

**CKD**

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*New Products*

# Refrigerating type air dryer GX3100/5100 Series

**REFRIGERATED AIR DRYER**



**CKD Corporation**

CC-815A **3**

**Discontinue**

# Ecological compact dryer

## GX3100 | GX5100 Series

New refrigerant R-407C to prevent ozone destruction is used in CKD refrigerating type dryer GX3000/5000 Series.

Introducing the all new GX Series!



**Stainless steel heat exchanger compatible with oil free compressed air**

**Outstanding corrosion resistance**

**GX3108 | GX5103 to 5108**

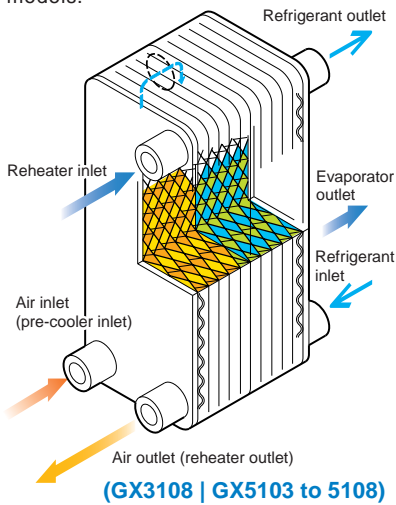
The stainless steel plate heat exchanger provides outstanding corrosion-resistant, preventing refrigerant leaks and rust formation.

**GX3111 to 3137 | GX5111 to 5137**

A stainless steel vessel is used, and refrigerant piping is configured from spiral fin tubing free of brazed sections.

**All models compatible with high pressure**

Standard specifications, max. working pressure 1.6MPa, are provided for all models.

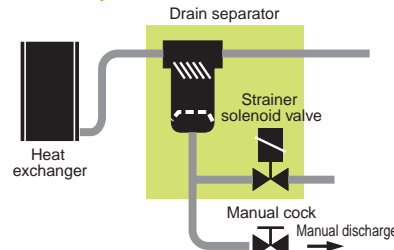


**Ensuring reliability with forced drain**

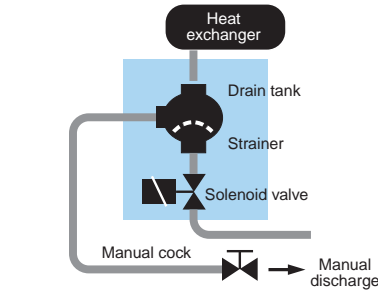
**Eliminating problems during drainage**

Drainage is forcibly ejected by the dryer's air pressure, leaving pipes unclogged. Reliability is greatly improved using a direct-acting solenoid valve.

**GX3108 | GX5103 to 5108**



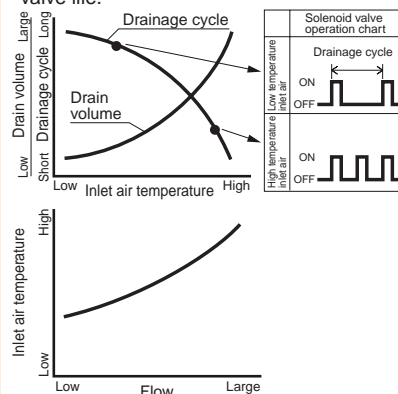
**GX3111 to 3137 | GX5111 to 5137**



**Air loss prevention**

**GX3111 to 3137 | GX5111 to 5137**  
Drainage discharge time is controlled based on inlet air temperature. Air loss is prevented.

Solenoid valve operating frequency drops with inlet air temperature, extending solenoid valve life.

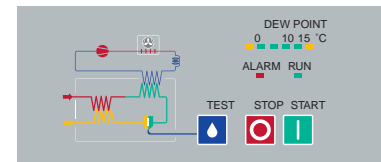


Typically when a dryer and air compressor are directly connected, the air compressor's discharge temperature (dryer inlet air temperature) rises with air consumption and drops as air consumption drops.

**Highly efficient daily inspections**

**Operational status of the dryer is easily checked by the electronic dew point monitor in the operation panel.**

**GX3111 to 3137 | GX5111 to 5137**



Dew point grade indication in accordance with JIS B8392-1

Dew point grade	Pressure dew point	Lighting
4	3°C	Green 1
5	7°C	Green 2
6	10°C	Green 3

\* These values differ slightly from the actual pressure dew point and are for reference only.

**Central control in the plant is possible. (option)**

Centralized control is realized at the factory using remote operation and by reading out run/error signal output. (\*GX3108 and GX5103 to 5108 allow output of running signal only.)

**Dust filter equipped**

Dust filter for the capacitor is provided as standard. Mounting or removing the filter is also easy.



**Easy to remove front panel (tool not required)**



**This is available for various power voltage (option)**

The built-in transformer eliminates the need for a standalone or external transformer, free extra space.

## New ecological refrigerant is provided.

The new refrigerant R-407C has zero ozone depletion potential. This surpasses conventional models in global warming.



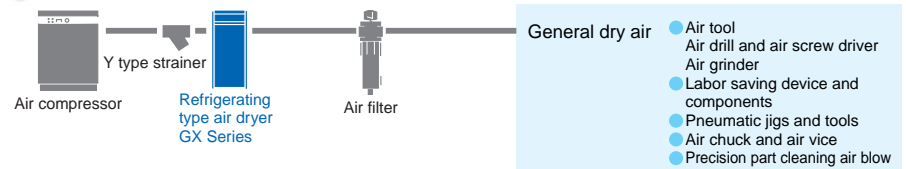
## Reliability increased by proximity fan controller

**Semi-permanent service life**  
Unlike the conventional reed type, there is no mechanical action.

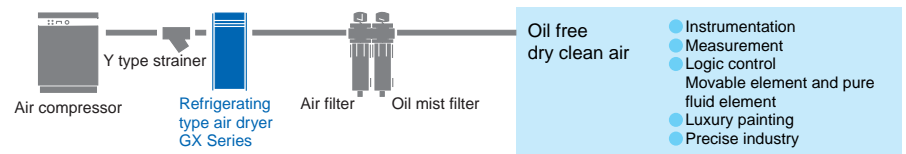
### Series variation

Series	Applications	Rated conditions					Applicable air compressor (kW)						
		Pressure dew point (°C)	Inlet air temperature (°C)	Ambient temperature (°C)	Inlet air pressure (MPa)	to 2.2	3.7	5.5	7.5	11	15	22	37
Standard inlet air type GX3100	Air line end installation	10	35	32	0.7	—	—	—	●	●	●	●	●
High temperature inlet air type GX5100	Air compressor direct connection	10	55	32	0.7	●	●	●	●	●	●	●	●

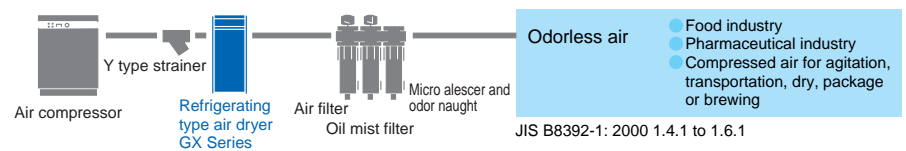
### Example of system selection list



JIS B8392-1: 2000 3.4.6 to 3.6.6



JIS B8392-1: 2000 1.4.1 to 1.6.1



JIS B8392-1: 2000 1.4.1 to 1.6.1

Note 1. GX3108, GX5103, GX5104, GX5106 or GX5108 includes a Y type strainer to install the air inlet.

Note 2. Use rust-proof piping -- galvanized, lined, stainless steel, etc. If large amounts of rust or flack are generated in the pipe due to the material, install an air filter in front of the dryer.

Note 3. The air filter's inlet air temperature must be 60°C or less. That for the oil mist filter must be 54°C or less. If the temperature of the air from the secondary side of the dryer is high, install the filter far enough away from the dryer so that inlet air temperature is lower than the above values.

Note 4. This system cannot be used with high pressure specifications of 1 to 1.6 MPa. Contact a CKD sales agent.

Examples:  
"1.6.1 grade" refers to a solid particle of 0.1 μm, a pressure dew point of +10°C, and an oil concentration of 0.01 mg/m<sup>3</sup>.

### For installation (GX3100 Series)

Rated (ambient temperature: 32°C, inlet air temperature: 35°C, pressure dew point: 10°C)

Air compressor		Refrigerating type air dryer	Air filter 3μm or 5μm	Oil mist filter (Oil removing)	Micro alescser, odor naught type (Odor removing)
Output kW	Standard treating flow rate m <sup>3</sup> /min(ANR)				
7.5	1.2/1.3	GX3108-AC100/200V	F8000-20-F	M8000-20-F1	1238-6C-X
11	1.65/1.82	GX3111-AC200V	AF1003P-20	AF1003M-20	AF1003X-20
15	2.8/3.1	GX3115-AC200V	AF1004P-25	AF1004M-25	AF1004X-25
22	3.9/4.3	GX3122-AC200V	AF1004P-25	AF1004M-25	AF1004X-25
37	6.6/7.3	GX3137-AC200V	AF1008P-40	AF1008M-40	AF1008X-40

### Compressor directly connected (GX5100 Series)

Rated (ambient temperature: 32°C, inlet air temperature: 55°C, pressure dew point: 10°C)

Air compressor		Refrigerating type air dryer	Air filter 3μm or 5μm	Oil mist filter (Oil removing)	Micro alescser, odor naught type (Odor removing)
Output kW	Standard treating flow rate m <sup>3</sup> /min(ANR)				
to 2.2	0.31/0.35	GX5103-AC100/200V	F3000-10-F	M4000-10-F1	1237-3C-X
3.7	0.5/0.55	GX5104-AC100/200V	F3000-10-F	M8000-20-F1	1238-6C-X
5.5	0.74/0.81	GX5106-AC100/200V	F4000-15-F	M8000-20-F1	1238-6C-X
7.5	1.2/1.3	GX5108-AC100/200V	F8000-20-F	M8000-20-F1	1238-6C-X
11	1.65/1.82	GX5111-AC200V	AF1003P-20	AF1003M-20	AF1003X-20
15	2.8/3.1	GX5115-AC200V	AF1004P-25	AF1004M-25	AF1004X-25
22	3.9/4.3	GX5122-AC200V	AF1004P-25	AF1004M-25	AF1004X-25
37	6.6/7.3	GX5137-AC200V	AF1008P-40	AF1008M-40	AF1008X-40

### Compressed air quality grade in accordance with JIS B 8392-1: 2000

Grade	Max. particle diameter (μm)	Dew point under max. pressure (°C)	Max. oil concentration (mg/m <sup>3</sup> )
1	0.1	-70	0.01
2	1	-40	0.1
3	5	-20	1
4	15	+3	5
5	40	+7	25
6	-	+10	-



## Safety precautions

Always read this section before starting use.

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanical mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.

It is important to select, use, handle, and maintain the product appropriately to ensure that the CKD product is used safely.

Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.

### WARNING

[1] This product is designed and manufactured as a general industrial machine part. It must be handled by an operator having sufficient knowledge and experience in handling.

[2] Use this product in accordance of specifications.

Contact CKD when using the product outside the unique specifications range, when using it outdoors, and when using it under the conditions and environment below. Do not attempt to modify or additionally machine the product.

(1) Use for special applications requiring safety including nuclear energy, railroad, aviation, ship, vehicle, medical equipment, equipment or applications coming into contact with beverage or food, amusement equipment, emergency shutoff circuits, press machine, brake circuits, or for safeguard.

(2) Use for applications where life or assets could be adversely affected, and special safety measures are required.

[3] Observe corporate standards and regulations, etc., related to the safety of device design and control, etc.,

ISO4414, JIS B8370 (pneumatic system rules)

JPAS 005 (principles for pneumatic cylinder use and selection)

Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rule, and organization standards and regulations

[4] Do not handle, pipe, or remove devices before confirming safety.

(1) Inspect and service the machine and devices after confirming safety of the entire system related to this product.


(2) Note that there may be hot or charged sections even after operation is stopped.


(3) When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Discharge any compressed air from the system, and pay enough attention to possible water leakage and leakage of electricity.


(4) When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.

[5] Observe warnings and cautions on the pages below to prevent accidents.

■ The safety cautions are ranked as "DANGER", "WARNING" and "CAUTION" in this section.

 **DANGER:** When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, or when there is a high degree of emergency to a warning.

 **WARNING:** When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.

 **CAUTION:** When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as "CAUTION" may lead to serious results depending on the situation. In any case, important information that must be observed is explained.



Main line component

## Safety precautions

Always read this section before starting use.

Refer to "Pneumatic, vacuum and auxiliary components No. CB-024SA" for general precautions.

### Refrigerating type air dryer GX Series

## Manufacturer's Liability

### ⚠ WARNING

The manufacturer cannot be held liable in the following cases:

- Serious errors in use occur due to the operator.

- The operator makes illegal modifications or repairs the product using nonstandard parts.

## Design & Selection

### ⚠ WARNING

&lt;Applications&gt;

- Use for applications other than dehumidifying compressed air is prohibited.
- Do not use this product for caisson shields or medical apparatuses used for respiration.
  - Failure to observe this could result in personnel injury.
- Do not install this product on transportation devices such as vehicles or ships.
  - Vibration, etc., could cause damage to internal components.

### ⚠ CAUTION

&lt;Quality of compressed air&gt;

- Do not use this product if inlet air contains corrosive gases, chemicals, organic solvents, or combustible gases.

&lt;Air temperature&gt;

- Do not exceed the maximum inlet air temperature during use.
- If the inlet air temperature is high, install an after cooler, etc., and lower the temperature to the maximum inlet air temperature or less. Drainage generated in the after cooler must be removed before the dryer is reached.

## Transportation

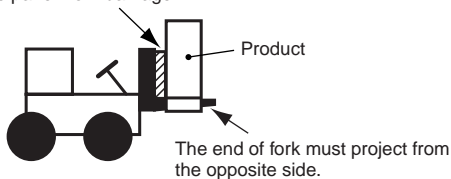
- This product contains less than 12 kg of refrigerant (R-407C). Follow all applicable laws when transporting this product by ground, sea or air.

## Transportation

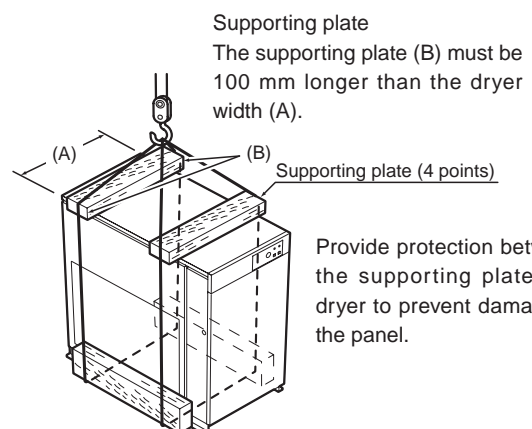
### ⚠ WARNING

- Tilting this product or applying vibration or impact during transportation is prohibited.
- Transportation by forklift (Series GX3111 to 3137, GX5111 to 5137)

Protect the panel from damage.



- Transportation by crane



## Installation & Adjustment

### **⚠ WARNING**

**<Electric wiring>**

- Use the product within the specified power voltage range.

**<Adjustment and operation>**

- Do not start or stop frequently, or failures could occur.
- When a remote operation circuit (option M) is provided to operate the dryer remotely, the following considerations must be made for the system: Start and stop the dryer less than ten times an hour. After restarting, wait at least five minutes before stopping again. Stop for at least three minutes.
- Install an overload protection ground-fault circuit breaker on the main power supply to provide isolated overload protection and to prevent electrical shock from current leakage.

- Always connect the ground.

### **⚠ CAUTION**

**<Ambient temperature>**

- Do not use the product in a location where the temperature is higher than the maximum working temperature.
- Do not install the product where it is subjected to radiated heat.
- If maximum working pressure is exceeded, install a ventilation fan or air inlet, etc.
- Do not use the product in a location where the temperature is lower than the minimum working temperature.

**<Location>**

- Install the product indoors.
- Install the product in a well-ventilated place free of dirt and dust.
- Install the product in the place that separated from rain or water splash.
- Do not install the product where high levels of humidity or dew could condense.
- Avoid using the product in direct sunlight or where heat is generated.
- Do not use the product in a location that has a corrosive gas.

**<Floor>**

- Install the product on a vibration-free floor.
- Install the product on a flat floor.
- Provide foundation work if the ground is soft.
- The anchor bolt position and hole dimensions are given in the outline drawing.

**<Vibration>**

- When using a reciprocating compressor, use a flexible tube or high-pressure rubber hose in part of piping with the air dryer to absorb vibration.

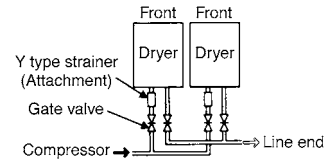
**<Maintenance space>**

- Secure the ventilation and maintenance spaces as followings.  
600mm or wider in each 4 directions  
600mm or higher in the top

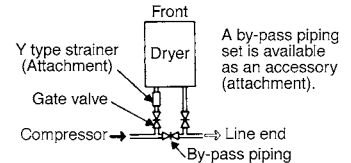
**<Air piping>**

- Pipe the dryer as the following diagram.

When operating 24 hours, parallel installation is recommended against emergencies. One unit is used for normal operation, while another unit is used as the backup unit.



For intermittent operation: Install the by-pass piping for maintenance.



(GX3111 to 3137, GX5111 to 5137 do not include a Y type strainer.)

- Install the enclosed Y strainer to prevent dirt in piping from entering the dryer. (Series: GX3108, GX5103 to 5108)
- Design piping so that pipe weight is not applied on the product.
- Use piping that sufficiently withstands working pressure. Check that air does not leak from connections.
- Galvanized steel pipes (white) are recommended. Use stainless steel pipes based on specifications and applications.

## <Drain piping method>

- Connect the drain pipe to the drain port.
- Use a drain pipe with a bore of at least 7. Keep the length to within 2 m, and release the discharge end into the atmosphere.
- The drain piping port is Rc1/4. If the drain piping slopes upward or if piping is too long, back pressure will be applied and drainage may not be discharged. Pipe with a downward slope so that drainage flows naturally.

- Drain treatment is necessary if oil could get into the drain.  
Contact an industrial waste specialist for treatment.
- Drainage is regularly discharged using air pressure. Securely fix drain discharge tubing, etc., so that it does not move during drain discharge.
- Keep the drain discharge manual cock completely closed during normal operation. Use this manual cock to remove drainage during maintenance.

## During use & Maintenance

### WARNING

#### <Freon collection>

- This product is subject to laws related to the collection and destruction of freon in specific products (freon collection and destruction laws). Collect freon gas when repairing or disposing of the product. Consult with CKD for Freon gas collection.

### CAUTION

#### <Repair parts>

- To ensure long use, regularly inspect wear and replace parts. Refer to the instruction manual enclosed with the product for details.

#### <Periodical maintenance part>

- To ensure long use, regularly inspect maintenance parts and replace them based on the standard replacement cycle. Refer to the Instruction Manual enclosed with the product for details.

**Discontinue**

Refrigerating type air dryer



# GX3100 Series

Applicable air compressor: 7.5kW, 11kW, 15kW, 22kW and 37kW

JIS symbol



## Specifications

Model no.		GX3108	GX3111	GX3115	GX3122	GX3137	
Applicable air compressor	kW	7.5	11	15	22	37	
Specified range	Working fluid	Compressed air					
	Inlet air temperature	°C					
	Inlet air pressure	MPa					
	Ambient temperature	°C					
Rated	Treating flow rate	m <sup>3</sup> /min. (ANR) (Note 2) 50/60Hz	1.20/1.30	1.65/1.82	2.80/3.10	3.90/4.30	6.60/7.30
	Inlet air temperature	°C					
	Inlet air pressure	MPa					
	Ambient temperature	°C					
Performance	Outlet air pressure dew point	°C					
	Pressure drop	MPa (Note 3) 50/60Hz	0.023/0.027	0.005/0.006	0.014/0.017	0.0026/0.0032	0.007/0.008
Power supply		Single phase 100/100-110 VAC 50/60Hz	Single phase 200/200-220 VAC 50/60Hz			Three phase 200/200-220 VAC 50/60Hz	
		Single phase 200/200-220 VAC 50/60Hz					
Electric specifications	Power consumption	kW 50/60Hz	0.41/0.50	1.16/1.29	1.17/1.32	1.19/1.36	1.53/1.89
	Operating current (at 100 V)	A 50/60Hz	4.5/4.9	-	-	-	-
	Operating current (at 200 V)	A 50/60Hz	2.4/2.5	6.5/6.7	6.6/6.8	6.7/7.0	5.4/6.0
	Starting current (at 100 V)	A 50/60Hz	17.6/16.3	-	-	-	-
	Starting current (at 200 V)	A 50/60Hz	9.6/8.9	26.7/24.5	26.7/24.5	26.7/24.5	27.8/24.7
Refrigerant		R-407C					
Air inlet/outlet port size		Rc3/4	Rc1	Rc1	R1 1/2	R1 1/2	
Drain port size		Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	
Product weight	kg	40	65	65	83	102	
Exhaust heat	kW 50/60Hz	0.71/0.79	1.7/1.9	2.1/2.4	2.2/2.4	3.3/3.8	

Note 1. Standard paint color outer panel: Quality cool white (munsell No. 5GY7.5/0.5)

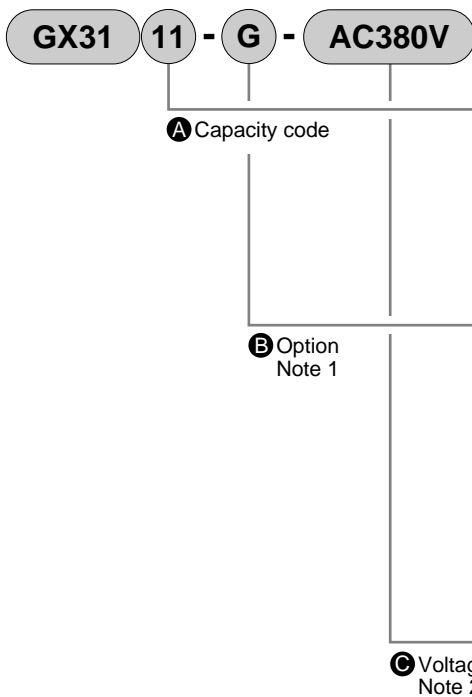
Quality cool gray (munsell No. 3G6.0/0.5)

Base: Black

Note 2: ANR indicates status at 20°C atmospheric pressure and 65% relative humidity.

Note 3: Pressure drops are typical and not guaranteed.

### How to order



Symbol	Descriptions
<b>(A) Capacity code</b>	
08	7.5kW
11	11kW
15	15kW
22	22kW
37	37kW

<b>(B) Option</b>	
G	Optional voltage
H	English documentation
M	Remote control & operation, fault signal output (Only GX3111, GX3115, GX3122, GX3137)
M1	Running signal output (Note 2- (4)) (Only GX3108)
N1	Copper tube rust proof coating
Y2	Product photo

<b>(C) Voltage</b>	
AC100V: 100 VAC	(only GX3108)
AC115V: 115 VAC	(only GX3108)
AC127V: 127 VAC	(only GX3108)
AC100V: 200 VAC	
AC220V: 220 VAC	(Note 2- (2))
AC230V: 230 VAC	
AC240V: 240 VAC	
AC380V: 380 VAC	
AC400V: 400 VAC	
AC415V: 415 VAC	
AC440V: 440 VAC	
AC460V: 460 VAC	
AC480V: 480 VAC	

### Note on model no. selection

- Note 1: Indicate options in alphabetical order.  
 Note 2: (1) (C) voltage must be indicated even for standard parts.  
 Example) GX3111-AC200V  
 (2) Ordering of 220 VAC voltage differs with the power frequency. Order as shown below.  
 Option G for 50Hz and 220 VAC: Example) GX3111-G-AC220V  
 Standard products for 60Hz and 220 VAC: Example) GX3111-AC200V  
 (3) With option G, the transformer is built into the main console, so outline dimensions do not change.  
 (4) GX3108 can be used only to read out the operation signals.  
 When conducting remote operation with the GX3108, turn the dryer switch on and operate from the power supply.

### Selection guide

If applicable models are asked from max. treating air flow rate in the each model.  
 Standard treating flow rate x pressure dew point coefficient x inlet air temperature coefficient x ambient temperature coefficient x inlet air pressure coefficient = max. treating air flow rate

Conditions	Working conditions	Selecting conditions	Coefficient
Pressure dew point	Less than 5°C	3°C	0.45
Inlet air temperature	35 to 43°C	45°C	0.70
Ambient temperature	25 to 33°C	35°C	0.90
Inlet air pressure	0.55 to 0.75MPa	0.5MPa	0.88
Frequency	50Hz	50Hz	50Hz

Substitute the above conditions into the equation above to obtain the process air when using the GX3111.

$$1.65 \times 0.45 \times 0.70 \times 0.90 \times 0.88 = 0.41 \text{ m}^3/\text{min.}$$

If the working air rate is less than this value, select that model.

Note: Select conditions so that the total of each coefficient does not exceed 1.5.

(1) Pressure dew point coefficient		
Pressure dew point	Coefficient	
	GX3108, GX3111, GX3115	GX3122, GX3137
15°C	1.25	1.13
10°C	1.00	1.00
7°C	0.80	0.90
5°C	0.65	0.80
3°C	0.45	0.65

(2) Inlet air temperature coefficient		
Inlet air temperature	Coefficient	
	GX3108, GX3111, GX3115	GX3122, GX3137
25°C	1.40	1.35
30°C	1.19	1.15
35°C	1.00	1.00
40°C	0.83	0.83
45°C	0.70	0.65
50°C	0.60	0.50

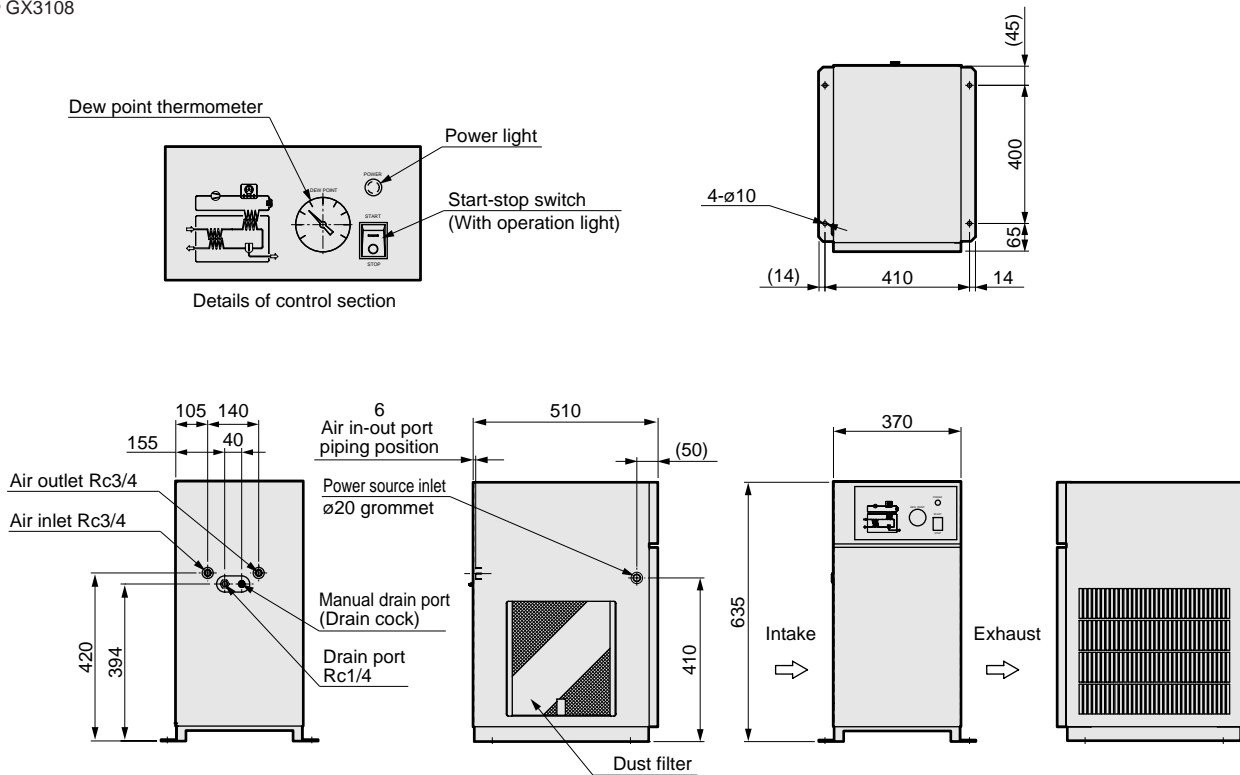
(3) Ambient temperature coefficient		
Ambient temperature	Coefficient	
	GX3108, GX3111, GX3115	GX3122, GX3137
25°C	1.20	1.27
32°C	1.00	1.00
35°C	0.90	0.87
40°C	0.77	0.67
43°C	0.69	0.55

(4) Inlet air pressure coefficient	
Inlet air pressure	Coefficient
0.2MPa	0.59
0.3MPa	0.71
0.4MPa	0.80
0.5MPa	0.88
0.6MPa	0.94
0.7MPa	1.00
0.8MPa	1.05
0.9MPa	1.09
1.0MPa	1.12
1.6MPa	1.27

# GX3100 Series

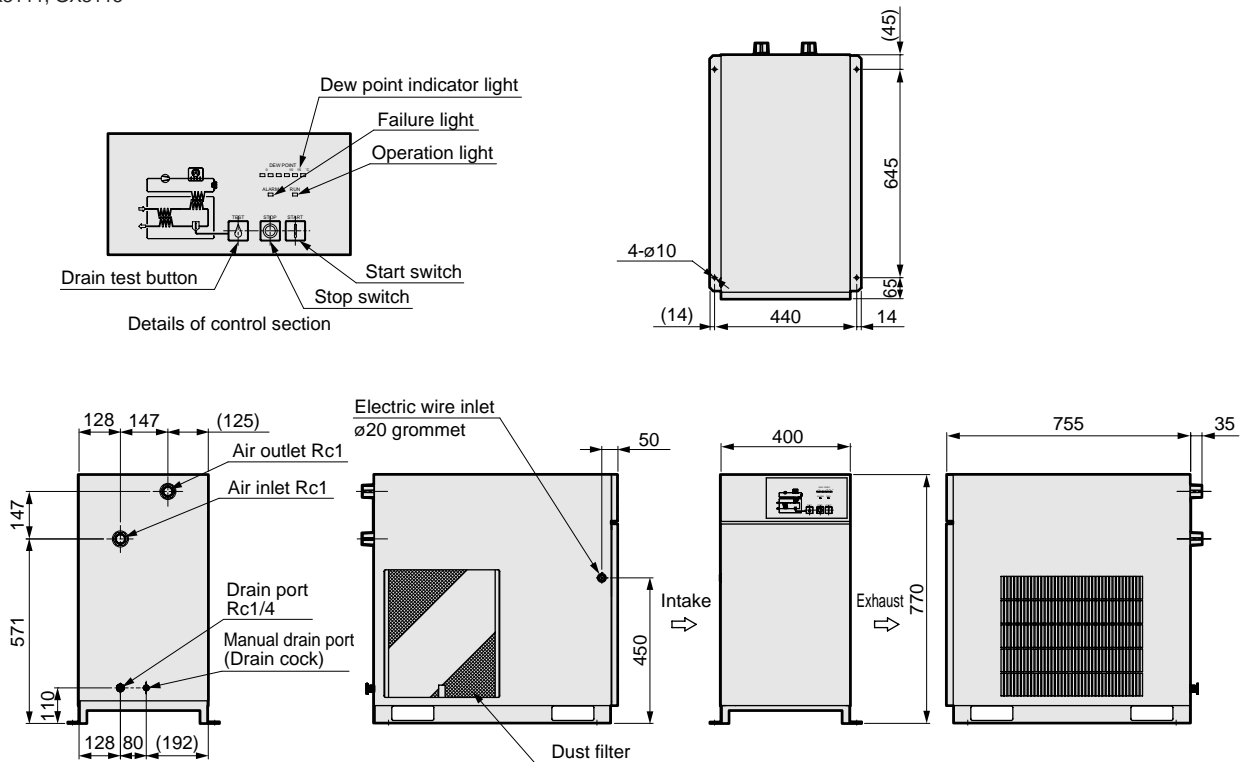
## Dimensions

● GX3108



Note 1: The Y strainer and nipple attached to the air inlet are enclosed.  
 Note 2: A power cord and 2.0 m grounding wire are enclosed with the 100 VAC model.

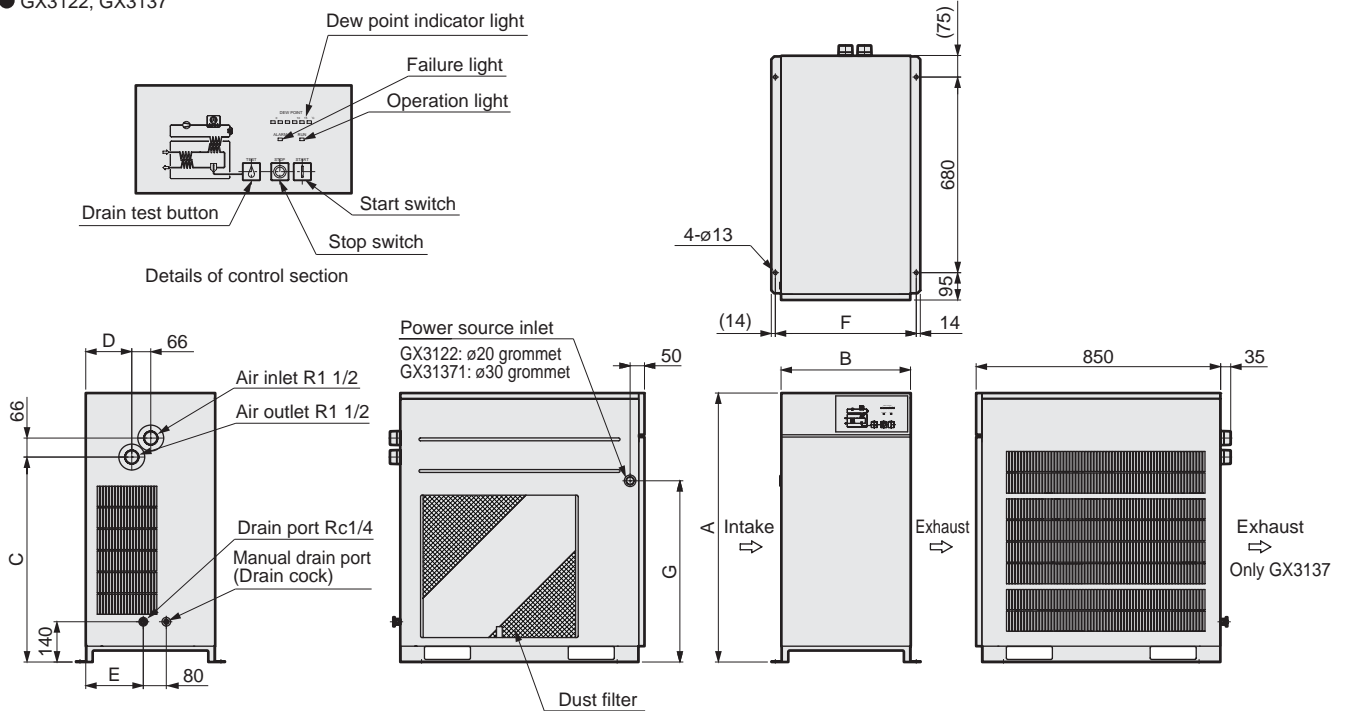
● GX3111, GX3115



Note 1: The Y type strainer is not included.

### Dimensions

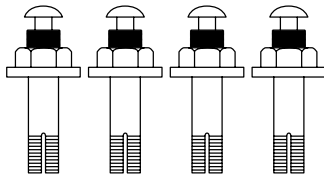
● GX3122, GX3137



Note 1: The Y type strainer is not included.

Model no.	A	B	C	D	E	F	G
GX3122	835	400	610	132	182	440	530
GX3137	935	450	713	160	200	490	630

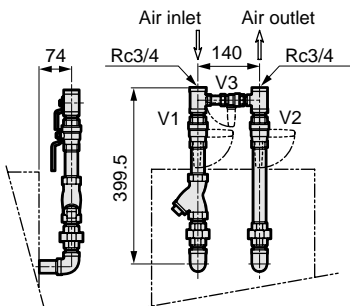
#### Anchor bolt & nut (optional)



No.	Applicable model	Size	Material	Quantity
GXP-FL-233907	GX3103, GX3104	M8 x 70	SUS	4
	GX3106, GX3108 GX3111, GX3115			
GXP-FL-233908	GX3122, GX3137	M10 x 100		

#### By-pass piping set (optional)

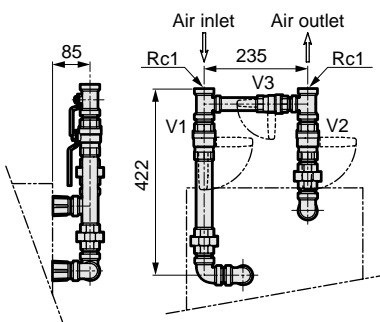
● GX3108



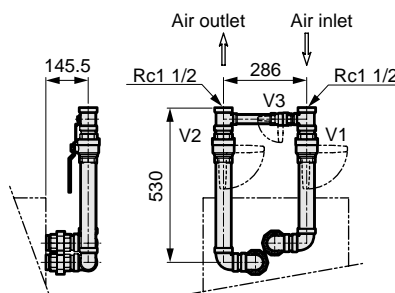
No.	Applicable model
RD-KFL-375436	GX3108
RD-KFL-375437	GX3111, GX3115
RD-KFL-375438	GX3122, GX3137

V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub>: Ball valve  
 V<sub>1</sub>, V<sub>2</sub> : NORMALLY OPEN  
 V<sub>3</sub> : NORMALLY CLOSED

● GX3111, GX3115



● GX3122, GX3137



**Discontinue**

Refrigerating type air dryer



# GX5100 Series

Applicable air compressor: 2.2kW, 3.7kW, 5.5kW, 7.5kW, 11kW, 15kW, 22kW and 37kW

JIS symbol



## Specifications

Model no.	GX5103	GX5104	GX5106	GX5108	GX5111	GX5115	GX5122	GX5137	
Applicable air compressor kW	to 2.2	3.7	5.5	7.5	11	15	22	37	
Specified range	Working fluid								
	Compressed air								
	Inlet air temperature °C (Note 3)								
	5 to 80								
Inlet air pressure MPa									
0.2 to 1.6									
Ambient temperature °C (Note 3)									
2 to 43									
Rated	Treating flow rate m <sup>3</sup> /min. (ANR) (Note 2) 50/60Hz	0.31/0.35	0.50/0.55	0.74/0.81	1.20/1.30	1.65/1.82	2.80/3.10	3.90/4.30	6.60/7.30
	Inlet air temperature °C	55							
	Inlet air pressure MPa	0.7							
	Ambient temperature °C	32							
Performance	Outlet air pressure dew point °C	10							
	Pressure drop MPa (Note 4) 50/60Hz	0.009/0.011	0.023/0.027	0.009/0.011	0.023/0.027	0.005/0.006	0.015/0.018	0.0026/0.0032	0.008/0.009
Power supply	Single phase 100/100-110 VAC 50/60Hz				Single phase 200/200-220 VAC 50/60Hz	Three phase 200/200-220 VAC 50/60Hz			
	Single phase 200/200-220 VAC 50/60Hz								
Electric specifications	Power consumption kW 50/60Hz	0.25/0.26	0.25/0.26	0.42/0.49	0.43/0.50	1.20/1.35	1.69/2.06	1.61/1.98	2.51/3.11
	Operating current (at 100 V) A 50/60Hz	3.2/2.7	3.2/2.8	4.7/5.0	4.7/5.0	-	-	-	-
	Operating current (at 200 V) A 50/60Hz	1.4/1.3	1.4/1.4	2.4/2.4	2.4/2.5	6.7/7.0	5.9/6.5	5.6/6.2	9.0/10.2
	Starting current (at 100 V) A 50/60Hz	8.6/8.1	8.6/8.1	17.6/16.3	17.6/16.3	-	-	-	-
	Starting current (at 200 V) A 50/60Hz	4.1/3.8	4.1/3.8	9.6/8.9	9.6/8.9	26.7/24.5	27.8/24.7	27.8/24.7	68.0/60.0
Refrigerant	R-407C								
Air inlet/outlet port size	Rc3/8	Rc3/8	Rc3/4	Rc3/4	Rc1	Rc1	R1 1/2	R1 1/2	
Drain port size	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	Rc1/4	
Product weight kg	28	28	40	40	65	76	102	128	
Exhaust heat kW 50/60Hz	0.44/0.49	0.59/0.64	0.94/1.04	1.3/1.4	2.6/2.9	4.0/4.7	4.4/5.1	7.2/8.3	

Note 1. Standard paint color outer panel: Quality cool white (munsell No. 5GY7.5/0.5)

Quality cool gray (munsell No. 3G6.0/0.5)

Base: Black

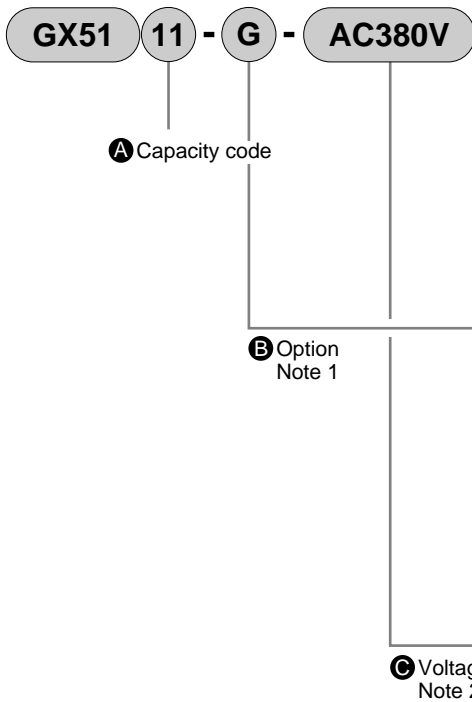
Note 2: ANR indicates status at 20°C atmospheric pressure and 65% relative humidity.

Note 3: If inlet air temperature and ambient temperature are both at a maximum (80°C and 43°C), use at the rated flow cannot be guaranteed. Continuing operation will shorten product life.

Refer to separate specifications for details on the working range.

Note 4: The pressure drop is typical and not guaranteed.

### How to order



Symbol	Descriptions	
<b>(A) Capacity code</b>		
03	2.2kW	
04	3.7kW	
06	5.5kW	
08	7.5kW	
11	11kW	
15	15kW	
22	22kW	
37	37kW	
<b>(B) Option</b>		
G	Optional voltage	
H	English documentation	
M	Remote control & operation, fault signal output (Only GX5111, GX5115, GX5122, GX5137)	
M1	Running signal outlet (Note 2- (5)) (Only GX5103, GX5104, GX5106, GX5108)	
N1	Copper tube rust proof coating	
Y2	Product photo	
<b>(C) Voltage</b>		
AC100V: 100 VAC		(Note 2 - (3))
AC115V: 115 VAC		(Note 2 - (3))
AC127V: 127 VAC		(Note 2 - (3))
AC100V: 200 VAC		
AC220V: 220 VAC		(Note 2 - (2))
AC230V: 230 VAC		
AC240V: 240 VAC		
AC380V: 380 VAC		
AC400V: 400 VAC		
AC415V: 415 VAC		
AC440V: 440 VAC		
AC460V: 460 VAC		
AC480V: 480 VAC		

### Note on model no. selection

- Note 1: Indicate options in alphabetical order.  
 Note 2: (1) (C) voltage must be indicated even for standard parts.  
 Example) GX5111-AC200V  
 (2) Ordering of 220 VAC voltage differs with the power frequency. Order as shown below.  
 Option G for 50Hz and 220 VAC: Example) GX5111-G-AC220V  
 Standard products for 60Hz and 220 VAC: Example) GX5111-AC200V  
 (3) 100 VAC, 115 VAC and 127 VAC are available for 4 models of GX5103, GX5104, GX5106 and GX5108.  
 (4) With option G, the transformer is built into the main console, so outline dimensions do not change.  
 (5) GX5103, GX5104, GX5106, GX5108 has running signal output only.  
 When conducting remote operation with these models, turn the dryer switch on and operate from the power supply.

### Selection guide

If applicable models are asked from max. treating air flow rate in the each model.  
 Standard treating flow rate x pressure dew point coefficient x inlet air temperature coefficient x ambient temperature coefficient x inlet air pressure coefficient = max. treating air flow rate

Conditions	Working conditions	Selecting conditions	Coefficient
Pressure dew point	Less than 5°C	3°C	0.55
Inlet air temperature	55 to 65°C	65°C	0.70
Ambient temperature	35 to 40°C	40°C	0.75
Inlet air pressure	0.55 to 0.75MPa	0.5MPa	0.88
Frequency	50Hz	50Hz	50Hz

Substitute the above conditions into the equation above and obtain the process air when using the GX5111.

$1.65 \times 0.55 \times 0.70 \times 0.75 \times 0.88 = 0.42\text{m}^3/\text{min}$ .  
 If the working air rate is less than this value, select that model.

Note: Select conditions so that the total of each coefficient does not exceed 1.5.

(1) Pressure dew point coefficient			
Pressure dew point	Coefficient		
	GX5103, GX5104, GX5106, GX5108	GX5111, GX5115	GX5122, GX5137
15°C	1.06	1.23	1.10
10°C	1.00	1.00	1.00
7°C	0.95	0.82	0.91
5°C	0.91	0.68	0.83
3°C	0.84	0.55	0.70

(2) Inlet air temperature coefficient		
Inlet air temperature	Coefficient	
	GX5103, GX5104, GX5106, GX5108, GX5122, GX5137	GX5111, GX5115
40°C	1.15	1.50
45°C	1.12	1.40
50°C	1.08	1.18
55°C	1.00	1.00
60°C	0.88	0.85
65°C	0.74	0.70
70°C	0.60	0.57
75°C	0.44	0.46
80°C	0.30	0.35

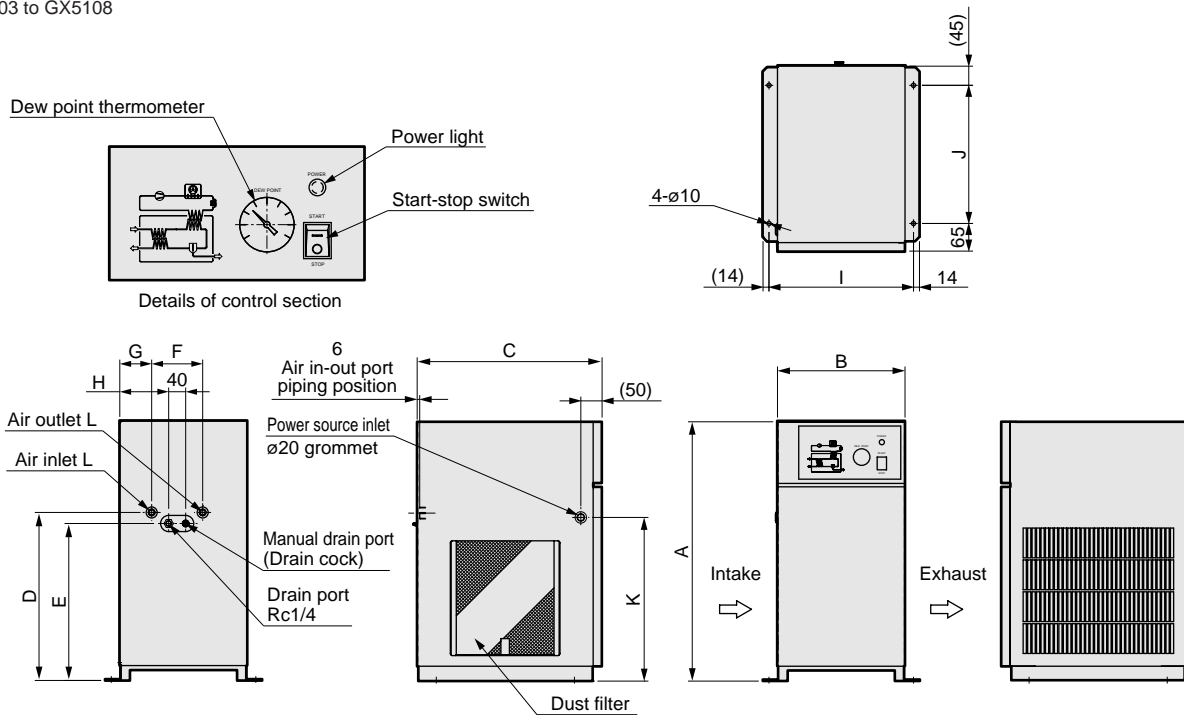
(3) Ambient temperature coefficient	
Ambient temperature	Coefficient
25°C	1.20
32°C	1.00
35°C	0.90
40°C	0.75
43°C	0.67

(4) Inlet air pressure coefficient	
Inlet air pressure	Coefficient
0.2MPa	0.59
0.3MPa	0.71
0.4MPa	0.80
0.5MPa	0.88
0.6MPa	0.94
0.7MPa	1.00
0.8MPa	1.05
0.9MPa	1.09
1.0MPa	1.12
1.6MPa	1.27

# GX5100 Series

## Dimensions

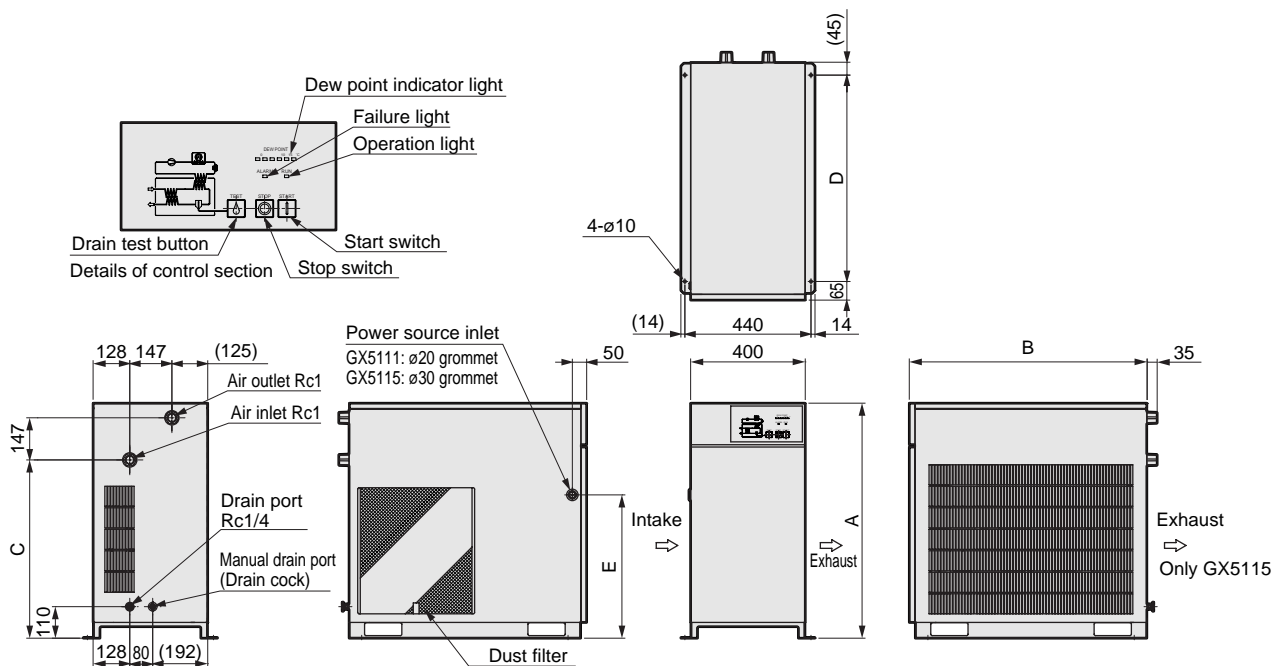
● GX5103 to GX5108



Note 1: The Y strainer and nipple attached to the air inlet are enclosed.  
 Note 2: A power cord and 2.0 m grounding wire are enclosed with the 100 VAC model.

Model no.	A	B	C	D	E	F	G	H	I	J	K	L
GX5103	610	300	435	395	369	120	75	115	340	325	385	Rc3/8
GX5104	610	300	435	395	369	120	75	115	340	325	385	Rc3/8
GX5106	635	370	510	420	394	140	105	155	410	400	410	Rc3/4
GX5108	635	370	510	420	394	140	105	155	410	400	410	Rc3/4

● GX5111, GX5115

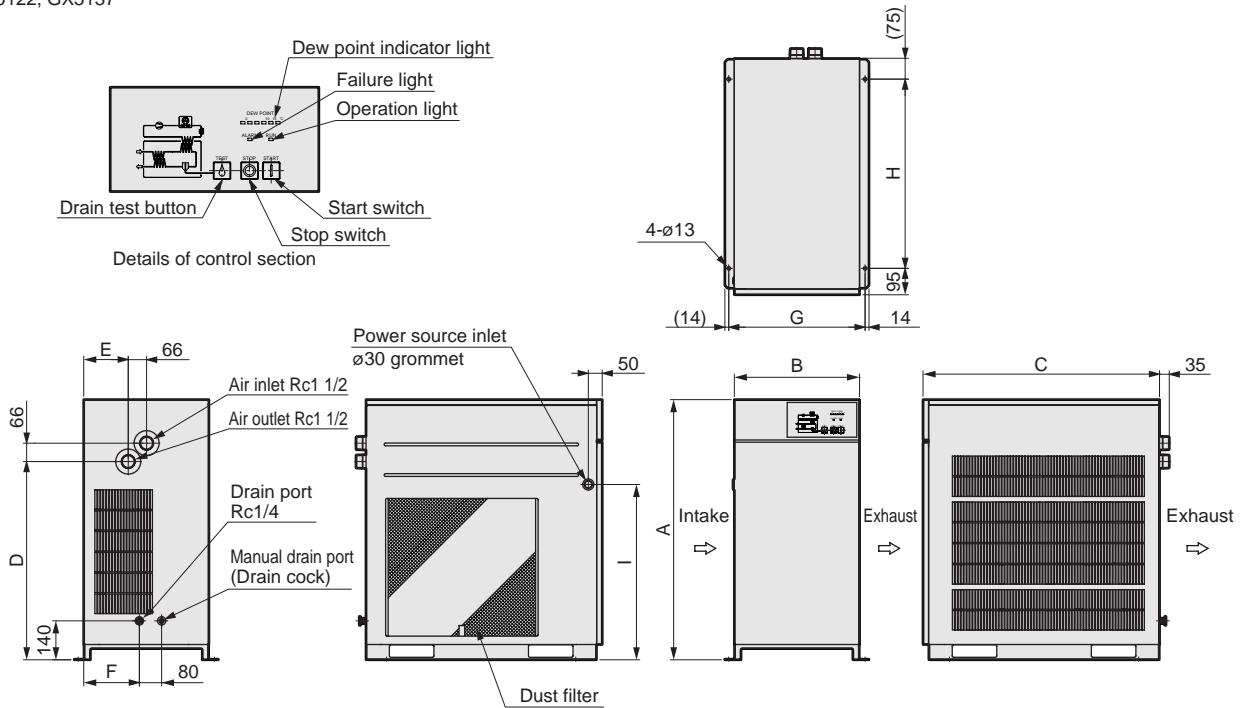


Note 1: The Y type strainer is not included.

Model no.	A	B	C	D	E
GX5111	770	755	571	645	450
GX5115	820	830	622	720	500

### Dimensions

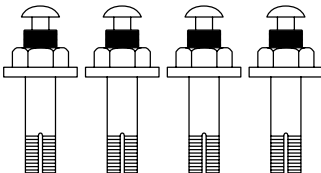
● GX5122, GX5137



Note 1: The Y type strainer is not included.

Model no.	A	B	C	D	E	F	G	H	I
GX5122	935	450	850	713	160	200	490	680	630
GX5137	1010	500	930	789	180	240	540	760	705

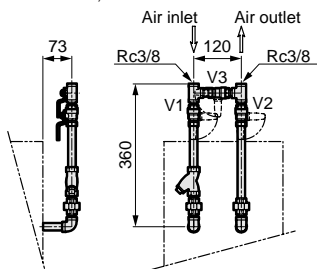
#### Anchor bolt & nut (optional)



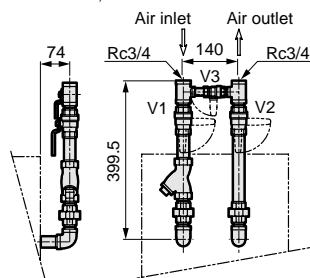
No.	Applicable model	Size	Material	Quantity
GXP-FL-233907	GX5103, GX5104	M8 x 70	SUS	4
	GX5106, GX5108			
	GX5111, GX5115			
GXP-FL-233908	GX5122, GX5137	M10 x 100		

#### By-pass piping set (optional)

● GX5103, GX5104



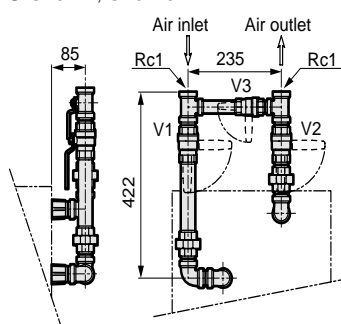
● GX5106, GX5108



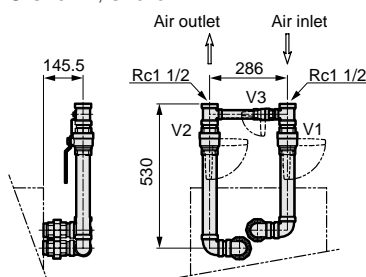
No.	Applicable model
RD-KFL-375435	GX5103, GX5104
RD-KFL-375436	GX5106, GX5108
RD-KFL-375437	GX5111, GX5115
RD-KFL-375438	GX5122, GX5137

V<sub>1</sub>, V<sub>2</sub>, V<sub>3</sub>: Ball valve  
V<sub>1</sub>, V<sub>2</sub>: NORMALLY OPEN  
V<sub>3</sub> : NORMALLY CLOSED

● GX5111, GX5115



● GX5122, GX5137



### Saturated vapor rate table (Relative humidity: 100%)

(Unit: g/m<sup>3</sup>)

		Temperature °C at 1°C									
		0	1	2	3	4	5	6	7	8	9
Temperature °C at 10°C	90	418	433	449	465	481	498	515	532	551	569
	80	291	302	313	325	337	350	363	376	390	404
	70	197	205	213	222	231	240	250	259	270	280
	60	130	135	141	147	154	160	167	174	182	189
	50	82.8	86.7	90.8	95.0	95.5	104	109	114	119	124
	40	51.1	53.7	56.4	59.3	62.2	65.3	68.5	71.9	75.4	79.0
	30	30.3	32.0	33.7	35.6	37.6	39.6	41.7	43.9	46.2	48.6
	20	17.2	18.3	19.4	20.6	21.8	23.0	24.4	25.8	27.2	28.7
	10	9.39	10.0	10.7	11.3	12.1	12.8	13.6	14.5	15.4	16.3
	0	4.85	5.19	5.56	5.94	6.36	6.79	7.26	7.75	8.27	8.81
	- 0	4.84	4.84	4.13	3.82	3.52	3.24	2.99	2.75	2.53	2.33
	-10	2.14	1.96	1.80	1.65	1.51	1.39	1.27	1.16	1.06	0.967
	-20	0.882	0.804	0.732	0.667	0.607	0.551	0.501	0.454	0.412	0.373
	-30	0.338	0.305	0.276	0.249	0.225	0.203	0.183	0.164	0.148	0.133
	-40	0.119	0.107	0.0955	0.0854	0.0763	0.0681	0.0608	0.0541	0.0482	0.0428
	-50	0.0381	0.0338	0.0299	0.0265	0.0234	0.0207	0.0183	0.0161	0.0142	0.0125
	-60	0.0109	0.00959	0.00840	0.00734	0.00642	0.00560	0.00488	0.00425	0.00369	0.00320
	-70	0.00277	0.00240	0.00207	0.00179	0.00154	0.00133	0.00114	0.000977	0.000836	0.000715
	-80	0.000610	0.000520	0.000442	0.000376	0.000318	0.000269	0.000228	0.000192	0.000162	0.000136
	-90	0.000114	0.0000952	0.0000795	0.0000663	0.0000551	0.0000458	0.0000379	0.0000313	0.0000259	0.0000213

### Reading the saturated vapor rate table

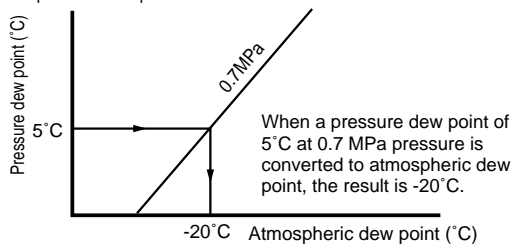
The temperature in 10°C units is shown in the vertical column, and the temperature in 1°C units is shown in the horizontal row.  
Example: Obtain the saturated vapor rate at 32°C.

		Temperature °C at 1°C				
		0	1	2	3	
Temperature °C at 10°C	40					
	30			33.7		
	20					

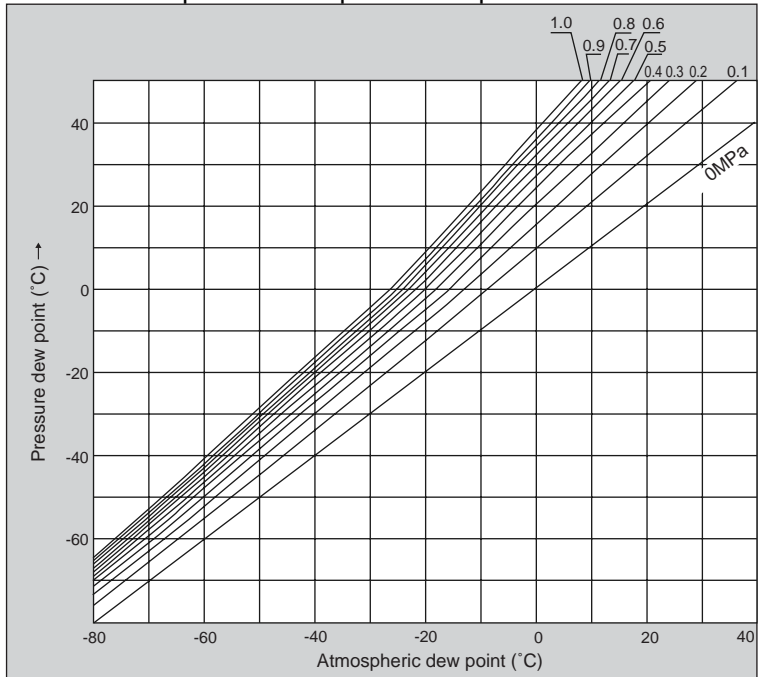
33.7 g/m<sup>3</sup> can be selected from the above table.

### Reading the pressure dew point - atmospheric pressure dew point conversion table

This table is used to convert the pressure dew point at each pressure to the atmospheric pressure dew point, or vice versa.  
Example: Obtain the atmospheric dew point at 0.7 MPa pressure and 5°C pressure dew point.



### Pressure dew point - atmospheric dew point conversion table



#### Revision descriptions

Notes on saturated vapor rate table and pressure dew point - atmospheric dew point conversion table added

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