU/hr	98,000	132,100	132,100	170,300	170,300
		kW	28.7	38.7	38.7	49.9	49.9
	Sensible Cooling Capacity	BTU/hr	90,800	124,900	124,900	156,000	156,000
		kW	26.6	36.6	36.6	45.7	45.7
Power	Powe Source	V/Ph/Hz	380 ~ 415 / 3 / 50				
	FLA	A	32.0	42.8	47.1	47.1	50.6
	Recommend Capacity For Air Switch	A	40	63			
Refrigerant Type		R410A					
Fan Type	Type	BACKWARD CENTRIFUGAL FAN					
	Quantity	1					
Air Filter		G4 FILTER					
Compressor Type	Type	FULLY HERMETIC SCROLL COMPRESSOR					
	Quantity	1	1	2	1	2	
Air Flow		m <sup>3</sup> /h / CFM	8000 / 4709	10,000 / 5886	10,000 / 5886	11,500 / 6769	11,500 / 6769
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)					
Chilled Water Cooling Unit	Chilled Water Flow Rate	m <sup>3</sup> /h (l/s)	4.9 / 1.36	6.6 / 1.83	6.6 / 1.83	8.5 / 2.36	8.5 / 2.36
	Chilled Water Pressure Drop	kPa	52.6	39.4	39.4	62.0	62.0
	Water Pipe Size	mm/in	32 / 1-1/4"			38 / 1-1/2"	
Water Cooled Dual Cooled	Cooling Water Flow Rate	m <sup>3</sup> /h (l/s)	7.4 / 2.06	9.3 / 2.58	9.7 / 2.69	11.3 / 3.14	11.4 / 3.17
	Cooling Water Pressure Drop	kPa	52.0	53.0	40.0	75.0	45.0
	Cooling Water Pipe Size	mm/in	28.58 / 1-1/8"	34.93 / 1-3/8"	28.58 / 1-1/8"	34.93 / 1-3/8"	28.58 / 1-1/8"
External Static Pressure		Pa	0~400 Pa (AS PER REQUIREMENT)				
Heating Capacity (Standard)		kW	6	9			
Humidifying Capacity (Standard)		kg/h	5	8			
Humidifier Pipe		mm/in	19 / 3/4"				
Pipe Connection	Size	Liquid	16 / 0.63"		16X2 / 0.63" X2	16 / 0.63"	16X2 / 0.63" X2
		Gas	19 / 3/4"		19*2 / 3/4" X2	19 / 3/4"	19*2 / 3/4" X2
Condensate Drain Pipe		Size	19 / 3/4"				
Unit Dimension	Height	mm/in	1975 / 77.76	1975 / 77.76			
	Width	mm/in	855 / 33.66	1580 / 62.20			
	Depth	mm/in	870 / 34.25	998 / 39.29			
Occupied Space		m <sup>2</sup>	0.74	1.58			
Unit Weight		kg/lb	390 / 860	475 / 1047	545 / 1202	595 / 1312	615 / 1356

**Notes:**

- All specification are subjected to change by the manufacturer without prior notice.
- Nominal cooling capacity are based on the condition below:

Return air temperature	24°C / RH 50%
Air and water-cooled condensate temperature	45°C
Cooling water supply temperature	32°C
Return water temperature	37°C
Chilled water supply temperature	7°C
Chilled water return temperature	12°C

3. FLA indicates maximum current of standard unit configuration, air-cooled ODU is not included.

4. Unit dimension shown does not include the height of cap tuyere where the standard height of cap tuyere is 400mm. Other sizes available as well.

# Specifications

## CoolMaster Series (Dual Cool Type)

Model		Indoor	A5PCM060D	A5PCM070D	A5PCM080D	A5PCM090D	A5PCM100D
Air Discharge Direction		UP-FLOW, DOWN-FLOW					
Compressor Side	Nominal Cooling Capacity	BTU/hr	218,400	246,700	272,300	298,600	326,600
		kW	64.0	72.3	79.8	87.5	95.7
	Sensible Cooling Capacity	BTU/hr	196,600	222,200	245,400	268,900	294,200
		kW	57.6	65.1	71.9	78.8	86.2
Chilled Water Cooling Side	Nominal Cooling Capacity	BTU/hr	203,100	234,800	269,300	284,600	302,000
		kW	59.5	68.8	78.9	83.4	88.5
	Sensible Cooling Capacity	BTU/hr	188,700	217,700	245,400	260,100	272,300
		kW	55.3	63.8	71.9	76.2	79.8
Power	Powe Source	V/Ph/Hz	380 ~ 415 / 3 / 50				
	FLA	A	59.4	64.1	76.6	80.9	85.2
	Recommend Capacity For Air Switch	A	80		100	125	
Refrigerant Type		R410A					
Fan Type	Type	BACKWARD CENTRIFUGAL FAN					
	Quantity	2					
Air Filter		G4 FILTER					
Compressor Type	Type	FULLY HERMETIC SCROLL COMPRESSOR					
	Quantity	2					
Air Flow		m <sup>3</sup> /h / CFM	11,500 / 6769	17,000 / 10,006	20,000 / 11,772	22,000 / 12,949	23,000 / 13,537
Water Valve Type		STANDARD CONFIGURATION: TWO-WAY VALVE; THREE WAY-VALVE (OPTIONAL)					
Chilled Water Cooling Unit	Chilled Water Flow Rate	m <sup>3</sup> /h (l/s)	10.1 / 2.81	11.7 / 3.25	13.4 / 3.72	14.2 / 3.94	15.0 / 4.17
	Chilled Water Pressure Drop	kPa	45.1	47.0	53.3	55.8	58.5
	Water Pipe Size	mm/in	51 / 2"				
Water Cooled Dual Cooled	Cooling Water Flow Rate	m <sup>3</sup> /h (l/s)	14.7 / 4.08	16.8 / 4.67	18.6 / 5.17	20.6 / 5.72	23.0 / 6.39
	Cooling Water Pressure Drop	kPa	47.0	48.0	54.0	71.0	80.0
	Cooling Water Pipe Size	mm/in	34.93 / 1-3/8"				
External Static Pressure		Pa	0~400 Pa (AS PER REQUIREMENT)				
Heating Capacity (Standard)		kW	9			12	
Humidifying Capacity (Standard)		kg/h	8			10	
Humidifier Pipe		mm/in	19 / 3/4"				
Pipe Connection	Size	Liquid	16X2 / 0.63" X2				
		Gas	19*2 / 3/4" X2				
Condensate Drain Pipe		Size	19 / 3/4"				
Unit Dimension	Height	mm/in	1975 / 77.76			1975 / 77.76	
	Width	mm/in	2280 / 89.76			2680 / 105.51	
	Depth	mm/in	998 / 39.29			998 / 39.29	
Occupied Space		m <sup>2</sup>	2.28			2.67	
Unit Weight		kg/lb	790 / 1742	830 / 1830	910 / 2006	980 / 2161	1000 / 2205

### Notes:

1. All specification are subjected to change by the manufacturer without prior notice.
2. Nominal cooling capacity are based on the condition below:

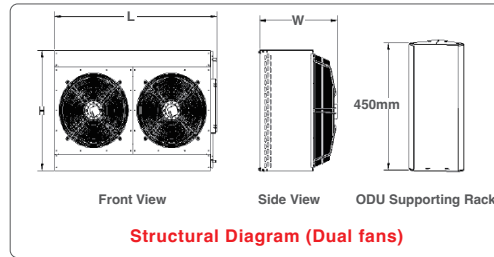
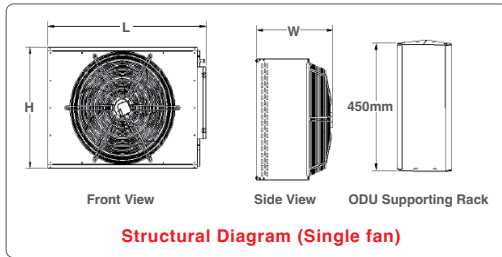
Return air temperature	24°C / RH 50%
Air and water-cooled condensate temperature	45°C
Cooling water supply temperature	32°C
Return water temperature	37°C
Chilled water supply temperature	7°C
Chilled water return temperature	12°C

3. FLA indicates maximum current of standard unit configuration, air-cooled ODU is not included.

4. Unit dimension shown does not include the height of cap tuyere where the standard height of cap tuyere is 400mm. Other sizes available as well.

## Stepless Inverter Condenser Fan

- Variable-frequency stepless speed regulated technology (fan speed changes as per condensation pressure).
- Optional: Owl serrated design fan (reduce energy consumption and noise), Low noise outdoor unit & Soundproofing wall.



Model			A50PC32S	A50PC42S	A50PC50S	A50PC60S	A50PC60D
Refrigerant Circuit Quantity			SINGLE LOOP	SINGLE LOOP	SINGLE LOOP	SINGLE LOOP	DUAL LOOP
Quantity of Fans			1				
Power Source			380 ~ 415 / 3 / 50				
FLA		A	1.75	2.4			
Unit Dimension	Height	mm/in	1,273 / 50.12"				
	Width	mm/in	661 / 26.02"				
	Depth	mm/in	1,045 / 41.14"		1,545 / 60.83"		
Unit Weight			108 / 238	115 / 253	135 / 298	152 / 335	
Refrigerant Pipe	Size	Liquid	16 / 0.63"				(16 / 0.63")*2
		Gas	22 / 0.87"				

Model			A50PC72S	A50PC72D	A50PC80S	A50PC80D	A50PC86S
Refrigerant Circuit Quantity			SINGLE LOOP	DUAL LOOP	SINGLE LOOP	DUAL LOOP	SINGLE LOOP
Quantity of Fans			2				
Power Source			380 ~ 415 / 3 / 50				
FLA		A	3.5				
Unit Dimension	Height	mm/in	1,273 / 50.12"				
	Width	mm/in	655 / 25.79"	661 / 26.02"	655 / 25.79"	661 / 26.02"	655 / 25.79"
	Depth	mm/in	1,845 / 72.6"	2,045 / 80.5"	1,845 / 72.6"	2,045 / 80.5"	1,845 / 72.6"
Unit Weight			168 / 370	178 / 392	168 / 370	178 / 392	195 / 430
Refrigerant Pipe	Size	Liquid	16 / 0.63"	(16 / 0.63")*2	16 / 0.63"	(16 / 0.63")*2	
		Gas	22 / 0.87"				

Model			A50PC86D	A50PC90S	A50PC90D	A50PC99S	A50PC99D
Refrigerant Circuit Quantity			DUAL LOOP	SINGLE LOOP	DUAL LOOP	SINGLE LOOP	DUAL LOOP
Quantity of Fans			2				
Power Source			380 ~ 415 / 3 / 50				
FLA		A	3.5	4.8			
Unit Dimension	Height	mm/in	1,273 / 50.12"				
	Width	mm/in	661 / 26.02"				
	Depth	mm/in	2,045 / 80.5"	2,345 / 92.32"			
Unit Weight			208 / 459	226 / 498		245 / 540	
Refrigerant Pipe	Size	Liquid	(16 / 0.63")*2				
		Gas	22 / 0.87"				

Notes:

- Outdoor condenser can be installed horizontally or vertically.
- A 450 mm supporting rack is attached with condenser for horizontal installation.



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