

# Operation Manual

## RH - 200/20C series

Thank you for purchasing the RYOUSEI product at this time.

Please read this instruction manual before you use our product. It helps you when you do not understand to use or something is wrong.

Please check the serial number marked on the main body of your product and the serial number printed on the guarantee sheet. The production serial number is important for quality control. So, do not take off the serial number plate.

In this manual, the safety's instructions are divided into "warning" and "caution."

### **Warning**

When you use our product by mistake, there is a possibility of leading to the serious injury or the death.

### **Caution**

When you use our product by mistake, there is a possibility of leading to the slightly injury, the intermediate injury or the object damage.

### **Before using the product**

#### (1) Check your product

After severe inspection, we send this product to you. But, when you receive it, please check the next points.

- Check the serial number plate. (Type, output, voltage and frequency in according to your order)
- Check damage by an accident of transportation.

If you find unacceptable parts, please contact to us in checking the type and serial number.

#### (2) Transportation and installation

##### **Warning**

• When you transport our product, the person keeping the technical knowledge transport it and take care of falling, falling down. Please use the lifting bolt in attaching the lifting bolts.

##### **Caution**

- Install our product on the flat place and please perform foundation work if it is necessary.
- When you open wooden frame packing, please take care the needles. When you open the corrugated cardboard packing, please take care the nails.
- Please check that you can see the warning indication stickers at any time. Do not take them off and cover them with a thing.

#### (3) Use place

##### **Warning**

• At the place with the flammable or explosiveness atmosphere, do not use this product. Please use the type of an explosion - prevention at the dangerous places shown the labor security hygiene rule (Article 280 to Article 282) in Japan.

##### **Caution**

- This product is not the type of outdoor specifications. So, do not use it at the outdoors.
- When you do the remodeling of the product, we do not have the responsibility.

- Use this product in an ambient temperature range from  $-15^{\circ}\text{C}$  to  $+40^{\circ}\text{C}$  and at the humidity of 80 percent or less.

#### (4) Instructions in connecting the power's supply

##### **Warnings**

- When you connect the wiring of this product, the person keeping the technical knowledge connect the wiring and take care of the accident of electric shock by the short circuit. Please connect the wiring in according to the circuit diagram.
- Before you use our product, please connect it to the earth for the prevention the accident of electric shock by the short circuit. (A ground less than grounding resistance 100Ω) When you connect it to the earth, please use the attaching plug, the line of the earth or the terminal block's part of the earth.

##### **Caution**

- The line of the earth is green. (Articles 18 to 28, Electric Equipment Engineering Standards)
- Please connect the wiring of this product, according to the electric facilities technology standard and the standard of the electric power company. Particularly, when the wiring distance is long, please make your voltage drop less than 2%.
- In our product (Without the thing of the special design), the overload protector is installed. But, we recommend installing the ground - fault interrupter for the fire and to prevent the accident of electric shock.

- Please use this product at the rated voltage of the power's supply and in frequency.

- The power supply capacity uses the thing more than 3 times of the serial number plate.

#### (5) Please lay pipes (Such as a duct or hood) efficiently.

### **Instruction for use**

#### (1) Power supply

Please check the power supply line and the power supply's plug are connected before you use this product.

##### **Warnings**

- Do not bend, step and sandwich the power supply's cord. In addition, the cord melts by oil or gasoline.
- Please do not run this product in opening the control panel's or the terminal box's door. (Cover)
- In cutting off, please turn off the power's switch or the main power's supply.

- If this product has the wheel for movement, do not move the main body in pulling the power supply's cord or the hose to prevent falling. When you move it, please move the main body directly.

- When you pull out the power supply's plug, please pull out the plug without pulling the cord. (With the power supply's plug)

#### (2) Operation

##### **Warnings**

- Do not absorb and throw the fire from the inlet port at all this time.
- While the product runs, do not open the door or enter your hands.
- In this product, you cannot absorb the dust contained the flammable explosiveness or gas and you cannot install the product in the dangerous place.
- This product is the absorption of the dry dust. Do not absorb the wet dust such as oil or water.
- When you absorb cement, lime, medicine and toner so much, sometimes they pass the texture of the filter and are drained outside. When you use our product in the clean room, (Such a hospital, medicine company and so on) please use the type that set up a high efficiency particulate air filter.
- To prevent the heating damage of the motor, do not use this product with blocking the inlet port, outlet port and the cooling - intake port.
- When you move our product and change the dust that you absorb, please contact to us.

#### ○Running method

- Please connect the power supply and you can run our product by pushing the switch (blower run / stop) in the running controller. (ROPES/RH3)
- When you stop the product, push the switch (blower run / stop) in the running controller again. (Cf. RH3 manual)
- When you run it in conjunction with your machine, please keep the state switch does not turn on and input the running signal from your machine to the terminal block's part of 1 and 2. (Cf. RH3 manual)

#### (3) Filter - cleaning (cleaning)

- When you use product for a long time, the filter is blocked with dust, the quantity of the wind falls down. In this case, stop running once, remove the dust from the filter after the filter - cleaning. The filter - cleaning is possible by moving the front lever of the body to front and back. (Please do the filter - cleaning about 10 times or so.)

#### (4) Disposal of the dust

- After filter - cleaning, please drain the dust from the dust bucket every day. When you keep on having saved the dust for a long time, it causes the blocking of the filter or the fire.

#### ○Disassembly of the dust bucket

- RH - 200C type
  - After you take off the fixed metal fitting of the filter - check door, opening the door, please draw the dust bucket to you.

#### RH - 20C type

- After you take off the fixed metal fitting of the filter - check door, (two places) please draw the dust bucket to you by the handle of the dust bucket.

### **Maintenance to use the product for a long time**

#### (1) Maintenance

##### **Caution**

- Please cut the power's switch or the main power's supply at the time of check or repair. If you do not it, it might cause the accident of electric shock, the injury or the fire.

#### ※Instruction at the time of the maintenance

- In the maintenance, please confirm your safety enough in according to your company's security management rule and the labor safe hygiene rule in Japan.
- In the maintenance, please wear working clothes, protectors. (A protection mask, protection glasses and so on)
- If you use a flammable material near our product, do not check or repair our product in the place.
- In the maintenance, (When you do not operate our product.) please turn off the main power's supply and display the running prohibition.

#### ※Maintenance item

##### ○Before running the product

- Confirm whether there are not the harmful transformations or the damage of the functions by looking at the appearance.

- Check that the filter - check door is closing and the dust bucket is setting in position definitely.

- Check the disposal of the dust bucket.

- During the operation
  - Confirm whether there is not any air leak from the packing. (The part of the dust bucket or the filter - check door)
  - Confirm whether the lamp of the running controller (The power's supply, the running and so on) turns on. (Cf. ROPES manual)
  - Confirm whether the noise from the motor is not growing up.
  - Opening all the inlet port of the duct and check this product's electric current by your ammeter. If you confirm that the electric current falls down greatly, the blocking of the filter is expected

- The periodic inspection and the resolution
  - Check the filter, if it is broken or something is wrong. (When there is a hole space or when a dirt is terrible and so on,) please exchange it or clean it by vacuum cleaner.
  - Check the packing of the filter - check door and the dust bucket. If something is wrong, please exchange it.

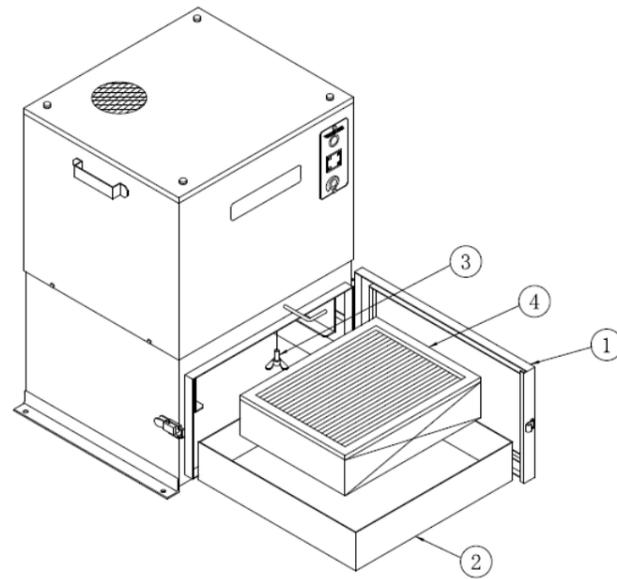
- Other part
  - Check whether the hoods, hoses and pipes are installed properly with no deformation or damage. When you run this product, check any air leak from the connections of the hoods, hoses and pipes. In addition, if there is the dust in the hoods, hoses and pipes, please clean the dust regularly.
  - Please confirm whether there is not the dust in the control panel. If there is the dust inside, please clean the dust regularly.

- (2) Exchange of the filter
  - When you use this product for a long time, the filter is blocked with dust. So, you clean the filter or exchange the filter about every year. When you clean the filter or exchange the filter, please confirm the damage of the filter or something is wrong.
  - Depending on the kind of the dust, you cannot clean the filter enough by the filter - cleaning. So, in this case, please take off the filter from the main body and clean the filter by vacuum cleaner or exchange the filter. (When you clean the filter, please get rid of the dust of the gap of the filter.)
  - When you wash the filter, please install the filter after drying the filter completely. And, depending on the kind of the dust, you cannot wash in water in water. So, in this case, please contact to us.

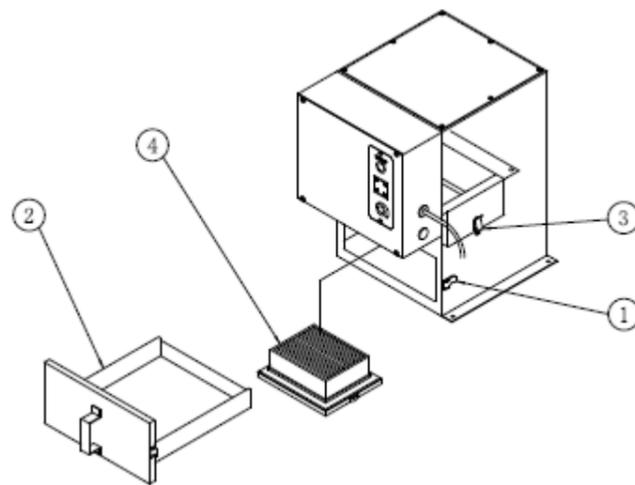
**⚠ Cautions**

- When you check the filter or exchange the filter, please turn off the main power's supply and confirm that the product stops completely.
- At the time of putting on and taking off of the filter, please wear the protect gloves not to cut your hands.
- When you put on the filter, that is incomplete, there is the case that the dust breaks out from the outlet port. So, please confirm that you put on the filter correctly.

- Procedure of exchanging the filter  
RHM - 200C type
  - ①Take off the fixed metal fitting of the filter - check door.
  - ②Draw the dust bucket to you and take it out.
  - ③Loosen the thumbscrew.
  - ④Draw the filter and remove it.
    - After exchanging the filter or cleaning the filter, put it on correctly.
    - After disposal, put the dust bucket in the main body. Close the filter - check door and fix the fixed metal fitting.



- RHM - 20C type
  - ①Take off the fixed metal fitting of the filter - check door. (Two places)
  - ②Draw the dust bucket by the handle of the dust bucket and take it out.
  - ③Please take off the fixed metal fittings of the filter.
  - ④Take out the filter with the part of fixing the filter.
    - After exchanging the filter or cleaning the filter, put it on correctly.
    - After putting on the filter, please confirm whether you put it on correctly.



- HEPA filter
 

When you set the high efficiency particulate air filter, and if you cannot collect the dust by the primary filter, the dust is collected in the high efficiency particulate air filter. The high efficiency particulate air filter cannot wash in water and cannot clean it by vacuum cleaner. So, exchange the high efficiency particulate air filter if it does not work well. (If the pressure is more than 0.5kPa in the pressure measurement, please exchange the high efficiency particulate air filter.)

**■ After - sales service**

- (1) A guarantee rule
 

The term of a guarantee is 1 year from the day of purchase. We calculate the term of the guarantee as 8 hours during the operation time. If you use our product in a severe condition, (For example: 24 hours operation) the term of your guarantee will be short.
- (2) When you repair our product during the term of the guarantee.
 

When our product is broken during the term of the guarantee, though you use the product in normal condition, please check your machine by the list of the next clause "If you find something wrong, please check your machine at first". In addition, if it still does not work, please contact to us.
- (3) We are charged the fee in the next case during the term of the guarantee.
  - ①Error in using or trouble / damage by the unfair repair and remodeling
  - ② Exchange / repair the consumption part of the product. (A filter, attachment parts and so on.)
  - ③Trouble by the accident of transformation after the purchase.
  - ④ Trouble / damage by the earthquake, fire and natural calamity in heaven and earth.
  - ⑤Trouble / damage by non - rated voltage.
  - ⑥Non - entry of the guarantee's sheet or forgery of the guarantee's sheet.
  - ⑦When you use our product in blocking up the inlet port or outlet port.
  - ⑧The lease product
- (4) When you repair our product without the term of the guarantee.
 

Please contact to us. If we maintain the performance of the product by repairing, we will repair it in having the charge.
- (5) We keep the maintenance parts for repairing of the type of RHM - 200C / 20C in minimum 6 years after the production break.
- (6) If you have any question about after - sales service, please contact to us.
- (7) This guarantee and service are valid only in Japan.

**■ If you find something wrong ,please check your machine at first**

| Symptom   | Probable cause   | Measure   |
|---|--|---|
| Do not start running when you turn on the switch (blower running / stop) in the running controller (ROPES/RH3). | Power's supply turns off.  | Turn on power's supply.                               |
|   | Overload protector operates.                                       | Examine cause. After revising malfunction, run again. |
|   | Repeat starting and stopping many times, so protector operates.    | After 10 minutes later, run again.                    |
|   | Trouble of the running controller                                  | Repair or exchange                                    |
| Motor stops during in operation.  | Trouble of the motor   | Repair or exchange                                    |
|   | Disconnection of power supply cord or wiring                       | Repair or exchange                                    |
| Vibration or noise is bigger than before.   | Repeat starting and stopping many times, so, protector operates.   | After 10 minutes later, run again.                    |
|   | Trouble of the motor   | Repair or exchange                                    |
| Dust leaks from outlet port.  | Wear of the motor  | Repair or exchange                                    |
|   | Dust bucket is full.   | Check and tighten                                     |
| Do not absorb or the power of absorption is falling down.   | There is the part becoming loose.                                  | Check and tighten                                     |
|   | Blocking of the filter   | Clean or exchange                                     |
|   | Dust bucket is full.   | Disposal of dust                                      |
|   | Installation error of the filter                                   | Check and install again                               |
|   | Installation error of dust bucket                                  | Check and install again                               |
|   | Blocking of the duct or hose                                       | Clean   |
| Connection error of the duct or hose  | Transformation and damage of the duct or hose                      | Exchange  |
|   | Transformation and damage of the packing of the dust bucket's part | Check and connect again                               |
|   | Transformation and damage of the packing of the dust bucket's part | Exchange  |

**RYOUSEI Co., Ltd.**

2-6-8 Obata Minami, Moriyama ward, Nagoya city, 〒463-0048, Japan

Nagoya Phone (052) 794-3211  
 Tokyo Phone (03) 3835-4451  
 Osaka Phone (06) 6302-8055  
 Fukuoka Phone (092) 947-2821