TAHVIEHSAM
Cooling System Solutions
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EUROKLIMAT®

DX Air Handling Unit

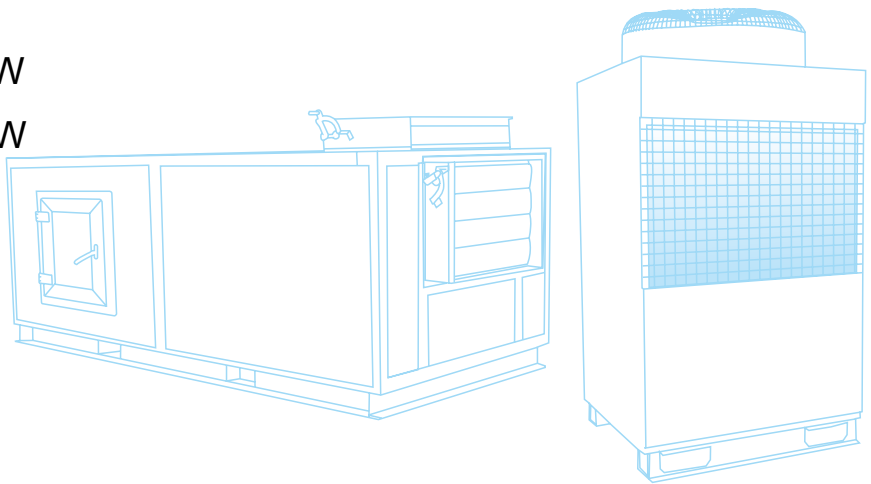
Standard Models: EKDX050-25A(R)~EKDX600-300A(R)

Low-temperature Cooling Models: EKDX050-25A~EKDX600-300A

Air Flow: 5000~60000 m^3/h

Cooling Capacity: 25 kW~300 kW

Heating Capacity: 28 kW~330 kW



We help our customers

S U C C E E D

www.euroklimat.com

EUROKLIMAT Air Conditioner, Environmental & Energy-saving Technology from Europe.

EUROKLIMAT (EK) was established in 1963 in Italy. For the past half a century, it has become famous as an energy-saving air-conditioning manufacturer in Italy and globally. Continuous innovation, new product development and top manufacturing quality are the driving force behind this growth.

EUROKLIMAT (EK) pursues the ideals of protecting the environment, providing physical comfort and adopting energy-saving into the whole process of product R&D, manufacturing and service. Our products covering residential, commercial and close control air-conditioner are manufactured according to the global generally accepted standards.

2007 Berlin-Allianz Assurance

2005 Silverstone, UK-F1 circuit

2006-2007 Helsinki- Nokia R&D centers worldwide headquarters

EK EUROKLIMAT®

EK Italia Headquarters

2011 Foxconn Group Langfang Industrial Park in Langfang

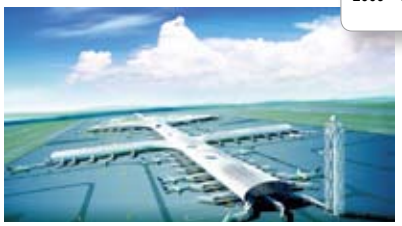
2009 ZTE Nanjing Research Center

2011 Avic Shenyang Aircraft Corporation

2009 Chongqing Xuyang Langqing Plaza

2010 Control and Propulsion Technology Building for China Aerospace Science and Technology Corporation

2009 Walmart China



2011 Terminal 3 of Shenzhen Bao'an International Airport

2010 Shenyang International Expo Center

Overview

Over half a century, EK has won favorable reputation in European and the world market for providing various high-quality air handling systems with its Europe-leading air handling technologies. Aiming at new and increasing requirements of fine, pure, quality, and reliable modern industrial products and scientific experiments, EK has innovatively launched the new-generation clean-room air handling EKDX series. This series can be widely used in the clean technology field that requires a highly clean space ranging from dozens to hundreds of square meters in industries such as precision electronics, pharmaceuticals, biological engineering, medical health care, foods, cosmetics, and military.

The EKDX clean indoor air handling unit features pleasant appearance, easy layout, flexible use, high bearing performance, and high energy efficiency. Professional automatic control solutions can be provided according to customer requirements to ensure precise, economic, and steady running of the unit. A complete series is provided, allowing free combinations. The unit runs normally at the temperature range from -10°C to 48°C, meeting requirements in various regions and industries.

Nomenclature

Indoor unit

EKDX 200 - 100 A R
1 2 3 4 5

1.	EKDX	indicates EK clean-room central air conditioning indoor unit.
2.	200	shows the unit air flow. 200 means 200 x 100 m^3/h.
3.	100	indicates the cooling capacity (in kW).
4.	A	indicates the design S/N.
5.	R	indicates the unit form. R means heat pump model; by default, the unit is a cooling model.

Standard outdoor unit:

EKAA 100 A R B
1 2 3 4 5

1.	EKAA	indicates EK clean-room central air conditioning outdoor unit.
2.	100	shows the cooling capacity code.
3.	A	indicates the design S/N.
4.	R	indicates the unit form. R means heat pump model; by default, the unit is a cooling model.
5.	B	indicates that this unit is equipped with an EKDX indoor unit.

Low-temperature cooling outdoor unit:

EKAA 100 A LC B
1 2 3 4 5

1.	EKAA	indicates EK clean-room central air conditioning outdoor unit.
2.	100	shows the cooling capacity code.
3.	A	indicates the design S/N.
4.	LC	indicates the low-temperature cooling model.
5.	B	indicates that this unit is equipped with an EKDX indoor unit.

Main specifications

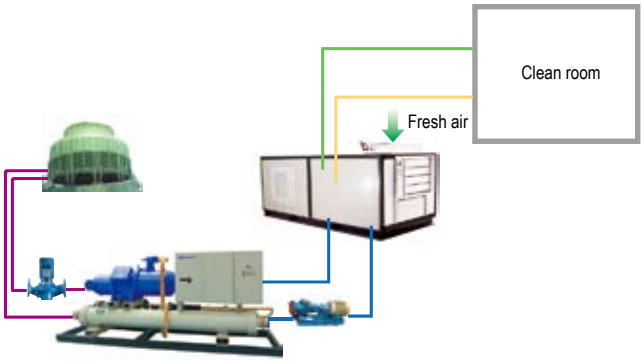
Name	Minimum net pressure difference		Air exchange times (times/h)	Cross-sectional wind speed (m/s)	Self-cleaning time (min)	Temperature (°C)	Relative humidity (%)	Minimum fresh air flow		Noise dB(A)	Lowest illumination (lx)
	Degree	For an adjacent low-level clean room						(m^3/h x person)	(times/h)		
Special clean room and special lab	++	+8	-	0.25~0.30	15	22~25	40~60	60	6	52	350
Standard clean room	++	+8	30~36	-	25	22~25	40~60	60	6	50	350
Normal clean room	+	+5	18~22	-	30	22~25	35~60	60	4	50	350
Special preparation room	+	+5	17~20	-	-	21~27	60	-	3	60	150
Sterilized dressing and instruments, one-off articles room, and precision instruments storage room	+	+5	10~13	-	-	21~27	60	-	3	60	150
Preparation room (sterilization)	+	+5	10~13	-	-	21~27	60	30	3	60	200
Scrub room	0~+	0	10~13	-	-	21~27	65	-	3	55	150
Clean corridor	0~+	0	10~13	-	-	21~27	65	-	3	52	150
Change room	0~+	-	8~10	-	-	21~27	30~60	-	3	60	200
Recovery room	0	0	8~10	-	-	22~25	30~60	-	4	50	200
Cleaning corridor	0~+	0~+5	8~10	-	-	21~27	65	-	3	55	150

Note: 0~+5 means that any number other than 0 in this range is available.

Features of a traditional clean-room air handling unit

Common design of a clean-room air handling unit is as follows: A water-cooled (air-cooled) central air-conditioner provides the cooling and heating source, and an endpoint air handling unit completes air handling. Such a unit is mainly applicable to large-area clean scenarios. This unit has the following disadvantages for a clean room:

- The system design is complicated and independent running is not supported. A special air-conditioning equipment room must be provided, requiring a large construction use area.
- The entire system requires complicated control, long construction period, and high construction cost.
- The chilled and cooling water system features complicated design, where water leakage easily occurs. In addition, regular maintenance by professional personnel is required, and a fault of the major unit affects running of the entire system.
- The startup current of the major unit is large, the installation cables are long, and the goods supply period for the major unit is long.

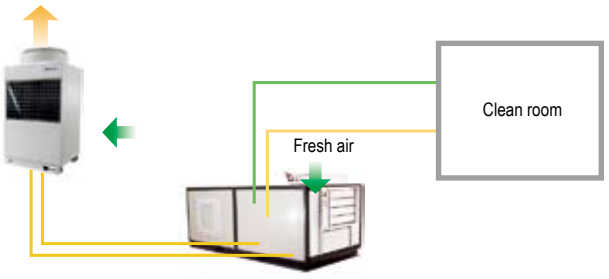


Traditional clean-room air handling unit

Features of EK clean-room air handling unit

EK clean-room air handling unit is specifically designed for clean rooms. It provides a built-in cooling and heating source, integrates air handling and automatic control functions, and has the following features: low investment, simple system, efficient running, and easy installation and maintenance.

- The unit has a simple design and easy control, and is suitable for independent use.
- The indoor unit can be directly mounted to the ceiling or in an attached room, not requiring a special air-conditioner room.
- No chilled or cooling water system is required. The control is simple. The project can be completed phase by phase at a low construction cost.
- The maintenance is simple. Maintenance of a single unit requires only the space of the clean room.
- The unit can run at temperature ranging from -10°C to 48°C.



EK clean-room air handling unit

Consolidated Structure

The unit features a compact structure, easy assembly, and solid seal. It adopts special seal glue handling, providing air leakage rate as low as 0.3%. The 30mm (standard)/50mm (optional) enhanced high-pressure non-fluorine polyurethane double-layer foamed panel delivers a solid insulation performance and high bearing capacity, meeting requirements of a purifying unit for high residual pressure.

Smart Control

The unit adopts integrated digital electromechanical design and is equipped with a smart controller, providing multiple control functions such as constant temperature, constant humidity, function setting, fault alarm, and remote monitoring to ensure safe and reliable unit running.

High Efficient and Low Noise

The outdoor unit adopts brand-name fully hermetic volute compressors that deliver high efficiency, low noise, and strong resistance to hydraulic shock and run at temperature ranging from -10°C to 48°C, meeting cleaning requirements in various regions and scenarios.
The indoor unit adopts imported high-quality centrifugal fans with double air intakes (model selection of the fans has passed AMCA certification) or unhoused fans (optional), and is equipped with dedicated anti-vibration measures for quiet running.

Prevention of Cold Bridge

The unit adopts inner skeleton design and high-strength foam seals and tight repair door structure, effectively preventing cold bridge between wall plates, between wall plate and inner skeleton, or at the repair door.
The panel of the unit is wrapped with solid insulating UPVC plastic at all sides, avoiding direct contact with thermal conductive parts, providing T1 class insulation performance, eliminating cold bridge, and preventing cooling loss.

Load Matching

The evaporation section of the indoor unit can be equipped with a bypass valve. The direct evaporation coil supports combination with multiple cooling capacity options according to different conditions for a wide range of fresh air/air return scenarios. The outdoor unit of a large-capacity cooling unit adopts modular design, allowing differential energy regulation during use, lowering the operating cost, and reducing shock on the grid at startup.

High-Quality Filters

The unit adopts a high-quality multi-level (primary, medium, sub-high, and high efficiency) air filtering system. The filtering class meets the requirements of a special clean room, and can effectively suppress organic compounds on the filtering paper.

Sterilization

The indoor unit adopts a dry water drainage tray that has no residual condensed water and prevents bacteria. A stainless steel water tray is optional. In addition, a sterilization device such as efficient UV sterilization lamp and ozone generator can be configured as required to eliminate bacteria and effectively suppress microbes in the system.

Purification Design

A special frame structure ensures smooth surface in the unit. The inner stainless steel surface and an efficient heat exchanger (optional) made of hydrophilic aluminum foil can effectively prevent dust accumulation and re-entrainment. The special design and materials can resist disinfectant and air erosion and are favorable for regular cleaning and sterilization.

Saving Investment

The unit has a built-in cooling and heating source and does not require a chilled or cooling water system, greatly saving user investment, and making the unit structure simple and compact. No dedicated equipment room is required. The unit can run immediately after cabling and piping. The installation, use, and maintenance are easy.

Multi-System Design

The outdoor unit adopts modular design and starts level by level, efficiently reducing shock on the grid. Multiple levels of cooling are provided, allowing differential energy regulation under different load conditions and reducing the operating cost. The compressors wear in a balanced manner, prolonging the lifecycle.

Models: EKDX050-25A(R)~EKDX125-62.5A(R)

Model		Indoor unit	EKDX050-25A/ EKDX050-25AR	EKDX075-37.5A/ EKDX075-37.5AR	EKDX100-25A/ EKDX100-25AR	EKDX100-50A/ EKDX100-50AR	EKDX125-31A/ EKDX125-31AR	EKDX125-62.5A/ EKDX125-62.5AR
		Outdoor unit	EKAA100AB/ EKAA100ARB	EKAA150AB/ EKAA150ARB	EKAA100AB/ EKAA100ARB	2xEKAA100AB/ 2xEKAA100ARB	EKAA125AB/ EKAA125ARB	2xEKAA125AB/ 2xEKAA125ARB
Nominal cooling capacity (1)		kW	25	37.5	25	50	31	62.5
Nominal heating capacity (1)		kW	28	41.3	28	55	34.1	68
Nominal cooling capacity (2)		kW	--	32.5	21	44	29	58
Nominal heating capacity (2)		kW	--	36	24	49	32	63
Air flow		m^3/h	5000	7500	10000	10000	12500	12500
EKDM air handling unit model corresponding to the external height and width			EKDM0507H	EKDM0510H	EKDM0611H	EKDM0611H	EKDM0810H	EKDM0810H
Refrigerant model			R22					
Outer dimensions of indoor unit	Length	mm	As per the number of function sections					
	Height	mm	850	850	1010	1010	1330	1330
	Width	mm	1170	1650	1810	1810	1650	1650
Outer dimensions of outdoor unit (W × D × H)		mm	990x840x1840	1290x840x1840	990x840x1840	2x990x840x1840	990x840x1840	2x990x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute					
Outdoor unit weight		kg	265 / 280	285 / 300	265 / 280	2x265 / 2x280	270 / 285	2x270 / 2x285
Power supply of outdoor unit			380V/3N~/50HZ					
Cooling input power of outdoor unit		kW	9.33 / 9.4	16.13 / 17.47	9.33 / 9.4	20.41 / 20.17	12.1 / 12.25	24.2 / 24.5
Heating input power of outdoor unit		kW	-- / 9.75	-- / 14.7	-- / 9.75	-- / 20.3	-- / 10	-- / 20
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	28.6(1-1/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)
Connect mode			Soldering					

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (1) is measured under the following conditions: The indoor dry bulb reads 20 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (2) is measured under the following conditions: The indoor dry bulb reads 24 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- The fresh air flow of the unit cannot be larger than 20%.

Models: EKDX150-37.5A(R)~EKDX250-125A(R)

Model		Indoor unit	EKDX150-37.5A/ EKDX150-37.5AR	EKDX150-75A/ EKDX150-75AR	EKDX200-50A/ EKDX200-50AR	EKDX200-100A/ EKDX200-100AR	EKDX250-62A/ EKDX250-62AR	EKDX250-125A/ EKDX250-125AR
		Outdoor unit	EKAA150AB/ EKAA150ARB	2xEKAA150AB/ 2xEKAA150ARB	2xEKAA100AB/ 2xEKAA100ARB	4xEKAA100AB/ 4xEKAA100ARB	2xEKAA125AB/ 2xEKAA125ARB	4xEKAA125AB/ 4xEKAA125ARB
Nominal cooling capacity (1)		kW	37.5	75	50	100	62	125
Nominal heating capacity (1)		kW	41.3	82.5	55	110	68	137.5
Nominal cooling capacity (2)		kW	32.5	65	44	84.5	58	104
Nominal heating capacity (2)		kW	36	71.5	49	93	63	114
Air flow		m^3/h	15000	15000	20000	20000	25000	25000
EKDM air handling unit model corresponding to the external height and width			EKDM0910H	EKDM0910H	EKDM1011H	EKDM1011H	EKDM1013H	EKDM1013H
Refrigerant model			R22					
Outer dimensions of indoor unit	Length	mm	As per the number of function sections					
	Height	mm	1490	1490	1650	1650	1650	1650
	Width	mm	1650	1650	1810	1810	2130	2130
Outer dimensions of outdoor unit (W × D × H)		mm	1290x840x1840	2x1290x840x1840	2x990x840x1840	4x1290x840x1840	2x1290x840x1840	4x1290x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute					
Outdoor unit weight		kg	285 / 300	2x285 / 2x300	2x265 / 2x280	4x265 / 4x280	2x270 / 2x285	4x270 / 4x285
Power supply of outdoor unit			380V/3N~/50HZ					
Cooling input power of outdoor unit		kW	16.13 / 17.47	32.26 / 34.94	20.41 / 20.17	40.82 / 40.34	24.2 / 24.5	48.4 / 49.0
Heating input power of outdoor unit		kW	-- / 14.7	-- / 29.4	-- / 20.3	-- / 40.6	-- / 20	-- / 40
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	34.9(1-3/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)
Connect mode			Soldering					

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (1) is measured under the following conditions: The indoor dry bulb reads 20 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (2) is measured under the following conditions: The indoor dry bulb reads 24 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- The fresh air flow of the unit cannot be larger than 20%.

Models: EKDX300-75A(R)~EKDX600-300A(R)

Model		Indoor unit	EKDX300-75A/ EKDX300-75AR	EKDX300-150A/ EKDX300-150AR	EKDX400-200A/ EKDX400-200AR	EKDX500-250A/ EKDX500-250AR	EKDX600-300A/ EKDX600-300AR
		Outdoor unit	2xEKAA150AB/ 2xEKAA150ARB	4xEKAA150AB/ 4xEKAA150ARB	8xEKAA100AB/ 8xEKAA100ARB	8xEKAA125AB/ 8xEKAA125ARB	8xEKAA150AB/ 8xEKAA150ARB
Nominal cooling capacity (1)		kW	75	150	200	250	300
Nominal heating capacity (1)		kW	82.5	165	220	275	330
Nominal cooling capacity (2)		kW	65	126	169	208	252
Nominal heating capacity (2)		kW	71.5	138	186	228	276
Air flow		m^3/h	30000	30000	40000	50000	60000
EKDM air handling unit model corresponding to the external height and width			EKDM1312H	EKDM1312H	EKDM1022H	EKDM1026H	EKDM1324H
Refrigerant model			R22				
Outer dimensions of indoor unit	Length	mm	As per the number of function sections				
	Height	mm	2130	2130	1650	1650	2130
	Width	mm	1970	1970	3620	4260	3940
Outer dimensions of outdoor unit (W × D × H)		mm	2x1290x840x1840	4x1290x840x1840	8x990x840x1840	8x990x840x1840	8x1290x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute				
Outdoor unit weight		kg	2x285 / 2x300	4x285 / 4x300	8x265 / 8x280	8x270 / 8x285	8x285 / 8x300
Power supply of outdoor unit			380V/3N~/50HZ				
Cooling input power of outdoor unit		kW	32.26 / 34.94	64.52 / 69.88	81.64 / 80.68	96.8 / 98.0	129.04 / 139.76
Heating input power of outdoor unit		kW	-- / 29.4	-- / 58.8	-- / 81.2	-- / 80	-- / 117.6
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	34.9(1-3/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	34.9(1-3/8)
Connect mode			Soldering				

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (1) is measured under the following conditions: The indoor dry bulb reads 20 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C. The nominal heating capacity (2) is measured under the following conditions: The indoor dry bulb reads 24 °C and the outdoor dry/wet bulb reads 7/6 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- The fresh air flow of the unit cannot be larger than 20%.

Models: EKDX050-25A~EKDX100-50A

Model		Indoor unit	EKDX050-25A	EKDX050-50A(*)	EKDX075-37.5A	EKDX075-75A(*)	EKDX100-25A	EKDX100-50A
		Outdoor unit	EKAA100ALCB	2xEKAA100ALCB	EKAA150ALCB	3xEKAA100ALCB	EKAA100ALCB	2xEKAA100ALCB
Nominal cooling capacity (1)		kW	--	32	32.5	54	21	44
Nominal cooling capacity (2)		kW	25	50	37.5	75	25	50
Air flow		m^3/h	5000	5000	7500	7500	10000	10000
EKDM air handling unit model corresponding to the external height and width			EKDM0507H	EKDM0507H	EKDM0510H	EKDM0610H	EKDM0611H	EKDM0611H
Refrigerant model			R22					
Outer dimensions of indoor unit	Length	mm	As per the number of function sections					
	Height	mm	850	850	850	1010	1010	1010
	Width	mm	1170	1170	1650	1650	1810	1810
Outer dimensions of outdoor unit (W × D × H)		mm	990x840x1840	2x990x840x1840	1290x840x1840	3x990x840x1840	990x840x1840	2x990x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute					
Outdoor unit weight		kg	265	2x265	285	3x265	265	2x265
Power supply of outdoor unit			380V/3N~/50HZ					
Cooling input power of outdoor unit		kW	9.33	20.41	16.13	30.62	9.33	20.41
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	28.6(1-1/8)	28.6(1-1/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)
Connect mode			Soldering					

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- Constant-temperature constant-humidity units must use low-temperature outdoor units.
- An asterisk (*) means mixed conditions with 50% or more fresh air. The unit is a cooling unit, and a low-temperature outdoor unit must be used.
- For a unit without an asterisk (*), the fresh air flow cannot exceed 20%.

Models: EKDX100-100A~EKDX150-37.5A

Model		Indoor unit	EKDX100-100A(*)	EKDX125-31A	EKDX125-62.5A	EKDX125-125A(*)	EKDX150-37.5A
		Outdoor unit	4xEKAA100ALCB	EKAA125ALCB	2xEKAA125ALCB	4xEKAA125ALCB	EKAA150ALCB
Nominal cooling capacity (1)		kW	61	29	58	94.5	37.5
Nominal cooling capacity (2)		kW	100	31	62.5	125	32.5
Air flow		m^3/h	10000	12500	12500	12500	15000
EKDM air handling unit model corresponding to the external height and width			EKDM0712H	EKDM0810H	EKDM0810H	EKDM0911H	EKDM0910H
Refrigerant model			R22				
Outer dimensions of indoor unit	Length	mm	As per the number of function sections				
	Height	mm	1170	1330	1330	1490	1490
	Width	mm	1970	1650	1650	1810	1650
Outer dimensions of outdoor unit (W × D × H)		mm	4x990x840x1840	990x840x1840	990x840x1840	990x840x1840	1290x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute				
Outdoor unit weight		kg	2x265	270	2x270	4x270	285
Power supply of outdoor unit			380V/3N~/50HZ				
Cooling input power of outdoor unit		kW	40.82	12.1	24.2	48.4	16.13
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)
Connect mode			Soldering				

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- Constant-temperature constant-humidity units must use low-temperature outdoor units.
- An asterisk (*) means mixed conditions with 50% or more fresh air. The unit is a cooling unit, and a low-temperature outdoor unit must be used.
- For a unit without an asterisk (*), the fresh air flow cannot exceed 20%.

Models: EKDX150-75A~EKDX250-125A

Model		Indoor unit	EKDX150-75A	EKDX150-150A(*)	EKDX200-50A	EKDX200-100A	EKDX250-62A	EKDX250-125A
		Outdoor unit	2xEKAA150ALCB	4xEKAA150ALCB	2xEKAA100ALCB	4xEKAA100ALCB	2xEKAA125ALCB	4xEKAA125ALCB
Nominal cooling capacity (1)		kW	75	150	50	100	62	125
Nominal cooling capacity (2)		kW	65	105	44	84.5	58	104
Air flow		m^3/h	15000	15000	20000	20000	25000	25000
EKDM air handling unit model corresponding to the external height and width			EKDM0910H	EKDM0913H	EKDM1011H	EKDM1011H	EKDM1013H	EKDM1013H
Refrigerant model			R22					
Outer dimensions of indoor unit	Length	mm	As per the number of function sections					
	Height	mm	1490	1490	1650	1650	1650	1650
	Width	mm	1650	2130	1810	1810	2130	2130
Outer dimensions of outdoor unit (W × D × H)		mm	1290x840x1840	1290x840x1840	990x840x1840	990x840x1840	990x840x1840	990x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute					
Outdoor unit weight		kg	2x285	4x285	2x265	2x265	2x270	4x270
Power supply of outdoor unit			380V/3N~/50HZ					
Cooling input power of outdoor unit		kW	32.26	64.52	20.41	40.82	24.2	48.4
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	34.9(1-3/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)	28.6(1-1/8)
Connect mode			Soldering					

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- Constant-temperature constant-humidity units must use low-temperature outdoor units.
- An asterisk (*) means mixed conditions with 50% or more fresh air. The unit is a cooling unit, and a low-temperature outdoor unit must be used.
- For a unit without an asterisk (*), the fresh air flow cannot exceed 20%.

Models: EKDX300-75A~EKDX600-300A

Model		Indoor unit	EKDX300-75A	EKDX300-150A	EKDX400-200A	EKDX500-250A	EKDX600-300A
		Outdoor unit	2xEKAA150ALCB	4xEKAA150ALCB	8xEKAA100ALCB	8xEKAA125ALCB	8xEKAA150ALCB
Nominal cooling capacity (1)		kW	75	150	200	250	300
Nominal cooling capacity (2)		kW	65	126	169	208	252
Air flow		m^3/h	30000	30000	40000	50000	60000
EKDM air handling unit model corresponding to the external height and width			EKDM1312H	EKDM1312H	EKDM1022H	EKDM1026H	EKDM1324H
Refrigerant model			R22				
Outer dimensions of indoor unit	Length	mm	As per the number of function sections				
	Height	mm	2130	2130	1650	1650	2130
	Width	mm	1970	1970	3620	4260	3940
Outer dimensions of outdoor unit (W × D × H)		mm	1290x840x1840	1290x840x1840	990x840x1840	990x840x1840	1290x840x1840
Compressor of outdoor unit		Model	Fully hermetic volute				
Outdoor unit weight		kg	2x285	4x285	8x265	8x270	8x285
Power supply of outdoor unit			380V/3N~/50HZ				
Cooling input power of outdoor unit		kW	32.26	64.52	81.62	96.8	129.04
Connecting pipe specifications	Liquid pipe	φmm(in.)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)	15.88(5/8)
	Gas pipe	φmm(in.)	34.9(1-3/8)	34.9(1-3/8)	28.6(1-1/8)	28.6(1-1/8)	34.9(1-3/8)
Connect mode			Soldering				

Note:

- The nominal cooling capacity (1) is measured under the following conditions: The indoor dry/wet bulb reads 27/19 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity (2) is measured under the following conditions: The indoor dry/wet bulb reads 24/17 °C and the outdoor dry/wet bulb reads 35/24 °C.
- The nominal cooling capacity does not consider heat losses of the fan motor of the indoor unit. The external static pressure can be customized, in which case the power of the air supply motor changes accordingly.
- The specifications are subject to change due to product improvements without prior notice.
- Constant-temperature constant-humidity units must use low-temperature outdoor units.
- An asterisk (*) means mixed conditions with 50% or more fresh air. The unit is a cooling unit, and a low-temperature outdoor unit must be used.
- For a unit without an asterisk (*), the fresh air flow cannot exceed 20%.

Relationship between cooling capacity change coefficient and indoor/outdoor conditions

Energy coefficient (ε) / Outdoor dry bulb reading (°C) \ Indoor wet bulb reading (°C)	17	18	19	20	21	22	23
25	1.093	1.150	1.173	1.192	1.210	1.226	1.233
30	1.036	1.091	1.114	1.135	1.152	1.166	1.177
35	1	1.034	1.064	1.091	1.114	1.135	1.152
40	0.921	0.963	1	1.034	1.064	1.091	1.114
43	0.826	0.876	0.921	0.963	1	1.034	1.064

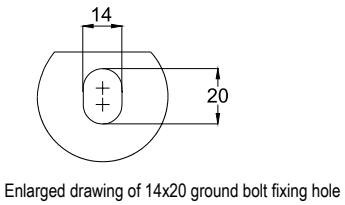
Relationship between heating capacity change coefficient and indoor/outdoor conditions

Energy coefficient (ε) / Outdoor dry bulb reading (°C) \ Indoor wet bulb reading (°C)	14	12	10	8	6	4	2	0	-2	-4	-6	-8
10	1.236	1.189	1.155	1.118	1.079	1.036	0.991	0.942	0.89	0.835	0.776	0.713
15	1.195	1.161	1.125	1.086	1.041	0.997	0.948	0.896	0.842	0.784	0.721	0.658
20	1.17	1.131	1.093	1.051	1.021	0.955	0.904	0.849	0.791	0.729	0.663	0.6
24	1.138	1.099	1.054	1.015	1	0.91	0.856	0.8	0.737	0.672	0.6	0.539

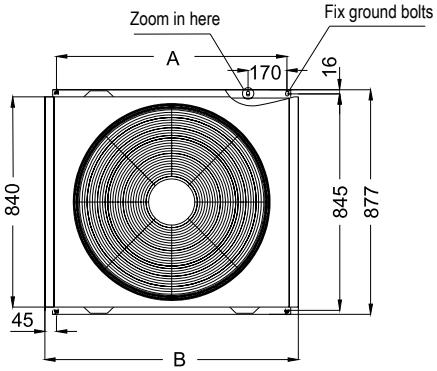
Note:

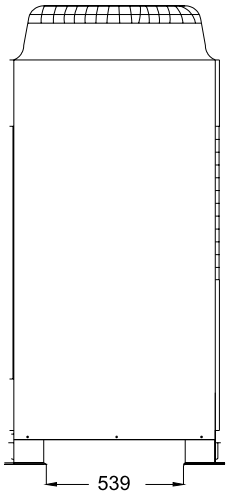
- During cooling operation, the readings of the indoor dry bulb and outdoor wet bulb have a small impact on the cooling capacity. On the contrary, during heating operation, the readings of the indoor wet bulb and outdoor dry bulb have a small impact on the heating capacity. To better show the relationship between indoor/outdoor conditions and cooling/heating capacity, the preceding table does not include these impacts.
- The preceding table shows the approximate change curve of the EKDX series air conditioner with the change of indoor/outdoor conditions, and serves only as reference for customers during model selection.
- If the cooling (or heating) capacity in nominal conditions is Q_0, and the energy coefficient in a certain condition is ε, the actual cooling (or heating) capacity in the corresponding condition Q_1 is measured as follows: $Q_1 = Q_0 \times \varepsilon$.

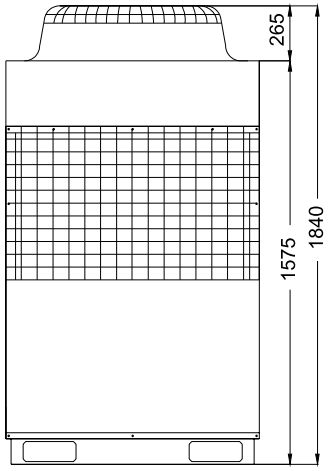
Outdoor unit: EKAA100AB/EKAA100ARB/EKAA100ALCB
EKAA125AB/EKAA125ARB/EKAA125ALCB
EKAA150AB/EKAA150ARB/EKAA150ALCB



Enlarged drawing of 14x20 ground bolt fixing hole







Measurement: mm

Model	A	B
EKAA100AB / EKAA100ARB / EKAA100ALCB	900	990
EKAA125AB / EKAA125ARB / EKAA125ALCB	900	990
EKAA150AB / EKAA150ARB / EKAA150ALCB	1200	1290

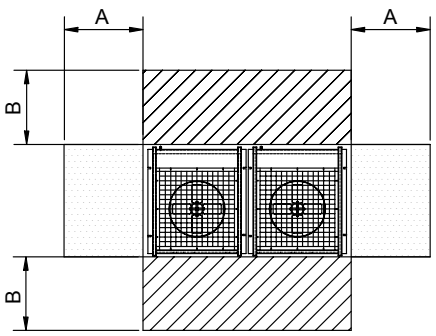
Outdoor unit installation

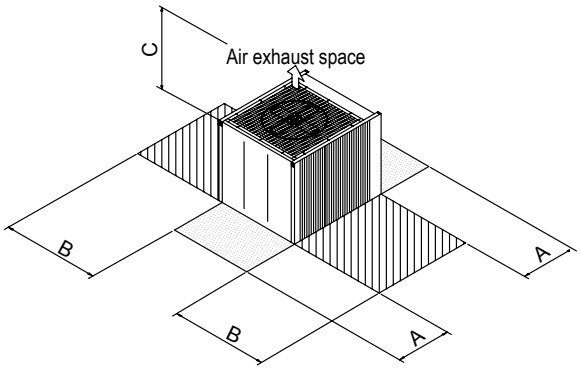
- The unit should be installed in a position so that the hot air that passes through the condenser is not re-sucked into the unit or the unit does not suck in the hot air exhausted by another unit, and there is sufficient space for maintaining the unit.
- No obstacles should exist on the unit air exhaust or suction channel.
- The unit should be installed in a well-ventilated place to blow away hot air exhausted by the unit and allow low-temperature air in.
- The unit should be installed at a base that is solid and horizontal and has sufficient strength to bear the weight of the unit and allow vibration during operation.
- The unit should not be installed in a dirty or greasy environment.

Range of unit installation position (minimum gap)

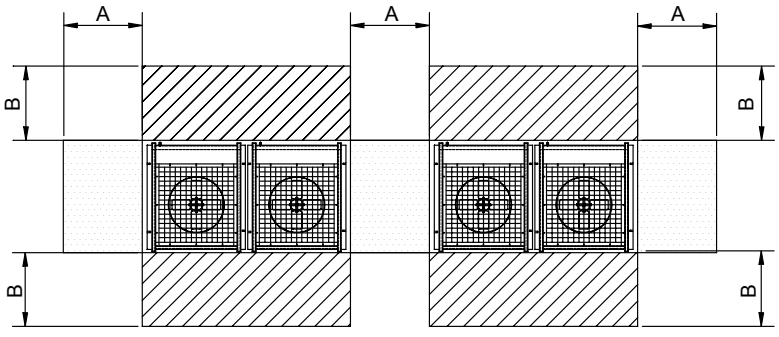
Measurement: mm

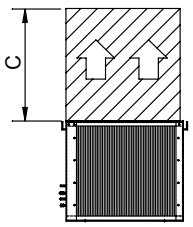
Model	EKAA100AB EKAA100ARB EKAA100ALCB	EKAA125AB EKAA125ARB EKAA125ALCB	EKAA150AB EKAA150ARB EKAA150ALCB	2xEKAA100AB 2xEKAA100ARB 2xEKAA100ALCB	4xEKAA100AB 4xEKAA100ARB 4xEKAA100ALCB	4xEKAA125AB 4xEKAA125ARB 4xEKAA125ALCB	4xEKAA150AB 4xEKAA150ARB 4xEKAA150ALCB
A	500	500	700	700	1000	1000	1000
B	700	900	900	700	700	900	900
C	2200	2500	2500	2200	2200	2500	2500





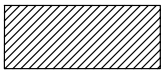
Upward air supply



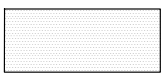


Remarks:

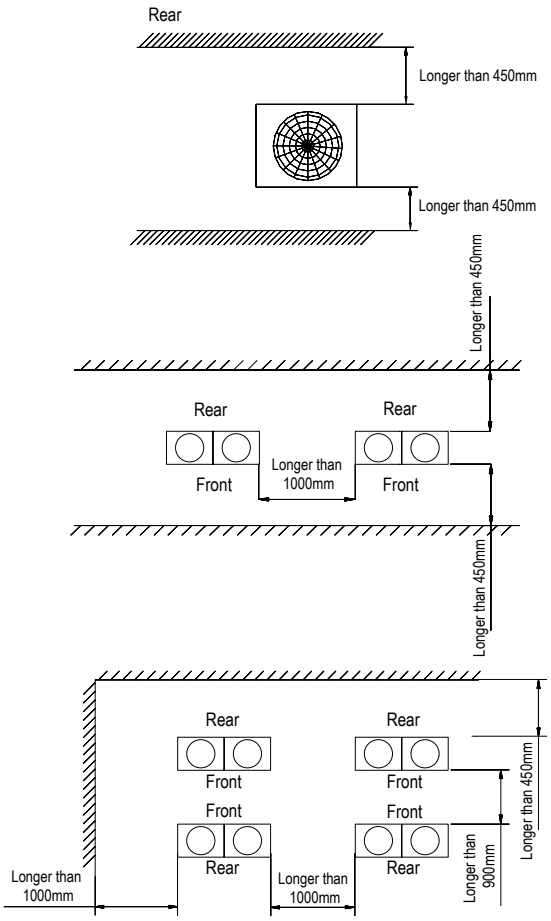
Air intake channel

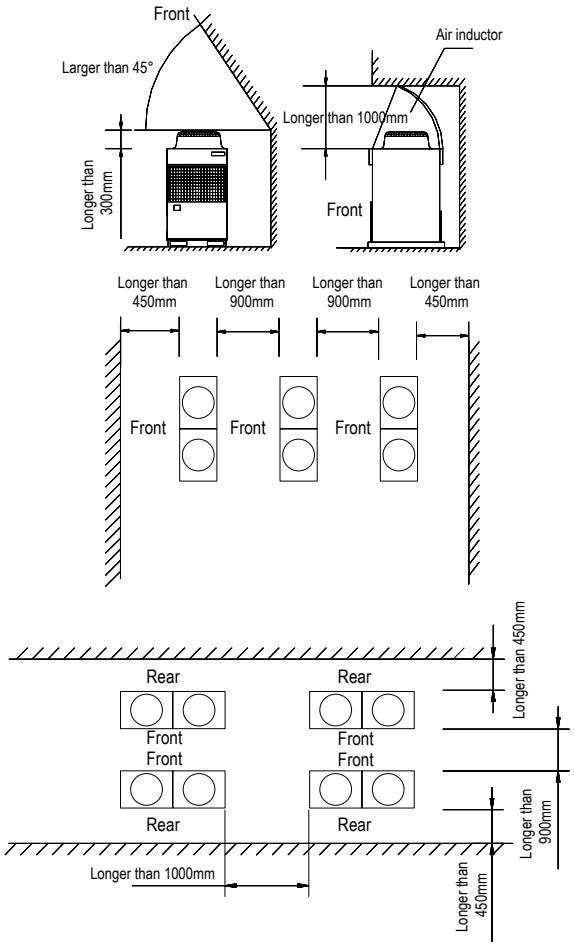


Repair channel



Outdoor unit: EKAA100AB / EKAA100ARB / EKAA100ALCB
EKAA125AB / EKAA125ARB / EKAA125ALCB
EKAA150AB / EKAA150ARB / EKAA150ALCB

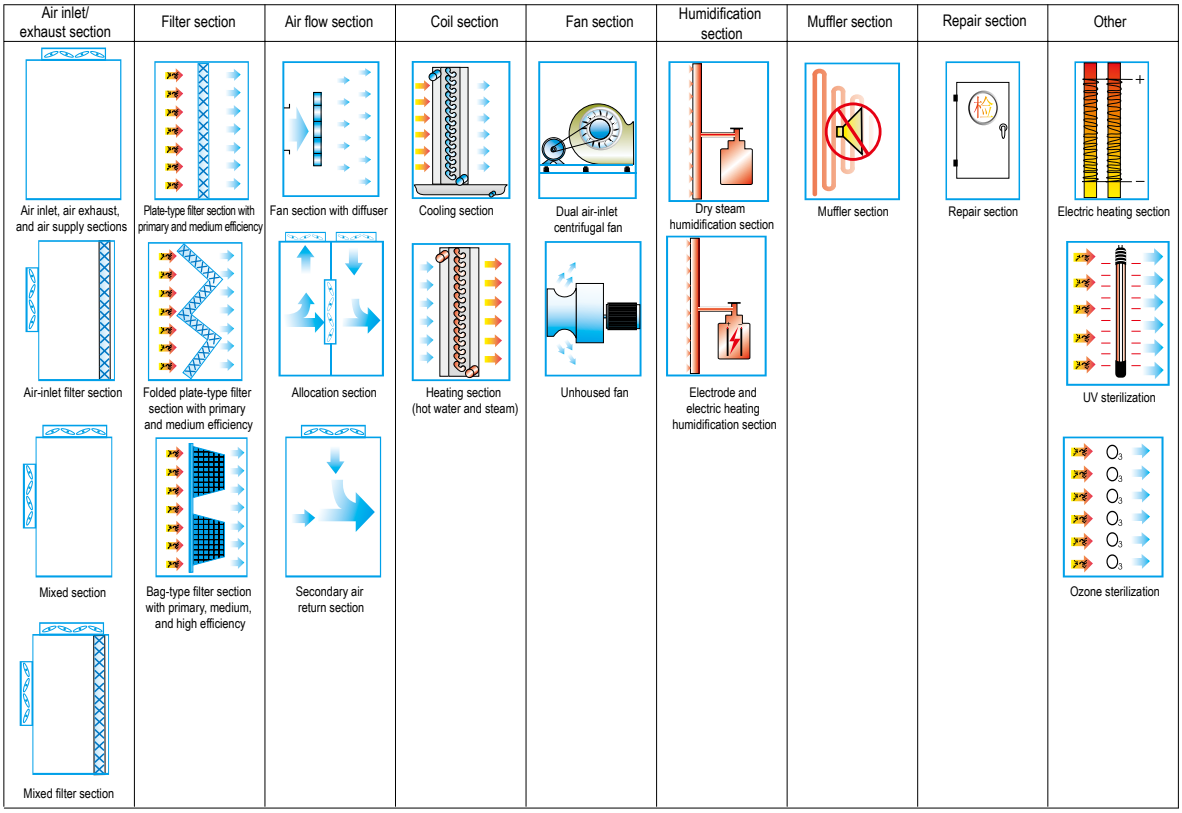




Operating Conditions

- The unit can work in heating mode under an outdoor ambient temperature ranging from -10°C to 27°C, and work in cooling mode under an outdoor ambient temperature ranging from 18°C to 48°C.
- The outdoor ambient temperature range for low-temperature and constant-temperature and constant-humidity units is from -10°C to 48°C.

Function sections of an indoor unit



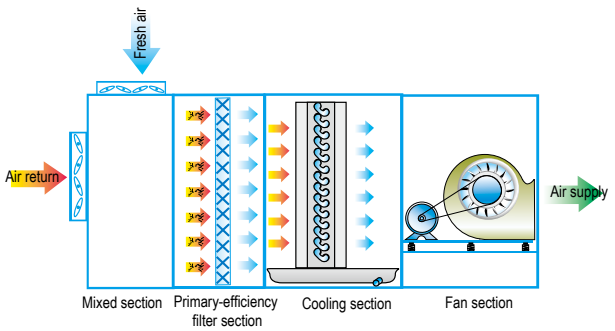
Length of an indoor unit

Indoor unit model	Function section length												
	Mixed section	Primary-efficiency filtering	Medium-efficiency filtering	Direct-expansion coil	Heating coil	Electric heating	Humidification section	Fan section	Fan section with diffuser	Muffler section	Air supply section	Allocation section	Repair section
EKDX050-12.5AR	4M	1M	3M	4M	2M	2~4M	4M	7M	4M	5M	4M	7M	4M
EKDX050-25AR	4M	1M	3M	4M	2M	2~4M	4M	7M	4M	5M	4M	7M	4M
EKDX075-37.5AR	4M	1M	3M	4M	2M	2~4M	4M	5M	4M	5M	4M	7M	4M
EKDX075-25AR	4M	1M	3M	4M	2M	2~4M	4M	8M	4M	5M	4M	7M	4M
EKDX100-50AR	4M	1M	3M	4M	2M	2~4M	4M	8M	4M	5M	4M	7M	4M
EKDX125-31AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX125-62.5AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX150-37.5AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX150-75AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX200-50AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX200-100AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX250-62.5AR	4M	1M	3M	5M	2M	2~4M	4M	11M	4M	5M	4M	9M	4M
EKDX250-125AR	4M	1M	3M	5M	2M	2~4M	4M	11M	4M	5M	4M	9M	4M
EKDX300-75AR	5M	1M	3M	5M	2M	2~4M	4M	11M	4M	5M	5M	11M	4M
EKDX300-150AR	5M	1M	3M	5M	2M	2~4M	4M	13M	4M	5M	5M	11M	4M
EKDX400-200AR	4M	1M	3M	5M	2M	2~4M	4M	10M	4M	5M	4M	9M	4M
EKDX500-250AR	4M	1M	3M	5M	2M	2~4M	4M	11M	4M	5M	4M	9M	4M
EKDX600-300AR	5M	1M	3M	5M	2M	2~4M	4M	13M	4M	5M	5M	11M	4M

Note: A heat pump unit is taken for example. Where, 1M = 160 mm.

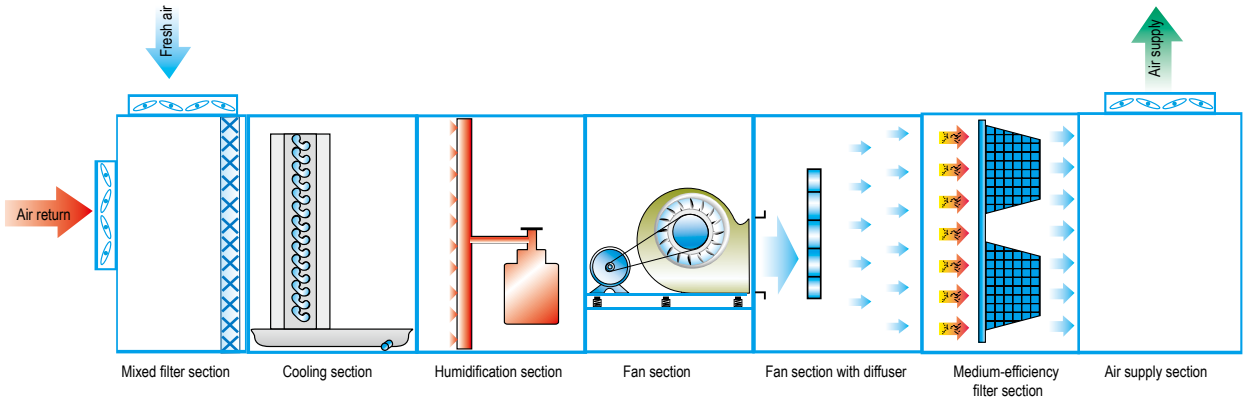
Applicable to scenarios with common cleanness requirements (class 100 thousand and class 300 thousand)

The unit adopts a negative pressure structure and is equipped with a basic direct-expansion coil. An air handling unit (with wet film for humidification) with standard primary-efficiency filter (G3) and medium-efficiency filter (F5) can process air return and mixed conditions. With a sub high-efficient or high-efficient filter at the end of the clean room, the unit is suitable for an ordinary clean room project with temperature control and low requirements for cleanness.



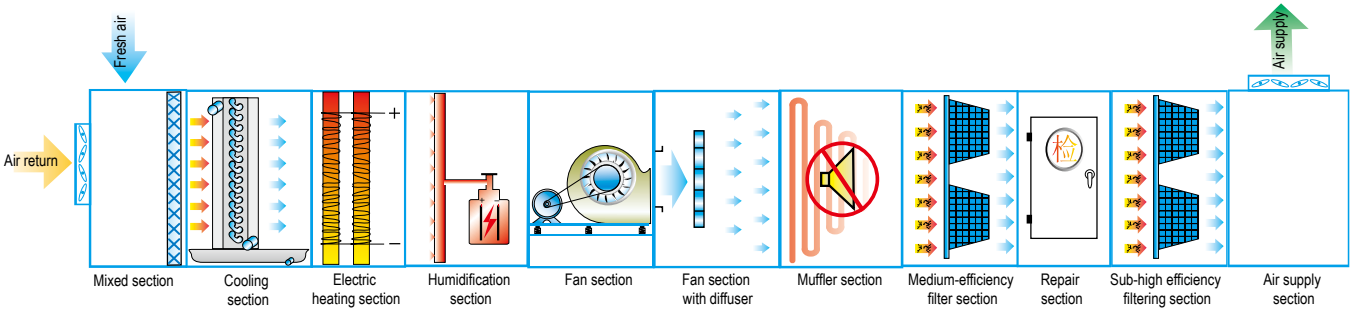
Applicable to scenarios with high requirements for cleanness (class one thousand and class ten thousand)

The unit adopts a positive pressure structure, and is equipped with a basic direct-expansion coil and dry steam humidifier. The unit is also equipped with a primary-efficient filter (G4) and a medium-efficient filter (F8). The medium-efficient filter is located at the positive pressure section, effectively protecting the high-efficient or ultra high-efficient filter at the end. In addition, a sub high-efficient filter can be equipped. This unit is suitable for scenarios with high requirements for cleanness.



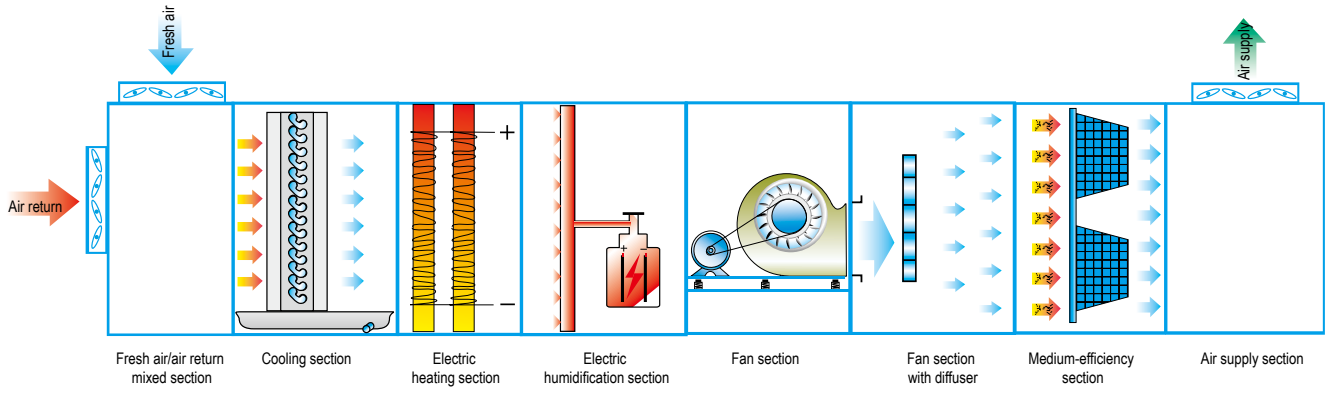
Applicable to scenarios with constant-temperature constant-humidity control requirements

This unit is equipped with high-quality DDC controllers, basic direct-expansion coils, a primary-efficient filter (G4) and a medium-efficient filter (F8), pressure difference display control, non-step electric heating, a high-quality proportional electrode humidifier, and smart EK air-conditioner control solution, meeting requirements of a constant-temperature project for different granularity temperature and humidity control.



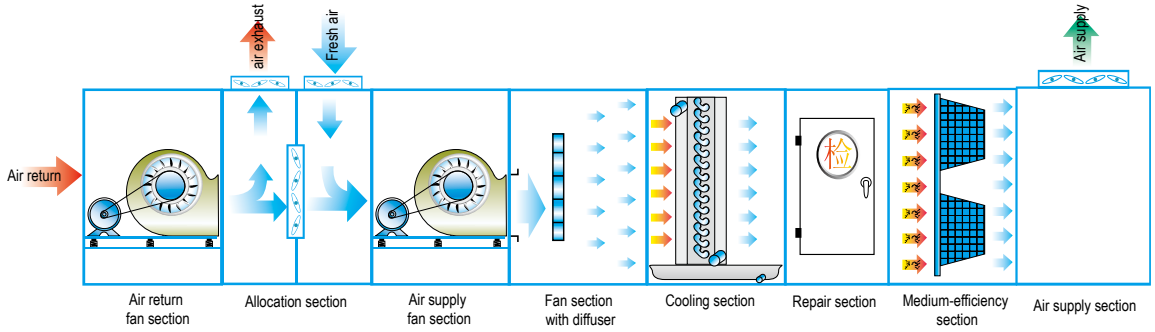
Applicable to scenarios with high requirements for cleanness (class ten and class one hundred)

The unit adopts three-level filtering (or performs two-level filtering for fresh air), and is equipped with cooling section, a primary-efficient filter (G4), a medium-efficient filter (F8), a sub high-efficient filter (H11), electric heating, imported electric humidifier, and a clean-room muffler. It works with a high-efficient or ultra high-efficient filter at the end of the clean room to meet requirements of a clean room project for high cleanness class, constant temperature and humidity, and low-noise control.



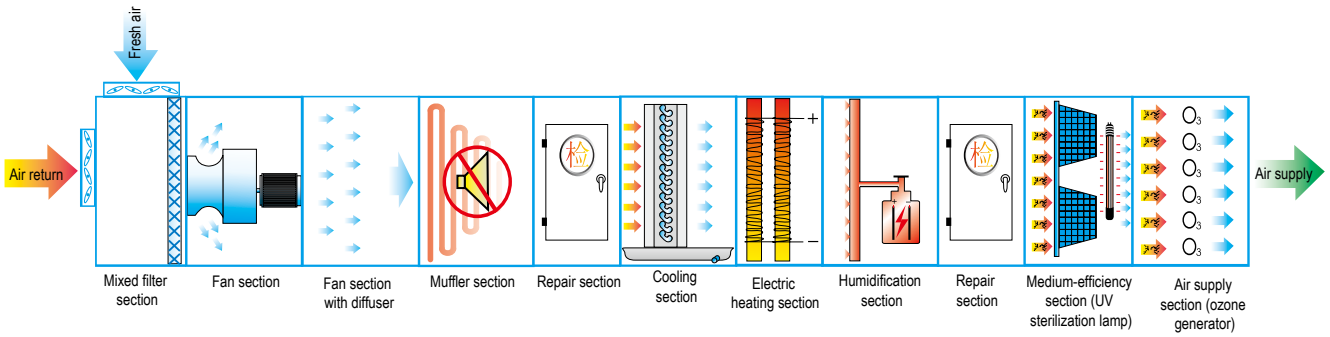
Air handling unit with allocation section

The unit is equipped with basic direct-expansion coils and primary-efficiency and medium-efficiency filters. The air return fan and air supply fan work together to exhaust air in a centralized manner through the allocation section. The unit can accurately control the positive and negative pressure of the clean room and is suitable for air handling with centralized air exhaust.



Combined air handling unit with a sterilizer (medicine and health care, biological engineering, and medical)

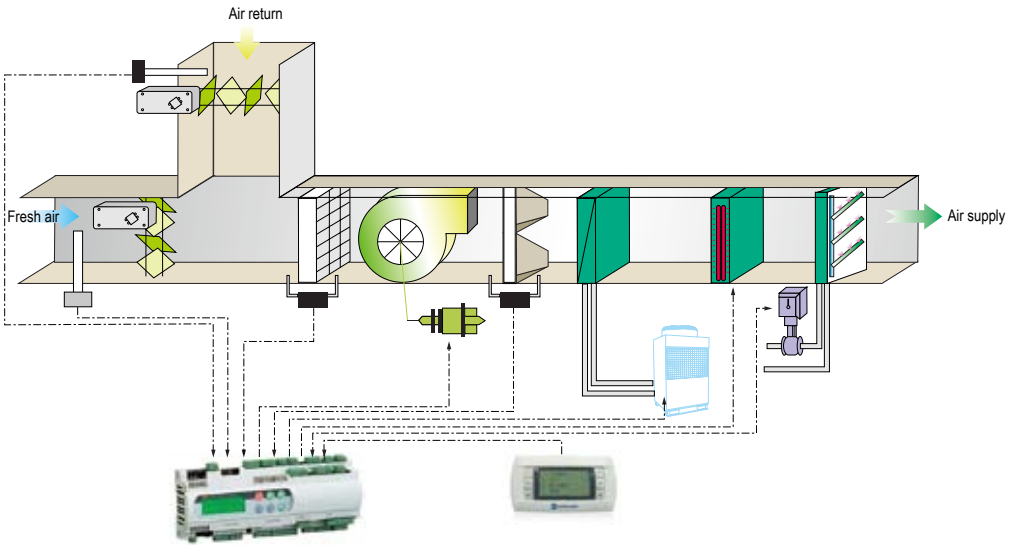
The unit is equipped with a high-quality primary-efficiency filter (G4) and medium-efficiency filter (F8) that contain anti-bacterial agent. A UV sterilization lamp is configured in the filtering section to effectively kill germs filtered out by the filters. An ozone generator or anion generator is configured at the air supply section to fully improve the indoor air quality. A dual-speed fan can be configured to meet different fan speed requirements. Spraying sterilization can be performed on the surface air cooler and a fixed air flow valve can be mounted to maintain constant positive and negative cleanness pressure.



Complete control solution (DDC/PLC control)

EK provides a number of smart control solutions to meet control requirements in different scenarios. A cutting-edge unit controller can not only provides accurate control for a single unit but also control multiple units and run general open protocols to easily control buildings.

DDC (PLC) controller functions



A network-enabled DDC controller allows a DDC control system to access a same-level network through its communication module to communicate with other DDC controllers and share data and information. It also allows the DDC control system to access a distributed system, form a station, perform station monitoring tasks, and communicate with the central control station or building control system. Each DDC controller can process multiple data points through I/O expansion cards and control multiple air handling units. Likewise, it can be connected to the building control system through the built-in TCP/IP protocol and a Web server communication card. In addition, it can even perform remote access in Web mode.

- Display the current running/stop or fault status of the fan and unit.
- Monitors the resistance of the primary, medium, and high efficiency filters, and notifies replacement or cleaning of filters when the resistance exceeds the threshold.
- Monitors the air supply pipe and air return pipe and temperature and humidity of each air-conditioned room (the system can provide and record the reading and status of each monitoring point).
- Controls the opening of the fresh air, air return, and air supply valves according to the fresh air/air return enthalpy and indoor temperature and humidity requirements to fully utilize fresh air in transitional seasons and save energy.
- Monitors the indoor air temperature and humidity and controls the output frequency of the converter to regulate the rotation speed and air flow of the fan, thereby minimizing energy consumption while ensuring indoor air quality.
- Monitors the air supply pressure, air supply speed, and pressure of the room, ensures the pressure difference between the room and the outside, and prevents cross pollution.
- Outputs corresponding signals through calculation of the PID program in the controller during running of the unit to control start/stop of the compressors and opening of the steam valve and humidifier, thereby keeping the temperature and humidity in the air-conditioned area within the required range.
- Monitors the working status of the fireproof valve and connection with firefighting signals, and shuts valves, stops the air supply and air return fans, and starts the smoke exhaust fan in the case of fire.
- Immediately shuts the fresh air valve when the unit stops, stops the fan after a delay, and blows dry the coil and unit with return air to keep the interior of the unit dry.
- Remotely monitors the running status of units through remote start/stop of units and fault alarm.
- All the preceding functions can be automatically saved on a computer. The unit running and fault alarm information can be analyzed to optimize the running solutions for smart and low-energy-consumption running.

Process of the DDC controller in reducing energy consumption

A combined indoor temperature and humidity sensor detects the indoor temperature and humidity and sends a signal to the DDC controller. Through comparative calculation, the controller outputs a corresponding signal to control the evaporator, heater, and humidifier to regulate the air supply temperature and humidity, keeping the indoor temperature and humidity within the required range. The combined temperature and humidity sensors in the fresh air and air return pipes respectively detect the temperature and humidity of the fresh air and return air and input an enthalpy difference signal to a multi-functional controller after calculation and comparison by the enthalpy difference transducer. The controller outputs corresponding control signals based on this signal to control the opening proportion of the fresh air, air return, and air exhaust valves and regulate the proportions of fresh air and return air, thereby reducing energy consumption.

Conversion Table of Units

Measurement	Metric system	British system
Length	1 m	3.281 ft
	0.3084 mm	1 ft
	1 mm	0.039337 in
	25.4 mm	1 in
Area	1 m^2	10.76 ft^2
	0.0929 m^2	1 ft^2
Volume	1 m^3	35.31 ft^3
	0.0283 m^3	1 ft^3
Weight	1 kg	2.205 lb
	0.4536 kg	1 lb
Speed	1 m^3/s	2119 cfm
	0.000472 m^3/s	1 cfm
	1 m^3/h	0.5836 cfm
Air flow	1.699 m^3/h	1 cfm
	1 L/s	2.119 cfm
	0.4719 L/s	1 cfm
Water volume	1 L/s	15.85 gpm
	0.06309 L/s	1 gpm
Power	1 kW	1.341 hp
	0.7457 kW	1 hp
	1 W	3.412 BTU/h
	0.2931 W	1 BTU/h
	1 kW	0.2843 Ton
Heat capacity	3.517 kW	1 Ton
	1 kJ	0.9478 BTU
	1.055 kJ	1 BTU
	1 kPa	4.015 inH_2O
	0.2491 kPa	1 inH_2O
	1 kPa	0.3346 ftH_2O
	2.989 kPa	1 ftH_2O
Pressure	1 kPa	0.2953 inHg
	3.386 kPa	1 inHg
	1 kPa	0.145 psi
	6.895 kPa	1 psi

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