Service Manual

Multi Variable Air Conditioners

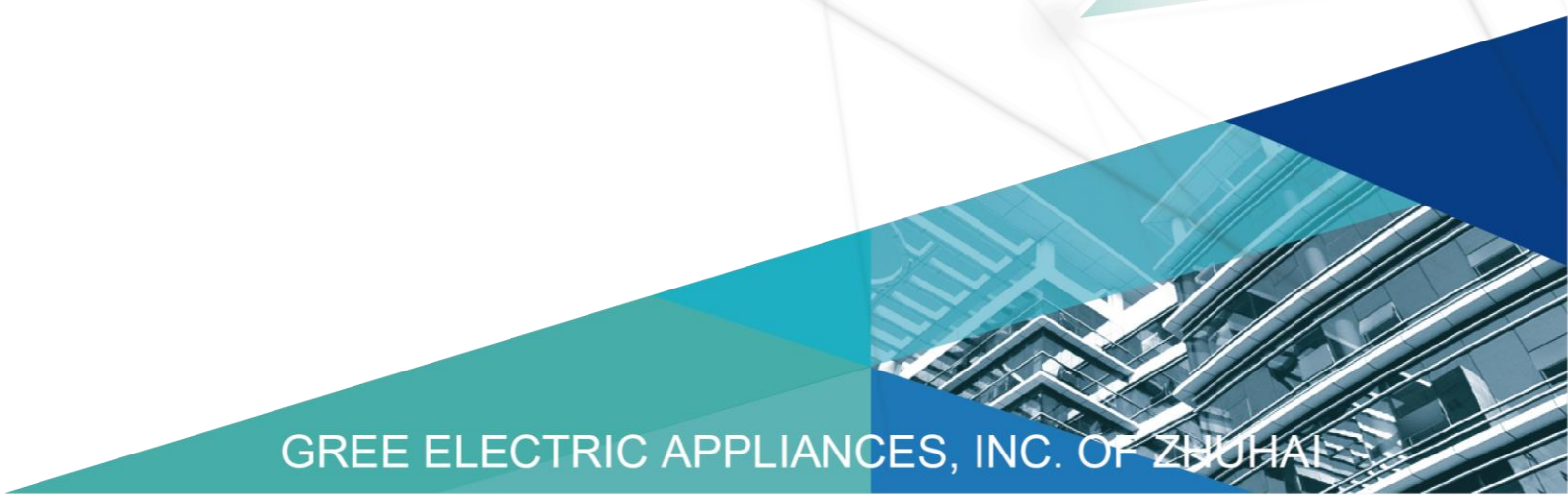
Indoor Units

(GC202506-II)

Capacity: 5800Btu/h~60000Btu/h

Rated Frequency: 60Hz

Refrigerant Type: R32



GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Foreword

Thank you for choosing Gree air conditioners. In order to correctly install and use our units, and for the satisfactory operation effect, please read this manual carefully.

This manual specifies safe operation requirements from perspectives of product introduction, control, troubleshooting and maintenance, as well as basic principles and implementation methods. Professional operators must abide by relevant national (local) safety requirements and technical specifications set forth in this manual during operations; otherwise, the air conditioning system may fail or be damaged, and personnel safety accident may also occur.

	Appliance filled with flammable gas R32.
	Before install the appliance, read the installation manual first.
	Before use the appliance, read the owner's manual first.
	Before repair the appliance, read the service manual first.

CONTENTS

Safety Notice on Maintenance

PROHIBITED：

(1) Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

(2) Do not pierce or burn.

(3) Please note that refrigerant may be odorless.

(4) The appliance shall be stored in a room without continuously operating ignition sources (For example: open flames, an operating gas appliance or an operating electric heater).

(5) Indoor unit adopts special joints that can't be detached. The installation method is the same with the common joints. However, because the joint can't be detached, if it is badly connected and causes leakage, it needs to be cut and replaced by a new one through welding.

(6) Using unsuitable parts or tools may lead to electric shock or fire hazard.

(7) If refrigerant leaks during maintenance, please ventilate the room immediately. Heavy leakage may lead to breathing difficulty, severe injury or death.

(8) Disconnect power before disassembling the appliance for maintenance.

(9) The appliance should be maintained and cared by authorized technical personnel with necessary qualifications.

WARNING:

(1) If the working place is more than 2m's high, please wear a safety helmet, gloves and a safety belt.

(2) Never mix any other substances except the specified refrigerant into the refrigerant circuit.

(3) When re-locating the appliance, check whether the new location is strong enough to withstand the weight of the appliance.

(4) If there is refrigerant leak, please fix the leak before charging in the refrigerant. After refrigerant is charged, check for refrigerant leaks. If you cannot spot the leak, stop the maintenance work. Please evacuate the system and close the service valve to prevent refrigerant leaking into the room.

(5) Prepare suitable tools and protectors.

(6) If you need to carry out maintenance or check the electric circuit without cutting off the power, please be careful not to touch the electrical parts.

(7) The appliance should be maintained and cared by authorized technical personnel with necessary qualifications.

(8) LEAK DETECTION SYSTEM installed. Unit must be powered except for service.

(9) Keep any required ventilation openings clear of obstruction.

(10) Precautions shall be taken to avoid excessive vibration or pulsation to refrigerating piping.

(11) Protection devices, piping and fittings shall be protected as far as possible against adverse environmental effects, for example, the danger of water collecting and freezing in relief pipes or the accumulation of dirt and debris.

(12) Provision shall be made for expansion and contraction of long runs of piping.

(13) Piping in refrigerating systems shall be so designed and installed to minimize the likelihood hydraulic shock damaging the system.

(14) Steel pipes and components shall be protected against corrosion with a rustproof coating before applying any insulation.

(15) Only auxiliary devices approved by the appliance manufacturer or declared suitable with the refrigerant shall be installed in connecting ductwork.

NOTICE:

(1) If the appliance is maintained at a humid place, it should be grounded to avoid electric shock.

(2) Never repair the unit with wet hands. Operating the unit with wet hands may lead to electric shock.

(3) If the unit is not correctly grounded, please check and fix it.

(4) Before cleaning the unit, please disconnect power to prevent the inner fan from starting up and running at high speed; Otherwise personal injury may occur.

(5) Measure the insulation resistance after maintenance. The resistance must be 1M or higher. Bad insulation may lead to electric shock.

(6) Welding and cutting work must be done in a well-ventilated place.

(7) Gas appliances, heaters and other fire sources should be kept away from the installation and maintenance site.

(8) Maintenance should be done according to suggestions of the manufacturer.

(9) Maintenance should be done only after the refrigerant is completely reclaimed from the unit.

OBSERVED：

(1) After the maintenance work is done, check the drainage of indoor unit.

(2) Do not tilt the unit, otherwise, water may spill out from the unit and make the floor and furniture wet.

(3) Disassembly of the unit, handling of the refrigerant, oil and accessories should all be done according to applicable local rules and regulations.

Safety Notice on Operation

PROHIBITED:

(1) Never try to modify the unit, otherwise, it may cause electric shock, overheat or fire hazard.

(2) If the power cord or conducting wires are scratched, please replace them.

(3) Never use connected or extended power cord or share the power socket with other appliances.

(4) Prepare a specialized power circuit for the appliance.

WARNING:

(1) If the power plug is dirty, please clean it before inserting it to the power socket. If the power plug is loose, please tighten it up.

(2) Do not damage the power cord. A damaged or refitted power cord may lead to electric shock or fire hazard.

(3) Check frequently whether the appliance is in good condition.

NOTICE:

(1) After changing the batteries of remote control, please discard them to avoid being swallowed by children.

(2) When the unit is working, do not remove the fan cover.

(3) Do not use organic solvents to wipe the controller operating panel.

(4) Before cleaning the unit, cut off the power supply.

PRODUCT

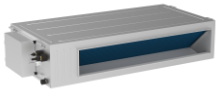
CHAPTER 1 PRODUCT

1 Product List

1.1 High Static Pressure Duct Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND07PHS/NhD-T(U)	CM810N3040	7500	8500	208/230V ~60Hz	R32	
GMV-ND09PHS/NhD-T(U)	CM810N3050	9500	10500			
GMV-ND12PHS/NhD-T(U)	CM810N2990	12000	13500			
GMV-ND15PHS/NhD-T(U)	CM810N3070	15000	17000			
GMV-ND18PHS/NhD-T(U)	CM810N3060	18000	20000			
GMV-ND24PHS/NhD-T(U)	CM810N2940	24000	27000			
GMV-ND30PHS/NhD-T(U)	CM810N3080	30000	34000			
GMV-ND36PHS/NhD-T(U)	CM810N3100	36000	40000			
GMV-ND42PHS/NhD-T(U)	CM810N3090	42000	47000			
GMV-ND48PHS/NhD-T(U)	CM810N3110	48000	54000			
GMV-ND54PHS/NhD-T(U)	CM810N2930	54000	60000			

1.2 Fresh Air Processing Duct Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-NDX42P/NhD-T(U)	CM810N3230	42000	29000	208/230V ~60Hz	R32	
GMV-NDX48P/NhD-T(U)	CM810N3220	48000	34000			
GMV-NDX54P/NhD-T(U)	CM810N3120	54000	45000			

1.3 High Pressure Air Handler Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND12A/NhB-T(U)	CM810N3290	12000	13500	208/230V ~60Hz	R32	
GMV-ND18A/NhB-T(U)	CM810N3020	18000	20000			
GMV-ND24A/NhB-T(U)	CM810N3370	24000	27000			
GMV-ND30A/NhB-T(U)	CM810N3010	30000	34000			
GMV-ND36A/NhB-T(U)	CM810N3360	36000	40000			
GMV-ND42A/NhB-T(U)	CM810N3000	42000	47000			
GMV-ND48A/NhB-T(U)	CM810N3340	48000	54000			
GMV-ND54A/NhB-T(U)	CM810N3350	54000	60000			
GMV-ND60A/NhB-T(U)	CM810N3030	60000	66000			

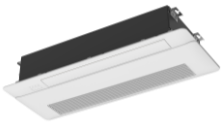
1.4 360° Air Discharge Cassette Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND07T/NhD-T(U)	CM500N2470	7500	8500	208/230V ~60Hz	R32	
GMV-ND09T/NhD-T(U)	CM500N2520	9500	10500			
GMV-ND12T/NhD-T(U)	CM500N2440	12000	13500			
GMV-ND15T/NhD-T(U)	CM500N2510	15000	17000			
GMV-ND18T/NhD-T(U)	CM500N2430	18000	20000			
GMV-ND24T/NhD-T(U)	CM500N2500	24000	27000			
GMV-ND30T/NhD-T(U)	CM500N2460	30000	34000			
GMV-ND36T/NhD-T(U)	CM500N2490	36000	40000			
GMV-ND42T/NhD-T(U)	CM500N2480	42000	47000			
GMV-ND48T/NhD-T(U)	CM500N2420	48000	54000			

1.5 360°Air Discharge Compact Cassette Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND05T/NhE-T(U)	CM500N2550	5800	6200	208/230V ~60Hz	R32	
GMV-ND07T/NhE-T(U)	CM500N2570	7500	8500			
GMV-ND09T/NhE-T(U)	CM500N2580	9500	10500			
GMV-ND12T/NhE-T(U)	CM500N2560	12000	13500			
GMV-ND15T/NhE-T(U)	CM500N2590	15000	17000			
GMV-ND18T/NhE-T(U)	CM500N2450	18000	20000			

1.6 1-way Cassette Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND07TD/NhA-T(U)	CM502N0220	7500	8500	208/230V ~60Hz	R32	
GMV-ND09TD/NhA-T(U)	CM502N0230	9500	10500			
GMV-ND12TD/NhA-T(U)	CM502N0210	12000	13500			

1.7 Wall Mounted Type Indoor Unit

Model	Product Code	Cooling Capacity	Heating Capacity	Power Supply	Refrigerant	Appearance
		Btu/h	Btu/h			
GMV-ND06G/NhA1C-T(U)	CM100N3560	6000	7500	208/230V ~60Hz	R32	
GMV-ND07G/NhA1C-T(U)	CM100N3570	7500	8500			
GMV-ND09G/NhA1C-T(U)	CM100N3410	9500	10500			
GMV-ND12G/NhA1C-T(U)	CM100N3590	12000	13500			
GMV-ND14G/NhA1C-T(U)	CM100N3430	15000	17000			
GMV-ND18G/NhA1C-T(U)	CM100N3580	18000	20000			
GMV-ND24G/NhA1C-T(U)	CM100N3420	24000	27000			
GMV-ND06G/NhA3C-T(U)	CM100N3490	6000	7500			
GMV-ND07G/NhA3C-T(U)	CM100N3510	7500	8500			
GMV-ND09G/NhA3C-T(U)	CM100N3520	9500	10500			
GMV-ND12G/NhA3C-T(U)	CM100N3500	12000	13500			
GMV-ND14G/NhA3C-T(U)	CM100N3530	15000	17000			
GMV-ND18G/NhA3C-T(U)	CM100N3550	18000	20000			
GMV-ND24G/NhA3C-T(U)	CM100N3540	24000	27000			

2 Nomenclature

Nomenclature of Indoor Unit:

GMV	-	N	□	□	□	□	□	/	□	□	-	□	□
1		2	3	4	5	6	7		8	9		10	11

No.	Description	Options
1	Product code	GMV-Gree Multi VRF Units
2	indoor unit code	indoor unit-N
3	Motor type	D-DC motor NULL-AC motor
4	Function code	X-fresh air
5	Cooling capacity/air volume code	Indoor unit: nominal cooling capacity /1000(Btu/h)
6	Unit type	P-standard static pressure duct type indoor unit PH-high static pressure duct type indoor unit T-360°Air Discharge type indoor unit A-Air handler type indoor unit TD-one-way cassette type indoor unit
7	With water pump or not	With water pump-S (S is not displayed for the cassette unit with water pump)
8	Refrigerant code	Nh-R32
9	Design serial No.	Nominate by A, B, C or expand it by 1, 2, 3…
10	Power	T-208/230V~,60Hz
11	Sale Area code	(U)-North America

3 Specifications

3.1 High Static Pressure Duct Indoor Unit

Model			GMV-ND07PHS/NhD-T(U)	GMV-ND09PHS/NhD-T(U)	GMV-ND12PHS/NhD-T(U)
Capacity	Cooling	Btu/h	7500	9500	12000
	Heating	Btu/h	8500	10500	13500
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	470/355/295	470/355/295	470/355/295
		m^3/h	800/600/500	800/600/500	800/600/500
ESP		Pa	60/0~150	60/0~150	60/0~150
		In.W.G	0.24/0~0.6	0.24/0~0.6	0.24/0~0.6
Sound pressure level(H/M/L)		dB(A)	33/30/27	33/30/27	35/32/29
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	3/8	3/8
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (WxDxH)	Outline	In.	39-3/8×27-9/16×11-13/16	39-3/8×27-9/16×11-13/16	39-3/8×27-9/16×11-13/16
	Package	In.	47-7/16×32×14-3/16	47-7/16×32×14-3/16	47-7/16×32×14-3/16
Dimension (WxDxH)	Outline	mm	1000×700×300	1000×700×300	1000×700×300
	Package	mm	1205×813×360	1205×813×360	1205×813×360
Net weight/Gross weight		LBS	94/108	94/108	94/108
Net weight/Gross weight		kg	42.5/49	42.5/49	42.5/49
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	1.4	1.4	1.4
Fuse Capacity		A	10	10	10
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND15PHS/NhD-T(U)	GMV-ND18PHS/NhD-T(U)	GMV-ND24PHS/NhD-T(U)
Capacity	Cooling	Btu/h	15000	18000	24000
	Heating	Btu/h	17000	20000	27000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	590/470/410	590/470/410	735/620/560
		m^3/h	1000/800/700	1000/800/700	1250/1050/950
ESP		Pa	90/0~200	90/0~200	90/0~200
		In.W.G	0.36/0~0.8	0.36/0~0.8	0.36/0~0.8
Sound pressure level(H/M/L)		dB(A)	39/36/33	39/36/33	40/37/34
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	1/2	1/2	1/2
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ12.7	Φ12.7	Φ12.7
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	39-3/8×27-9/16×11-13/16	39-3/8×27-9/16×11-13/16	39-3/8×27-9/16×11-13/16
	Package	In.	47-7/16×32×14-3/16	47-7/16×32×14-3/16	47-7/16×32×14-3/16
Dimension (W×D×H)	Outline	mm	1000×700×300	1000×700×300	1000×700×300
	Package	mm	1205×813×360	1205×813×360	1205×813×360

Model		GMV-ND15PHS/NhD-T(U)	GMV-ND18PHS/NhD-T(U)	GMV-ND24PHS/NhD-T(U)
Net weight/Gross weight	LBS	95/109	95/109	95/109
Net weight/Gross weight	kg	43/49.5	43/49.5	43/49.5
MOP (Max Fuse Size)	A	15	15	15
MCA (Min. Circuit Ampacity)	A	1.8	1.8	2.2
Fuse Capacity	A	10	10	10
Refrigeration Control Device		EXV	EXV	EXV
Protection Device		Fuse	Fuse	Fuse

Model			GMV-ND30PHS/NhD-T(U)	GMV-ND36PHS/NhD-T(U)	GMV-ND42PHS/NhD-T(U)
Capacity	Cooling	Btu/h	30000	36000	42000
	Heating	Btu/h	34000	40000	47000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	1175/940/825	1175/940/825	1175/940/825
		m^3/h	2000/1600/1400	2000/1600/1400	2000/1600/1400
ESP		Pa	90/0~200	90/0~200	90/0~200
		In.W.G	0.36/0~0.8	0.36/0~0.8	0.36/0~0.8
Sound pressure level(H/M/L)		dB(A)	44/40/37	44/40/37	44/40/37
Connecting pipe	Liquid	In.	3/8	3/8	3/8
	Gas	In.	5/8	5/8	5/8
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	55-1/8×27-9/16×11-13/16	55-1/8×27-9/16×11-13/16	55-1/8×27-9/16×11-13/16
	Package	In.	63-1/16×32×14-3/8	63-1/16×32×14-3/8	63-1/16×32×14-3/8
Dimension (W×D×H)	Outline	mm	1400×700×300	1400×700×300	1400×700×300
	Package	mm	1601×813×365	1601×813×365	1601×813×365
Net weight/Gross weight		LBS	128/143	128/143	128/143
Net weight/Gross weight		kg	58/65	58/65	58/65
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	2.7	2.7	2.7
Fuse Capacity		A	10	10	10
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND48PHS/NhD-T(U)	GMV-ND54PHS/NhD-T(U)
Capacity	Cooling	Btu/h	48000	54000
	Heating	Btu/h	54000	60000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	1470/1175/1030	1470/1175/1030
		m^3/h	2500/2000/1750	2500/2000/1750
ESP		Pa	90/0~200	90/0~200
		In.W.G	0.36/0~0.8	0.36/0~0.8
Sound pressure level(H/M/L)		dB(A)	46/44/41	46/44/41
Connecting pipe	Liquid	In.	3/8	3/8
	Gas	In.	5/8	5/8

Model			GMV-ND48PHS/NhD-T(U)	GMV-ND54PHS/NhD-T(U)
Connecting pipe	Liquid	mm	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9
Drain pipe		In.	Φ1	Φ1
		mm	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	55-1/8×27-9/16×11-13/16	55-1/8×27-9/16×11-13/16
	Package	In.	63-1/16×32×14-3/8	63-1/16×32×14-3/8
Dimension (W×D×H)	Outline	mm	1400×700×300	1400×700×300
	Package	mm	1601×813×365	1601×813×365
Net weight/Gross weight		LBS	128/143	128/143
Net weight/Gross weight		kg	58/65	58/65
MOP (Max Fuse Size)		A	15	15
MCA (Min. Circuit Ampacity)		A	3.7	3.7
Fuse Capacity		A	10	10
Refrigeration Control Device			EXV	EXV
Protection Device			Fuse	Fuse

3.2 Fresh Air Processing Indoor Unit

Model			GMV-NDX42P/NhD-T(U)	GMV-NDX48P/NhD-T(U)	GMV-NDX54P/NhD-T(U)
Capacity	Cooling	Btu/h	42000	48000	54000
	Heating*1	Btu/h	29000	34000	45000
	Heating*2	Btu/h	36000	41000	52000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	705/590~1175	705/590~1175	880/705~1470
		m^3/h	1200/1000~2000	1200/1000~2000	1500/1200~2500
ESP		Pa	150/50~220	150/50~220	150/50～220
		In.W.G	0.6/0.2~0.88	0.6/0.2~0.88	0.6/0.2~0.88
Sound pressure level(H/M/L)		dB(A)	45	45	46
Connecting pipe	Liquid	In.	3/8	3/8	3/8
	Gas	In.	5/8	5/8	5/8
	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	55-1/8×27-9/16×11-13/16	55-1/8×27-9/16×11-13/16	55-1/8×27-9/16×11-13/16
	Package	In.	63-1/16×32×14-3/8	63-1/16×32×14-3/8	63-1/16×32×14-3/8
	Outline	mm	1400×700×300	1400×700×300	1400×700×300
	Package	mm	1601×813×365	1601×813×365	1601×813×365
Net weight/Gross weight		LBS	126/141	126/141	126/141
Net weight/Gross weight		kg	57/64	57/64	57/64
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	2.7	2.7	3.7
Fuse Capacity		A	10	10	10
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

NOTICE

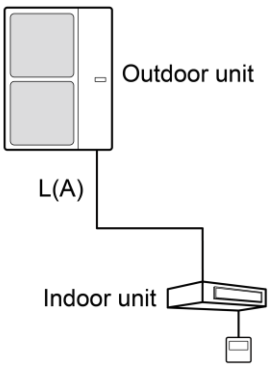
① Rated cooling capacity test conditions: indoor 95.0°F DB/82.4°F WB, outdoor 95.0°F DB; connection pipe length: 24-5/8ft., without height difference between units. The default air outlet temperature of the unit is 64.4°F.

② Rated heating capacity test conditions: *1. indoor 44.6°F DB, outdoor 44.6°F DB/42.8 °F WB, *2 indoor 32°F DB, outdoor 32°F DB/26.8°F WB, connection pipe length: 24-5/8ft., without height difference between units. The default air outlet temperature of the unit is 71.6°F.

③ The Sound Pressure Level will change with the External Static Pressure.

VRF fresh air series indoor unit is a kind of air processing unit that inhales the fresh air from outdoor side and then processes it to provide for the user in the room. This product series can only connect to one VRF fresh air indoor unit when linking to the outdoor unit.

Optional Indoor unit model	Recommended capacity of outdoor unit	Connected outdoor unit series	Connection condition
GMV-NDX42P/NhD-T(U)	42000/48000Btu/h	R32 GMV6 Mini R32 Ultra Heat GMV6 Mini	The capacity of outdoor unit is not less than the recommended capacity and cannot exceed 10% of the recommended capacity.
GMV-NDX48P/NhD-T(U)	48000Btu/h		
GMV-NDX54P/NhD-T(U)	60000Btu/h		



NOTICE

Please match the outdoor unit in strict accordance with the above requirements, otherwise, the comfortableness will be affected or even the unit will be damaged.

3.3 Air Handler Indoor Unit

Model			GMV-ND12A/NhB-T(U)	GMV-ND18A/NhB-T(U)	GMV-ND24A/NhB-T(U)
Capacity	Cooling	Btu/h	12000	18000	24000
	Heating	Btu/h	13500	20000	27000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	650/520/300	650/520/300	880/800/690
		m^3/h	1105/884/510	1105/884/510	1495/1359/1172
ESP		Pa	50/0 ~ 250	50/0 ~ 250	50/0 ~ 250
		In.W.G	0.2/0 ~ 1.0	0.2/0 ~ 1.0	0.2/0 ~ 1.0
Sound pressure level(H/M/L)		dB(A)	40/37/35	40/37/35	42/40/38
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	1/2	1/2
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ12.7	Φ12.7
Drain pipe		In.	G1	G1	G1
		mm	Φ25.4	Φ25.4	Φ25.4

Model			GMV-ND12A/NhB-T(U)	GMV-ND18A/NhB-T(U)	GMV-ND24A/NhB-T(U)
Dimension (W×D×H)	Outline	In.	21-1/4×18-1/8×43-1/2	21-1/4×18-1/8×43-1/2	21-1/4×18-1/8×43-1/2
	Package	In.	26×20-9/16×46-1/4	26×20-9/16×46-1/4	26×20-9/16×46-1/4
	Outline	mm	540×460×1105	540×460×1105	540×460×1105
	Package	mm	660×523×1175	660×523×1175	660×523×1175
Net weight/Gross weight		LBS	126/139	126/139	130/143
Net weight/Gross weight		kg	57/63	57/63	59/65
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	2.0	2.0	3.0
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND30A/NhB-T(U)	GMV-ND36A/NhB-T(U)	GMV-ND42A/NhB-T(U)
Capacity	Cooling	Btu/h	30000	36000	42000
	Heating	Btu/h	34000	40000	47000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	910/820/710	1230/1100/970	1260/1120/1000
		m^3/h	1546/1393/1206	2090/1869/1648	2141/1903/1699
ESP		Pa	50/0~250	50/0~250	50/0~250
		In.W.G	0.2/0~1.0	0.2/0~1.0	0.2/0~1.0
Sound pressure level(H/M/L)		dB(A)	42/40/38	48/46/44	48/46/44
Connecting pipe	Liquid	In.	3/8	3/8	3/8
	Gas	In.	5/8	5/8	5/8
	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9
Drain pipe		In.	G1	G1	G1
		mm	Φ25.4	Φ25.4	Φ25.4
Dimension (W×D×H)	Outline	In.	21-1/4×18-1/8×43-1/2	21-1/4×21×1/4×48-1/4	21-1/4×21×1/4×48-1/4
	Package	In.	26×20-9/16×46-1/4	26×23-3/4×51	26×23-3/4×51
	Outline	mm	540×460×1105	540×540×1224	540×540×1224
	Package	mm	660×523×1175	660×603×1295	660×603×1295
Net weight/Gross weight		LBS	130/143	157/172	157/172
Net weight/Gross weight		kg	59/65	71/78	71/78
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	3.0	4.0	4.0
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND48A/NhB-T(U)	GMV-ND54A/NhB-T(U)	GMV-ND60A/NhB-T(U)
Capacity	Cooling	Btu/h	48000	54000	60000
	Heating	Btu/h	54000	60000	66000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	1800/1600/1500	1800/1600/1500	1820/1650/1530
		m^3/h	3059/2719/2549	3059/2719/2549	3093/2804/2600
ESP		Pa	50/0~250	50/0~250	50/0~250
		In.W.G	0.2/0~1.0	0.2/0~1.0	0.2/0~1.0
Sound pressure level(H/M/L)		dB(A)	51/50/49	51/50/49	51/50/49

Model			GMV-ND48A/NhB-T(U)	GMV-ND54A/NhB-T(U)	GMV-ND60A/NhB-T(U)
Connecting pipe	Liquid	In.	3/8	3/8	3/8
	Gas	In.	5/8	5/8	5/8
	Liquid	mm	Φ9.52	Φ9.52	Φ9.52
	Gas	mm	Φ15.9	Φ15.9	Φ15.9
Drain pipe		In.	G1	G1	G1
		mm	Φ25.4	Φ25.4	Φ25.4
Dimension (W×D×H)	Outline	In.	24-13/16×21-1/4×51-15/16	24-13/16×21-1/4×51-15/16	24-13/16×21-1/4×51-15/16
	Package	In.	27-5/16×26×54-13/16	27-5/16×26×54-13/16	27-5/16×26×54-13/16
	Outline	mm	630×540×1320	630×540×1320	630×540×1320
	Package	mm	693×660×1392	693×660×1392	693×660×1392
Net weight/Gross weight		LBS	194/212	194/212	194/212
Net weight/Gross weight		kg	88/96	88/96	88/96
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	7.7	7.7	7.7
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

3.4 360° Air Discharge Cassette Indoor Unit

Model			GMV-ND07T/NhD-T(U)	GMV-ND09T/NhD-T(U)	GMV-ND12T/NhD-T(U)
Capacity	Cooling	Btu/h	7500	9500	12000
	Heating	Btu/h	8500	10500	13500
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	470/412/353	470/412/353	470/412/353
		m^3/h	800/700/600	800/700/600	800/700/600
Sound pressure level(H/M/L)		dB(A)	37/33/28	37/33/28	37/33/28
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	3/8	3/8
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	33 1/16×33 1/16×9 7/16	33 1/16×33 1/16×9 7/16	33 1/16×33 1/16×9 7/16
	Package	In.	36 3/4×36 3/4×11 1/2	36 3/4×36 3/4×11 1/2	36 3/4×36 3/4×11 1/2
	Outline	mm	840×840×240	840×840×240	840×840×240
	Package	mm	933×933×292	933×933×292	933×933×292
Net weight/Gross weight		LBS	50/61	50/61	50/61
Net weight/Gross weight		kg	22.5/27.5	22.5/27.5	22.5/27.5
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	0.9	0.9	0.9
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse
Decoration panel	Model		TF06	TF06	TF06
	Dimension (W×D×H)	Outline	In.	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16
		Package	In.	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8
		Outline	mm	950×950×65	950×950×65	950×950×65

Model				GMV-ND07T/NhD-T(U)	GMV-ND09T/NhD-T(U)	GMV-ND12T/NhD-T(U)
Decoration panel	Dimension (W×D×H)	Package	mm	1033×1020×110	1033×1020×110	1033×1020×110
	Net weight/Gross weight		LBS	13.2/20.9	13.2/20.9	13.2/20.9
	Net weight/Gross weight		kg	6/9.5	6/9.5	6/9.5

Model			GMV-ND15T/NhD-T(U)	GMV-ND18T/NhD-T(U)	GMV-ND24T/NhD-T(U)
Capacity	Cooling	Btu/h	15000	18000	24000
	Heating	Btu/h	17000	20000	27000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	560/500/440	560/500/440	736/677/588
		m^3/h	950/850/750	950/850/750	1250/1150/1000
Sound pressure level(H/M/L)		dB(A)	40/37/34	40/37/34	40/37/34
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	1/2	1/2	1/2
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ12.7	Φ12.7	Φ12.7
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	33 1/16×33 1/16×9 7/16	33 1/16×33 1/16×9 7/16	33 1/16×33 1/16×11 7/16
	Package	In.	36 3/4×36 3/4×11 1/2	36 3/4×36 3/4×11 1/2	36 3/4×36 3/4×13 9/16
	Outline	mm	840×840×240	840×840×240	840×840×290
	Package	mm	933×933×292	933×933×292	933×933×345
Net weight/Gross weight		LBS	50/61	50/61	56/67
Net weight/Gross weight		kg	22.5/27.5	22.5/27.5	25.5/30.5
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	0.9	0.9	1.1
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse
Decoration panel	Model		TF06	TF06	TF06
	Dimension (W×D×H)	Outline	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16
		Package	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8
		Outline	950×950×65	950×950×65	950×950×65
		Package	1033×1020×110	1033×1020×110	1033×1020×110
	Net weight/Gross weight		13.2/20.9	13.2/20.9	13.2/20.9
	Net weight/Gross weight		6/9.5	6/9.5	6/9.5

Model			GMV-ND30T/NhD-T(U)	GMV-ND36T/NhD-T(U)
Capacity	Cooling	Btu/h	30000	36000
	Heating	Btu/h	34000	40000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	883/706/588	883/706/588
		m^3/h	1500/1200/1000	1500/1200/1000
Sound pressure level(H/M/L)		dB(A)	44/39/34	44/39/34
Connecting pipe	Liquid	In.	3/8	3/8
	Gas	In.	5/8	5/8
	Liquid	mm	Φ9.52	Φ9.52

Model				GMV-ND30T/NhD-T(U)	GMV-ND36T/NhD-T(U)
Connecting pipe		Gas	mm	Φ15.9	Φ15.9
Drain pipe			In.	Φ1	Φ1
			mm	Φ25	Φ25
Dimension (W×D×H)		Outline	In.	33 1/16×33 1/16×11 7/16	33 1/16×33 1/16×11 7/16
		Package	In.	36 3/4×36 3/4×13 9/16	36 3/4×36 3/4×13 9/16
		Outline	mm	840×840×290	840×840×290
		Package	mm	933×933×345	933×933×345
Net weight/Gross weight			LBS	56/67	56/67
Net weight/Gross weight			kg	25.5/30.5	25.5/30.5
MOP (Max Fuse Size)			A	15	15
MCA (Min. Circuit Ampacity)			A	1.2	1.2
Fuse Capacity			A	3.15	3.15
Refrigeration Control Device				EXV	EXV
Protection Device				Fuse	Fuse
Decoration panel	Model			TF06	TF06
	Dimension (W×D×H)	Outline	In.	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16
		Package	In.	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8
		Outline	mm	950×950×65	950×950×65
		Package	mm	1033×1020×110	1033×1020×110
	Net weight/Gross weight		LBS	13.2/20.9	13.2/20.9
	Net weight/Gross weight		kg	6/9.5	6/9.5

Model				GMV-ND42T/NhD-T(U)	GMV-ND48T/NhD-T(U)
Capacity		Cooling	Btu/h	42000	48000
		Heating	Btu/h	47000	54000
Power supply			V/Ph/Hz	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)			CFM	1060/853/677	1060/853/677
			m^3/h	1800/1450/1150	1800/1450/1150
Sound pressure level(H/M/L)			dB(A)	45/40/35	45/40/35
Connecting pipe		Liquid	In.	3/8	3/8
		Gas	In.	5/8	5/8
		Liquid	mm	Φ9.52	Φ9.52
		Gas	mm	Φ15.9	Φ15.9
Drain pipe			In.	Φ1	Φ1
			mm	Φ25	Φ25
Dimension (W×D×H)		Outline	In.	33 1/16×33 1/16×11 7/16	33 1/16×33 1/16×11 7/16
		Package	In.	36 3/4×36 3/4×13 9/16	36 3/4×36 3/4×13 9/16
		Outline	mm	840×840×290	840×840×290
		Package	mm	933×933×345	933×933×345
Net weight/Gross weight			LBS	56/67	56/67
Net weight/Gross weight			kg	25.5/30.5	25.5/30.5
MOP (Max Fuse Size)			A	15	15
MCA (Min. Circuit Ampacity)			A	1.3	1.3
Fuse Capacity			A	3.15	3.15
Refrigeration Control Device				EXV	EXV
Protection Device				Fuse	Fuse
Decoration panel	Model			TF06	TF06
	Dimension (W×D×H)	Outline	In.	37 3/8×37 3/8×2 9/16	37 3/8×37 3/8×2 9/16
		Package	In.	40 5/8×40 1/8×4 3/8	40 5/8×40 1/8×4 3/8

Model				GMV-ND42T/NhD-T(U)	GMV-ND48T/NhD-T(U)
Decoration panel	Dimension (W×D×H)	Outline	mm	950×950×65	950×950×65
		Package	mm	1033×1020×110	1033×1020×110
	Net weight/Gross weight		LBS	13.2/20.9	13.2/20.9
	Net weight/Gross weight		kg	6/9.5	6/9.5

3.5 360°Air Discharge Compact Cassette Indoor Unit

Model				GMV-ND05T/NhE-T(U)	GMV-ND07T/NhE-T(U)	GMV-ND09T/NhE-T(U)
Capacity		Cooling	Btu/h	5800	7500	9500
		Heating	Btu/h	6200	8500	10500
Power supply			V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)			CFM	290/270/220	290/270/220	360/320/280
			m^3/h	500/460/370	500/460/370	620/550/480
Sound pressure level(H/M/L)			dB(A)	33/30/28	33/30/28	37/35/30
Connecting pipe		Liquid	In.	1/4	1/4	1/4
		Gas	In.	3/8	3/8	3/8
		Liquid	mm	Φ6.35	Φ6.35	Φ6.35
		Gas	mm	Φ9.52	Φ9.52	Φ9.52
Drain pipe			In.	Φ1	Φ1	Φ1
			mm	Φ25	Φ25	Φ25
Dimension (W×D×H)		Outline	In.	22 7/16×22 7/16×10 7/16	22 7/16×22 7/16×10 7/16	22 7/16×22 7/16×10 7/16
		Package	In.	27 1/2×25 11/16×11 5/8	27 1/2×25 11/16×11 5/8	27 1/2×25 11/16×11 5/8
		Outline	mm	570×570×265	570×570×265	570×570×265
		Package	mm	698×653×295	698×653×295	698×653×295
Net weight/Gross weight			LBS	37.5/47.4	37.5/47.4	37.5/47.4
Net weight/Gross weight			kg	17.0/21.5	17.0/21.5	17.0/21.5
MOP (Max Fuse Size)			A	15	15	15
MCA (Min. Circuit Ampacity)			A	0.5	0.5	0.5
Fuse Capacity			A	3.15	3.15	3.15
Refrigeration Control Device				EXV	EXV	EXV
Protection Device				Fuse	Fuse	Fuse
Decoration panel	Model			TF05	TF05	TF05
	Dimension (W×D×H)	Outline	In.	24 3/8×24 3/8×1 7/8	24 3/8×24 3/8×1 7/8	24 3/8×24 3/8×1 7/8
		Package	In.	27 1/4×27 1/4×4 1/2	27 1/4×27 1/4×4 1/2	27 1/4×27 1/4×4 1/2
		Outline	mm	620×620×47.5	620×620×47.5	620×620×47.5
		Package	mm	693×693×115	693×693×115	693×693×115
	Net weight/Gross weight		LBS	6.6/10	6.6/10	6.6/10
	Net weight/Gross weight		kg	3/4.5	3/4.5	3/4.5

Model			GMV-ND12T/NhE-T(U)	GMV-ND15T/NhE-T(U)	GMV-ND18T/NhE-T(U)
Capacity	Cooling	Btu/h	12000	15000	18000
	Heating	Btu/h	13500	17000	20000
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	360/320/280	360/320/280	430/385/330
		m^3/h	620/550/480	620/550/480	730/650/560
Sound pressure level(H/M/L)		dB(A)	37/35/30	37/35/30	43/40/38

Model				GMV-ND12T/NhE-T(U)	GMV-ND15T/NhE-T(U)	GMV-ND18T/NhE-T(U)
Connecting pipe		Liquid	In.	1/4	1/4	1/4
		Gas	In.	3/8	1/2	1/2
		Liquid	mm	Φ6.35	Φ6.35	Φ6.35
		Gas	mm	Φ9.52	Φ12.7	Φ12.7
Drain pipe			In.	Φ1	Φ1	Φ1
			mm	Φ25	Φ25	Φ25
Dimension (W×D×H)		Outline	In.	22 7/16×22 7/16×10 7/16	22 7/16×22 7/16×10 7/16	22 7/16×22 7/16×10 7/16
		Package	In.	27 1/2×25 11/16×11 5/8	27 1/2×25 11/16×11 5/8	27 1/2×25 11/16×11 5/8
		Outline	mm	570×570×265	570×570×265	570×570×265
		Package	mm	698×653×295	698×653×295	698×653×295
Net weight/Gross weight			LBS	37.5/47.4	37.5/47.4	37.5/47.4
Net weight/Gross weight			kg	17.0/21.5	17.0/21.5	17.0/21.5
MOP (Max Fuse Size)			A	15	15	15
MCA (Min. Circuit Ampacity)			A	0.5	0.5	0.5
Fuse Capacity			A	3.15	3.15	3.15
Refrigeration Control Device				EXV	EXV	EXV
Protection Device				Fuse	Fuse	Fuse
Decoration panel	Model			TF05	TF05	TF05
	Dimension (W×D×H)	Outline	In.	24 3/8×24 3/8×1 7/8	24 3/8×24 3/8×1 7/8	24 3/8×24 3/8×1 7/8
		Package	In.	27 1/4×27 1/4×4 1/2	27 1/4×27 1/4×4 1/2	27 1/4×27 1/4×4 1/2
		Outline	mm	620×620×47.5	620×620×47.5	620×620×47.5
		Package	mm	693×693×115	693×693×115	693×693×115
	Net weight/Gross weight		LBS	6.6/10	6.6/10	6.6/10
	Net weight/Gross weight		kg	3/4.5	3/4.5	3/4.5

3.6 1-way Cassette Indoor Unit

Model			GMV-ND07TD/NhA-T(U)	GMV-ND09TD/NhA-T(U)	GMV-ND12TD/NhA-T(U)
Capacity	Cooling	Btu/h	7500	9500	12000
	Heating	Btu/h	8500	10500	13500
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H/M/L)		CFM	353/294/265	353/294/265	353/294/265
		m^3/h	600/500/450	600/500/450	600/500/450
Sound pressure level(H/M/L)		dB(A)	36/33/28	36/33/28	36/33/28
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	3/8	3/8
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52
Drain pipe		In.	Φ1	Φ1	Φ1
		mm	Φ25	Φ25	Φ25
Dimension (W×D×H)	Outline	In.	38 7/8×15 3/16×7	38 7/8×15 3/16×7	38 7/8×15 3/16×7
	Package	In.	51 1/2×19 3/4×12 3/16	51 1/2×19 3/4×12 3/16	51 1/2×19 3/4×12 3/16
	Outline	mm	987×385×178	987×385×178	987×385×178
	Package	mm	1307×501×310	1307×501×310	1307×501×310
Net weight/Gross weight		LBS	42/57	42/57	42/57

Model				GMV-ND07TD/NhA-T(U)	GMV-ND09TD/NhA-T(U)	GMV-ND12TD/NhA-T(U)
Net weight/Gross weight			kg	19/26	19/26	19/26
MOP (Max Fuse Size)			A	15	15	15
MCA (Min. Circuit Ampacity)			A	0.3	0.3	0.3
Fuse Capacity			A	3.15	3.15	3.15
Refrigeration Control Device				EXV	EXV	EXV
Protection Device				Fuse	Fuse	Fuse
Decoration panel	Model			TD01	TD01	TD01
	Dimension (W×D×H)	Outline	In.	47 1/4×18 1/8×2 3/16	47 1/4×18 1/8×2 3/16	47 1/4×18 1/8×2 3/16
		Package	In.	49 13/16×21 1/8×4 3/4	49 13/16×21 1/8×4 3/4	49 13/16×21 1/8×4 3/4
		Outline	mm	1200×460×55	1200×460×55	1200×460×55
		Package	mm	1265×536×121	1265×536×121	1265×536×121
	Net weight/Gross weight		LBS	9.3/13.2	9.3/13.2	9.3/13.2
	Net weight/Gross weight		kg	4.2/6	4.2/6	4.2/6

3.7 Wall Mounted Type Indoor Unit

Model			GMV-ND06G/NhA1C-T(U)	GMV-ND07G/NhA1C-T(U)	GMV-ND09G/NhA1C-T(U)
Capacity	Cooling	Btu/h	6000	7500	9500
	Heating	Btu/h	7500	8500	10500
Power supply		V/Ph/Hz	208/230V ~ 60	208/230V ~ 60	208/230V ~ 60
Airflow volume(H)		CFM	265	265	265
		m^3/h	450	450	450
Sound pressure level(H/M/L)		dB(A)	36/34/31	36/34/31	36/34/31
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	3/8	3/8
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ9.52
Drain pipe		In.	Φ13/16	Φ13/16	Φ13/16
		mm	Φ20	Φ20	Φ20
Dimension (WxDxH)	Outline	In.	34 1/8×8 1/8×10 7/8	34 1/8×8 1/8×10 7/8	34 1/8×8 1/8×10 7/8
	Package	In.	39 3/16×13 1/2×10 31/32	39 3/16×13 1/2×10 31/32	39 3/16×13 1/2×10 31/32
	Outline	mm	867×206×276	867×206×276	867×206×276
	Package	mm	996×343×279	996×343×279	996×343×279
Net weight/Gross weight		LBS	21/26	21/26	21/26
Net weight/Gross weight		kg	9.5/12	9.5/12	9.5/12
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	0.9	0.9	0.9
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND12G/NhA1C-T(U)	GMV-ND14G/NhA1C-T(U)	GMV-ND18G/NhA1C-T(U)
Capacity	Cooling	Btu/h	12000	15000	18000
	Heating	Btu/h	13500	17000	20000
Power supply		V/Ph/Hz	208/230V ~ 60	208/230V ~ 60	208/230V ~ 60
Airflow volume(H)		CFM	380	380	530
		m^3/h	650	650	900
Sound pressure level(H/M/L)		dB(A)	42/39/34	42/39/34	44/42/38

Model			GMV-ND12G/NhA1C-T(U)	GMV-ND14G/NhA1C-T(U)	GMV-ND18G/NhA1C-T(U)
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	1/2	1/2
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ12.7	Φ12.7
Drain pipe		In.	Φ13/16	Φ13/16	Φ13/16
		mm	Φ20	Φ20	Φ20
Dimension (WxDxH)	Outline	In.	38 1/2×9 3/4×13 1/8	38 1/2×9 3/4×13 1/8	43 15/16×9 3/4×13 1/8
	Package	In.	43 11/16×16 1/8×13 11/16	43 11/16×16 1/8×13 11/16	49 1/4×16 1/2×14 1/32
	Outline	mm	978×248×333	978×248×333	1116×248×333
	Package	mm	1109×410×347	1109×410×347	1251×419×356
Net weight/Gross weight		LBS	29/36	29/36	34/43
Net weight/Gross weight		kg	13/16.5	13/16.5	15.5/19.5
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	1.1	1.1	1.1
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND24G/NhA1C-T(U)	GMV-ND06G/NhA3C-T(U)	GMV-ND07G/NhA3C-T(U)
Capacity	Cooling	Btu/h	24000	6000	7500
	Heating	Btu/h	27000	7500	8500
Power supply		V/Ph/Hz	208/230V ~60	208/230V ~60	208/230V ~60
Airflow volume(H)		CFM	530	265	265
		m^3/h	900	450	450
Sound pressure level(H/M/L)		dB(A)	44/42/38	36/34/31	36/34/31
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	1/2	3/8	3/8
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ12.7	Φ9.52	Φ9.52
Drain pipe		In.	Φ13/16	Φ13/16	Φ13/16
		mm	Φ20	Φ20	Φ20
Dimension (WxDxH)	Outline	In.	43 15/16×9 3/4×13 1/8	34 1/8×8 1/8×10 7/8	34 1/8×8 1/8×10 7/8
	Package	In.	49 1/4×16 1/2×14 1/32	39 3/16×13 1/2×10 31/32	39 3/16×13 1/2×10 31/32
	Outline	mm	1116×248×333	867×206×276	867×206×276
	Package	mm	1251×419×356	996×343×279	996×343×279
Net weight/Gross weight		LBS	34/43	21/26	21/26
Net weight/Gross weight		kg	15.5/19.5	9.5/12	9.5/12
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	1.1	0.9	0.9
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND09G/NhA3C-T(U)	GMV-ND12G/NhA3C-T(U)	GMV-ND14G/NhA3C-T(U)
Capacity	Cooling	Btu/h	9500	12000	15000
	Heating	Btu/h	10500	13500	17000
Power supply		V/Ph/Hz	208/230V ~ 60	208/230V ~ 60	208/230V ~ 60
Airflow volume(H)		CFM	265	380	380

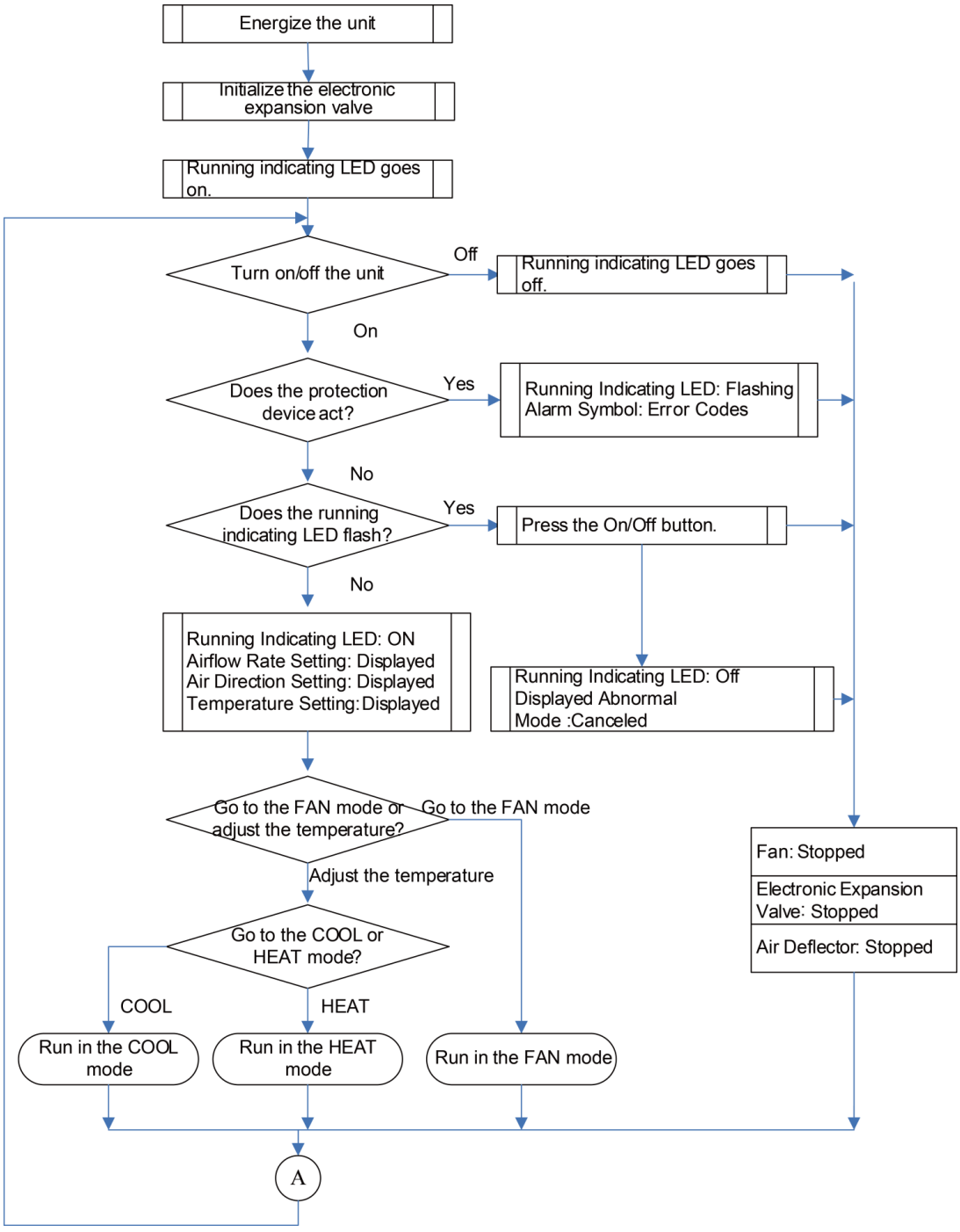
Model			GMV-ND09G/NhA3C-T(U)	GMV-ND12G/NhA3C-T(U)	GMV-ND14G/NhA3C-T(U)
Airflow volume(H)		m^3/h	450	650	650
Sound pressure level(H/M/L)		dB(A)	36/34/31	42/39/34	42/39/34
Connecting pipe	Liquid	In.	1/4	1/4	1/4
	Gas	In.	3/8	3/8	1/2
	Liquid	mm	Φ6.35	Φ6.35	Φ6.35
	Gas	mm	Φ9.52	Φ9.52	Φ12.7
Drain pipe		In.	Φ13/16	Φ13/16	Φ13/16
		mm	Φ20	Φ20	Φ20
Dimension (WxDxH)	Outline	In.	34 1/8×8 1/8×10 7/8	38 1/2×9 3/4×13 1/8	38 1/2×9 3/4×13 1/8
	Package	In.	39 3/16×13 1/2×10 31/32	43 11/16×16 1/8×13 11/16	43 11/16×16 1/8×13 11/16
	Outline	mm	867×206×276	978×248×333	978×248×333
	Package	mm	996×343×279	1109×410×347	1109×410×347
Net weight/Gross weight		LBS	21/26	29/36	29/36
Net weight/Gross weight		kg	9.5/12	13/16.5	13/16.5
MOP (Max Fuse Size)		A	15	15	15
MCA (Min. Circuit Ampacity)		A	0.9	1.1	1.1
Fuse Capacity		A	3.15	3.15	3.15
Refrigeration Control Device			EXV	EXV	EXV
Protection Device			Fuse	Fuse	Fuse

Model			GMV-ND18G/NhA3C-T(U)	GMV-ND24G/NhA3C-T(U)
Capacity	Cooling	Btu/h	18000	24000
	Heating	Btu/h	20000	27000
Power supply		V/Ph/Hz	208/230V ~ 60	208/230V ~ 60
Airflow volume(H)		CFM	530	530
		m^3/h	900	900
Sound pressure level(H/M/L)		dB(A)	44/42/38	44/42/38
Connecting pipe	Liquid	In.	1/4	1/4
	Gas	In.	1/2	1/2
Connecting pipe	Liquid	mm	Φ6.35	Φ6.35
	Gas	mm	Φ12.7	Φ12.7
Drain pipe		In.	Φ13/16	Φ13/16
		mm	Φ20	Φ20
Dimension (WxDxH)	Outline	In.	43 15/16×9 3/4×13 1/8	43 15/16×9 3/4×13 1/8
	Package	In.	49 1/4×16 1/2×14 1/32	49 1/4×16 1/2×14 1/32
	Outline	mm	1116×248×333	1116×248×333
	Package	mm	1251×419×356	1251×419×356
Net weight/Gross weight		LBS	34/43	34/43
Net weight/Gross weight		kg	15.5/19.5	15.5/19.5
MOP (Max Fuse Size)		A	15	15
MCA (Min. Circuit Ampacity)		A	1.1	1.1
Fuse Capacity		A	3.15	3.15
Refrigeration Control Device			EXV	EXV
Protection Device			Fuse	Fuse

CONTROL

CHAPTER 2 CONTROL

1 Operation Flowchart

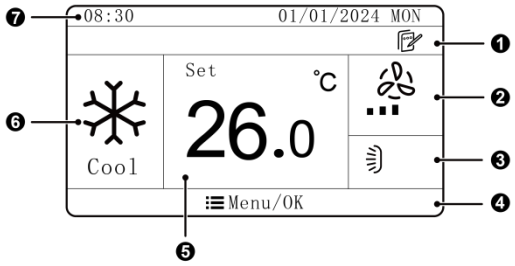


2 Wired Controller

2.1 Control Panel

2.1.1 XE7C-23/H Wired Controller

Appearance of wired controller



LCD graphics of wired controller

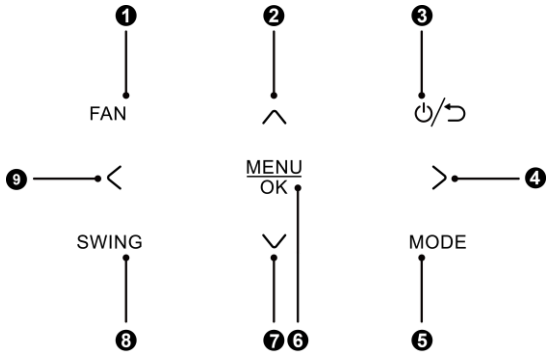
Table LCD display instruction

No.	Name	Instruction
1	Status column	Display the icon of function that is turned on
2	Fan speed	It is for displaying the fan speed
3	Swing	It is for displaying the current swing status
4	Button prompt	Display the function of MENU/OK button at the current page and the settable cursor
5	Temperature display	It shows the value of temperature (If the wired controller is controlling a fresh air indoor unit, it will display FAP).
6	Mode	It shows the operating mode
7	Clock display	It display the date and the time. When it's locating the indoor unit, it displays the project No. of current indoor unit.
NOTE: When wired controller is connected with different indoor units, some functions will be different.		

Table Instruction of Status Column Icon

No.	Symbols	Name	Instructions
1		Air *	Air status(indoor unit optional function)
2		Remove card	The card for access control is removed
3		Clean	Remind to clean the filter
4		Child lock	Child lock status
5		Error	There are errors for the unit
6		Health *	Health function (indoor unit optional function)
7		Defrosting	Defrosting status of outdoor unit
8		Main	Current wired controller connects the main indoor unit.
9		Power off memory	Memory status (when power recovered, indoor unit will resume previous setting status)
10		Absence	Absence is displayed when this function is turned on.
11		Quiet status	Quiet status (including quiet and auto quiet modes)
12		Energy-saving	Energy-saving status of indoor unit

No.	Symbols	Name	Instructions
13		Shield	Shielding status
14		Slave wired controller	Slave wired controller (address of wired controller is 02).
15		Sleep	Sleep status
16		Time	Timer status is displayed
17		X-fan	X-fan is displayed when this function is set.
18		Group control	One wired controller controls multiple indoor units.
19		Valid operation	It's displayed for valid operation
20		WiFi	WiFi status(If the wired controller has no WiFi function, it displays only when the unit connected to "G-Cloud").
21		Independent swing*	Independent swing status
22		Auto clean *	Auto clean status
23		Setback	Setback function status
24		Warning	Warning status
25	AUX	Aux. Heat*	Aux. Heat is available
26	AUX ON		Aux. Heat operating
NOTE: When wired controller is connected with different indoor units, some functions will be different.			



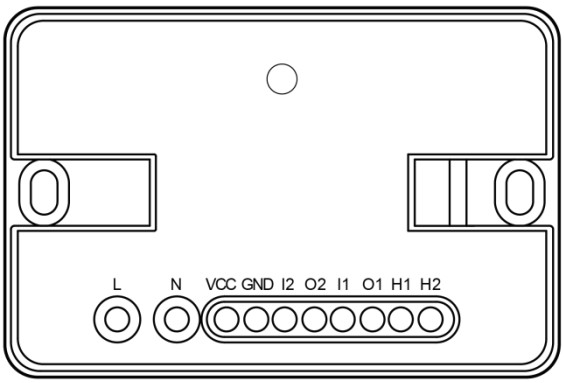
Button graphics

Table function instruction of buttons

No.	Name	Function
1	FAN	Switch fan speeds: auto, low, medium-low, medium, Medium-high and high
2	∧	(1) Set operation temperature for the indoor unit. (2) Move cursor. (3) Set and check parameters.
7	∨	
3	⏻/⮌	On/off button for turn on or turn off the unit; back button for return to previous page.
9	<	(1) Turn pages, and switch and select the target; (2) Move the cursor; (3) Set and check parameters.
4	>	
5	MODE	Switch operating modes: Auto, Cool, Dry, Fan, Heat, Floor, 3D Heat, etc.
6	MENU/OK	Select mode and confirm parameters.
8	SWING	Set the swing status of central air conditioners.

2.1.2 LE60-24/H1 Linkage Controller

The linkage controller can detect strong or weak electric access control signals as well as passive dry contact signals (window switches, fire alarms, etc.), achieving linkage control of access, windows, fire alarms, etc., to turn off the indoor units and restoring the original on/off state.



Exterior Sketch of Linkage Controller

2.1.2.1 Description of Ports

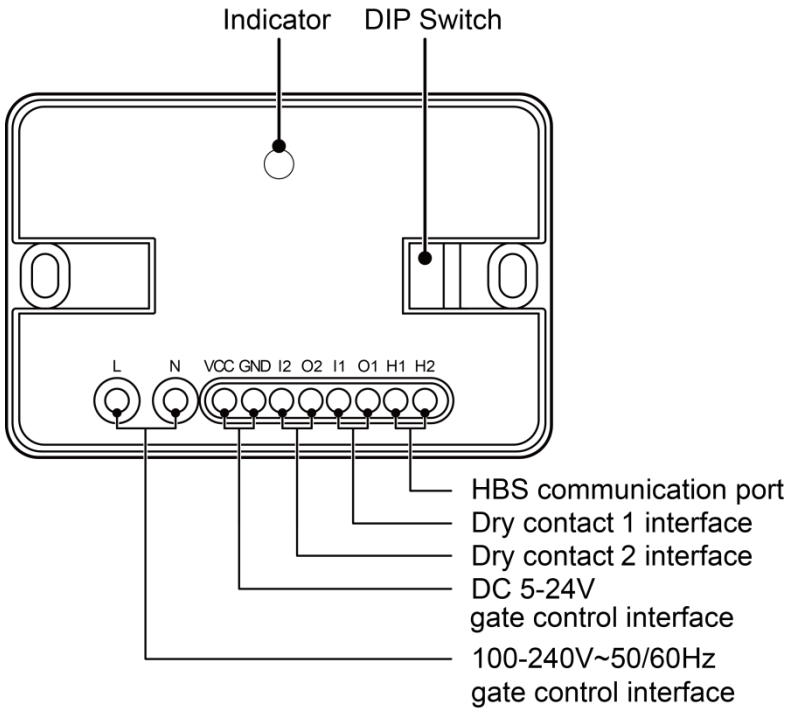


Diagram of Ports

HBS communication port (H1, H2): It is connected to the indoor unit of air conditioner through a 2-core communication wire. It is used for the indoor unit to supply power to linkage controller and communicate with linkage controller.

Dry contact interface (I1 and O1, I2 and O2): Connect the dry contact signal to the I1, O1 (or I2, O2) ports to achieve linkage controller of window switches, fire alarms, etc., for unpowered signals to turn off the indoor units and restoring the original on/off state. Attention to the following items:

(1) When any dry contact detects the following signal changes, linkage controller switches unit off.

1) When the DIP switch function corresponding to the dry contact is set to “Dry contact disconnected for switching unit off”, the dry contact signal is changed from connection to disconnection and lasts for 5 seconds.

2) When the DIP switch function corresponding to the dry contact is set to “Dry contact connected for switching unit off”, the dry contact signal is changed from disconnection to connection and lasts for 5 seconds.

(2) After the unit is switched off in above way, it can be turned on by other devices (such as a wired controller).

(3) After the signal recovers, the original startup or shutdown state of the unit will restore. However, if manual operation for unit startup is done before the signal recovers, the original startup or shutdown state of the unit will not restore after the signal recovers.

Gate control interface (N and L, VCC and GND): The linkage controller has gate control interface, which can be connected with gate control system to achieve access control card removal to turn off the indoor units or access control card insertion to restore the original on/off state. If you want to control indoor unit’s functions through gate control, make sure the 4th lever of the DIP switch is turned to the “1” side, then connect the gate-control terminal to the N and L port or the VCC and GND port. Attention to the following items:

1) The N and L port is the power supply interface of the 100-240V~50/60Hz gate control.
2) The VCC and GND port is the power supply interface of the DC 5-24V gate control.
3) Only one power input can be chosen between the 100-240V ~50/60Hz and the DC 5-24V.

2.1.2.2 LED Indicator

The following table is a detailed description about the LED indicator:

The LED indicator lights up	The linkage controller works.
The LED indicator blinks	The communication between the indoor unit and the linkage controller has malfunction.
The LED indicator lights off	The power supply of linkage controller is cut off.

2.1.2.3 DIP Switch

NOTE:

If the setting is changed, it will take effect after the linkage controller is re-energized.

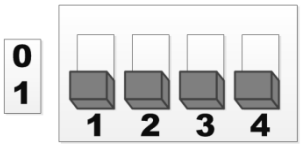


Diagram of DIP Switch

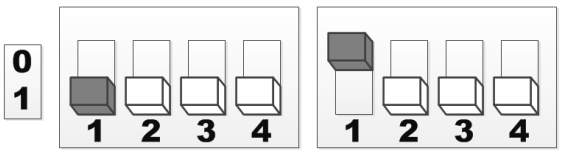
(1) The 1st Lever of DIP Switch –Master/Slave HBS Device Setting

The 1st lever of DIP switch is used for the setting of master/slave HBS device. The factory default setting is slave HBS device.

In an HBS network, if the linkage controller is the only device that is connected to indoor units, it should be set as the master HBS device. Turn the 1st lever of DIP switch to 0.

In an HBS network, if both the wired controller and linkage controller are connected to indoor units, the wired controller should be set as the master HBS device (i.e. master wired controller, please refer to the instruction manual of wired controller for the setting method). So the linkage controller should be set as the slave HBS device. Turn the 1st lever of DIP switch to 1.

Diagram of DIP Switch Setting for Master/Slave HBS Device:



Slave HBS Device | Master HBS Device

(2) The 2nd/3rd Lever of DIP Switch –Dry Contact 1/2 Signal Change Detection Setting

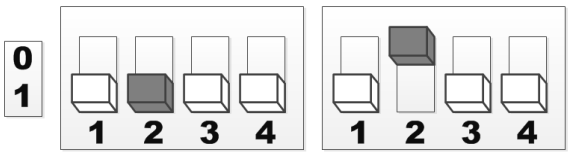
The 2nd/3rd lever of DIP switch is used for the setting of dry contact 1/2 signal change detection respectively. The factory default setting is “dry contact 1/2 disconnected for switching unit off”.

When dry contact 1(I1, O1) signal change detection shall be set to “Dry contact disconnected for switching unit off”, turn the 2nd lever of DIP switch to 1.

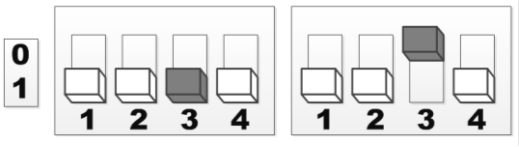
When dry contact 1 signal change detection shall be set to “Dry contact connected for switching unit off”, turn the 2nd lever of DIP switch to 0.

Similarly, the 3rd lever of DIP switch corresponds to dry contact 2(I2, O2) signal change detection. The setting method of dry contact 2 signal change detection is the same as that of dry contact 1 signal change detection.

Diagram of DIP Switch Setting for dry contact 1/2 signal change detection:



Dry contact 1 disconnected for switching unit off | Dry contact 1 connected for switching unit off



Dry contact 2 disconnected for switching unit off | Dry contact 2 connected for switching unit off

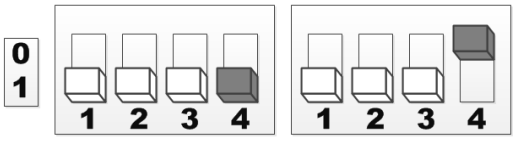
(3) The 4th Lever of DIP Switch –Gate Control System Setting

The 4th lever of DIP switch is used for the setting of Gate Control System. Factory default provided with Gate-control function.

If the gate-control system is involved, turn the 4th lever of DIP switch to 1.

If the gate-control system is not involved, turn the 4th lever of DIP switch to 0.

Diagram of DIP Switch Setting for Gate Control System:

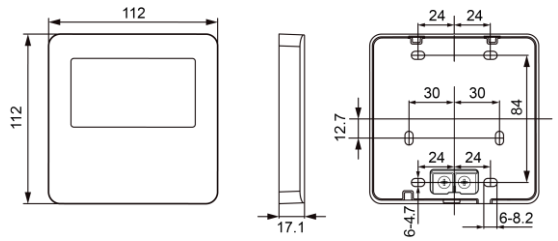


Gate-control system is connected | Gate-control system is not connected

2.2 Installation and Removal

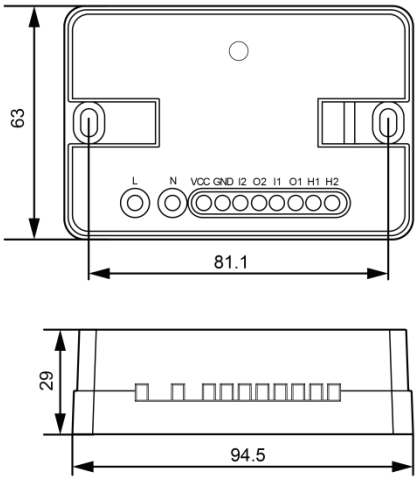
2.2.1 Installation Dimensions

Unit: mm(inch)



Dimension of XE7C-23/H

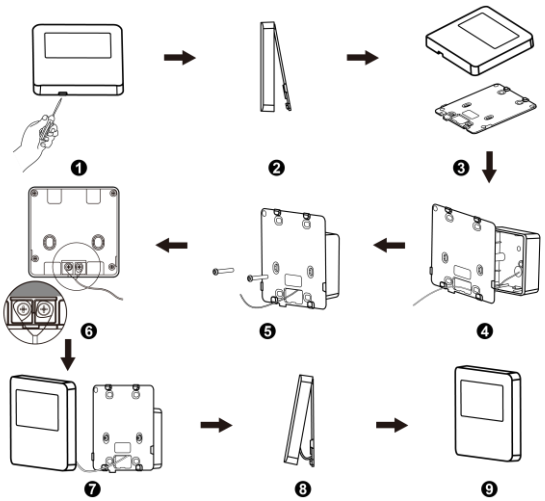
Unit:mm(inch)



Dimension of LE60-24/H1

2.2.2 Installation Method

(1) Wired Controller XE7C-23/H Installation Method:



Installation diagram for wired controller XE7C-23/H

The figure shows a simple installation course of wired controller, and the following points should be noted:

① Before installation, please cut off the power supply of indoor unit, it is not allowed to operate with power supply;

② Pull out the 2-core twisted pair inside the installation hole in the wall, and thread the wire through the hole in the back of soleplate of wired controller;

③ Stick the soleplate of wired controller on the wall, and use Self-tapping Screw ST3.9×25 MA or screw M4×25 to fix the soleplate with the installation hole of wall;

④ Connect the 2-core twisted pair to wiring terminal H1 and H2, and then tighten the screw;

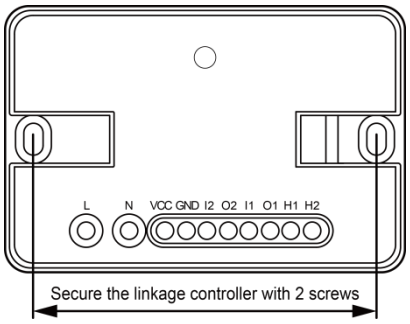
⑤ Arrange the wires in the back of panel, and then buckle the panel of wired controller with the soleplate of wired controller.

⚠WARNING

If caliber of the communication cord is too large, which causes difficulty in leading or sticking the cord according to above point 2 and point 4, strip some of the sheath of the communication cable to meet the installation requirement.

(2) Linkage Controller LE60-24/H1 Installation Method:

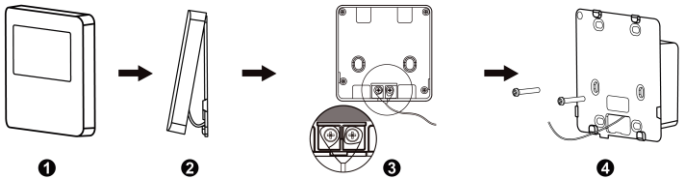
According to actual condition, install the linkage controller in an appropriate place indoors, and secure it with 2 screws. If necessary, push plastic expansion tubes into the wall before secure it with screws.



Installation Means

2.2.3 Removal Method

Wired Controller XE7C-23/H Disassembly diagram:

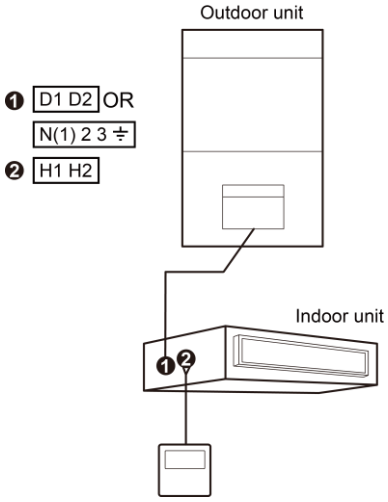


Disassembly diagram of wired controller XE7C-23/H

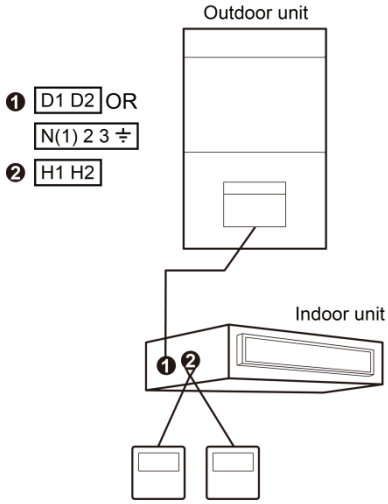
2.2.4 Connection of Communication Cord

There are 2 ways to connect wired controller with indoor units' network.

Each indoor unit has to be connected with a R32 safety system compatible wired controller. These wired controllers have implemented safety measures that will warn the user visually and audibly in case of a leak.



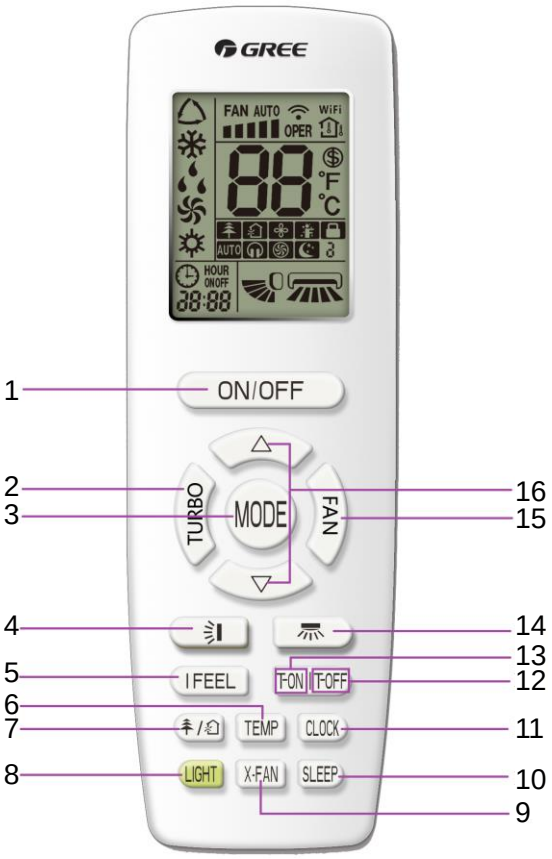
One wired controller control one indoor unit



Two wired controllers controls one indoor unit

3 Remote Controller

3.1 Remote Controller YAP1F



Button name and function introduction

No.	Button name	Function
1	ON/OFF	Turn on or turn off the unit
2	TURBO	Set turbo function
3	MODE	Set operation mode
4		Set up&down swing status
5	I FEEL	Set I FEEL function
6	TEMP	Switch temperature displaying type on the unit's display
7		Set health function and air function
8	LIGHT	Set light function
9	X-FAN	Set X-FAN function
10	SLEEP	Set sleep function
11	CLOCK	Set clock of the system
12	T-OFF	Set timer off function
13	T-ON	Set timer on function
14		Set left&right swing status
15	FAN	Set fan speed
16	△/▽	Set temperature and time

4 Introduction to Unit Functions

Function Application of IDUs

Indoor unit functions cover user operation functions and engineering application functions. For user operation functions, refer to operating instructions of the IDU, wired controller, and remote controller.

Engineering application functions include:

SN	Function Name
1	Main IDU query and settings
2	Indoor unit project number query and settings
3	Parameter View
4	User parameter settings
6	Project parameter settings

Engineering application functions can be operated through the IDU wired controller XE7C-23/H.

4.1 Engineering Application Functions Operated through the XE7C-23/H Wired Controller

4.1.1 Main IDU Settings

The main IDU can be set through the wired controller or remote controller. The methods for setting the main IDU through the wired controller are as follows:

Under on or off status, press “MENU/OK” button on the homepage to enter into the menu page.

Press “<” or “>” button to select “Set”, and then press “MENU/OK” button to enter into the set page.

Press “∧” or “∨” button to select “Parameter Setting” at the set page. Then press “MENU/OK” button to go into user parameter setting page.

After that, press “∧” or “∨” button to select the item “Main IDU”.

When selecting the parameter, press “<” or “>” button to select the setting value “Yes”. Press “MENU/OK” button to save corresponding setting item. If the setting can’t be confirmed, switching the item can restore the previous setting value.

If the main IDU setting is successful, "" icon will display on the homepage of wired controller .

4.1.2 Main IDU Display

For IDUs connected with wired controllers, "" on the wired controller connected with the main IDU will be on.

For IDUs embedded or connected with LED panels, the operation LED on the LED panel of the main IDU will blink three times.

NOTICE

After the main IDU is successfully set, stick the “MASTER” flag to the wired controller or unit panel for convenience of user operation and engineering maintenance. This flag is placed in the package bag of the ODU.

4.1.3 Project Number Query and Settings

(1) IDU Project Number View and Locating

Under on or off status, press “MENU/OK” button on the homepage to enter into the menu page.

Press “<” or “>” button to select “View”, and then press “MENU/OK” button to enter into the view

page.

Press "∧" or "∨" button to select "IDU Project No. View and Locating" at the view page. Then press "MENU/OK" button to enter into "IDU Project No. View and Locating" page to see IDU project number. Synchronously, the double-eight digital LED of the IDU embedded displays its own project number. If the current wired controller works in one-to-many mode, you can press the "<" or ">" button to switch indoor unit number, view each indoor unit corresponding project number.

NOTICE

It is normal if the buzzer of the IDU operated by the wired controller rings. The purpose of ringing the buzzer is to facilitate engineering commissioning personnel to locate the IDU, especially for the IDU without any LED panel because it cannot display its project number.

(2) View All IDU Project Number

Under on or off status, press "MENU/OK" button on the homepage to enter into the menu page.

Press "<" or ">" button to select "View", and then press "MENU/OK" button to enter into the view page.

Press "∧" or "∨" button to select "View All IDU Project No." at the view page. Then press "<" or ">" button to select turn on or turn off this function. And press "MENU/OK" button to confirm it. When turn on the "View All IDU Project No.", the status column on the homepage of each wired controller in the entire network displays the project number of the corresponding IDU. Synchronously, the double-eight digital LED of each IDU embedded or connected with an LED panel displays its own project number.

Method for quitting query: Press the "⏻/⮌" button on any wired controller in the network.

(3) Project number settings of IDU

Under on or off status, press "MENU/OK" button on the homepage to enter into the menu page.

Press "<" or ">" button to select "Set", and then press "MENU/OK" button to enter into the set page.

Press "∧" or "∨" button to select "Parameter Setting" at the set page. Then press "MENU/OK" button for 5s to go into parameter setting page.

Press "∧" or "∨" button to select "Project Parameter" at the parameter setting page, and then press "MENU/OK" button to enter into the project parameter setting page.

After that, press "∧" or "∨" button to select the item "IDU Project No. Setting". If the current wired controller works in one-to-many mode, you can press the "<" or ">" button to switch indoor unit number.

When selecting the parameter, press "MENU/OK" button to enter into the IDU project No. setting page. Then press "∧" or "∨" or "<" or ">" button to switch the project number. Hold it can switch it quickly. Press "MENU/OK" button to save this setting.

4.1.4 Parameter View

Parameters can be queried in power-on or power-off status.

Press "MENU/OK" button on the homepage to enter into the menu page.

Press "<" or ">" button to select "View", and then press "MENU/OK" button to enter into the view page.

Press "∧" or "∨" button to select "Parameter View" at the view page. Then press "MENU/OK" button to enter into parameter view page.

Press "∧" or "∨" button to switch the items.

When viewing the indoor unit, if the current wired controller works in one-to-many mode, press "<" or ">" button to switch indoor units. Corresponding indoor unit's parameters will be displayed on the page.

When viewing the outdoor unit, if there are multiple outdoor unit, press "<" or ">" button to switch outdoor units. Corresponding outdoor unit's parameters will be displayed on the page.

The parameter view list is as follows:

Parameter View List

Parameter Name	Range	Parameter Name	Range
Wired Controller's Address	1,2	No. of IDUs Wired to Controller	1~16
Main IDU's Project No.	0,1~255	Time Left to Clean Filter	0~416 days
Online IDUs of CAN1	1~100	CAN2 address	1~255
Max Distribution Ratio	110% 135% 150%	Cool & Heat Modes	Cool Only, Heat Only, Cool & Heat, Fan
IDU Error History	5 historical errors	Prior Operation	Yes, No
Indoor Temp	-30°C -139°C	Relative Humidity	0%~100%
Inlet Temp 1	-30°C -139°C	Outlet Temp 1	-30°C -139°C
Inlet Temp 2*	-30°C -139°C	Outlet Temp 2*	-30°C -139°C
IDU Capacity	IDU capacity and capacity after adjustment	IDU EXV Status	0~20
Fresh Air IDU Output Temp*	-30°C -139°C	Indoor Unit Fan Static Pressure	0~999
R32 Refrigerant Concentration	0%～100%	ODU Static Pressure	0~4
ODU Error History	5 historical errors		
The following parameters can only be viewed from the master wired controller, they cannot be viewed from the slave wired controller			
Parameter Name	Range	Parameter Name	Range
Unit Code	0~9, A~Z, a~z, -	Board Code	0~9, A~Z, a~z,-
Outdoor Temp	-30~139°C	Comp1 Operation Freq.	0~200Hz
Comp 2 Operation Freq.	0~200Hz	ODU Fan Operation Freq.	0~100Hz
High Pressure Sat. Temp	-40~70°C	Low Pressure Sat. Temp	-69~38°C
Comp1 Discharge Temp	-30~150°C	Comp 2 Discharge Temp.	-30~150°C
Comp 3 Discharge Temp	-30~150°C	Comp 4 Discharge Temp.	-30~150°C
Comp 5 Discharge Temp	-30~150°C	Comp 6 Discharge Temp.	-30~150°C
Comp 3 Operation Freq.	0~200Hz	ODU Heating EXV1	0~48
ODU Heating EXV2	0~48	Subcooler EXV	0~48
Defrost Temp	-30~139°C	Subcooler Liquid Temp	-30~139°C
Separator Outlet Temp	-30~139°C	Oil Return Temp	-30~139°C
Condenser Inlet Temp	-30~139°C	Condenser Outlet Temp	-30~139°C

NOTICE

① Under parameter viewing status, the signal from remote controller is invalid.

② When the parameter is invalid, it will display "--".

4.1.5 User Parameter Settings

User parameters can be set in power-on or power-off status.

Press "MENU/OK" button on the homepage to enter into the menu page.

Press "<" or ">" button to select "Set", and then press "MENU/OK" button to enter into the set page.

Press "∧" or "∨" button to select "Parameter Setting" at the set page. Then press "MENU/OK" button to go into user parameter setting page.

After that, press "∧" or "∨" button to switch the items. Hold it can switch it quickly.

When selecting the parameter, press "<" or ">" to switch the setting value. Press "MENU/OK" button to save corresponding setting items. If the setting can't be confirmed, switching the item can restore the

previous setting value.

The user parameter setting list is as follows:

User Parameter Setting List

Item	Settable range	Default	Remarks
Main Wired Controller	Yes, No	Yes	When it is set as no, this wired controller is slave wired controller. Status column of the homepage displays the icon of slave wired controller "". The wired controller can only activate the main wired controller. It does not have the function of setting parameters for other units.
Main IDU	Yes, No	No	Once it is activated, the current IDU is set to be the main IDU. When the setting is Yes, if the system mode priority is the master-slave mode, the status column in homepage will display the icon of main IDU ""; when the setting is off, master and slave status of the current IDU will not be changed.
Use Remote	Yes, No	Yes	When it is set as no, the wired controller cannot receive the remote control signal. It can only be operated with buttons.
Prior Operation	Yes, No	No	When the power supply is insufficient, it is allowed to turn on the designated IDU as preferential operation; other IDUs should be forced to be off.
High Ceiling Installation*	Yes, No	No	Only applicable to cassette type IDU
Link with Fresh Air IDU*	Yes, No	No	After setting the linkage function, the fresh air IDU will automatically turn on or turn off along with the on and off of general IDU. Meanwhile, users can manually turn on or turn off the unit. It only applicable to fresh air IDU.
PM2.5 Filter*	Yes, No	No	After it is successfully set, adjust the revolving speed to ensure the air volume is close to or the same as the previous air volume. It is only applicable to the unit with PM2.5 filter.
Temp and RH Correction Control	Yes: Temp and humidity correction control No: Ambient temperature control	Refer to indoor unit for the defaulted value	It can be set only when it's supported by the indoor unit.
Dry Mode Humidity Control	Yes: Humidity control No：Temperature control	No	If select "yes", set humidity is displayed under dry mode. Otherwise, set temperature is displayed. It can only be set when it's supported by the indoor unit.
Clear Filter Cleaning Time	Yes, No	No	—
Indoor Fan Static Pressure	1~9	5	—
No. of IDUs Wired to Controller	0: This function is unavailable 1-16: quantity of IDU	1	Set corresponding value according to the connected quantity of IDU.
Angle of Air-return Board*	Angle 1 Angle 2 Angle 3	Angle 2	Only applicable to the model with air-return plate.
Cooling temp of Auto Mode	17°C~30°C (63°F~86°F)	25°C (77°F)	Cooling temperature of auto mode – heating temperature of auto mode≥1°C.
Heating temp of Auto Mode	16°C ~29°C (61°F~84°F)	20°C (68°F)	
Resume After Inserting Card	Yes, No	Yes	When it is set as No, it will keep the status after inserting the gate control card. If it is at OFF status when pulling out the card, when inserting the card, it is still at OFF status.

Item	Settable range	Default	Remarks
Time for IDU Cold Air Prevention*	180s, 300s, 420s, 600s	180s	Cold air prevention time is the max waiting time from the time turning on the heating mode to the time blowing out the hot wind. The actual waiting time is related to the outdoor ambient temperature. If there is cold air after turning on the heating mode in the actual operation, please consult the professional person to adjust this parameter.
Set Temp of RH Control Mode	10°C ~30°C (50°F~86°F)	16°C (61°F)	Note: It's only applicable for the units whose dry mode is with humidity control function.
Auto Clean Mode	01: Normal 02: Quick 03: Deep	1	Note: Only applicable to the unit with auto clean function. If "0" is displayed, this function is not available for this unit.
Cooling Temp of Fresh Air IDU*	16°C ~30°C (61°F~86°F)	18°C (64°F)	Only applicable to fresh air IDU.
Heating Temp of Fresh Air IDU*	16°C ~30°C (61°F~86°F)	22°C (71°F)	Only applicable to fresh air IDU.
Setback	Yes, No	No	—
Upper Temp Limit of Setback	20~30°C (68~86°F)	26°C (79°F)	When temperature unit is °C, temperature upper limit – temperature lower limit ≥ 4°C; When temperature unit is °F, temperature upper limit – temperature lower limit ≥7°F.
Lower Temp Limit of Setback	16~26°C (61~79°F)	20°C (68°F)	
Auto Fan Setting	0: Normal Auto Wind 1: Heating Wind Sensing Wind	0	—
Enable Aux. Heat*	Yes, No	Yes	When Aux heating is available, the home status bar displays the "AUX" icon; when Aux heating is running, the home status bar displays the "AUX ON" icon. Note:This feature is only applicable to high static pressure air handler indoor units.
Setpoint-Space Temperature Differential for Aux. Heat*	1~10	3	When the temperature difference between the ambient temperature and the set temperature exceeds the opening temperature difference, AUX heating is allowed to start. Note:This feature is only applicable to high static pressure air handler indoor units.
Aux. Heat ON Timer *	0min~60mins	2mins	After the heat pump operation meets the start time, AUX heating is allowed to turn on. Note:This feature is only applicable to high static pressure air handler indoor units.
Satisfy Room Temperature with AUX*	Yes, No	No	Note:This feature is only applicable to high static pressure air handler indoor units.

NOTICE

In parameter setting status, signals of the remote controller are invalid.

4.1.6 Project Parameter Settings

Engineering parameters can be set in power-on or power-off status.

Press "MENU/OK" button on the homepage to enter into the menu page.

Press "<" or ">" button to select "Set", and then press "MENU/OK" button to enter into the set page.

Press "∧" or "∨" button to select "Parameter Setting" at the set page. Then press "MENU/OK" button

for 5s to go into parameter setting page.

Press "∧" or "∨" button to select "Project Parameter" at the parameter setting page, and then press "MENU/OK" button to enter into the project parameter setting page.

After that, press "∧" or "∨" button to switch the items. Hold it can switch it quickly.

When selecting the parameter, press "<" or ">" to switch the setting value. Press "MENU/OK" button to save corresponding setting items. If the setting can't be confirmed, switching the item can restore the previous setting value.

The project parameter setting list is as follows:

Project Parameter Setting List

Item	Settable range	Default	Remarks
Memory	Yes、No	Yes	No: standby after power-down recovery Yes: restoring the original status after power-down recovery
System Energy-Saving	Yes、No	No	—
Constant Air Volume Debugging*	Yes、No	No	—
IDU Project No. Setting	1-255	—	When the number of online indoor units is greater than 1, press "< " or "> " to switch indoor units, press the "MENU/OK" key to enter the project number setting of the selected indoor unit: press "< " or "> " to increase/decrease the project number by the unit digit. Press "< " or "> " to increase/decrease the project number by the tenth digit.
Prevent Heat Accumulation	Off、10s、20s、30s、40s、50s、60s	Off	It indicates the number of seconds for enabling the low-level fan every 15min.
ODU Quiet Mode	Off、1~12	—	Top discharge outdoor unit defaults to Off, side discharge outdoor unit defaults to 12
Capacity Upper Limit	100%、90%、80%	100%	—
IDU Capacity Adjustment	-40、-30、-20、-10、0、10、20、30、40	0	—
Min Pulse of EXV	Auto、1~500	Auto	Press "<" or ">" to adjust the minimum opening degree. Press and hold "<" or ">" for 5 seconds, the minimum opening degree will increase or decrease by single digit. Press and hold for 5 to 10 seconds, the minimum opening degree will increase or decrease by ten digits. After the default minimum opening degree for heating breakdown is manually modified, the opening degree remains unchanged upon heating breakdown.
Max Defrosting Time	10mins、15mins、20mins	15mins	—
Rapid Defrost Mode*	Standard、Rapid1、Rapid2	Standard	—
Force Defrost	Yes、No	No	—

Item	Settable range	Default	Remarks
Defrosting Cycle K1	40mins、50mins、60mins	50mins	—
Amb Temp Sensor Location	1、2、3、4	3	1：Return Air； 2：Wired Controller； 3：Cool:Return Air, Heat:Wired Controller； 4：Cool:Wired Controller, Heat:Return Air
Amb Temp Sensor Cool Revise	-15℃~+15℃	Temperature sensor of unit: 0°C; temperature sensor of wired controller: 0°C	—
Amb Temp Sensor Heat Revise	-15℃~+15℃	Temperature sensor of unit: -2°C; temperature sensor of wired	—
AHRI IDU Fan Speed*	100~1800	—	—
Heating to Temp Fan Status	Stop、Breeze	Breeze	—
Display Ambient Temp on Homepage	Yes、No	No	—
Function Setting of Lifting Panel*	On、Off	Off	Only applicable for 360°air discharge cassette indoor unit.
Cooling to Temp Fan Setting*	Yes、No	No	This feature is only applicable to the indoor units that have this function set.
IDU High and Low Level Status*	None、High、Low	None	—
Control Method of Constant Temp Mode*	Mode1、Mode2	Mode1	—
Fresh Air IDU Static Pressure*	1~13	8	Only applicable to DC Fresh Air Indoor Unit.
Lowest Air Outlet Temperature Can Be Set*	8℃~16℃	16℃	This setting can only be done when the indoor unit is a fresh air processing indoor unit.
Delayed Startup of Indoor Fan Under Cooling Mode*	0s、20s、40s、60s、80s	0s	This feature is only applicable to the indoor units that have this function set.
Locked Status of Refrigerant Leakage	0、1	0	Default 0, indoor unit reports refrigerant leak fault, automatically changes to 1 after meeting the unit requirements, automatically changes to 0 after indoor unit refrigerant leak fault recovery. Manually set from 1 to 0, clear the indoor unit's refrigerant leak fault.
Item with "*" are reserved parameter.			

NOTICE

In parameter setting status, signals of the remote controller are invalid.

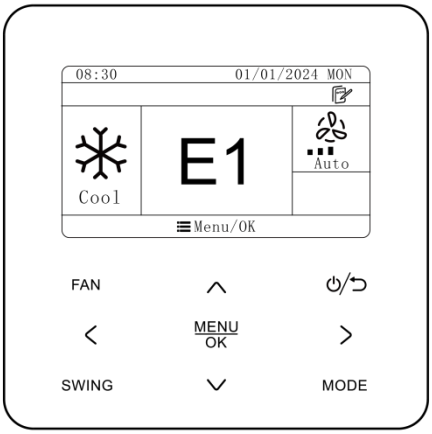
4.1.7 Error Display

When there is error during operation, the temperature display zone on the wired controller will show the error code. If several errors happen at the same time, error codes will show on the display repeatedly.

NOTICE

If error occurs, please turn off the unit and ask for professionals to repair it.

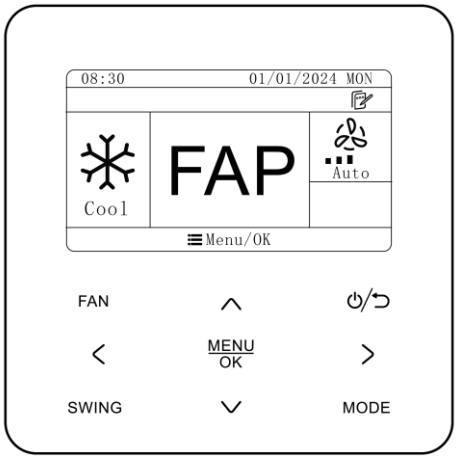
The following figure shows the display of outdoor unit high pressure protection when unit is on.



Display of Outdoor Unit High Pressure Protection

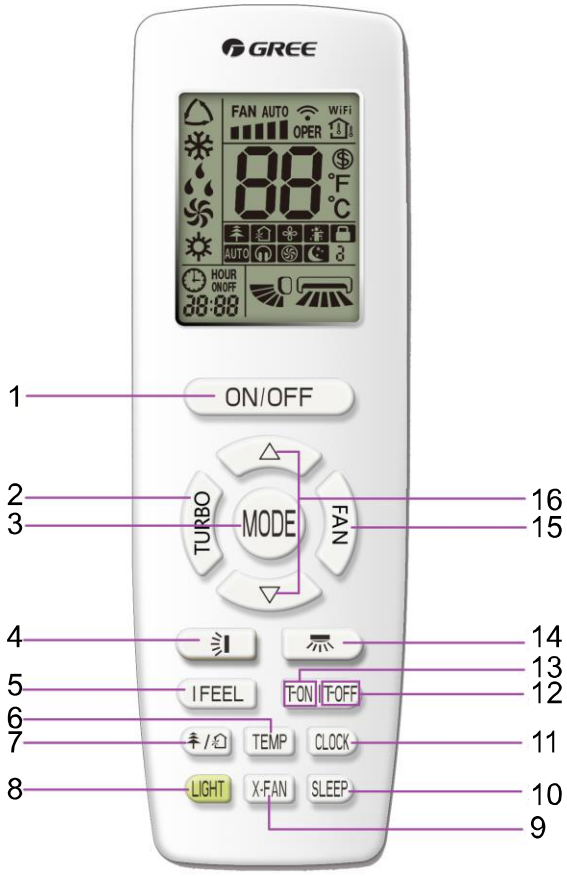
NOTICE

When the wired controller is connected with a Fresh Air Indoor Unit, fresh air indoor unit code “FAP” will be displayed as shown below. Setting temperature won’t be displayed and can’t be adjusted via “∧” or “∨” button. The air outlet temperature in cooling or heating can only be set in the parameter setting status.



4.2 Engineering Application Functions Operated through the YAP1F Remote Controller

4.2.1 The method for setting the master IDU through the YAP1F remote controller is as follows



No.	Button name	Function
1	ON/OFF	Turn on or turn off the unit
2	TURBO	Set turbo function
3	MODE	Set operation mode
4		Set up&down swing status
5	I FEEL	Set I FEEL function
6	TEMP	Switch temperature displaying type on the unit's display
7		Set health function and air function
8	LIGHT	Set light function
9	X-FAN	Set X-FAN function
10	SLEEP	Set sleep function
11	CLOCK	Set clock of the system
12	T-OFF	Set timer off function
13	T-ON	Set timer on function
14		Set left&right swing status
15	FAN	Set fan speed
16	△/▽	Set temperature and time

For details about the above figures, refer to the instructions 66174100016.

Perform settings by pressing "▲" and "▼" in air supply mode:

(1) Set the temperature to 30°C.

(2) Press "▼" and then "▲" in five seconds. Repeat this operation for three times.

After successful settings, "UC" is displayed on the receiving indicator panel of the remote controller for five seconds and "↖" is displayed on the wired controller.

4.2.2 IDU Project Number Query by Remote Controller YAP1F

(1) Query method for project number of single IDU:

Enter query:

Under fan mode, set temperature in 16°C, press "Light" button for 5 times continuously within 5 seconds and then the IDU light board will display its project number.

Exit query:

1) After entering query status, press "Light" button for 5 times continuously within 5 seconds to exit query status.
2) After 30min, it will exit query status automatically and display normal status.

(2) Query method for project numbers of all IDUs in a single system:

Enter query:

Under fan mode, set temperature in 30°C, press "Light" button for 5 times continuously within 5 seconds and then the light boards of all indoor units will display their project numbers respectively.

Exit query:

1) After entering query status, press "Light" button for 5 times continuously within 5 seconds to exit query status.
2) After 30min, it will exit query status automatically and display normal status.

4.2.3 Common Remote controller recovery refrigerant leakage fault

In the startup and Fan modes, the Remote controller shall operate the light key for 5 consecutive times within 5 seconds at the interface with the set temperature of 20 ℃(68℉) to clear the refrigerant leakage fault of the internal unit.

INSTALLATION

CHAPTER 3 INSTALLATION

1 Engineering Installation Preparation and Notice

1.1 Installation Notice

All phases of this installation must conform to NATIONAL, STATE AND LOCAL CODES. If it is required for additional information, please contact your local distributor.

Personnel and property safety are highly concerned during the entire installation process. Installation implementation must abide by relevant national safety regulations to ensure personnel and property safety.

All personnel involved in the installation must attend safety education courses and pass corresponding safety examinations before installation. Only qualified personnel can attend the installation. Relevant personnel must be held responsible for any violation of the regulation.

1.2 Installation Key Points and Importance

VRF air conditioning systems use refrigerant, instead of other agent, to directly evaporate to carry out the system heat. High level of pipe cleanness and dryness is required in the system. Since various pipes need to be prepared and laid out onsite, carelessness or maloperation during installation may leave impurities, water, or dust inside refrigerant pipes. If the design fails to meet the requirement, various problems may occur in the system or even lead to system breakdown.

Problems that usually occur during installation are as follows:

No.	Installation Problem	Possible Consequence
1	Dust or impurities enter into the refrigeration system.	Pipes are more likely to be blocked; air conditioning performance is reduced; compressor wear is increased or even hinder the normal operation of the system and burn the compressor.
2	Nitrogen is not filled into the refrigerant pipe or insufficient Nitrogen is filled before welding.	Pipes are more likely to be blocked; air conditioning performance is reduced; compressor wear is increased or even hinder the normal operation of the system and burn the compressor.
3	The vacuum degree in the refrigerant pipe is insufficient.	The refrigeration performance is reduced. The system fails to keep normal operation due to frequent protection measures. When the problem getting serious, compressor and other major components can be damaged.
4	Water enters into the refrigeration system.	Copper plating may appear on the compressor and reduce the compressor efficiency with abnormal noise generated; failures may occur in the system due to ice plug.
5	The refrigerant pipe specifications do not meet the configuration requirements.	Smaller configuration specifications can increase the system pipe resistance and affect the cooling performance; larger configuration specifications are waste of materials and can also reduce the cooling performance.
6	Refrigerant pipe is blocked.	The cooling performance is reduced; in certain cases, it may cause long-term compressor operating under overheat conditions; the lubricating effect can be affected and the compressor may be burnt if impurities were mixed with the lubricating oil.
7	Refrigerant pipe exceeds the limit.	The loss in pipe is considerable and the unit energy efficiency decreases, which are harmful for long-term running of the system.
8	Incorrect amount of refrigerant is filled.	The system cannot correctly control the flow allocation; the compressor may be operating under over-heating environment or running when the refrigerant flows back to the compressor.
9	The refrigerant pipe leaks.	Insufficient refrigerant circulating in the system decreases the cooling performance of the air conditioner. Long-term operation under such circumstance may cause an overheating compressor or even damage the compressor.

No.	Installation Problem	Possible Consequence
10	Water drainage from the condensate water pipe is not smooth.	Residual water in IDUs can affect the normal operation of the system. The possible water leakage can damage the IDU's decoration.
11	The ratio of slop for condensate water pipe is insufficient or the condensate water pipe is incorrectly connected.	Reverse slop or inconsistent connection of condensate water pipe can hinder the smooth drainage and cause leakage of the IDU.
12	The air channel is improperly fixed.	The air channel will deform; vibration and noise occur during unit operating.
13	The guide vane of air channel is not reasonably manufactured.	Uneven air quantity allocation reduces the overall performance of the air conditioner.
14	The refrigerant pipe or condensate water pipe does not meet the insulation requirement.	Water can easily condensate and drip to damage the indoor decoration, or even trigger the protection mode of system due to overheating operation.
15	The installation space for IDU is insufficient.	Since there is a lack of space for maintenance and checking, indoor decoration might need to be damaged during such operation.
16	The IDU or the location of the air outlet or return air inlet is not designed reasonably.	The air outlet or return air inlet may be short-circuited, thus affecting the air conditioning performance.
17	The ODU is improperly installed.	The ODU is difficult to be maintained; unit exhaust is not smooth, which reduces the heat exchanging performance or even prevent the system from normal operation; in addition, the cold and hot air for heat exchange and the noise may annoy people in surrounding areas.
18	Power cables are incorrectly provided.	Unit components may be damaged and potential safety hazard may occur.
19	Control communication cables are incorrectly provided or improperly connected.	The normal communication in the system fails or the control over IDUs and ODUs turn in a mess.
20	Control communication cables are not properly protected.	The communication cables are short-circuited or disconnected, and the unit cannot be started up due to communication failure.

Understand the special requirement (if any) for unit installation before implementation to ensure installation quality. Relevant installers must have corresponding engineering construction qualifications.

Special type operators involved in the engineering implementation, such as welders, electricians, and refrigeration mechanics must have relevant operating licenses and are accredited with vocational qualification certification.

2 Installation Materials Selection

The materials, equipment and instruments used during air conditioning engineering construction must have certifications and test reports. Products with fireproof requirements must be provided with fireproof inspection certificates and must meet national and relevant compulsory standards. If environmentally-friendly materials are to be used as required by customers, all such materials must meet national environmental protection requirement and be provided with relevant certificates.

(1) Only auxiliary devices approved by the appliance manufacturer or declared suitable with the refrigerant shall be installed in connecting ductwork;

(2) Do NOT install operating ignition sources (example: open flames, an operating gas appliance or

an operating electric heater) in the duct work.

(3) Air inlet AND outlet are connected directly to the same room by ducting. Do NOT use spaces such as a false ceiling as a duct for the air inlet or outlet.

(4) No auxiliary devices, which may be a potential ignition source, are installed in the duct work (example: hot surfaces with a temperature exceeding 700° C and electric switching device);

2.1 Refrigerant Piping

(1) Material requirement: Dephosphorization drawing copper pipe for air conditioners.

(2) Appearance requirement: The inner and outer surface of pipe should be smooth without pinhole, crack, peeling, blister, inclusion, copper powder, carbon deposition, rust, dirt or severe oxide film, and without obvious scratch, pit, spot and other defects.

(3) Test report: Certifications and quality test reports must be provided.

(4) The tensile strength must be at least 240 kgf/mm².

(5) After the inner part of the copper pipe is cleaned and dried, the inlet and outlet must be sealed tightly by using pipe caps, plugs or adhesive tapes.

2.2 Condensate Water Pipe

(1) Pipes that can be used for air conditioner drainage include: water supplying UPVC pipe, PP-R pipe, PP-C pipe, and HDG steel pipe;

(2) All relevant certificates and quality test reports are provided.

(3) Requirements for specifications and wall thickness.

Water supplying UPVC pipe:

Φ32mm(1-1/4inch)×2mm(1/16inch), Φ40mm(1-3/4inch)×2mm(1/16inch),

Φ50mm(1-15/16inch)×2.5mm(1/8inch).

HDG steel pipe:

Φ25mm(1inch)×3.25mm(1/8inch), Φ32mm(1-1/4inch)×3.25mm(1/8inch).

Φ40mm(1-3/4inch)×3.5mm(1/8inch), Φ50mm(1-15/16inch)×3.5mm(1/8inch).

2.3 Insulation Material

(1) Rubber foam insulation material.

(2) Flame retardancy level: B1 or higher.

(3) Refractoriness: at least 120°C (248°F).

(4) The insulation thickness of condensate water pipe: at least 10mm (3/8inch).

(5) When the diameter of copper pipe is equal to or greater than Φ15.9mm(5/8inch), the thickness of insulation material should be at least 20mm(3/4inch); when the diameter of copper pipe is less than 15.9mm(5/8inch), the thickness of insulation material should be at least 15 mm(5/8inch).

2.4 Communication Cable and Control Cable

NOTICE For air conditioning units installed in places with strong electromagnetic interference, shielded wire must be used as the communication cables of the IDU and wired controller, and shielded twisted pairs must be used as the communication cables between IDUs and between the IDU and ODU.

Communication cable selection for ODU and IDUs

Material Type	Total Length L (m) of Communication Cable between Indoor Unit and Indoor (Outdoor) Unit	Wire size (mm^2/AWG)	Material Standard	Remarks
Light/Ordinary polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤1000m(L≤3280-5/6feet)	≥2×0.75 (2×AWG 18)	IEC 60227-5	(1) If the wire diameter is enlarged to 2×1 mm2 (2×AWG16), the total communication line length can reach 1500 m (4921-1/4feet.). The average length of communication line between units is 12.5 m. (2) The cord shall be Circular cord (the cores shall be twisted together). (3) If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

Communication cable selection for IDU and wired controller

Material type	Total length of communication line between indoor unit and wired controller	Wire size(mm^2/AWG)	Material Standard	Remarks
Light/Ordinary polyvinyl chloride sheathed cord. (60227 IEC 52 /60227 IEC 53)	L≤100m(L≤328feet)	2×0.75 ~2×1.25 (2×AWG18 ~2×AWG16)	IEC 60227-5	(1) Total length of communication line can't exceed 100m(328feet.). The average length of the communication line between indoor unit and wired controller is 15m. (2) The cord shall be Circular cord (the cores shall be twisted together). (3) If unit is installed in places with intense magnetic field or strong interference, it is necessary to use shielded wire.

2.5 Power Cable

Only copper conductors can be used as power cables. The copper conductors must meet relevant national standard and satisfy the carrying capacity of unit.

2.6 Hanger Rod and Support

(1) Hanger rod: M8 or M10.

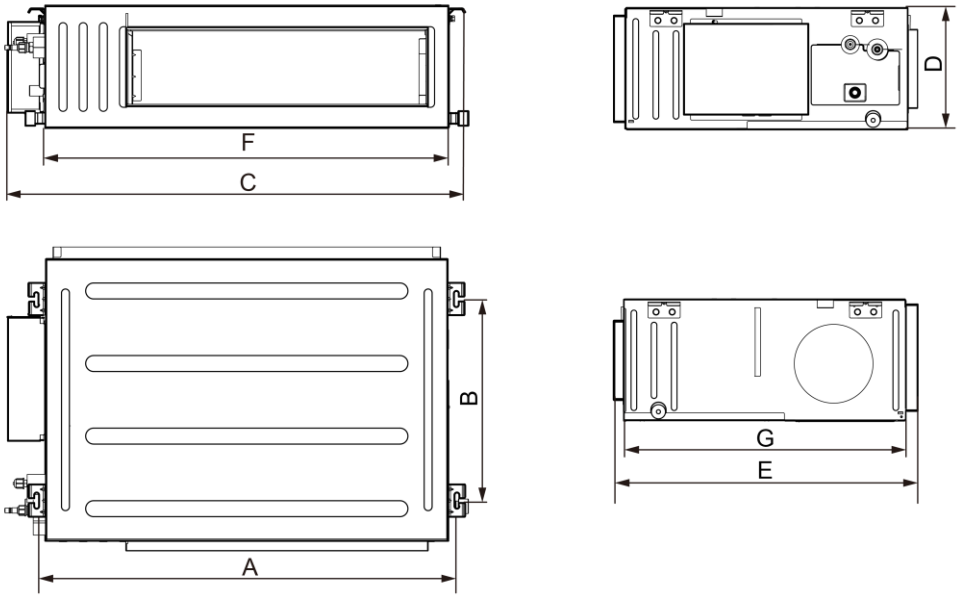
(2) U-steel: 14# or above.

(3) Angle steel: 30mm (1-1/6inch)×30mm (1-1/6inch)×3mm (1/8inch) or above.
Round steel: Φ10mm (4/10inch) or above.

3 Installation of Indoor Unit

3.1Installation of High Static Pressure Duct Type Indoor Unit

3.1.1 Outline and Installation Dimension



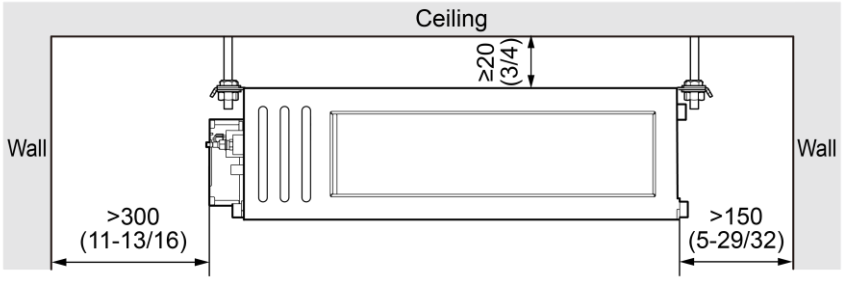
The following table lists the detailed dimensions.

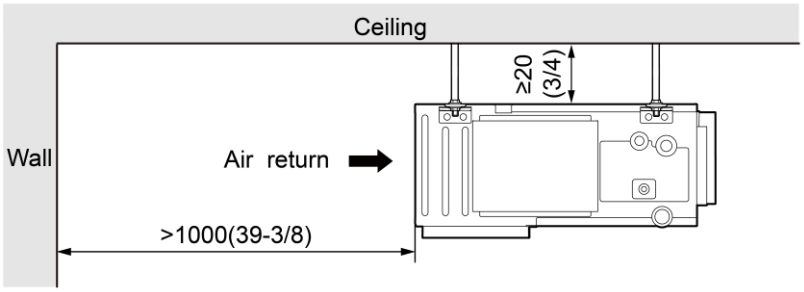
Unit: mm(inch)

Model	A	B	C	D	E	F	G
GMV-ND07PHS/NhD-T(U) GMV-ND09PHS/NhD-T(U) GMV-ND12PHS/NhD-T(U) GMV-ND15PHS/NhD-T(U) GMV-ND18PHS/NhD-T(U) GMV-ND24PHS/NhD-T(U)	1040 (40-15/16)	500 (19-11/16)	1130 (44-1/2)	300 (11-13/16)	754 (29-11/16)	1000 (39-3/8)	700 (27-9/16)
GMV-ND30PHS/NhD-T(U) GMV-ND36PHS/NhD-T(U) GMV-ND42PHS/NhD-T(U) GMV-ND48PHS/NhD-T(U) GMV-ND54PHS/NhD-T(U)	1440 (56-11/16)	500 (19-11/16)	1540 (62-5/8)	300 (11-13/16)	754 (29-11/16)	1400 (55-1/8)	700 (27-9/16)

3.1.2 Installation Space

Unit: mm(inch)



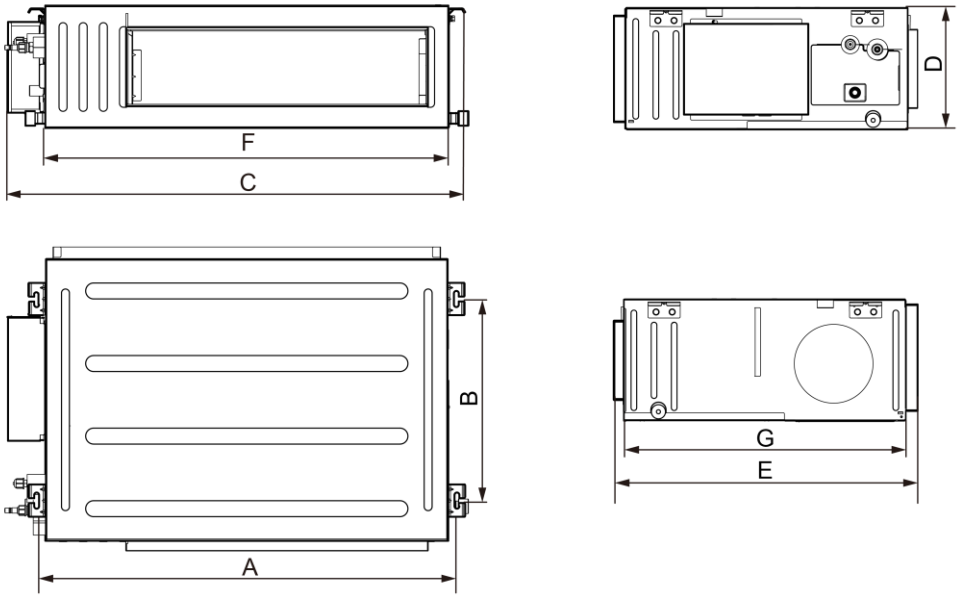


3.1.3 Installation Notice

- The unit shall be installed by the professional personnel according to this installation instruction to ensure proper use.
- Please contact the local Gree appointed service center before installation. Any malfunction caused by the unit that is not installed by the Gree appointed service center would probably not be dealt with on time because of the inconvenience of the business contact.
- It should be guided under the professional personnel when the air conditioner unit is moved to other place.
- Installation of the unit must be in accordance with National Electric Codes and local regulations.
- Improper installation will affect unit’s performance, so do not install the unit by yourself. Please contact local dealer to arrange professional technicians for the installation.
- Do not connect power until all installation work is finished.
- If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- Air duct or grille fixed with screws must be installed at the air inlet or the air outlet of duct type unit. After installation, please make sure that human's hands are unable to touch inner parts of the unit. Installation and maintenance of the unit must be carried out by professionals.

3.2 Installation of Fresh Air Processing Indoor Unit

3.2.1 Outline and Installation Dimension



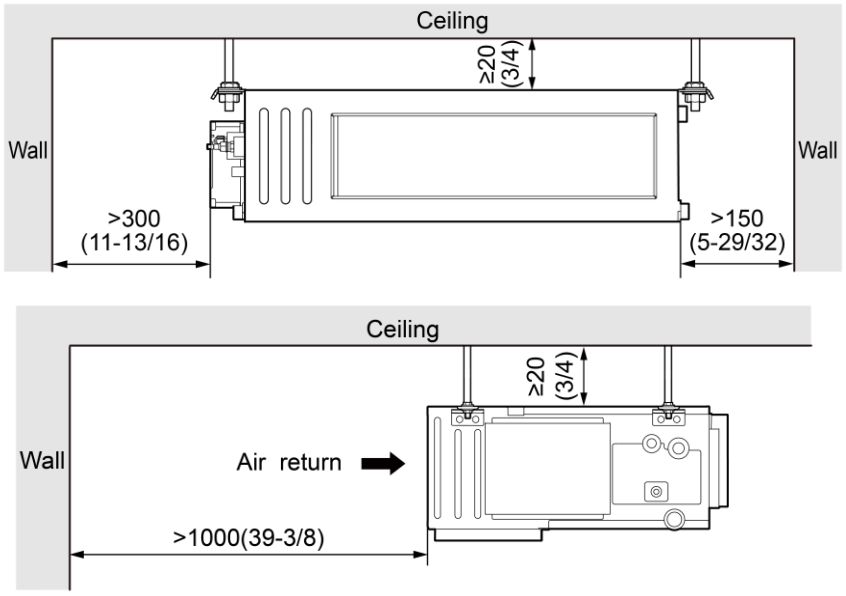
The following table lists the detailed dimensions.

Unit: mm(inch)

Model	A	B	C	D	E	F	G
GMV-NDX42P/NhD-T(U) GMV-NDX48P/NhD-T(U) GMV-NDX54P/NhD-T(U)	1440 (56-11/16)	500 (19-11/16)	1540 (62-5/8)	300 (11-13/16)	754 (29-11/16)	1400 (55-1/8)	700 (27-9/16)

3.2.2 Installation Space

Unit: mm(inch)



3.2.3 Installation Notice

(1) Installation of the unit must be in accordance with National Electric Codes and local safety regulations.

(2) Improper installation will affect unit's performance, so do not install the unit by yourself. Please

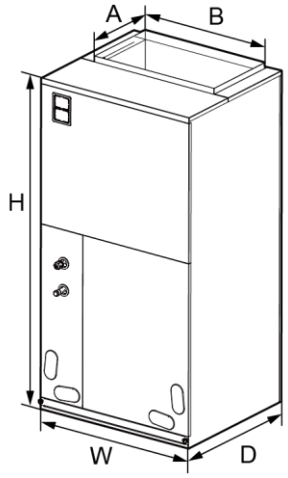
contact local dealer to arrange professional technicians for the installation.

(3) Do not connect power until all installation work is finished.

(4) Air duct or grille fixed with screws must be installed at the air inlet or the air outlet of duct type unit. After installation, please make sure that human's hands are unable to touch inner parts of the unit. Installation and maintenance of the unit must be carried out by professionals.

3.3 Installation of Air Handler Type Indoor Unit

3.3.1 Outline and Installation Dimension



The following table lists the detailed dimensions.

Unit: mm(inch)

Model	A	B	C	D	E
GMV-ND60A/NhB-T(U) GMV-ND54A/NhB-T(U) GMV-ND48A/NhB-T(U)	630 (24-13/16)	540 (21-1/4)	1320 (51-15/16)	295 (11-5/8)	508 (20)
GMV-ND42A/NhB-T(U) GMV-ND36A/NhB-T(U)	540 (21-1/4)	540 (21-1/4)	1224 (48-1/4)	295 (11-5/8)	508 (20)
GMV-ND30A/NhB-T(U) GMV-ND24A/NhB-T(U) GMV-ND18A/NhB-T(U) GMV-ND12A/NhB-T(U)	540 (21-1/4)	460 (18-1/8)	1105 (43-1/2)	295 (11-5/8)	508 (20)

3.3.2 Installation Notice

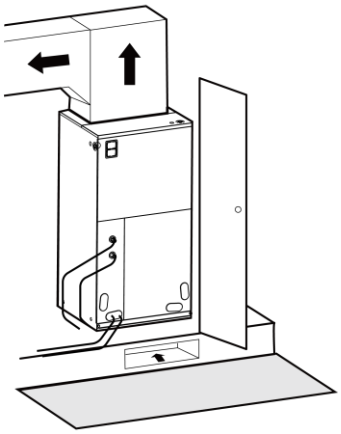
When installing the air handler, take consideration to minimize the length of refrigerant tubing as much as possible. Do not install the air handler in a location either above or below the condenser that violates the instructions provided with the condenser. Service clearance is to take precedence. Allow a minimum of 24” in front of the unit for service clearance. When installing in an area directly over a finished ceiling (such as an attic), an emergency drain pan is required directly under the unit. See local and state codes for requirements. When installing this unit in an area that may become wet, elevate the unit with a sturdy, non-porous material. In installations that may lead to physical damage (i.e. a garage) it is advised to install a protective barrier to prevent such damage.

This air handler is designed for a complete supply and return ductwork system. These duct type indoor units are used to supply conditioned air to one zone. Do not operate this product without all ductwork attached.

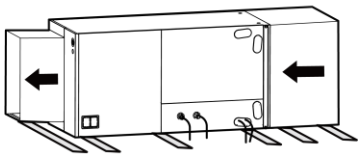
Based upon the actual conditions, if air handler is installed as type (A), the air handler should be

concealed in a specific room or space and make sure the air handler is not accessible to the general public.

Based upon the actual conditions, if air handler is installed as type (B), make sure that there is enough space for care and maintenance and the height between the air handler and ground is above 2500mm. And the air handler is not accessible to the general public.



Type (A)



Type (B)

3.3.3 Electric Heater

(1) The air handlers listed in this manual do not have factory installed electric heater. Electric heater is available as an accessory. Please refer to installation instructions provided with heater kit for the correct installation procedure.

(2) Refer to the “installing electric heater” section of this manual and the instructions provided with the heater kit for the correct installation procedure.

(3) The electrical characteristics of the air handler, the electric heater kit, and the supply power should be identical. This air handler does not have factory installed electric heater. Electric heater is available as an accessory. If installing this option, the only heater kits that can be used are the series as indicated below. It is forbidden to use the electric heater other than those recommended.

(4) E-HEAT mode setting method: under off status, press “⏻/⮌” and “MENU/OK” button for 5s to turn on or turn off E-heat mode. After that, the wired controller control pop-up box shows "Enable Setting E-Heat Mode" or "Disable Setting E-Heat Mode" for 3s, and indoor unit can set “Electric heating mode”. When E-HEAT mode has been set and indoor unit operates under heating mode, if outdoor unit stops operation because of error, indoor unit will switch to operate under electric heating mode.

(5) After the electric heater is shutdown, the fan of indoor unit will delay for a few minutes and then shut down so that the indoor unit can blow the waste heat and relieve the heat accumulation in the air duct.

(6) During installation and debugging, pay attention to verify the switch sequence of electric heater and fan, ensure the fan must be turned on when electric heater operation and ensure the electric heater is turned off before the fan to avoid unsafe.

3.3.3.1 Electric heater kits available

Model	Electric heater	Description	Manufacturer of electric heater
GMV-ND12A/NhB-T(U) GMV-ND18A/NhB-T(U) GMV-ND24A/NhB-T(U) GMV-ND30A/NhB-T(U)	LYQ-08-A，21-4227-01 LYQ-08-C，21-4216-03	Circuit breaker, 5 kW、10 kW electric heater	TUTCO Zhenjiang Dongfang
GMV-ND36A/NhB-T(U) GMV-ND42A/NhB-T(U)	LYQ-08-A，21-4227-01 LYQ-08-C，21-4216-03 LYQ-08-D，21-4217-01	Circuit breaker, 5 kW、10 kW、15 kW electric heater	
GMV-ND48A/NhB-T(U) GMV-ND54A/NhB-T(U) GMV-ND60A/NhB-T(U)	LYQ-08-A，21-4227-01 LYQ-08-C，21-4216-03 LYQ-08-D，21-4217-01 LYQ-08-E，21-4228-01	Circuit breaker, 5 kW、10 kW、15 kW、20 kW electric heater	

3.3.3.2 Electric heater kits installation

(1) Ensure that all power supply is disconnected prior to installing the heater kit.

(2) A means of strain relief and conductor protection must be provided at the supply wire entrance into cabinet.

(3) Use copper conductors only.

(4) Installation must follow national electric code and other applicable codes.

(5) If this appliance is installed in an enclosed area such as a garage or utility room with any carbon monoxide producing appliance, ensure the area is properly ventilated.

1) Refer to the Table for appropriate heater kit.

2) Check any physical damage, do not install damaged heater kit.

3) Remove the upper access panel from air handler.

4) Remove cover plate from air handler.

5) Slide the heater kit in to the slot and secure element plate with previously removed screws.

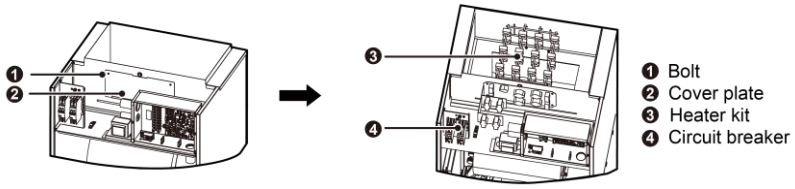
6) Before installing the electric heating, unplug the X1 terminal, and insert the plug-in terminals on the electric heating to the X1 and X2 terminals respectively. The power line of the unit is connected through an electrically heated circuit breaker.

7) Insert power leads into the circuit breaker lugs or stripped red and black wires (for heater kit without circuit breaker) and tighten.

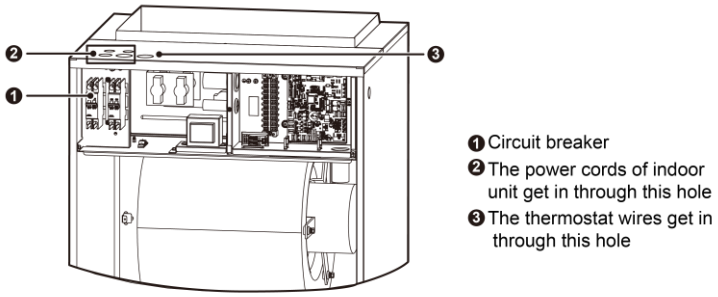
8) Connect ground wire to ground lug; M6 screws are required for grounding screws when installing electric heating.

9) Knock off appropriate area of the plastic circuit breaker cover on the access panel of the air handler. Knock off the holes according to the actual installation number and positions of circuit breakers. If circuit breaker is not installed, do not knock off the holes; otherwise, electric shock may occur.

10) Replace access panel and check operation.

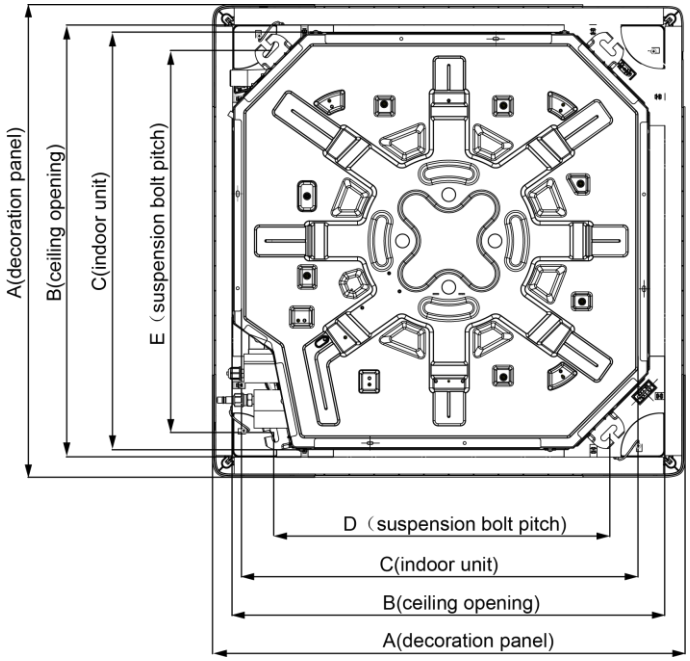


11) Connection of power cords and thermostat wires.



3.4 Installation of 360°Air Discharge Cassette Type Indoor Unit

3.4.1 Outline and Installation Dimension



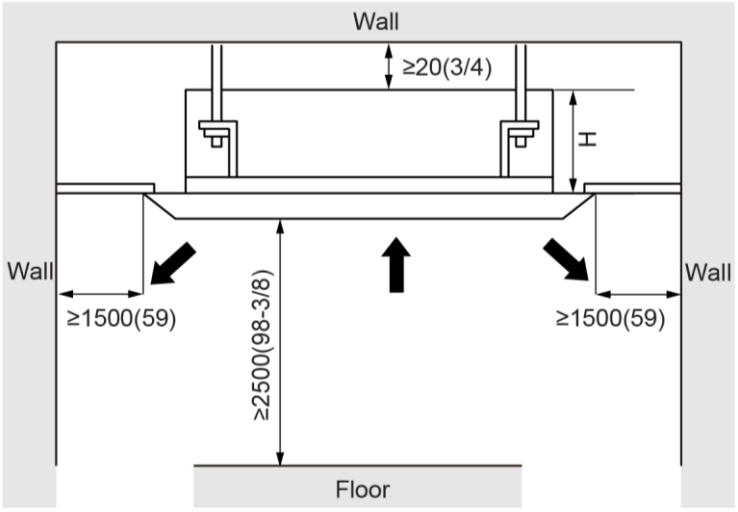
The following table lists the detailed dimensions.

Unit: mm(inch)

Model	A	B	C	D	E
GMV-ND07T/NhD-T(U) GMV-ND09T/NhD-T(U) GMV-ND12T/NhD-T(U) GMV-ND15T/NhD-T(U) GMV-ND18T/NhD-T(U) GMV-ND24T/NhD-T(U) GMV-ND30T/NhD-T(U) GMV-ND36T/NhD-T(U) GMV-ND42T/NhD-T(U) GMV-ND48T/NhD-T(U)	950(37-3/8)	890(35)	840(33-1/8)	680(26-3/4)	780(30-3/4)

3.4.2 Installation Space

Unit: mm (inch)



Unit: mm (inch)

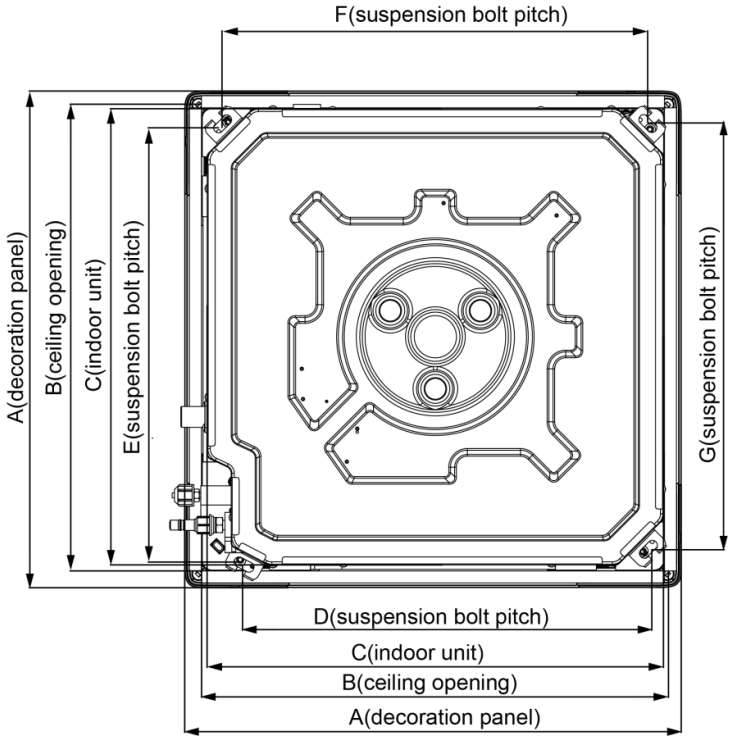
Model	H
GMV-ND07T/NhD-T(U) GMV-ND09T/NhD-T(U) GMV-ND12T/NhD-T(U) GMV-ND15T/NhD-T(U) GMV-ND18T/NhD-T(U)	275(10-3/4)
GMV-ND24T/NhD-T(U) GMV-ND30T/NhD-T(U) GMV-ND36T/NhD-T(U) GMV-ND42T/NhD-T(U) GMV-ND48T/NhD-T(U)	325(12-3/4)

3.4.3 Installation Notice

- The unit shall be installed in accordance with national standards or local regulations.
- Only qualified personnel can carry out installation work, please contact with local dealer before installation.
- Make sure all the installation work completed before energizing.
- The appliances are not accessible to general public.

3.5 Installation of 360°Air Discharge Compact Cassette Type Indoor Unit

3.5.1 Outline and Installation Dimension

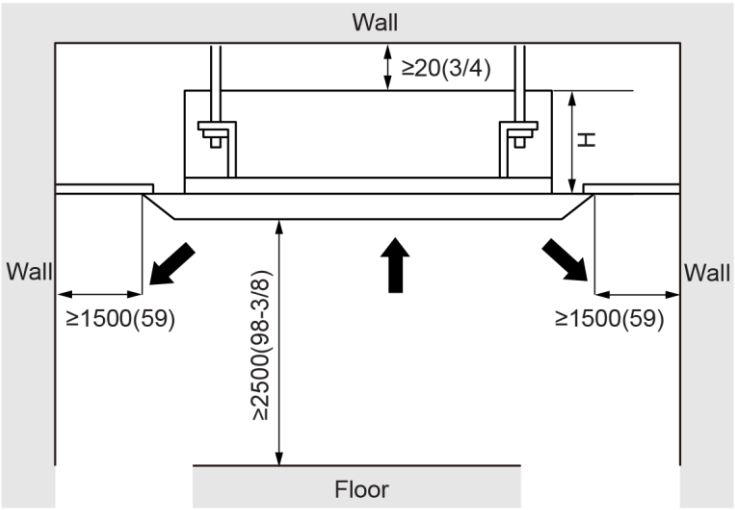


Unit: mm (inch)

Model	A	B	C	D	E	F	G
GMV-ND05T/NhE-T(U) GMV-ND07T/NhE-T(U) GMV-ND09T/NhE-T(U) GMV-ND12T/NhE-T(U) GMV-ND15T/NhE-T(U) GMV-ND18T/NhE-T(U)	620 (24-3/8)	580 (22-13/16)	570 (22-7/16)	505 (19-7/8)	550 (22-5/8)	530 (20-7/8)	530 (20-7/8)

3.5.2 Installation Space

Unit: mm (inch)



Unit: mm (inch)

Model	H
GMV-ND18T/NhE-T(U) GMV-ND15T/NhE-T(U) GMV-ND12T/NhE-T(U) GMV-ND09T/NhE-T(U) GMV-ND07T/NhE-T(U) GMV-ND05T/NhE-T(U)	305(12)

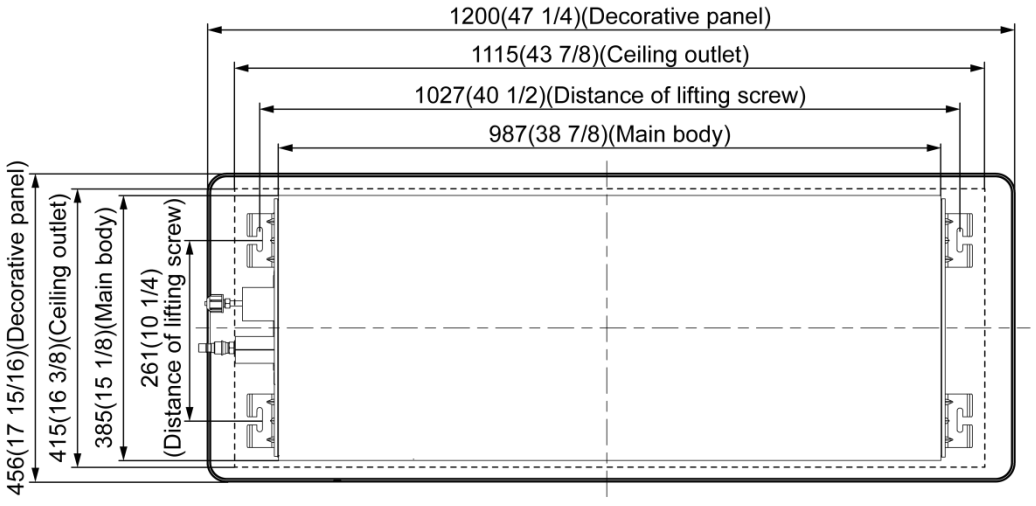
3.5.3 Installation Notice

- The unit shall be installed by the professional personnel according to this installation instruction to ensure proper use.
- Please contact the local Gree appointed service center before installation. Any malfunction caused by the unit that is not installed by the Gree appointed service center would probably not be dealt with on time because of the inconvenience of the business contact.
- It should be guided under the professional personnel when the air conditioner unit is moved to other place.
- The unit shall be installed in accordance with national standards or local regulations.
- Only qualified personnel can carry out installation work, please contact with local dealer before installation.
- Make sure all the installation work completed before energizing.
- The appliances are not accessible to general public.

3.6 Installation of 1-way Cassette Type Indoor Unit

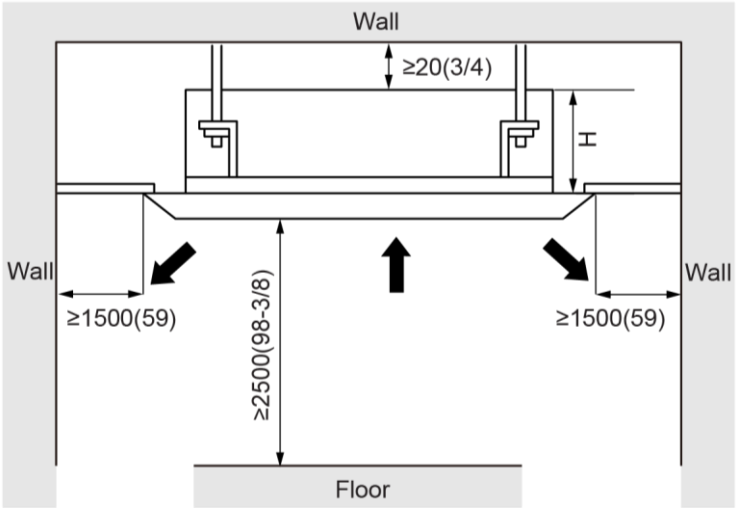
3.6.1 Outline and Installation Dimension

Unit: mm (inch)



3.6.2 Installation Space

Unit: mm (inch)



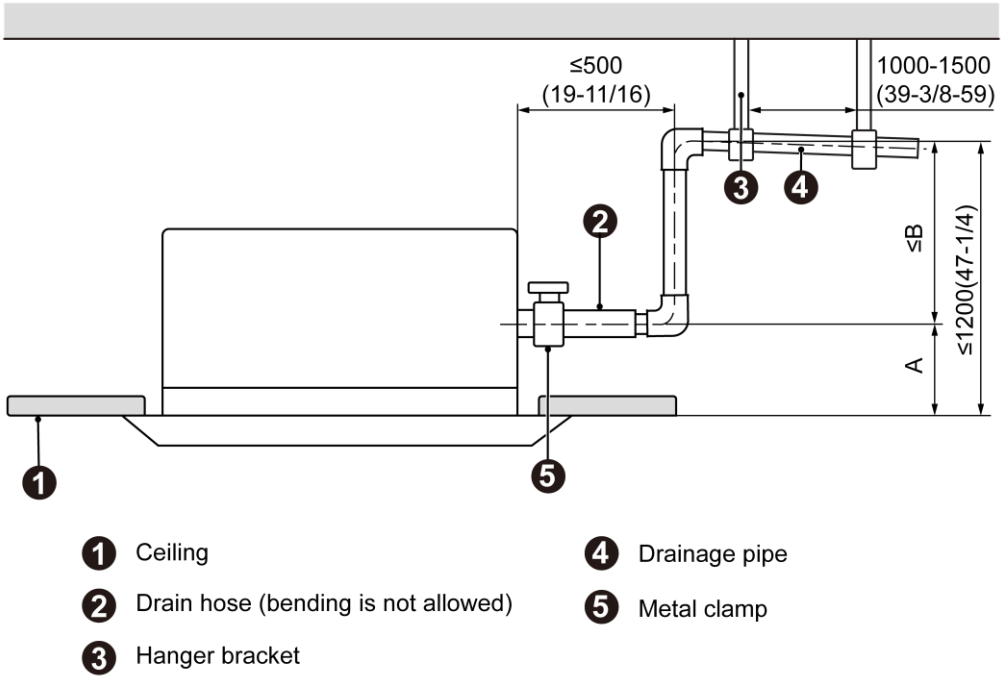
Unit: mm (inch)

Model	H
GMV-ND07TD/NhA-T(U) GMV-ND09TD/NhA-T(U) GMV-ND12TD/NhA-T(U)	207(8-1/8)

3.6.3 Drainage Pipe Installation

The installation height of raising pipe for drainage should be lower than B. The gradient from raising pipe towards drainage direction should be at least 1%~2%. If the raising pipe is vertical with the unit, the raising height should be less than C.

Unit: mm (inch)



Unit: mm (inch)

Model	A	B	C
GMV-ND07TD/NhA-T(U) GMV-ND09TD/NhA-T(U) GMV-ND12TD/NhA-T(U)	100(3-15/16)	1100(43-5/16)	1050(41-5/16)

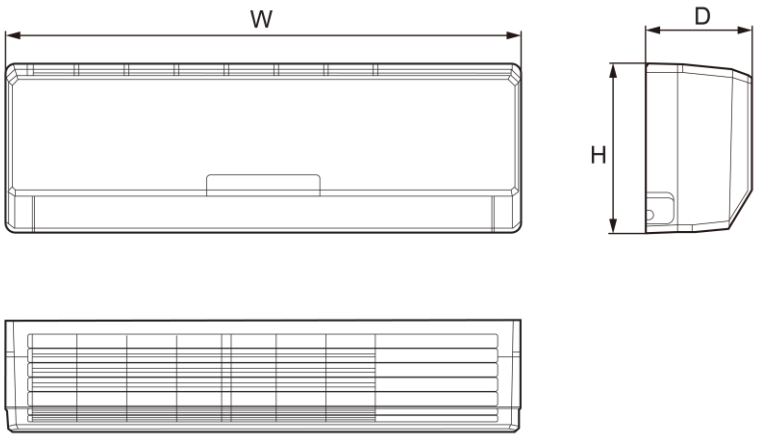
3.6.4 Installation Notice

- The unit shall be installed by the professional personnel according to this installation instruction to ensure proper use.
- Please contact the local Gree appointed service center before installation. Any malfunction caused by the unit that is not installed by the Gree appointed service center would probably not be dealt with on time because of the inconvenience of the business contact.
- It should be guided under the professional personnel when the air conditioner unit is moved to other place.
- The unit shall be installed in accordance with national standards or local regulations.
- Only qualified personnel can carry out installation work, please contact with local dealer before installation.
- Make sure all the installation work completed before energizing.

3.7 Wall Mounted Type Indoor Unit

3.7.1 Outline and Installation Dimension

Unit: mm (inch)



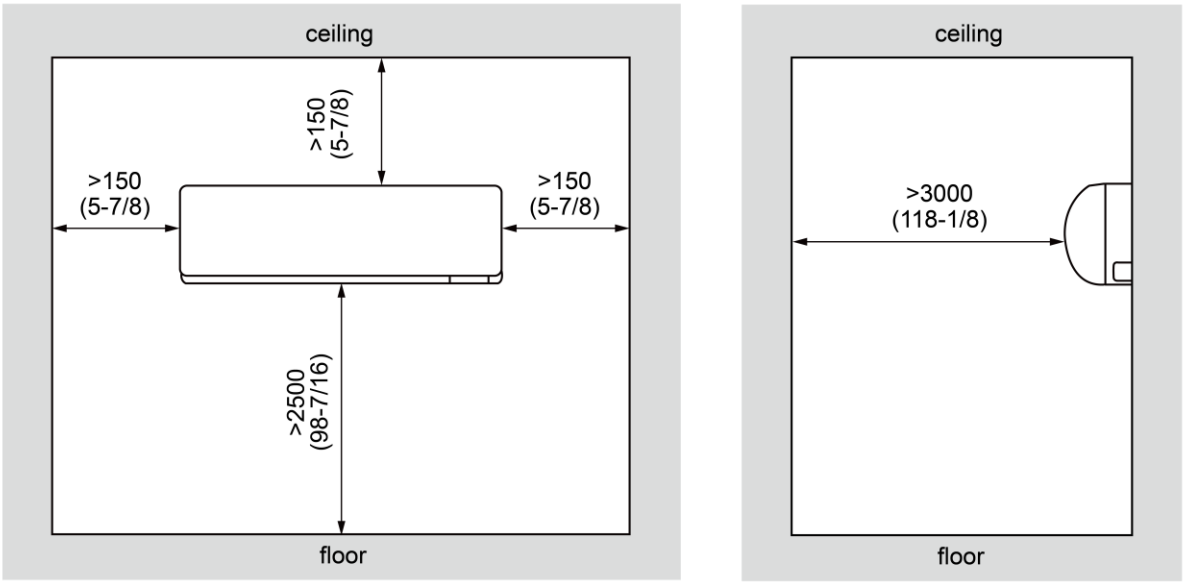
Below are dimensions of W, H, D for different models:

Unit: mm(inch)

Item / Model	W	H	D
GMV-ND06G/NhA1C-T(U) GMV-ND07G/NhA1C-T(U) GMV-ND09G/NhA1C-T(U) GMV-ND06G/NhA3C-T(U) GMV-ND07G/NhA3C-T(U) GMV-ND09G/NhA3C-T(U)	867(34-1/8)	276(10-7/8)	206(8-1/8)
GMV-ND12G/NhA1C-T(U) GMV-ND14G/NhA1C-T(U) GMV-ND12G/NhA3C-T(U) GMV-ND14G/NhA3C-T(U)	978(38-1/2)	333(13-1/8)	248(9-3/4)
GMV-ND18G/NhA1C-T(U) GMV-ND24G/NhA1C-T(U) GMV-ND18G/NhA3C-T(U) GMV-ND24G/NhA3C-T(U)	1116(43-15/16)	333(13-1/8)	248(9-3/4)

3.7.2 Installation Space

Unit: mm (inch)



3.7.3 Installation Notice

- The unit shall be installed by the professional personnel according to this installation instruction to ensure proper use.
- Please contact the local Gree appointed service center before installation. Any malfunction caused by the unit that is not installed by the Gree appointed service center would probably not be dealt with on time because of the inconvenience of the business contact.
- It should be guided under the professional personnel when the air conditioner unit is moved to other place.
- Maintenance/service to be done by specialized personnel, mandated by the manufacturer or authorized representative.
- This appliance is intended to be used by expert or trained users in shops, in light industry and on farms or for commercial use by lay persons.
- This unit is a partial unit air conditioner, complying with partial unit requirements of this International standard and must only be connected to other units that have been confirmed as complying to corresponding partial unit requirements of this international standard.
- This unit shall only be connected to an appliance suitable for the same refrigerant.
- Make sure all the installation work completed before energizing.

4 Installation of Connection Pipe

⚠CAUTION	
①	Conform to the following principles during pipe connection: Connection pipe should be as short as possible, so is the height difference between indoor and outdoor units. Keep the number of bends as little as possible. Radius of curvature should be as large as possible.
②	Weld the connection pipe between indoor and outdoor units. Please strictly follow the requirements for welding process. Rosin joint or pin hole is not allowed.
③	When laying the pipe, be careful not to distort it. Radius of bending parts should be over 200mm (8inch). Note that pipes cannot be repeatedly bent or stretched; otherwise the material will get harder. Do not bend or stretch the pipe for more than 3 times at the same position.

4.1 Flaring Process

(1) Mechanical connectors used indoors shall comply with ISO 14903. When mechanical connectors are reused indoors, sealing parts shall be renewed. When flared joints are reused indoors, the flare part shall be refabricated.

(2) Pipework shall be protected from physical damage.

(3) Installation of pipework shall be kept to a minimum space required.

(4) Do NOT re-use joints and copper gaskets which have been used already.

(5) Joints made in installation between parts of refrigerant system shall be accessible for maintenance purposes.

(6) Install the refrigerant piping or components in a position where they are unlikely to be exposed to any substance which may corrode components containing refrigerant, unless the components are constructed of materials that are inherently resistant to corrosion or are suitably protected against corrosion.

(7) After completion of field piping for split systems, the field pipework shall be pressure tested with an inert gas and then vacuum tested prior to refrigerant charging, according to the following requirements; field-made refrigerant joints indoors shall be tightness tested. The test method shall have a sensitivity of 5 grams per year of refrigerant or better under a pressure of at least 0.25 times the maximum allowable pressure. No leak shall be detected.

(8) Use pipe cutter to cut the connection pipe in case it is unshaped.

(9) Keep the pipe downward in case cutting scraps get into the pipe. Clear away the burrs after cutting.

(10) Remove the flared nut connecting indoor connection pipe and outdoor unit. Then use flaring tool to fix the flared nut into the pipe (as shown in Fig.4.1).

(11) Check if the flared part is flaring evenly and if there is any crack.

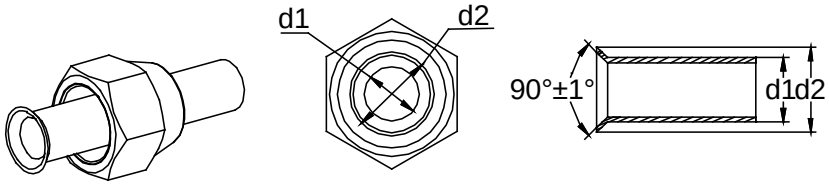


Fig. 4.1

4.2 Pipe Bending

(1) Reshape the pipe by hand. Be careful not to damage the pipe.

(2) Do not bend the pipe over 90°.

(3) If pipe is repeatedly bent or stretched, it will get hard and difficult to bend and stretch againch Therefore, do not bend or stretch the bend for over 3 times.

(4) In case that direct bending will open cracks to the pipe, first use sharp cutter to cut the insulating layer, as shown in Fig. 4.3. Do not bend the pipe until it is exposed. When bending is done, wrap the pipe with insulating layer and then secure it with adhesive tape.

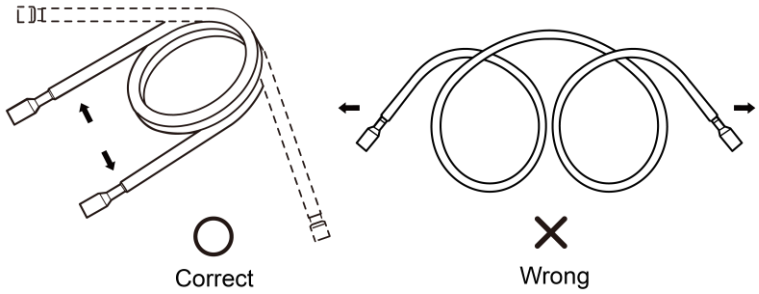


Fig. 4.2

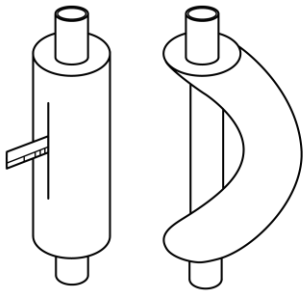


Fig. 4.3

4.3 Indoor Pipe Connection

(1) Remove pipe cover and pipe plug.

(2) Direct the flared part of copper pipe to the center of screwed joint. Twist on the flared nut tightly by hand, as in Fig. 4.4 (Make sure indoor pipe is correctly connected. Improper location of the center will prevent flared nut from being securely twisted. Thread of nut will get damaged if the flared nut is twisted forcibly).

(3) Use torque wrench to twist on the flared nut tightly until the wrench gives out a click sound (Hold the handle of wrench and make it at right angle to the pipe. as in Fig. 4.5).

⚠CAUTION	
①	Use sponge to wrap the un-insulated connection pipe and joint. Then tie the sponge tightly with plastic tape.
②	Connection pipe should be supported by a bearer rather than the unit.
③	The bending angle of piping should not be too small; otherwise the piping might have cracks. Please use a pipe bender to bend the pipe.
④	When connecting IDU with connection pipe, do not pull the big and small joints of IDU with force in case the capillary tube or other tubes have cracks and cause leakage.

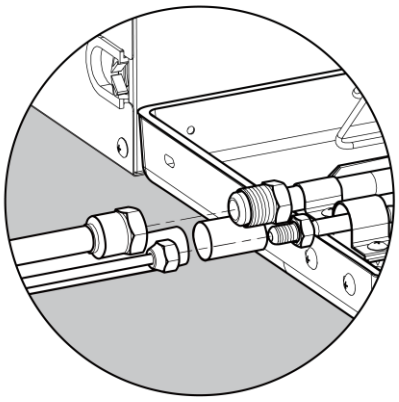


Fig. 4.4

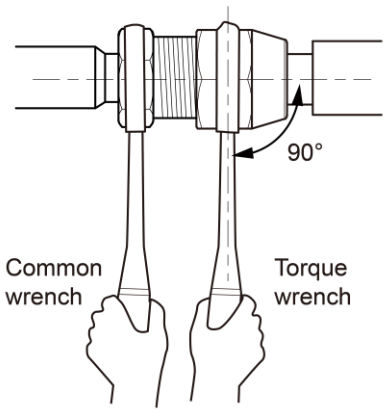


Fig. 4.5

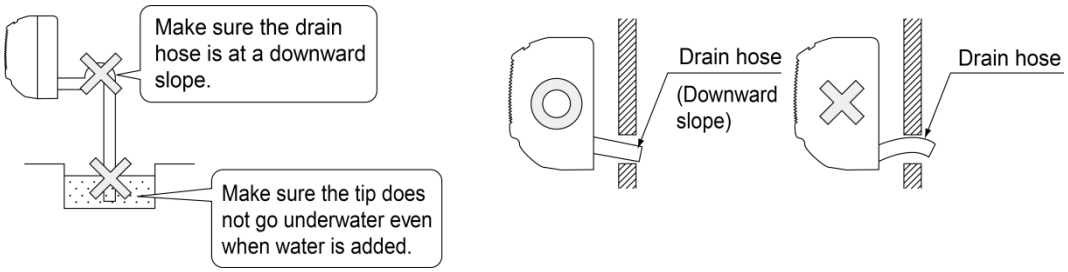
Pipe Diameter(mm/inch)	Tightening Torque
6.35(1/4)	15-30N·m(11-22ft.-1b.)
9.52(3/8)	35-40N·m(26-29ft.-1b.)
12.7(1/2)	45-50N·m(33-37ft.-1b.)
15.9(5/8)	60-65N·m(44-48ft.-1b.)

5 Installation of Drain Pipe

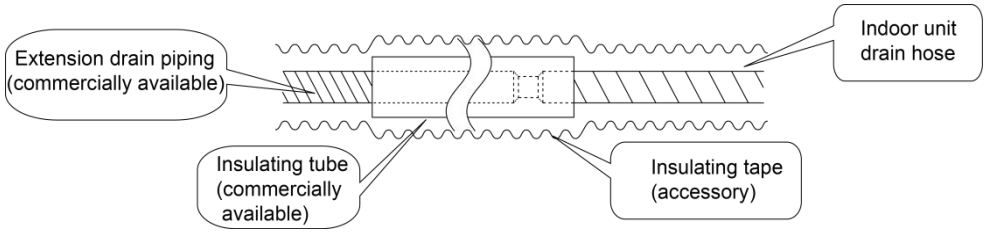
5.1 Precautions When Doing the Piping Work

- Keep piping as short as possible and slope it downwards at a gradient of at least 1/100 so that air may not remain trapped inside the pipe.

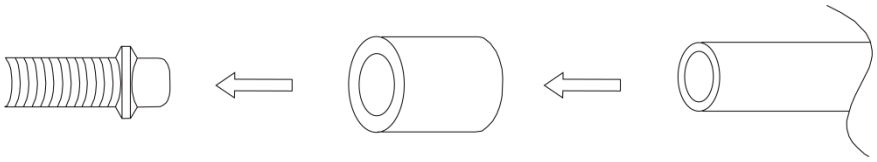
  For example:



- Keep pipe size equal to or greater than that of the connecting pipe.
- Install the drain piping as shown and take measures against condensation. Improperly rigged piping could lead to leaks and eventually wet furniture and belongings.



- When directly connecting a hard vinyl chloride pipe joint to the drain hose connected to the indoor unit, use a commercially available hard vinyl chloride pipe joint (nominal diameter 13mm (1/2 inch)).



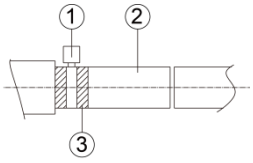
Drain hose connected to the indoor unit	Commercially available hard vinyl chloride pipe joint (nominal diameter 13mm)	Commercially available hard vinyl chloride pipe (nominal diameter 13mm)

- Drain hose connected to the indoor unit Commercially available hard vinyl chloride pipe joint (nominal diameter 13mm(1/2 inch)), Commercially available hard vinyl chloride pipe(nominal diameter 13mm(1/2 inch))
- Do not connect the drain piping directly to sewage pipes that smell of ammonia. The ammonia in the sewage might enter the indoor unit through the drain pipes and corrode the heat exchanger.

5.2 Installing the Drain Pipes

- Insert the drain hose into the drain outlet, and tighten the clamp securely with tape.
- Tighten the clamp until the screw head is less than 4mm (3/16 inch) from the hose.

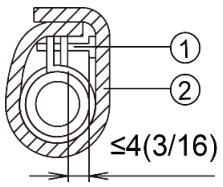
①. Metal clamp (accessory)
②. Drain hose (accessory)
③. Grey tape (accessory)



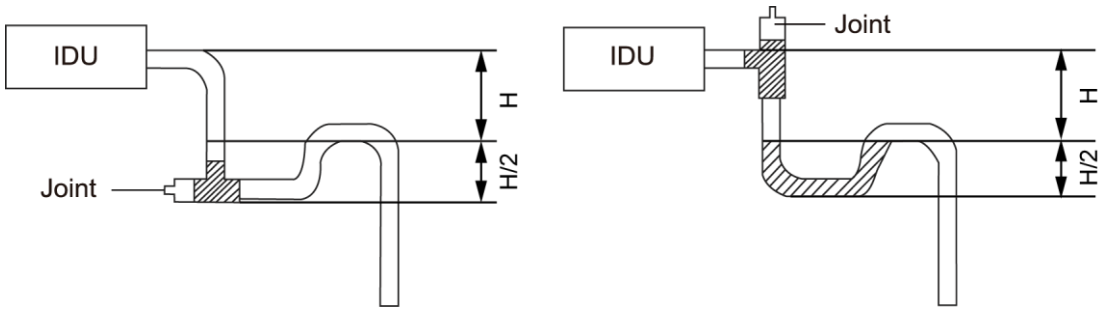
- Insulate the pipe clamp and the drain hose using heat insulation sponge.

Unit: mm (inch)

①. Metal clamp (accessory)
②. Insulation sponge (accessory)

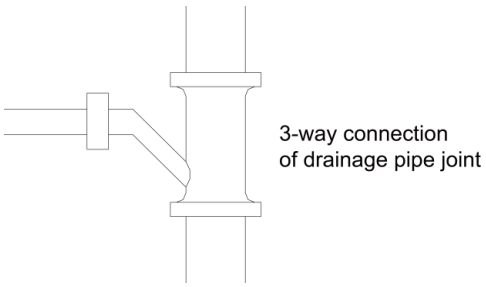


- Install water trap as shown below.
- Install one water trap for each unit.
- Installation of water trap shall consider easy cleaning in the future.

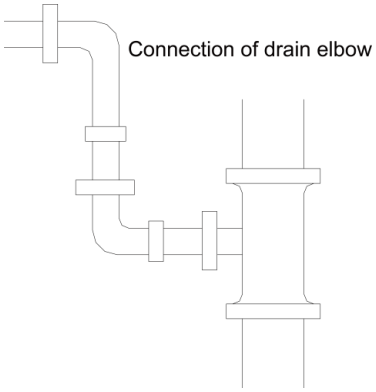


- Connection of drainage branch pipe to the standpipe or horizontal pipe of drainage main pipe
- The horizontal pipe cannot be connected to the vertical pipe at a same height. It can be connected in a manner as shown below:

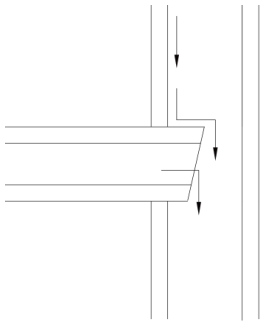
  NO.1: 3-way connection of drainage pipe joint



NO.2: Connection of drain elbow



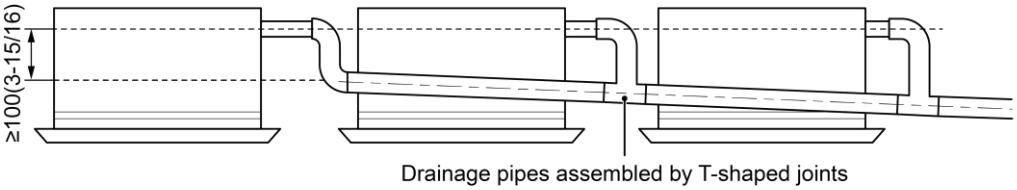
NO.3: Connection of horizontal pipe

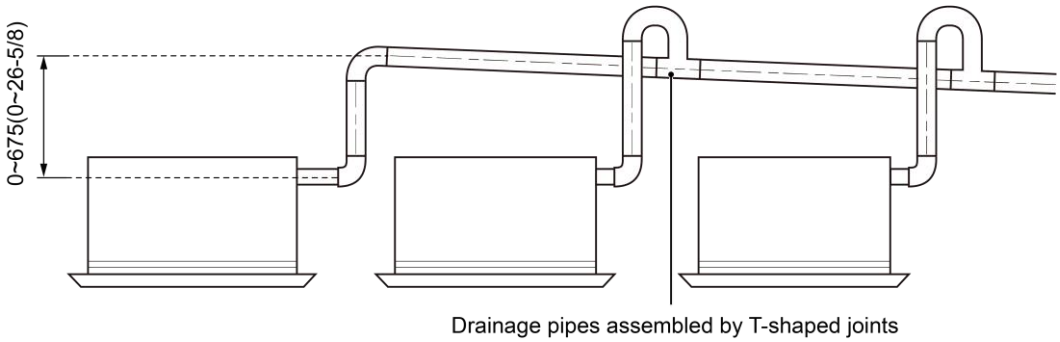


Connection of horizontal pipe

- When unifying multiple drain pipes, install the pipes as shown below. Select converging drain pipes whose gauge is suitable for the operating capacity of the unit.(take the cassette type unit for example)

Unit: mm (inch)





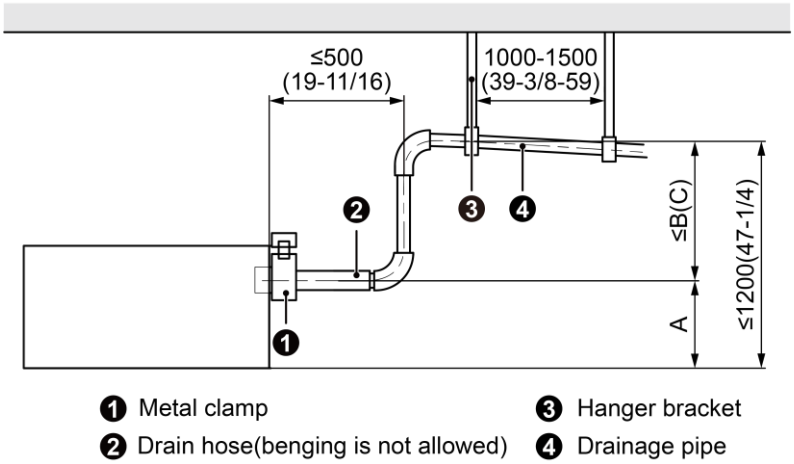
5.3 Precautions When Doing Riser Piping Work

(1) Make sure that heat insulation work is executed on the following 2 spots to prevent any possible water leakage due to dew condensation.

1) Connect the drain hose to the drain raiser pipe, and insulate them.

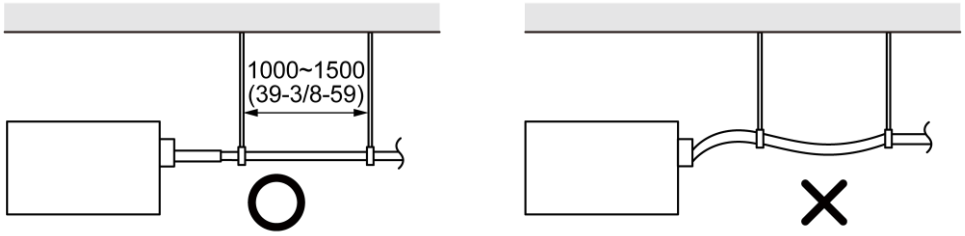
2) Connect the drain hose to the drain outlet on the indoor unit, and tighten it with the clamp.

Unit: mm (inch)



(2) Secure a downward gradient of 1/100 or more for the drain pipe. To accomplish this, mount supporting brackets at an interval of 1 -1.5 m (39-3/8~59in).

Unit: mm (inch)



5.4 Testing of Drain Piping

- After piping work is finished, check if drainage flows smoothly.
- Shown in the figure, add approximately 1liter of water slowly into the drain pan and check drainage flow during COOL running.

6 Electrical Installation

- The wiring must be in accordance with the local rules.
- Rated supply voltage and special circuit for air conditioner must be used.
- Do not pull the power cord forcefully.
- All the electric installations must be carried out by specialist technicians in accordance with the local laws, rules and these instructions.
- The diameter of flexible wire should be wide enough. Replace the damaged power cord and connecting wire with special flexible wire.
- The earthing shall be reliable and connected to the special earthing device on the construction. The installation must be done by specialist technicians. The leak protection switch and air switch with enough capacity must be installed. The air switch shall have both the magnetic tripping and

thermal tripping functions to ensure protection against the short circuit and overload.

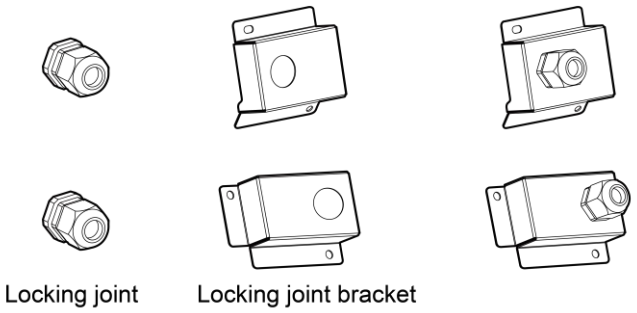
- The air conditioner belongs to I type electric appliances. The reliable earthed action is a must.
- The yellow and green wire inside the air conditioner is the earthed wire. Do not use it for other purpose or even cut off it. Do not fix it with tapping screw, Otherwise it may cause electric shock.
- There should be reliable earthed terminal for the power supply. Never connect the earth lead to the following articles:

  ①water pipe; ②gas pipe; ③drain pipe; ④unreliable place considered by professionals.

6.1 Locking Joint Installation of 360°Air Discharge Cassette Type Indoor Unit

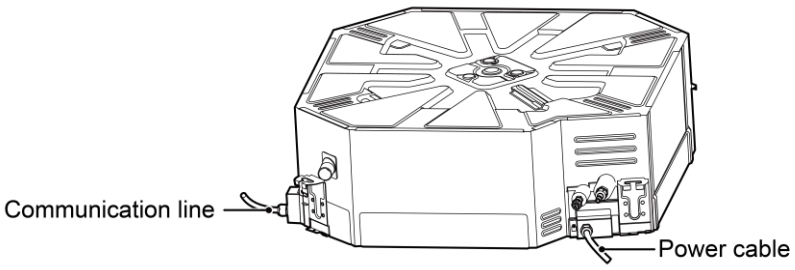
When the power cable and communication line of the unit are connected, the power cable and communication line need to be fixed through the side panel locking connector. The fixing process is as follows.

(1) Attach the locking joint to the locking joint bracket.



(2) Power cable (communication line) passes through the locking joint and the side plate engineering line over the wire crossing hole.

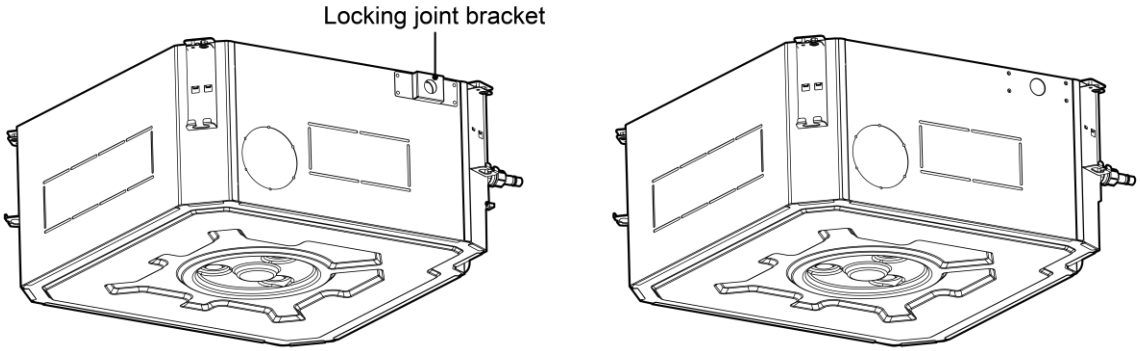
(3) Finally, reattach the locking joint bracket to the side panel.



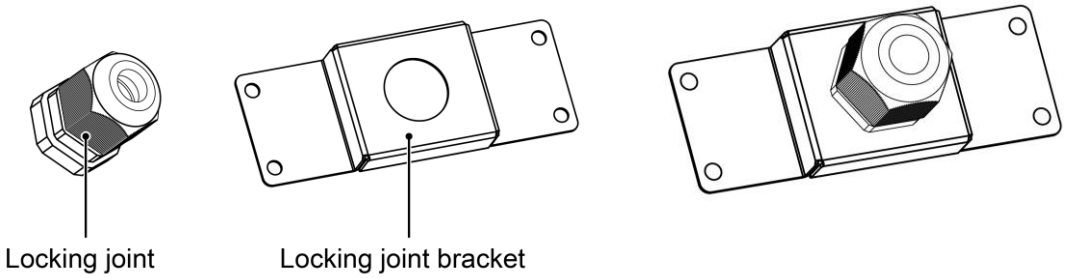
6.2 Locking Joint Installation of 360°Air Discharge Compact Cassette Type Indoor Unit

When the power cord and communication cable of the unit are connected, the power cable and communication cable need to be fixed through the side panel locking connector. The fixing process is as follows.

(1) Remove the locking joint bracket from the side panel.

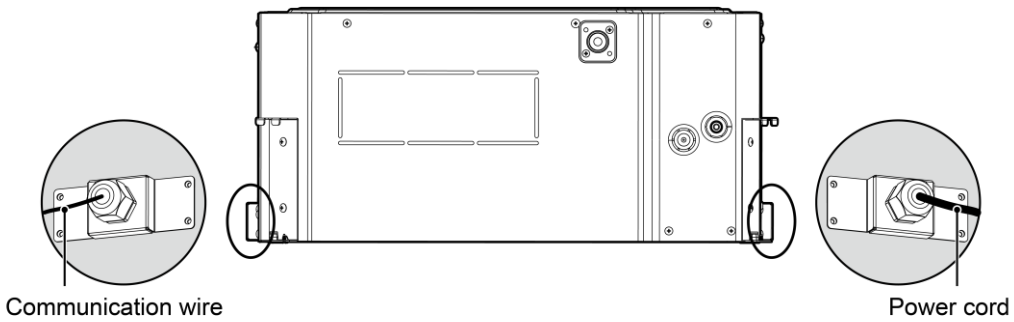


(2) Attach the locking joint to the locking joint bracket.



(3) Power cable (communication line) passes through the locking joint and the side plate engineering line over the wire crossing hole.

(4) Finally, reattach the locking joint bracket to the side panel.



MAINTENANCE

CHAPTER 4 MAINTENANCE

1 Malfunction List

1.1 Malfunction List for the Wired Controller

Error Code	Content	Error Code	Content	Error Code	Content
L0	Indoor Unit Error	LA	Indoor Units Incompatibility Error	d9	Jumper Cap Error
L1	Indoor Fan Protection	LH	Low Air Quality Warning	dA	Indoor Unit Network Address Error
L2	E-heater Protection	LC	ODU-IDU Incompatibility Error	dH	Wired Controller PCB Error
L3	Water Full Protection	d1	Indoor Unit PCB Error	dC	Capacity DIP Switch Setting Error.
L4	Wired Controller Power Supply Error	d3	Ambient Temperature Sensor Error	dL	Outlet Air Temperature Sensor Error
L5	Freeze protection	d4	Inlet Pipe Temperature Sensor Error	dE	Indoor Unit CO_2 Sensor Error
L7	No Master Indoor Unit Error	d6	Outlet Pipe Temperature Sensor Error	dy	Water Temperature Sensor Error
L8	Power Insufficiency Protection	d7	Humidity Sensor Error	C0	Communication Error
L9	Quantity Of Group Control Indoor Units Setting Error	d8	Water Temperature Error	AJ	Filter Cleaning Reminder
db	Special Code: Field Debugging Code				

1.2 Display of Light Board (Only for Two-way Cassette Type Indoor Unit)

The panel of this model is without nixie tube display. The error codes will be displayed through the power light, operation light and timer light; ○, ● and ◎ stand for on, off and blink respectively.

Power light	○	◎	◎	◎	◎
Operation light	◎	●	○	○	◎
Timer light	●	○	●	○	●

Error code display sheet

Error code	C0	A0	A3/A4	L0	L1	L3	L5	d1	d3	d4	d6	d7	E0	db
Power light	◎	○	○	●	●	●	○	◎	◎	◎	●	○	●	◎
Operation light	◎	◎	○	●	○	◎	●	○	●	◎	◎	◎	◎	●
Timer light	◎	◎	◎	◎	◎	◎	◎	◎	◎	○	○	○	●	●
Error description	Communication error	To be debugged	Defrosting/ oil return	Indoor unit error	Indoor fan protection	Water full protection	Freeze protection	Indoor unit PCB error	Ambient temperature sensor error	Inlet pipe temperature sensor error	Outlet pipe temperature sensor error	Humidity sensor error	Outdoor unit error	Field debugging code

1.3 Exception Analyzing and Troubleshooting

1.3.1 “d1” Indoor circuit board error

Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

Check if the reading of address chip and memory chip of IDU mainboard is normal. If the data of address chip and memory chip cannot be read, it is abnormal

Possible reason:

- Address chip is abnormal
- Memory chip is abnormal. Replace main control board directly

Troubleshooting:

Replace main control board directly

1.3.2 “d3” Ambient temperature sensor error

Error display: IDU wired controller and IDU receive light board will display 

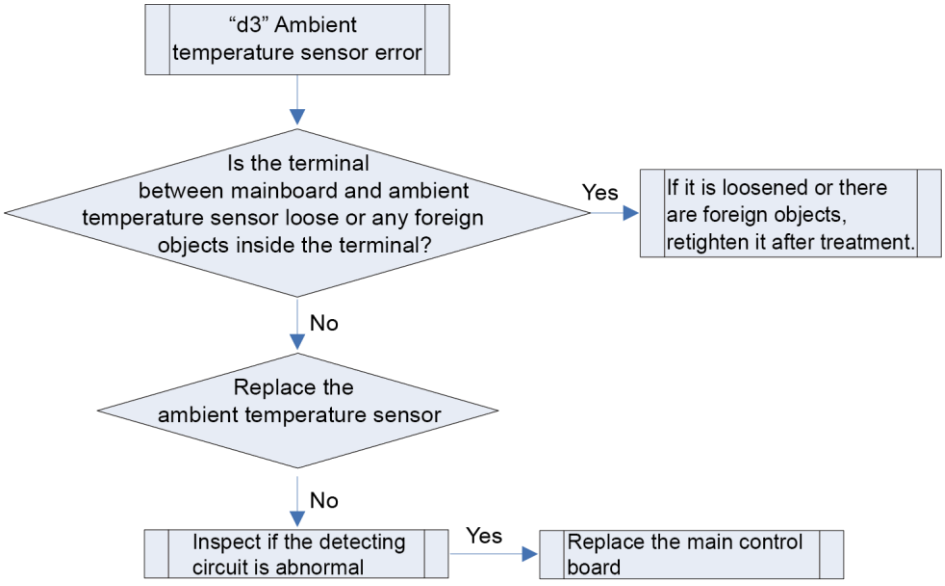
Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value, if the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error

Possible reason:

- Poor contact between ambient temperature sensor and terminal in mainboard interface
- Ambient temperature sensor is abnormal
- Detecting circuit is abnormal

Troubleshooting:



1.3.3 “d4” Inlet pipe temperature sensor error

Error display: IDU wired controller and IDU receive light board will display 

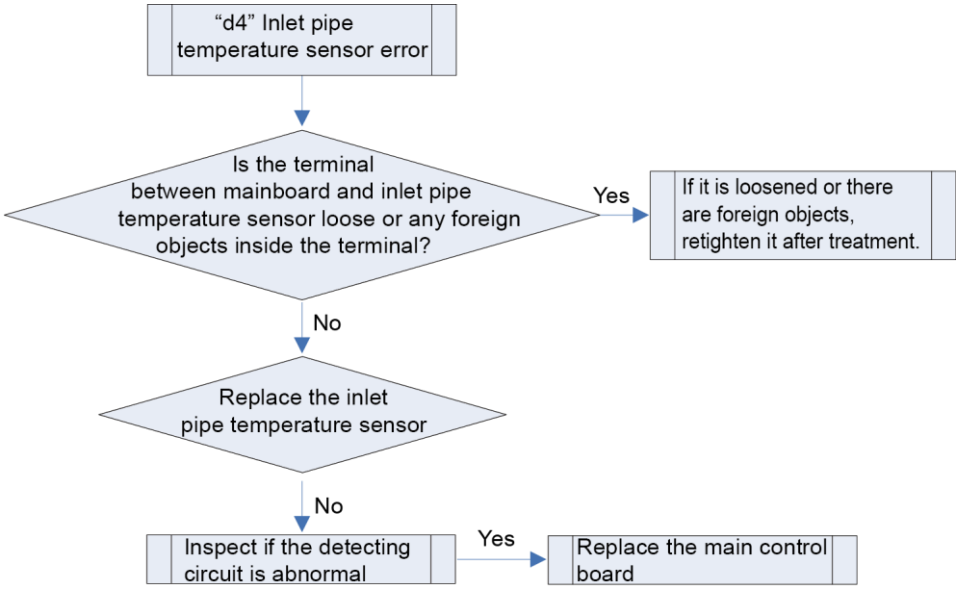
Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value. If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error

Possible reason:

- Poor contact between inlet pipe temperature sensor and terminal in mainboard interface
- Inlet pipe temperature sensor is abnormal
- Detecting circuit is abnormal

Troubleshooting:



1.3.4 “d6” Outlet pipe temperature sensor error

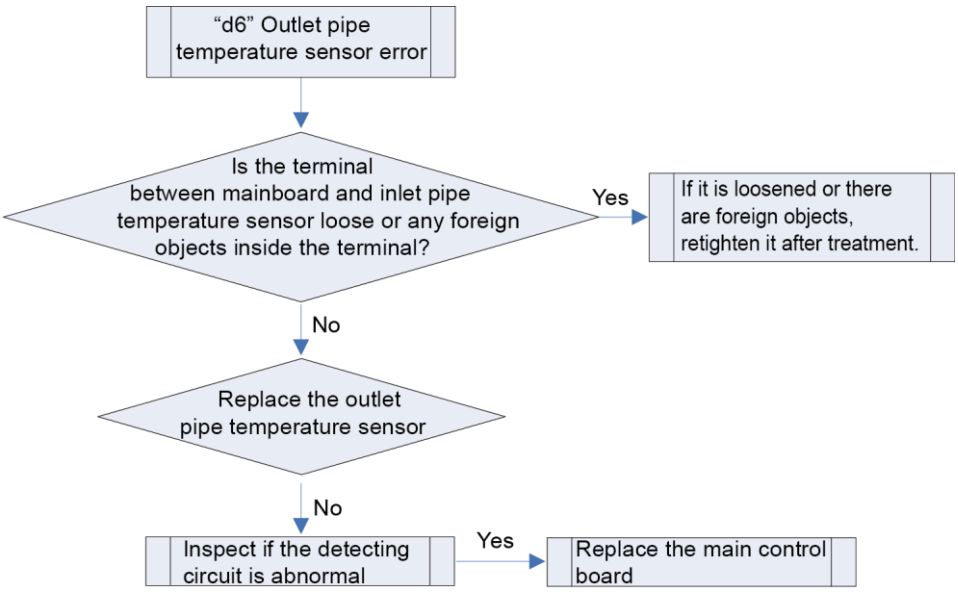
Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value. If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error

Possible reason:

- Poor contact between outlet pipe temperature sensor and terminal in mainboard interface
- Outlet pipe temperature sensor is abnormal
- Detecting circuit is abnormal



1.3.5 "d7" Humidity sensor error

Error display: IDU wired controller and IDU receive light board will display 

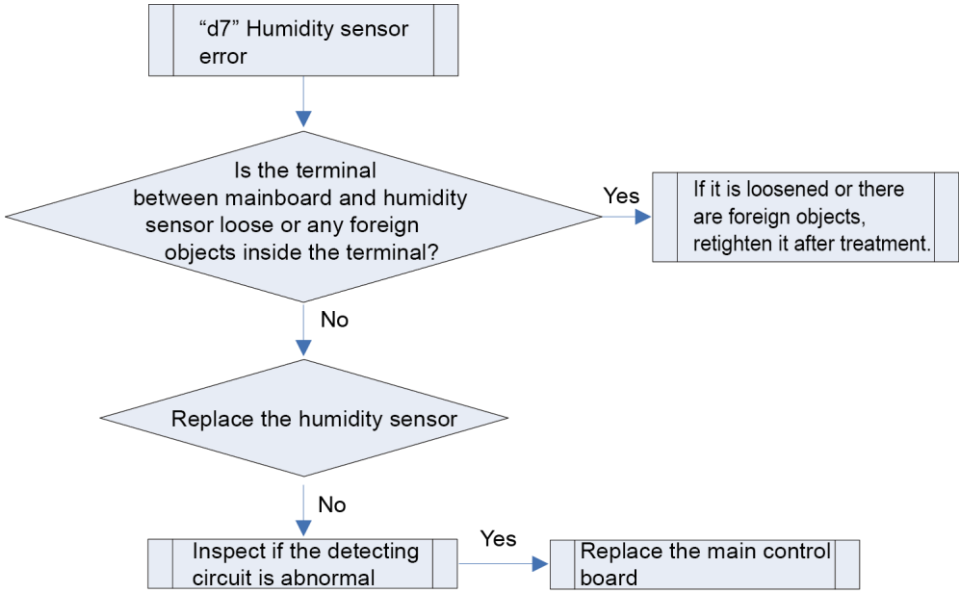
Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value. If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error

Possible reason:

- Poor contact between humidity sensor and terminal in mainboard interface
- Humidity sensor is abnormal
- Detecting circuit is abnormal

Troubleshooting:



1.3.6 "d9" Jumper cap error

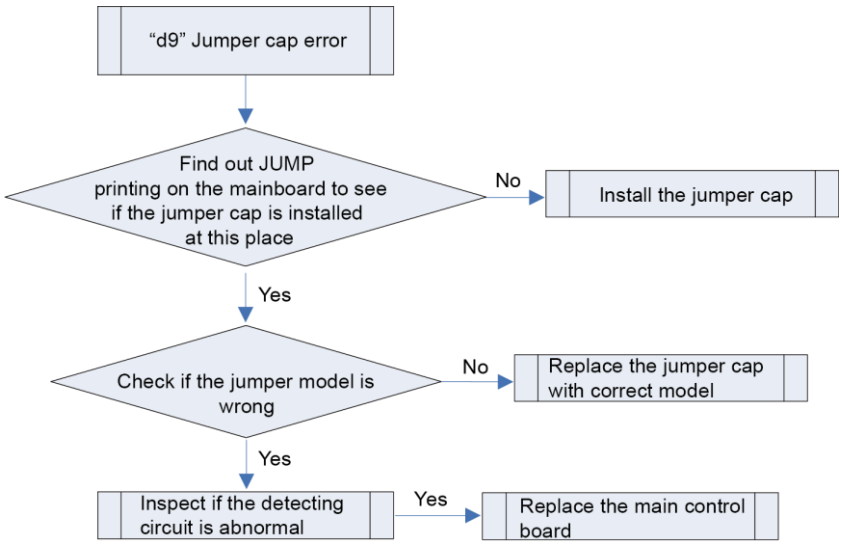
Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

Possible reason:

- If jumper cap model doesn't match with mainboard, report the error
- Jumper cap is not installed
- Jumper cap model is wrong
- Detecting circuit is abnormal

Troubleshooting:



1.3.7 “dA” IDU network address error

Error display: IDU wired controller and IDU receive light board will display 

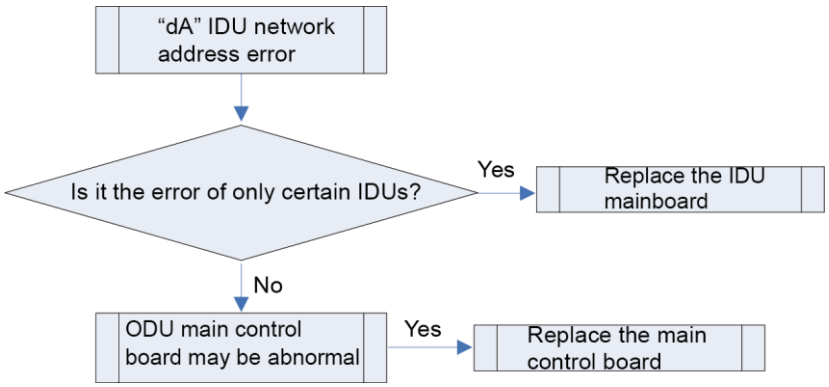
Error judgment condition and method:

Through testing the IDU address chip and IP address, if address chip cannot be read, IDU IP is 0 or IP is in conflict, report the error.

Possible reason:

- ODU allocated address is wrong
- IDU treatment is wrong
- Address chip is abnormal

Troubleshooting:



1.3.8 “dH” wired controller circuit board error

Error display: IDU wired controller and IDU receive light board will display 

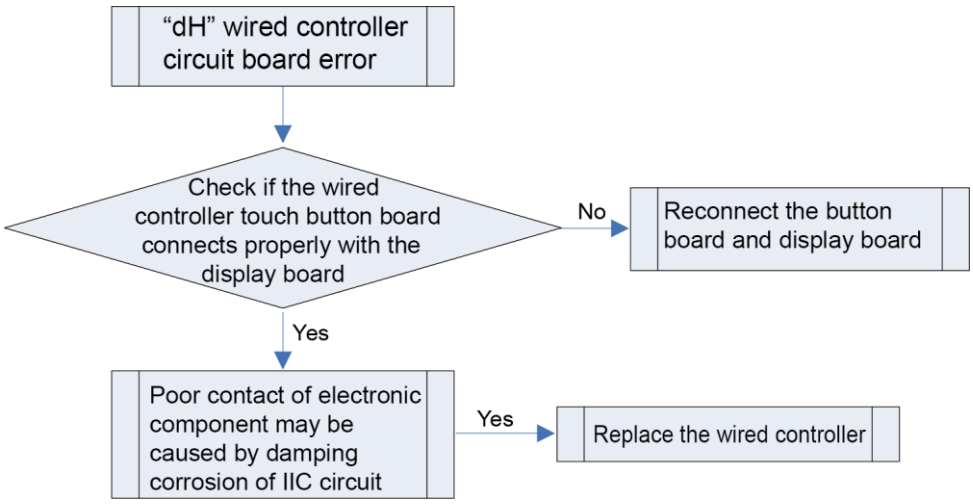
Error judgment condition and method:

Wired controller IIC communication is abnormal

Possible reason:

- Communication of wired controller touch button board and display board IIC is abnormal;
- Read and write of wired controller memory chip IIC is abnormal (when memory chip is existed);

Troubleshooting:



1.3.9 “dC” Capacity DIP switch setting error

Error display: IDU wired controller and IDU receive light board will display 

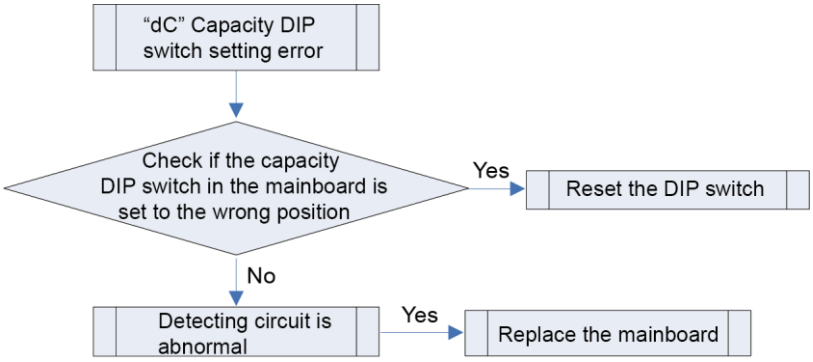
Error judgment condition and method:

If capacity DIP switch is set to the wrong position, report the error.

Possible reason:

- Capacity DIP switch is set to the wrong position
- Detecting circuit is abnormal

Troubleshooting:



1.3.10 “dL” Air outlet temperature sensor error

Error display: IDU wired controller and IDU receive light board will display 

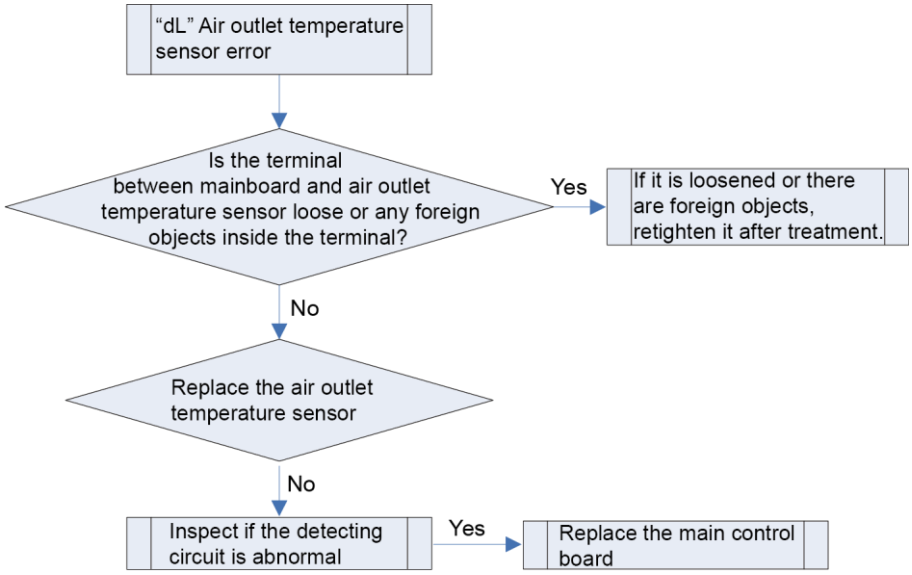
Error judgment condition and method:

Sample the AD value of temperature sensor through temperature sensor detecting circuit and judge the range of AD value. If the sampling AD value exceeds upper limit and lower limit in 5 seconds continuously, report the error

Possible reason:

- Poor contact between air outlet temperature sensor and terminal in mainboard interface
- Air outlet temperature sensor is abnormal
- Detecting circuit is abnormal

Troubleshooting:



1.3.11 "db" Project debugging

Error display: ODU mainboard, IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

This is a status code of project debugging, not an error code. When IDU or ODU displays this code, it means the unit is under debugging status and the IDU cannot be operated.

Troubleshooting: ——

Possible reason:——

1.3.12 "L1" Indoor fan protection

Error display: IDU wired controller and IDU receive light board will display 

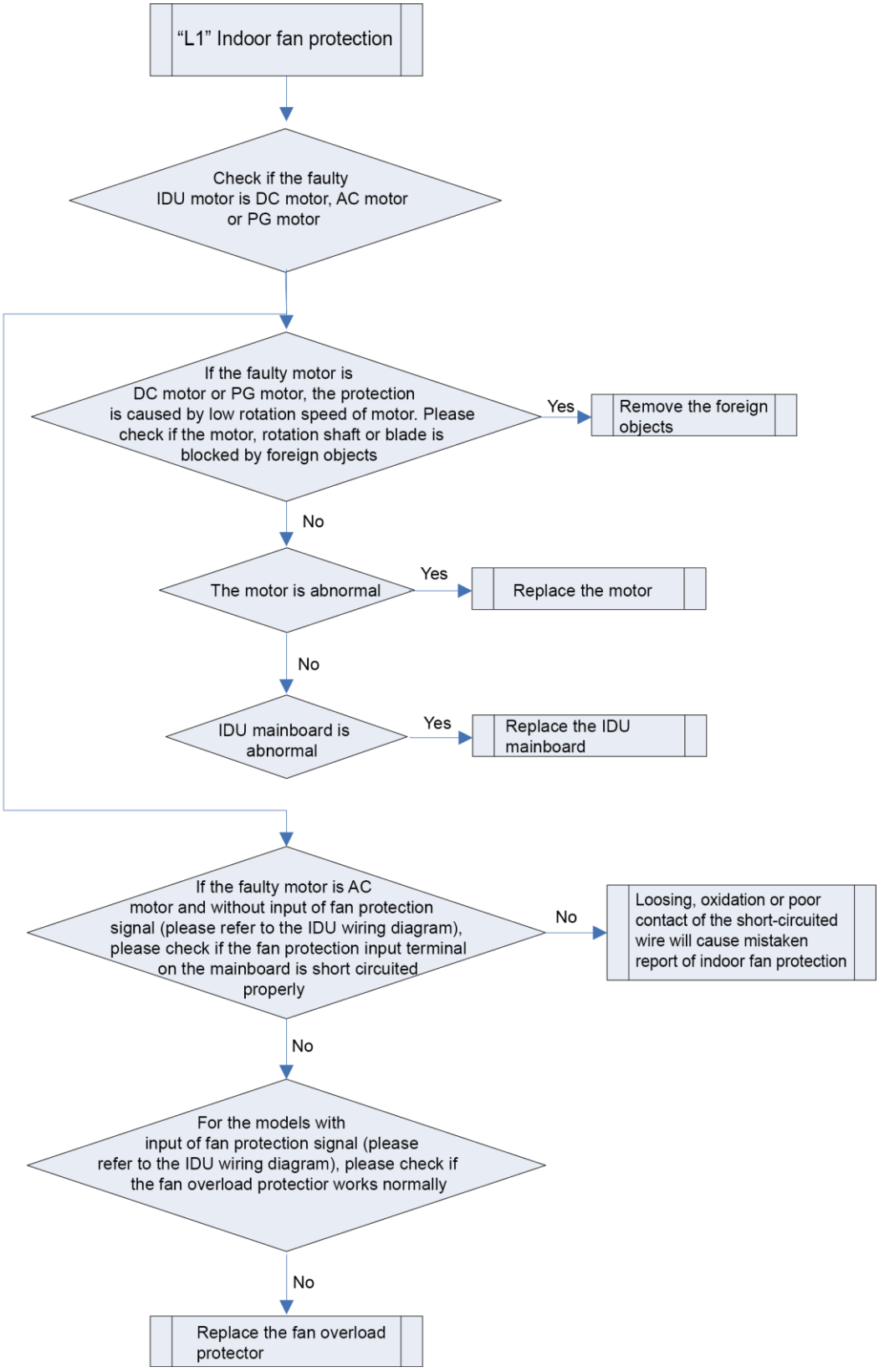
Error judgment condition and method:

Check if the rotation speed of IDU is too slow, or it stops rotation, or protection signal of outdoor fan is transferred. If yes, it is judged that indoor fan protection occurs.

Possible reason:

- Motor stops operation or it is blocked
- IDU mainboard is abnormal

Troubleshooting:



1.3.13 "L3" Water full protection

Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

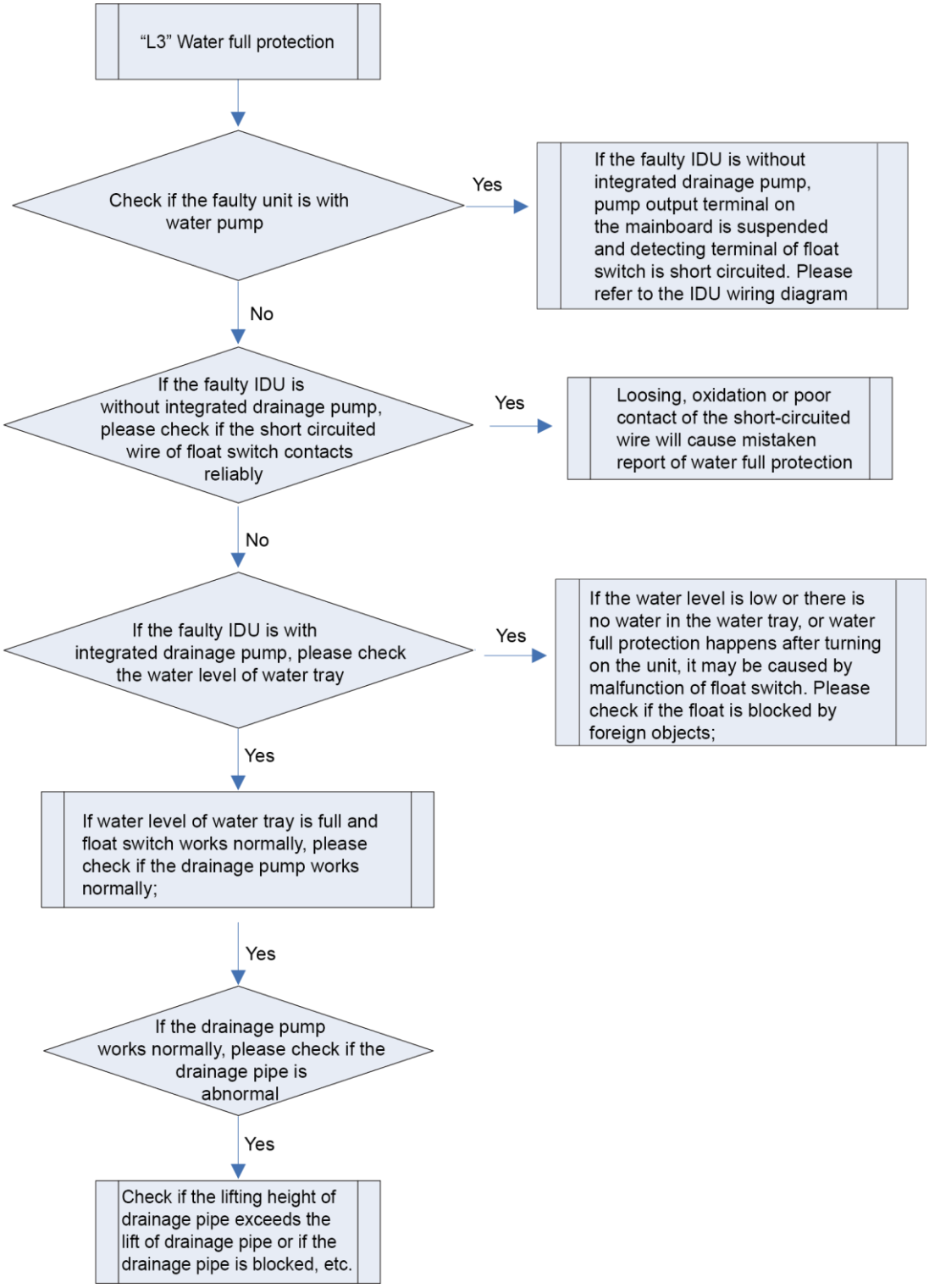
Check the status of IDU float switch. When water level is too high, float switch is activated, so water

full protection happens.

Possible reason:

- IDU is installed improperly
- Drainage pump is broken
- Float switch operates abnormally
- IDU mainboard is abnormal

Troubleshooting:



1.3.14 “L4” Power supply overcurrent protection

Error display: IDU wired controller and IDU receive light board will display 

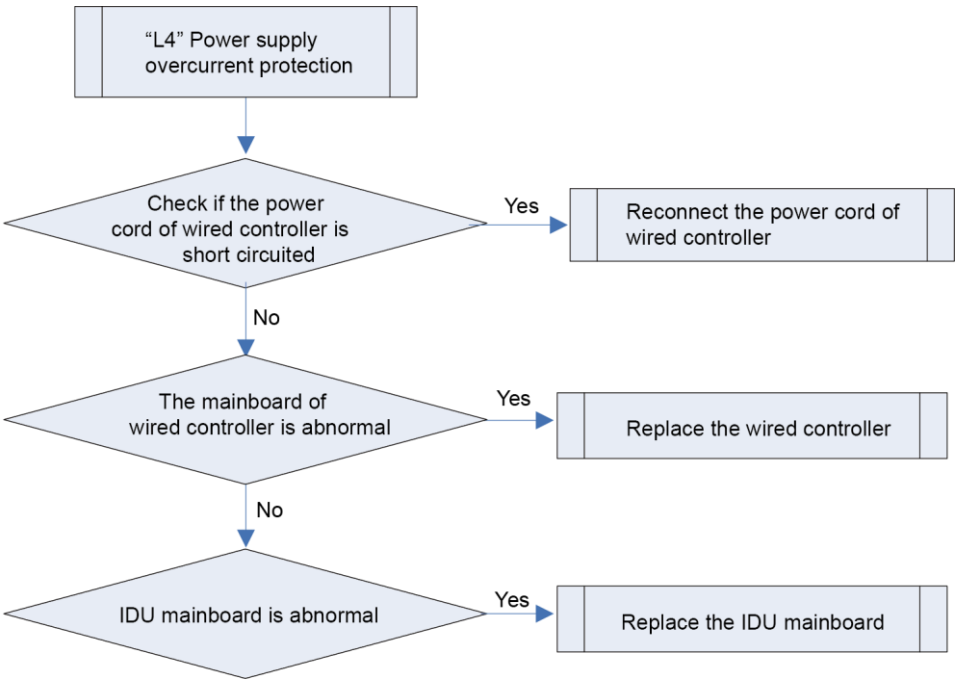
Error judgment condition and method:

Check if the power supply current from IDU to wired controller is normal. If power supply current is too big, it is judged that the current is abnormal.

Possible reason:

- Power supply conducting wire of wired controller is short circuited
- IDU mainboard is abnormal
- Mainboard of wired controller is abnormal

Troubleshooting:



1.3.15 “L5” Freeze protection

Error display: IDU wired controller and IDU receive light board will display 

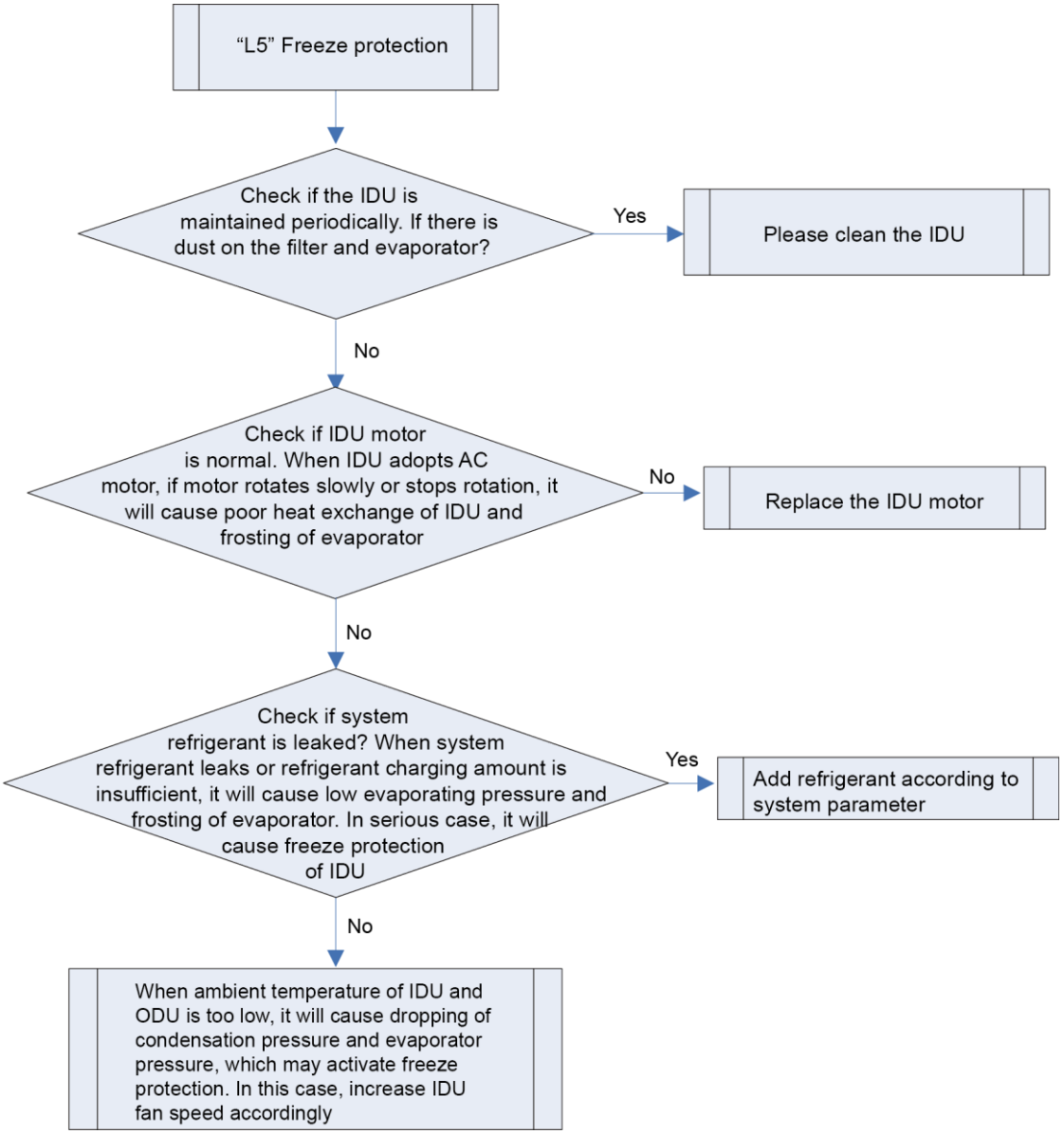
Error judgment condition and method:

Check IDU pipe temperature. When pipe temperature is too low, freeze protection will be activated to prevent freezing damage of evaporator.

Possible reason:

- IDU filter and evaporator are dirty
- IDU motor is blocked
- Refrigerant amount is insufficient
- Ambient temperature of IDU and ODU is too low

Troubleshooting:



1.3.16 "L7" No master IDU

Error display: IDU wired controller and IDU receive light board will display 

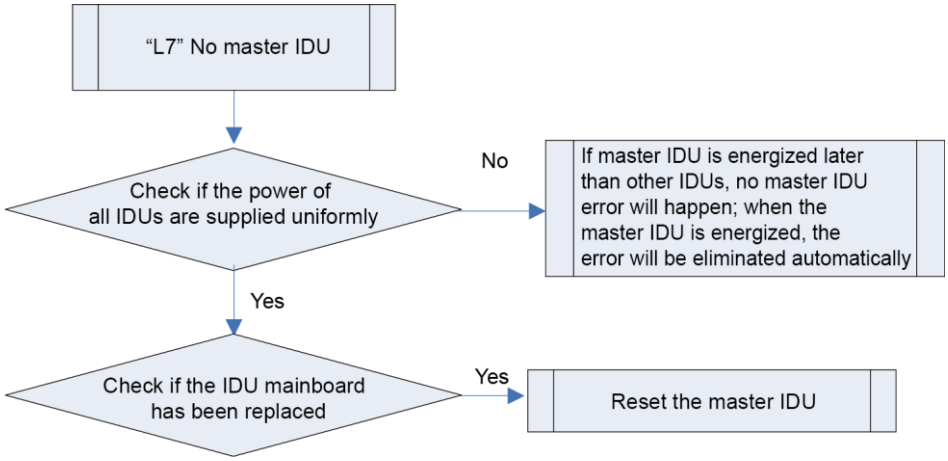
Error judgment condition and method:

No master IDU error will happen when there is no master IDU in the system

Possible reason:

- Master IDU is offline
- The mainboard of master IDU is replaced
- The mainboard of master IDU has error

Troubleshooting:



1.3.17 "L9" Group-controlled IDU quantity inconsistency

Error display: IDU wired controller and IDU receive light board will display 

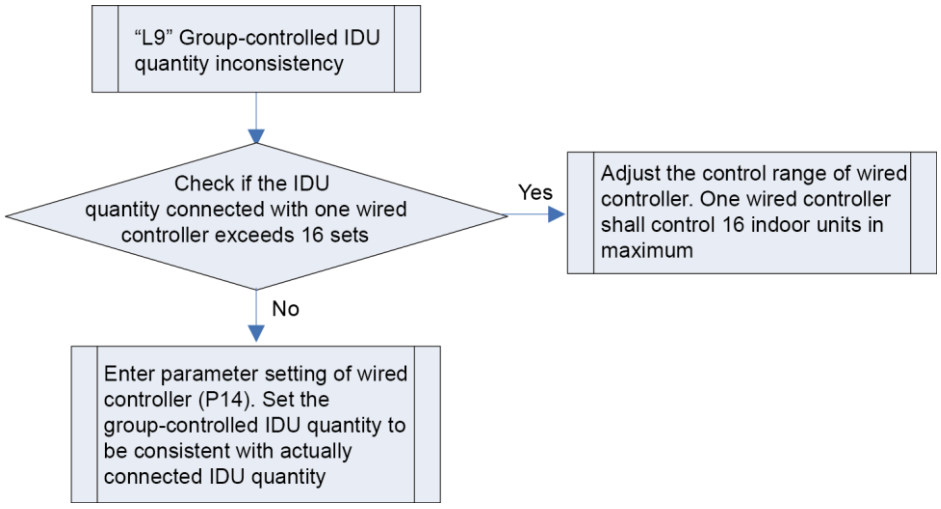
Error judgment condition and method:

If the IDU quantity connected with wired controller exceeds 16 sets or actually connected IDU quantity is inconsistent with the set group-controlled IDU quantity.

Possible reason:

- IDU quantity connected with one wired controller exceeds 16 sets;
- Actually connected IDU quantity is inconsistent with the set group-controlled IDU quantity.

Troubleshooting:



1.3.18 "LA" Group-controlled IDU series inconsistency

Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

Wired controller detects that the IDUs connected with itself belong to different series.

Possible reason:

- IDUs connected with one wired controller belong to different series

Troubleshooting:

Make sure the IDUs connected with one wired controller belong to the same series.

1.3.19 “LC” Mismatch of IDU and ODU models

Error display: IDU wired controller and IDU receive light board will display 

Error judgment condition and method:

When some IDUs or devices which cannot be identified by some ODUs are installed in the system, mismatch error of IDU and ODU models will occur.

Possible reason:

- Mismatch of IDU and ODU

Troubleshooting:

When some IDUs or devices which cannot be identified by some ODUs are installed in the system (E.g. floor heating device is installed in modular DC inverter multiple VRF system), the error will occur. Please remove the relevant IDU devices or replace the ODU with suitable model.

2 After-sales Emergency Masures

When some unrecoverable fault occurs to one module which is connected with several others in parallel, the following emergency measures are recommended to guarantee the heating or cooling capacity of the indoor units and the service life of modules except the faulted one are not affected.

Step 1: set all indoor units under “Off” mode and cut off the power supply to the indoor and outdoor units.

Step 2: shut off all cutoff valves of the faulted outdoor unit, including the cutoff valves of the liquid/gas pipe as well as the oil balancing valve.

Step 3: cut off the air switch of the module.

Step 4: remove the communication line between the faulted module and other modules which are still kept connected through the communication line.

Step 5: readjust the address and quantity settings on the main board of the modules except the faulted one.

Step 6: power and restart the unit.

3 About the Refrigerant Leakage Sensor

(1) The R32 refrigerant leakage sensor must be replaced after malfunction or at the end of its lifetime. ONLY authorized persons may replace the sensor.

(2) The sensor has a lifetime of 15 years. At the end of sensor lifetime or when the sensor fault, the indoor unit or wired controller displays error code "yd", and emits an alarm sound. The alarm can be canceled by operating the “On/Off” button of the wired controller or remote control. The indoor unit fan will keep running and the system can not operate until the sensor is replaced. Please contact our designated dealer or local service center to replace the sensor.

(3) The R32 refrigerant leakage sensor is a semiconductor detector which may incorrectly detect substances other than R32 refrigerant. Avoid using chemical substances (e.g. organic solvents,

hair spray, paint) in high concentrations, in the close proximity of the indoor unit because this may cause misdetection of the R32 refrigerant leakage sensor.

(4) When the sensor detects refrigerant leak, the indoor unit or wired controller displays error code "yb", and emits an alarm sound. The alarm can be canceled by operating the “On/Off” button of the wired controller or remote control. The indoor unit fan will keep running and the system can not operate until the leakage is repaired. Please contact our designated dealer or local service center.

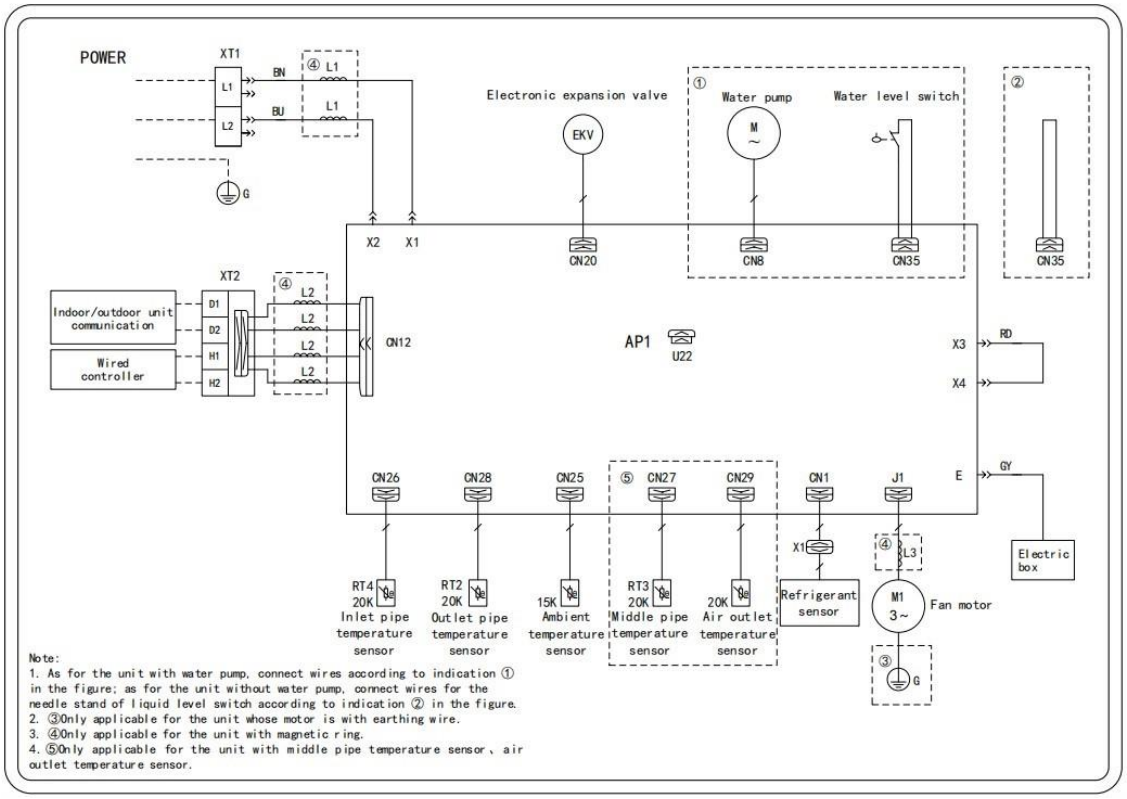
(5) If the indoor unit report a refrigerant leak and returns to normal after a while, it may be a misdetection caused by other chemical substances.

4 Wiring Diagram

NOTICE This drawing is just for reference; please always refer to the electric wiring stuck to the unit for actual wiring.

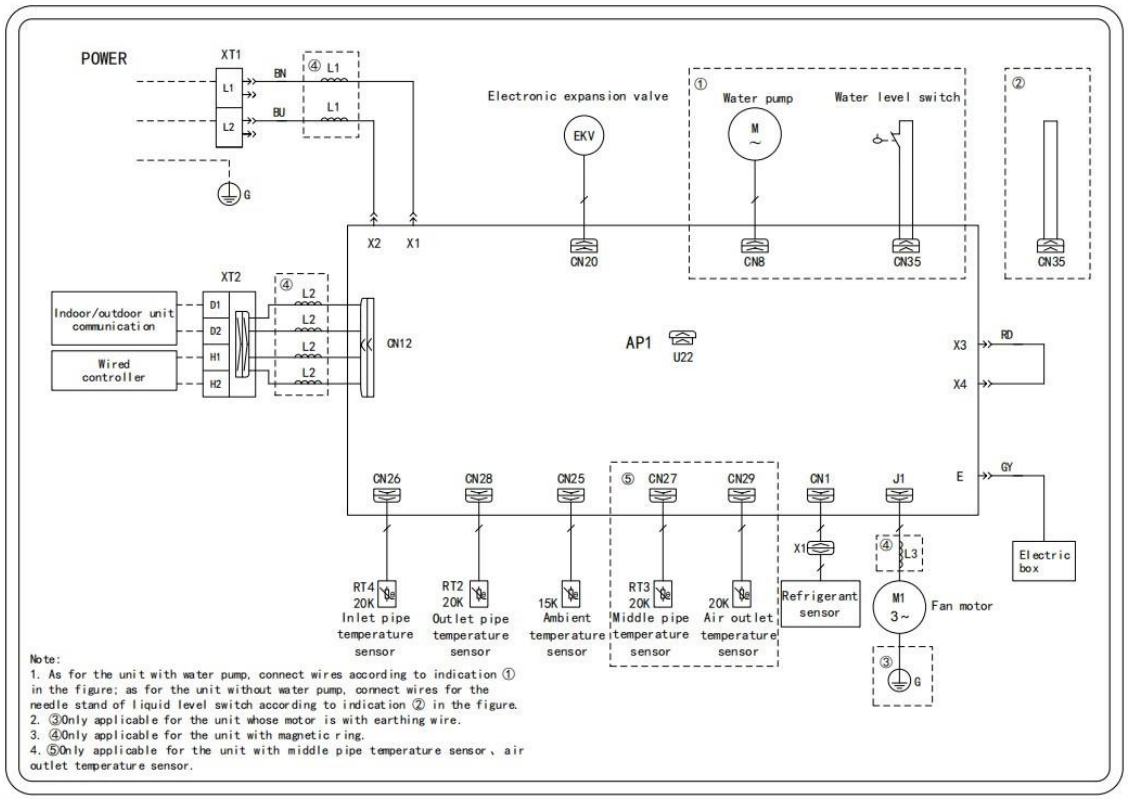
4.1 High Static Pressure Duct Type Indoor Unit

GMV-ND07~54PHS/NhD-T(U)：



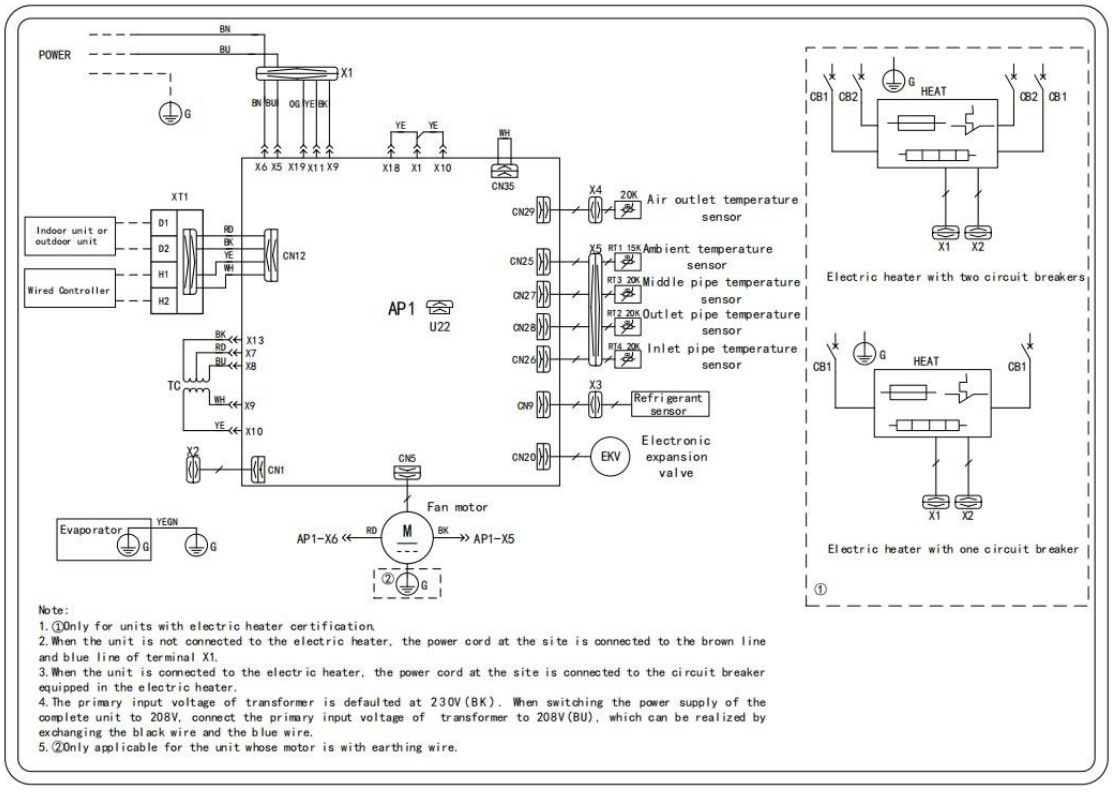
4.2 Fresh Air Processing Indoor Unit

GMV-NDX42~54P/NhD-T(U)：



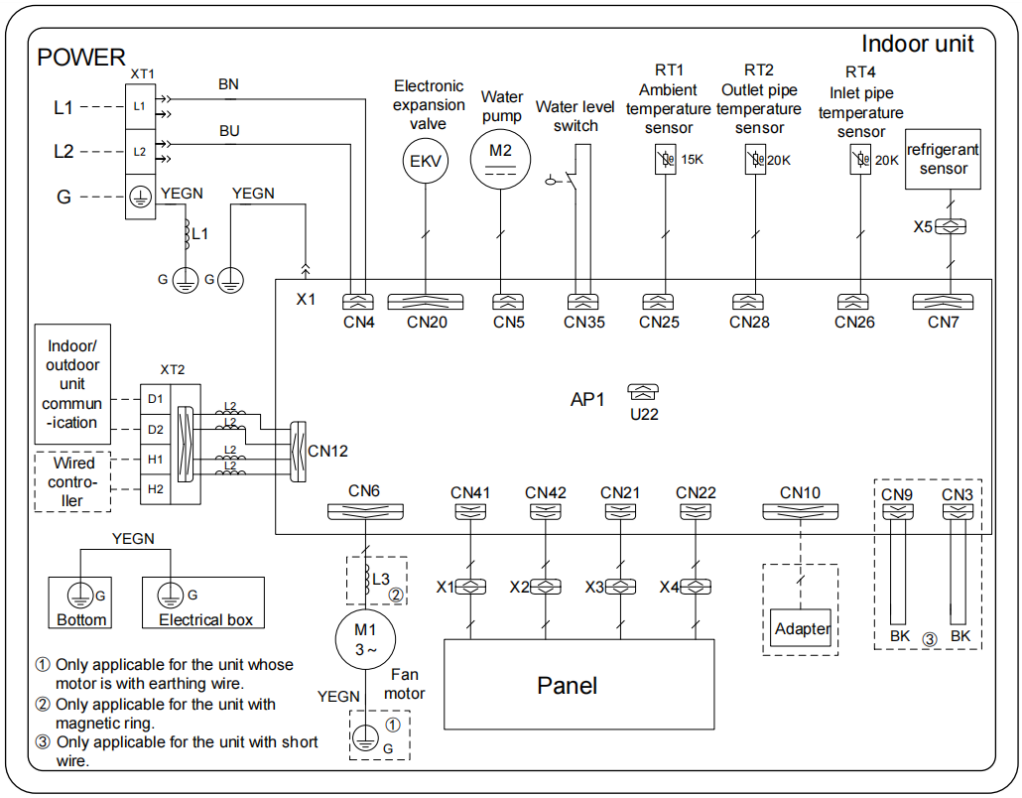
4.3 Air Handler Type Indoor Unit

GMV-ND12~60A/NhB-T(U):



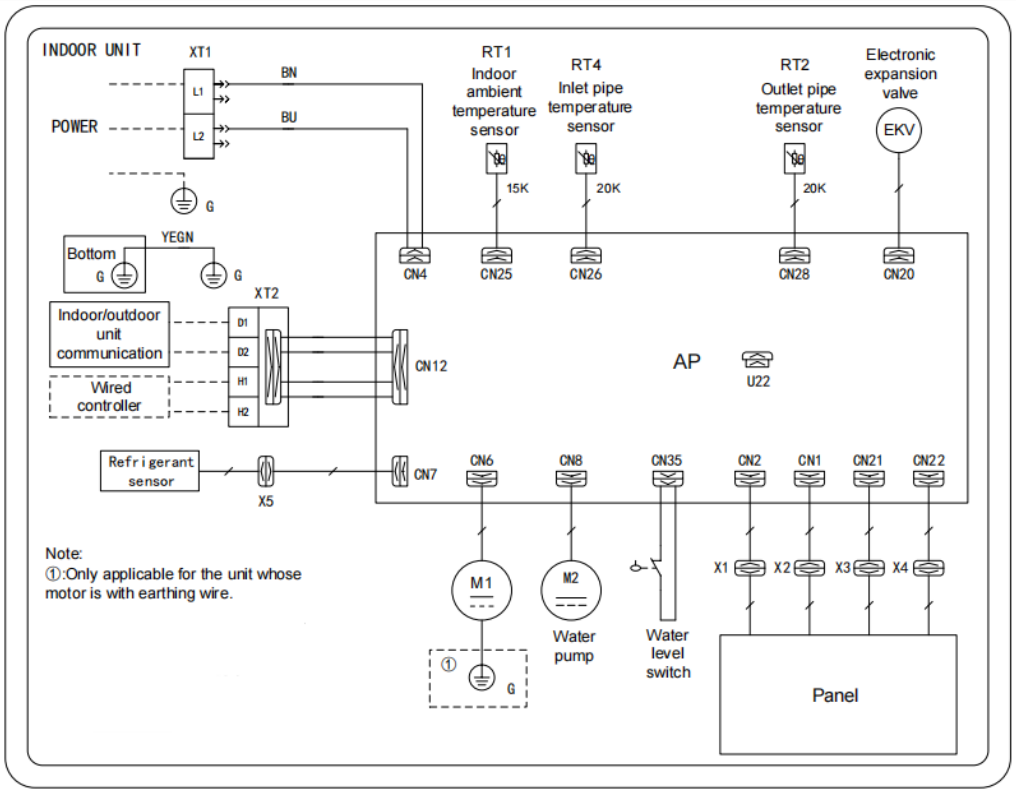
4.4 360°Air Discharge Casssette Type Indoor Unit

GMV-ND07~48T/NhD-T(U):



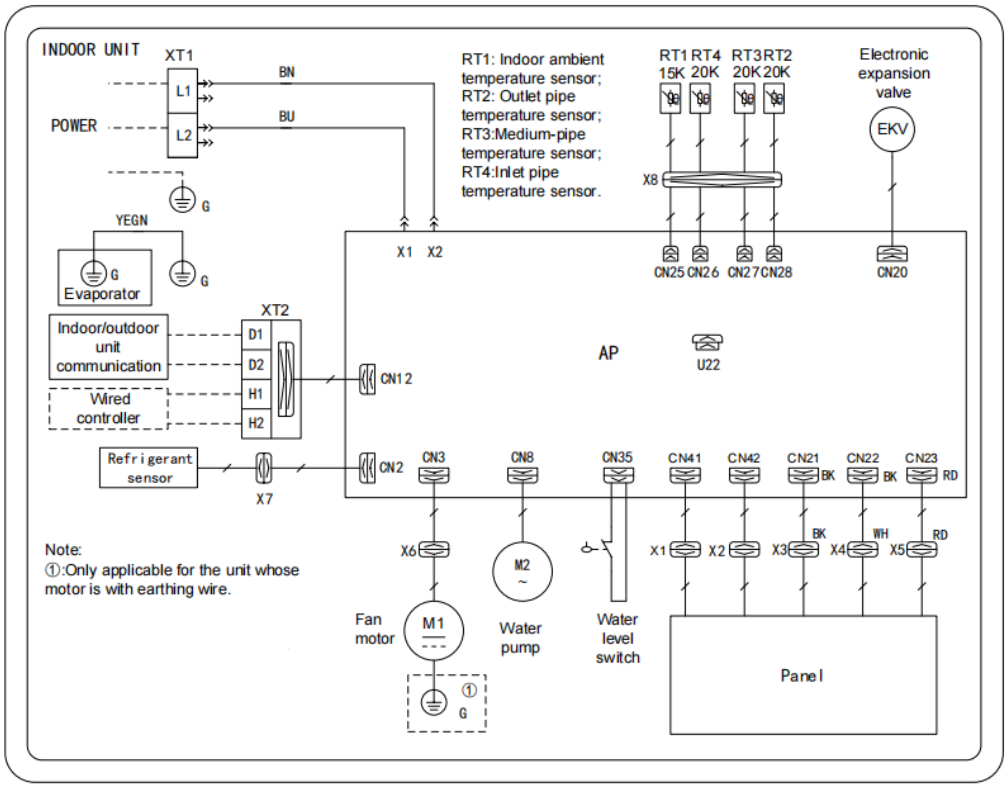
4.5 360°Air Discharge Compact Casssette Type Indoor Unit

GMV-ND05~18T/NhE-T(U):



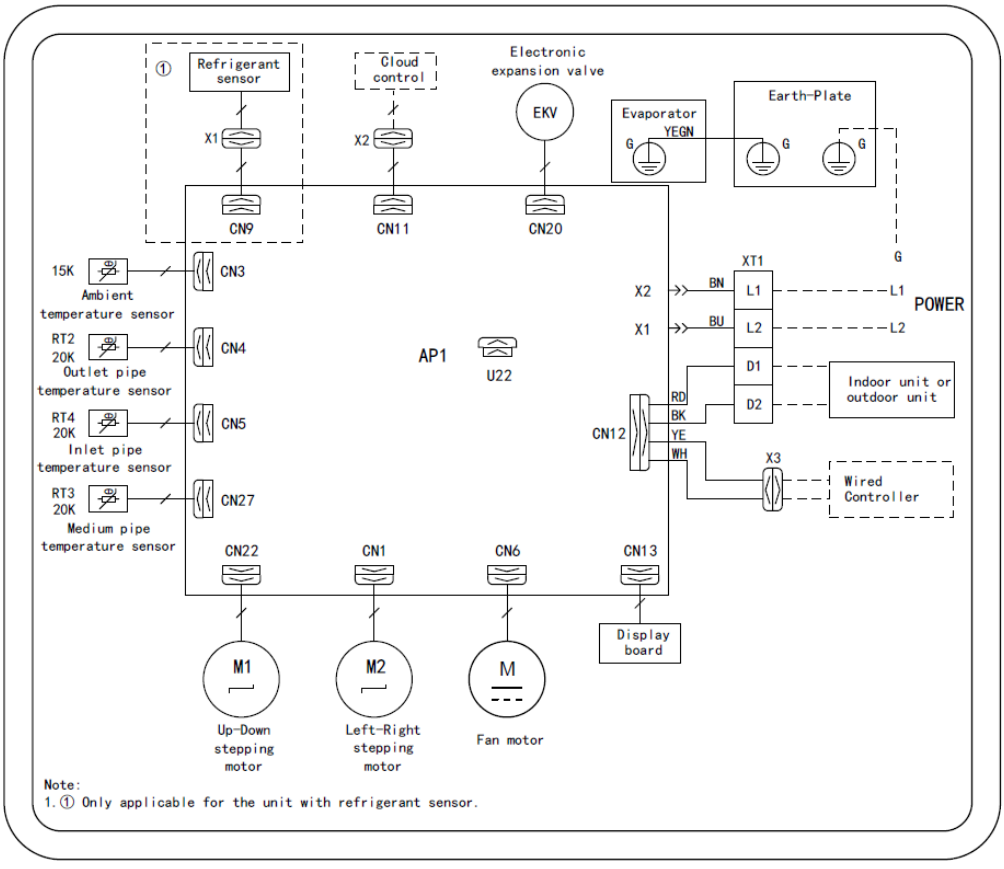
4.6 1-way Cassette Type Indoor Unit

GMV-ND07~12TD/NhA-T(U):



4.7 Wall Mounted Type Indoor Unit

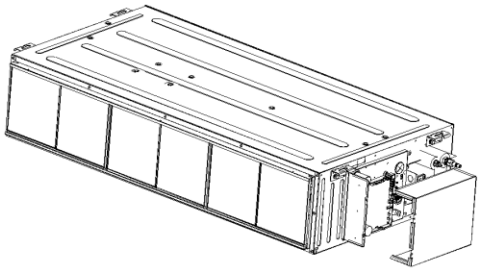
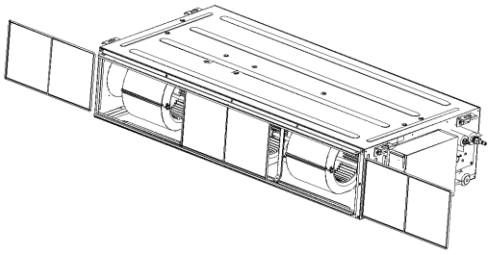
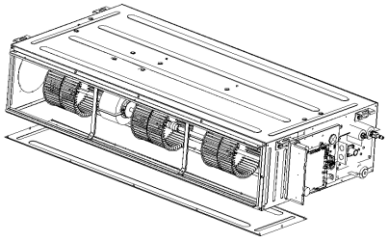
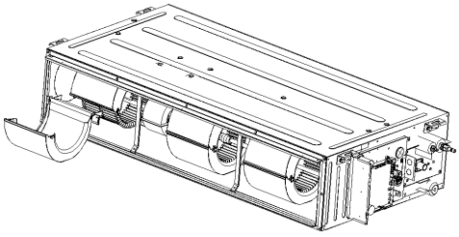
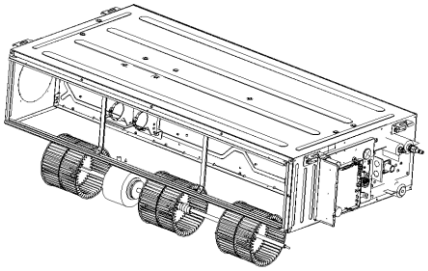
GMV-ND06~24G/NhA1C-T(U)、GMV-ND06~24G/NhA3C-T(U):

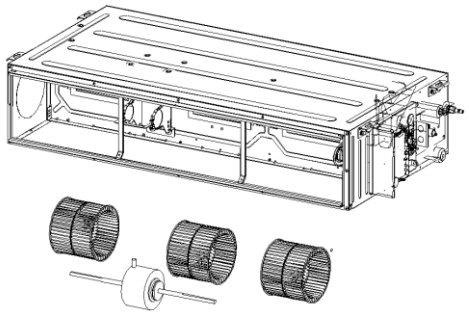
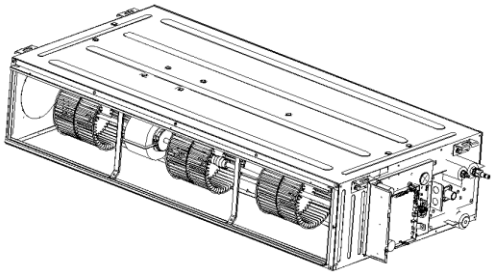
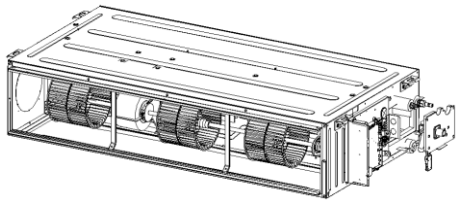


5 Disassembly and Assembly Procedure of Main Parts

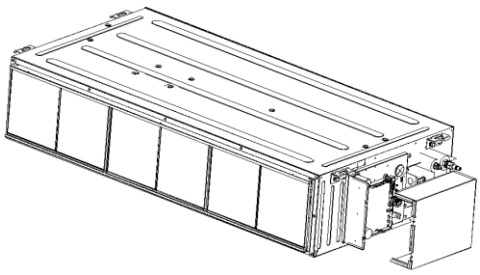
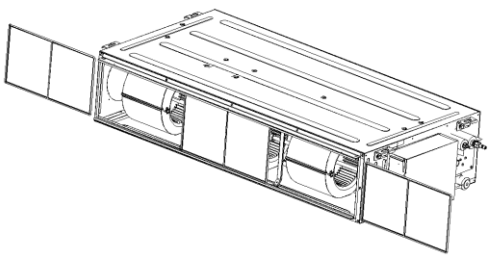
5.1 High Static Pressure Duct Type Indoor Unit

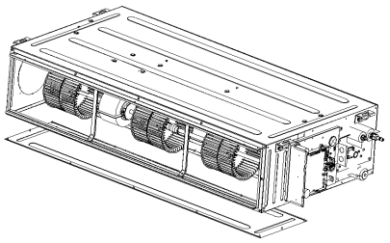
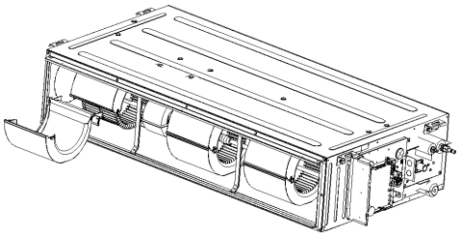
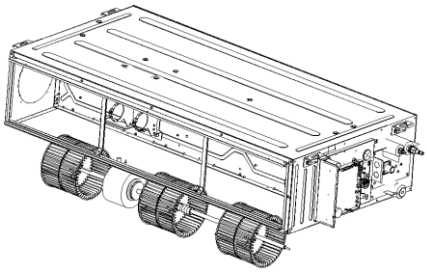
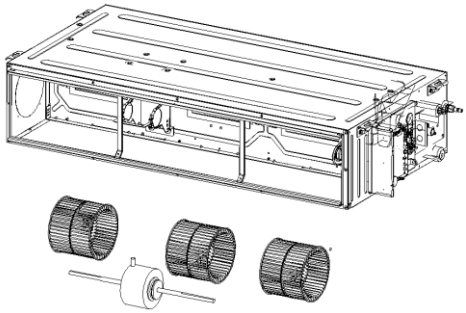
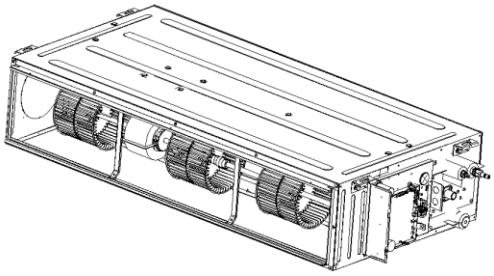
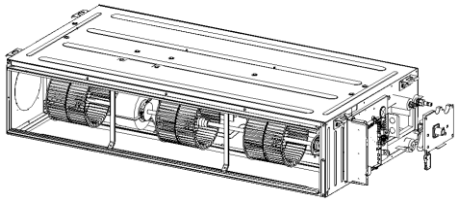
NOTICE The following steps are specific for GMV-ND18PHS/NhD-T(U) units. For other units, the assembly and disassembly procedure is similar except the specifications of centrifugal fans and motors.

Motor and fan		
Precondition: The power supply has been disconnected.		
Step	Diagram	Operation Procedure
1. Remove the line connecting to the motor.		● Use a screwdriver to unscrew the electric box cover. ● Remove from the master board the line connecting to the motor and remove the tie.
2. Remove the filter.		● Remove the filter from the air return frame.
3. Remove the air return cover plate.		● Use a screwdriver to unscrew the air return cover plate.
4. Remove the volute casing.		● Loosen the fasteners that connect the rear volute casing with the front volute casing and remove the rear volute casing.
5. Loosen the centrifugal fan and motor.		● Use a hexagon to unscrew the centrifugal fan and loosen the fasteners of the motor.

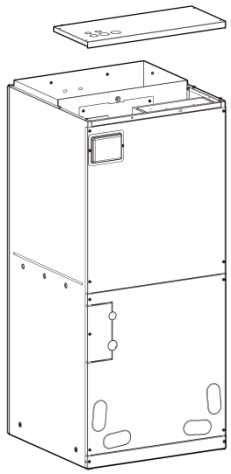
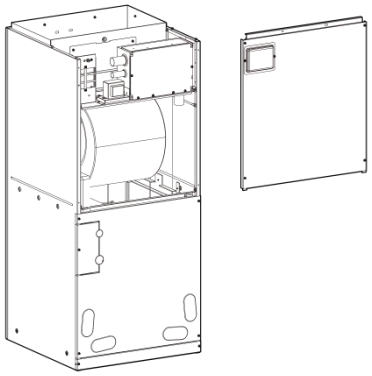
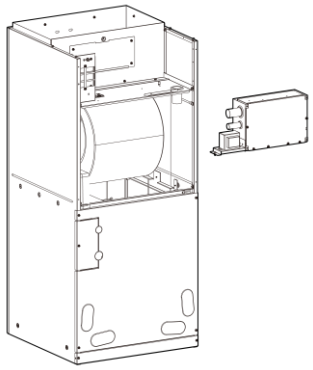
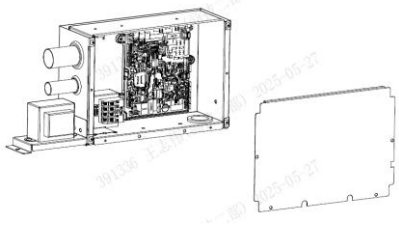
Motor and fan		
Precondition: The power supply has been disconnected.		
Step	Diagram	Operation Procedure
6. Remove the motor.		● Remove the motor from the support and remove the centrifugal fan from the motor axle. Then, remove the motor. ● For motors that are accompanied with supports, the supports need removing as well.
7. Install a new motor.		● Assemble units based on the reverse order of this procedure and power on the units for test.
8. Remove the Refrigerant Sensor.		● Remove the Refrigerant Sensor from the Water Pump Assy and the Water Pump Assy from Left Side Plate Assy. Then, remove the Refrigerant Sensor.

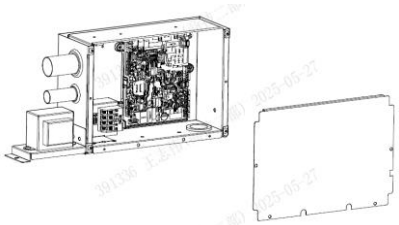
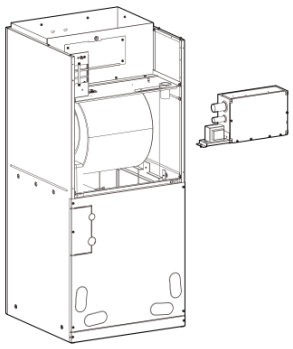
5.2 Fresh Air Processing Indoor Unit

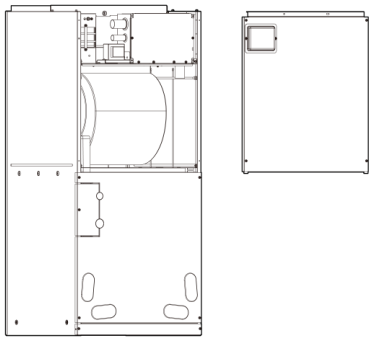
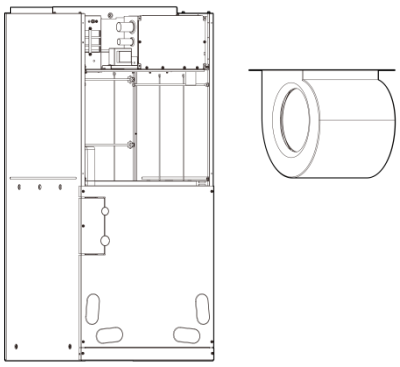
Motor and fan		
Precondition: The power supply has been disconnected.		
Step	Diagram	Operation Procedure
1. Remove the line connecting to the motor.		● Use a screwdriver to unscrew the electric box cover. ● Remove from the master board the line connecting to the motor and remove the tie.
2. Remove the filter.		● Remove the filter from the air return frame.

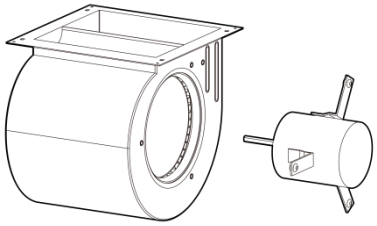
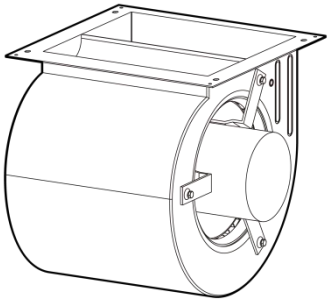
Motor and fan		
Precondition: The power supply has been disconnected.		
Step	Diagram	Operation Procedure
3. Remove the air return cover plate.		● Use a screwdriver to unscrew the air return cover plate.
4. Remove the volute casing.		● Loosen the fasteners that connect the rear volute casing with the front volute casing and remove the rear volute casing.
5. Loosen the centrifugal fan and motor.		● Use a hexagon to unscrew the centrifugal fan and loosen the fasteners of the motor.
6. Remove the motor.		● Remove the motor from the support and remove the centrifugal fan from the motor axle. Then, remove the motor. ● For motors that are accompanied with supports, the supports need removing as well.
7. Install a new motor.		● Assemble units based on the reverse order of this procedure and power on the units for test.
8. Remove the Refrigerant Sensor.		● Remove the Refrigerant Sensor from the Water Pump Assy and the Water Pump Assy from Left Side Plate Assy. Then, remove the Refrigerant Sensor.

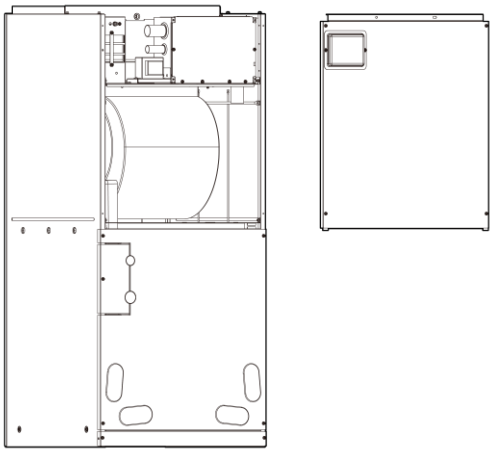
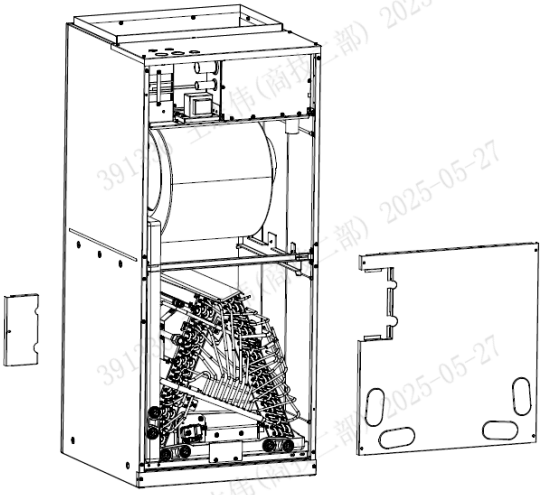
5.3 Air Handler Type Indoor Unit

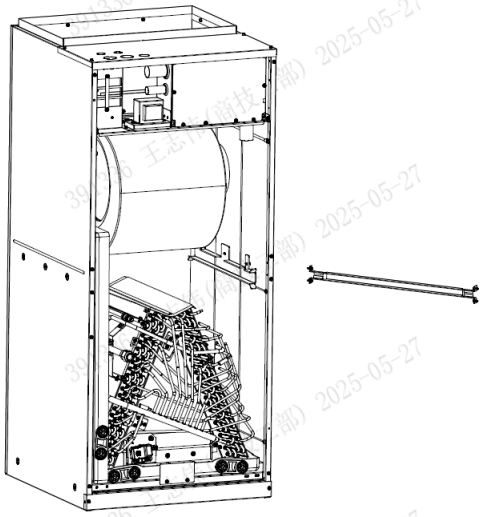
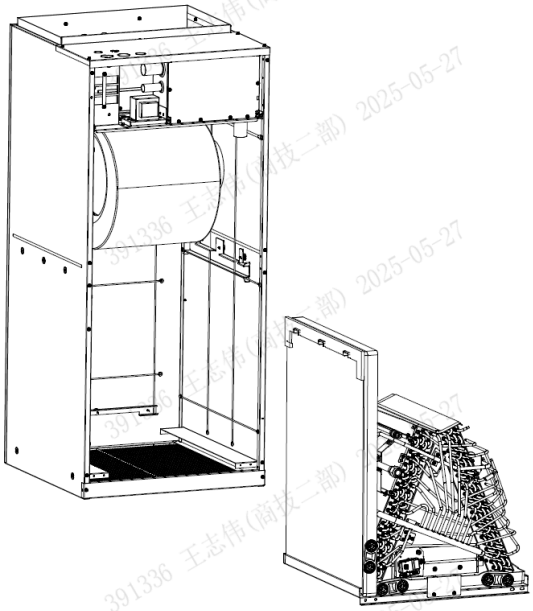
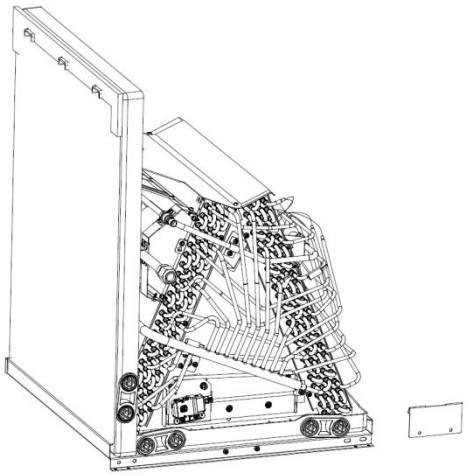
Disassembly and Assembly of the Electric Box		
Step	Picture	Work Instruction
1.Remove the upper panel.		● Loosen screws around the upper panel with a screwdriver. ● Remove the upper panel away from the unit.
2.Remove the front panel.		● Loosen screws around the upper panel with a screwdriver. ● Remove the front panel away from the unit.
3.Remove the electric box.		● Disconnect the power cord and control line from the wiring terminals, and then draw them out. ● Loosen screws around the electric box with a screwdriver. ● Remove the electric box from the unit.
4.Remove the electric element.		● Disconnect the electric element from the wiring terminal. ● Loosen screws around the electric element with a screwdriver. ● Remove the electric element from the electric box.

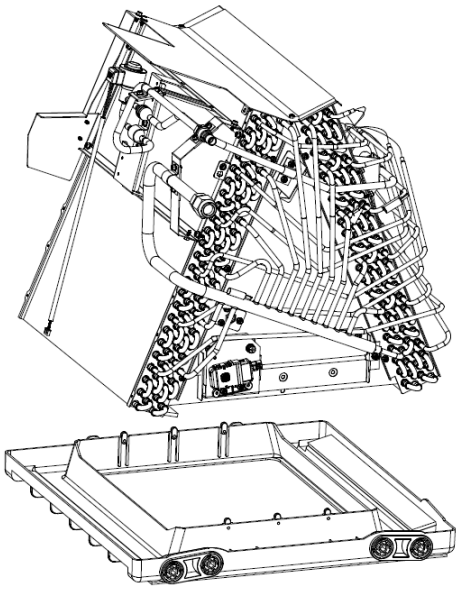
Disassembly and Assembly of the Electric Box		
Step	Picture	Work Instruction
5.Mount the new electric element.		● Place the electric element at the proper position. ● Tighten the screws around the electric element with a screwdriver. ● Wire the electric element to the wiring terminal.
6.Reinstall the electric box.		● Place the electric box at the proper position. ● Tighten screws around the electric box with a screwdriver. ● Connect the power cord and control line properly. ● Reassemble the unit as before.

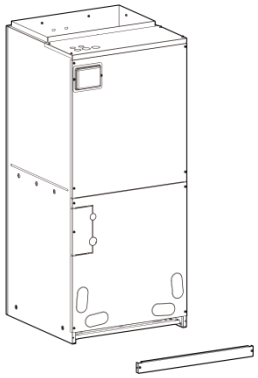
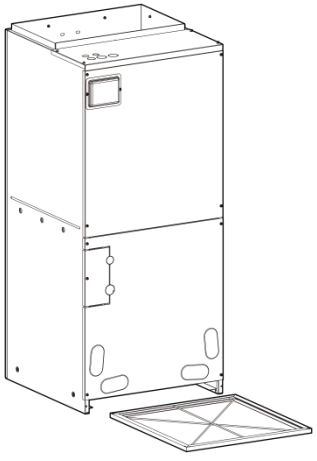
Disassembly and Assembly of the Fan Motor		
Step	Picture	Work Instruction
1.Remove the upper panel.		● Loosen screws round the upper panel with a screwdriver. ● Remove the upper panel from unit.
2.Remove the fan.		● Disconnect the wires of the fan from the wiring terminal and draw them out. ● Loosen screws located at the front of the fan with a screwdriver. ● Remove the fan from the unit.

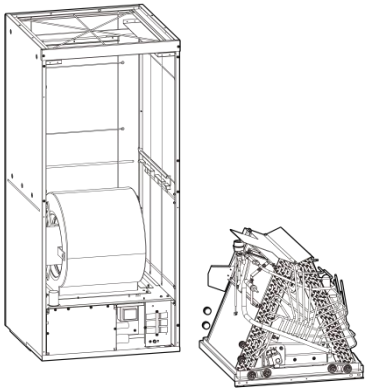
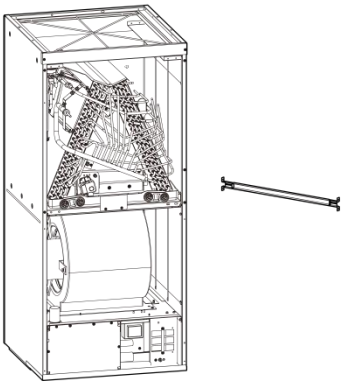
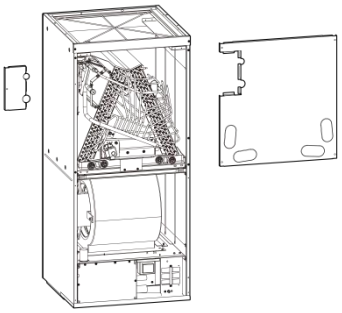
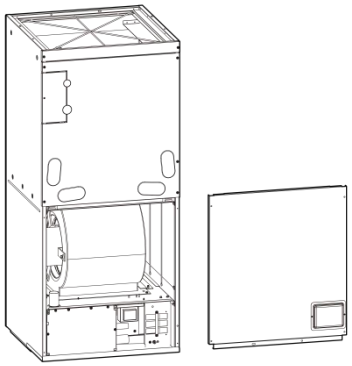
Disassembly and Assembly of the Fan Motor		
Step	Picture	Work Instruction
3.Remove the motor.		● Loosen screws fixing the motor and fan blades. ● Loosen screw bolts fixing the bracket. ● Remove the motor rightward from the fan.
4.Reinstall the fan.		● Place the motor at the proper position. ● Tighten screws fixing the motor and fan blades. ● Tighten screw bolts fixing the motor bracket. ● After the installation, reassemble the unit as before.

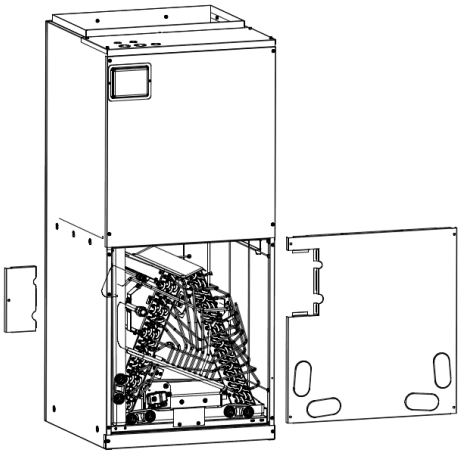
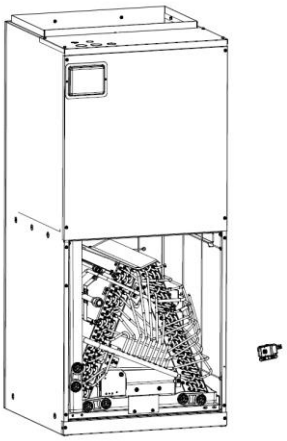
Disassembly and Assembly of the Evaporator and Drain Pan		
Step	Picture	Work instruction
1.Remove the upper panel.		● Loosen screws round the upper panel with a screwdriver. ● Remove the upper panel from unit.
2.Remove the lower panel (1) and panel (2).		● Loosen screws round the lower panel with a screwdriver. ● Remove the lower panel from unit.

Disassembly and Assembly of the Evaporator and Drain Pan		
Step	Picture	Work instruction
3.Remove the enhanced frame if applicable.		● Remove the screws from enhanced frame. ● Disassemble the enhanced frame from the unit.
4.Remove the primary drain pan.		● Remove the primary drain pan from the unit.
5.Remove the secondary drain pan.		● Remove the secondary drain pan from the unit.

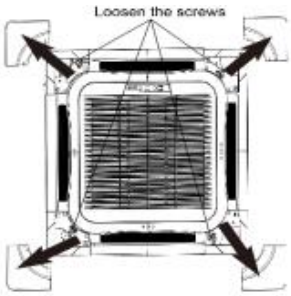
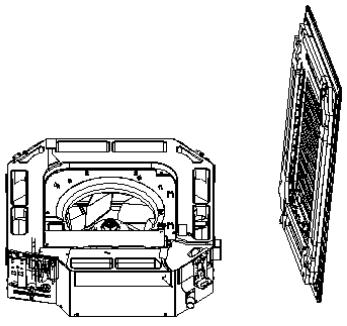
Disassembly and Assembly of the Evaporator and Drain Pan		
Step	Picture	Work instruction
6.Remove the evaporator.		● Remove the evaporator away from the primary drain pan. ● Reassemble the unit as before.

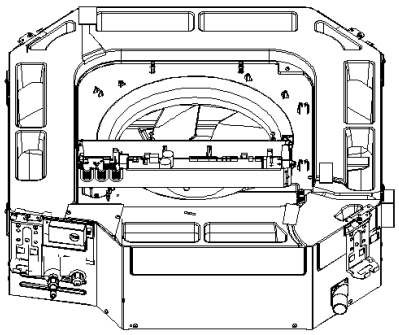
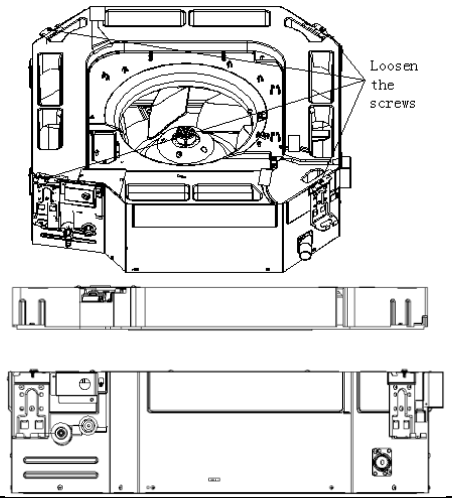
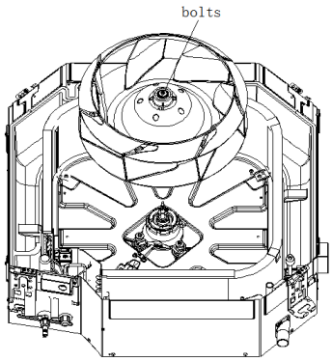
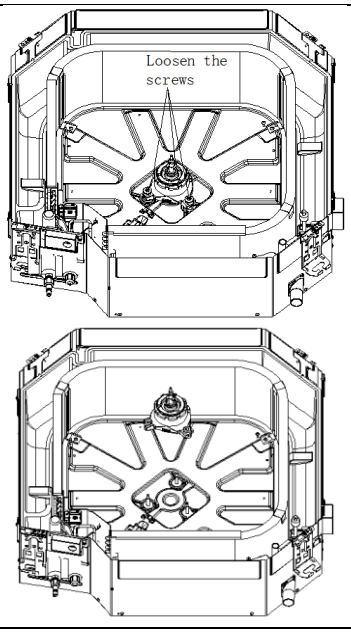
Disassembly and Assembly of the Filter		
Step	Picture	Work instruction
1.Remove the mounting plate.		● Loosen screws fixing the mounting plate with a screwdriver. ● Remove the mounting plate away from the unit.
2.Remove the filter screen.		● Remove the filter screen away from the unit. ● After replacing the filter screen, reassemble the unit as before.

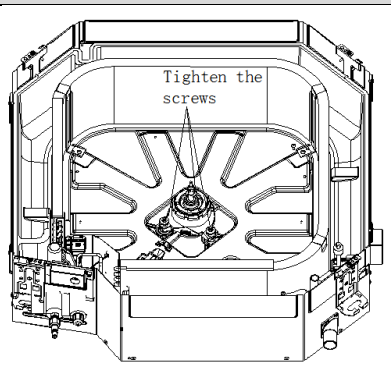
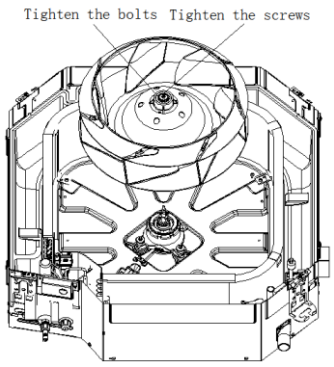
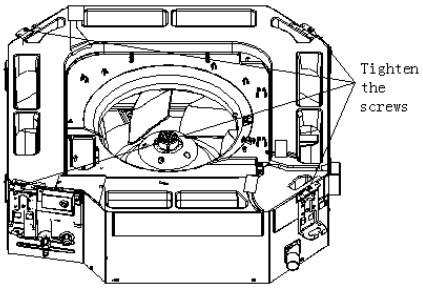
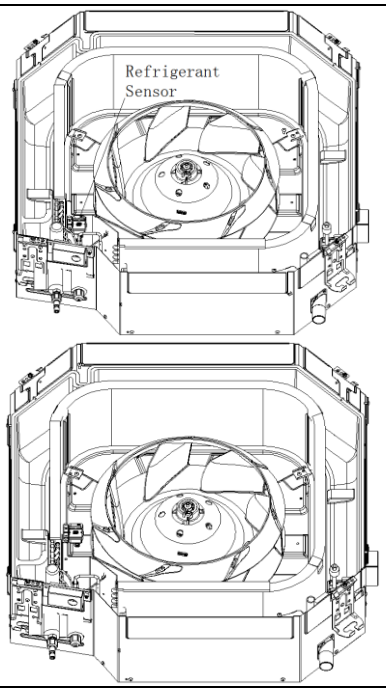
Installation of downward air supply mode		
Step	Picture	Work instruction
1.Turn the internal unit upside down.		● Loosen screws around the upper and lower panel with a screwdriver. ● Remove the front panel away from the unit.
2.Install the enhanced frame.		● install the screws from enhanced frame. ● install the enhanced frame from the unit.
3.install the lower panel (1) and panel (2).		● install screws round the lower panel with a screwdriver. ● install the lower panel for unit.
4.install the upper panel.		● install screws round the upper panel with a screwdriver. ● install the upper panel from unit.

Disassembly and Assembly of refrigerant sensor		
Step	Picture	Work instruction
1.Remove the lower panel (1) and panel (2).		● Loosen screws around the lower panel with a screwdriver. ● Remove the lower panel away from the unit.
2.Remove the refrigerant sensor.		● Remove the refrigerant sensor away from the unit. ● After replacing the refrigerant sensor , reassemble the unit as before.

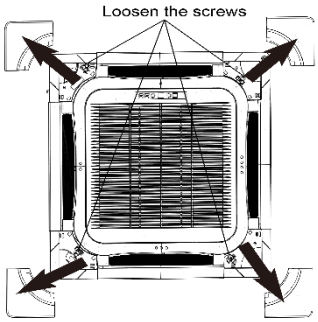
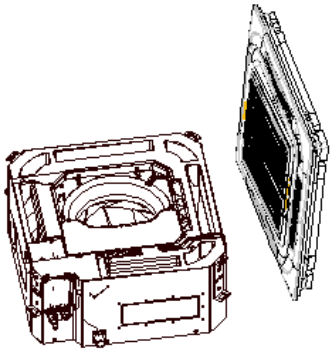
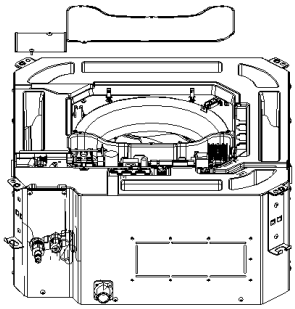
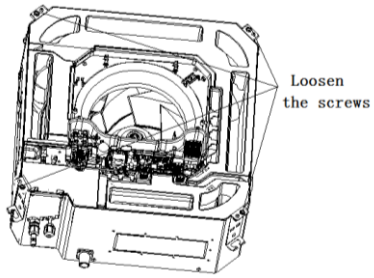
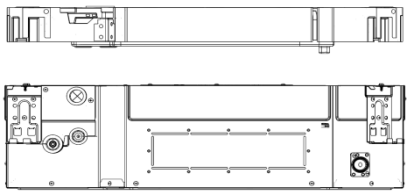
5.4 360°Air Discharge Casssette Type Indoor Unit

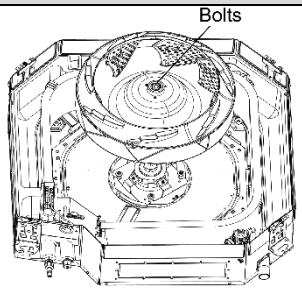
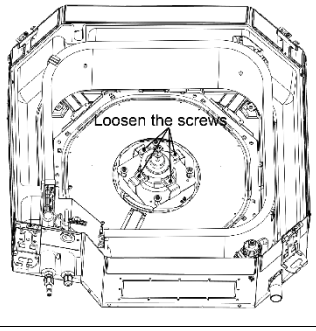
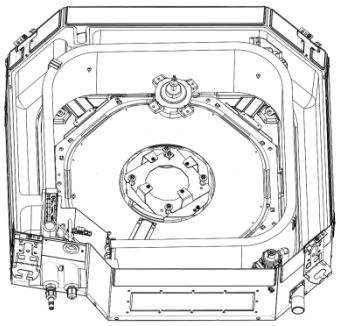
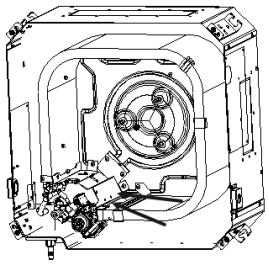
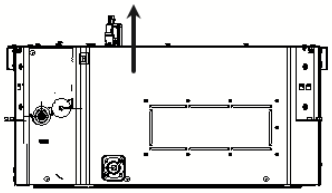
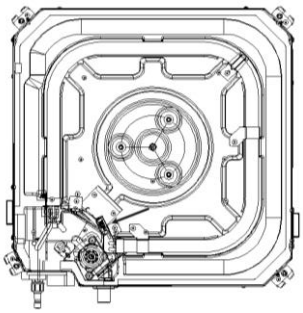
Motor and fan		
Step	Diagram	Operation Procedure
1. Remove the front panel.	 	● Turn off the power supply of indoor unit. ● Push the 4 corner plates in the directions shown by the arrows. ● Loosen the screws and remove the front panel.

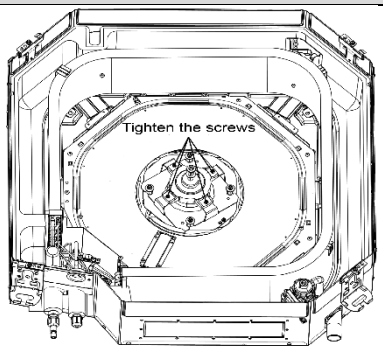
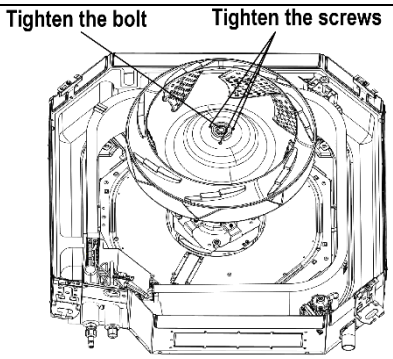
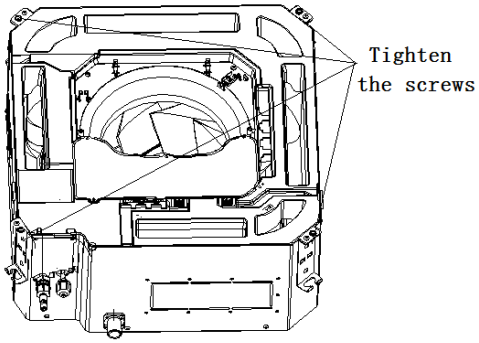
Motor and fan		
Step	Diagram	Operation Procedure
2. Remove the cover of electric box and the clamp of power cord.		● Remove the motor wire and water pump of the electric box.
3. Remove the water tray.		● Loosen the screws in the 4 corners and then remove the water tray.
4. Remove the fan.		● Use a screwdriver to remove the clamping band of motor. Then remove the fan.
5. Remove the motor.		● Use a screwdriver to unscrew the 3 screws of motor. Then remove the motor.

Motor and fan		
Step	Diagram	Operation Procedure
6. Replace and install the motor.		● Remove the motor from motor support and then replace with a new motor. ● Tighten the 3 screws of motor with a screwdriver.
7. Install the fan.		● Direct the hole of fan to the motor shaft and then mount on the fan. ● Tighten the clamping band of motor with a wrench.
8. Install the water tray.		● Direct the 4 corners of water tray to the 4 corners of the unit and then press them. Use a screwdriver to tighten the screws in the 4 corners. ● Connect the power cord and water pump wire. ● Place back the cover of electric box and the clamp of power cord. Then tighten the screws with a screwdriver.
9. Remove the Refrigerant Sensor		● Remove the 2 Refrigerant Sensor fixing screws, and then you can remove the Refrigerant Sensor.

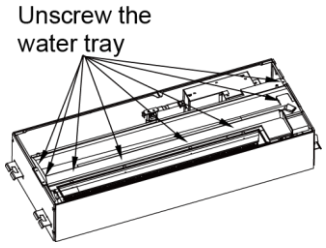
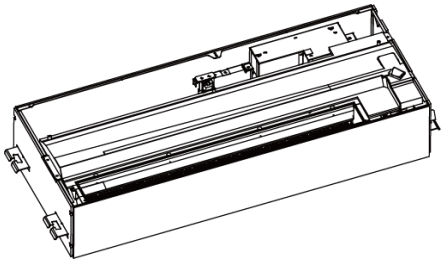
5.5 360°Air Discharge Compact Casssette Type Indoor Unit

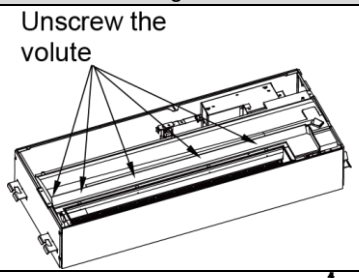
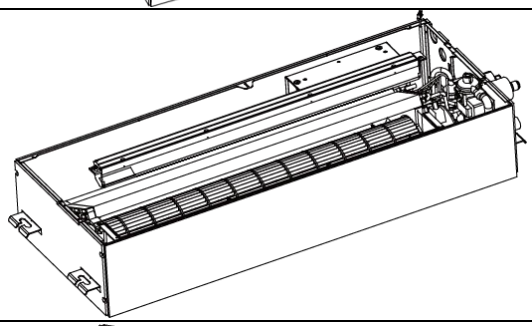
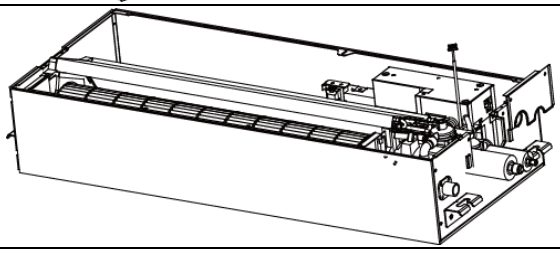
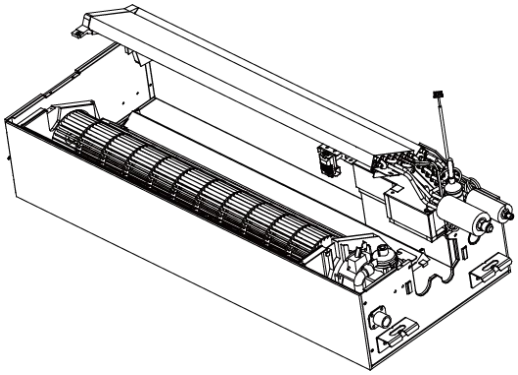
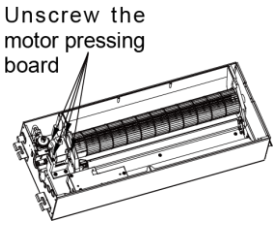
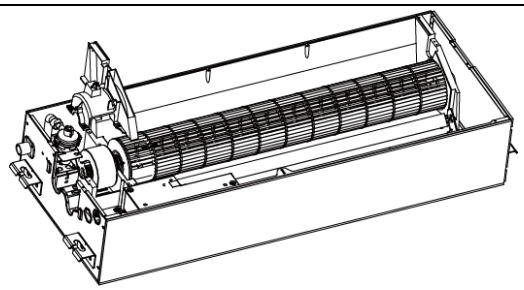
<table>
<tr><th colspan="3">Motor and fan</th></tr>
<tr><th>Step</th><th>Diagram</th><th>Operation Procedure</th></tr>
<tr><td rowspan="2">1. Remove the front panel.</td><td> 
</td><td rowspan="2">● Turn off the power supply of indoor unit.
● Push the 4 corner plates in the directions shown by the arrows.
● Loosen the screws and remove the front panel.</td></tr>
<tr><td>  </td></tr>
<tr><td>2. Remove the cover of electric box and the clamp of power cord.</td><td>  </td><td>● Remove the motor wire and water pump of the electric box.</td></tr>
<tr><td rowspan="2">3. Remove the water tray.</td><td> 
</td><td rowspan="2">● Loosen the screws in the 4 corners and then remove the water tray.</td></tr>
<tr><td>  </td></tr>
</table>

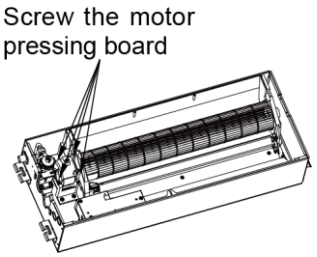
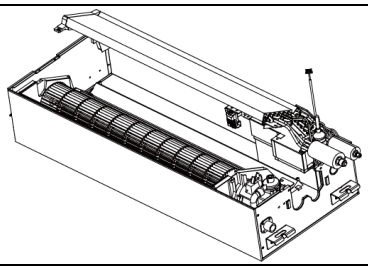
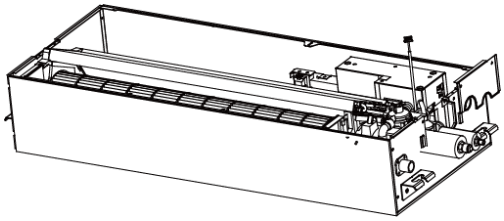
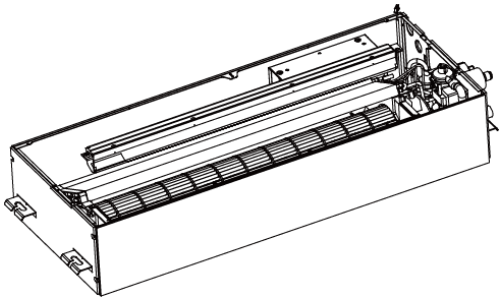
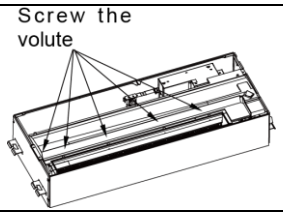
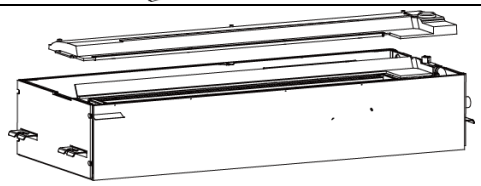
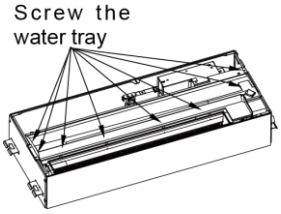
Motor and fan		
Step	Diagram	Operation Procedure
4. Remove the fan.		● Use a screwdriver to remove the clamping band of motor. Then remove the fan.
5. Remove motor.	 	● Use a screwdriver to unscrew the 4 screws of motor. Then remove the motor.
6. Remove the refrigerant sensor	 	● Remove the two fixing screws on the back of the connector plate. ● Move upwards to remove the refrigerant sensor.
7.Replacement and installation of refrigerant sensor		● Remove the refrigerant sensor from the connector plate, then replace it with a new refrigerant sensor. ● Use a screwdriver to tighten the two screws of the refrigerant sensor.

Motor and fan		
Step	Diagram	Operation Procedure
8. Replace and install the motor.		● Remove the motor from motor support and then replace with a new motor. ● Tighten the 4 screws of motor with a screwdriver.
9. Install the fan.		● Direct the hole of fan to the motor shaft and then mount on the fan. ● Tighten the clamping band of motor with a wrench.
10. Install the water tray.		● Direct the 4 corners of water tray to the 4 corners of the unit and then press them. Use a screwdriver to tighten the screws in the 4 corners. ● Connect the power cord and water pump wire. ● Place back the cover of electric box and the clamp of power cord. Then tighten the screws with a screwdriver.

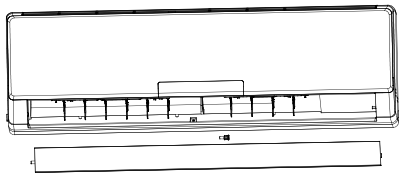
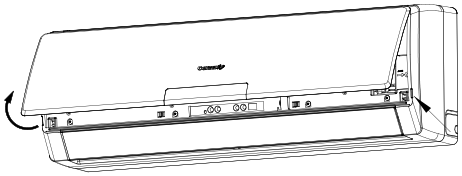
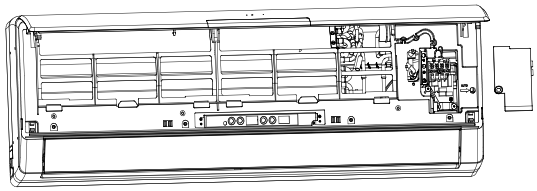
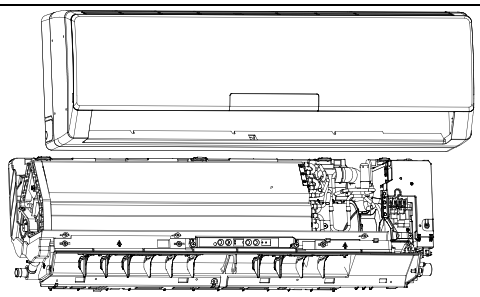
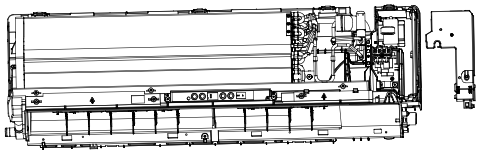
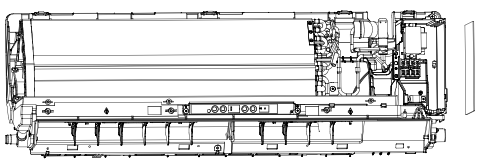
5.6 1-way Cassette Type Indoor Unit

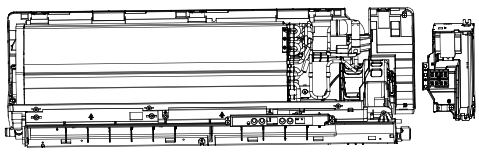
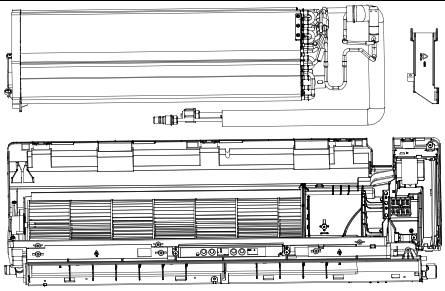
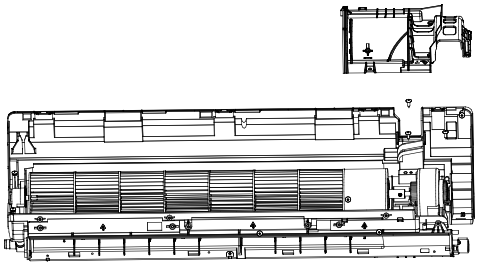
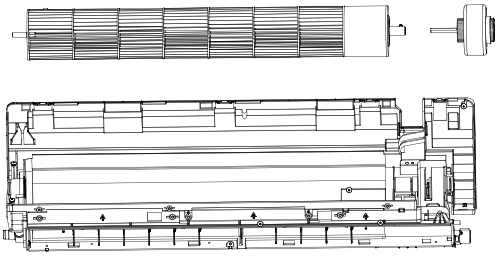
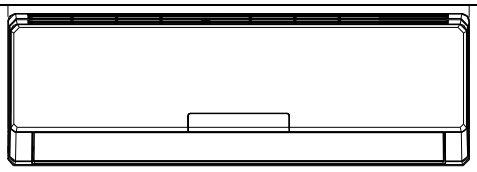
Motor and fan		
Step	Diagram	Operation Procedure
1.Unscrew the water tray.		● Use a screwdriver to unscrew the water tray.
2.Remove the water tray.		● Remove the water tray.

Motor and fan		
Step	Diagram	Operation Procedure
3.Unscrew the volute tongue.		● Use a screwdriver to unscrew the volute tongue.
4.Remove the volute tongue.		● Remove the volute tongue.
5.Unscrew the outlet board.		● Use a screwdriver to unscrew the outlet board and then remove the board.
6.Remove the evaporator.		● Remove the evaporator.
7.Unscrew the motor pressing board.		● Use a screwdriver to unscrew the motor pressing board.
8.Remove the pressing board and replace the motor.		● Remove the pressing board and replace the motor.

Motor and fan		
Step	Diagram	Operation Procedure
9.Screw the motor pressing board.		● Use a screwdriver to screw the motor pressing board.
10.Install the evaporator.		● Install the evaporator.
11.Screw the outlet board.		● Use a screwdriver to screw the outlet board.
12.Put the volute tongue back to position.		● Put the volute tongue back to position.
13.Screw the volute tongue.		● Use a screwdriver to screw the volute tongue.
14.Install the water tray.		● Install the water tray.
15.Screw the water tray.		● Use a screwdriver to screw the water tray.

5.7 Wall Mounted Type Indoor Unit

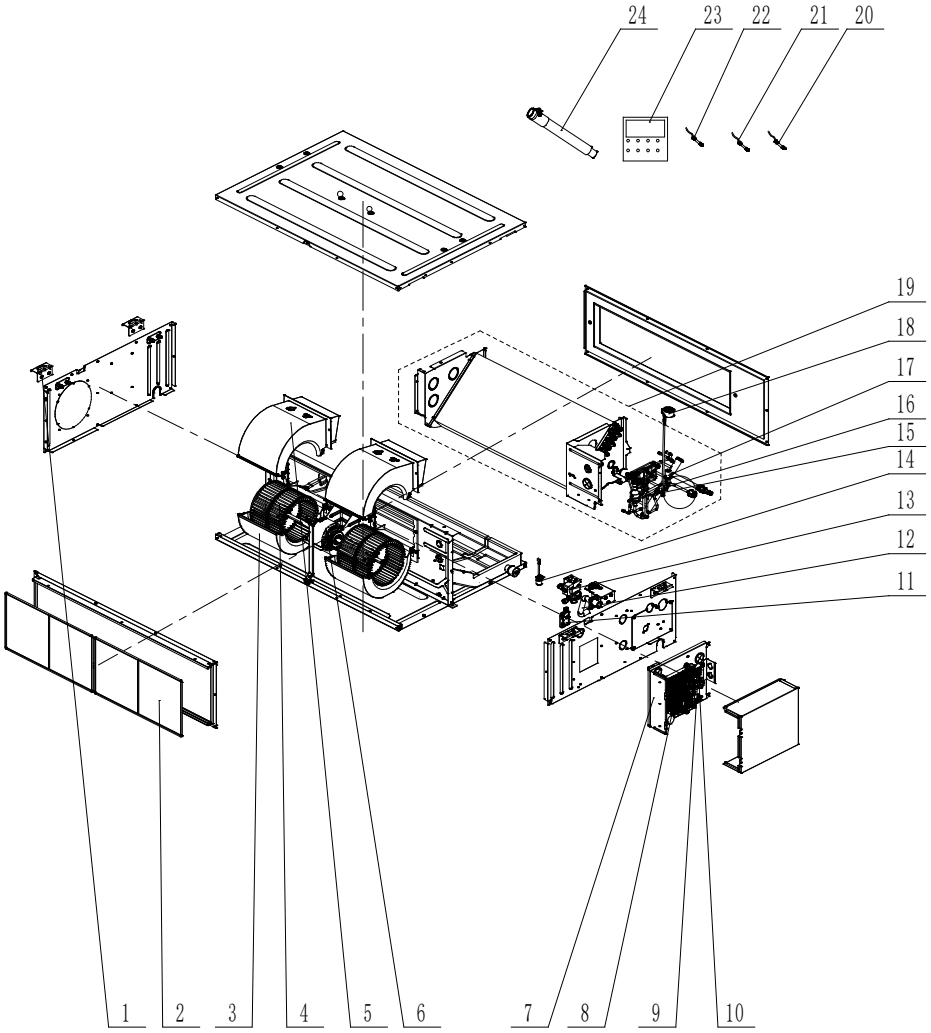
Removal of Fan Motor		
Remark: before removing, making sure power is disconnected.		
Step	Diagram	Operation Procedure
1. Remove the louver		● Take off the axle bush of the louver. ● Remove the louver.
2. Open the front panel		● Hold the indents on both sides of the panel and pull it out in the direction shown by the arrow.
3. Remove the electrical box cover 2		● Unscrew the screws fixing the electrical box cover with a screwdriver. Take off the box cover 2. ● Detach the ambient temperature sensor from the conduit.
4. Remove the front panel assembly		● Unscrew the screws fixing the front panel assembly. ● Remove the front panel assembly.
5. Remove the electrical box cover 1		● Press on the buckle of the box cover 1 and then take off the cover.
6. Remove the main board		● Release the wiring terminals connected to the main board. ● Remove the main board.

Removal of Fan Motor		
Remark: before removing, making sure power is disconnected.		
Step	Diagram	Operation Procedure
7. Remove the electrical box		● Unscrew the screws fixing the electrical box with a screwdriver. ● Remove the electrical box.
8. Remove the evaporator		● Use a screwdriver to unscrew the screws fixing the press plate of connection pipe on the back of the unit and take off the press plate. ● Unscrew the screws of evaporator with a screwdriver and then remove the evaporator.
9.Remove motor's pressing plate		● Unscrew the fixing screws of the pressing plate with a screwdriver and then remove it.
10. Remove the motor and fan		● Take off the motor and fan directly. ● Use a screwdriver to unscrew the screws connecting the motor and the fan.
11. Install a new motor.		● Assemble units based on the reverse order of this procedure and power on the units for test.

6 Exploded Views and Part List

6.1 High Static Pressure Duct Type Indoor Unit

Exploded View of GMV-ND07~24PHS/NhD-T(U):

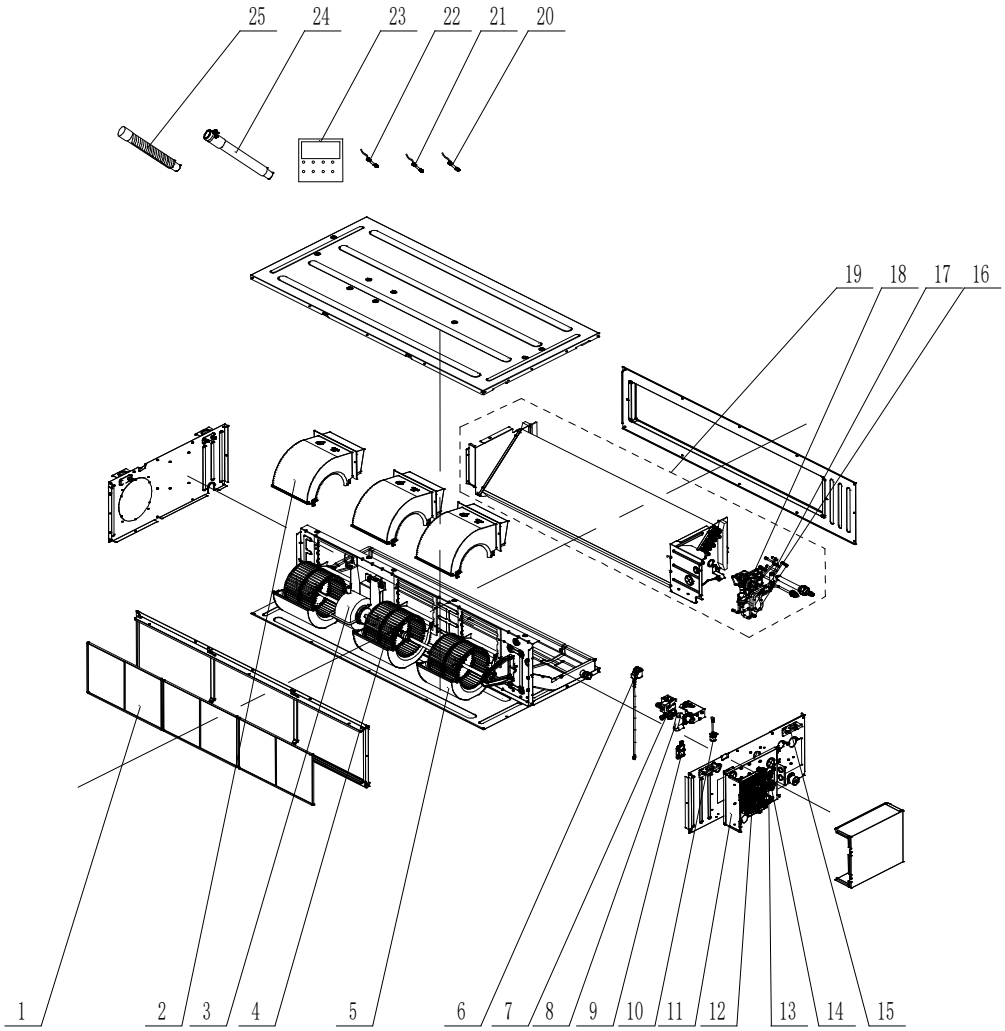


No.	Model	GMV-ND07PHS/NhD-T(U) GMV-ND09PHS/NhD-T(U)		GMV-ND12PHS/NhD-T(U) GMV-ND15PHS/NhD-T(U) GMV-ND18PHS/NhD-T(U) GMV-ND24PHS/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
1	Hook	02112466	4	02112466	4
2	Filter Sub-Assy	111001000045	2	111001000045	2
3	Propeller Housing(Lower)	26905200079	2	26905200079	2
4	Centrifugal Fan	10455200003	2	10455200003	2
5	Propeller Housing(Upper)	26905200078	2	26905200078	2
6	Brushless DC Motor	15010406007901	1	15010406007901	1
7	Electric Box Assy	100002083603	1	100002083603	1
8	Main Board	300002064354	1	300002064354	1
9	Terminal Board	42200006005404	1	42200006005404	1
10	Terminal Board	4201110602	1	4201110602	1
11	Refrigerant Sensor	340024060017	1	340024060017	1
12	Pump Drainpipe	200070060004	1	200070060004	1

No.	Model	GMV-ND07PHS/NhD-T(U) GMV-ND09PHS/NhD-T(U)		GMV-ND12PHS/NhD-T(U) GMV-ND15PHS/NhD-T(U) GMV-ND18PHS/NhD-T(U) GMV-ND24PHS/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
13	Water Pump	81200706032701	1	81200706032701	1
14	Liquid Level Switch	430024000005	1	430024000005	1
15	Strainer	07415210	1	07415210	1
16	Strainer	07213050	1	07213050	1
17	Electronic Expansion Valve	072009060064	1	072009060076	1
18	Electric Expand Valve Fitting	07200206000109	1	07200206000109	1
19	Evaporator Assy	011001063469	1	011001063321	1
20	Temperature Sensor	340025060014	1	340025060014	1
21	Temperature Sensor	340025060014	1	340025060014	1
22	Temperature Sensor	340025060018	1	340025060018	1
23	Display Board	300001061780	1	300001061780	1
24	Drain Hose Sub-Assy	05232050	1	05232050	1

Above data is subject to change without notice, please refer the SP in global service website.

Exploded View of GMV-ND30~54PHS/NhD-T(U):



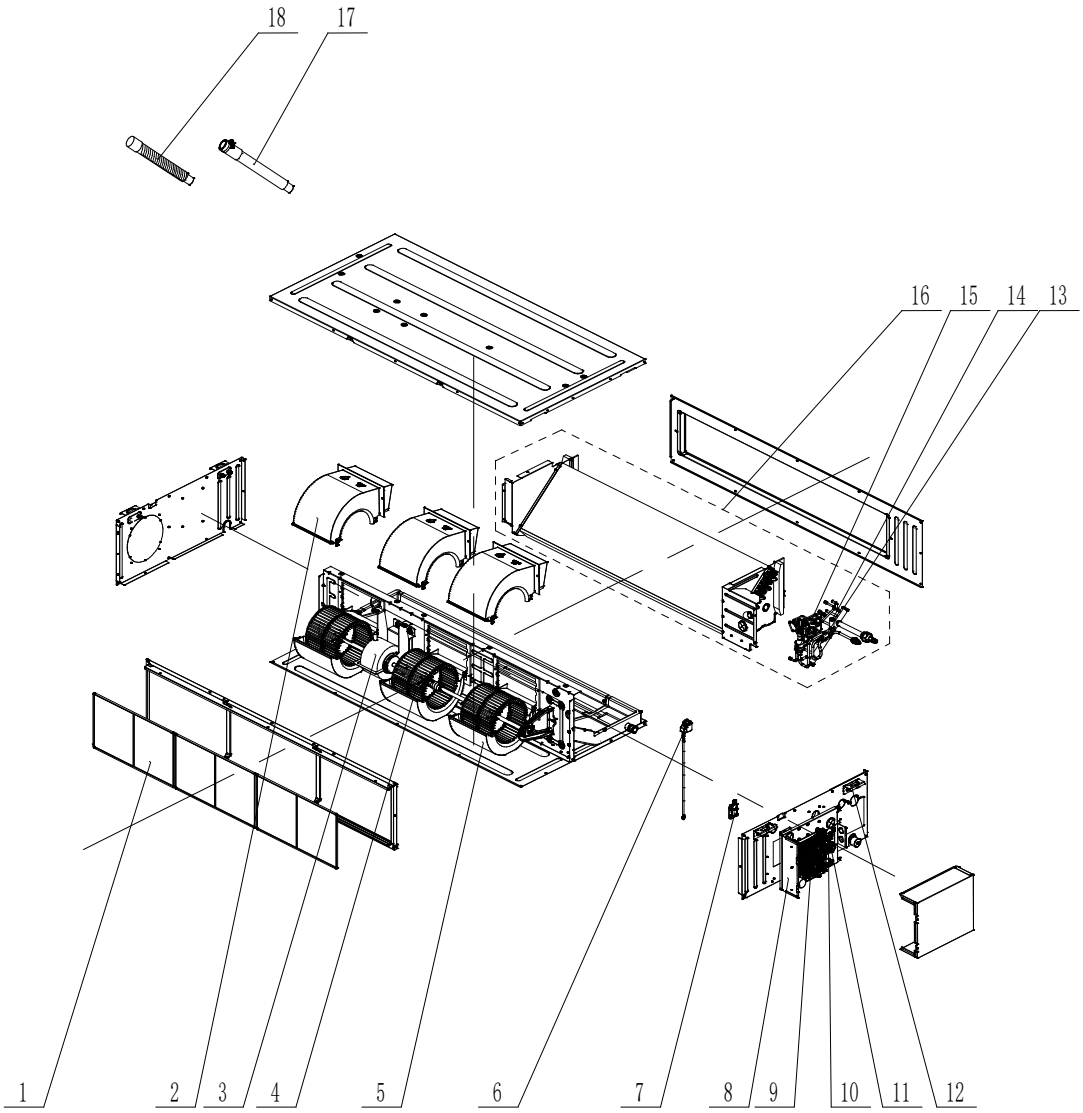
No.	Model	GMV-ND30PHS/NhD-T(U) GMV-ND36PHS/NhD-T(U) GMV-ND42PHS/NhD-T(U) GMV-ND48PHS/NhD-T(U) GMV-ND54PHS/NhD-T(U)	Qty.
	Part Name	Part Code	
1	Filter Sub-Assy	111001000052	3
2	Propeller Housing(Upper)	26905200078	3
3	Brushless DC Motor	1570940000805	1
4	Centrifugal Fan	10455200003	3
5	Propeller Housing(Lower)	26905200079	3
6	Electric Expand Valve Fitting	07200206000109	1
7	Water Pump	81200706032701	1
8	Pump Drainpipe	200070060004	1
9	Refrigerant Sensor	340024060017	1
10	Liquid Level Switch	430024000005	1
11	Electric Box Assy	100002083095	1
12	Main Board	300002064284	1
13	Terminal Board	42200006005404	1
14	Terminal Board	4201110602	1
15	Hook	02112466	4

No.	Model	GMV-ND30PHS/NhD-T(U) GMV-ND36PHS/NhD-T(U) GMV-ND42PHS/NhD-T(U) GMV-ND48PHS/NhD-T(U) GMV-ND54PHS/NhD-T(U)	Qty.
	Part Name	Part Code	
16	Strainer	07213050	1
17	Electronic Expansion Valve	072009060056	1
18	Strainer	07415210	1
19	Evaporator Assy	011001063320	1
20	Temperature Sensor	340025060014	1
21	Temperature Sensor	340025060014	1
22	Temperature Sensor	340025060018	1
23	Display Board	300001061780	1
24	Drain Hose Sub-Assy	05232050	1
25	Corrugated Pipe	05015408	1

Above data is subject to change without notice, please refer the SP in global service website.

6.2 Fresh Air Processing Type Indoor Unit

Exploded View of GMV-NDX42~54P/NhD-T(U)



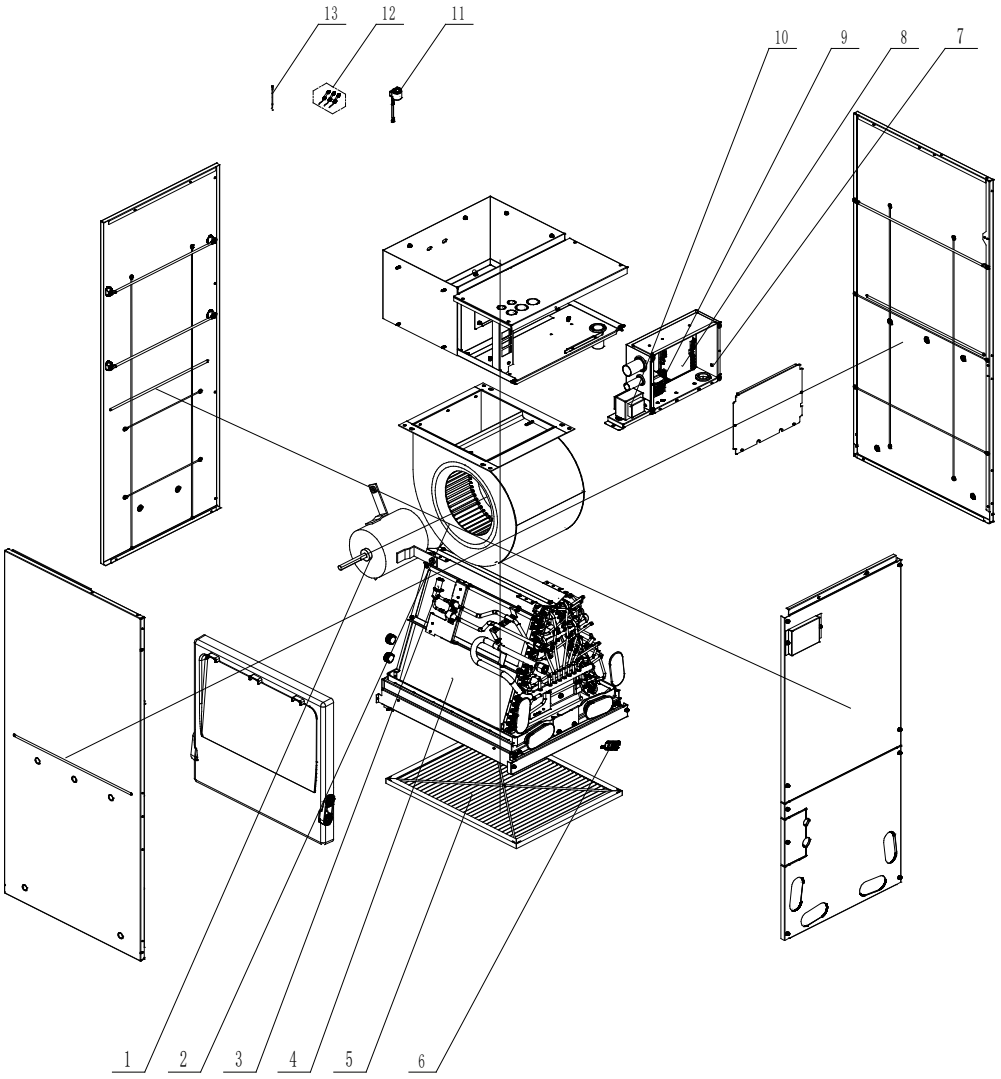
No.	Model	GMV-NDX42P/NhD-T(U) GMV-NDX48P/NhD-T(U) GMV-NDX54P/NhD-T(U)	
	Part Name	Part Code	Qty.
1	Filter Sub-Assy	111001000052	3
2	Propeller Housing(Upper)	26905200078	3
3	Brushless DC Motor	1570940000805	1
4	Centrifugal Fan	10455200003	3
5	Propeller Housing(Lower)	26905200079	3
6	Electric Expand Valve Fitting	07200206000109	1
7	Refrigerant Sensor	340024060017	1
8	Electric Box Assy	100002083095	1
9	Main Board	300002064284	1
10	Terminal Board	42200006005404	1
11	Terminal Board	4201110602	1
12	Hook	02112466	4
13	Strainer	07213050	1
14	Electronic Expansion Valve	072009060056	1

No.	Model	GMV-NDX42P/NhD-T(U) GMV-NDX48P/NhD-T(U) GMV-NDX54P/NhD-T(U)	
	Part Name	Part Code	Qty.
15	Strainer	07415210	1
16	Evaporator Assy	011001063320	1
17	Drain Hose Sub-Assy	05232050	1
18	Corrugated Pipe	05015408	1

Above data is subject to change without notice, please refer the SP in global service website.

6.3 Air Handler Type Indoor Unit

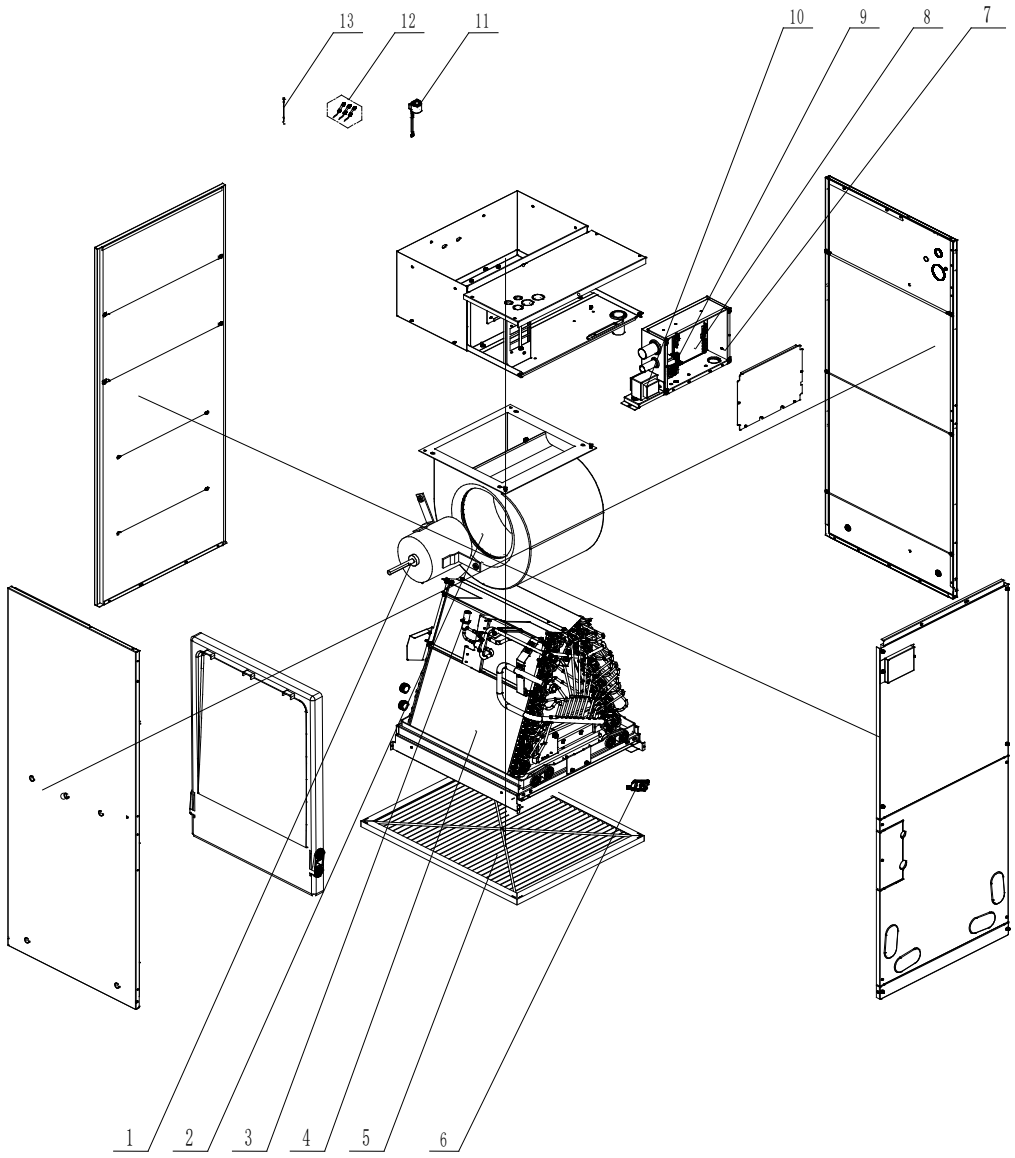
Exploded View of GMV-ND12~30A/NhB-T(U)：



No.	Model	GMV-ND12A/NhB-T(U) GMV-ND18A/NhB-T(U)		GMV-ND24A/NhB-T(U) GMV-ND30A/NhB-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
1	Brushless DC Motor	15010400001401	1	15010400001401	1
2	Centrifugal Fan Housing	1570220101	1	1570220101	1
3	Electronic Expansion Valve	072009060064	1	072009060076	1
4	Evaporator Assy	011001063608	1	011001063609	1
5	Filter Sub-Assy	111001060269	1	111001060269	1
6	Refrigerant Sensor	340024060017	1	340024060017	1
7	Electric Box Assy	100002084426	1	100002084426	1
8	Main Board	300002064555	1	300002064555	1
9	Terminal Board	42200006005404	1	42200006005404	1
10	Transformer	43110286	1	43110286	1
11	Electric Expand Valve Fitting	07200206000103	1	07200206000103	1
12	Sensor Sub-Assy	390002060766	1	390002060766	1
13	Temperature Sensor	390001060085	1	390001060085	1

Above data is subject to change without notice, please refer the SP in global service website.

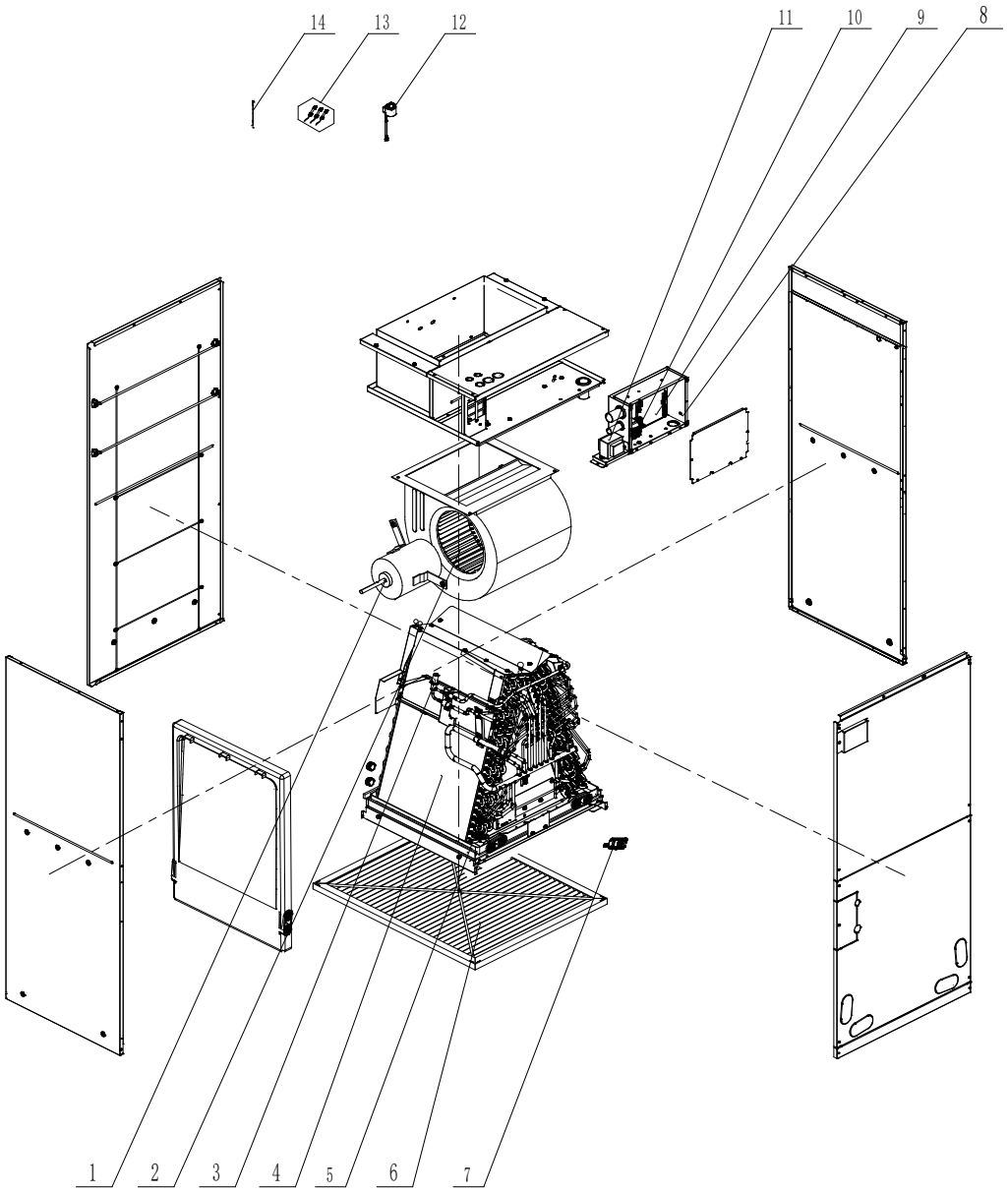
Exploded View of GMV-ND36~42A/NhB-T(U)：



No.	Model	GMV-ND36A/NhB-T(U) GMV-ND42A/NhB-T(U)	
	Part Name	Part Code	Qty.
1	Brushless DC Motor	15010400001401	1
2	Centrifugal Fan Housing	1570220201	1
3	Electronic Expansion Valve	072009060056	1
4	Evaporator Assy	011001063610	1
5	Filter Sub-Assy	111001060160	1
6	Refrigerant Sensor	340024060017	1
7	Electric Box Assy	100002084426	1
8	Main Board	300002064555	1
9	Terminal Board	42200006005404	1
10	Transformer	43110286	1
11	Electric Expand Valve Fitting	07200206000103	1
12	Sensor Sub-Assy	390002060766	1
13	Temperature Sensor	390001060085	1

Above data is subject to change without notice, please refer the SP in global service website.

Exploded View of GMV-ND48~60A/NhB-T(U)：



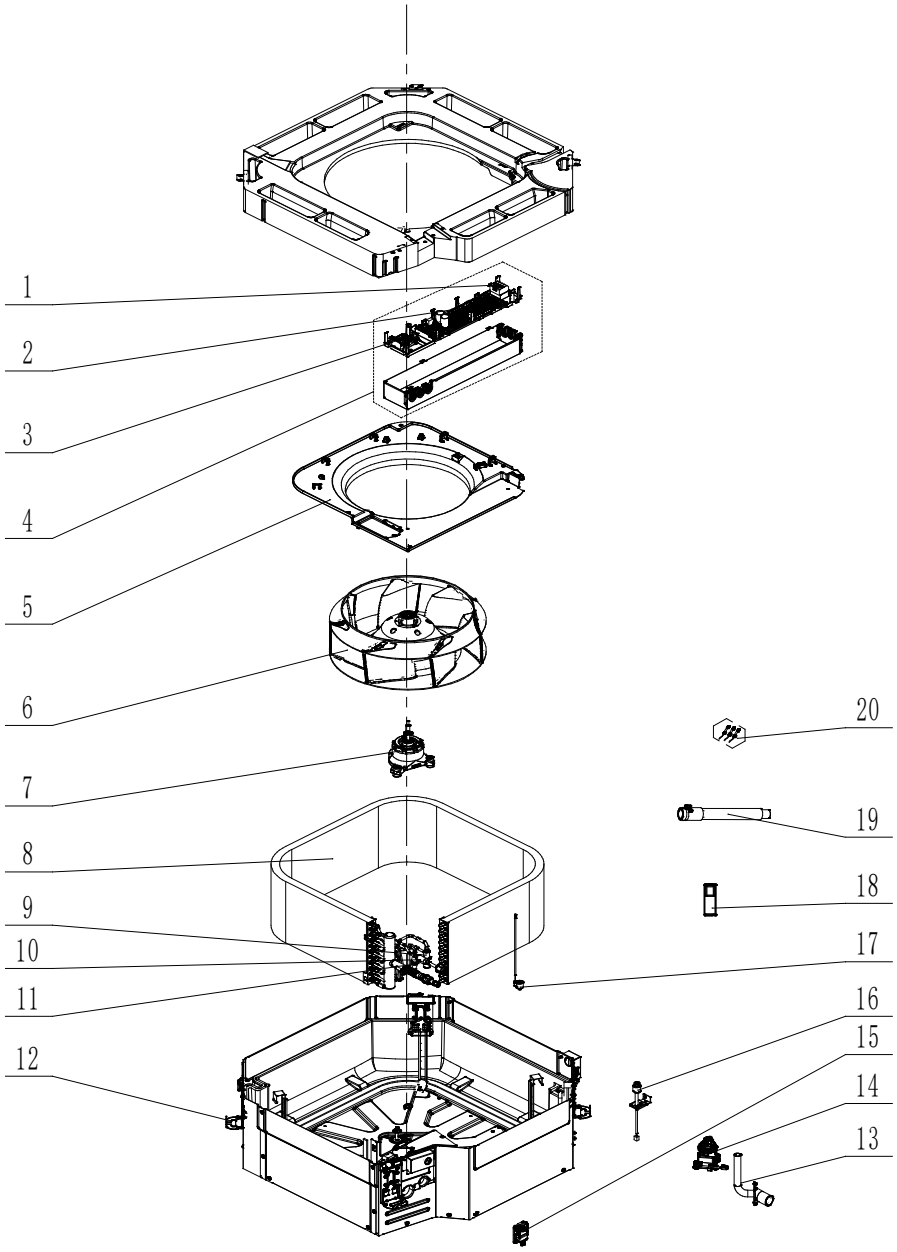
No.	Model	GMV-ND48A/NhB-T(U) GMV-ND54A/NhB-T(U) GMV-ND60A/NhB-T(U)	
	Part Name	Part Code	Qty.
1	Brushless DC Motor	15010400001301	1
2	Centrifugal Fan Housing	1570220301	1
3	Electronic Expansion Valve	072009060056	1
4	Evaporator Assy	011001063611	1
5	Strainer	0721200102	1
6	Filter Sub-Assy	111001060188	1
7	Refrigerant Sensor	340024060017	1
8	Electric Box Assy	100002084426	1
9	Main Board	300002064555	1
10	Terminal Board	42200006005404	1
11	Transformer	43110286	1
12	Electric Expand Valve Fitting	07200206000103	1

No.	Model	GMV-ND48A/NhB-T(U) GMV-ND54A/NhB-T(U) GMV-ND60A/NhB-T(U)	
	Part Name	Part Code	Qty.
13	Sensor Sub-assy	390002060766	1
14	Temperature Sensor	390001060085	1

Above data is subject to change without notice, please refer the SP in global service website.

6.4 360°Air Discharge Casssette Type Indoor Unit

Exploded View of GMV-ND07~18T/NhD-T(U):

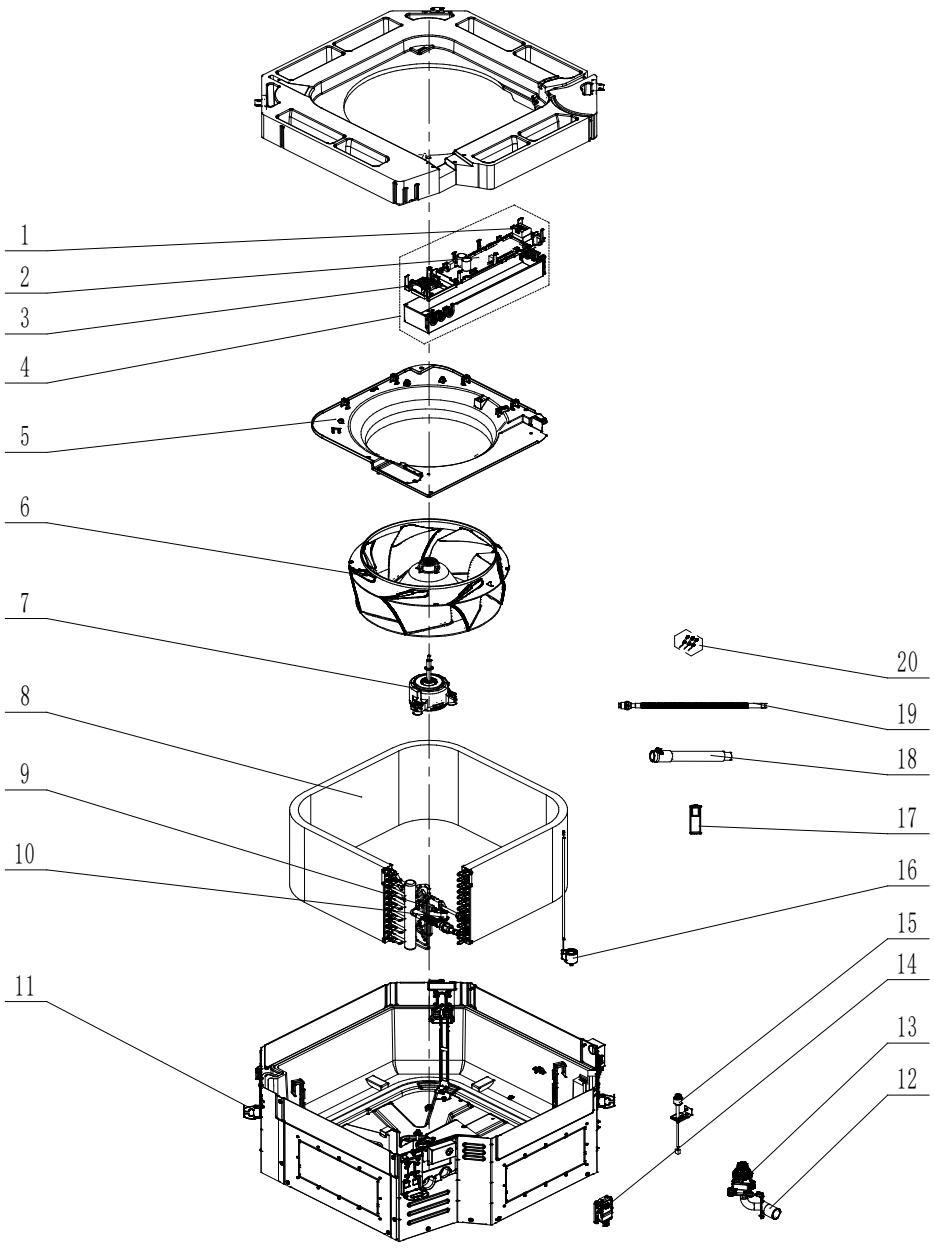


No.	Model	GMV-ND07T/NhD-T(U) GMV-ND09T/NhD-T(U) GMV-ND12T/NhD-T(U)		GMV-ND15T/NhD-T(U) GMV-ND18T/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
1	Terminal Board	42200006005404	1	42200006005404	1
2	Main Board	300002064302	1	300002064302	1
3	Terminal Board	42200006001301	1	42200006001301	1
4	Electric Box Assy	100002083156	1	100002083156	1
5	Diversion Circle	200150060030	1	200150060030	1
6	Centrifugal Fan	103003060047	1	103003060047	1
7	Brushless DC Motor	150104060121	1	150104060121	1

No.	Model	GMV-ND07T/NhD-T(U) GMV-ND09T/NhD-T(U) GMV-ND12T/NhD-T(U)		GMV-ND15T/NhD-T(U) GMV-ND18T/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
8	Evaporator Assy	011001063464	1	011001063307	1
9	Electronic Expansion Valve	072009060064	1	072009060076	1
10	Strainer	07213050	1	07213050	1
11	Strainer A	0721002201	1	0721002201	1
12	Body Installing Plate	01332701	4	01332701	4
13	Drainage Pipe Sub-assy	26909400055	1	26909400055	1
14	Water Pump	43138000058	1	43138000058	1
15	Refrigerant Sensor	340024060017	1	340024060017	1
16	Liquid Level Switch	4502021603	1	4502021603	1
17	Electric Expand Valve Fitting	4304413252	1	4304413252	1
18	Remote Controller	30510589	1	30510589	1
19	Drain Hose Sub-assy	05339400001	1	05339400001	1
20	Sensor Sub-assy	390002060712	1	390002060712	1

Above data is subject to change without notice, please refer the SP in global service website.

Exploded View of GMV-ND24~48T/NhD-T(U):



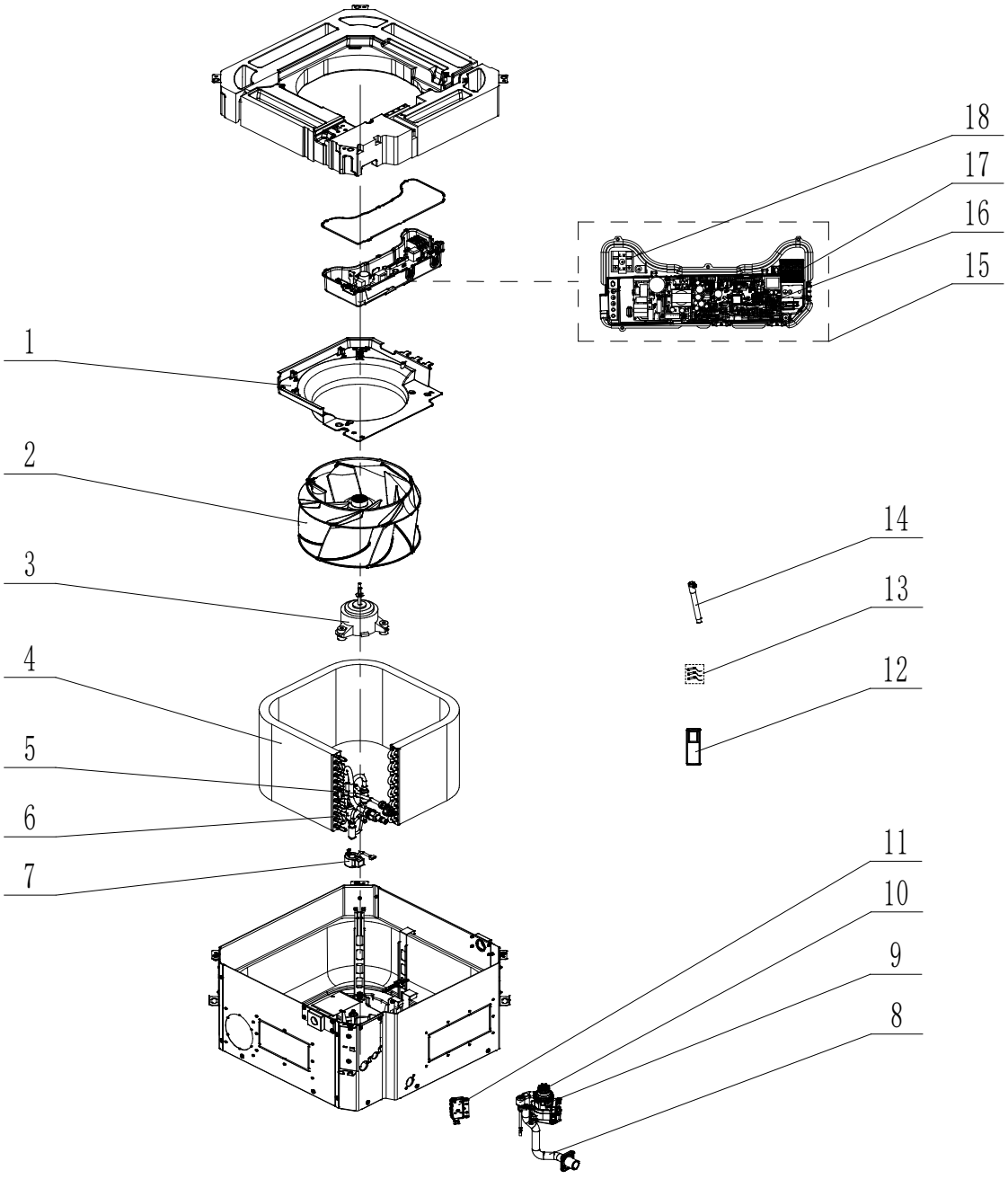
No.	Model	GMV-ND24T/NhD-T(U)		GMV-ND30T/NhD-T(U) GMV-ND36T/NhD-T(U) GMV-ND42T/NhD-T(U) GMV-ND48T/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
1	Terminal Board	42200006005404	1	42200006005404	1
2	Main Board	300002064286	1	300002064286	1
3	Terminal Board	42200006001301	1	42200006001301	1
4	Electric Box Assy	100002083157	1	100002083157	1
5	Diversion Circle	200150060029	1	200150060029	1
6	Centrifugal Fan	103003060048	1	103003060048	1
7	Brushless DC Motor	15010406012201	1	15010406012201	1
8	Evaporator Assy	011001063685	1	011001063308	1

No.	Model	GMV-ND24T/NhD-T(U)		GMV-ND30T/NhD-T(U) GMV-ND36T/NhD-T(U) GMV-ND42T/NhD-T(U) GMV-ND48T/NhD-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
9	Strainer	07213050	1	07213050	1
10	Electronic Expansion Valve	072009060076	1	072009060076	1
11	Body Installing Plate	01332701	4	01332701	4
12	Drainage Pipe Sub-assy	26909400055	1	26909400055	1
13	Water Pump	43138000058	1	43138000058	1
14	Refrigerant Sensor	340024060017	1	340024060017	1
15	Liquid Level Switch	4502021603	1	4502021603	1
16	Electric Expand Valve Fitting	4304413252	1	4304413252	1
17	Remote Controller	30510589	1	30510589	1
18	Drain Hose Sub-assy	05339400001	1	05339400001	1
19	Corrugated Pipe	035030000008	1	05015408	1
20	Sensor Sub-assy	390002060712	1	390002060712	1

Above data is subject to change without notice, please refer the SP in global service website.

6.5 360°Air Discharge Compact Casssette Type Indoor Unit

Exploded View of GMV-ND05T/NhE-T(U);GMV-ND07T/NhE-T(U) ;GMV-ND09T/NhE-T(U) ;GMV-ND12T/NhE-T(U); GMV-ND15T/NhE-T(U); GMV-ND18T/NhE-T(U).



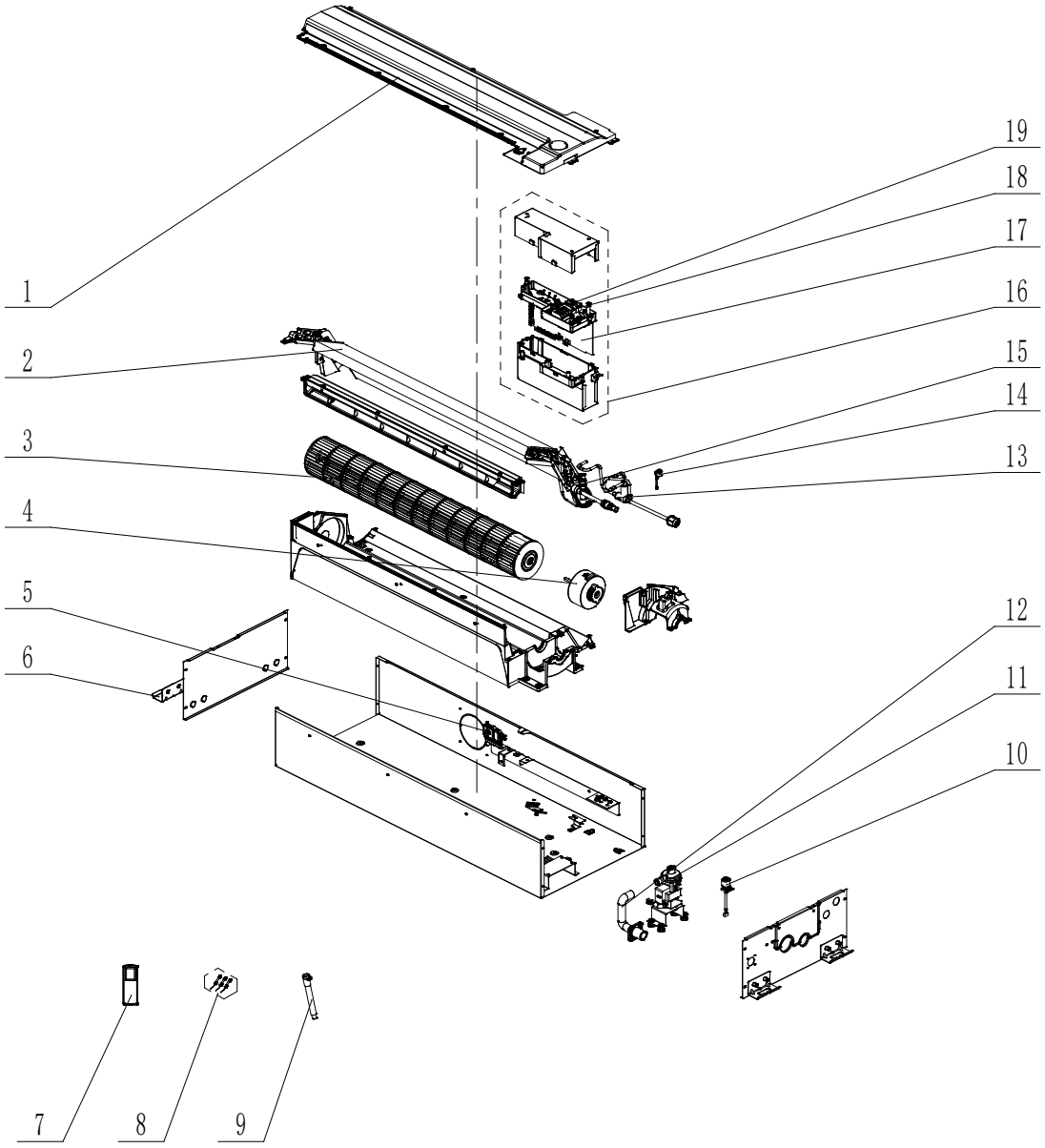
No.	Model	GMV-ND05T/NhE-T(U) GMV-ND07T/NhE-T(U) GMV-ND09T/NhE-T(U) GMV-ND12T/NhE-T(U)		GMV-ND15T/NhE-T(U) GMV-ND18T/NhE-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
1	Diversion Circle	20015006000301	1	20015006000301	1
2	Centifugal Fan	103003060008	1	103003060008	1
3	Brushless DC Motor	150104060012	1	150104060012	1

No.	Model	GMV-ND05T/NhE-T(U) GMV-ND07T/NhE-T(U) GMV-ND09T/NhE-T(U) GMV-ND12T/NhE-T(U)		GMV-ND15T/NhE-T(U) GMV-ND18T/NhE-T(U)	
	Part Name	Part Code	Qty.	Part Code	Qty.
4	Evaporator Assy	011001063859	1	011001063623	1
5	Filter	07216221	1	07216221	1
6	Strainer	07213032	1	07213032	1
7	Electric expand valve fitting	43040001	1	43040001	1
8	Drain Pipe	200070060005	1	200070060005	1
9	Water Pump	4313800005802	1	4313800005802	1
10	Liquid Level Switch	430024000005	4	430024000005	4
11	Refrigerant Sensor	340024060017	1	340024060017	1
12	Remote Controller	30510589	1	30510589	1
13	Sensor Sub-assy	390002060768	1	390002060768	1
14	Drain Hose Sub-Assy	007008000001	1	007008000001	1
15	Electric Box Assy	100002084482	1	100002084482	1
16	Main Board	300002064558	1	300002064558	1
17	Terminal Board	42200006005404	1	42200006005404	1
18	Terminal Board	4201110602	1	4201110602	1

Above data is subject to change without notice, please reference the SP in global service website.

6.6 1-way Cassette Type Indoor Unit

Exploded View of GMV-ND07TD/NhA-T(U); GMV-ND09TD/NhA-T(U); GMV-ND12TD/NhA-T(U)



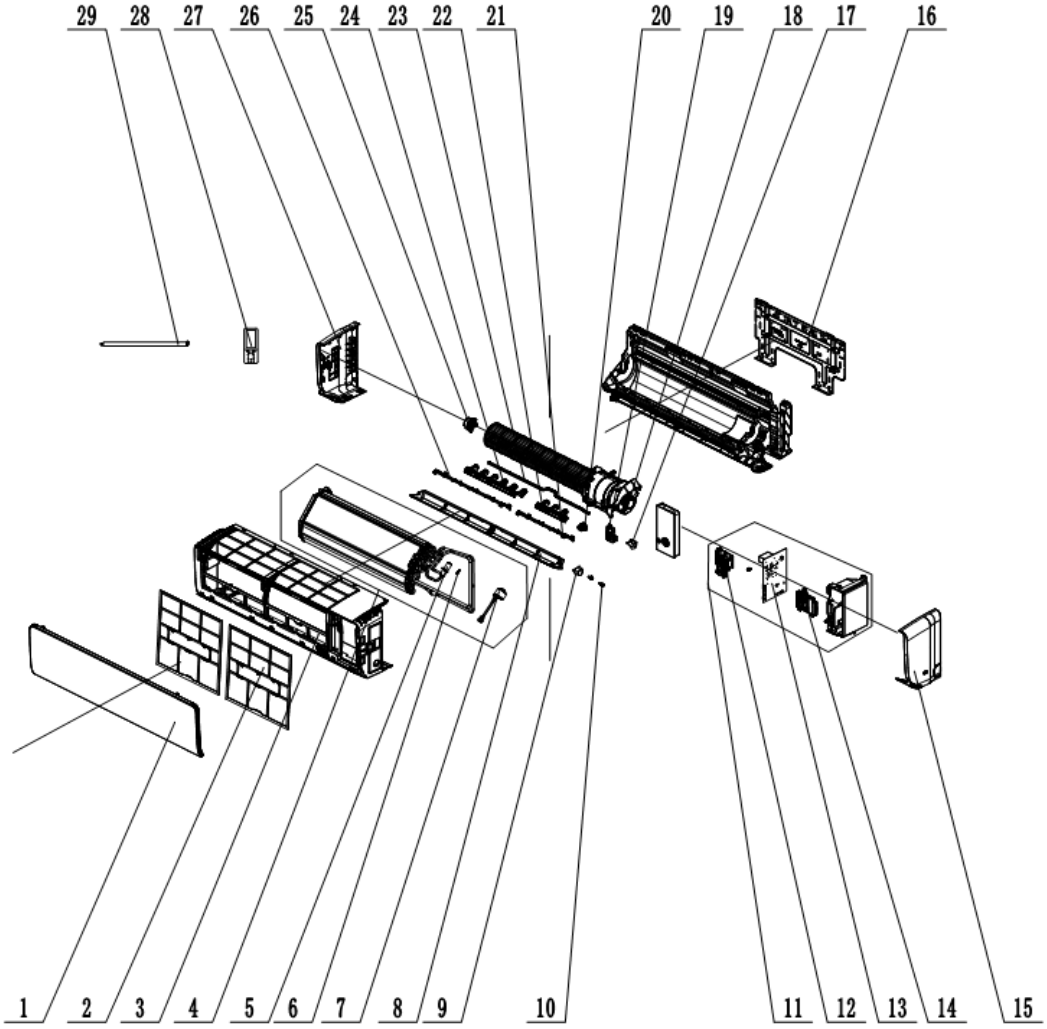
No.	Model	GMV-ND07TD/NhA-T(U) GMV-ND09TD/NhA-T(U) GMV-ND12TD/NhA-T(U)	
	Part Name	Part Code	Qty.
1	Water Tray	26904100035	1
2	Evaporator Assy	011001063631	1
3	Cross Flow Fan	10454100001	1
4	Brushless DC Motor	1501214301	1
5	Refrigerant Sensor	340024060017	1
6	Hook	02112466	1

No.	Model	GMV-ND07TD/NhA-T(U) GMV-ND09TD/NhA-T(U) GMV-ND12TD/NhA-T(U)	
	Part Name	Part Code	Qty.
7	Remote Controller	30510589	1
8	Sensor Sub-assy	390002060770	1
9	Drain Hose	05232046	1
10	Liquid Level Switch	430024000005	1
11	Water Pump	81200706001601	1
12	Pump Drainpipe	26905288	1
13	Strainer	07213050	1
14	Electric expand valve fitting	43040001	1
15	Strainer	0721200102	4
16	Electric Box Assy	100002084624	1
17	Main Board	300002064551	1
18	Terminal Board	42200006005404	1
19	Terminal Board	42000100000102	1

Above data is subject to change without notice, please reference the SP in global service website.

6.7 Wall Mounted Type Indoor Unit

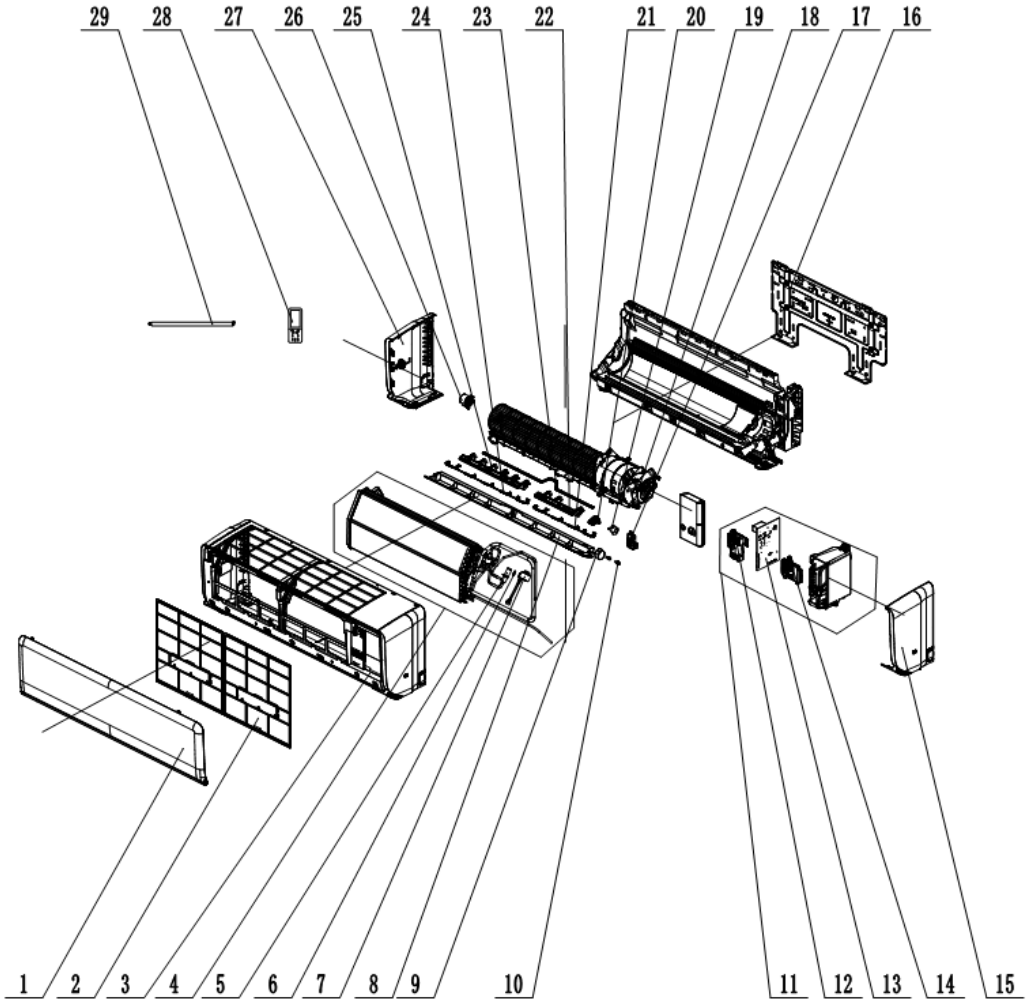
Exploded View of GMV-ND06G/NhA1C-T(U),GMV-ND07G/NhA1C-T(U),GMV-ND09G/NhA1C-T(U), GMV-ND06G/NhA3C-T(U),GMV-ND07G/NhA3C-T(U),GMV-ND09G/NhA3C-T(U).



No.	Model	GMV-ND06G/NhA1C-T(U)、GMV-ND06G/NhA3C-T(U) GMV-ND07G/NhA1C-T(U)、GMV-ND07G/NhA3C-T(U) GMV-ND09G/NhA1C-T(U)、GMV-ND09G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
1	Front Panel	200003060356T	1
2	Filter Sub-Assy	1112246803	2
3	Front Case	200002060102	1
4	Evaporator Assy	011001063588	1
5	Electronic Expansion Valve	072009060064	1
6	Filter Sub-Assy	11120011	1
7	Electric Expand Valve Fitting	07200206001901	1
8	Guide Louver	200004060236	1
9	Stepping Motor	1521210712	1
10	Axile Bush	10542036	1
11	Electric Box Assy	100002084357	1

No.	Model	GMV-ND06G/NhA1C-T(U)、GMV-ND06G/NhA3C-T(U) GMV-ND07G/NhA1C-T(U)、GMV-ND07G/NhA3C-T(U) GMV-ND09G/NhA1C-T(U)、GMV-ND09G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
12	Terminal Board	4201026807	1
13	Main Board	300002064511	1
14	Display Board	300001061358	1
15	Right Side Plate	200086060076	1
16	Wall Mounting Frame	012043000008	1
17	Stepping Motor	1521210704	1
18	Brushless DC Motor	15010406011702	1
19	Gas Sensor	340024060017	1
20	Air Louver (Auto)	200007060117	1
21	Rear Grill Sub-Assy	209168000017	1
22	Air Louver(Right)	200007060110	1
23	Swing Lever	200035060044	1
24	Air Louver (Left)(Auto)	200007060111	1
25	Axile Bush Sub-Assy	10542047	1
26	Rear Grill Sub-Assy	209168000016	1
27	Left Side Plate	200085060070	1
28	Remote Controller	305001060060	1
29	Drainage Hose	05230014	1

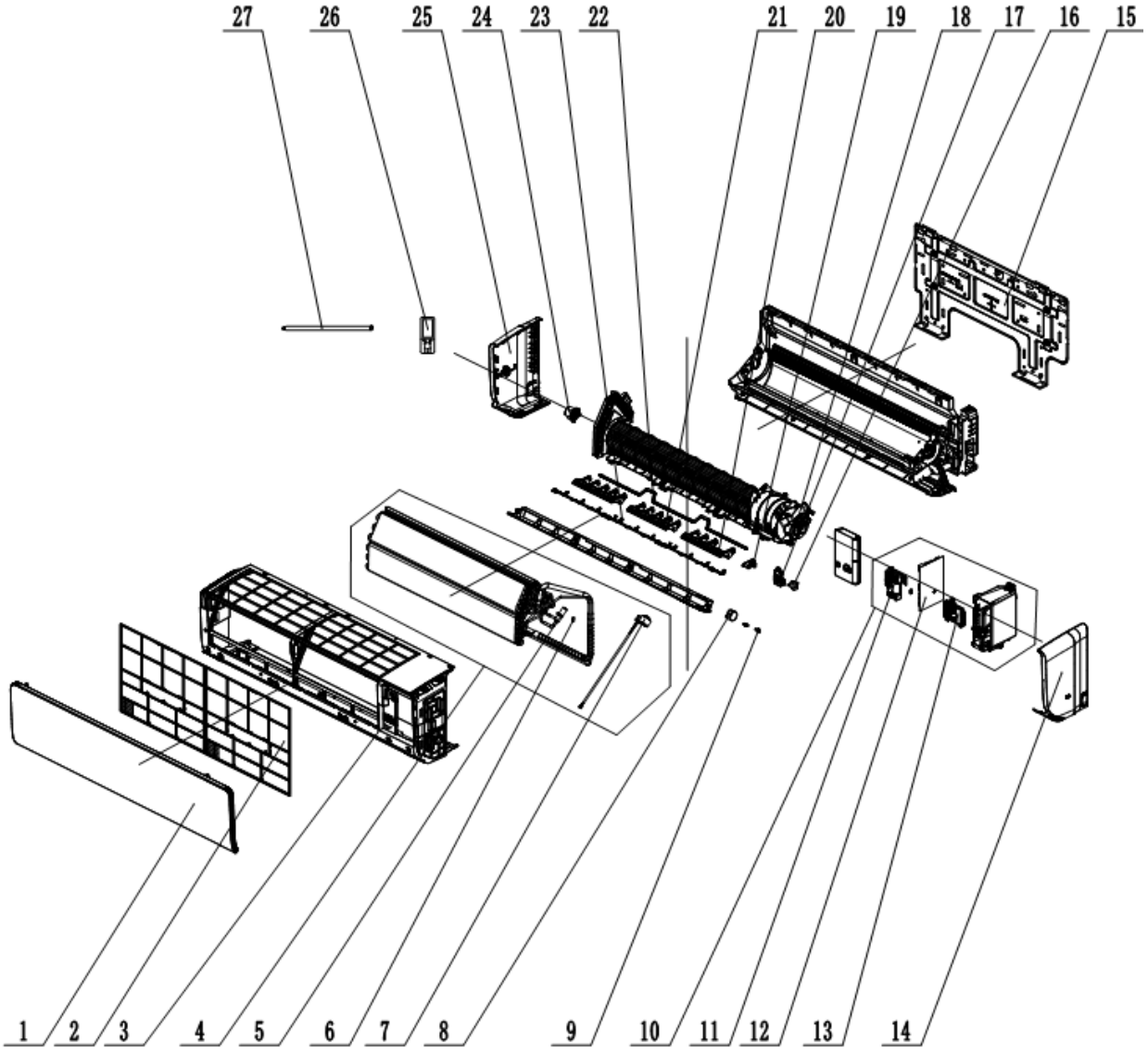
Exploded View of GMV-ND12G/NhA1C-T(U),GMV-ND14G/NhA1C-T(U), GMV-ND12G/NhA3C-T(U),GMV-ND14G/NhA3C-T(U).



No.	Model	GMV-ND12G/NhA1C-T(U)、GMV-ND12G/NhA3C-T(U) GMV-ND14G/NhA1C-T(U)、GMV-ND14G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
1	Front Panel	200003060382T	1
2	Filter Sub-Assy	111001060404	2
3	Front Case	200002060099	1
4	Evaporator Assy	011001063589	1
5	Electronic Expansion Valve	072009060076	1
6	Filter Sub-Assy	11120011	1
7	Electric Expand Valve Fitting	07200206001901	1
8	Guide Louver	200004060235	1
9	Stepping Motor	1521240212	1
10	Axile Bush	10542036	1
11	Electric Box Assy	100002084358	1
12	Terminal Board	4201026807	1
13	Main Board	300002064511	1
14	Display Board	300001061358	1

No.	Model	GMV-ND12G/NhA1C-T(U)、GMV-ND12G/NhA3C-T(U) GMV-ND14G/NhA1C-T(U)、GMV-ND14G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
15	Right Side Plate	200086060074	1
16	Wall Mounting Frame	012043060024	1
17	Gas Sensor	340024060017	1
18	Brushless DC Motor	15010406008802	1
19	Stepping Motor	1521210704	1
20	Air Louver (Auto)	200007060116	1
21	Rear Grill Sub-Assy	209168000010	1
22	Air Louver(Right)	200007060115	1
23	Swing Lever	200035060043	1
24	Rear Grill Sub-Assy	209168000011	1
25	Air Louver (Left)	200007060114	1
26	Axile Bush Sub-Assy	1054204701	1
27	Left Side Plate	200085060068	1
28	Remote Controller	305001060060	1
29	Drainage Hose	05230014	1

Exploded View of GMV-ND18G/NhA1C-T(U),GMV-ND24G/NhA1C-T(U), GMV-ND18G/NhA3C-T(U),GMV-ND24G/NhA3C-T(U).



No.	Model	GMV-ND18G/NhA1C-T(U)、GMV-ND18G/NhA3C-T(U) GMV-ND24G/NhA1C-T(U)、GMV-ND24G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
1	Front Panel	200003060359T	1
2	Filter Sub-Assy	1101200703	2
3	Front Case	20000206010301	1
4	Evaporator Assy	011001063590	1
5	Electronic Expansion Valve	072009060076	1
6	Filter Sub-Assy	11120011	1
7	Electric Expand Valve Fitting	07200206001901	1
8	Stepping Motor	1521240210	1
9	Axile Bush	10542036	2
10	Electric Box Assy	100002084359	1
11	Terminal Board	4201026807	1

No.	Model	GMV-ND18G/NhA1C-T(U)、GMV-ND18G/NhA3C-T(U) GMV-ND24G/NhA1C-T(U)、GMV-ND24G/NhA3C-T(U)	
	Part Name	Part Code	Qty.
12	Main Board	300002064511	1
13	Display Board	300001061358	1
14	Right Side Plate	20008606007401	1
15	Wall Mounting Frame	012043060024	1
16	Stepping Motor	1521210704	1
17	Gas Sensor	340024060017	1
18	Brushless DC Motor	15010406011601	1
19	Air Louver	200007060103	1
20	Air Louver 1	200007060104	1
21	Air Louver 1	200007060101	2
22	Swing Lever	200035060042	1
23	Rear Grill Sub-Assy	209168000018	3
24	Axile Bush Sub-Assy	1054204701	1
25	Left Side Plate	20008506006801	1
26	Remote Controller	305001060060	1
27	Drainage Hose	0523001405	1

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