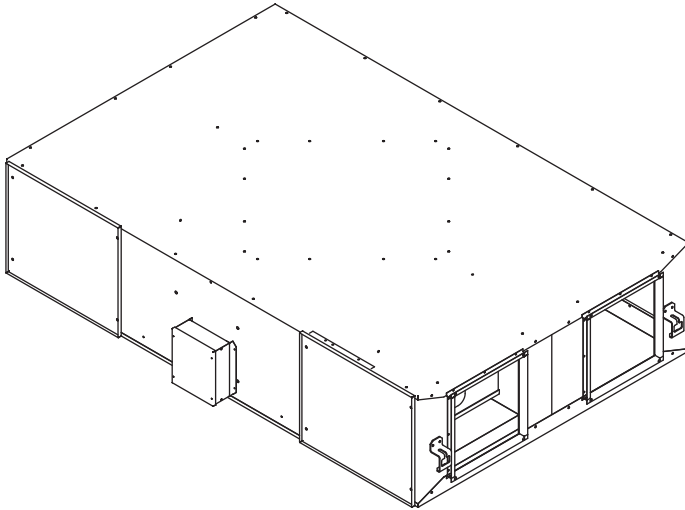


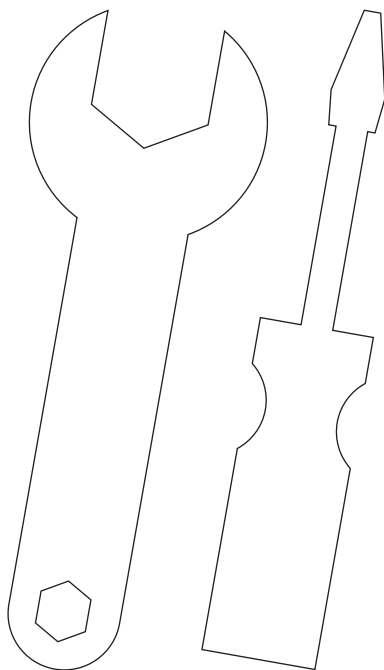


JAKKA heat recovery units JRH72N Series



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- This product must not be disassembled under any circumstances. Only authorized repair technicians are qualified to conduct disassembly and repairs.
 - Failure to heed this warning may result in fire, electrical shock or injury.
-



- Do not install this product in a refrigerated warehouse, heated swimming pool or other location where temperature and humidity are significantly different. (Failure to heed this warning may result in electrical shock or malfunctioning.)
 - Do not install this product where it will be directly exposed to rain. (Failure to heed this warning may result in electrical shock or malfunctioning.)
 - Do not install this product in a location where acid, alkali or organic solvent vapors, paints or other toxic gases, gases containing corrosive components or high concentrations of oily smoke are present. (Failure to heed this warning may result not only in malfunctioning but also fire, power leakage and electrical shock.)
 - Do not use this product outside the range of its rated voltage and control capacity. JRH72N; Single phase, 220-240V, 50 Hz. (Failure to heed this warning may result in fire or electrical shock.)
-



- Install this product in an environment where the temperature ranges from -12 °C to +46 °C and the relative humidity is less than 80%. If condensation is expected to form, heat up the fresh outside air by a duct heater etc.
 - Select a position for introducing the outside air where no exhaust or combustion gases will be sucked into the fresh air duct and where it will not be covered by snow (Failure to ensure a supply of air can result in producing a state of Oxygen deficiency inside the room.)
 - Select an adequately sturdy position for installing the product and install it properly and securely. (Injury may result if the product should fall.)
 - Use the designated electrical wires for the terminal board connections and connect the wires securely so that they will not be disconnected. (Failure to ensure proper connections may result in fire.)
 - When passing metal ducts through wooden buildings clad with metal laths, wire laths or metal, these ducts must be installed in such a way that they will not make electrical contact with metal laths, wire laths or metal sheets. (Power leakage can cause ignition.)
 - The outside ducts must be tilted at a gradient(1/30 or more) downwards toward the outdoor area from the main unit, and properly insulated. (The entry of rain water may cause power leaks, fire or damage to household property.)
 - Gloves should be worn during installation. (Failure to heed this warning may result in injury.)
 - A dedicated circuit breaker must be installed at the origin of mains power supply. This circuit breaker must be provided with a means for locking (lock and key).
-



- Connect the product properly to the ground. (Malfunctioning or power leaks can cause electrical shock.)
-



- An isolator switch having a minimum contact gap of 3 mm in all poles must be provided as a means of disconnecting the power supply.

Control List



NOTE

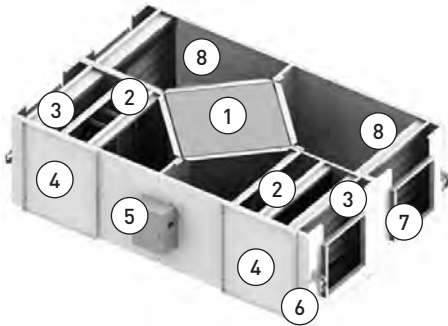
► Control procedures required after commissioning and in case of a malfunction are listed below. In the event of further malfunction after initial controls, consult to our company.

CONTROL LIST



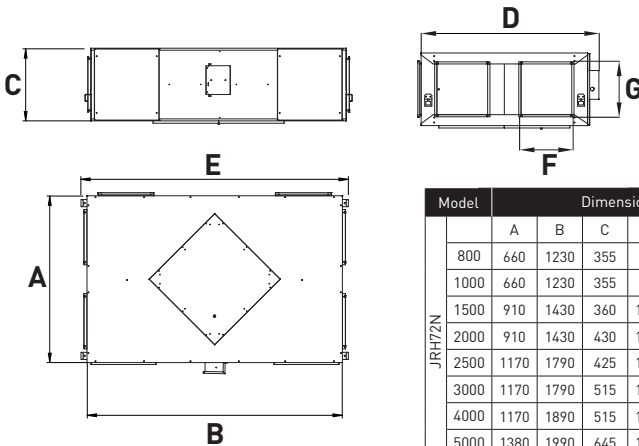
- | | | |
|----|--|--------------------------|
| 01 | Make sure the unit receives power and grounding is done! | <input type="checkbox"/> |
| 02 | Make sure the length of electric cables is correct! (Check for overheating on cables!) | <input type="checkbox"/> |
| 03 | Check if the cables heading to the electrical box are shielded (protected against magnetic field) and shield is grounded. If not, replace! | <input type="checkbox"/> |
| 04 | Check if the exhaust and supply filters are clean and make sure they do not prevent air flow! | <input type="checkbox"/> |
| 05 | Make sure the drain hose is connected and check for any blockages through the drain line! If needed, clean it! | <input type="checkbox"/> |
| 06 | Please check that the duct dimensions used in the duct system are correct and of the same dimension of the units duct connection. If wrong correct it with appropriate one. | <input type="checkbox"/> |
| 07 | Make sure electrical connections are done as it is described in this manual. Make necessary corrections if there is any faulty connection. | <input type="checkbox"/> |
| 08 | Make sure there is enough service space for installation. If not, repeat installation. | <input type="checkbox"/> |
| 09 | In extremely cold climates in which freezing may occur on the heat recovery unit, use electric pre-heater at the fresh air suction to raise the air temperature to -8 °C or above. | <input type="checkbox"/> |
| 10 | Check for unusual noise or vibration after the installation. If there is, control if anti-vibration pads are used. | <input type="checkbox"/> |

Components



- 1 Heat Recovery Exchanger
- 2 Fresh Air and Exhaust Air Fans
- 3 Fresh Air and Exhaust Air Filters
- 4 Filter and Fan Service Cover
- 5 Electrical Box
- 6 Sub Hangers
- 7 Duct Connectors
- 8 Alternative Duct Connections

Dimensions



Model	Dimensions							Weight (kg)	
	A	B	C	D	E	F	G		
JR72N	800	660	1230	355	795	1312	200	200	51
	1000	660	1230	355	795	1312	200	200	52
	1500	910	1430	360	1045	1510	170	270	72
	2000	910	1430	430	1045	1510	250	300	84
	2500	1170	1790	425	1300	1870	300	300	103
	3000	1170	1790	515	1300	1870	370	370	116
	4000	1170	1890	515	1300	1970	370	370	125
	5000	1380	1990	645	1455	2070	430	430	186
	6000	1380	1990	645	1455	2070	430	430	199

Technical Specification

	Units	Model								
		JR72N								
		800	1000	1500	2000	2500	3000	4000	5000	6000
Mains Connection		1~230 V 50 Hz								
Working Range		-12°C ~ 46°C and RH ≤ 80%								
Performance Data										
Air Flow Rate [1]	[m³/h]	865	1112	1500	1900	2500	2970	3830	4980	6100
Sound Level [2]	[dB (A)]	44	45	46	48	49	50	52	53	59
Electrical Data										
Fan Motor Power	[W]	2x135	2x220	2x303	2x515	2x515	2x540	2x650	2x890	2x1,270
Maximum Current	[A]	2x0,63	2x0,90	2x1,30	2x2,25	2x2,25	2x2,30	2x2,70	2x3,80	2x5,30

¹It is measured when external static pressure is 0 Pa.

²Sound level data are measured at 250 Hz and 1.5 m away from the unit's bottom.

Installation

Checking Product Received

After receiving the product, inspect for any shipping damage. Claims for damage, either apparent or concealed, should be filed immediately with the shipping company.

Check for the model number and electrical properties like power supply, voltage and frequency whether they fit your demand or not.

The installation and operation of the unit must be done as explained in this manual; the utilization of the unit other than those indicated in these instructions is not recommended.

Please contact your local agent for any discrepancy.

Our liability shall not cover any defects arose from the alterations performed by a customer without our written approval.



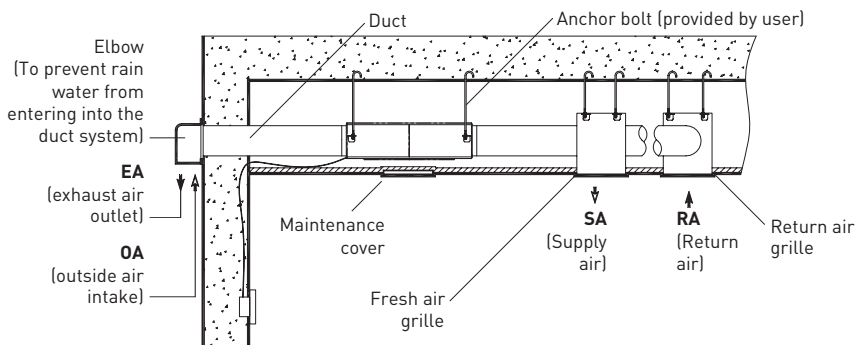
WARNING

- ▶ Do not perform installation work and electrical wiring connection without referring to the Installation and Operational Manual.
 - ▶ Check that the ground wire is securely connected.
 - ▶ Connect a fuse of specified capacity.
-



CAUTION

- ▶ Do not install the unit, remote controller and cable within approximately 3 meters from strong electromagnetic wave radiators.
-



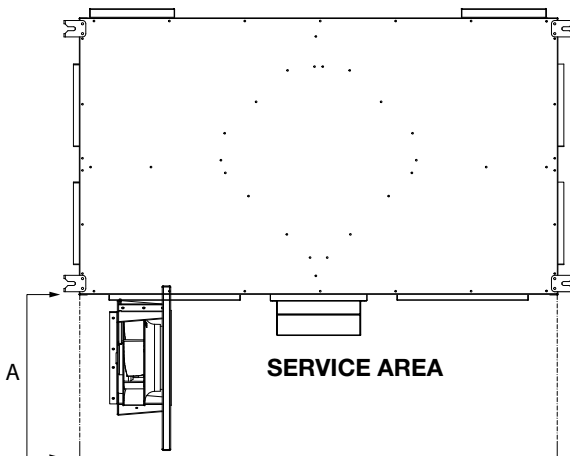
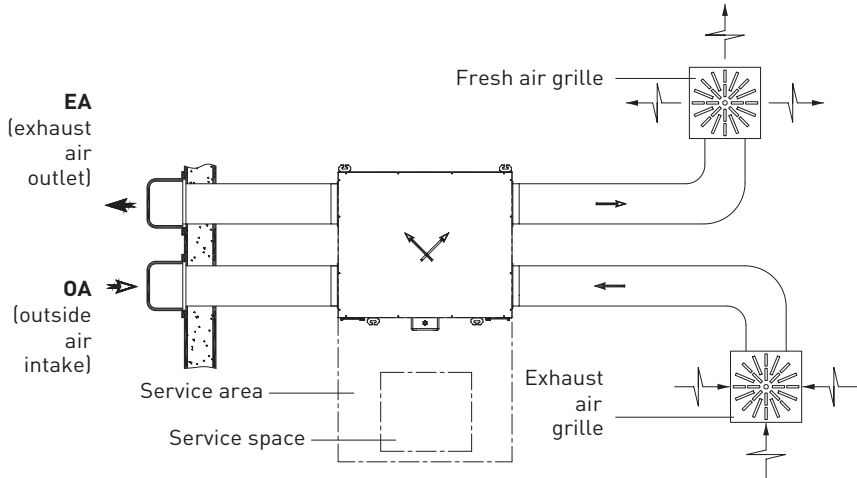
Mounting the Appliance

JRH72N series appliances can directly be mounted on a vibration-free solid wall with the suspension parts supplied for installation purpose. The screws must be applied in a torque enough to secure a rigid connection. The other part is mounted to the wall and used as a hanger to fix the unit. Following aspects must be considered during mounting of the unit.

- 1 The appliance must be mounted level.
- 2 The installation space must be freezing free.

Connecting the ducts

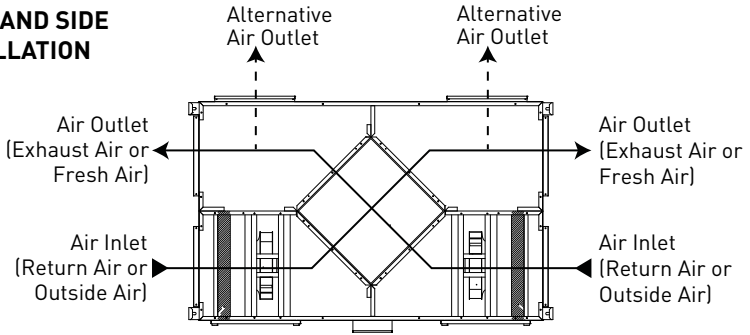
The duct connections in the unit are made of ABS material hence do not need additional insulation. After connecting the unit; make sure that there is no leakage between the duct connections of the unit and the duct. Use a duct tape where necessary.



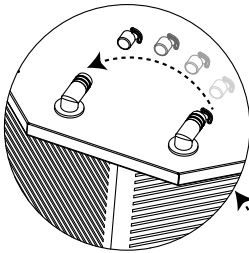
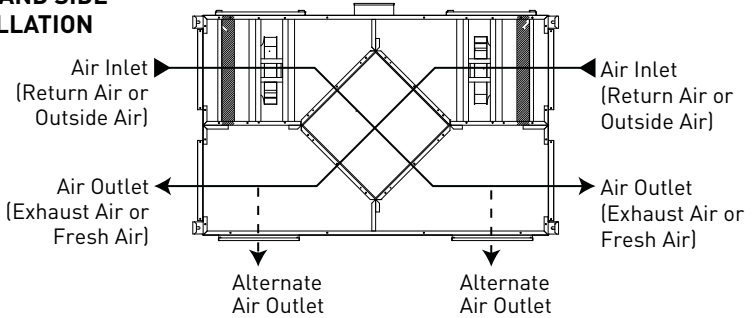
MODEL	DIMENSIONS	
	A	
	mm	
JRH72N	800	300
	1000	300
	1500	430
	2000	430
	2500	570
	3000	570
	4000	570
	5000	650
6000	650	

Installation

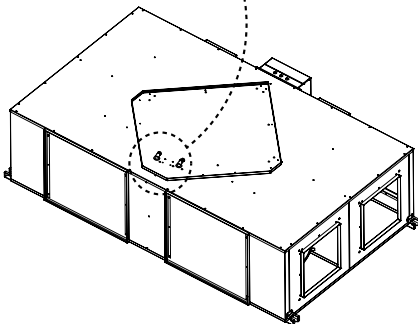
RIGHT HAND SIDE INSTALLATION



LEFT HAND SIDE INSTALLATION



▶ Install the drain plug on the side of the fresh air.



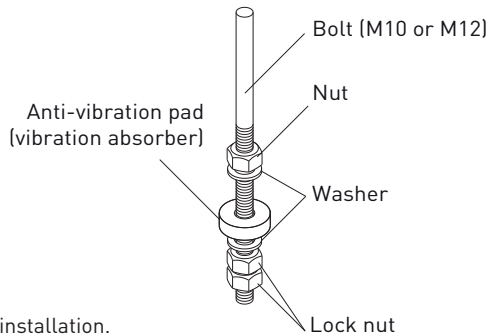


CAUTION

- ▶ Before connecting the ducts, check that no sawdust or any other foreign material (scaps of paper, vinyl, building material etc.) exist in the ducts.
- ▶ Make sure service doors open easily and fan/ filter can be pulled out.
- ▶ Pay attention to the warnings before connecting the units to ducts.

Preparation of roof bolts

Hang the rubber anti-vibration pad to the bolt and balance the unit so that it remain horizontally. Make sure the unit is attached securely with a lock nut.



CAUTION

- ▶ Control the strength of the bolts before installation.



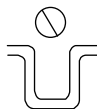
CAUTION

- ▶ Do not install the ducts as shown on the following figures. Doing so will increase the pressure drop, decrease the air volume from the unit and give rise to abnormal sounds.

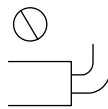
Extremely sharp bends



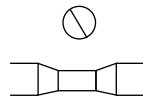
Multiple Bends



Bends right next to the outlet.



Sudden contraction and/or expansions in duct diameter



The distribution ducts should be connected to the unit through rigid or semi flexible ducts in order to avoid abnormal sounds and vibration. Flexible ducts may also be used ensuring that the structure of the duct does not block the air stream and cause vibration. The unit is equipped with pre-drilled duct flanges made of ABS for distribution duct connections.

- 1 Set the supplied ABS-made duct adapter to each duct connection to assure a good junction of the ducts.
- 2 Fit the ducts securely into the duct connection flanges and wind Aluminum tape to prevent air leakages.
- 3 Suspend the ducts from the ceiling so that their weight will not be applied to the unit.
- 4 The outdoor ducts must be covered with heat insulating material in order to prevent forming of condensation.

Maintenance



WARNING

- ▶ Disconnect all electric power, including remote disconnects before servicing. Follow proper lockout / tagout procedures to ensure the equipment cannot be inadvertently energized. Secure drive sheaves to ensure rotor cannot freewheel. Failure to secure drive sheaves or disconnect power before servicing could result in death or serious injury.
-

Filter Maintenance

For best performance, clean up the air filters periodically. Best on every 3 operating months, or at least once per year.

Change filters after cleaning them 6 times, or earlier if necessary.



WARNING

- ▶ Do not start system without air filters properly installed and inspection doors screwed. Otherwise, blockages in heat exchanger may occur.

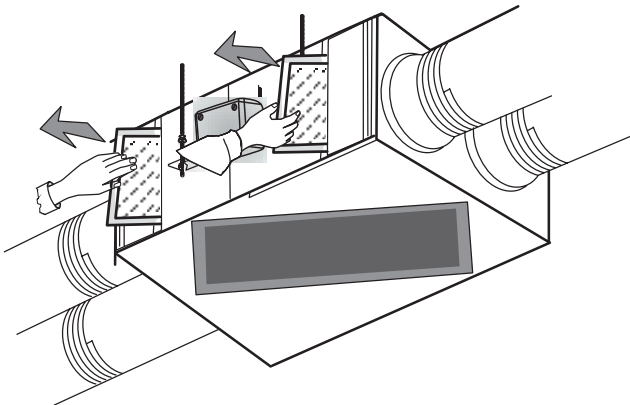


HOW TO ACCESS FILTERS

STEP 1 ▶ To open the service door, remove out 4 screws on the service cover.

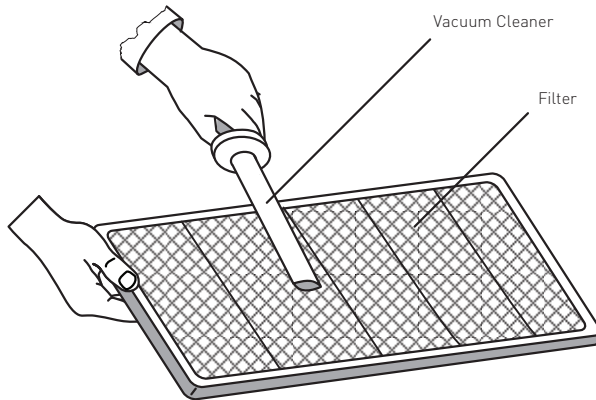
STEP 2 ▶ With the opened service door, the filter service holes for fresh air filter(s) and return air filter will be visible.

STEP 3 ▶ Remove the filter(s) as shown in the figure and do the maintenance as described in this manual.



i NOTE

- ▶ JAKKA Controllers for this units have a preset timer to monitor filter occupancy according to factory set timer. Remote controller informs the user to check the filters. After the filters are cleaned by the user, filter warning alarm must be reset.



Clean the filter with a vacuum cleaner. To remove dense dust build-ups, prepare a solution with cold water and natural detergent or soap powder and submerge the filter in the solution. Later pull out the filter from the solution and leave it to dry. In any case, do not scrub or apply force on the filter material. After it is completely dry, mount the filter to the unit, close the service door and tighten the screws thoroughly.

i NOTE

- ▶ It may be handy to keep spare clean and dry filters for quick replacement of dirty filters to minimize unit downtime for filter maintenance.

Exchanger Maintenance

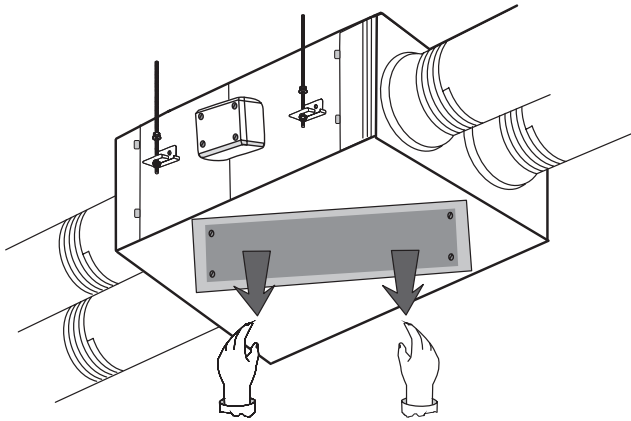
For best performance, clean up the air exchanger periodically.
If the filters are maintained regularly, clean exchanger at least once in every two years.

? HOW TO ACCESS EXCHANGER

STEP 1 ▶ To open the service cover that is located on the bottom side of unit, unscrew and remove out 4 screws that secure the heat recovery exchanger service cover.

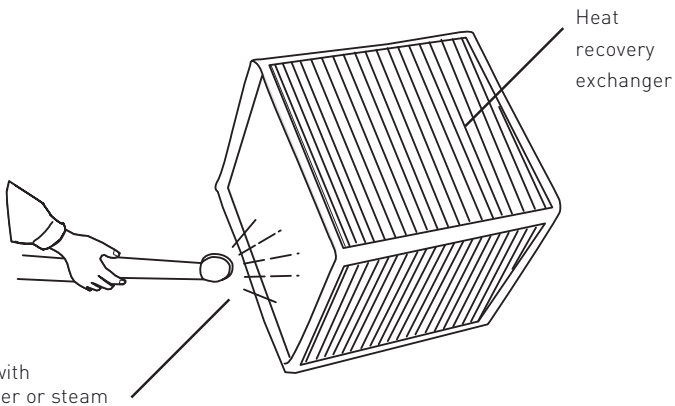
STEP 2 ▶ While performing removal of service cover make sure heat recovery exchanger does not fall down.

Maintenance



i **NOTE**

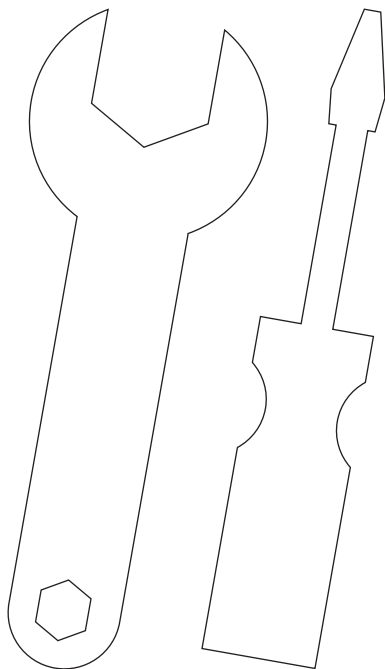
► Minimum mass of exchanger is 12 kg, and maximum mass of exchanger is 55 kg.



Clean the heat recovery exchanger with hot water or steam. Use natural detergent or soap powder if need be. Leave it to dry after cleaning and mount it to the unit after it is completely dry. Tighten the service cover screws thoroughly and make sure the heat recovery exchanger does not fall down.

Troubleshooting

FAULT	REASON	SOLUTION
FANS DO NOT WORK	a. Power supply off	a. Turn on the power supply
	b. No signal from the control panel	b. Press the correct buttons of the control panel
	c. Incorrect or loose electrical connection	c. Connect connections correctly
	d. Motors in thermal protection mode	d. Check motor current
	*e. No signal from the frequency inverter	*e. Check the error code on the frequency inverter's screen
FANS RETURN TO REVERSE DIRECTION	a. Phase connection is not correct	a. Make the correct phase connection
LOW AIR FLOW	a. Filters clogged or dirty.	a. Change or clean filters
	b. Air duct is clogged	b. Check the air ducts
	c. Channel connections are incomplete.	c. Check the duct system for leaks and complete the connections
HIGH AIR FLOW	a. Channel connections are incomplete.	a. Check the duct system for leaks and complete the connections
	b. Supply voltage is low	b. Measure the current drawn by the motor against overloading
	c. Grilles are not mounted	c. Mount the grilles
	d. Filters are not mounted	d. Mount the filters
DRAINAGE WATER CAN NOT BE DISCHARGED	a. Drainage plugged	a. Clean drain pipe
	b. Incorrect installation of drainage pipe.	b. Mount the drain pipe correctly



► For Troubleshooting **Please Contact**

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