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Midea "Ventilation recuperators series HRV"



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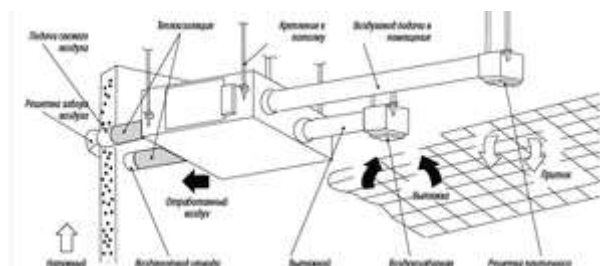
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SUGGESTED RETAIL PRICE

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Technology	Description	Specifications	Instructions
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VENTILATION

Recuperators series CE-HRV together with the air conditioning and VRF systems provide perfectly comfortable indoor climate by

changing the temperature and humidity of incoming fresh air, depending on the climatic conditions inside and outside the premises.

Features of this series:

- There are several modes of operation
- Provides a highly efficient heat exchange between the supply and exhaust air
- The control system individually or as part of a central control system VRF Midea. Possible to organize group control
- The compact design and low noise level



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As a heat exchanger, a specially developed recuperator made of HEP material (multilayer paper with special processing and varnish-

protective coating) is used. It is optimized compared to 2006-08 models.
also fan design.

- Dimensions and volume of installations are reduced on average by 27% compared to 2006-08 models;
- The weight of the plants has also decreased, which, combined with a reduction in size, makes installation and maintenance of systems easier and more convenient.



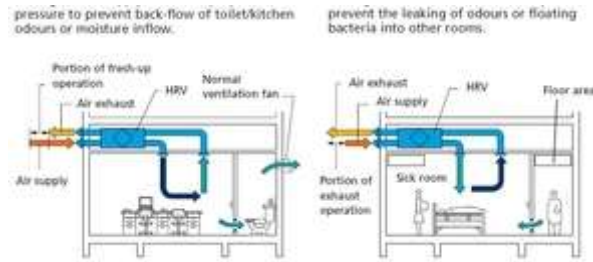
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Fresh air from outside passes through the heat exchanger of the special paper, is heated or cooled (depending on season) due to the thermal energy of the

exhaust air. The process of heat exchange occurs between air currents moving in sync.

The heat exchanger is due to its design, provides:

1. Otlichnye ability to transfer heat and moisture of heat transfer coefficient reaches a value of 74% (see. The specification for each type ventustanovoki).
2. Good fire safety parameters (antivozgoraemost), which ensures the operation of the fan unit larger safety and applicability.
3. Excellent parameters capture condensate drops, the material is resistant to wear and suitable for long-term operation.



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In some cases, it is necessary to provide a "fresh air" in the room - the picture shows the scheme when the "excess" of supply air is supplied to the common area, and is removed

through adjacent rooms, where it enters through overflow grids or natural leaks in the structure.

For some objects, for example, medical ones, it is important to provide excess "vacuum" of air in the working area - the picture shows a diagram when the main volume of air with bacteria must be removed from the working area under the ceiling, and the air flow is supplied both to the common area and to adjacent rooms through other devices, this air enters the working area through the transfer grates.

Total Heat Exchanger



GAE-15D
GAE-25D
GAE-35D

GAE-50D
GAE-80D
GAE-100D



GAE-150D
GAE-250D
GAE-350D
GAE-500D

GAE-200D
GAE-300D
GAE-400D

Thank you for choosing our Total Heat Exchanger. Please read this USER MANUAL carefully prior to using and keep it for further reference.

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PRODUCT OVERVIEW

Total heat exchanger is energy-saving equipment used for the recovery of exhaust air energy from air-conditioner. Such device does not require the master air conditioner to provide cold and heat source but exchanges heat by means of directly recovery of the air in air-conditioner room. Therefore, it is the standard configuration of energy-saving and environmental-friendly, healthy buildings, and an ideal partner of air-conditioning. It is mainly composed of shell body, heat exchanger core and filters and other components. Such device works by following the principle that through the material with heat transfer and heat transmission performance in heat exchanger core, using exhaust air to pre-cool and dry the fresh air in summer and pre-heat and humidify fresh air in winter, so that the new fresh air load can be significantly reduced and thereby energy consumption and operating costs of heating and cooling system can be economized, and peak electricity consumption will also be reduced. Such device is widely used in high-rise buildings, hotels, office buildings, hospitals, shopping malls, and banks, residential buildings and other places.

Product Features

- **Energy-saving**

Effective recover the energy loss due to ventilation, save air conditioning operating cost.

- **Mute design, clean and fresh**

Unit has super silent design, free-from maintenance and operation, thin and easy to install; and it is configured with filters to ensure the clean and fresh of fresh air and extend the service life of machine core.

- **Complete specification, for your choice at will**

This device is provide with serial design and complete function products, and thus can be widely applied into the independent space and realize energy-saving operation with full-fresh air.

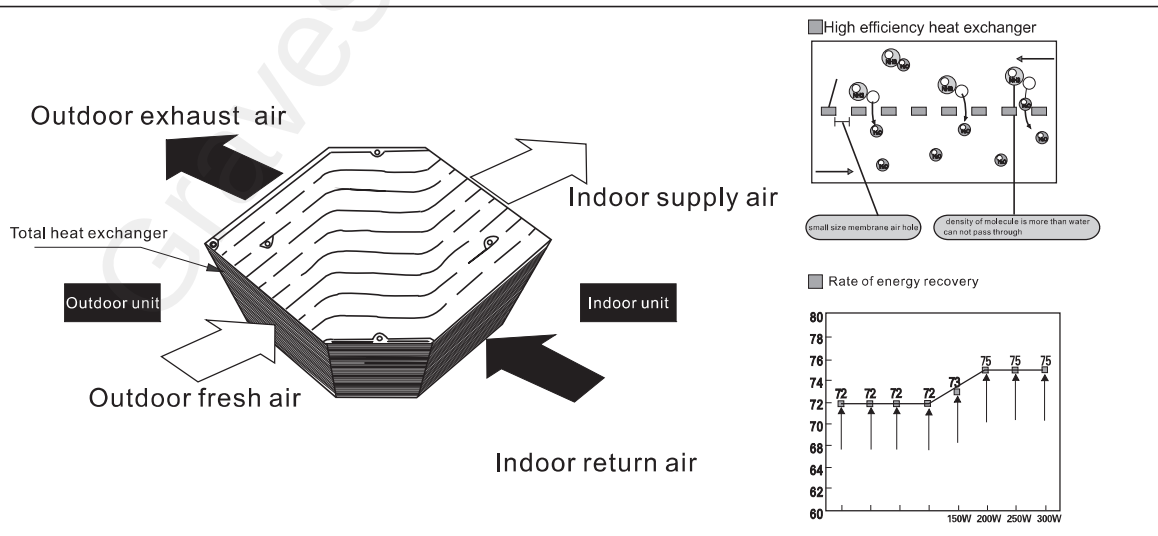
- **Intelligent control, complete functions**

LCD intelligent controller is designed with refined and beautiful appearance, simplified structure, and one-button for multi-functional operation, and other features. The equipment running state on different time phase can be pre-set.

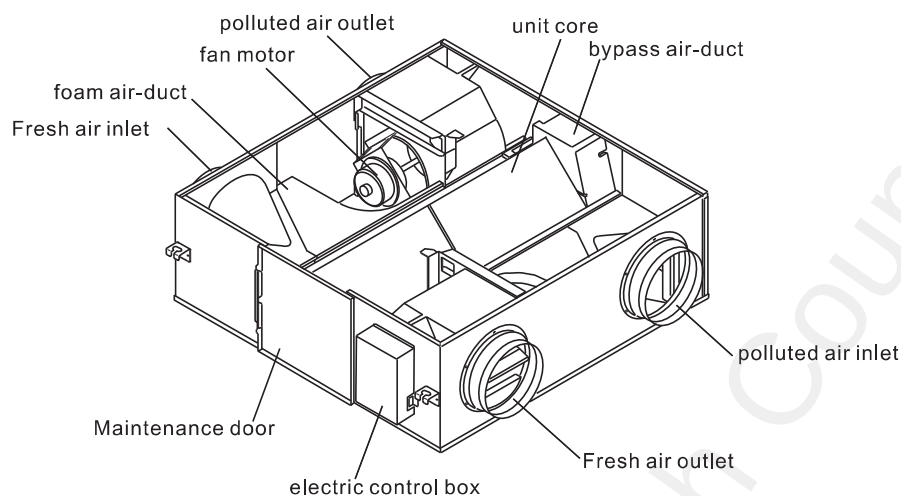
- **Novel structure, superior quality**

Through meticulous design, this unit is characterized by novel structure, elaborate craftsmanship, high-quality, and extremely delicate appearance.

Principle of GAE-type Total Heat Exchanger



Sketch Diagram



Selection Guide

Room type	No smoking					A little smoking		Lots of smoking
	General ward	Stadium	Theater Department Store	Office	Computer room	Restaurant	Superior Room	Meeting Room
Fresh air volume per person $Q(\text{m}^3/\text{h})$	17-42	8-20	8.5-21	25-62	40-100	20-50	30-75	50-125
Number of room exchange fresh air $P(\text{Times/h})$	1.06-2.65	0.50-1.25	1.06-2.66	1.56-3.90	2.50-6.25	1.25-3.13	1.88-4.69	3.13-7.81

Example

For a 60 square meter meeting room, net story height is 3m ,ten person

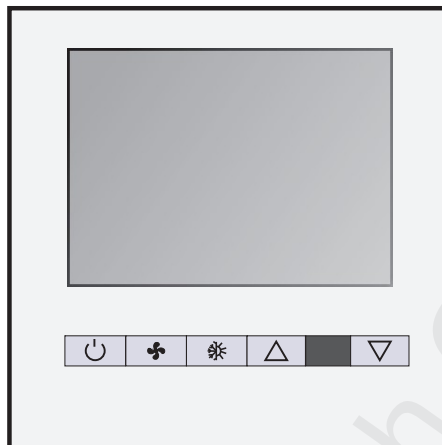
if required fresh air volume per person (Q) is 80,so $Q_1=n \cdot q=10 \times 80=800(\text{m}^3/\text{h})$;

if number of room exchange fresh air is 5.5 times/h,so $Q_2=p \cdot s \cdot h=5.5 \times 60 \times 3=990 (\text{m}^3/\text{h})$;

Because $Q_2 > Q_1$, so adopt Q_2 as equipment selection base, you can choose our company product GAE-100D type total heat exchanger whose air flow volume is $1000 \text{ m}^3/\text{h}$.

USAGE GUIDE

Model:GAE-15D~100D



◆ON/OFF: Press “” button once to turn on the unit, press it again to turn off the unit.

ON: the unit is running.

OFF: the unit stops, but the settings will save..

◆Fan motor control: Press “” button to choose fan speed.

“” high、“” middle、“” low.

◆Mode selection: when the heat exchanger is on, press button to select mode.

General ventilation: Press “” button until “” symbol is flashing, and automatically recognized 6 seconds later.

Heat recovery: Press “” button until “” symbol is flashing, and automatically recognized 6 seconds later.

◆Control for bypass motor: ①if the air volume is less than 1000, no bypass control ②if the air volume is more than 1000, you can press button to change between general ventilation and heat recovery, and then the bypass motor energized, the motor drive baffle movement, the LCD displays “” symbol. the bypass motor power off when the baffle moves to the setting location (about 12 seconds).

◆Adjust temperature: (only when the temperature is incorrect)

Press button “” and “” for 3 seconds when the unit is off, the LCD displays “xx℃”, press

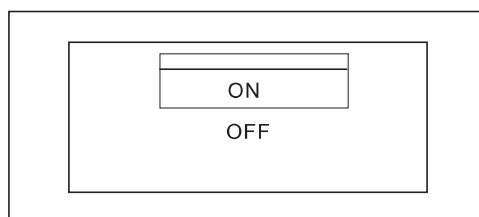
button “” and “” to adjust the temperature, and automatically recognized 6 seconds later.

◆when the power supply is 380V 3N~/50Hz, only has ON/OFF function.

Model:GAE-150D ~GAE-500D

Turn "OFF", total heat exchanger is stop.

Turn "ON", total heat exchanger is running.



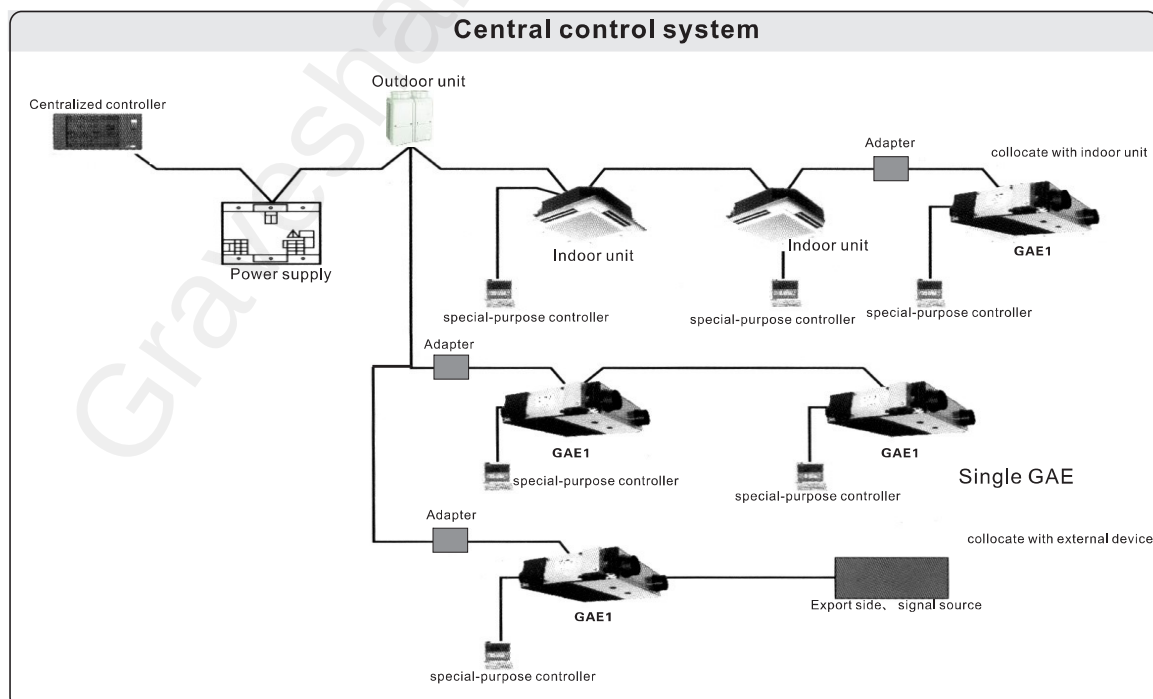
INSTALLATION INSTRUCTION

Safety Precautions

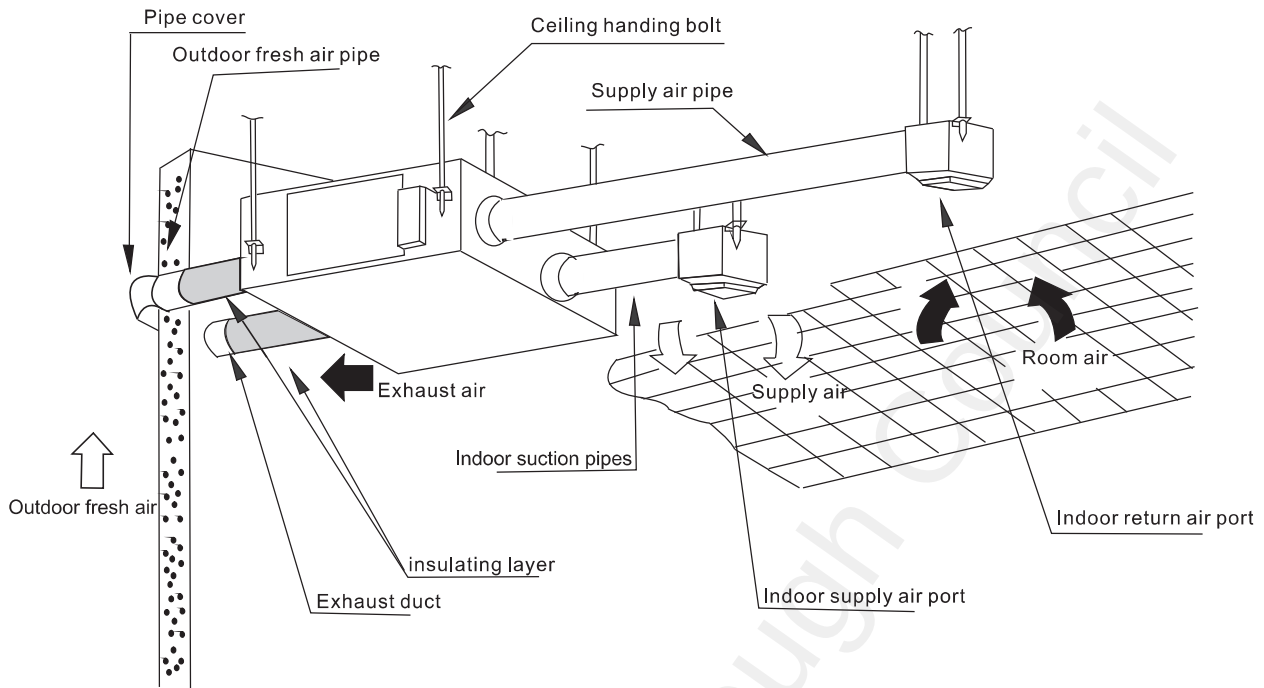
- Do not install the unit at the place where have heat resource or fire.
- Do not install the unit at the place where may have flammable gas leakage
- Do not install the unit at the lampblack place such as kitchen.
- Do not install the unit at the moisture place such as bathroom.
- Do not install the unit at the place where may have acids, alkalis, organic solvents coatings and other harmful gas or other corrosive gas
- Please install the access door at the air filter and core of heat exchanger side.
- The place must be solid and firm enough to bear the unit weight .
- Suggest installing leakage circuit breaker .
- Please install the unit at the inside of insulation .
- Inlet should be installed at the place where exhaust air can not regorge.
- Keep a clear distance between indoor suction port and indoor supply air port.
- Fresh air suction pipe and exhaust air pipe should keep warm to prevent condensation
- Air inlet should install anti-bird net or similar device.
- Do not attempt to install by yourself.Ensure that instalation must be done by agent or authorized professional installation company.
- When using metal pipe through metal plate or metal mesh of the wooden buildings , it is necessary to do a insulation layer between the pipes and wall .

Installation Guide

Network connection figure of total heat exchanger and center air conditioner system



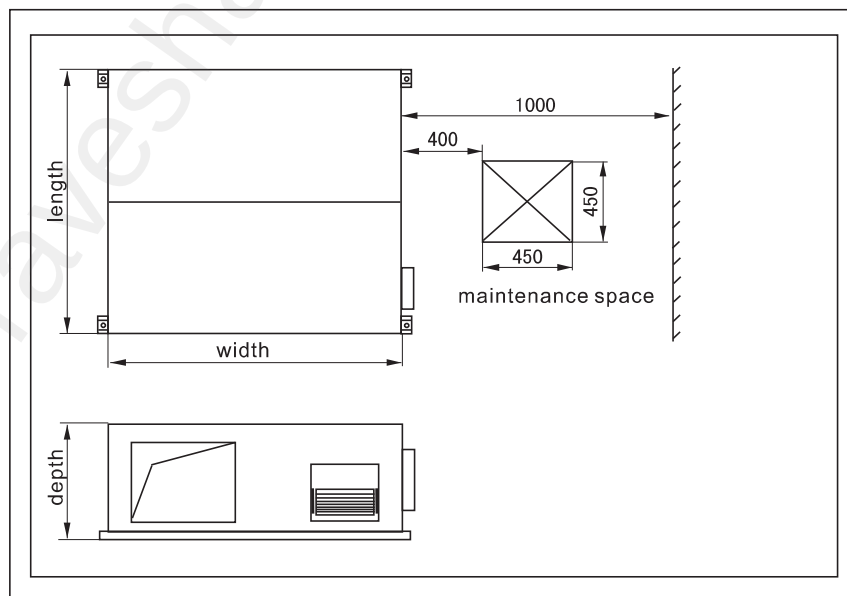
The Figure of Installation



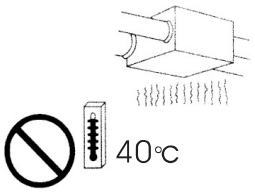
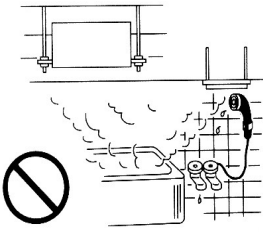
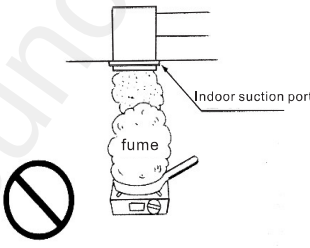
Two outdoor air duct should keep warm to prevent condensation

Installation Check

- First check whether the unit is complete and non-destructive before installation, and then open the panel, turn the fan by hand, check whether has the metal friction sound, if has, adjust the wheel to make it not touch the unit.
- please keep enough space for maintenance.
- Unit should be installed smoothly, and shall not bear the weight of condensate pipe and air-duct, connect the air duct and the air vent with soft connecting pipe.
- Power supply should be equipped with independent breaker as well as current leakage protective device.
- Make sure Reliable grounding and the power supply is 220V/50Hz or 380V/50Hz.

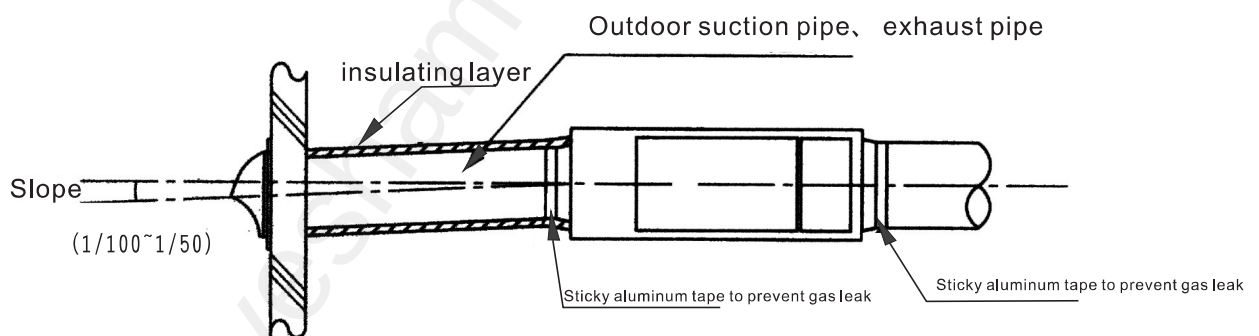


- Location in the following places may cause malfunction of the machine.

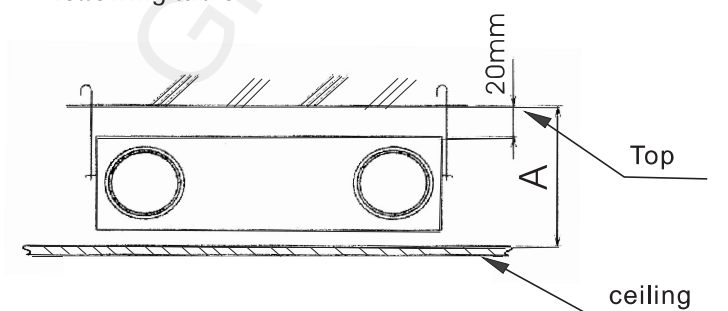
Where direct sunshine or overheat. Do not install heat exchanger at the place where temperature is over 40°C. because air filter and core of heat exchanger will deform or damage the motor in the high temperature. 	humidity areas Do not install at the place where much moisture (such as bathroom), or may cause electric shock 	Where much fume(such as kitchen) Air filter and core of heat exchange attached the oil can not use. 
Ensure access door is easy to install the filter and maintenance the core of heat exchanger and unit.	Do not install the unit at the place where may have acids, alkalis, organic solvents coatings and other harmful gas or other corrosive gas .	

Installation of Drain Pipe

- Avoid pipe over bending\repeated bending and reducing the diameter of connecting pipe.
- When installing , outdoor pipes should slope downward to prevent water immersion.
- Insulating layer should be made to prevent condensation in outdoor pipe (if necessary, including the indoor pipe) .
- The connection part of the pipeline should use aluminum tape to prevent gas leakage.
- Installation location of indoor supply air and inlet air should keep a distance as soon as possible.

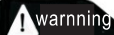


- When install the heat exchanger ,the ceiling height must be guaranteed not less than the size of following table.



Model	Ceiling height A
GAE-25D	262

WIRING



Please cut off the power supply before access to the appliance.

precautions

Please install a breaker which can turn off the whole system power supply.

Please install a switch to switch power supply.

Make sure the grounding impedance is less than 100Ω. when using leakage circuit breaker, because you can use the earth resistance, so the grounding impedance can exceed 500Ω.

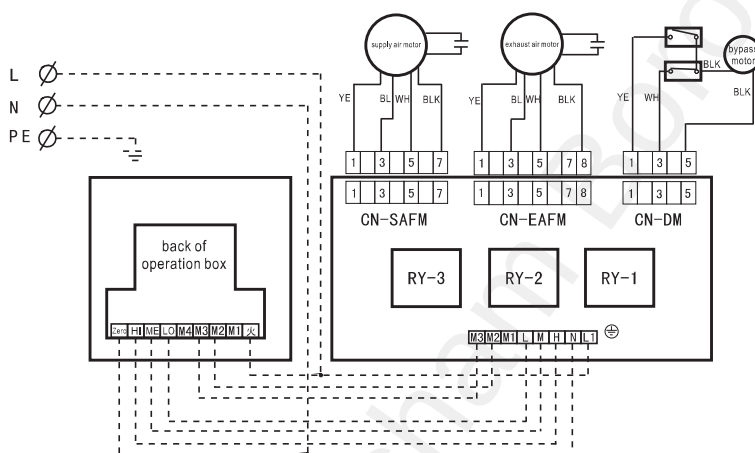
Make sure the reliable grounding.

Do not connect earth wire with a gas pipe、water pipe、lightening rod or a telephone earth wire.

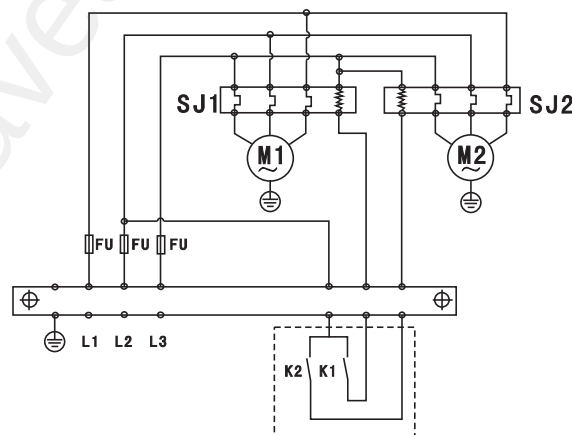
- gas pipe:gas leakage will cause a fire.
- water pipe:If the material of water pipe is PE, it will not play a ground role.
- lightening rod or a telephone earth wire:the ground potential will be high when lightening.

Unit wiring diagram

single phase: AC 220V~/50Hz



three phase: AC 380V~/50Hz

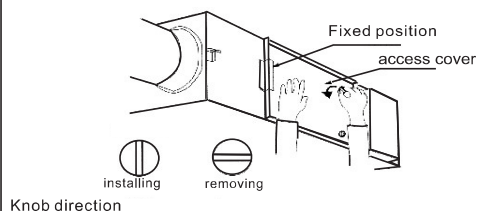


MAINTENANCE AND SERVICE

- Turn off the operation switch/special circuit breaker before maintenance and service.
- If the total heat exchanger is used for a long time, the performance of ventilation will decrease due to dirty or blocked filter. Clean the filter periodically as the accumulation of dust or debris on the heat exchange core. Pay special attention in April to May if there are a lot of willow catkins flying in the sky, and they are more likely to attach with the filter, which will decrease the ventilation effect, so clean the filter 2 times every month during such period.
- Do not clean the filter and core of heat exchanger with volatile oil and metal brush.
- Do not clean the core of heat exchanger with water, please remove all the dust with a vacuum cleaner or brush. Do not clean the unit with water.

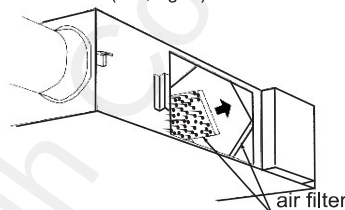
1 Remove the access cover

Rotate the second knob with 90°, remove the access cover.



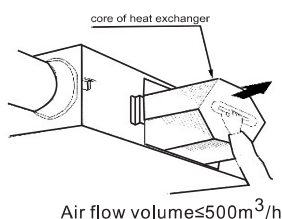
2 Remove the air filter

Move out of air filter (left, right) Remove the air filter



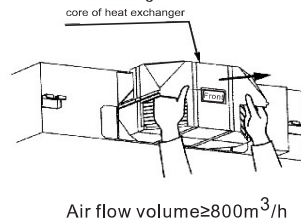
3 Take apart the core of heat exchanger

Remove the core of heat exchanger



3 Remove the core of heat exchanger

Remove the core of heat exchanger



4 Use vacuum-cleaner

Please use the cleaner to remove the dust from the air filter.



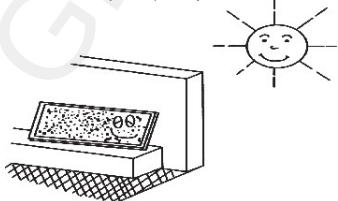
4 Clean the air filter

If the dust does not come off easily, wash them with neutral detergent dissolved in warm water below 60°C.



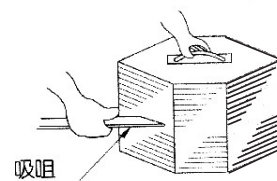
5 Dry the air filter

The air filter must be dry completely before installation.



❗ Do not use fire to make it dry.

6 Remove the dust/dirt from the core body

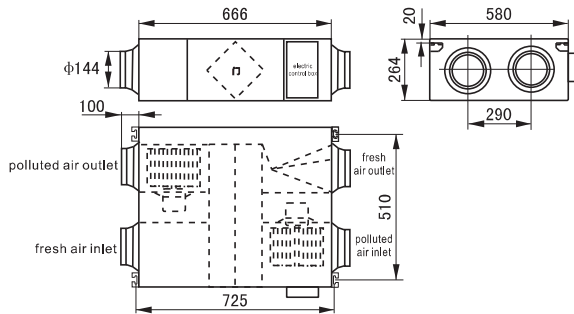


❗ Do not clean with water!

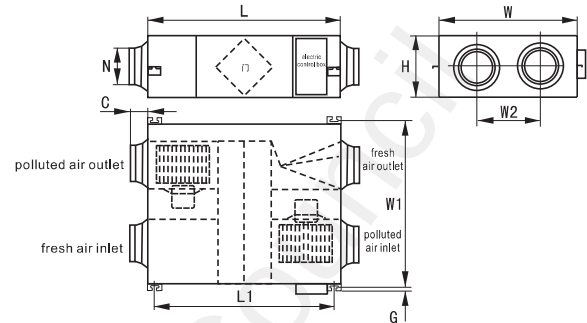
After cleaning, re-install the heat exchanger core and filter to their original state, and attach the access cover.

UNIT DIMENSION

GAE-15D

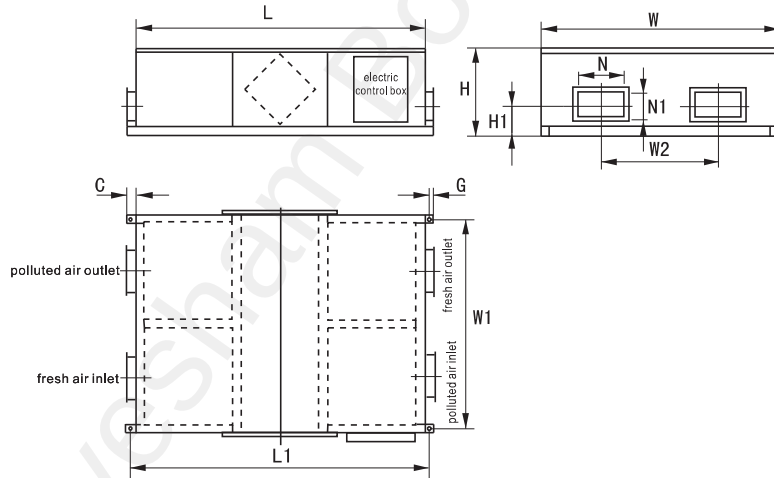


GAE-25D ~ GAE-100D



Model	L	L1	W	W1	W2	H	C	G	N
GAE-25D	744	675	599	657	315	270	100	19	Φ 144
GAE-35D	744	675	804	862	480	270	100	19	Φ 144
GAE-50D	824	754	904	960	500	270	107	19	Φ 194
GAE-80D	1116	1045	884	940	428	388	85	19	Φ 242
GAE-100D	1116	1045	1134	1190	678	388	85	19	Φ 242

GAE-150D ~ GAE-500D



Model	L	L1	W	W1	W2	H	H1	C	G	N	N1
GAE-150D	1500	1550	1200	1170	600	540	250	50	25	320	300
GAE-200D	1550	1600	1400	1370	700	540	250	50	25	320	300
GAE-250D	1610	1580	1330	1400	655	600	270	50	15	365	275
GAE-300D GAE-350D	1700	1670	1500	1570	750	640	270	50	15	365	275
GAE-400D	1625	1675	1330	1300	650	1050	510	50	25	370	330
GAE-500D	1720	1770	1660	1630	810	1050	560	50	25	455	360

TECHNICAL SPECIFICATIONS

Model	Power supply	Unit dimension (mm)	Net weight (kg)	E.S.P (kg)	Air flow volume (m3/h)
GAE-15D	220V 50Hz	666X580X264	25	75	150
GAE-25D		744X599X270	27	75	250
GAE-35D		744X804X270	30	80	350
GAE-50D		824X904X270	41	80	500
GAE-80D		1116X884X388	68	100	800
GAE-100D		1116X1134X388	82	130	1000

GAE-150D	380V 50Hz	1600X1200X540	200	160	1500
GAE-200D		1650X1400X540	225	170	2000
GAE-250D		1610X1430X600	240	180	2500
GAE-300D GAE-350D		1700X1600X640	270	200	3000
GAE-400D		1700X1600X640	270	200	3500
GAE-500D		1820X1660X1050	280	240	5000

Model	Cooling		Heating		Input power (W)	Running current (A)	Noise level dB(A)
	temperature efficiency	enthalpy efficiency	temperature efficiency	enthalpy efficiency			
GAE-15D	60	50	65	55	65	0.5	30
GAE-25D	60	50	65	55	120	0.6	34
GAE-35D	60	50	65	55	200	1.0	35
GAE-50D	60	50	65	55	220	1.0	36
GAE-80D	60	50	65	55	410	1.5	38
GAE-100D	60	50	65	55	510	2.0	40

GAE-150D	60	50	65	55	1000	4.4	45
GAE-200D	60	50	65	55	1200	5.6	48
GAE-250D	60	50	65	55	2000	6.8	52
GAE-300D GAE-350D	60	50	65	55	2100	7.2	53
GAE-400D	60	50	65	55	2400	8.2	55
GAE-500D	60	50	65	55	3000	11.1	56

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Technology	Description	Specifications	Instructions
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Model		CE-HRV-200	CE-HRV-300	CE-HRV-400	CE-HRV-500	CE-HRV-800
	Air flow (m3 / h)	200	300	400	500	800
	Static pressure (Pa)	75	75	80	80	100
In summer, air-conditioning mode - Cooling (t outdoor > t room)	Temperature heat transfer efficiency(%)	60	60	60	60	60
	Enthalpy heat exchange efficiency(%)	50	50	50	50	50
In winter air-conditioning mode - Heating (t outdoor < t room)	Temperature heat transfer efficiency(%)	65	65	65	70	70

Fan motor	Enthalpy heat exchange efficiency(%)	55	55	60	60	60
	Power supply (V-Hz-F)	220~240-1-50				
	type	Single-phase asynchronous				
	Power Consumption (W)	20	40	80	120	360
	Operating Current (A)	0.5	0.56	1	1.2	2
Dimensions (L * W * H) mm		666*580*264	744*599*270	744*804*270	824*904*270	1116*884*388
Net / Gross Weight (kg)		22/46	23/48	30/57	35.5/65.5	57.5/91.5
Sound pressure level dB(A)		27	30	32	35	39

Wired Remote Control

KJR-27B/E

Model	CE-HRV-1000	CE-HRV-1500	CE-HRV-2000
Air flow (m3 / h)	1500	1500	2000
Static pressure (Pa)	150	160	170
In summer, air-conditioning mode - Cooling (t outdoor > t room)	Temperature heat transfer efficiency (%)	60	60
	Enthalpy heat exchange efficiency (%)	50	50
In winter air-conditioning mode - Heating (t outdoor < t room)	Temperature heat transfer efficiency (%)	70	70

	Enthalpy heat exchange efficiency (%)	60	60	60
Power supply (V-Hz-F)		220~240-1-50	380-3-50	
	type	Single-phase asynchronous	Three-phase asynchronous	
Fan motor	Power Consumption (W)	360	900	1100
	Operating Current (A)	2.4	3.2	3.6
Dimensions (L * W * H) mm		1116*1134*388	1500*1200*540	1500*1200*540
Net / Gross Weight (kg)		59/95	160/200	175/215
Sound pressure level dB(A)		40	51	53

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Technology	Description	Specifications	Instructions
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Wired remote control for indoor unit [\('attr\(href\)'\)](#)



The internal block is completed / can be completed (option) with the wire control panel.

General functional features:

1. Connection to indoor units using stranded wire.
2. The job modes.
3. Set the fan speed.
3. Display information about operating modes on the LCD.
4. Setting the time of automatic on / off using a timer.

[Read more](#) [\('attr\(href\)'\)](#)

BREEZELESS+ ROUNDFLOW CASSETTE

NEW FOR 2021

Midea Breezeless+ Roundflow cassettes have a super slim design with low heights starting from just 205mm.

The range features 360°C airflow, which is softened into thousands of tiny particles of cool air by 10,800 hourglass-shaped micro holes to eliminate the feeling of cold draughts. Optimum comfort can be achieved, tailored to each unique user's preference via various modes; Air Blast, Gentle Flow and Power Breezeless.

BREEZELESS+ EFFECT

10,800 hourglass-shaped micro holes turn the airflow into thousands of tiny particles of cool air, softening the airflow to eliminate the feeling of cold draughts.

360° AIRFLOW OUTLET

360° air outlet provides even airflow circulation to cool or heat every corner of a room and keep a constant temperature.

'FOLLOW ME' SENSITIVE COOLING

Keep the remote close to you and it will measure the temperature around you and adjust comfort levels accordingly.

FRESH AIR INLET & DRAIN PUMP

Built-in fresh air inlet creates a more comfortable environment. Optional motor available to increase the "fresh air effect". The built-in drain pump is mounted externally for easy maintenance, it is vertically exhausted and pumps up to 1000mm.

LED FASCIA DISPLAY

Built-in display for easy trouble shooting and system information.

INDEPENDENT VANE CONTROL

The direction of each vane can be set independently via the wired controller.

SUPER SLIM DESIGN

The height of the units starts from just 205mm.

TWIN COMBINATIONS

Outdoor unit sizes 36,42,48 & 55 can be installed with two indoor units for increased flexibility.

REMOTE SIGNAL

Built-in ports for on/off control and fault indication.



Indoor unit



Outdoor unit



IR Controller RG10-B (optional)



Wired Controller
KJR-120G2-S2 (included)
KJR-120G2-M2 (optional)



Please note:

- For full Breezeless+ function set dip switch SW2-No.2 to on. Once active it can be enabled via (optional) infra-red controller.
- If humidity levels in a room rise above standard conditions the system will automatically switch to normal operation. This is to deal with the load before reverting back to Breezeless mode.



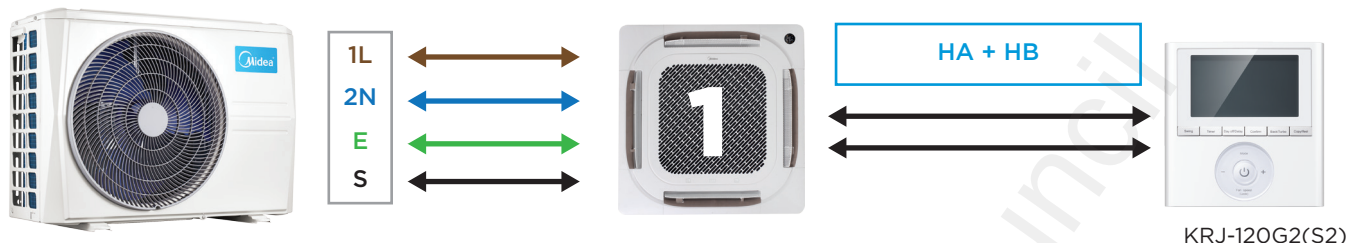
Voice Control



Midea Air App

BREEZELESS+ ROUNDFLOW CASSETTE

BREEZELESS+, A6 DUCT, CEILING & FLOOR KRJ-120G2(S2) - 2-Core Controller



INDOOR			MCD1-24HRFNX(18)	MCD1-24HRFNX	MCD1-36HRFN8	MCD1-42HRFNX
OUTDOOR			MOX330U-18HFN8	MOX430U-24HFN8	MOD30U-36HFN8	MOD30U-42HFN8
Nominal Cooling Capacity (min-max)		kW	5.28(2.90-5.59)	7.03 (3.22-8.21)	10.55 (4.04-12.02)	12.31 (2.58-13.7)
Nominal Heating Capacity (min-max)		kW	5.57(2.37-6.10)	7.62 (2.81-8.94)	11.14 (2.78-12.30)	13.48 (3.37-14.07)
UK Total Cooling Capacity		kW	5.3	7.78	11.39	12.13
Seasonal Efficiency SEER/Class		W/W	6.3/A++	6.2A++	6.7/A++	6.1/A++
Seasonal Efficiency SCOP/Class		W/W	4/A+	4/A+	4/A+	4/A+
Power supply (indoor power via outdoor)		V- Ph-Hz	220-240-1-50	220-240-1-50	220-240-1-50	220-240-1-50
Cooling Current (min-max)		A	7.2(3.2-9.2)	10.2 (4.2-12)	17.5 (4.2-18.5)	18.8 (3.1-19.1)
Heating Current (min-max)		A	6.8(3.1-8.5)	7.62 (2.81-8.94)	11.14 (2.78-12.30)	13.48 (3.37-14.07)
Max.Current		A	13.5	19	22.5	22.5
Recommended Fuse Size (Outdoor)		A	16	20	32	32
Interconnecting/Indoor Power Wiring		No.	4 Core 1mm ²	4 Core 1mm ²	4 Core 1mm ²	4 Core 1mm ²
Indoor Air Flow (High to Low)		m ³ /h	1300/1140/1000	1300/1140/1000	1700/1550/1380	1900/1750/1600
Indoor Sound Pressure Level (High to Low)		dB(A)	45.5/42.5/39.5/27	45.5/42.5/39.5/27	50/47.5/44.5/39	51/48.5/46/38
Indoor unit	Dimensions (WxDxH) (body)	mm	830x830x205	830x830x205	830x830x245	830x830x287
	Packing (WxDxH) (body)	mm	910x910x250	910x910x250	910x910x290	910x910x330
	Dimensions (WxDxH) (panel)	mm	950x950x55	950x950x55	950x950x55	950x950x55
	Packing (WxDxH) (panel)	mm	1035x1035x90	1035x1035x90	1035x1035x90	1035x1035x90
	Net/Gross Weight (body)	Kg	21.6/25.4	21.6/25.4	27.2/31.2	29.3/33.5
	Net/Gross Weight (panel)	Kg	6/9	6/9	6/9	6/9
Drainage water pipe dia.		mm	ODΦ25	ODΦ25	ODΦ25	ODΦ25
Outdoor air flow		m ³ /h	2100	3500	4000	4000
Outdoor Sound Pressure Level		dB(A)	53	57	60	60
Outdoor unit	Dimensions (WxDxH)	mm	805x330x554	890x342x673	946x410x810	946x410x810
	Packing (WxDxH)	mm	915x370x615	995x398x740	1090x500x885	1090x500x885
	Net/Gross Weight	Kg	32.5/35.2	43.9/46.9	66.9/71.5	71.0/75.0
Refrigerant	Type		R32	R32	R32	R32
	GWP		675	675	675	675
	Charged quantity	Kg	1.15	1.5	2.4	2.8
	Additional Charge	g/m	12	24	24	24
Refrigerant piping	Liquid side/ Gas side	mm(inch)	Φ6.35/Φ12.7(1/4"/1/2")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")
	Max. pipe length	m	30	50	75	75
	Max. height difference	m	20	25	30	30
Operating temperature	Indoor (Cooling/ Heating)	°C	16-32/0-30	16-32/0-30	16-32/0-30	16-32/0-30
	Outdoor (Cooling/ Heating)	°C	-15-50/-15-25	-15-50/-15-24	-15-50/-15-24	-15-50/-15-24

BREEZELESS+ ROUNDFLOW CASSETTE



Indoor unit



Outdoor unit



IR Controller RG10-B
(optional)



Wired Controller
KJR-120G2-S2 (included)
KJR-120G2-M2 (optional)

INDOOR			MCD1-36HRFN8	MCD1-48HRFNX	MCD1-55HRFNX
OUTDOOR			MOD30U-36HFN8	MOE30U-48HFN8	MOE30U-55HFN8
Nominal Cooling Capacity (min-max)		kW	10.55 (4.04-12.02)	14.07 (4.75-16.12)	15.53 (5.28-18.46)
Nominal Heating Capacity (min-max)		kW	11.14 (2.78-12.30)	16.12 (4.10-17.29)	18.17 (4.40-19.93)
UK Total Cooling Capacity		kW	11.39	15.28	17.22
Seasonal Efficiency SEER/Class		W/W	6.3/A++	6.1/A++	6.3/A++
Seasonal Efficiency SCOP/Class		W/W	3.9/A	4/A+	4/A+
Power supply (Indoor power via outdoor)		V- Ph-Hz	380-415-3-50	380-415-3-50	380-415-3-50
Cooling Current (min-max)		A	6.5 (1.4-6.5)	8.1 (1.8-10.2)	8.6 (2.1-10.7)
Heating Current (min-max)		A	5.0 (1.3-6.4)	8.0 (1.9-9.5)	9.6 (2.1-10.7)
Max.Current		A	10	13	14
Recommended Fuse Size (Outdoor)		A	16	16	16
Interconnecting/Indoor Power Wiring		No.	4 Core 1mm ²	4 Core 1mm ²	4 Core 1mm ²
Indoor Air Flow (High to Low)		m ³ /h	1800/1600/1400	1970/1780/1580	2000/1850/1650
Indoor Sound Pressure Level (High to Low)		dB(A)	50/47.5/44.5/39	51/48.5/46.5/37.5	53/50.5/48/40
Indoor unit	Dimensions (WxDxH) (body)	mm	830x830x245	830x830x287	830x830x287
	Packing (WxDxH) (body)	mm	910x910x290	910x910x330	910x910x330
	Dimensions (WxDxH) (panel)	mm	950x950x55	950x950x55	950x950x55
	Packing (WxDxH) (panel)	mm	1035x1035x90	1035x1035x90	1035x1035x90
	Net/Gross Weight (body)	Kg	27.2/31.2	29.3/33.5	29.3/33.5
	Net/Gross Weight (panel)	Kg	6/9	6/9	6/9
Drainage water pipe dia.		mm	ODΦ25	ODΦ25	ODΦ25
Outdoor air flow		m ³ /h	4000	7500	7500
Outdoor sound pressure level		dB(A)	60	61	61
Outdoor unit	Dimensions (WxDxH)	mm	946x410x810	952x415x1333	952x415x1333
	Packing (WxDxH)	mm	1090x500x885	1095x495x1480	1095x495x1480
	Net/Gross Weight	Kg	80.5/85	103.7/118.3	107.0/121.2
Refrigerant	Type		R32	R32	R32
	GWP		675	675	675
	Charged quantity	Kg	2.4	2.9	3.0
	Additional Charge	g/m	24	24	24
Refrigerant piping	Liquid side/ Gas side	mm(inch)	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")	Φ9.52/Φ15.9(3/8"/5/8")
	Max. pipe length	m	75	75	75
	Max. height difference	m	30	30	30
Operating temperature	Indoor (Cooling/ Heating)	°C	16-32/0-30	16-32/0-30	16-32/0-30
	Outdoor (Cooling/ Heating)	°C	-15-50/-15-24	-15-50/-15-24	-15-50/-15-24

Nominal Conditions: Cooling; indoor 27°C DB, 19°C WB, outdoor 35°C DB, 24°C WB.
Nominal Conditions: Heating; indoor 20°C DB, outdoor 7°C DB, 6°C WB.

UK Conditions: Summer: indoor 21°C DB, 15°C WB, outdoor 27°C DB.
Sound Pressure is measured 1.5m below the air-outlet at Nominal Conditions