

4T202406



2024



Midea Building Technologies Division
Midea Group

Add.: Midea Headquarters Building, 6 Midea Avenue, Shunde, Foshan, Guangdong, China
Postal code: 528311

mbt.midea.com www.midea-group.com tsp.midea.com

Midea reserves the right to change the specifications of the product, and to withdraw or replace products without prior notification or public announcement. Midea is constantly developing and improving its products.



Air Handling Unit

MAKE A BEAUTIFUL TOMORROW

Midea MBT

Midea MBT(Midea Building Technologies) is a key division of the Midea Group, a leading provider of comprehensive solutions of intelligent building, involving energy sources, elevators, control systems, and heating, ventilation & air conditioning. Midea MBT has continued with the tradition of innovation upon which it was founded and emerged as a global leader in the HVAC and building management industry. A strong drive for advancement has resulted in an extensive R&D department that has placed Midea MBT at the forefront of a competitive edge. Through these independent projects and joint-cooperation with other global enterprises, Midea has supplied thousands of innovative solutions to customers worldwide.

Several production bases are situated on Shunde, Chongqing, Hefei, and Italy.

MBT Shunde: 38 product lines focusing on VRF, Split Products, Heat Pump Water Heaters and AHU/FCU.

MBT Chongqing: 14 product lines focusing on Water Cooled Centrifugal/Screw/Scroll Chillers, Air Cooled Screw/Scroll Chillers and AHU/FCU.

MBT Hefei: 11 product lines focusing on VRF, Chillers and Heat Pump Water Heaters.

Clivet S.p.A: 50,000m2 workshop in Feltre and Verona, covering products such as ELFO system, hydronic, WHLP, packaged, split and close control and so on.





MBT Learning Academy

Objective

MBT Learning Academy aims to provide training to the sales personnel as well as technical personnel in order to increase the utilization for your MBT equipment. Once you have purchased equipment from MBT, taking care of the equipment is topmost priority. MBT Learning Academy offers training courses to learn firsthand from the manufacturer what it takes to get the best out of your MBT product. The goal of MBT Learning Academy is to provide product specific training, safe work procedures and expertise in carrying out the installation and maintenance of MBT products as well as teaching the main selling points in order to help the sales people sell the MBT products with ease.

Training Centers

Our world class training centers provide knowledge and skills necessary to efficiently deploy MBT technologies. The training centers include dedicated laboratories to provide hands-on experiences with various systems, components and controls to refresh and enhance the skills of your sales, design and installation and service teams. Right now we operate our trainings from the below two locations:

1. MBT Training Center

Address: MBT Training Center, 2nd Floor, Building 6, Midea Global Innovation Center, Beijiao, Shunde, Foshan, China Pin-528311

The Midea MBT Training Center is situated 70 kilometers from Baiyun Guangzhou International Airport.

Products: VRF, M thermal

2. Chongqing Midea Training Center

Address: No. 15, Qiangwei Road, Nan'an District, Chongqing, China

Chongqing Midea Training Center is 35 kilometers from Chongqing International Airport.

Products: Centrifugal Chiller, Screw/Scroll Chiller and Terminals



VRF training



M thermal training



Chiller training

Global Technical Trainings

The training courses by MBT Learning Academy are divided into the following two categories with different targeted audiences for each.

Design and Application Trainings: The design and application trainings for various products are basically for the sales personnel selling MBT products in order to give them basic understanding about the main features. The trainings are conducted on a global level inviting sales engineers, technical engineers, consultants and project designers from different parts of the world.

After Sales- Service Trainings: These trainings are dedicated for the After Sales/ Service personnel in order for them to better carry out the installation, commissioning and maintenance of MBT products. Technical person and engineers from different parts of the world are invited to take part in these trainings.

Online Trainings: The trainings to the Global customers can also be done online with the help of Team and Midea Meeting software. This way, the customers do not need to be physically present for the training. Amid the COVID-19 pandemic, MBT Learning Academy has conducted a lot of online trainings. The training videos are available on the TSP system and can be downloaded by using QR codes.

Products: VRF, M thermal, Chillers and Terminals

Highly Skilled Trainers: The trainers for various courses by MBT Learning Academy are expert people with vast experiences in their field. Most of them have a deep insight about the global HVAC market and help the attendees to better understand the MBT products.

Training Certificates:

The attendees for Global trainings are provided a training certificate highlighting the courses discussed in the training, signed by Mr. Henry Cheng, General Manager of MBT Overseas Sales Company.

Registration:

You can contact your respective Midea contact point to provide you with the complete schedule about the global technical trainings as well as how to register for these trainings.

For further enquiries about the Global Trainings conducted by MBT Learning Academy, please send email at the following email address: peeyush@midea.com



Chiller After Sales Courses



Chiller Introduction Courses

Midea Global Spare Parts Center

The global spare parts center provides high quality and fast spare parts supply. Midea online system (<https://tsp.midea.com>) can query and purchase spare parts with one click, further shortening the supply time of spare parts.

The “**2** (HQ Spare parts center) + **10** (Regional Spare parts center) + **N** (Country Spare parts inventory)” Spare Parts Layout can ensure the timely supply of global after-sales spare parts.



Technical Support Platform (TSP)

TSP is a platform for customers to provide professional technical support. Through TSP, you can inquire product information, documentation, spare parts and troubleshooting, initiate technical questions and quality complaint process, and also support self-service spare parts order.

APAC: <https://ics.midea.com/>
EMEA: <https://ics-eu.midea.com/>
Americas: <https://ics-amer.midea.com/>



My order

Inquire spare parts from exploded view and place spare parts order directly in TSP.

Document inquiry and download

View or download product technical documentation online, such as catalogs, images, training PPTs, etc.

Technical inquiry & FAQ

Initiate technical questions online, and our technicians answer them online in time. Find a quick solution in the FAQ.

Troubleshooting

Query the error code and solution by SN, model name, error code or product type.

Complain

Initiate the product quality complaint process online, and our after-sales engineers handle related complaints in time.

Mobile Intelligence Service App (MISA)

MISA is the mobile terminal of TSP, with the same functions as TSP. The mobile service makes technical support more timely and convenient.

<https://link.midea.com>



FAQ



Complain

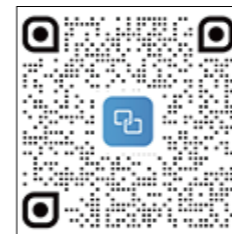


Technical Enquiry

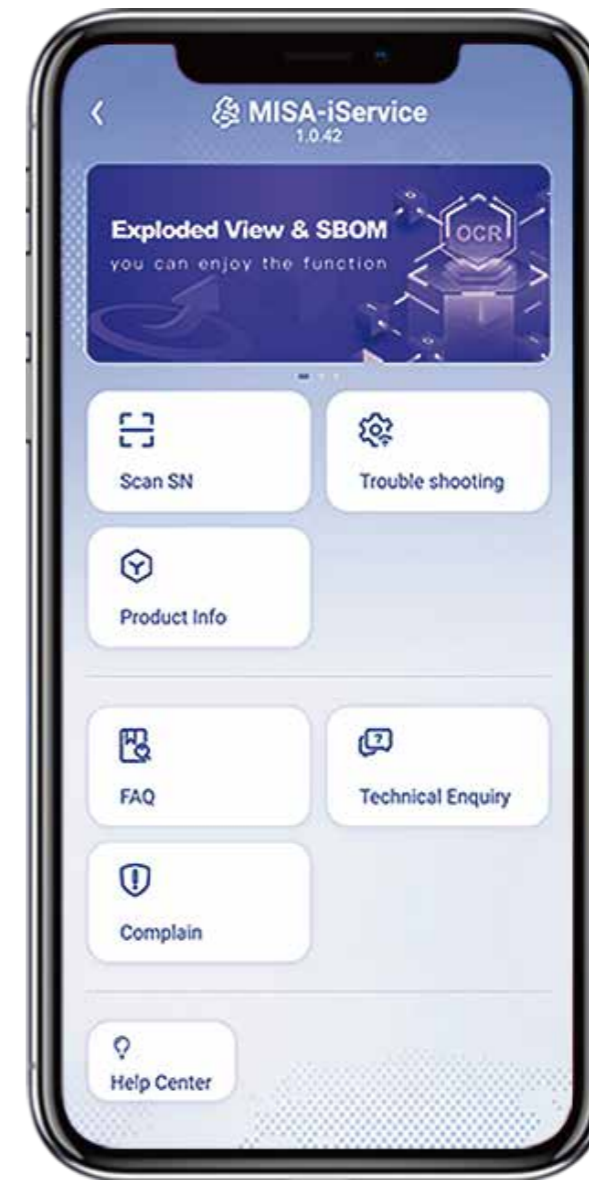


Trouble shooting

Download



Scan above to download the mobile app



Search product manuals



Spare Parts list

Feedback



Thank you very much for your attention and advice

Introduction

Midea air handling units (AHUs/MAHUs) have been designed and manufactured to meet the requirements of all kinds of space cooling and heating, such as office buildings, shopping malls, exhibition halls, airports, railway stations, hotels, factories and any other central air-conditioning systems.

Contents

▶ 11 Reference Projects

▶ 15 Air Handling Unit

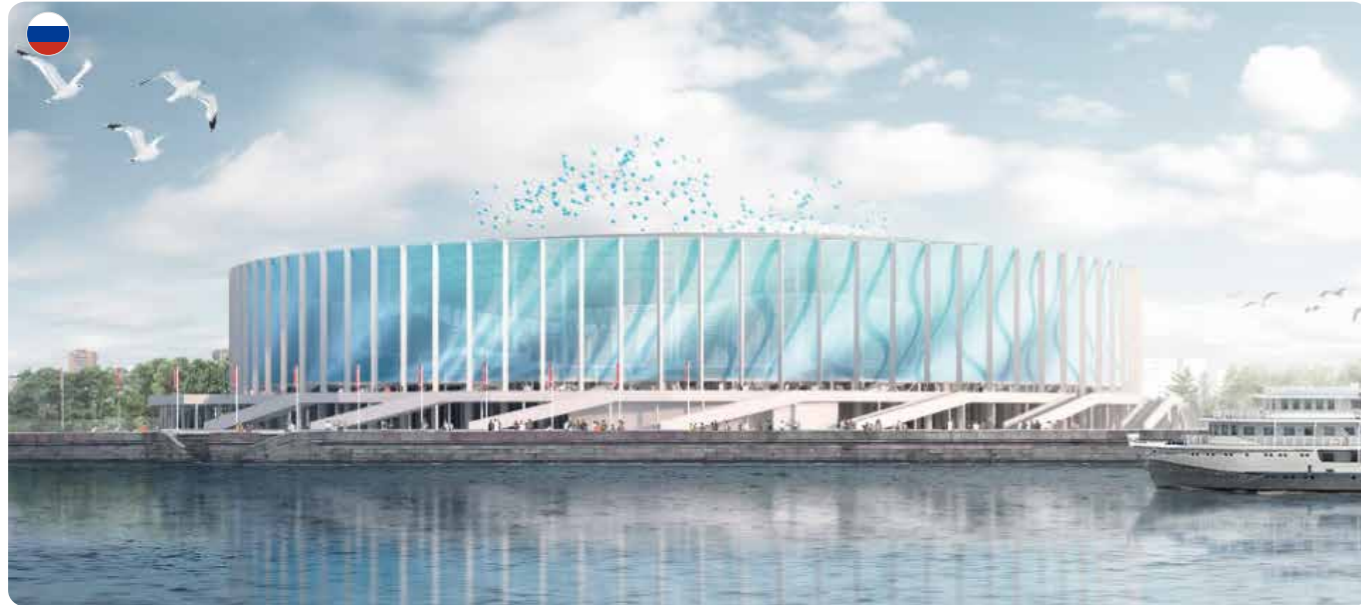
▶ 39 Modular Air Handling Unit



Reference Projects

2018 Russia World Cup Stadiums Nizhny Novgorod Stadium

- 📍 City: Nizhny Novgorod
- 🏗️ Product: Water-cooled Screw Chiller; Fan Coil Units



2018 Russia World Cup Stadiums Volgograd Arena

- 📍 City: Volgograd
- 🏗️ Product: Water-cooled Screw Chiller; Fan Coil Units



The 27th Southeast Asian Games Stadium

- 📍 Country: Myanmar
- 📍 City: Nay Pyi Taw
- 🏗️ Outdoor Units: Water-cooled screw chiller
- 🏗️ Indoor Units: MAHU
- 📊 Total Capacity: 4,100RT



Beijing New International Airport

- 📍 Country: China
- 📍 City: Beijing
- 🏗️ Outdoor Units: Centrifugal chiller
- 🏗️ Indoor Units: FCU & MAHU
- 📊 Total Capacity: 10,000RT



Hilton Hotel in Foshan(Five Star)

- 🌐 Country: China
- 📍 City: Foshan
- 🏢 Outdoor Units: Centrifugal chiller & Water-cooled screw chiller
- 🏢 Indoor Units: FCU & AHU
- 📊 Total Capacity: 4,500RT



Top Glove in Malaysia

- 🌐 Country: Malaysia
- 📍 City: Klang
- 🏢 Outdoor Units: Water-cooled screw chiller
- 🏢 Indoor Units: FCU & AHU
- 📊 Total Capacity: 3,400RT



Major Platinum Cineplex Laos

- 🌐 Country: Laos
- 📍 City: Vientiane
- 🏢 Outdoor Units: Centrifugal chiller & Water-cooled screw chiller
- 🏢 Indoor Units: FCU & AHU
- 📊 Total Capacity: 2,000RT



The Prime Minister Office Building

- 🌐 Country: Tajikistan
- 📍 City: Dushanbe
- 🏢 Outdoor Units: Water-cooled screw chiller
- 🏢 Indoor Units: FCU & AHU
- 📊 Total Capacity: 2,880kW



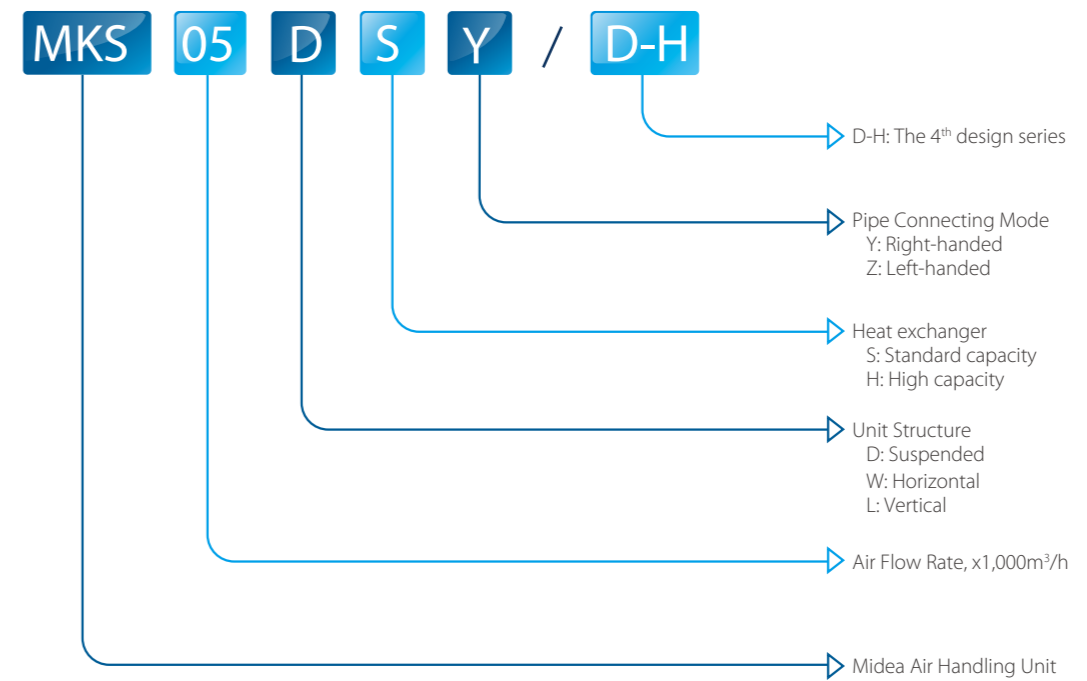


Air Handling Unit

Air Handling Unit (AHU) is the primary equipment in an air system of central air conditioning system. It handles and conditions the air and distributes it to various conditioned spaces. Midea air handling units (AHUs) have been designed and manufactured to meet the requirements of all kinds of space cooling and heating, such as office buildings, shopping malls, exhibition halls, airports, railway stations, hotels, factories and any other central air-conditioning systems.

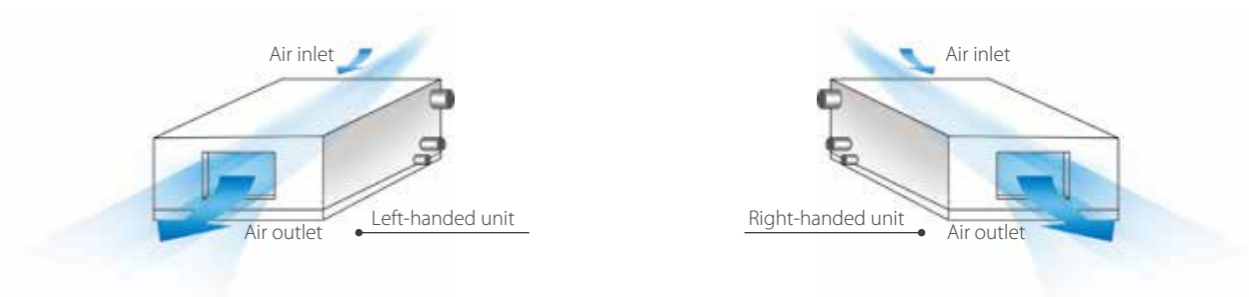
Midea AHUs have been widely used in many parts of the world. Now, the 4th generation and the 4th generation AHU has been launched to provide you with more comfort and convenience. It adapts unitary structure design, more outstanding cold-bridge free performance, lower air leakage and more elegant appearance. There are 3 types - suspended type (the 4th generation), horizontal type and vertical type (the 4th generation), including 66 standard models, and the air flow rate is available from 2,000m³/h to 40,000m³/h. Different external static pressure (ESP) can be customized to meet different kinds of applications.

Nomenclature



Orientation

Unit handling orientation is determined by location of pipe connection while facing unit in the direction of air flow. The unit below is left-handed connection unit, otherwise is right-handed connection unit.



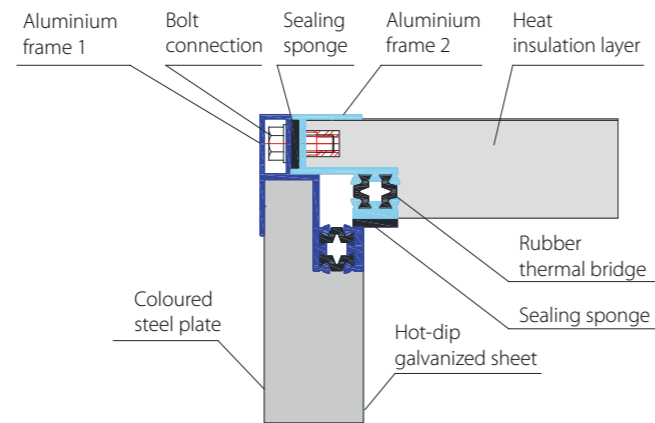
Features

High strength, high reliability

Panels are double-skin with injection of high density polyurethane. The panel frame adopts the composite profile structure patent, the built-in high-strength aluminum profile makes the box body stronger, and the mechanical strength of the box that fulfils the requirements in European EN1886, Class 2 and above.

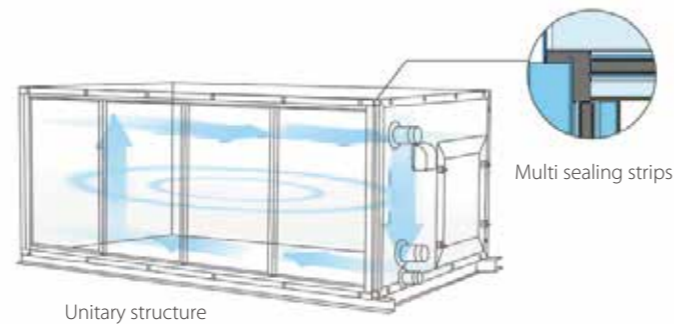
Outstanding cold-bridge free structure

The density of polyurethane injection is $50\text{kg}/\text{m}^3$ (thermal conductivity factor $K \leq 0.0224\text{W}/\text{m}^2 \cdot \text{K}$). Unit cabinet is constructed by panels with male and female aluminum alloy cards and sealing strip. The service door (or service panel) is plastic-steel frame with polyurethane injection panel and rubber sealing strip.



Low air leakage rate

Double skin panel, unitary structure design, less connecting joints, multi sealing strips in the contact surfaces, around sealing service door/ panel, all ensure almost total air can be supplied to the air-conditioned room. The air leakage rate is less than 0.29%. Units will not sweat when exterior room temperature is 27°C , relative humidity is 90%.



- Simple structural components
- Less at-site work

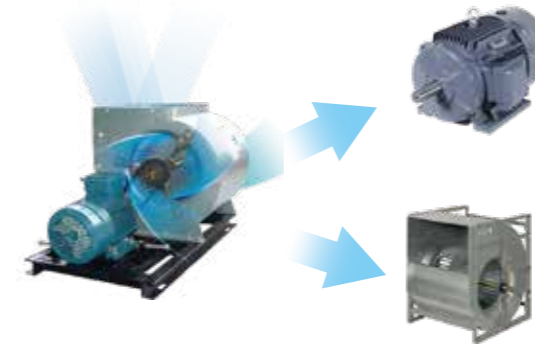
High performance heat exchanger



- Copper pipe and aluminum fin type heat exchanger, optimal choice of fin spacing and number of rows.
- Fins are coated with anticorrosive layers, assure longer coil life and lower maintenance cost.
- Optimal water circuits design, increased heat exchange efficiency and decreased water resistance, improving unit performance and efficiency.

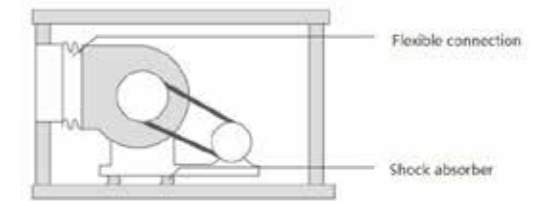
Stable air supply fan assembly

- Yilida brand centrifugal fan, high performance efficiency, 3-phase, class "F" insulation and IP55 protection AC motor.
- Belt drive, optimal selection of drive ratio, increase fan/motor assembly efficiency, easy for maintenance.
- Service door or service panel is equipped for inspection of motor and fan.



Low noise design

- Optimal fan selection, excellent working condition, efficient operation.
- Flexible connection at air outlet, minimizes vibration transmission.
- Equip with shock absorbers, decreases vibration, low noise. Tighten cabinet, secure against noise leakage.



Improved indoor air quality

- Aluminum alloy frame plate type filter, stable and durable.
- Cover the whole return air inlet, large filter surface, higher inlet air quality.
- Filter can be extracted in leftward and rightward way, easy for maintenance.



State-of-the-art design

The outer skin is colored steel sheet with anti-corrosion coat and is cleanable; the fastening bolts are concealed by plastic caps. The outer layer of film prevents panels from scratching during unit assembling and transportation. Clear, smooth and color coordination appearance make the outlook attractive.

Wide usage

- Three structure design: horizontal type, vertical type and suspended type.
- Two pipe connecting mode: right-handed and left handed.
- Air flow rate ranging from $2,000\text{m}^3/\text{h}$ to $40,000\text{m}^3/\text{h}$.
- Different ESP can be customized.

Midea AHU can be widely used in hotels, restaurants, factories, hospitals, airports, railway stations, exhibition halls, office buildings, shopping malls, laboratories and other central air-conditioning systems.



Mechanical specifications

Base frame

Unit sections are mounted on galvanized steel or channel steel base frame for easy shipment and handling. The frames provide holes for section connection, and holes for fork-lift truck. Guard rail cross the bottom in the holes prevents unit damage. The base frame can be used in lieu of concrete plinths or other additional bases that are used on site. However, for high static pressure application, additional concrete plinths or other additional bases are required at site to raise the AHU for drain pan's U-trap.

Double skin panel

Standard panels are 25mm thick double skin type with injected polyurethane foam insulation. The outer skin is anti-corrosion color-coated steel sheet with a layer of film and the inner skin is galvanized steel sheet.

The panel insulation is moistureproof and anti-corrosive. The insulation material is totally enclosed in the panel to avoid any possibility of insulation being exposed to air stream.



Coil

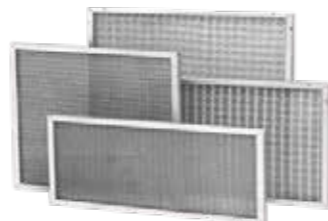
Coil used in Midea AHU is AHRI certified. It consists of copper tubes and aluminum fins. The fins are sine-wave design with slits for better heat transfer efficiency and moisture carrying capacity. Coil is leak tested at 1.6MPa in the factory.

Coil is mounted over a drain pan. The coil rests on U-shaped supporter locating over the drain pan. The drain pan extends beyond the leaving side of the coil to recover condensate water. Coil connections always extend through out of the unit cabinet, allowing for easy connection of valves and piping. Air discharge valve is on the top of water outlet pipe and is located outside the cabinet.



Filter

Filter is aluminum alloy frame structure. Primary efficiency plate type filter is designed as standard. The structure of filters are stable firm, have high strength and intensity and are easy to replace or clean. Filter can be unloaded and loaded from both left and right side.



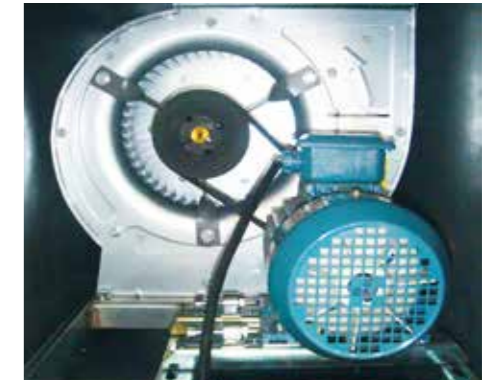
Drain pan

The cooling coil is installed on reversed U-shaped support plate. Standard galvanized drain pan is coated to inhibit the growth of algae and fungi. 10mm insulation is provided between the drain pan and the bottom panel. Stainless steel drain pan is optional.

Fan and motor assembly

The fan is made of high grade hot galvanized steel sheet. It is designed to a special configuration according to aerodynamics. It is coated in order to be anti-corrosive. Fan connection is isolated from unit casing by a flexible canvas duct mounted at fan discharge outlet. Fan and motor assembly is internally isolated from unit casing with rubber pad, furnished and installed in the factory.

Motors are mounted on slide rails with provision for V-belt tensioning. Motor can be moved freely in four directions to reach the correct point. Installation and maintenance of motor, belt and pulley are time saving jobs. Fan and motor assembly is mounted on a rigid base frame which is supported by effective rubber shock absorber. Discharge fan is provided with a fire retardant flexible connection.



Fan and motor assembly

Access panel



Inside



Outside

Note:For reference only

Access panel is double skins with injected polyurethane foam insulation. The outer skin is anti-corrosion coated steel sheet, the inner skin is galvanized steel sheet. The polyurethane foam insulation is heat resistant and totally enclosed. 4 hinges are used to fixed the access panel, convenient for installation and maintenance. A durable rubber seal is around the panel's frame and a 10mm thick insulation seal is stuck around the back side frame of the panel to prevent air leakage.

Air dampers

Air dampers in AHUs are optional. Aerodynamically designed damper blades have built in high quality bearings. Blade edges are lined with sealing strip to restrict leakage to an absolute minimum. Air damper blades are either linked to give parallel turning operation or gear set to give opposing direction. The dampers are tested to yield linear control characteristic.



Specifications

Suspended type

● Return air condition

Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	Static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS02DSY/D-H MKS02DSZ/D-H	2000	11.2	18.6	0.54	120	67	0.37	19.00	40	25	58.0	90	870x750x555	1066x914x702	380~415V -3-50Hz
MKS02DHY/D-H MKS02DHz/D-H		14.6	22.6	0.70	120	227	0.75	6.52	40		58.9	95			
MKS03DSY/D-H MKS03DSZ/D-H	3000	17.1	26.7	0.82	120	52	0.55	25.66	40	25	58.0	120	1020x830x605	1216x994x752	
MKS03DHY/D-H MKS03DHz/D-H		22.0	33.8	1.05	120	212	1.10	16.04	40		58.1	125			
MKS04DSY/D-H MKS04DSZ/D-H	4000	22.8	39.9	1.09	120	70	0.75	63.32	40	25	60.0	145	1300x830x605	1496x994x752	
MKS04DHY/D-H MKS04DHz/D-H		29.3	45.1	1.40	120	230	1.10	40.15	40		61.9	155			
MKS05DSY/D-H MKS05DSZ/D-H	5000	28.5	47.5	1.36	120	42	1.10	67.58	40	25	62.0	160	1390x830x605	1586x994x752	
MKS05DHY/D-H MKS05DHz/D-H		36.6	56.4	1.75	120	202	1.50	55.55	40		63.0	170			
MKS06DSY/D-H MKS06DSZ/D-H	6000	34.1	57.5	1.63	160	92	1.50	72.02	40	25	62.0	180	1590x830x605	1786x994x752	
MKS06DHY/D-H MKS06DHz/D-H		44.1	67.7	2.11	160	252	2.20	60.21	40		63.3	190			
MKS07DSY/D-H MKS07DSZ/D-H	7000	39.1	66.0	1.90	160	98	1.10	76.40	40	25	64.0	190	1590x830x705	1786x994x852	
MKS07DHY/D-H MKS07DHz/D-H		51.7	79.0	2.47	160	258	2.20	83.38	40		65.4	205			
MKS08DSY/D-H MKS08DSZ/D-H	8000	45.5	73.1	2.17	160	79	1.50	81.38	50	25	64.0	205	1700x830x705	1896x994x852	
MKS08DHY/D-H MKS08DHz/D-H		59.1	90.2	2.82	160	239	2.20	88.83	50		65.5	220			
MKS09DSY/D-H MKS09DSZ/D-H	9000	51.2	83.0	2.45	200	116	2.20	67.94	50	25	66.0	235	1700x920x755	1896x1084x902	
MKS09DHY/D-H MKS09DHz/D-H		67.1	100.8	3.21	200	286	3.00	78.46	50		67.0	250			
MKS10DSY/D-H MKS10DSZ/D-H	10000	58.9	99.3	2.81	200	136	2.20	66.56	50	25	66.0	260	1940x920x755	2136x1084x902	
MKS10DHY/D-H MKS10DHz/D-H		74.6	112.0	3.56	200	306	3.00	85.47	50		67.8	280			
MKS12DSY/D-H MKS12DSZ/D-H	12000	68.3	113.5	3.26	200	108	3.00	71.52	50	25	68.0	270	1940x920x860	2136x1084x1007	
MKS12DHY/D-H MKS12DHz/D-H		85.6	135.2	4.09	200	278	4.00	87.88	50		69.6	290			
MKS15DSY/D-H MKS15DSZ/D-H	15000	85.3	142.1	4.08	240	125	4.00	83.62	50	25	70.0	350	2240x1000x905	2436x1164x1052	
MKS15DHY/D-H MKS15DHz/D-H		107.0	169.0	5.11	240	305	5.50	76.25	50		71.8	380			

1.Cooling capacity is based in the following condition

a)Water temperature: 7°C(inlet)/12°C(outlet) b)Air entering condition: 27°C DB/19.5°C WB

2.Heating capacity is based on the following condition

a)Water temperature: 60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition: 21°C DB

**: For reference only, please consult factory for exact size

● Fresh air condition

Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS02DSY/D-H MKS02DSZ/D-H	2000	23.5	27.3	1.12	120	67	0.37	38.00	40	25	58.0	90	870x750x555	1066x914x702	380~415V -3-50Hz
MKS02DHY/D-H MKS02DHz/D-H		28.4	33.0	1.35	120	227	0.75	32.25	40		58.9	95			
MKS03DSY/D-H MKS03DSZ/D-H	3000	32.0	35.6	1.53	120	52	0.55	35.66	40	25	58.0	120	1020x830x605	1216x994x752	
MKS03DHY/D-H MKS03DHz/D-H		42.5	49.4	2.03	120	212	1.10	57.04	40		58.1	125			
MKS04DSY/D-H MKS04DSZ/D-H	4000	45.5	52.0	2.17	120	70	0.75	63.32	40	25	60.0	145	1300x830x605	1496x994x752	
MKS04DHY/D-H MKS04DHz/D-H		56.7	65.9	2.71	120	230	1.10	62.51	40		61.9	155			
MKS05DSY/D-H MKS05DSZ/D-H	5000	57.1	72.6	2.73	120	42	1.10	67.58	40	25	62.0	160	1390x830x605	1586x994x752	
MKS05DHY/D-H MKS05DHz/D-H		70.9	82.4	3.39	120	202	1.50	75.55	40		63.0	170			
MKS06DSY/D-H MKS06DSZ/D-H	6000	64.9	84.0	3.10	160	92	1.50	72.02	40	25	62.0	180	1590x830x605	1786x994x752	
MKS06DHY/D-H MKS06DHz/D-H		84.5	97.0	4.04	160	252	2.20	75.04	40		63.3	190			
MKS07DSY/D-H MKS07DSZ/D-H	7000	83.8	97.2	4.00	160	98	1.10	76.40	40	25	64.0	190	1590x830x705	1786x994x852	
MKS07DHY/D-H MKS07DHz/D-H		98.9	115.5	4.72	160	258	2.20	78.32	40		65.4	205			
MKS08DSY/D-H MKS08DSZ/D-H	8000	87.6	112.0	4.19	160	79	1.50	83.83	50	25	64.0	205	1700x830x705	1896x994x852	
MKS08DHY/D-H MKS08DHz/D-H		113.0	132.0	5.40	160	239	2.20	90.38	50		65.5	220			
MKS09DSY/D-H MKS09DSZ/D-H	9000	106.1	123.1	5.07	200	116	2.20	68.49	50	25	66.0	235	1700x920x755	1896x1084x902	
MKS09DHY/D-H MKS09DHz/D-H		126.9	148.5	6.06	200	286	3.00	77.64	50		67.0	250			
MKS10DSY/D-H MKS10DSZ/D-H	10000	113.0	140.0	5.40	200	136	2.20	66.22	50	25	66.0	260	1940x920x755	2136x1084x902	
MKS10DHY/D-H MKS10DHz/D-H		141.0	165.0	6.74	200	306	3.00	84.74	50		67.8	280			
MKS12DSY/D-H MKS12DSZ/D-H	12000	139.1	161.4	6.65	200	108	3.00	75.15	50	25	68.0	270	1940x920x860	2136x1084x1007	
MKS12DHY/D-H MKS12DHz/D-H		170.4	197.6	8.14	200	278	4.00	84.36	50		69.6	290			
MKS15DSY/D-H MKS15DSZ/D-H	15000	170.0	210.0	8.12	240	125	4.00	86.32	50	25	70.0	350	2240x1000x905	2436x1164x1052	
MKS15DHY/D-H MKS15DHz/D-H		213.0	247.0	10.18	240	305	5.50	75.26	50		71.8	380			

1.Cooling capacity is based in the following condition

a)Water temperature: 7°C(inlet)/12°C(outlet) b)Air entering condition: 35°C DB/28°C WB

2.Heating capacity is based on the following condition

a)Water temperature: 60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition: 7°C DB

**: For reference only, please consult factory for exact size

Specifications

Horizontal type

● Return air condition

Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS05WSY/D-H MKS05WSZ/D-H	5000	28.3	47.5	1.35	160	96	1.1	21.6	40	25	59.5	190	1100x1120x840	1294x1264x980	380V-3-50Hz
MKS05WHY/D-H MKS05WHZ/D-H		36.6	56.4	1.75	160	96	1.1	13.99	40	25	61.2	230			
MKS06WSY/D-H MKS06WSZ/D-H	6000	34.6	58.8	1.65	160	68	1.5	31.06	40	25	60.3	210	1200x1120x840	1394x1264x980	
MKS06WHY/D-H MKS06WHZ/D-H		44.1	67.7	2.11	160	68	1.5	20.65	40	25	61.4	270			
MKS08WSY/D-H MKS08WSZ/D-H	8000	50.8	73.1	2.43	160	78	1.5	45.49	50	25	63.1	250	1450x1170x945	1646x1314x1092	
MKS08WHY/D-H MKS08WHZ/D-H		59.1	90.2	2.82	160	78	2.2	55.79	50	25	63.5	273			
MKS10WSY/D-H MKS10WSZ/D-H	10000	63.2	91.3	3.02	240	112	3	79.39	50	25	63.5	300	1650x1200x965	1864x1344x1112	
MKS10WHY/D-H MKS10WHZ/D-H		74.6	112	3.56	240	112	3	38.06	50	25	65.2	325			
MKS15WSY/D-H MKS15WSZ/D-H	15000	91	131.3	4.35	240	125	4	49.36	50	25	66.1	390	1940x1220x1195	2134x1364x1338	
MKS15WHY/D-H MKS15WHZ/D-H		107	169	5.11	240	125	4	78.31	65	25	68.2	480			
MKS20WSY/D-H MKS20WSZ/D-H	20000	119.3	183.4	5.7	320	210	7.5	65.54	65	25	70.4	500	2240x1350x1630	2442x1502x1782	
MKS20WHY/D-H MKS20WHZ/D-H		149	224	7.12	320	210	7.5	58.67	65	25	71.6	620			
MKS25WSY/D-H MKS25WSZ/D-H	25000	149.3	248.9	7.13	420	318	7.5	66.16	65	25	70.2	580	2590x1400x1835	2792x1552x1987	
MKS25WHY/D-H MKS25WHZ/D-H		187	279	8.93	420	318	7.5	75.94	80	25	71.5	685			
MKS30WSY/D-H MKS30WSZ/D-H	30000	179.2	298.7	8.56	420	273	11	69.32	65	25	73.3	650	2690x1450x2080	2892x1602x2227	
MKS30WHY/D-H MKS30WHZ/D-H		225	335	10.75	420	273	11	79.15	80	25	73.5	765			
MKS35WSY/D-H MKS35WSZ/D-H	35000	209.1	348.4	9.99	520	432	5.5x2	74.92	65x2	25	73.8	880	2400x1880x2540	2652x2032x2692*	
MKS35WHY/D-H MKS35WHZ/D-H		265	391	12.66	520	432	7.5x2	66.42	65x2	25	74.2	950			
MKS40WSY/D-H MKS40WSZ/D-H	40000	238.9	398.2	11.41	520	405	7.5x2	41.2	65x2	25	76.2	920	2790x1880x2060	3042x2028x2212	
MKS40WHY/D-H MKS40WHZ/D-H		300	447	14.33	520	405	7.5x2	68.25	65x2	25	77.5	1150			

1.Cooling capacity is based in the following

a)Water temperature: 7°C(inlet)/12°C(outlet) b)Air entering condition: 27°C DB/19.5°C WB

2.Heating capacity is based on the following

a)Water temperature: 60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition: 21°C DB

*: This model requires a custom open top cabinet for shipping

**: For reference only, please consult factory for exact size

● Fresh air condition

Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS05WSY/D-H MKS05WSZ/D-H	5000	57.1	72.6	2.70	160	96	1.1	61.06	40	25	59.5	190	1100x1120x840	1294x1264x980	380V-3-50Hz
MKS05WHY/D-H MKS05WHZ/D-H		70.9	82.4	3.40	160	96	1.1	58.49	40	25	61.2	230			
MKS06WSY/D-H MKS06WSZ/D-H	6000	64.9	84.0	3.10	160	68	1.5	37.6	40	25	60.3	210	1200x1120x840	1394x1264x980	
MKS06WHY/D-H MKS06WHZ/D-H		84.5	97.0	4.00	160	68	1.5	62.06	40	25	61.4	270			
MKS08WSY/D-H MKS08WSZ/D-H	8000	87.6	112.0	4.20	160	78	1.5	73.31	50	25	63.1	250	1450x1170x945	1646x1314x1092	
MKS08WHY/D-H MKS08WHZ/D-H		113.0	132.0	5.40	160	78	2.2	46.54	50	25	63.5	273			
MKS10WSY/D-H MKS10WSZ/D-H	10000	113.0	140.0	5.40	240	112	3	79.28	50	25	63.5	300	1650x1200x965	1864x1344x1112	
MKS10WHY/D-H MKS10WHZ/D-H		141.0	165.0	6.70	240	112	3	69.33	50	25	65.2	325			
MKS15WSY/D-H MKS15WSZ/D-H	15000	170.0	210.0	8.10	240	125	4	73.22	50	25	66.1	390	1940x1220x1195	2134x1364x1338	
MKS15WHY/D-H MKS15WHZ/D-H		213.0	247.0	10.20	240	125	4	76.15	65	25	68.2	480			
MKS20WSY/D-H MKS20WSZ/D-H	20000	222.0	280.0	10.60	320	210	7.5	69.42	65	25	70.4	500	2240x1350x1630	2442x1502x1782	
MKS20WHY/D-H MKS20WHZ/D-H		279.0	323.0	13.30	320	210	7.5	66.16	65	25	71.6	620			
MKS25WSY/D-H MKS25WSZ/D-H	25000	279.0	350.0	13.30	420	318	7.5	71.84	65	25	70.2	580	2590x1400x1835	2792x1552x1987	
MKS25WHY/D-H MKS25WHZ/D-H		350.0	404.0	16.70	420	318	7.5	83.36	80	25	71.5	685			
MKS30WSY/D-H MKS30WSZ/D-H	30000	322.0	412.0	15.40	420	273	11	36.54	65	25	73.3	650	2690x1450x2080	2892x1602x2227	
MKS30WHY/D-H MKS30WHZ/D-H		418.0	485.0	20.00	420	273	11	77.19	80	25	73.5	765			
MKS35WSY/D-H MKS35WSZ/D-H	35000	382.0	490.0	18.30	520	432	5.5x2	32.29	65x2	25	73.8	880	2400x1880x2540	2652x2032x2692*	
MKS35WHY/D-H MKS35WHZ/D-H		494.0	566.0	23.60	520	432	7.5x2	67.77	65x2	25	74.2	950			
MKS40WSY/D-H MKS40WSZ/D-H	40000	430.0	560.0	20.50	520	405	7.5x2	35.41	65x2	25	76.2	920	2790x1880x2060	3042x2028x2212	
MKS40WHY/D-H MKS40WHZ/D-H		557.0	647.0	26.60	520	405	7.5x2	77.92	65x2	25	77.5	1150			

1.1.Cooling capacity is based in the following

a)Water temperature: 7°C(inlet)/12°C(outlet) b)Air entering condition: 35°C DB/28°C WB

2.Heating capacity is based on the following:

a)Water temperature: 60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition: 7°C DB

*: This model requires a custom open top cabinet for shipping

**: For reference only, please consult factory for exact size

Specifications

Vertical type

● Return air condition

Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS03LSY/D-H MKS03LSZ/D-H	3000	17.1	26.7	0.82	120	52	0.75	23.4	40	25	57.1	130	1010x580x1100	1260x730x1290	380V-3-50Hz
MKS03LHY/D-H MKS03LHZ/D-H		22.0	33.8	1.05	120	52	0.75	14.54	40		57.5	140			
MKS04LSY/D-H MKS04LSZ/D-H	4000	22.8	39.9	1.09	160	79	1.1	24.88	40	25	58.2	150	1050x580x1250	1300x730x1440	380V-3-50Hz
MKS04LHY/D-H MKS04LHZ/D-H		29.3	45.1	1.40	160	79	1.1	16.56	40		60.3	162			
MKS05LSY/D-H MKS05LSZ/D-H	5000	28.3	47.5	1.40	160	96	1.1	31.86	40	25	60.5	170	1110x630x1420	1360x780x1610	380V-3-50Hz
MKS05LHY/D-H MKS05LHZ/D-H		36.6	56.4	1.70	160	96	1.5	20.8	40		61.2	185			
MKS06LSY/D-H MKS06LSZ/D-H	6000	34.6	58.8	1.70	160	68	1.5	43.75	40	25	61.4	190	1200x630x1470	1450x780x1660	380V-3-50Hz
MKS06LHY/D-H MKS06LHZ/D-H		44.1	67.7	2.10	160	68	1.5	28.5	40		61.9	210			
MKS08LSY/D-H MKS08LSZ/D-H	8000	50.8	73.1	2.40	200	118	2.2	49.98	50	25	63.2	230	1350x740x1650	1600x890x1840	380V-3-50Hz
MKS08LHY/D-H MKS08LHZ/D-H		59.1	90.2	2.80	200	118	2.2	52.7	50		63.6	255			
MKS10LSY/D-H MKS10LSZ/D-H	10000	58.9	99.3	2.81	240	112	3.0	58.17	50	25	64.5	250	1410x740x1800	1660x890x1990	380V-3-50Hz
MKS10LHY/D-H MKS10LHZ/D-H		74.6	112.0	3.60	240	112	3.0	58.36	50		65.4	290			
MKS15LSY/D-H MKS15LSZ/D-H	15000	91	131.3	4.30	240	125	5.5	58.42	50	25	67.6	360	1940x740x1880	2190x960x2070	380V-3-50Hz
MKS15LHY/D-H MKS15LHZ/D-H		107.0	169.0	5.10	240	125	5.5	86.04	50		68.4	410			
MKS20LSY/D-H MKS20LSZ/D-H	20000	113.7	183.4	5.4	280	152	7.5	74.53	50	25	70.5	480	2300x860x2305	2550x1080x2485*	380V-3-50Hz
MKS20LHY/D-H MKS20LHZ/D-H		149.0	224.0	7.10	280	152	7.5	64.1	50		71.2	540			
MKS25LSY/D-H MKS25LSZ/D-H	25000	149.3	248.9	7.10	320	218	7.5	79.53	65	25	70.7	620	2700x960x2570	2950x1180x2760*	380V-3-50Hz
MKS25LHY/D-H MKS25LHZ/D-H		187.0	279.0	8.90	320	218	7.5	85.78	65		71.3	680			
MKS30LSY/D-H MKS30LSZ/D-H	30000	179.2	298.7	8.60	320	173	11.0	84.2	65	25	73.1	690	2690x960x2780	2940x1180x2960*	380V-3-50Hz
MKS30LHY/D-H MKS30LHZ/D-H		225.0	335.0	10.80	320	173	11.0	88.14	65		73.5	760			
MKS35LSY/D-H MKS35LSZ/D-H	35000	209.1	348.4	10.00	370	235	11.0	87.89	80	25	73.6	780	2750x1000x2890	3000x1220x3070*	380V-3-50Hz
MKS35LHY/D-H MKS35LHZ/D-H		265.0	391.0	12.70	370	235	15.0	89.01	80		74.2	860			
MKS40LSY/D-H MKS40LSZ/D-H	40000	238.9	398.2	11.40	370	193	15.0	78.23	80	25	76.2	850	3400x1000x2360	3650x1220x2540*	380V-3-50Hz
MKS40LHY/D-H MKS40LHZ/D-H		300.0	447.0	14.30	370	193	15.0	84.05	80		77.5	940			

- 1.Cooling capacity is based in the following:
 a)Water temperature:7°C(inlet)/12°C(outlet) b)Air entering condition:27°C DB/19.5°C WB
 2.Heating capacity is based on the following:
 a)Water temperature:60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition:21°C DB

*: This model requires a custom open top cabinet for shipping
 **: For reference only, please consult factory for exact size

● Fresh air condition

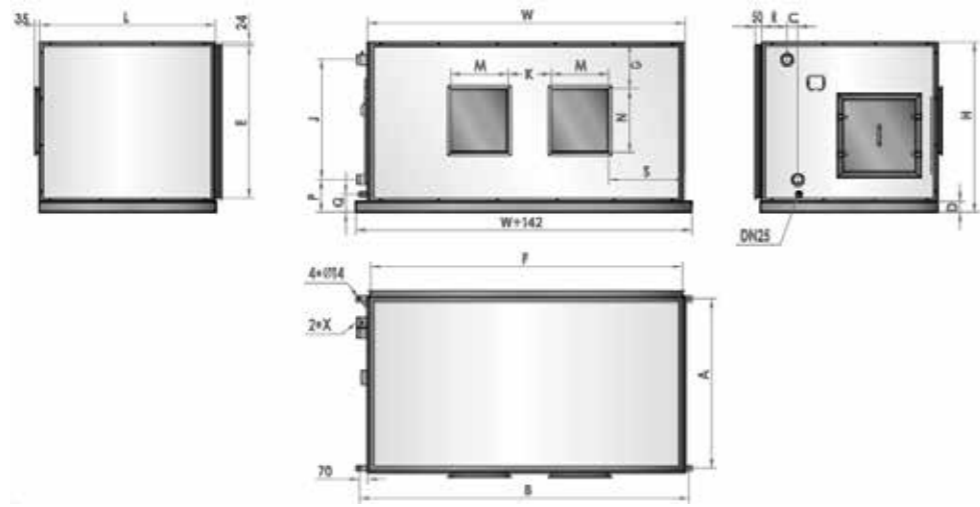
Model	Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	static pressure	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension**	Power supply
	m³/h	kW	kW	L/s	Pa	Pa	kW	kPa	DN	DN	dB(A)	kg	WxDxH (mm)	WxDxH (mm)	V-Ph-Hz
MKS03LSY/D-H MKS03LSZ/D-H	3000	32.0	35.6	1.53	120	52	0.75	45.98	40	25	57.1	130	1010x580x1100	1260x730x1290	380V-3-50Hz
MKS03LHY/D-H MKS03LHZ/D-H		42.5	49.4	2.03	120	52	0.75	47.12	40		57.5	140			
MKS04LSY/D-H MKS04LSZ/D-H	4000	45.5	46.0	2.17	160	79	1.1	43.05	40	25	58.2	150	1050x580x1250	1300x730x1440	380V-3-50Hz
MKS04LHY/D-H MKS04LHZ/D-H		56.7	65.9	2.71	160	79	1.1	50.72	40		60.3	162			
MKS05LSY/D-H MKS05LSZ/D-H	5000	57.1	72.6	2.73	160	96	1.1	61.24	40	25	60.5	170	1110x630x1420	1360x780x1610	380V-3-50Hz
MKS05LHY/D-H MKS05LHZ/D-H		70.9	82.4	3.39	160	96	1.5	58.2	40		61.2	185			
MKS06LSY/D-H MKS06LSZ/D-H	6000	64.9	84.0	3.10	160	68	1.5	46.7	40	25	61.4	190	1200x630x1470	1450x780x1660	380V-3-50Hz
MKS06LHY/D-H MKS06LHZ/D-H		84.5	97.0	4.04	160	68	1.5	62.11	40		61.9	210			
MKS08LSY/D-H MKS08LSZ/D-H	8000	87.6	112.0	4.19	200	118	2.2	73.3	50	25	63.2	230	1350x740x1650	1600x890x1840	380V-3-50Hz
MKS08LHY/D-H MKS08LHZ/D-H		113.0	132.0	5.40	200	118	2.2	45.7	50		63.6	255			
MKS10LSY/D-H MKS10LSZ/D-H	10000	113.0	140.0	5.40	240	112	3.0	79.54	50	25	64.5	250	1410x740x1800	1660x890x1990	380V-3-50Hz
MKS10LHY/D-H MKS10LHZ/D-H		141.0	165.0	6.74	240	112	3.0	69.06	50		65.4	290			
MKS15LSY/D-H MKS15LSZ/D-H	15000	170.0	210.0	8.12	240	125	5.5	73.88	50	25	67.6	360	1940x740x1880	2190x960x2070	380V-3-50Hz
MKS15LHY/D-H MKS15LHZ/D-H		213.0	247.0	10.18	240	125	5.5	76.15	50		68.4	410			
MKS20LSY/D-H MKS20LSZ/D-H	20000	222.0	280.0	10.61	280	152	7.5	69.67	50	25	70.5	480	2300x860x2305	2550x1080x2485*	380V-3-50Hz
MKS20LHY/D-H MKS20LHZ/D-H		279.0	323.0	13.33	280	152	7.5	65.5	50		71.2	540			
MKS25LSY/D-H MKS25LSZ/D-H	25000	279.0	350.0	13.33	320	218	7.5	71.29	65	25	70.7	620	2700x960x2570	2950x1180x2760*	380V-3-50Hz
MKS25LHY/D-H MKS25LHZ/D-H		350.0	404.0	16.72	320	218	7.5	83.47	65		71.3	680			
MKS30LSY/D-H MKS30LSZ/D-H	30000	322.0	412.0	15.38	320	173	11.0	79.07	65	25	73.1	690	2690x960x2780	2940x1180x2960*	380V-3-50Hz
MKS30LHY/D-H MKS30LHZ/D-H		418.0	485.0	19.97	320	173	11.0	83.14	65		73.5	760			
MKS35LSY/D-H MKS35LSZ/D-H	35000	382.0	490.0	18.25	370	235	15.0	80.2	80	25	73.6	780	2750x1000x2890	3000x1220x3070*	380V-3-50Hz
MKS35LHY/D-H MKS35LHZ/D-H		494.0	566.0	23.60	370	235	15.0	81.33	80		74.2	860			
MKS40LSY/D-H MKS40LSZ/D-H	40000	430.0	560.0	20.54	370	193	15.0	35.2	80	25	76.2	850	3400x1000x2360	3650x1220x2540*	380V-3-50Hz
MKS40LHY/D-H MKS40LHZ/D-H		557.0	647.0	26.61	370	193	15.0	77.28	80		77.5	940			

- 1.Cooling capacity is based in the following:
 a)Water temperature:7°C(inlet)/12°C(outlet) b)Air entering condition:35°C DB/28°C WB
 2.Heating capacity is based on the following:
 a)Water temperature:60°C(inlet) /same water flow as in standard rating condition in cooling(outlet) b)Air entering condition:7°C DB

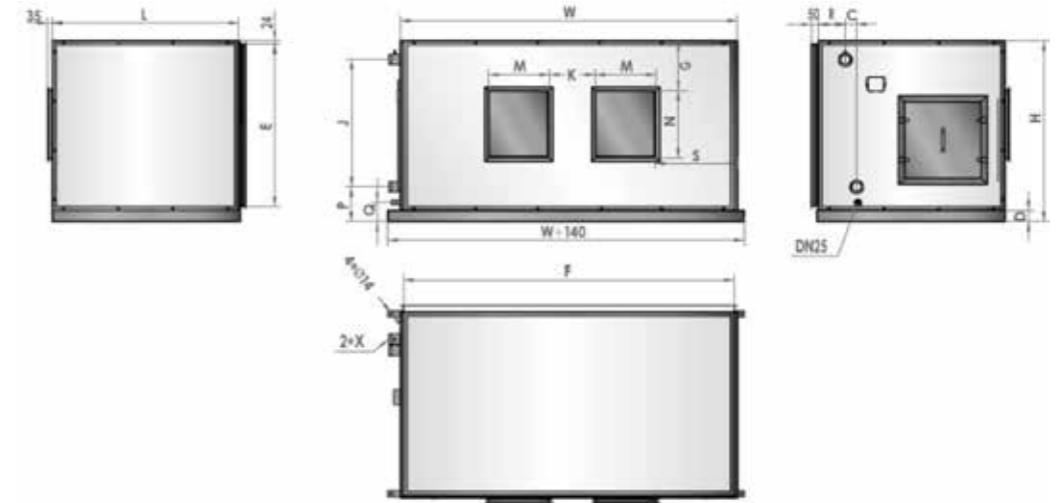
*: This model requires a custom open top cabinet for shipping
 **: For reference only, please consult factory for exact size

Dimensions

Suspended type



Horizontal type



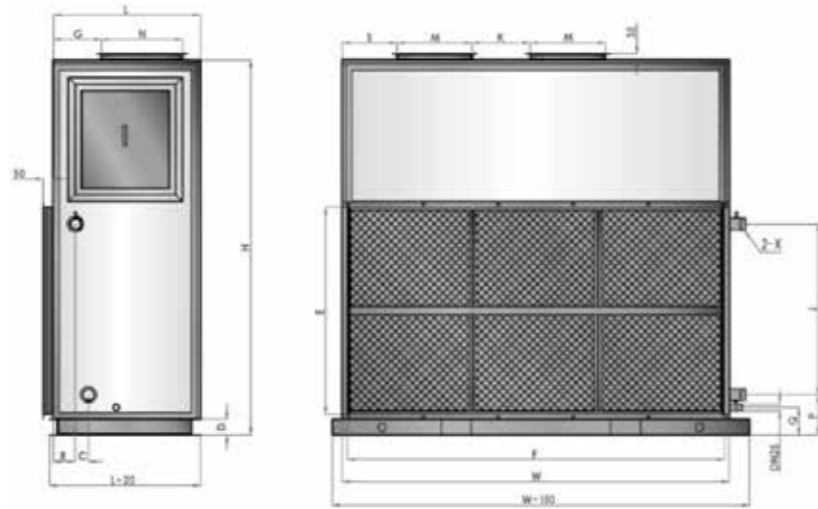
(unit:mm)

MKS/D-H		02D	03D	04D	05D	06D	07D	08D	09D	10D	12D	15D
Outside dimension	L	750	830	830	830	830	830	830	920	920	920	1000
	W	870	1020	1300	1390	1590	1590	1700	1700	1940	1940	2240
	H	555	605	605	605	605	705	705	755	755	860	905
C	S	66	66	66	66	66	66	66	66	66	66	66
	H	110	110	110	110	110	110	110	110	110	110	110
D		25	25	25	25	25	25	25	25	25	25	25
Inlet flange	E	465	510	510	525	525	625	625	675	675	680	825
	F	820	970	1250	1340	1540	1540	1650	1650	1890	1890	2190
G		135	166	166	166	166	211	211	211	211	316	300
J		195	245	245	295	295	400	400	445	445	550	595
K		/	/	172	172	232	252	252	234	314	312	282
Outlet flange	M	271	310	244	244	310	343	343	319	405	407	385
	N	238	274	274	274	274	301	301	351	351	353	416
P		170	170	170	170	170	170	170	170	170	170	170
Q		71	71	71	71	71	71	71	71	71	71	71
R		115	115	115	115	115	115	115	115	115	115	115
Diameter of connection pipe X	S	DN40	DN40	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN50	DN50
	H	DN40	DN40	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN50	DN50

(unit:mm)

MKS/D		05W	06W	08W	10W	15W	20W	25W	30W	35W	40W
Outside dimension	L	1120	1120	1170	1200	1220	1350	1400	1450	1880	1880
	W	1100	1200	1450	1650	1940	2240	2590	2690	2400	2790
	H	840	840	945	965	1195	1630	1835	2080	2540	2060
C	S	66	66	74	74	74	84	84	84	84	83
	H	71	71	66	66	93	100	100	100	100	138
D		25	25	25	25	25	80	80	80	80	80
Inlet flange	E	762	762	865	890	1115	1500	1705	1950	2410	1925
	F	1050	1140	1390	1600	1880	2193	2543	2643	2353	2740
J	S	469	469	599	599	853	1170	1473	1727	990	733
	H	/	/	/	/	/	1270	1473	1727	990	/
K		/	/	/	/	282	335	446	446	490	666
Outlet flange	M	405	405	482	482	384	440	567	567	648	648
	N	350	350	414	414	415	488	488	488	648	648
G		135	175	193	212	442	656	856	1098	1356	876
S		185	227	310	584	233	318	272	249	307	414
P		167	167	167	167	167	218	218	218	218	218
Q		76	76	76	76	76	131	131	131	131	131
R	S	156	156	156	156	156	162	184	218	187	186
	H	/	/	/	/	/	135	152	183	165	/
Diameter of connection pipe	S	DN40	DN40	DN50	DN50	DN50	DN65	DN65	DN65	DN65x2	DN65x2
	H	DN40	DN40	DN50	DN50	DN65	DN65	DN80	DN80	DN65x2	DN65x2

note:code 2x representative two coil.



(unit:mm)

MKS/D		03L	04L	05L	06L	08L	10L	15L	20L	25L	30L	35L	40L
Outside dimension	L	580	580	630	630	740	740	740	860	960	960	1000	1000
	W	1010	1050	1110	1200	1350	1410	1940	2300	2700	2690	2750	3400
	H	1100	1250	1420	1470	1650	1800	1880	2305	2570	2780	2890	2360
C	S	66	66	66	66	66	74	74	74	84	92	100	118
	H	71	71	71	71	66	66	66	87	92	92	100	138
D		50	50	50	50	50	50	80	80	80	80	80	80
Inlet flange	E	474	575	677	728	830	928	1038	1250	1450	1705	1805	1280
	F	/	/	/	/	/	/	/	1350	1500	1705	1755	/
J	S	960	1000	1060	1150	1300	1360	1890	2253	2653	2643	2703	3350
	H	277	403	487	529	659	804	855	1060	1274	1517	1624	1098
K		/	/	/	/	/	/	/	1167	1325	1528	1575	/
Outlet flange	M	/	/	/	/	/	/	282	373	448	448	438	438
	N	309	342	405	405	482	482	384	482	488	488	579	579
G		273	300	350	350	414	414	415	414	309	309	303	579
S		188	202	206	206	249	249	233	247	309	309	303	307
P		212	208	163	222	307	347	176	220	258	254	265	854
Q		159	161	160	169	161	168	203	203	213	207	215	214
R	S	101	101	101	101	101	101	131	134	134	134	134	134
	H	106	106	106	106	106	106	111	102	102	105	113	111
Diameter of connection pipe	S	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN50	DN65	DN65	DN80	DN80
	H	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN50	DN65	DN65	DN80	DN80

note:code 2x representative two coil.

Options

Customizable ESP

- Suspended type

Model	Air volume (m³/h)	Rows of cooling coil	External static pressure(Pa)					
			P1	P2	P3	P4	P5	P6
MKS02DSY/D-H MKS02DSZ/D-H	2000	4(S)	27	67	107	147	187	227
MKS02DHY/D-H MKS02DHZ/D-H		6(H)	27	67	107	147	187	227
MKS03DSY/D-H MKS03DSZ/D-H	3000	4(S)	12	52	92	132	172	212
MKS03DHY/D-H MKS03DHZ/D-H		6(H)	12	52	92	132	172	212
MKS04DSY/D-H MKS04DSZ/D-H	4000	4(S)	30	70	110	150	190	230
MKS04DHY/D-H MKS04DHZ/D-H		6(H)	30	70	110	150	190	230
MKS05DSY/D-H MKS05DSZ/D-H	5000	4(S)	2	42	82	122	162	202
MKS05DHY/D-H MKS05DHZ/D-H		6(H)	2	42	82	122	162	202
MKS06DSY/D-H MKS06DSZ/D-H	6000	4(S)	52	92	132	172	212	252
MKS06DHY/D-H MKS06DHZ/D-H		6(H)	52	92	132	172	212	252
MKS07DSY/D-H MKS07DSZ/D-H	7000	3(S)	58	98	138	178	218	258
MKS07DHY/D-H MKS07DHZ/D-H		4(H)	58	98	138	178	218	258
MKS08DSY/D-H MKS08DSZ/D-H	8000	3(S)	39	79	119	159	199	239
MKS08DHY/D-H MKS08DHZ/D-H		4(H)	39	79	119	159	199	239
MKS09DSY/D-H MKS09DSZ/D-H	9000	3(S)	76	116	156	196	236	286
MKS10DHY/D-H MKS10DHZ/D-H		4(H)	76	116	156	196	236	286
MKS10DSY/D-H MKS10DSZ/D-H	10000	3(S)	96	136	176	216	256	306
MKS10DHY/D-H MKS10DHZ/D-H		4(H)	96	136	176	216	256	306
MKS12DSY/D-H MKS12DSZ/D-H	12000	3(S)	68	108	148	188	228	278
MKS12DHY/D-H MKS12DHZ/D-H		4(H)	68	108	148	188	228	278
MKS15DSY/D-H MKS15DSZ/D-H	15000	3(S)	85	125	165	205	255	305
MKS15DHY/D-H MKS15DHZ/D-H		4(H)	85	125	165	205	255	305

Note:
 1.Character in red are standard motor power input in standard ESP, others ESP must be customized.
 2.Character in red are standard motor power input in standard ESP, others power input correspondence others customized ESP.

● Suspended type

Model	Air volume (m³/h)	Rows of cooling coil	Motor power(kW) corresponding to external static pressure					
			P1	P2	P3	P4	P5	P6
MKS02DSY/D-H MKS02DSZ/D-H	2000	4(S)	0.37	0.37	0.55	0.55	0.55	0.55
MKS02DHY/D-H MKS02DHZ/D-H		6(H)	0.37	0.55	0.55	0.55	0.75	0.75
MKS03DSY/D-H MKS03DSZ/D-H	3000	4(S)	0.55	0.55	0.55	0.75	0.75	0.75
MKS03DHY/D-H MKS03DHZ/D-H		6(H)	0.55	0.55	0.75	0.75	0.75	1.1
MKS04DSY/D-H MKS04DSZ/D-H	4000	4(S)	0.75	0.75	0.75	1.1	1.1	1.1
MKS04DHY/D-H MKS04DHZ/D-H		6(H)	0.75	1.1	1.1	1.1	1.1	1.1
MKS05DSY/D-H MKS05DSZ/D-H	5000	4(S)	1.1	1.1	1.5	1.5	1.5	1.5
MKS05DHY/D-H MKS05DHZ/D-H		6(H)	1.5	1.5	1.5	1.5	1.5	2.2
MKS06DSY/D-H MKS06DSZ/D-H	6000	4(S)	1.1	1.5	1.5	1.5	1.5	2.2
MKS06DHY/D-H MKS06DHZ/D-H		6(H)	1.5	1.5	1.5	1.5	2.2	2.2
MKS07DSY/D-H MKS07DSZ/D-H	7000	3(S)	1.1	1.1	1.1	1.5	1.5	2.2
MKS07DHY/D-H MKS07DHZ/D-H		4(H)	1.1	1.5	1.5	1.5	2.2	2.2
MKS08DSY/D-H MKS08DSZ/D-H	8000	3(S)	1.5	1.5	1.5	1.5	2.2	2.2
MKS08DHY/D-H MKS08DHZ/D-H		4(H)	1.5	1.5	2.2	2.2	2.2	2.2
MKS09DSY/D-H MKS09DSZ/D-H	9000	3(S)	2.2	2.2	2.2	2.2	2.2	3
MKS10DHY/D-H MKS10DHZ/D-H		4(H)	2.2	2.2	2.2	2.2	3	3
MKS10DSY/D-H MKS10DSZ/D-H	10000	3(S)	2.2	2.2	2.2	3	3	3
MKS10DHY/D-H MKS10DHZ/D-H		4(H)	2.2	2.2	3	3	3	3
MKS12DSY/D-H MKS12DSZ/D-H	12000	3(S)	3	3	3	3	4	4
MKS12DHY/D-H MKS12DHZ/D-H		4(H)	3	3	3	4	4	4
MKS15DSY/D-H MKS15DSZ/D-H	15000	3(S)	4	4	4	4	5.5	5.5
MKS15DHY/D-H MKS15DHZ/D-H		4(H)	4	4	4	5.5	5.5	5.5

Note :
 1. Characters in red are standard motor power input in standard ESP, others ESP must be customized.
 2. Characters in red are standard motor power input in standard ESP, others power input correspondence others customized ESP.

● Horizontal type

Model	Air volume m³/h	Rows of cooling coil	Motor power(kW) corresponding to external static pressure													
			120	160	200	240	280	320	370	420	470	520	570	620	670	720
MKS05WSY/D-H MKS05WSZ/D-H	5000	4(S)	1.1	1.1	1.1	1.5	1.5	1.5	/	/	/	/	/	/	/	/
MKS05WHY/D-H MKS05WHZ/D-H		6(H)	1.1	1.1	1.5	1.5	1.5	1.5	/	/	/	/	/	/	/	/
MKS06WSY/D-H MKS06WSZ/D-H	6000	4(S)	1.5	1.5	1.5	1.5	2.2	2.2	/	/	/	/	/	/	/	
MKS06WHY/D-H MKS06WHZ/D-H		6(H)	1.5	1.5	1.5	2.2	2.2	2.2	/	/	/	/	/	/	/	
MKS08WSY/D-H MKS08WSZ/D-H	8000	3(S)	1.5	1.5	1.5	2.2	2.2	2.2	/	/	/	/	/	/	/	
MKS08WHY/D-H MKS08WHZ/D-H		4(H)	1.5	2.2	2.2	2.2	2.2	/	/	/	/	/	/	/	/	
MKS10WSY/D-H MKS10WSZ/D-H	10000	3(S)	/	/	3	3	3	3	/	/	/	/	/	/	/	
MKS10WHY/D-H MKS10WHZ/D-H		4(H)	/	/	3	3	3	/	/	/	/	/	/	/	/	
MKS15WSY/D-H MKS15WSZ/D-H	15000	3(S)	/	/	4	4	4	4	5.5	5.5	/	/	/	/	/	
MKS15WHY/D-H MKS15WHZ/D-H		4(H)	/	/	4	4	5.5	5.5	5.5	5.5	/	/	/	/	/	
MKS20WSY/D-H MKS20WSZ/D-H	20000	3(S)	/	/	/	/	5.5	7.5	7.5	7.5	7.5	7.5	/	/	/	
MKS20WHY/D-H MKS20WHZ/D-H		4(H)	/	/	/	/	7.5	7.5	7.5	7.5	7.5	/	/	/	/	
MKS25WSY/D-H MKS25WSZ/D-H	25000	3(S)	/	/	/	/	/	/	5.5	7.5	7.5	7.5	7.5	/	/	
MKS25WHY/D-H MKS25WHZ/D-H		4(H)	/	/	/	/	/	/	7.5	7.5	7.5	7.5	/	/	/	
MKS30WSY/D-H MKS30WSZ/D-H	30000	3(S)	/	/	/	/	/	/	11	11	11	11	11	11	/	
MKS30WHY/D-H MKS30WHZ/D-H		4(H)	/	/	/	/	/	/	11	11	11	11	11	15	/	
MKS35WSY/D-H MKS35WSZ/D-H	35000	3(S)	/	/	/	/	/	/	/	/	5.5x2	5.5x2	7.5x2	7.5x2	7.5x2	
MKS35WHY/D-H MKS35WHZ/D-H		4(H)	/	/	/	/	/	/	/	/	7.5x2	7.5x2	7.5x2	7.5x2	7.5x2	
MKS40WSY/D-H MKS40WSZ/D-H	40000	4(S)	/	/	/	/	/	/	/	/	7.5x2	7.5x2	7.5x2	11x2	11x2	
MKS40WHY/D-H MKS40WHZ/D-H		6(H)	/	/	/	/	/	/	/	/	7.5x2	7.5x2	11x2	11x2	11x2	

Note :
 1. Characters in red are standard motor power input in standard ESP, others ESP must be customized.
 2. Characters in red are standard motor power input in standard ESP, others power input correspondence others customized ESP.

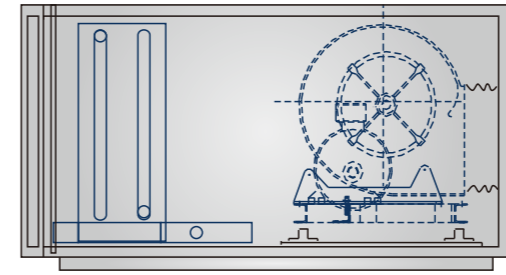
● Vertical type

Model	Air volume m ³ /h	Rows of cooling coil	Motor power(kW) corresponding to external static pressure											
			80	120	160	200	240	280	320	370	420	470	520	570
MKS03LSY/D-H MKS03LSZ/D-H	3000	4(S)	0.75	0.75	0.75	0.75	1.1	1.1	/	/	/	/	/	/
MKS03LHY/D-H MKS03LHZ/D-H		6(H)	0.75	0.75	1.1	1.1	1.1	1.1	/	/	/	/	/	/
MKS04LSY/D-H MKS04LSZ/D-H	4000	4(S)	/	1.1	1.1	1.1	1.1	1.1	1.5	/	/	/	/	/
MKS04LHY/D-H MKS04LHZ/D-H		6(H)	/	1.1	1.1	1.1	1.1	1.5	1.5	/	/	/	/	/
MKS05LSY/D-H MKS05LSZ/D-H	5000	4(S)	/	1.1	1.1	1.5	1.5	1.5	1.5	/	/	/	/	/
MKS05LHY/D-H MKS05LHZ/D-H		6(H)	/	1.1	1.5	1.5	1.5	1.5	2.2	/	/	/	/	/
MKS06LSY/D-H MKS06LSZ/D-H	6000	4(S)	/	1.5	1.5	1.5	2.2	2.2	2.2	/	/	/	/	/
MKS06LHY/D-H MKS06LHZ/D-H		6(H)	/	1.5	1.5	1.5	2.2	2.2	2.2	/	/	/	/	/
MKS08LSY/D-H MKS08LSZ/D-H	8000	3(S)	/	/	2.2	2.2	2.2	2.2	3	3	/	/	/	/
MKS08LHY/D-H MKS08LHZ/D-H		4(H)	/	/	2.2	2.2	2.2	3	3	3	/	/	/	/
MKS10LSY/D-H MKS10LSZ/D-H	10000	3(S)	/	/	/	3	3	3	3	4	4	/	/	/
MKS10LHY/D-H MKS10LHZ/D-H		3(H)	/	/	/	3	3	4	4	4	4	/	/	/
MKS15LSY/D-H MKS15LSZ/D-H	15000	3(S)	/	/	/	5.5	5.5	5.5	5.5	7.5	/	/	/	/
MKS15LHY/D-H MKS15LHZ/D-H		4(H)	/	/	/	5.5	5.5	5.5	7.5	/	/	/	/	/
MKS20LSY/D-H MKS20LSZ/D-H	20000	3(S)	/	/	/	/	7.5	7.5	7.5	7.5	7.5	/	/	/
MKS20LHY/D-H MKS20LHZ/D-H		4(H)	/	/	/	/	7.5	7.5	7.5	7.5	/	/	/	/
MKS25LSY/D-H MKS25LSZ/D-H	25000	3(S)	/	/	/	/	/	7.5	7.5	7.5	11	11	11	/
MKS25LHY/D-H MKS25LHZ/D-H		4(H)	/	/	/	/	/	7.5	7.5	11	11	11	11	/
MKS30LSY/D-H MKS30LSZ/D-H	30000	3(S)	/	/	/	/	/	11	11	11	11	15	15	/
MKS30LHY/D-H MKS30LHZ/D-H		4(H)	/	/	/	/	/	11	11	11	15	15	15	/
MKS35LSY/D-H MKS35LSZ/D-H	35000	3(S)	/	/	/	/	/	/	11	11	15	15	15	15
MKS35LHY/D-H MKS35LHZ/D-H		4(H)	/	/	/	/	/	/	11	15	15	15	15	15
MKS40LSY/D-H MKS40LSZ/D-H	40000	4(S)	/	/	/	/	/	/	15	15	15	/	/	/
MKS40LHY/D-H MKS40LHZ/D-H		6(H)	/	/	/	/	/	/	15	15	/	/	/	/

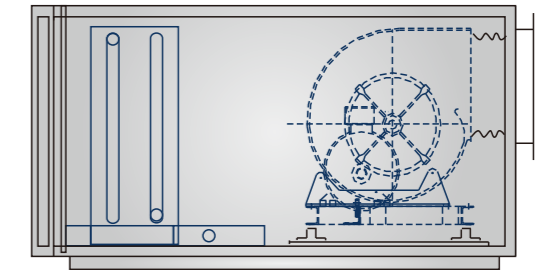
Note:
 1. Characters in red are standard motor power input in standard ESP, others ESP must be customized.
 2. Characters in red are standard motor power input in standard ESP, others power input correspondence others customized ESP.

Air outlet directions

● Suspended type

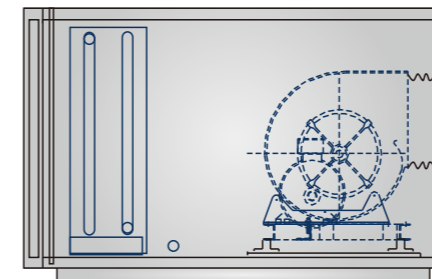


Standard: Front below

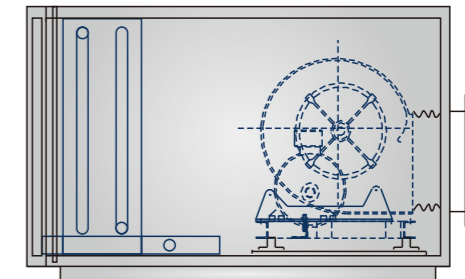


Option: Front up

● Horizontal type

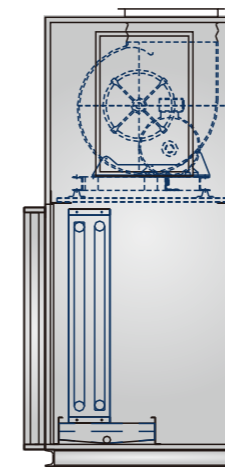


Standard: Front up

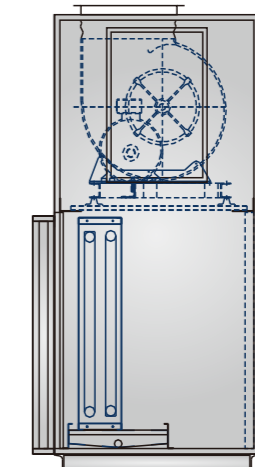


Option: Front below

● Vertical type



Standard: Up front



Option: Up rear

Name		Standard	Customized
Air volume	Suspended type	2000~15000CMH	/
	Horizontal type	3000~40000CMH	> 40000CMH choose AHU
	Vertical type	5000~40000CMH	> 40000CMH choose AHU
Fan total pressure	/	/	Suspended type: ≤800Pa; Horizontal and Vertical type: ≤1000Pa
Panel	Thickness	25mm	50mm
	Innet Skin	0.5mm, Galvanized Steel	Galvanized Steel (Thickness: 0.5/0.7/1.0); Stainless Steel (Thickness:0.5/0.7/1.0), Pre-coated Steel (Thickness:0.5/0.7/1.0)
	Outer Skin	0.5mm, Pre-coated Steel	Pre-coated Steel (Thickness:0.5/0.7/1.0), Stainless Steel (Thickness:0.5/0.7/1.0)
Coil	Fin Material	Aluminium	Hydrophilic Aluminium
	Header Material	Seamless Steel Tube	Copper Tube
	Coil Frame	GI	SUS304
	Has Moisture Eliminator	AL Moisture Eliminator	SUS304 Moisture Eliminator
	Number of Rows	3/4/6 Rows	/
	Tube Size	1/2 inch (≤15000CMH), 3/8 inch (>15000CMH)	/
	Drain Pan Material	GL Spray	SUS304
	Connection Type	Male Threaded	With Flange
	Motor Brand	WoLong	Siemens
Motor	Frequency Type	Single Speed	Variable Frequency Motor, Explosion-Proof Motor, Double speed motor
	Efficiency	IE2	IE3
	Accessories	/	Belt guard, Winding protection, NSK/SKF bearing, Moisture-proof heating belt
	Blower Brand	Yilida	Kruger
Fan	Blade Type	Forward Curved	/
	Discharge	Suspended: FB; Horizontal: FT; Vertical: UF	/
	Accessories	/	NSK/SKF bearing, Pressure differential gauge, Pressure differential switch, Activation Box
	Humidifier Type	/	Evaporative Humidifier
Filter	Filter Brand	G2 nylon plate	G2 AL plate, G3/G4/F5 plate filter
	Filter Frame	AL	/
	Frame Material	Galvanized Steel	Stainless Steel
	Special filter	/	UV lamp, Light hydrogen plasma air purifying disinfectant, Electrostatic Filter, Air Purifier, Photocatalyst filter
	Accessories	/	Pressure differential gauge, Pressure differential switch
controller	General customization	/	Direct On line Starter, Y-Delta Starter, Inverter Starter
	Non-standard custom	/	Modbus, BMS, etc.
Others	Anti-corrosion customization	Vertical type: Galvanized Steel	SUS Fastener
	Unit Base	Horizontal type: (≤30000CMH) Galvanized Steel, (≥35000CMH) 8# Steel Bsse Horizontal type	Steel Bsse, Hot dip zinc base Steel Bsse, Hot dip zinc base
	Outdoor Location	/	Canopy
	Accessories	/	Lamp, Lamp Control Box, Inspection Window, GL Damper, AL Damper, Hinged access door



Motor



Coil



Air filter



Humidifier



Service Lamp



UV germicidal lamp

Selection

Selection procedures

● Step 1:

Determine the airflow (m³/h), inlet air condition, total cooling capacity (kW), or total heating capacity (kW). If the inlet air condition is beyond the standard condition of the above specifications, please check to the following formula:

$$Q = F1 \times F2 \times F3 \times Q0$$

Note:

Q0—cooling capacity of standard cooling condition, refer to the unit specifications;

F1—temperature correction coefficient of cooling coil, refer to table A;

F2—temperature difference correction coefficient of water, refer to figure 1;

F3—water velocity correction coefficient, refer to figure 2

Table A Temperature correction coefficient of cooling coil F1

EWB	EWT	Entering water temperature °C						
		4	5	6	7	8	9	10
Entering air WB temperature °C	17	0.978	0.890	0.801	0.711	0.626	0.523	0.423
	18	1.093	1.001	0.915	0.823	0.731	0.635	0.538
	19	1.213	1.124	1.032	0.940	0.846	0.750	0.652
	19.5	1.274	1.184	1.093	1.000	0.906	0.809	0.711
	20	1.337	1.246	1.155	1.061	0.967	0.869	0.770
	21	1.464	1.373	1.281	1.186	1.090	0.993	0.893
	22	1.597	1.504	1.411	1.316	1.219	1.121	1.020
	23	1.733	1.641	1.547	1.450	1.352	1.252	1.151
	24	1.874	1.781	1.685	1.589	1.490	1.389	1.287
	26	2.172	2.076	1.978	1.879	1.779	1.676	1.571
	28	2.489	2.391	2.291	2.189	2.086	1.981	1.874
	30	2.824	2.725	2.623	2.519	2.414	2.306	2.196

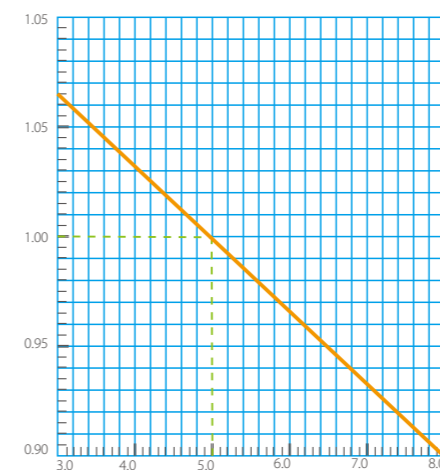


Figure 1 Temperature difference correction coefficient of water F2

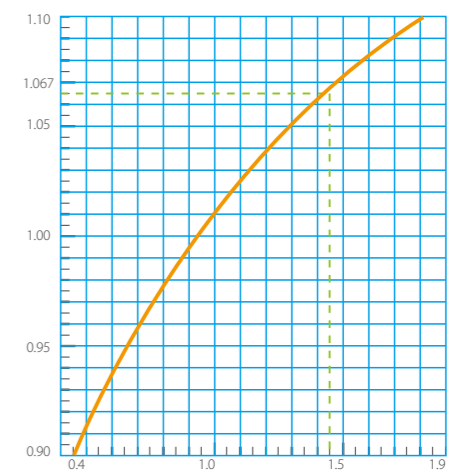


Figure 2 Water velocity correction coefficient F3

● Step 2:

Determine the external static pressure (Pa). If the ESP is beyond the standard value of the above specifications, please indicate the required ESP when you take the order. Take table B as a reference to estimate the air pressure in the duct.

Table B Air resistance of duct

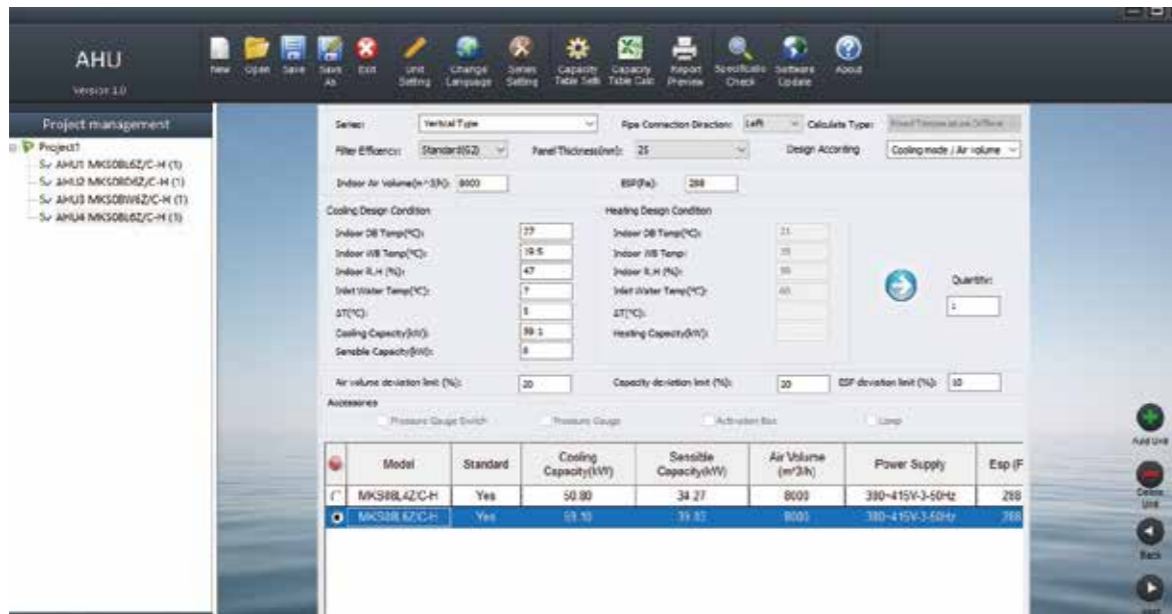
Air speed(m/s)	Total air pressure of the duct (Pto)				
	On-way resistance (Pa/m)	Local resistance (Pa/pcs)			
		Straight pipe	Damper	Diffuser	Bend
10	1.35	30	20(air outlet speed ≤5m/s)	30	20
9	1	25		25	18
8	0.7	20		20	15
7	0.55	15		15	12
6	0.4	12		12	10

Note:
 1. Pto= on-way resistance+ local resistance, Pa.
 2. ESP= Pto.

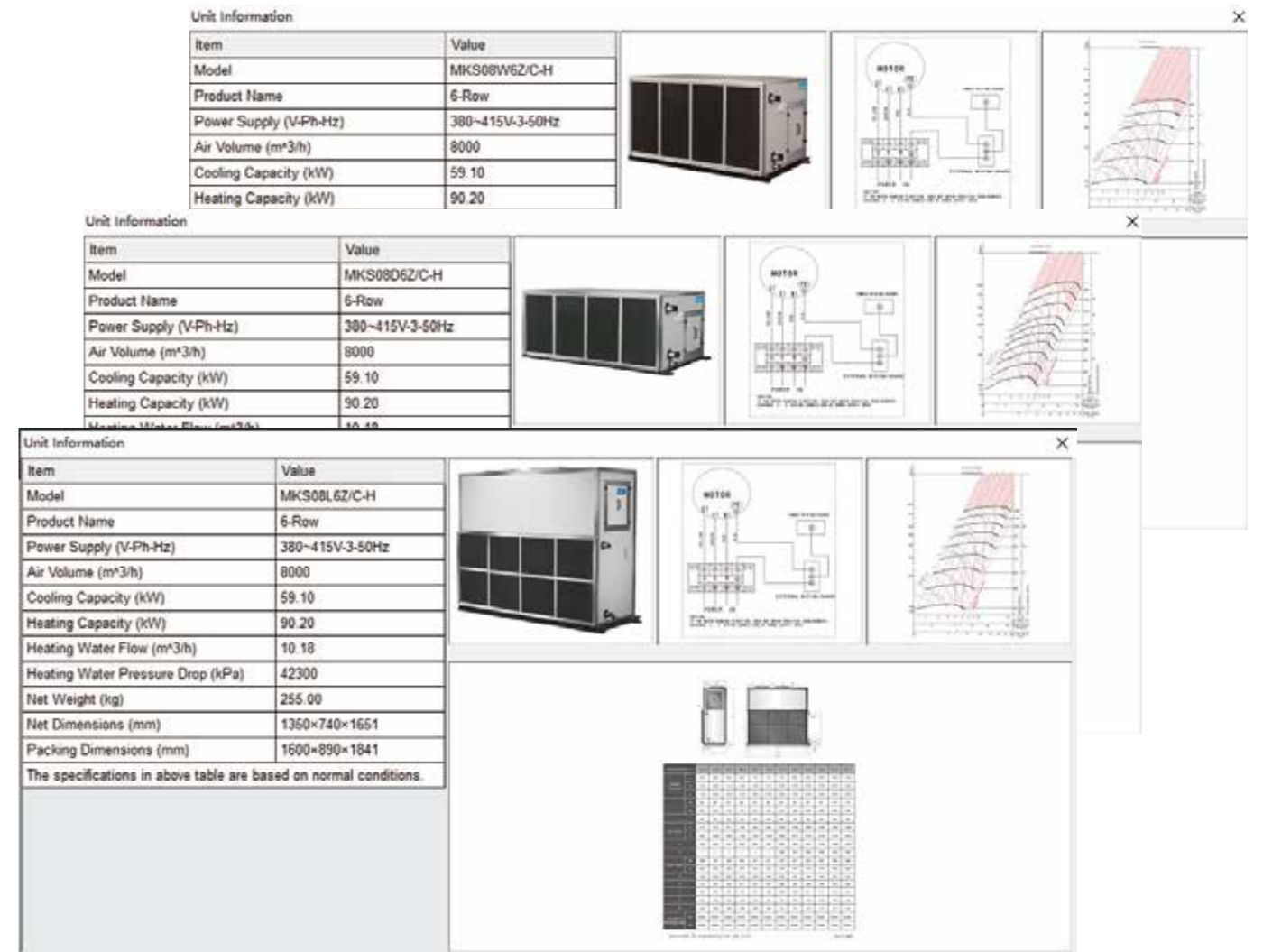
- **Step 3:**
Determine the unit structure: horizontal type (W), vertical type (L) and suspended type (D).
- **Step 4:**
Determine the pipe connecting mode: right-handed (Y), left-handed (Z).

Selection software

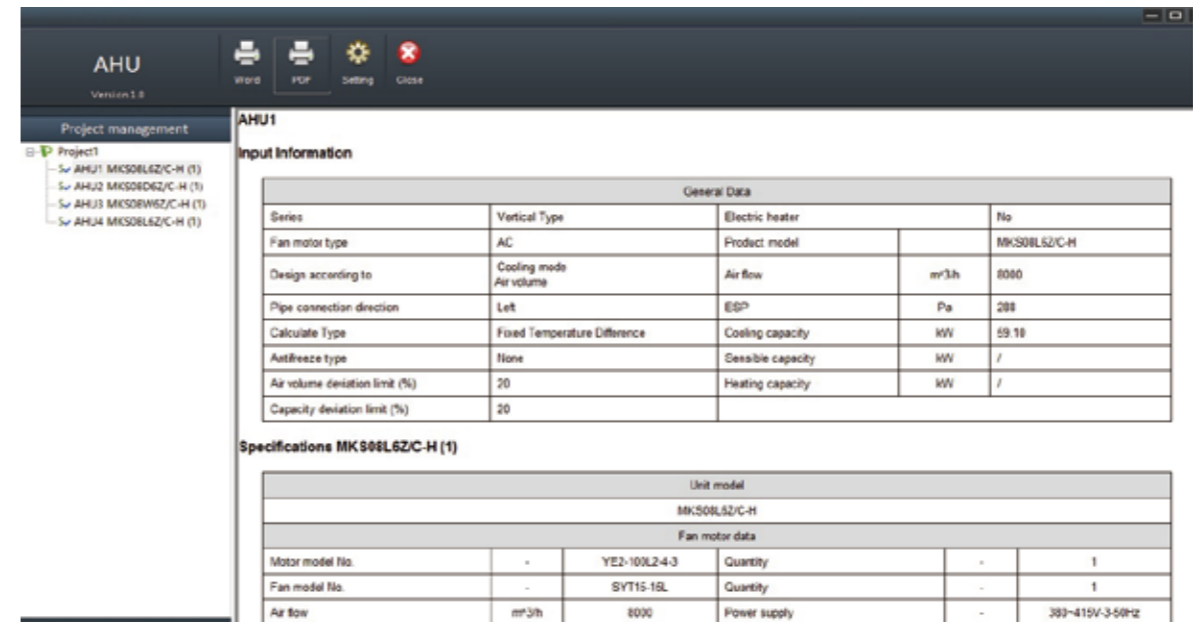
- You can make selections under various entering air conditions, entering water conditions, different air volume, and different cooling capacity or heating capacity.
- User friendly interface make selection visual and easy.
- Powerful project managemakes functions.
- Selection interface



- Main interface



- Report data interface





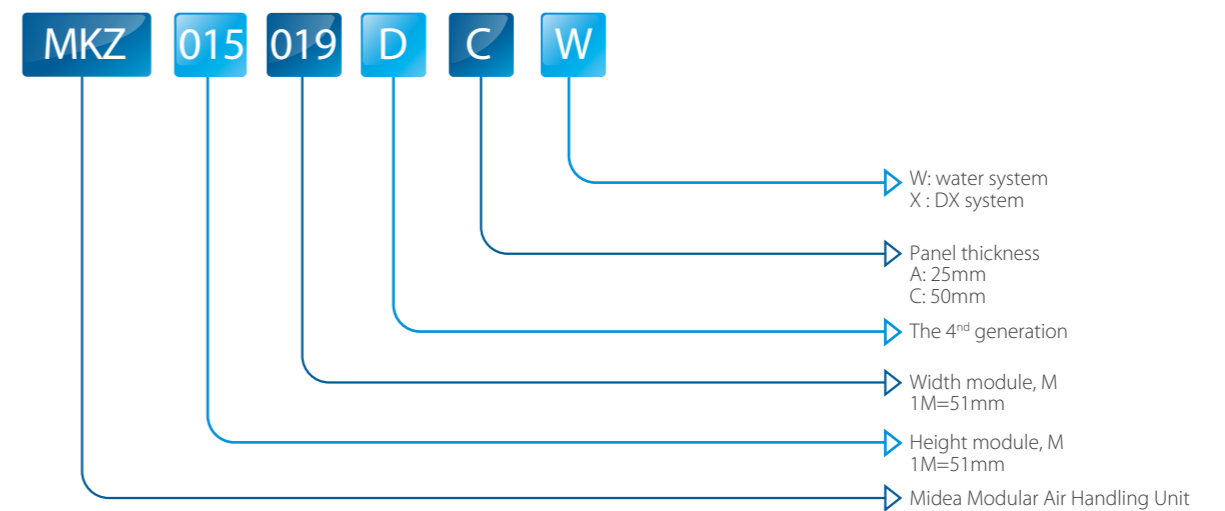
Modular Air Handling Unit

MAHUs are modular so that they have the flexibility to add components as required. The 4th generation Midea MAHU adapts unitary structure design, more outstanding cold-bridge free performance, lower air leakage and more elegant appearance. It realizes a variety of functions: cooling, heating, humidification, dehumidification, air purification, noise elimination, and so on. The air flow rate is available from 1400m³/h to 240000m³/h;

MAHUs can provide a variety of functional section combinations according to customer requirements, and can be widely used in subways, exhibition centers, airports, office buildings, hotels, theaters, shopping malls, gymnasiums, state administrative organs, electronics, precision machinery, textiles, medicine, food, petrochemicals, tobacco and other occasions.

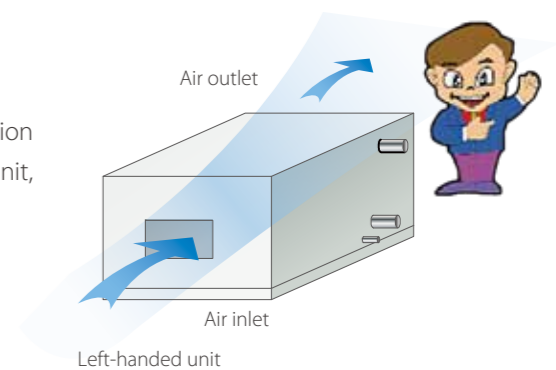
If the unit is installed near the coast or surrounded by corrosive environments such as paper mills, iron mills, chemical plants, etc., customers need to consult the factory so that the corrosive environment does not hinder the stability of the product's long-term operation.

Nomenclature



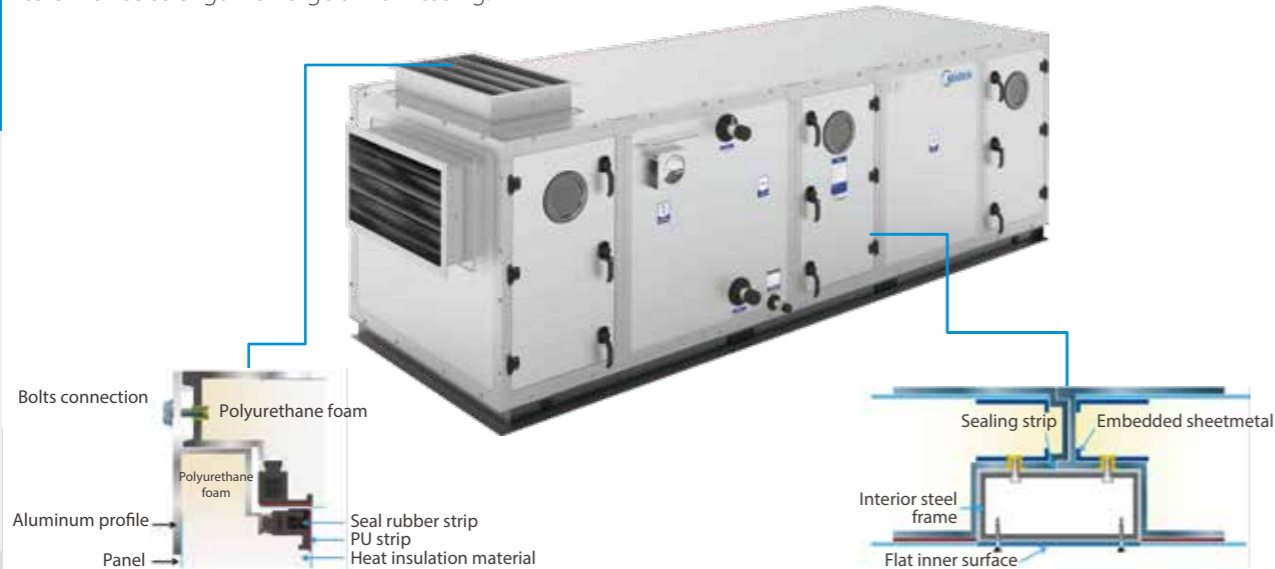
Orientation

Unit handling orientation is determined by location of pipe connection while facing the air outlet. The unit below is left-handed connection unit, otherwise is the right-handed connection unit.



Reliable quality

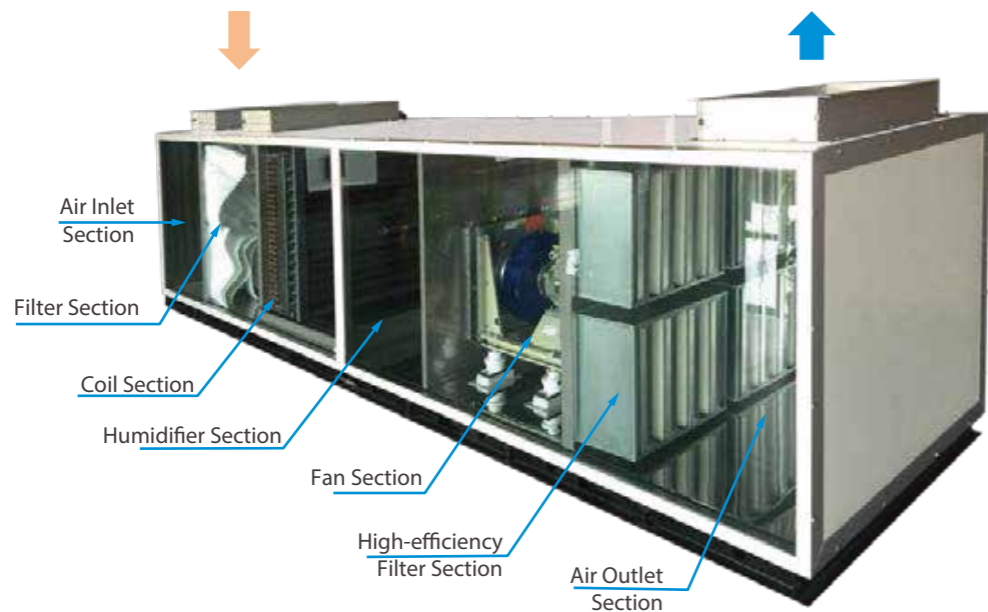
Patented "Labyrinth" panel is integrated male and female aluminum profile. Different panels of the unit casing are mounted and locked by the labyrinth profile, then fastened with bolts and nuts by embedded sheet metal inside the aluminum profile, and interior steel frame are used on the panel connection to enhance the strength. Square steels would be mounted inside the units to enhance strength for large airflow casing.



Modular design

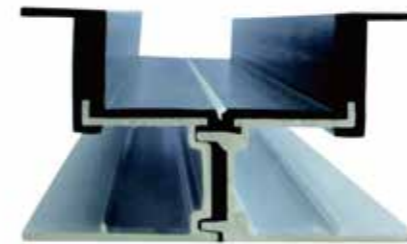
The MAHUs adopt module design usually including mixing section, primary efficiency filter section, medium efficiency filter section, high efficiency filter section, cooling coil section, heating coil section, humidifier section, sound attenuator section, service section, heat recovery section, fan section and so on. Function sections can be combined freely. Different function sections can be selected according to the specific applications.

The MAHUs can be shipped in divided sections. Each section is fully completed at manufacturer's work place, and only connection of sections can be done on project site. Oversized units cannot be fitted in normal container shipment or cannot be delivered through access at site can be considered shipment in complete knock down form, but reassembling works must be done by engineers of the manufacturer.



Torsion-resistant case

The box panel is surrounded by aluminum alloy profile frames with concave and convex grooves, forming a mutually fastening sealing structure during installation. Through the connection of bolts and embedded nuts, the labyrinth seal box with strong torsional resistance is formed. The mechanical strength of the box can reach EN1886 D1 grade and the air leakage rate can reach EN1886 L1 grade.



Great insulation performance

The box panel is made of polyurethane with low thermal conductivity and double-layer steel plate inside and outside, which has good heat insulation and noise reduction performance, and the thermal insulation performance of the box can reach the European standard EN1886 T2 level.



Professional selection software & heat exchanger

A user-friendly software selection program has been provided to help the customer easily select the units as per their project requirements.

The heat exchanger is designed with AHRI certified professional selection software to ensure that the selection and physical performance consistency.



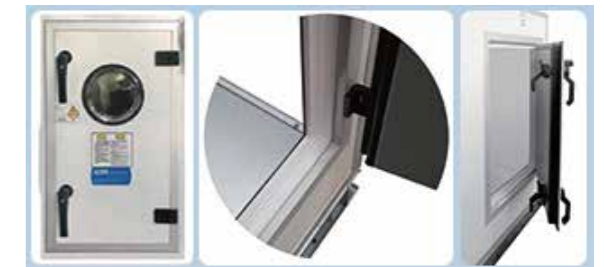
Cold-bridge-free structure

Patented "Labyrinth" panel is integrated male and female aluminum profile. Different panels of the unit casing are mounted and locked by the labyrinth profile forming labyrinth sealing structure to prevent air-leakage. And the cold bridge factor can reach the European standard EN1886 TB1 level. The outer wall panel of the box is wrapped in the aluminum profile frame, and the sheet metal corners are isolated from wet air to avoid rusting.



Safely designed maintenance

The access door designed with aviation technology is foamed with high strength and small deformation. Double knife seal without leakage, while equipped with safety pressure relief device to ensure the safety of the access door operation.



Professional details

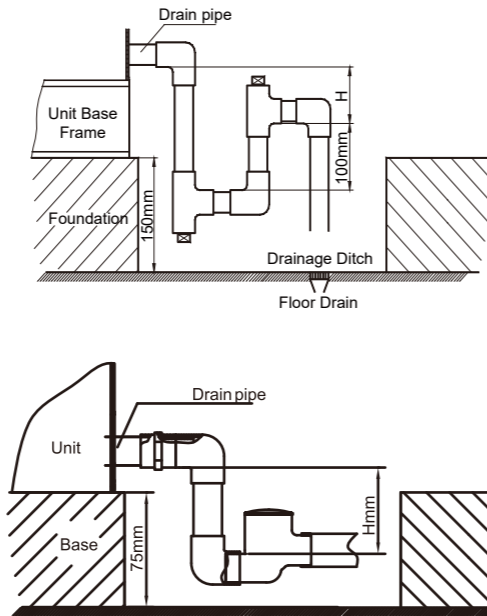
The differential pressure gauge installation method adopted by Midea is made of stainless steel pipe instead of traditional plastic pipe, and the joints are sealed by rubber sealing sleeve, which effectively solves the air leakage and jittering of differential pressure gauge pointer caused by insufficient strength of the connecting pipe.



Base frame

Unit sections are mounted on galvanized steel or channel steel base frame for ease of shipment and handling. The frames provide holes for section connection, and holes for fork-lifting truck. There is a guard rail cross the bottom in the holes to prevent unit damage by trucks.

The base frame can be used in lieu of concrete plinths or other additional bases that are used on site. However, for high static pressure application, additional concrete plinths or other additional bases are required at site to raise the MAHUs for drain pan's U-trap.



Double skin panel

The outer skin is color-coated steel sheet that is resistant to scratch and nicks and shall allow for easy cleaning. The inner skin is galvanized steel sheet.

The panels are double skin type with injected polyurethane foam insulation. The panel is moisture proof and anti-corrosive. The insulation material is totally enclosed in the panel to avoid any possibility of insulation being exposed to air stream.

The panel is sturdy and, in its standard design, unit sections of the same width can be stacked on the top of one another, without additional reinforcement.

Drain pan

Standard drain pan is steel and painted, fully insulated on the outside with 10mm foam insulation. Stainless steel drain pan is optional. Connecting pipe is located at bottom of drain pan to allow complete drainage. The drain pipe exits from the same side as coil header.

Heat exchangers

Pay attention to ensure that the fins of the heat exchanger coil and the copper tube are not scratched and deflated. To keep the coil clean, the fins of the coil can be brushed with a nylon brush. It must be cleaned with vacuum cleaner before brushing. If there is compressed air, you can use high pressure air hose or nozzle to clean the coil. The outer surface of the coil should be free of dust after cleaning and the inner surface of the coil should reach its original heat transfer capacity. In addition to cleaning fins, the coils should be cleaned of scale after 2-3 years of use, and if available, softened water should be used for cold and hot water for the unit coils.

Spring Isolator

The fan motors are mounted on a rigid base frame which is supported by effective spring shock absorber. Shipping brackets are equipped at the base frame to protect fans, motors and spring shock absorber during transportation.

Fan assembly

The vibration levels of the complete fan assembly (fan wheel, motor and drives assembled as a whole system) is checked and dynamically balanced in the factory.

The main parts of fan are scroll, impeller, frame, bearing and shaft. The scroll is made of hot galvanized steel sheet. Its side plate has an outline complying with aerodynamics. The impeller is made of high grade hot galvanizing steel sheet and is designed to a special configuration according to aerodynamics to make the efficiency highest and the noise lowest. The high quality ball bearings are air-sealed, with preset lubricating oil, and have automatic alignment. The shafts are made of 40 Cr or C45 carbon steel bars. They are coated after assembly in order to provide corrosion resistance.

Fan connection is isolated from unit casing by a flexible canvas duct mounted at fan discharge outlet. Fan and motor assembly is internally isolated from the unit casing with spring isolators, furnished and installed by the unit manufacturer.

The drive assembly consists of belt pulley and motor. The belt type is oil and heat resistant, antistatic and avoiding electric discharges. Motor is mounted on a sliding base to permit adjustment of drive belt tension. The motor used is induction motor which is fully enclosed and horizontally mounted.

Unit is provided with a painted metal sheet belt guard. The belt guard is rigidly attached to the fan base support structure.

Fan assembly section is equipped with an access door with window on the drive side of the fan.



Motor

Totally enclosed fan cooled motors, with class F insulation, are mounted on slide rails with provision for V-belt tensioning. Fan and motor are mounted on a common base frame fitted with anti-vibration mountings and the fan discharge is provided with a fire retardant flexible connection to completely isolate the fan and motor assembly from the unit casing.

Fan motor is mounted on a horizontal flat plate and can't be supported by the fan or its structural members. Motor is mounted within the fan section casing on slide rails equipped with adjusting screws. So motor can be moved freely in the horizontal direction to reach the correct point then fasten bolts. Installation and maintenance are time saving.



Coil

In Midea MAHUs, there are three typical types of coils: chilled water coils, hot water coils and steam heater coils. All coils are AHRI certified and provided to meet the scheduled performance. Coils consist of copper-tubes and aluminum fins. The fins are sine-wave design with slits for better heat transfer efficiency and moisture carry-over limit performance.



All coils are installed with space between each component for cleaning and mounting of controls. All cooling coils are mounted over a drain pan. The drain pan extends beyond the leaving side of the coil to help recover condensate.

Coil connections always extend through out of the unit cabinet, allowing for the easy connection of valves and piping. Vents are located outside the cabinet.

The coil can be customized with DX coil and refrigerant is R410A.



Humidifier

Usually, there is no humidifier installed in the MAHUs for comfort air conditioning systems; but the outdoor climate is very cold in winters, therefore in case a humidifier is not used, the winter indoor relative humidity may be too low. Humidifiers are necessary for health care facilities and processing systems in pharmaceutical, semiconductor, textile, communication centers, and computer rooms.

In Midea MAHUs, wet film vaporization, dry steam, electrode boiler, and water spray humidifiers are widely used. Wet film vaporization humidifier is a type of enthalpy humidifier or evaporation gasification humidifier. Through the principle of exchange of heat and moisture, the air is humidified and cooled. The medium is inorganic material which has long-life, high reliability, good heat conduction and bacterial resistance. Dry steam or electrode boiler humidifiers are widely used in where a warm air supply and humidity control are needed in winter.



Wet film vaporization humidifier



Dry steam humidifier



Electrode boiler humidifier

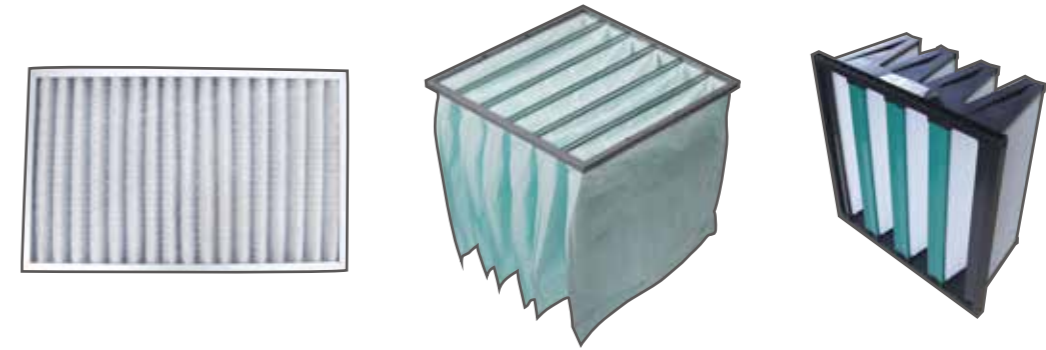


Water spray humidifier

Filter

Air filtration is an important aspect for delivering good indoor air quality. In MAHUs, earlier low-efficiency filters of the panel type are giving way to the medium and high efficiency bag type and cartridge type of filters.

Filter section consists of galvanized steel filter frame structure and an access door for filter maintenance. Low efficiency plate filter is designed as standard. Bag, cartridge and other high efficiency filters are optional and can be customised. The structure of filters are stable and firm. The filters have high strength and intensity. It is easy to change the filters. Filters can be mounted from front side in the unit. The filters efficiency is up to 95%.



Filter efficiency table

	Pre Filter ≥ 5µm 80% > Efficiency ≥ 20%					Secondary Filter ≥ 1µm 70% > Efficiency ≥ 20%					High Efficiency Filter ≥ 1µm 99% > Efficiency ≥ 70%			Secondary HEPA Filter ≥ 0.5µm 99.9% > Efficiency ≥ 95%				HEPA Filter ≥ 0.5µm Efficiency ≥ 99.99%			
China - GB/T14295 U.S. - ASHRAE	C1	C2 ~ C4	L5	L6	L7	L8	M9	M10	M11	M12	M13	M14	H12 ~ H16				VH17	VH18	VH19	VH20	
Europe - New Standard	G1 65%	G2 80%	G3 30% ~ 90%		G4 > 90%		F5 40%		F5 60%		F7 80%	F8 90%	F9 85%	H10 95%	H11 99%	H12 99.90%	H13 99.995%	H14 99.995%	V15~V17 99.995%		
Europe - Old Standard	EU1	EU2	EU3	EU4		EU5	EU6	EU7	EU8	EU9	EU10	EU11	EU12	EU13	EU14						

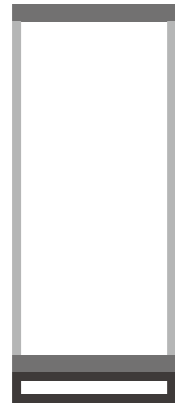
Air dampers

Air dampers in MAHUs are optional. Aerodynamically designed damper blades have built in high quality bearings. Blade edges are lined with sealing strip to restrict leakage to an absolute minimum. Air damper blades are either linked to give parallel turning operation or gear set to give opposing direction. The dampers are tested to yield linear control characteristic. Mixing dampers working in pairs and can be coupled in such a way that if one is 75% open the other will be 25% open.



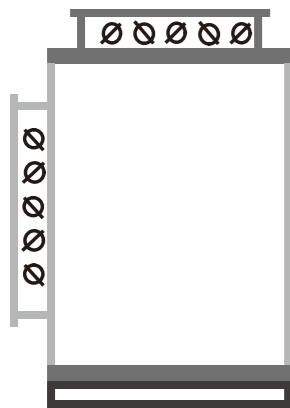
Functional Sections Description

● Cabinet



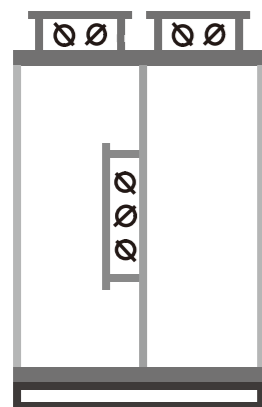
Cabinets consist of standard panels measuring 100mm each in length. The interconnecting parts of panels are made of proprietary designed aluminum profiles which guarantee minimum air leakage and panels are fitted together with bolts and nuts. As a result, the panels can be assembled or dis-assembled at site without compromising the quality of assembly. The construction of panels are formed with pre-coated grey color GI metal sheet (external surface), PU foam (as insulation material) and GI metal sheet (internal surface). The proprietary designed aluminum frames for panels act as built in structural supports and strengthened by additional internal/hidden frames. Apart from that, the bottom panels are designed to withstand weight of service and maintenance personnel without deformation of panels. The highly integrated method of joining ensure minimum leakage, no cold bridge, minimum or no corrosion, rigid and strong. The unit and components come with hanging/hoisting holes for easier transportation and commissioning at site.

● Mixing Section



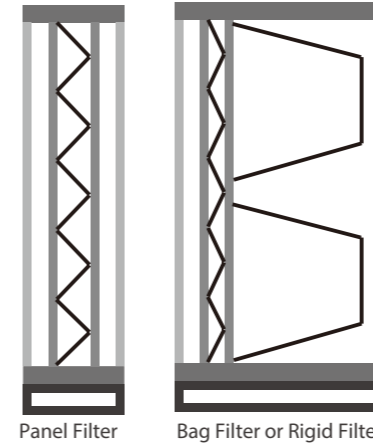
Providing chamber for mixing of return air and fresh air to adjust the ratio of air mixture. It has air dampers, made of GI metal vanes with aerofoil profile which can be controlled manually or by motor. Sizing of air dampers is based on maintaining surface velocity of 8m/s to ensure that the noise generated by the air dampers does not exceed overall noise level of the unit. When the air dampers are installed in the unit, the section length will determine the height of the dampers and maximum height is equals: (Section Length - 160)mm.

● Fresh Air And Exhaust Air Section



Be able to modulate the exhaust air volume, fresh air and return air ratio.

● Filters Section

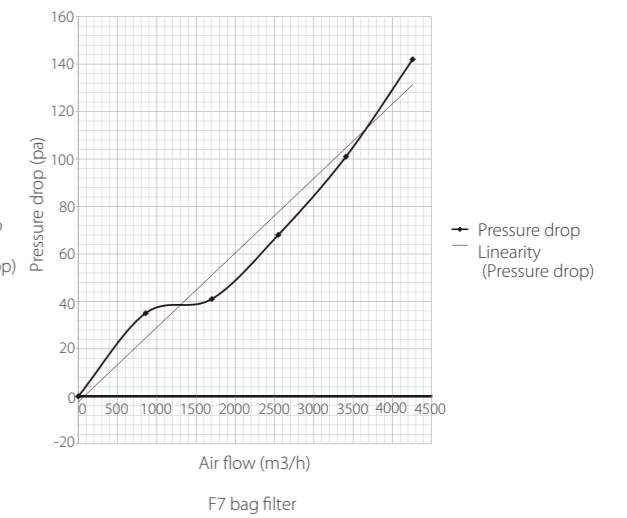
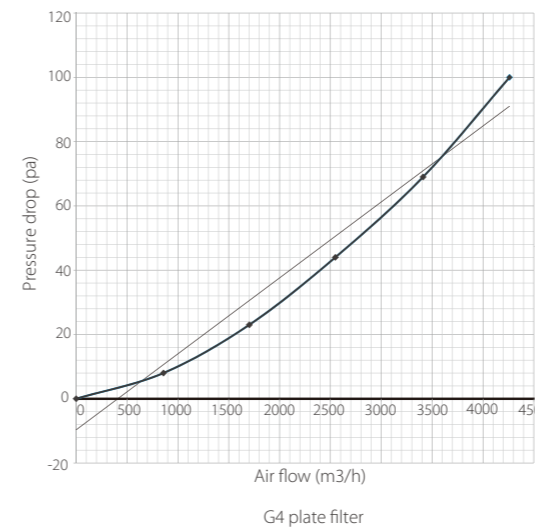


The cross sectional air speed for entering air is uniform and greater than 80% of the nominal air speed of the unit.

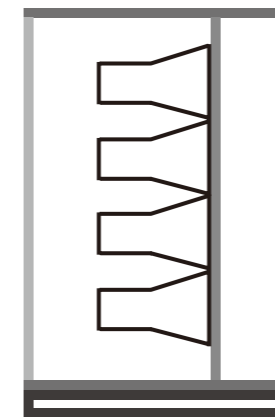
Classification of filters:

- Primary
Panel and Bag type; Made of synthetic fiber and nonwoven cloth.
- Secondary
Panel, Bag and Rigid type; Made of fiber glass.
- Sub-Hepa
Bag and Rigid type; Made of fine fiber glass.
- Hepa
Rigid and Paper type.
- Active Carbon Filter

Used to remove bad odor and pollution from air. Normal filters are required to be installed before and after Active Carbon Filter to prolong the lifespan of filter and to prevent loose carbon particles from entering the air stream.

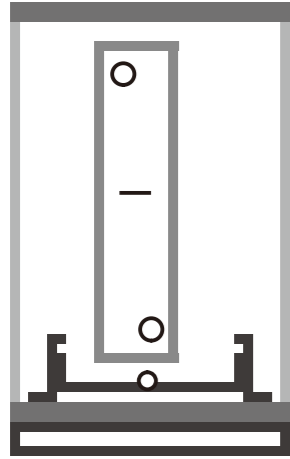


● Self-Cleaning High Efficiency Filter Section



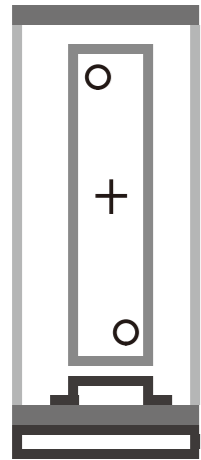
Self-cleaning High Efficiency Filter has high capacity for dust collection. When the dust has been accumulated, service personnel can remove the dust by blowing with compressed air and the dust will be collected at the metal pan at the bottom. This will avoid replacing the filter frequently.

- Coil Section

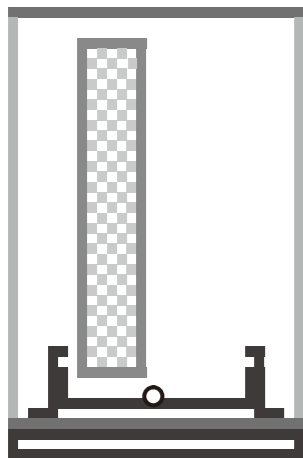


Cooling Coil

Cooling and Heating coils are made of aluminum fins and copper tubes. Copper tubes are mechanically expanded and securely bonded to aluminum fins. Aluminum fins range from 8 to 13 fins/inch. The coils are designed for easy maintenance and can be easily slid out for service and maintenance works. The headers of coil are made of steel with an air vent at the top and also an water release port at the bottom. Coil's cross sectional air speed is greater than 80% of nominal air speed. All coils have been leak tested with 2.5MPa pressure and the recommended maximum operating pressure is 1.6MPa. All water pipes and condensing water pipes are located at the same side of the unit. Optional water droplets eliminator can be installed to prevent water carry over even at high air velocity. The drain pan is made of insulated steel plate and galvanized steel pipes as condensate water discharge pipe.



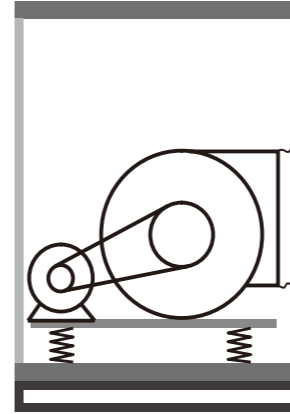
Heating Coil



Evaporative Cooling

Spraying water on evaporative material which achieve cooling through evaporation of water. No refrigerant is needed and the operating cost is low.

- Fan Section



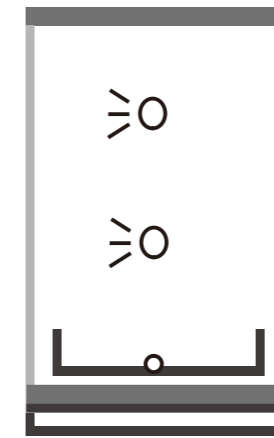
Base on the requirements of air flow rate and external static pressure, the selection software is able to select one or multiple centrifugal fan. Various types of fan blades design can be chosen base on different application needs, i.e. Forward Curved, Backward Curved and Aerofoil.

Fan are statically and dynamically balanced and are driven by multiple anti-static V-belts. Bearings are of seal type and there is no lubrication required for the whole operating life of bearings. All the blower housing and frames are made of GI steel.

Fan motors are totally closed, with single speed and 4 poles in general. Base bracket/frame of fan motor is adjustable and together with fan blower, they are sitting on a structure that equipped with vibration isolator (with noise damper and adjusting rod).

Flexible ducting is used to connect fan discharge to the unit and all Fan Sections are equipped with access door, detachable service panel that enable the fan and motor to be completely removed from unit for replacement or maintenance.

- Humidifying Section



Steam Humidifier

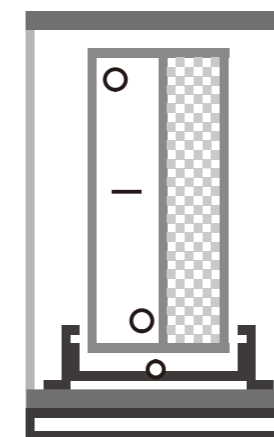
There are a few types of humidifier:

a. Dry steam humidifier - Isotherm humidifier, made of stainless steel and with properties of high corrosion resistance, small size, easy installation, clean humidification and high efficiency. There are 2 types of dry steam humidifier, i.e. electric driven or manual.

Applicable for sites with steam source.

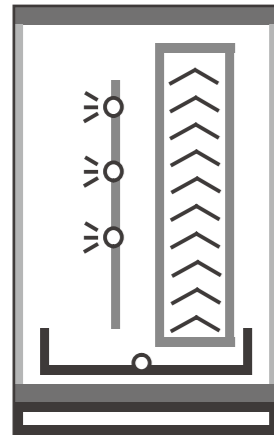
b. Electrode humidifier - Generate steam from water through application of AC current. It is microcomputer controlled with modulating control or ON/OFF control.

Applicable for industrial sites without steam source.



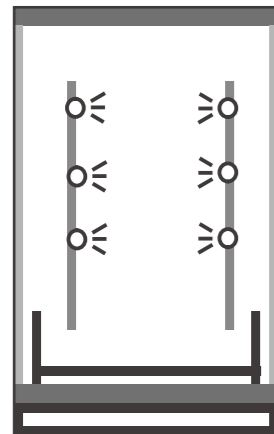
Wet Film Humidifier

c. Evaporative humidifier - Using wet film to absorb water and vaporize the water by air stream flowing through it. It has the effect of washing the air and can be used for droplets eliminator at the same time. It can use domestic tap water or recirculation water.



High Pressure Spray Humidifier

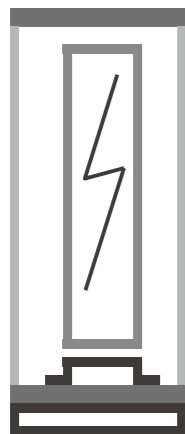
d. High pressure spray humidifier - pressurized the water and inject through nozzle to create mist and humidify the air through vaporization of the mist. The efficiency is about 40 ~ 50%.



Air Washer Humidifier

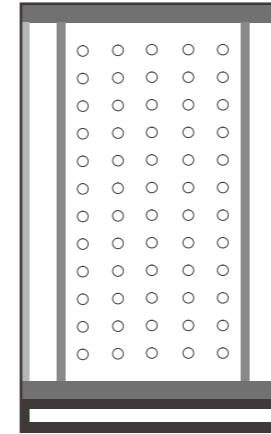
e. Air Washer Humidifier - can achieve various air treatment simultaneously. It is able to reduce the enthalpy, humidity and temperature of air and at the same time form an water curtain across the air stream to clean the air.

● Electric Heater Section



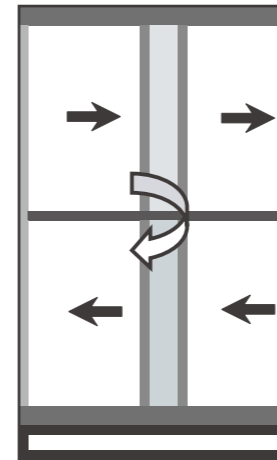
There are 2 types of electric heater used, spiral fins type or PTC heating elements. The heating elements are fitted on a frame and the control for heaters is field supplied.

● Sound Attenuator Section



Under different application requirements and noise characteristics of fan, 2 types of Sound Attenuators can be installed, i.e. Sound Absorption Medium Plate Muffler or a Micro-Perforated Plate Muffler. Sound Absorption Medium Plate Muffler is made of perforated panel filled with noise absorbing material. It has good sound attenuation effect towards high and medium frequency noise. Micro-Perforated Plate Muffler is made of micro-perforated panel which applying principles of resonance for sound attenuation. It has good filtering effect for low and medium frequency noise. Since it does not require sound absorbing medium, it is non-polluting and not affected by moisture. Sound attenuator can be classified as Return Air Sound Attenuator and Supply Air Sound Attenuator.

● Heat Recovery Section



There are a few types of Heat Recovery devices:

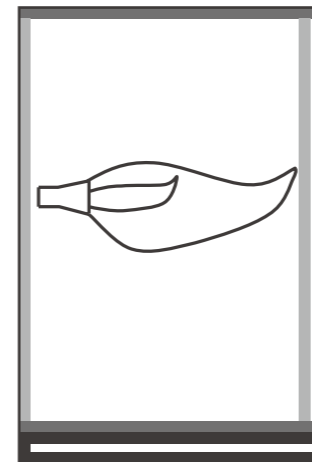
a. Heat Wheel - for both sensible and latent heat recovery with the efficiency of 70~90%. The counter flow between fresh air and exhaust air offers self-cleaning capability.

b. Intermediate heat exchanger - the media used can be water or glycol solution and can be applied for small temperature difference system. The efficiency is lower than 60%.

c. Counter flow plate heat exchanger - fresh air and exhaust air exchange the energy in the plate type heat exchanger and depends on the material used for heat exchanger, the heat transferred can be sensible only or total heat. The efficiency is about 50%, however, due to no physical contact of fresh air and exhaust air, there is no pollution of fresh air by the exhaust air.

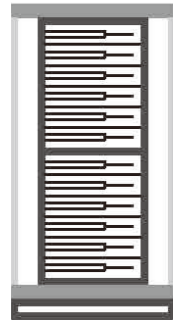
d. Heat pipe heat exchanger - each pipe contains Freon or ammonia as the working fluid and the heat recovery is done through phase change of working fluid with no moving parts involve.

● Gas Heater Section



There are two methods of heating, one is to burn the gas directly inside the plenum to heat the air stream and it is suitable for huge conditions space. Second is to heat the air at the burner outside the unit and channel the hot air through tubes which are running within the air stream. This will avoid consuming the oxygen in the air stream and maintain the supply air quality.

● Healthy Section



The ionization of suspended particles in the air through the purification electric field, the use of high-voltage electrostatic field makes all suspended particles in the air attached. Then it is quickly adsorbed by the dust collection plate to achieve the purpose of efficient dust removal and purification. The single use dust removal efficiency is more than 98.9%.

The discharge electrode generates plasma under high pressure, and the plasma will quickly destroy and completely kill the cell nuclei of airborne bacteria, viruses and dust mites and other microorganisms, and the residual material is sintered and adsorbed by the dust collection plate at the same time, with a sterilization rate of more than 99% and a single use sterilization efficiency of more than 94.69%.

● Activated Carbon Adsorption Section

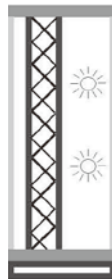


The function section has a built-in activated carbon filter, which can be in full contact with the gas (impurities). When the gas (impurities) hits the capillary, it is adsorbed and purified.

Adsorption of formaldehyde, benzene, TVOC organic harmful gases

Activated carbon types	N4G1	N4S1	N4A1	N4B1	N4F1	N4M1
Usage	General Gases	Stench	Acid Gases	Alkaline Gases	Formaldehyde	Mercury Vapor

● Light purification sterilization section



Semiconductor materials with photocatalytic function produce free hydroxyl radicals and active oxygen under UV irradiation of specific wavelengths, which can destroy bacteria and viruses and decompose organic pollutants (formaldehyde, benzene, etc.).

● UV lamp



Germicidal UVC is through the irradiation of ultraviolet light, to achieve the purpose of sterilization. The real germicidal effect is UVC ultraviolet light, because C-band ultraviolet light is easily absorbed by the DNA of living organisms. Germicidal UVC is a purely physical disinfection method, with simple and convenient, broad-spectrum and efficient, no secondary pollution, easy to manage and achieve the advantages of automation.

● Ozone Generator



Ozone, which can oxidize and decompose enzymes necessary for the internal decomposition of bacteria, can also directly interact with bacteria and viruses, destroying their cells, decomposing cellular DNA, leading to the soluble extinction of cells, parasitic strains and virus particles.

Ozone generator uses the principle of gas corona discharge to generate ozone, through the circulation of wind to the entire system controlled space for regular sterilization, disinfection, to achieve the purification effect does not leave any residue of substances harmful to humans.

Comparison of each purification and sterilization technology

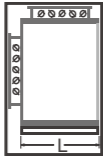




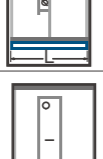
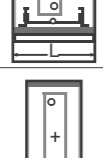


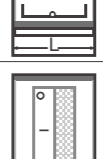
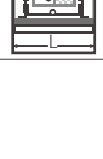
Germicidal method	Dust removal capacity	Bacteria and virus killing capacity	Formaldehyde, benzene, TVOC removal capacity
Electronic purification	☆	☆	
Activated carbon			☆
Ultraviolet germicidal lamp		☆	
Photocatalyst		☆	☆
Ozone generator		☆	
Traditional plate bag filter	☆		

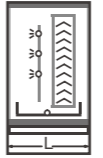
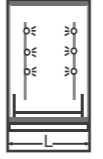
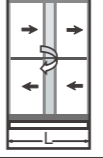
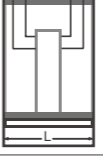
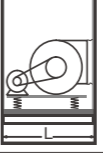
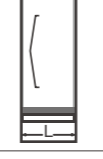
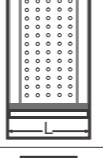
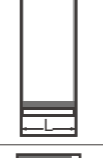
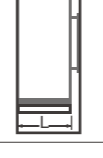
☆ —Great

Maintenance comparison

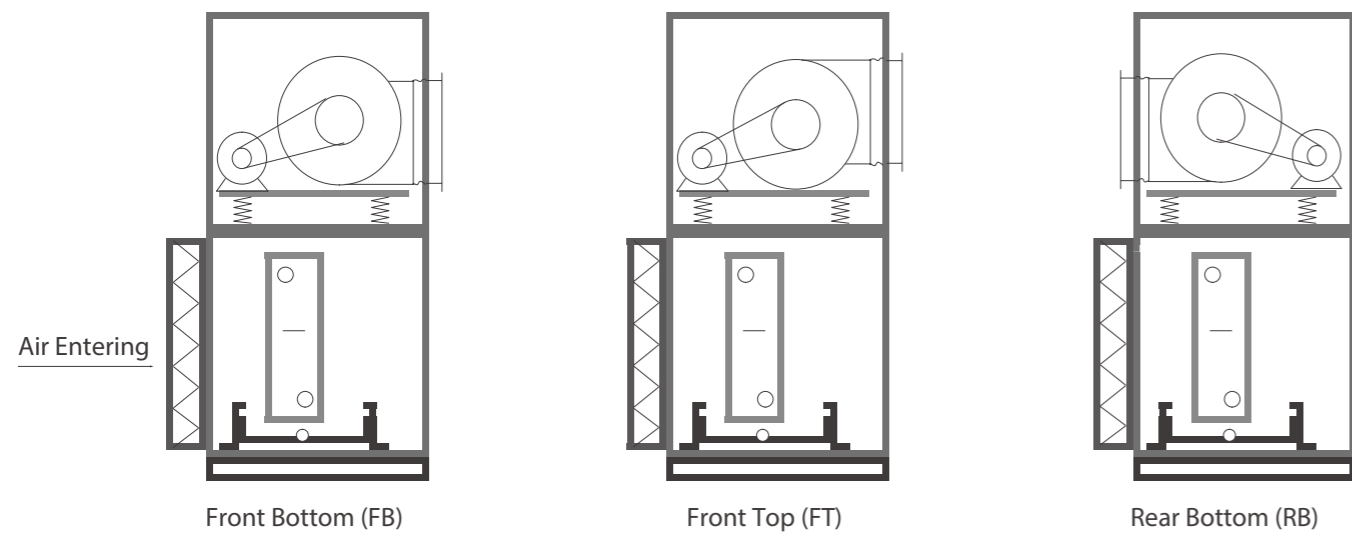
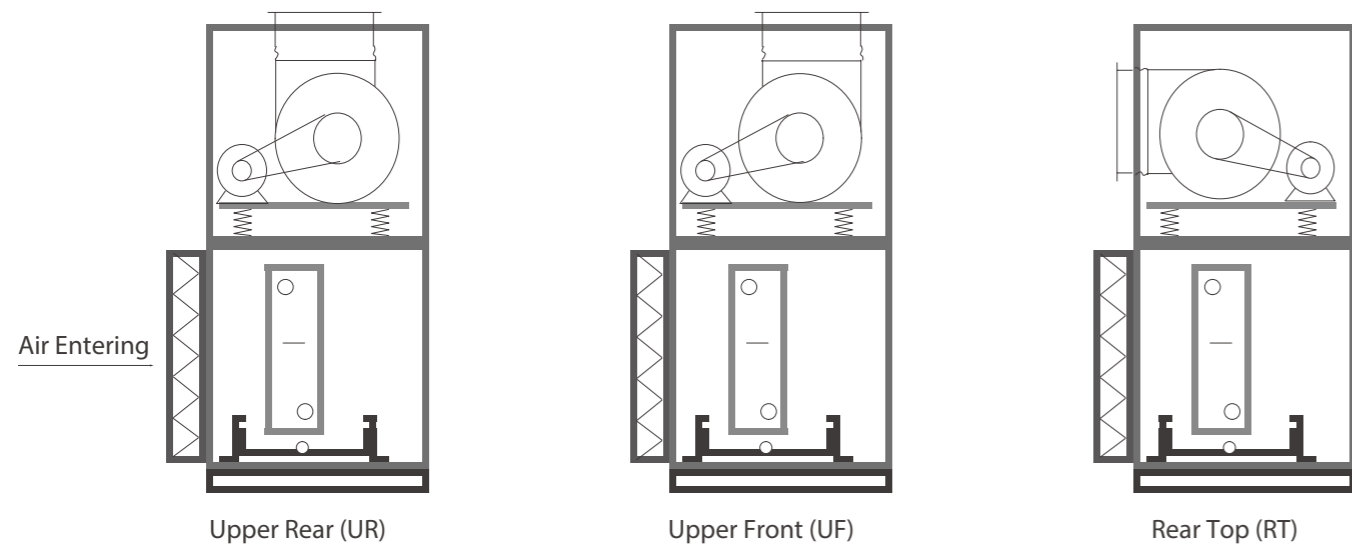
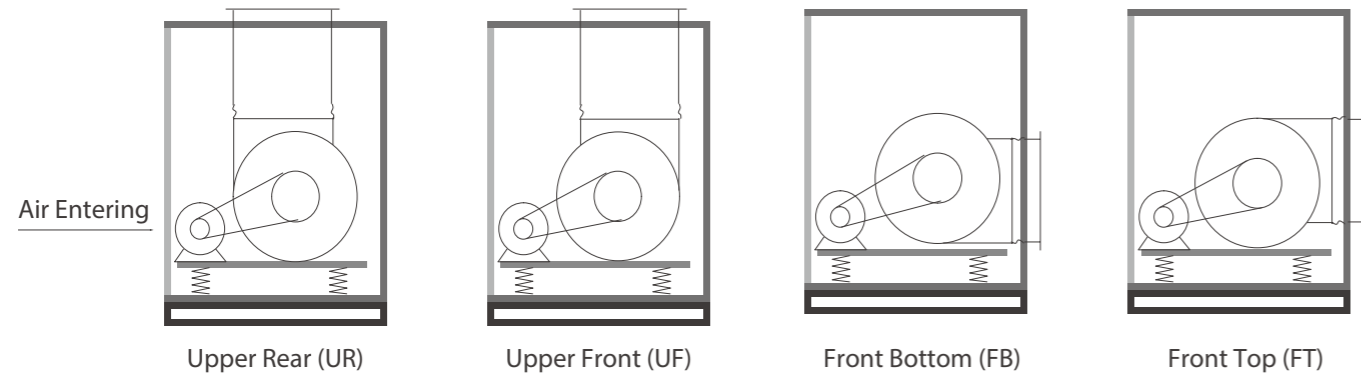
Germicidal method	Section length	Power supply	Cleaning
Electronic purification	3M	220V~50Hz	Cleaning once a year
Activated carbon	Plate type 1M, charcoal box type 4M		Plate type cant be clean charcoal box type can re-add carbon material
Ultraviolet germicidal lamp	0M	220V~50Hz	Continuous use
Photocatalyst	3M	220V~50Hz	Continuous use
Ozone generator	0M, Placed in the air outlet section	220V~50Hz	Cleaning once half a year
Traditional plate bag filter	1M, 4M		Single use

Function Sections Specifications

Name	Sketch	Description (mm)			
		Unit Modules	L	Unit Modules	L
Mixing Box		010013-020028	500	047055-050069	1000
		022028-023033	600	050074-067072	1200
		026031-035044	700	067086-074090	1400
		035048-042060	900	074102-099138	1600
Outlet Filter		Installed outside the unit body, do not occupy the space.			
Plate Filter		L=100 The plate type filter has the primary effect and the middle effect for optional, and can be arranged in the mixed section or the outer space and not occupy the space.			
Bag Filter Close Knit Filter		Bag Filter	L=400		
		Close Knit Filter	L=400		
Plate bag type filter		L=500			
Fresh Air Exhaust Section		Unit Modules	L		
		010013-035051	1200		
		035055-057076	1500		
		067072-099138	1800		
Chilled Water Coil		Unit Modules	L		
			(1-6Row)	(6-10Row)	
		010013-057076	600	700	
		067072-099138	1000	1200	
Heating Coil		Rows	L	L(leaving rows)	
		1Row	200	500	
		2-4Rows	300	600	
Electric Heater		Electric Heat	L		
		200KW	300		
		<200KW	200		
		Cabinet can not be put or electric heating wind speed is less than 3.0m / s, section length of 700			
Steam Humidifier		L=600 If placed behind the fan section, requires 900mm. With simple water tray Drainage pipe diameter DN32			
Wet Film Humidifier		Shared section length with chiller water coil section, if segmented, it needs to be 600mm. With simple water tray Drainage pipe diameter DN32			

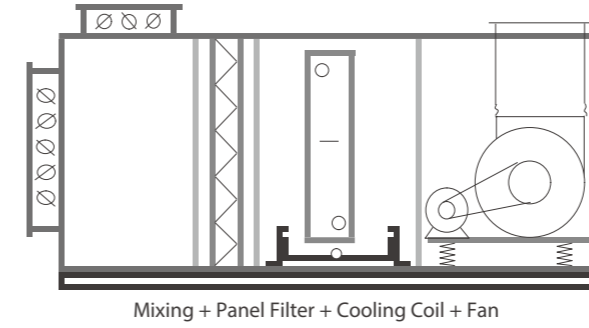
Name	Sketch	Description(mm)			
High Pressure Spray Humidifier		L=900 Eliminator is needed Water pan width <49M Drainage pipe diameter DN32 49M≤Water pan width≤68M Drainage pipe diameter DN50 Water pan width > 69M drainage pipe diameter DN50 (two)			
Spray Section		2 rows	L=2100		
Heat Recovery Section		L according to the specific conditions to be selected.			
Dehumidification Section		L according to the specific conditions to be selected.			
Fan Section		L=700-3500			
Diffuser		Unit Modules	L		
		010013-026035	500		
		028034-047058	600		
		047063-050074	800		
		050079-099138	1000		
Silencer		L=500, 800, 1100			
Middle Section		L=600 Set before the filtering section, chilled water coil section, heating section and silencer section, easy to maintain and repair.			
Air Outlet Section		Unit Modules	L	Unit Modules	L
		010013-020028	500	047055-050069	1000
		022028-023033	600	050074-067072	1200
		026031-035044	700	067086-074090	1400
		035048-042060	900	074102-099138	1600
Other Function Sections	Eliminator	Shared section length with chiller water coil			
	Evaporative cooling section	L=900			
	High-efficient self-cleaning filter barrel type filter section	L=1800			
	Combustion	L=3000			

Fan Outlet Direction

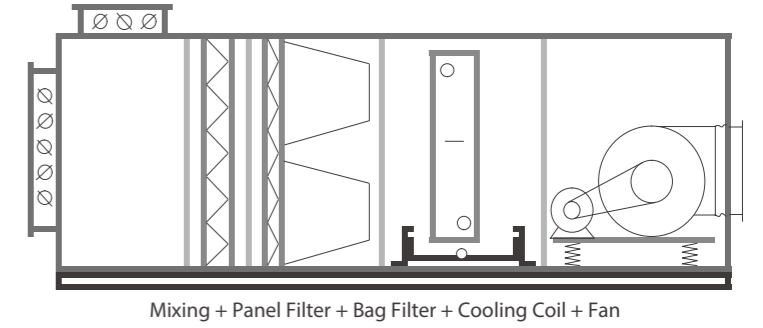


Configurations

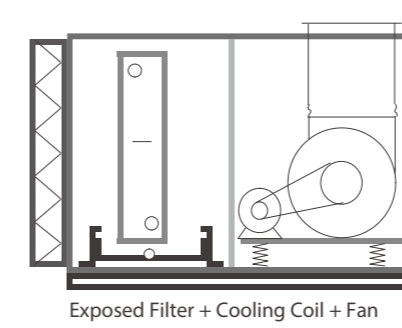
● Horizontal Combination 1:



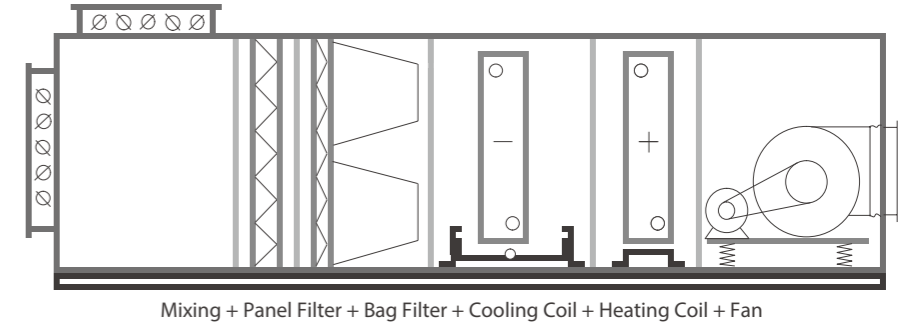
● Horizontal Combination 2:



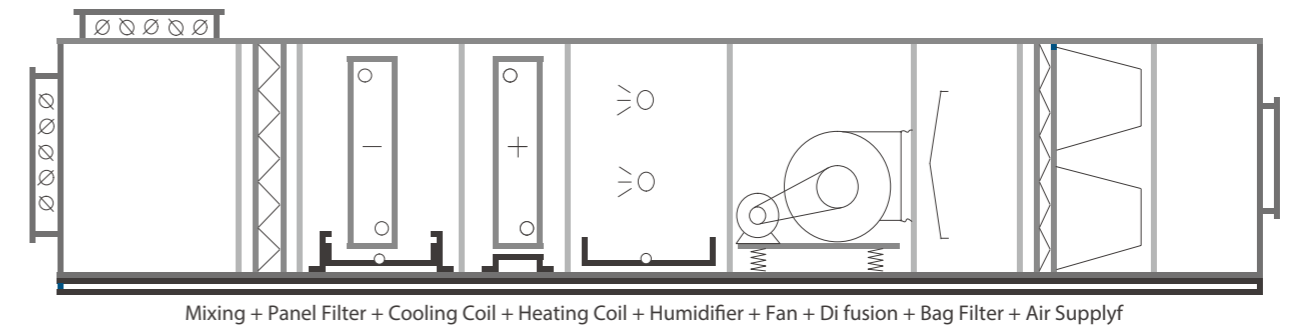
● Horizontal Combination 3:



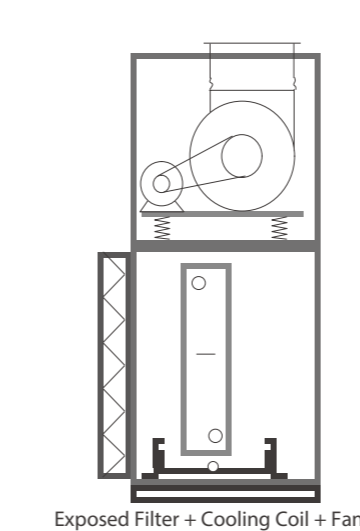
● Horizontal Combination 4:



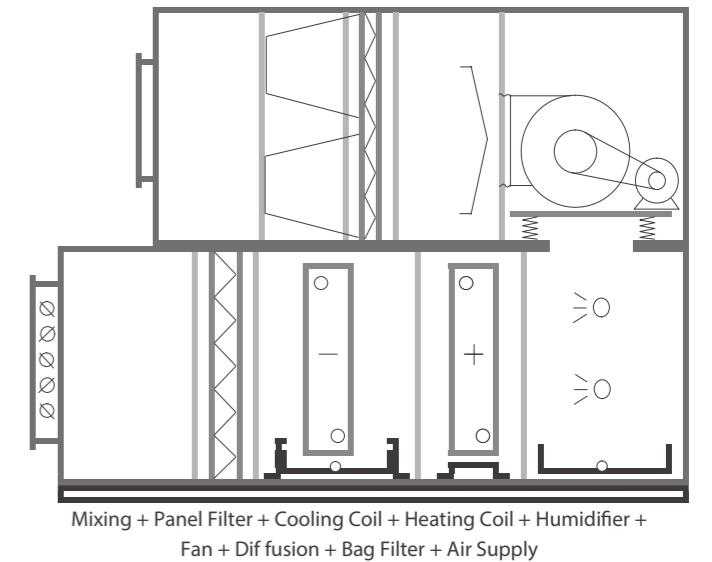
● Horizontal Combination 5:



● Vertical Combination 1:



● Vertical Combination 2:



Name		Standard	Customized
Panel	Thickness	25mm	50mm
	Innet Skin	0.5mm, Galvanized Steel	Stainless Steel (Thickness: 0.5/0.7/1.0), Pre-coated Steel (Thickness:0.5/1.0)
	Outer Skin	0.5mm, Pre-coated Steel	Stainless Steel (Thickness:0.5/0.7/1.0)
Coil	Fin Material	Aluminium	Hydrophilic Aluminum
	Header Material	Seamless Steel Tube	Copper Tube
	Coil Frame	GI	SUS304
	Has Moisture Eliminator	/	AL Grid, AL, Stainless Steel
	Number of Rows	/	1~8, 10Rows
	Tube Size	/	3/8 inch, 1/2 inch, 5/8 inch
	Drain Pan Material	GL Spray	SUS304
	Steam Heater	Steel Pipe	Stainless Steel Pipe
	Accessories	/	UV Lamp, Flange components, Thermometer, Hygrothermograph, U Trap
	Motor	Motor Brand	BeiDe
Frequency Type		Single Speed	Variable Frequency Motor, Explosion-Proof Motor, EC motor, Double speed motor
Efficiency		IE2	IE3
Accessories		/	Belt guard, Winding protection, NSK/SKF bearing
Fan	Blower Brand	Yilida	Kruger, Wolter, Ebm-Papst EC Fan, Comefri Plug Fan, Aiehl-abegg Plug Fan, Non-Standard Blower Brand
	Blade Type	Forward Curved	Backward curved, Airfoil, Explosion-proof, Plug Fan
	Accessories	/	NSK/SKF bearing, Pressure differential switch, Thermometer, Hygrothermograph, Starter, EC fan air flow controller, EC fan junction box, Inlet grid
Humidifier	Humidifier Type	/	Evaporative Humidifier, Water Spray Humidifier, Water Mist Humidifier, Electrode Boiler Humidifier, Electrical Heating Element Humidifier, Dry Steam Humidifier, Water Spray
	Accessories	/	UV lamp, Thermometer, Hygrothermograph, Humidity Transmitter
Filter	Filter Brand	/	G2~H14
	Filter Frame	G2~G4: AL, More thanF5: Galvanized Steel	AL
	Frame Material	Galvanized Steel	Stainless Steel
	Special filter	/	Chemical filter, UV lamp, Air Purifier, Photocatalyst filter
	Accessories	/	Pressure differential gauge, Pressure differential switch
Electric Heating	Heater Type	PTC	/
	Accessories	/	Thermometer
Heat Recovery	Device type	/	Heat Recovery Wheel, Plate Heat Exchanger, Heat pipe
	Accessories	/	Pressure differential switch, Thermometer
Silencer	Silencer Type	Resistance Type	Silencer Size: 400mm, 700mm, 1000mm
controller	General customization	/	Direct On line Starter, Y-Delta Starter, Inverter Starter
	Non-standard custom	/	Constant temperature and humidity control cabinet, Constant temperature control cabinet, Humidity control cabinet, BMS, etc.
	Accessories	/	VSD, Water Valve
Others	Anti-corrosion customization	spray	SUS Fastener, Nano protective coating for coil
	Unit Base	Base Height: 80mm	100mm, 160mm, 200mm
	Outdoor Location	/	Canopy, Tuyere shutter
	Accessories	/	Lamp, Lamp Control Box, Inspection Window, GL Damper, AL Damper, Danper Handle

Air volume

MKZxxxxDA(or CW)		Coil face air velocity (m/s)					
		2.00	2.25	2.50	2.80	3.00	3.50
010	013	1327	1493	1659	1858	1991	2323
010	014	1475	1660	1844	2066	2213	2582
010	015	1626	1829	2033	2276	2439	2846
012	014	1841	2071	2301	2577	2762	3222
014	014	2212	2489	2765	3097	3319	3872
014	015	2439	2744	3049	3415	3659	4268
014	017	2881	3241	3601	4033	4321	5041
014	019	3333	3750	4167	4667	5000	5833
016	018	3629	4083	4536	5081	5444	6351
014	022	4000	4500	5000	5600	6000	7000
016	021	4418	4970	5522	6185	6627	7731
016	023	4938	5556	6173	6914	7407	8642
016	024	5200	5850	6500	7280	7800	9100
016	026	5714	6429	7143	8000	8571	10000
016	028	6224	7002	7780	8714	9336	10892
016	029	6504	7317	8130	9106	9756	11382
020	025	7025	7903	8781	9835	10537	12293
020	026	7360	8280	9200	10304	11040	12880
020	028	8032	9036	10040	11245	12048	14056
022	028	8907	10020	11134	12470	13360	15587
022	030	9639	10843	12048	13494	14458	16867
023	031	10526	11842	13158	14737	15789	18421
023	033	11336	12753	14170	15870	17004	19838
026	031	12048	13554	15060	16867	18072	21084
026	033	12955	14575	16194	18138	19433	22672
026	035	13821	15549	17276	19350	20732	24187
028	034	14516	16331	18145	20323	21774	25403
028	038	16461	18519	20576	23045	24691	28807
032	036	17814	20040	22267	24939	26721	31174
032	038	18952	21321	23690	26532	28427	33165
032	040	20080	22590	25100	28112	30120	35141
032	043	21774	24496	27218	30484	32661	38105
035	044	24194	27218	30242	33871	36290	42339
035	048	26613	29940	33266	37258	39919	46573
035	051	28455	32012	35569	39837	42683	49797
035	055	30894	34756	38618	43252	46341	54065
035	057	32000	36000	40000	44800	48000	56000
042	054	36000	40500	45000	50400	54000	63000
042	058	39024	43902	48780	54634	58537	68293
042	060	40323	45363	50403	56452	60484	70565
047	055	41600	46800	52000	58240	62400	72800
047	058	44000	49500	55000	61600	66000	77000
047	063	48000	54000	60000	67200	72000	84000
047	068	52209	58735	65261	73092	78313	91365
050	069	56000	63000	70000	78400	84000	98000
050	074	60241	67771	75301	84337	90361	105422
050	079	64516	72581	80645	90323	96774	112903
057	072	68000	76500	85000	95200	102000	119000
057	076	72000	81000	90000	100800	108000	126000
067	072	80645	90726	100806	112903	120968	141129
067	086	96386	108434	120482	134940	144578	168675
074	090	112903	127016	141129	158065	169355	197581
074	102	128514	144578	160643	179920	192771	224900
086	098	144578	162651	180723	202410	216867	253012
086	108	160000	180000	200000	224000	240000	280000
096	120	200803	225904	251004	281124	301205	351406
099	138	240000	270000	300000	336000	360000	

Cooling capacity

Unit Model MKZxxxxDA(or C)W	Rated Flow m³/h	Fresh Air Condition(7°C) Cooling Capacity						Return Air Condition(15°C) Cooling Capacity						
		4Row		6Row		8Row		4Row		6Row		8Row		
		Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	
010	013	1659	10	23	12	29	13	31	7	9	9	12	9	14
010	014	1844	10	24	14	32	14	34	8	9	9	12	10	15
010	015	2033	11	26	15	35	16	37	8	10	10	14	11	16
012	014	2301	14	32	17	40	18	43	10	12	12	17	13	19
014	014	2765	16	38	20	48	22	52	12	15	14	20	16	23
014	015	3049	18	42	22	53	24	57	13	16	16	22	17	25
014	017	3601	21	50	26	62	28	67	15	19	19	26	20	30
014	019	4167	25	58	30	72	33	78	17	22	22	30	23	35
016	018	4536	27	63	33	78	36	85	19	24	24	33	25	38
014	022	5000	30	69	36	86	39	93	21	27	26	36	28	42
016	021	5522	33	76	40	96	43	103	23	29	29	40	31	46
016	023	6173	36	85	45	107	48	115	26	33	32	44	35	51
016	024	6500	38	90	47	112	51	121	27	34	34	47	36	54
016	026	7143	42	99	52	124	56	133	30	38	37	51	40	59
016	028	7780	46	107	57	135	61	145	32	41	40	56	44	65
016	029	8130	48	112	59	141	64	152	34	43	42	58	46	68
020	025	8781	52	121	64	152	69	164	37	47	46	63	49	73
020	026	9200	54	127	67	159	72	172	38	49	48	66	52	77
020	028	10040	59	139	73	174	79	188	42	53	52	72	56	84
022	028	11134	66	154	81	193	87	208	46	59	58	80	62	93
022	030	12048	71	166	88	208	94	225	50	64	62	86	68	100
023	031	13158	78	182	96	228	103	246	55	70	68	94	74	109
023	033	14170	84	196	103	245	111	265	59	75	73	102	79	118
026	031	15060	89	208	110	261	118	281	63	80	78	108	84	125
026	033	16194	96	224	118	280	127	303	67	86	84	116	91	135
026	035	17276	102	238	126	299	135	323	72	92	90	124	97	144
028	034	18145	107	250	132	314	142	339	75	96	94	130	102	151
028	038	20576	122	284	150	356	161	384	86	109	107	148	115	171
032	036	22267	126	293	154	366	176	420	87	111	106	151	120	181
032	038	23690	135	316	164	391	189	451	93	118	113	162	129	195
032	040	25100	142	330	173	412	198	473	99	125	119	170	136	204
032	043	27218	154	358	188	447	215	513	107	136	129	184	147	221
035	044	30242	171	398	209	497	239	570	119	151	144	205	164	245
035	048	33266	188	438	230	546	263	627	131	166	158	225	180	270
035	051	35569	201	468	246	584	281	670	140	178	169	241	192	288
035	055	38618	218	508	267	634	305	728	152	193	183	261	209	313
035	057	40000	226	526	276	657	316	754	157	200	190	271	216	324
042	054	45000	254	592	311	739	355	848	177	225	214	305	243	365
042	058	48780	275	642	337	801	385	919	191	244	232	330	264	396
042	060	50403	284	663	348	828	398	950	198	252	239	341	273	409
047	055	52000	293	684	359	854	411	980	204	260	247	352	281	422
047	058	55000	310	723	380	903	434	1037	216	275	261	372	297	446
047	063	60000	338	789	414	985	474	1131	236	300	285	406	324	487
047	068	65261	368	858	450	1072	515	1230	256	326	310	442	353	529
050	069	70000	395	921	483	1149	553	1319	275	350	333	474	378	568
050	074	75301	425	991	520	1236	595	1419	296	376	358	510	407	611
050	079	80645	455	1061	557	1324	637	1520	317	403	383	546	436	654
057	072	85000	479	1118	587	1396	671	1602	334	424	404	575	460	689
057	076	90000	508	1184	621	1478	711	1696	353	449	428	609	487	730
067	072	100806	569	1326	696	1655	796	1900	396	503	479	682	545	818
067	086	120482	714	1676	835	1988	969	2314	509	684	592	866	683	1042
074	090	141129	747	1763	860	2050	991	2367	554	705	671	955	763	1145
074	102	160643	906	2113	1109	2638	1268	3028	631	802	763	1087	869	1303
086	098	180723	1019	2377	1247	2967	1427	3406	709	903	859	1223	977	1466
086	108	200000	1128	2631	1381	3284	1579	3770	785	999	950	1354	1081	1622
096	120	251004	1416	3302	1733	4121	1982	4731	985	1253	1193	1699	1357	2036
099	138	300000	1692	3946	2071	4926	2369	5655	1178	1498	1425	2030	1622	2433

Notes:

- 1.Fresh air condition: air inlet 35°C DB/28°C WB;
- 2.Return air condition: air inlet 27°C DB/19.5°C WB;
- 3.Chilled water inlet/outlet temperature 7/12°C, coil face air velocity 2.5m/s;
- 4.The above parameters are for reference only, if test conditions change will lead to different cooling capacity, specific data please contact us.

Heating capacity

Unit Model MKZxxxxDA(or C)W	Rated Flow m³/h	Fresh Air Condition(7°C) Total Heat				Return Air Condition(15°C) Total Heat				
		1Row	2Row	3Row	4Row	1Row	2Row	3Row	4Row	
		kW	kW	kW	kW	kW	kW	kW	kW	
010	013	1659	9	17	22	26	7	14	18	22
010	014	1844	10	19	25	29	8	15	20	24
010	015	2033	11	21	27	32	8	17	22	27
012	014	2301	12	23	31	36	10	19	25	30
014	014	2765	15	28	37	44	12	23	31	37
014	015	3049	16	31	41	48	13	25	34	40
014	017	3601	19	37	49	57	15	30	40	48
014	019	4167	22	42	56	66	17	34	46	55
016	018	4536	24	46	61	72	19	37	50	60
014	022	5000	26	51	68	79	21	41	55	66
016	021	5522	29	56	75	88	23	45	61	73
016	023	6173	32	63	83	98	26	51	68	81
016	024	6500	34	66	88	103	27	53	72	86
016	026	7143	37	73	96	113	30	59	79	94
016	028	7780	41	79	105	123	32	64	86	103
016	029	8130	43	83	110	129	34	67	90	107
020	025	8781	46	89	119	139	37	72	97	116
020	026	9200	48	94	124	146	38	75	101	121
020	028	10040	53	102	136	159	42	82	111	133
022	028	11134	58	113	150	177	46	91	123	147
022	030	12048	63	123	163	191	50	99	133	159
023	031	13158	69	134	178	209	55	108	145	174
023	033	14170	74	144	191	225	59	116	156	187
026	031	15060	79	153	203	239	63	123	166	199
026	033	16194	85	165	219	257	67	133	179	214
026	035	17276	91	176	233	274	72	142	191	228
028	034	18145	95	185	245	288	75	149	200	240
028	038	20576	108	210	278	326	86	169	227	272
032	036	22267	123	215	277	316	100	177	229	265
032	038	23690	131	228	294	336	106	188	244	282
032	040	25100	138	242	312	356	113	199	258	299
032	043	27218	150	262	338	386	122	216	280	324
035	044	30242	167	292	376	429	136	240	311	360
035	048	33266	183	321	413	472	149	264	343	396
035	051	35569	196	343	442	504	160	282	366	424
035	055	38618	213	372	480	548	173	307	398	460
035	057	40000	220	386	497	567	180	318	412	477
042	054	45000	248	434	559	638	202	357	463	536
042	058	48780	269	470	606	692	219	387	502	581
042	060	50403	278	486	626	715	226	400	519	601
047	055	52000	287	501	646	737	234	413	535	620
047	058	55000	303	530	683	780	247	437	566	656
047	063	60000	331	579	745	851	269	476	618	715
047	068	65261	360	629	811	926	293	518	672	778
050	069	70000	386	675	870	993	314	556	721	834
050	074	75301	415	726	935	1068	338	598	775	898
050	079	80645	444	778	1002	1144	362	640	830	961
057	072	85000	468	820	1056	1206	382	675	875	1013

Unit Model MKZxxxxDA (or CJW)		Length(mm)												Others
		Mixing Box	Plate Filter	Bag Filter	Close Knit Filter	Fresh Air Exhaust Section	Chilled Water Coil (1-6row)	Chilled Water Coil (8-10row)	Steam Hot Water Heating	Middle Section	Silencer	Fan (Type A)	Fan (Type B)	
010	013	500	100	400	400	1200	600	700	300	500	800	800(160)		
010	014	500	100	400	400	1200	600	700	300	500	800	900(180)	800(160)	
010	015	500	100	400	400	1200	600	700	300	500	800	900(200)	900(180)	
012	014	500	100	400	400	1200	600	700	300	500	800	1000(225)	900(200)	
014	014	500	100	400	400	1200	600	700	300	500	800	1100(280)	1000(250)	
014	015	500	100	400	400	1200	600	700	300	500	800	1100(280)	1000(250)	
014	017	500	100	400	400	1200	600	700	300	500	800	1000(225)	900(200)	
014	019	500	100	400	400	1200	600	700	300	500	800	1100(280)	1000(250)	
016	018	500	100	400	400	1200	600	700	300	500	800	1100(280)	1000(250)	
014	022	500	100	400	400	1200	600	700	300	500	800	1100(280)	1000(250)	
016	021	500	100	400	400	1200	600	700	300	500	800	1100(315)	1100(280)	
016	023	500	100	400	400	1200	600	700	300	500	800	1100(315)	1100(280)	
016	024	500	100	400	400	1200	600	700	300	500	800	1100(315)	1100(280)	
016	026	500	100	400	400	1200	600	700	300	500	800	900(315)	900(280)	
016	028	500	100	400	400	1200	600	700	300	500	800	900(315)	900(280)	
016	029	500	100	400	400	1200	600	700	300	500	800	1200(355)	900(315)	
020	025	500	100	400	400	1200	600	700	300	500	800	1200(355)	1100(315)	
020	026	500	100	400	400	1200	600	700	300	500	800	900(355)	900(315)	
020	028	500	100	400	400	1200	600	700	300	500	800	900(400)	1200(355)	
022	028	600	100	400	400	1200	600	700	300	500	800	1400(450)	1300(400)	
022	030	600	100	400	400	1200	600	700	300	500	800	1400(450)	900(400)	
023	031	600	100	400	400	1200	600	700	300	500	800	1400(450)	900(400)	
023	033	600	100	400	400	1200	600	700	300	500	800	1000(450)	900(400)	
026	031	700	100	400	400	1200	600	700	300	500	800	1400(450)	900(400)	
026	033	700	100	400	400	1200	600	700	300	500	800	1500(500)	1000(450)	
026	035	700	100	400	400	1200	600	700	300	500	800	1000(500)	1000(450)	
028	034	700	100	400	400	1200	600	700	300	600	800	1500(500)	1000(450)	
028	038	700	100	400	400	1200	600	700	300	600	800	1900(560)	1000(500)	
032	036	700	100	400	400	1200	600	700	300	600	800	1900(560)	1000(500)	
032	038	700	100	400	400	1200	600	700	300	600	800	1900(560)	1000(500)	
032	040	700	100	400	400	1200	600	700	300	600	800	1300(560)	1000(500)	
032	043	700	100	400	400	1200	600	700	300	600	800	1500(630)	1400(560)	
035	044	700	100	400	400	1200	600	700	300	600	800	1500(630)	1400(560)	
035	048	900	100	400	400	1200	600	700	300	600	800	1400(710)	1500(630)	
035	051	900	100	400	400	1200	600	700	300	600	800	1400(710)	1500(630)	
035	055	900	100	400	400	1500	600	700	300	600	800	1400(710)	1500(630)	
035	057	900	100	400	400	1500	600	700	300	600	800	1400(710)	1500(630)	
042	054	900	100	400	400	1500	600	700	300	600	800	1600(800)	1400(710)	
042	058	900	100	400	400	1500	600	700	300	600	800	1600(800)	1400(710)	
042	060	900	100	400	400	1500	600	700	300	600	800	1600(800)	1400(710)	
047	055	1000	100	400	400	1500	600	700	300	600	800	1700(900)	1600(800)	
047	058	1000	100	400	400	1500	600	700	300	600	800	1700(900)	1600(800)	
047	063	1000	100	400	400	1500	600	700	300	600	800	1700(900)	1600(800)	
047	068	1000	100	400	400	1500	600	700	300	600	800	1800(1000)	1700(900)	
050	069	1000	100	400	400	1500	600	700	300	600	800	1800(1000)	1700(900)	
050	074	1200	100	400	400	1500	600	700	300	600	800	1800(1000)	1700(900)	
050	079	1200	100	400	400	1500	600	700	300	600	800	1800(1000)	1700(900)	
057	072	1200	100	400	400	1500	600	700	300	600	800	2000(1120)	1800(1000)	
057	076	1200	100	400	400	1500	600	700	300	600	800	2000(1120)	1800(1000)	
067	072	1200	100	400	400	1800	600	700	300	600	800	2000(1120)	1800(1000)	
067	086	1400	100	400	400	1800	600	700	300	600	800	2800(900*2)		
074	090	1400	100	400	400	1800	600	700	300	600	800	3300(1000*2)		
074	102	1600	100	400	400	1800	1000	1200	300	600	800	3300(1000*2)		
086	098	1600	100	400	400	1800	1000	1200	300	600	800	3400(1120*2)		
086	108	1600	100	400	400	1800	1000	1200	300	600	800	3400(1120*2)		
096	120	1600	100	400	400	1800	1000	1200	300	600	800	3500(1250*2)		
099	138	1600	100	400	400	1800	1000	1200	300	600	800	3500(1250*2)		

The length of the heat recovery section and dehumidification section should be selected according to the actual conditions; Combustion Section: 3000;
Activated Carbon Section: 100-500.

- Note:
- 1.The length of the unit is equal to the sum of the length of each function;
 - 2.Function segment length will be modified because of the specific design, the above data for reference only.

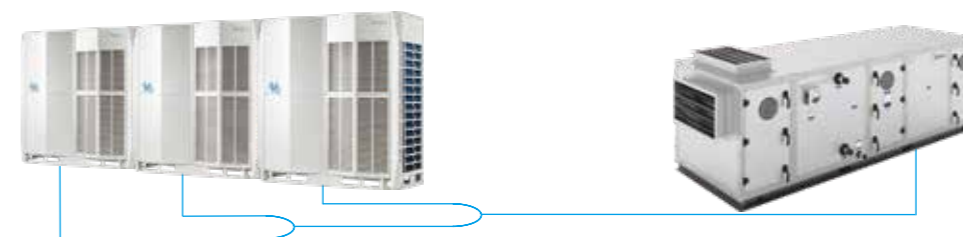
Unit Model MKZxxxxDA(or CJW)		Empty Box Weight (kg)									
		Wall Thickness 25mm					Wall Thickness 35mm				
		End-plate	300	600	900	1200	End-plate	300	600	900	1200
010	013	4	8	15	23	31	5	9	19	28	37
010	014	4	8	16	24	32	6	10	19	29	39
010	015	5	8	17	25	33	6	10	20	30	40
012	014	5	9	17	26	35	7	10	21	31	42
014	014	6	9	19	28	37	8	11	22	33	44
014	015	6	10	19	29	38	8	11	23	34	46
014	017	7	10	20	31	41	9	12	24	36	49
014	019	8	11	22	32	43	10	13	26	39	51
016	018	9	11	22	33	45	11	13	26	40	53
014	022	9	12	24	35	47	11	14	28	42	56
016	021	10	12	24	36	48	12	14	28	43	57
016	023	11	13	25	38	51	13	15	30	45	60
016	024	11	13	26	39	52	14	15	31	46	61
016	026	12	14	27	41	54	15	16	32	48	64
016	028	13	14	28	43	57	16	17	33	50	67
016	029	13	15	29	44	58	16	17	34	51	68
020	025	14	15	29	44	58	18	17	34	51	68
020	026	15	15	30	45	59	18	17	35	52	70
020	028	16	15	31	46	62	19	18	36	54	72
022	028	18	16	32	48	64	21	19	38	56	75
022	030	19	17	33	50	67	23	19	39	58	78
023	031	20	17	35	52	69	24	20	40	60	81
023	033	21	18	36	54	72	26	21	42	63	83
026	031	23	18	36	55	73	27	21	42	64	85
026	033	24	19	38	57	75	29	22	44	66	88
026	035	26	19	39	58	78	31	23	45	68	90
028	034	27	20	40	59	79	32	23	46	69	92
028	038	30	21	42	63	84	35	24	49	73	97
032	036	32	22	43	65	87	38	25	50	75	100
032	038	34	22	45	67	89	40	26	51	77	103
032	040	36	23	46	69	92	42	26	53	79	106
032	043	38	24	48	71	95	45	27	55	82	110
035	044	43	25	50	75	100	50	29	58	87	115
035	048	46	26	53	79	105	55	30	61	91	121
035	051	49	27	54	82	109	58	31	63	94	125
035	055	53	28	57	85	114	62	33	65	98	131
035	057	55	29	58	87	116	64	33	67	100	134
042	054	62	30	61	91	121	73	35	70	104	139
042	058	67	32	63	95	126	78	36	72	109	145
042	060	69	32	64	96	129	81	37	74	111	148
047	055	71	32	64	96	129	83	37	74	111	148
047	058	74	33	66	99	132	87	38	76	114	152
047	063	81	35	69	104	138	94	40	79	119	159
047	068	87	36	72	108	145	101	41	83	124	166
050	069	94	37	75	112	150	109	43	86	128	171
050	074	101	39	78	117	156	117	45	89	134	178

Unit Model MKZxxxxDA (or CJW)		Weight (kg)																	
		Mixing Box Air Valve	Primary Efficiency Palte Filter	Primary Efficiency Bag Filter	Eliminator	Silencer	Wet Film Humidifier (Dry)				Standard 1/2 Coil (No Water)								
							Thickness 50mm	Thickness 100mm	Thickness 150mm	Thickness 200mm	1Row	2Row	3Row	4Row	5Row	6Row	8Row	10Row	
010	013	10	3	3	4	12	6	7	8	9	10	13	16	19	24	20	27	22	31
010	014	10	3	4	4	13	7	8	9	10	11	13	17	19	25	21	29	23	32
010	015	11	4	4	5	14	7	8	10	11	12	15	18	20	26	22	31	24	34
012	014	11	4	4	5	15	7	8	10	11	12	15	19	21	29	23	33	25	36
014	014	12	5	5	6	18	8	9	11	12	13	17	22	23	31	26	36	28	40
014	015	12	5	5	6	19	8	9	11	12	13	17	22	25	33	27	38	30	42
014	017	13	6	6	7	22	8	9	12	13	14	19	24	27	36	29	42	32	46
014	019	14	6	7	8	24	10	11	14	15	16	21	26	29	39	32	44	34	50
016	018	15	7	7	9	26	10	11	14	15	16	22	28	31	41	34	47	37	53
014	022	15	8	8	9	28	10	12	15	16	17	23	30	33	43	35	50	39	57
016	021	16	8	9	10	31	11	12	15	16	17	24	31	34	46	38	53	41	60
016	023	17	9	9	11	34	11	13	16	17	18	26	33	37	49	40	56	44	63
016	024	17	9	10	12	35	11	13	16	18	19	28	35	38	51	42	58	45	65
016	026	18	10	11	13	38	13	14	18	19	20	29	37	41	55	45	62	48	69
016	028	19	11	11	14	41	13	15	18	20	21	31	39	43	57	47	65	52	74
016	029	19	11	12	14	42	14	15	19	21	22	32	40	45	59	49	67	52	76
020	025	19	12	13	15	46	14	15	19	21	22	33	41	46	61	50	70	54	79
020	026	20	13	13	16	48	14	16	19	21	22	34	43	47	62	51	72	56	81
020	028	21	14	14	17	51	14	16	20	22	23	36	46	50	67	55	76	59	86
022	028	21	15	16	19	56	16	18	22	23	24	38	49	53	71	59	81	64	92
022	030	22	16	17	20	60	16	18	22	24	25	40	51	56	75	62	86	67	97
023	031	23	17	18	22	65	17	19	23	25	26	43	53	59	79	65	91	71	102
023	033	24	18	19	23	69	18	20	25	27	28	45	56	63	84	69	95	74	107
026	031	24	20	21	25	74	18	21	25	27	28	47	59	65	87	72	100	78	112
026	033	25	21	22	26	78	19	21	26	28	29	49	62	69	92	75	105	81	118
026	035	26	22	23	28	83	20	23	27	30	31	52	65	72	96	79	110	86	124
028	034	27	23	24	29	87	20	23	28	30	31	53	67	75	99	82	113	88	128
028	038	28	26	27	32	97	21	24	29	32	33	58	73	81	108	89	124	97	140
032	036	29	28	29	35	105	23	26	31	33	34	61	77	86	115	95	131	102	148
032	038	30	30	31	37	111	23	26	32	34	35	64	81	90	120	99	137	107	154
032	040	31	31	33	39	117	25	28	33	36	37	67	84	94	125	103	143	112	161
032	043	32	34	35	42	126	26	28	34	37	38	71	90	100	133	110	152	119	171
035	044	34	38	39	47	141	27	31	37	40	41	78	98	109	145	119	166	129	187
035	048	36	41	43	51	154	29	33	39	42	43	83	106	117	155	128	178	139	201
035	051	37	43	46	54	163	31	34	41	44	45	87	111	123	164	135	187	146	210
035	055	39	47	49	59	176	33	37	44	47	48	94	118	131	175	144	200	156	225
035	057	39	49	51	61	182	33	37	44	48	49	97	122	135	180	149	206	161	232
042	054	41	55	58	69	207	36	40	48	51	52	106	134	149	198	163	228	177	256
042	058	43	59	62	74	223	38	42	50	54	55	113	143	159	211	174	242	188	271
042	060	44	61	64	77	230	39	43	51	55	56	117	147	163	217	179	249	193	279
047	055	44	63	66	79	236	40	44	52	56	57	119	150	166	220	182	253	197	284
047	058	45	66	70	83	249	42	46	54	58	59	124	157	173	230	191	265	206	297
047	063	47	72	76	90	271	44	48	57	61	62	133	168	186	248	205	284	222	319
047	068	49	78	82	97	292	46	50	59	64	65	142	179	199	265	218	303	237	341
050	069	51	84	88	105	315	49	53	63	67	68	151	191	212	282	233	324	251	363
050	074	53	90	95	113	338	52	57	66	71	72	161	204	226	300	248	344	268	386
050	079	55	96	101	120	361	54	59	69	74	75	170	215	238	318	262	364	284	410
057	072	55	100	105	125	375	55	60	70	75	76	175	221	245	326	269	374	291	421
057	076	57	106	111	132	396	57	62	73	78	79	184	232	257	342	282	392	305	441
067	072	60	118	123	147	441	61	67	78	83	84	201	254	282	374	309	429	334	483
067	086	66	140	147	175	526	71	77	89	95	96	235	297	329	437	361	503	390	564
074	090	70	162	170	203	609	79	86	98	105	106	267	337	373	496	410	570	444	640
074	102	75	184	193	230	690	87	94	108	115	116	299	377	418	556	459	638	496	716
086	098	79	205	216	257	770	94	101	115	123	124	329	415	459	611	505	702	546	788
086	108	83	226	238	283	849	102	110	125	133	134	359	453	502	667	552	766	596	860
096	120	93	281	295	351	1053	120	129	146	154	155	435	550	609	810	669	930	722	1044
099	138	101	333	350	416	1248	138	148	166	175	176	508	643	712	947	782	1087	845	1220

Examples of calculation:

- 1.Weight of chilled water coil section = Weight of chilled water coil section modules + Weight of different rows coil
- 2.Weight of fan section = Weight of box of fan section modules + Weight of fan + Weight of motor + Weight of transmission part + Weight of base of fan and motor
- 3.Total weight of unit = Weight of each function section calculated according the above two examples + Weight of box panel

Midea DX Modular Air Handling Unit



Parameters of Air-cooled DX Constant Temperature/Purifying Unit

Model	IDU air flow (m³/h)	m³/h	4500	5000	6000	7000	8000	9000	10000	11000	12000	14000
	System parameters	Rated cooling capacity (kW)	KW	25.2	28.0	33.5	40.0	45.0	50.0	56.0	61.5	67.0
System parameters	Rated heating capacity (kW)	KW	27.0	31.5	37.5	50.0	50.0	56.0	63.0	69.0	75.0	87.5
ODU	Compressor	Enhanced vapour injection DC inverter scroll compressor										
ODU	Throttling mode	Electronic expansion valve										
Refrigerant	R410A charge amount (kg)	kg	11	11	11	13	13	16	16	17	17	22
Connecting pipe	Connection methods	Welding or flaring connection										
Connecting pipe	Liquid pipe	φmm	9.52x2	9.52x2	9.52x2	12.7x2	12.7x2	12.7x2	12.7x2	12.7x2	12.7x2	12.7x4
Connecting pipe	Gas pipe	φmm	15.88x2	15.88x2	15.88x2	19.05x2	19.05x2	22.23x2	22.23x2	25.4x2	25.4x2	19.05x4

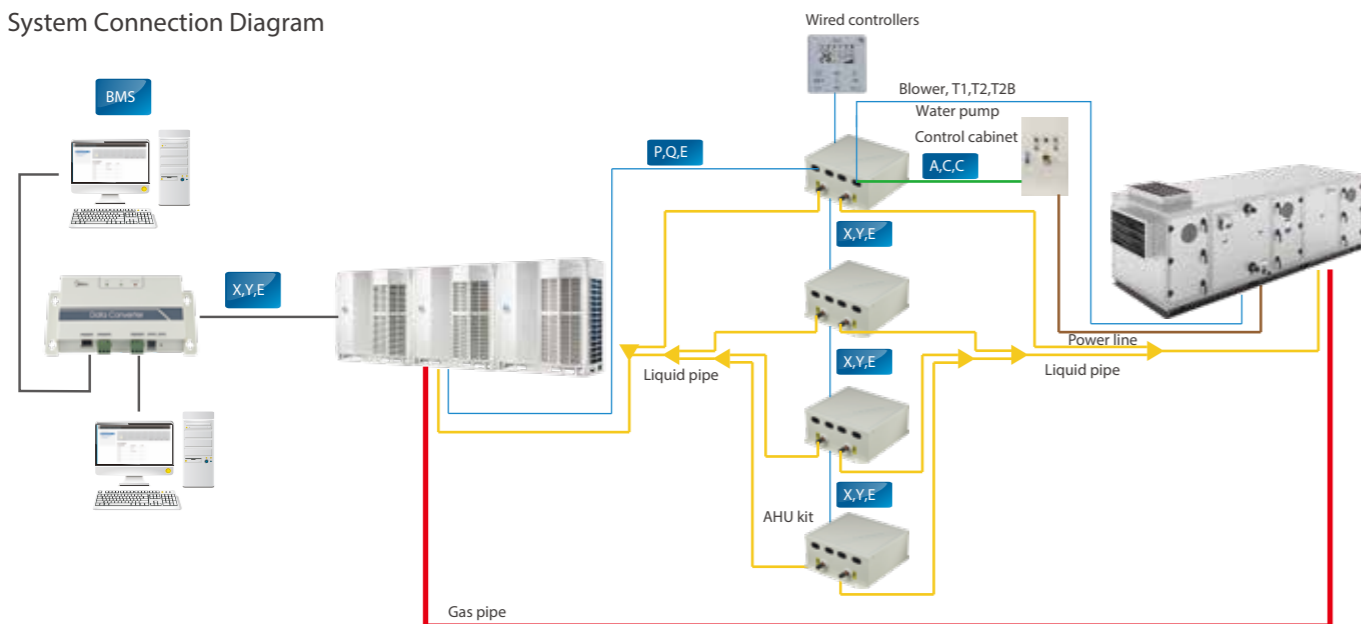
Model	IDU air flow (m³/h)	m³/h	15000	17000	18000	20000	22000	24000	26000	28000	31000	33000
	System parameters	Rated cooling capacity (kW)	KW	85.0	95.2	101.0	112.0	123.0	134.0	157.0	170.0	190.4
System parameters	Rated heating capacity (kW)	KW	95.0	106.0	112.0	126.0	138.0	150.0	175.0	190.0	212.0	224.0
ODU	Compressor	Enhanced vapour injection DC inverter scroll compressor										
ODU	Throttling mode	Electronic expansion valve										
Refrigerant	R410A charge amount (kg)	kg	22	28	28	17x2	17x2	17x2	22x2	22x2	28x2	28x2
Connecting pipe	Connection methods	Welding or flaring connection										
Connecting pipe	Liquid pipe	φmm	12.7x4	12.7x4	12.7x4	12.7x4	12.7x4	12.7x6	12.7x6	12.7x6	12.7x6	12.7x6
Connecting pipe	Gas pipe	φmm	19.05x4	22.23x4	22.23x4	25.4x4	25.4x4	25.4x4	22.23x6	22.23x6	25.4x6	25.4x6

- Notes:
1. Rated cooling capacity is measured under nominal air flow conditions with an indoor dry bulb/wet bulb temperature of 27/19°C and an outdoor dry bulb/wet bulb temperature of 35/24°C.
 2. Rated heating capacity is measured under nominal air flow conditions with an indoor dry bulb/wet bulb temperature of 20/15°C and an outdoor dry bulb/wet bulb temperature of 7/6°C.
 3. Performance test for piping conditions: the equivalent refrigerant pipe is 7.5m long.
 4. The ODU carries R410A when delivered from the factory. During installation and based on the liquid pipe length, the correct amount of refrigerant should be added.
 5. Matched ODU: See the manual for specific ODU specifications.
 6. MKX series outdoor unit operating range: Cooling: -5°C ≤ T ≤ 55°C. Heating: -25°C ≤ T ≤ 27°C. ;
 7. When the air volume needed for the project does not match the rated air volume, the principle of non-standard air volume under the same cooling condition: the minimum drop to 80% of the standard air volume, the maximum can rise to 110% of the standard air volume

Parameters of Air-cooled DX Fresh Air Handling Unit

Model	IDU air flow (m³/h)	2500	3000	3500	4000	4500	5000	6000	6500
	System parameters	Rated cooling capacity (kW)	25.2	28	33.5	40	45	50.4	56
System parameters	Rated heating capacity (kW)	27	31.5	37.5	45	50	56	63	69
ODU	Compressor	Enhanced vapour injection DC inverter scroll compressor							
ODU	Throttling mode	Electronic expansion valve							
Refrigerant	R410A charge amount (kg)	11	11	11	13				

System Connection Diagram



Personalized product customization, fast selection

Professional operating system, easy to use, the system automatically associated with the design, selection speed Fast and high accuracy. Perfect project management of the system can provide quick feedback to customers on product design requirements. Multiple languages can be switched easily.

Powerful selection ability

The design experience of Midea's combined air handling units is set into a variety of modules, which can be directly retrieved to speed up the selection speed. The software is embedded with a variety of functional section configurations, which can meet the requirements of customers for different process designs. Large-capacity unit model database can meet the requirements of various places on the size of the box

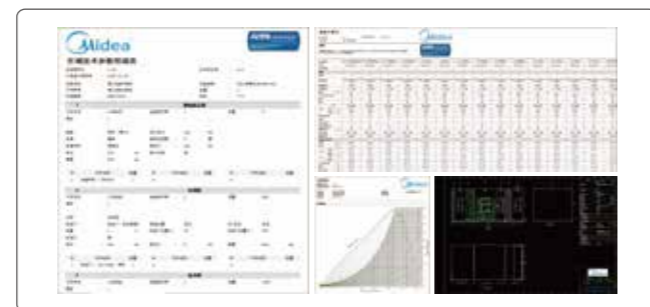
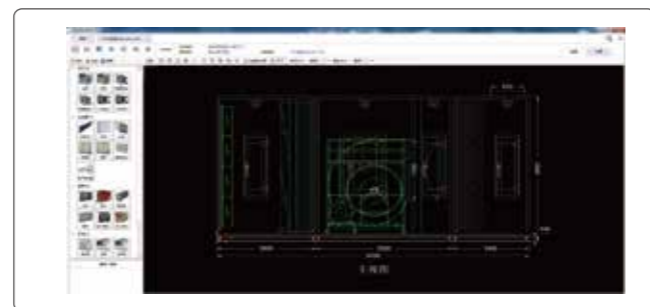
Professional selection of core components

Through the professional heat exchanger selection software, according to the different working conditions of the unit, we can provide a variety of coil rows, circuits and fins selection, and the heat exchanger selection software is certified by AHRI. Fan motor selection can be automatically judged according to the air volume and pressure requirements, and the fan motor combination with the better working condition point is recommended.



Complete set of report output

The selection results can be output through a complete set of reports, including the detailed technical parameters of each functional section of the unit, the detailed coil selection table, the enthalpy and humidity diagram and the working condition point, and the schematic diagram of the external dimensions of the unit, etc. The output selection report is professional, accurate and intuitive.



Installation

- Unit should be installed on a horizontal foundation to avoid running noise and keep the condensing water draining smooth.
- Allow sufficient space for maintenance. At least 1m width should be reserved in the direction of setting up the accesses door as shown in figure installation space.

Piping

- Flexible fittings should be used in water piping to absorb thermal expansion and contraction strains. and avoid transmission of vibrations
- Drainage pipe should be equipped with a U shaped water seal to keep water draining fluently as shown in figure draining pipe.

Wiring

- Wiring should be done according to the wiring diagram shown in the picture alongside.
- Unit shell must have reliable earthing.
- One motor one protection switch.
- During unit running time, the power voltage fluctuation value must be less than 10%, frequency fluctuation value must be less than 2%.

Water supply

- The water supplied in the water system should be soft and clean. Before water supply, the water system should be washed to clean away all the scraps and patches compounds first. At last, exhaust the air in the coil by discharge valve on the top of the water outlet pipe.
- If unit is running in winter season and is planning to stop for some time, the following steps should be taken to avoid damage to the coil: keep the water in coil circulating continuously; Add some anti freezing substance close the fresh air inlet damper.
- If unit stop running in winter season, water in the coil must be drained out completely to keep the coil dry.

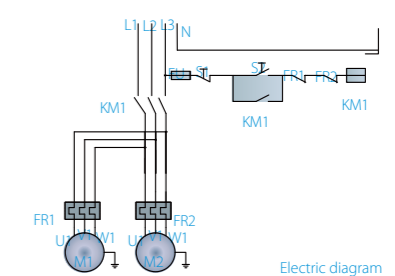
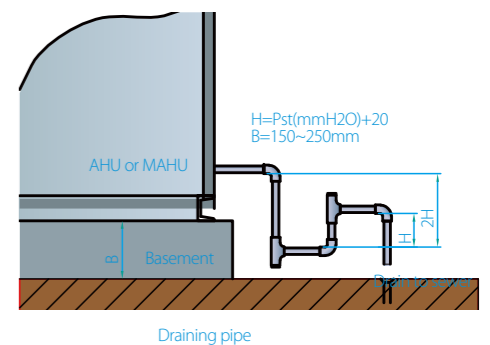
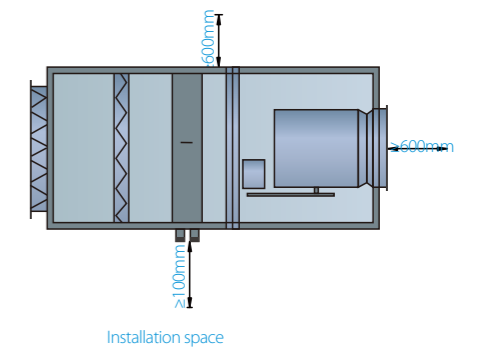
Start-up requirements

- Before start-up the units, do make sure that ductwork is clean, filters are in place, bearings lubricated, condensate properly trapped, piping connections verified and leak tested, belts aligned and tensioned, all shipping braces have been removed, and fan has been test run under observation.

Maintenance

- Check and make sure valves in water pipe and air duct are in normal working condition before unit running.
- Check the lubrication of fan bearings and tension of belts regularly.
- Check and adjust the connection, operation and transmission of fan, motor and other moving parts regularly.
- Wash the air filters once a month.
- Exhaust the water in the coil if the unit stops using for a long period.
- In winter, keep the water in the coil circulating when stop the unit for a short time.
- The water in the coil should be softened water. Clear away scale in the coil and dirty thing among the fins once a year.

For the detail information about installation, usage and maintenance, please refer to the 'installation manual', or consult Midea company.



Mechanical and Thermal Performance for Standard Air Handling Unit

Casing Mechanical Performance	AHRI Rating Requirements	Performance Rating	
		MKZ-DA	MKZ-DC
Casing Deflection Rating Class	CD1:Maximum Normalized Deflection≤0.0033in/in of Span tested at 10 in H2O CD4:Maximum Normalized Deflection≤0.0042in/in of Span tested at 4 in H2O	CD4	CD1
Casing Air Leakage Rate	CL1:Maximum Casing Air Leakage Rate CL≤1 CFM/100ft2 at Reference pressure 1.0 in. H2O CL2:Maximum Casing Air Leakage Rate CL≤2 CFM/100ft2 at Reference pressure 1.0 in. H2O	CL2	CL1
Thermal Transmittance Class with Leakage	CT1:Thermal Transmittance with Leakage $U \leq 0.16$ Btu/ft2/°F CT2:Thermal Transmittance with Leakage $0.16 < U \leq 0.26$ Btu/ft2/°F	CT2	CT1
Thermal Transmittance Class without Leakage	CT1:Thermal Transmittance with Leakage $U \leq 0.14$ Btu/ft2/°F CT2:Thermal Transmittance with Leakage $0.14 < U \leq 0.23$ Btu/ft2/°F	CT2	CT1
Thermal Bridging Class	CB0:Thermal Bridging Factor, $kb \geq 0.8$ (screw heads and fasteners are included) CB1:Thermal Bridging Factor, $kb \geq 0.8$ CB2:Thermal Bridging Factor, $0.8 > kb \geq 0.6$	CB2	CB1

Note: Casing air leakage class for MKZ-DA tested at 1500Pa
Casing air leakage class for MKZ-DC tested at 2500Pa

Certified in accordance with the AHRI Central Station Air-handling Unit Casing Certification Program, which is based on AHRI Standard 1350.
Certified units may be found in the AHRI Directory at www.ahridirectory.org

