

Nortek Global HVAC, LLC

Flex Match Series System-Outdoor Unit

Model:

GXH30(8.8)FMK4DH

GXH36(10.6)FMK4DH

GXH42(12.3)FMK4DH

- Please read this owner's manual carefully before operation and retain it for future reference
- Specifications & illustrations subject to change without notice or incurring obligations
- If you have lost the owner's manual, please visit www.NortekHVAC.com for electronic version.

Preface

The Flex Match System uses cutting-edge manufacturing. Please carefully read this manual before installation and operation. Please note the following:

- (1) This unit measures on the base of UL1995.
- (2) Flex Match System conforms to design standard: ARI 210240-2008.
- (3) Strictly follow all instructions listed in the manual.
- (4) The total capacity of the indoor units which runs at the same time cannot exceed that of the outdoor units; otherwise, the cooling (heating) effect of each indoor unit would be insufficient.

Model	GXH30(8.8)FMK4DH	GXH36(10.6)FMK4DH	GXH42(12.3)FMK4DH
Minimum number of connectable indoor units	2	2	2
Maximum number of connectable indoor units	4	5	5
Minimum capacity of connectable indoor units	18KBtu	18KBtu	18KBtu
Maximum capacity of connectable indoor units	42KBtu	48KBtu	51KBtu

- (5) Switch the main power on 8 hours before starting the unit.

(6) It is a normal for the indoor unit fan to continue to run for 20~70 seconds after the indoor unit receives the “stop” signal so as to make full use of residual heat in the coil.

(7) When the running modes of the indoor and outdoor units conflict, it will be indicated on the display of the wired controller for five seconds and then the indoor unit will stop. In this case, the units will resolve the conflict by harmonizing their running modes. The cooling mode is compatible with the dehumidifying mode. The fan mode can run with any mode. If the supply power fails when the unit is running, three minutes later after power recovery the indoor unit will send the “start” signal to the outdoor unit.

- (8) Cautions for the Debugging and Maintenance Personnel:

When running debugging or maintenance, make sure the heating belt of the compressor has been energized for at least eight hours prior to startup! Once the compressor is started, it must run continuously for at least 30 minutes, otherwise it could be damaged!

User Notice

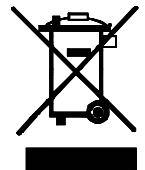
Children and persons with reduced mental, sensory or physical capabilities should not be allowed to operate or maintain this equipment.

Children should not play with the appliance.

If the power cord is damaged, it must be replaced by a new cord that meets the same standards as the original. It must be installed by a qualified professional. Failure to comply could result in damage to the equipment or cause a fire.

This appliance should be installed by expert or trained users.

DISPOSAL: Do not dispose this product as unsorted household waste. Please dispose or recycle responsibly.



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1 Safety Precautions

▲WARNING	WARNING NOTICE: Failure to comply with warning notice could result in property damage, serious personal injury or death.
▲CAUTION	CAUTION NOTICE: Failure to comply with caution notice could result in property damage or personal injury.
NOTICE	NOTICE: Failure to comply with notice could result in property damage.

▲ WARNING	
1)	Instructions for installation and use of this product are provided by the manufacturer and accompany each unit. The instruction of installation, maintenance and operating and safety instructions should be kept for future reference.
2)	Installation must be performed in accordance with the requirements of NEC and CEC by authorized personnel only.
3)	Before installation, please check if the power supply is in accordance with the requirements specified on the nameplate. And also take care of the power safety.
4)	Make sure the unit can be grounded properly and securely as to avoid electric shock. Please do not connect the ground wire to gas pipe, water pipe, lightning rod or telephone line.
5)	Be sure to use the approved accessories and parts to prevent the water leakage, electric shock or fire.
6)	If refrigerant leakage occurs during installation, please ventilate immediately. Toxic gas will result if the refrigerant gas meets flame.
7)	Wire size of power cord should be sufficiently sized. The damaged power cord and connection wire should be replaced by approved cable.
8)	After connecting the power cord, please secure the electric box cover properly in order to avoid accident.
9)	Never fail to comply with the nitrogen charge requirements. Charge with nitrogen when welding pipes.
10)	Never short-circuit or cancel the pressure switch to prevent unit damage.
11)	Connect the wired controller before turning on power; otherwise wired controller may be damaged.
12)	Before using the unit, please check if the piping and wiring are correct to avoid water leakage, refrigerant leakage, electric shock, or fire.
13)	Do not insert fingers or objects into air outlet/inlet grille.
14)	(23) If you use gas heater or petroleum heater in the same room, please open the door or window to maintain good air ventilation.
15)	Never start up or shut off the air conditioner by plugging or unplugging the power cord.
16)	Do not turn off the unit after it runs for at least five minutes; otherwise the compressor oil return system will be damaged.
17)	Do not allow children operate this unit.
18)	Do not operate this unit with wet hands.
19)	Turn off the unit or cut off the power supply before cleaning the unit, otherwise electric shock or injury may occur.
20)	Never spray or flush water towards unit, otherwise malfunction or electric shock may occur.
21)	Do not expose the unit to the wet or corrosive environment.
22)	Turn power on to the unit 8 hours before startup. Do not turn off power if unit will be turned off for a short period of time such as overnight. If power is turned off, it will need to be turned back on 8 hours before startup again, for the compressor to warm up..

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23) Volatile liquid, such as paint thinner or gasoline will damage the unit appearance. Only use soft cloth with a little mild detergent to clean the outer casing of unit.
24) Under cooling mode, please don't set the room temperature too low and keep the temperature difference between indoor and outdoor unit within 5 °C(9 °F)
25) If anything abnormal conditions occur (such as burning smell), please power off the unit and cut off the main power supply. Contact qualified service technician immediately. If unit continues to operate abnormally, it may be damaged and lead to electric shock or fire.
26) User is not allowed to repair the unit. Faulty service may cause electric shock or fire. Please contact qualified service center for help.

Manufacturer is not responsible of personal injury or equipment damage caused by improper installation or commission, unnecessary service and failure to follow the rules and instructions listed in this manual.

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2 Product Introduction

The Flex Match System uses inverter compressor technology. According to change displacement of compressor, stepless capacity regulation within a range of 15%~120% can be realized. Multiple product combinations can be selected with a capacity range from 30KBtu to 42KBtu.

2.1 Parts List

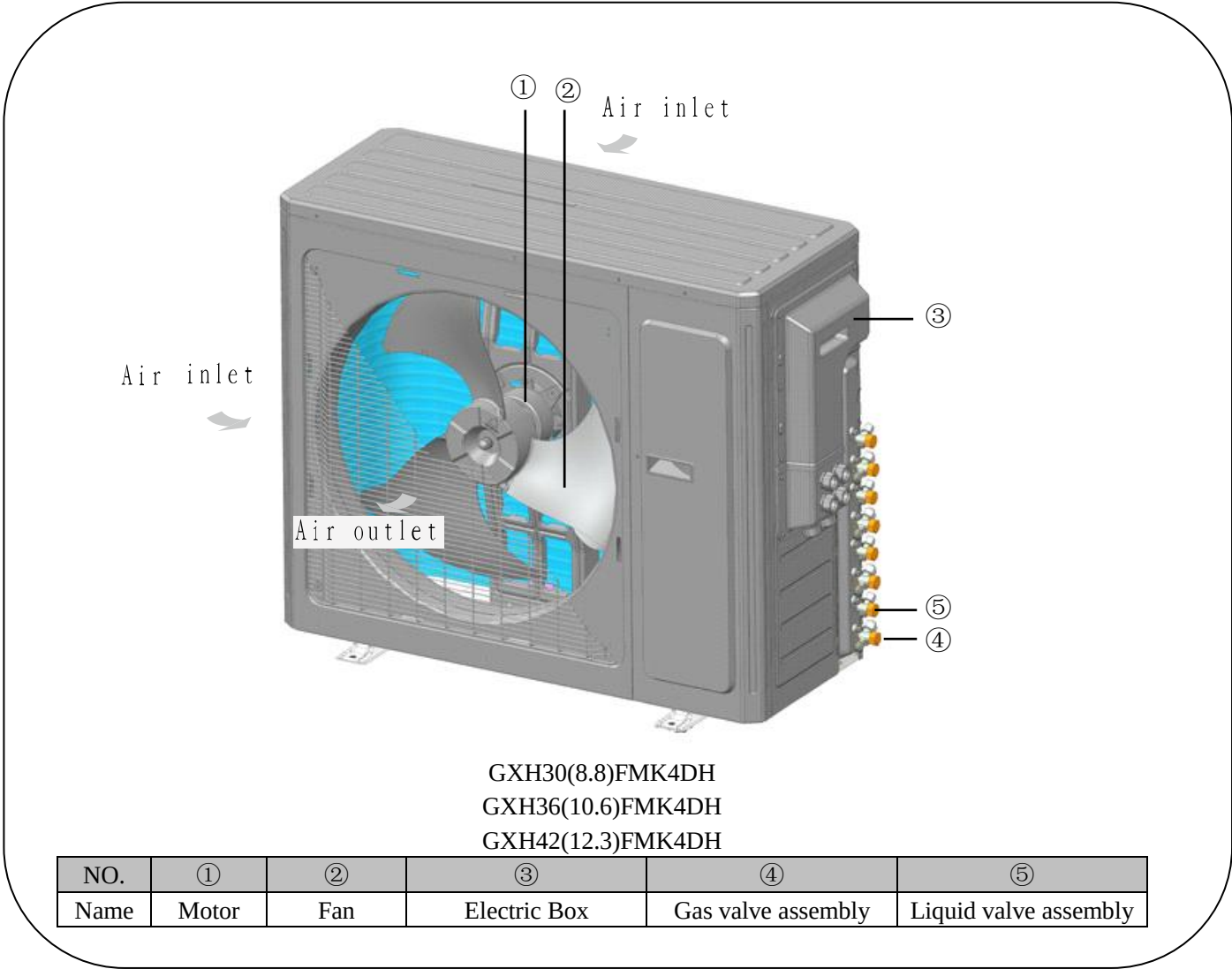


Fig1

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2.2 Combinations of outdoor and indoor units

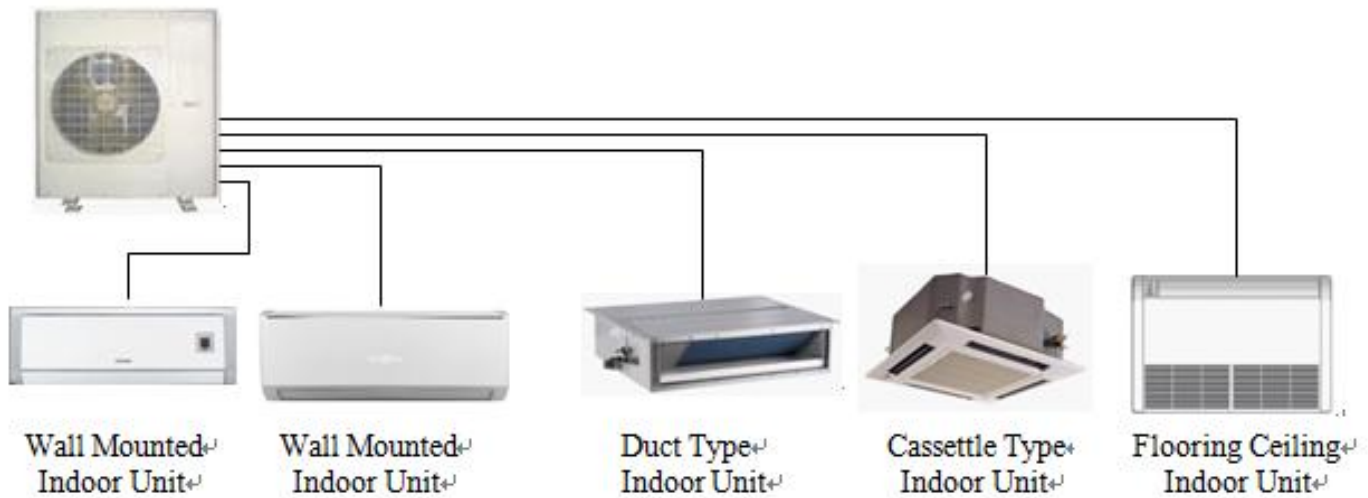


Fig 2

See Fig.2 for Combinations for Outdoor and Indoor Units. For the free match series air conditioning system, one outdoor unit is able to drive up to five indoor units which can be cassette type, duct type, wall-mounted or floor ceiling type. The outdoor unit will run as long as any one indoor unit receives the running command, and all indoor units stop once the outdoor unit is turned off.

Table 1 Energy Level and Capacity Code of the Indoor

Indoor unit		Model	Capacity Code	Outdoor unit
Wall mounted	Lomo	GHH09(2.6)LUK4DH	09	GXH30(8.8)FMK4DH; GXH36(10.6)FMK4DH; GXH42(12.3)FMK4DH
		GHH12(3.5)LUK4DH	12	
		GHH18(5.3)LUK4DH	18	
		GHH24(7.0)LUK4DH	24	
Flooring ceiling		GFH09(2.6)FMK4DH	09	
		GFH12(3.5)FMK4DH	12	
		GFH18(5.3)FMK4DH	18	
		GFH24(7.0)FMK4DH	24	
Duct type		GDH09(2.6)FMK4DH	09	
		GDH12(3.5)FMK4DH	12	
		GDH18(5.3)FMK4DH	18	
		GDH21(6.2)FMK4DH	21	
		GDH24(7.0)FMK4DH	24	
Cassette type		GKH12(3.5)FMK4DH	12	
		GKH18(5.3)FMK4DH	18	
		GKH24(7.0)FMK4DH	24	
Console		GCH09(2.6)FMK4DH	09	
		GCH12(3.5)FMK4DH	12	
		GCH18(5.3)FMK4DH	18	

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2.3 Rated working condition

Table 2

	Indoor side state		Outdoor side state	
	Dry bulb temp. °F	Wet bulb temp. °F	Dry bulb temp. °F	Wet bulb temp. °F
Rating cooling	80.06	66.92	95	75.02
Rating Heating	69.98	60.08	47	43.00

NOTICE

- 1) The following listed cooling /heating capacity and sound is tested before shipment.
- 2) The parameters below are tested under rated working condition. If there is any change to them, please refer to the nameplate.
- 3) The parameters of heating capacity of indoor unit for heat pump excluded any auxiliary electric heating power.
- 4) The performance parameters below are tested according to standard ANSI/AHRI 1230-2010.

2.4 The range of production working temperature

Table 3

Cooling Working range	Outdoor temperature 0~118°F
Heating Working range	Outdoor temperature -4~86°F

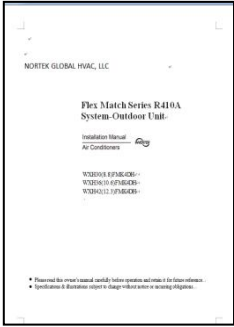
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3 Preparation before Installation

3.1 Standard parts

Please use the following standard parts supplied by GREE.

Table 4

Pars of Outdoor Unit				
Number	name	picture	Quantity	Remark
1	Owner's manual		1	
2	Tube connector subassy		8	

3.2 Selecting installation site

⚠ WARNING	
1)	(1) Check the support structure to verify that it has sufficient load-carrying capacity to support the weight of the unit, and it can be securely mounted.
2)	Never expose the unit to direct sunlight or rainfall. The unit should be protected from dust, strong wind and earthquake..
3)	Try to keep the unit away from combustible, inflammable, corrosive or exhaust gas.
4)	Leave clearance space around unit for service and maintenance.
5)	Keep the indoor and outdoor units as close as possible to each other to reduce pipe length and bends.
6)	Never allow children to play on or near the unit.

When the outdoor unit is surrounded by walls, leave appropriate clearances as shown in Fig. 3.

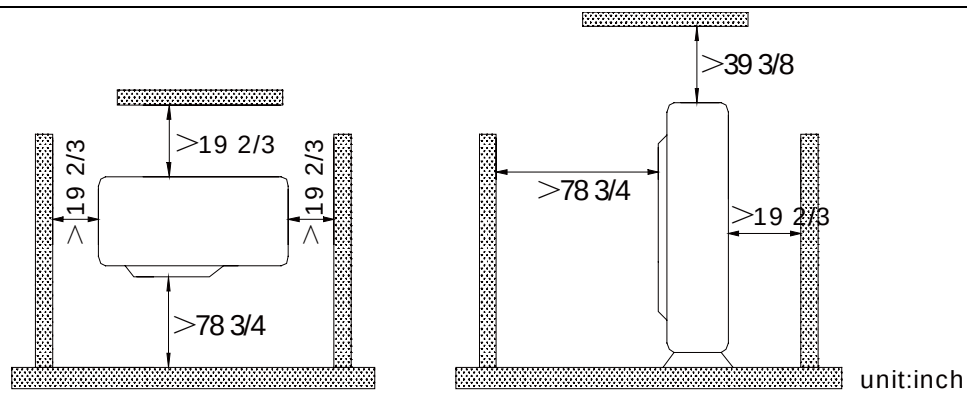


Fig 3

3.3 Piping Connection

The maximum pipe length is shown in the following table. When the distance between units (piping length) is out of the range listed below, normal run of the unit cannot be guaranteed.

Table 5

Model	Connecting Pipe (inch)		Max. Pipe length(ft)	Max. Height Difference between Indoor Unit and Outdoor Unit (ft)
	Liquid	Gas		
GXH30(8.8)FMK4DH	Φ 1/4	Φ 3/8	225	When the outdoor unit is above, maximum height difference between indoor and outdoor units is up to 50ft; When the indoor unit is above, maximum height difference between indoor and outdoor units is up to 50ft;
GXH36(10.6)FMK4DH	Φ 1/4	Φ 3/8	250	
GXH42(12.3)FMK4DH	Φ 1/4	Φ 3/8	250	

NOTICE

- 1) Use water-proof insulating pipe.
- 2) Wall thickness of pipe: 0.019-0.039 inch; bearing pressure: 3.0MPa
- 3) The longer the connection pipe is, the lower the cooling and heating capacity.

4 Installation Instruction

4.1 Outline and dimension of the outdoor unit

GXH30(8.8)FMK4DH

Outline dimension and Mounting holes

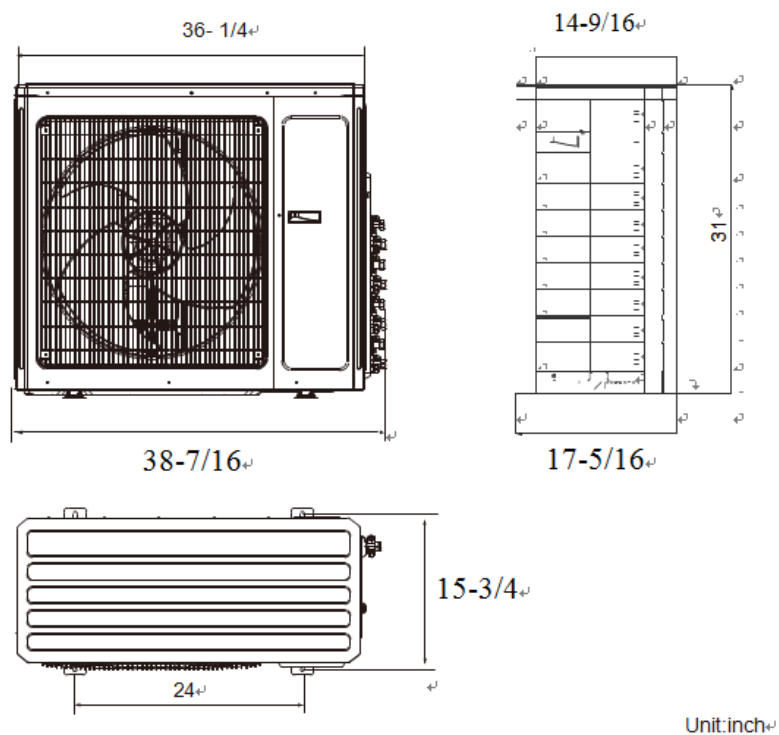


Fig. 4.

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GXH36(10.6)FMK4DH & GXH42(12.3)FMK4DH

Outline dimension and Mounting holes

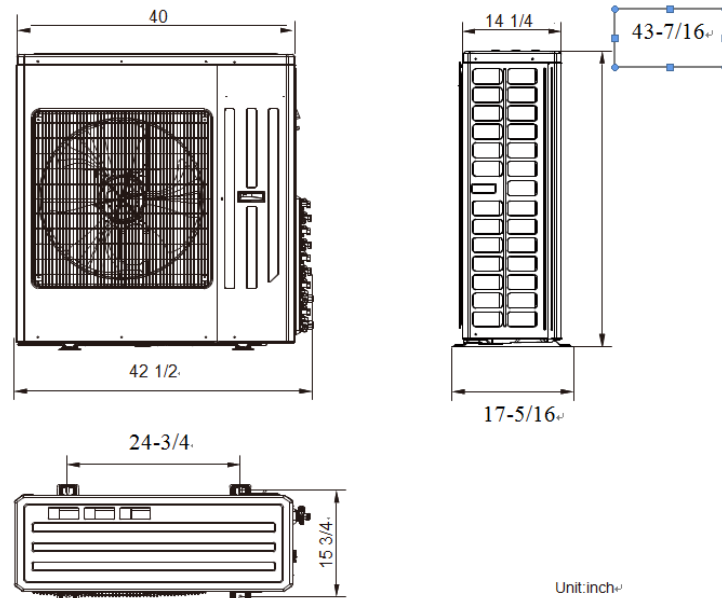


Fig 5

4.2 Installation of the Connection Pipe

Connecting piping for indoor unit and outdoor unit are in manifold mode. (As shown below).

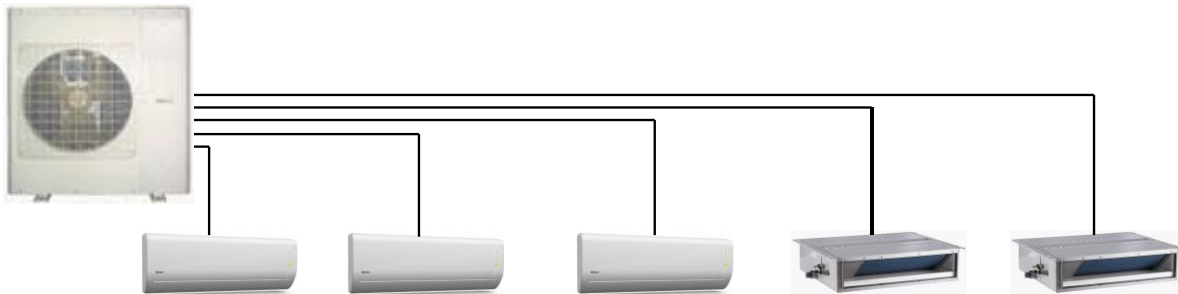


Fig 6

4.2.1 Piping between the Indoor and Outdoor Units

(1) If the liquid and gas stop valves listed as A , B, C, D or E have not been connected to the indoor units, please remove the caps with wrench.

(2) Refer to Fig. 7 for the torque requirements.

(3) Align the flare end of the copper pipe point with the screw and then tighten the screw by hand.

(4) After that, tighten the screw with the torque wrench unit it clicks (as shown in Fig. 7).

(5) Use a pipe tube bender to bend the pipe. If the degree of the pipe bend is too small, it will break.

(6) Wrap the exposed refrigerant pipe and the joints with sponge and then secure them with the plastic tape.

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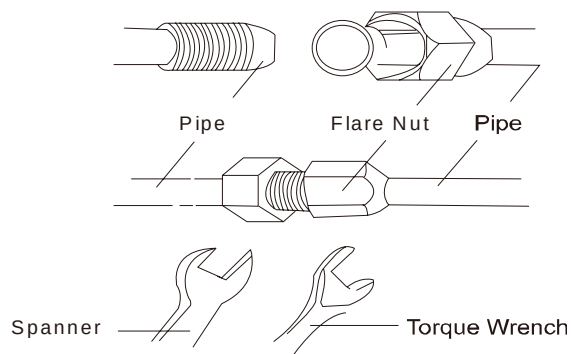


Fig 7

Pipe diameter	Thickness of copper tube	Tightening torque [NOTE: Convert back to N/M]
Φ1/4 inch	≥0.0315 inch	11~22 ft·lbf
Φ3/8 inch	≥0.0315 inch	26~29 ft·lbf
Φ1/2 inch	≥0.0315 inch	33~37 ft·lbf
Φ5/8 inch	≥0.0394 inch	44~48 ft·lbf

CAUTION

- 1) When installing pipe lines to units, never forcefully pull on pipes or connections could be damaged and result in a refrigerant leak.
- 2) The refrigerant pipe should be supported by brackets. The units should not bear the weight of the pipes.
- 3) If the piping connection size of outdoor unit does not match the piping connection size of indoor unit, use the piping connection dimension of indoor unit. Use an adapter joint to connect the pipes.
- 4) For the Flex Match system, each pipe should be labeled to make connections easier and more accurate.

4.2.2 Allowable pipe length and drop height between indoor and outdoor units

If the total refrigerant pipe length (liquid pipe) is smaller than that listed in the table below, no additional refrigerant will be needed.

Table 6

Model	GXH30(8.8)FMK4DH	GXH36(10.6)FMK4DH	GXH42(12.3)FMK4DH
Total Liquid Pipe Length (a+b+c+d+e)	130ft	130ft	130ft

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Allowable Length and Height Fall of the Refrigerant Pipe

Table 7

		Allowable Value		Fitting Pipe
		GXH30(8.8)FMK4DH	GXH36(10.6)FMK4DH, GXH42(12.3)FMK4DH	
Total length (actual length) of fitting pipe		225ft	250ft	$L_1+L_2+\dots+L_M(M \leq 5)$
Length of farthest fitting pipe (ft)		82ft	82ft	$L_X (X=1, 2, 3, 4, 5)$
Height difference between outdoor unit and indoor unit	Outdoor unit at upper	50ft	50ft	H1
	Outdoor unit at lower	50ft	50ft	H3
Height difference between indoor units (m)		25ft	25ft	H2

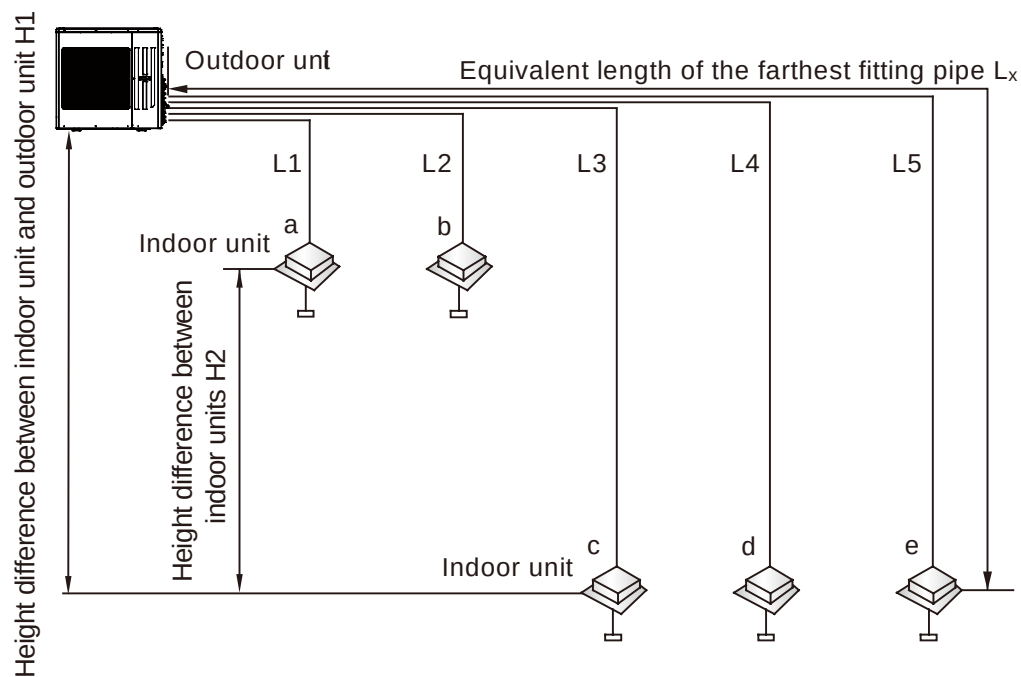


Fig 8

4.2.3 Installation of the Protection Layer for Refrigerant Pipe

(1)The refrigerant pipe should be insulated with the insulating material and plastic tape in order to prevent condensation.

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(2)The joints of the indoor unit should be wrapped with the insulating material with no gap allowed on the joint of the indoor unit, as shown in Fig. 9.

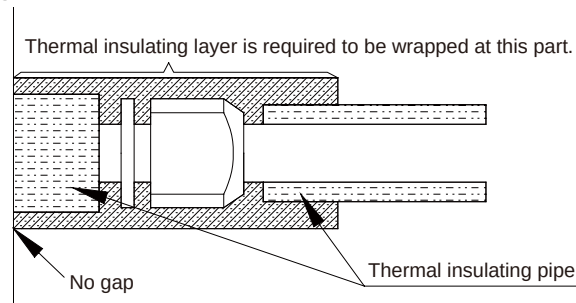


Fig. 9

⚠ CAUTION

After the pipe is protected, never bend it to form a small angle, or it could break.

(3)Wrap the Pipe with Tape:

- a. Bundle the refrigerant pipe and electric wire together with tape, and separate them from the drain pipe to prevent the condensate water overflowing.
- b. Wrap the pipe from the bottom of the outdoor unit to the top of the pipe where it enters the wall. Each layer of tape should overlap the previous layer by $\frac{1}{2}$ the width of the tape.
- c. Attach the wrapped pipe on the wall with clamps.

⚠ CAUTION

- | |
|--|
| 1) Do not wrap the pipe too tightly; otherwise the insulation effect would be weakened. Additionally, make sure the drain hose is separated from the pipe. |
| 2) Seal the hole on the wall to keep out wind and rain. |

4.2.4 Support and protection for pipeline

Support should be made for hanging connection pipe. Distance between each support cannot be over 1m (3 ft).

4.3 Air Purging and Refrigerant Charge

4.3.1 Air purging

- (1) The refrigerant has been charged into the outdoor unit before shipment. Additional refrigerant may need to be charged into the refrigerant pipe during the field installation.
- (2) Check if the liquid valve and the gas valve of the outdoor unit are fully closed.

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(3) As shown in the following figure (Fig. 10), remove the refrigerant inside the indoor unit and refrigerant pipe out with the vacuum pump.

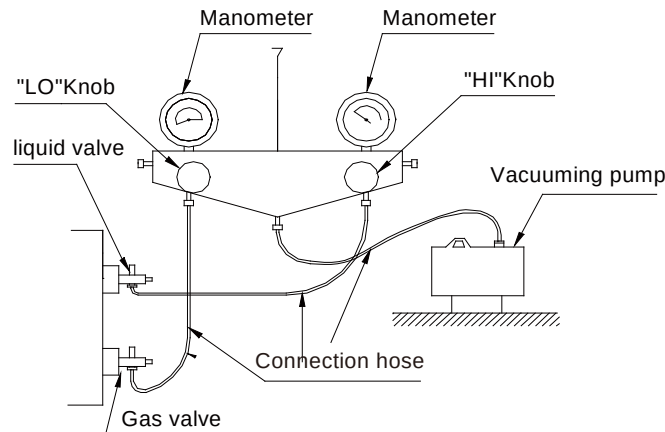


Fig 10

(4) When the compressor is not running, charge the R410A refrigerant into the refrigerant pipe from the liquid valve of the outdoor unit (not from the gas valve).

4.3.2 Additional refrigerant charging

The GXH30, 36 and 42 models are factory charged for a minimum of 130 feet. Should you need to exceed 130 feet, then using 0.2 ounces per foot, calculate your additional refrigerant charge. The maximum lineset length of run cannot exceed 225 feet for a GXH30 model. GXH 36 and 42 models have a maximum length of lineset run of 250 feet. The total amount of additional refrigerant charge cannot exceed 28 total ounces.

4.4 Electric Wiring

4.4.1 Wiring precautions

- (1) The installation must be done in accordance with national wiring regulations.
- (2) Only a power cord with the rated voltage and dedicated circuit for the air conditioning can be used.
- (3) Do not pull on unit by power cord.
- (4) The electric installation should follow local laws, regulations and this manual.
- (5) The diameter of the power cord should be sufficiently sized. If damaged, it should be replaced by appropriate cord.
- (6) The grounding should be secure and the ground wire should be connected by qualified technician. Besides, the circuit breaker must be provided with enough capacity and of both magnetic and thermal tripping functions for short circuit and overload.

Table 8

Models	Power Supply	Circuit Breaker (A)	Recommended Wire Size AWG
GXH30(8.8)FMK4DH	208/230V~60Hz	32	14
GXH36(10.6)FMK4DH	208/230V~60Hz	32	14
GXH42(12.3)FMK4DH	208/230V~60Hz	32	14

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GXH30(8.8)FMK4DH

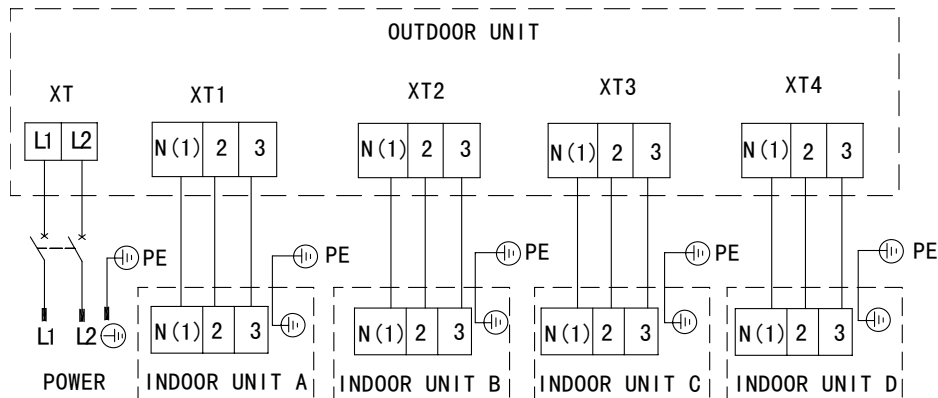


Fig 11

GXH36(10.6)FMK4DH、GXH42(12.3)FMK4DH

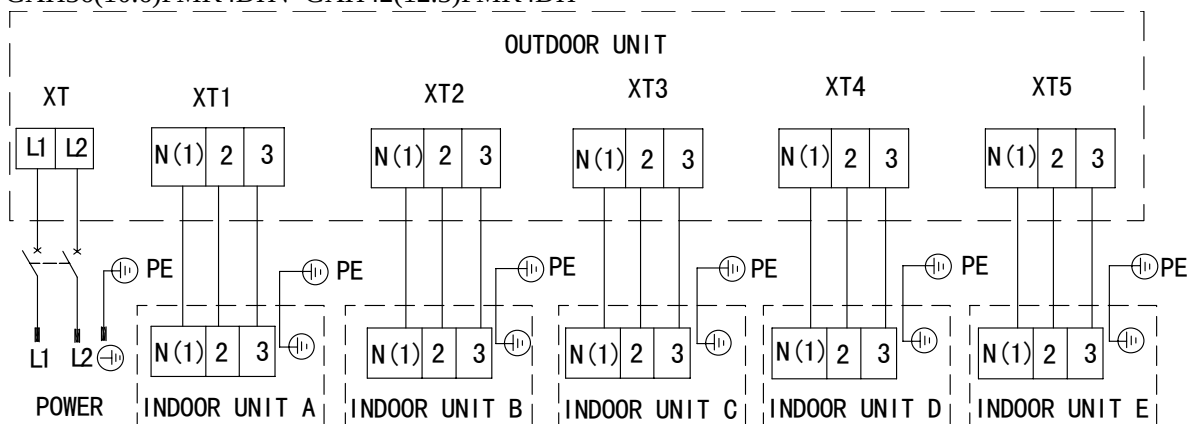


Fig 12

4.4.2 Grounding Requirements

- (1) The air conditioner is classified as a Class I appliance, so grounding must be reliable.
- (2) The yellow-green line of the air conditioner is the ground line and cannot be used for other purpose, cut off or fixed by the tapping screw; otherwise it would cause electric shock.
- (3) A reliable ground terminal should be provided and the ground wire cannot be connected to any of the following.
 - ①Water pipe;; ②Coal gas pipe; ③Sewage pipe; ④Other unreliable objects.

4.4.3 Electrical Cable Connection

⚠ CAUTION	
1)	Faulty connection will result in malfunction. After connection, the wire should not be taut.
2)	Piping and wiring connection should be connected as described in this manual.
3)	The electric installation should be carried out by the technician as instructed by the local laws, regulations and this manual.
4)	The installation location should be dry, without exposure to direct sunlight or strong wind.
5)	A circuit breaker must be installed shut off the main power supply of the entire system..

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4.4.4 Wiring of the Power Cord

- (1). Open the side plate.
- (2). Connect the power cord to the terminals “L1” , “L2” and to the grounding bolt, and then connect the wiring terminals “N(1),2,3” of the indoor unit to those of the outdoor unit accordingly. Use the green bonding screw to connect the grounding cord. The location is showing in the Fig. 13.
- (3). Secure the power cord with wire clips.
- (4). Lead the power cord through the rubber ring.

⚠ CAUTION

If the supply cord is damaged, it must be replaced by qualified person in order to avoid a hazard.

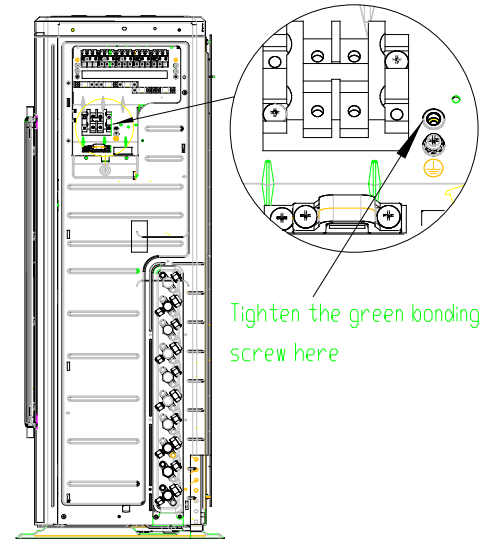


Fig 13

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5 Troubleshooting

WARNING

- 1) In the event of abnormal conditions (like, strong or burning smell), shut off the main power supply immediately and then contact qualified service personnel. Continual use of malfunctioning unit will damage the air conditioning unit and also would cause electric shock or fire hazard.
- 2) User should not repair the air conditioner. Contact professionally skilled personnel as faulty repair would cause electric shock or fire hazard.

Check before Contacting Service Center.

Table 9

Check Items	Conditions Might Happen	Check
Has the unit been securely mounted?	The unit may fall, shake or emit noise.	
Have you done the gas leakage test?	It may cause poor cooling/heating performance.	
Did the unit get proper thermal insulation?	It may cause condensation and dripping.	
Does the condensate drain well?	It may cause dripping.	
Does the voltage match the rated voltage specified on the nameplate?	It may cause malfunction or damage.	
Is the electric wiring and piping connection installed correctly and securely?	It may cause malfunction or damage.	
Has the unit been grounded securely?	It may cause electrical shock.	
Is the power cord properly installed?	It may cause malfunction or damage.	
Are the inlet or outlet blocked?	It may cause poor cooling/heating performance.	

NOTICE!

If the air conditioner still runs abnormally after the above check and handling, please contact the maintenance serviceman at the local appointed service center and also give a description of the error occurred as well as the model number.

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6 Common malfunctions and troubleshooting.

Please check the following before calling for service

Table 10

Conditions		Causes
The unit does not run	The unit will not restart after it has stopped.	The overload protection switch requires a three minute delay.
	As soon as power is turned on.	Standby operation lasts for about 1 minute.
The unit blows out mist	When the cooling operation starts.	If the ambient air is high temperature and humidity, mist will be produced as air is cooled.
The unit generates noise	The unit “clatters” as soon as it starts running.	It is the sound of the initialization of the electronic expansion valve.
	The unit “swishes” during the cooling operation.	It is the sound of refrigerant gas running through the coil.
	The unit “swishes” when it is started or stopped.	It is the sound when the refrigerant gas stops running.
	The unit “swishes” when it is in and after the running.	It is the sound of the draining system.
	The unit “squeaks” will running or after stopping.	It is the sound expansion/contraction of the plastic cover or other part due to temperature change.
The unit blows out dust.	When the unit restarts after it is not used for a long time.	The dust inside the unit is blown out again.
The unit emits odors.	When the unit is running.	Odors absorbed in the unit or filter are recirculated into the room.

NOTICE!

If problem cannot be solved after checking the above items, please contact qualified service technician.

Following circumstance are not malfunction

Table 11

Malfunction		Reason
Indoor unit still runs after set temperature is reached	After indoor unit receive "stop" signal, fan will keep running	Indoor fan motor will keep running 20-70s so as to take advantage of residual cooling or heating effect from coil
Mode conflict	COOL or HEAT mode cannot be operated	When the indoor operating mode conflicts with that of outdoor unit, indoor fault indicator will flash and conflict will be shown on the wired controller after 5 minutes. Indoor unit stops to run. Outdoor operating mode changes to the as the same as that of indoor unit, then the unit will go back to normal.

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7 Troubleshooting

The error code will be displayed on the wired controller and the main board of the outdoor unit
The meaning of each error, as shown in table 12.

Table 12

Name of malfunction	The indicator display		
	Yellow light	Red light	Green light
Compressor runs	Flash once		
Defrost	Flash twice		
Anti-freezing protection	Flash 3 times		
IPM protection	Flash 4 times		
AC over-current protection	Flash 5 times		
Over-burden protection	Flash 6 times		
Compressor exhaust high temperature protection	Flash 7 times		
Compressor overload protection	Flash 8 times		
Power protection	Flash 9 times		
EEPROM reads and write protection	Flash 11 times		
Low PN voltage protection	Flash 12 times		
Over voltage protection for PN	Flash 13 times		
PFC protection	Flash 14 times		
PFC module temperature protection	Flash 15 times		
Low pressure protection	Flash 17 times		
High pressure protection	Flash 18 times		
Limit/decline frequency(electric current)		Flash 1 times	
Frequency limit (exhaust)		Flash 2 times	
Frequency limit (Over-burden)		Flash 3 times	
Outdoor ambient sensor malfunction		Flash 6 times	
Outdoor tube sensor malfunction		Flash 5 times	
Exhaust sensor malfunction		Flash 7 times	
Attain the temperature of switch on		Flash 8 times	
Frequency limit(power)		Flash 13 times	
Outdoor fan malfunction		Flash 14 times	
Frequency limit(PFC module temperature)		Flash 15 times	
PFC module sensor malfunction		Flash 16 times	
Liquid pipe temperature sensor malfunction of A		Flash 17 times	
Gas pipe temperature sensor malfunction of A		Flash 18 times	
Liquid pipe temperature sensor malfunction of B		Flash 19 times	
Gas pipe temperature sensor malfunction of B		Flash 20 times	
Liquid pipe temperature sensor malfunction of C		Flash 21 times	
Gas pipe temperature sensor malfunction of C		Flash 22 times	
Liquid pipe temperature sensor malfunction of D		Flash 23 times	
Gas pipe temperature sensor malfunction of D		Flash 24 times	
Liquid pipe temperature sensor malfunction of E		Flash 25 times	
Gas pipe temperature sensor malfunction of E		Flash 26 times	
Exit of the condenser tube sensor malfunction		Flash 27 times	

Flex match series

Communication is normal			Flash n times (n=indoor unit number)
Communication failure between indoor unit and outdoor unit			Often bright (indoor unit all Communication failure)

8 Maintenance

Regular check, maintenance, and care should be performed by professional personnel, which will prolong the life of the unit.

8.1 Outdoor heat exchanger

Outdoor heat exchanger is required to be cleaned once every two months. Use vacuum cleaner with nylon brush to clean up dust and debris off the surface of heat exchanger. Blow away dust by compressed air if it is available. Never use water to wash the heat exchanger.

8.2 Drain Pipe

Regularly check if the drain pipe is clogged in order to drain condensate smoothly.

8.3 Preseason Checklist

- (1) Check if the inlet/outlet of the indoor/outdoor unit is blocked.
- (2) Check the ground wire.
- (3) Check if battery of remote wireless controller needs replacing.
- (4) Check if the filter screen has been properly set.
- (5) After long period of shutdown, turn on the main power switch 8 hours before re-operating the unit to preheat the compressor crankcase.
- (6) Check if the outdoor unit is still mounted securely. If there is something abnormal, please contact appointed qualified service center.

8.4 Post-Season Checklist

- (1) Cut off main power supply to the unit.
- (2) Clean filter screen and indoor and outdoor units.
- (3) Clean the dust and debris on the indoor and outdoor units.
- (4) In the event of rusting, use the anti-rust paint to stop spreading of rust.

8.5 Parts Replacement

Purchase parts from authorized service center or dealer.

NOTICE!

During airtight and leakage test, never mix oxygen, ethane, and other dangerous gas into refrigeration circuit. It is best to use nitrogen for leak testing.

9 After-sales Service

In case the air-conditioning unit you bought has any quality problem or you have any inquiry, please contact the installer or authorized distributor.

Warranty claims should meet the following requirements:

- (1) Installation and startup of the unit should be performed by professional personnel.
- (2) Only approved accessories are used on the machine.
- (3) All the instructions listed in this manual have been followed.
- (4) Warranty will be void if any of the above circumstances.

**Specifications & illustrations subject to change without notice
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