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Midea

2022

Air Handling Unit

MAKE A BEAUTIFUL TOMORROW

Midea Building Technologies Division

Midea Group

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Postal code: 528311

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

Quality Assurance ISO 9001

Environmental Management ISO 14001

Occupational Health and Safety Management ISO 45001

Note: Product specifications change from time to time as product improvements and developments are released and may vary from those in this document.

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.

FORTUNE GLOBAL 500 2021

1999
Entered the MBT field

2004
Launched the first generation of AC fan coil unit.

2008
Launched the new generation of One-way cassette series and Four-way cassette series of AC fan coil unit

2014
Launched the first wall-mounted series of DC fan coil unit and entered the DC fan coil unit field.

2016
Acquire an 80% stake in Clivet.

2019
Launched the new generation of Ceiling &Floor.

2020-2021
- Launched the new generation of Wall Mounted.
- Acquired the Chinese national brand Linvol Elevator and entered the elevator industry.

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.

Midea Meeting

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

Midea Global Spare Center

The global spare 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.

A

B

Introduction

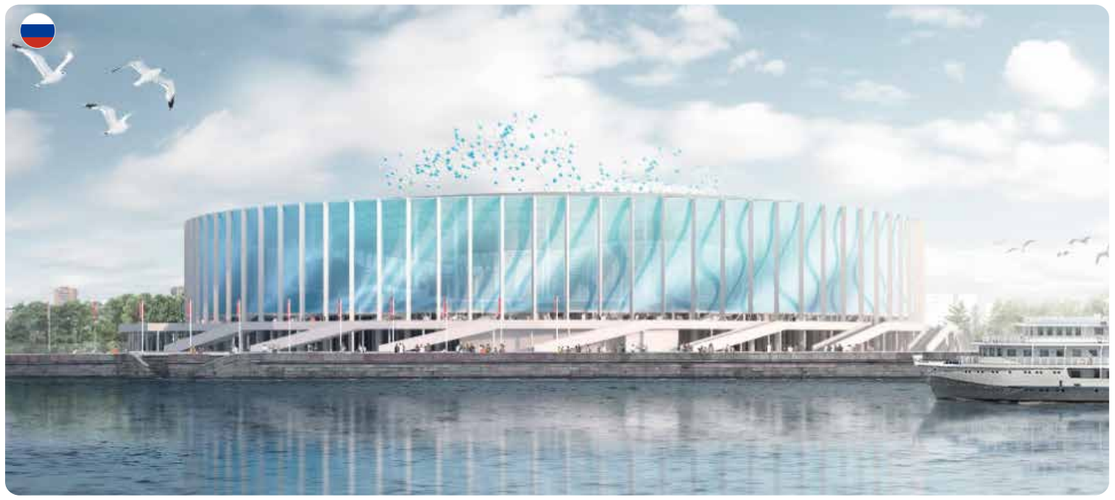
Midea air handling units (AHUs/MAHUs) have been designed and manufactured to meet the requirements of all kinds of space cooling and heating, such as office buildings, shopping malls, exhibition halls, airports, railway stations, hotels, factories and any other central air-conditioning systems.

Contents

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

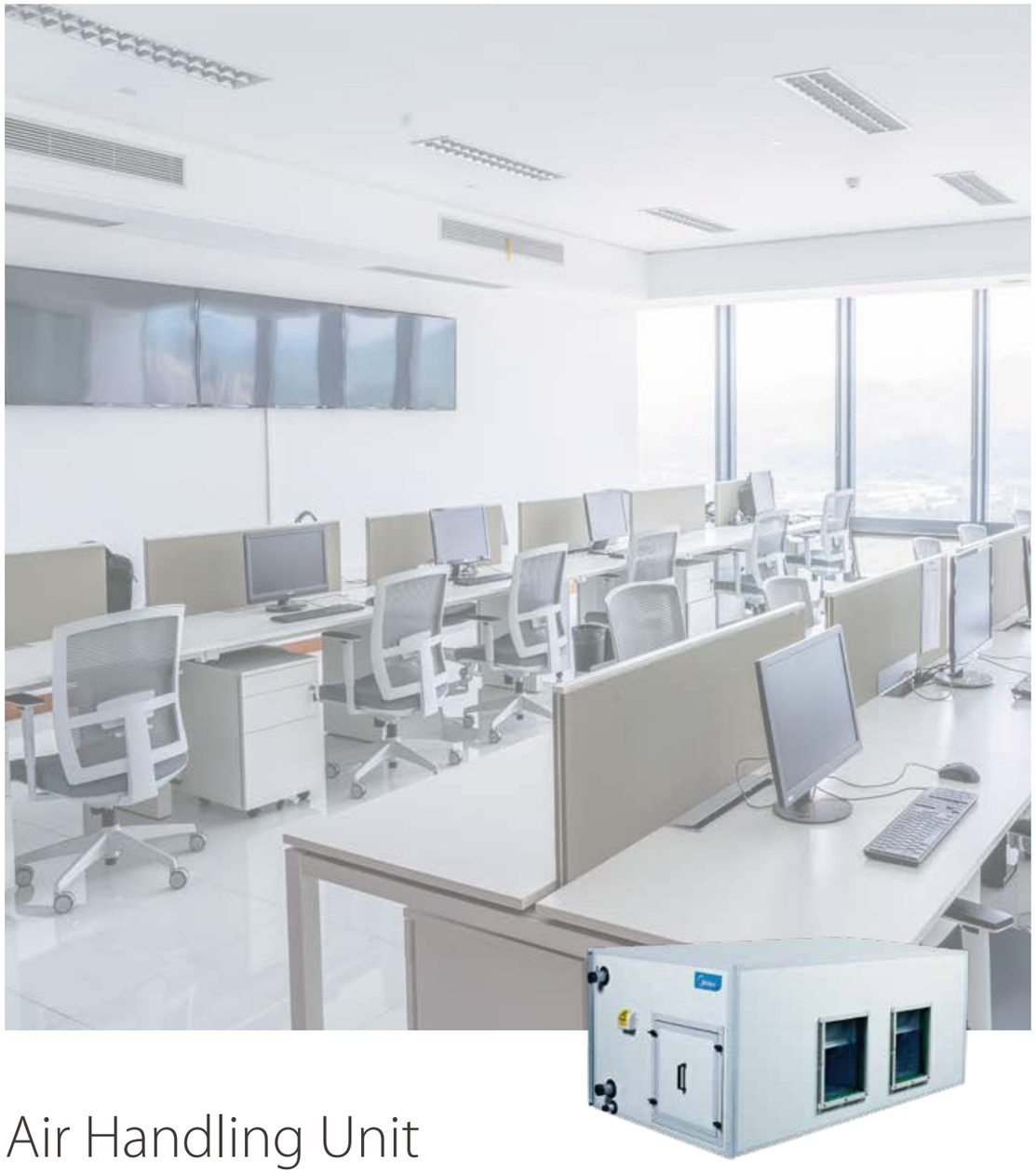
- Country: Malaysia
- City: Klang
- Outdoor Units: Water-cooled screw chiller
- Indoor Units: FCU & AHU
- Total Capacity: 3,400RT

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

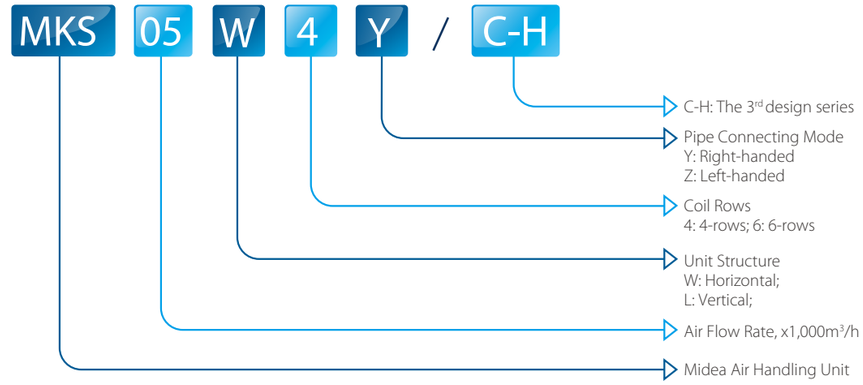


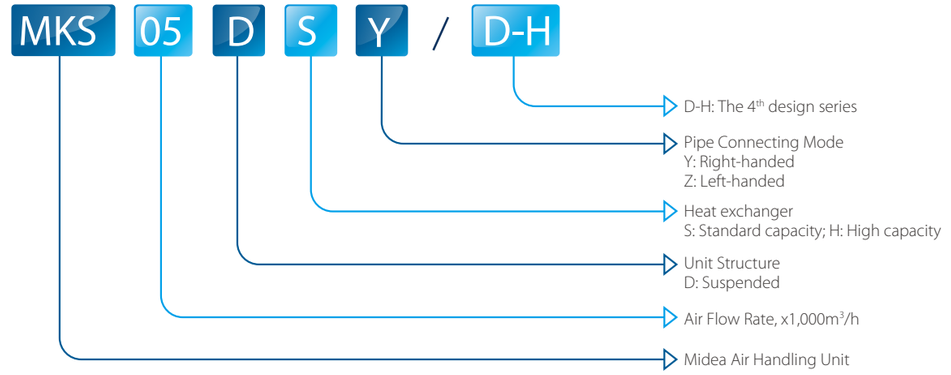
Air Handling Unit

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 3rd 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 3rd 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.

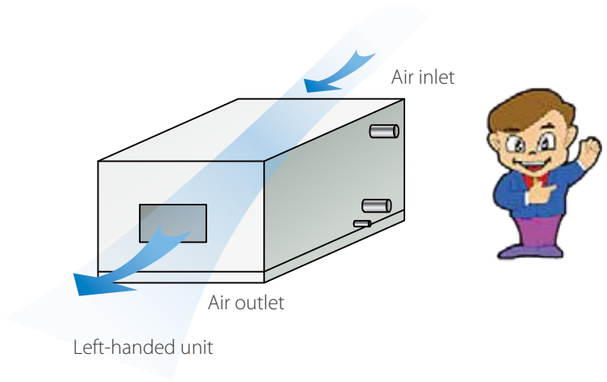
Nomenclature





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.



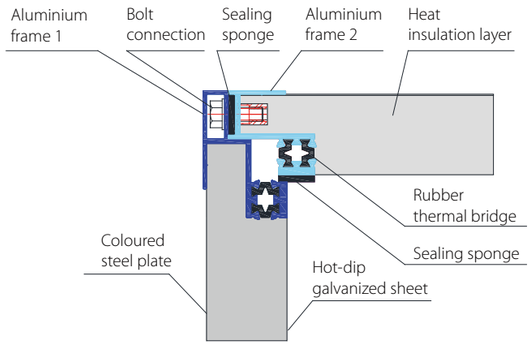
Features

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

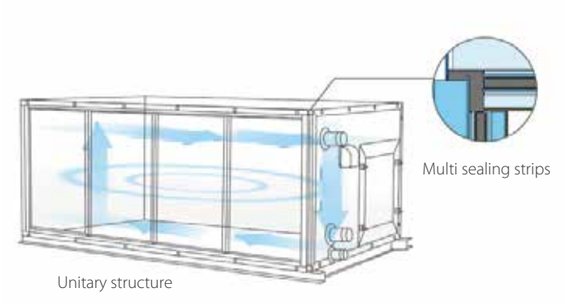
The density of polyurethane injection is 50kg /m³ (thermal conductivity factor K≤0.0224W/m²·K). Unit cabinet is constructed by panels with male and female aluminum alloy cards and sealing strip. The service door (or service panel) is plastic-steel frame with polyurethane injection panel and rubber sealing 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℃, relative humidity is 90%.

- Simple structural components
- Less at-site work

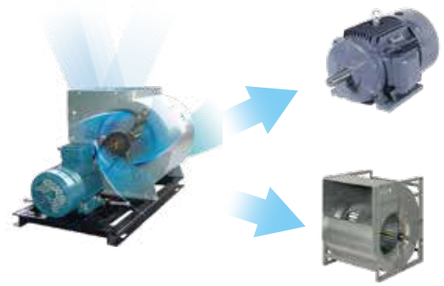


High performance heat exchanger

- 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.

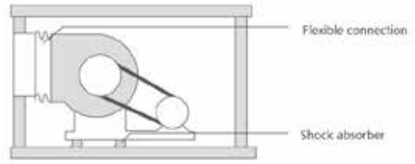
Stable air supply fan assembly

- 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 transmision.
- 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 2,000m³/h to 40,000m³/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.

School | Factory | Hotel | Hospital | Office

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

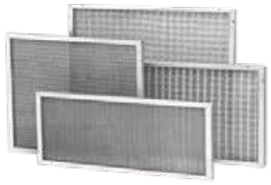
Standard panels are 25mm thick double skin type with injected polyurethane foam insulation. The outer skin is anti-corrosion color-coated steel sheet with a layer of film and the inner skin is galvanized steel sheet .
The panel insulation is moistureproof and anti-corrosive. The insulation material is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

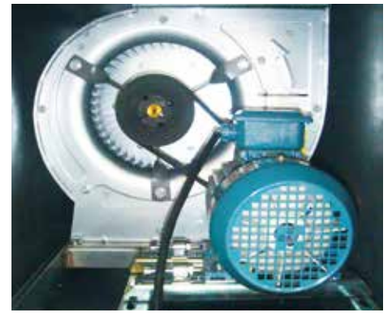


Drain pan

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

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 sticked 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	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension	Power upply
MKSxxxxY (or Z)/D-H		m³/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
02D	S	2000	11.2	18.6	0.54	67	0.37	19	40	25	58.0	90	870×750×555	1066×914×702	380~415V -3-50Hz
	H		14.6	22.6	0.70	227	0.75	32	40		58.9	95			
03D	S	3000	17.1	26.7	0.82	52	0.55	35	40	25	58.0	120	1020×830×605	1216×994×752	
	H		22.0	33.8	1.05	212	1.10	57	40		58.1	125			
04D	S	4000	22.8	39.9	1.09	70	0.75	52	40	25	60.0	145	1300×830×605	1496×994×752	
	H		29.3	45.1	1.40	230	1.10	62	40		61.9	155			
05D	S	5000	28.5	47.5	1.36	42	1.10	20	40	25	62.0	160	1390×830×605	1586×994×752	
	H		36.6	56.4	1.75	202	1.50	40	40		63.0	170			
06D	S	6000	34.1	57.5	1.63	92	1.50	25	40	25	62.0	180	1590×830×605	1786×994×752	
	H		44.1	67.7	2.11	252	2.20	54	40		63.3	190			
07D	S	7000	39.1	66.0	1.90	98	1.10	44	40	25	64.0	190	1590×830×705	1786×994×852	
	H		51.7	79.0	2.47	258	2.20	61	40		65.4	205			
08D	S	8000	45.5	73.1	2.17	79	1.50	31	50	25	64.0	205	1700×830×705	1896×994×852	
	H		59.1	90.2	2.82	239	2.20	42	50		65.5	220			
09D	S	9000	51.2	83.0	2.45	116	2.20	34	50	25	66.0	235	1700×920×755	1896×1084×902	
	H		67.1	100.8	3.21	286	3.00	59	50		67.0	250			
10D	S	10000	58.9	99.3	2.81	136	2.20	30	50	25	66.0	260	1940×920×755	2136×1084×902	
	H		74.6	112.0	3.56	306	3.00	58	50		67.8	280			
12D	S	12000	68.3	113.5	3.26	108	3.00	52	50	25	68.0	270	1940×920×860	2136×1084×1007	
	H		85.6	135.2	4.09	278	4.00	57	50		69.6	290			
15D	S	15000	85.3	142.1	4.08	125	4.00	36	50	25	70.0	350	2240×1000×905	2436×1164×1052	
	H		107.0	169.0	5.11	305	5.50	33	50		71.8	380			

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

● Fresh air condition

Model		Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension	Power upply
MKSxxxxY (or Z)/D-H		m³/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
02D	S	2000	23.5	27.3	1.12	67	0.37	38	40	25	58.0	90	870×750×555	1066×914×702	380~415V -3-50Hz
	H		28.4	33.0	1.35	227	0.75	54	40		58.9	95			
03D	S	3000	32.0	35.6	1.53	52	0.55	55	40	25	58.0	120	1020×830×605	1216×994×752	
	H		42.5	49.4	2.03	212	1.10	77	40		58.1	125			
04D	S	4000	45.5	52.0	2.17	70	0.75	52	40	25	60.0	145	1300×830×605	1496×994×752	
	H		56.7	65.9	2.71	230	1.10	58	40		61.9	155			
05D	S	5000	57.1	72.6	2.73	42	1.10	61	40	25	62.0	160	1390×830×605	1586×994×752	
	H		70.9	82.4	3.39	202	1.50	58	40		63.0	170			
06D	S	6000	64.9	84.0	3.10	92	1.50	37	40	25	62.0	180	1590×830×605	1786×994×752	
	H		84.5	97.0	4.04	252	2.20	62	40		63.3	190			
07D	S	7000	83.8	97.2	4.00	98	1.10	36	40	25	64.0	190	1590×830×705	1786×994×852	
	H		98.9	115.5	4.72	258	2.20	59	40		65.4	205			
08D	S	8000	87.6	112.0	4.19	79	1.50	73	50	25	64.0	205	1700×830×705	1896×994×852	
	H		113.0	132.0	5.40	239	2.20	46	50		65.5	220			
09D	S	9000	106.1	123.1	5.07	116	2.20	39	50	25	66.0	235	1700×920×755	1896×1084×902	
	H		126.9	148.5	6.06	286	3.00	46	50		67.0	250			
10D	S	10000	113.0	140.0	5.40	136	2.20	79	50	25	66.0	260	1940×920×755	2136×1084×902	
	H		141.0	165.0	6.74	306	3.00	69	50		67.8	280			
12D	S	12000	139.1	161.4	6.65	108	3.00	41	50	25	68.0	270	1940×920×860	2136×1084×1007	
	H		170.4	197.6	8.14	278	4.00	57	50		69.6	290			
15D	S	15000	170.0	210.0	8.12	125	4.00	73	50	25	70.0	350	2240×1000×905	2436×1164×1052	
	H		213.0	247.0	10.18	305	5.50	76	50		71.8	380			

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

Horizontal type

● Return air condition

Model		Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension	Power supply
MKSxxxY(orZ)/C-H		m³/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
05W	4	5000	28.3	47.5	1.35	96	1.1	20.2	40	25	59.5	190	1100×1120×840	1294×1264×980	380~415V-3-50Hz
	6		36.6	56.4	1.75	256	1.5	39.5	40		61.2	230			
06W	4	6000	34.6	58.8	1.65	68	1.1	25	40	25	60.3	210	1200×1120×840	1394×1264×980	
	6		44.1	67.7	2.11	228	2.2	54	40		61.4	270			
08W	4	8000	50.8	73.1	2.43	78	1.5	30.7	50	25	63.1	250	1450×1170×945	1646×1314×1092	
	6		59.1	90.2	2.82	198	2.2	42.3	50		63.5	273			
10W	4	10000	63.2	91.3	3.02	112	3	30	50	25	63.5	300	1650×1200×965	1864×1344×1112	
	6		74.6	112	3.56	152	3	58	50		65.2	325			
15W	4	15000	91	131.3	4.35	125	4	35.5	50	25	66.1	390	1940×1220×1195	2134×1364×1338	
	6		107	169	5.11	305	5.5	33	65		68.2	480			
20W	4	20000	119.3	183.4	5.70	210	7.5	28.1	65	25	70.4	500	2440×1350×1310	2642×1502×1462	
	6		149	224	7.12	210	7.5	59	65		71.6	620			
25W	4	25000	149.3	248.9	7.13	318	7.5	34	65	25	70.2	580	2590×1400×1510	2792×1552×1662	
	6		187	279	8.93	318	7.5	64	80		71.5	685			
30W	4	30000	179.2	298.7	8.56	273	11	53.3	65	25	73.3	650	2790×1450×1580	2992×1602×1727	
	6		225	335	10.75	273	11	69	80		73.5	765			
35W	4	35000	209.1	348.4	9.99	432	2×5.5	40	2×65	25	73.8	880	2790×1880×1930	3042×2028×2082	
	6		265	391	12.66	432	2×7.5	67	2×65		74.2	950			
40W	4	40000	238.9	398.2	11.41	405	2×7.5	41.2	2×65	25	76.2	920	2790×1880×2060	3042×2028×2212	
	6		300	447	14.33	405	2×7.5	68	2×65		77.5	1150			

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

● Fresh air condition

Model		Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	External static pressure	Fan motor input	Water pressure drop	Chilled water pipe	Drain pipe	Sound level	Net weight	Net dimension	Package dimension	Power supply
MKSxxxY(orZ)/C-H		m³/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
05W	4	5000	57.1	72.6	2.70	96	1.1	61	40	25	59.5	190	1100×1120×840	1294×1264×980	380~415V-3-50Hz
	6		70.9	82.4	3.40	256	1.5	58	40		61.2	230			
06W	4	6000	64.9	84.0	3.10	68	1.1	37	40	25	60.3	210	1200×1120×840	1394×1264×980	
	6		84.5	97.0	4.00	228	2.2	62	40		61.4	270			
08W	4	8000	87.6	112.0	4.20	78	1.5	73	50	25	63.1	250	1450×1170×945	1646×1314×1092	
	6		113.0	132.0	5.40	198	2.2	46	50		63.5	273			
10W	4	10000	113.0	140.0	5.40	112	3	79	50	25	63.5	300	1650×1200×965	1864×1344×1112	
	6		141.0	165.0	6.70	152	3	69	50		65.2	325			
15W	4	15000	170.0	210.0	8.10	125	4	73	50	25	66.1	390	1940×1220×1195	2134×1364×1338	
	6		213.0	247.0	10.20	305	5.5	76	65		68.2	480			
20W	4	20000	222.0	280.0	10.60	210	7.5	69	65	25	70.4	500	2440×1350×1310	2642×1502×1462	
	6		279.0	323.0	13.30	210	7.5	66	65		71.6	620			
25W	4	25000	279.0	350.0	13.30	318	7.5	71	65	25	70.2	580	2590×1400×1510	2792×1552×1662	
	6		350.0	404.0	16.70	318	7.5	83	80		71.5	685			
30W	4	30000	322.0	412.0	15.40	273	11	36	65	25	73.3	650	2790×1450×1580	2992×1602×1727	
	6		418.0	485.0	20.00	273	11	77	80		73.5	765			
35W	4	35000	382.0	490.0	18.30	432	2×5.5	32	2*65	25	73.8	880	2790×1880×1930	3042×2028×2082	
	6		494.0	566.0	23.60	432	2×7.5	67	2*65		74.2	950			
40W	4	40000	430.0	560.0	20.50	405	2×7.5	35	2*65	25	76.2	920	2790×1880×2060	3042×2028×2212	
	6		557.0	647.0	26.60	405	2×7.5	77	2*65		77.5	1150			

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

Vertical type

● Return air condition

Model		Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	Externa static pressurel	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension	Power supply
MKSxxxY(orZ)/C-H		m^3/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
03L	4	3000	17.1	26.7	0.82	52	0.75	35	40	25	57.1	130	1010×580×1100	1260×730×1290	380~415V-3-50Hz
	6		22.0	33.8	1.05	212	1.1	57	40		57.5	140			
04L	4	4000	22.8	39.9	1.09	79	1.1	52	40	25	58.2	150	1050×580×1250	1300×730×1440	
	6		29.3	45.1	1.40	239	1.5	62	40		60.3	162			
05L	4	5000	28.3	47.5	1.40	96	1.1	20	40	25	60.5	170	1110×630×1420	1360×780×1610	
	6		36.6	56.4	1.70	256	2.2	40	40		61.2	185			
06L	4	6000	34.6	58.8	1.70	68	1.5	25	40	25	61.4	190	1200×630×1470	1450×780×1660	
	6		44.1	67.7	2.10	228	2.2	54	40		61.9	210			
08L	4	8000	50.8	73.1	2.40	118	2.2	31	40	25	63.2	230	1350×740×1650	1600×890×1840	
	6		59.1	90.2	2.80	288	3.0	42	40		63.6	255			
10L	4	10000	58.9	99.3	2.81	112	3.0	30	50	25	64.5	250	1410×740×1800	1660×890×1990	
	6		74.6	112.0	3.60	292	4.0	58	50		65.4	290			
15L	4	15000	91	131.3	4.30	125	5.5	36	50	25	67.6	360	1940×740×1880	2190×960×2070	
	6		107.0	169.0	5.10	205	5.5	33	50		68.4	410			
20L	4	20000	113.7	183.4	5.4	152	7.5	28	50	25	70.5	480	2420×860×1980	2670×1080×2170	
	6		149.0	224.0	7.10	152	7.5	59	50		71.2	540			
25L	4	25000	149.3	248.9	7.10	218	7.5	34	65	25	70.7	620	2790×960×2160	3040×1180×2350	
	6		187.0	279.0	8.90	218	7.5	64	65		71.3	680			
30L	4	30000	179.2	298.7	8.60	173	11.0	53	65	25	73.1	690	2790×960×2360	3040×1180×2540	
	6		225.0	335.0	10.80	173	11.0	69	65		73.5	760			
35L	4	35000	209.1	348.4	10.00	235	11.0	40	80	25	73.6	780	3200×1000×2360	3450×1220×2540	
	6		265.0	391.0	12.70	235	15.0	67	80		74.2	860			
40L	4	40000	238.9	398.2	11.40	193	15.0	41	80	25	76.2	850	3400×1000×2360	3650×1220×2540	
	6		300.0	447.0	14.30	193	15.0	68	80		77.5	940			

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

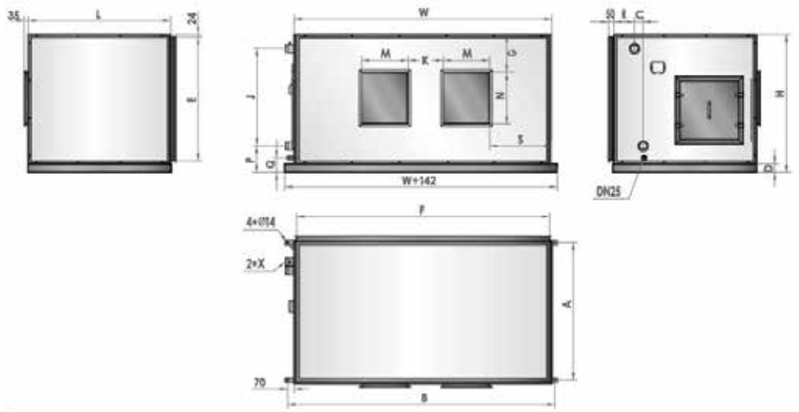
● Fresh air condition

Model		Air volume	Rated cooling capacity	Rated heating capacity	Water flow rate	Externa static pressurel	Fan motor input	Water pressure drop	Chilled water pipe	Cooling water pipe	Sound level	Net weight	Net dimension	Package dimension	Power supply
MKSxxxY(orZ)/C-H		m^3/h	kW	kW	L/s	Pa	kW	kPa	DN	DN	dB(A)	kg	W×D×H (mm)	W×D×H (mm)	V-Ph-Hz
03L	4	3000	32.0	35.6	1.53	52	0.75	46	40	25	57.1	130	1010×580×1100	1260×730×1290	380~415V-3-50Hz
	6		42.5	49.4	2.03	212	1.1	47	40		57.5	140			
04L	4	4000	45.5	46.0	2.17	79	1.1	13	40	25	58.2	150	1050×580×1250	1300×730×1440	
	6		56.7	65.9	2.71	239	1.5	24	40		60.3	162			
05L	4	5000	57.1	72.6	2.73	96	1.1	61	40	25	60.5	170	1110×630×1420	1360×780×1610	
	6		70.9	82.4	3.39	256	2.2	58	40		61.2	185			
06L	4	6000	64.9	84.0	3.10	68	1.5	37	40	25	61.4	190	1200×630×1470	1450×780×1660	
	6		84.5	97.0	4.04	228	2.2	62	40		61.9	210			
08L	4	8000	87.6	112.0	4.19	118	2.2	73	40	25	63.2	230	1350×740×1650	1600×890×1840	
	6		113.0	132.0	5.40	288	3.0	46	40		63.6	255			
10L	4	10000	113.0	140.0	5.40	112	3.0	79	50	25	64.5	250	1410×740×1800	1660×890×1990	
	6		141.0	165.0	6.74	292	4.0	69	50		65.4	290			
15L	4	15000	170.0	210.0	8.12	125	5.5	73	50	25	67.6	360	1940×740×1880	2190×960×2070	
	6		213.0	247.0	10.18	205	5.5	76	50		68.4	410			
20L	4	20000	222.0	280.0	10.61	152	7.5	69	50	25	70.5	480	2420×860×1980	2670×1080×2170	
	6		279.0	323.0	13.33	152	7.5	66	50		71.2	540			
25L	4	25000	279.0	350.0	13.33	218	7.5	71	65	25	70.7	620	2790×960×2160	3040×1180×2350	
	6		350.0	404.0	16.72	218	7.5	83	65		71.3	680			
30L	4	30000	322.0	412.0	15.38	173	11.0	36	65	25	73.1	690	2790×960×2360	3040×1180×2540	
	6		418.0	485.0	19.97	173	11.0	77	65		73.5	760			
35L	4	35000	382.0	490.0	18.25	235	11.0	32	80	25	73.6	780	3200×1000×2360	3450×1220×2540	
	6		494.0	566.0	23.60	235	15.0	67	80		74.2	860			
40L	4	40000	430.0	560.0	20.54	193	15.0	35	80	25	76.2	850	3400×1000×2360	3650×1220×2540	
	6		557.0	647.0	26.61	193	15.0	77	80		77.5	940			

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

Dimensions

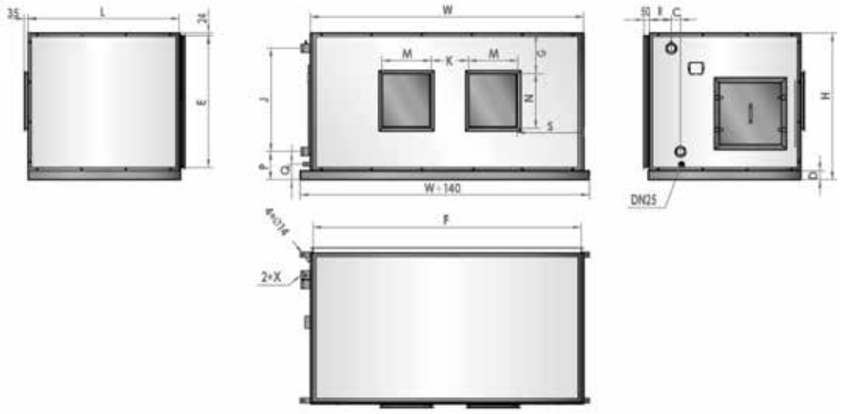
Suspended type



(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

Horizontal type

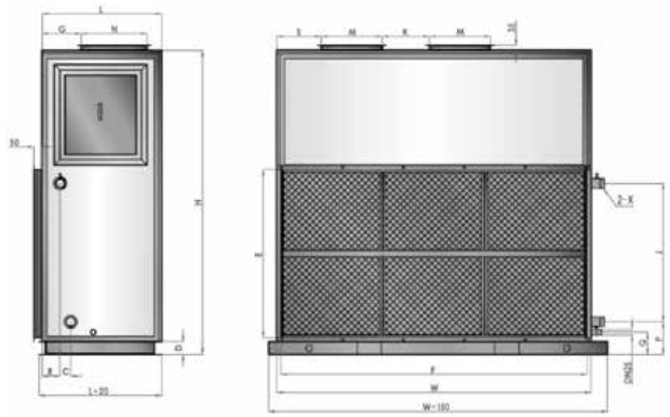


(unit:mm)

MODEL(MKS-H)		05W/C	06W/C	08W/C	10W/C	15W/C	20W/C	25W/C	30W/C	35W/C	40W/C
Outside dimension	L	1120	1120	1170	1200	1220	1350	1400	1450	1880	1880
	W	1100	1200	1450	1650	1940	2440	2590	2790	2790	2790
	H	840	840	945	965	1195	1310	1510	1580	1930	2060
C	4R	66	66	66	66	66	82.5	82.5	82.5	82.5	82.5
	6R	110	110	110	110	110	137.5	137.5	137.5	137.5	137.5
D		25	25	25	25	25	80	80	80	80	80
Inlet flange	E	762	762	865	890	1115	1175	1375	1440	1795	1925
	F	1050	1140	1390	1600	1880	2390	2540	2740	2740	2740
G		157	157	177	195	422	335	533	593	746	876
J		498	498	599	599	853	923	1114	1177	669	733
K		/	/	/	/	282	335	446	446	666	666
Outlet flange	M	405	405	482	482	373	430	567	567	648	648
	N	350	350	414	414	404	478	488	488	648	648
P		172	172	172	172	172	224	224	224	224	224
Q		71	71	71	71	71	126	126	126	126	126
R		156	156	156	156	156	195	195	195	186	186
Diameter of connection pipe X	4R	DN40	DN40	DN50	DN50	DN50	DN65	DN65	DN65	2xDN65	2xDN65
	6R	DN40	DN40	DN50	DN50	DN65	DN65	DN80	DN80	2xDN65	2xDN65

note:code 2x representative two coil.

Vertical type



(unit:mm)

MODEL(MKS-H)		03L/C	04L/C	05L/C	06L/C	08L/C	10L/C	15L/C	20L/C	25L/C	30L/C	35L/C	40L/C
Outside dimension	L	580	580	630	630	740	740	740	860	960	960	1000	1000
	W	1010	1050	1110	1200	1350	1410	1940	2420	2790	2790	3200	3400
	H	1100	1250	1420	1470	1650	1800	1880	1980	2160	2360	2360	2360
C	4R	66	66	66	66	66	66	66	83	83	83	118	118
	6R	110	110	110	110	110	110	110	138	138	138	138	138
D		50	50	50	50	50	50	80	80	80	80	80	80
Inlet flange	E	474	575	677	728	830	982	1038	1026	1090	1280	1280	1280
	F	960	1000	1060	1150	1300	1360	1890	2370	2740	2740	3150	3350
J		304	405	507	558	660	805	856	839	918	1108	1098	1098
K		/	/	/	/	/	/	282	373	448	448	438	438
Outlet flange	M	309	342	405	405	482	482	384	482	567	567	579	579
	N	273	300	350	350	414	414	414	414	488	488	579	579
G		188	202	205	205	249	249	233	247	309	309	303	307
S		212	207	232	271	307	347	266	290	348	348	616	854
P		161	161	161	161	161	168	203	206	211	211	214	214
Q		101	101	101	101	101	101	131	134	134	134	134	134
R		102	102	102	102	102	102	111	111	111	111	111	111
Diameter of connection pipe X	4R	DN40	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN65	DN65	DN80	DN80
	6R	DN40	DN40	DN40	DN40	DN40	DN50	DN50	DN50	DN65	DN65	DN80	DN80

note:code 2x representative two coil.

Options

Customizable ESP

● Suspended type

MKSxxxS (or H) Y(or Z)/D-H	Air volume (m³/h)	Rows of cooling coil	External static pressure(Pa)					
			P1	P2	P3	P4	P5	P6
02D	2000	4	27	67	107	147	187	227
		6	27	67	107	147	187	227
03D	3000	4	12	52	92	132	172	212
		6	12	52	92	132	172	212
04D	4000	4	30	70	110	150	190	230
		6	30	70	110	150	190	230
05D	5000	4	2	42	82	122	162	202
		6	2	42	82	122	162	202
06D	6000	4	52	92	132	172	212	252
		6	52	92	132	172	212	252
07D	7000	3	58	98	138	178	218	258
		4	58	98	138	178	218	258
08D	8000	3	39	79	119	159	199	239
		4	39	79	119	159	199	239
09D	9000	3	76	116	156	196	236	286
		4	76	116	156	196	236	286
10D	10000	3	96	136	176	216	256	306
		4	96	136	176	216	256	306
12D	12000	3	68	108	148	188	228	278
		4	68	108	148	188	228	278
15D	15000	3	85	125	165	205	255	305
		4	85	125	165	205	255	305

MKSxxxS (or H) Y(or Z)/D-H	Air volume (m³/h)	Rows of cooling coil	Motor power(kW) corresponding to external static pressure					
			P1	P2	P3	P4	P5	P6
02D	2000	4	0.37	0.37	0.55	0.55	0.55	0.55
		6	0.37	0.55	0.55	0.55	0.75	0.75
03D	3000	4	0.55	0.55	0.55	0.75	0.75	0.75
		6	0.55	0.55	0.75	0.75	0.75	1.1
04D	4000	4	0.75	0.75	0.75	1.1	1.1	1.1
		6	0.75	1.1	1.1	1.1	1.1	1.1
05D	5000	4	1.1	1.1	1.5	1.5	1.5	1.5
		6	1.5	1.5	1.5	1.5	1.5	2.2
06D	6000	4	1.1	1.5	1.5	1.5	1.5	2.2
		6	1.5	1.5	1.5	1.5	2.2	2.2
07D	7000	3	1.1	1.1	1.1	1.5	1.5	2.2
		4	1.1	1.5	1.5	1.5	2.2	2.2
08D	8000	3	1.5	1.5	1.5	1.5	2.2	2.2
		4	1.5	1.5	2.2	2.2	2.2	2.2
09D	9000	3	2.2	2.2	2.2	2.2	2.2	3
		4	2.2	2.2	2.2	2.2	3	3
10D	10000	3	2.2	2.2	2.2	3	3	3
		4	2.2	2.2	3	3	3	3
12D	12000	3	3	3	3	3	4	4
		4	3	3	3	4	4	4
15D	15000	3	4	4	4	4	5.5	5.5
		4	4	4	4	5.5	5.5	5.5

● Horizontal type

MKSxxY (Z)/C-H	Air volume (m³/h)	Rows of cooling coil	External static pressure(Pa)					
			P1	P2	P3	P4	P5	P6
05W	5000	4	56	96	136	176	216	256
		6	56	96	136	176	216	256
06W	6000	4	28	68	108	148	188	228
		6	28	68	108	148	188	228
08W	8000	4	38	78	118	158	198	238
		6	38	78	118	158	198	238
10W	10000	4	72	112	152	192	242	292
		6	72	112	152	192	242	292
15W	15000	4	85	125	165	205	255	305
		6	85	125	165	205	255	305
20W	20000	4	170	210	260	310	360	410
		6	170	210	260	310	360	410
25W	25000	4	268	318	368	418	468	518
		6	268	318	368	418	468	518
30W	30000	4	223	273	323	373	423	473
		6	223	273	323	373	423	473
35W	35000	4	382	432	482	532	582	632
		6	382	432	482	532	582	632
40W	40000	4	355	405	455	505	555	605
		6	355	405	455	505	555	605

MKSxxY (Z)/C-H	Air volume (m³/h)	Rows of cooling coil	Motor power(kW) corresponding to external static pressure					
			P1	P2	P3	P4	P5	P6
05W	5000	4	1.1	1.1	1.1	1.1	1.5	1.5
		6	1.1	1.1	1.1	1.5	1.5	1.5
06W	6000	4	1.1	1.1	1.5	1.5	1.5	2.2
		6	1.1	1.5	1.5	1.5	2.2	2.2
08W	8000	4	1.5	1.5	1.5	2.2	2.2	2.2
		6	1.5	1.5	2.2	2.2	2.2	/
10W	10000	4	2.2	3	3	3	/	/
		6	3	3	3	/	/	/
15W	15000	4	3	4	4	4	4	5.5
		6	3	4	4	4	4	5.5
20W	20000	4	5.5	7.5	7.5	7.5	7.5	11
		6	7.5	7.5	7.5	7.5	7.5	11
25W	25000	4	5.5	7.5	7.5	7.5	7.5	11
		6	7.5	7.5	7.5	7.5	11	11
30W	30000	4	11	11	11	11	11	11
		6	11	11	11	11	11	15
35W	35000	4	5.5×2	5.5×2	7.5×2	7.5×2	7.5×2	7.5×2
		6	7.5×2	7.5×2	7.5×2	7.5×2	7.5×2	11×2
40W	40000	4	7.5×2	7.5×2	7.5×2	11×2	11×2	11×2
		6	7.5×2	7.×25	11×2	11×2	11×2	11×2

● Vertical type

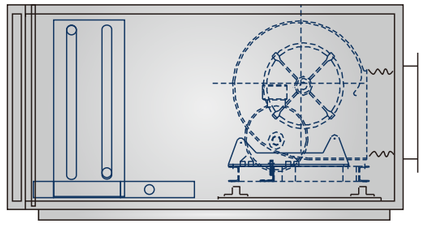
MKSxxY (Z)/C-H	Air volume (m³/h)	Rows of cooling coil	External static pressure(Pa)					
			P1	P2	P3	P4	P5	P6
03L	3000	4	12	52	92	132	172	212
		6	12	52	92	132	172	212
04L	4000	4	39	79	119	159	199	239
		6	39	79	119	159	199	239
05L	5000	4	56	96	136	176	216	256
		6	56	96	136	176	216	256
06L	6000	4	28	68	108	148	188	228
		6	28	68	108	148	188	228
08L	8000	4	78	118	158	198	238	288
		6	78	118	158	198	238	288
10L	10000	4	72	112	152	192	242	292
		6	72	112	152	192	242	292
15L	15000	4	85	125	165	205	255	305
		6	85	125	165	205	255	305
20L	20000	4	112	152	192	242	292	342
		6	112	152	192	242	292	342
25L	25000	4	178	218	268	318	368	418
		6	178	218	268	318	368	418
30L	30000	4	133	173	223	273	323	373
		6	133	173	223	273	323	373
35L	35000	4	185	235	285	335	385	435
		6	185	235	285	335	385	435
40L	40000	4	143	193	243	293	343	393
		6	143	193	243	293	343	393

MKSxxY (Z)/C-H	Air volume (m³/h)	Rows of cooling coil	Motor power(kW) corresponding to external static pressure					
			P1	P2	P3	P4	P5	P6
03L	3000	4	0.75	0.75	0.75	1.1	1.1	1.1
		6	0.75	0.75	1.1	1.1	1.1	1.1
04L	4000	4	1.1	1.1	1.1	1.1	1.1	1.5
		6	1.1	1.1	1.1	1.1	1.5	1.5
05L	5000	4	1.1	1.1	1.5	1.5	1.5	1.5
		6	1.1	1.5	1.5	1.5	1.5	2.2
06L	6000	4	1.1	1.5	1.5	1.5	2.2	2.2
		6	1.5	1.5	1.5	2.2	2.2	2.2
08L	8000	4	1.5	2.2	2.2	2.2	2.2	3
		6	2.2	2.2	2.2	2.2	3	3
10L	10000	4	3	3	3	3	3	4
		6	3	3	3	3	4	4
15L	15000	4	5.5	5.5	5.5	5.5	5.5	7.5
		6	5.5	5.5	5.5	5.5	7.5	7.5
20L	20000	4	7.5	7.5	7.5	7.5	7.5	11
		6	7.5	7.5	7.5	7.5	11	11
25L	25000	4	7.5	7.5	7.5	11	11	11
		6	7.5	7.5	11	11	11	11
30L	30000	4	11	11	11	11	15	15
		6	11	11	11	15	15	15
35L	35000	4	11	11	15	15	15	15
		6	11	15	15	15	15	15
40L	40000	4	15	15	15	18.5	18.5	18.5
		6	15	15	18.5	18.5	18.5	18.5

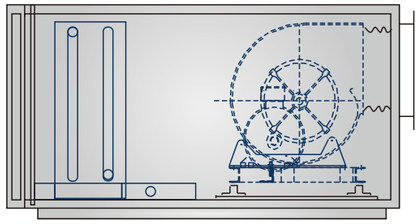
Note :
1.Characters in red are standard motor power input in standard ESP, others ESP must be customized.
2. Characters in red are standard motor power input in standard ESP, others power input correspondence others customized ESP.

Air outlet directions

● Suspended type

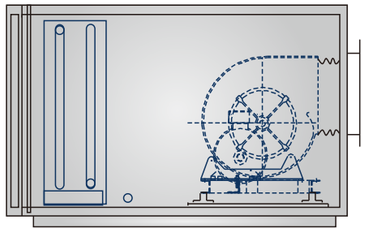


Standard: Front below

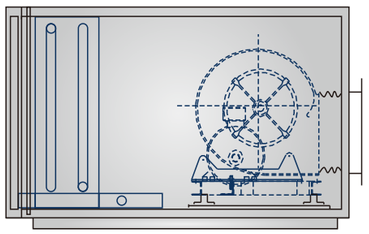


Option: Front up

● Horizontal type

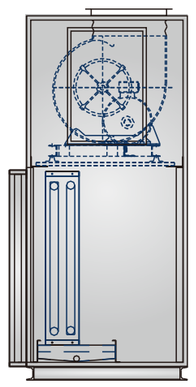


Standard: Front up

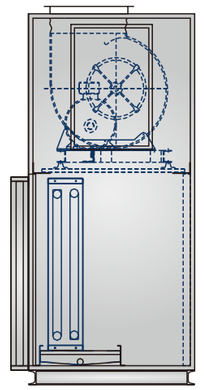


Option: Front below

● Vertical type



Standard: Up front



Option: Up rear

Customizable components

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	35mm, 50mm
	Innet Skin	0.5mm, Galvanized Steel	Galvanized Steel (Thickness: 0.8/1.0/1.2); Stainless Steel (Thickness:0.5/0.8/1.0/1.2), Pre-coated Steel (Thickness:0.5/0.8/1.0/1.2)
	Outer Skin	0.5mm, Pre-coated Steel	Pre-coated Steel (Thickness:0.8/1.0/1.2), Stainless Steel (Thickness:0.5/0.8/1.0/1.2)
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	4/6Rows	8Rows
	Tube Size	1/2 inch (≤15000CMH), 3/8 inch (>15000CMH)	/
	Drain Pan Material	GL Spray	SUS304
	Connection Type	Male Threaded	With Flange
Motor	Motor Brand	WanNan	Siemens
	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
Fan	Blower Brand	Yilida	Kruger
	Blade Type	Forward Curved	/
	Discharge	Suspended: FB; Horizontal: FT; Vertical: UF	/
	Accessories	/	NSK/SKF bearing, Pressure differential gauge, Pressure differential switch, Activation Box
Humidiffer	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 disinfector, 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	Steel Bsse, Hot dip zinc base
		Horizontal type	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 (m^3/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℃	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

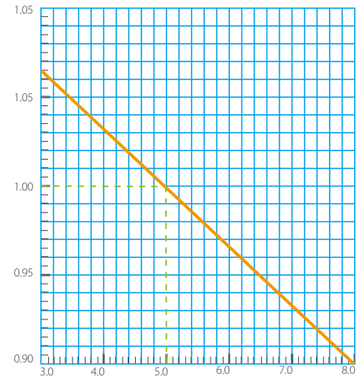


Figure 1 Temperature difference correction coefficient of water F2

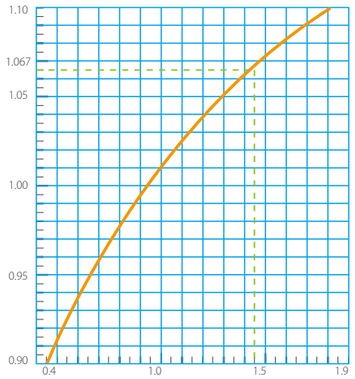


Figure 2 Water velocity correction coefficient F3

- **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	Plenum
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:**

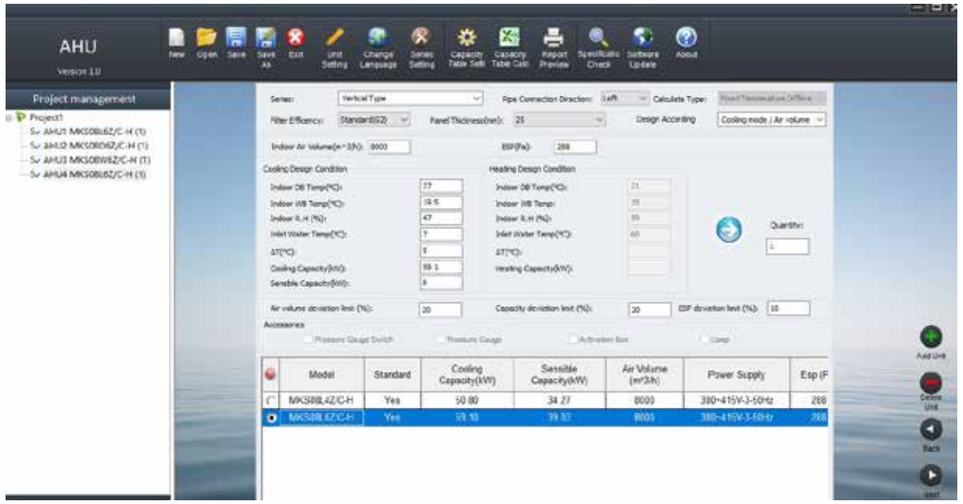
Determine the unit structure: horizontal type (W), vertical type (L) and suspended type (D).

- **Step 4:**

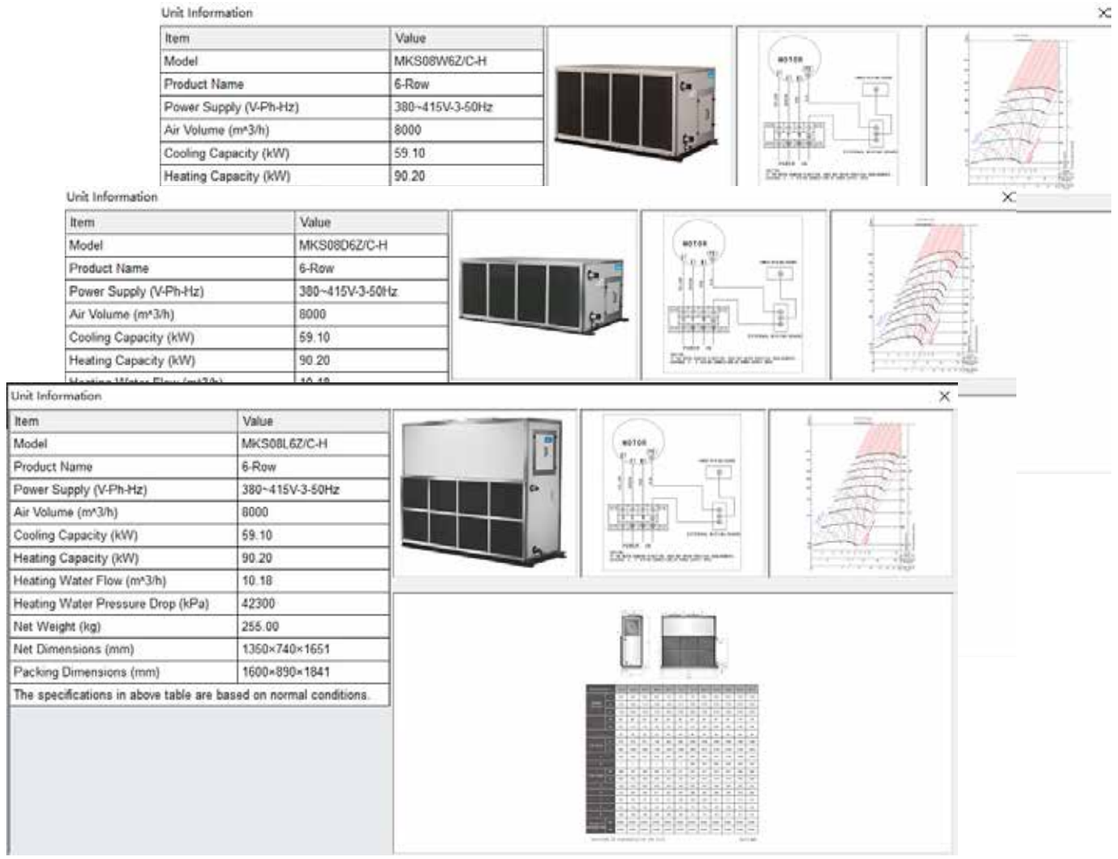
Determine the pipe connecting mode: right-handed (Y), left-handed (Z).

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

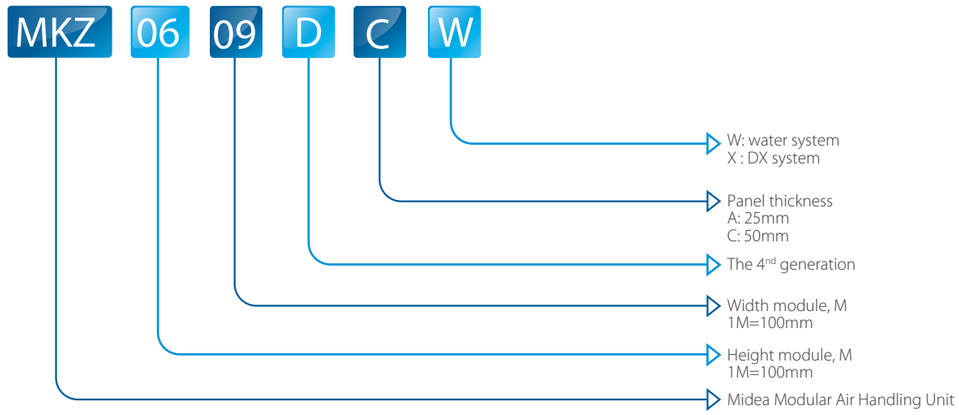


- Report data interface

Modular Air Handling Unit

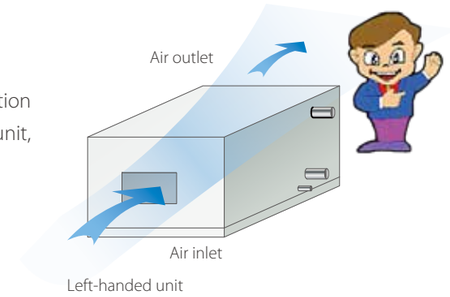
MAHUs are modular so that they have the flexibility to add components as required. The 4nd generation Midea MAHU adapts unitary structure design, more outstanding cold-bridge free performance, lower air leakage and more elegant appearance. It realizes a variety of functions: cooling, heating, humidification, dehumidification, air purification, noise elimination, and so on. The air flow rate is available from 1,500m³/h to 200,000m³/h. Total pressure (TP) exceeds 2000Pa to adapt to different kinds of applications, such as office buildings, shopping malls, exhibition halls, airports, railway stations, hotels, chemical fibres, electronics industries, textile mills, tobaccos, hospitals, printers, automobile factories and any other central air-conditioning systems.

Nomenclature



Orientation

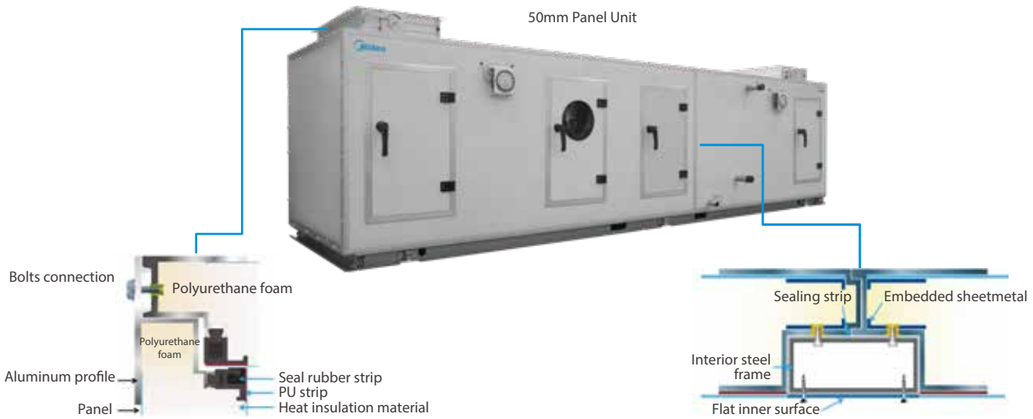
Unit handling orientation is determined by location of pipe connection while facing the air outlet. The unit below is left-handed connection unit, otherwise is the right-handed connection unit.



Features

Reliable quality

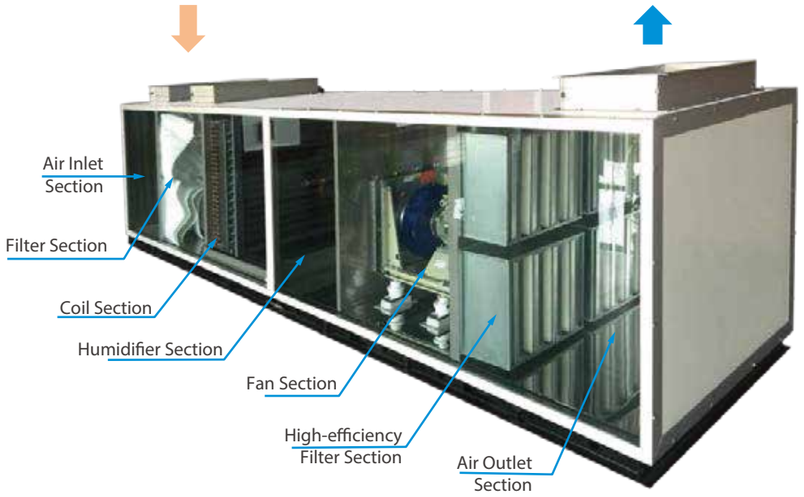
Patented "Labyrinth" panel is integrated male and female aluminum profile. Different panels of the unit casing are mounted and locked by the labyrinth profile, then fastened with bolts and nuts by embedded sheet metal inside the aluminum profile, and interior steel frame are used on the panel connection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



Modular design

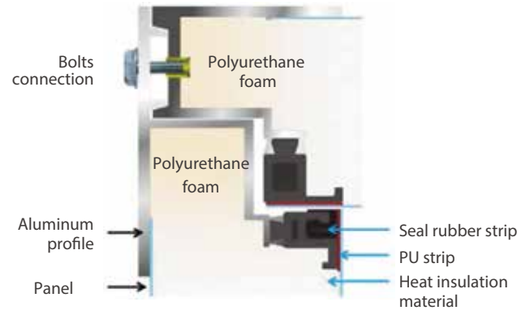
The MAHUs adopt module design usually including mixing section, primary efficiency filter section, medium efficiency filter section, high efficiency filter section, cooling coil section, heating coil section, humidifier section, sound attenuator section, service section, heat recovery section, fan section 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.



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 well-designed insulation is appropriately applied on the panel to break the cold-bridge. The access door leaf is integrated by highly pressurised polyurethane foam without secondary outer frame mounted and a seal injected by machine without broken on the inner perimeter of the door to prevent air leakage and forming cold-bridge. Thus, the certified thermal bridging rating of AHRI is CB1 and air leakage rating reaches CL1 under 2500Pa test condition.



Sandwich panel design

The MAHUs adopt unitary structure design and the insert fastening bolts are covered by haps which are in accordance with the color of the outer skin, and clear, smooth appearance make the outlook attractive.

Ease of Maintenance

Midea MAHUs are designed to provide easy access to interior components for routine maintenance and service. The easy-to-move panels and access doors of the units provide complete access to the unit interior and components.

Wide usage

Midea MAHUs can be widely used in chemical fibres, electronics industries, textile mills, tobacco industries, hospitals, printers, automobile factories and any other central air-conditioning systems, especially tthose which have special requirements of environment space.





Selection software

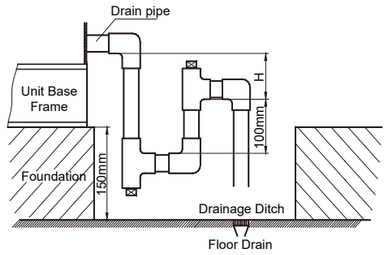
A user-friendly software selection program has been provided to help the customer easily select the units as per their project requirements.

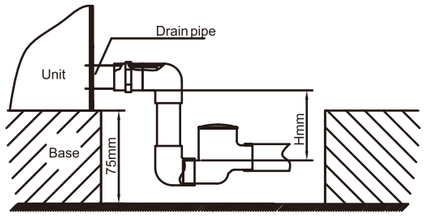
Mechanical specifications

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.

Access door

The access doors are equipped with locking handle which is controllable internally and externally. The access door leaf is integrated by highly pressurre polyurethane foam without secondary outer frame mounted and a seal injected by machine without broken on the inner perimeter of the door to prevent air leakage and form cold-bridge.

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.

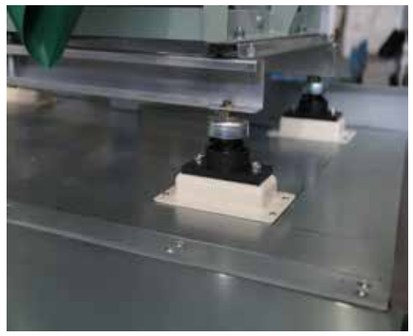
Unit is provided with a painted metal sheet belt guard. The belt guard is rigidly attached to the fan base support structure.

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

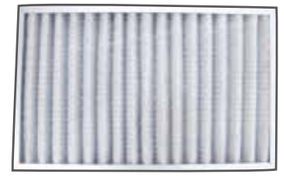
Electrode
boiler humidifier

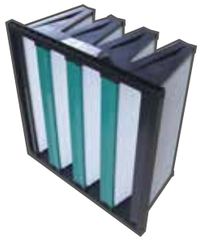
Water spray humidifier

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

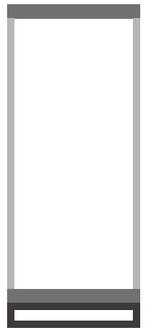
Air dampers in MAHUs are optional. Aerodynamically designed damper blades have built in high quality bearings. Blade edges are lined with sealing strip to restrict leakage to an absolute minimum. Air damper blades are either linked to give parallel turning operation or gear set to give opposing direction.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

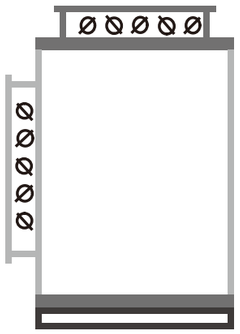
Funtional Sections Description

● Cabinet



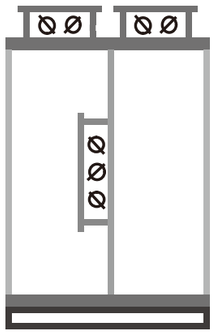
Cabinets consist of standard panels measuring 100mm each in length. The interconnecting parts of panels are made of proprietary designed aluminum profiles which guarantee minimum air leakage and panels are fitted together with bolts and nuts. As a result, the panels can be assembled or dis-assembled 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



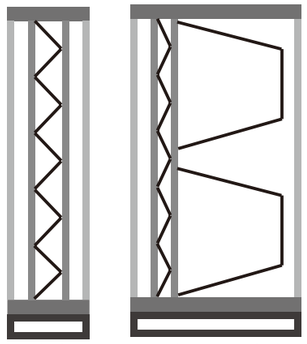
Providing chamber for mixing of return air and fresh air to adjust the ratio of air mixture. It has air dampers, made of GI metal vanes with aerofoil profile which can be controlled manually or by motor. Sizing of air dampers is based on maintaining surface velocity of 8m/s to ensure that the noise generated 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



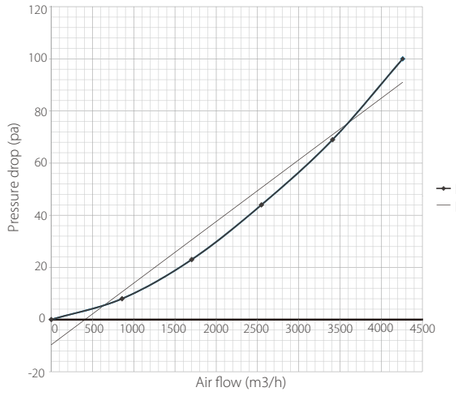
Be able to modulate the exhaust air volume, fresh air and return air ratio.

● Filters Section

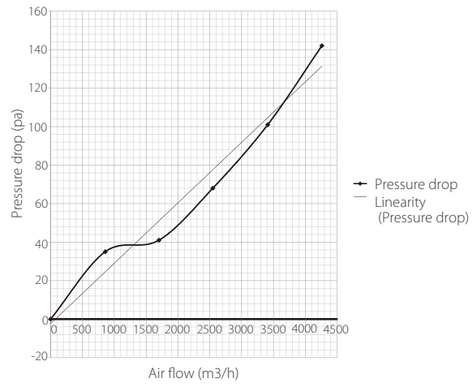


Panel Filter　　Bag Filter or Rigid Filter

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.

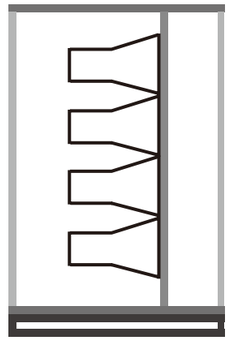


G4 plate filter



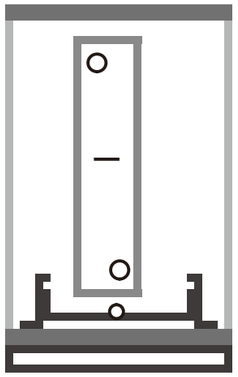
F7 bag filter

● Self-Cleaning High Efficiency Filter Section



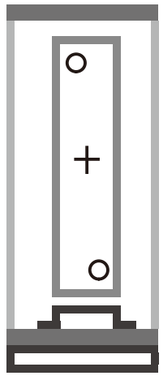
Self-cleaning High Efficiency Filter has high capacity for dust collection. When the dust has been accumulated, service personnel can remove the dust by blowing with compressed air and the dust will be collected at the metal pan at the bottom. This will avoid replacing the filter frequently.

Coil Section

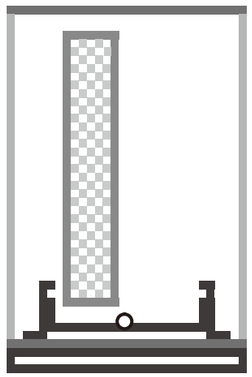


Cooling Coil

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 slided 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.



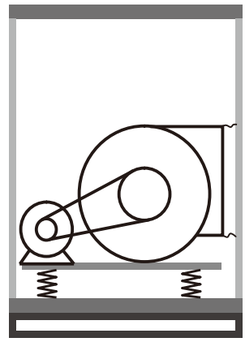
Heating Coil



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



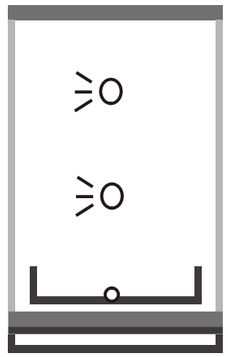
Base on the requirements of air flow rate and external static pressure, the selection software is able to select one or multiple centrifugal fan. Various types of fan blades design can be chosen base on different application needs, i.e. Forward Curved, Backward Curved and Aerofoil.

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

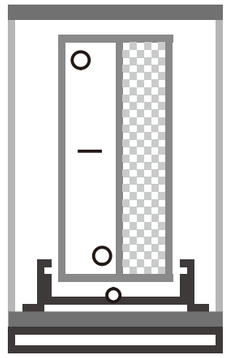


Steam Humidifier

There are a few types of humidifier:

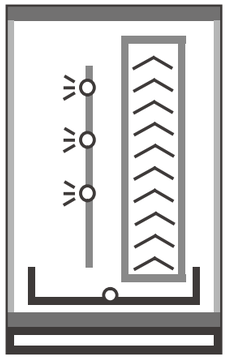
a. Dry steam humidifier - Isotherm humidifier, made of stainless steel and with properties of high corrosion resistance, small size, easy installation, clean humidification and high efficiency. There are 2 types of dry steam humidifier, i.e. electric driven or manual.
Applicable for sites with steam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



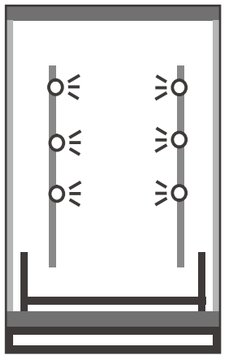
Wet Film Humidifier

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

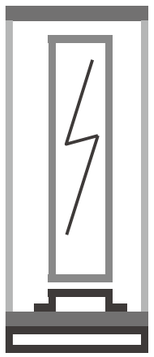
d. High pressure spray humidifier - pressurized the water and inject through nozzle to create mist and humidify the air through vaporization of the mist. The efficiency is about 40 ~ 50%.



Air Washer Humidifier

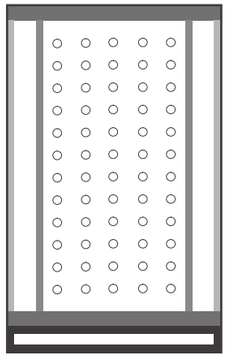
e. Air Washer Humidifier - can achieve various air treatment simultaneously. It is able to reduce the enthalpy, humidity and temperature of air and at the same time form an water curtain across the air stream to clean the air.

- Electric Heater Section



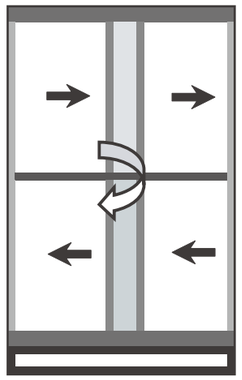
There are 2 types of electric heater used, spiral fins type or PTC heating elements. The heating elements are fitted on a frame and the control for heaters is field supplied.

- 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:

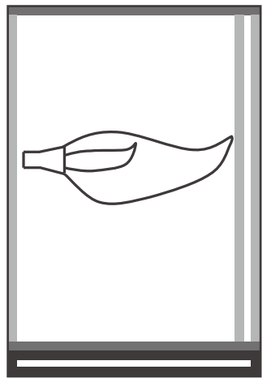
a. Heat Wheel - for both sensible and latent heat recovery with the efficiency of 70~90%. The counter flow between fresh air and exhaust air offers self-cleaning capability.

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.

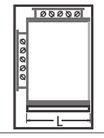
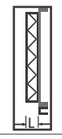
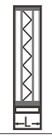
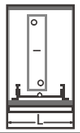
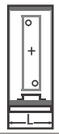
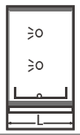
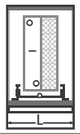
d. Heat pipe heat exchanger - each pipe contains Freon or ammonia as the working fluid and the heat recovery is done through phase change of working fluid with no moving parts involve.

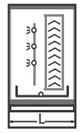
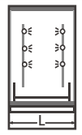
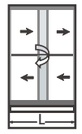
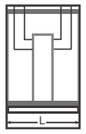
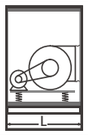
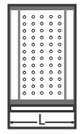
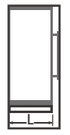
- Gas Heater Section



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.

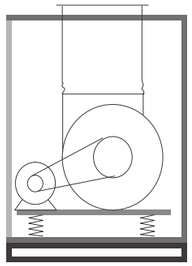
Function Sections Spcifications

Name	Sketch	Description (mm)			
Mixing Box		Unit Modules	L		
		0607-1117	600		
		1217-2126	800		
		2227-2534	1000		
		2834-4565	1200		
Outlet Filter		Installed outside the unit body, does 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			
Fresh Air Exhaust Section		Unit Modules	L		
		0607-1925	1200		
		2025-2940	1500		
		3141-4565	1800		
Chilled Water Coil		Unit Modules	L		
			(1-4Row)	(5-6Row)	(8-12Row)
		0607-2940	600	700	900
		3141-4565	1000	1000	1200
Heating Coil		Unit Modules	L(1-2Row)		
		0607-2940	300		
		3141-4565	600		
		For less than 3141 of the unit modules, if the heating section is located behind no more than 8 rows of the chiller water coil section and the section between and hot cold coil do not need for maintenance, the hot and cold coils in the same water plate, a total of 900mm.			
Electric Heater		T	L		
		<4	300		
		≥4	700		
		T=Electric Heat(W)/Air Volume(CMH)			
Steam Humidifier		L=600 If placed behind the fan section, requires 900mm.			
Wet Film Himidifier		Shared section length with chiller water coil section, if segmeted, it needs to be 600mm.			

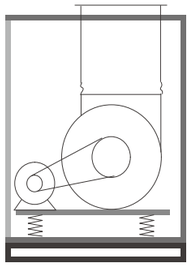
Name	Sketch	Description(mm)	
High Pressure Spray Humidifier		L=900 Eliminator is needed	
Spray Section		2 rows	L=2100
Heat Recovery Section		L according to the specific conditions to be selected.	
Dehumidification Section		L according to the specific conditions to be selected.	
Fan Section		L=700-3500	
Diffuser		L=600	
Silencer		L=500, 800, 1100	
Middle Section		L=600 Set befor the filtering section,chilled water coil section, heating section and silencer section, easy to maintain and repair.	
Air Outlet Section		Unit Modules	L
		0607-1117	600
		1217-2126	800
		2227-2534	1000
		2834-4565	1200
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

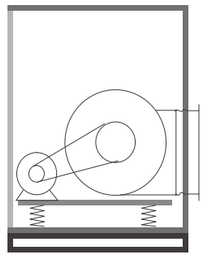
Air Entering



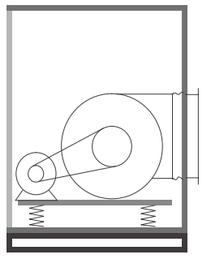
Upper Rear (UR)



Upper Front (UF)

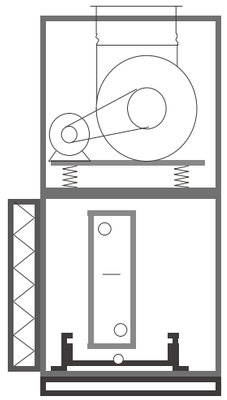


Front Bottom (FB)

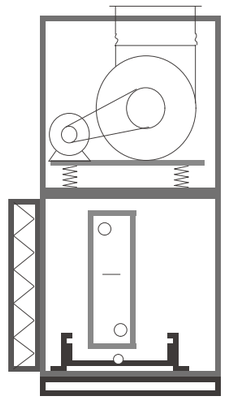


Front Top (FT)

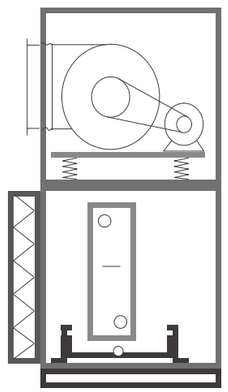
Air Entering



Upper Rear (UR)

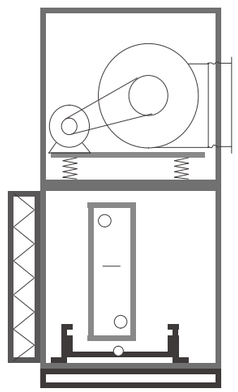


Upper Front (UF)

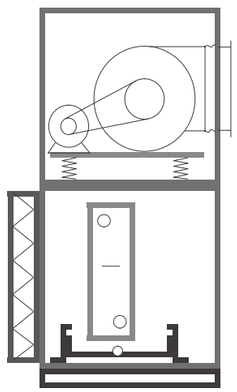


Rear Top (RT)

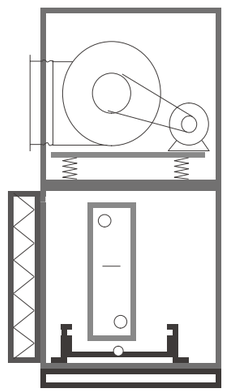
Air Entering



Front Bottom (FB)



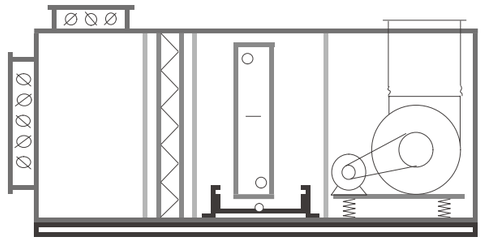
Front Top (FT)



Rear Bottom (RB)

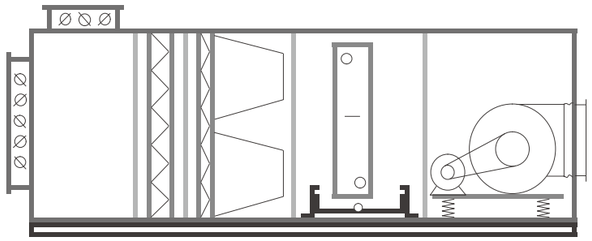
Configurations

- Horizontal Combination 1:



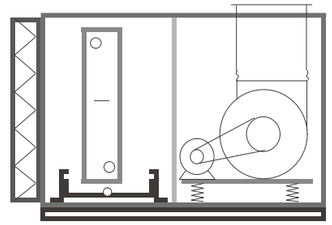
Mixing + Panel Filter + Cooling Coil + Fan

- Horizontal Combination 2:



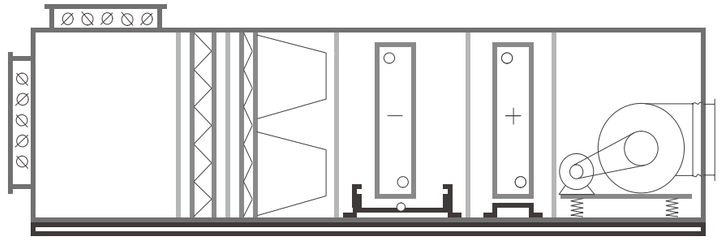
Mixing + Panel Filter + Bag Filter + Cooling Coil + Fan

- Horizontal Combination 3:



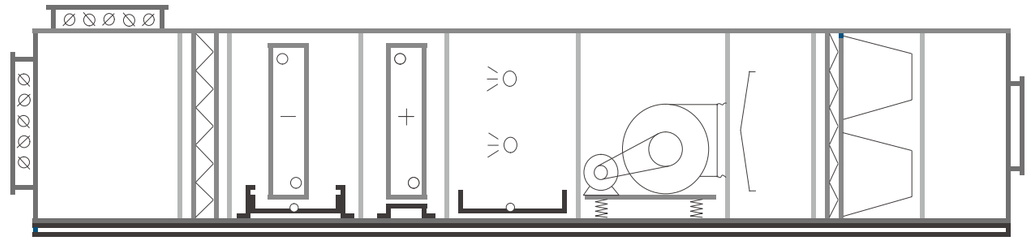
Exposed Filter + Cooling Coil + Fan

- Horizontal Combination 4:



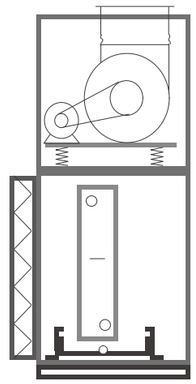
Mixing + Panel Filter + Bag Filter + Cooling Coil + Heating Coil + Fan

- Horizontal Combination 5:



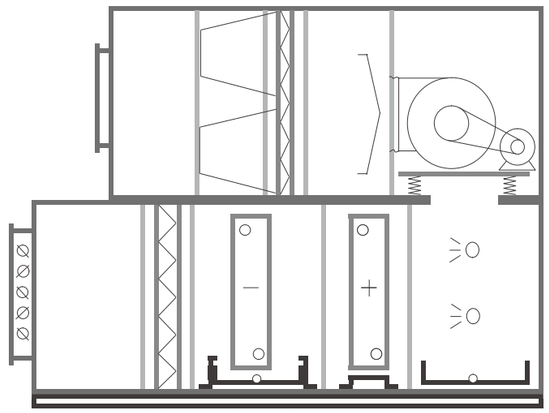
Mixing + Panel Filter + Cooling Coil + Heating Coil + Humidifier + Fan + Di fusion + Bag Filter + Air Supplyf

- Vertical Combination 1:



Exposed Filter + Cooling Coil + Fan

- Vertical Combination 2:



Mixing + Panel Filter + Cooling Coil + Heating Coil + Humidifier + Fan + Dif fusion + Bag Filter + Air Supply

Customizable components

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	WanNan, Siemens, WEG, ABB, Non-Standard Motor Brand
	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
Humidiffer	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

Specifications

Air volume

MKZxxxxDA(or C)W		Air flow volume (m^3/h)	Coil face air velocity (m/s)					
			2.00	2.25	2.50	2.80	3.00	3.50
06	07		1567	1762	1958	2193	2351	2742
06	08		1790	2014	2238	2506	2685	3133
06	09		2207	2783	2758	3089	3311	3862
06	10		2527	2843	3158	3537	3791	4422
07	10		2888	3249	3610	4043	4332	5054
07	11		3253	3660	4067	4555	4880	5693
08	10		3610	4061	4512	5053	5415	6318
08	11		4067	4575	5083	5964	6101	7117
08	12		4524	5089	5655	6334	6786	7917
08	13		4981	5604	6226	6974	7472	8717
08	14		5438	6118	6798	7614	8157	9517
10	12		5881	6616	7351	8234	8822	10292
10	13		6476	7285	8094	9066	9714	11333
10	15		7664	8622	9580	10730	11496	13412
10	16		8259	9291	10323	11562	12389	14453
11	15		8843	9949	11054	12381	13265	15475
11	16		9529	10720	11911	13341	14294	16676
11	17		10215	11492	12769	14301	15323	17876
12	17		10896	12258	13620	15254	16344	19068
12	18		11628	13081	14534	16279	17442	20349
13	17		12258	13790	15322	17161	18387	21452
13	18		13081	14716	16351	18313	19622	22892
13	19		13904	15642	17380	19465	20856	24332
14	19		14676	16511	18345	20547	22014	25683
14	20		15545	17488	19431	21763	23318	27204
15	19		16221	18249	20277	22710	24332	28387
15	21		18141	20409	22677	25398	27212	31747
16	21		19005	21381	23757	26607	28508	33259
16	22		20011	22513	25014	28016	30017	35019
16	24		22023	24776	27529	30832	33035	38540
19	22		24559	27629	30699	34383	36839	42978
19	23		25794	29018	32242	36111	38691	45140
19	25		28263	31795	35328	39568	42395	49460
20	25		29309	32973	36637	41033	43964	51291
20	26		30589	34413	38237	42825	45884	53531
21	26		32774	36871	40968	45884	49161	57355
22	27		33866	38099	42333	47412	50799	59266
23	26		36052	40558	45065	50473	54078	63091
22	30		39536	44478	49420	55351	59304	69188
25	28		42621	47949	53276	59670	63932	74587
25	31		47559	53504	59449	66582	71339	83228
25	34		52497	59059	62621	73495	78746	91870
28	34		59788	67261	74735	83703	89682	104629
28	38		67286	75697	84107	94200	100929	117751
29	40		72767	81863	90959	101874	109151	127342
31	41		79292	89204	99115	111009	118938	138761
32	45		89467	100650	111833	125253	134201	156567
35	46		101523	114213	126904	142432	152285	177665
37	50		117371	132042	146713	164319	176057	205399
38	55		136921	154037	171152	191690	205382	239612
43	58		165054	185685	206317	231075	247581	
45	65		191575	215522	239469	268205	280000	

Cooling capacity

Unit Model MKZxxxxDA(or C)W		Rated Flow	Fresh Air Condition(7℃) Cooling Capacity						Return Air Condition(15℃) Cooling Capacity					
			4Row		6Row		8Row		4Row		6Row		8Row	
		m3/h	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW	Sensible kW	Total kW
06	07	1958	9	21	12	29	13	31	8	9	9	12	10	15
06	08	2238	11	24	14	33	15	36	9	11	10	14	11	17
06	09	2758	13	29	17	41	18	44	11	13	12	17	14	21
06	10	3158	15	33	19	46	21	50	12	15	14	19	16	24
07	10	3610	17	38	22	53	24	58	14	17	16	22	18	28
07	11	4067	19	43	25	60	27	65	16	20	18	25	21	31
08	10	4512	21	47	28	66	30	72	18	22	20	27	23	35
08	11	5083	24	53	31	75	34	81	20	24	22	31	26	39
08	12	5655	27	59	35	83	37	90	22	27	25	34	29	43
08	13	6226	29	66	38	92	41	99	24	30	27	38	31	48
08	14	6798	32	72	42	100	45	108	27	33	30	41	34	52
10	12	7351	35	77	45	108	49	117	29	35	32	45	37	56
10	13	8094	38	85	50	119	53	129	32	39	36	49	41	62
10	15	9580	45	101	59	141	63	153	37	46	42	58	48	73
10	16	10323	49	109	63	152	68	165	40	50	45	63	52	79
11	15	11054	52	116	68	163	73	176	43	53	49	67	56	85
11	16	11911	56	125	73	175	79	190	46	57	52	72	60	91
11	17	12769	60	134	78	188	84	204	50	61	56	78	54	98
12	17	13620	64	143	84	200	90	217	53	65	60	83	69	104
12	18	14534	69	153	89	214	96	232	57	70	64	88	73	111
13	17	15322	72	161	94	225	101	244	60	74	67	93	77	118
13	18	16351	77	172	100	241	108	261	64	79	72	99	82	125
13	19	17380	82	183	107	256	115	277	68	83	76	106	88	133
14	19	18345	87	193	113	270	121	293	72	88	81	111	93	141
14	20	19431	92	204	119	286	128	310	76	93	85	118	98	149
15	19	20277	96	213	124	298	134	324	79	97	89	123	102	156
15	21	22677	107	239	139	334	150	362	89	109	100	138	114	174
16	21	23757	112	250	146	350	157	379	93	114	104	144	120	182
16	22	25014	118	263	153	368	165	399	98	120	110	152	126	192
16	24	27529	130	290	169	405	182	439	107	132	121	167	139	211
19	22	30699	145	323	188	452	203	490	120	147	135	186	155	235
19	23	32242	152	339	198	474	213	514	126	155	142	196	163	247
19	25	35328	167	372	217	520	233	564	138	170	155	215	178	271
20	25	36637	173	385	225	539	242	585	143	176	161	222	185	281
20	26	38237	180	402	234	563	252	610	149	184	168	232	193	293
21	26	40968	193	431	251	603	270	654	160	197	180	249	207	314
22	27	42333	199	445	259	623	279	676	165	204	186	257	214	324
23	26	45065	212	474	276	663	297	719	176	216	198	274	227	346
22	30	49420	233	520	303	727	326	789	193	238	217	300	250	379
25	28	53276	251	560	327	784	352	850	208	256	234	324	269	409
25	31	59449	280	625	365	875	392	948	232	285	261	361	300	456
25	34	62621	309	690	402	965	433	1047	256	315	288	398	331	503
28	34	74735	352	786	458	1100	493	1192	292	359	328	454	377	573
28	38	84107	397	885	516	1237	555	1342	328	404	370	511	424	645
29	40	90959	429	957	558	1338	600	1451	355	437	400	552	459	698
31	41	99115	467	1043	608	1458	654	1581	387	476	435	602	500	760
32	45	111833	527	1177	686	1645	738	1784	436	537	491	679	564	858
35	46	126904	598	1335	778	1867	838	2025	495	609	558	771	640	973
37	50	146713	692	1543	900	2158	968	2341	573	705	645	891	740	1125
38	55	171152	807	1801	1050	2518	1130	2731	668	822	752	1039	863	1313
43	58	206317	973	2171	1265	3035	1362	3292	805	991	906	1253	1040	1582
45	65	239469	1129	2519	1468	3523	1581	3821	935	1150	1052	1454	1207	1837

Notes:
1.Fresh air condition: air inlet 35℃ DB/28℃ WB;
2.Return air condition: air inlet 27℃ DB/19.5℃ WB;
3.Chilled water inlet/outlet temperature 7/12℃, 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	Fresh Air Condition(7℃) Total Heat				Return Air Condition(15℃) Total Heat			
			1Row	2Row	3Row	4Row	1Row	2Row	3Row	4Row
		m3/h	kW	kW	kW	kW	kW	kW	kW	kW
06	07	1958	12	18	23	26	9	14	19	21
06	08	2238	14	20	26	30	10	16	21	24
06	09	2758	17	25	32	37	12	20	26	30
06	10	3158	20	29	37	42	14	23	30	34
07	10	3610	23	33	42	48	16	26	34	39
07	11	4067	26	37	47	54	18	29	39	44
08	10	4512	28	41	52	60	20	32	43	49
08	11	5083	32	46	59	68	23	36	49	55
08	12	5655	36	52	65	75	25	41	54	62
08	13	6226	39	57	72	83	28	45	59	68
08	14	6798	43	62	79	91	30	49	65	74
10	12	7351	46	68	85	98	33	53	70	80
10	13	8094	51	74	94	108	36	58	77	88
10	15	9580	60	87	111	128	42	69	91	105
10	16	10323	65	94	120	138	46	74	99	113
11	15	11054	70	101	128	147	49	79	106	121
11	16	11911	75	109	138	159	53	85	114	130
11	17	12769	81	116	148	170	57	91	122	139
12	17	13620	86	124	158	182	60	98	130	149
12	18	14534	92	133	168	194	64	104	139	159
13	17	15322	97	140	177	204	68	110	146	167
13	18	16351	103	149	189	218	72	117	156	178
13	19	17380	110	158	201	232	77	124	166	190
14	19	18345	116	167	212	245	81	131	175	200
14	20	19431	123	177	225	259	86	139	186	212
15	19	20277	128	185	235	270	90	145	194	221
15	21	22677	143	207	263	302	100	162	217	247
16	21	23757	150	217	275	317	105	170	227	259
16	22	25014	158	228	290	334	111	179	239	273
16	24	27529	174	251	319	367	122	197	263	300
19	22	30699	194	280	355	409	136	220	293	335
19	23	32242	204	294	373	430	143	231	308	352
19	25	35328	223	322	409	471	157	253	337	386
20	25	36637	231	334	424	488	162	262	350	400
20	26	38237	241	349	443	510	169	274	365	417
21	26	40968	259	374	474	546	182	293	391	447
22	27	42333	268	389	497	562	184	303	399	454
23	26	45065	284	411	522	601	200	323	430	492
22	30	49420	313	454	581	656	215	353	466	530
25	28	53276	336	486	617	710	236	382	509	581
25	31	59449	375	542	688	793	263	426	568	649
25	34	62621	414	598	760	875	291	470	627	716
28	34	74735	472	682	865	996	331	535	714	816
28	38	84107	531	767	974	1121	373	602	803	918
29	40	90959	574	829	1053	1213	403	652	869	993
31	41	99115	626	904	1148	1322	439	710	947	1082
32	45	111833	706	1020	1295	1491	496	801	1068	1220
35	46	126904	801	1157	1469	1692	562	909	1212	1385
37	50	146713	926	1338	1699	1956	650	1051	1401	1601
38	55	171152	1080	1561	1982	2282	758	1226	1635	1868
43	58	206317	1302	1881	2389	2751	914	1478	1970	2251
45	65	239469	1512	2184	2773	3193	1061	1715	2287	2613

Notes:
1.Heating water inlet/outlet temperature 60/50℃, coil face air velocity 2.5m/s;
2.The above parameters are for reference only, if test conditions change will lead to different heating capacity, specific data please contact us.

Section length

Unit Model MKZxxxxDA(or C)W		Length(mm)													
		Mixing Box	Plate Filter	Bag Filter	Close Knit Filter	Fresh Air Exhaust Section	Chilled Water Coil(1-4row)	Chilled Water Coil(5-6row)	Chilled Water Coil(8-12row)	Steam Hot Water Heating	Middle Section	Silencer	Fan (Type A)	Fan (Type B)	Others
06	07	600	100	400	400	1200	600	700	900	300	600	800	900(200)	1100(225)	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.
06	08	600	100	400	400	1200	600	700	900	300	600	800	900(200)	1100(225)	
06	09	600	100	400	400	1200	600	700	900	300	600	800	700(200)	1200(280)	
06	10	600	100	400	400	1200	600	700	900	300	600	800	700(200)	1300(135)	
07	10	600	100	400	400	1200	600	700	900	300	600	800	700(200)	1300(135)	
07	11	600	100	400	400	1200	600	700	900	300	600	800	800(225)	1300(135)	
08	10	600	100	400	400	1200	600	700	900	300	600	800	700(200)	1300(135)	
08	11	600	100	400	400	1200	600	700	900	300	600	800	800(225)	1300(135)	
08	12	600	100	400	400	1200	600	700	900	300	600	800	800(315)		
08	13	600	100	400	400	1200	600	700	900	300	600	800	800(315)		
08	14	600	100	400	400	1200	600	700	900	300	600	800	800(315)		
10	12	600	100	400	400	1200	600	700	900	300	600	800	800(315)	1500(400)	
10	13	600	100	400	400	1200	600	700	900	300	600	800	900(355)	1500(400)	
10	15	600	100	400	400	1200	600	700	900	300	600	800	900(355)	1500(400)	
10	16	600	100	400	400	1200	600	700	900	300	600	800	900(355)	1500(400)	
11	15	600	100	400	400	1200	600	700	900	300	600	800	100(400)	1800(500)	
11	16	600	100	400	400	1200	600	700	900	300	600	800	100(400)	1800(500)	
11	17	600	100	400	400	1200	600	700	900	300	600	800	1100(450)	1800(500)	
12	17	800	100	400	400	1200	600	700	900	300	600	800	1100(450)		
12	18	800	100	400	400	1200	600	700	900	300	600	800	1100(450)	1200(500)	
13	17	800	100	400	400	1200	600	700	900	300	600	800	1100(450)		
13	18	800	100	400	400	1200	600	700	900	300	600	800	1100(450)	1200(500)	
13	19	800	100	400	400	1200	600	700	900	300	600	800	1100(450)	1300(560)	
14	19	800	100	400	400	1200	600	700	900	300	600	800	1200(500)	1300(560)	
14	20	800	100	400	400	1200	600	700	900	300	600	800	1200(500)	1300(560)	
15	19	800	100	400	400	1200	600	700	900	300	600	800	1200(500)	1300(560)	
15	21	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	1500(630)	
16	21	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	1500(630)	
16	22	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	1500(630)	
16	24	800	100	400	400	1200	600	700	900	300	600	800	1300(560)	1700(710)	
19	22	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2600(800)	
19	23	800	100	400	400	1200	600	700	900	300	600	800	1500(630)	2600(800)	
19	25	800	100	400	400	1200	600	700	900	300	600	800	1700(710)	2600(800)	
20	25	800	100	400	400	1500	600	700	900	300	600	800	1700(710)	2600(800)	
20	26	800	100	400	400	1500	600	700	900	300	600	800	1800(800)	3000(900)	
21	26	800	100	400	400	1500	600	700	900	300	600	800	1800(800)	3000(900)	
22	27	1000	100	400	400	1500	600	700	900	300	600	800	2100(900)	3300(1000)	
23	26	1000	100	400	400	1500	600	700	900	300	600	800	1800(800)	3000(900)	
22	30	1000	100	400	400	1500	600	700	900	300	600	800	2100(900)	3300(1000)	
25	28	1000	100	400	400	1500	600	700	900	300	600	800	2100(900)	3300(1000)	
25	31	1000	100	400	400	1500	600	700	900	300	600	800	2100(900)	2200(1000)	
25	34	1000	100	400	400	1500	600	700	900	300	600	800	2100(900)	2200(1000)	
28	34	1200	100	400	400	1500	600	700	900	300	600	800	2100(900)	2200(1000)	
28	38	1200	100	400	400	1500	600	700	900	300	600	800	2600(800×2)		
29	40	1200	100	400	400	1500	600	700	900	300	600	800	2600(800×2)		
31	41	1200	100	400	400	1800	1000	1000	1200	600	600	800	2600(800×2)		
32	45	1200	100	400	400	1800	1000	1000	1200	600	600	800	2800(900×2)		
35	46	1200	100	400	400	1800	1000	1000	1200	600	600	800	3300(1000×2)		
37	50	1200	100	400	400	1800	1000	1000	1200	600	600	800	3300(1000×2)		
38	55	1200	100	400	400	1800	1000	1000	1200	600	600	800	3400(1120×2)		
43	58	1200	100	400	400	1800	1000	1000	1200	600	600	800	3400(1120×2)		
45	65	1200	100	400	400	1800	1000	1000	1200	600	600	800	3500(1250×2)		

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.

Weight of function sections (empty box)

Unit Model MKZxxxxDA(or C)W		Empty Box Weight (kg)														
		Wall Thickness 25mm					Wall Thickness 35mm					Wall Thickness 50mm				
		End-plate	300	600	900	1200	End-plate	300	600	900	1200	End-plate	300	600	900	1200
06	07	5	38	68	86	99	6	40	70	90	104	7	41	73	99	111
06	08	6	40	70	88	101	7	42	72	93	107	8	43	75	102	116
06	09	7	42	72	97	111	8	44	74	101	116	9	45	77	104	126
06	10	8	44	74	102	117	9	46	75	106	122	10	47	79	106	132
07	10	8	45	75	104	119	9	47	77	107	124	10	48	81	110	134
07	11	9	47	77	107	123	9	49	79	109	125	10	50	83	112	138
08	10	10	46	76	105	121	11	48	78	108	126	12	49	82	112	136
08	11	10	48	78	108	124	11	50	80	110	127	12	51	84	114	139
08	12	10	50	80	110	127	11	52	82	112	132	12	53	86	116	142
08	13	11	52	82	112	132	12	54	84	114	139	13	55	88	118	145
08	14	12	54	84	114	135	13	56	86	116	143	14	57	90	120	148
10	12	12	52	82	111	131	13	53	84	113	142	14	55	87	118	146
10	13	13	54	84	113	136	14	55	86	115	145	15	57	89	119	149
10	15	15	58	88	117	143	16	59	90	119	150	17	61	93	123	155
10	16	16	60	90	119	146	17	61	92	122	152	18	63	95	125	158
11	15	17	59	89	118	146	18	60	91	121	150	19	62	94	124	156
11	16	18	61	91	120	149	19	62	93	123	153	20	64	96	126	159
11	17	19	63	93	122	152	21	64	95	125	156	22	66	98	129	162
12	17	20	64	94	124	154	22	65	96	127	158	23	67	99	131	164
12	18	21	66	96	126	156	23	67	98	129	160	24	69	101	133	166
13	17	22	65	95	124	154	23	66	97	127	158	24	68	100	131	164
13	18	24	67	97	126	156	25	68	99	129	160	25	70	102	133	166
13	19	25	69	99	128	158	26	70	101	131	162	27	72	104	135	168
14	19	25	70	100	131	160	26	71	102	132	164	27	73	105	137	172
14	20	27	72	102	134	162	28	73	104	136	166	29	75	107	139	176
15	19	27	71	101	133	161	28	72	103	135	168	29	74	106	138	175
15	21	31	75	105	140	165	32	78	109	142	178	33	78	110	144	185
16	21	33	77	107	144	168	34	80	111	146	183	35	80	112	148	190
16	22	34	79	109	149	172	36	82	114	150	188	37	82	115	154	196
16	24	37	85	123	160	197	40	86	127	165	204	43	88	131	172	213
19	22	41	84	122	161	200	44	85	126	166	206	48	87	130	172	215
19	23	42	86	124	163	202	45	87	128	168	208	50	89	132	174	217
19	25	44	90	128	168	206	47	91	132	172	212	52	93	136	178	221
20	25	49	93	134	175	216	52	95	138	180	222	56	97	142	187	231
20	26	50	95	136	177	218	53	97	140	182	224	58	99	144	189	233
21	26	53	96	139	182	225	56	98	142	187	231	60	100	147	193	240
22	27	57	98	141	184	227	61	100	144	189	234	72	102	149	196	243
23	26	57	100	143	186	229	61	102	146	191	236	72	104	151	198	245
22	30	63	110	158	205	253	67	113	161	211	260	79	115	167	219	270
25	28	66	124	182	240	297	69	126	186	245	305	80	128	191	253	315
25	31	72	133	193	253	312	72	135	197	258	320	87	138	202	266	331
25	34	79	142	203	265	327	84	144	208	272	335	94	147	213	280	347
28	34	91	147	213	279	345	98	149	213	279	345	109	156	224	295	366
28	38	102	158	226	294	362	107	160	230	301	371	128	163	237	311	384
29	40	104	162	230	298	362	109	164	234	305	375	130	167	241	315	388
31	41	121	171	244	318	391	135	173	250	326	402	153	165	257	337	417
32	45	132	181	257	332	408	148	184	263	341	419	166	188	270	352	434
35	46	150	192	276	360	444	163	195	282	369	455	182	199	289	381	472
37	50	163	206	292	378	464	174	209	298	387	477	206	213	306	400	493
38	55	197	222	313	404	494	208	226	320	414	507	223	231	329	427	525
43	58	235	249	343	439	534	247	252	348	444	547	266	258	359	462	570
45	65	274	279	375	479	585	289	282	379	484	597	311	288	398	512	633

Examples of cauculation:
1.Weight of chilled water coil section = Weight of chilled water coil section modules + Weight of differernt 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 cauculated according the above two examples + Weight of box panel

Weight of function sections (parts)

Unit Model MKZxxxxDA (or C)W		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	12Row
06	07	11	4	4	5	15	7	8	10	11	15	19	21	23	25	28	32	37	41
06	08	11	5	5	6	18	7	9	10	11	17	22	23	25	28	31	36	41	46
06	09	15	5	5	7	20	8	9	11	13	17	22	24	26	30	33	39	45	50
06	10	18	6	6	8	22	8	10	11	13	17	23	26	28	32	36	43	49	55
07	10	18	6	7	10	26	8	10	12	14	19	26	29	32	36	40	47	54	61
07	11	20	7	8	11	28	8	10	12	15	20	27	30	34	38	43	51	59	66
08	10	18	7	8	12	29	9	11	13	15	23	31	34	38	43	48	57	66	74
08	11	20	8	9	14	32	9	11	13	16	24	32	36	40	46	52	62	71	80
08	12	22	9	10	15	35	9	12	14	17	25	34	38	43	49	55	66	76	86
08	13	24	10	10	17	38	9	12	15	17	26	36	40	45	52	59	70	81	92
08	14	26	10	11	19	41	10	12	15	18	27	37	42	48	55	62	75	86	98
10	12	22	11	12	20	44	10	12	15	18	31	42	48	53	61	69	83	96	108
10	13	24	12	13	22	48	10	13	16	19	32	44	50	56	65	73	88	102	116
10	15	29	14	15	26	55	11	14	17	21	34	47	55	62	72	81	99	115	131
10	16	31	15	16	28	59	11	14	18	22	35	49	57	65	75	86	104	121	139
11	15	29	15	17	30	61	11	15	18	22	38	53	62	70	81	92	112	130	149
11	16	31	16	18	33	65	11	15	19	23	39	55	64	73	85	97	118	138	158
11	17	33	17	19	35	69	12	16	20	24	40	57	67	76	89	101	124	145	166
12	17	48	19	21	37	75	12	16	20	25	43	60	71	81	94	107	131	154	176
12	18	51	20	22	40	79	12	17	21	26	44	62	73	84	98	112	137	161	185
13	17	48	20	22	42	81	12	17	21	26	47	66	78	89	104	119	145	171	196
13	18	51	22	24	45	86	13	17	22	27	48	69	81	93	109	124	152	179	206
13	19	54	23	25	48	91	13	18	23	28	49	71	84	97	113	130	159	188	216
14	19	54	25	27	51	98	13	18	24	29	52	74	88	102	119	136	167	197	227
14	20	58	26	28	54	103	14	19	24	30	53	76	91	105	124	142	174	206	238
15	19	54	26	29	56	105	14	19	25	31	56	81	96	111	130	149	183	216	249
15	21	61	29	32	63	116	14	20	26	33	59	86	102	119	140	161	199	235	272
16	21	61	31	34	66	123	15	21	27	34	61	89	107	124	146	168	207	246	284
16	22	64	33	35	69	129	15	21	28	35	63	92	110	129	151	174	215	256	296
16	24	70	36	39	77	141	16	23	30	37	66	97	117	138	162	187	232	276	320
19	22	64	39	42	85	153	16	24	31	39	75	109	132	155	182	209	260	309	358
19	23	67	41	44	90	160	17	24	32	40	76	112	136	160	188	217	270	321	373
19	25	74	44	48	98	174	17	26	34	43	80	118	144	170	201	232	290	346	402
20	25	74	46	50	102	183	18	26	35	44	82	122	149	176	208	240	299	358	416
20	26	77	48	52	106	191	18	27	36	45	84	125	153	181	215	248	310	370	431
21	26	77	51	55	114	200	19	28	37	47	89	132	163	193	229	264	330	395	459
22	27	101	55	60	126	219	20	29	39	50	96	144	177	210	249	288	361	432	503
23	26	109	57	62	128	226	20	30	40	51	95	143	177	211	250	289	363	435	507
22	30	109	65	71	135	240	21	31	42	53	107	160	197	233	277	320	401	480	559
25	28	109	65	71	149	257	21	32	43	55	108	163	202	241	287	332	417	500	584
25	31	122	72	78	166	284	23	35	47	60	114	174	218	261	312	362	456	548	641
25	34	134	79	86	184	312	24	37	50	64	120	185	233	281	336	391	494	596	698
28	34	166	88	96	209	349	26	40	55	70	135	207	262	317	379	441	559	674	789
28	38	187	99	107	236	390	28	44	60	77	143	224	286	347	417	486	617	746	875
29	40	198	108	117	255	425	29	46	63	81	151	237	304	370	445	519	661	800	939
31	41	203	118	128	281	466	31	49	67	87	163	256	330	403	485	566	721	874	1024
32	45	224	134	145	317	528	33	53	74	95	175	280	362	445	536	627	801	973	1144
35	46	229	149	162	360	590	36	58	80	104	195	311	405	499	602	705	901	1095	1290
37	50	250	172	186	416	678	39	64	90	116	216	349	457	565	683	801	1027	1251	1474
38	55	276	194	211	485	766	43	72	101	131	241	393	519	645	782	918	1180	1440	1700
43	58	291	231	251	585	914	49	82	116	151	280	461	613	764	928	1091	1406	1718	2030
45	65	328	271	295	680	1073	54	93	131	171	311	518	694	869	1057	1246	1609	1970	2331

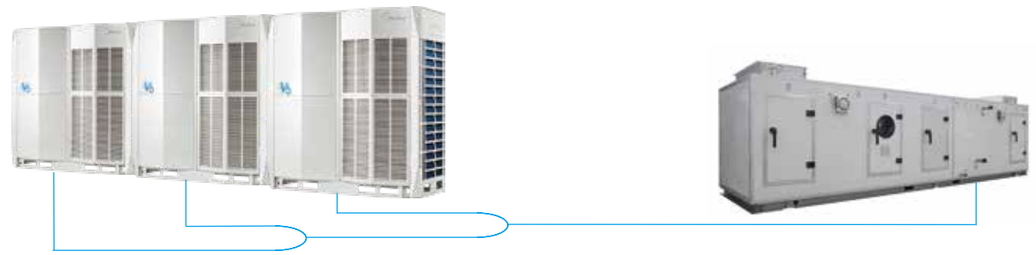
Examples of cauculation:

1.Weight of chilled water coil section = Weight of chilled water coil section modules + Weight of differernt 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 cauculated 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 (m^3/h)		1400	2400	5000	6000	7500	10000	12000	15000	18500	23500	28000	34500
	IDU model (modulus)		0607	0608	0810	0813	1013	1115	1117	1218	1521	1622	1923	2026
System parameters	Rated cooling capacity (kW)		7.5	15	25.5	30	41	52	62	79	104	124	156	186
	Rated heating capacity (kW)		8	16	28.5	34.1	44	55	68	83	110	136	165	204
ODU	Compressor		Enhanced vapour injection DC inverter scroll compressor											
	Throttling mode		Electronic expansion valve											
Refrigerant	R410A charge amount (kg)		2.1	2.1×2	3.4×2	3.6×2	4.35×2	6.7×2	7.2×2	4.35×4	6.7×4	7.2×4	6.7×6	7.2×6
Connecting pipe	Connection methods		Welding or flaring connection											
	Dimension	Liquid pipe	6.35	6.35×2	9.52×2	9.52×2	12.7×2	12.7×2	12.7×2	12.7×4	12.7×4	12.7×4	12.7×6	12.7×6
		Gas pipe	15.9	15.9×2	15.9×2	15.9×2	19.1×2	22.2×2	25.4×2	19.1×4	22.2×4	25.4×4	22.2×6	25.4×6

Notes:

1. Rated cooling capacity is measured under nominal air flow conditions with an indoor dry bulb/wet bulb temperature of 24/17℃ and an outdoor dry bulb/wet bulb temperature of 35/24℃.
2. Rated heating capacity is measured under nominal air flow conditions with an indoor dry bulb/wet bulb temperature of 20/15℃ and an outdoor dry bulb/wet bulb temperature of 7/6℃.
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 ODUs: VRF series such as V5 series, V6 series,. See the manual for specific ODU specifications.

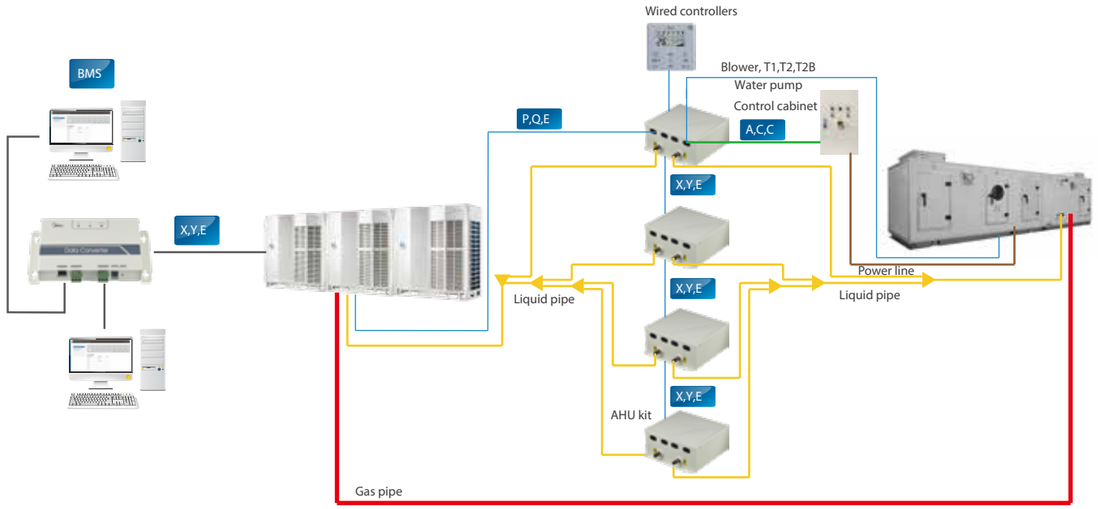
Parameters of Air-cooled DX Fresh Air Handling Unit

Model	IDU air flow (m^3/h)		2450	3000	4000	5000	7000	8000	10000	14000
	IDU model (modulus)		0610	0711	0813	0814	1015	1017	1119	1319
System parameters	Rated cooling capacity (kW)		25.5	30	41	51	61	81	105	121
	Rated heating capacity (kW)		28.5	34.1	41.5	55	68	83	110	135
ODU	Compressor		Enhanced vapour injection DC inverter scroll compressor							
	Throttling mode		Electronic expansion valve							
Refrigerant	R410A charge amount (kg)		3.4×2	3.6×2	4.35×2	6.7×2	7.2×2	4.35×4	6.7×4	7.2×4
Connecting pipe	Connection methods		Welding or flaring connection							
	Dimension	Liquid pipe	9.52×2	9.52×2	12.7×2	12.7×2	12.7×2	12.7×4	12.7×4	12.7×4
		Gas pipe	15.9×2	15.9×2	19.1×2	22.2×2	25.4×2	19.1×4	22.2×4	25.4×4

Notes:

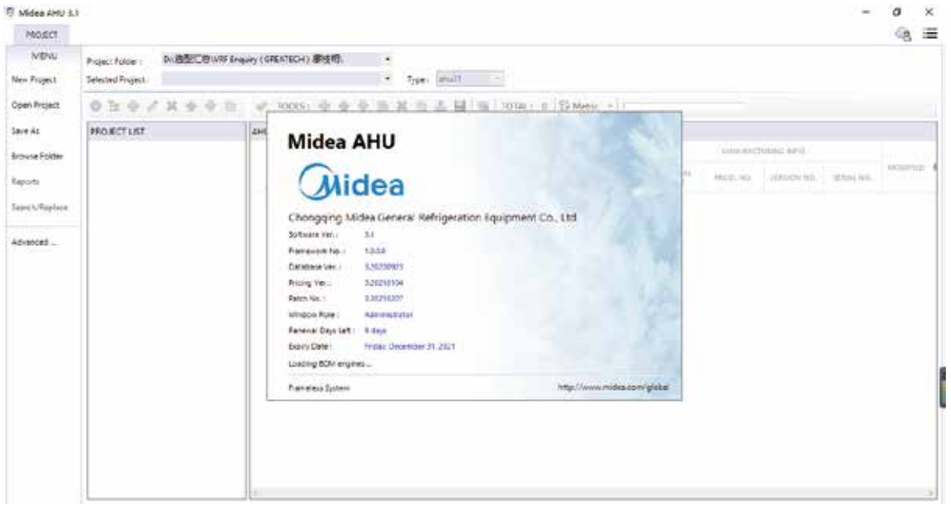
1. Rated cooling capacity is measured under nominal air flow conditions with an outdoor dry bulb/wet bulb temperature of 34/28℃.
2. Rated heating capacity is measured under nominal air flow conditions with an outdoor dry bulb/wet bulb temperature of 7/6℃ (no frost).
3. Performance test for piping conditions: the equivalent refrigerant pipe is 7.5m long; 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.
4. Operating temperature: cooling: 20℃ to 43℃; heating: -5℃ to +16℃.
5. Matched ODUs: VRF series such as V5 series, V6 series. See the manual for specific ODU specifications.

System Connection Diagram

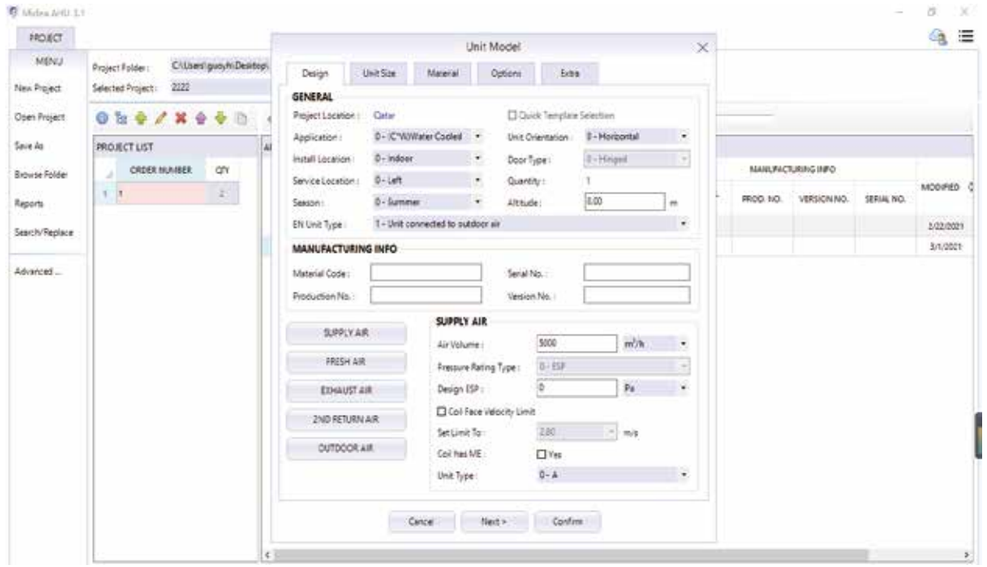


Selection software

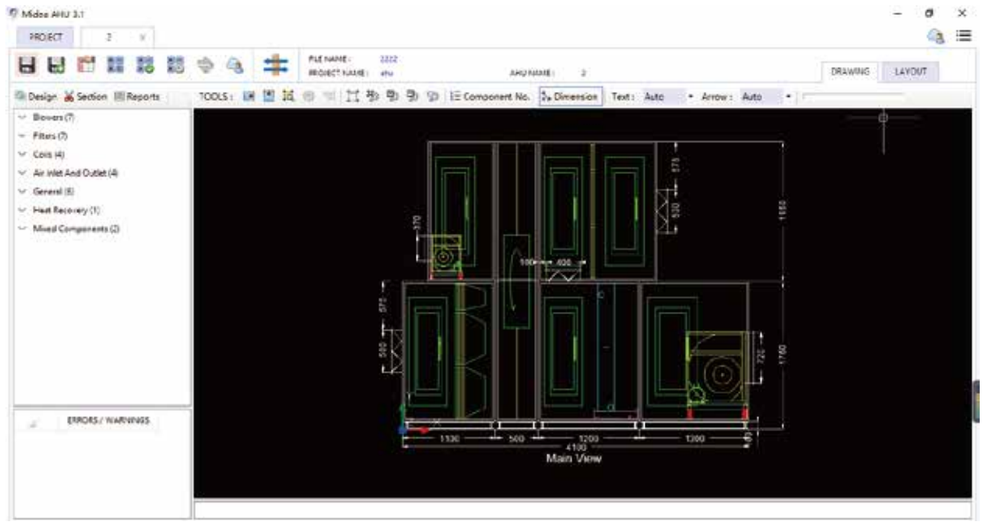
To help customers define their product requirements easily, a user-friendly software selection program is provided. The program leads the user through the selection process by pertinent input data for all components required. Component sections are selected by placing them on configuration screen. Once the unit layout is defined, the options and accessories are identified. The program gives immediate feedback about fan and coil selection, offering serial options based on the performance inputs. Once final component selections have been made, the program provides all output needed, including unit specification, dimension, weights, fan curves and so on.



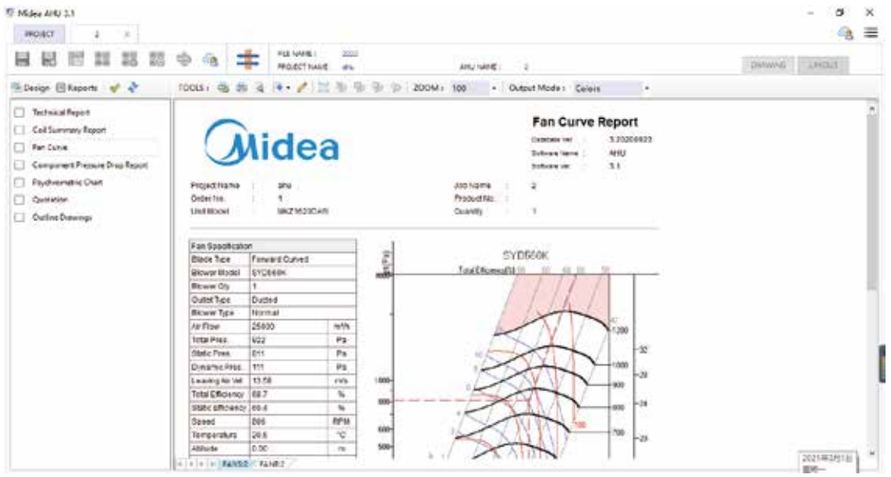
● Main interface

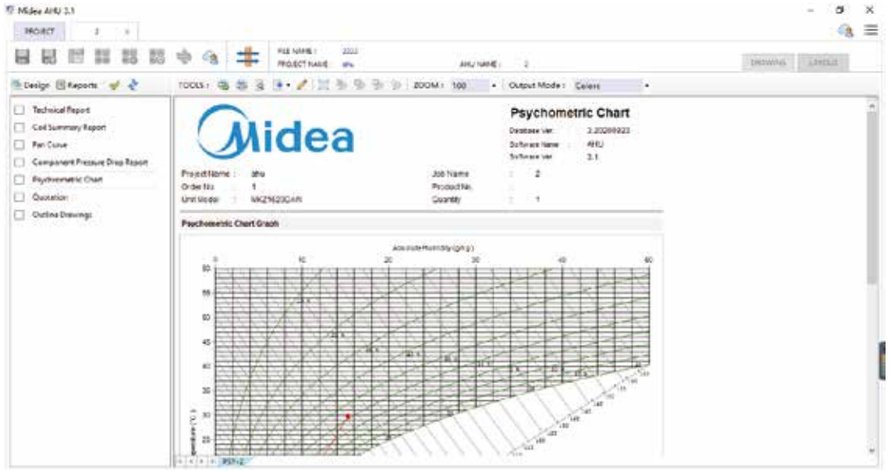


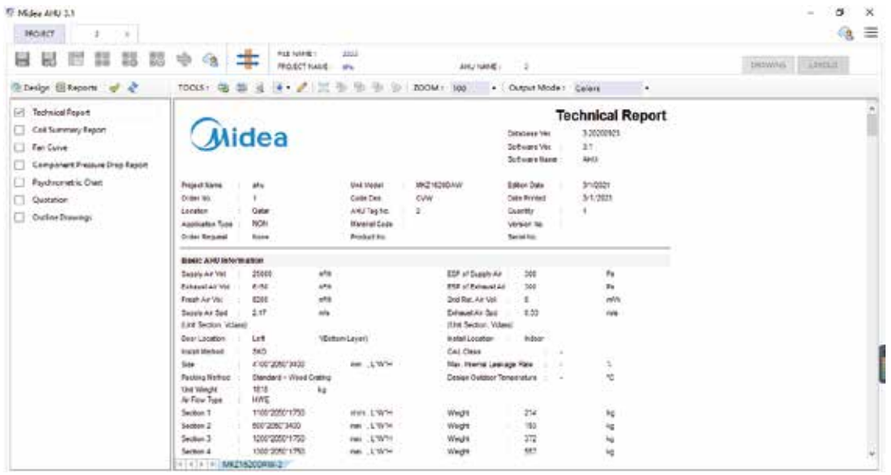
● Selection interface



● Report interface

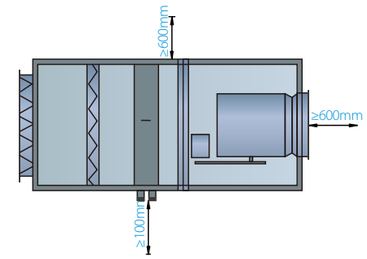






Installation

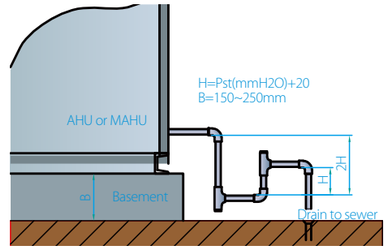
- Unit should be installed on a horizontal foundation to avoid running noise and keep the condensing water draining smooth.
- Allow sufficient space for maintenance. At least 1m width should be reserved in the direction of setting up the accesses door as shown in figure installation space.



Installation space

Piping

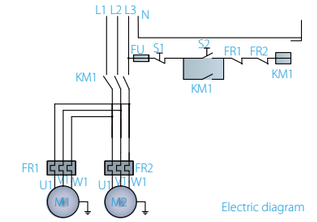
- Flexible fittings should be used in water piping to absorb thermal expansion and contraction strains.
  Drainage pipe should be equipped with a U shaped water seal to keep water draining fluently as shown in figure draining pipe.



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%.



Electric diagram

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 Requirments	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 ≤ 0.16 Btu/ft2/°F CT2:Thermal Transmittance with Leakage 0.16< U ≤ 0.26 Btu/ft2/°F	CT2	CT1
Thermal Transmittance Class without Leakage	CT1:Thermal Transmittance with Leakage U ≤ 0.14 Btu/ft2/°F CT2:Thermal Transmittance with Leakage 0.14< U ≤ 0.23 Btu/ft2/°F	CT2	CT1
Thermal Bridging Class	CB0:Thermal Bridging Factor, kb ≥ 0.8(screw heads and fasteners are included) CB1:Thermal Bridging Factor, kb ≥ 0.8 CB2:Thermal Bridging Factor, 0.8 > kb≥ 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-handing Unit Casing Certification Program, which is based on AHRI Standard 1350.
Certifide units may be found in the AHRI Directory at www.ahridirectory.org