



INSTRUCTION MANUAL

FOR CUSTOMERS

(FOR CENTRAL HEATING AND AIR-CONDITIONING : A C F - 1)

MODEL (SENSITIVE HEAT EXCHANGER)

24HEC12P

24HEC15P

24HEC25P

24HEC35P

◇BEFORE USING IT, READ "1. OBEY THE PROCEDURE FOR SAFETY" TO USE IT CORRECTLY AND SAFELY

◇KEEP THIS MANUAL FOR FUTURE REFERENCE.

—CONTENTS—


1. OBEY THE PROCEDURE FOR SAFETY
2. OUTLINE OF CENTRAL HEATING AND AIR-CONDITIONING SYSTEM
3. DESCRIPTION AND FUNCTION OF PRODUCTS
4. HOW TO OPERATE
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6. INSPECTION AND AFTER-SALE SERVICE
7. PRODUCT SPECIFICATION






 **協立エアテック** 株式会社
KYORITSU AIR TECH INC.





THIS INSTRUCTION MANUAL CAN BE REVISED BY IMPROVEMENT OF PRODUCTS WITHOUT A NOTICE.

1. OBEY THE PROCEDURE FOR SAFTY

- Make sure to read this "OBEY THE PROCEDURE FOR SAFTY" before using this product
- Here is written about important matters regarding to safety.
Follow them to avoid be injuring and/or damaging.

 WARNING	This shows that the dangerous level is afraid of death or heavy injury.	 CAUTION	This shows that the dangerous level is afraid of injury or equipment damaged.
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 WARNING	
 <small>DISASSEMBLE PROHIBITION</small>	<ul style="list-style-type: none"> ● Must not disassemble nor modify a device. Otherwise it causes fire, electric shock, damage or injury by irregular action
 <small>WET PROHIBITION</small>	<ul style="list-style-type: none"> ● Must not get a product wet. Otherwise it causes fire or electric shock.
 <small>Gas PROHIBITION</small>	<ul style="list-style-type: none"> ● If there is a gas leakage risk, must not use it. Otherwise it causes explosion or ignition.
 <small>MUST FOLLOW INSTRUCTIONS</small>	<ul style="list-style-type: none"> ● Use it under the specified power (AC 100V). Otherwise it causes electric shock. ● While maintenance, turn off a circuit breaker first. It causes injury if clothes were caught in the machine or electric shock. ● CENTRAL HEATING AND AIR-CONDITIONING SYSTEM is for a general residence and the airflow of ventilation is designed for a general life. If there are so many residents or there is a foul smell, also ventilate by the other way such as opening windows.

 CAUTION	
 <small>Use prohibition</small>	<ul style="list-style-type: none"> ● If you feel an unusual noise or an unusual smell from the device while operating, stop to operate it and turn off a circuit breaker. Otherwise it causes fire or electric shock.
 <small>Prohibition</small>	<ul style="list-style-type: none"> ● Make sure to install a middle-efficiency filter before operation. It causes a machine trouble by dust in the product.
 <small>MUST FOLLOW INSTRUCTIONS</small>	<ul style="list-style-type: none"> ● While taking maintenance, make sure to work with gloves to protect your hands. Otherwise it causes injury of a hand by sharp parts of a metal device. ● While taking maintenance, watch your feet and step on a steady stand. If you wear slippers or step on an unsteady stand, it causes slipping and falling down, or a damage. ● Clean and replace a middle-efficiency periodically. It causes performance down or machine trouble by garbage or dust. ● Inspect a drain pan periodically. If water overflows from a drain pan, it soils a ceiling. ● Install each part accurately. It causes performance down, injury by fall down or damage. ● Dry middle-efficiency filters out thoroughly after cleaning. causes electric shock, machine trouble or rust. ● If the device shall not be operated for a long time, cut circuit breaker of a distribution board. Otherwise it can cause electric leakage or fire.

2. OUTLINE OF CENTRAL HEATING AND AIR-CONDITIONING SYSTEM

● Prevent you from Sick House Syndrome

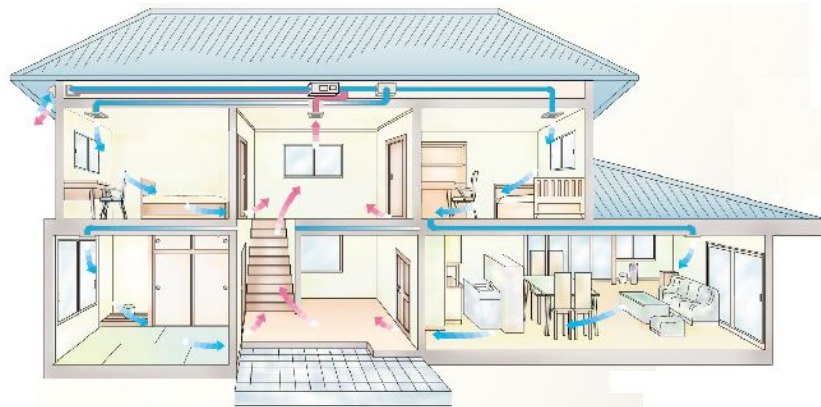
Sick House Syndrome as a present problem means that human may experience eye, nose, and throat irritation, stuffiness, "spaciness", skin rashes, headaches, nausea, flu-like symptoms. And the residents in a new built or renewal house often have such symptoms. One of the cause's opinions is a chemical matter emitted from building materials, furniture or daily necessities. Especially women, old people or babies are hazardous to their health to occupy as a result of airborne pollutants. So the Japanese Building Standards Act was amended to discharge chemical matters by mechanical ventilation. This product obeys the Act.

● Indoor to be comfortable space

This product gives air conditioning in whole house, so any room is comfortable in all season.

● Change supply air into healthy air

Recently outdoor air pollution increases gradually. So this product supplies fresh air through a middle-efficiency filter from outdoor air to eliminate pollen, fine particles and dust.



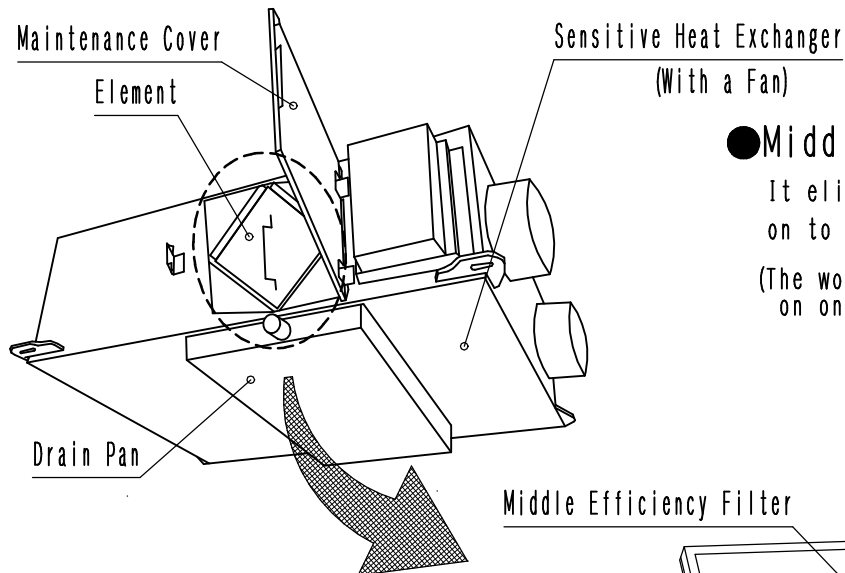
Energy saving ventilation system with a sensitive heat exchanger for all rooms

Central heating and air-conditioning system can continue to supply fresh air into indoor and exhaust dirty air to outdoor by 24 hours operating.

3. Description of the product and function

Sensitive Heat Exchange

<24HEC12P~24HEC35P>

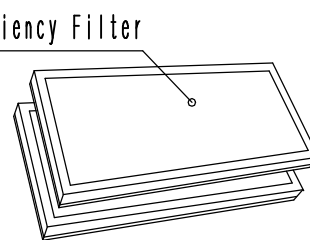


※This portrait shows the Sensitive Heat Exchanger opening an inspection door.

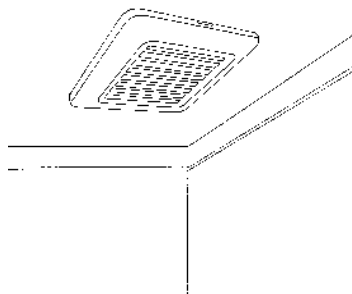
●Middle Efficiency Filter

It eliminates pollen, dust and so on to supply clean air into rooms.

(The word "Element Side" is printed on one side of the filter.)



Supply / Exhaust grill



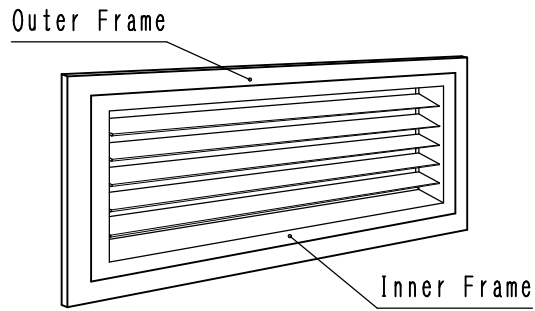
●Supply Grill

Fresh air which is heat-exchanged diffuses into a room through the grill.

●Exhaust Grill

Exhaust air is exhaust out of a room through the grill.

Filter Return Grill (SFTR)

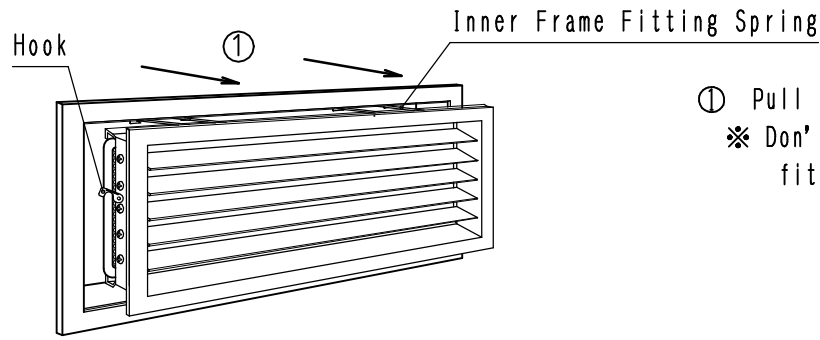


- Install a FILTER RETURN GRILL in a corridor to exhaust conditioned air from a room through it intensively. The exhaust air circulates in an air conditioning unit and return to room again.

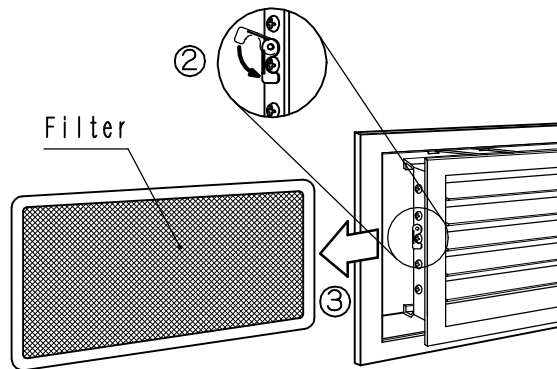
- If a lot of dust is stuck on a filter and long operation, it causes decreasing airflow or performance down by clogging up. Clean up or replace the filter periodically.

※Once per mont

【How to remove a filter】

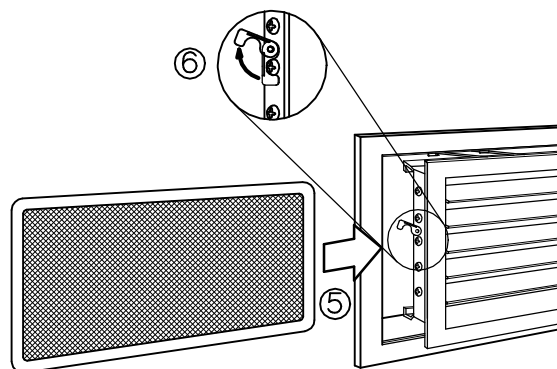


- ① Pull out an inner frame.
※ Don't remove an inner frame fitting spring.



- ② Unlock the hook
- ③ Remove a filter
- ④ Clean the filter

※Regarding to a filter cleaning method, see chapter "5. HOW TO MAINTAIN - how to maintain a filter return grill (SFTR)."



- ⑤ • ⑥ Put back the filter in a reverse sequence.

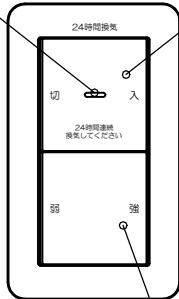
- ⑦ Lastly push an inner frame into an original position.

4. HOW TO OPERATE

Control Switch

Operation Indicator Lamp
It indicates operation/stop situation by the lamp's color.

Operation Button
Operate or stop a ventilation unit.



Airflow Arrangement Button
Arrange fast/slow airflow

Warning



DISASSEMBLE PROHIBITION

● Must not disassemble nor modify a device. Otherwise it causes fire or electric shock



WET PROHIBITION

● Must not get a switch button wet. Otherwise it causes fire or electric shock.



MUST FOLLOW INSTRUCTIONS

● While maintenance, turn off a circuit breaker first. It causes electric shock.

CAUTION



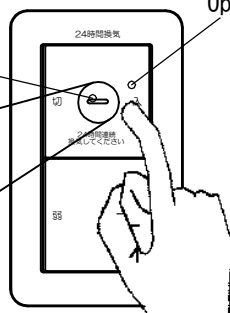
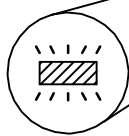
MUST FOLLOW INSTRUCTIONS

● If the device shall not be operated for a long time, cut circuit breaker of a distribution board. Otherwise it can cause electric leakage or fire.

How to operate

【Operation】

Operation indicator lamp
It indicates operation/stop status by lamp color.



Operation Button

At operating : Red
At stopping : Lamp Off

● Turn on the power of a distribution panel.

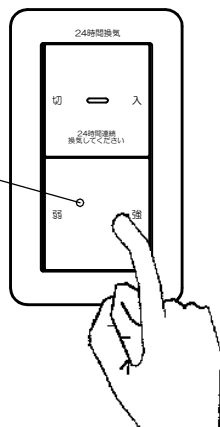
● ON: Push an operation button “入 (on)”.
(Indicator lamp: red)

● OFF: Push a stop button “切 (off)”.
(Indicator lamp: off)

※ This product is for 24 ventilation system.

【Airflow control】

Airflow control switch







● Usually operate with “強 (fast)” mode

● In case of decreasing airflow (in winter)
When you push “弱 (slow)” switch, operation mode changes slow mode.

* But totally ventilation airflow decreases.

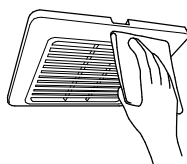
5. HOW TO MAINTENANCE

⚠ Warning	
 <small>DISASSEMBLE PROHIBITION</small>	<ul style="list-style-type: none"> ● Must not disassemble nor modify "HOUSEECO 24". Otherwise it causes fire or electric shock
 <small>MUST FOLLOW INSTRUCTIONS</small>	<ul style="list-style-type: none"> ● While maintenance, turn off a circuit breaker first. It causes injury if clothes were caught in the machine or electric shock.

⚠ CAUTION	
 <small>Prohibition</small>	<ul style="list-style-type: none"> ● Make sure to install a middle-efficiency filter before operation. It causes a machine trouble by dust in the product.
 <small>MUST FOLLOW INSTRUCTIONS</small>	<ul style="list-style-type: none"> ● If the device shall not be operated for a long time, cut circuit breaker of a distribution board. Otherwise it can cause electric leakage or fire. ● While taking maintenance, make sure to work with gloves to protect your hands. Otherwise it causes injury of a hand by sharp parts of a metal device. ● While taking maintenance, watch your feet and step on a steady stand. If you wear slippers or step on an unsteady stand, it causes slipping and falling down, or a damage ● Clean and replace a middle-efficiency periodically. It causes performance down or machine trouble by garbage or dust. ● Inspect a drain pan periodically. If water overflows from a drain pan, it causes soiling a ceiling. ● Install each part accurately. It causes performance down, injury by fall down or damage. ● Dry middle-efficiency filters out thoroughly after cleaning. It causes electric shock, machine trouble or rust.

(1) Supply/Exhaust grill cleaning procedure

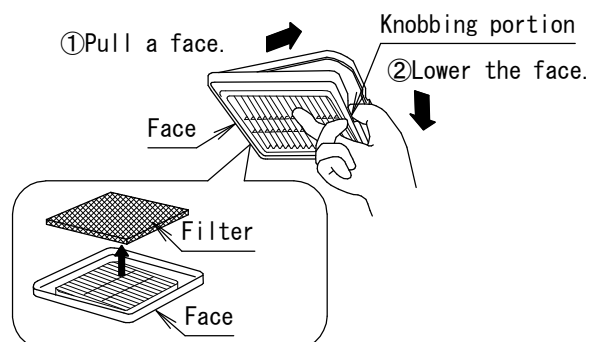
【Grill cleaning procedure】



- Soak clothes in neutral detergent water and then wring out them. Wipe up dirty with the clothes from grill's surface.

Note) When an organic solvent, alcohol, and the scouring powder, etc. are used the grill is hurt.

【Filter cleaning procedure】



- Clean up a filter once around 2 months.
- Grasp a knobbing portion and remove a face as ①→② sequence.
- Beat the dust out of the filter lightly.

- In case of heavy dusty, clean up in neutral detergent water and then make it natural dried up.
Note) Must not wash it strongly nor wash it in hot water.
Note) Dry a filter up perfectly.

- After the filter is dried perfectly, carry it on the face and install in original place of flange
- In case of a filter damaged, replace it with a new one.
(Please give us a purchase order for it.)

(2) How to maintain Sensitive Heat-Exchanger

●While maintenance, stop to operate an air-conditioning unit and a sensitive heat-exchanger, and turn off a power supply.

It causes injury if clothes were caught in the machine or electric shock.

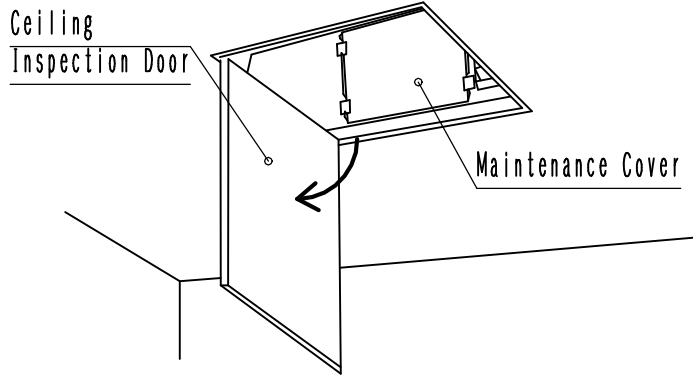
●While taking maintenance, make sure to work with gloves to protect your hands.

Otherwise it causes injury of a hand by sharp parts of a metal device.

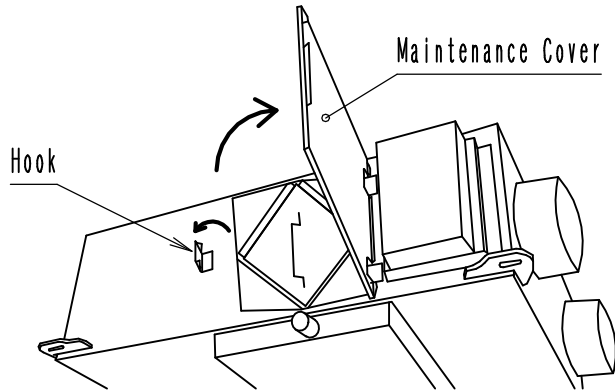
●While taking maintenance, watch your feet and step on a steady stand.

If you wear slippers or step on an unsteady stand, it causes slipping and falling down, or a damage.

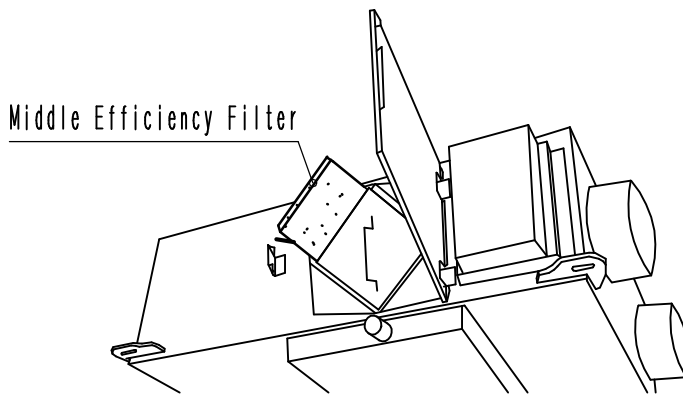
【Middle efficiency filter removal procedure】



① Open an inspection door on ceiling



② Unlock a hook and then open the maintenance cover.

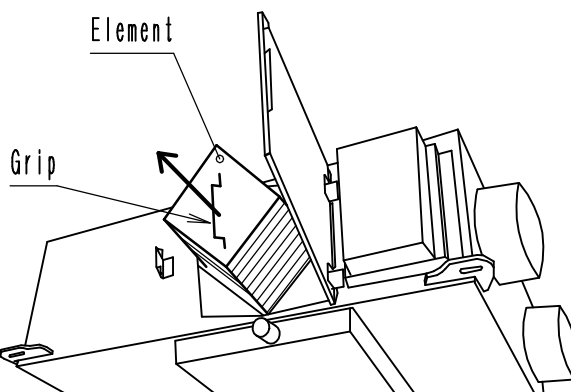


③ Pull off middle efficiency filters in right and left sides over an Element.

※Pay attention not to drop them down while working.

※The word "Element Side" is printed on back side of the filter.

※Do not pull out filters of bottom of an Element.



④ Grasp a grip of an element with one hand and support bottom of an element with the other, and then pull an element out.

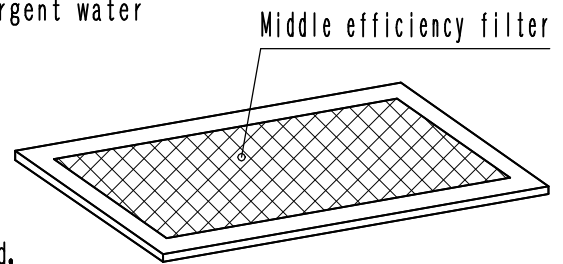
※Pay attention not to drop them down while working.

【Middle efficiency filter cleaning procedure】

※A middle efficiency filter of SFTR or a sensitive heat-exchanger should be cleaned once per a month.

- When you clean a filter, clean up in neutral detergent water and then make it natural dried up.

Note) Must not wash it strongly nor wash it in hot water.

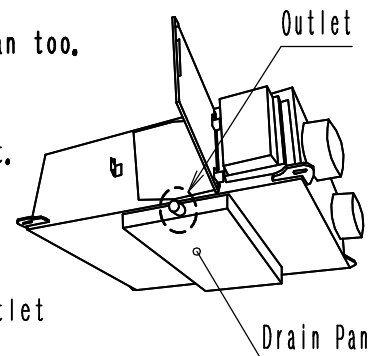


- If a middle efficiency filter is broken or damaged, replace it with a new filter.
- When you order it, please contact us.
(See a chapter "6. Inspection and after sale Service" about contact to us.)

【How to inspect a drain pan】

※When you clean a middle efficiency filter, inspect a drain pan too.

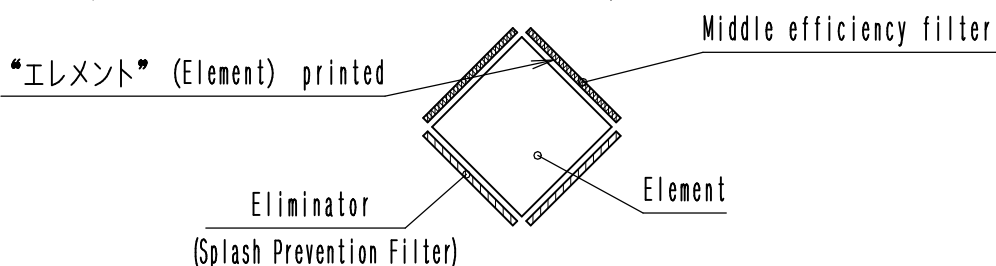
Check "whether water is discharged fully from a drain pan" after you had pulled out a middle efficiency filter/element.



- If water is not discharged well, remove garbage around a outlet because water can be stopped by the garbage.
(If water overflows from a drain pan, it causes soiling a ceiling.)

【Note for installation】

- Install a middle efficiency filter whose "element printed side" should be set in the body as a below illustration.



Note) Check whether a middle efficiency filter is dried out thoroughly before installation.

Note) Must not pull an Eliminator (Splash Prevention Filter) out of the product. Otherwise it causes electric shock, machine trouble or rust by splashed water. Furthermore it causes soiling a ceiling.

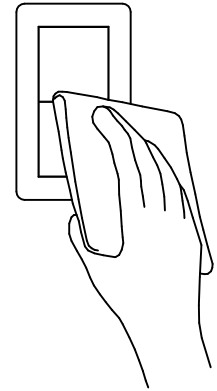
- Put back the filter in a reverse sequence as "5. HOW TO MAINTENANCE - Middle efficiency filter removal procedure"
- Make sure to install a middle-efficiency filter before operation. Otherwise it causes a machine trouble by dust in the product.
- Check whether it is usual operation after putting back a middle efficiency filter.

(3) How to clean a switch button

- Soak a cloth in neutral detergent water or tepid water and wring out the cloth tightly, and then wipe the stains from a switch button with the cloth.

Note) Don't use an organic solvent, an alcohol or polishing powder. Otherwise they can damage a switch button.

Note) Must not wash a switch button in water because it causes machine trouble.



6. INSPECTION AND AFTER-SALE SERVICE

《Machine Trouble Possible》

- If you feel "machine trouble possible" in operating or after executing maintenance, check as following.
- Even if you cannot repair it or you find out under mentioned irregular condition, you should stop to operate it and contact a representative shop or us printed on this back cover.

Sign	Cause	Restoration
<ul style="list-style-type: none"> ● No wind (airflow) blows. ● Airflow does not blow enough. 	<ul style="list-style-type: none"> ● Isn't an airflow control board of a supply grill or an exhaust grill closed? ● Aren't blades of FD closed? ● Does main power supply on? ● Is a filter cleaned up? 	<ul style="list-style-type: none"> ● Rotate an airflow control board to open and then inspect that airflow discharges. ● Open an inspection door and then check that FD is not closed. ● Check a power supply on. ● Check that a filter does not clog up.
<ul style="list-style-type: none"> ● No operating 	<ul style="list-style-type: none"> ● Does main power supply on? ● Isn't a circuit breaker turned off? 	<ul style="list-style-type: none"> ● Check a power supply on. ● Check that a circuit breaker does not turn off.

《After-sale Service》

- Request after-sale service to a representative shop or us in that time, give the information as following.

Product Name: 24 Hours Ventilation System	Description (details) of trouble/irregular
Model: 24HEC12PM ~ 24HEC35PM	Your name, your address and phone number

- Please call to our Call Center for an order of a filter or a thermal fuse.
092-947-6158 (Call Center)

7. PRODUCT SPECIFICATION

Model		24HEC12P				24HEC15P			
Rated Power	V	AC 100							
Operating Frequency	Hz	50		60		50		60	
Notch		Normal	Low	Normal	Low	Normal	Low	Normal	Low
Airflow (Volume)	m ³ /h	120	100	120	105	150	125	150	130
Outlet velocity static pressure	Pa	94	63	135	73	102	70	160	75
Rated Current	A	1.2	0.9	1.3	1.0	1.3	0.9	1.4	1.1
Consumption Power	W	105	88	130	97	120	90	140	108
Noise Level	dB (A)	34.7	31.0	36.5	31.0	34	28.1	36.2	25.7
Thermal Exchange Rate		65%				62%			
Pre-Filter		A method of weight measurement 82%							
Weight		Approx. 27kg							

Model		24HEC25P				24HEC35P			
Rated Power	V	AC 100							
Operating Frequency	Hz	50		60		50		60	
Notch		Normal	Low	Normal	Low	Normal	Low	Normal	Low
Airflow (Volume)	m ³ /h	250	205	250	185	350	310	350	315
Outlet velocity static pressure	Pa	87	66	109	65	107	90	170	95
Rated Current	A	1.4	1.3	1.7	1.6	1.8	1.5	2.0	1.8
Consumption Power	W	142	128	166	151	176	150	196	180
Noise Level	dB (A)	25.4	21.0	26.1	19.0	29.6	25.4	31.2	24.7
Thermal Exchange Rate		67%	68%	67%	69%	66%			
Pre-Filter		A method of weight measurement 82%							
Weight		Approx. 44kg				Approx. 47kg			

- Noise level was measured at 1.5m under the center of a product.
And because it was measured in the anechoic chamber,
it can be different from a real site by such an echo.

A (LETTER OF) GUARANTEE

Product Name	CENTRAL HEATING AND AIR-CONDITIONING	MODEL	24HEC□P
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Thank you very much for purchasing our product. This letter promises that you can receive a free repair work of the product in the term of a guarantee when it shall be troubled if you have used it correctly as mentioned in this letter of guarantee.

[The prescribed procedure for free repair]

- 1) When the product gets trouble in term of guarantee under following the prescribed procedures of Instruction Manual, Installation Manual, a package or a package, the shop you purchased, or our company will repair in free of charge.
 - 2) When you demand a free repair because of machine trouble in term of guarantee, show this guarantee to the shop you purchased or our company. But traveling expenses can be needed if a site is in an island or far place.
 - 3) In case of a change of address, consult with the shop you purchased it before.
 - 4) This guarantee is valid in only Japan.
 - 5) This guarantee should be in safekeeping. Please understand that we shall not reissue the guarantee in case of lost.
 - 6) In case of the under-mentioned, it is not a free service even in term of guarantee.
 - ① Trouble or damage is caused by your wrong use, disassembly, modify or wrong repair.
 - ② Trouble or damage is caused by transporting after purchase, moving a place, drop down or your mistake.
 - ③ Trouble or damage is caused by fire, damage from salt water, gassed damage, earthquake, lightning, soot and smoke, storm and flood, abnormal weather or the other natural disaster. Or damaged by rats, birds, spiders, insects or abnormal voltage.
 - ④ Trouble or damage is caused by different installation or wrong work from correct way of Instruction Manual, Installation Manual, prescribed procedure in a product or a package.
 - ⑤ Trouble or damage is caused by different power or voltage from specified one.
 - ⑥ The product is not used in a house, but used in a business place.
 - ⑦ You have no guarantee.
 - ⑧ There is not written a purchased date, your name, shop's sign or wrong description on a letter of guarantee.
 - ⑨ Replacement of consumables or maintenance service is charged a fee.
- ※ This letter of guarantee promises that you can receive a free repair work of the product in the term of a guarantee under the specified condition. But it is not a restriction for your legal right. If you have a necessary of repair or a question, please contact a shop you purchased or our company directly.

In term of guarantee	One year from purchased year _____ month _____ date _____
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Customer	Name	Phone
	Address	

Shop	Name	Phone
	Address	

KYORITSU AIR TECH INC

Head Office :

1034-4 Oaza Wada, Sasaguri-Machi, Kasuya-Gun, Fukuoka, 811-2414, JAPAN

TEL:092-947-6101 FAX:092-947-6107

CALL CENTER:

TEL : 092-947-6158

On Line from Monday to Friday 9:00~17:00 (except holidays)