AIRSYS

DATACOOL

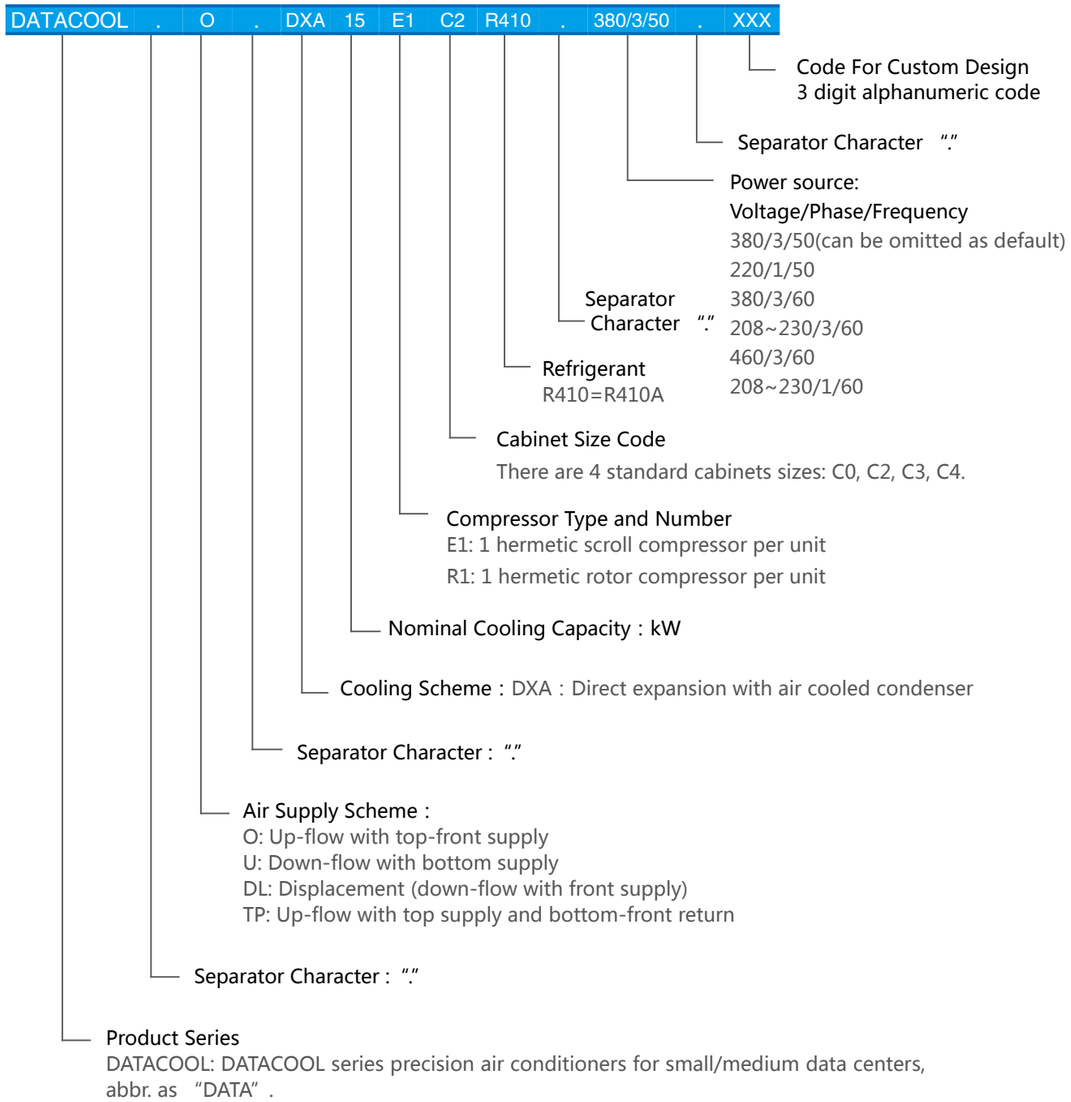
Precision Air Conditioners for Small/Medium Data Centers

Cooling Capacity: 5.8~30.2kW

The DATACOOL product series is just one of the many and varied data center cooling product solutions offered by AIRSYS. This series is specially designed for small to medium data center applications and incorporates cutting edge features to maximize efficiency and reliability.

DATACOOL units provide the precise temperature and humidity control required by data centers, and are designed to work across a wide range of ambient temperatures (-40℃ to +45℃) and throughout 24x7 operation. The high efficiency and reliability of the DATACOOL range meets, and typically exceeds, equivalent product lines in the market.

Unit Identification



Example: DATACOOL.O.DXA13E1C0 : This product name suggests that it is a DATACOOL series, up flow with top-front supply, direct expansion system with a remote air-cool condenser, nominal cooling capacity of 13KW. This unit has only 1 compressor with cabinet size of C0, charged R410A refrigerant, power source 380V/3Ph/50Hz.

Operation Range & Control Accuracy

Operation Range

Ambient Temperature:

- 15℃ to +45℃; operational range can be expanded to as low as -40℃ when equipped with low-ambient enhancement option

Refrigeration pipework horizontal length limits:

The combined gas and liquid pipe length in the horizontal plane must be no more than 30 meters. (Please consult with the factory or dealer if distance is over this limit.)

Control Precision

Temperature range: 15℃~35℃; Precision: ±1℃;

Relative humidity range: 35%~80%; Precision: ±5%.

Applications

Small/Medium sized MCS
Call Centers or Text Message Process Centers
Microwave or Satellite Base Stations
Mobile Telecom-equipment Room
Small/Medium Data Centers or Computer Rooms
Network Operation Centers
UPS and Battery Housing
Hot Spots or Regions within Large Data Centers
CT and MRI Computer/Electronic Rooms
Medical Clinic Facilities
Industry Production or Processing Plants
Precision Control Environments or Labs
Standard or Calibration Chambers
Precision Machine Shops
Museum and Record Keeping Environments

Product Features

High Efficiency

The DATACOOL product series was primarily designed for high energy efficiency and, as such, incorporates highly-efficiency components (such as compressors and fan motors) and an efficient structural design and configuration.

Energy-efficient Running Modes

The DATACOOL product range offers two running modes which may be chosen from the controller display:
Standard running mode: In this mode, the temperature and humidity are controlled within narrower ranges;
Energy saving mode: In this mode, good energy savings can be achieved through allowing the temperature and humidity to be controlled within wider ranges

Condenser Fan Speed Control

Automatic control of the condenser fan speed to meet the actual required heat rejection capacity reduces both the energy consumption of the fan motor and the greater refrigeration system.

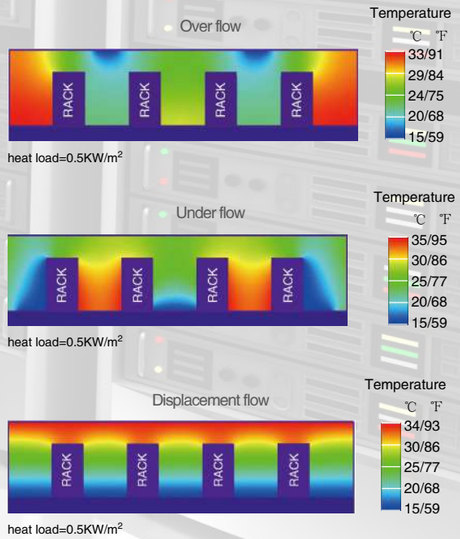
Efficient Air Distribution

DATACOOL units are available in 4 standard supply air arrangements: (up-flow with front supply, down-flow with bottom supply, displacement and up-flow with top-supply). Options are available to suit all installation requirements.

The up-flow with top-front supply and bottom-front return arrangement does not require a raised floor, which typically leads to a simpler installation and is widely accepted in smaller housing arrangements. Since hot air tends to remain at the top of the enclosure and cold air at the bottom, the energy efficiency of this arrangement is typically lower by 2%~5% compared to the other configurations.

Down-flow units with bottom supply require a raised floor. Compared with the above arrangement, it offers an easy and reliable method for distributing air to the cold aisle. Higher efficiencies are achievable, but at a higher capital cost.

A displacement syst em follows more closely the natural tendency of warm and cool air distribution, as shown below. It reduces the loss of cooling capacity loss which occurs through the mixing of hot and cold air and does not require a raised floor. Higher efficiencies are achievable, however no obstacles must remain in front of the supply grilles in order to avoid short-circuiting of the air.



Top supply units have a standard available static pressure of 50Pa at the outlet and are usually employed at installations requiring increased flexibility of unit placement (through fitting supply duct to the outlet). As well as increased placement flexibility, good temperature and airflow distribution is achievable.

Filter

DATACOOL units are provided with washable synthetic fiber filters with G4 rating; i.e. they can remove 80% of particles 5μ in size and 20% of 1μ, which is sufficient to meet conventional data center requirements.

Consistent Appearance

The DATACOOL series enclosures and base are black in color and consistent with industry standard dimensions and styles.

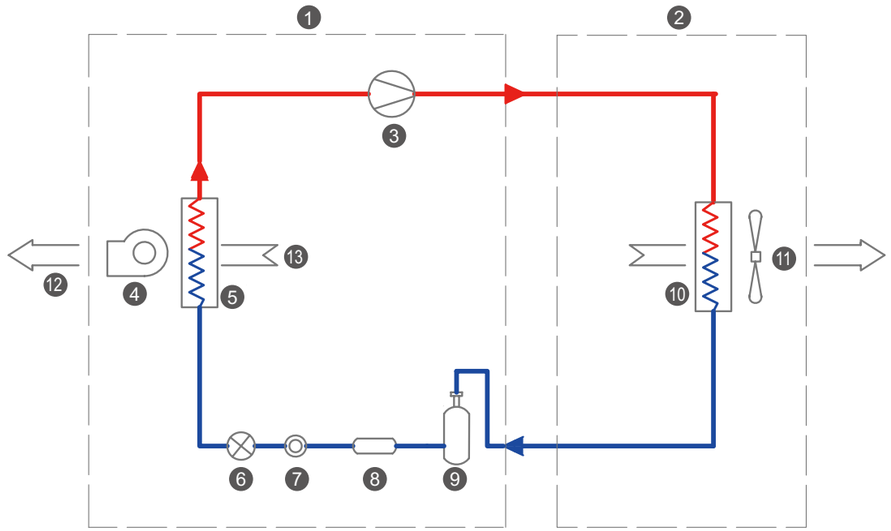
Compact Structure

A small footprint, light weight and generally compact structure assist in moving and handling DATACOOL units within small or confined spaces.

Reliability

The DATACOOL series use only high-quality components from established manufacturers (including compressors, fan motors, expansion valves and controllers) to ensure high reliability and longer up-time.
Control systems are designed with three levels of access control, reducing the risk of human error or servicing by unqualified technicians.
All DATACOOL units are also configured with various protection measures and alarms to reduce the probability of failure, including high/low pressure, compressor over-heat, humidifier, heater-over current, fan motor over-drive, high- & low-temperature protections and dirty filter.

System Schematic



1 Indoor
2 Outdoor
3 Compressor
4 Indoor Fan
5 Evaporator
6 Expansion Valve
7 Sight Glass
8 Filter Dryer
9 Receiver
10 Condenser
11 Outdoor Fan
12 Supply Air
13 Return Air

Product Configuration

Standard Configuration

Steel frames, base & top powder coated in black
Steel front panel powder coated in black, heat and sound insulated plates
Rotor compressor (5 & 7kW units)/Scroll compressor (others)
Double inlet centrifugal EC fan
Copper tube aluminum finned evaporator
Thermal expansion valve
Sight glass(not available for 5R1C0, 7R1C0, 13E1C0)
Filter dryer
High pressure transducer (not available for 5R1C0, 7R1C0, 13E1C0)
Liquid receiver(not available for 5R1C0, 7R1C0, 13E1C0)
Electrode humidifier, 50Hz unit available with multi-stage humidifier
Stainless steel fin electrical heater, 50 Hz unit available with multiple capacities
G4 air filter
Return air temperature and RH sensor
Pressure switch/protection
Micro-controller system
Phase protection (only available for 3-phase unit)
Continuous control system for condensing pressure
Micro PC control system
Electrical panel for
MCBs of compressor, fan motor, heater, humidifier etc.
Contactors of compressor, fan motor, heater, humidifier etc.
Transformer(s) for auxiliary circuitry and microcontroller
Wooden packaging

Options

Scroll compressor (5 & 7kW units)
Double inlet centrifugal AC fan (only available for 50Hz unit)
Low-Ambient startup kit for -20 ℃ or lower
Dirty filter alarm
Supply air temperature sensor
Supply air pressure sensor
Installation stands with adjustable legs
Floor water sensor/alarm kit
Additional floor water detector
GSM short message module
RS232 communication card
RS485 communication card
pCOweb communication card
Clock card
Communication protocol converter

Heater/humidifier Configuration Table

		5R1C0	7R1C0	13E1C0	15E1C2	18E1C2	22E1C3	25E1C3	30E1C3
Heater capacity (kW)	2.3	●	●	—	—	—	—	—	—
	4.5	—	—	●	—	—	—	—	—
	6	—	—	—	●	●	—	—	—
	9	—	—	—	○	○	●	●	●
	12	—	—	—	—	—	○	○	○
	13.5	—	—	—	—	—	○	○	○
Humidifier capacity (kg/h)	3	●	●	●	—	—	—	—	—
	5	—	—	—	●	●	●	—	—
	8	—	—	—	○	○	○	●	●
	10	—	—	—	—	—	○	○	○
	13	—	—	—	—	—	○	○	○
	15	—	—	—	—	—	○	○	○

Note: "●" standard configuration, "○" option available , "—" no option available.

Remote Control & Monitoring Network

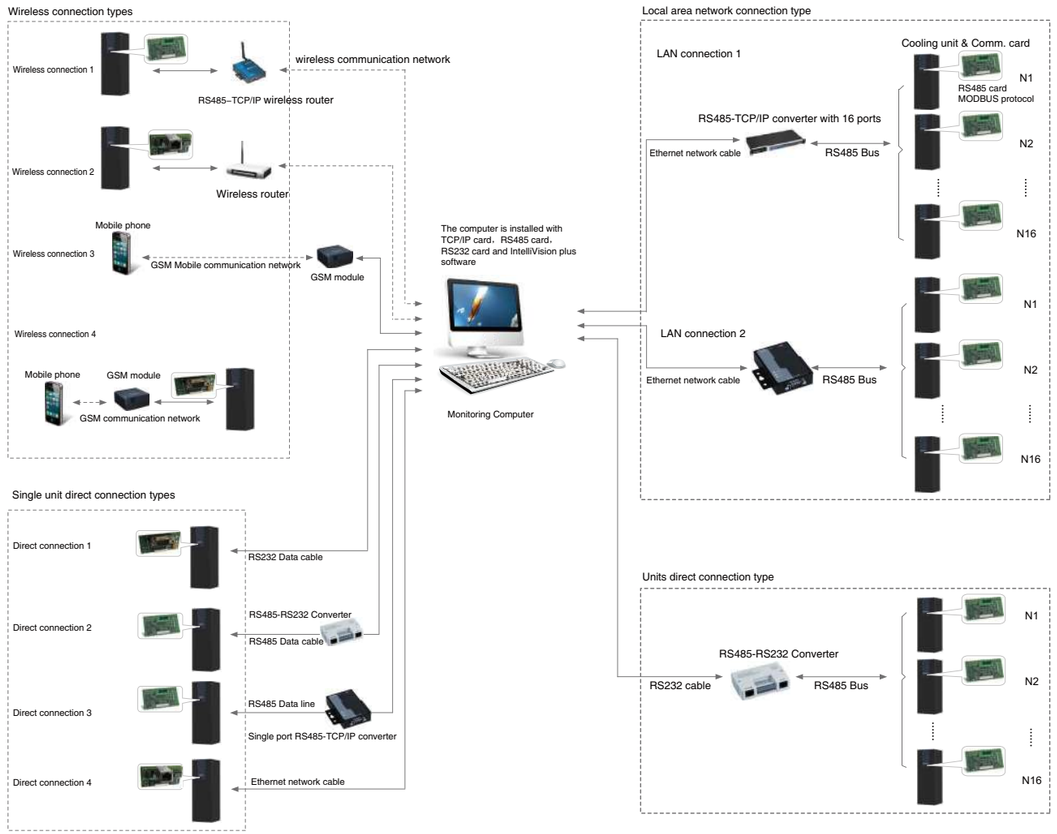
Networking and Monitoring of air conditioning equipment is typically a subsystem of a Building Management System (BMS) and provides centralized monitoring and management of all the air-conditioning equipment. Thanks to years of experience in the production and application of precision air conditioning equipment, AIRSYS is able to provide a variety of monitoring systems ranging from simple SMS alarm monitoring to the most sophisticated tERA cloud based GPRS wireless centralized monitoring system. There is a solution available to suit all sites and installations.

A given unit can be remote controlled or monitored via several means:

3 kinds of local direct cable connection

3 kinds of LAN network connection

4 kinds of wireless network connection



Specification & Parameters

380V/3Ph/50Hz

Unit Model		5R1C0	7R1C0	13E1C0	15E1C2	18E1C2	22E1C3	25E1C3	30E1C3
Supply air scheme(1)		O/U/DL/TP							
Cooling capacity									
Total(2)	kW	5.8	7.4	13.2	15.4	18.3	22.2	25.0	30.2
Sensible(2)	kW	5.3	6.7	11.9	14.1	16.8	20.4	23.4	27.3
Total(3)	kW	6.1	7.6	13.4	15.7	18.7	22.6	25.9	30.6
Sensible(3)	kW	5.7	7.1	12.5	14.6	17.4	21.0	24.1	28.5
Compressor									
Type		Hermetic rotor		Hermetic rotor					
Power input(2)	kW	1.7	2.1	3.3	3.7	4.4	5.4	5.9	6.9
Current(2)	A	7.6	3.8	5.9	6.5	7.9	10.4	11.2	12.7
Power input(3)	kW	1.8	2.2	3.4	3.8	4.5	5.5	6.0	7.0
Current(3)	A	7.7	3.9	6.0	6.6	8.0	10.5	11.5	12.9
Fan									
Type		Double inlet centrifugal AC fan							
Qty. of fan	n.	1	1	1	1	1	2	2	2
Air volume	m^3/h	1650	1650	2630	4050	4050	5100	6500	6500
External Static pressure(ESP)	Pa	30	30	30	30	30	50	50	50
Power input	kW	0.35	0.35	0.55	1.40	1.40	0.80	1.20	1.20
Current	A	1.7	1.7	2.7	2.6	2.6	1.3	2.1	2.1
Refrigerant									
Type		R410A							
Charging amount	kg	1.5	2.3	3.2	4.5	5.2	6.5	7.0	7.5
Noise level(4)	dB	63	63	63	63	63	63	63	66
Heater(5)									
Type		Finned stainless tube							
Heating capacity	kW	2.3	2.3	4.5	6.0	6.0	9.0	9.0	9.0
Current	A	3.4	3.4	6.8	9.1	9.1	13.6	13.6	13.6
Working steps	n.	1	1	1	2	2	2	2	2
Humidifier(5)									
Type		Electrode							
Capacity	kg/h	3	3	3	5	5	5	8	8
Current	A	3.4	3.4	3.4	5.7	5.7	5.7	9.2	9.2
Power input	kW	2.3	2.3	2.3	3.8	3.8	3.8	6.0	6.0
Outdoor unit									
OD Model*Qty(6)		CMDG3*1	CMDG4*1	CMDG5*1	CMEG5*1	CMEG8*1	CMEG8*1	CMEG10*1	CMEG10*1
Power supply									
Power source		380V/3Ph/50Hz							
Unit max. operating power input(7)	kW	5.3	6.2	10.5	14.5	15.7	18.3	19.4	20.8
Unit max. operating current input(7)	A	16.4	12.6	19.8	22.9	26.5	31.5	33.2	36.0
Unit piping connection									
Condensate water drainage	in	3/4″	3/4″	3/4″	3/4″	3/4″	3/4″	3/4″	3/4″
Humidifier water supply	in	1/2″	1/2″	1/2″	1/2″	1/2″	1/2″	1/2″	1/2″
Ref. connecting type		Bell mouth thread connection				Welding connection			
Refrigerant gas	in/mm	1/2″	1/2″	5/8″	19	22	22	22	22
Refrigerant liquid	in/mm	3/8″	3/8″	1/2″	12	16	16	16	16
Unit external dimensions and Weight									
Width	mm	650	650	650	900	900	1300	1300	1300
Depth	mm	580	580	580	750	750	750	750	750
Height	mm	1910	1910	1910	1910	1910	1910	1910	1910
Net weight	kg	148	149	174	245	248	350	360	369
Wooden packaging dimension and Weight									
Width	mm	820	820	820	1010	1010	1410	1410	1410
Depth	mm	770	770	770	885	885	885	885	885
Height	mm	2090	2090	2090	2090	2090	2090	2090	2090
Weight	kg	222	223	248	335	338	455	465	474

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; DL: Replacement; TP: Top Throw;
(2) Return air temperature dry bulb 24℃, humidity at 50%, outdoor dry bulb temperature 35℃;
(3) Return air temperature dry bulb 28℃, humidity at 40%, outdoor dry bulb temperature 35℃;
(4) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;
(5) For specific data, please refer to outdoor unit technical parameters. In the case of C0 unit CMD condenser only provide vertical installation;
(6) Max operating power and current: in the extreme condition when ambient temperature at 45℃ and unit's electrical heater running at its full capacity to de-humidify.

220V/1Ph/50Hz

Unit Model		5R1C0	7R1C0	13E1C0
Supply air scheme(1)		O/U/DL/TP		
Cooling capacity				
Total(2)	kW	5.8	7.4	13.2
Sensible(2)	kW	5.3	6.7	11.9
Total(3)	kW	6.1	7.6	13.4
Sensible(3)	kW	5.7	7.1	12.5
Compressor				
Type		Hermetic rotor		Hermetic rotor
Power input(2)	kW	1.7	2.0	3.4
Current(2)	A	7.6	9.0	16.8
Power input(3)	kW	1.8	2.1	3.5
Current(3)	A	7.7	9.1	16.9
Fan				
Type		Double inlet centrifugal AC fan		
Qty. of fan	n.	1	1	1
Air volume	m^3/h	1650	1650	2630
External Static pressure(ESP)	Pa	30	30	30
Power input	kW	0.35	0.35	0.55
Current	A	1.7	1.7	2.7
Refrigerant				
Type			R410A	
Charging amount	kg	1.5	2.3	3.2
Noise level(4)	dB	63	63	63
Heater(5)				
Type		Finned stainless tube		
Heating capacity	kW	2.3	2.3	4.5
Current	A	5.9	5.9	11.7
Working steps	n.	1	1	1
Humidifier(5)				
Type		Electrode		
Capacity	kg/h	3	3	3
Current	A	2.3	2.3	2.3
Power input	kW	5.9	5.9	5.9
Outdoor unit				
OD Model*Qty(6)		CMDG3*1	CMDG4*1	CMDG5*1
Power supply				
Power source		220V/1Ph/50Hz		
Unit max. operating power input(7)	kW	5.3	6.2	10.5
Unit max. operating current input(7)	A	18.9	15.1	41.1
Unit piping connection				
Condensate water drainage	in		3/4″	
Humidifier water supply	in		1/2″	
Ref. connecting type		Bell mouth thread connection		
Refrigerant gas	in	1/2″	1/2″	5/8″
Refrigerant liquid	in	3/8″	3/8″	1/2″
Unit external dimensions and Weight				
Width	mm	650	650	650
Depth	mm	580	580	580
Height	mm	1910	1910	1910
Net weight	kg	148	149	174
Wooden packaging dimension and Weight				
Width	mm	820	820	820
Depth	mm	770	770	770
Height	mm	2090	2090	2090
Weight	kg	222	223	248

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; TP: Top Throw;

(2) Return air temperature dry bulb 24℃, humidity at 50%, outdoor dry bulb temperature 35℃;

(3) Return air temperature dry bulb 28℃, humidity at 40%, outdoor dry bulb temperature 35℃;

(4) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;

(5) For specific data, please refer to outdoor unit technical parameters. In the case of C0 unit CMD condenser only provide vertical installation;

(6) Max operating power and current: in the extreme condition when ambient temperature at 45℃ and unit's electrical heater running at its full capacity to de-humidify.

380V/3Ph/60Hz

Unit Model		5R1C0	7R1C0	13E1C0	15E1C2	18E1C2	22E1C3	25E1C3	30E1C3
Supply air scheme(1)		O/U/DL/TP							
Cooling capacity									
Total(2)	kW	5.8	7.4	13.2	15.4	18.3	22.2	26.7	30.2
Sensible(2)	kW	5.3	6.7	11.9	14.1	16.8	20.4	23.4	27.3
Total(3)	kW	6.1	7.6	13.4	15.7	18.7	22.6	25.9	30.6
Sensible(3)	kW	5.7	7.1	12.5	14.6	17.4	21.0	24.1	28.5
Compressor									
Type		Hermetic rotor		Hermetic scroll					
Power input(2)	kW	1.7	2.0	3.4	3.6	4.4	5.3	6.5	7.0
Current(2)	A	7.6	9.0	6.0	7.2	8.0	9.7	11.4	13.5
Power input(3)	kW	1.8	2.2	3.4	3.7	4.5	5.5	6.0	7.0
Current(3)	A	7.7	3.9	6.0	7.3	8.0	10.5	11.5	12.9
Fan									
Type		Double inlet centrifugal EC fan							
Qty. of fan	n.	1	1	1	1	1	2	2	2
Air volume	m^3/h	2000	2000	2630	4050	4050	5100	6500	6500
External Static pressure(ESP)	Pa	30	30	30	30	30	50	50	50
Power input	kW	0.36	0.36	0.66	0.8	0.8	1.2	1.6	1.6
Current	A	1.8	1.8	2.9	3.6	3.6	5.4	7.2	7.2
Refrigerant									
Type		R410A							
Charging amount	kg	1.5	2.3	3.2	4.5	5.2	6.5	7.0	7.5
Noise level(4)	dB	63	63	63	63	63	63	63	66
Heater(5)									
Type		Finned stainless tube							
Heating capacity	kW	2.3	2.3	4.5	6.0	6.0	9.0	9.0	9.0
Current	A	3.4	3.4	6.8	9.1	9.1	13.6	13.6	13.6
Working steps	n.	1	1	1	2	2	2	2	2
Humidifier(5)									
Type		Electrode							
Capacity	kg/h	3	3	3	5	5	5	8	8
Current	A	2.3	2.3	2.3	3.8	3.8	3.8	6.0	6.0
Power input	kW	3.4	3.4	3.4	5.7	5.7	5.7	9.2	9.2
OD Model*Qty(6)		CMDG3*1	CMDG4*1	CMDG5*1	CMEG5*1	CMEG8*1	CMEG8*1	CMEG10*1	CMEG10*1
Power supply									
Power source		380V/3Ph/60Hz							
Unit max. operating power input(7)	kW	5.4	6.2	11.2	12.8	14.4	18.8	20.9	21.6
Unit max. operating current input(7)	A	16.3	20.8	21.11	25.5	27.5	35.8	40.1	42.2
Unit piping connection									
Condensing water drainage	in	3/4″							
Humidifier water supply	in	1/2″							
Ref. connecting type		Bell mouth thread connection			Welding connection				
Refrigerant gas	in	1/2″	1/2″	5/8″	19	22	22	22	22
Refrigerant liquid	in	3/8″	3/8″	1/2″	12	16	16	16	16
Unit external dimensions and Weight									
Width	mm	650	650	650	900	900	1300	1300	1300
Depth	mm	580	580	580	750	750	750	750	750
Height	mm	1910	1910	1910	1910	1910	1910	1910	1910
Net weight	kg	148	149	174	245	248	350	360	369
Wooden packaging dimension and Weight									
Width	mm	820	820	820	1010	1010	1410	1410	1410
Depth	mm	770	770	770	885	885	885	885	885
Height	mm	2090	2090	2090	2090	2090	2090	2090	2090
Weight	kg	222	223	248	335	338	455	465	474

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; DL: Replacement TP: Top Throw;

(2) Return air temperature dry bulb 24 humidity at 50% outdoor dry bulb temperature 35 ;

(3) Return air temperature dry bulb 28 humidity at 40%, outdoor dry bulb temperature 35 ;

(4) Tested at 1m distance, free field;

(5) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;

(6) For specific data, please refer to outdoor unit technical parameters. CMDG condenser only provide vertical installation;

(7) Max operating power and current: in the extreme condition when ambient temperature at 45 and unit’ s electrical heater running at its full capacity to de-humidify.

208~230V/3Ph/60Hz

Unit Model		5R1C0	7R1C0	13E1C0	15E1C2	18E1C2	22E1C3	25E1C3	30E1C3
Supply air scheme(1)		O/U/DL/TP							
Cooling capacity									
Total (2)	kW	5.8	7.4	13.2	15.4	18.3	22.2	26.8	30.2
Sensible (2)	kW	5.3	6.7	11.9	14.1	16.8	20.4	23.4	27.3
Total (3)	kW	6.1	7.6	13.4	15.7	18.7	22.6	25.9	30.6
Sensible (3)	kW	5.7	7.1	12.5	14.6	17.4	21.0	24.1	28.5
Compressor									
Type		Hermetic rotor		Hermetic scroll					
Power input(2)	kW	1.7	2.0	3.3	3.5	4.4	5.3	6.6	7.0
Current(2)	A	7.6	9.0	9.7	10.6	13.2	16.1	19.2	22.2
Power input(3)	kW	1.8	2.1	3.4	3.6	4.5	5.4	6.7	7.1
Current(3)	A	7.7	9.1	9.8	10.7	13.3	16.2	19.3	22.3
Fan									
Type		Double inlet centrifugal EC fan							
Qty. of fan	n.	1	1	1	1	1	2	2	2
Air volume	m^3/h	2000	2000	2630	4050	4050	5100	6500	6500
External Static pressure(ESP)	Pa	30	30	30	30	30	50	50	50
Power input	kW	0.4	0.4	0.6	0.7	0.7	1.2	1.6	1.6
Current	A	1.8	1.8	2.7	2.6	2.6	5.4	7.2	7.2
Refrigerant									
Type		R410A							
Charging amount	kg	1.5	2.3	3.2	4.5	5.2	6.5	7.0	7.5
Noise level(4)	dB	63	63	63	63	63	63	63	66
Heater(5)									
Type		Finned stainless tube							
Heating capacity	kW	2.3	2.3	4.5	6.0	6.0	9.0	9.0	9.0
Current	A	5.9	5.9	11.8	15.8	15.8	23.6	23.6	23.6
Working steps	n.	1	1	1	2	2	2	2	2
Humidifier(5)									
Type		Electrode							
Capacity	kg/h	3	3	3	5	5	5	8	8
Current	A	2.3	2.3	2.3	3.8	3.8	3.8	6.0	6.0
Power input	kW	5.9	5.9	5.9	9.9	9.9	9.9	15.9	15.9
OD Model*Qty(6)		CMDG3*1	CMDG4*1	CMDG5*1	CMEG5*1	CMEG8*1	CMEG8*1	CMEG10*1	CMEG10*1
Power supply									
Power source		208~230V/3Ph/60Hz							
Unit max. operating power input(7)	kW	5.3	6.1	10.8	12.8	14.3	18.8	21.0	21.7
Unit max. operating current input(7)	A	18.8	23.3	31.3	36.1	40.7	54.4	61.1	63.7
Unit piping connection									
Condensing water drainage Φ	in	3/4″							
Humidifier water supply Φ	in	1/2″							
Ref. connecting type		Bell mouth thread connection			Welding connection				
Refrigerant gas Φ	in	1/2″	1/2″	5/8″	19	22	22	22	22
Refrigerant liquid Φ	in	3/8″	3/8″	1/2″	12	16	16	16	16
Unit external dimensions and Weight									
Length	mm	650	650	650	900	900	1300	1300	1300
Width	mm	580	580	580	750	750	750	750	750
Height	mm	1910	1910	1910	1910	1910	1910	1910	1910
Net weight	kg	148	149	174	245	248	350	360	369
Wooden packaging dimension and Weight									
Width	mm	820	820	820	1010	1010	1410	1410	1410
Depth	mm	770	770	770	885	885	885	885	885
Height	mm	2090	2090	2090	2090	2090	2090	2090	2090
Weight	kg	222	223	248	335	338	455	465	474

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; DL: Replacement TP: Top Throw;

(2) Return air temperature dry bulb 24 humidity at 50% outdoor dry bulb temperature 35 ;

(3) Return air temperature dry bulb 28 humidity at 40%, outdoor dry bulb temperature 35 ;

(4) Tested at 1m distance, free field;

(5) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;

(6) For specific data, please refer to outdoor unit technical parameters. CMDG condenser only provide vertical installation;

(7) Max operating power and current: in the extreme condition when ambient temperature at 45 and unit’s electrical heater running at its full capacity to de-humidify.

460V/3Ph/60Hz

Unit Model		5R1C0	7R1C0	13E1C0	15E1C2	18E1C2	22E1C3	25E1C3	30E1C3
Supply air scheme(1)		O/U/DL/TP							
Cooling capacity									
Total (2)	kW	5.8	7.4	13.2	15.4	18.3	22.2	26.7	30.2
Sensible (2)	kW	5.3	6.7	11.9	14.1	16.8	20.4	23.4	27.3
Total (3)	kW	6.1	7.6	13.4	15.7	18.7	22.6	25.9	30.6
Sensible (3)	kW	5.7	7.1	12.5	14.6	17.4	21.0	24.1	28.5
Compressor									
Type		Hermetic rotor		Hermetic scroll					
Power input(2)	kW	1.7	2.0	3.4	3.5	4.4	5.3	6.6	7.0
Current(2)	A	6.7	3.2	4.8	5.4	6.6	8.0	10.5	11.0
Power input(3)	kW	1.8	2.2	3.4	3.7	4.5	5.5	6.0	7.0
Current(3)	A	6.8	3.3	4.9	5.5	6.7	8.1	10.6	11.1
Fan									
Type		Double inlet centrifugal EC fan							
Qty. of fan	n.	1	1	1	1	1	2	2	2
Air volume	m^3/h	2000	2000	2630	4050	4050	5100	6500	6500
External Static pressure(ESP)	Pa	30	30	30	30	30	50	50	50
Power input	kW	0.4	0.4	0.7	0.7	0.7	1.2	1.6	1.6
Current	A	1.5	1.5	2.4	1.0	1.0	4.5	6.0	6.0
Refrigerant									
Type		R410A							
Charging amount	kg	1.5	2.3	3.2	4.5	5.2	6.5	7.0	7.5
Noise level(4)	dB	63	63	63	63	63	63	63	66
Heater(5)									
Type		Finned stainless tube							
Heating capacity	kW	2.3	2.3	4.5	6.0	6.0	9.0	9.0	9.0
Current	A	2.9	2.9	5.7	7.6	7.6	11.3	11.3	11.3
Working steps	n.	1	1	1	2	2	2	2	2
Humidifier(5)									
Type		Electrode							
Capacity	kg/h	3	3	3	5	5	5	8	8
Current	kW	2.3	2.3	2.3	3.8	3.8	3.8	6.0	6.0
Power input	A	2.9	2.9	2.9	4.7	4.7	4.7	7.6	7.6
OD Model*Qty(6)		CMDG3*1	CMDG4*1	CMDG5*1	CMEG5*1	CMEG8*1	CMEG8*1	CMEG10*1	CMEG10*1
Power supply									
Power source		460V/3Ph/60Hz							
Unit max. operating power input(7)	kW	5.6	6.2	10.8	12.4	14.3	18.8	21.0	21.7
Unit max. operating current input(7)	A	15.9	10.4	17.3	18.3	21.3	30.1	34.5	35.5
Unit piping connection									
Condensing water drainage Φ	in	3/4″							
Humidifier water supply Φ	in	1/2″							
Ref. connecting type		Bell mouth thread connection			Welding connection				
Refrigerant gas Φ	in	1/2″	1/2″	5/8″	19	22	22	22	22
Refrigerant liquid Φ	in	3/8″	3/8″	1/2″	12	16	16	16	16
Unit external dimensions and Weight									
Length	mm	650	650	650	900	900	1300	1300	1300
Width	mm	580	580	580	750	750	750	750	750
Height	mm	1910	1910	1910	1910	1910	1910	1910	1910
Net weight	kg	148	149	174	245	248	350	360	369
Wooden packaging dimension and Weight									
Width	mm	820	820	820	1010	1010	1410	1410	1410
Depth	mm	770	770	770	885	885	885	885	885
Height	mm	2090	2090	2090	2090	2090	2090	2090	2090
Weight	kg	222	223	248	335	338	455	465	474

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; DL: Replacement TP: Top Throw;

(2) Return air temperature dry bulb 24 humidity at 50% outdoor dry bulb temperature 35 ;

(3) Return air temperature dry bulb 28 humidity at 40%, outdoor dry bulb temperature 35 ;

(4) Tested at 1m distance, free field;

(5) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;

(6) For specific data, please refer to outdoor unit technical parameters. CMDG condenser only provide vertical installation;

(7) Max operating power and current: in the extreme condition when ambient temperature at 45 and unit’s electrical heater running at its full capacity to de-humidify.

208~230V/1Ph/60Hz

Unit Model		5R1C0	7R1C0	13E1C0
Supply air scheme(1)			O/U//TP	
Cooling capacity				
Total(2)	kW	5.8	7.4	13.2
Sensible(2)	kW	5.2	6.6	11.7
Total(3)	kW	6.1	7.6	13.4
Sensible(3)	kW	5.7	7.1	12.5
Compressor				
Type			Hermetic rotor	Hermetic scroll
Power input(2)	kW	1.7	2.0	3.4
Current(2)	A	7.6	8.8	15.3
Power input(3)	kW	1.8	2.1	3.5
Current(3)	A	7.7	9.0	15.4
Fan				
Type			Double inlet centrifugal EC fan	
Qty. of fan	n.	1	1	1
Air volume	m^3/h	2000	2000	2630
External Static pressure(ESP)	Pa	0	0	0
Power input	kW	0.35	0.35	0.55
Current	A	1.7	1.7	2.7
Refrigerant				
Type			R410A	
Charging amount	kg	4.5	5.2	6.5
Heater(4)				
Type			Finned stainless tube	
Heating capacity	kW	2.25	2.25	4.5
Current	A	10.3	10.3	20.5
Working steps	n.	1	1	1
Humidifier(4)				
Type			Electrode	
Capacity	kg/h	3	3	3
Current	A	2.3	2.3	2.3
Power input	kW	5.9	5.9	5.9
OD Model*Qty(5)		CMD3*1	CMD4*1	CMD5*1
Power supply				
Power source			208-230V/1Ph/60Hz	
Unit max. operating power input(6)	kW	5.4	6.2	10.7
Unit max. operating current input(6)	A	23.2	27.7	50.60
Unit piping connection				
Condensing water drainage	in		3/4″	
Humidifier water supply	in		1/2″	
Ref. connecting type			Bell mouth thread connection	
Refrigerant gas	in	1/2″	1/2″	5/8″
Refrigerant liquid	in	3/8″	3/8″	1/2″
Unit external dimensions and Weight				
Width	mm	650	650	650
Depth	mm	580	580	580
Height	mm	1910	1910	1910
Net weight	kg	148	149	174
Wooden packaging dimension and Weight				
Width	mm	820	820	820
Depth	mm	770	770	770
Height	mm	2090	2090	2090
Weight	kg	222	223	248

(1) O: Up-front Throw (supply air coming out of up-front louver); U: Bottom Throw; TP: Top Throw;

(2) Return air temperature dry bulb 24 humidity at 50% outdoor dry bulb temperature 35;

(3) Return air temperature dry bulb 28 humidity at 40%, outdoor dry bulb temperature 35;

(4) In this table, only showing the default heater/humidifier default capacities; please refer to “Heater/humidifier Configuration Table” for other options available for each model if you need;

(5) For specific data, please refer to outdoor unit technical parameters. CMD condenser only provide vertical installation;

(6) Max operating power and current: in the extreme condition when ambient temperature at 45 and unit’s electrical heater running at its full capacity to de-humidify.

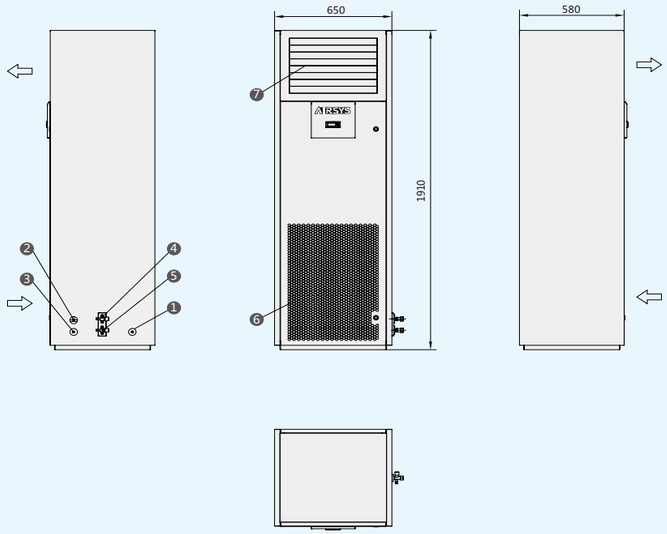
Outdoor unit

Unit model		CMDG3	CMDG4	CMDG5	CMEG5	CMEG8	CMEG10
Capacity (1)	kW	9.3	13.7	20.4	20.5	29.6	35.4
Fan							
Fan qty.	No.	1	1	1	1	1	1
Air flow rate	m3/h	4400	4100	5600	5600	10100	9700
Input power	kW	0.28	0.28	0.37	0.37	0.63	0.63
Input current	A	1.3	1.3	1.7	1.7	3	3
Connection tube size							
Gas pipe	mm	1/2"	1/2"	5/8"	19	22	22
Liquid pipe	mm	3/8"	3/8"	1/2"	12	16	16
Unit external dimensions and Weight							
Width	mm	808	808	1004	1140	1340	1340
Depth	mm	509	509	509	475	620	620
Height	mm	789	789	930	770	1070	1070
Weight	kg	29	35	43	47	95	110
Wooden packaging dimensions and Weight							
Width	mm	974	974	1170	1225	1455	1455
Depth	mm	650	650	650	610	755	755
Height	mm	970	970	1110	925	1225	1225
Weight	kg	59	65	78	82	145	160

(1)The capacity is rated at entering air temperature 35℃ and condensing temperature 50℃ condition.

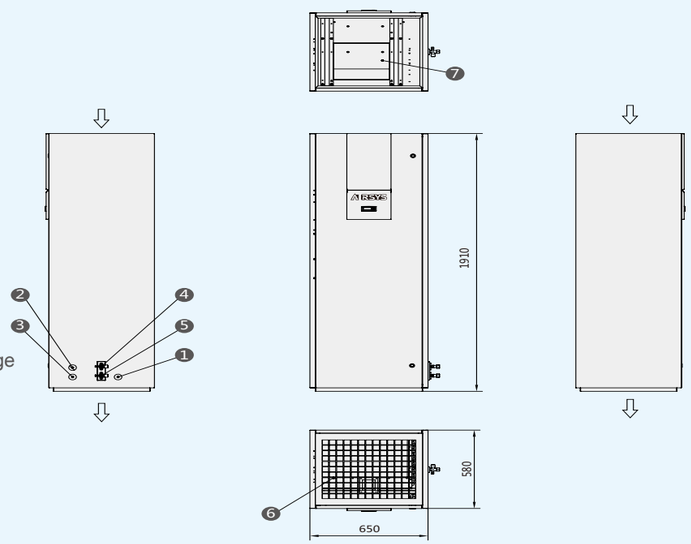
Unit Dimension Drawing

C0 Up-front throw (air) unit dimension drawing



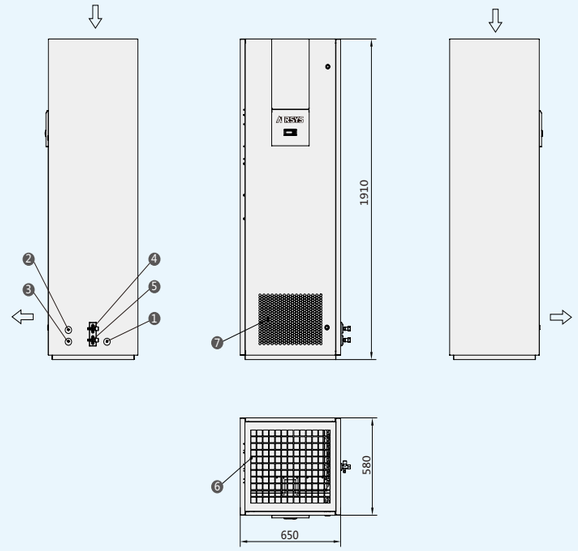
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C0 Bottom throw (air) unit dimension drawing



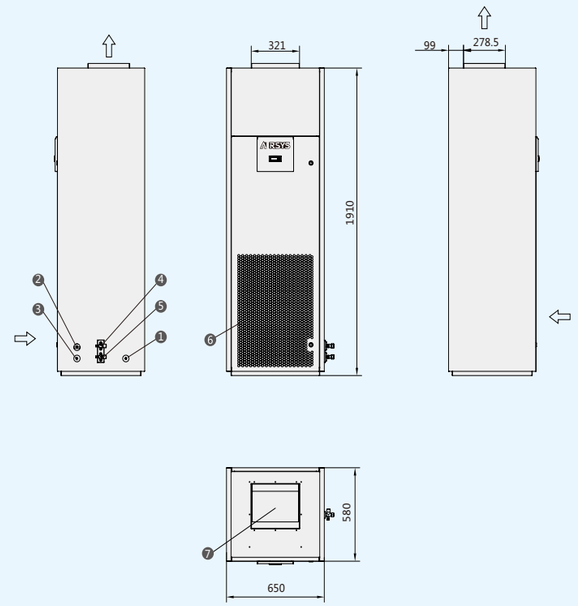
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C0 Replacement (air) unit dimension drawing



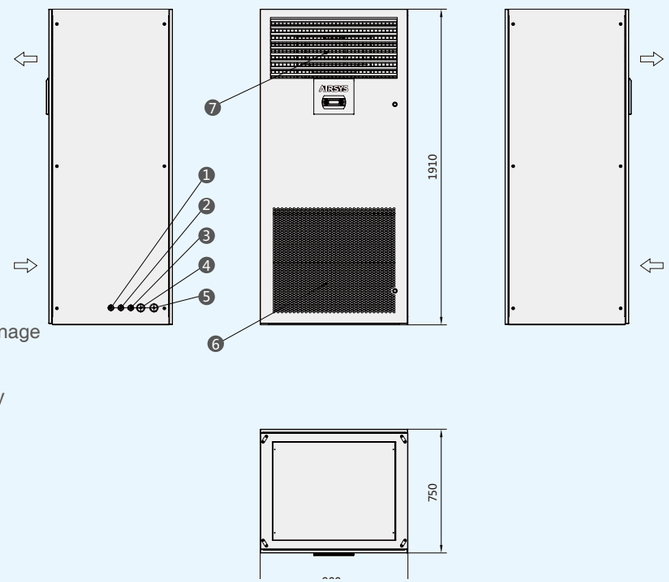
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C0 Top throw (air) unit dimensions



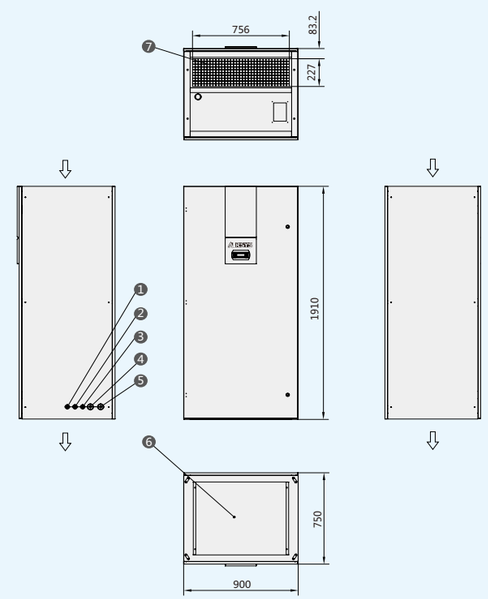
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C2 Up-front throw (air) unit dimension drawing



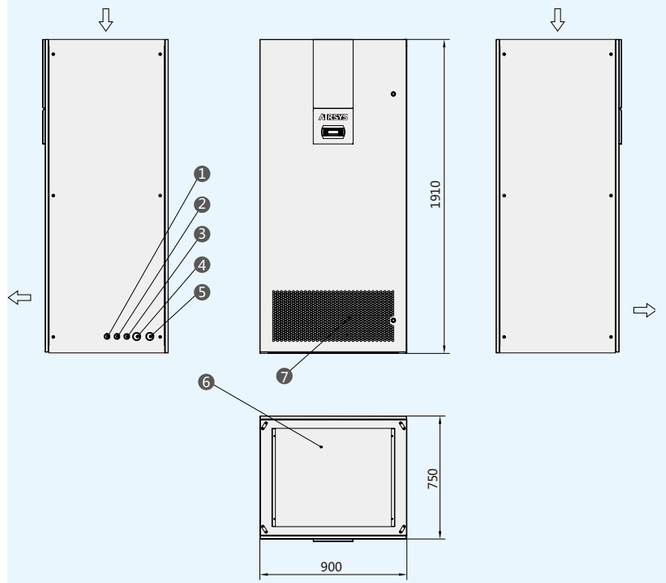
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C2 Bottom throw (air) unit dimension drawing



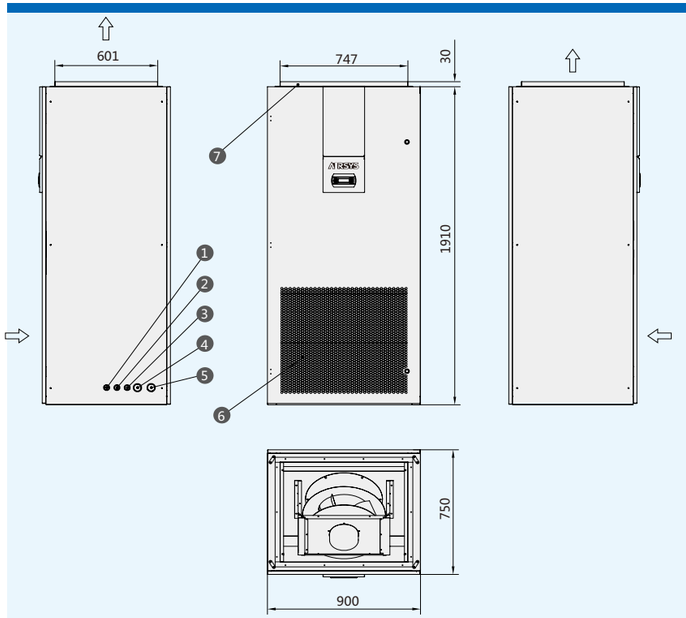
1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

C2 Replacement (air) unit dimension drawing



1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

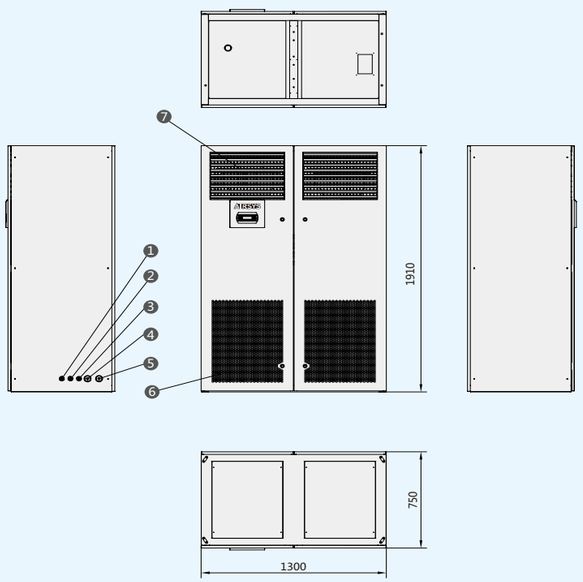
C2 Top throw (air) unit dimensions



1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

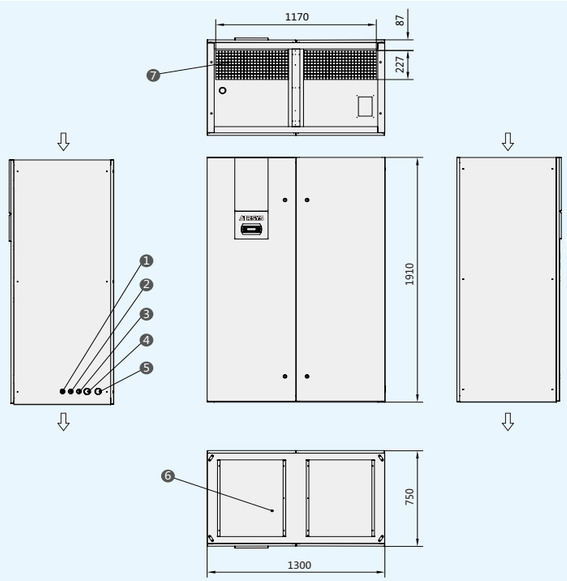
C3 Up-front throw (air) unit dimension drawing

1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet



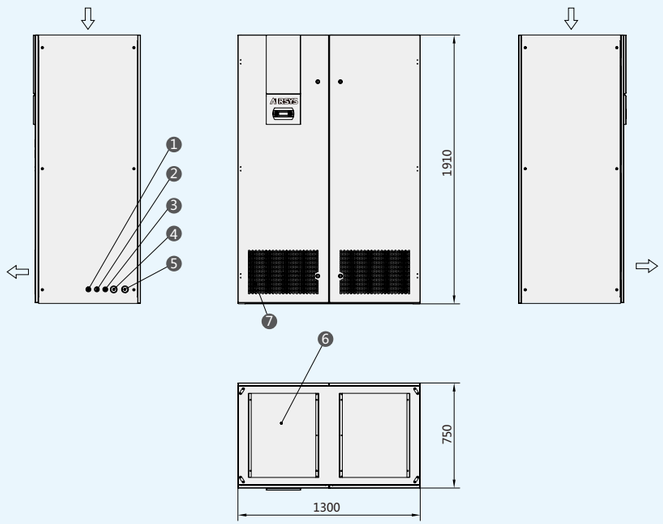
C3 Bottom throw (air) unit dimension drawing

1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet



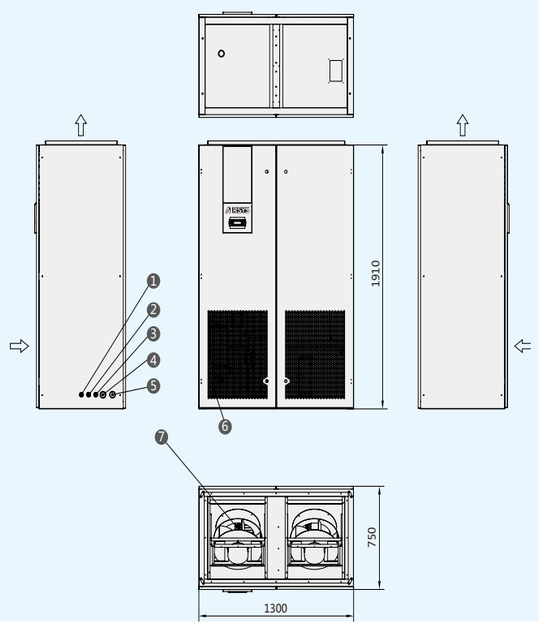
C3 Replacement (air) unit dimension drawing

1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

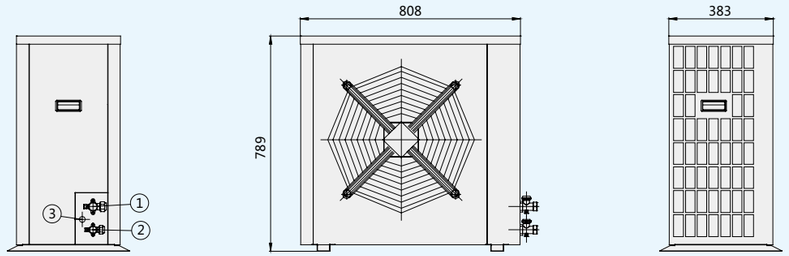


C3 Top throw (air) unit dimensions

1. Condensing water drainage
2. Cable holes
3. Humidifier water supply
4. Gas pipe
5. Liquid pipe
6. Return air intake
7. Supply air outlet

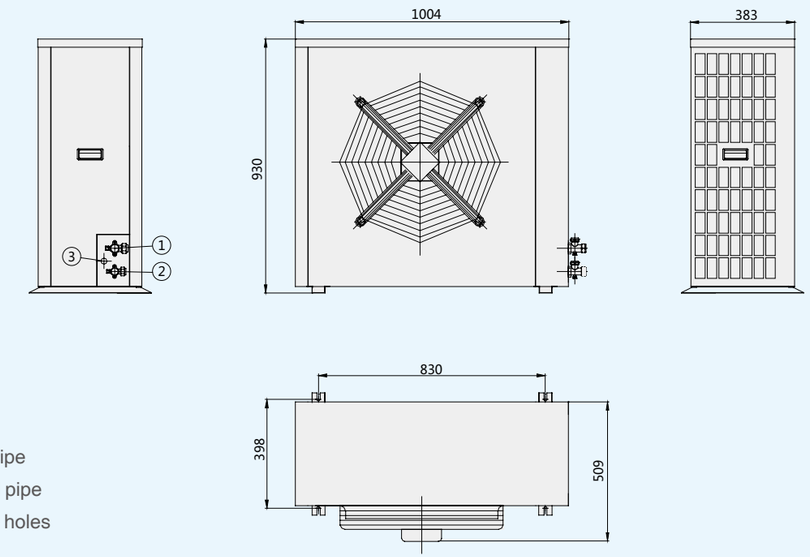


CMDG3/CMDG4 dimension drawing



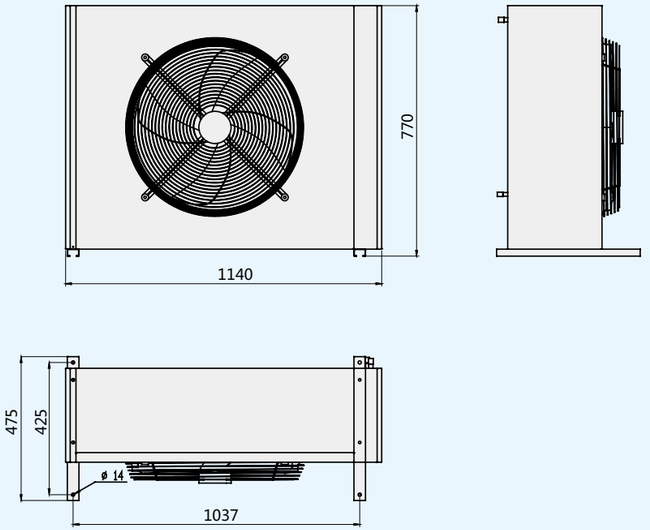
1 Gas pipe
2 Liquid pipe
3 Cable holes

CMDG5 dimension drawing

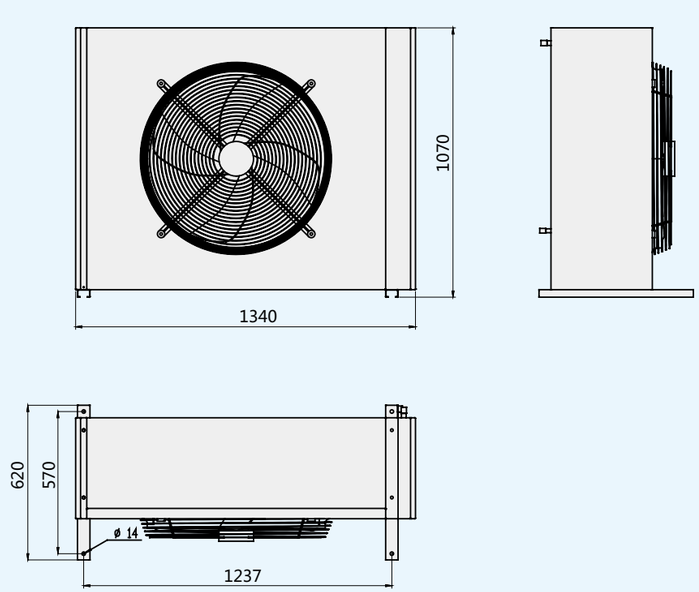


1 Gas pipe
2 Liquid pipe
3 Cable holes

CMEG5 dimension drawing



CMEG8/CMEG10 dimension drawing



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AIRSYS is a cooling product and solution provider for ICT (Information & Communication Technology) industry.

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- Air conditioning equipments for telecom shelters
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Product design and specification subject to change without prior notice.