

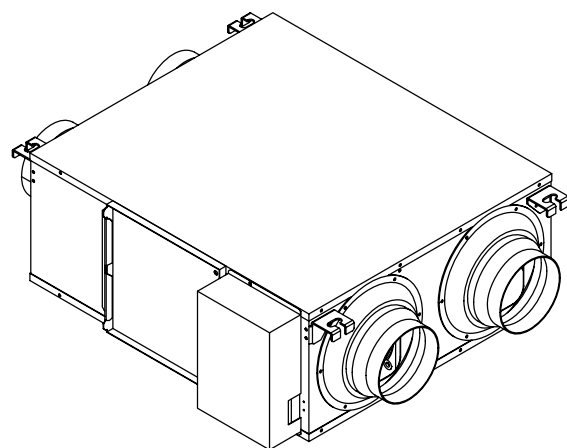
Hisense

Operation Installation & Maintenance Manual

Total Heat Exchanger	
Type	Model
Total heat exchanger	HKF-15B1EC HKF-15B2EC HKF-25B1EC HKF-25B2EC HKF-35B1EC HKF-35B2EC HKF-50B1EC HKF-50B2EC HKF-65B1EC HKF-65B2EC HKF-80B1EC HKF-80B2EC HKF-100B1EC HKF-100B2EC
	HKF-150B1EE HKF-150B2EE HKF-200B1EE HKF-200B2EE HKF-250B1EE HKF-250B2EE HKF-300B1EE HKF-300B2EE
	HKL-400B1EE HKL-400B2EE HKL-500B1EE HKL-500B2EE

IMPORTANT:

READ AND UNDERSTAND THIS MANUAL CAREFULLY BEFORE USING THE TOTAL HEAT EXCHANGER. KEEP THIS MANUAL FOR FUTURE REFERENCE.

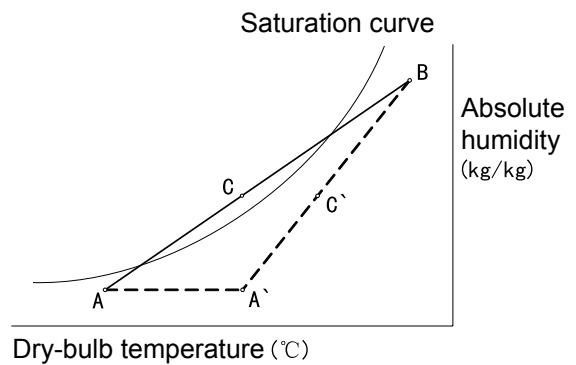


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ORIGINAL INSTRUCTIONS

SPECIAL NOTES

- Service conditions of the machine
Outdoor air condition: temperature range $-10^{\circ}\text{C} \sim 45^{\circ}\text{C}$, the relative humidity: 85% or lower.
Indoor air condition: temperature range $-10^{\circ}\text{C} \sim 45^{\circ}\text{C}$, the relative humidity: 85% or lower.
- Do not use it in places with much oil fume or high humidity (machinery factory, kitchen, bathroom, etc.).
- Do not use it in high-temperature places or where there is direct burning of flame, and avoid that the surrounding temperature of the installation position is higher than 45°C .
- Do not install it in places where acidity, alkali, organic solvent, paint and other hazardous gases are easy to occur and places containing gases with corrosive components.
- When it operates under heating mode in winter, frost or rime may occur under the condition of high air humidity. Present the winter temperature and humidity saturation in cold places with a curve, as shown in the right Figure, where, the air line drawing is marked with high-temperature air suction condition B and low-temperature air suction condition A. If the heat of the high-temperature air flow B is exchanged by the machine, and the point C indicates the gas condition after heat exchanging, then frost or rime may occur under such condition. To avoid such situation, please heat the low-temperature side air flow A to A' to reach C' below the saturation curve.
- The table below lists the humidity at condensation critical point under several air conditions when the indoor temperature is at 30°C . If the indoor air humidity is higher than this condition, condensation may occur. Long-time condensation will result in water drip or flowing out.



Outdoor air temperature DB	Indoor air temperature DB	Relative humidity of indoor air (%)	Absolute humidity of indoor air (kg/kg)
0°C	30°C	47	0.0125
-5°C	30°C	41	0.0105
-10°C	30°C	34	0.0090

IMPORTANT NOTICE

- HISENSE pursues a policy of continuing improvement in design and performance of products, and changes will be made without notice. The right is therefore reserved to vary specifications without notice.
- HISENSE is free of liability for accidental damage occurring during operation under special circumstances.
- The equipment only serves as fresh air ventilator.
- No part of this manual may be reproduced without permission.
- Signal words (DANGER, WARNING and CAUTION) are used to identify levels of hazard seriousness.

Definitions for identifying hazard levels are provided below with their respective signal words.



: Immediate hazards which WILL result in severe personal injury or death.



: Hazards or unsafe practices which COULD result in severe personal injury or death.

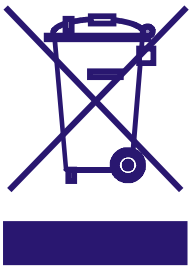


: Hazards or unsafe practices which COULD result in minor personal injury or product or property damage.

NOTE : Useful information for operation and/or maintenance.

- If you have any questions, contact your dealer or service center of HISENSE
- This manual should be considered as a permanent part of the total heat exchanger and should remain with the air conditioning equipment.
- Operate the total heat exchanger within this range.
Regarding installation altitude below 1000 m ;
Regarding frequency of supply power within $\pm 1\%$ Hz of rated frequency;
Regarding transport / storage temperature within -25~55°C.

IMPORTANT NOTICE



Correct Disposal of this product

This marking indicates that this product should not be disposed with other household wastes. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To return your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

CHECKING PRODUCT RECEIVED

- Upon receiving this product, inspect it for any shipping damage.
Claims for damage, either apparent or concealed, should be filed immediately with the shipping company.
- Check the model number, electrical characteristics (power supply, voltage and frequency) and accessories to determine if they are correct.
The standard utilization of the unit shall be explained in these instructions.
Therefore, the utilization of the unit other than those indicated in these instructions is not recommended.
Please contact your local agent, as the occasion arises.
HISENSE's liability shall not cover defects arising from the alteration performed by a customer without HISENSE's consent in a written form.

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1. Safety Instruction



WARNING

- The installation work shall be performed by the dealer or professionals, and do not install by yourself. Improper installation it may result in water leakage, electric shock or fire.
- The installation work shall follow the installation instructions and do not alter the unit by yourself.
- Install the machine where is able to bear its weight. Insufficient weight bearing intensity or improper installation may result in unit falling and cause personal injury.
- Prevent exhaust from entering air intake, otherwise, the indoor air may be polluted, endangering health.
- Confirm there is separate power supply circuit for the total heat exchanger and all electrical works shall be constructed by professionals based on local laws, regulations and installations of specifications.
- Please use the specified parts and components for installation, otherwise, it may cause machine falling, water leakage, electric shock or fire.
- Take full consideration of the impact from strong wind, typhoon and earthquake, and consolidate the installation to avoid accidents caused by machine falling.
- Ensure all wires are connected firmly and special wires have been used without external force on connection terminal and wires.
- When connecting the power supply source, remote controller line and transmission line, confirm the connection and the electrical parts box cover is firmly installed. Improper connection may result in electric shock, fire or overheating connection terminal. Please install grounding leakage breaker, otherwise, it may electric shock or fire.

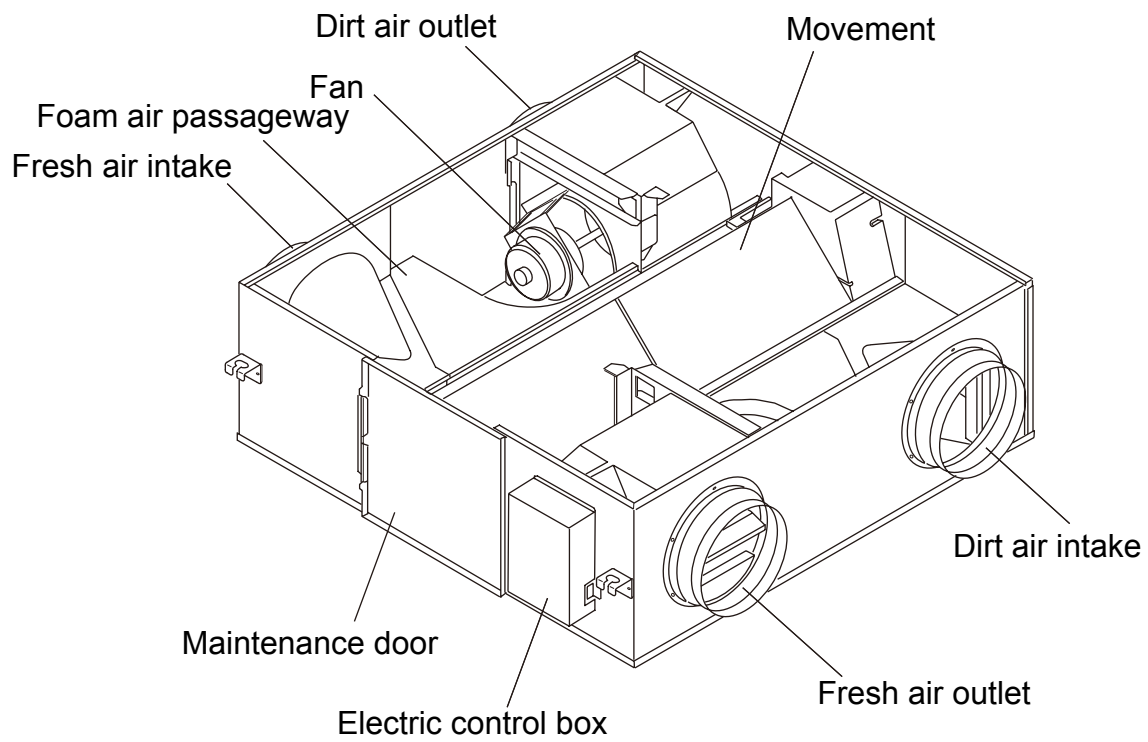


CAUTION

- Do not install total heat exchanger, remote controller and cables within 3 meters of strong electric magnetic radiation source (such as medical equipment). Incorrect connection or installation may cause overheating or fire.
- Please keep the power line of the total heat exchanger more than 1m away from TVs and radios to avoid interference to images or causing noise.
- The declivity shall be kept for outdoor air duct to prevent rain water from entering the machine. If the installation is incorrect, the water may enter the building to damage furniture and cause electric shock and fire.
- Wrap the outdoor pipelines and gas supply pipelines with heat insulation materials to prevent condensation. Confirm the implementation of snow protection measures; without snow protection measures, the snow may enter the air duct and cause machine damage, electric shock and fire.
- Little bugs may enter the room through air duct; and effective measures shall be taken based on actual situation (for example, install filter) to prevent little bugs from entering.
- The appliance is not to be used by children or person with reduced physical, sensory or mental capabilities, or lack of experience and knowledge unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- Children should be supervised that they do not play with the appliance.
- The appliance should not be installed in the laundry.
- This appliance is not accessible to the general public.

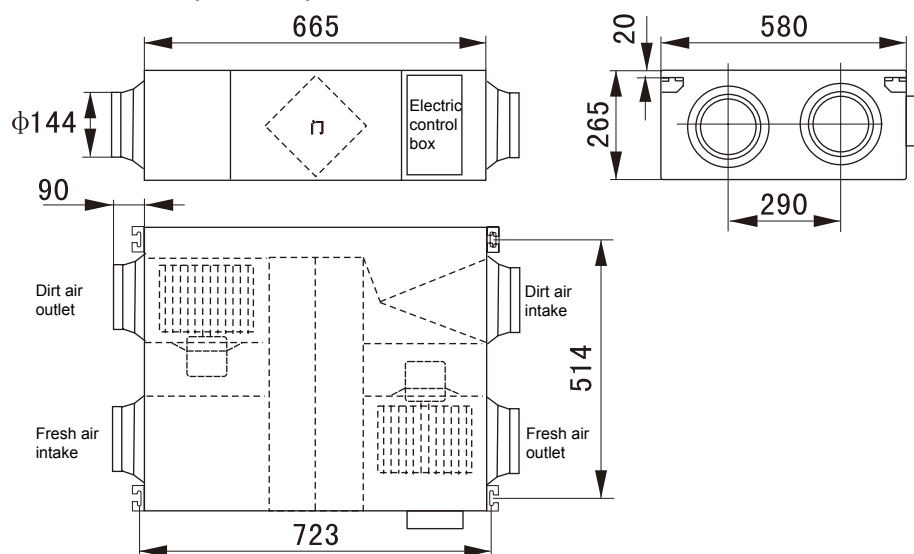
2. Structure Description

2.1 Production structure (diagrammatic drawing)



2.2 Overall dimension of product

HKF-15B1EC(15B2EC)



HKF-25B1EC(25B2EC) ~ HKF-100B1EC(100B2EC)

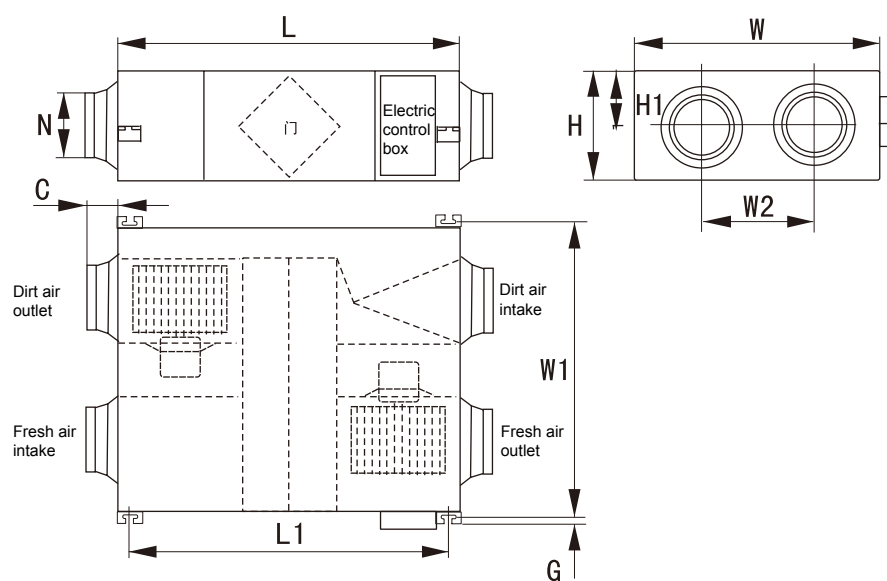
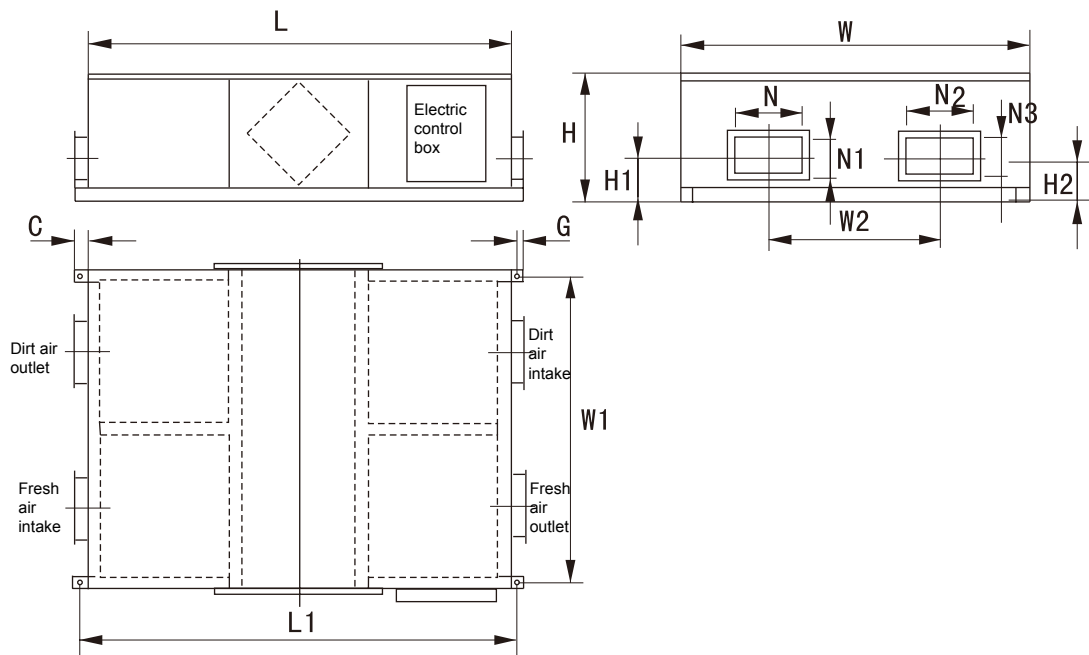


Table 2.1 Unit: mm

Model	L	L1	W	W1	W2	H	C	G	N	H1
HKF-25B1EC(25B2EC)	745	675	600	656	315	270	90	19	φ 144	110
HKF-35B1EC(35B2EC)	745	675	805	861	480	270	90	19	φ 144	110
HKF-50B1EC(50B2EC)	825	755	905	961	500	270	96	19	φ 194	110
HKF-65B1EC(65B2EC)	1115	1050	885	941	430	390	80	19	φ 242	175
HKF-80B1EC(80B2EC) ~ HKF-100B1EC(100B2EC)	1115	1050	1135	1191	675	390	80	19	φ 242	175

HKF-150B1EE(150B2EE) ~ HKF-200B1EE(200B2EE)
 HKL-400B1EE(400B2EE) ~ HKL-500B1EE(500B2EE)



HKF-250B1EE(250B2EE) ~ HKF-300B1EE(300B2EE)

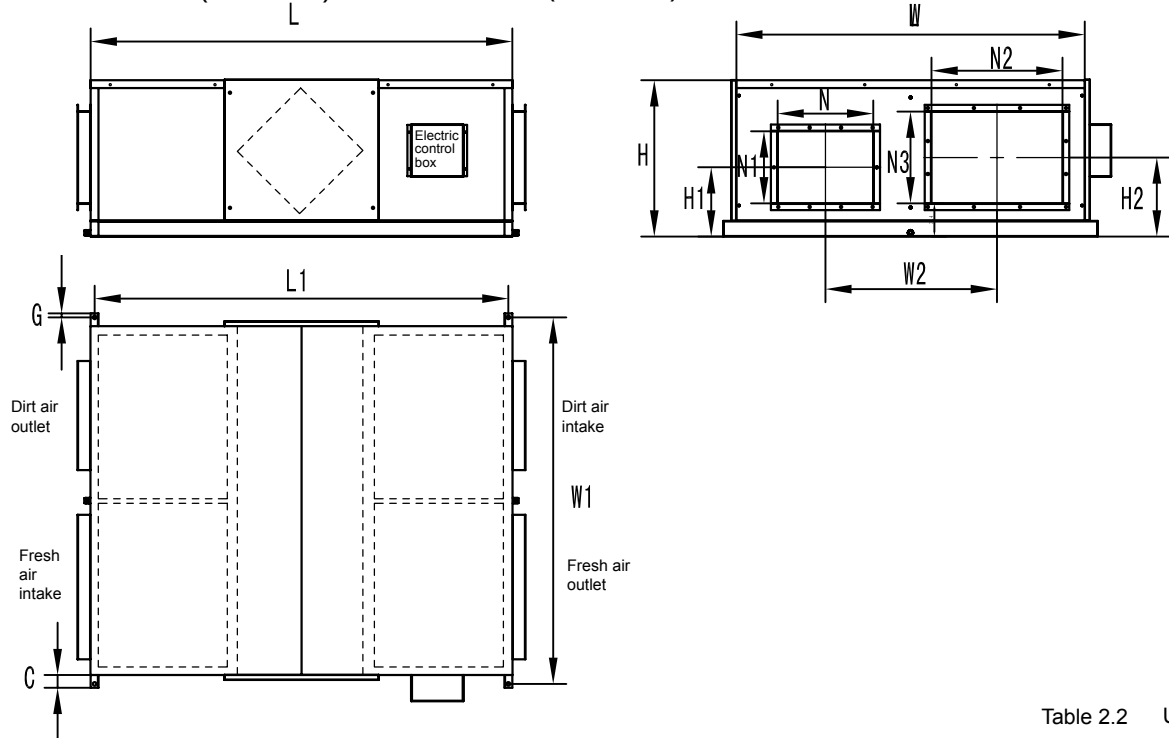
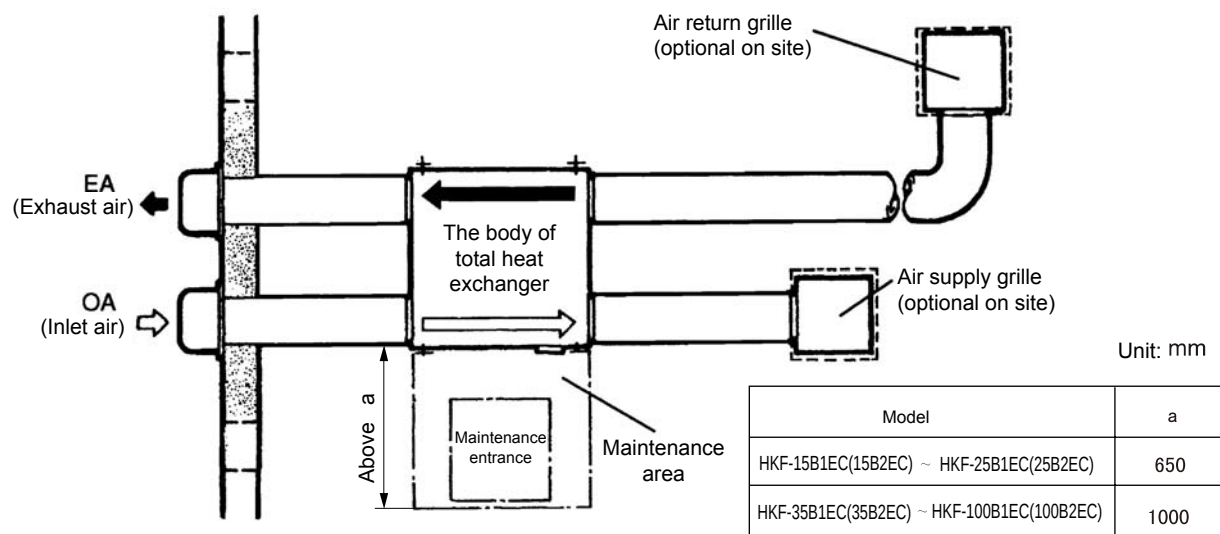


Table 2.2 Unit: mm

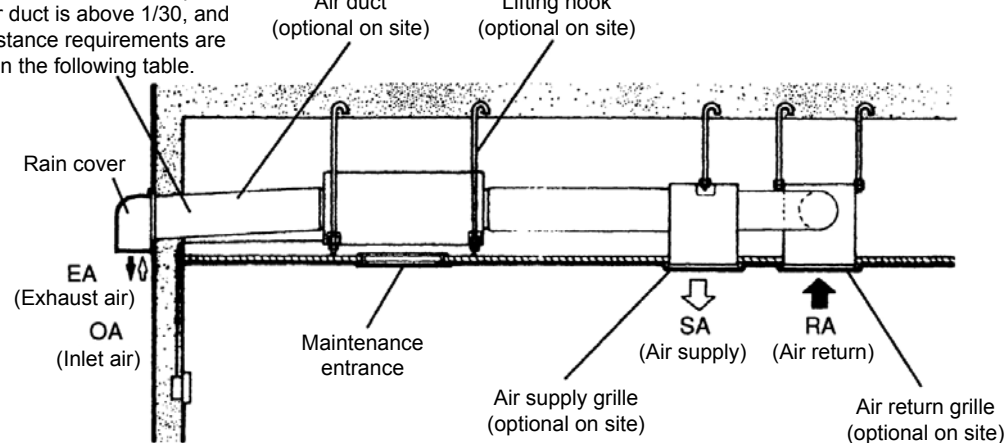
Model	L	L1	W	W1	W2	H	H1	C	G	N	N1	N2	N3	H2
HKF-150B1EE(150B2EE)	1500	1550	1200	1170	600	540	250	50	25	320	300	320	300	250
HKF-200B1EE(200B2EE)	1550	1600	1400	1370	700	540	250	50	25	320	300	320	300	250
HKF-250B1EE(250B2EE)	1610	1580	1330	1400	655	600	265	50	15	365	275	500	350	300
HKF-300B1EE(300B2EE)	1700	1670	1500	1570	750	640	272	50	15	365	275	500	350	309
HKL-400B1EE(400B2EE)	1625	1675	1330	1300	665	1050	490	50	25	370	330	500	690	475
HKL-500B1EE(500B2EE)	1625	1675	1330	1300	665	1050	490	50	25	370	330	500	690	475

3. Installation Example

HKF-15B1EC(15B2EC) ~ HKF-100B1EC(100B2EC):

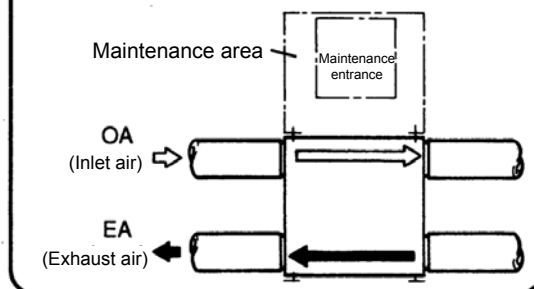


Ensure the downward slope of the air duct is above 1/30, and the distance requirements are seen in the following table.

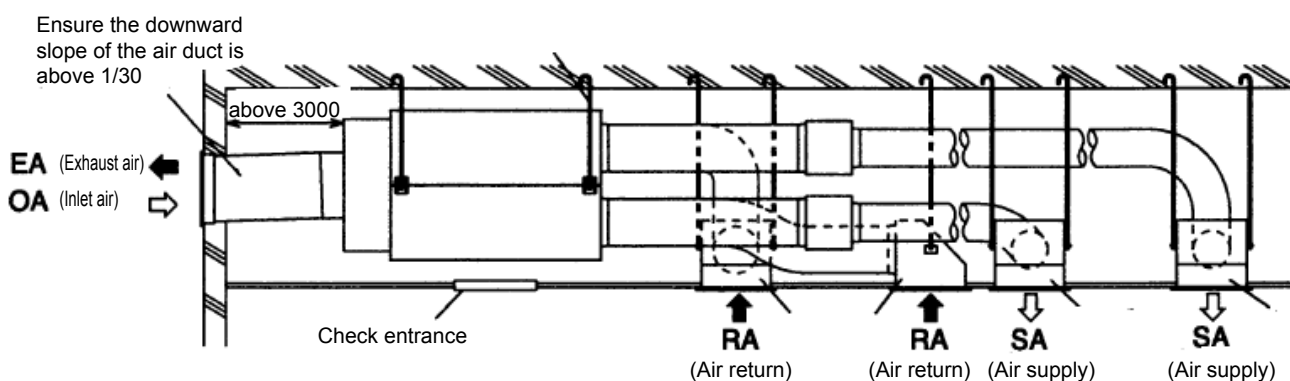
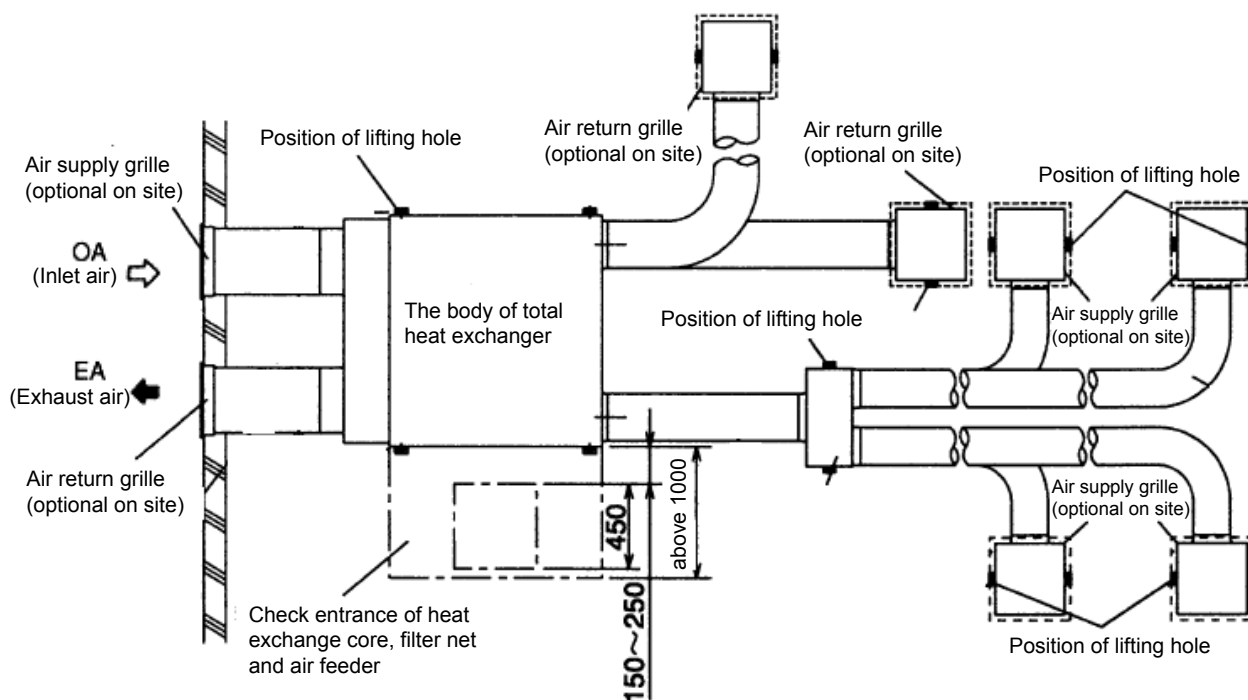


Model	Distance
HKF-15B1EC(15B2EC) ~ HKF-50B1EC(50B2EC)	More than 1m
HKF-65B1EC(65B2EC) ~ HKF-100B1EC(100B2EC)	More than 2.5m

* Reverse installation is allowed based on site situation. Turn 180 degrees, and install after the body of total heat exchanger is kept horizontal.

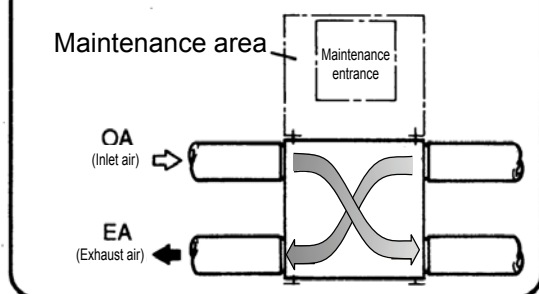


HKF-150B1EE(150B2EE) ~ HKF-300B1EE(300B2EE):



Unit: mm

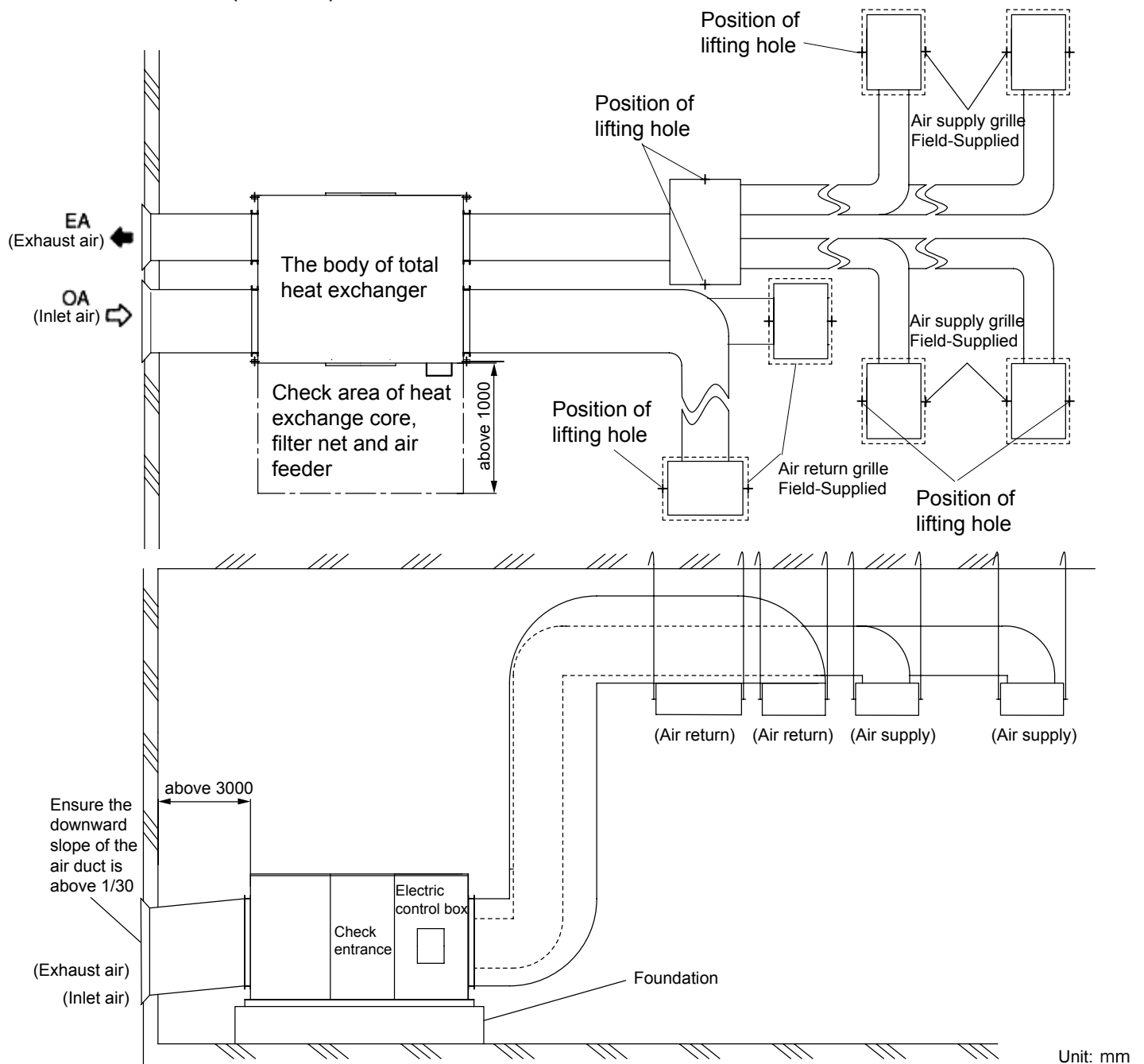
* Reverse installation is allowed based on site situation. Turn 180 degrees, and install after the body of total heat exchanger is kept horizontal.



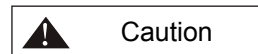
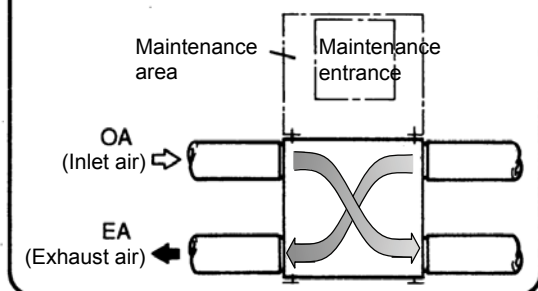
Note:

The machine body has the condensate water pipe interface, please install the condensate pipe synchronously, and ensure the reliable drainage.

HKL-400B1EE(400B2EE) ~ HKL-500B1EE(500B2EE):



* Reverse installation is allowed based on site situation. Turn 180 degrees, and install after the body of total heat exchanger is kept horizontal.



- Transport the equipment to a place near the installation location as much as possible before unpacking.
- Do not damage the heat insulation materials on the surface during lifting.
- Before installation and commissioning, do not put any irrelevant material into the unit to ensure the unit is free of any sundries. Otherwise, fire or accident may occur.
- The machine body has the condensate water pipe interface, please install the condensate pipe synchronously, and ensure the reliable drainage.

4. Installation Method

4.1 Notes

(1) Factory-supplied accessories

Check to ensure that the following accessories are packed with the indoor unit. If any of these accessories are not packed with the unit, please contact your dealer.

Accessory	Qty.	Purpose
Bundle	10	For fixing wires
Liquid display switch (single-phase unit)	1	For the control of single-phase unit
Installation and maintenance manual	1	

(2) Tools and instruments required for installation

No.	Tool	No.	Tool	No.	Tool
1	Arm saw	5	Hex wrench	9	Cable cutter
2	Screwdriver	6	Gradienter	10	Current meter
3	Pincer pliers	7	Thrum occluder	11	Voltmeter
4	Wrench	8	Lifter (for lifting units)	12	Megameter



Danger

- It is forbidden to alter and transform the specifications without permission.
- Do not use the power supply other than AC 220-240V/380-415V and 50Hz please cut off the breaker of the power source during maintenance, sport check and long-term use.
- During grounding construction, the grounding line shall not be connected with the gas pipeline, water pipe, lightning rod, the grounding line of telephone.
- Do not insert your fingers or any stick into the fan or air supply inlet and air exhaust outlet.
- Do not install it where combustible gas may be leaked.



Warning

- If it is installed at the outer side of the heat insulation space (space with the condition similar with outdoor air condition), condensation may occur inside the host, leading to electric shock or water drip.
- Pay attention to the rotation of wind wheels caused by reverse wind in the air passageway. Although the power is cut off, it is still possible to be rolled into the rotating position and cause injury.
- Do not install it onto the ceiling without enough strength. The ceiling shall be reinforced if the strength can not be determined to ensure sufficient strength.
- It is recommended that the appliance be installed higher than 2.5 meters from the floor level when it is installed on the ceiling.

 Caution

- The installation works shall strictly follow this installation instruction. Please do not set the indoor air return port at the place where high-temperature or high-humidity air can be sucked.
- Install anti-bird net or similar articles at the scavenging port. The wire installation shall comply with electrical equipment technical standards and indoor wire regulations.
- Install it in the inner side of the heat insulation space (space isolated from outer side air).
- The air passageway at outer side shall be inclined to the outdoor when installed. When the machine body is installed, install it places where dust and stove can not enter from the air passageway.
- Do not install the machine and indoor air return port in a kitchen or other places with much oil fume.
- Anti-creeping breaker shall be installed sometimes based on the installation position of breaker.
- The following phenomena shall be avoided in the process of installing pipelines:
 - Parts used for installation works shall be specified ones (including accessories)
 - The power line and connection line shall be firmly installed, the power cover plate shall be compacted without warping.
 - Please do not turn the machine or impose excessive load like air passageway during construction.
 - Do not exchange gas with open-type burner (heating installation). For heating with fuel gas or petroleum in the room, it is required to use special gas exchanging equipment.
 - Pay attention to the gravity and weight when carrying in or out. Use gloves and other protection tools during construction.

(1) Over-bending



(2) Repeated bending



(3) Bending near the air inlet

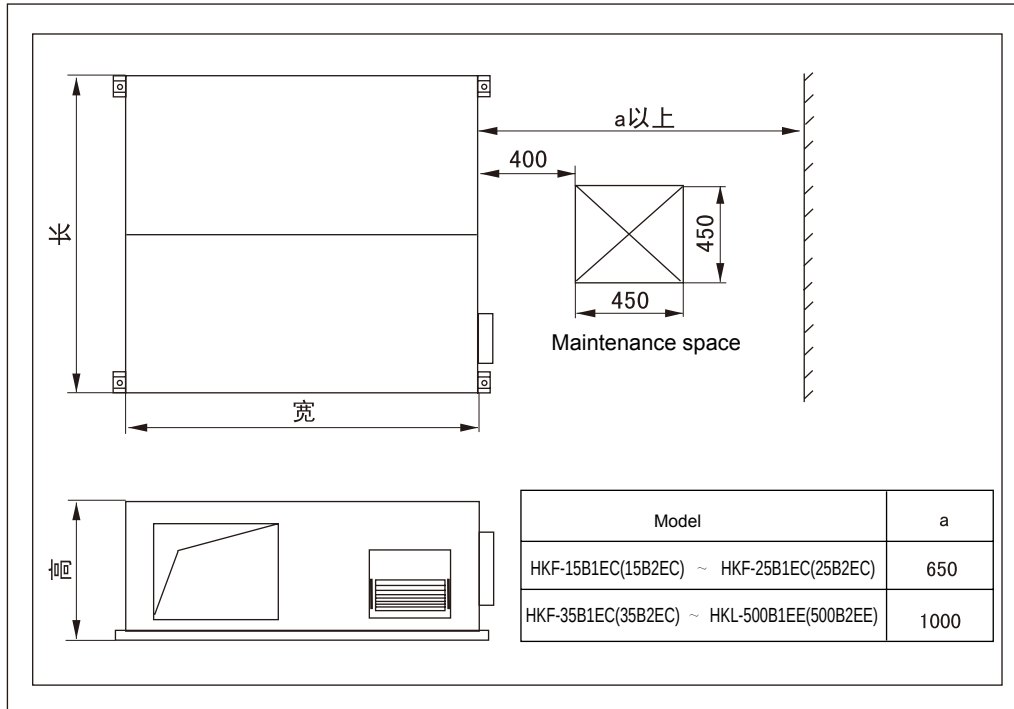


(4) Shorten the diameter of air duct



4.2 Initial Check

- Install the total heat exchanger with a proper clearance around it for operation and maintenance working space, as shown in Fig. 4.1



Unit: mm

- Avoid obstacles in the air supply and return passageways of the total heat exchanger which may hamper the air flow.
- Do not install the total heat exchanger in a kitchen where vapor from oil or its mist flows to the indoor unit.
- The oil will deposit on the total heat exchanger, thereby reducing the indoor unit performance in heat exchanging and break the plastic parts of the indoor unit.
- Pay attention to the following points when the indoor unit is installed in a hospital or other facilities where there are electronic waves from medical equipment.
 - (A) Do not install the indoor unit where the electromagnetic wave is directly radiated to the electrical box, remote control cable or remote control switch.
 - (B) Install the total heat exchanger as far as practical or at least 3 meters from the electromagnetic wave radiator.
 - (C) Prepare a steel box and install the remote control switch in it. Prepare a steel conduit tube and wire the remote control cable in it. Then connect the ground wire with the box and the tube.
 - (D) Install a noise filter when the power supply emits harmful noises.

4.3 Installation

4.3.1 Suspension bolts

(1) Select final location and installation direction, paying careful attention to the space for piping, wiring and maintenance.

(2) The installation of suspension bolts is as shown in Fig. 4.2 below.

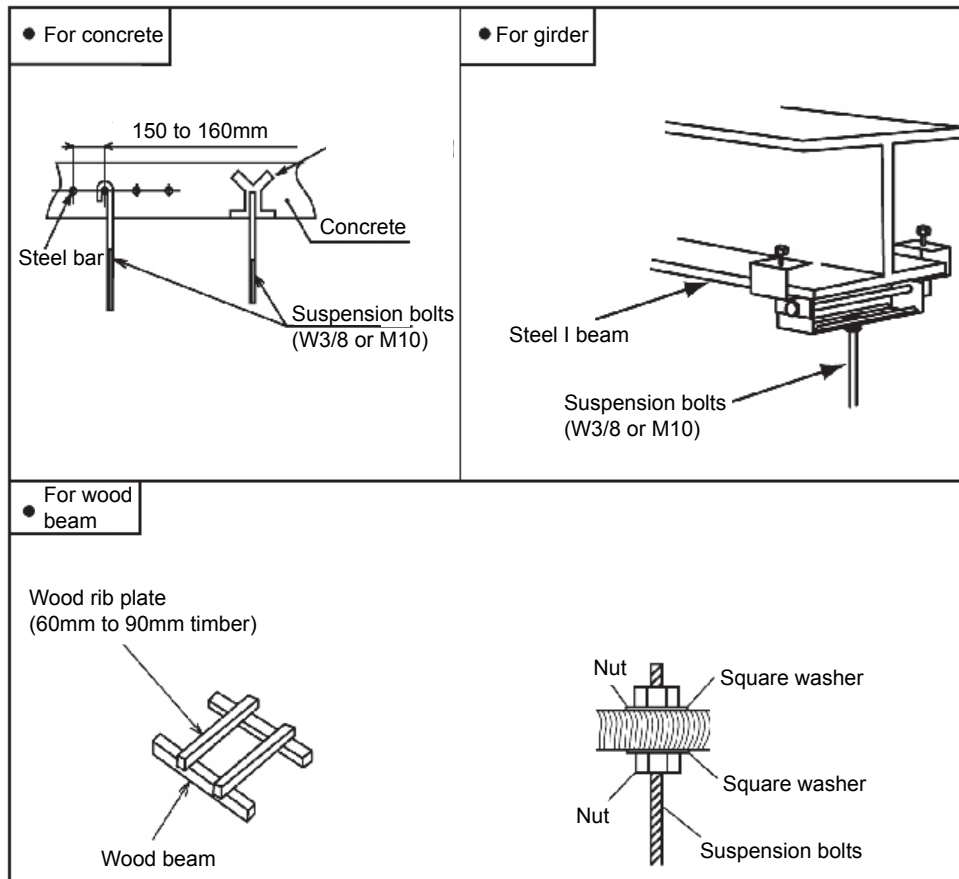


Fig. 4.2 Fixation of suspension bolts

4.3.2 Body installation

The installation of the body is as shown in Fig. 4.3.

Parts prepared for installation site

Suspension bolt	4-M10 or W3/8
Nut	8-M10 or W3/8
Washer	8-M10 or W3/8

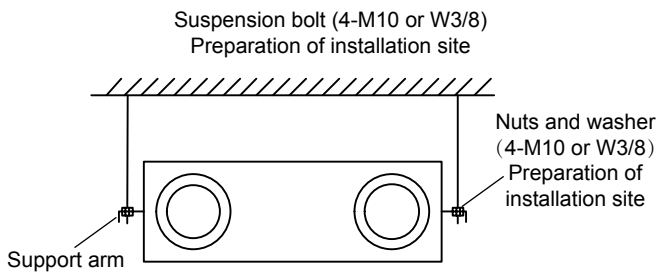


Fig. 4.3 Body installation

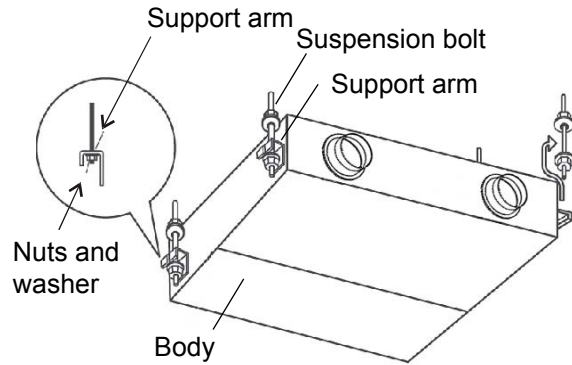


Fig. 4.5 Lifting method

(1) How to install suspension bolts and nuts

As shown in Fig. 4.4, install nuts onto the four bolts.

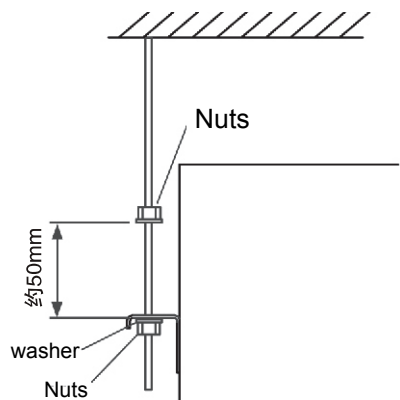


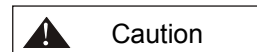
Fig. 4.4 Suspension bolt and nut

(2) Body installation

- As shown in the figure below, place the left bracket the nuts and washers of suspension bolts.
- Ensure the left bracket is correctly placed on the nuts and washers, and then place the right bracket of the total heat exchanger on the nuts and washers. (The suspension bolts can be removed upon installation of the body.)

4.3.4 Adjustment of the total heat exchanger body level

- (1) Check to confirm the top is level, and measure the maximum inclination of the top.
- (2) After adjustment, screw the suspension nuts tightly. Thread locking agent shall be smeared to prevent nuts from loosening.



Please cover the machine with plastic cloth in the process of installation to keep it clean.

4.3.3 Connecting air duct

The indoor unit is equipped with a flange with holes that can be connected with the air duct; the flexible air duct shall be used at the air supply side (indoor air supply).

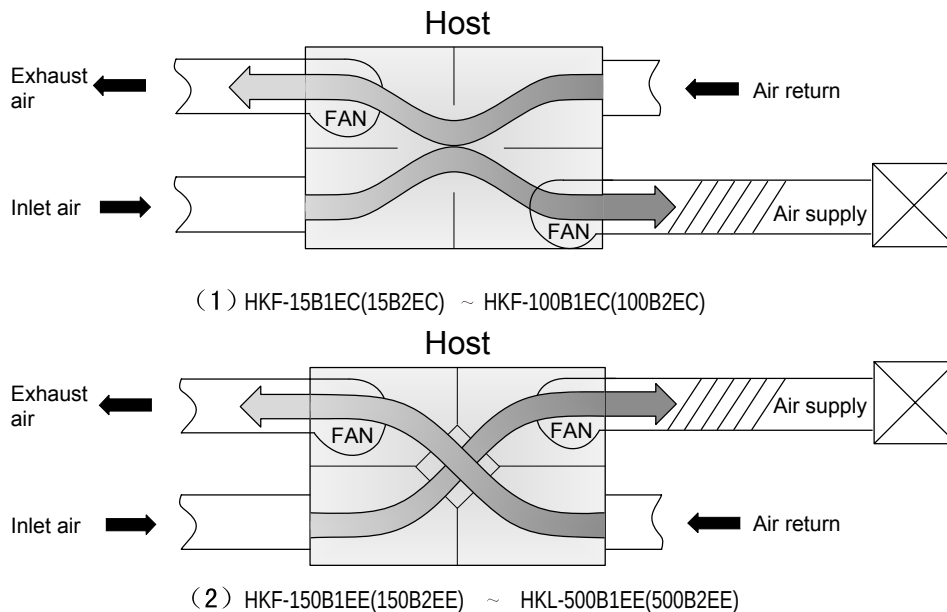
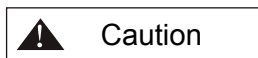


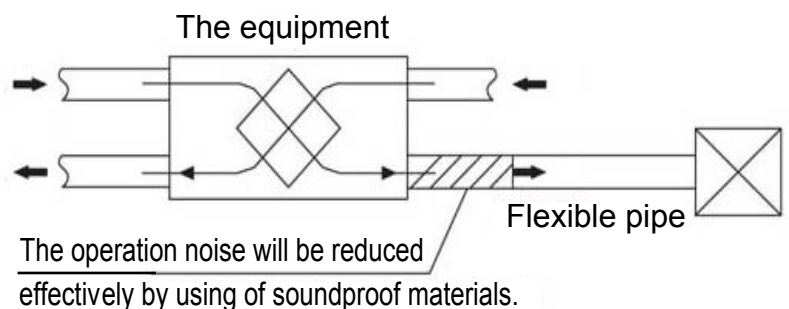
Fig. 4.7 Connecting air duct



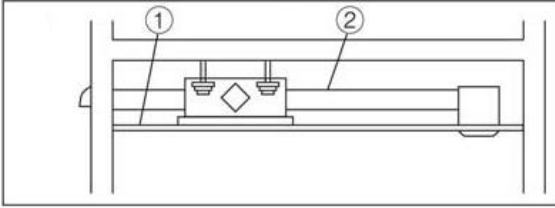
- To prevent gas leakage, the connections between air duct and flange as well as between air ducts shall be wrapped with aluminum foil.
- After the air duct is connected, the outside of the flange rings shall be treated for heat insulation to avoid condensation.
- Install the two air ducts at an certain inclination (no less than 1/30) to prevent rain water from back-flowing. (Refer to Installation)
- If the temperature and humidity in the ceiling are kept high, please install ventilation equipment in it.
- When the air duct penetrates metal lattice window, electrical lines or wood structural walls reinforced by metal, the air duct and wall shall be protected for electric insulation.

4.4 Measures to reduce operation noise

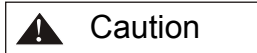
- (1) Usually soundproof materials are adopted in air ducts to reduce the operation noise of the host at the air supply port.
 - The effect of reducing operation noise by using soundproof materials at the side of air supply pipe near the machine is better than near air intake/exhaust grille.



(2) The following measures are adopted to reduce noise:



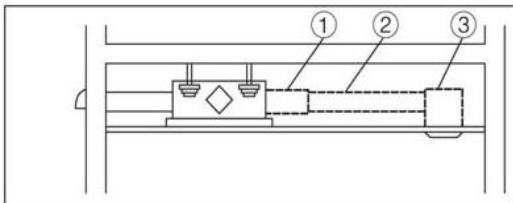
- ① Use soundproof (low penetrating sound) ceiling.
- ② Place noise reducing materials under the operation noise source.



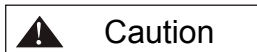
- Some soundproof ceilings are not effective for low-frequency operation noise.
- When sheet soundproof materials are used, the entire machine shall be wrapped.
- Sheet sound absorption materials are not allowed to be used for some models as they may have adverse influence on heat radiation ventilation.

(3) Reduce visual operation noises from air supply port (air intake port).

- Use the optional accessories recommended below to reduce the operation noises of ceiling-suspended machine.



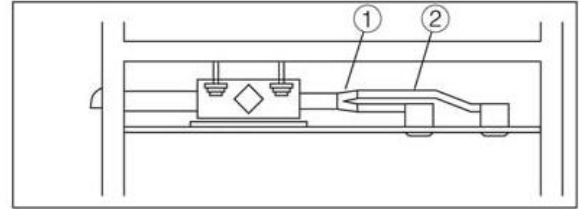
- ① Noise elimination box (silencer)
- ② Flexible air duct
- ③ Noise elimination air supply grille



- Do not connect the rotating air duct and aluminum corrugated pipe directly with the air exhaust port of the host.
- The flexible air duct used together with a silencer will produce more effective noise elimination effect.

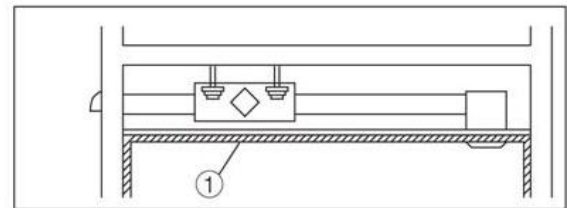
(4) Branching layout of air ducts

- Make the wind flow through the two air ducts so that it will reduce speed before arriving at the air supply port.

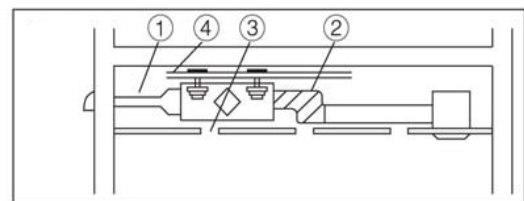


- ① Noise elimination box (silencer)
- ② Flexible air duct

- Adopting sound absorption materials for indoor walls will effectively reduce noises.



- The following points shall be avoided when large-capacity host (650 or more) is installed.



- ① Use the air duct with a small diameter (such as $\Phi 250 \rightarrow \Phi 150$, $\Phi 200 \rightarrow \Phi 100$).
- ② Connect with corrugated pipe, which over-bends the air duct (especially connect the corrugated pipe with the exhaust air port of the host).
- ③ Open holes on the ceiling.
- ④ Use materials with insufficient strength to hang the host.

5. Wiring

5.1 General inspection

- (1) Confirm all electrical elements used in the installation site (power switch, shutdown switch, conductor, pipe connection and wiring terminal) have been selected based on the data in Table 5.1 and comply with national electrical standards.
- (2) Check if the power voltage is within the rated voltage range (-10%~+10%). If the power voltage is too low, the system will not start.
- (3) Check the distribution capacity.
- (4) Ensure the grounding line has been connected.



Warning

- Before connection or regular inspection, the main power switch of the total heat exchanger shall be kept off for more than 3 minutes.
- Before connection or regular inspection, ensure the fan of the total heat exchanger has been shut down.
- Protect wires, drainage pipe, electrical elements, etc. to prevent damage by rats or other small animals. Without protection, rats may bite the elements without protection, leading to fire.



Caution

- Wrap along wires with adhesive tape or other materials to seal the connection port and prevent condensed water or insects from entering.
- Fasten the wires of the total heat exchanger with bundles.
- Fix the remote controller wire in the electric control box with bundles.

5.2 Connection

The connection of total heat exchanger wires is as shown in Fig. 5.2

- (1) As shown in Fig. 5.1, cut the rubber pad center at the wire connection hole into a cross.
- (2) Penetrate through the connection hole on the electric control box, and connect the wired controller.
- (3) Connect the power line and the grounding line with the terminal board of the electric control box.
- (4) Fasten the wires in the electric control box with the bundle.
- (5) After the wires are connected, seal the connection port of the wires with sealing materials (with a cover) to prevent condensed water or insects from entering.
- (6) Put the power supply wiring through a conduit tube and make sure that the conduit tube and electrical control box were properly fixed.

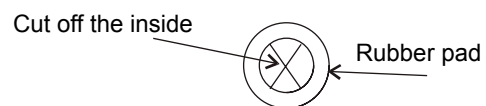


Fig. 5.1 Rubber pad

Table 5.1 Electric parameters

Model	Power supply			Voltage		Indoor blower	
	VOL	PH	HZ	Max	Min	RNC	IPT
HKF-15B1EC(15B2EC)	220—240	1	50	264	198	0.38	0.082
HKF-25B1EC(25B2EC)	220—240	1	50	264	198	0.66	0.138
HKF-35B1EC(35B2EC)	220—240	1	50	264	198	0.76	0.166
HKF-50B1EC(50B2EC)	220—240	1	50	264	198	1.82	0.378
HKF-65B1EC(65B2EC)	220—240	1	50	264	198	1.75	0.386
HKF-80B1EC(80B2EC)	220—240	1	50	264	198	1.98	0.422
HKF-100B1EC(100B2EC)	220—240	1	50	264	198	4.68	1.020
HKF-150B1EE(150B2EE)	380—415	3	50	457	342	2.78	0.820
HKF-200B1EE(200B2EE)	380—415	3	50	457	342	2.89	1.040
HKF-250B1EE(250B2EE)	380—415	3	50	457	342	3.86	1.440
HKF-300B1EE(300B2EE)	380—415	3	50	457	342	5.12	2.320
HKL-400B1EE(400B2EE)	380—415	3	50	457	342	5.89	3.420
HKL-500B1EE(500B2EE)	380—415	3	50	457	342	8.78	4.400

RNC: working current (A)

IPT: input power (kW)

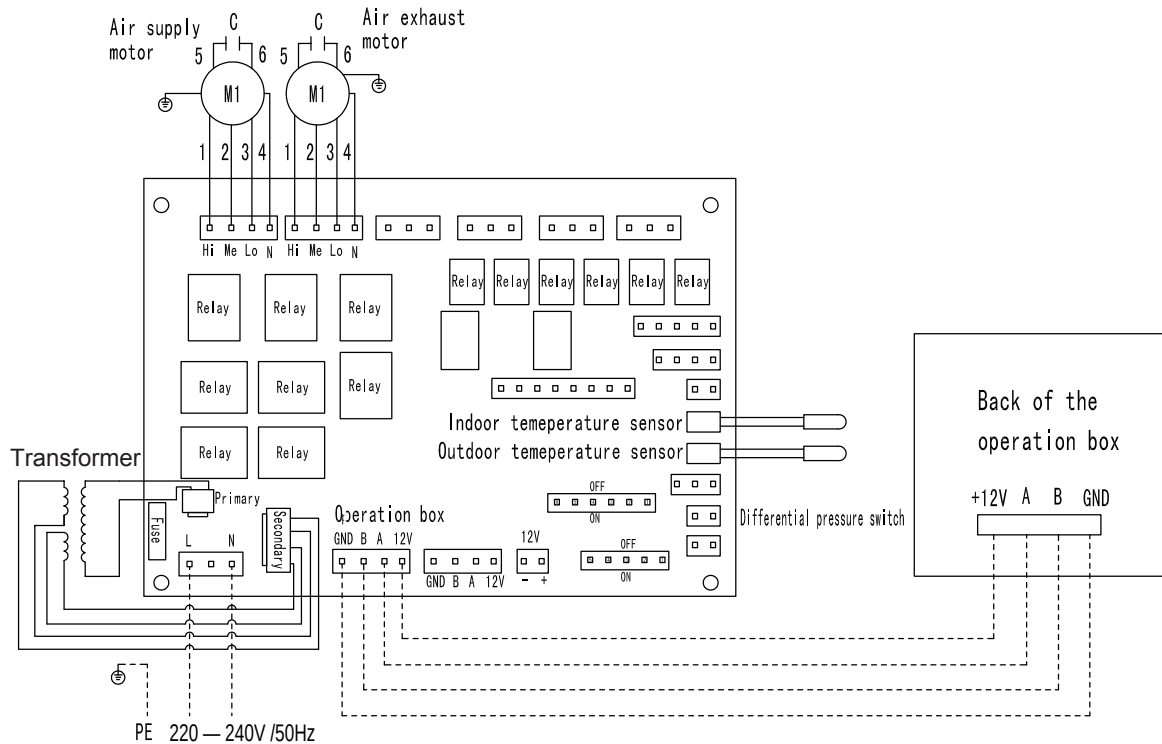


Fig. 5.2 Single-phase circuit connection diagram (HKF-15B1EC-100B1EC)

Note: the control lines between power line, terminal board of total heat exchanger and smart three-speed switch are of field wiring.

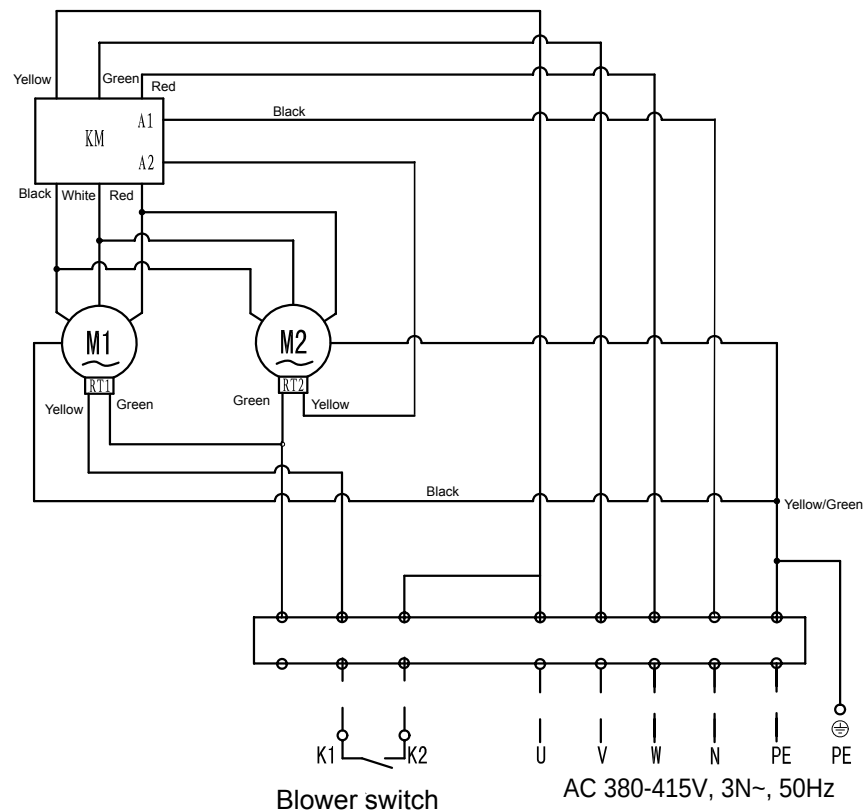


Fig. 5.3 Three-phase circuit connection diagram HKF-150B1EE-HKL-500B1EE)

Note: The connection of KM contactor, RT motor overheating protection contact and the dotted line part are implemented on site. The blower switch should be prepared by the contractor on site.

Minimum diameter of wires and power lines connected on site

Model	Power supply	Maximum current	Diameter of power line	Diameter of control line
			EN60 335-1 *1	EN60 335-1 *1
HKF-15B1EC(15B2EC) ~ HKF-100B1EC(100B2EC)	220 — 240V /50Hz	5A	2.5 mm ²	0.75mm ²
HKF-150B1EE(150B2EE) ~ HKL-500B1EE(500B2EE)	380 — 415V 3N/50Hz	9A	2.5 mm ²	0.75mm ²

The wire sizes marked with *1 in the above table are selected at the rated current of the unit according to the European Standard, EN 60335-1. Use the wires which are not lighter than the ordinary polyvinyl chloride sheathed flexible cord (code designation H05 VV-F).

Specifications of power line

Total current (A)	Wire size(mm ²)	※1 When the current exceeds 63A, serial connection is not allowed.
$I \leq 6$	2.5	
$6 < I \leq 10$	2.5	
$10 < I \leq 16$	2.5~4	
$16 < I \leq 25$	2.5~6	
$25 < I \leq 32$	4~10	
$32 < I \leq 40$	6~16	
$40 < I \leq 63$	10~25	
$63 < I$	※1	

Note:

- (1) Field lines(wires) shall be installed in accordance with local laws and regulations.
- (2) Refer to relevant standards for the above power line dimensions.
- (3) Shield lines will(shall) be used for the control system and shall be grounded.
- (4) Power lines shall be sheathed copper conductors(wires).
- (5) When the power lines are connected in series, add up the current values and select wires.
- (6) Between the power source and the unit, a switch that can ensure all-pole disconnection and this switch contact shall be 3mm away or more.
- (7) The grounding lines(wires) shall not be thinner than the power supply wires.

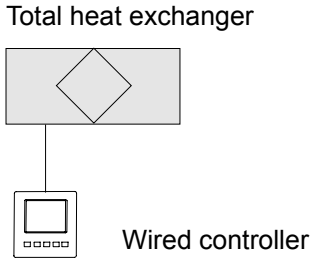
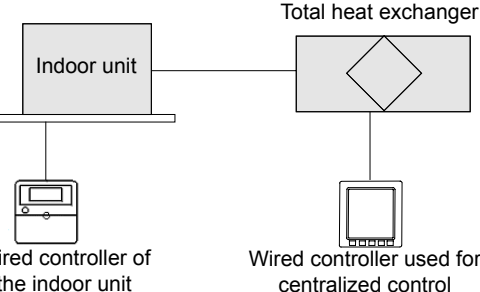
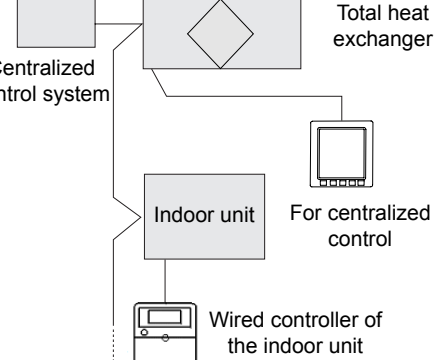
5.3 Centralized Control System

5.3.1 The product usually operates separately without centralized control function.

5.3.2 This product can be equipped with centralized control function at option when used in combination with Hisense multilevel air-conditioner system.

For the operation methods of indoor unit wired controller (wired remote control switch) and centralized controller, please refer to corresponding specifications.

System description

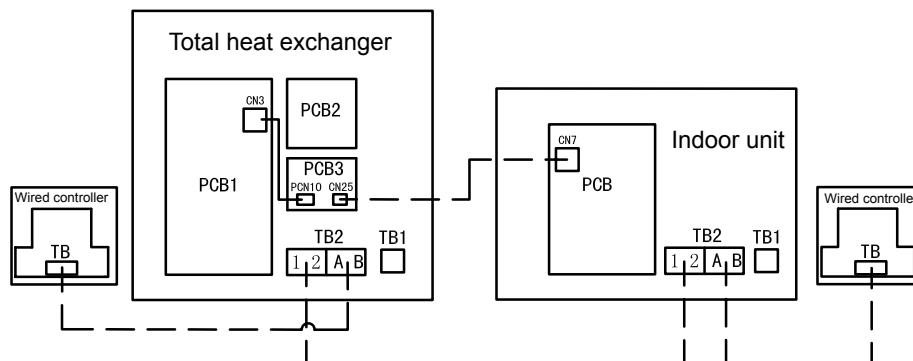
System example		Operation method
System description	Separate system  The diagram shows a rectangular box labeled 'Total heat exchanger' with a diamond symbol inside. A line connects it to a smaller box labeled 'Wired controller' which has a display screen and buttons.	The operation of the total heat exchanger can be started and shut down by wired controller.
	System used in combination with indoor unit  The diagram shows an 'Indoor unit' (a box with a display) connected to a 'Total heat exchanger' (a box with a diamond). Below the indoor unit is a 'Wired controller of the indoor unit'. Below the total heat exchanger is a 'Wired controller used for centralized control'.	The operation of the total heat exchanger can be controlled by the wired controller used for centralized control. The indoor unit and total heat exchanger can be uniformly controlled for startup and shutdown by the wired controller of the indoor unit.
	Centralized control system  The diagram shows a 'Centralized control system' (a box) connected to a 'Total heat exchanger' (a box with a diamond). The total heat exchanger is also connected to an 'Indoor unit' (a box with a display). Below the indoor unit is a 'Wired controller of the indoor unit'. A separate box labeled 'For centralized control' is also shown.	When the wired controller used for centralized control is connected, the operation of startup and shutdown can be executed by centralized controller, indoor unit or the wired controller used for centralized control. When the display screen shows "centralized control", the wired controller used for centralized control shall not be used for startup, shutdown or timing operation, and other operations can still be controlled by such wired controller.

5.3.3 Wire connection illustration description

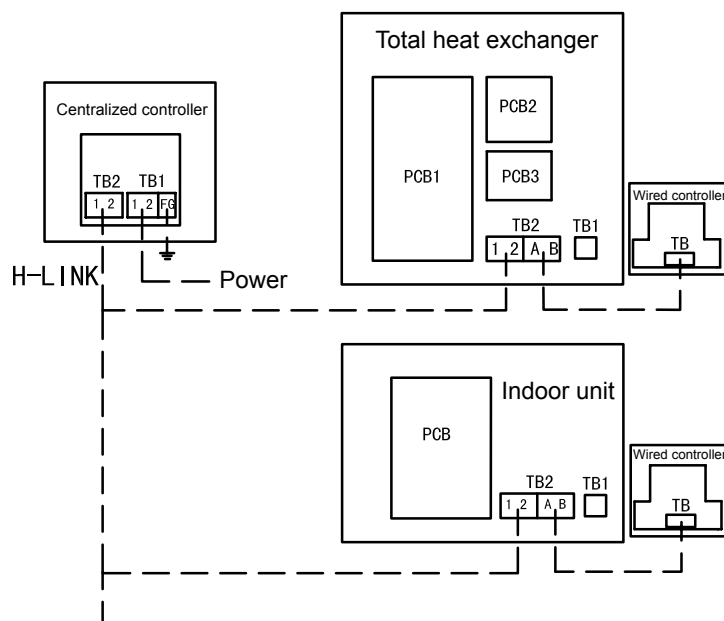
(1) Independent system connection diagram.

For details, see Fig. 5.2 and Fig. 5.3

(2) Connection diagram of the system combined with the indoor unit.

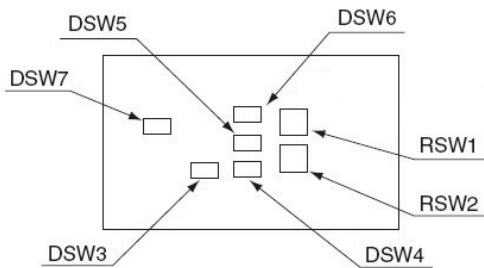


(3) Connection diagram of the centralized control system



DIP Switch Setting

- (1) The setting of DIP switch shall be performed when the unit power is OFF; otherwise, the setting is invalid.
- (2) The position of DIP switch is shown in the figure below.



- (3) The PCB in the unit is equipped with 2 rotary switches and 5 dip switches. Before testing run, set these dip switches according to the following instructions.

Do not start the unit unless these switches are setup.

- (a) Unit No. setting (RSW1&RSW6) Setting is required. Set the No. of all units respectively and serially, by following setting position shown in the table below. The unit number shall not be the same with that of other units in multi-link system.

Setting of address

	DSW6 (Tens digit)	RSW1 (Units digit)	Setting position
Setting method 1		 Set by inserting slotted screw driver into the groove.	 Set No. 1 pin ON Set at "6"
	DSW6 Set at No. 0-63		Ex) Set at No. 16 Unit
Setting method 2		 Set No. 5 pin ON	

Note: 8121 encoding method

Before shipment, DSW6 and RSW1 are set to "0".

Max. 64 indoor units are available to be connected.

Note: set according to setting method 1 when the machine has rotary switches.

set according to setting method 2 when the machine has no rotary switches.

Refrigerant Cycle No. Setting (RSW2&DSW5) Setting is required. Setting position before shipment is all OFF.

Setting of Refrigerant Cycle

Setting of Recharge Cycle			
Setting method 1	DSW5 (Tens digit)	RSW2 (Units digit)	Example Set at No. 5 Unit
Setting method 2	DSW5 Set at No. 0-63		Example Set at No. 5 Unit
Note: 8121 encoding method			

Before shipment, DSW5 and RSW2 are set to "0".

Max. 64 indoor units are available to be connected.

Note: set according to setting method 1 when the machine has rotary switches. set according to setting method 2 when the machine has no rotary switches.

- (b) Capacity Code Setting (DSW3)

No setting is required,

due to setting before shipment.

Capacity	Model
Setting position	1, 3, 4 are set to ON.

- (c) Unit Model Setting (DSW4)

No setting is required, due to setting before shipment. This switch is used to set unit model codes.



Note:

The symbol "■" indicates the position of DIP switch.

The position shown in the figure is the factory status.

Warning

Cut off power before setting DIP switch, otherwise, the setting will be invalid.

6. Test Run

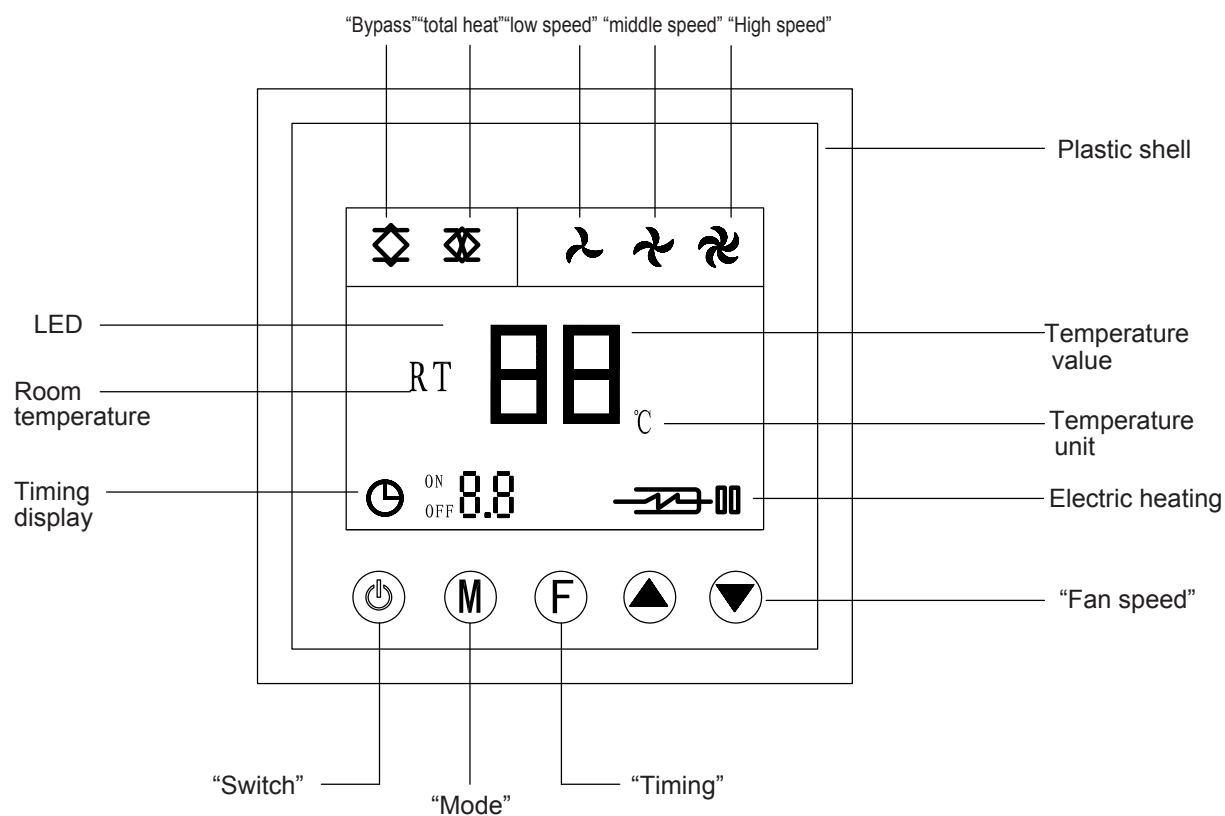
Test run should be performed according to "Installation & Maintenance Manual".

- (1) After lifting and adjusting the entire machine, energize according to the connection diagram and at the same time adjust the high, medium and low grades of the smart switch at any grade, then the machine starts working. Users can shift grades according to the pollution level of indoor air.
- (2) When shifting the grade of the smart switch, should be left 2-3 min between each grade, shift after the blower runs smoothly to ensure the service life of motor.
- (3) In case of abnormality, please shift special breaker to [OFF] immediately and confirm the wire connection again.

7. Instructions of wired controller

7.1 User interface (Used in HKF-15B1EC-100B1EC.)

The instructions of wired controller which used in HKF-15B2EC-HKL-500B2EE, shall be saw in the operation instruction of the wired remote control (Model No.HYXE-G01H)



7.2 Symbol description:

- *1) Mode:  Bypass Mode,  Total Heat Recovery Mode;
- 2) Fan speed:  High Speed,  Medium Speed,  Low Speed;
- 3) Temperature: RT indicates indoor temperature;  the temperature value, temperature unit;
- 4)  Timing open.ON means boot time,OFF means shutdown time.
 Timing length.
- *5)  Electric heating open.

7.3 Key description:

 Switch key, **M** Mode key, **F** Timing key,
 and  Fan Speed key

7.4 Function description:

- 1) For each time of pressing on  , it means startup or shutdown;
- *2) When the machine is on, for each time of pressing on **M** , the unit will shift between  mode and  mode. After the mode is confirmed, the icon will flash 5 times, confirm and enter into setting mode.
- 3) When the machine is on, for each time of pressing on  or  , the unit will shift in the sequence of “low-medium-high-low”. After selecting the air speed, the icon will flash 5 times, and the air supply blower and the air exhaust blower will operate at the set air speed.
- 4) When the machine is on, for each time of pressing on Timing key **F**, Timing Icon will appear, and the shutdown time will be increased or decreased 1 hour for each time of pressing  or  .Pressing on Time key again to confirm the set mode. The time setting will be canceled when pressing the Time key thirdly.
- 5) When the machine is off, for each time of pressing on Timing key **F** , Timing Icon will appear, and the boot time will be increased or decreased 1 hour for each time of pressing  or  .Pressing on Time key again to confirm the set mode. The time setting will be canceled when pressing the Time key thirdly.

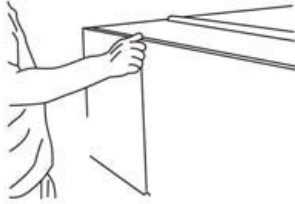
7.5 The temperature display is constantly turned on and can not be adjusted.

- * Note: 1. The bypass mode and Electric heating are only available on specified models. And standard configuration models have no bypass mode, and Electric heating. The pressing on mode key has no influence to the operation of the unit.
- 2. The wired controller is only used on models of single-phase power source,

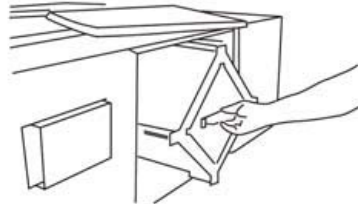
8. Maintenance

- After the machine is used for a period of time, as the dust, etc. in the indoor or outdoor air deposits on the surface of primary filter net, the net meshes may be blocked. If it is not cleaned timely, the air outlet may not supply air. (generally clean every 1000 hours)
- It is forbidden to clean the heat exchange core with water, instead, it is only allowed to draw the core out and absorb the attached dust with a dust collector. (generally maintain every 3000 hours)
The cleaning of the core needs to be done by your local agent.

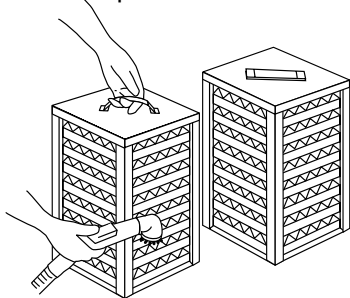
- Screw off the screws on the sealing plate of the machine, open the sealing plate, and the primary filter can be pulled out. Use clean water and a brush to remove the dust on its surface; after it is dried, push it into the machine again, install the sealing plate, and then it can be used again.



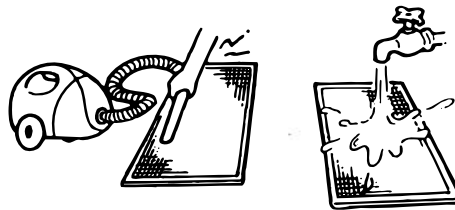
(1) Screw off the screws with a screwdriver and dismantle the middle panel.



(2) Pull out the filter net and core.



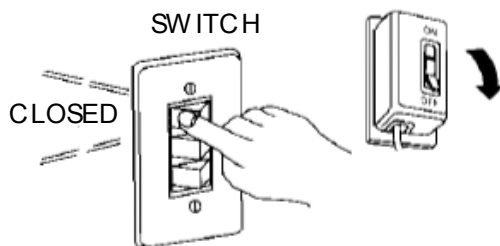
(3) Absorb the dust with a dust collector



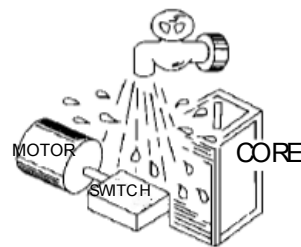
(4) Absorb the dust on the filter with a dust collector, clean it with clean water and a brush, and dry it.



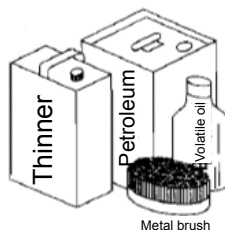
NOTE



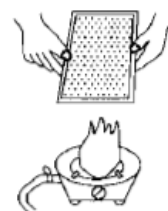
(1) Before maintenance, remember to turn off the switch and the special breaker



(2) The motor, switch and heat exchange core can not be cleaned with water.



(3) Above materials or appliances are forbidden to use.



(4) The heat exchange core, filter net, etc. can not be dried with fire.

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