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CKD

SM－366338－A

INSTRUCTION MANUAL

REFRIGERATED COMPRESSED AIR DRYER

Xeroaqua GX Series

GX3108, GX3111, GX3115, GX3122,
GX3137
GX5103, GX5104, GX5106, GX5108,
GX5111, GX5115, GX5122, GX5137

- This product is "industrial use." Be careful of handling enough.
- Be sure to read this manual before installing and operating your dryer.
- The end of a book serves as a CKD WARRANTY. Please save carefully.

JUL-06 2nd edition
CKD Corporation

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Safety instructions

This dryer must be operated by a person who has basic knowledge of electric, compressed air,liquid, piping, refrigerant, etc. We are not responsible for any accidents caused when a person who does not have the basic knowledge or who is not well trained installation, operation, repair, etc.
Improper operation may cause poor performance of the dryer or may cause accidents.
We applied a variety of safety measures to our dryers, but improper handling of dryers could cause accidents. Thus, be sure to read and fully understand this manual before using them.
"Keep this manual together with the dryer".

Caution for safety

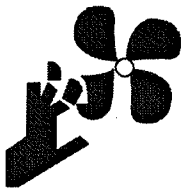
Cautions at operation are indicated in the following two ways. WARNING CAUTION

WARNING used when improper handling could kill or seriously harm operators

CAUTION used when improper handling could harm operators or damage objects

WARNING: ROTATION

★The fan may start rotating suddenly and may be harmful.
Do not put your hands or objects into the fan area.
●Be sure to turn off the power before inspection.



WARNING: ELECTRICAL SHOCK

★Power supply terminal box, switches, etc. may cause you electrical shock.
●Be sure to turn off the power before inspection. Do not operate the dryer with your wet hands.

CAUTION: HIGH TEMPERATURE

★The dryer is hot for a while after shut down the dryer.
●Be sure to turn off the power and to confirm that dryer becomes cool before inspection.

CAUTION: FOOT HOLD

★You could fall if you climb on the panel.
●Do not climb on the panel.

EARTH CONNECTION

★Be sure to connect earth to prevent electrical shock.

This dryer is industrials. Be sure to fully attend to using the dryer.

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1. Introduction

Thank you very much for purchasing CKD Product.
This manual explains basic points of installation, operation, etc. to have our refrigerated air dryer, Xeroaqua GX Series perform at their best. Be sure to read this manual before using your dryer.
Keep this manual together with the dryer.

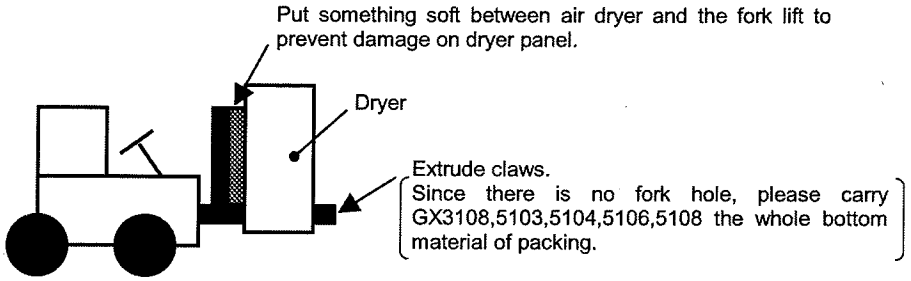
2. Cautions

2. 1 Transportation

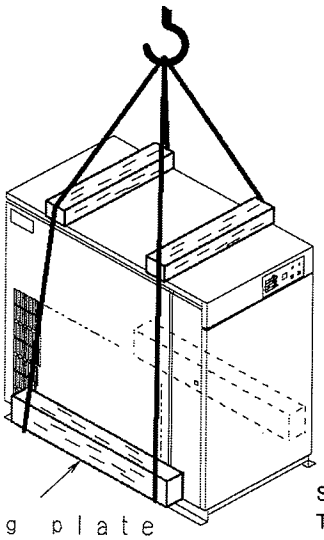
1) Do not fall down the dryer. Also do not give vibration or impact to the dryer.
*Internal parts could get damaged.

2) Do not climb up on the dryer or put objects on the dryer.
*Workers could get hurt.

3) Move the product with a fork lift as shown in the drawing.
(GX3111,3115,3122,3137,GX5111,5115,5122,5137)



4) Move the product with a crane.



Supporting plate
(4 places)

Supporting plate
The length of the supporting plates should be longer than the width of the dryer by approximately 100mm.
Put something soft between air dryer and the supporting plates to prevent damages on dryer panel.

2. 2 Operation Environment

1) Do not install the dryer outdoor.
*This product dose not have water-proof structure. Water or rain splashing to its electrical system could result in leak or fire.

2) Operating ambient temperature should be 2 to 43 ° C (no condensation).
*Drain freezes under the temperature of 2℃ or below, and this could cause break-down Operation under the temperature of 43 ° C or above could stop the operation abnormally or could shorten the service life of the product.

3) Do not use the dryer in a place with direct sun light, powder dust, heat producing objects, corrosive gas, explosive gas, ignitable gas or combustible gas.
*Break-down, explosion, or fire may result.

2. 3 Cautions at operation

1) Do not use the dryer to remove humidity of except compressed air.
Break-down, explosion, or fire may result.

2) Install an earth leakage breaker at power supply.
*Electric shock may result.

3) Ground to earth.
*Causes of an electric shock or a fire.

4) Use the dryer within specifications.
*Operation may stop abnormally, or the product' s service life may be shortened.

5) Do not frequent start and stop the dryer.
Hold frequency of starting/shutting off within 6 times/hour, keep it running for at least 5 minutes before shutting it off and hold restarting it for 3 minutes or longer.
*Break-down or shorter service life of the product may result.

6) Do not turn on the power supply without the panel on.
*Electric shock or heat injury may result, or rotation parts could hurt workers.

7) Remove drain before it enters the dryer when drain flows into the dryer with compressed air.
*Drain could leak to the secondary side of the dryer.

8) Don't carry out reconstruction of this machine.
*It becomes an unexpected accident and the cause of a life fall.

9) Check the dew point gauge or dew point lamps during operation.
*If dew point temp. does not show the green belt, it will become the cause of an unusual stop or it will become the cause which shortens the life of a compressor etc.

1 0) If emergency stop occurs during operation, remove the cause of abnormal conditions referring to the trouble shooting.
*If the emergency stop occurs repeatedly, this may cause the dryer to malfunction.

1 1) Do not use the dryer for pneumatic caisson shield or respiratory medical equipment.
*It could cause an accident includes injury.

1 2) Do not use the dryer for transportation devices such as automobile, ship etc.
* Vibration could be a cause of break down of the internal components.

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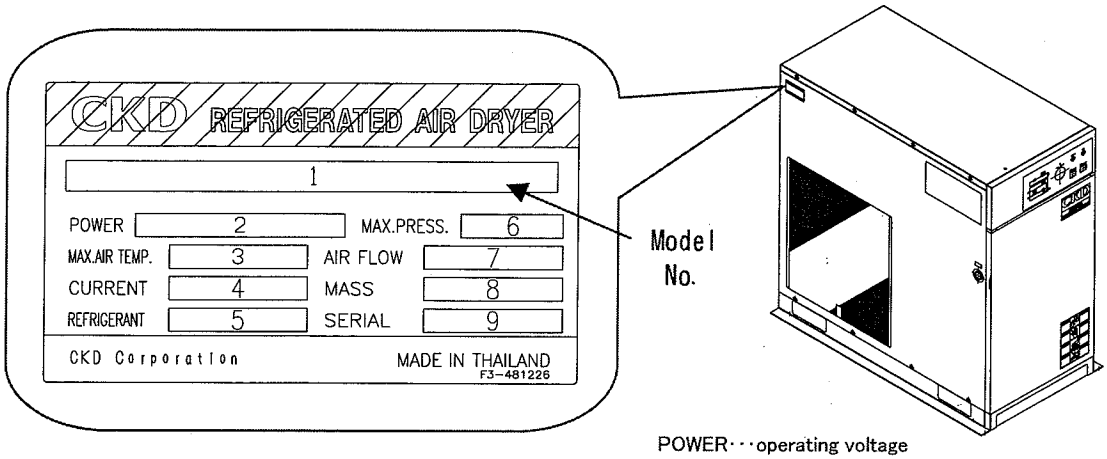
3. Installation

3. 1 Confirm the following.

1) Confirm the contents on the label. (Model No., Spec. etc.)



POWER・・・operating voltage
MAX.PRESS・・・max. inlet air pressure
MAX.AIR TEMP・・・max. inlet air temperature
AIR FLOW・・・flow late
CURRENT・・・operating current
MASS・・・mass
REFRIGERANT・・・refrigerant type &mass
SERIAL No.・・・serial number

1	2	3	4	5	6	7	8
GX3108-AC100V	1φAC100V50/60Hz	50℃	4.5/4.9A	R-407C, 470g	1.6MPa	1.2/1.3 m^3/min ANR	40kg
GX3108-AC200V	1φAC200V50/60Hz	50℃	2.4/2.5A	R-407C, 470g	1.6MPa	1.2/1.3 m^3/min ANR	40kg
GX3111-AC200V	1φAC200V50/60Hz	50℃	6.5/6.7A	R-407C, 405g	1.6MPa	1.65/1.82 m^3/min ANR	65kg
GX3115-AC200V	1φAC200V50/60Hz	50℃	6.6/6.8A	R-407C, 405g	1.6MPa	2.8/3.1 m^3/min ANR	65kg
GX3122-AC200V	1φAC200V50/60Hz	50℃	6.7/7.0A	R-407C, 440g	1.6MPa	3.9/4.3 m^3/min ANR	83kg
GX3137-AC200V	3φAC200V50/60Hz	50℃	5.4/6.0A	R-407C, 1050g	1.6MPa	6.6/7.3 m^3/min ANR	102kg

1	2	3	4	5	6	7	8
GX5103-AC100V	1φAC100V50/60Hz	80℃	3.2/2.7A	R-407C, 220g	1.6MPa	0.31/0.35 m^3/min ANR	28kg
GX5103-AC200V	1φAC200V50/60Hz	80℃	1.4/1.3A	R-407C, 220g	1.6MPa	0.31/0.35 m^3/min ANR	28kg
GX5104-AC100V	1φAC100V50/60Hz	80℃	3.2/2.8A	R-407C, 220g	1.6MPa	0.5/0.55 m^3/min ANR	28kg
GX5104-AC200V	1φAC200V50/60Hz	80℃	1.4/1.4A	R-407C, 220g	1.6MPa	0.5/0.55 m^3/min ANR	28kg
GX5106-AC100V	1φAC100V50/60Hz	80℃	4.7/5.0A	R-407C, 470g	1.6MPa	0.74/0.81 m^3/min ANR	40kg
GX5106-AC200V	1φAC200V50/60Hz	80℃	2.4/2.4A	R-407C, 470g	1.6MPa	0.74/0.81 m^3/min ANR	40kg
GX5108-AC100V	1φAC100V50/60Hz	80℃	4.7/5.0A	R-407C, 470g	1.6MPa	1.2/1.3 m^3/min ANR	40kg
GX5108-AC200V	1φAC200V50/60Hz	80℃	2.4/2.5A	R-407C, 470g	1.6MPa	1.2/1.3 m^3/min ANR	40kg
GX5111-AC200V	1φAC200V50/60Hz	80℃	6.7/7.0A	R-407C, 405g	1.6MPa	1.65/1.82 m^3/min ANR	65kg
GX5115-AC200V	3φAC200V50/60Hz	80℃	5.9/6.5A	R-407C, 620g	1.6MPa	2.8/3.1 m^3/min ANR	76kg
GX5122-AC200V	3φAC200V50/60Hz	80℃	5.6/6.2A	R-407C, 1050g	1.6MPa	3.9/4.3 m^3/min ANR	102kg
GX5137-AC200V	3φAC200V50/60Hz	80℃	9.0/10.2A	R-407C, 1480g	1.6MPa	6.6/7.3 m^3/min ANR	128kg

【Caution】 If the contents are not clear or there are any questions, please contact CKD or distributors before using the dryer.

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2) Confirm damage or transformation that is made during the transportation.

3) Check whether there are all accessories.

Instruction Manual	1	
Y-type strainer	1	Note1)
Both screw nipple	1	Note1)
Tightening joint	1	
Insert ring	1	
Drain tube	1	

Note1) Only GX3108,GX5103,5104,5106,5108

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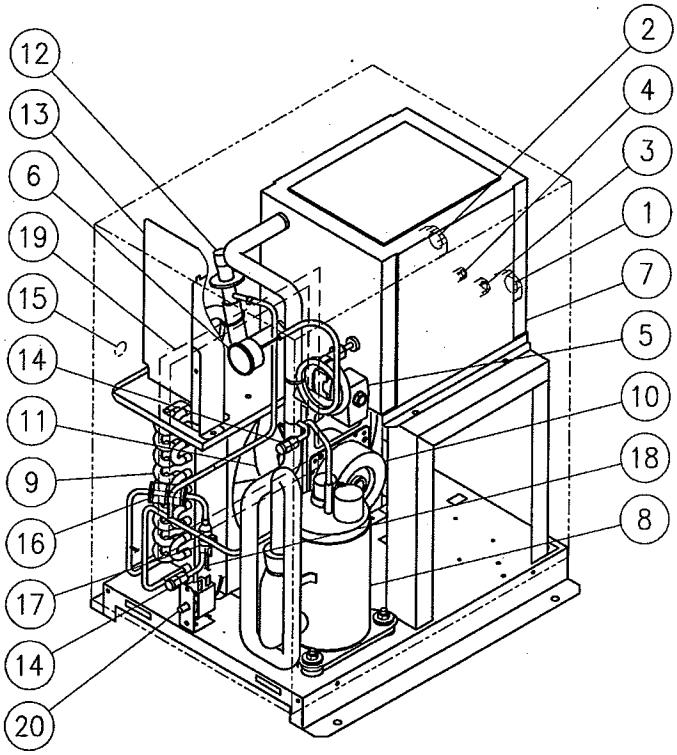
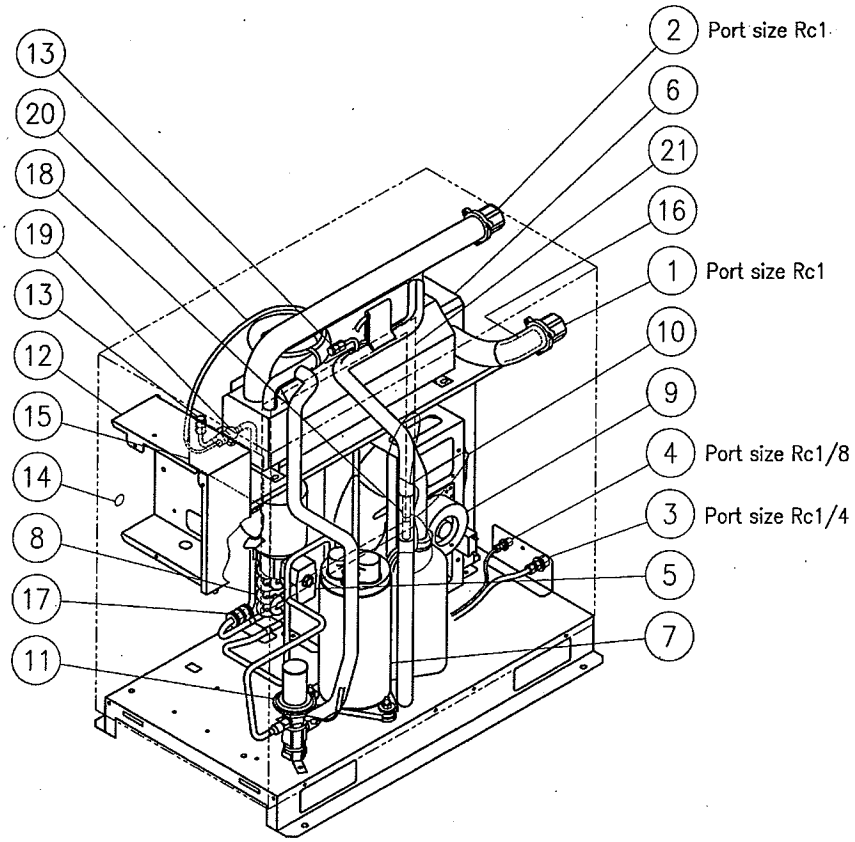
3. 2 The name of each part

1) GX3108-AC100, 200V



No.	Parts name	Q'ty
20	High pressure switch	1
19	Dust filter	1
18	Capillary tube	1
17	Strainer	1
16	Thermo sensor(fan control)	1
15	Power source inlet	1
14	Service valve	2
13	Electric box	1
12	Capacity control valve	1
11	Fan blade	1
10	Fan motor	1
9	Condenser	1
8	Compressor	1
7	Heat exchanger	1
6	Dew point gauge	1
5	Solenoid valve(drain discharge)	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

2) GX3111-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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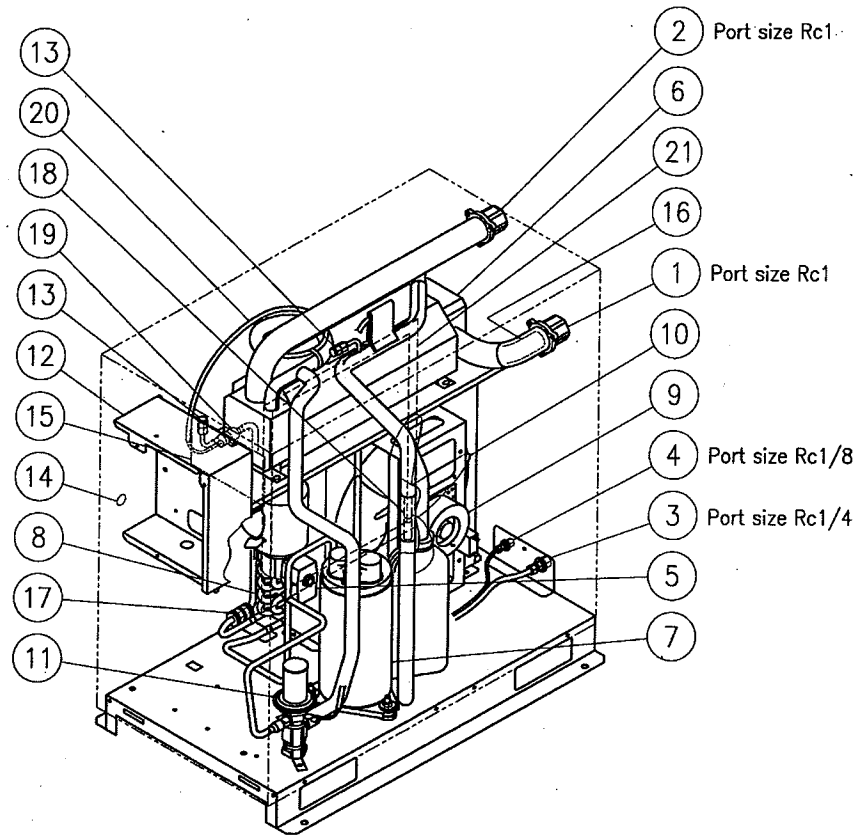
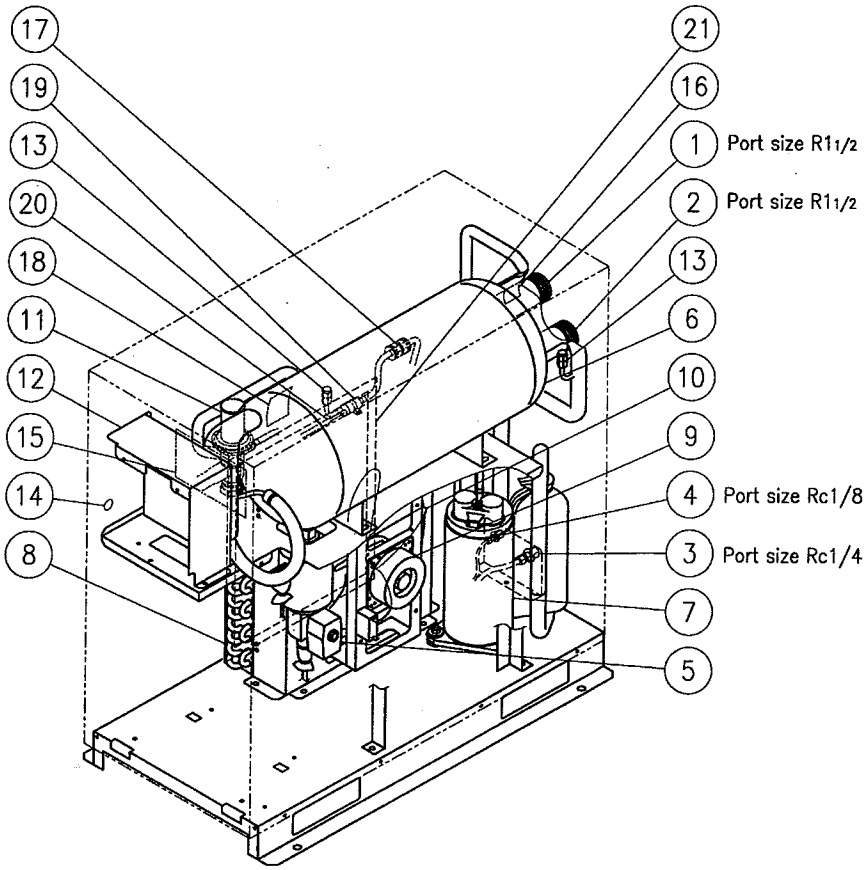
3) GX3115-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

4) GX3122-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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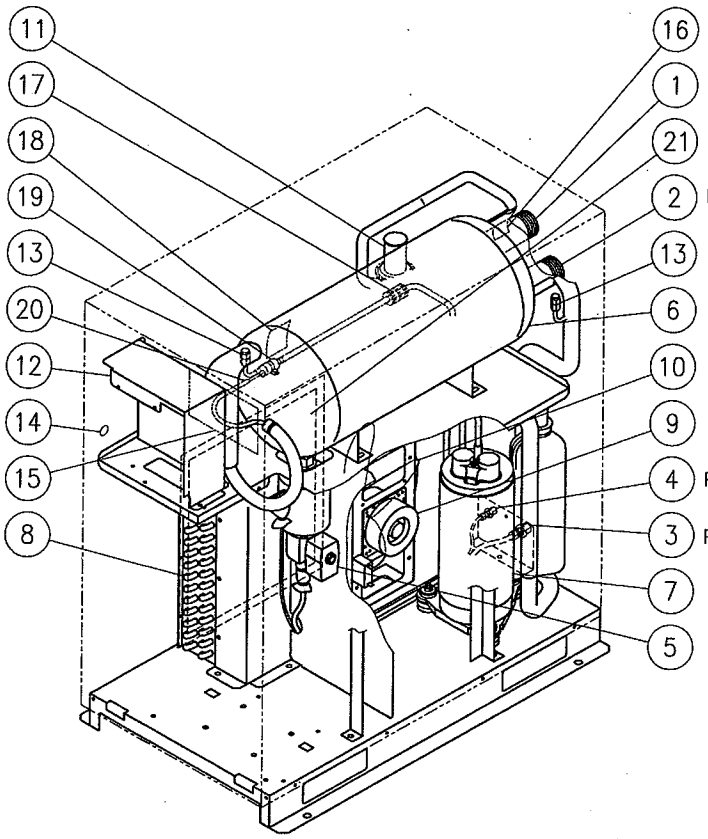
5) GX3137-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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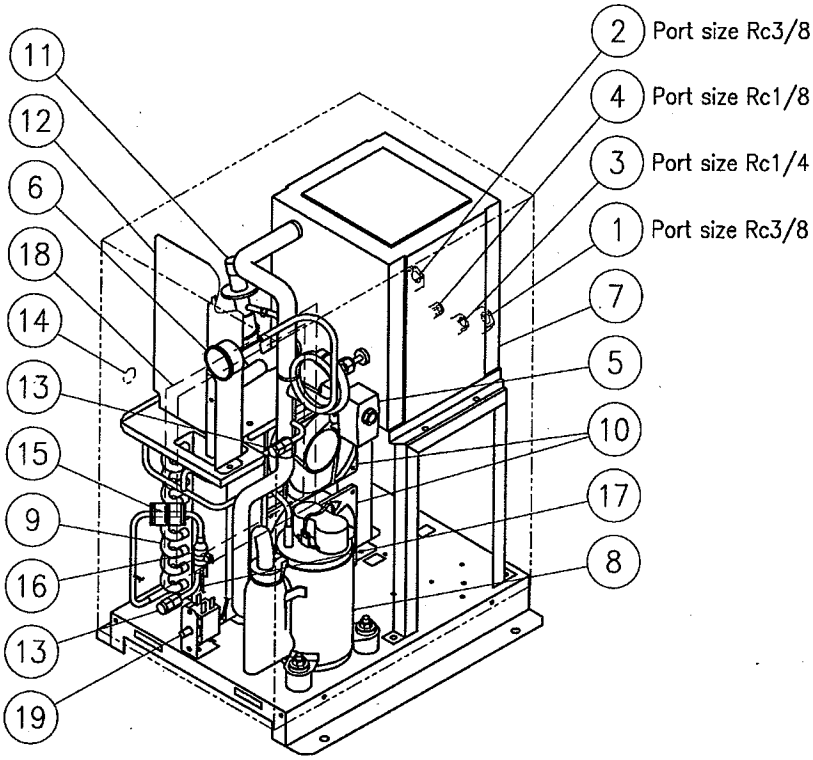
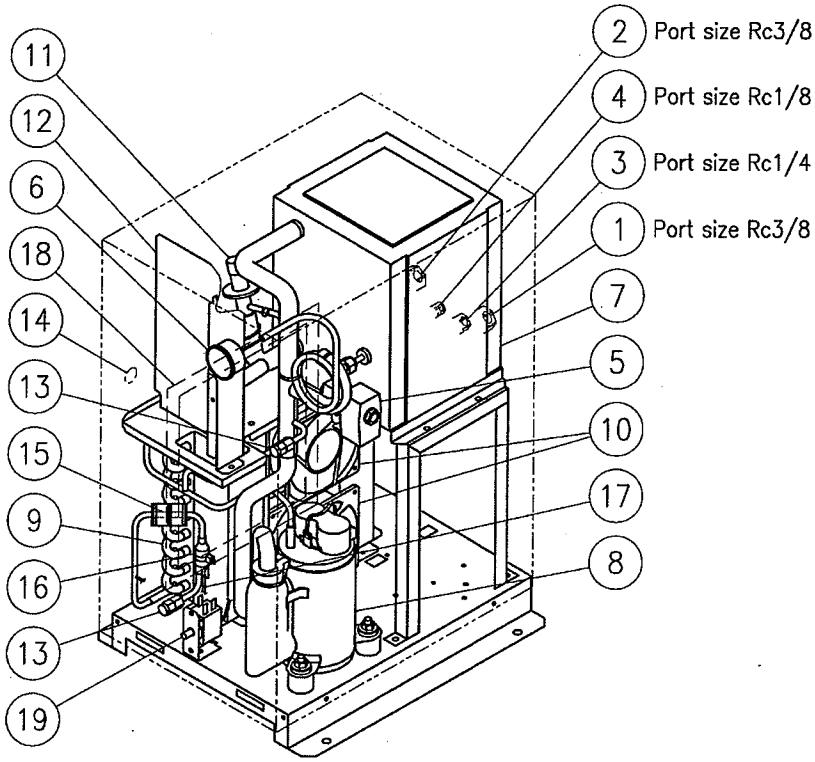
6) GX5103-AC100, 200V



No.	Parts name	Q'ty
19	High pressure switch	1
18	Dust filter	1
17	Capillary tube	1
16	Strainer	1
15	Thermo sensor(fan control)	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan motor	2
9	Condenser	1
8	Compressor	1
7	Heat exchanger	1
6	Dew point gauge	1
5	Solenoid valve(drain discharge)	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

7) GX5104-AC100, 200V



No.	Parts name	Q'ty
19	High pressure switch	1
18	Dust filter	1
17	Capillary tube	1
16	Strainer	1
15	Thermo sensor(fan control)	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan motor	2
9	Condenser	1
8	Compressor	1
7	Heat exchanger	1
6	Dew point gauge	1
5	Solenoid valve(drain discharge)	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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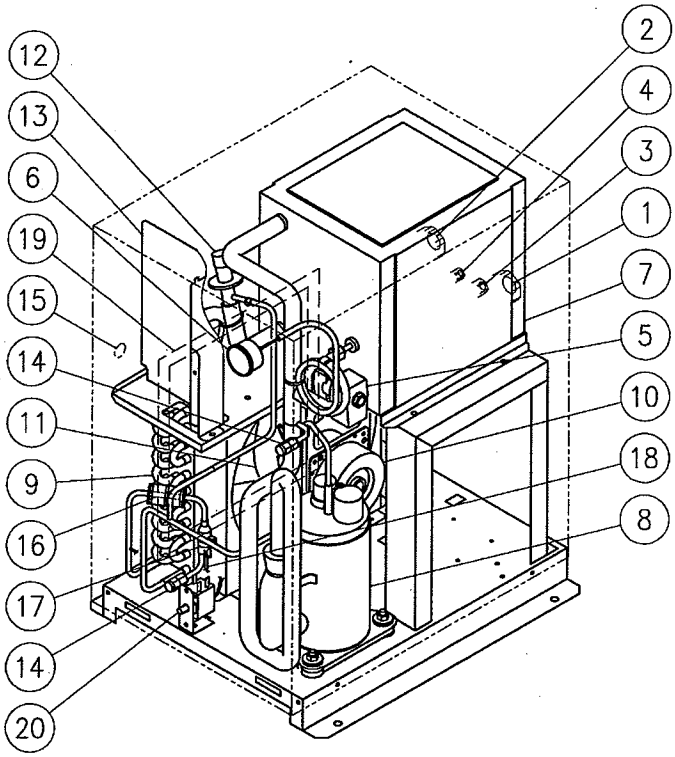
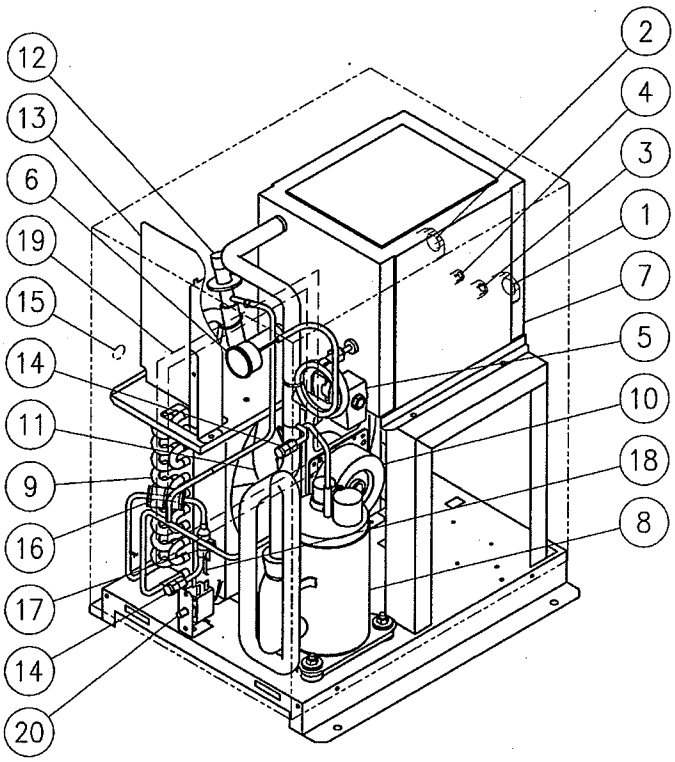
8) GX5106-AC100, 200V



No.	Parts name	Q'ty
20	High pressure switch	1
19	Dust filter	1
18	Capillary tube	1
17	Strainer	1
16	Thermo sensor(fan control)	1
15	Power source inlet	1
14	Service valve	2
13	Electric box	1
12	Capacity control valve	1
11	Fan blade	1
10	Fan motor	1
9	Condenser	1
8	Compressor	1
7	Heat exchanger	1
6	Dew point gauge	1
5	Solenoid valve(drain discharge)	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

9) GX5108-AC100, 200V



No.	Parts name	Q'ty
20	High pressure switch	1
19	Dust filter	1
18	Capillary tube	1
17	Strainer	1
16	Thermo sensor(fan control)	1
15	Power source inlet	1
14	Service valve	2
13	Electric box	1
12	Capacity control valve	1
11	Fan blade	1
10	Fan motor	1
9	Condenser	1
8	Compressor	1
7	Heat exchanger	1
6	Dew point gauge	1
5	Solenoid valve(drain discharge)	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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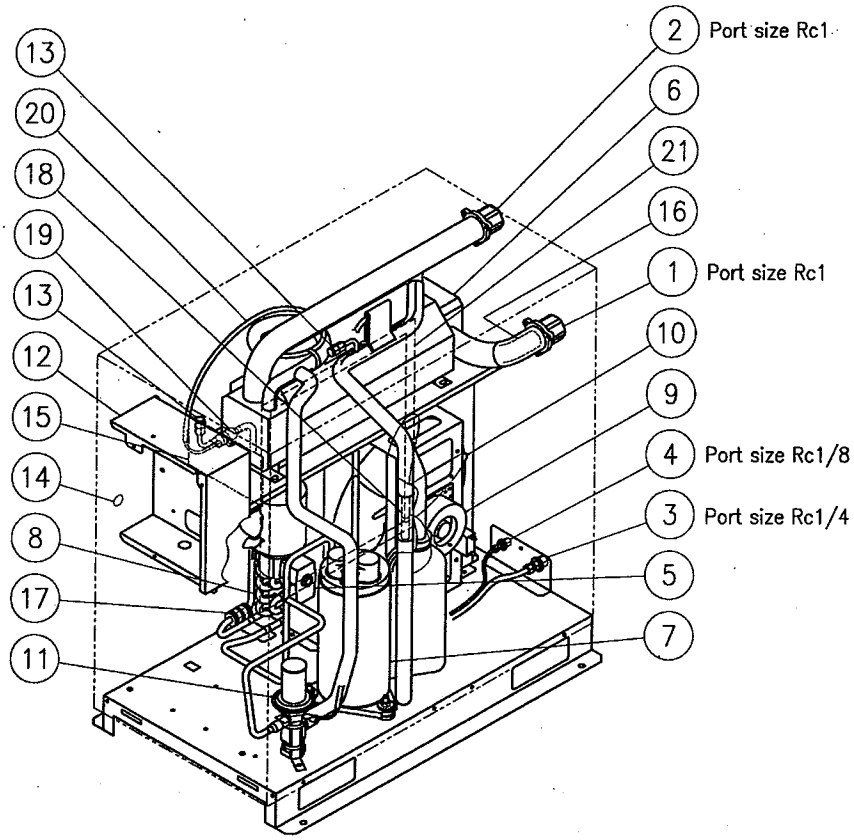
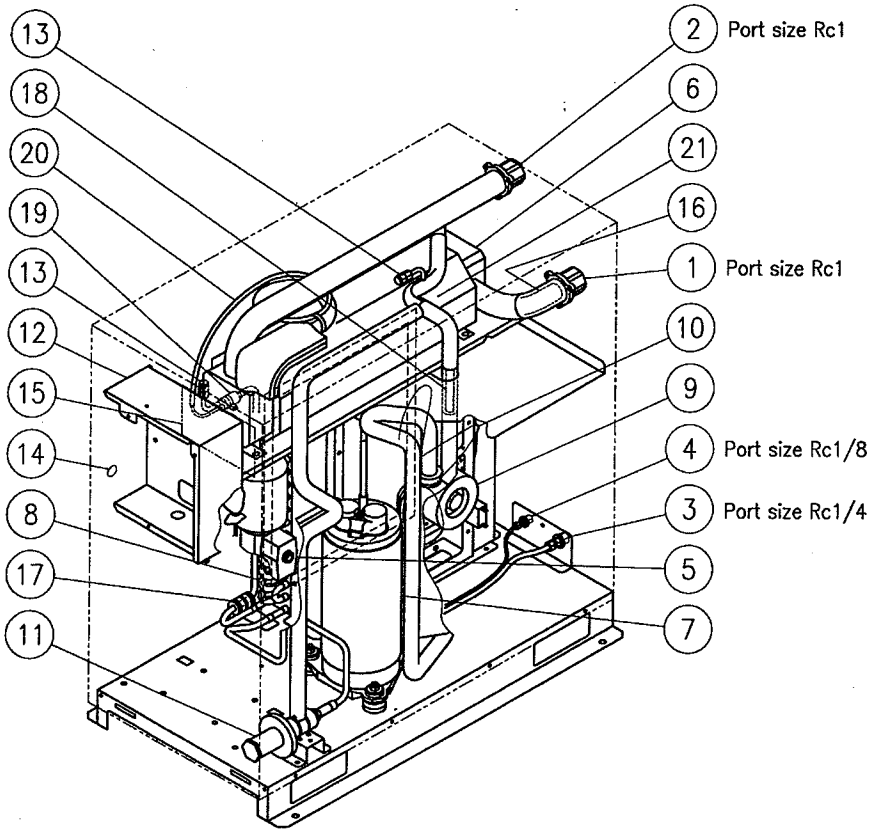
10) GX5111-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

11) GX5115-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

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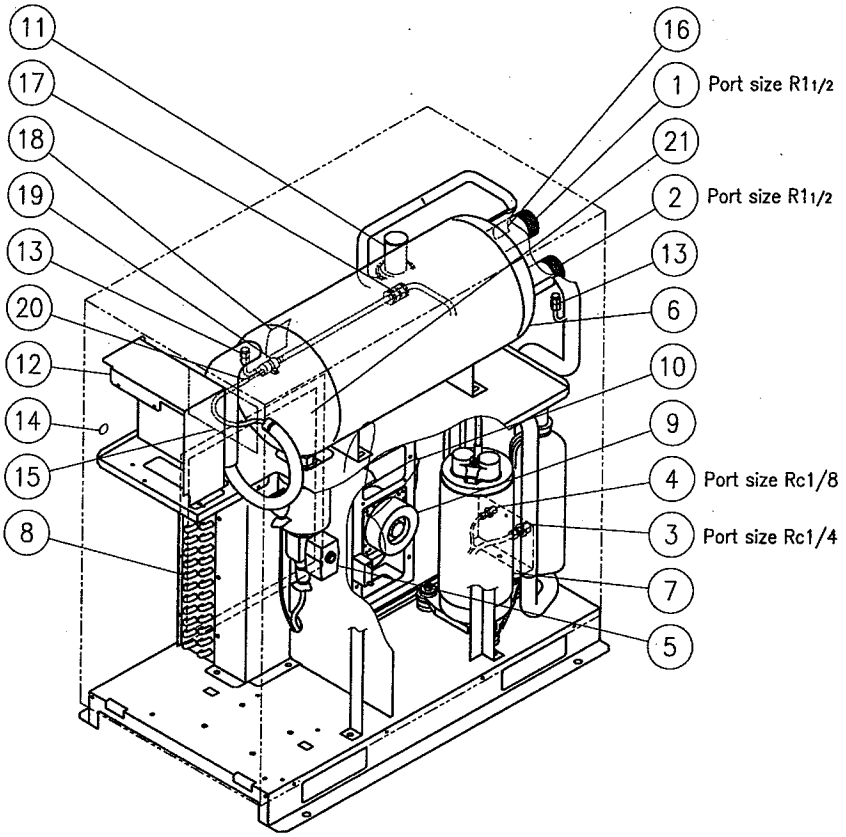
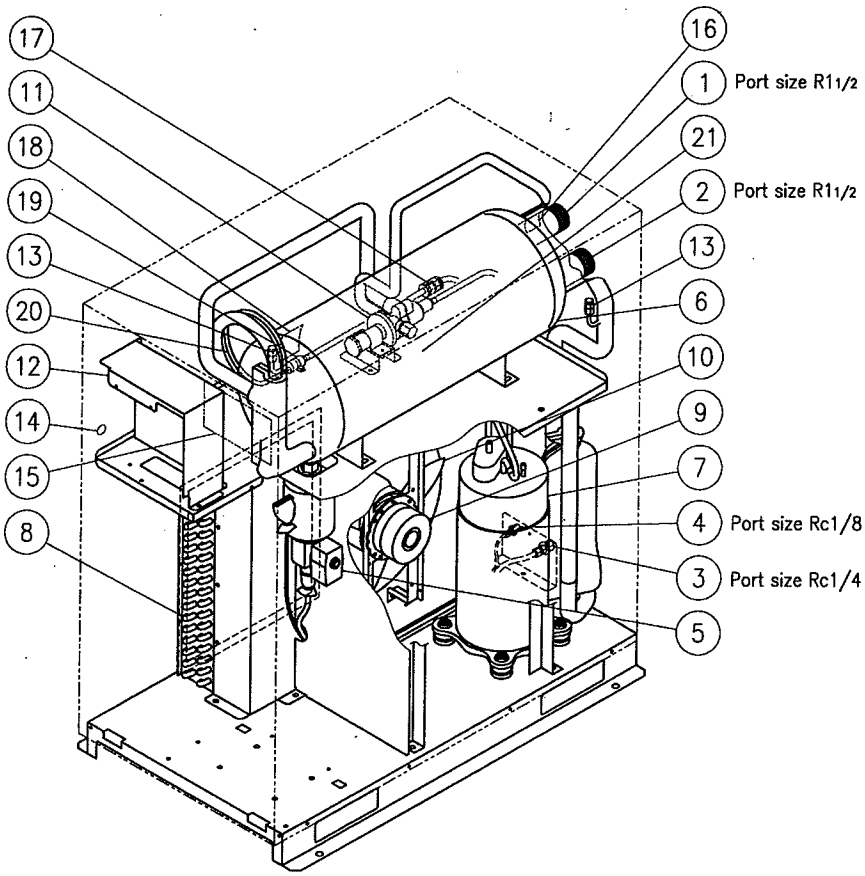
12) GX5122-AC200V



No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

13) GX5137-AC200V

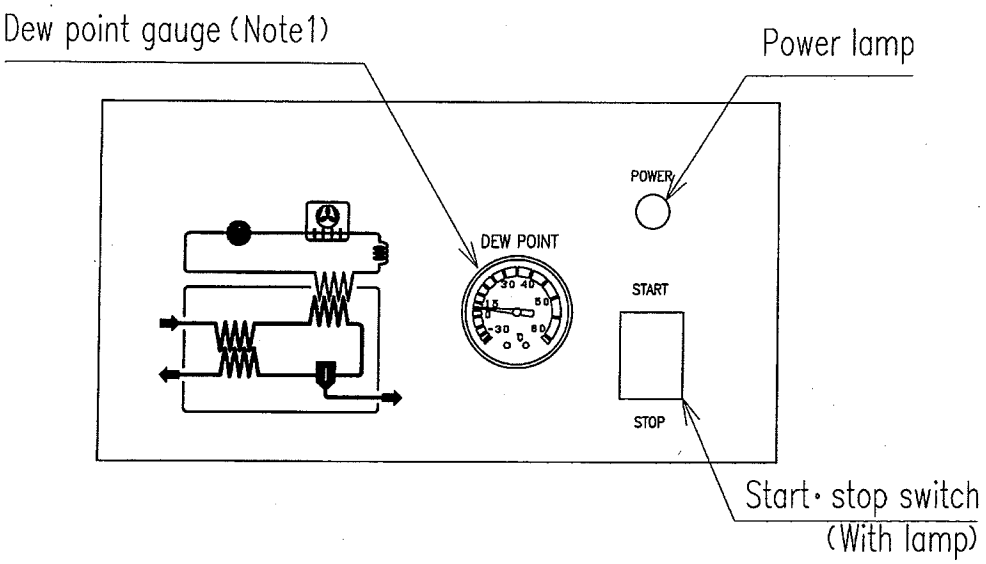


No.	Parts name	Q'ty
21	Dust filter	1
20	Capillary tube	1
19	Strainer	1
18	Thermo sensor(dew point)	1
17	Thermo sensor(fan control)	1
16	Thermo sensor(inlet air temp.)	1
15	Controller	1
14	Power source inlet	1
13	Service valve	2
12	Electric box	1
11	Capacity control valve	1
10	Fan blade	1
9	Fan motor	1
8	Condenser	1
7	Compressor	1
6	Heat exchanger	1
5	Drain purger ass'y	1
4	Drain outlet(drain cock,normally closed)	1
3	Drain outlet	1
2	Air outlet	1
1	Air inlet	1

Discontinue

3. 3 Operation panel

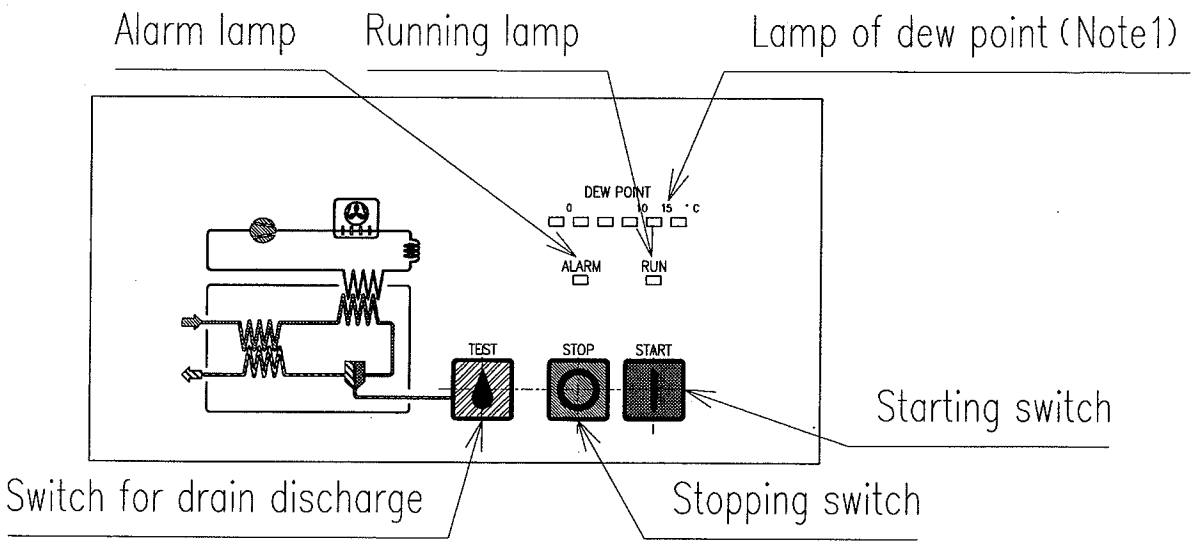
1) GX3108
GX5103, 5104, 5106, 5108



Note1) It may differ from the actual pressure dew point.
Use it as a reference value.

Operation part detail

2) GX3111, 3115, 3122, 3137
GX5111, 5115, 5122, 5137



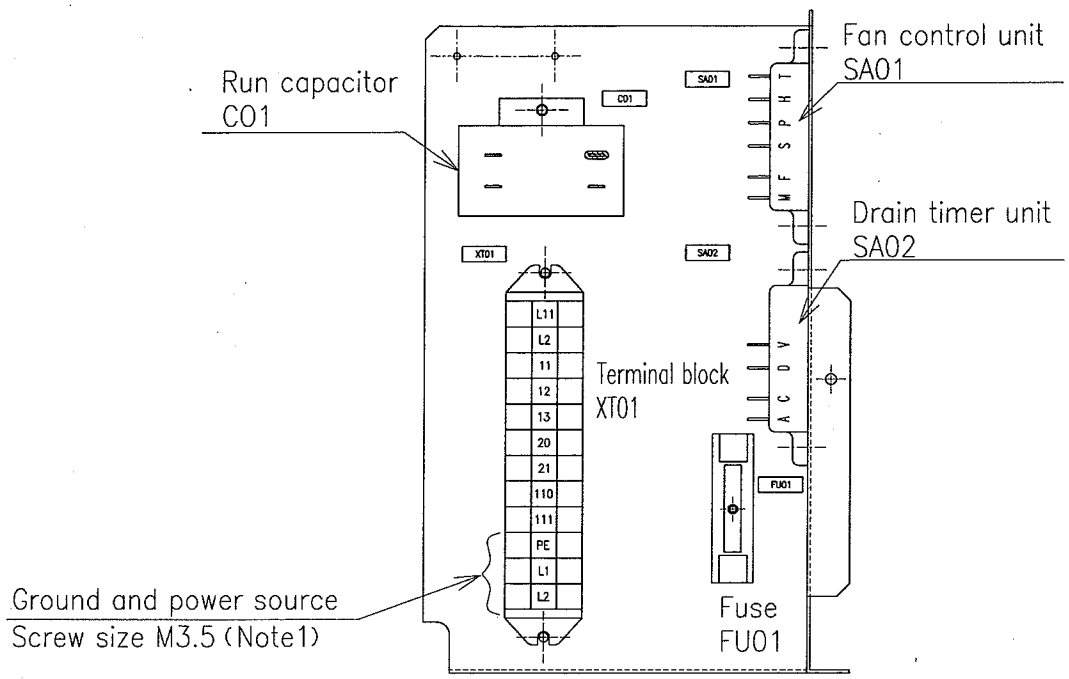
Note1) It may differ from the actual pressure dew point.
Use it as a reference value.

Operation part detail

Discontinue

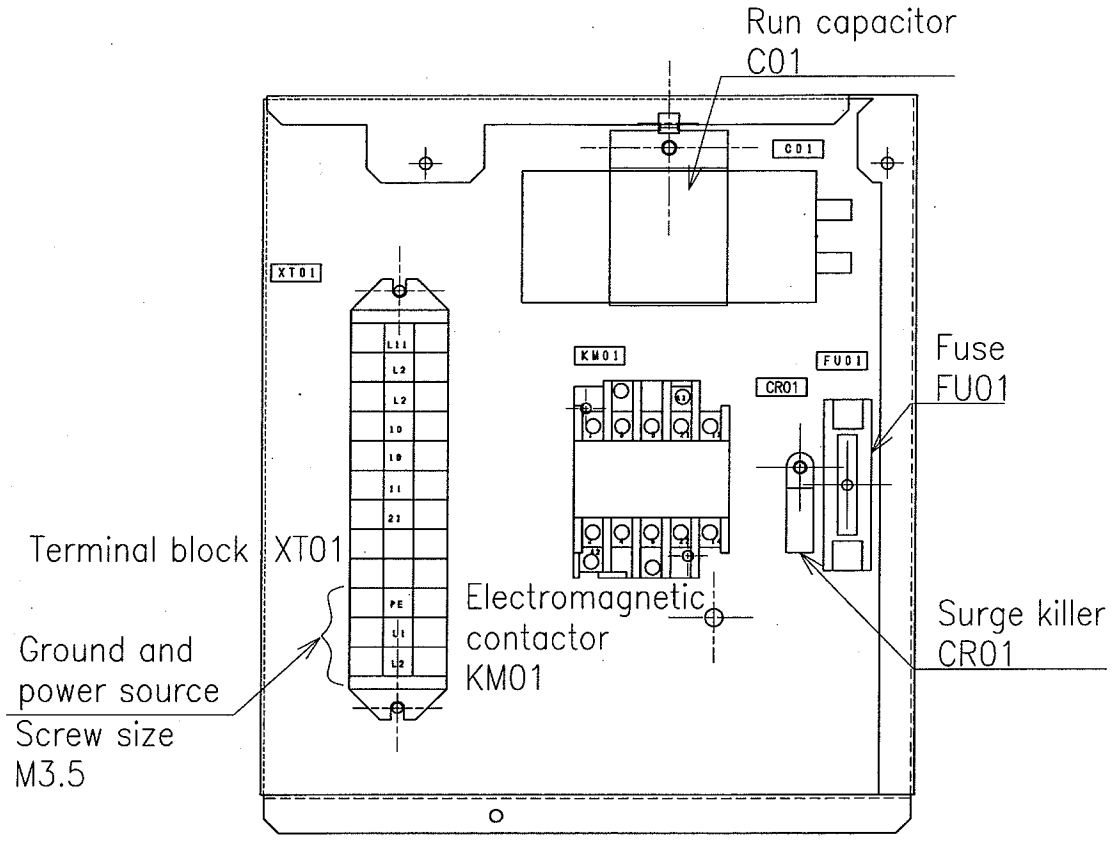
3. 4 Electric component

1) GX3108
GX5103, 5104, 5106, 5108



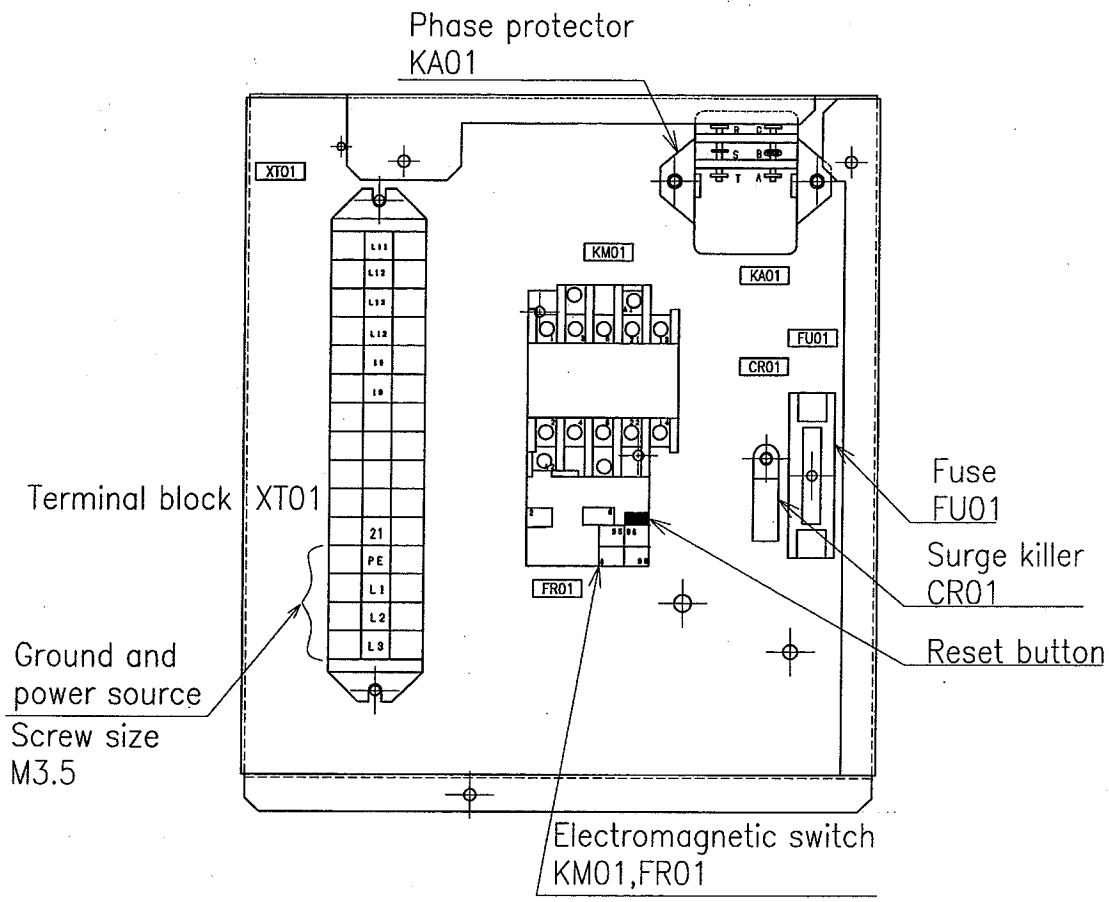
Note1) Power cord (with plug) is attached to AC100V model.

2) GX3111, 3115, 3122
GX5111



Discontinue

3) GX3137
GX5115, 5122, 5137



Discontinue

3. 5 Installation features

1) Do not install the dryer outdoor or high humidity place.

*This product does not have waterproof structure.

Water or rain splashing, high humidity (=85% RH or over) could cause leak or fire to electrical systems.

2) Operating ambient temperature should be 2 to 43℃ with no condensation.

*Drain freeze under the temperature of 2℃ or below, and this could cause breakdown.

Operation under the temperature of 43℃ or above could stop the operation abnormally or could shorten the service life of the product.

3) Install the dryer without direct sunlight, powder dust, heating elements, corrosive gas, explosive gas, inflammable gas or combustibles.

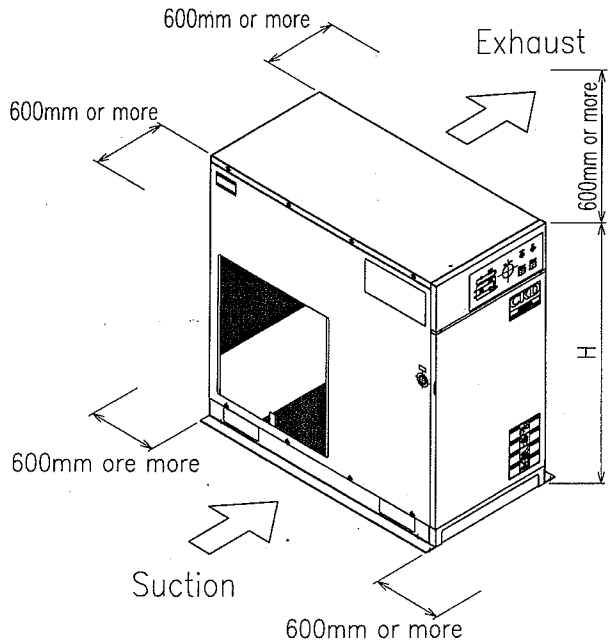
*Breakdown, explosion or ignition may result.

4) The installation floor should have a solid concrete foundation with level and flat surface.

*Weak or inclin foundation may cause noise and vibration.

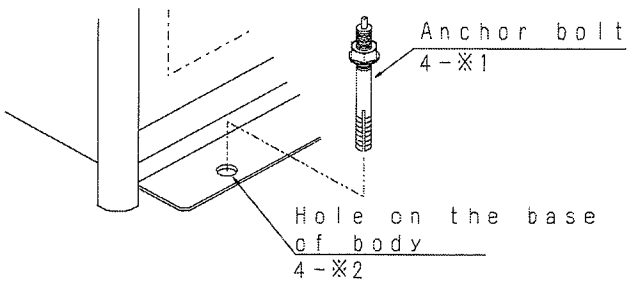
5) Need to keep spaces as a following figure for maintenance.

*Do not enter the exhaust air to suction part.



3. 6 Fixixation

Fix the dryer body by anchor bolts to avoid the dryer falling due to earthquake or impact.



	※1	※2
GX3108 GX3111 GX3115 GX5103 GX5104 GX5106 GX5108 GX5111 GX5115	M8×ℓ70	φ10
GX3122 GX3137 GX5122 GX5137	M10×ℓ100	φ13

Discontinue

3. 7 Air piping

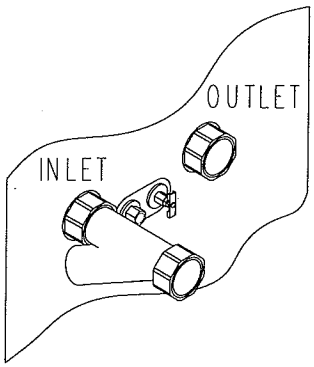
1) Confirm which is Air inlet or Air outlet before piping.

2) Mount the attached Y-type strainer by nipple or by other pipes.
(GX3108, GX5103, 5104, 5106, 5108)

⚠ 【CAUTION】

- If use is carried out without attaching Y type strainer in an air inlet, it will become failure and the cause of garbage clogging.
- Do not mistake direction of Y type strainer.

Rear side



Rear side

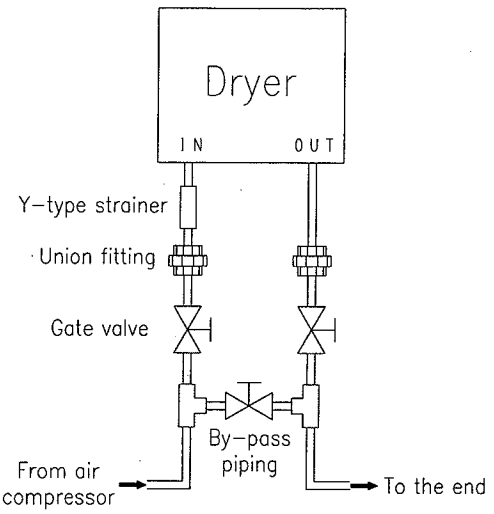
Pipe size

GX3108	Rc 3/4
GX5103	Rc 3/8
GX5104	Rc 3/8
GX5106	Rc 3/4
GX5108	Rc 3/4

3) Recommend a by-pass circuit in the air circuit.

〈On and off operation〉

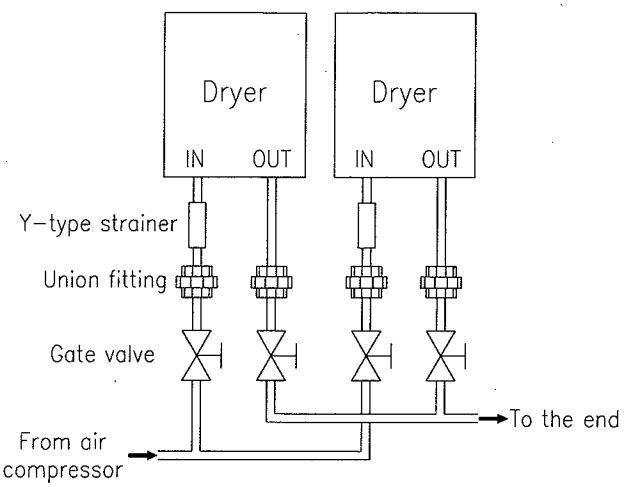
Installation of by-pass piping is recommended.



⚠ CAUTION By-pass piping is normally closed. Water comes out at the end if air flows when it is open.

〈24 hours operation〉

Installation of two dryers is recommended. One is used regularly, and the other is for emergency.



⚠ CAUTION Gate valve which isn't used the dryer is normally closed. Water comes out at the end if air flows when it is open.

4) Design the piping in the way not to apply the piping weight to the dryer body.

5) Vibration of the air compressor should not be transmitted.

6) Piping must be able to endure the operating pressure and temperature. No air leakage is allowed from connection parts.

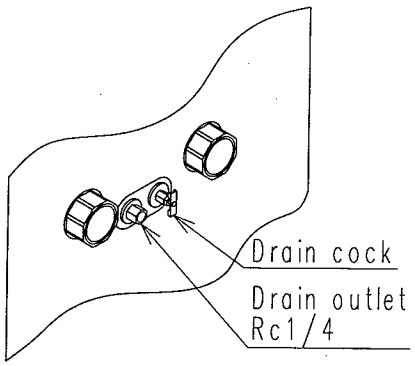
7) Use zinc plated steel pipe or stainless pipe.

8) Flash air circuit before connecting pipes to remove dust, etc.

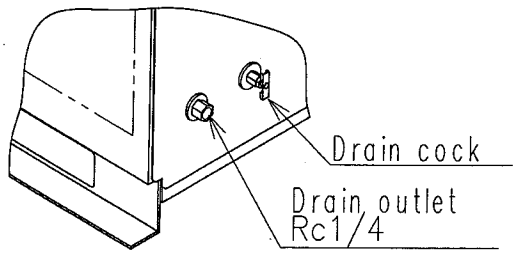
3. 8 Drain Piping

1) Confirm the drain outlet location before piping.

Rear side



GX3108
GX5103, 5104, 5106, 5108

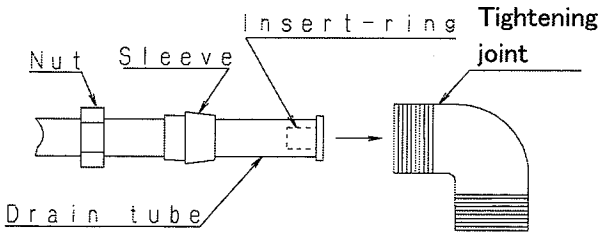


GX3111, 3115, 3122, 3137
GX5111, 5115, 5122, 5137

Connect the drain pipe to the drain outlet (Rc1/4) using enclosed items.
Have its end open atmosphere.

Fit a nut and a sleeve to the transparent vinyl tube as shown in figure below. Insert a insert-ring in the drain tube until it hits the drain tube (end). Then tighten the nut by hand. Finally, tighten the nut one and one-forth to one half by some tool such as a spanner etc.

Enclosed items : Tightening joint(ϕ 10 × R1/4)
Insert-ring(ϕ 10)
Drain tube (O.D ϕ 10 × I.D ϕ 7 × 1.5m)



2) When connecting the items on sale as the drain pipe, take the following into consideration. The inside diameter of drain pipe must be ϕ 7 or larger and the length must be 2m or less. Have its end open to atmosphere.

3) Drain may not be discharged due to back pressure if pipe rises in part or if pipe is too long. Use down-slope piping to let drain flow smoothly.

4) Drain is regularly discharged compulsorily by air pressure. Fix drain discharge tube, etc. firmly.

5) Drain must be treated if oil is mixed in it. Consult industrial waste treatment companies for treatment.

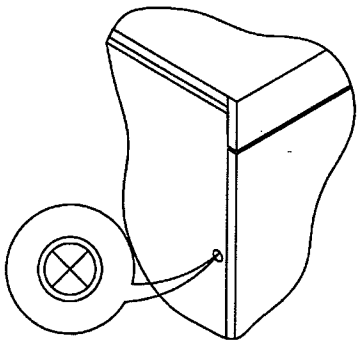
6) Use the drain cock at the time of a maintenance.

3. 9 Electrical wiring

1) Use proper voltage.
　＊Voltage must be within +/− 10% of rated voltage.

2) Mount an earth leakage breaker with over−load protection (sensitivity current 30mA or less) to power supply.

3) How to connect power supply code

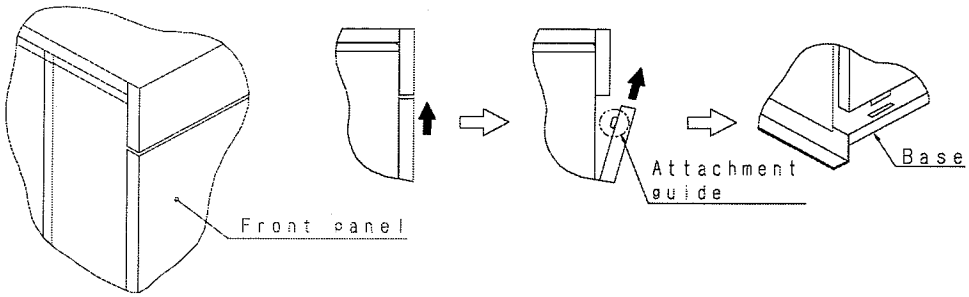


- Make a hole for wiring on the rubber bushing at the upper back part of the dryer.

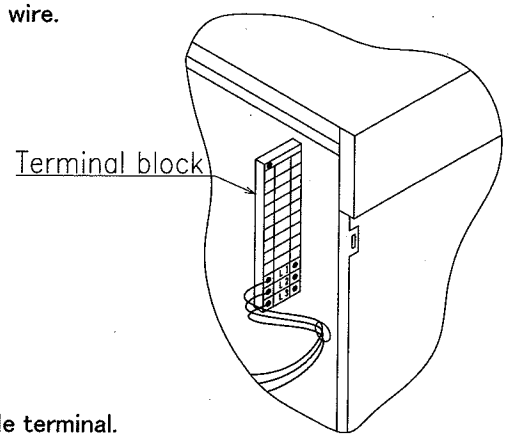
・Remove the front panel.

Procedure

①The front panel is lifted upwards.
②The attachment guide is removed from the right−and−left side panel.
③The front panel is lifted upwards and it extracts from the plug part of the base.



- Connect the terminal block L1, L2,(L1,L2,L3 if three phase type), and the earth leakage breaker by wire.



- Use round ring−style terminal.
- Two cores required for single phase type, and three cored required for three phase type.
- Power cord (with plug) is attached to AC100V model.

⚠【CAUTION】

- Insert a power cable, an output signal cable, a remote operation cable and a ground cable to wire each terminals firmly without looseness or coming off.
  ※Looseness or coming off wiring could causes of a fire.
- Refer to operation manual for option about wiring method when specifying voltage.

4） How to connect earth wire

- As power supply code connection, connect the earth wire to the terminal box PE and the earth terminal in the panel.(The D sort grounding construction by the electric construction contractor is required.)

⚠ 【CAUTION】Do not connect the earth wire to a water pipe, gas pipe, lightning conductor, etc.

5） Wiring capacity (A power cable and a ground cable)

	Recommendation breaker capacity (A)	Cable size			
		Length 10m	Length 20m	Length 30m	Length 50m
GX3108-AC100V	10	2.0	2.0	2.0	3.5
GX3108-AC200V	5	2.0	2.0	2.0	2.0
GX3111-AC200V	15	2.0	2.0	3.5	3.5
GX3115-AC200V	15	2.0	2.0	3.5	3.5
GX3122-AC200V	15	2.0	2.0	3.5	3.5
GX3137-AC200V	15	2.0	3.5	5.5	14.0
GX5103-AC100V	5	2.0	2.0	2.0	2.0
GX5104-AC100V	5	2.0	2.0	2.0	2.0
GX5106-AC100V	10	2.0	2.0	2.0	3.5
GX5108-AC100V	10	2.0	2.0	2.0	3.5
GX5103-AC200V	5	2.0	2.0	2.0	2.0
GX5104-AC200V	5	2.0	2.0	2.0	2.0
GX5106-AC200V	5	2.0	2.0	2.0	2.0
GX5108-AC200V	5	2.0	2.0	2.0	2.0
GX5111-AC200V	15	2.0	2.0	3.5	5.5
GX5115-AC200V	15	2.0	3.5	5.5	14.0
GX5122-AC200V	15	2.0	3.5	5.5	14.0
GX5137-AC200V	15	5.5	8.0	14.0	22.0

・Power cable is type VCT(600V vinyl cab tire cable), and ground cable is type IV (600V vinyl insulated wire) as shown by the above chart.

4. Functional explanation

4. 1 Functional explanation

1) Air circuit

The compressed air which became wet warmly is beforehand cooled by precooler, and then, it goes into an evaporator, heat exchange is carried out with cold freon gas, and it is cooled to the dew point. Reheat of the compressed air cooled and dehumidified is carried out by reheater, and it turns into warm dry air.

2) Refrigerant circuit

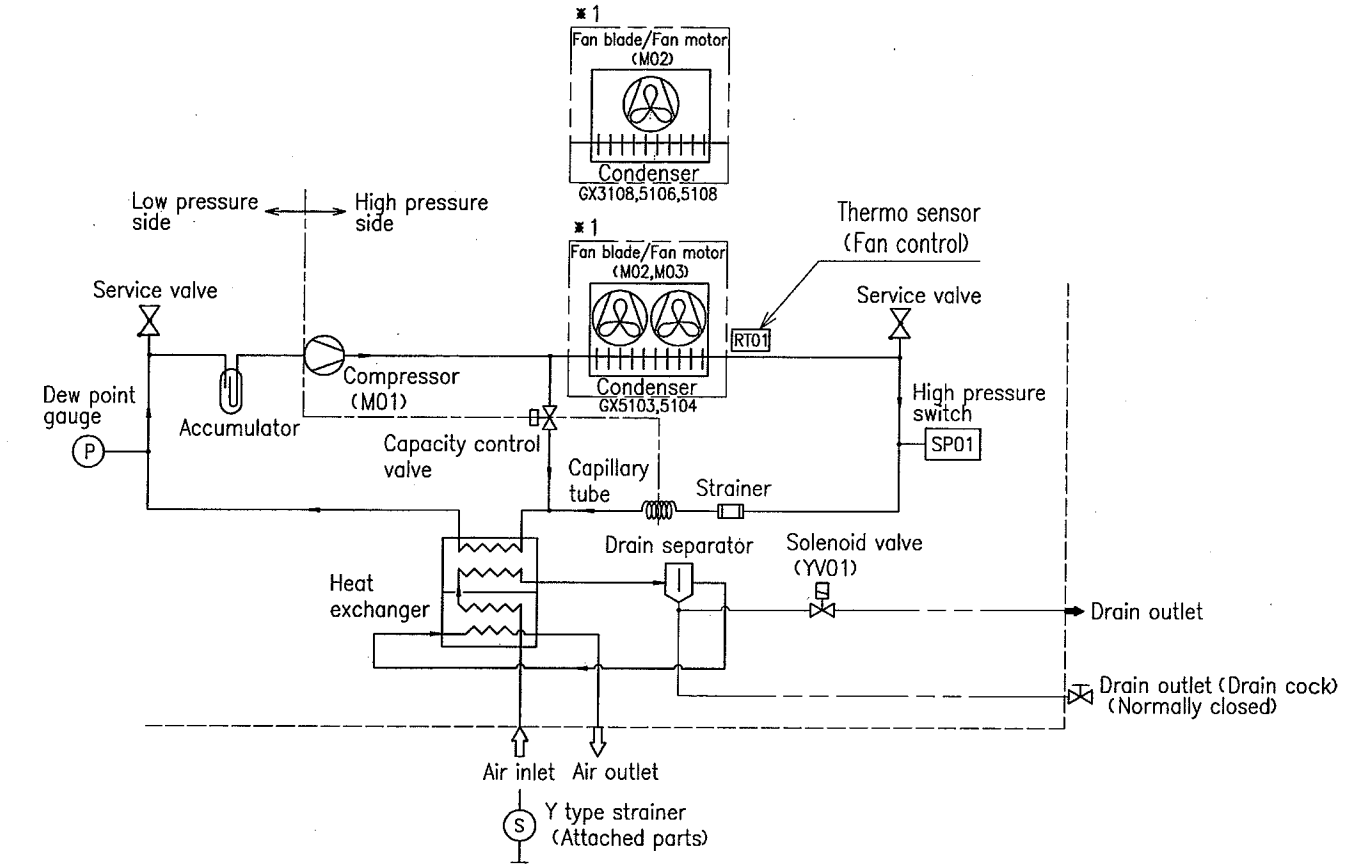
It is, and the freon gas which became high temperature high pressure with the compressor (refrigerant compressor) is cooled and condensed with a condenser, and serves as high-pressure refrigerant liquid. And by decompressing in a capillary tube, it becomes the liquid of low-temperature low pressure. Using an evaporator, by carrying out heat exchange with the warm damp compressed air, coolant liquid evaporates and cools compressed air by the evaporation heat. The gasified refrigerant returns to a compressor again.

3) Drain circuit

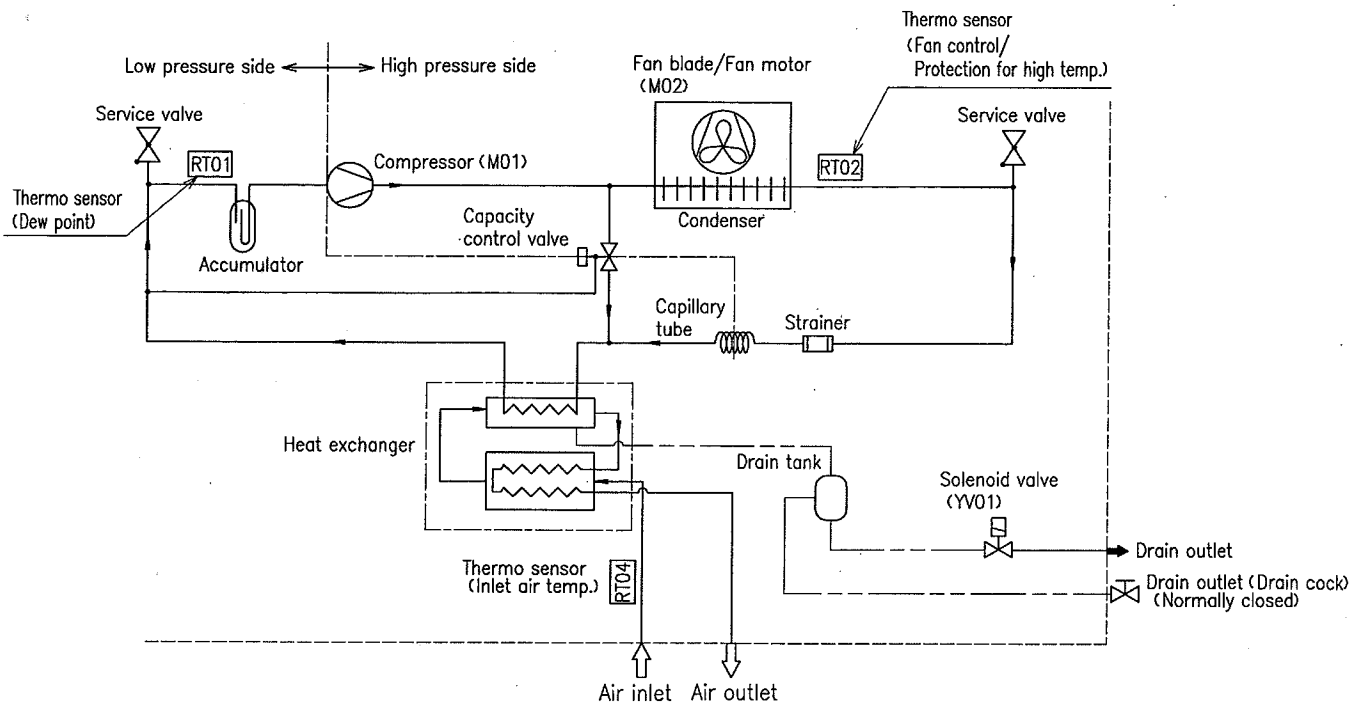
The steam in compressed air is cooled and condensed with an evaporator, and it is serves as drain (moisture). The drain tank is covered with drain. The drain collected in the drain tank is discharged periodically when a valve operates, and also the drain cook has clung so that discharge may be manually possible, please use it a maintenance or in an emergency.

4. 2 System diagram

1) GX3108
GX5103, 5104, 5106, 5108

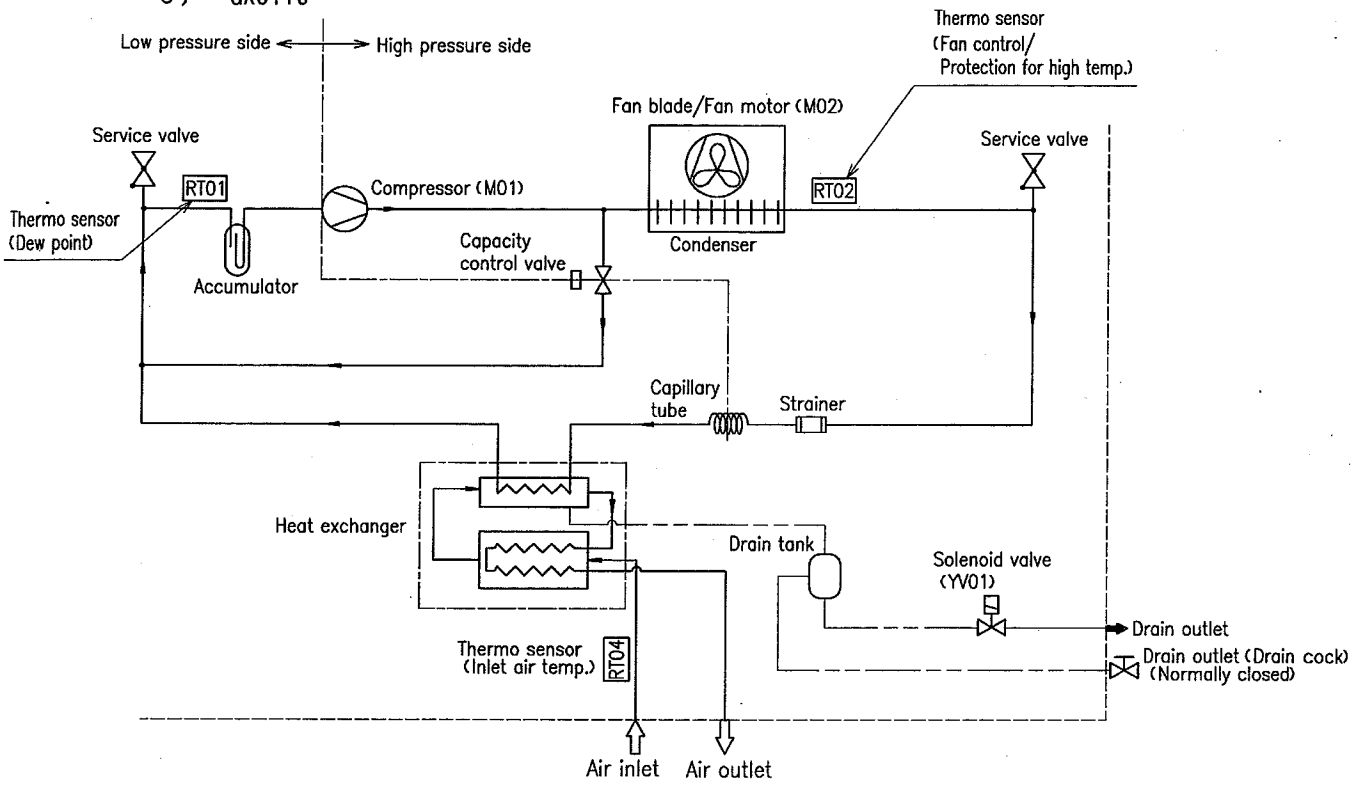


2) GX3111, 3115
GX5111

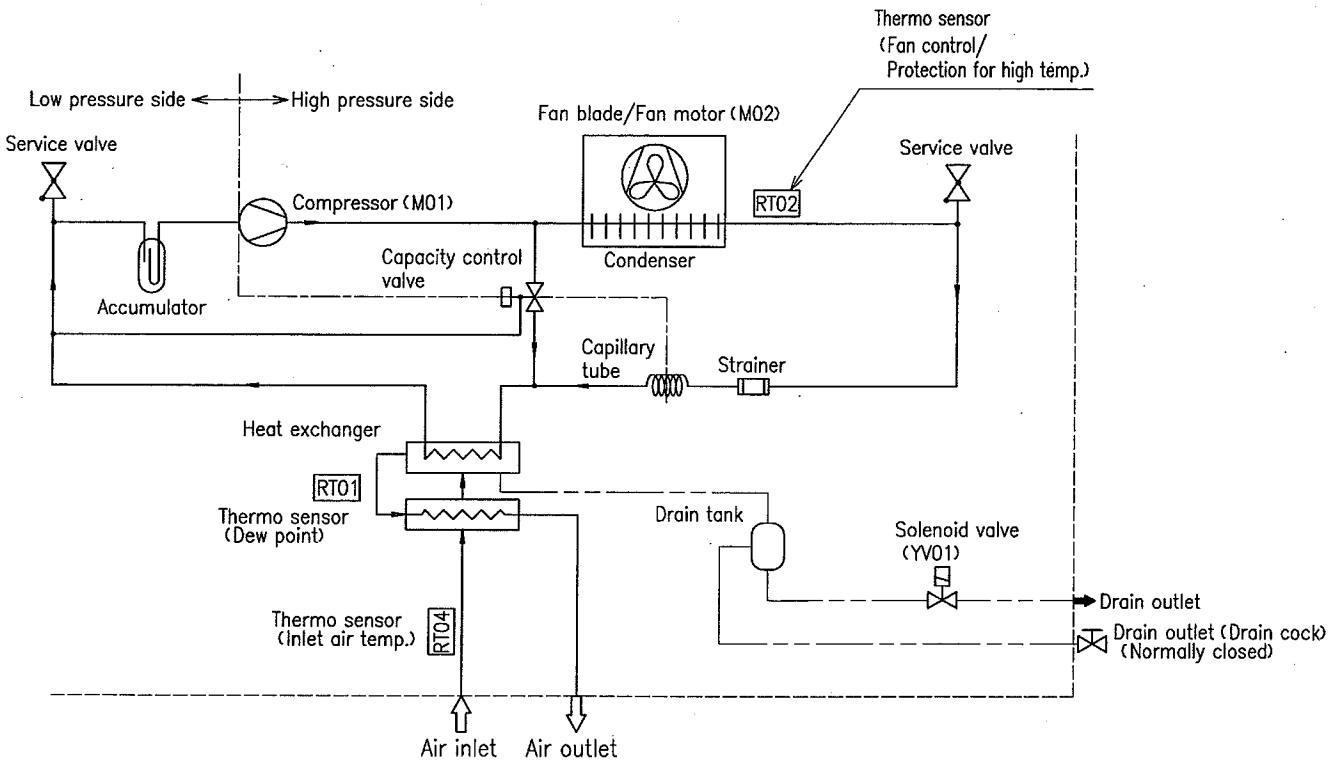


Discontinue

3) GX5115



4) GX3122, 3137
GX5122, 5137



Discontinue

5. Preparation for operation & Operation

5. 1 Preparation for operation

1) Confirm that air piping, electrical wiring and drain piping are properly connected.

2) Confirm that the gate valves next to the dryer and the gate valve of by-pass piping are closed. Confirm that the air pressure in the pipes is zero.

5. 2 How to start and stop the dryer (GX3108, 5103, 5104, 5106, 5108)

1) Turn on the power supply.

2) " POWER " lamp on the operation panel turns on.

3) Push "START･STOP" button ("I" mark) on the operation panel. "RUN" lamp turns on, and the dryer starts running. After a while, "DEW POINT" gauge enters the green area and indicates air pressure dew point.

⚠ 【CAUTION】

- During the dryer is running, the fan turns on and off repeatedly. This is normal.
- The value of dew point gauge may differ from the actual pressure dew point. Use it as a reference value.

4) Open the gate valve on the dryer inlet side gradually.

⚠ 【CAUTION】

Pass compressed air after about 5 minutes from starting. If compressed air is passed in time shorter than this, damp air may flow in piping and drain may occur within piping.

5) Open the gate valve on the dryer outlet side gradually.

6) The drain removed by the dryer is regularly discharged compulsorily by air pressure when solenoid valve is on.

⚠ 【CAUTION】

The drain outlet with a drain cock mounted is for emergency. Normally, it needs to be closed.

7) Push "START･STOP" button ("O" mark) on the operation panel. "RUN" lamp turns off, and the dryer stops running.

⚠ 【CAUTION】

①Frequent turning on and off is causes of trouble. The frequency of starting/stop is carried out in 6 or less times/o'clock, and please do not let me stop for 5 minutes after starting, and also give stop time as the above for 3 minutes

※It becomes the cause of failure or a life fall.

②Stop an air compressor and extract residual pressure, before stopping this machine.

※The air which is not dehumidified may flow to a secondary side of this machine

5. 3 How to start and stop the dryer (GX3111, 3115, 3122, 3137, GX5111, 5115, 5122, 5137)

1) Turn on the power supply.

2) "DEW POINT" lamp on the operation panel turns on. At this time, the lamp indicates about ambient temperature.

3) Push "START" button ("I" mark) on the operation panel. "RUN" lamp turns on, and the dryer starts running. After a while, "DEW POINT" lamp enters the green area and indicates air pressure dew point.

⚠ 【CAUTION】

- During the dryer is running, the fan turns on and off repeatedly. This is normal.
- The value of dew point gauge may differ from the actual pressure dew point. Use it as a reference value.

4) Open the gate valve on the dryer inlet side gradually.

⚠ 【CAUTION】

Pass compressed air after about 5 minutes from starting. If compressed air is passed in time shorter than this, damp air may flow in piping and drain may occur within piping.

5) Open the gate valve on the dryer outlet side gradually.

6) The drain removed by the dryer is regularly discharged compulsorily by air pressure when solenoid valve is on.

⚠ 【CAUTION】

The drain outlet with a drain cock mounted is for emergency. Normally, it needs to be closed.

7) Push "STOP" button on the operation panel. "RUN" lamp turns off, and the dryer stops running.

⚠ 【CAUTION】

① Frequent turning on and off is causes of trouble. The frequency of starting/stop is carried out in 6 or less times/o'clock, and please do not let me stop for 5 minutes after starting, and also give stop time as the above for 3 minutes

※It becomes the cause of failure or a life fall.

② In three phase type, It does not start, even if it will push the "START" button, if the order of a power supply is different. Something should replace two (L1 and L3) among three phase.

※Do not start in the state where the order to unite is different (electromagnetic contactor is compulsorily operated with a finger). A compressor breaks down.

③ Stop an air compressor and extract residual pressure, before stopping this machine.

※The air which is not dehumidified may flow to a secondary side of this machine

Discontinue

5. 4 When safety device turns on and the dryer stops running

5. 4. 1 Safety device (Refer to 11 Electrical Circuit)

1 — 1) When a compressor becomes hot or when over current flows, safety device turns on and run lamp turns off, and the dryer stops running.
(GX3108, GX5103, 5104, 5106, 5108)

1 — 2) When a compressor becomes hot or when over current flows, safety device and alarm lamp turns on, and the dryer stops running.
(GX3111, 3115, 3122, 3137, GX5111, 5115, 5122, 5137)

2 — 1) When a refrigerant high-pressure rises abnormally, a high-pressure switch will work and run lamp turns off, and a dryer will stop.
(GX3108, GX5103, 5104, 5106, 5108)

2 — 2) When a refrigerant high-pressure rises abnormally, a thermo sensor will work and alarm lamp turns on, and a dryer will stop.
(GX3111, 3115, 3122, 3137, GX5111, 5115, 5122, 5137)

3) Setting value list

Mark	Model	Parts list	Applications	Setting value	Reset method
FR01	GX3108-AC100V	Overload protector	Temperature of the compressor upper part & current	6A (100℃)	Automatic reset (Thermal type)
	GX3108-AC200V			3A (100℃)	
	GX3111-AC200V			9.6A (100℃)	
	GX3115-AC200V			9.6A (100℃)	
	GX3122-AC200V			9.6A (100℃)	
	GX3137-AC200V	Electromagnetic switch	Compressor current	9A	Manual reset
	GX5103-AC100V	Overload protector	Temperature of the compressor upper part & current	3A (100℃)	Automatic reset (Thermal type)
	GX5104-AC100V			3A (100℃)	
	GX5106-AC100V			6A (100℃)	
	GX5108-AC100V			6A (100℃)	
	GX5103-AC200V			1.6A (100℃)	
	GX5104-AC200V			1.6A (100℃)	
	GX5106-AC200V			3A (100℃)	
	GX5108-AC200V			3A (100℃)	
	GX5111-AC200V			9.6A (100℃)	
	GX5115-AC200V	Electromagnetic switch	Compressor current	9A	Manual reset
	GX5122-AC200V			9A	
	GX5137-AC200V			12A	
SP01	GX3108-AC100V,200V	High pressure switch	Refrigerant circuit	2.75MPa OFF	Manual reset
	GX5103-AC100V,200V				
	GX5104-AC100V,200V				
	GX5106-AC100V,200V				
	GX5108-AC100V,200V				
RT02	GX3111-AC200V	Thermo sensor	Refrigerant circuit	63℃	Automatic reset
	GX3115-AC200V				
	GX3122-AC200V				
	GX3137-AC200V				
	GX5111-AC200V				
	GX5115-AC200V				
	GX5122-AC200V				
	GX5137-AC200V				
ST01	GX3137-AC200V	Internal thermostat	Temperature of the compressor inside	130℃ OFF	Automatic reset (Thermal type)
	GX5115-AC200V			130℃ OFF	
	GX5122-AC200V			130℃ OFF	
	GX5137-AC200V	Thermal switch	Temperature of the compressor upper part	115℃ OFF	
FU01	Common	Fuse	Electric circuit harness	5A	Exchange

5. 4. 2 How to reset

1) Push "STOP" button("○" mark) on the operation panel and turn off the power supply.
2) Remove causes that stopped the dryer abnormally.
(Refer to trouble shooting on "8.Trouble shooting")
3) Reset the safety device. (Refer to "3.2 The name of each part", "3.4 Elwctric component" and "5.4.1 Safety device")
4) Turn on the power supply.

⚠ 【CAUTION】

- Be sure to turns off the power supply when remove causes of problems.
- The product carried thermal type safety device, you may not be able to restart the dryer even though removing the causes. In this case, turn off the power supply and wait till the compressor becomes cool. (normally 10 to 15 minutes)
- Thermal type safety device is Automatic reset (normally 10 to 15 minutes). If "START・STOP" button turns on, it may be repeated running and stopping.

※Power source and "START・STOP" button turns off, when dryer becomes abnormal stop.
(GX3108, GX5103, 5104, 5106, 5108)

6. Maintenance and check point

6. 1 Items of maintenance and check point

Check following items for full performance and longer service life of the dryer.

Checking item	Model	Contents	Checking cycle		
			Daily	Weekly	Monthly
"POWER" lamp	GX3108 GX5103, GX5104 GX5106, GX5108	"POWER" lamp is on.	○		
"START-STOP" switch	GX3108 GX5103, GX5104 GX5106, GX5108	"START-STOP" switch lamp is on.	○		
"RUN" lamp	GX3111, GX3115 GX3122, GX3137 GX5111, GX5115 GX5122, GX5137	"RUN" lamp is on.	○		
Dew point gauge	GX3108 GX5103, GX5104 GX5106, GX5108	Before operation: About ambient temp. is displayed. Under operation: Enter the green area	○		
Dew point lamp	GX3111, GX3115 GX3122, GX3137 GX5111, GX5115 GX5122, GX5137	Before operation: Ambient temp. is displayed. Under operation: Enter the green area	○		
Screen for inlet Y-type strainer	GX3108 GX5103, GX5104 GX5106, GX5108	Remove the screen for Y-type strainer mounted to the inlet and clean it.			○ (Cleaning)
Dust filter for Condenser	Common	Dust filter is not dirty.			○ (Cleaning)
Drain discharge		Drain is discharged periodically.	○		
Compressor		No abnormal noise is generated.	○		
Fan motor		No abnormal noise is generated.	○		
Air leak		No air leaks.			○

1) Cleaning methods

・Dust filter for condenser

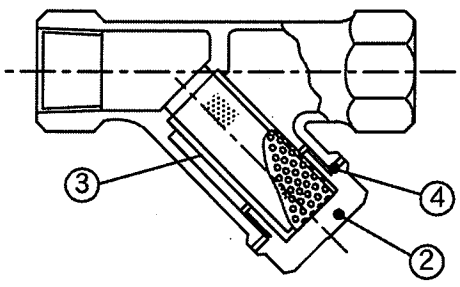
Dirt is blown away using air gun. wash in water, when dirt condition is severe.

・Screen for inlet Y-type strainer

Disassembling & A assembling procedures.

Remove the strainer ③ by loosening the cap ②.Clean the strainer and remove foreignmatter, dust, etc. attached to the strainer.

Mount the strainer with the packing ④ being fitted in and tighten them.



⚠【CAUTION】

If cleaning of a dust filter is neglected, it will become a cause of failures, such as a compressor and a fan motor.

Discontinue

6. 2 Consumables and maintenance parts

(Note: pcs/set is use quantity per 1 set of these devices.)

●Consumables (The parts which will be exchanged if the state exhausting was checked periodically and it has exhausted.)

Inspect the following parts periodically, and exchange it based on Exchange judgment standard

Parts name	pcs/set	Inspection frequency	Exchange judgment standard※
Dust filter	1	Monthly	When it damages and dirt. When it does not come off.
Fuse	1	Each time	When being cut off.
Screen for Y-type strainer	*a	Monthly	When dirt does not come off.

※Be careful that it is not a guarantee value since the operation time (years) indicated changes with operating conditions (ambient temperature, installation environment, etc.). Years are a standard at the time of considering as 12 hours/day (Japan Electrical Manufacturer's Association (JEMA)) x 300 days of operating ratios.

※We recommend you to keep a fuse as spare parts.

Maker : Fuji terminal industry co., ltd.
Model : FGB0
Specification : AC250V , 5A class B(standard melted type)

●Periodic maintenance parts (The main parts for which exchange is needed with a use situation)

Check the following parts periodically and exchange them based on standard exchange time.

Parts name	pcs /set	How to exchange	Standard exchange time ※
Compressor	1	B	20,000 hours (6 years)
Fan motor	*b	A	20,000 hours (6 years)
Electromagnetic switch	*c	A	20,000 hours (6 years)
Electromagnetic contactor	*d	A	20,000 hours (6 years)
Solenoid valve	*a	A	20,000 hours (6 years)
Drain discharger (Note 1)	*e	A	20,000 hours (6 years)
Power lamp	*a	A	20,000 hours (6 years)
Start･stop switch	*a	A	15,000 hours (4 years)

※Keep in mind that it is not a guarantee value since the operation time (years) indicated above changes with operating conditions (ambient temperature, installation environment, etc.). Years are a standard at the time of considering as 12 hours/day (Japan Electrical Manufacturers' Association (JEMA)) x 300 days of operating ratios. Moreover, since time for the rate of failure in the case where you use it above this time to increase is shown, although it is not necessary to necessarily exchange, this exchange time is exchanged when the case where there are abnormalities at the time of check, and preventive maintenance are performed

･How to exchange

A : Those who have the knowledge and experience of piping, electricity, etc. Need to perform exchange of parts.
(When there are not these knowledge and experiences, ask our company or a special contractor.)

B : Before part exchange, refrigerant recovery is required. Moreover, since technical knowledge is needed for exchange work, ask our company or a special contractor.

*a: 1 pc/set(GX3108,GX5103,5104,5106,5108)

*b: 1 pc/set(GX3108,3111,3115,3122,3137,GX5106,5108,5111,5115,5122,5137)
2 pcs/set(GX5103,5104)

*c: 1 pc/set(GX3137,GX5115,5122,5137)

*d: 1 pc/set(GX3111,3115,GX5111)

*e: 1 pc/set(GX3111,3115,3122,3137,GX5111,5115,5122,5137)

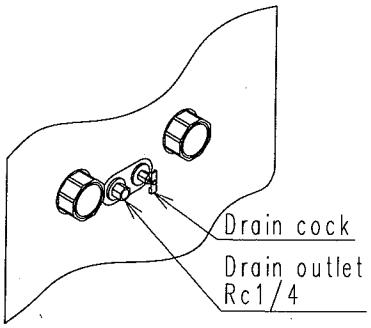
Note1) Drain discharger and solenoid valve must exchange by the set.
However, solenoid valve coil only is exchangeable

Discontinue

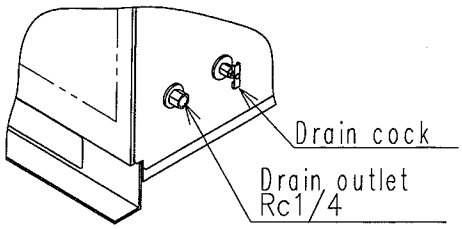
6. 3 Storage (When not using for a long time)

If you do not use the dryer for a long time, do the following.

①Turn off the power supply(breaker).
②Discharge drain.



GX3108
GX5103, 5104, 5106, 5108



GX3111, 3115, 3122, 3137
GX5111, 5115, 5122, 5137

Open the pet cock to discharge drain; then, close the pet cock.

③Put sheet. etc. over the dryer. Keep the dryer in a place where environment is the same as the operating environment.
④When you run the dryer again, inspect each part of the dryer and run it as instructed in this manual.

7. After sales service

1) Contact your distributor or CKD to request the repair service.
2) Provide the following information when requesting the repair service.
* model number of the dryer
* serial number
* date of installation
* name of the store where you purchased the dryer
* conditions of your dryer
3) We will repair your dryer even after the warranty period expires (charged). We will supply parts for 7 years after production of your dryer is terminated.

Discontinue

8. Trouble shooting

GX3108, GX5103, 5104, 5106, 5108

Condition		Causes	Measures
Main power line "short circuit breaker" falls.		Electric parts have leaked.	Insulation resistance measurement of electric parts (10MΩ or more)
			Check whether there is any adhesion of waterdrop in an electric wire drawing-in terminal part, if it is, Remove or exchange.
			Check whether covering of electric wire is torn and touched sheet metal etc., if it is touched, Fix it. (rebanding, electric wire and terminal exchange).
"POWER" lamp does not turn on		Power supply did not turn on.	Turn on the power supply.
		Power supply voltage is abnormal.	Adjust the voltage.
		Connection of harness is bad.	Repair the harness.
		"POWER" lamp is off.	Replace "POWER" lamp.
The dryer does not start, when "START" switch turns on.	"RUN" lamp does not turn on.	"START" switch was failed.	Replace the "START" switch
		Safety device is on.	Reset the safety device. Turn off the former power supply, reset safety device after removing causes. (Refer 5.4 When safety device turns on and the dryer stops running)
		Safety device is bad.	Replace the safety device.
		Power supply voltage is abnormal.	Adjust the voltage.
		Connection of harness is bad.	Repair the harness
	"RUN" lamp turns on.	Compressor is bad starting.	Start it after stopping 3 minutes or more.
Water comes out at the time of using.	Direction of "dew point gauge" does not point out the green, and water comes from a secondary side.	Solenoid valve for drain discharge is bad.	Solenoid valve is decomposed and cleaned. Replace the solenoid valve.
		Excess water drips come in from the air inlet.	Install filter in front of the dryer to remove water drips.
		The pipe coming out of the dryer is lower than the dew point.	Cover the pipe coming out of the dryer with heat insulation material.
		The bypass circuit before and behind the drier is open.	Close the bypass circuit.
		Flow treated by the dryer is too much	Adjust the flow (1.3 × rated flow rate or less)
		Drain piping is too long or too small	Replace bore size φ7mm or more and length 2m or less, and the discharge end released to air.
	Although direction of "dew point gauge" points out the green, water comes from a secondary side.	Load over ・Ambient temperature is high. ・Inlet temperature is high. ・Inlet pressure is low. ・Treated flow rate is large.	Lower the load to the level. ・Lower the ambient temperature. ・Lower the inlet temperature. ・Raise the inlet pressure. ・Lower the treated flow rate.
		Dust filter is clogged.	Clean the dust filter. When dirt is severe, it exchanges for a new one.
		Fan motor is bad.	Replace the fan motor.
		Ventilation is bad. (Supply/exhaust part of condenser is closed.)	Improve the ventilation. (Move something on the supply/exhaust part of the condenser.)
		Refrigerant gas leak	Refrigerant gas leak part is fixed and coolant filling is carried out.

Discontinue

Condition		Causes	Measures
Pressure drop before/after the dryer is too large.		Screen for Y-type strainer at the dryer inlet is closed.	Clean the screen.
		Stop valve before/after the dryer is closed.	Fully open the valve.
		Treated flow rate is too large.	Make 1.3 times or less of rated flow
		Congelation in the dryer. • Ambient temperature is low. • Inlet temperature is low. • Cooling wind directly blow to the dryer. • Thermo sensor (RT01) is bad. (Short circuit state)	Prevent congelation. • Raise the ambient temperature. • Raise the inlet temperature. • Do not let cooling wind directly blow to the dryer • Replace sensor.
The dryer suddenly stops.	All the lamps turn off.	Power supply is turned off.	Turn on the power supply.
		Power supply voltage is abnormal.	Adjust the voltage.
	Only "POWER" lamp is on.	Safety device is on.	Turn off the main power supply, reset safety device after removing causes. (Refer 5.4 When safety device turns on and the dryer stops running)
		• Ambient temperature is high.	• Lower the ambient temperature.
		• Inlet temperature is high.	• Lower the inlet temperature.
		• Inlet pressure is low.	• Raise the inlet pressure.
		• Treated flow rate is large.	• Lower the treated flow rate.
		• Dust filter is clogged.	• Clean the dust filter.
		• Fan motor is bad.	• Replace the fan motor.
		• Refrigerant gas leak	• Refrigerant gas leak part is fixed and coolant filling is carried out.

Discontinue

GX3111, 3115, 3122, 3137, GX5111, 5115, 5122, 5137

Condition		Causes	Measures
Main power line "short circuit breaker" falls.		Electric parts have leaked.	Insulation resistance measurement of electric parts (10MΩ or more)
			Check whether there is any adhesion of waterdrop in an electric wire drawing-in terminal part, if it is, Remove or exchange.
			Check whether covering of electric wire is torn and touched sheet metal etc., if it is touched, Fix it. (rebanding, electric wire and terminal exchange).
"DEW POINT" lamp does not turn on.		Power supply did not turn on.	Turn on the power supply.
		Power supply voltage is abnormal.	Adjust the voltage.
		Different power supply phase pattern.(three phase type)	Adjust the phase. (Replace two lines.)
		Connection of harness and terminal in controller is bad.(Or the connecter is not connect)	Check and repair the harness and terminal in controller. (Or connect the connecter)
		Lamp is bad.	Exchange controller.
		Fuse (in controller) is bad.	Exchange controller.
		Fuse (in harness) is bad.	Exchange fuse.
"ALARM" lamp is on when the power supply is turned on.		Safety device is on.	Turn off the former power supply, reset safety device after removing causes. (Refer 5.4 When safety device turns on and the dryer stops running)
		Safety device is bad.	Exchange safety device.
		Thermo sensor (RT02) is bad. (Short circuit state)	Exchange sensor.
The dryer does not start, when "START" switch turns on.	"RUN" lamp does not turn on.	"START" switch is bad.	Exchange controller.
		Lamp is bad.	Exchange controller.
		Fuse (in controller) is bad.	Exchange controller.
		Fuse (in harness) is bad.	Exchange fuse.
	"RUN" lamp turns on.	Electromagnetic contactor and electromagnetic switch (KM01) is bad.	Replace the electromagnetic contactor and the electromagnetic switch.
	"ALARM" lamp turns on.	Compressor is bad starting.	Stopping 3 minutes or more, and start it after reset safety device. (Refer 5.4 When safety device turns on and the dryer stops running)
Yellow lamp (DEW POINT) turns on.	Yellow lamp (high temp. side) turns on.	Refer to 「Water comes out at the time of use.」.	
		Thermo sensor (RT01) is bad. (Short circuit state)	Exchange sensor.
	Yellow lamp (low temp. side) turns on.	Ambient temperature is low.	Adjust the temperature (2 ° C or higher).
		Inlet air temperature is low.	Adjust the temperature (5 ° C or higher).
		Cooling wind directly blows to the dryer.	Do not let cooling wind directly blow to the suction side of the condenser.
		Thermo sensor(RT01)is bad. (Disconnection state)	Exchange sensor.

Discontinue

Condition		Causes	Measures
Water comes out at the time of use.	Direction of "dew point gauge" does not point out the green, and water comes from a secondary side.	Solenoid valve for drain discharge is bad.	Solenoid valve is decomposed and cleaned. Exchange drain purger ass'y or solenoid valve. (If drain discharge switch ("TEST" switch) on operation panel is pushed, operation of valve can be checked.)
		Excess water drips come in from the air inlet.	Install filter in front of the dryer to remove water drips.
		The pipe coming out of the dryer is lower than the dew point.	Cover the pipe coming out of the dryer with heat insulation material.
		The bypass circuit before and behind the drier is open.	Close the bypass circuit.
		Flow treated by the dryer is too much.	Adjust the flow (1.3×rated flow rate or less)
		Drain piping is too long or too small.	Replace bore size ϕ7mm or more and length 2m or less, and the discharge end released to air.
		The setting mistake of the controller (S,I)	Change the setting of the controller Note1)
	Yellow lamp (high temp. side of DEW POINT turns on, and water comes from a secondary side.	Load over ・Ambient temperature is high. ・Inlet temperature is high. ・Inlet pressure is low. ・Treated flow rate is large.	Lower the load to the level. ・Lower the ambient temperature. ・Lower the inlet temperature. ・Raise the inlet pressure. ・Lower the treated flow rate.
		Dust filter is clogged.	Clean the dust filter. When dirt is severe, it exchanges for a new one.
		Fan motor is bad.	Replace the fan motor.
		Ventilation is bad. (Supply/exhaust part of condenser is closed.)	Improve the ventilation. (Move something on the supply/exhaust part of the condenser.)
		Refrigerant gas leak	Refrigerant gas leak part is fixed and coolant filling is carried out.
Pressure drop before/after the dryer is too large.		Screen for Y-type strainer at the dryer inlet is closed.	Clean the screen.
		Stop valve before/after the dryer is closed.	Fully open the valve.
		Treated flow rate is too large.	Make 1.3 times or less of rated flow
		Congelation in the dryer. ・Ambient temperature is low. ・Inlet temperature is low. ・Cooling wind directly blow to the dryer.	Prevent congelation. ・Raise the ambient temperature. ・Raise the inlet temperature. ・Do not let cooling wind directly blow to the dryer
The dryer suddenly stops.	"RUN" lamp turns off when "ALARM" lamp does not turn on.	Power failure momentaly	Wait three minutes, and push start button.
		Low voltage momentaly	
	"ALARM" lamp turns on, and the dryer stops.	Safety device is on. ・Ambient temperature is high. ・Inlet temperature is high. ・Inlet pressure is low. ・Treated flow rate is large. ・Dust filter is clogged. ・Fan motor is bad. ・Refrigerant gas leak. ・Thermo sensor(RT02)is bad. (Short circuit state or disconnection state)	Turn off the main power supply, reset safety device after removing causes. (Refer 5.4 When safety device turns on and the dryer stops running) ・Lower the ambient temperature. ・Lower the inlet temperature. ・Raise the inlet pressure. ・Lower the treated flow rate. ・Clean the dust filter. ・Replace the fan motor. ・Refrigerant gas leak part is fixed and coolant filling is carried out. ・Exchange sensor.

Note1) setting value of controller

機種	I	S
GX3111 GX3115 GX5111	I3 I2 I1 S4 S3 S2 S1	
GX3122 GX3137 GX5115 GX5122	I3 I2 I1 S4 S3 S2 S1	
GX5137	I3 I2 I1 S4 S3 S2 S1	

Discontinue

9. Specifications

Model number			GX3108	GX3111	GX3115	GX3122	GX3137
User range	Media		Compressed air				
	Inlet air temperature	℃	5～50				
	Inlet air pressure	MPa	0.2～1.6				
	Ambient temperature	℃	2～43				
Rated	Treated flow rate (50/60Hz)	m^3/minANR	1.2/1.3	1.65/1.82	2.8/3.1	3.9/4.3	6.6/7.3
	Inlet air temperature	℃	35				
	Inlet air pressure	MPa	0.7				
	Ambient temperature	℃	32				
Rated functionality	Outlet air pressure dew point	℃	10				
	Pressure drop(50Hz)	MPa	0.023	0.005	0.014	0.003	0.007
Electrical specifications 1 (AC100V)	Power supply	V	Single phase AC100V/ 100-110V 50/60Hz				
	Power consumption (50/60Hz)	kW	0.41/0.50				
	Operating current (50/60Hz)	A	4.5/4.9				
	Starting current (50/60Hz)	A	17.6/16.3				
	Recommendation breaker capacity	A	10				
Electrical specifications 2 (AC200V)	Power supply	V	Single phase AC200V/200-220V 50/60Hz				Three phase AC200V/ 200-220V 50/60Hz
	Power consumption (50/60Hz)	kW	0.41/0.50	1.16/1.29	1.17/1.32	1.19/1.36	1.53/1.89
	Operating current (50/60Hz)	A	2.4/2.5	6.5/6.7	6.6/6.8	6.7/7.0	5.4/6.0
	Starting current (50/60Hz)	A	9.6/8.9	26.7/24.5	26.7/24.5	26.7/24.5	27.8/24.7
	Recommendation breaker capacity	A	5	15	15	15	15
Refrigerant			R-407C				
Exhaust heat(50/60Hz)		kW	0.71/0.79	1.7/1.9	2.1/2.4	2.2/2.4	3.3/3.8
Mass		kg	40	65	65	83	102

Discontinue

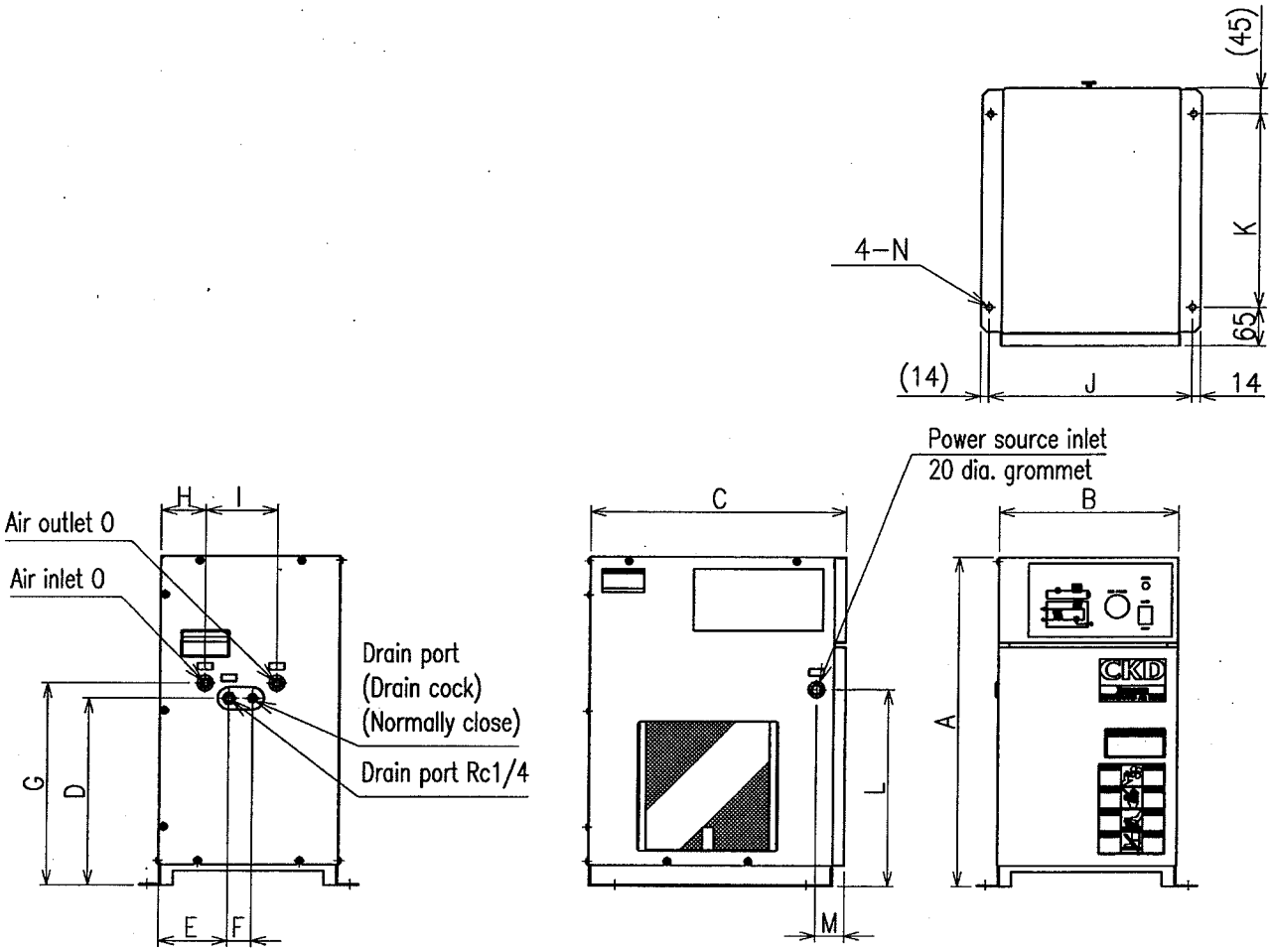
Model number			GX5103	GX5104	GX5106	GX5108	GX5111	GX5115	GX5122	GX5137
User range Note 1)	Media		Compressed air							
	Inlet air temperature	℃	5～80							
	Inlet air pressure	MPa	0.2～1.6							
	Ambient temperature	℃	2～43							
Rated	Treated flow rate (50/60Hz)	m^3/minANR	0.31/0.35	0.5/0.55	0.74/0.81	1.2/1.3	1.65/1.82	2.8/3.1	3.9/4.3	6.6/7.3
	Inlet air temperature	℃	55							
	Inlet air pressure	MPa	0.7							
	Ambient temperature	℃	32							
Rated functionality	Outlet air pressure dew point	℃	10							
	Pressure drop(50Hz)	MPa	0.009	0.023	0.009	0.023	0.005	0.015	0.0026	0.008
Electrical specifications 1 (AC100V)	Power supply	V	Single phase AC100V/100-110V							
	Power consumption (50/60Hz)	kW	0.25/0.26	0.25/0.26	0.42/0.49	0.43/0.50				
	Operating current (50/60Hz)	A	3.2/2.7	3.2/2.8	4.7/5.0	4.7/5.0				
	Starting current (50/60Hz)	A	8.6/8.1	8.6/8.1	17.6/16.3	17.6/16.3				
	Recommendation breaker capacity	A	5	5	10	10				
Electrical specifications 2 (AC200V)	Power supply	V	Single phase AC200V/200-220V 50/60Hz					Three phase AC200V/200-220V 50/60Hz		
	Power consumption (50/60Hz)	kW	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 (50/60Hz)	A	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 (50/60Hz)	A	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
	Recommendation breaker capacity	A	5	5	5	5	15	15	15	15
Refrigerant			R-407C							
Exhaust heat(50/60Hz)		kW	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
Mass		kg	28	28	40	40	65	76	102	128

Note1) When both inlet air temperature and ambient temperature are the maximum temperature, using rated air flow is not guaranteed. If continuation operation is carried out, the life of this machine will become short. Confirm by specifications separately about the details of the use range.

Discontinue

10. Dimensions

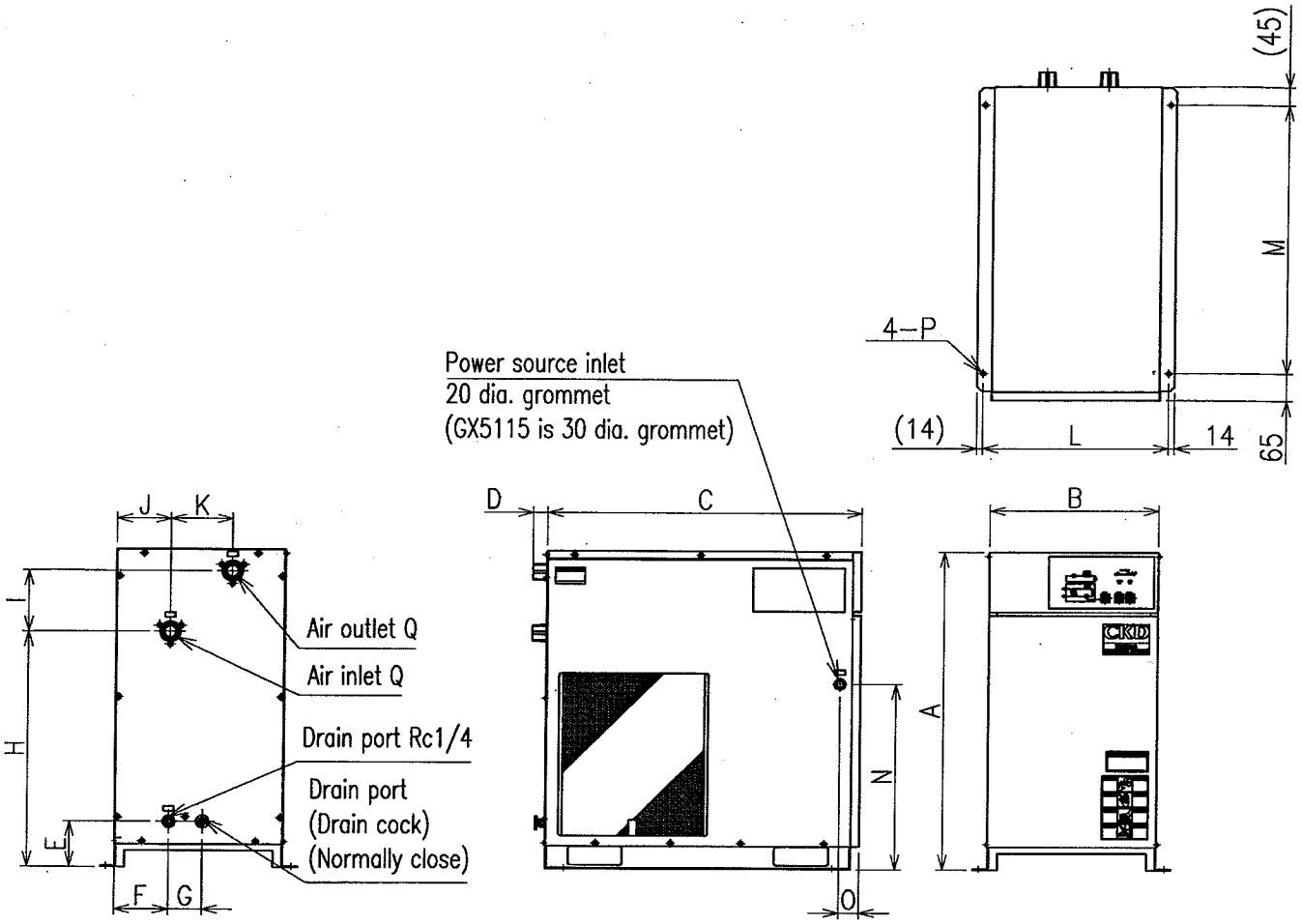
10.1 GX3108, GX5103, GX5104, GX5106, GX5108



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
GX3108	635	370	510	394	155	40	420	105	140	410	400	410	50	φ10	Rc3/4
GX5103	610	300	435	369	115	40	395	75	120	340	325	385	50	φ10	Rc3/8
GX5104	610	300	435	369	115	40	395	75	120	340	325	385	50	φ10	Rc3/8
GX5106	635	370	510	394	155	40	420	105	140	410	400	410	50	φ10	Rc3/4
GX5108	635	370	510	394	155	40	420	105	140	410	400	410	50	φ10	Rc3/4

Discontinue

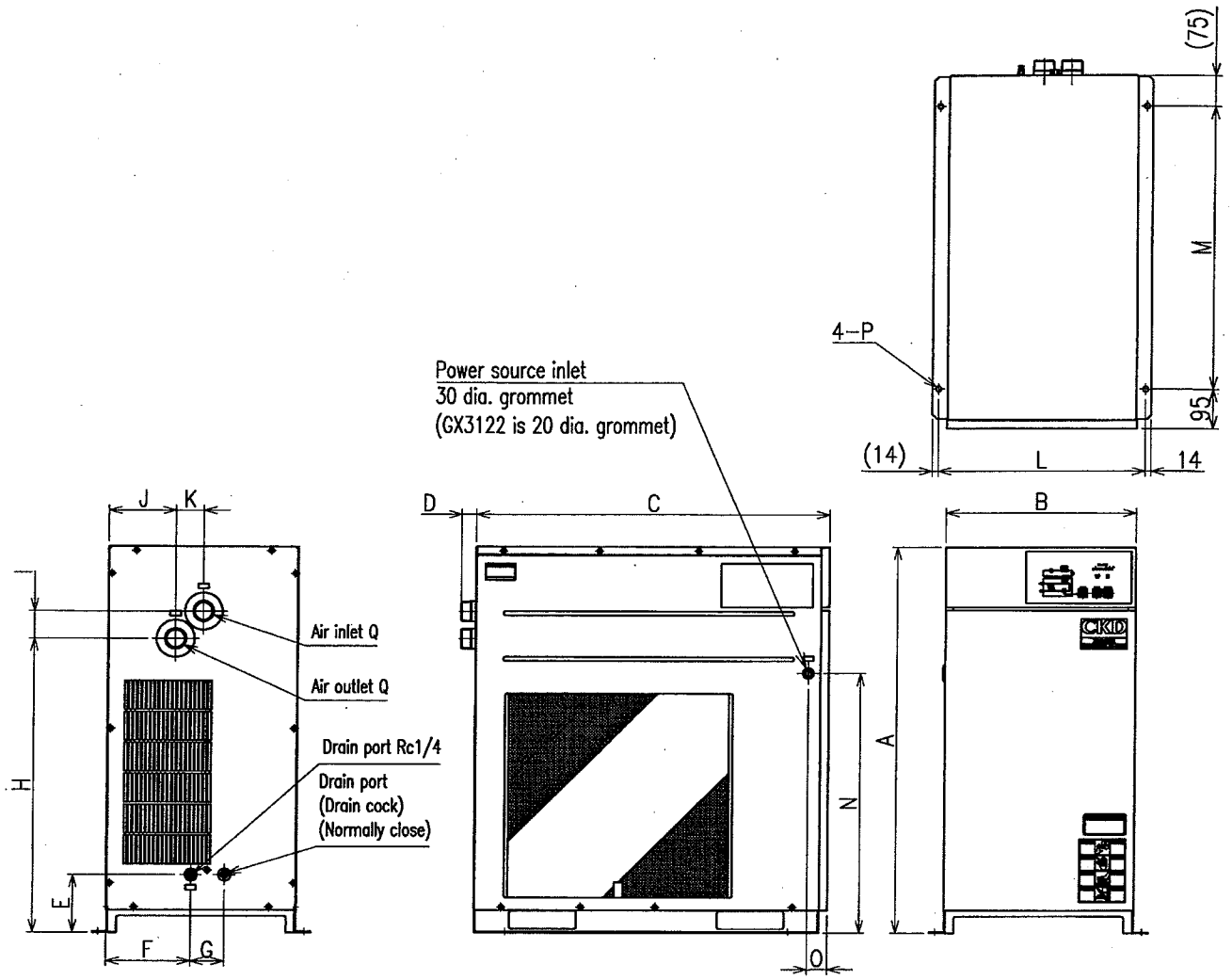
10. 2 GX3111, GX3115, GX5111, GX5115



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
GX3111	770	400	755	35	110	128	80	571	147	128	147	440	645	450	50	ϕ10	Rc1
GX3115	770	400	755	35	110	128	80	571	147	128	147	440	645	450	50	ϕ10	Rc1
GX5111	770	400	755	35	110	128	80	571	147	128	147	440	645	450	50	ϕ10	Rc1
GX5115	820	400	830	35	110	128	80	622	147	128	147	440	720	500	50	ϕ10	Rc1

Discontinue

10. 3 GX3122, GX3137, GX5122, GX5137

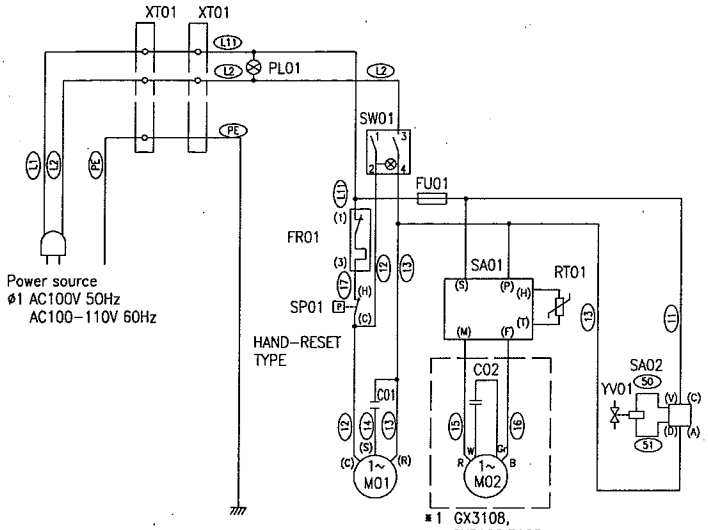


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
GX3122	835	400	850	35	140	182	80	610	66	132	66	440	680	530	50	ϕ13	R $1^1/_2$
GX3137	935	450	850	35	140	200	80	713	66	160	66	490	680	630	50	ϕ13	R $1^1/_2$
GX5122	935	450	850	35	140	200	80	713	66	160	66	490	680	630	50	ϕ13	R $1^1/_2$
GX5137	1010	500	930	35	140	240	80	789	66	180	66	540	760	705	50	ϕ13	R $1^1/_2$

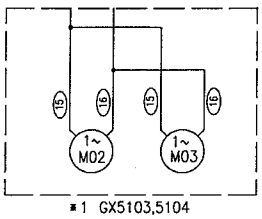
Discontinue

11. Electrical circuit

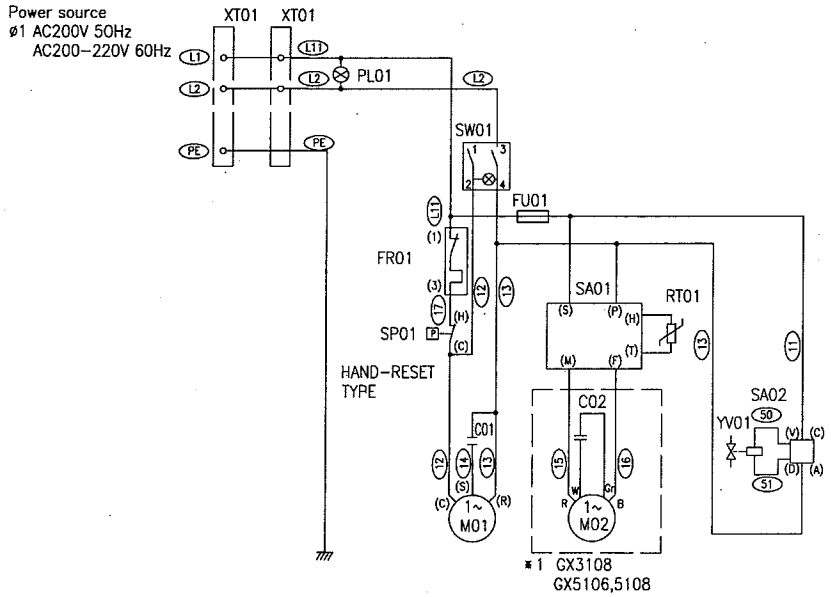
11.1 GX3108-AC100V
GX5103, 5104, 5106, 5108-AC100V



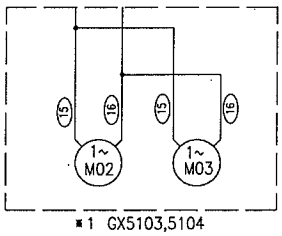
M01	Compressor	YV01	Solenoid valve (Drain discharge)
M02	Fan motor	FR01	Overload protector
M03	Fan motor (GX5103,5104)	FU01	Fuse
C01	Run capacitor	SW01	Start-stop switch
C02	Run capacitor (GX3106,3108,5106,5108)	SP01	Pressure switch (Hand-reset)
SA01	Fan control unit	PL01	Power lamp
SA02	Drain timer unit	XT01	Terminal block
RT01	Fan control sencor		



11.2 GX3108-AC200V
GX5103, 5104, 5106, 5108-AC200V

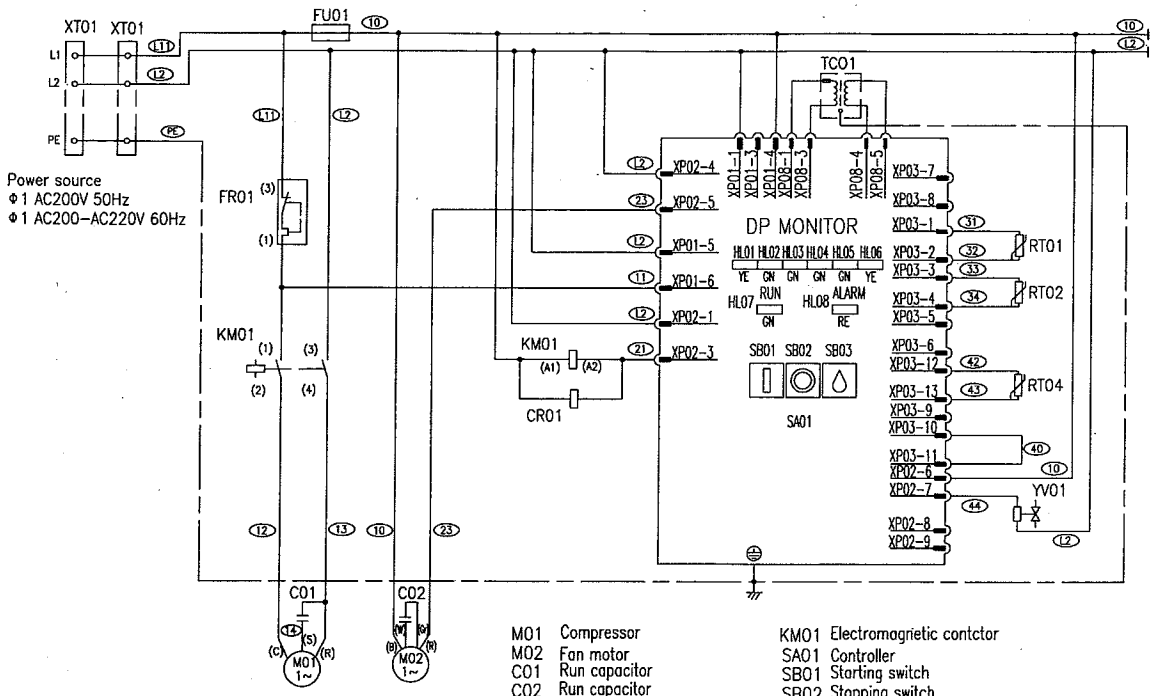


M01	Compressor	YV01	Solenoid valve (Drain discharge)
M02	Fan motor	FR01	Overload protector
M03	Fan motor (GX5103,5104)	FU01	Fuse
C01	Run capacitor	SW01	Start-stop switch
C02	Run capacitor (GX3106,3108,5106,5108)	SP01	Pressure switch (Hand-reset)
SA01	Fan control unit	PL01	Power lamp
SA02	Drain timer unit	XT01	Terminal block
RT01	Fan control sensor		



Discontinue

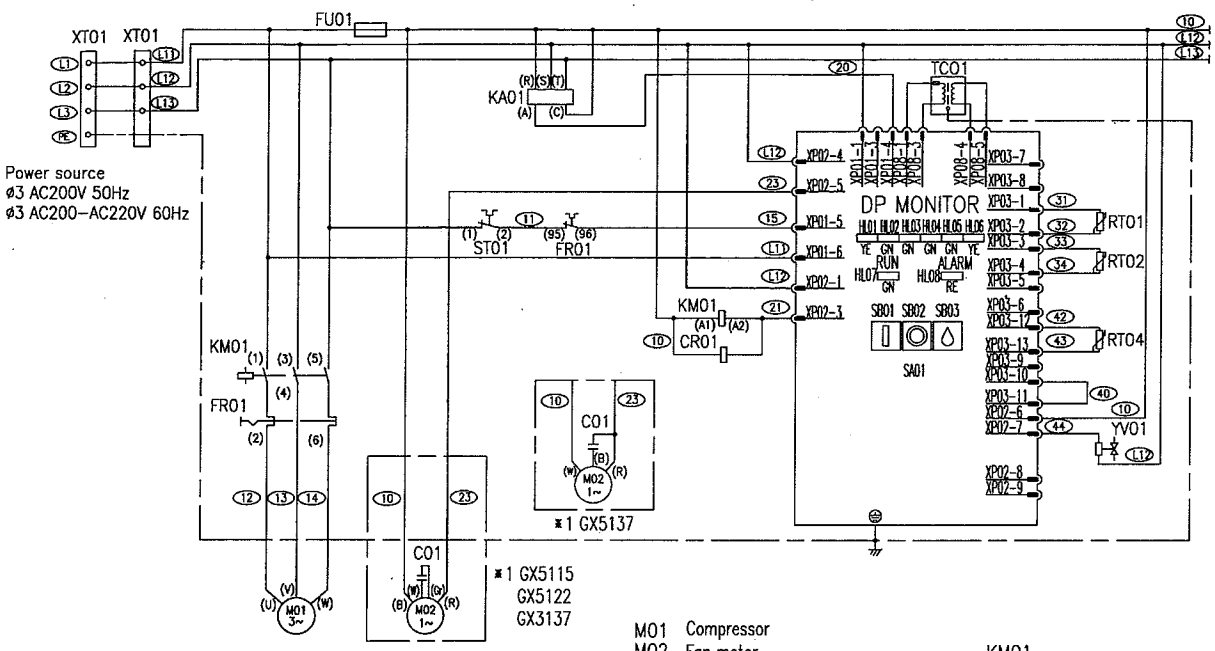
11. 3 GX3111, 3115, 3122-AC200V
GX5111-AC200V



M01 Compressor
M02 Fan motor
C01 Run capacitor
C02 Run capacitor
FR01 Overload protector
RT01 Thermo sensor (Dew point)
RT02 Thermo sensor (Fan control)
RT04 Thermo sensor (Inlet air temp.)
CR01 Surge killer
FU01 Fuse

KM01 Electromagnetic contctor
SA01 Controller
SB01 Starting switch
SB02 Stopping switch
SB03 Switch for drain discharge
TC01 Transformer
XT01 Terminal block
YV01 Drain solenoid valve
HL01~HL08 Indication lamp

11. 4 GX3137-AC200V
GX5115, 5122, 5137-AC200V



M01 Compressor
M02 Fan motor
C01 Run capacitor
RT01 Thermo sensor (Dew point)
RT02 Thermo sensor (Fan control)
RT04 Thermo sensor (Inlet air temp.)
CR01 Surge killer
FU01 Fuse
ST01 Internal thermostat (GX5115,5122,3137)
ST01 Thermal switch (GX5137)
KA01 Phase protector

KM01 FR01 Electromagnetic switch
SA01 Controller
SB01 Starting switch
SB02 Stopping switch
SB03 Switch for drain discharge
TC01 Transformer
XT01 Terminal block
YV01 Drain solenoid valve
HL01~HL08 Indication lamp

Discontinue

12. CKD WARRANTY

Subject to the conditions below, CKD Corporation ("CKD") warrants the first end user (the "Buyer") that CKD's products are free from defects in material and workmanship.
CKD will, at CKD's option, either repair or replace a defective product, including lowest transportation costs but not including installation or any other similar charges, provided that (1) the buyer notifies CKD in writing of the claimed defect within one year from the date Buyer received the product, (2) provides a complete explanation of the defect, the application of the product, and such other information concerning use of the product as CKD may request, and (3) returns the product to CKD in accordance with CKD's specific written instructions and authorization obtained from CKD prior to return of the product, and CKD's inspection confirms that the product was defective.
This warranty applies only if the product was used and applied correctly under normal operating conditions and good engineering practice; was installed, operated and maintained in accordance with all instructions issued or published by CKD; was used within stated pressure, media and operating limitations published by CKD and in effect on the date of shipment; and was not subject to abuse, misuse or unauthorized modification.
THIS WARRANTY IS THE ONLY AUTHORIZED CKD WARRANTY AND IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED INCLUDING ANY IMPILIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, notwithstanding any disclosure to CKD of the use to which the product is to be put. The Buyer's SOLE AND EXCLUSIVE REMEDY on any claim of any kind for any loss or damage arising out of the manufacture, sale, delivery or use of CKD's products shall be for the repair or replacement of any defective products as provided herein.
IN NO EVENT SHALL CKD BE LIABLE FOR BUSINESS INTERRUPTIONS, LOSS OF PROFITS, PERSONAL INJURY, COSTS OF DELAY OR FOR ANY OTHER SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL LOSSES, COSTS OR DAMAGES. There are no warranties, expressed or implied, made by CKD other than the warranty against defects in material and workmanship set forth above, and CKD neither assumes nor authorizes any other person or firm to assume for it any other obligations or liability.
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CKD MAINTAINS A POLICY OF ONGOING PRODUCT DEVELOPMENT AND INPROVEMENT. WE THEREFORE RESERVE THE RIGHT TO CHANGE DIMENSIONS, SPECIFICATIONS AND DESIGN WITHOUT NOTICE.

CKD corporation

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PHONE 0568－77－1111

Purchased air drier

Model name	
Manufacture number	
Purchase date	
Beginning of using date	

Sales shop name

TEL

Charge

Discontinue

Discontinue

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