Authorized dealer of Guangdong Euroklimat Air-Conditioning & Refrigeration Co., Ltd.

ISO9001: 2008 Certificate of quality management system for enterprise

ISO14001: 2004 Certificate of environmental management system

Production permit (XK06-015-00361)

CNAS Testing CNAS L5123

CNAS

EK air-conditioner one-stop service hotline in China: 400-188-1963

EKCUMC1711-Catalog-AA

- Products in printed materials may differ from actual products. See the actual products when you purchase the products.
- The product design specification, functions, performance parameters and external structure are subject to change without notice. For specific parameters, see parameters on the product nameplate.
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EK's Subscription ID and Public ID in WeChat

EK'S DATA CENTER COOLING SOLUTIONS

EK
SINCE 1963

Introduction to EK

EuroKlimat (hereafter referred to as EK) is your most trusted data center cooling expert. As various services related to network increase, any loss caused by each service interruption becomes critical. Furthermore end users need to spend more resources to rectify the fault. The basic environmental requirements for safe and reliable operation become mandatory.

Founded in 1963, EK is one of the earliest manufacturers to engage in R&D on precision air-conditioning system for critical applications. Based on the European leading R&D and design platform, EK integrates more than 40 years of R&D experience in Europe and excellent engineering design philosophy to provide a wide variety of users with the most advanced and reliable data center cooling solutions. EK has become a professional leader in the field.

The data center cooling products by EK have successfully served world well-known users and institutions, such as Nokia, Allianz Insurance, DHL and European Aerospace industries. EK China comprehensively introduces European leading product design, R&D and manufacturing to provide products of the same quality to Chinese customers, such as switching rooms, computer rooms and data centers.

In 2014
EK's R&D Center in China launched the close-to-heat-source RACK Cooliaig solutions

In 2014
EK provided data equipment room guarantee for Allianz Insurance

In 2009
the R&D Center introduced European leading equipment room precision air-conditioning technology and launched the whole series of equipment room precision air-conditioning products

In 2007
EK cooperated with European Space Agency to research and develop special aerospace air-conditioning system and successfully entered DLR

In 1975
EK started to produce special precision air-conditioning equipment in the industry

In 1968
EK became a dominant precision air-conditioning brand in Italy

In 1963
EK was founded in Italy

EKCU TRADITIONAL PRECISION AIR CONDITIONING SOLUTION

Close control unit

Mini size

Eurofanshion --mini size

Medium/ large size

Eurocooling --medium/large size

Close to heat source

Eurocloud --close to heat source

Applications

Integrated Cabinet

Cabinet Row

Modular type

EK mini-type CCU air-cooled 5.6kw~20kw 改为 EK mini-type air cooled 5.6kW~20kW

Mini-type		EKCU06	EKCU08	EKCU12	EKCU16	EKCU20
Total cooling capacity	kW	5.6	7.6	12.5	16.2	20
Sensible cooling capacity	kW	5.1	6.9	11.3	15.1	18.9
Rated air flow	m3/h	1700	1700	3000	4200	6000
Power supply	~	220-240V~/50Hz			380-415V/3N~/50Hz	
Power input	kW	2.0	3.0	4.6	5.4	7.2
Running current	A	4.2	5.6	9.3	9.80	14.6
Refrigerant	-	R410A				
Gas pipe diameter	mm	12.7	12.7	15.88	15.88	15.88
Liquid pipe diameter	mm	9.52	9.52	12.7	12.7	12.7
Fan type	-	Forward centrifugal				
Fan quantity	Nr	1	1	1	1	2
Filter type	-	Aluminum profile cleanable filter(standard);G1/G4 filter (optional)				
Unit size (L*W*H)	mm	500*385*1750		600*500*1850	880*700*1950	1140*700*1950
*Elec-heater(optional)	kW	3	3	6	6	6
*Humidifier(optional)	kg/h	3	3	3	3	3
Outdoor unit	-	03 SSW	03 SSW	05 SW	08 SW	08 SW

Note
- 1. Indoor air entering temperature DB/WB 24°C/17°C
- 2. ESP could be adjusted based on the requirement of customers
- 3. Electric-heater and humidifier could be adjusted according to customer requirements.
- 4. The rated input current does not include the power input of electric heater and humidifier.
- 5. Electrode humidifier for 8kg/h is cleanable type, 3kg/h is non cleanable type.
- 6. The height of indoor unit(except model EKCU16/20) includes the louvered plenum

EUROKLIMAT®

Give life to building, bring us back to nature™

EKCU TRADITIONAL PRECISION AIR CONDITIONING SOLUTION

Efficient and energy-saving

For the EKCU series of precision air conditioners for equipment room, each component is strictly designed, produced and tested to guarantee high efficiency of the whole equipment. It uses world's well-known scroll compressor and centrifugal fan, and works uninterruptedly for 7 x 24 hours. Under the control of a microprocessor, it can perfectly meet operating requirements and guarantee the unit's efficient energy saving. It uses an adjustable humidifier that features fast response, constant humidification and low water temperature. In addition, it uses a leading heat exchanger that can effectively increase the heat exchange area to gain better heat exchange effect. The full series of units use environment-friendly refrigerant, which guarantees the unit's high efficiency.
EKCU precision air conditioning unit is designed and produced strictly to provide 7x24 uninterruptible operations with proven Scroll compressor and centrifugal fans (EC fans are optional). The microprocessor meets the exact operating conditions with humidifier and reheat. EKCU unit uses environmental friendly refrigerants.

Intelligent control

It uses the ModBus protocol to implement remote control and advanced group control on multiple units.
Its microcomputer controller can monitor the system operating status and the system time in real time, and start or shut down the relevant air conditioning unit according to the actual demand on the refrigeration capacity.
In addition, it avoids the competitive operating mode, for example, a combination of cooling + heating or dehumidification + humidification.
The unit design and cabling comply with the ICE204-1/EN602041 standard. It is equipped with complete compressor and inner equipment protection, as well as a safety isolating switch that interlocks the door of electric cabinet.
It can implement group control on as many as eight units (free combination) and mutual backup of these units to guarantee stable and efficient operating of the air conditioning system.
The industrial standard microprocessor control center provides precision cooling unit with monitoring, data recording, safety protection and parameter setting. The operation is simple and information is clear.
Rs485 (BMS interface) is standard with SNMP interface as optional.
Comprehensive displayed information and alarm messages are provided with high resolution LCD display monitor.

Stable and reliable

It uses European leading reliability design philosophy and optimum components to guarantee system reliability and stability.
The components are high-quality components that have passed strict tests.
The advanced controller can automatically balance the load of components to prolong the unit's service time.
The air conditioner supports high pressure and low pressure switches, discharge temperature protection, and external balanced thermal expansion valve, which make the unit operate in a more precise and reliable manner.
It supports professional self-diagnosis and fault pre-warning.
The stainless steel pan is created through a punching process on high-quality cool-rolled stainless steel plates, which features outstanding appearance, corrosion resistance, condensate resistance, and strong fire resistance.
The standard configuration includes a washable air filter with strong and corrosion-resistant aluminum-alloy frame and grid protector. The air filter can be a G3 filter or an electrical screen filter.
EKCU uses European leading reliability design philosophy and proven components to guarantee system reliability and stability.
The advanced microprocessor balances the run time of components to prolong the unit's service time.

Cooling source

AX water-cooled type BX air-cooled type CW chilled water type

DATA CENTER

Naming Rule for Indoor Units

EKCU	32	A	H	0	BX	C	T	F	AA
1	2	3	4	5	6	7	8	9	10

1	EKCU	EK precision air conditioning for data centers
2	32	Unit code08,12,14,20···
3	A	Design serial number: A refers to technique
4	H	Function form: H refers to constant temperature and humidity. The default value is refrigerating-type unit
5	0	Refrigerant: 0: R407C; 1: R410A
6	BX	Unit form: AX: water-cooled type; BX: air-cooled type; CW: chilled water type
7	C	Dimensions code: As, A, Bs, B, C, D, E, F
8	T	Air outlet method: T for top outlet and U for bottom outlet
9	F	Power: A: 220 V~/50 Hz; F: 380 V/3N~/50 Hz
10	AA	Specific descriptions on changes in product specification

Naming Rule for Outdoor Units

EKCU	04	A	0	ST	CT	A	AA
1	2	3	4	5	6	7	8

1	EKCU	EK precision air conditioning for data centers
2	04	Unit code 04,05,08,10,12···
3	A	Design serial number ; A , B
4	0	Refrigerant ; 0 : R407C;1 : R410A
5	ST	Function form: ST: standard type
6	CT	Unit form: CT: outdoor unit
7	A	Power: A: 200~240 V/50 Hz
8	AA	Specific descriptions on changes in product specification

EKCU TRADITIONAL PRECISION AIR CONDITIONING SOLUTION

EKCU-AX Water-cooled

Model		EKCU25	EKCU30	EKCU35	EKCU40	EKCU42	EKCU45	EKCU50	EKCU52	EKCU60	EKCU70	EKCU80	EKCU90	EKCU100
Circulating air flow	m3/h	7500	8500	9000	11000	11000	12000	13000	13000	17000	18000	21000	24000	25000
Total cooling capacity	kW	26.5	32.7	37.3	41.3	43.1	48.2	50.3	52.7	65.2	71.5	82.5	91.3	101.5
Sensible cooling capacity	kW	24.5	30	34.1	38	39.6	44.2	46	48.5	60.3	68.7	76	84	93.5
Water flow	m³/h	6.00	7.40	8.40	9.30	9.70	10.90	11.30	11.40	14.70	16.80	18.60	20.60	23.00
W.P.D.	kPa	45.0	52.0	48.0	43.0	40.0	59.0	75.0	45.0	47.0	48.0	54.0	71.0	80.0
Cooling water inlet/outlet	inch	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Compressor quantity	Nr	1	1	1	1	2	1	1	2	2	2	2	2	2
Compressor type		SCROLL												
Fan quantity	Nr	1	1	1	1	1	1	1	1	2	2	2	2	2
E.S.P.	Pa	0~400Pa												
Filter		G4												
Secondary heater	kW	6	6	6	9	9	9	9	9	9	9	12	12	12
Humidifying capacity	kg/h	5	5	5	8	8	8	8	8	10	10	10	10	10
Power supply		380-415V/3N~/50Hz												
Specification FLA (1)	A	26.4	29.2	35.4	38.3	41.8	43.3	44.8	46.1	58.1	61.1	69.6	74.6	79.6
Proposed air switch (2)	A	40	40	50	50	63	63	63	63	80	80	100	100	100
Humidifier inlet pipe	mm	19	19	19	19	19	19	19	19	19	19	19	19	19
Condensate water drainage	mm	19	19	19	19	19	19	19	19	19	19	19	19	19
Refrigerant gas pipe	mm	19	22	22	22	19e2	22	22	19e2	22e2	22e2	22e2	22e2	22e2
Refrigerant liquid pipe	mm	16	16	16	16	16e2	16	16	16e2	16e2	16e2	16e2	16e2	16e2
Weight	kg	295	310	352	395	465	485	505	520	720	760	860	910	930
Dimension(LxWxH)	mm	855x870x1975				1380x998x1975				1880x998x1975			2280x998x1975	

Note
- Test condition , R410a refrigerant ,return air 24°C/50%RH,condesate temp. m°C,supplying water entering/leaving temp. 32°C/37°C ,
- (1) is the max allowable current which doesn't include the outdoor unit; (2) would fluctuate based on different configurations.
- Two-way valve is the standarded for water cooled chiller ,water flow and W.P.D. would be varying depending on the concentration of glycol.
- The heights above don't contain the hood.
- ESP can be adjustable for EC fan ,AC fan can't.

EKCU-CW Chilled-water

Model		031	041	051	061	071	081	091	101	110	120	130	140	150	160	170	180	190	200
Circulating air flow	m³/h	9200	9600	10200	12000	17000	20400	21300	22200	23500	25500	26500	28000	31500	33000	34000	35500	37000	38000
Total cooling capacity	kw	31.7	41.5	51.5	61.5	71.8	81.5	92.0	101.5	111.8	122.2	131.5	140.9	152.9	162.1	172.5	182.5	191.8	202.5
Sensible cooling capacity	kw	28.6	36.5	45.2	54.0	63.0	73.0	80.6	90.2	98.0	106.9	115.3	123.8	136.9	144.2	151.6	160.8	169.1	178.2
Water flow	m³/h	5.4	7.1	8.8	10.5	12.3	14.0	15.8	17.4	19.1	20.9	22.5	24.0	26.4	27.8	29.6	31.3	32.8	34.7
W.P.D.	kPa	47.7	42.2	56.6	47.8	50.7	47.2	56.8	63.2	70.1	72.5	74.8	75.1	76.0	81.2	83.6	89.4	94.0	98.5
Secondary heater	kw	6	6	6	9	9	9	9	9	12	12	12	12	12	12	12	12	12	12
Humidifying capacity	kg/h	5	5	5	8	8	8	8	8	15	15	15	15	15	15	15	15	15	15
Fan quantity(one coil)	Nr	1	1	1	1	2	2	2	2	2	2	2	2	3	3	3	3	3	3
Fan quantity(two coils)	Nr	-	1	1	1	2	2	2	2	2	3	3	3	3	-	-	-	-	-
E.S.P.	Pa	0~400Pa																	
Filter		G4																	
Power supply		380-415V/3N~/50Hz																	
Specification FLA (1)	pu	14.0	14.0	14.0	21.5	21.5	21.5	21.5	21.5	23.5	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0	33.0
Humidifier inlet pipe	mm	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Condensate water drainage	mm	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
CW inlet/outlet DIA	mm	32	32	42	42	42	42	54	54	54	54	54	54	68	68	68	68	68	68
Unit weight(one coil)	kg	282	324	385	406	523	566	597	615	636	656	680	697	788	810	835	866	897	923
Unit weight(two coils)	kg	-	405	485	503	702	743	762	790	835	896	935	966	1050	-	-	-	-	-
Unit size(one coil)	mm	930x998x1975							1830x998x1975							2730x998x1975			
Unit size(two coils)	mm	1130x998x1975							2230x998x1975			3330x998x1975				-			

Note
- 1. Test condition, return air 24°C/50%RH, chilled water entering/leaving temp. 7°C/12°C.
- 2. (1) is the max allowable current which doesn't include the outdoor unit; (2) would fluctuate based on different configurations.
- 3. Two-way valve is equipped for the water flow control of standard unit ,three-way valve is optional .
- 4. The heights above don't contain the hood.
- 5. ESP can be adjustable for EC fan ,AC fan can't.

EKCU-BX Air-cooled

Model		EKCU25	EKCU30	EKCU35	EKCU40	EKCU42	EKCU45	EKCU50	EKCU52	EKCU60	EKCU70	EKCU80	EKCU90	EKCU100
Circulating air flow	m3/h	7500	8500	9000	11000	11000	12000	13000	13000	17000	18000	21000	24000	25000
Total cooling capacity	kW	26.5	32.7	37.2	41.2	43	48.2	50.2	52.8	65.2	74.6	82.5	91.3	101.5
Sensible cooling capacity	kW	24.5	30	34.1	38	39.6	44.2	46	48.5	60.3	68.7	76	84	93.5
Compressor quantity	Nr	1	1	1	1	2	1	1	2	2	2	2	2	2
Compressor type		SCROLL												
Fan quantity	Nr	1	1	1	1	1	1	1	1	2	2	2	2	2
E.S.P.	Pa	0~400Pa												
Filter		G4												
Secondary heater	kW	6	6	6	9	9	9	9	9	9	12	12	12	
Humidifying capacity	kg/h	5	5	5	8	8	8	8	8	10	10	10	10	10
Power supply														
Specification FLA	A	26.4	29.2	35.4	38.3	41.8	43.3	44.8	46.1	58.1	61.1	69.6	74.6	79.6
Proposed air switch (1)	A	40	40	50	50	63	63	63	63	80	80	100	100	100
Humidifier inlet pipe (2)	mm	19	19	19	19	19	19	19	19	19	19	19	19	19
Condensate water drainage	mm	19	19	19	19	19	19	19	19	19	19	19	19	19
Refrigerant gas pipe	mm	19	22	22	22	19e2	22	22	19e2	22e2	22e2	22e2	22e2	22e2
Refrigerant liquid pipe	mm	16	16	16	16	16e2	16	16	16e2	16e2	16e2	16e2	16e2	16e2
Weight (air cooled)	kg	275	290	332	375	435	465	485	490	680	720	800	850	876
Dimension(LxWxH)	mm	855x870x1975				1380x998x1975				1880x998x1975			2280x998x1975	

Model	EKCU05ASTCT-AC512	EKCU08ASTCT-AC542	EKCU12ASTCT-AC550	EKCU12ASTCT-AC560	EKCU15ASTCT-AC572	EKCU18ASTCT-AC580	EKCU18ASTCT-AC590
Fan quantity	1	1	1	1	2	2	2
Power supply	380-415V/3N~/50Hz						
Pipe connection	φ22/ φ16	φ22/ φ16	φ22/ φ16	φ25/ φ19	φ25/ φ19	φ28/ φ22	φ28/ φ22
Weight (kg)	120	128	136	152	168	168	226
Dimension-L (mm)	1350		1550		1850		2350
Dimension-H1 (mm)	1308		1115		1308		1115
Dimension-H2 (mm)	654		662		654		662
Dimension-W (mm)	972		1277		1277		1277

Match table							
Indoor unit	EKCU25	EKCU30	EKCU35	EKCU40	EKCU42	EKCU45	EKCU50
Outdoor unit	EKCU08ASTCT-AC542	EKCU12ASTCT-AC550	EKCU12ASTCT-AC560	EKCU15ASTCT-AC572	2*EKCU05ASTCT-AC512	EKCU18ASTCT-AC580	EKCU18ASTCT-AC590
Indoor unit	EKCU52	EKCU60	EKCU70	EKCU80	EKCU90	EKCU100	
Outdoor unit	2*EKCU08ASTCT-AC542	2*EKCU12ASTCT-AC550	2*EKCU12ASTCT-AC560	2*EKCU15ASTCT-AC572	2*EKCU18ASTCT-AC580	2*EKCU18ASTCT-AC590	

Note
- 1. Test condition , R410a referigerant ,return air 24°C/50%RH,condesate temp. 35°C
- 2. (1) is the max allowable current whichdoesn't include the outdoor unit;(2) would fluctuate based on different configurations.
- 3. The heights above don't contain the hood
- 4. ESP can be adjustable for EC fan ,AC fan can't

EKCU TRADITIONAL PRECISION AIR CONDITIONING SOLUTION

CoolCloud Series Modular Precision Air Conditioner for Equipment Room

- The modular design facilitates maintenance
- The modular combination improves the standby capability of cooling and spacing the data center room with more reliable cooling measures.
- The modular design makes the external appearance more pceasing.
- The modular design makes the external size more compact, which facilitates transportation and installation.
- The master/slave design facilitates site expansion. It enables you to increase the number of cooling units as the equipment in the data center increase in the future.
- The unit supports front-side maintenance and occupies a small area, which efficiently saves the space in the data center.

Efficient and Energy-saving EC Fan

The EC fan is an all-new air handling apparatus that breaks traditional restrictions. It supports stepless speed change driven by an aircraft-grade DC motor. Its accurate electric control provides fast response to output demands and non-normal load is more economical and energy-saving.It supports as high as 92% operating efficiency, saving 30% energy compared with ordinary AC fans and therefore effectively reducing the unit's OPEX.The EC fan has a longer service time and lower vibration noise. It can operate stably and continuously without maintenance, which improves the unit's operating stability.

Efficient and Energy-saving Electrical Heater

The electrical heater uses the Positive Temperature Coefficient (PTC). The PTCV thermo-sensitive ceramic component features low thermal resistance, high heat exchange efficiency, and fast and stable heating. It supports temperature self-restriction, that is, it sharply decreases the power to lower the temperature within the Curie temperature when a rotation fault occurs and the heater fails to dissipate heat. In this way, open fire and a flame heating pipe never happen. It eliminates potential safety hazards.Each PTC electric heater supports dual protection: restorable temperature protection and ultimate fuse protection. What's more, its pressure difference protection can also protect the system by cutting off the PTC power supply in case of any fan or motor failure.

Stepless Speed-Change Air-Cooled Condenser

The EKCU-BE series air-cooled condenser is made of highly corrosion-resistant materials. Its fan is equipped with an imported speed controller. The controller can implement stepless speed change to guarantee normal unit operating. No matter a cold winter night or a hot summer afternoon, it always meets your cooling requirements. The condenser can be horizontally or vertically installed on site.

Precision Control System

It uses a controller specially designed for equipment room, equipped with a color backlight LCD. The system provides professional control functions to monitor the operating status and system time in real time. It correctly reports and shows alarms, and starts or shuts down the unit according to the actual cooling requirements. It helps the unit operate in backup or shift mode and avoids the competitive operating mode, for example, a combination of cooling + heating or dehumidification + humidification. In addition, the system supports automatic startup once the power supply recovers. It can access the centralized management system of equipment room through the ModBus protocol to implement remote monitoring and operation. It provides a colored touch screen for you to implement free settings.

Naming Rule for Indoor Units

EKCU	35	A	H	1	BE	C	T	F	AA
1	2	3	4	5	6	7	8	9	10

1	EKCU	EK precision air conditioning for data center.
2	35	Unit code 20, 25, 30, 35...
3	A	Design serial number: A refers to technique.
4	H	Function form: H refers to constant temperature and humidity. The default value is refrigerating-type unit.
5	1	Refrigerant: 1: R410A
6	BE	Unit form: BE: air-cooled type; CE: chilled water type
7	C	Dimensions code: A, B, C, D, E, F
8	T	Air outlet method: T for top outlet and U for bottom outlet
9	F	Power: A: 220 V~/50 Hz; F: 380 V/3N~/50 Hz
10	AA	Specific descriptions on changes in product specification

Naming Rule for Outdoor Units

EKCU	12	A	1	ST	CT	A	AA
1	2	3	4	5	6	7	8

1	EKCU	EK precision air conditioning for data center.
2	12	Unit code 10, 12, 15...
3	A	Design serial number: A, B
4	1	Refrigerant: 1: R410A
5	ST	Function form: ST: standard type
6	CT	Unit form: CT: outdoor unit
7	A	Power: A: 200~240 V/50 Hz
8	AA	Specific descriptions on changes in product specification

Application scenarios of EK's COOLING SOLUTIONS FOR DATA CENTERS:

1. Low-density data center (2-5 kW/cabinet)
2. Computer room/data center
3. UPS room
4. Precision control room
5. Industrial operation lab
6. Hospital or financial data center

EKCU DATA CENTER ROOM COOLING SOLUTION

Application scenarios of EK's COOLING SOLUTIONS FOR DATA CENTERS:

1. Low-density data center (2-5 kW/cabinet)
2. Computer room/data center
3. UPS room
4. Precision control room
5. Industrial operation lab
6. Hospital or financial data center

EKCU-BE Air-cooled modular

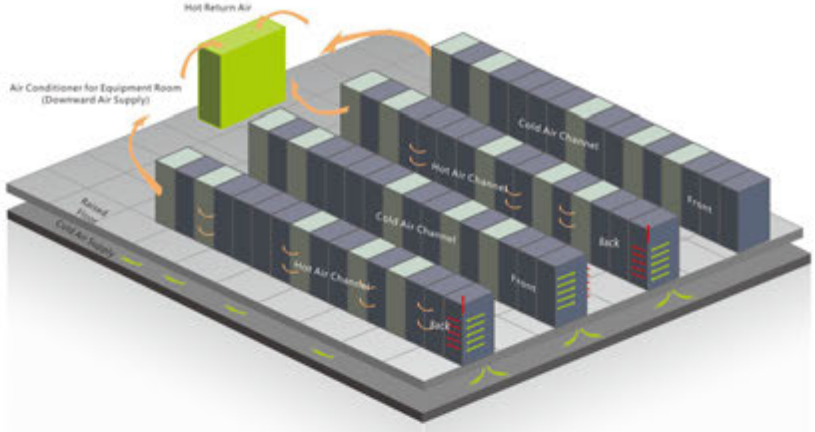
Model		EKCU20	EKCU25	EKCU30	EKCU35	EKCU40	EKCU50	EKCU58	EKCU70
Total cooling capacity	kW	20.0	25.0	29.0	35.0	40.0	50.0	58.0	70.0
Sensible cooling capacity	kW	18.8	23.0	27.3	32.3	37.6	46.0	54.5	64.7
Power supply	-	380-415V/3N~/50Hz							
Compressor/Circuits	no/no	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
Cooling power input	kW	7.1	9.3	10.2	12.7	14.3	18.5	20.4	25.5
Cooling running current	A	14.3	18.5	20.3	25.4	28.6	37.0	40.7	50.9
Air flow	m3/h	6600	8300	10000	11800	13200	16600	20000	22000
E.S.P.	Pa	50	50	50	50	50	50	50	50
Fan type		EC							
Fan quantity	no	1	1	1	1	2	2	2	2
Gas pipe	mm	1xø15.88	1xø22.23	1xø22.23	1xø22.23	1xø15.88	2xø22.23	2xø22.23	2xø22.23
Liquid pipe	mm	1xø12.7	1xø15.88	1xø15.88	1xø15.88	1xø12.7	2xø15.88	2xø15.88	2xø15.88
Connection type	-	(Flare)Thread connection		(Flare)Thread+welding connection)		(Flare)Thread connection		(Flare)Thread+welding connection	
Refrigerant	-	R410A							
Condensate water drainage	mm	Φ22(Inner)							
Electrical heater (option)	kW	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Humidifier (option)	kg/h	8.0	8.0	8.0	8.0	8.0	8.0	8.0	8.0
Dimension	mm	880x840x1950	880x840x1950	1320x840x1950	1320x840x1950	2x880x840x1950	2x880x840x1950	2x1320x840x1950	2x1320x840x1950
Weight	kg	330	350	395	415	660	700	790	830

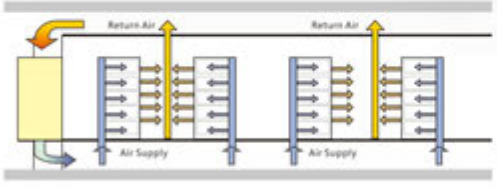
Note
- 1. Return air 24℃/17℃,condensate temp. 45℃
- 2. Above E.S.P. could be customized based on the real requirement .

Major Application of EKCU

The temperature control range and precision are as follows:

If the temperature control range is 18 - 30℃, the control precision is ±1℃.
If the humiditycontrol range is 40% - 80%, the control precision is ±5%.





EKMC MODULAR RACK COOLING SOLUTION

EKMC Modular Rack Cooling

Rack cooling

Cooling capacity: 10 - 70 kW

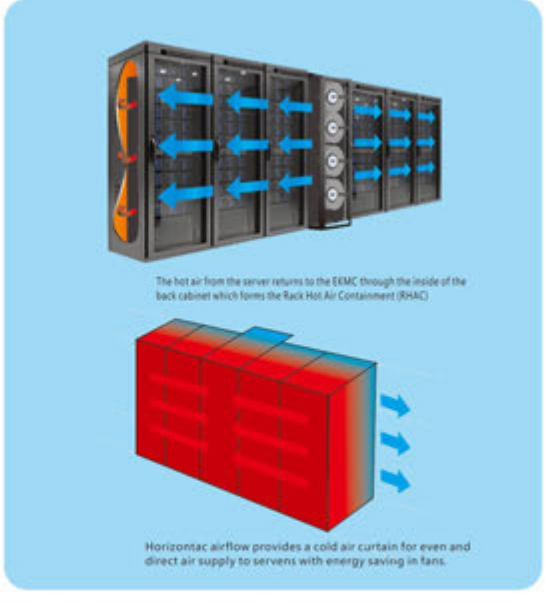
Systems: -Air cooled(DX)
-Chilled water(CW)

EKMC

Selection of Modern Data Center

Close-to-heat-source cooling solution reduces energy costs.

EKMC



The hot air from the server returns to the EKMC through the inside of the back cabinet which forms the Rack Hot Air Containment (RHAC)

Horizontac airflow provides a cold air curtain for even and direct air supply to servens with energy saving in fans.

- The modular design supports expansion as business of the data center develops.
- EK RHAC eliminates any mixing of cold and hot air to increase cooling efficiency without the need for raised floor and additional hardware for either cold aisle containment or hot aisle containment

The modular design saves investment

EKMC

Like a server, the unit can be installed in any IT cabinet.

Modular Rack Cooling can be added conveniently at any time and any location.

EKMC MODULAR RACK COOLING SOLUTION

Introduction to Main Components of EKMC Products

The main components come from well-known brands, for example, EBM EC fan and Johnson electrical water valve. These components effectively guarantee the unit's stable and reliable operation. The fan supports hot-pluggable replacement, which facilitates maintenance. The EK's large-scale hydrophilic aluminum evaporator guarantees that the unit operates with high sensible heat ratio.

Installation Type

Fully recessed installation

- Applies to all cabinets

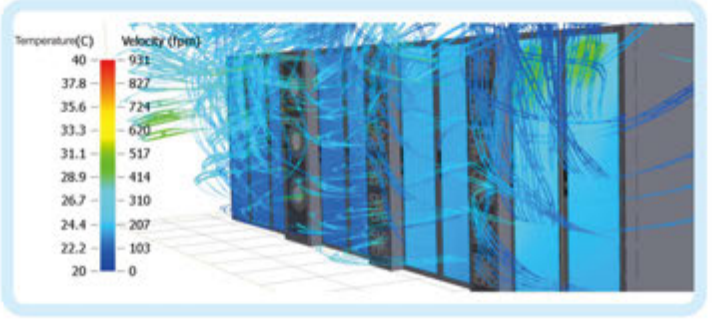
Semi recessed installation

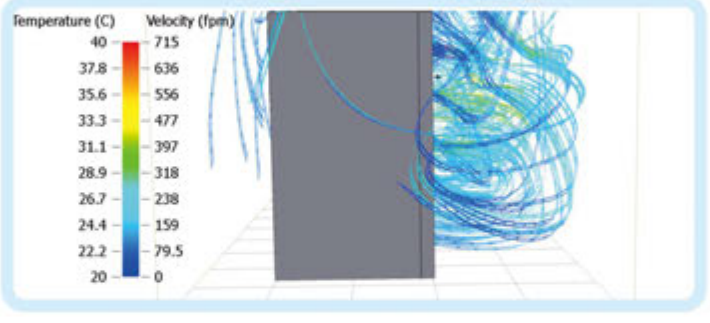
- Low fan power
- Horizontal air supply
- Applies to all cabinets

Scalable design.EKMC unit can be inserted into a cabinet like a server, which minimizes the impact on layout of the data center without any raised floor or top cabling. The layout is flexible and simple, and the installation is efficient.

High RACK Density Application

Chilled water and direct expansion can be used. The cooling capacity ranges from 15 kW to 70 kW. The EKMC unit can be widely used in server cabinets with low medium and high density:
4 kW to 60 kW + standard server
80 kW + blade server





EKMC MODULAR RACK COOLING SOLUTION

Naming Rule for Indoor Units

EKMC	25	A	1	D	22	A	AA	E
1	2	3	4	5	6	7	8	9

1	EKMC	EK Modular Rack cooling unit
2	25	Unit code 15, 25, 35, 50...
3	A	Design serial number: A, B, C
4	1	Refrigerant code: 1: R410A (applicable to DX air-conditioning unit)
5	D	Unit type: D: direct expansion (DX); C: chilled water (CW)
6	22	Applicable cabinet specification: 19: 19 U; 22: 22 U; 52: 52 U
7	A	Power: A: 220 V~/50 Hz; F: 380 V/3N~/50 Hz
8	AA	Specific descriptions on changes in product specification
9	E	Product feature code: E indicates external sales (default setting: domestic sales)

EKMC-DX Air-cooled

Model		EKMC15	EKMC30
Fan quantity	No.	1	2
Rated air flow (80% RPM)	m3/h	2,175	4,350
Noise level	dB(A)	60	67
Max air flow (100%RPM)	m3/h	2,725	5,450
Power supply	V/Ph/Hz	220-240/1/50	220-240/1/50
Max current	A	1.8	3.52
Max power input	kW	0.367	0.733
Power input (max air flow)	kW	0.367	0.733
Power input (rated air flow)	kW	0.194	0.388
Total cooling capacity (rated air flow)	kW	14.0	27.3
Total cooling capacity (max air flow)	kW	15.9	31.2
DX-coil rows	No.	3	3
Coil material		Copper tube+Aluminum fins	
Refrigerant		R410A	R410A
Liquid/gas pipe diameter	mm	9.52/15.88	12.7/ 22.23
Condensate pump pipe (option)		6mm PE	6mm PE
Running weight	kg	67	100
Dimension (H×W×L)	mm	530 x 439 x996	930 x 439 x996
Matched outdoor unit		EKRV050B1	2 x EKRV050B1
Power input	KW	4.30	8.00
Current input	A	19.5	15.2
Power supply		220-240V ~ /50Hz	380-415V/3N ~/50Hz
Weight	kg	120	160
Dimension (W×D×H)	mm	600×350×1160	920×760×1160

Note 1.Evaporating temp.15°C , ambient temp.35°C ; return air temp.38°C ; supplied air temp.24°C ;

EKMC -In Row Chilled water

Model		EKMC25H (52U)	EKMC25H (46U)	EKMC25H (42U)
Rated air flow (80% RPM)	m3/h	4300	3655	3655
Max air flow (100%RPM)	m3/h	5000	4300	4300
Power supply	V/Ph/Hz		220-240/1/50	
Power input (max air flow)	kW	0.86	0.737	0.737
Power input (rated air flow)	kW	0.584	0.501	0.501
7°C entering /12°C leaving				
Total cooling capacity (rated air flow)	kW	39.0	32.1	30.9
Sensible cooling capacity (rated air flow)	kW	33.5	27.6	26.9
Total cooling capacity (max air flow)	kW	42.5	35.4	33.9
Sensible cooling capacity (max air flow)	kW	37.4	31.2	30.4
CW flow (rated air flow)	m3/h	6.2	4.9	4.4
CW flow (max air flow)	m3/h	6.2	4.9	4.4
12°C entering /18°C leaving				
Total cooling capacity (rated air flow)	kW	27.7	23.1	22.4
Sensible cooling capacity (rated air flow)	kW	27.7	23.1	
Total cooling capacity (max air flow)	kW	31.3	26.1	25.3
Sensible cooling capacity (max air flow)	kW	31.3	26.1	
CW flow (rated air flow)	m3/h	4.0	3.3	3.2
CW flow (max air flow)	m3/h	4.5	3.7	3.6
Water pipe connection	mm		DN25	
Dimension (W×L)	mm		300 x 1200	

Note • Note : Return air D.B.temp.38°C,W.B.temp.23°C ;

Model		EKMC35
Fan quantity	No.	2
Rated air flow (80% RPM)	m3/h	4350
Noise level	dB(A)	67
Max air flow (100%RPM)	m3/h	5450
Power supply	V/Ph/Hz	220-240/1/50
Max current	A	3.52
Max power input	kW	0.733
Power input (max air flow)	kW	0.733
Power input (rated air flow)	kW	0.388
Total cooling capacity (rated air flow)	kW	28.9
Total cooling capacity (max air flow)	kW	34.2
Coil rows	No.	3
CW flow	m3/h	3.99
Water pipe size	mm	DN25
Unit weight	kg	80
Dimension (H×W×L)	mm	930 x 439 x 996

Note • 1.Entering/leaving 7/12°C , return air temp.38°C ; supplied air temp.24°C ;

EUROKLIMAT®

EKAS FREE COOLING CHILLER

Free Cooling

Centralized Host System

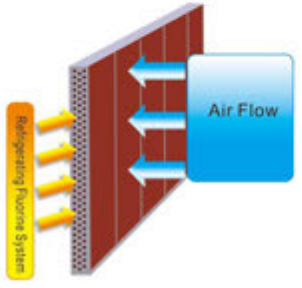
Refrigerant:R134a

Refrigerating capacity:65 - 400 RT

C O P : 3.56

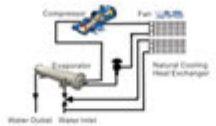
EKAS FREE COOLING CHILLER:

Embedded Free Cooling Air-Water Heat Exchange Tube

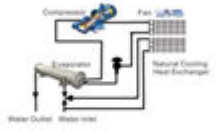


Ordinary Condenser Coil

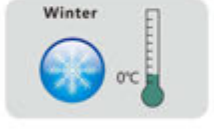
free Cooling Coil

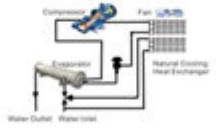


1. The outdoor ambient temperature is too high to use natural cooling
2. The three-way valve is closed
3. No water flows through the natural cooling coil
4. The chilled water directly returns through the evaporator
5. The air conditioner's compressor and fan start (100% compressor output)



1. The outdoor ambient temperature is lower than the indoor temperature so that natural cooling is practicable
2. The three-way valve is open
3. The chilled water returns through the natural cooling coil for pre-cooling
4. The chilled water flows through the natural cooling coil and then the evaporator
5. The air conditioner's compressor and fan start (partial compressor output)





1. The outdoor ambient temperature is low enough to provide the energy that can meet all indoor demands.
2. The three-way valve is open
3. The chilled water returns through the natural cooling coil
4. The chilled water is all made through outdoor environment
5. The air conditioner's compressor is closed and the fan starts (no compressor output)

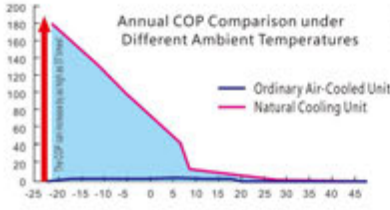
EKAS FREE COOLING CHILLER

1、The 1250 kW unit is used as an example.

2、7 x 24 hours, 18/12℃ chilled water.

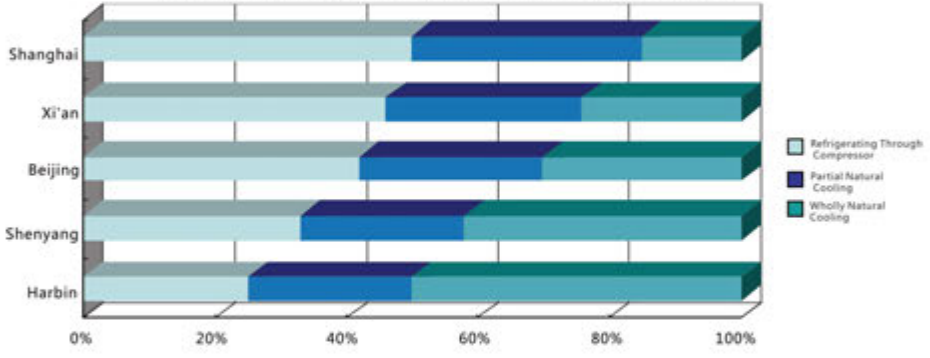
The annual OPEX is reduced by **38%**

The COP can increase by as high as 37 times !



The annual OPEX is reduced by 38%. !

Time Proportion of Different Operating Modes Based on Different Cities :

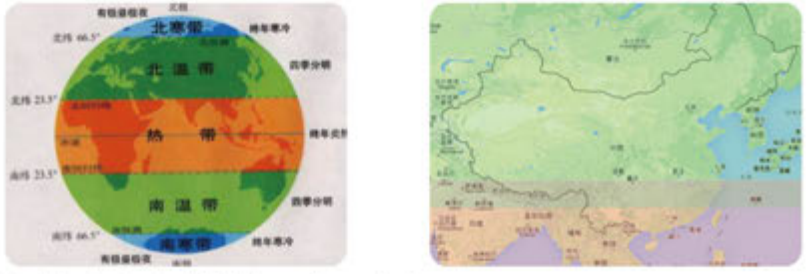


From South to North, more energy is saved and the PUE of equipment room is lower.

Applicable Places for free Cooling

In fact, free cooling can be used in the buildings that have cooling demands in the whole year, for example, large-sized data centers, switching rooms, IDC rooms, communications rooms, etc stations, and industrial uninterrupted technique devices.

Applicable Regions FOR FREE Cooling



Teopical region is not suitable for free cooling application.
For the Northern and Southern 7 latitude free higher than 23.5°, that is, the regions north to the Yangtze River of China, it is suitable to use negions with cooling.

Model		EKAS065	EKAS075	EKAS085	EKAS095	EKAS110	EKAS120	EKAS140	EKAS150	EKAS170	EKAS190
Nominal Refrigerating Capacity	kW	226.3	270.0	299.5	322.7	392.9	437.1	502.9	548.8	619.5	683.7
	USRT	64.3	76.8	85.2	91.7	111.7	124.3	143.0	156.0	176.1	194.4
	x10⁴kcal/h	19.5	23.2	25.8	27.7	33.8	37.6	43.2	47.2	53.3	58.8

Model		EKAS200	EKAS220	EKAS240	EKAS260	EKAS280	EKAS300	EKAS320	EKAS340	EKAS380	EKAS400
Nominal Refrigerating Capacity	kW	719.6	801.9	874.2	939.9	1005.7	1097.6	1168.3	1239.0	1367.3	1439.1
	USRT	204.6	228.0	248.6	267.3	286.0	312.1	332.2	352.3	388.8	409.2
	x10⁴kcal/h	61.9	69.0	75.2	80.8	86.5	94.4	100.5	106.6	117.6	123.8

Note: ■ Working conditions of free cooling chiller: outdoor dry-bulb temperature 35℃; outlet water temperature 7℃; water flow 0.172 m3/(h·kW)
■ For specfc requlicements, contact EK's Marketing Department.

Shanghai Jinqiao Data Center

Project Introduction :

It consists of 600㎡ IT equipment room, 240㎡ substation, 110㎡ diesel generator room, 52㎡ OAM space, and many offices.

Project Analysis :

Each MDC(modular data center) consissts of 12 standard cabinets.The total IT power consumption is 800 kW and the planned power consumption per cabinet is 6 kW. There are 10 MDC and the IT load of each MDC is 72 kW. When the power consumption of other devices is taken into consideration, the total cooling load is 75 kW. There are two network MDC and the IT load of each network MDC is 64 kW. When the power consumption of other devices is taken into consideration, the total cooling load is 67 kW.

General Planning :

3 MDC for phase I project (2 IT MDC and 1 network MDC)
3MDC for phase II project (3 IT MDC)
6 MDC for phase III project (5 IT MDC and 1 network MDC)
There are 12 MDC in total and each MDC consists 12 cabinets. The density per cabinet is 6 kW.
Total: 12 x 12 x 6 = 864 kW。

According to the statistics on electrical capacity, the capacity of the fofae system is calculated as follows:

Equipment Room Name	Equipment Load (kW)	Room Area (m2)	Total Load (kW)	Designed Load
Main Equipment Room	795.60	612.00	856.80	899.64
UPS Room	138.93	200.00	158.93	166.87
Battery Room	15.91	57.6	21.67	22.76
Total	869.60	1037.40	1089.27	

Free cooling chillers :

According to the power capacity and the requirements of phased construction, 3 free cooling chillers are used to operate in N+1 configuration.
In first phase, two 1+1 systems are installed.
The MDC uses inrow cooling units with cold aisce containment.

IBM Wien-Informatic centre (IBM Wien Informatic Center in Austria)

Project Introduction :

This project is one of the data centers constructed by IBM in Wien Austria.
EK's all-new displacement air supply unit and chilled-water CWK series unit are used in this project.

Cooling capacity: 600 kW

Project Analysis :

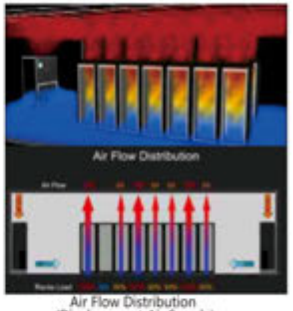
This project is one of the data centers constructed by IBM in Wien Austria. The total area of equipment rooms is about 1000㎡, the load per unit is about 600 W/m, and the total load is about 600 kW.
According to the equipment room's dissipation density, cabinet density and distribution form, the EK air conditioners use the all-new displacement air supply to guarantee good refrigerating effect and long-term stable operation of the equipment room.

Displacement air supply :

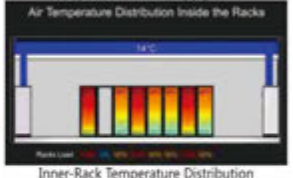
Cold air is supplied to indoor environment through the bottom grid of indoor unit. A low-temperature air layer forms in the bottom space indoor and flows into racks to cool the heating electrical devices.

Advantages :

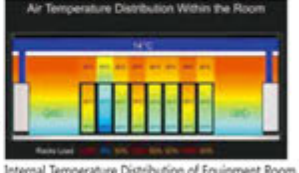
1. No raised floor, ceiling, or air duct am required
2. The inlet and outlet water temperature is the same, the refrigerating capacity increases by 27%, and the equipment investment decreases by 20%
3. The inlet water temperature of the unit increases by 40℃ and the load of refrigerating equipment decreases to guarantee more energy-saving operation
4. The unit can adjust the air supply according to the load, so as to reduce the power consumption of indoor fan.



Air Flow Distribution
(Displacement Air Supply)



Inner-Rack Temperature Distribution
(Displacement Air Supply)



Internal Temperature Distribution of Equipment Room
(Displacement Air Supply)

EUROKLIMAT®

Railway Cooling Solution for Equipment Room

Project Introduction :

The Xiang-Gui high-speed railway is also called Xiang-Gui passenger railway. It is the most important high-speed railway in Guangxi province and also the most important part of Datong-Zhanjiang railway that is known as one of China's eight vertical railways and eight horizontal railways. EK provides a total number of 115 air conditioners for the communications rooms, signal rooms, and IT equipment rooms in the railway stations along the line.

Cooling capacity: 1202.7 kW

Project Summary :

With the development of THIS railway construction, the railway communications network becomes an important tool for assuring driving safety and improving transportation efficiency. The characteristics of railways make most of communications rooms and equipment distributed along the railways and equipment rooms are usually constructed in remote areas and unattended for long time.As a guarantee to stable operation of the equipment in equipment rooms, the stable and reliable operation of air conditioning systems become more important.

All units that EK provides for this project use Copeland efficient scroll compressors that are built in indoor units. Such compressors can guarantee long-term stable operation without any fault. Outdoor condensers are made of high-strength corrosion-resistant sprayed steel plates and are applicable to various severe ambient environment (-15℃ - 48℃). The units use Italy CAREL DDC controllers that can provide fine control on indoor temperature and humidity. The controllers have RS485 interfaces that can implement centralized remote monitoring and convenient unit control and supervision. All units support power-off memory, power-on start, phase sequence tolerance, and HA switching.

EK precision air conditioners for equipment room assure a stable guarantee to your high-speed travel.

Project Name: Bayer Material Science (Qingdao) Co., Ltd.

Project Introduction : Bayer is one of the top 500 enterprises around the world.
This project is Bayer's Polyurethane Material Expansion Project (annual output: 30,000 tons) in Qingdao.
All units of this project will be used in the plants for processing precision parts

Total cooling capacity: 93.6 kW

Project Name: Sihui Rural Credit Cooperative

Project Introduction : Project Introduction: Sihui Rural Credit Cooperative is in the Dongcheng district of Sihui. In this project, EK provides a full set of air conditioners for its bank data storage and exchange equipment rooms.

Total cooling capacity: 52kW

Project Name: Continental

Project Introduction: Continental was founded in 1871 and headquartered in Hanover Germany. It is the third largest tire manufacturing enterprise around the world and the largest auto parts supplier in the Europe. This project is a reconstruction project and all units will be used in the IDC data center.

Total cooling capacity: 40.2kW

Project Name: Huma Data Center of China Telecom

Project Introduction : Project Introduction: Shanghai Huma Data Center is constructed according to the T4 standard. It belongs to IDC Data Center of China Telecom Shanghai Branch.
In this reconstruction project, EK provides chilled-water air conditioners for equipment room.

Total cooling capacity: 47kW

Project Name: Chongqing Kaixian People's Hospital

Project Introduction: The hospital is constructed according to the standards of level-3 general hospitals. It covers an area of 118 mu (1 mu = 666.67 m2) and has a building area of 65,000 m2. In this project, EK provides prevision air conditioners for its NMR room.

Total cooling capacity: 43.1kW