Stock Code: 002837

Envicool · Data Center and Equipment Thermal Expert

Data Center Cooling

- CyberMate V series inverter CRAC
- XRow series row-based cooling unit
- XRack series micro-modularized solution
- XSpace series modularized solution
- HumidMate series data center constant humidity solution
- XFlex series IEC solution
- iFreecooling series economization solution
- XStorm series fan wall solution

Industrial Cooling

- EIA series air conditioner
- EIB series air conditioner
- EIX series air/water heat exchanger
- EIW series water cooler

Energy Storage & Electricity Cooling

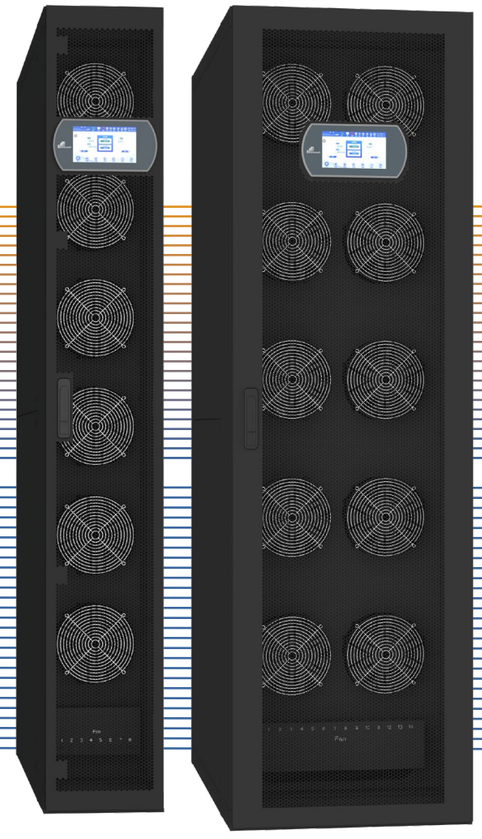
- MC series split air conditioner
- MC series door mounted integrated air conditioner
- MC series wall mounted integrated air conditioner
- MC series floor standing integrated air conditioner
- MC series corner standing integrated air conditioner
- MX series heat exchanger
- EMW series air cooled chiller

Telecom Cabinet Cooling

- DC series air conditioner
- EC series air conditioner
- HC series combo air conditoner
- EF series inverter air conditioner
- EX series heat exchanger

XRow

Close to the Heat Source Row-based Cooling Unit



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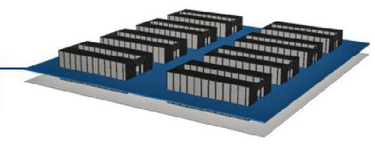
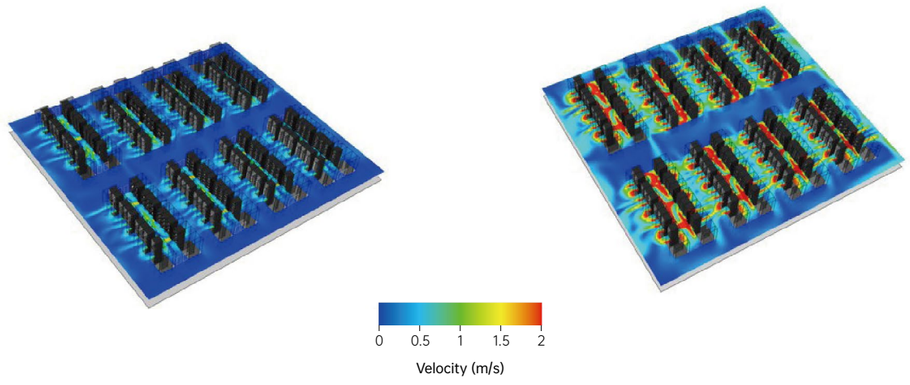
Efficient Cooling Solution for Modularized Data Center

How to Achieve High Energy Efficiency?





- Placed closely to the heat source, the return air temperature and evaporating pressure are increased, thus cooling efficiency can be improved
- Equipped with EC fan, short air supply distance, fan power consumption can be reduced by 20%~30%
- Equipped with DC inverter compressor, 10%~100% cooling capacity stepless adjustment, efficiency under partial load can be highly improved, suitable for data center load characteristics
- Advanced EVO controller can control the airflow & cooling capacity output as required, realizing the best cooling effect & lowest power consumption

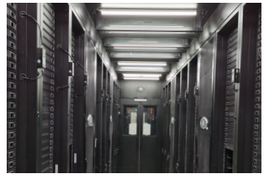
XRow Series Configuration Nomenclature

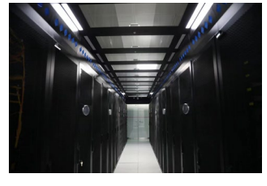
No.	Function	Code	Description
1	Series Name	XR	XRow series row-based cooling unit
2	Series Code	6	Air cooled
		9	Chilled water
3	Cooling Capacity	0	Eg.: 40kW cooling capacity
		4	
		0	
4	System Type	A	Air cooled
		C	Chilled water
		W	Water cooled
5	Structure Type and Air Discharge	H1	Installed between racks, rear air inlet, front air outlet
		L4	Installed between the rack or integrated with racks design, with rear air inlet, front air outlet ∠ 90° on both sides
6	Function	B	Cooling
		H	Cooling, reheating
		C	Cooling, humidifying
		P	Cooling, reheating, humidifying
7	Optional Refrigerant Pump	/	Without refrigerant pump
		O	With refrigerant pump

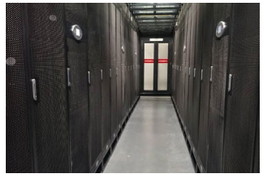
XRow Series Indoor Conversion (Distribution) Unit

No.	Function	Code	Description
1	Series Name	CDU	CDU abbr: chilled water distribution unit
2	Cooling Capacity	150	Cooling capacity: eg. 150 means 150kW

Applications

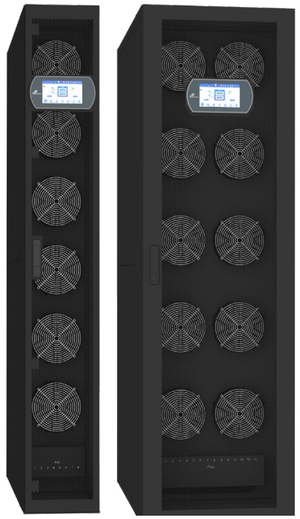






XRow

Modularized DC High Efficient Cooling



Flexible Configuration

- Optional centralized condenser, saving space up to 60%
- Optional refrigerant pump free cooling module, making full use of low temperature natural cooling to save energy
- Optional ∠ 90° supply air on both sides
- Optional cooling capacity range: 5-60kW
- Optional dual power input

XRow Series DX Units Features

Low Opex During Full Life Cycle

- DC inverter compressor with 10%~100% cooling capacity stepless adjustment, high efficiency under partial load
- Indoor high efficient EC fan, supply air close to server rack, saving energy by 20%~30%
- Outdoor fan with stepless speed regulation, control airflow volume as required
- Compact design, saving space
- High return air temperature design, energy efficiency increased by 20%~30%

High Reliability

- DC inverter, starting current less than rated current， reducing impact on power grid
- Excellent performance with stable dehumidification under 10% load
- Expert self-diagnosis and fault warning function
- N+1 redundant configuration of fans

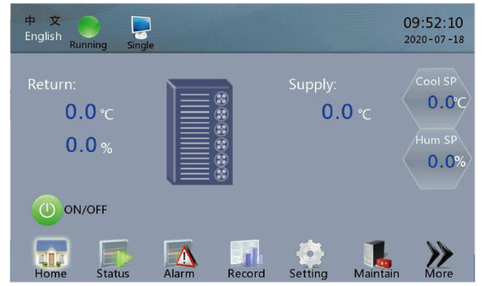
Flexible Cooling

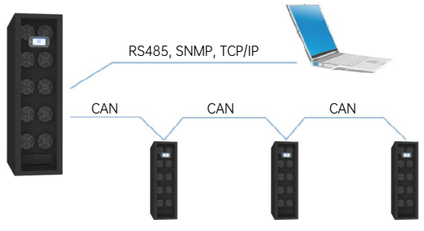
- Precise control of temperature and humidity
- The cooling capacity and airflow output automatically adjust with load change
- Intelligent team work function can help unbalanced load area to realize coordination

EVO Intelligent Control System

EVO Display System

- 4.3/7-inch, true color touch screen
- Temperature and humidity curves
- Graphical display of components running status
- Alarm information display, easy for operation and maintenance
- Multi-level password protection, and hierarchical authorization management





EVO Team Work System

- Team work 32 units, connecting network easily
- Optional zone temperature control
- Shared temperature and humidity setting
- Team work mode: demand management, trend management, rotation and breakdown shift automatically, realizing adaptive energy saving

EVO Control System

- N+1 redundant configuration of fan, control airflow volume as required
- Compatible with aisle differential pressure control
- Optional multiple high-precision supply & return air temperature and humidity sensors
- Optional connection of multiple temperature and humidity sensors, multi-point detection

EVO Intelligent Monitoring System

- Standard RS485 interface, support modbus protocol
- Optional ethernet interface, support TCP/IP, SNMP protocol
- Optional cloud remote monitoring module, read unit info remotely through web pages, WeChat official account and APP
- Support upgrading air conditioner software and writing parameter remotely

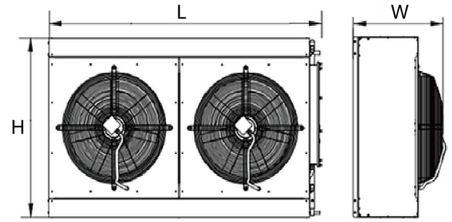
XRow Data Sheet of DX Units (Air Cooled/Water Cooled)

Indoor Unit Model	XR6012A		XR6020A		XR6040A		XR6050A	
Power Supply	380V 3Ph 50Hz		380V 3Ph 50Hz		380V 3Ph 50Hz		380V 3Ph 50Hz	
Return Air Condition	35℃ 26%RH	37℃ 24%RH	35℃ 26%RH	37℃ 24%RH	35℃ 26%RH	37℃ 24%RH	35℃ 26%RH	37℃ 24%RH
Performance Technical Data								
Total Cooling Capacity (kW)	11.5	12.2	22.2	24.2	37.7	39.5	45.5	47.8
Sensible Cooling Capacity (kW)	11.5	12.2	22.2	24.2	37.7	39.5	45.5	47.8
Sensible Heat Ratio (%)	100	100	100	100	100	100	100	100
Max. Power Consumption of Unit (kW)	8.0	8.0	12.0	12.0	21.7	21.7	27.1	27.1
Full Load Amps FLA (A)	16.5	16.5	23.4	23.4	41.6	41.6	58.5	58.5
Quantity of Compressor	1	1	1	1	1	1	1	1
Rated Power Consumption of Compressor (kW)	2.7	2.9	5.45	5.95	10.0	10.6	11.4	12.1
Indoor EC Fan Technical Data								
Airflow (m³/h)	2,500	2,500	4,800	4,800	7,800	7,800	10,000	10,000
Quantity of EC Fan	6	6	6	6	10	10	10	10
Rated Power Consumption of EC Fan (kW)	0.35	0.35	0.75	0.75	1.6	1.6	2.0	2.0
Heating								
Heating Capacity (kW)	3	3	3	3	6	6	6	6
Humidification								
Humidification Capacity (kg/h)	3	3	3	3	3	3	3	3
Connection Size								
Gas (mm)	16		16		19		22	
Liquid (mm)	9.52		12.7		16		19	
Drain Pipe ID (mm)	25		19		19		19	
Physical Data								
Width (mm)	300		300		600		600	
Depth (mm)	1,200		1,200		1,200		1,200	
Height (mm)	2,000		2,000		2,000		2,000	
Weight (kg)	170		235		325		350	
Breakers								
Breaker (A)	32		40		63		80	

Remark: 1. Condensing temperature at 45℃ .
2. The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.

XRow Air Cooled Condenser

- Stepless speed regulation fan
- Owl fan with low noise
- Optional iFreecooling refrigerant pump free cooling solution
- Fans and motors with easy maintenance, adapt to various climate conditions



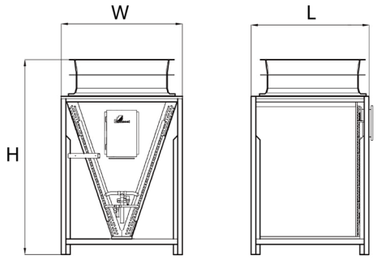
Data Sheet of XRow Air Cooled Condenser

Outdoor Unit Model		XRC16	CS38	CS54	CS66
Quantity of Fan		2	1	1	2
Operating Temperature Range (Standard)		-20 ~ 45℃	-20 ~ 45℃	-20 ~ 45℃	-20 ~ 45℃
Operating Temperature Range (with Low Temperature Startup Kits)		-40 ~ 45℃	-40 ~ 45℃	-40 ~ 45℃	-40 ~ 45℃
Physical Data					
Length (mm)		1,282	1,190	1,340	1,944
Height (mm)		358	955	1,207	977
Widht (mm)		1,223	731	737	658
Weight (mm)		125	130	150	160
Breakers & Cables					
Outdoor Unit	Breaker (A)	20	10	10	20
	Power Cables (mm²)	4	1.5	1.5	1.5

Remark: 1. XRC16 supports horizontal installation only.
2. CS series outdoor units support horizontal and vertical installation.

Air Cooled Centralized Condenser

- V-type high efficient coil design
- Stepless speed regulation fan
- Modular design
- Optional iFreecooling integrated refrigerant pump free cooling solution
- High chimney fan with low noise



Data Sheet of Air Cooled Centralized Condenser

Model	Quantity of Fan	L (mm)	W (mm)	H (mm)	Weight (kg)	Liquid Line - OD (mm)	Gas Line - OD (mm)
CS38U	1	1,020	1,020	1,840	130	16	22
CS54U	1	1,020	1,020	1,840	140	16	22
CS66U	1	1,080	1,080	1950	150	19	28

Remark: The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.

iFreeCooling

iFreecooling Economization Solution

- Reduce power consumption
- Ensure high reliability of data center
- Reduce data center PUE
- Reduce 25%~40% total power consumption of data center

Data Sheet of XRow + iFreecooling

Indoor Unit Model		XR6020A	XR6040A	XR6050A
Power Supply		380V 3Ph 50Hz	380V 3Ph 50Hz	380V 3Ph 50Hz
Return Air Condition		37℃ DB/24%RH	37℃ DB/24%RH	37℃ DB/24%RH
DX Unit Performance				
DX Cooling Capacity (kW)		24.2	39.5	47.8
DX Sensible Cooling Capacity (kW)		24.2	39.5	47.8
Sensible Heat Ratio (%)		100	100	100
Indoor Fan Technical Data				
Airflow (m^3/h)		4,800	7,800	10,000
Quantity of Fan		6	10	10
Heating				
Heating Capacity (kW)		3	6	6
Humidification				
Humidification Capacity (kg/h)		3	3	3
Connection Size				
Liquid (mm)		12.7	16	19
Gas (mm)		16	19	22
Humidifier Inlet Pipe		G1/2"	G1/2"	G1/2"
Condensate Pump Drain Pipe (ID, mm)		10	10	10
Drain Pipe (ID, mm)		19	19	19
Dimensions				
Width (mm)		300	600	600
Depth (mm)		1,200	1,200	1,200
Height (mm)		2,000	2,000	2,000
Breakers & Cables				
Cooling	Breaker (A)	32	63	63
	Cables (mm^2)	6	10	16
Cooling + Humidifying	Breaker (A)	40	63	80
	Cables (mm^2)	6	10	16
Cooling + Humidifying + Reheating	Breaker (A)	40	63	80
	Cables (mm^2)	6	10	16

Remark: 1. Condensing temperature at 45℃ .
2. The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.

Data Sheet of Integrated Refrigerant Pump Centralized Condenser

Model	Quantity of Fan	L (mm)	W (mm)	H (mm)	Liquid Line - OD (mm)	Gas Line - OD (mm)
CS38P	1	1,020	1,020	1,840	16	22
CS54P	1	1,020	1,020	1,840	16	22
CS66P	1	1,080	1,080	1,950	19	28

Remark: 1. The unit size is the footprint size, and the protruding part of the electric control box along the length direction is not included.
2. The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.

Data Sheet of XRow CW Unit

Indoor Unit Model	XR9020C						XR9060C					
Power Supply	380V 3Ph 50Hz						380V 3Ph 50Hz					
Inlet Water Temperature (℃)	7		10		12		7		10		12	
Outlet Water Temperature (℃)	12		15		18		12		15		18	
Return Air Condition (℃)	35	37	35	37	35	37	35	37	35	37	35	37
Performance Technical Data												
Total Cooling Capacity (kW)	29.4	33.6	23.9	27.5	20.4	22.7	60.5	70.5	48.9	56.2	41.8	46.7
Sensible Cooling Capacity (kW)	26.2	29.3	23.4	25.3	20.4	22.6	55.2	61.4	48.6	53.3	41.8	46.7
Sensible Heat Ratio (%)	89.1	87.0	97.9	92.0	100	99.6	91.2	87.1	99.4	94.8	100	100
Rated Power Consumption of EC Fan (kW)	0.75	0.75	0.75	0.75	0.75	0.75	3.50	3.50	3.50	3.50	3.50	3.50
Max. Power Consumption (kW)	3.75	3.75	3.75	3.75	3.75	3.75	8.75	8.75	8.75	8.75	8.75	8.75
Full Load Amps FLA (A)	8	8	8	8	8	8	16.97	16.97	16.97	16.97	16.97	16.97
Water Flowrate (m^3/h)	5.2	5.9	4.2	4.8	3.0	3.4	11.0	12.7	9.0	10.2	6.5	7.2
Water Side Pressure Drop (kPa)	106.8	121.6	76.2	87.5	40.3	48.6	106.1	124.5	71.7	87.3	38.4	46.7
Main Fan Technical Data												
Airflow (m^3/h)	4,800						11,000					
Quantity of Fan	6						3					
Heating												
Heating Capacity (kW)	3						6					
Humidification												
Humidification Capacity (kg/h)	3						3					
Connection Size												
Inlet Water Pipe (mm)	28						35					
Outlet Water Pipe (mm)	28						35					
Drain Pipe (ID, mm)	19						19					
Physical Data												
Width (mm)	300						600					
Depth (mm)	1,200						1,200					
Height (mm)	2,000						2,000					
Weight (kg)	170						250					
Breakers												
Breaker (A)	20						32					

Remark:The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.

CDU Chilled Water Distribution Unit

with XRow Series Chilled Water Unit

Features

- Standardized, easy to operate & maintain, standard rack design, neat and tidy
- Flexible installation location, either be close or far away from the rack
- Equipped with water leakage detector rope, high reliability
- Each inlet & outlet water pipe has valve separately, to isolate the chilled water unit, and make maintenance easy
- Each inlet & outlet water pipe has insulation to prevent condensation

Product Introduction

- CDU chilled water distribution unit, to be flexibly used with XRow series chilled water unit
- Achieve standardized connection between the chiller and the chilled water unit, and distribute chilled water evenly to each unit
- Each water supply and return branch pipeline is equipped with a separate valve, independently control the cold water supply at each end. The number of supply and return water branch pipelines can be designed according to actual needs

Data Sheet of CDU

CDU Model	CDU120	CDU180	CDU240
Performance Specification			
Cooling Capacity (kW)	120	180	240
Connection Size			
Main Inlet Pipe (mm)	76	89	89
Main Outlet Pipe (mm)	76	89	89
Available Quantity of Chilled Water Unit	4	6	8
Chilled Water Unit Inlet Pipe (mm)	35	35	35
Chilled Water Unit Outlet Pipe (mm)	35	35	35
Physical Data			
Width (mm)	600	600	600
Depth (mm)	1,200	1,200	1,200
Height (mm)	2,000	2,000	2,000
Weight (kg)	175	185	200

Remark:The listed data is being continuously updated and is for reference only. For customized requirements, please feel free to contact us.