

INSTRUCTION MANUAL

REFRIGERATED COMPRESSED AIR DRYER

Xeroaqua GX Series

G X 8 0 0 0 Series

GX8004, GX8006, GX8008, GX8011,
GX8015, GX8022, GX8037

G X 8 1 0 0 Series

GX8155, GX8175



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.





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  **WARNING**  **CAUTION** two ways.

 **WARNING** used when improper handling could kill or seriously harm operators

 **CAUTION** used when improper handling could harm operators or damage objects



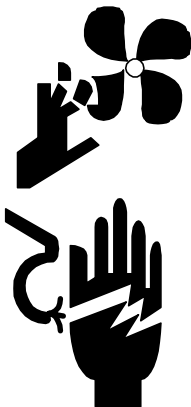
WARNING: ROTATION

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.



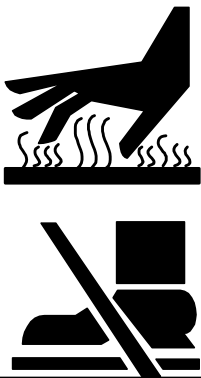
CAUTION: HIGH TEMPERATURE

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 . Certificate of pressure vessel

1 . Keep the certificate of pressure vessel

This machine is installed a pressure vessel that is applied the second class pressure vessel of boiler and pressure vessel safety regulation by the Japan Ministry of Labor. The machine is shipped with a certificate of the second class pressure vessel. This certificate should be kept carefully with this machine while this machine is operated. (It is not necessary to submit the relevant documents to the labor standard inspection office from October 1, 1990.)

2 . Handling for the second class pressure vessel certificate

- 1) Second class pressure vessel cannot be transferred, rent, and installed without the requirements of structure. The certificates of the second class pressure vessel supplied with the machine are important documents that certify the pressure vessels meet the requirement for the structure.
- 2) Carefully keep certificates of the second class pressure vessel in a safe place so that it is not damaged, broken, or lost.
- 3) If you want reissue the certificates of second class pressure vessel, it must be within one year from individual inspection. Otherwise, it is absolutely necessary to inspect the pressure vessel again.
- 4) Inspect following items once a year by your self, then please keep those results for three years after installation of second class pressure vessels.
 - Check the main body for damage.
 - Check the lid tightening bolts for wear.
 - Check the piping and valves for damage

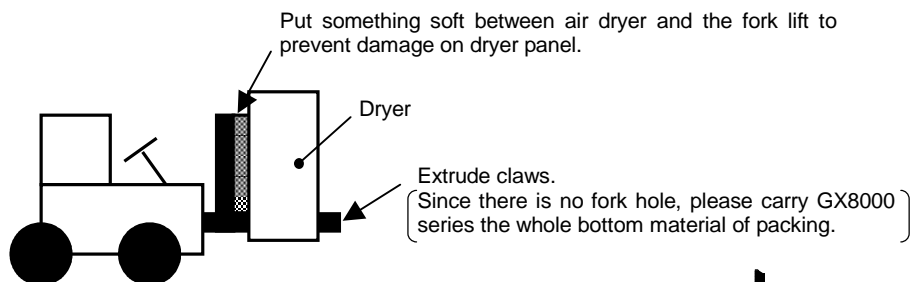
3 . Cautions

3.1 Transportation

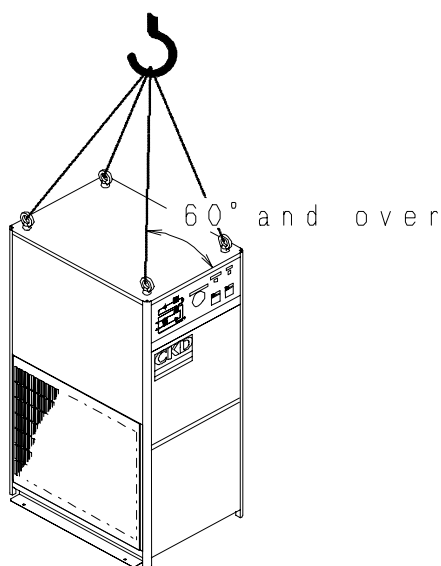
- 1) Do not fall down the dryer. Also do not give vibration or impact to the dryer.
*Internal parts could get damaged.

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

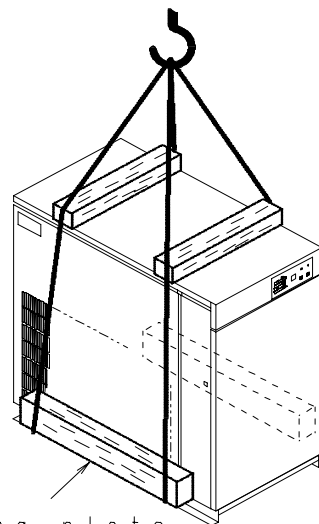
- 3) Move the product with a fork lift as shown in the drawing.



- 4) Move the product with a crane.
Suspend the product as shown in the drawing.



GX8000 Series



Supporting plate
(4 places)

Supporting plate

The length of the supporting plates (B) should be longer than the width of the dryer (A) by approximately 100mm.

Put something soft between air dryer and the supporting plates to prevent damages on dryer panel.

GX8100 Series

3.2 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 °C 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.

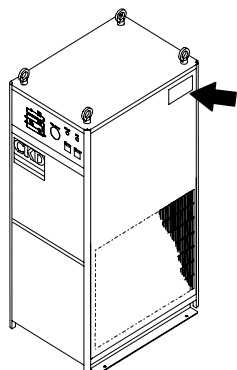
3.3 Cautions at operation

- 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) Do not use the dryer for pneumatic caisson shield or respiratory medical equipment.
*It could cause an accident includes injury.
- 10) 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.

4 . Installation

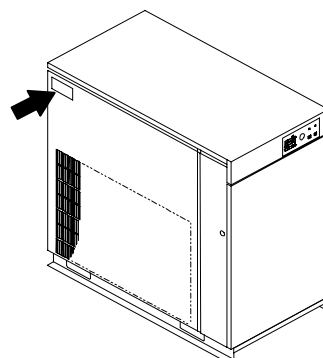
4.1 Confirm the following.

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



GX8000 series

REFRIGERATED AIR DRYER						
①						
POWER	②	MAX. PRESS.		⑤ MPa		
MAX. AIR TEMP.	③ 80℃	AIR FLOW		⑥ m ³ /min	ANR	
CURRENT	④ A	MASS		⑦ kg		
REFRIGERANT	SERIAL					
CKD		CKD Corporation MADE IN THAILAND				



GX8100 series

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

Accessories	GX8000 series	GX8100 series
Instruction Manual	○	○
Certificate for withstand pressure	-	○ (Only GX8175)
Y-type strainer	○	-
Both screw nipple	○	-
Single elbow	○	-
Insert ring	○	-
Drain tube	○	-

Model	Power	Max. Air Temp.	Max. Press.	Air Flow	Mass	Refrigerant	Serial No.
GX8004-AC220V	1	AC220V50/60Hz	1.3/1.4	R-22, *1	1.6	0.5/0.55	35
GX8004-AC230V	1	AC230V50/60Hz	1.3/1.3	R-22, *1	1.6	0.5/0.55	35
GX8004-AC240V	1	AC240V50/60Hz	1.2/1.2	R-22, *1	1.6	0.5/0.55	35
GX8006-AC220V	1	AC220V50/60Hz	1.4/1.7	R-22, *1	1.6	0.74/0.81	40
GX8006-AC230V	1	AC230V50/60Hz	1.3/1.6	R-22, *1	1.6	0.74/0.81	40
GX8006-AC240V	1	AC240V50/60Hz	1.3/1.5	R-22, *1	1.6	0.74/0.81	40
GX8008-AC220V	1	AC220V50/60Hz	2.9/2.4	R-22, *1	1.6	1.2/1.3	46
GX8008-AC230V	1	AC230V50/60Hz	2.7/2.3	R-22, *1	1.6	1.2/1.3	46
GX8008-AC240V	1	AC240V50/60Hz	2.6/2.2	R-22, *1	1.6	1.2/1.3	46
GX8011-AC220V	1	AC220V50/60Hz	3.2/2.9	R-22, *1	1.6	1.65/1.82	60
GX8011-AC230V	1	AC230V50/60Hz	3.0/2.7	R-22, *1	1.6	1.65/1.82	60
GX8011-AC240V	1	AC240V50/60Hz	2.9/2.6	R-22, *1	1.6	1.65/1.82	60
GX8015-AC380V	3	AC380V50/60Hz	2.3/2.5	R-22, *1	1.6	2.8/3.1	93
GX8015-AC400V	3	AC400V50/60Hz	2.2/2.4	R-22, *1	1.6	2.8/3.1	93
GX8015-AC415V	3	AC415V50/60Hz	2.1/2.3	R-22, *1	1.6	2.8/3.1	93
GX8022-AC380V	3	AC380V50/60Hz	3.0/3.3	R-22, *1	1.6	3.9/4.3	110
GX8022-AC400V	3	AC400V50/60Hz	2.9/3.1	R-22, *1	1.6	3.9/4.3	110
GX8022-AC415V	3	AC415V50/60Hz	2.8/3.0	R-22, *1	1.6	3.9/4.3	110
GX8037-AC380V	3	AC380V50/60Hz	4.5/5.4	R-22, *1	1.6	6.6/7.3	150
GX8037-AC400V	3	AC400V50/60Hz	4.2/5.1	R-22, *1	1.6	6.6/7.3	150
GX8037-AC415V	3	AC415V50/60Hz	4.1/4.9	R-22, *1	1.6	6.6/7.3	150
GX8155-AC380V	3	AC380V50Hz	5.7	R-407C, *1	1.0	9.6	230
GX8155-AC400V	3	AC400V50Hz	5.4	R-407C, *1	1.0	9.6	230
GX8155-AC415V	3	AC415V50Hz	5.2	R-407C, *1	1.0	9.6	230
GX8175-AC380V	3	AC380V50Hz	7.2	R-407C, *1	1.0	10.5	235
GX8175-AC400V	3	AC400V50Hz	6.9	R-407C, *1	1.0	10.5	235
GX8175-AC415V	3	AC415V50Hz	6.6	R-407C, *1	1.0	10.5	235

*1 The amount of refrigerant is indicated.



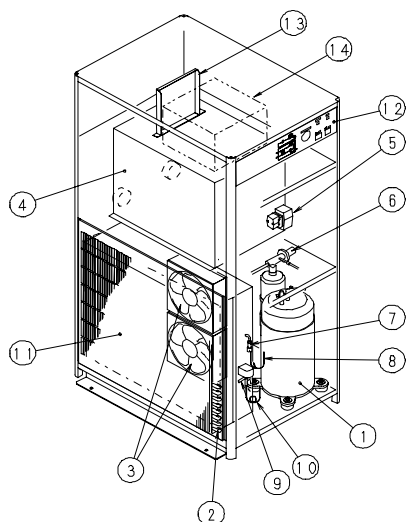
[Note] If the contents are not clear or there are any questions, please contact CKD or distributors before using the dryer.

- 2) Confirm damage or transformation that is made during the transportation.
 3) Attachment list.

Check whether there are all accessories. (Refer to above.)

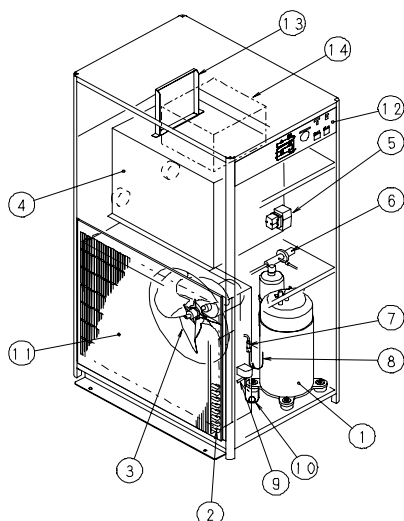
4.2 The name of each part

(1) GX8004



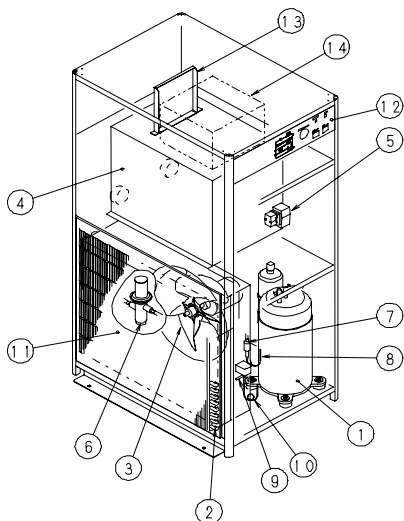
No.	Name	Q'ty	Note
1	Compressor	1	
2	Condenser	1	
3	Fan, fan motor	2	
4	Heat exchanger unit	1	
5	Solenoid valve	1	For drain discharge
6	Capacity control valve	1	
7	Strainer	1	
8	Capillary tube	1	
9	Solenoid valve	1	For liquid injection
10	Capillary tube	1	For liquid injection
11	Dust filter	1	
12	Operation panel	1	
13	Electrical panel	1	
14	Transformer	1	

(2) GX8006, GX8008, GX8011



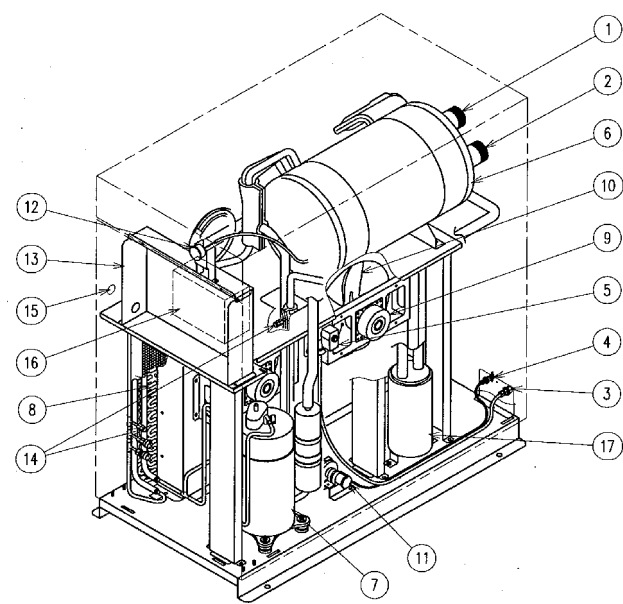
No.	Name	Q'ty	Note
1	Compressor	1	
2	Condenser	1	
3	Fan, fan motor	1	
4	Heat exchanger unit	1	
5	Solenoid valve	1	For drain discharge
6	Capacity control valve	1	
7	Strainer	1	
8	Capillary tube	1	
9	Solenoid valve	1	For liquid injection
10	Capillary tube	1	For liquid injection
11	Dust filter	1	
12	Operation panel	1	
13	Electrical panel	1	
14	Transformer	1	

(3) GX8015, GX8022, GX8037



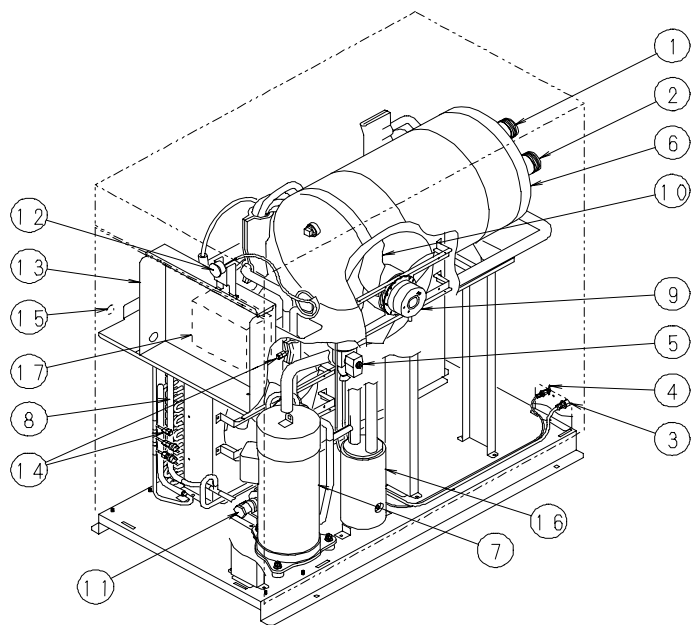
No.	Name	Q'ty	Note
1	Compressor	1	
2	Condenser	1	
3	Fan, fan motor	1	
4	Heat exchanger unit	1	
5	Solenoid valve	1	For drain discharge
6	Capacity control valve	1	
7	Strainer	1	
8	Capillary tube	1	
9	Solenoid valve	1	For liquid injection
10	Capillary tube	1	For liquid injection
11	Dust filter	1	
12	Operation panel	1	
13	Electrical panel	1	
14	Transformer	1	

(4) GX8155



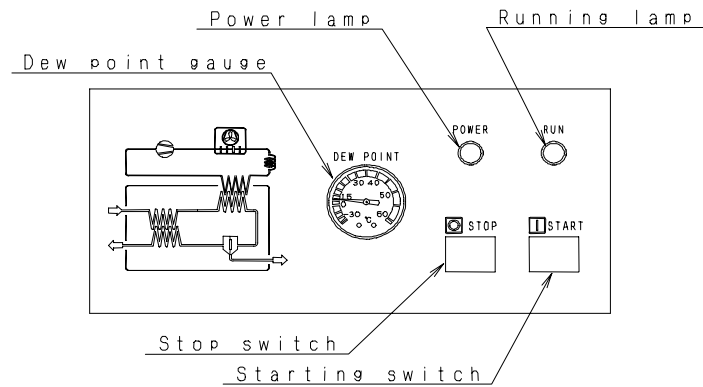
No.	Name	Q'ty
1	Air inlet	1
2	Air outlet	1
3	Drain port	1
4	Manual drain port	1
5	Solenoid valve	1
6	Heat exchanger	1
7	Compressor	1
8	Condenser	1
9	Fan motor	2
10	Fan blade	2
11	Capacity control valve	1
12	Dew point gauge	1
13	Electric box	1
14	Service valve	2
15	Power hole	1
16	Transformer	1
17	Accumulator	1

(5) GX8175



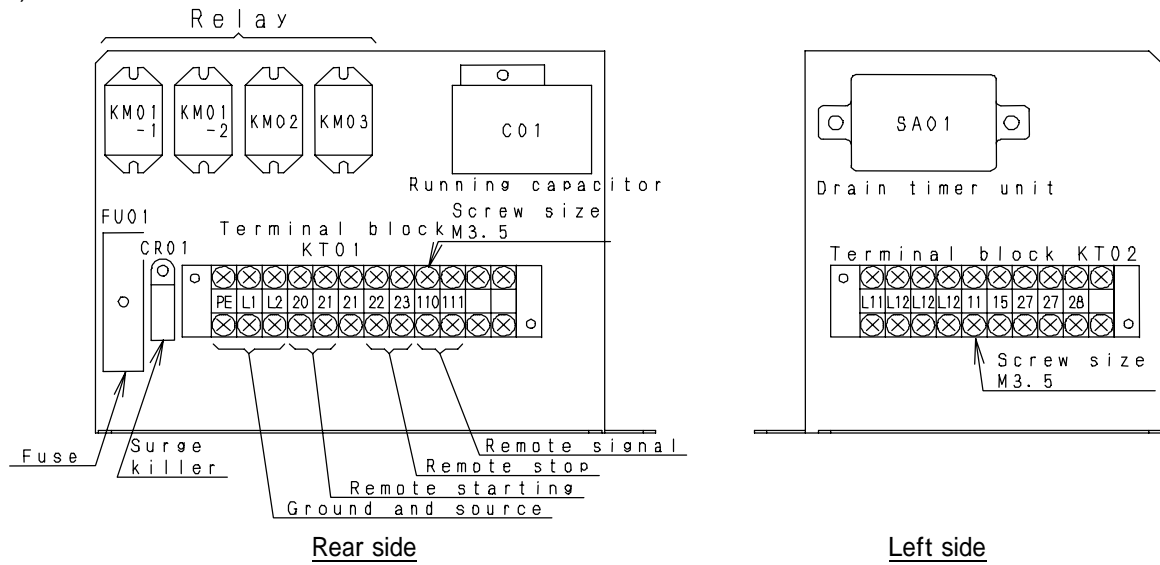
No.	Name	Q'ty
1	Air inlet	1
2	Air outlet	1
3	Drain port	1
4	Manual drain port	1
5	Solenoid valve	1
6	Heat exchanger	1
7	Compressor	1
8	Condenser	1
9	Fan motor	2
10	Fan blade	2
11	Capacity control valve	1
12	Dew point gauge	1
13	Electric box	1
14	Service valve	2
15	Power hole	1
16	Accumulator	1
17	Transformer	1

4.3 Operation panel

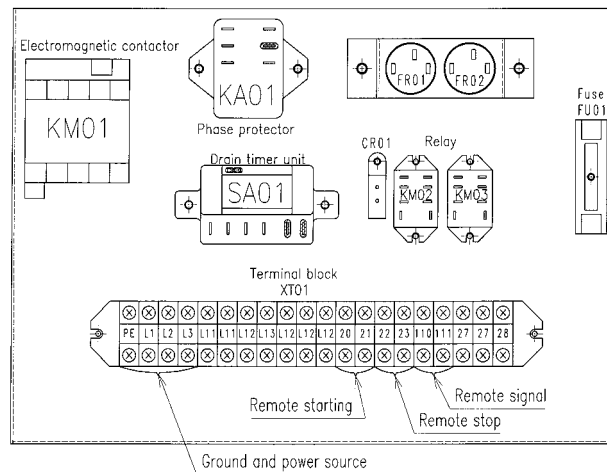


4.4 Electric component

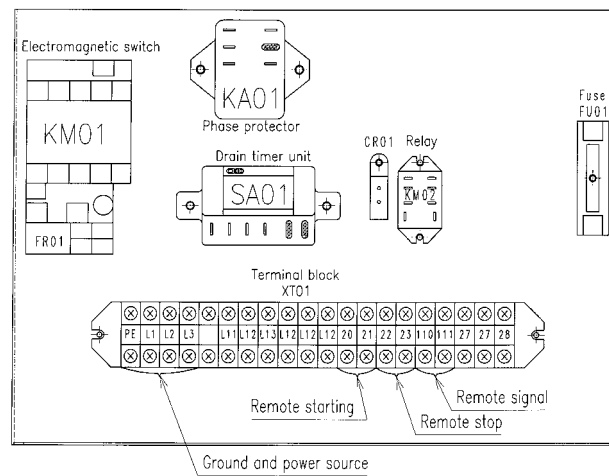
(1) GX8004, GX8006, GX8008, GX8011



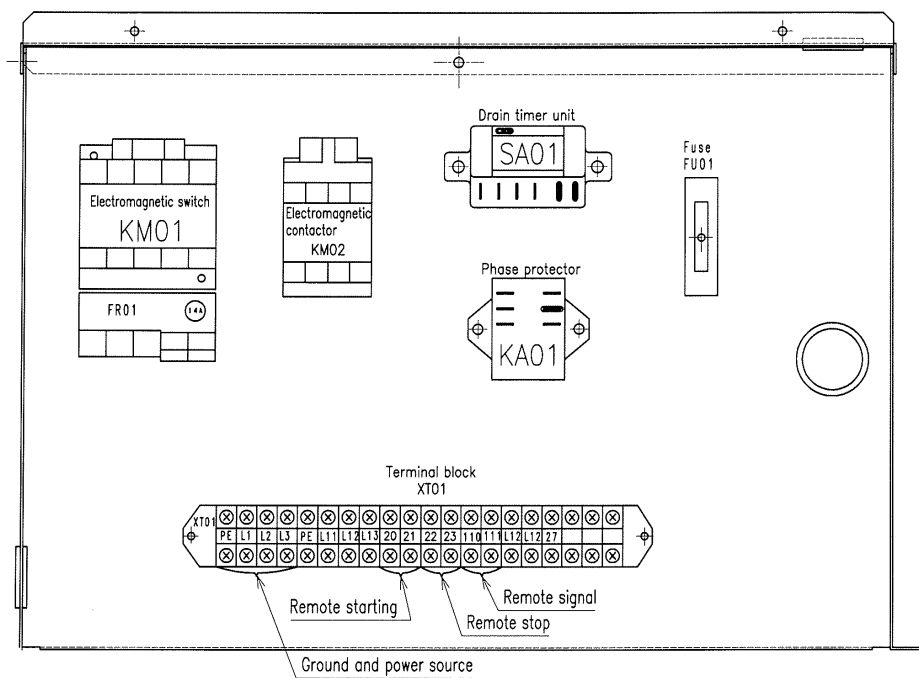
(2) GX8015



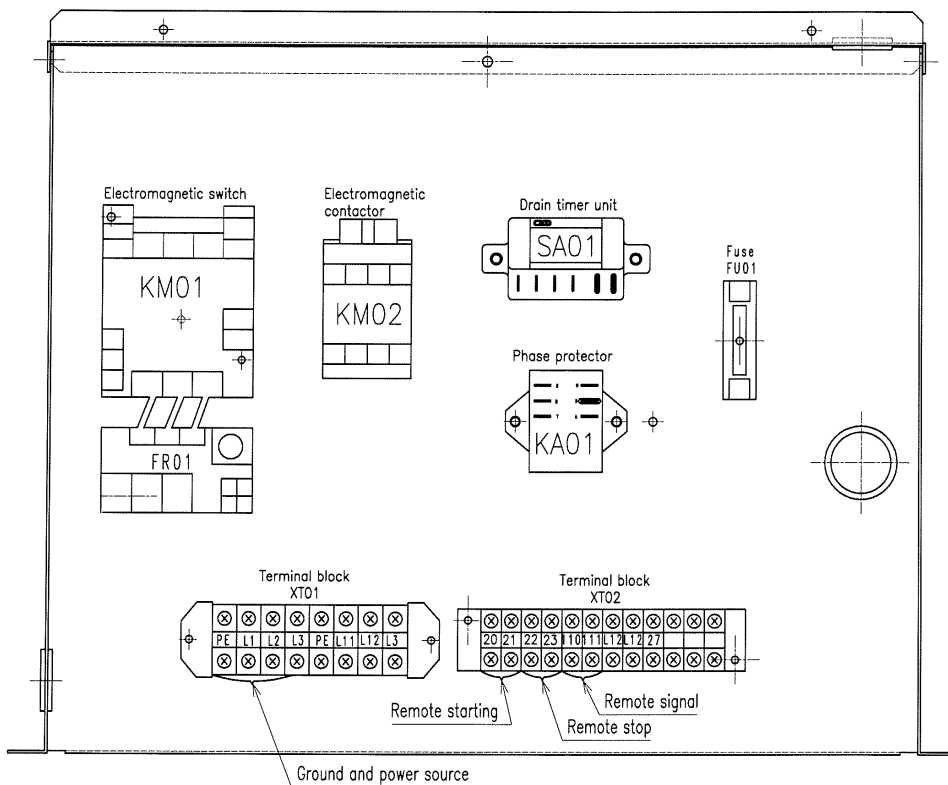
(3) GX8022, GX8037



(4) GX 8 1 5 5



(5) GX 8 1 7 5



4.5 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.

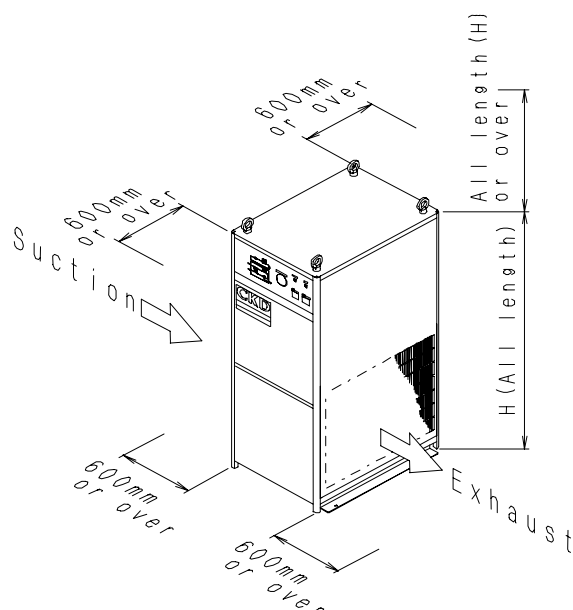
*Weak or inclin foundation may cause noise and vibration.



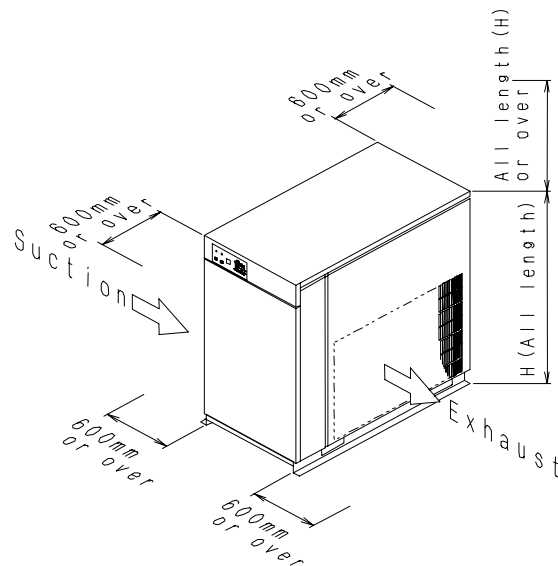
- 5) Need to keep spaces as a following figure for maintenance.

Do not enter the exhaust air to exhaust to upper part.

*An unusual stop may be carried out.



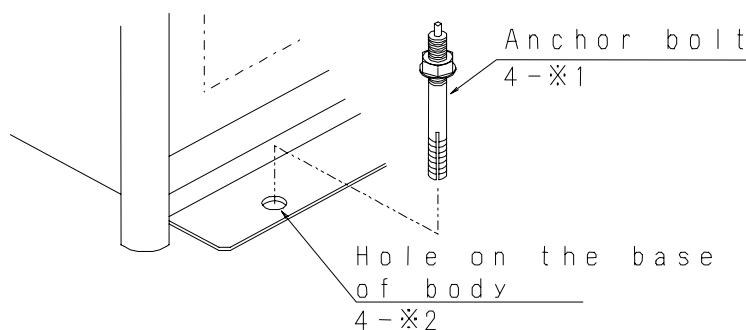
GX8000 series



GX8100 series

4.6 Fixation

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



	1	2
GX8004	M8 × ℓ70	10
GX8006		
GX8008		
GX8011		
GX8015		
GX8022	M10 × ℓ 100	12
GX8037		
GX8155	M12 × ℓ 70	16
GX8175		

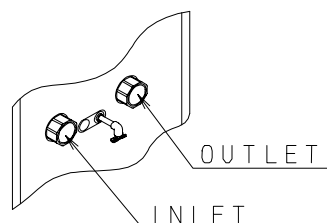
4.7 Air piping

- 1) Confirm which is Air inlet or Air outlet before piping.
- 2) Mount the attached Y-type strainer by nipple or by other pipes. (GX 8 0 0 0 Series)

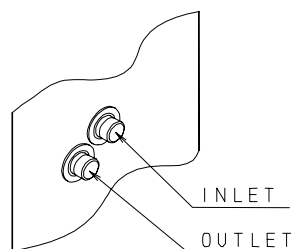
⚠ [CAUTION]

- 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



GX8000 series



GX8100 series

Pipe size

GX8004	Rc ³ / ₈
GX8006	Rc ¹ / ₂
GX8008	Rc ³ / ₄
GX8011	Rc ³ / ₄
GX8015	Rc1
GX8022	Rc1
GX8037	Rc1 ¹ / ₂
GX8155	R2
GX8175	R2

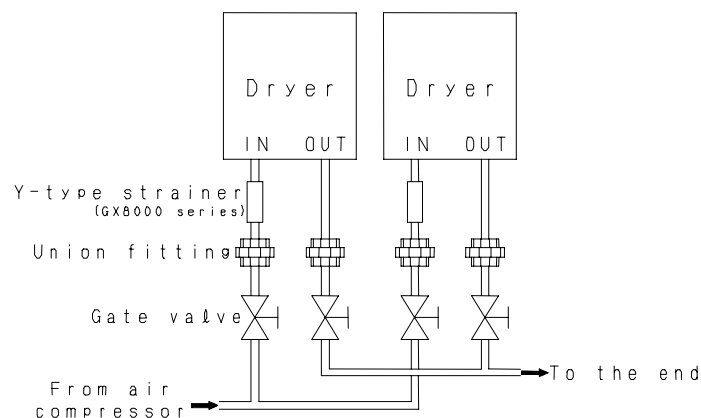
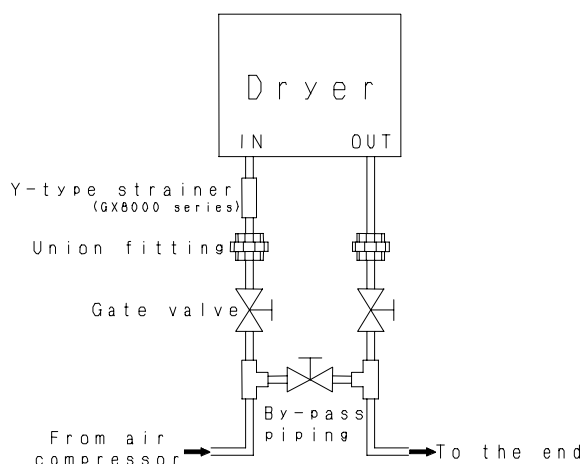
- 3) Install a by-pass circuit in the air circuit.

On and off operation

Installation of by-pass piping is recommended.

24 hours operation

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



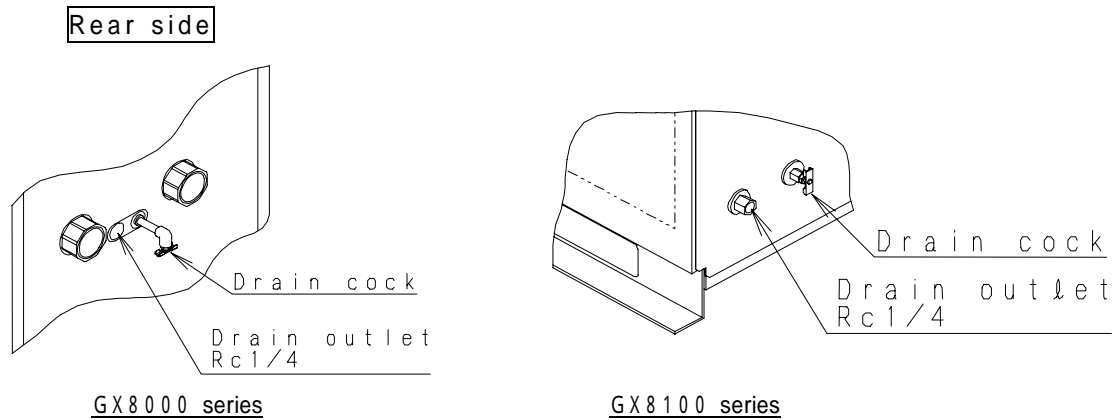
Note : By-pass piping is normally closed.

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.

4.8 Drain Piping

- 1) Confirm the drain outlet location before piping.

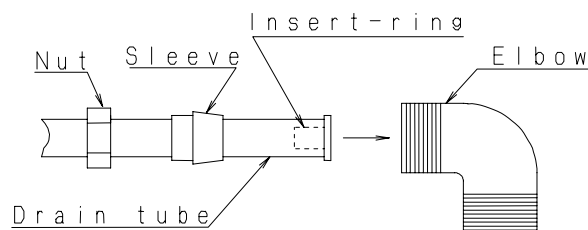


Connect the drain pipe to the drain outlet (Rc1/4) using enclosed items.

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 : Single elbow(10×R1/4) Insert-ring(10)
 Drain tube (O.D 10×I.D 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 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.

4.9 Electrical Wiring

1) Use proper voltage.

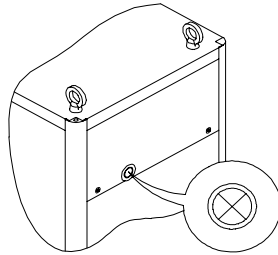
* Voltage must be within +/- 10% of rated voltage.

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

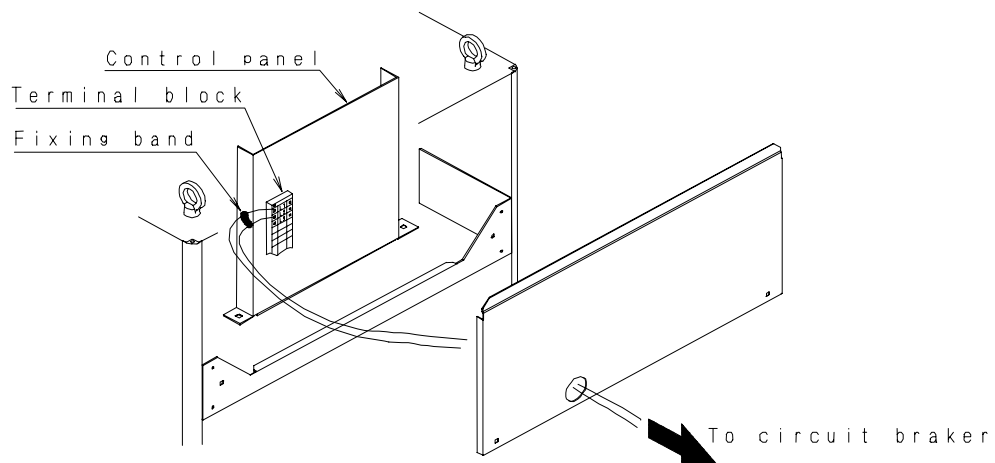
2) How to connect power supply code

GX8000 series

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



- Connect the terminal block L1 and 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.
- Fix power supply code by a hand mounted to the control panel.

GX8100 series

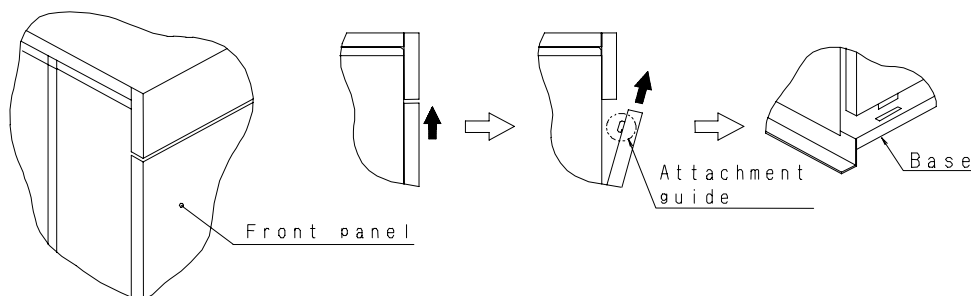
- Make a hole for wiring on the rubber bushing at the upper back part of the dryer.
- Remove the front panel.

Procedure

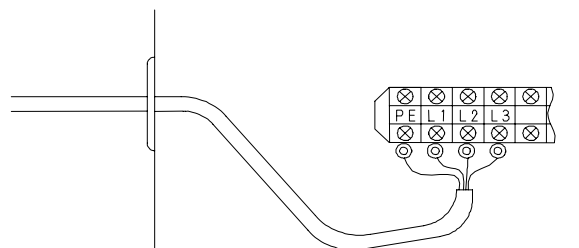
The front panel is lifted upwards.

The attachment guide is removed from the right-and-left side panel.

The front panel is lifted upwards and it extracts from the plug part of the base.



- Connect the terminal block L1, L2, L3, and the earth leakage breaker by wire.



3) 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.

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

	Breaker capacity (A)	Cable size(mm ²)			
		Length 10m	Length 20m	Length 30m	Length 50m
GX8004	5	2.0	2.0	2.0	2.0
GX8006	5	2.0	2.0	2.0	2.0
GX8008	5	2.0	2.0	2.0	3.5
GX8011	5	2.0	2.0	3.5	5.5
GX8015	5	2.0	2.0	2.0	3.5
GX8022	10	2.0	2.0	3.5	5.5
GX8037	10	2.0	3.5	5.5	8.0
GX8155	10	2.0	5.5	8.0	14.0
GX8175	15	3.5	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.

5 . Functional explanation

5.1 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

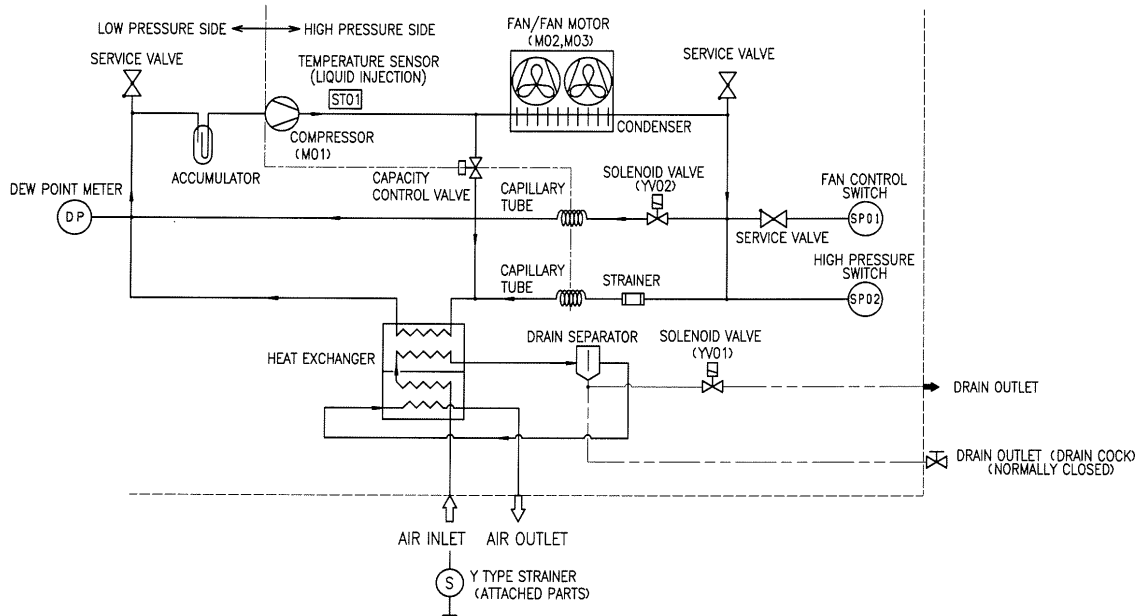
It is, and the freon gas which became high temperature high pressure with the compressor (refrigerant compressor) is cooled and condensed with a condenser, and serves as high-pressure refrigerant liquid. And by decompressing in a capillary tube, it becomes the liquid of low-temperature low pressure. 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

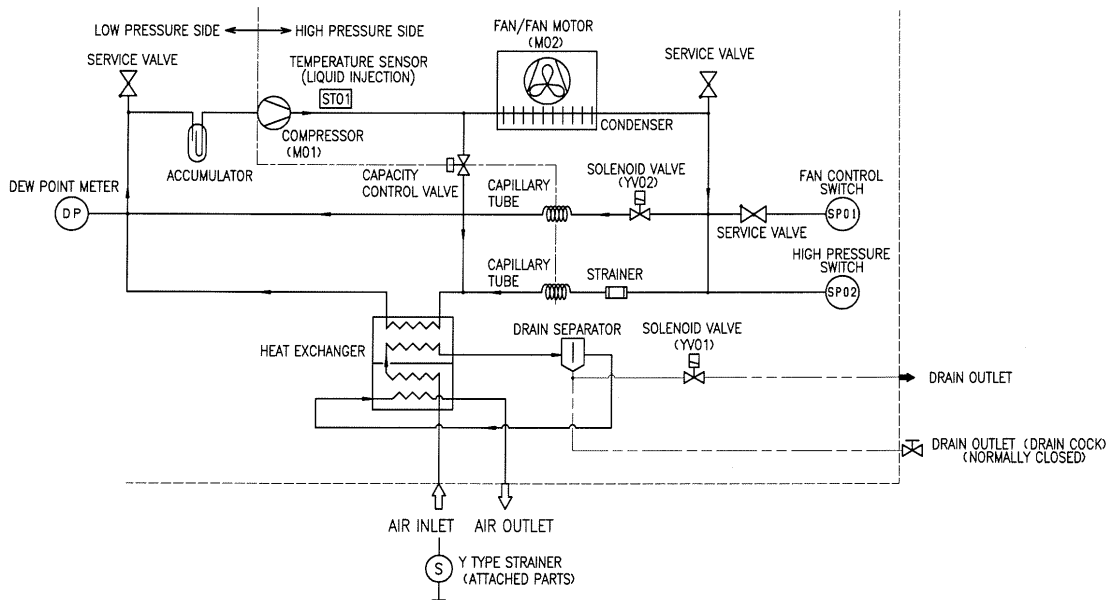
The steam in compressed air is cooled and condensed with an evaporator, and it is serves as drain (moisture). The drain tank is covered with drain. The drain collected in the drain tank is discharged periodically when a valve operates, and also the drain cock has clung so that discharge may be manually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

5.2 System Diagram

1) GX8004

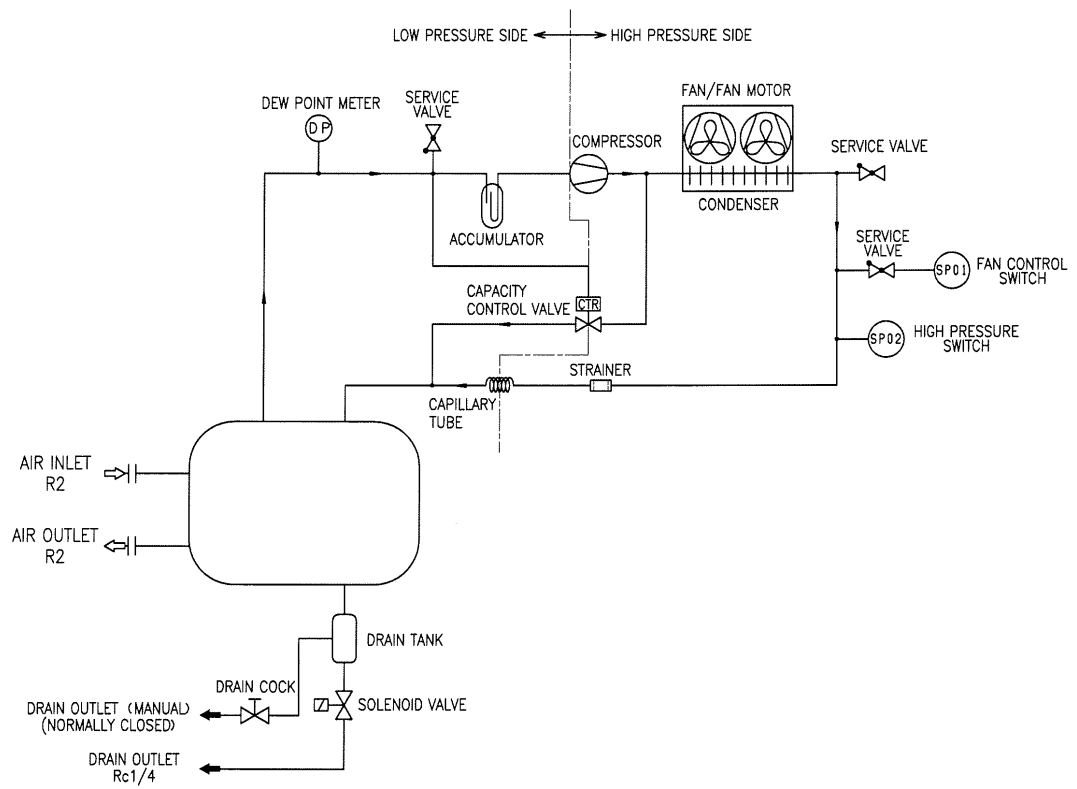


2) GX8006, GX8008, GX8011, GX8015, GX8022, GX8037



GX8022 only

3) GX8155, GX8175



6 . Preparation for operation & Operation

6.1 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.
- 3) In Xeroaqua GX series, it can operate and stop by remote control. Refer to the following, when use is carried out by remote control.

< Remote operation >

- Connect the momentary switch (NO) between terminal number 20 and 21.

< Remote stop >

- Remove the Jumper wire between terminal number 22 and 23.
- Connect the momentary switch (NC) between terminal number 22 and 23.

6.2 How to start and stop the dryer

- 1) Turn on the power supply.
- 2) At the time of manual operation, " POWER " lamp on the operation panel turns on.
- 3) Push "START" button ("I" mark) on the operation panel. At the time of remote control, push the momentary switch (NO) between 20 and 21. After a while, "DEW POINT" lamp enters the green area and indicates air pressure dew point.



Note: During the dryer is running, the fan turns on and off repeatedly. This is normal.

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



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

At the time of manual operation, push "STOP" button((" " mark) on the operation panel. Push the momentary switch (NC) connected between 22 and 23. "RUN" lamp turns off, and the dryer stops running.



Note:

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.

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.

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

An operation signal can be taken between terminal number 20 and 21

Contact capacity :AC125V/DC110V , 2A , 62.5A , 30W

6.3 When safety device turns on and the dryer stops running

6.3.1 Safety device (Refer to P28 Electrical Circuit)

- 1) When a compressor becomes hot or when over current flows, safety device turns on, and the dryer stops running. Moreover, if refrigerant high-pressure pressure rises, a high-pressure pressure switch will work and a drier will stop.
- 2) The control circuit fuse has clung to this machine.
- 3) Setting value list

MARK	MODEL	PARTS LIST	APPLICATIONS	SETTING VALUE	RETURN METHOD
FR01	GX8004	Over load protective devices	Temperature of the compressor upper part & Current	1.6A at100	Automatic return
	GX8006			2.1A at100	
	GX8008			5.8A at100	
	GX8011			5.8A at100	
	GX8015		Compressor current	6.6A at40	Manual reset
	GX8022			9.0A	
	GX8037			12A	
	GX8155			14A	
	GX8175			22A	
FR02	GX8015			6.6A at40	Automatic return
ST01	GX8000 common	Thermostat switch	Liquid injection	100 ON 90 OFF	Automatic return
	GX8155	Thermal switch	Temperature of the compressor upper part	85 ON 115 OFF	
	GX8175	Thermostat switch	Refrigerant circuit	105 ON 115 OFF	
ST02	GX8015	Internal thermostat	Compressor built-in	108 ON 130 OFF	Automatic return
	GX8022			113 ON 135 OFF	
	GX8037	Thermal switch	Temperature of the compressor upper part	85 ON 115 OFF	
SP02	Common	High range pressure switch	Refrigerant circuit	2.75MPaOFF 2.26MPa ON	Automatic return
FU01	Common	Fuse	Electric circuit harness	5A	Exchange

6.3.2 How to reset

- 1) Turn off the power supply. It is in the state of reset now.
- 2) Remove causes that stopped the dryer abnormally.
(Refer to Trouble shooting on pg.23-24.)
- 3) Reset the safety device. (Refer to 6.3.1)
- 4) Turn on the power supply.



CAUTION

- Be sure to turn 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)

7 . Maintenance and check point

7.1 Items of maintenance and check point

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

Checking item	Contents		Checking cycle		
			Daily	Weekly	Monthly
"POWER"lamp	"POWER"lamp is on.				
"RUN"lamp	"RUN"lamp is on.				
Dust filter for condenser	Dust filter is not dirty.				(Cleaning)
Drain discharge	Drain is discharged periodically.				
Dew point temp. display	Before operation	Ambient temp. is displayed			
	Under operation	0 to 15			
Screen for inlet Y-type strainer (only GX8000 series)	Remove the screen for Y-type strainer mounted to the inlet and clean it.				○
Refrigerant compressor	No abnormal noise is generated.				
Fan motor for condenser	No abnormal noise is generated.				
Air leak	No air leaks.				



Neglect of dust filter cleaning will cause machine trouble.

7.2 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	Weekly	When it damages and dirt. When it does not come off.
Screen for Y-type strainer (only GX8000 series)	1	Monthly	When dirt does not come off.
Fan control switch	1	-	8,000 hours (2years)
Fuse	1	Each time	When being cut 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 fan control switch and a fuse as spare parts.

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	×	20,000 hours (6 years)
Fan motor	Note (a)		20,000 hours (6 years)
Electromagnetic switch (For compressor)	Note (b)		20,000 hours (6 years)
Electromagnetic contactor (For compressor)	Note (c)		20,000 hours (6 years)
Relay (For compressor)	Note (d)		20,000 hours (6 years)
Relay (For fan motor)	Note (e)		20,000 hours (6 years)
Electromagnetic switch (For fan motor)	Note (f)		20,000 hours (6 years)
Solenoid valve (For drain discharge)	1		20,000 hours (6 years)
Main body of solenoid valve (For liquid injection)	Note (g)	×	20,000 hours (6 years)
Coil of solenoid valve(For liquid injection)	Note (g)		20,000 hours (6 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

: 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.)

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

Note(a): 1 pc/set (GX8006,8008,8015,8022,8037)

2 pcs/set(GX8004,8155,8175)

Note(b): 1 pc/set (GX8022,8037,8155,8175)

Note(c): 1 pc/set (GX8015)

Note(d): 1 pc/set (GX8004,8006,8008,8011)

Note(e): 1 pc/set (GX8004,8006,8008,8011,8015,8022,8037)

Note(f): 1 pc/set (GX8115,8175)

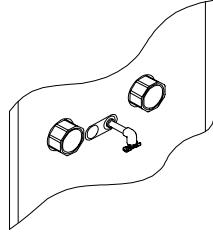
Note(g): 1 pc/set (GX8004,8006,8008,8011,8015,8022,8037)

7.3 Storage (When not using for a long time)

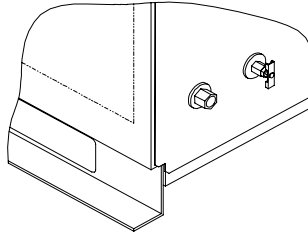
If you do not use the dryer for a long time, do the following.

Turn off the power supply(breaker).

Discharge drain.



GX8000 series



GX8100 series

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

Put sheet, etc. over the dryer. Keep the dryer in a place where environment is the same as the operating environment.

When you run the dryer again, inspect each part of the dryer and run it as instructed in this manual.

8 . 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.

9 . Troubleshooting

Condition		Causes	Measures
“POWER” 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 is pushed. (Manual mode)	“RUN” lamp does not turn on.	"START" switch was failed.	Replace the "START" switch
		Safety device is on.	Reset the safety device.
		Safety device is bad.	Reset the safety device.
		Power supply voltage is abnormal.	Adjust the voltage.
		Remote stop terminal is open.	The remote stop terminal is short-circuited.
	“RUN” lamp turns on.	Electromagnetic switch is bad.	Replace the electromagnetic switch.
The dryer does not start when “START” switch is pushed. (Remote control)	“RUN” lamp does not turn on.	“REMOTE START” switch is bad.	Replace “REMOTE START” switch.
		Safety device is on.	Reset the safety device.
		Safety device is bad.	Reset the safety device.
		Power supply voltage is abnormal.	Adjust the voltage.
		Remote stop terminal opens.	Connect NC switch to Remote stop terminal.
	“RUN” lamp turns on	Electromagnetic switch is bad.	Replace the electromagnetic switch.
Although operation is carried out	Although direction of "dew point meter" points out the green, water comes from a secondary side.	Solenoid valve for drain discharge is bad.	Replace the solenoid valve for drain discharge.
		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 (1.5 × rated flow rate or less)
		Drain piping is too long or too small.	Replace bore size 7mm or more and length 2m or less, and the discharge end released to air.
	Direction of "dew point meter" does not point out the green, and water comes from a secondary side.	Load over <ul style="list-style-type: none"> Ambient temperature is high. Inlet temperature is high. Inlet pressure is low. Treated flow rate is large. 	Lower the load to the level. <ul style="list-style-type: none"> Lower the ambient temperature. Lower the inlet temperature. Raise the inlet temperature. 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.)

Condition		Causes	Measures
Pressure drop before/after the dryer is too large.		Stop valve before/after the dryer is closed.	Fully open the valve.
		Screen for Y-type strainer at the dryer inlet is closed.	Clean the screen. (GX8000)
		Treated flow rate is too large.	Make 1.3 or less times of rated flow
		Congelation in the drayer. • 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.	All the lamps turn off, and the dryer stops.	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. • 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. • Solenoid valve for liquid injection is bad. (GX8000)	Unusual cause is removed and reset. • Lower the ambient temperature. • Lower the inlet temperature. • Raise the inlet temperature. • Lower the treated flow rate. • Clean the dust filter. • Replace the fan motor. • Replace the valve for liquid injection. (GX8000)
		Remote stop was pushed during manual operation.	Restart the manual operation.
		Manual stop was pushed during the remote operation.	Restart the remote operation.

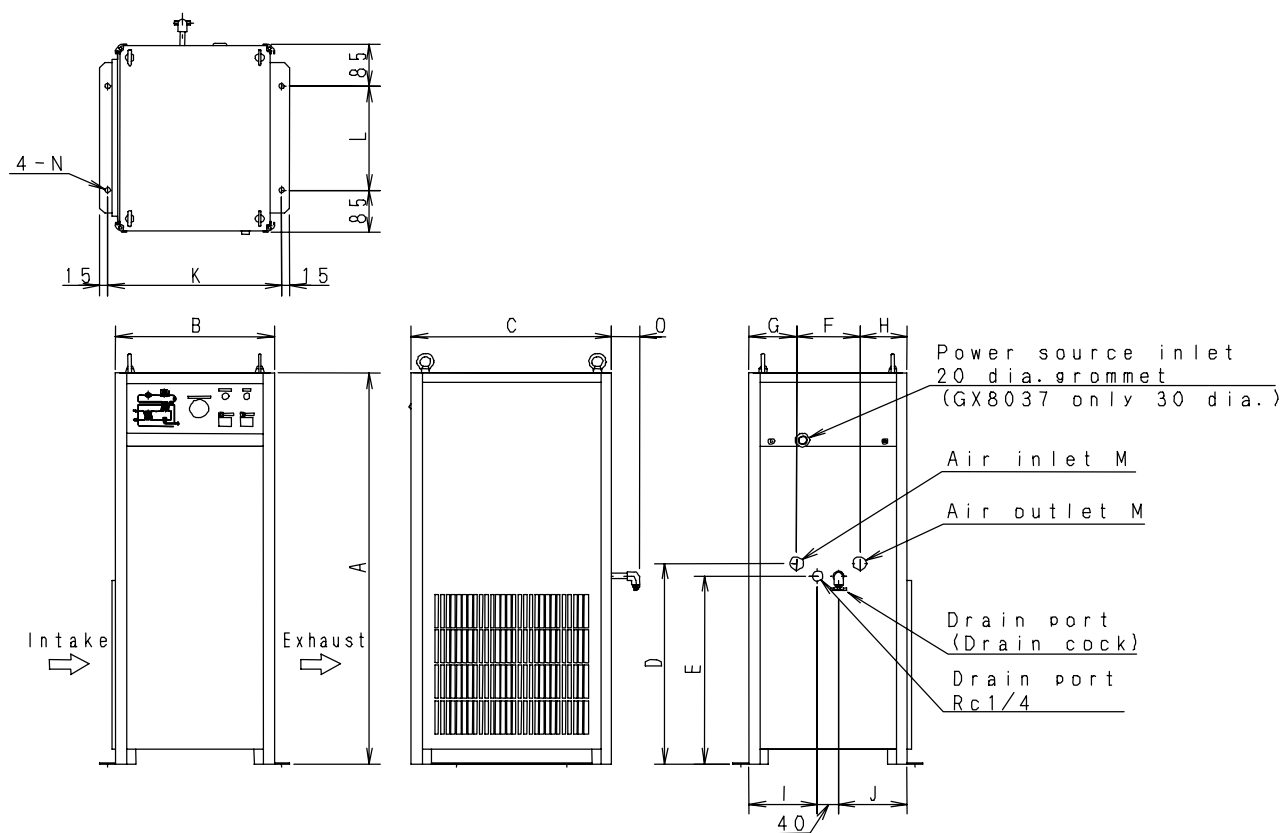
10. Specifications

Model number				GX8004	GX8006	GX8008	GX8011	GX8015	GX8022	GX8037	GX8155	GX8175
Use range	Media			Compressed air								
	Inlet air temperature			5 ~ 80								
	Inlet air pressure	MPa		0.2 ~ 1.6							0.2 ~ 1.0	
	Ambient temperature			2 ~ 43								
Rated	Treated flow rate	m³/minANR	50Hz	0.5	0.74	1.2	1.65	2.8	3.9	6.6	9.6	10.5
			60Hz	0.55	0.81	1.3	1.82	3.1	4.3	7.3	-	-
	Inlet air temperature			55								
	Inlet air pressure	MPa		0.7								
Ambient temperature			32									
Functionality	Outlet air pressure dew point			10								
	Pressure drop (50Hz)	MPa		0.023	0.013	0.023	0.013	0.012	0.017	0.024	0.0057	0.0066
Electrical specifications	Power consumption	kW	50Hz	0.23	0.27	0.48	0.57	1.1	1.4	2.3	2.7	3.7
			60Hz	0.25	0.33	0.51	0.63	1.3	1.7	2.9	-	-
	Power supply & operating current	Single phase AC220V	50Hz	1.3	1.4	2.9	3.2	-	-	-	-	-
			60Hz	1.4	1.7	2.4	2.9	-	-	-	-	-
		Single phase AC230V	50Hz	1.3	1.3	2.7	3.0	-	-	-	-	-
			60Hz	1.3	1.6	2.3	2.7	-	-	-	-	-
		Single phase AC240V	50Hz	1.2	1.3	2.6	2.9	-	-	-	-	-
			60Hz	1.2	1.5	2.2	2.6	-	-	-	-	-
		Three phase AC380V	50Hz	-	-	-	-	2.3	3.0	4.5	5.7	7.2
			60Hz	-	-	-	-	2.5	3.3	5.4	-	-
		Three phase AC400V	50Hz	-	-	-	-	2.2	2.9	4.2	5.4	6.9
			60Hz	-	-	-	-	2.4	3.1	5.1	-	-
		Three phase AC415V	50Hz	-	-	-	-	2.1	2.8	4.1	5.2	6.6
			60Hz	-	-	-	-	2.3	3.0	4.9	-	-
	Power supply & starting current	Single phase AC220V	50Hz	3.9	5.9	14.3	14.3	-	-	-	-	-
			60Hz	3.7	5.5	12.4	12.4	-	-	-	-	-
		Single phase AC230V	50Hz	3.7	5.7	13.7	13.7	-	-	-	-	-
			60Hz	3.5	5.3	11.9	11.9	-	-	-	-	-
		Single phase AC240V	50Hz	3.5	5.4	13.1	13.1	-	-	-	-	-
			60Hz	3.4	5.1	11.4	11.4	-	-	-	-	-
		Three phase AC380V	50Hz	-	-	-	-	11.0	15.2	24.9	30.4	55.0
			60Hz	-	-	-	-	10.5	14.6	23.2	-	-
		Three phase AC400V	50Hz	-	-	-	-	10.4	14.4	23.6	28.9	52.2
			60Hz	-	-	-	-	10.0	13.9	22.1	-	-
		Three phase AC415V	50Hz	-	-	-	-	10.1	13.9	22.8	27.8	50.3
			60Hz	-	-	-	-	9.6	13.4	21.3	-	-
Refrigerant				R-22							R-407C	
Exhaust heat		kW		0.59 /0.66	0.83 /0.94	1.3 /1.5	1.8 /2.0	3.2 /3.7	4.4 /5.0	7.4 /8.5	11.2	12.8

Note : Consult with CKD for max. working temperature.

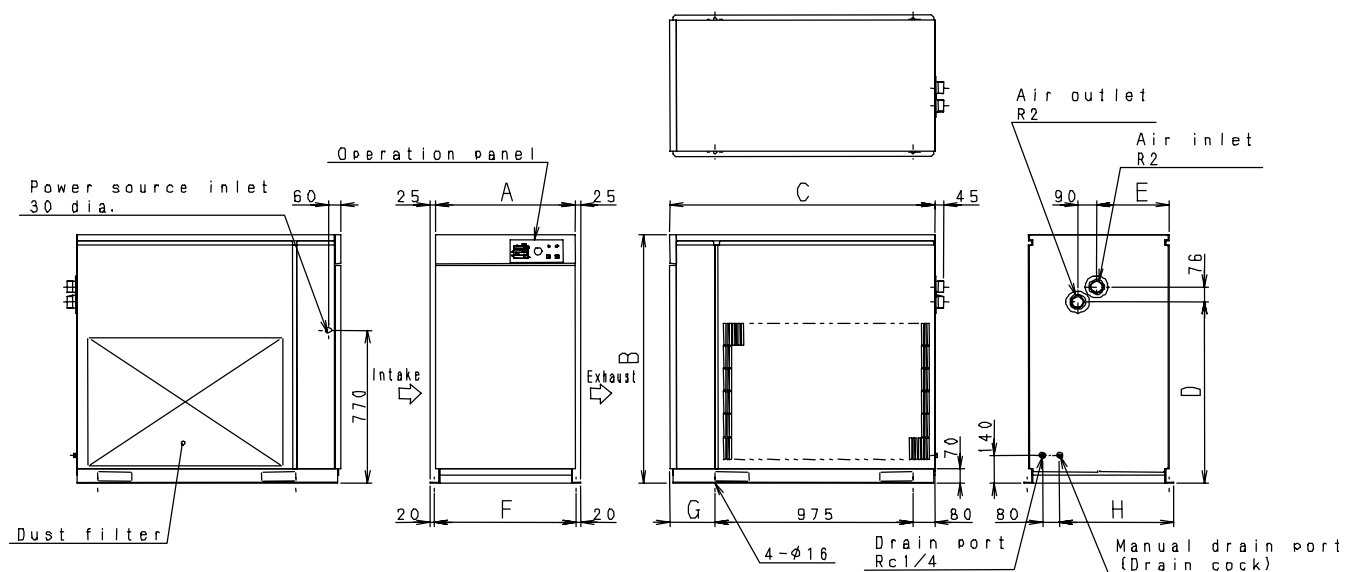
11. Dimensions

11.1 GX8004, GX8006, GX8008, GX8011, GX8015, GX8022, GX8037



Symbol Model	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
GX8004	790	300	380	405	379	120	90	(90)	130	(130)	340	210	Rc3/8	∅10	(54)
GX8006	820	350	430	430	404	140	95	(115)	145	(165)	390	260	Rc1/2	∅10	(54)
GX8008	820	350	430	430	404	140	95	(115)	145	(165)	390	260	Rc3/4	∅10	(54)
GX8011	960	420	450	487	455	190	120	(110)	195	(185)	460	280	Rc3/4	∅10	(54)
GX8015	1040	420	520	514	482	190	120	(110)	195	(185)	460	350	Rc1	∅10	(64)
GX8022	1120	420	610	593	561	190	120	(110)	195	(185)	465	440	Rc1	∅13	(64)
GX8037	1170	480	670	641	609	190	120	(170)	195	(245)	525	500	Rc1 1/2	∅13	(64)

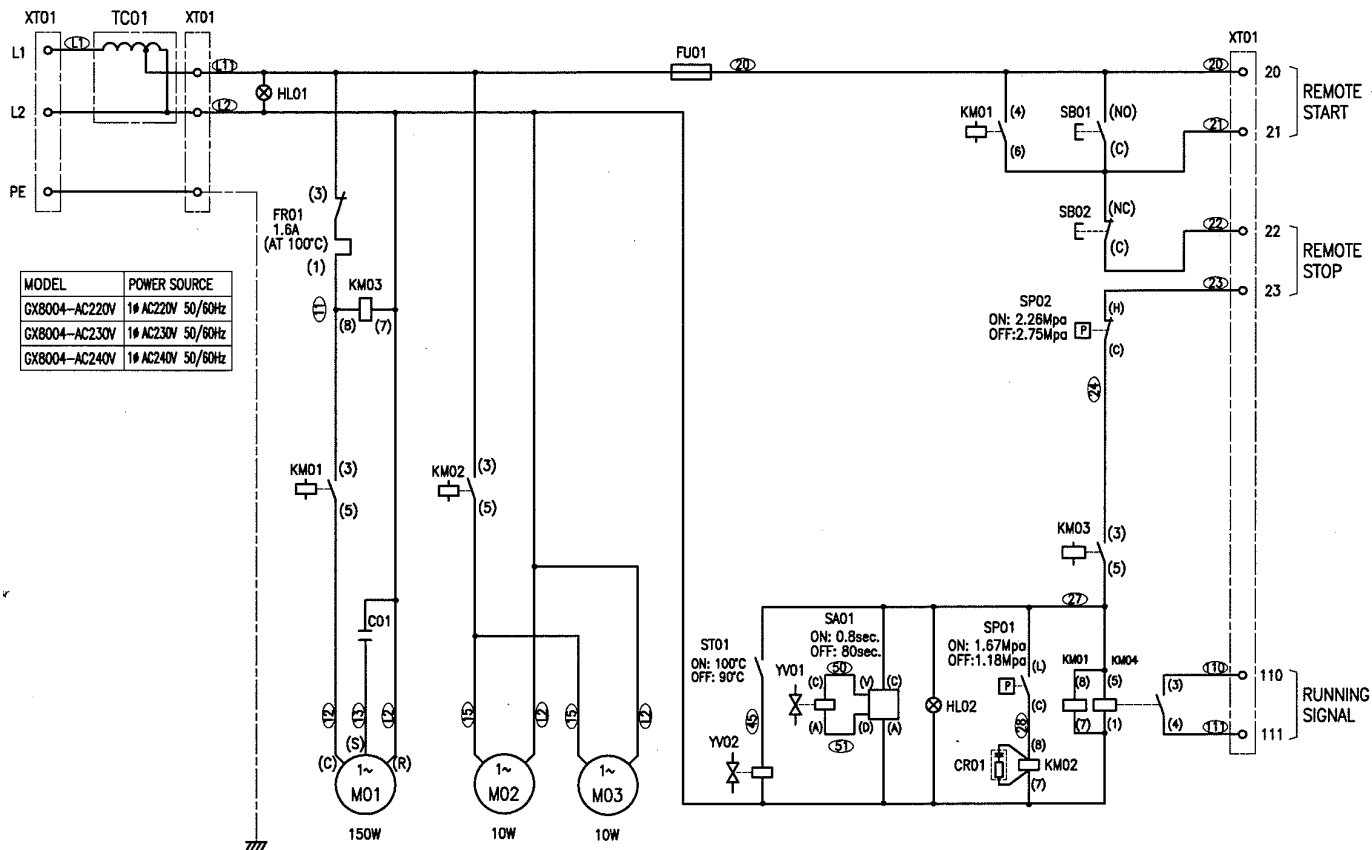
11.2 GX8155, GX8175



Model \ Symbol	A	B	C	D	E	F	G	H
GX8155	590	1200	1150	887	280	600	95	470
GX8175	660	1250	1250	912	340	670	195	540

12. Electrical Circuit

12.1 GX8004

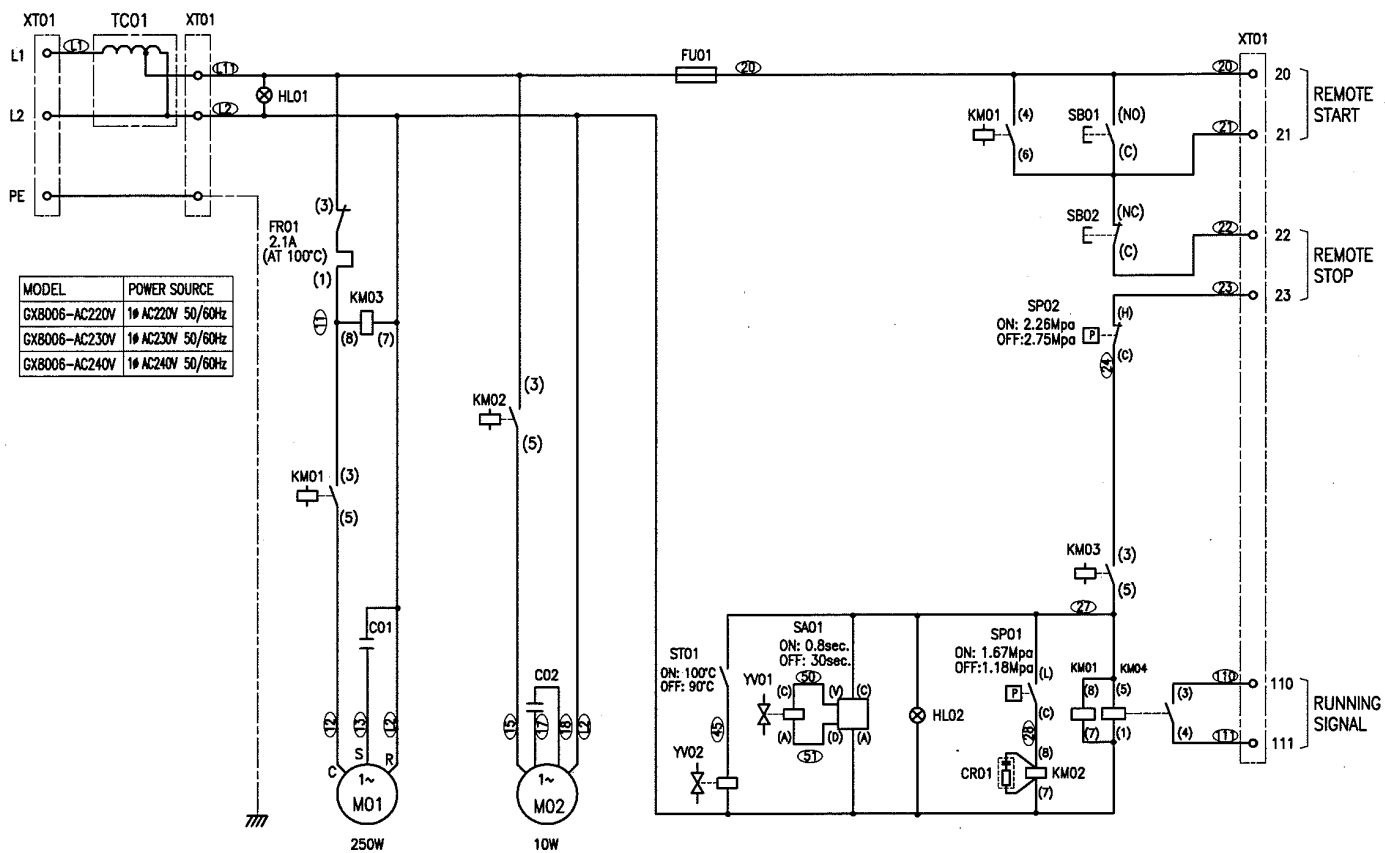


NOTE

1. Please use power supply voltage within $\pm 10\%$ of rated voltage.
2. The remote start switch (between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
3. As for the remote stop terminal (between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
4. An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 3A(AC240V)
5. Please use alternating current AC200~240V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KM04	RELAY	1
KM01, 02, 03	RELAY	3
FR01	OVER LOAD PROTECTOR	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C01	STARTING CAPACITOR	1
M02,03	FAN MOTOR	2
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.2 GX8006

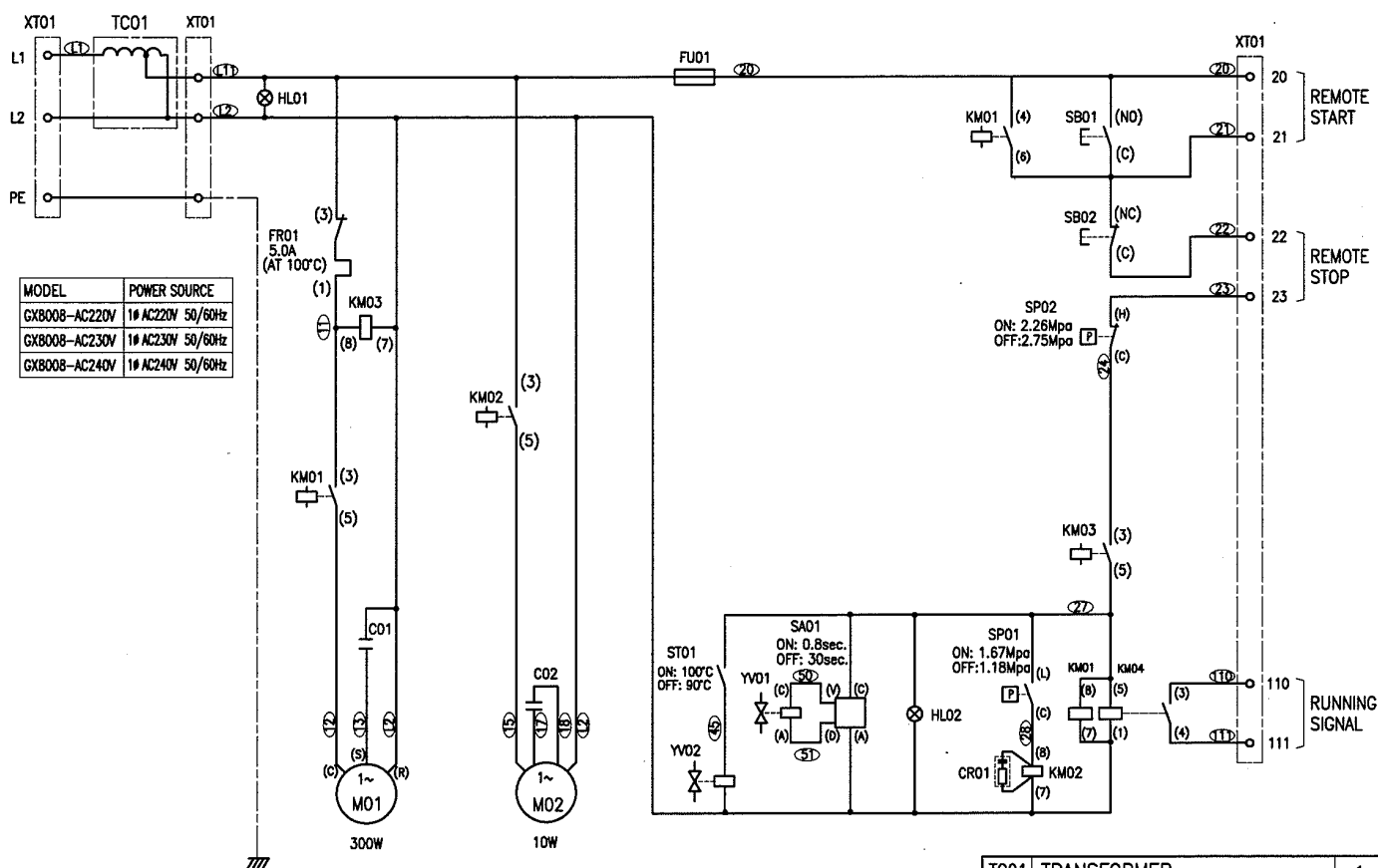


NOTE

1. Please use power supply voltage within $\pm 10\%$ of rated voltage.
2. The remote start switch(between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
3. As for the remote stop terminal(between 22 and 23) the jumper line is connected at the time of the shipment.
A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
4. An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage singnal.
Contact capacity: 3A(AC240V)
5. Please use alternating current AC200~240V for the point of contact at an operation singal
(between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HLO2	INDICATION LAMP	1
HLO1	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KM04	RELAY	1
KM01, 02, 03	RELAY	3
FR01	OVER LOAD PROTECTOR	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C02	RUN CAPACITOR	1
C01	STARTING CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.3 GX8008

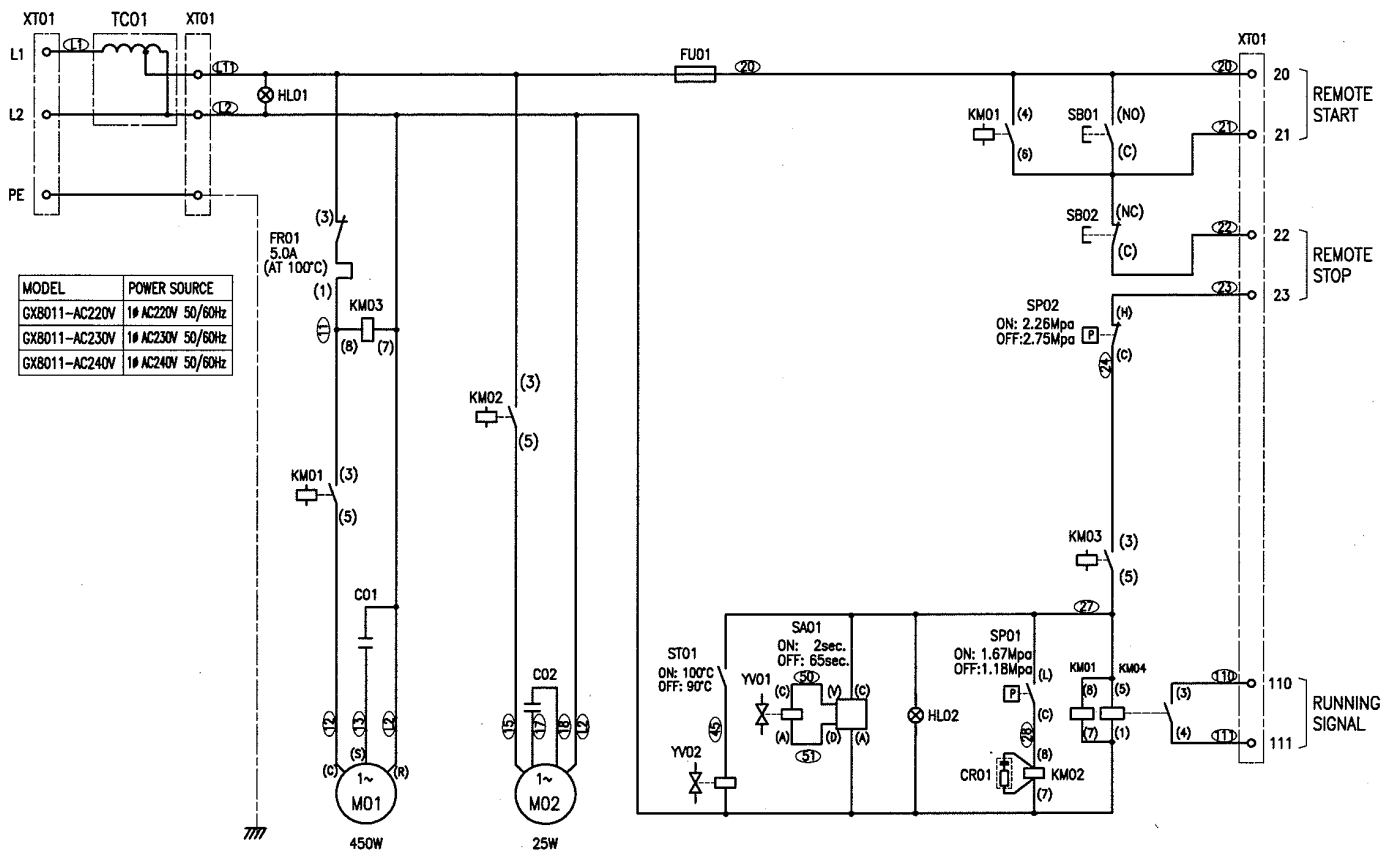


NOTE

1. Please use power supply voltage within $\pm 10\%$ of rated voltage.
2. The remote start switch(between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
3. As for the remote stop terminal(between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
4. An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 3A(AC240V)
5. Please use alternating current AC200~240V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KM04	RELAY	1
KM01, 02, 03	RELAY	3
FR01	OVER LOAD PROTECTOR	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C02	RUN CAPACITOR	1
C01	STARTING CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.4 GX8011

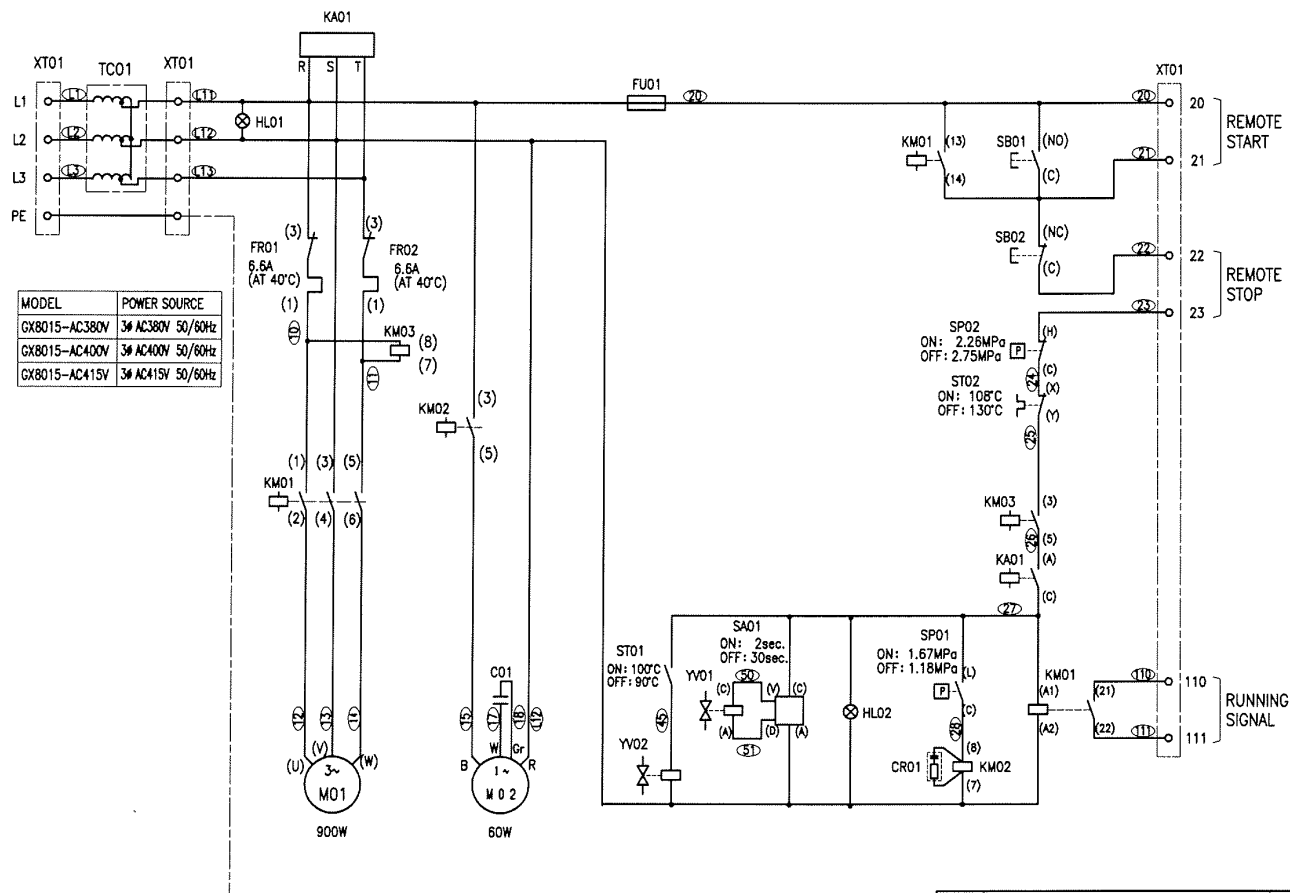


NOTE

1. Please use power supply voltage within $\pm 10\%$ of rated voltage.
2. The remote start switch (between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
3. As for the remote stop terminal (between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
4. An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 3A(AC240V)
5. Please use alternating current AC200~240V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KM04	RELAY	1
KM01, 02, 03	RELAY	3
FR01	OVER LOAD PROTECTOR	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C02	RUN CAPACITOR	1
C01	STARTING CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.5 GX8015

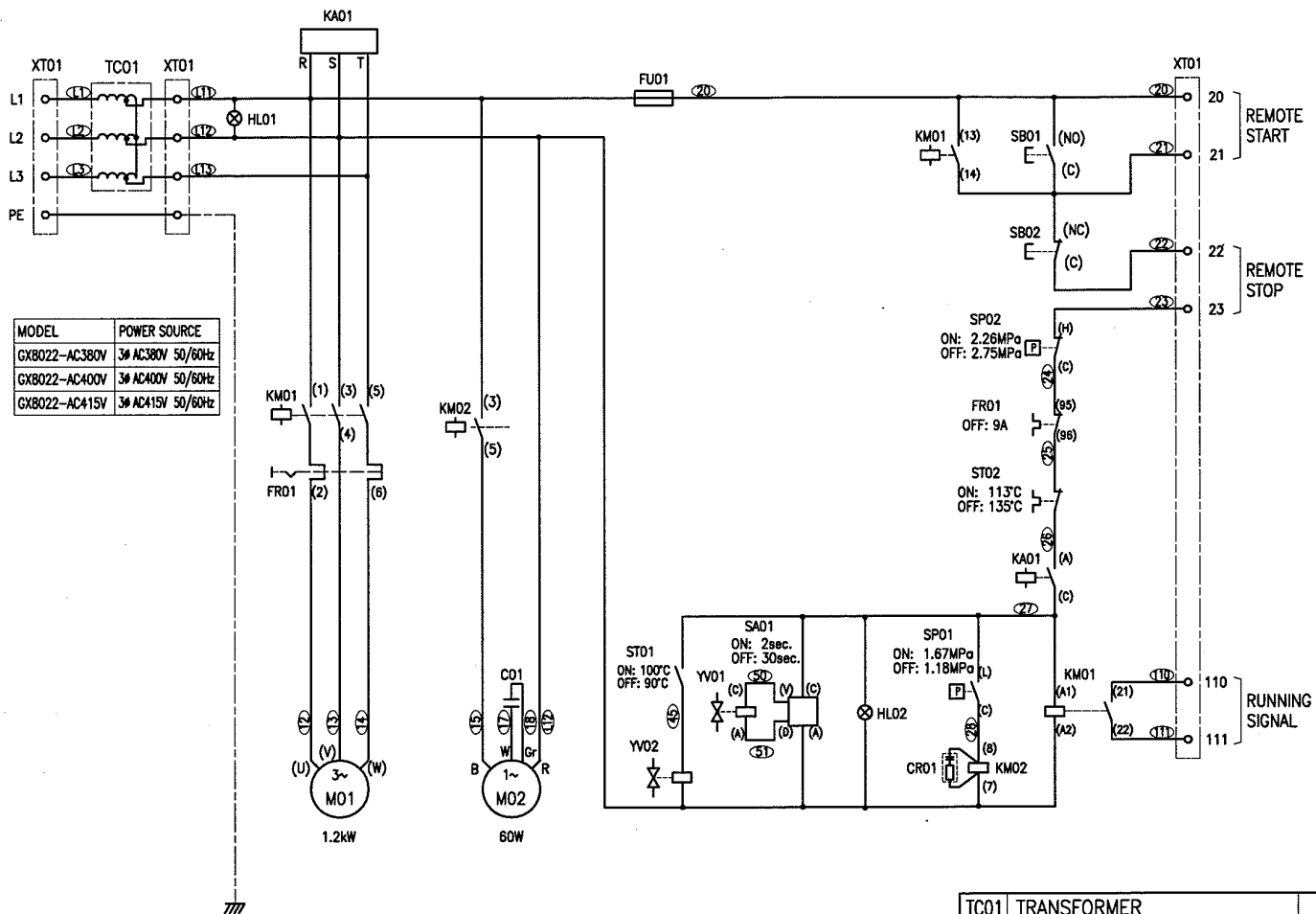


NOTE

- Please use power supply voltage within $\pm 10\%$ of rated voltage.
- The remote start switch (between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
- As for the remote stop terminal (between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
- An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 2A(AC415V)
- Please use alternating current AC380~415V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST02	INTERNAL THERMOSTAT	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KA01	PHASE PROTECTOR	1
KM02,03	RELAY	2
FR01,02	OVER LOAD PROTECTOR	2
KM01	ELECTROMAGNETIC CONTACTOR	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C01	RUN CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.6 GX8022

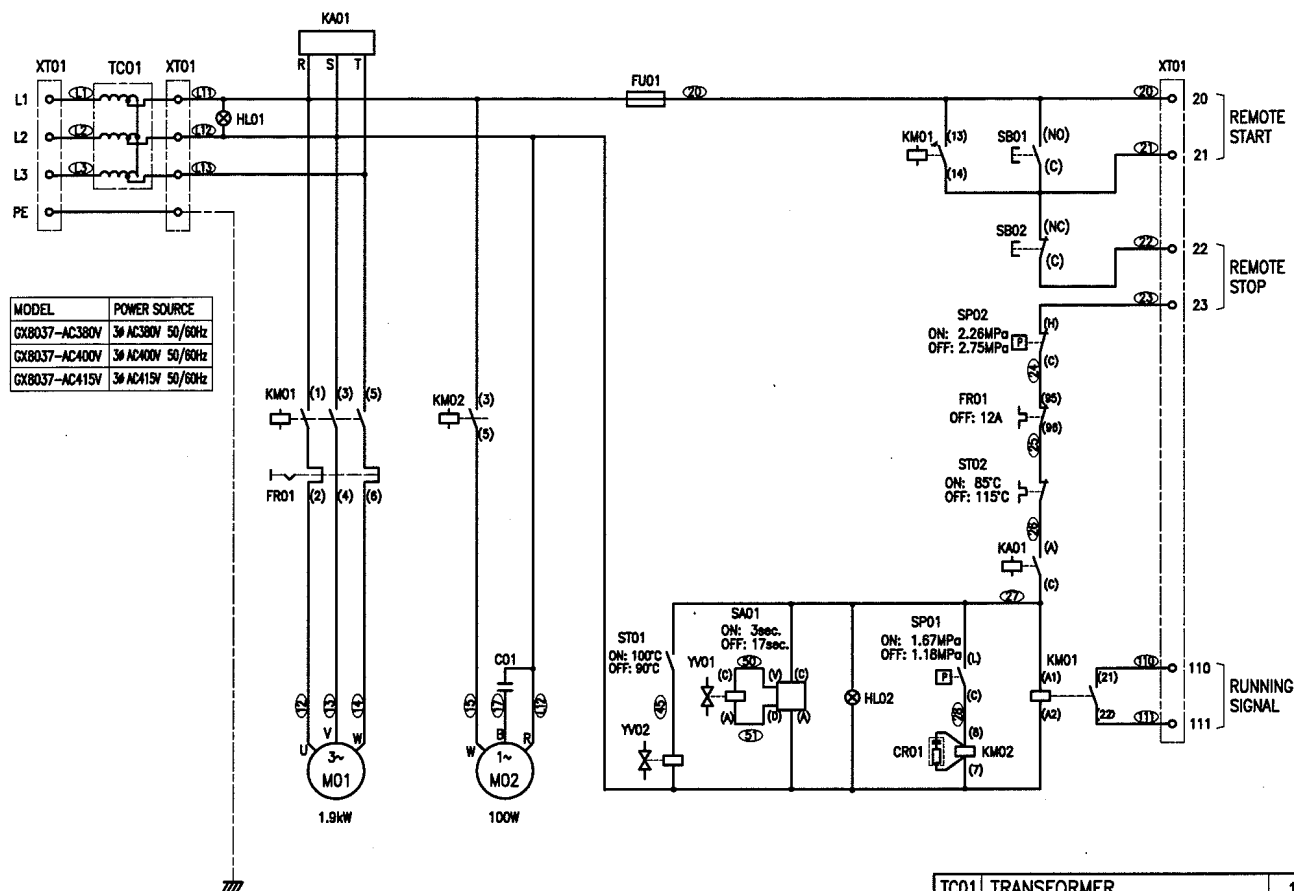


NOTE

- Please use power supply voltage within $\pm 10\%$ of rated voltage.
- The remote start switch(between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
- As for the remote stop terminal(between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
- An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 2A(AC415V)
- Please use alternating current AC380~415V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST02	INTERNAL THERMOSTAT	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KA01	PHASE PROTECTOR	1
KM02	RELAY	1
FR01	ELECTROMAGNETIC SWITCH	1
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C01	RUN CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.7 GX8037

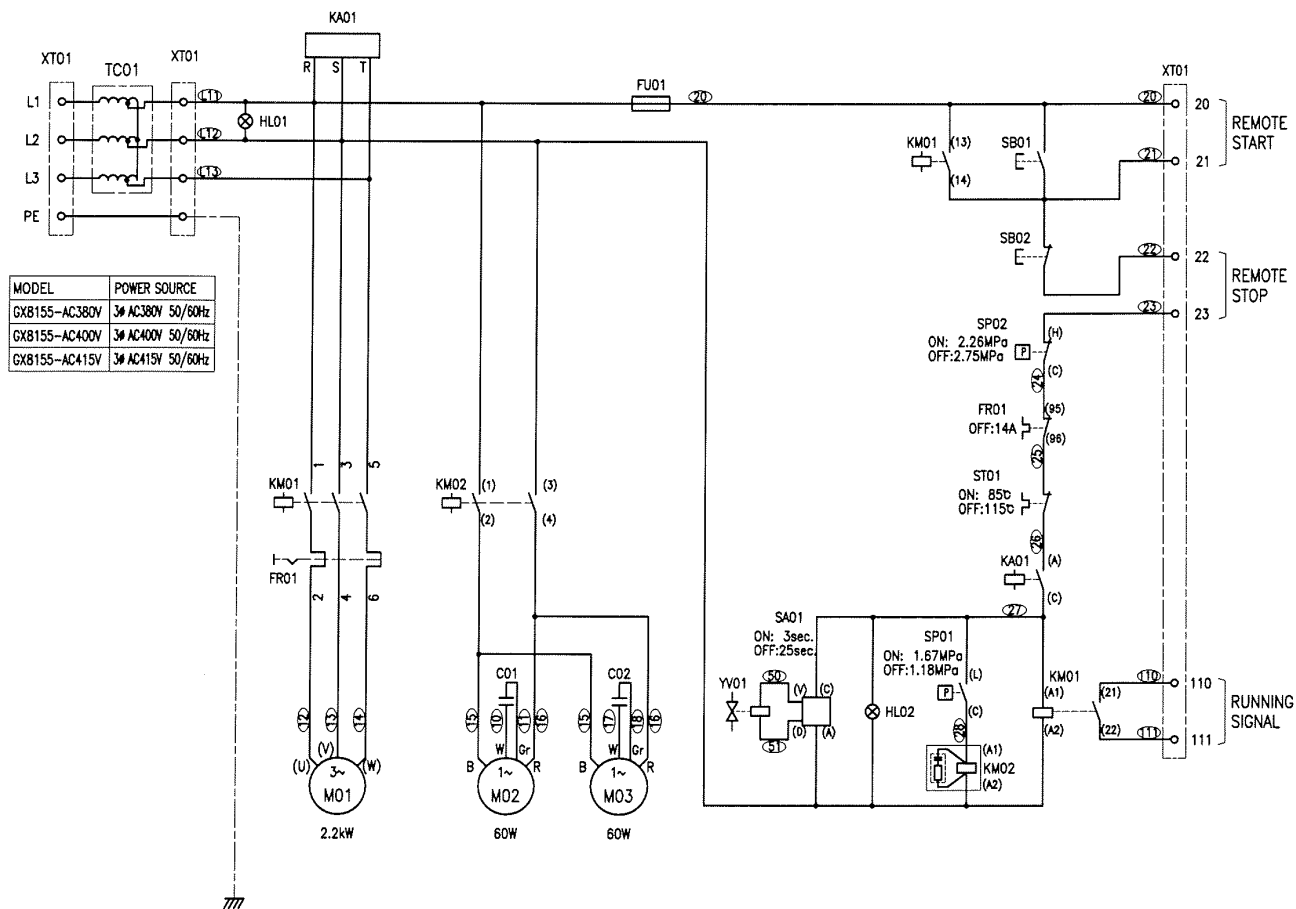


NOTE

1. Please use power supply voltage within $\pm 10\%$ of rated voltage.
2. The remote start switch(between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
3. As for the remote stop terminal(between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
4. An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 2A(AC415V)
5. Please use alternating current AC380~415V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH(STOP)	1
SB01	PUSH BUTTON SWITCH(RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST02	THERMAL SWITCH	1
ST01	THERMO SWITCH	1
CR01	SURGE KILLER	1
KA01	PHASE PROTECTOR	1
KM02	RELAY	1
FR01	ELECTROMAGNETIC SWITCH	1
KM01		
YV02	SOLENOID VALVE	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C01	RUN CAPACITOR	1
M02	FAN MOTOR	1
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.8 GX8155

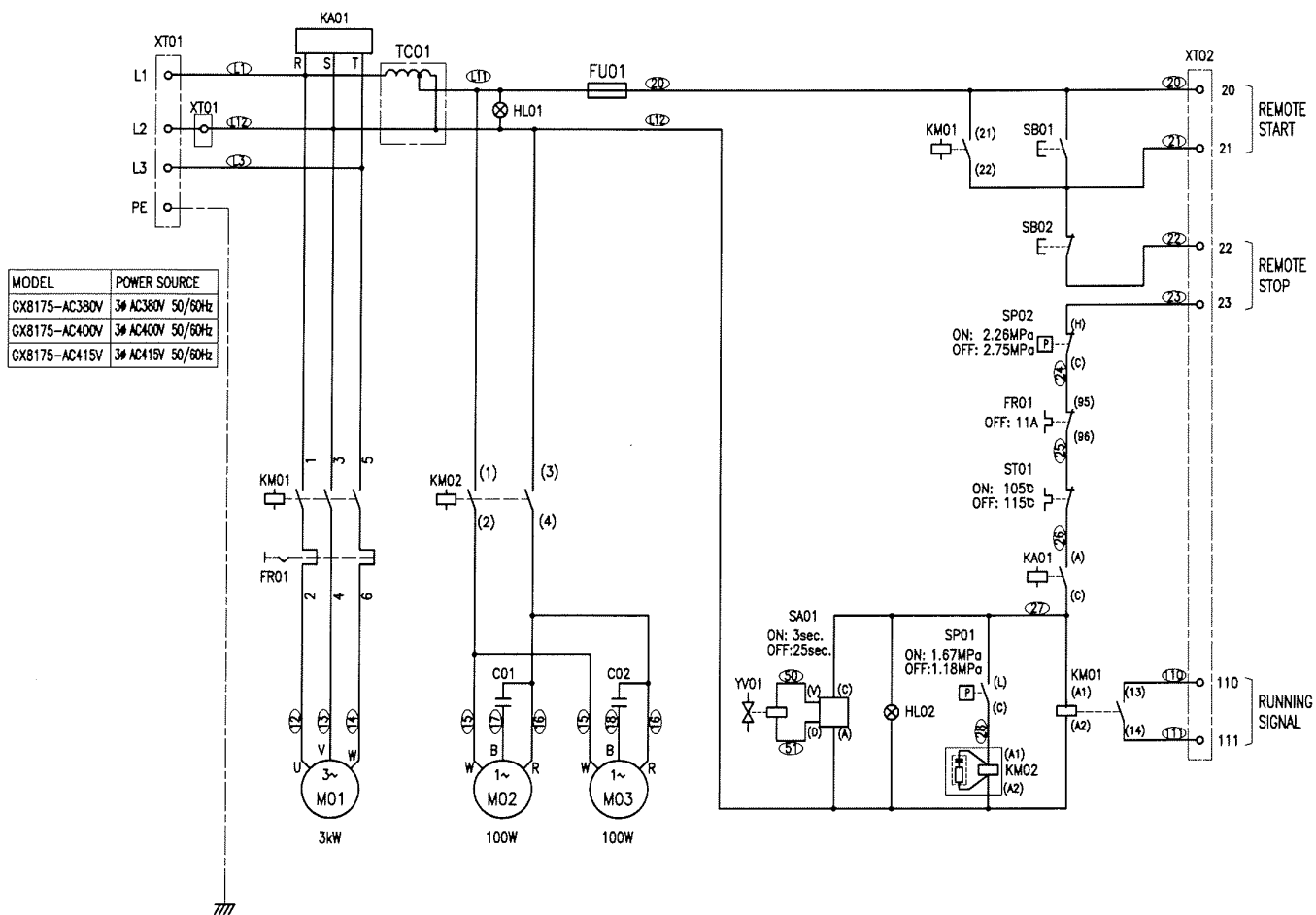


NOTE

- Please use power supply voltage within $\pm 10\%$ of rated voltage.
- The remote start switch(between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
- As for the remote stop terminal(between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
- An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage singnal. Contact capacity: 2A(AC415V)
- Please use alternating current AC380~415V for the point of contact at an operation singal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH (STOP)	1
SB01	PUSH BUTTON SWITCH (RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMAL SWITCH	1
KA01	PHASE PROTECTOR	1
KM02	ELECTROMAGNETIC CONTACTOR	1
FR01	ELECTROMAGNETIC SWITCH	1
KM01	ELECTROMAGNETIC SWITCH	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
C01,02	RUN CAPACITOR	2
M02,03	FAN MOTOR	2
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.9 GX8175



NOTE

- Please use power supply voltage within $\pm 10\%$ of rated voltage.
- The remote start switch (between 20 and 21) should use momentary contact of type "a". (0.5sec. or more)
- As for the remote stop terminal (between 22 and 23) the jumper line is connected at the time of the shipment. A remote stop switch should use momentary contact of type "b". (0.5sec. or more)
- An operation signal (between 110 and 111) is contacting at time of operation by the non-voltage signal. Contact capacity: 2A(AC415V)
- Please use alternating current AC380~415V for the point of contact at an operation signal (between 110 and 111), and don't use small current of direct current for it.

TC01	TRANSFORMER	1
XT02	TERMINAL BLOCK	1
XT01	TERMINAL BLOCK	1
HL02	INDICATION LAMP	1
HL01	INDICATION LAMP	1
SB02	PUSH BUTTON SWITCH (STOP)	1
SB01	PUSH BUTTON SWITCH (RUN)	1
SP02	PRESSURE SWITCH	1
SP01	FAN CONTROL SWITCH	1
FU01	FUSE	1
ST01	THERMO SWITCH	1
KM02	ELECTROMAGNETIC CONTACTOR	1
FR01	ELECTROMAGNETIC SWITCH	1
KM01	ELECTROMAGNETIC SWITCH	1
YV01	SOLENOID VALVE	1
SA01	DRAIN TIMER UNIT	1
KA01	PHASE PROTECTOR	1
C01,02	RUN CAPACITOR	2
M02,03	FAN MOTOR	2
M01	COMPRESSOR	1
No	PARTS	Q'TY

12.10 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 IMPLIED 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.

CKD shall not be liable for any trouble, malfunction and damages of CKD products caused, directly or indirectly, by disaster or any other causes not attributable to CKD's responsibility. CKD also shall not be responsible for any trouble, malfunction and damages of CKD Products caused by the lack or malfunction of safety circuit or structure or function that should be commonly equipped in the Buyer's equipment in which the CKD products were used.

CKD MAINTAINS A POLICY OF ONGOING PRODUCT DEVELOPMENT AND IMPROVEMENT. WE THEREFORE RESERVE THE RIGHT TO CHANGE DIMENSIONS, SPECIFICATIONS AND DESIGN WITHOUT NOTICE.

C K D corporation

〒485 - 8551 250, OUJI 2-CHOME, KOMAKI, AICHI 485-8551 JAPAN

P H O N E 0568 - 77 - 1111

Purchased air drier

Model name	
Manufacture number	
Purchase date	
Beginning of using date	

Sales shop name

T E L _____ Charge _____

CKD株式会社

北海道

札幌営業所

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〒984-0015 仙台市若林区卸町 2-2-1 (パックス 2・1 階)
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郡山営業所

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北関東

さいたま営業所

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茨城営業所

〒300-0847 茨城県土浦市卸町 1-1-1 (関鉄つくばビル 4 階 C)
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宇都宮営業所

〒321-0953 栃木県宇都宮市東宿郷 3-1-7 (NBF 宇都宮ビル 3 階)
TEL (028) 638-5770 FAX (028) 638-5790

太田営業所

〒373-0813 群馬県太田市千ヶ島町 946-2 (大機総合ビル 1 階)
TEL (0276) 45-8935 FAX (0276) 46-5628

南関東

東京営業所

〒105-0013 東京都港区浜松 1-31-1 (文化放送メディアプラス 4 階)
TEL (03) 5402-3628 FAX (03) 5402-0122

立川営業所

〒190-0022 東京都立川市錦町 3-2-30 (朝日生命立川錦町ビル 3 階)
TEL (042) 527-3773 FAX (042) 527-3782

千葉営業所

〒274-0825 千葉県船橋市前原西 2-12-5 (朝日生命津田沼ビル 5 階)
TEL (047) 470-5070 FAX (047) 493-5190

横浜営業所

〒222-0033 横浜市中区新横浜 2-17-19 (日経第 15 ビル 4 階)
TEL (045) 475-3471 FAX (045) 475-3470

厚木営業所

〒243-0035 神奈川県厚木市愛甲 1212-3
TEL (046) 226-5201 FAX (046) 226-5208

甲府営業所

〒409-3867 山梨県中巨摩郡昭和町清水新居 1509
TEL (055) 224-5256 FAX (055) 224-3540

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〒105-0013 東京都港区浜松 1-31-1 (文化放送メディアプラス 4 階)
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北陸・信越

長岡営業所

〒940-0088 新潟県長岡市柏町 1-4-33 (高野不動産ビル 2 階)
TEL (0258) 33-5446 FAX (0258) 33-5381

上田営業所

〒386-0034 長野県上田市大字中之条 323-6 (NF ビル 103 号)
TEL (0268) 24-2392 FAX (0268) 24-2394

松本営業所

〒399-0033 長野県松本市大字笹賀 5945
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富山営業所

〒939-8071 富山県富山市上袋 100-35
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金沢営業所

〒920-0025 石川県金沢市駅西本町 3-16-8
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東海

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〒485-8551 愛知県小牧市応時 2-250
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豊田営業所

〒473-0912 愛知県豊田市広田町広田 103
TEL (0565) 54-4771 FAX (0565) 54-4755

静岡営業所

〒422-8035 静岡県静岡市駿河区宮竹 1-3-5
TEL (054) 237-4424 FAX (054) 237-1945

浜松営業所

〒435-0016 浜松市東区和田町 438
TEL (053) 463-3021 FAX (053) 463-4910

四日市営業所

〒512-1303 三重県四日市市小牧町字高山 2800
TEL (059) 339-2140 FAX (059) 339-2144

名古屋支店

〒485-8551 愛知県小牧市応時 2-250
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〒550-0001 大阪市西区土佐堀 1-3-20
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(損保ジャパン守口ビル 6 階)
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堺営業所

〒591-8021 大阪府堺市新金岡町 5-5-6 (泉マンション 1 階)
TEL (072) 253-0071 FAX (072) 253-0054

滋賀営業所

〒524-0033 滋賀県守山市浮気町字中ノ町 300-21 (第 2 小島ビル 4 階)
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京都営業所

〒612-8414 京都市伏見区竹田段川原町 35-3
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奈良営業所

〒639-1123 奈良県大和郡山南市井町 460-15 (ウォッシュ・レジナ 1 階)
TEL (0743) 57-6831 FAX (0743) 57-6821

神戸営業所

〒673-0016 兵庫県明石市松の内 2-6-8 (西明石スポットビル 3 階)
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山口営業所

〒747-0801 山口県防府市駅南町 6-25
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四国

高松営業所

〒760-0055 香川県高松市観光通 2-2-15 (ダイヤビル)
TEL (087) 834-9640 FAX (087) 834-9633

松山営業所

〒790-0053 愛媛県松山市竹原 2-1-33 (サンライト竹原 1 階)
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九州

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〒802-0976 北九州市小倉南区南方 5-13-34
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〒812-0013 福岡市博多区博多駅東 1-10-27 (アステア博多ビル 5 階)
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大分営業所

〒871-0015 大分県中津市牛神町 1-11-1
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