

# INDUSTRIAL DEHUMIDIFIERS

9 models of 4 different types  
meet your various applications.

The ORION Dehumidifiers  
eliminate harmful moisture.



RFB500F

RFB1500F

RFB3750F1

## Contents

|                                                                             |      |
|-----------------------------------------------------------------------------|------|
| Features of new models .....                                                | P.1  |
| Product lines, model selection & application examples .....                 | P.2  |
| Be sure to read the contents before selection and adoption ...              | P.3  |
| Dehumidifiers of stationary type .....                                      | P.5  |
| Dehumidifiers of portable type .....                                        | P.7  |
| Dehumidifiers idealized to use at construction & civil works sites<br>..... | P.9  |
| Application Example .....                                                   | P.10 |

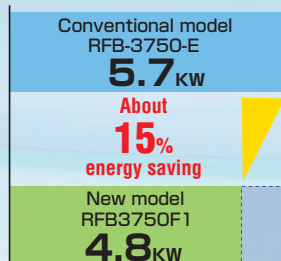
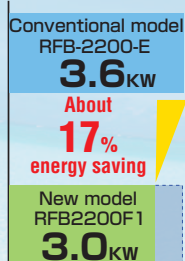
# ENERGY SAVING & POWERFUL DEHUMIDIFICATION HEAVY DUTY DEHUMIDIFIERS

RFB2200F1,2200F1-R,RFB3750F1,3750F1-R

**HFC REFRIGERANT (R410A) USED  
(ZERO DESTRUCTION COEFFICIENT OF OZONE LAYER)**

## 1. Improvement of Energy Saving

### Comparison of power consumption

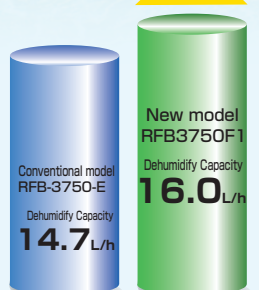
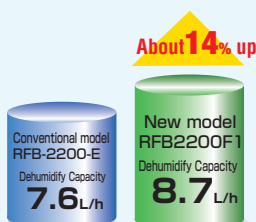


※ Based on 25°C,80%,60Hz

## 2. Greatly Improvement of Dehumidifying Capacity

### Comparison of dehumidifying capacity

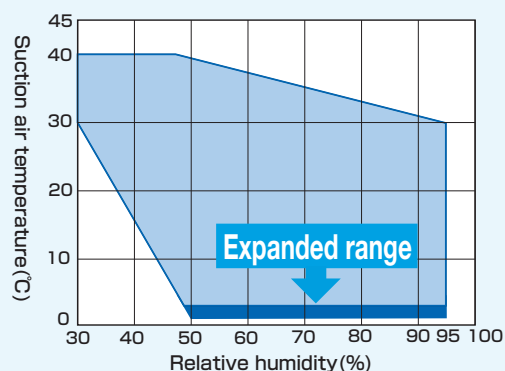
※ Based on 25°C,80%,60Hz



RFB3750F1

## 3. Wide Operable Range

Lower limit of operation range expanded from 3°C to 1°C.  
Expanded use application by dehumidification under low-temperature belt



## 4. Improvement of Easy Maintenance

Use of direct acting type blower eliminates maintenance of V-belt in RFB3750F1(-R).  
Layout is considered for easy maintenance access from the front.

※Refer to pages 5 & 6 for the detail specifications.

# Dehumidifier

ORION

## Product lines, model selection & application examples

### 9 models of 4 types that satisfy a variety of industrial needs

#### 1. Small portable type (4 models)

They are equipped with casters, and are applicable to various industrial field like food processing industry, agriculture and service industry.

#### 2. Stationary type of large capacity (2 models)

Incorporating humidistat, they have such configuration as thin and compact. Their sophisticated appearance becomes the atmosphere of the installation place.

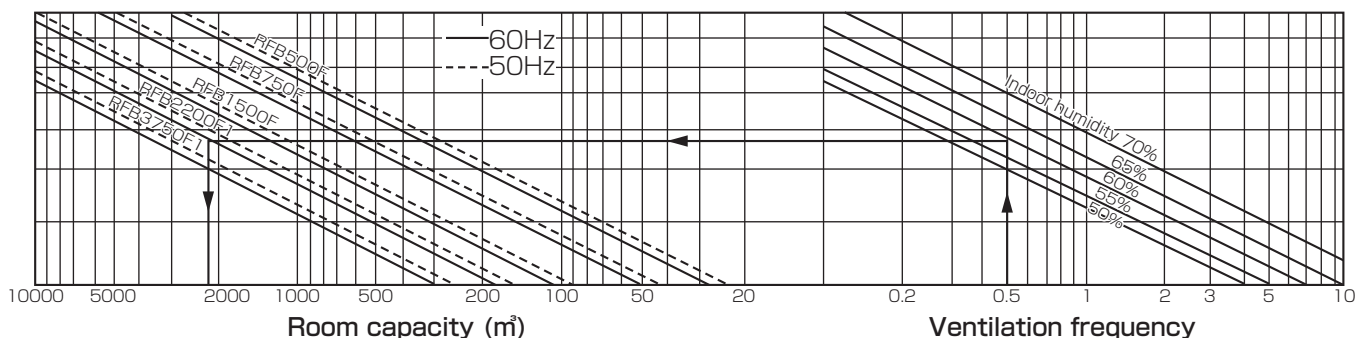
#### 3. Stationary type with air conditioning function (2 models)

The air conditioning function makes it possible to regulate the room temperature.

#### 4. High temperature type (1 model)

Taking drying efficiency into consideration, RFH1500F can cope with high 45°C of ambient temperature.

### Standard for model selection



Conditions: There is not any generating source of water vapor and at 30°C of suction air temperature and 80% of relative humidity.

Example) One RFB2200F1 can be for a room capacity of 2,100m³ at the ventilation frequency of 0.5 time per hour and 60% of indoor humidity.

※ If conditions are out of above mentioned range or room temperature control is needed, please consult your nearest local distributor.

※ Install an air ventilator if air flow from the dehumidifier is insufficient for the room air circulation.

#### ■ Natural ventilation frequency as per types of rooms

| Types of rooms                                       | Frequency | Types of rooms | Frequency | Types of rooms                         | Frequency |
|------------------------------------------------------|-----------|----------------|-----------|----------------------------------------|-----------|
| ● Shops with many customers going in and out         | 2~3       | ● Corridors    | 1         | ● Cafe (Without ventilating fans)      | 1         |
| ● Rooms without windows or doors facing the outdoors | 0.5~0.75  | ● School rooms | 0.5~3     | ● Cafe (With ventilating fans)         | 4         |
| ● Reception room                                     | 1~2       | ● Churches     | 0.75~2    | ● Wooden houses (Western style rooms)  | 1         |
|                                                      |           | ● Offices      | 0.5~1     | ● Wooden houses (Japanese style rooms) | 1.5       |
|                                                      |           | ● Warehouse    | 0.5~2     |                                        |           |
|                                                      |           | ● Factories    | 0.5~3     |                                        |           |

The quantity of water to be removed changes according to space, structure, frequency of natural ventilation, temperature and humidity of the room.

The frequency of natural ventilation is defined as

$$\frac{\text{Volume of incoming air (m}^3\text{/h)}}{\text{Room capacity (m}^3\text{)}}$$

and differs greatly according to the structure of the building or frequency of door opening and closing.

# Be sure to read the contents before selection and adoption

**ORION**

In order to protect you or people around you from any hazards or damage in advance and to use the product safely, be sure to read the following and to observe the instructions.



## WARNINGS

The cases where the operators are liable to death or severe injury if wrongly handled.

### Usage environment (Installation surroundings)



#### Product use limitations

- (1) When using the Product in connection with important facilities, be sure to establish backup and/or failsafe measures so that even in the event of breakdown of such products, such breakdown will not lead to serious accidents or losses.
- (2) The product is designed and produced as general purpose equipment to be used in general industrial applications. Therefore, this warranty will not apply when used in the following applications: However, in cases where the customer/user takes full responsibility and confirms the performance of the product in advance, and takes necessary safety precautions, please consult with ORION and we will consider if use of the product in the desired application is appropriate.
  - ① Atomic energy, aviation, aerospace, railway works, shipping, vehicles (cars and trucks), medical applications, transportation applications, and/or any applications where it might have a great effect on human life or property.
  - ② Electricity, gas, or water supply systems, etc. where high levels of reliability and safety are demanded.



**Install the Product horizontally in a place free from vibrations and sturdy enough to bear the product weight, and surely take necessary measures to prevent it from overturning.**  
Improper installation may cause water leakage, or injury from overturning or a fall.



**Never install the Product in a place where any combustible gases may float in the air or leak out.**

Such gases, if leaked and pooled around the Product, may cause a fire accident.



**Never use this equipment in the presence of corrosive gases, such as ammonia or sulfur, or in the purpose of drying items generated corrosive elements such as woods, sea products or incense stick.**

The corrosion of the products or the heat exchanger may cause malfunctions.

### Installation



**Please arrange for installation, water supply or drainage works by your dealer or other qualified persons.**

Improper installation made by those without sufficient knowledge and experience may cause water leakage, electric shock or fire accident.



**Be certain that all electrical wiring is done in accordance with relevant electrical construction and wiring regulations, and use only prescribed cables.**

Installation with an insufficient power supply or improper installation can result in electric shock or fire. Improperly securing cables to electrical contacts can lead to electric shock, overheating or fire.



**Always install and use this equipment with an earth leakage breaker.**

Using the equipment without an earth leakage breaker can lead to electric shock.



**Ensure that the equipment is properly grounded. (Installation of a proper ground hookup must be performed by a qualified electrician.)**

Improper grounding of this equipment can lead to electric shock.

### Operation & running



**Operation of this and related equipment should be carried out by persons who are knowledgeable and experienced after all relevant safety is confirmed.**

**CAUTION**

The cases where the operators are liable to bodily injury or material damage if wrongly handled.

**Usage environment (Installation surroundings)**

**Avoid installing the Product under the environment described below.**

|   |                                                                                                                                                                                 |   |                                                                                                                       |
|---|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---|-----------------------------------------------------------------------------------------------------------------------|
| ① | Places where direct sunlight shines on the Product                                                                                                                              | ⑧ | Coastal areas or other areas with high salt concentrations                                                            |
| ② | Places where freezing may occur                                                                                                                                                 | ⑨ | Places that have a particularly acidic or alkali atmosphere                                                           |
| ③ | Using in the presence of corrosive gases such as ammonia or sulfur, or in the purpose of drying items generated corrosive elements such as woods, sea products or incense stick | ⑩ | Very dusty places (Dust clogs the heat exchanger)                                                                     |
| ④ | Places where many dust, dirt or oil mist is suspended                                                                                                                           | ⑪ | Places where rain or other liquids splash on the Product                                                              |
| ⑤ | Places with significant oil spray or vapor (including machine oil)                                                                                                              | ⑫ | Places where the ambient temperature and/or humidity is outside the operational range                                 |
| ⑥ | Hot springs or other places with excessive sulfide gas                                                                                                                          | ⑬ | Places where proper draining facilities cannot be provided (except such a place where draining by moving is possible) |
| ⑦ | Places where combustible gases could be formed or could enter the area                                                                                                          | ⑭ | Places where dew condensation occurs                                                                                  |

※ If you would like to use the Product for drying items generated corrosive elements or to install it at the place where corrosion of other machines is extreme, please consult your nearest local distributor.

**Installation**

**Do not sit or stand on the Product. And do not put things on the Product in operation.**



**Make the power voltage to the Product to be within  $\pm 10\%$  of the rated voltage and the interphase imbalance to be within  $\pm 3\%$  of the rated value.**

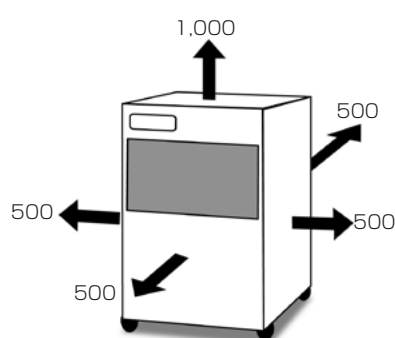


**Avoid any rise of piping to drain port, which obstructs smooth draining.**

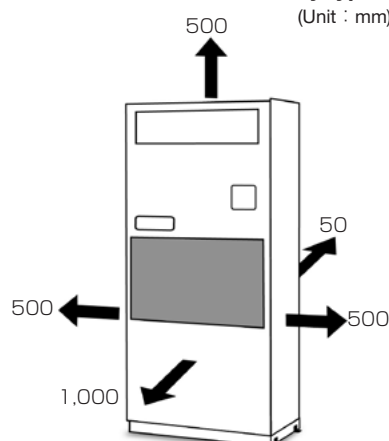


**Reserve sufficient space around the Product so that it can perform its capability to the utmost extent and also to allow easy access to it for maintenance.**

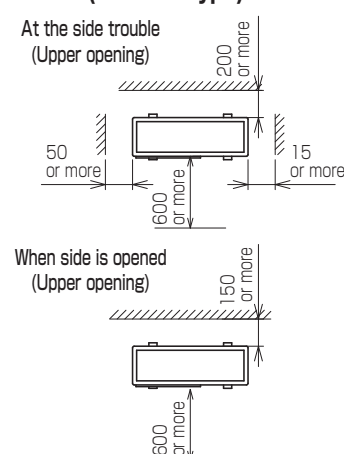
**Dehumidifiers of portable type**  
(Unit : mm)



**Dehumidifiers of stationary type**  
(Unit : mm)



**Dehumidifiers of stationary type (Outdoor type)**  
(Unit : mm)

**Preparation for operation**

**Supply electricity to the Product 12 hours in advance of the operation for trial run or when supply of electricity was stopped for more than 24 hours. (Except for RFB500F & RFB750F.)**  
If supply of electricity beforehand is failed, the compressor may be damaged.

**Maintenance and inspection**

**After all points with regard to safety about the Product and relative matters are confirmed, Inspect if the condenser and its filter get dirty every month, and clean them regularly.**

# Dehumidifiers of stationary type

**ORION**

The large capacity series



RFB3750F1 · 3750F1-R

## Features

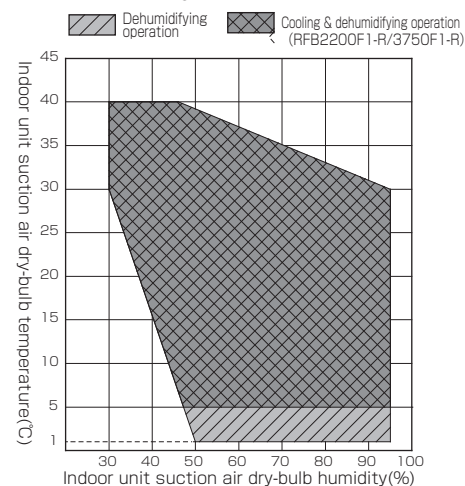
- Wide temperature control range from 5°C to 40°C.** ※The model with cooling function(R type).  
(Our corresponding conventional models: 16 - 40°C)
- Operating temperature and humidity display by easy operation.**  
Possible to check it in inspection mode, such as a corresponding conventional models.
- Cooling/dehumidifying switching operation by remote control.**  
※The model with cooling function(R type).  
Easy work through the front side.
- HFC refrigerant (R410A) adoption, ZERO destruction coefficient of ozone layer**

## Specifications

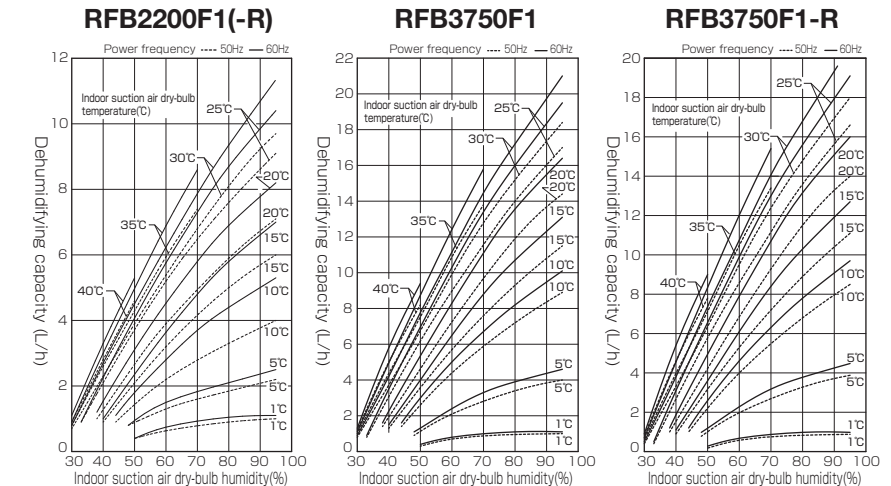
| Item                                         |                                | Model  | Dehumidifying only                                        |  | With air conditioning function |  | Dehumidifying only     |  | With air conditioning function |  |
|----------------------------------------------|--------------------------------|--------|-----------------------------------------------------------|--|--------------------------------|--|------------------------|--|--------------------------------|--|
|                                              |                                |        | RFB2200F1                                                 |  | RFB2200F1-R                    |  | RFB3750F1              |  | RFB3750F1-R                    |  |
| Dehumidifying capacity ※1                    |                                | L/h    | 7.6/8.7                                                   |  |                                |  | 14.0/16.0              |  | 13.7/15.6                      |  |
| Cooling capacity ※2                          |                                | kW     | —                                                         |  | 9.0/10.0                       |  | —                      |  | 15.3/16.2                      |  |
| Operable temperature range (Indoor type)     |                                | ℃      | 1 ~ 40                                                    |  |                                |  |                        |  |                                |  |
| Operable temperature range (Outdoor type) ※3 |                                | ℃      | —                                                         |  | -5~43                          |  | —                      |  | -5~43                          |  |
| Controllable temperature range               |                                | ℃      | —                                                         |  | 5 ~ 40                         |  | —                      |  | 5 ~ 40                         |  |
| Power specifications                         | Power source                   | V      | Three phase 200 ± 10% 50/60Hz                             |  |                                |  |                        |  |                                |  |
|                                              | Electric current ※1            | A      | 9.1/9.7                                                   |  |                                |  | 13.1/15.1              |  |                                |  |
|                                              | Power consumption ※1           | kW     | 2.3/3.0                                                   |  |                                |  | 3.7/4.8                |  |                                |  |
|                                              | Power capacity                 | kVA    | 4.9                                                       |  | 5.6                            |  | 7.7                    |  | 8.0                            |  |
| Equipment details                            | Compressor                     | kW     | 2.2                                                       |  |                                |  | 3.75                   |  |                                |  |
|                                              | Condenser, Evaporator          |        | Fin and tube type                                         |  |                                |  |                        |  |                                |  |
|                                              | Blower                         | W      | 270                                                       |  |                                |  | 400                    |  |                                |  |
|                                              | Air capacity                   | m³/min | 30                                                        |  |                                |  | 44/52                  |  |                                |  |
|                                              | Refrigerant controlling method |        | Electronic expansion valve                                |  |                                |  |                        |  |                                |  |
|                                              | Refrigerant                    |        | R410A                                                     |  |                                |  |                        |  |                                |  |
|                                              | Defrosting method              |        | Hot gas                                                   |  |                                |  |                        |  |                                |  |
|                                              | Ventilating fan                |        | Double suction multi blade type                           |  |                                |  |                        |  |                                |  |
| External dimensions (H × D × W) ※ 4          |                                | mm     | 1750(1517) × 400 × 650                                    |  |                                |  | 1950(1745) × 500 × 800 |  |                                |  |
| Product mass ※5                              |                                | kg     | 119                                                       |  | 124                            |  | 178                    |  | 183                            |  |
| Protecting devices                           | Compressor                     |        | Over current relay                                        |  |                                |  |                        |  |                                |  |
|                                              |                                |        | Discharge pipe thermostat (For overheat prevention), Fuse |  |                                |  |                        |  |                                |  |
|                                              | Blower                         |        | Internal thermostat, Fuse                                 |  |                                |  |                        |  |                                |  |
|                                              | Refrigerating circuit          |        | High pressure cut                                         |  |                                |  |                        |  |                                |  |
|                                              | Electric circuit               |        | Operation circuit fuse                                    |  |                                |  |                        |  |                                |  |
| Operation sound level ※6                     |                                | dB     | 54                                                        |  |                                |  | 59/68                  |  |                                |  |
|                                              |                                |        |                                                           |  |                                |  |                        |  |                                |  |

- ※1 The numerical value indicated above is based on 25°C of suction air temperature and 80% of relative humidity. The performance capacity is 90% or more of the indicated.
- ※2 The numerical value indicated above is based on 25°C of suction air temperature, 80% of relative humidity and 30°C of ambient temperature of an outdoor unit. The performance capacity is 90% or more of the indicated.
- ※3 In case of use of beyond operable temperature range, it cannot operate with cooler. (It may rise in room temperature due to force dehumidifying operation.)
- ※4 The figures in parentheses show dimensions before a plenum chamber is attached.
- ※5 Not including outdoor unit.
- ※6 The sound level is the value measured 1 meter away from the front and 1 meter high.
- The plenum chamber shall be assembled and installed at the site.
- The electric wiring, wiring of an outdoor unit and refrigeration piping must be arranged at the site.

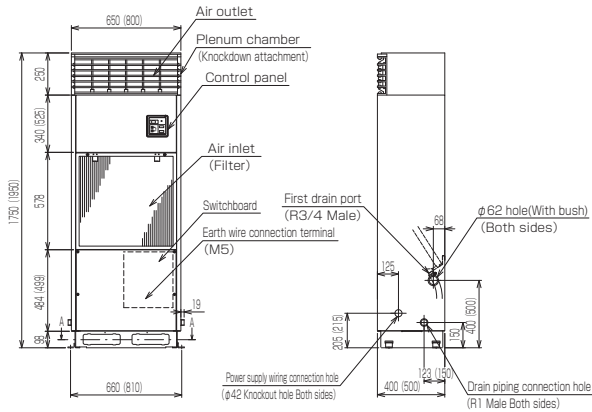
## Operable range RFB2200F1(-R)/3750F1(-R)



## Indoor temperature

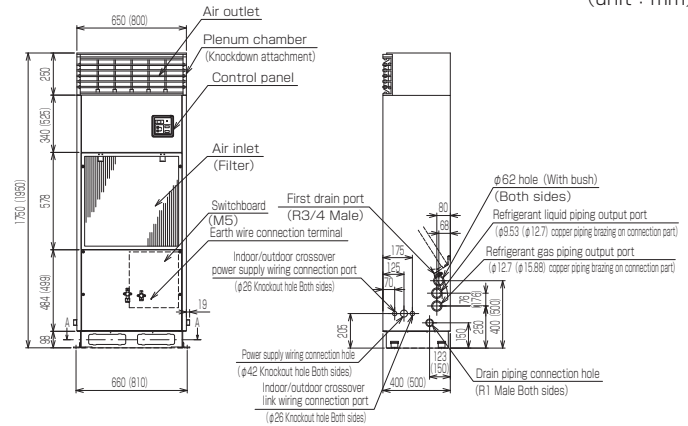


## External dimensions RFB2200F1/3750F1



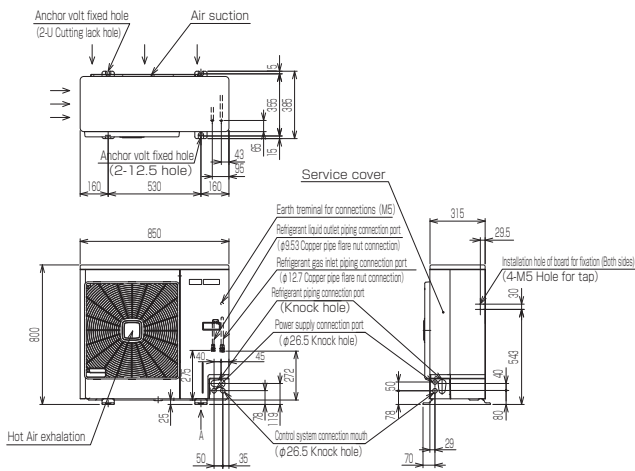
- ※ Plenum chamber must be assembled and installed at the site.
- ※ Drain pipes can be connected with either the right side or left side.
- ※ Power wire and transit wire can be connected with either the right side or left side.
- ※ Refrigerant pipe can be connected with either the right side or left side.
- ※ Dimensions in parentheses are those of RFB-3750F1.

## RFB2200F1-R/3750F1-R

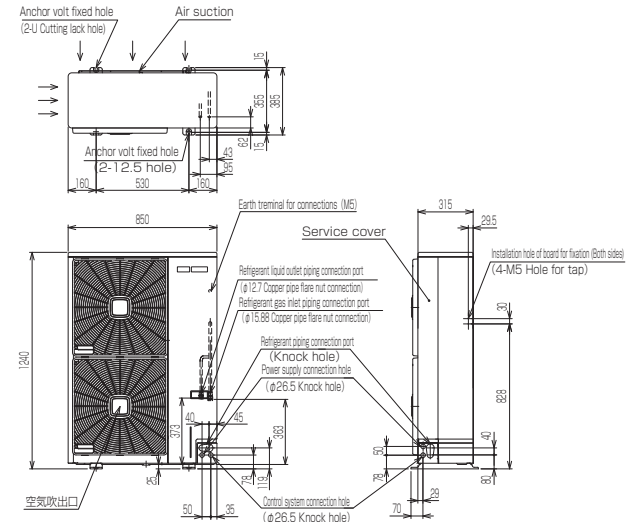


- ※ Plenum chamber must be assembled and installed at the site.
- ※ Drain pipes can be connected with either the right side or left side.
- ※ Power wire can be connected with either the right side or left side.
- ※ Refrigerant pipe can be connected with either the right side or left side.
- ※ Dimensions in parentheses are those of RFB3750F1-R.

## Outdoor unit for RFB-2200F1-R



## Outdoor unit for RFB-3750F1-R



## Outdoor unit specification

| Model                      | RFB2200F1-R          | RFB3750F1-R                            |
|----------------------------|----------------------|----------------------------------------|
| Operable temperature range | -5 ~ 43°C            |                                        |
| Refrigerant                | R410A                |                                        |
| Blower                     | 95W                  | 60W+80W                                |
| Mass                       | 23kg                 | 36kg                                   |
| Operation sound level      | 45/46dB              | 46/46dB                                |
| Piping                     | To outdoor unit      | φ12.7×t0.8                             |
|                            | From outdoor unit    | φ9.53×t0.8                             |
|                            | Pipe length          | Actual length: MAX. 30m                |
|                            | Difference in height | Outdoor unit on top/bottom: Max.20m/5m |

Note 1) Installation works like brazing are required for connection of refrigerant piping between a dehumidifier and outdoor unit. Order your dealer or a specialist for such works.

Note 2) Power wiring, transit wiring and refrigerant piping must be arranged locally.

Note 3) If the pipe length between dehumidifier and outdoor unit exceeds 5m, extra refrigerant must be charged.

## Options

### Duct (φ 200) assembly



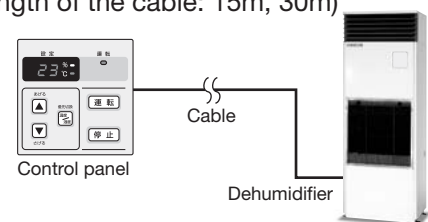
RFB2200F1  
RFB2200F1-R



RFB3750F1  
RFB3750F1-R

### Cable set

The control panel can be taken away from the dehumidifier to control it remotely.  
(Length of the cable: 15m, 30m)

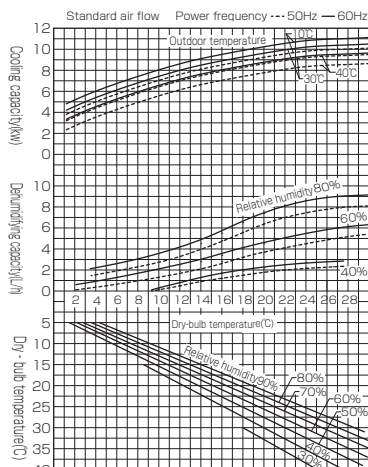


### Remote control wiring assembly

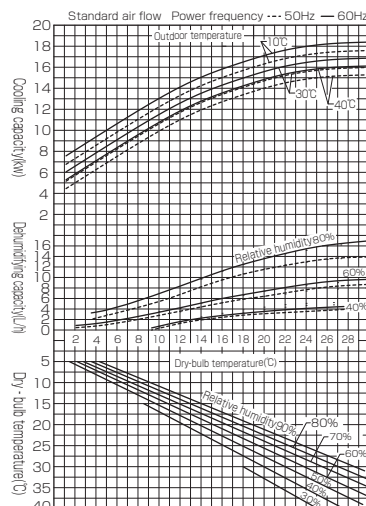
Connector for remote control terminal on base material

## Cooling capacity

### RFB2200F1-R



### RFB3750F1-R



# Dehumidifiers of portable type

**ORION**

## The small capacity series

### Features

1. Improvement of corrosion resistance by cation electrodeposition coating (epoxy resin) adoption.
2. HFC Refrigerant (R407C) adoption, ZERO destruction coefficient of ozone layer.
3. Single 100V power source adoption (RFE500F).
4. Slim and Compact. Easy movement (by casters) to places where dehumidifying is needed. Patented (RFB500F has various options.)
5. A high temperature type(up to 45°C) included in the series.



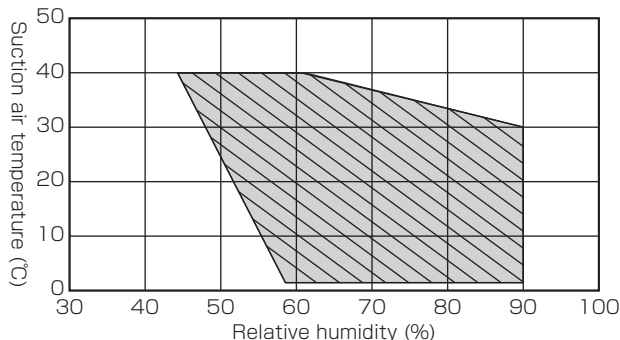
### Specifications

| Item                       |                                 | Model  | General purpose type                     |                                            |                  | High temperature type |
|----------------------------|---------------------------------|--------|------------------------------------------|--------------------------------------------|------------------|-----------------------|
|                            |                                 |        | RFB500F                                  | RFB750F                                    | RFB1500F         | RFH1500F ※ 4          |
| Dehumidifying capacity ※ 1 |                                 | L/h    | 1.4/1.6                                  | 1.4/1.7                                    | 3.0/3.6          | 2.0/2.3               |
| Operable temperature range |                                 | ℃      | 1 ~ 40                                   |                                            |                  | 20 ~ 45               |
| Power specifications       | Power source                    | V      | Single phase 100 ± 10% 50/60Hz           | Three phase 200 ± 10% 50/60Hz              |                  |                       |
|                            | Electric current ※ 1            | A      | 6.1/6.1                                  | 2.7/3.0                                    | 5.2/5.8          | 5.1/5.6               |
|                            | Power consumption ※ 1           | kW     | 0.54/0.61                                | 0.71/0.90                                  | 1.44/1.86        | 1.4/1.8               |
|                            | Power capacity                  | kVA    | 1.0                                      | 1.5                                        | 3.3              | 3.0                   |
| Equipment details          | Compressor                      | kW     | 0.47                                     | 0.65                                       | 1.4              | 1.4                   |
|                            | Condenser, Evaporator           |        | Forced air cooled fin and tube type      | Corrugated fin and tube type parallel flow |                  |                       |
|                            | Blower                          | W      | 10                                       | 25                                         | 100              | 100                   |
|                            | Air capacity                    | m³/min | 8/9                                      | 13/14                                      | 26/30            | 26/30                 |
|                            | Refrigerant controlling method  |        | Capillary tube                           |                                            |                  |                       |
|                            | Refrigerant                     |        | R407C                                    |                                            |                  |                       |
|                            | Defrosting method               |        | Hot gas                                  |                                            |                  |                       |
|                            | Ventilating fan                 |        | Propeller type                           |                                            |                  |                       |
|                            | Humidity regulator              |        | Optional                                 |                                            |                  |                       |
|                            | External dimensions (H × D × W) | mm     | 858 × 407 × 377                          | 780 × 400 × 540                            | 1007 × 465 × 655 | 1007 × 465 × 655      |
| Product mass               |                                 | kg     | 36                                       | 46                                         | 77               | 77                    |
| Protecting devices         | Compressor                      |        | Over current relay                       |                                            |                  |                       |
|                            | Refrigerating circuit           |        | High pressure cut                        |                                            |                  |                       |
| Accessories                | Drain hose ※ 3                  |        | 17L tank (with high water level stopper) | φ 19 vinyl hose 2m                         |                  |                       |
|                            | Power cord                      |        | With plug 5m                             | Cabtyre cord 3m                            |                  |                       |
| Operation sound level ※ 5  |                                 | dB     | 55/58                                    | 61/63                                      | 63/67            | 63/67                 |

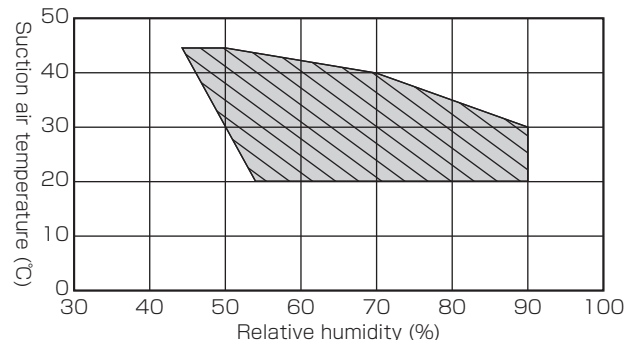
※1 The numerical value indicated above is based on 30°C of suction air temperature and 60% (80% for RFB500F) of relative humidity. The performance capacity is 95% or more of the indicated.

※2 The sound level is the value measured 1 meter away from the front and 1 meter high. ※3 A hose of inside diameter of φ19 can be attached to RFB500F. ※4 RFH1500F is manufactured to order.

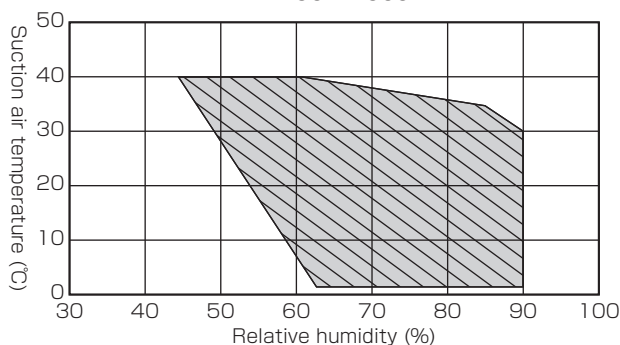
### Operable range RFB500F



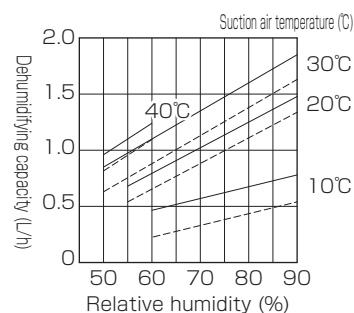
### RFH1500F



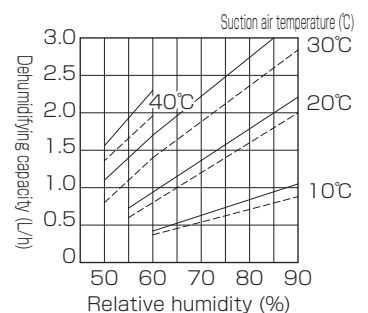
### RFB750F/1500F



### Dehumidifying capacity RFB500F

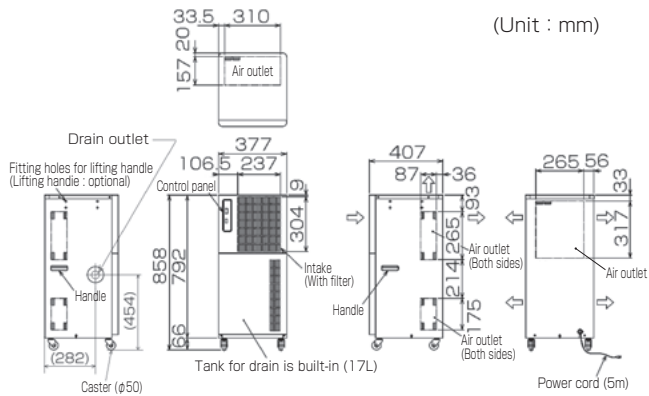


### RFB750F



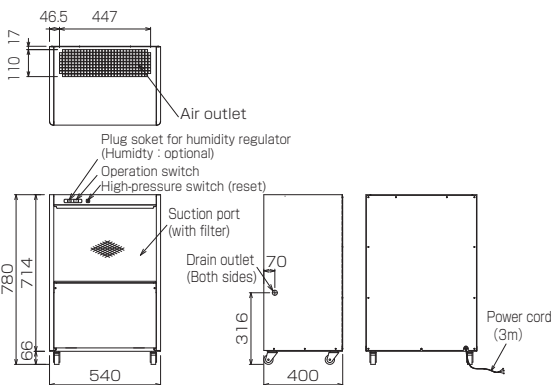
## External dimensions

### RFB500F

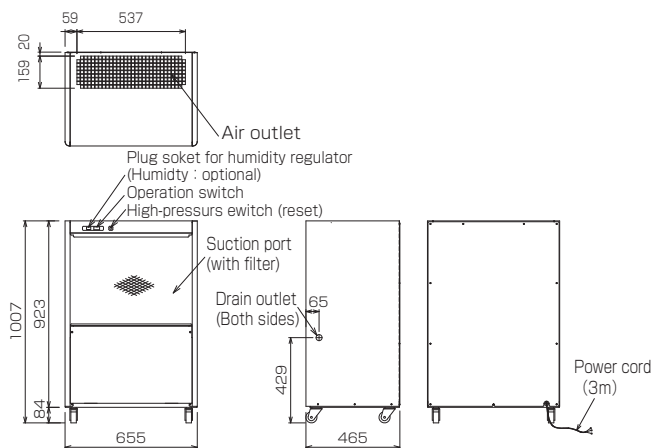


(Unit : mm)

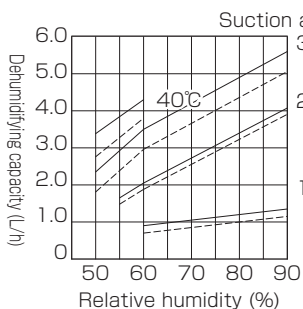
### RFB750F



### RFB1500F/RFH1500F

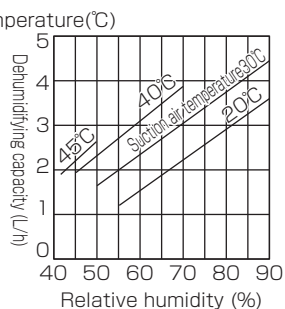


### RFB1500F



※50Hz: - - - / 60Hz: —  
 ※The performance curves are for reference only.

### RFH1500F



※The performance curves are based on 60Hz.  
 ※The capacity at 50Hz is about 85% of that of 60Hz.

## Option

### RFB500F

#### 1. Hanging handle



#### 2. Air direction plate



#### 3. Humidistat

Setting range: up to 90% RH



#### 4. Large casters (with a base)



### RFB750F/1500F/RFH1500F

#### 1. Humidistat

Setting range: up to 90% RH



#### 2. After heater [Built to order]

Use of an after heater enhances drying efficiency when temperature is low.

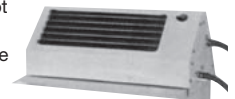


### Applicable model & specifications

|                                          |                                                                                                                  |  |  |
|------------------------------------------|------------------------------------------------------------------------------------------------------------------|--|--|
| Model                                    | EH-1500-B                                                                                                        |  |  |
| Applicable model                         | RFB1500F/RFH1500F                                                                                                |  |  |
| Heating capacity                         | 2kW                                                                                                              |  |  |
| Operable temperature range               | 1~40°C                                                                                                           |  |  |
| Operation controlling method             | Synchronized with fan motor and heating                                                                          |  |  |
| Power source                             | Three phase 200V 50/60Hz                                                                                         |  |  |
| Electric current                         | 5.8A                                                                                                             |  |  |
| Power consumption                        | 2.0kW                                                                                                            |  |  |
| External dimensions (Height×Depth×Width) | 188×270×656mm                                                                                                    |  |  |
| Mass                                     | 8kg                                                                                                              |  |  |
| Heat source                              | Sheathed heater                                                                                                  |  |  |
| Safety devices                           | Temperature controller (Off at 55°C/On at 45°C, Fixed)<br>Overheating protector (Off at 102°C, Manual resetting) |  |  |

#### 3. After cooler (Water cooled type) [Built to order]

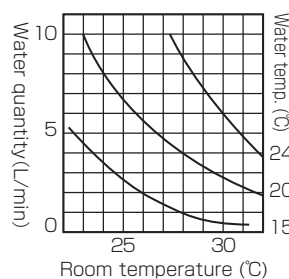
- Ideal for applications that should not raise room temperature
- Prevents dehydrated air temperature from rising



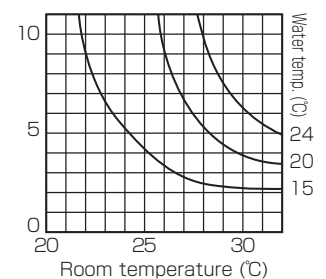
### Applicable model & specifications

|                  |         |                   |
|------------------|---------|-------------------|
| Model            | ZSA-750 | ZSA-1500          |
| Applicable model | RFB750F | RFB1500F RFH1500F |

### ZSA-750



### ZSA-1500



## Dehumidifiers idealized to use at construction &amp; civil works sites

ORION

L series(manufactured to order)

## Features

1. Being equipped with large casters, it is easy to move the dehumidifiers.
2. It is possible to store dehumidifiers two-storied, thanks to the reinforced frame.
3. For such applications as.....
  - Drying walls and interior of buildings at the construction sites.
  - Dehumidifying in basement or preventing mildew or abnormal smell from coming out.
  - Dehumidifying in warehouses or humidity control in production plants.

## Specifications

| Item                                                                              | Model                          | RFB500F L                                       |
|-----------------------------------------------------------------------------------|--------------------------------|-------------------------------------------------|
| Dehumidifying capacity ※ 1、※ 2                                                    | L/h                            | 1.4/1.6                                         |
| Operable temperature range                                                        | ℃                              | 1 ~ 40                                          |
| Power specifications                                                              | Power source                   | V Single phase 100 ± 10% 50/60Hz                |
|                                                                                   | Electric current               | A 6.1/6.1                                       |
|                                                                                   | Power consumption              | kW 0.54/0.61                                    |
|                                                                                   | Compressor                     | kW 0.47                                         |
| Equipment details                                                                 | Condenser                      | Forced air cooled fin and tube type             |
|                                                                                   | Blower                         | W 10                                            |
|                                                                                   | Air capacity                   | m <sup>3</sup> /min 8/9                         |
|                                                                                   | Refrigerant controlling method | Capillary tube                                  |
|                                                                                   | Refrigerant                    | R407C                                           |
|                                                                                   | Defrosting method              | Hot gas                                         |
| External dimensions (Height × Depth × Width)<br>(Two-storied external dimensions) | mm                             | 970 × 495 × 565<br>(1885 × 495 × 565)           |
|                                                                                   | Product mass                   | kg 46                                           |
| Protecting devices                                                                | Compressor                     | Over current relay                              |
|                                                                                   | Refrigerating circuit          | High-pressure pressure switch                   |
| Accessories                                                                       | Drain hose                     | 17L, with float type's high water level stopper |
|                                                                                   | Power cord                     | With plug 2 × 5m                                |
| Operation sound level ※ 3                                                         | dB                             | 55 / 58                                         |

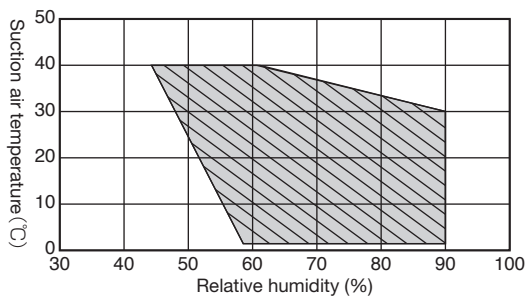


Storage Example

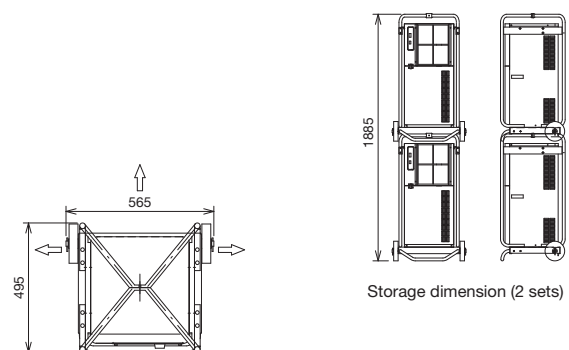
RFB500F L

- ※1 The value of dehumidifying capacity is based on 30℃ of suction air temperature and 80% of relative humidity.  
 ※2 The dehumidifying capacity is 95% or more of the indicated.  
 ※3 The sound level is the value measured 1 meter away from the front and 1 meter high.  
 ●With large casters(Front: Frame, Behind: Tires(φ150))  
 ●two-storied storage frame.  
 ※Overturn-prevention should be implemented in case of two-storied installation.  
 ●Optional: Humidistat

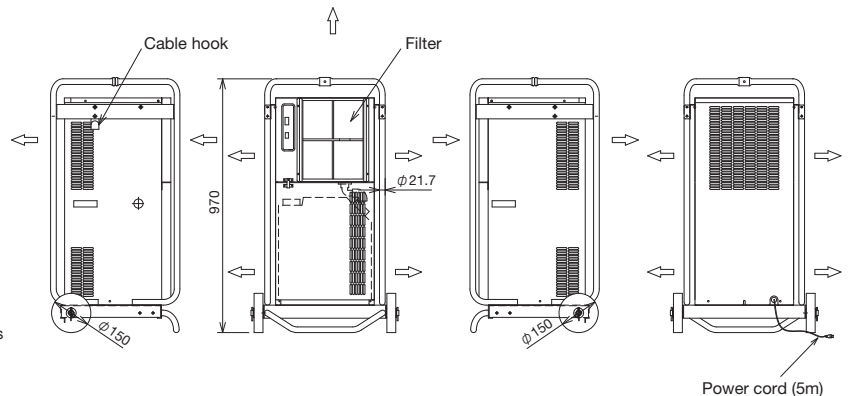
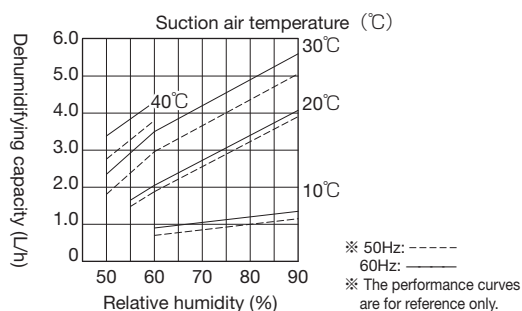
## Operable range



## External Dimensions



## Dehumidifying Capacity



### Application Examples

## 1. DRYING

For planned production, not being influenced by seasons or weather.

- Drying of concrete or wooden buildings
- Drying of tiles, pottery, dyed goods and others
- Drying of onion seed, noodles, pasta and so forth
- Drying of wet furniture with paint or varnish
- Drying of clothes and shoes at sports facilities



## 2. STORING

For storing such products, component parts or food from which moisture must be kept away.

- Storing metal or resin materials
- Storing canned food, galenicals and clothes
- Storing fruits and bulbs
- Preventing carton box from the change of shape by humidity.



## 3. PRODUCTION PROCESSING

For securing stable quality by controlling indoor humidity

- For various manufacturing processes like photo albums, plywood coating, dried food packaging, mixing cosmetic substances, and sealing of seasonings and condiments
- For cultivating mushroom
- Dehumidifying in food producing plants



## 4. OTHERS

- Humidity control of three coordinate measuring rooms
- Humidity control of die machining plant
- Humidity control of computer/server room
- Stable operation of copy machine





### ● Safety Notes

- Before operating this equipment, please read the operating manual carefully, and only use as indicated.
- For installation of this equipment and required wiring, employ a qualified person or consult with your dealer.
- Be sure to select equipment which suits your needs. Do not use this equipment for purposes other than those for which it is intended. Doing so can lead to accidents or equipment breakdown.

### ● Air-Cooled Models

If the condenser becomes clogged with dust or dirt, heat exchange will be greatly reduced and electricity consumption will increase. This will lead not only to decreased performance, but can also lead to the activation of built-in safety devices, and eventual damage to the equipment. For these reasons, the condenser should be cleaned on a regular basis.

### ● Water-Cooled Models

In general, water used to cool condensers will be well-water, tap water, or water from a cooling tower. However water of insufficient quality can lead to scaling in cooling pipes resulting in lower levels of heat exchange, increased electricity consumption and lower performance. Therefore water quality should be confirmed on a regular basis.

### Regarding After Service

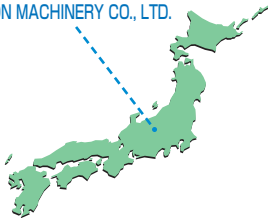
- For information regarding repair of equipment that has been in operation, please consult with your dealer.
- The customer will be responsible for charges incurred for repairs conducted after the warranty period has expired. In cases where equipment function can be improved by certain service procedures, such procedures will be taken at the specific request of the customer.
- Regarding spare parts... "Spare parts" are those which are necessary in order to maintain the function of the product. It is the policy of ORION to maintain a stock of replacement parts for 7 years after production of the product ceases.

### Recommended Maintenance Inspections

- Depending on the particular item, extended use can lead to the product become dirty or worn, which can lead to decreased performance. In order to realize continued best performance of this equipment, in addition to prescribed customer maintenance, it is also recommended that regular inspections be conducted. (Service and inspection fees apply.) For further information please consult with your dealer or contact ORION directly.

ORION is continuing to develop a complete and trustworthy nationwide network of expedient sales and service -- everywhere, anytime.

ORION MACHINERY CO., LTD.



ORION Machinery Co., Ltd is an ISO Certified, Quality Management and Environmental Management company.



ISO 9001 (Main Factory)



## ORION MACHINERY CO., LTD.

International Division

No. 246, Kotaka, Suzaka-shi, Nagano-ken, 382-8502 Japan  
TEL (026) 246-5664 FAX (026) 246-6753  
e-Mail: kokusai@orionkikai.co.jp

Head Office & Factory

No. 246, Kotaka, Suzaka-shi, Nagano-ken, 382-8502 Japan  
TEL (026) 245-1230 FAX (026) 245-5424  
URL: <http://www.orionkikai.co.jp>