DC INVERTER U-MATCH AIR CONDITIONERS

(GC201409)

BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITIONERS GREE MAKING BETTER CONDITION

TECHNICAL SALES GUIDE-50/60Hz

CAPACITY RANGE:7~16kW

SUPER HIGH AMBIENT OPERATION TO 48℃

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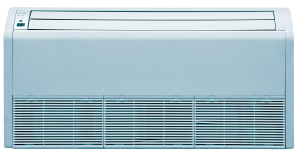


R410A

GREE ELECTRIC APPLIANCES INC.OF ZHUHAI

CONTENTS

1 MODELS LIST

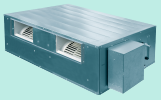
1.1 Outdoor Unit

Model		Power supply (V, Ph, Hz)	Appearance
Outdoor Unit	GUHD24NS3GO	220-240V~ 50/60Hz	
	GUHD36NS3GO	220-240V~ 50/60Hz	
	GUHD42NS3GO	220-240V~ 50/60Hz	
	GUHD48NS3GO	220-240V~ 50/60Hz	
	GUHD60NS3GO	220-240 V~ 50Hz	

Note:1 Ton =12000Btu/h = 3.517kW

1.2 Indoor Unit

Duct Type:

Type	Model Name		Nominal Capacity Cooling/Heating KW(Btu/h)	Power supply (V, Ph, Hz)	Appearance
Duct Type	R410A	GFH24S3GI	7.00/8.00 (23884/27296)	220-240V~ 50/60Hz	
		GFH24S3G1I	7.00/8.00 (23884/27296)		
		GFH36S3GI	10.0/12.00 (34102/40944)	220-240V~ 50/60Hz	
		GFH36S3G1I	10.0/12.00 (34102/40944)		
		GFH42S3GI	12.00/13.80 (40944/47768)		
		GFH42S3G1I	12.00/13.80 (40944/47768)		
		GFH48S3GI	13.70/16.00 (46744/54592)		
		GFH48S3G1I	13.70/16.00 (46744/54592)		
		GFH60S3GI	16.00/18.00 (54592/61416)	220-240V~ 50/60Hz	
		GFH60S3G1I	16.00/18.00 (54592/61416)		

Note:1 Ton =12000Btu/h = 3.517kW

Notes: The universal outdoor unit means that the customer can choose any of three kind of indoor unit to match the outdoor unit without any change with it.

2 NOMENCLATURE

2.1 Outdoor unit

G	U	H	D	24	N	S	3	G	O
1	2	3	4	5	6	7	8	9	10

NO.	Description	Options
1	Gree Electric Appliances Inc	Capital Letter :G
2	Unit Type	U=Match Outdoor Unit
3	Product Type	C=Cool Only H=Heat Pump without Aux Electric Heaters
4	Compressor Power Supply Type Code	N=Constant Frequency D=DC Inverter A=AC Inverter
5	Nominal Cooling Capacity	Nominal Cooling Capacity =Number×1000Btu/h
6	Climate Type	N=Climate T1 Condition T= Climate T3 Condition
7	Power Supply Code	S=220-240V~ 50Hz/60Hz
8	Refrigerant	1 =R22 2=R407C 3=R410A
9	Design and design change Code	Design Code: A, B, C, D..... design change Code=0(Default) 1, 2, 3.....
10	Unit Code	O=Outdoor

2.2 Indoor unit

G	F	H	24	S	3	G	(1)	I
1	2	3	4	5	6	7	8	9

NO.	Description	Options
1	Gree Electric Appliances Inc	Capital Letter :G
2	Unit Type	F=Duct Type K=Cassette Type T= Ceiling Type V= Floor standing Type
3	Product Type	C=Cool Only H=Heat Pump without Aux Electric Heaters
4	Nominal Cooling Capacity	Nominal Cooling Capacity =Number×1000Btu/h
5	Power Supply Code	S=220-240V~ 50Hz/60Hz
6	Refrigerant	1 =R22 2=R407C 3=R410A
7	Design Code	Design Code: A, B, C, D.....
8	design change Code	design change Code=0(Default) 1,2,3.....
8	Unit Code for Indoor Unit	I=Indoor Unit

3 FUNCTION

3.1 Description

Gree R410A DC Inverter U-Match Series Air Conditioners have combined the extraordinary comfort of the central air conditioners with the convenient installation and facility of the mini type of the split air conditioners. It is equipped with the condenser coil constructed of the hydrophilic aluminum sheet and the inner groove copper pipe, and also the low-noise compressor with various protections on the high/low pressure, high discharge temperature, overload, phase loss or reverse, and the sensor malfunction alarm. The casing of this unit is made of pre-painted steel, capable of resisting corrosion and rust creep and ensuring minimal fading when exposed to sunlight.

Gree R410A DC Inverter U-Match Series Air Conditioning Units can offer the perfect combination of superior product quality, high operating efficiency and cost efficiency. The capacity rated according to AS/NZS 3823.2:2013 ranges from 24KBtu/h to 60 KBu/h, which could be sufficient to different requirements from customers. These units are RCM certificated and manufactured under strict control with full conformance to ISO 9001:2000 and ISO 14001 standards. All units are factory tested prior to dispatch to verify the operation performance and control functioning.

Gree R410A DC Inverter U-Match Series Air Conditioning Units can be widely used in small supermarkets, chain stores, hotels, restaurants, offices and meeting room etc. especially fit for the small commercial and industrial application. The unit can set for cooling even when the outdoor ambient temperature drops to -15□ and thus an ideal for locations that require cooling even in winter.

The careful design from each part to the whole unit, together with the all-round process test and unit test, offers the high reliability for the whole system.

Perfect system protections can guarantee the safety of the system at utmost and get rid of the irreparable damage to the compressor or other critical parts under the harsh working conditions, including:

3.2 Features-Outdoor Units

Unit protections

High reliability

- The careful design from each part to the whole unit, together with the all-round process test and unit test, offers the high reliability for the whole system.

Long-term durability

- Perfect system protections can guarantee the safety of the system at utmost and get rid of the irreparable damage to the compressor or other critical parts under the harsh working conditions.

High/low pressure protection

- When suction pressure is too low or discharge pressure is too high, compressor will stop and unit display malfunction code.

Overload protection

- The compressor has its own overheat protection. Once the temperature of compressor is higher than allowable level, compressor will stop and only when temperature recovery, compressor restart.

Discharge high temperature protection

- Once the discharge temperature of compressor is higher than allowable value, compressor will stop and unit display malfunction code.

Anti-high temperature protection

- Once the heat exchanger temperature of indoor unit is too high ,the outdoor fan motor will stop.

Sensor malfunction alarming

- Once the sensor short out or shutdown, unit will display malfunction code.

Anti-freezing protection

- When it is detected that the temperature of the evaporator is too low, the compressor will stop to protection the whole system.

Over-current protection

- When it is detected that the running current of the compressor comes abnormal, the compressor will stop to protection the whole system.

Communication malfunction

- When the unit fails to perform the normal communication, it will stop to protect the whole system.

Special protections have been taken for the control of the inverter unit to prevent it from being damaged, including:

Unit protections

PFC or IPM module protection

- When the PFC or IPM module works abnormally, the unit will stop to protect the whole system.

DC busbar voltage protection

- When the voltage of the DC bus comes abnormal, the unit will stop the protect the compressor.

PFC or IPM temperature too high protection

- When the temperature of the PFC or the IPM module is too high, the unit will stop to protect the whole system.

Anti-high temperature protection

- once the heat exchanger temperature of indoor unit is too high ,the outdoor fan motor will stop.

Compressor frequency control

- The final running frequency of the compressor is limited to the minimum value to realize the lowest energy consumption.

Change rate of the compressor

- the frequency change rate varies with the change of the load.

4-way valve control

- for the heat pump units, the unit is able to perform heating through the 4-way valve.

Automatic defrosting

- when the heat pump unit performs heating, the automatic defrosting will work in according to the frosting condition on the outdoor unit so as to protect the whole system.

Low-temperature cooling

- the unit is able to work reliably under the -15°C ambient environment through adjusting the running speed of the outdoor unit's fan.

Deicing

- Deicing: the electric heating tape on the chassis will perform heating to prevent the chassis icing which would affect the performance of the unit.

3.3 Features-Indoor Units

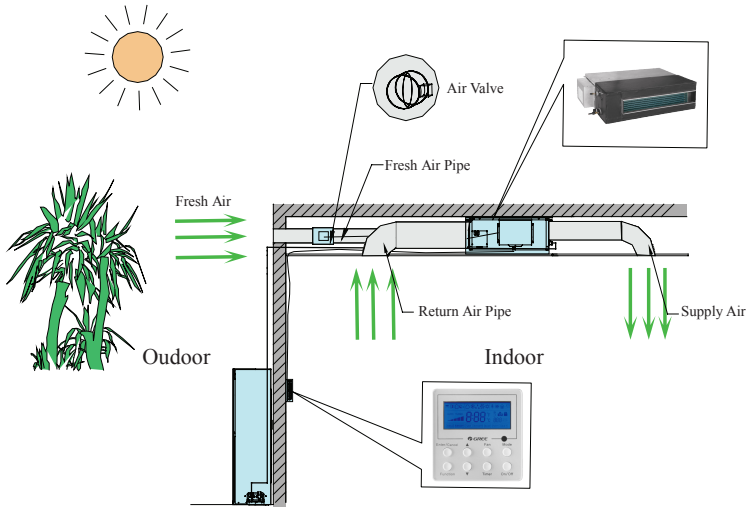
(1) Duct Type

Airflow Patterns for Extra Comfort :

It can connect many supply-air outlets to the duct, so that it can make the temperature and humidity of the whole room even, meanwhile, it can lead in fresh air, makes good indoor unit air quality. All units are provided with filters that they are easily accessible from the rear of the unit.

Flexible Installation:

Air-supply or air-return type, condensation water exit direction, and modes of wye (adopting either underside air back or rear air back) etc can be selected flexibly.

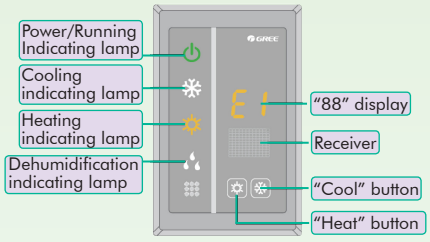


Easy Maintenance:

Evaporator coils are constructed of quality inner groove copper tube and hydrophilic aluminum sheet. It adopts easy and reliable configuration design ,so Maintenance is very convenient and easy.

Versatile Functions:

- Multi-Speeds fan control
- Comfortable cool and energy save function
- Vacation function
- Low temperature dry
- Long-distance monitoring
- Double wired controller control function
- Light board control:



4 PRODUCT DATA

4.1 Product Data at Rated Condition

Model	Indoor unit		GFH24S3GI	GFH24S3G1I
	Outdoor unit		GUHD24NS3GO	GUHD24NS3GO
Nominal Capacity	Cooling	kW	7.00	7.00
		Btu/h	23884	23884
	Heating	kW	8.00	8.00
		Btu/h	27296	27296
Power Input	Cooling	kW	2.18	2.18
	Heating	kW	2.28	2.28
EER/COP		W/W	3.21/3.51	3.21/3.51
Indoor Unit			GFH24S3GI	GFH24S3G1I
Power Supply		-	220-240V~ 50/60Hz	
Heat Exchange		-	Cross Fin Coil	Cross Fin Coil
Fan	Type	-	Centrifugal	Centrifugal
	Drive	-	Direc t	Direc t
	Motor Output	kW	—	—
	Air Flow	m^3/h	1500	1500
	Rated Ext. Static Pressure	Pa	50	50
Sound Pressure Level(SS/H/M/L)		dB(A)	46/43/41/38	46/43/41/38
Air Filter		-	PPKZ	
Drain Piping		mm	Ø20×1.2	Ø20×1.2
Dimensions (W×H×D) (Outline/Package)		mm	1225×290×775	1225×290×775
			1338×305×877	1338×305×877
Weight(Net/Gross)		kg	47.0/55.0	47.0/55.0
Outdoor Unit			GUHD24NS3GO	GUHD24NS3GO
Power Supply		-	220-240V~ 50/60Hz	
Heat Exchange		-	Cross Fin Coil	
Fan	Type	-	Axial-flow	
	Fan Motor Speed	rpm	800	800
Compressor	Type	-	Inverter Rotary	Inverter Rotary
	Power Input	W	2550	2550
Refrigerant	Type	-	R410A	
	Control	-	Electronic Expansion Valve	
	Charge	kg	2.2	2.2
Dimensions (W×H×D) (Outline/Package)		mm	1005×790×425	1005×790×425
			1083×855×488	1083×855×488
Weight(Net/Gross)		kg	69.0/74.0	69.0/74.0
Piping Connections	Liquid	Inch	3/8	3/8
	Gas	Inch	5/8	5/8
	Max. Length	m	50	50
	Max. Height	m	15	15

Model	Indoor unit		GFH36S3GI	GFH36S3G1I	GFH42S3GI
	Outdoor unit		GUHD36NS3GO	GUHD36NS3GO	GUHD42NS3GO
Nominal Capacity	Cooling	kW	10.00	10.00	12.00
		Btu/h	34120	34120	40944
	Heating	kW	12.00	12.00	13.80
		Btu/h	40944	40944	47086
Power Input	Cooling	kW	3.10	3.10	3.70
	Heating	kW	3.30	3.30	4.00
EER/COP		W/W	3.23/3.64	3.23/3.64	3.24/3.45
Indoor Unit			GFH36S3GI	GFH36S3G1I	GFH42S3GI
Power Supply		-	220-240V~ 50/60Hz		
Heat Exchange		-	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Fan	Type	-	Centrifugal fan	Centrifugal fan	Centrifugal fan
	Drive	-	direct	direct	direct
	Motor Output	kW	—	—	—
	Air Flow	m^3/h	2000	2000	2200
	Rated Ext. Static Pressure	Pa	50	50	50
Sound Pressure Level(SS/H/M/L)		dB(A)	48/45/43/41	48/45/43/41	50/48/46/43
Air Filter		-	PPKZ	PPKZ	PPKZ
Drain Piping		mm	Ø20×1.2	Ø20×1.2	Ø20×1.2
Dimensions (W×H×D) (Outline/Package)		mm	1340×350×750	1340×350×750	1340×350×750
			1423×455×837	1423×455×837	1423×455×837
Weight(Net/Gross)		kg	56/68	56/68	59/71
Outdoor Unit			GUHD36NS3GO	GUHD36NS3GO	GUHD42NS3GO
Power Supply		-	220-240V~ 50/60Hz		
Heat Exchange		-	Cross Fin Coil		
Fan	Type	-	Axial fan		
	Fan Motor Speed	rpm	780	780	780
Compressor	Type	-	Inverter Rotary	Inverter Rotary	Inverter Rotary
	Power Input	W	4150	4150	4580
Refrigerant	Type	-	R410A		
	Control	-	Electronic Expansion Valve		
	Charge	kg	3.5	3.5	3.9
Dimensions (W×H×D) (Outline/Package)		mm	1105×1100×440	1105×1100×440	1105×1100×440
			1158×1235×493	1158×1235×493	1158×1235×493
Weight(Net/Gross)		kg	91/100	91/100	101/111
Piping Connections	Liquid	Inch	3/8	3/8	3/8
	Gas	Inch	5/8	5/8	5/8
	Max. Length	m	50	50	50
	Max. Height	m	15	15	30

Model	Indoor unit		GFH42S3G1I	GFH48S3GI	GFH48S3G1I
	Outdoor unit		GUHD42NS3GO	GUHD48NS3GO	GUHD48NS3GO
Nominal Capacity	Cooling	kW	12.0	13.7	13.7
		Btu/h	40944	46744	46744
	Heating	kW	13.8	16.0	16.0
		Btu/h	47086	54592	54592
Power Input	Cooling	kW	3.70	4.25	4.25
	Heating	kW	4.00	4.80	4.80
EER/COP		W/W	3.24/3.45	3.22/3.33	3.22/3.33
Indoor Unit			GFH42S3G1I	GFH48S3GI	GFH48S3G1I
Power Supply		-	220-240V,~50/60Hz		
Heat Exchange		-	Cross Fin Coil		
Fan	Type	-	Centrifugal fan		
	Drive	-	direct		
	Motor Output	kW	—		
	Air Flow	m^3/h	2200	2500	2500
	Rated Ext. Static Pressure	Pa	50	50	50
Sound Pressure Level(SS/H/M/L)		dB(A)	50/48/46/43	51/48/46/44	51/48/46/44
Air Filter		-	PPKZ		
Drain Piping		mm	Ø20×1.2	Ø20×1.2	Ø20×1.2
Dimensions (W×H×D) (Outline/Package)		mm	1340×350×750	1340×350×750	1340×350×750
			1423×455×837	1423×455×837	1423×455×837
Weight(Net/Gross)		kg	59/71	59/71	59/71
Outdoor Unit			GUHD42NS3GO	GUHD48NS3GO	GUHD48NS3GO
Power Supply		-	220-240V~50/60Hz	220-240V~ 50/60Hz	220-240V~50/60Hz
Heat Exchange		-	Cross Fin Coil	Cross Fin Coil	Cross Fin Coil
Fan	Type	-	Axial fan	Axial fan	Axial fan
	Fan Motor Speed	rpm	780	800	800
Compressor	Type	-	Inverter Rotary	Inverter Rotary	Inverter Rotary
	Power Input	W	4580	4580	4580
Refrigerant	Type	-	R410A	R410A	R410A
	Control	-	Electronic Expansion Valve		
	Charge	kg	3.9	4.0	4.0
Dimensions (W×H×D) (Outline/Package)		mm	1105×1100×440	1085×1365×425	1085×1365×425
			1158×1235×493	1143×1505×478	1143×1505×478
Weight(Net/Gross)		kg	101/111	117/128	117/128
Piping Connections	Liquid	Inch	3/8	3/8	3/8
	Gas	Inch	5/8	5/8	5/8
	Max. Length	m	50	50	50
	Max. Height	m	30	30	30

Model	Indoor unit		GFH60S3GI	GFH60S3G1I
	Outdoor unit		GUHD60NS3GO	GUHD60NS3GO
Nominal Capacity	Cooling	kW	16.0	16.0
		Btu/h	54592	54592
	Heating	kW	18.0	18.0
		Btu/h	61416	61416
Power Input	Cooling	kW	5.00	5.00
	Heating	kW	5.00	5.00
EER/COP		W/W	3.20/3.60	3.20/3.60
Indoor Unit			GFH60S3GI	GFH60S3G1I
Power Supply		-	220V-240V 50/60Hz	
Heat Exchange		-	Cross Fin Coil	
Fan	Type	-	Centrifugal	
	Drive	-	direct	
	Motor Output	kW	-	
	Air Flow	m^3/h	3100	3100
	Rated Ext. Static Pressure	Pa	50	50
Sound Pressure Level(SS/H/M/L)		dB(A)	55/53/51/48	55/53/51/48
Air Filter		-	PPKZ	
Drain Piping		mm	ø30×1.5	ø30×1.5
Dimensions (W×H×D) (Outline/Package)		mm	1497×389×799	1497×389×799
			1578×470×883	1578×470×883
Weight(Net/Gross)		kg	79.0/103.0	79.0/103.0
Outdoor Unit			GUHD60NS3GO	GUHD60NS3GO
Power Supply		-	220-240V~ 50/60Hz	
Heat Exchange		-	Cross Fin Coil	
Fan	Type	-	Axial-flow	
	Fan Motor Speed	rpm	800	800
Compressor	Type		Inverter Rotary	
	Power Input	W	4580	4580
Refrigerant	Type	-	R410A	
	Control	-	Electronic expansion valve	
	Charge	kg	5.5	5.5
Dimensions (W×H×D) (Outline/Package)		mm	1085×1365×425	1085×1365×425
			1143×1505×478	1143×1505×478
Weight(Net/Gross)		kg	121.0/133.0	121.0/133.0
Piping Connections	Liquid	Inch	3/8	3/8
	Gas	Inch	3/4	3/4
	Max. Length	m	50	50
	Max. Height	m	30	30

Note:

a. The design of this unit conforms to the requirements of AS/NZS 3823.2:2013 standard.

b. The air volume is measured at the relevant standard external static pressure.

c. Cooling (heating) capacity stated above is measured under nominal working conditions corresponding to standard external static pressure. The parameters are subject to change with the improvement of products, in which case the values on nameplate shall prevail.

		Indoor	Outdoor
Cooling		DB:27°C(80.6°F) WB:19°C (66.2°F)	DB:35°C (95°F) WB:24°C(75.2°F)
Heating		DB:20°C (68°F) WB:15°C (59°F)	DB:7°C (44.6°F) WB:6°C(42.8°F)
Piping Length	24~60k	7.5m	

4.2 Operation Range

Mode	Range of Outdoor Temperature
Cooling	-15°C(5°F)— 48°C (118.4°F)
Heating	-10°C(14°F) — 24°C (75.2°F)

4.3 Cooling Performance(SI Units)

Notes:

DB: Dry Bulb Temperature(°C) WB: Wet Bulb Temperature(°C) ESP: External Static Pressure

TC: Total Capacity(Unit: kW) SHC: Sensible Heat Capacity(Unit: kW)

PI: Power Input(Unit: kW),Sum of Compressor, Outdoor Fan Power Input & Indoor Fan Power Input

GFH24S3GI/GFH24S3G1I

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				25.0°C(77.0°F)				32.0°C(89.6°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
1500(883)	50(0.2)	22(71.6)	16(60.8)	7.03	23.99	4.75	16.19	6.76	23.07	4.64	15.85
		25.0(77.0)	18(64.5)	7.38	25.17	4.80	16.36	7.09	24.20	4.64	15.83
		27.0(80.6)	19(66.2)	7.53	25.68	4.73	16.13	7.24	24.70	4.60	15.71
		30.0(86.0)	22(71.6)	7.99	27.25	4.70	16.05	7.68	26.20	4.53	15.46
		32(89.6)	24(75.2)	8.35	28.49	4.59	15.67	8.03	27.40	4.50	15.34

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				35.0°C(95.0°F)				43.0°C(109.5°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
1500(883)	50(0.2)	22(71.6)	16(60.8)	6.55	22.33	4.56	22.33	5.89	20.10	4.12	14.07
		25.0(77.0)	18(64.5)	6.86	23.41	4.53	23.41	6.17	21.07	4.14	14.11
		27.0(80.6)	19(66.2)	7.00	23.88	4.54	23.88	6.30	21.50	4.16	14.19
		30.0(86.0)	22(71.6)	7.42	25.32	4.45	25.32	6.68	22.79	4.07	13.90
		32(89.6)	24(75.2)	7.72	26.34	4.40	26.34	6.95	23.71	4.03	13.75

GFH36S3GI /GFH36S3G1I

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				25.0°C(77.0°F)				32.0°C(89.6°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2000(1175)	50(0.2)	22(71.6)	16(60.8)	10.04	34.27	6.78	23.13	9.66	32.95	6.64	22.64
		25.0(77.0)	18(64.5)	10.54	35.96	6.85	23.37	10.13	34.57	6.63	22.61
		27.0(80.6)	19(66.2)	10.75	36.69	6.75	23.04	10.34	35.28	6.58	22.44
		30.0(86.0)	22(71.6)	11.41	38.93	6.72	22.93	10.97	37.43	6.47	22.09
		32(89.6)	24(75.2)	11.93	40.71	6.56	22.39	11.47	39.14	6.42	21.92

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				35.0°C(95.0°F)				43.0°C(109.5°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2000(1175)	50(0.2)	22(71.6)	16(60.8)	9.35	31.90	6.51	31.90	8.42	28.71	5.89	20.10
		25.0(77.0)	18(64.5)	9.80	33.44	6.47	33.44	8.82	30.09	5.91	20.16
		27.0(80.6)	19(66.2)	10.00	34.12	6.48	34.12	9.00	30.71	5.94	20.27
		30.0(86.0)	22(71.6)	10.60	36.17	6.36	36.17	9.54	32.55	5.82	19.86
		32(89.6)	24(75.2)	11.03	37.63	6.29	37.63	9.93	33.87	5.76	19.65

GFH42S3GI/GFH42S3G1I

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				25.0°C(77.0°F)				32.0°C(89.6°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2200(1295)	50(0.2)	22(71.6)	16(60.8)	12.05	41.13	8.14	27.76	11.59	39.55	7.96	27.17
		25.0(77.0)	18(64.5)	12.65	43.15	8.22	28.05	12.16	41.49	7.95	27.13
		27.0(80.6)	19(66.2)	12.90	44.03	8.10	27.65	12.41	42.34	7.89	26.93
		30.0(86.0)	22(71.6)	13.69	46.72	8.06	27.52	13.17	44.92	7.77	26.50
		32(89.6)	24(75.2)	14.32	48.85	7.87	26.87	13.77	46.97	7.71	26.30

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				35.0°C(95.0°F)				43.0°C(109.5°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2200(1295)	50(0.2)	22(71.6)	16(60.8)	11.22	38.28	7.81	38.28	10.10	34.45	7.07	24.12
		25.0(77.0)	18(64.5)	11.76	40.13	7.76	40.13	10.58	36.11	7.09	24.20
		27.0(80.6)	19(66.2)	12.00	40.94	7.78	40.94	10.80	36.85	7.13	24.32
		30.0(86.0)	22(71.6)	12.72	43.40	7.63	43.40	11.45	39.06	6.98	23.83
		32(89.6)	24(75.2)	13.24	45.16	7.54	45.16	11.91	40.65	6.91	23.57

GFH48S3GI/GFH48S3G1I

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				25.0°C(77.0°F)				32.0°C(89.6°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2500(1470)	50(0.2)	22(71.6)	16(60.8)	13.76	46.95	9.29	31.69	13.23	45.15	9.09	31.02
		25.0(77.0)	18(64.5)	14.44	49.26	9.38	32.02	13.88	47.37	9.08	30.98
		27.0(80.6)	19(66.2)	14.73	50.27	9.25	31.57	14.17	48.33	9.01	30.74
		30.0(86.0)	22(71.6)	15.63	53.33	9.21	31.41	15.03	51.28	8.87	30.26
		32(89.6)	24(75.2)	16.34	55.77	8.99	30.67	15.72	53.62	8.80	30.03

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				35.0°C(95.0°F)				43.0°C(109.5°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB°C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2500(1470)	50(0.2)	22(71.6)	16(60.8)	12.81	43.71	8.92	43.71	11.53	39.34	8.07	27.53
		25.0(77.0)	18(64.5)	13.43	45.81	8.86	45.81	12.08	41.23	8.10	27.62
		27.0(80.6)	19(66.2)	13.70	46.74	8.88	46.74	12.33	42.07	8.14	27.77
		30.0(86.0)	22(71.6)	14.52	49.55	8.71	49.55	13.07	44.59	7.97	27.20
		32(89.6)	24(75.2)	15.11	51.56	8.61	51.56	13.60	46.40	7.89	26.91

GFH60S3GI/GFH60S3G1I

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				25.0°C(77.0°F)				32.0°C(89.6°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB °C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2500(1470)	50(0.2)	22(71.6)	16(60.8)	16.07	54.84	10.85	37.02	15.45	52.73	10.62	36.22
		25.0(77.0)	18(64.5)	16.86	57.53	10.96	37.40	16.21	55.32	10.60	36.18
		27.0(80.6)	19(66.2)	17.21	58.71	10.81	36.87	16.54	56.45	10.52	35.90
		30.0(86.0)	22(71.6)	18.26	62.29	10.75	36.69	17.55	59.89	10.36	35.34
		32(89.6)	24(75.2)	19.09	65.13	10.50	35.82	18.35	62.62	10.28	35.07

Air Flow Rate	ESP	Indoor Air Temperature		Outdoor Air Dry Bulb Temperature(Outdoor air: 85% RH)							
				35.0°C(95.0°F)				43.0°C(109.5°F)			
				TC		SHC		TC		SHC	
m^3/hr(cfm)	Pa(in.wg)	DB °C(°F)	WB °C(°F)	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h	kW	kBtu/h
2500(1470)	50(0.2)	22(71.6)	16(60.8)	14.96	51.04	10.41	51.04	13.46	45.94	9.42	32.16
		25.0(77.0)	18(64.5)	15.68	53.50	10.35	53.50	14.11	48.15	9.46	32.26
		27.0(80.6)	19(66.2)	16.00	54.59	10.37	54.59	14.40	49.13	9.50	32.43
		30.0(86.0)	22(71.6)	16.96	57.87	10.18	57.87	15.26	52.08	9.31	31.77
		32(89.6)	24(75.2)	17.65	60.21	10.06	60.21	15.88	54.19	9.21	31.43

4 Electrical Data

Outdoor unit

Model	Compressor			Fan Motor	Fuse/Breaker Capacity	Breaker Capacity	Min. Power Supply Cord
	Power Supply	Qty.	RLA	FLA			
	V/Ph/Hz	–	A	A	A	A	mm^2
GUHD24NS3GO	220-240V~ 50/60Hz	1	11.5	<1	5	20	2.5
GUHD36NS3GO	220-240V~ 50/60Hz	1	19.0	<1	5	25	4.0
GUHD42NS3GO	220-240V~ 50/60Hz	1	21.0	<1	5	40	6.0
GUHD48NS3GO	220-240V~ 50/60Hz	1	21.0	<1	5	40	6.0
GUHD60NS3GO	220-240V~ 50/60Hz	1	21.0	<1	5	40	6.0

Indoor unit

Model	Power Supply	Fan Motor FLA	Fuse/Breaker Capacity	Min. Power Supply Cord
	V/Ph/Hz	A	A	mm^2
GFH24S3GI	220-240V~ 50/60Hz	<1	5/6	1.0
GFH24S3G1I	220-240V~ 50/60Hz	<1	5/6	1.0
GFH36S3GI	220-240V~ 50/60Hz	<1	5/6	1.0
GFH36S3G1I	220-240V~ 50/60Hz	<1	5/6	1.0
GFH42S3GI	220-240V~ 50/60Hz	<1	5/6	1.0
GFH42S3G1I	220-240V~ 50/60Hz	<1	5/6	1.0
GFH48S3GI	220-240V~ 50/60Hz	<1	5/6	1.0
GFH48S3G1I	220-240V~ 50/60Hz	<1	5/6	1.0
GFH60S3GI	220-240V~ 50/60Hz	<1	5/6	1.0
GFH60S3G1I	220-240V~ 50/60Hz	<1	5/6	1.0

Notes:
RLA:Rated load amperes
LRA:Locked rotor amperes
FLA:Full load current
Fuse: On the main board

a. The specifications of the breaker and power cable listed in the table above are determined based on the maximum power (maximum amps) of the unit.
b. The specifications of the power cable listed in the table above are applied to the conduit-guarded multi-wire copper cable (like, YJV copper cable, consisting of PE insulated wires and a PVC cable jacket) used at 40°C and resistible to 90°C (see IEC 60364-5-52). If the working condition changes, they should be modified according to the related national standard.
c. The specifications of the breaker listed in the table above are applied to the breaker with the working temperature at 40°C. If the working condition changes, they should be modified according to the related national standard.

5 FAN CHARACTERISTICS

Static pressure selection	External Static Pressure (Pa)	Indoor Unit Model											
		GFH24S3GI GFH24S3G1I				GFH36S3GI GFH36S3G1I				GFH42S3GI GFH42S3G1I			
		Air Flow Volume(m^3/h)				Air Flow Volume(m^3/h)				Air Flow Volume(m^3/h)			
		Super High Speed Model	High Speed Model	Medium Speed Model	Low Speed Model	Super High Speed Model	High Speed Model	Medium Speed Model	Low Speed Model	Super High Speed Model	High Speed Model	Medium Speed Model	Low Speed Model
P1	10	1500	1300	1100	900	2000	1800	1500	1200	2200	2000	1800	1500
P2	20												
P3	30												
P4	40												
P5	50												
P6	75												
P7	100												
P8	150												
P9	200												

Static pressure selection	External Static Pressure (Pa)	Indoor Unit Model							
		GFH48S3GI GFH48S3G1I				GFH60S3GI GFH60S3G1I			
		Air Flow Volume(m^3/h)				Air Flow Volume(m^3/h)			
		Super High Speed Model	High Speed Model	Medium Speed Model	Low Speed Model	Super High Speed Model	High Speed Model	Medium Speed Model	Low Speed Model
P1	10	2500	2300	2000	1700	3100	2800	2500	2200
P2	20								
P3	30								
P4	40								
P5	50								
P6	75								
P7	100								
P8	150								
P9	200								

Note: You can select P1,..... P9 in fan mode of indoor fan motor, which means different fan mode combinations are corresponding to different static pressure. Ex-factory defaulted mode is P5. If you want to select fan mode of indoor fan motor, please under debugging state, press Mode button to adjust to "11" in temperature displaying zone. Timer zone displays setting state and press ▲ or ▼ button to adjust. There are 9 selections:

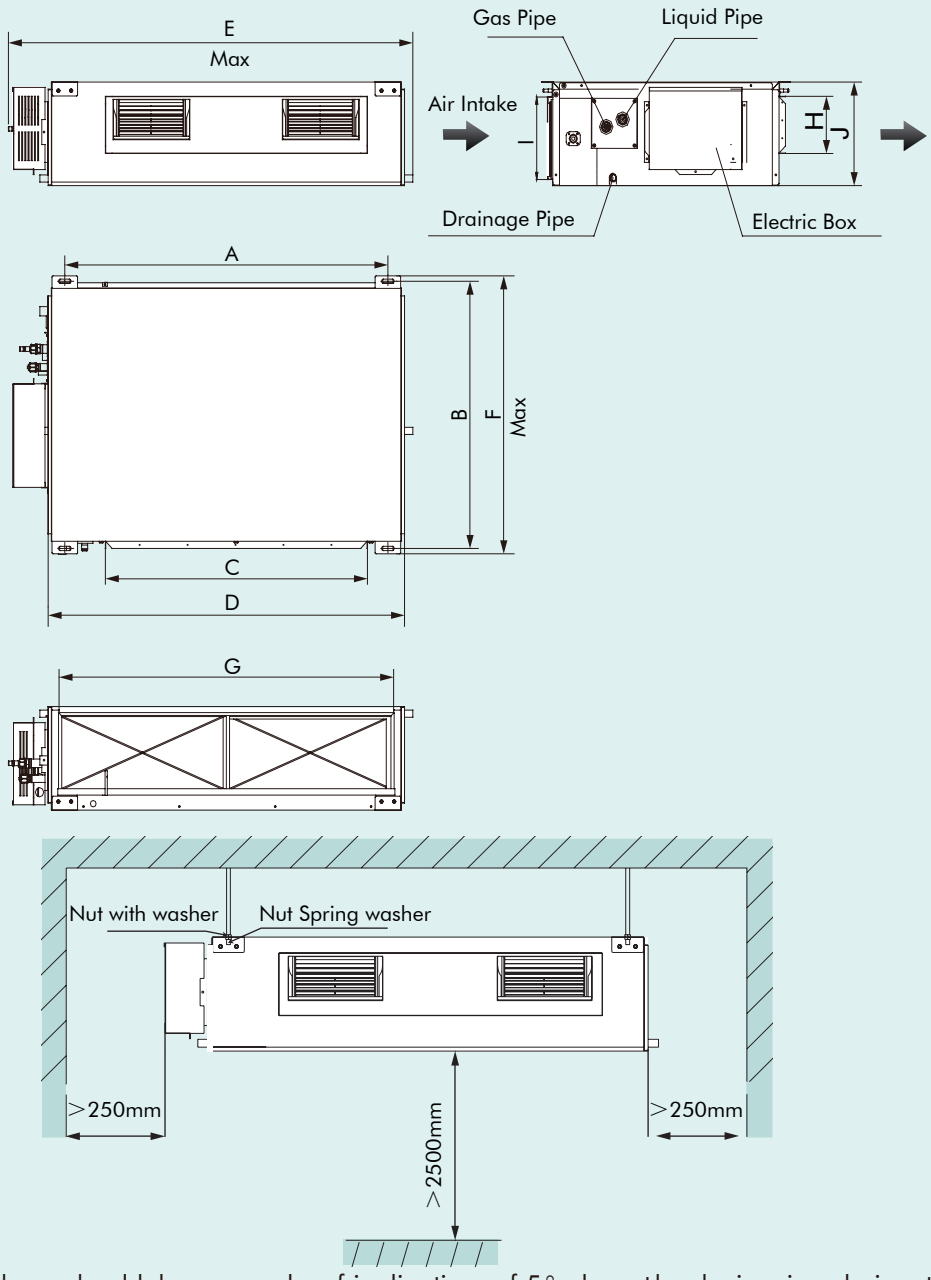
(1) P1 (LCD displays 01)
(2) P2 (LCD displays 02)
(3) P3 (LCD displays 03)
(4) P4 (LCD displays 04)
(5) P5 (LCD displays 05)
(6) P6 (LCD displays 06)
(7) P7 (LCD displays 07)
(8) P8 (LCD displays 08
(9) P9 (LCD displays 09)

6 DIMENSION

6.1 Indoor Units

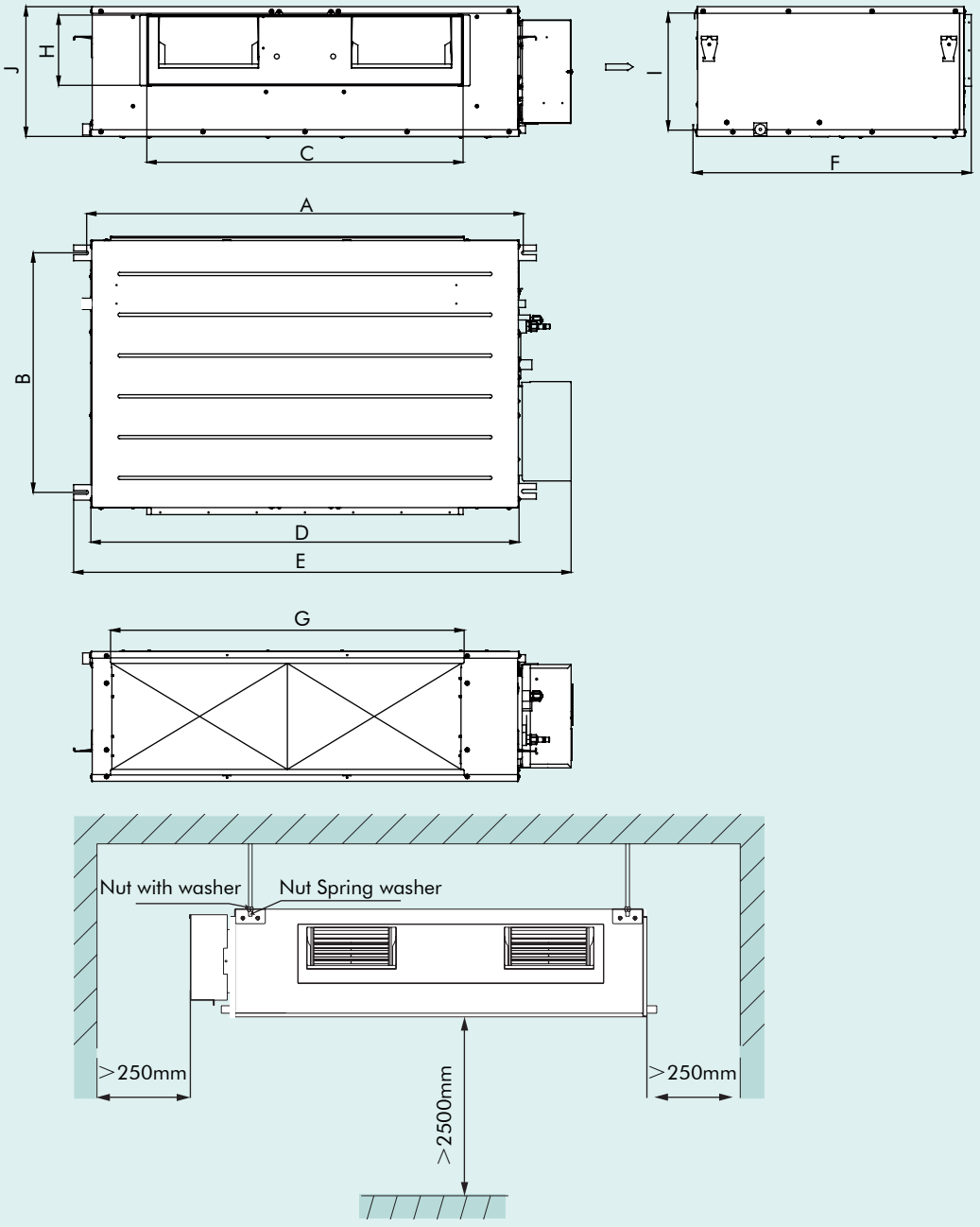
6.1.1 Duct type

Be suit for: GFH24S3GI, GFH24S3G1I



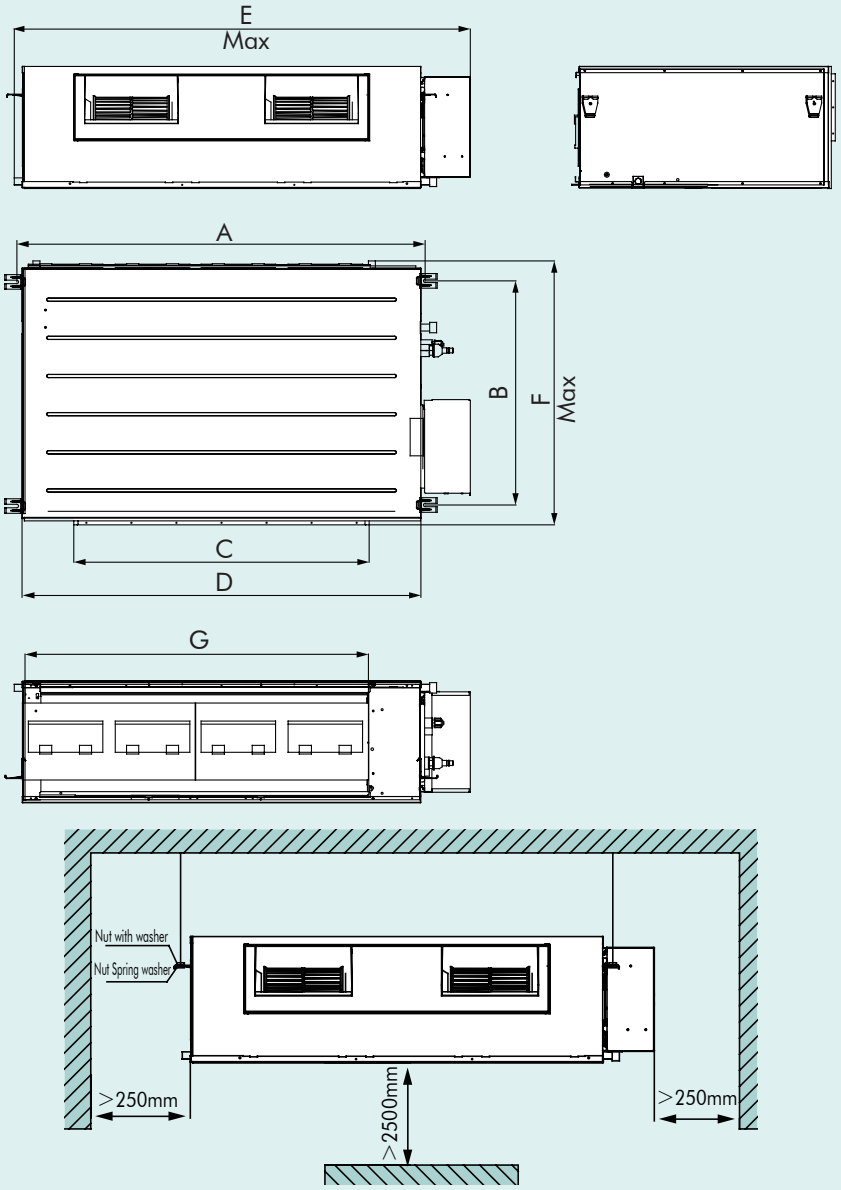
Note: there should be an angle of inclination of 5° along the drain pipe during the installation of the duct type unit so as to drain easily.

Be suit for: GFH36S3GI, GFH36S3G1I, GFH42S3GI, GFH42S3G1I, GFH48S3GI, GFH48S3G1I



Note: there should be an angle of inclination of 5° along the drain pipe during the installation of the duct type unit so as to drain easily.

Be suit for: GFH60S3GI, GFH60S3G1I



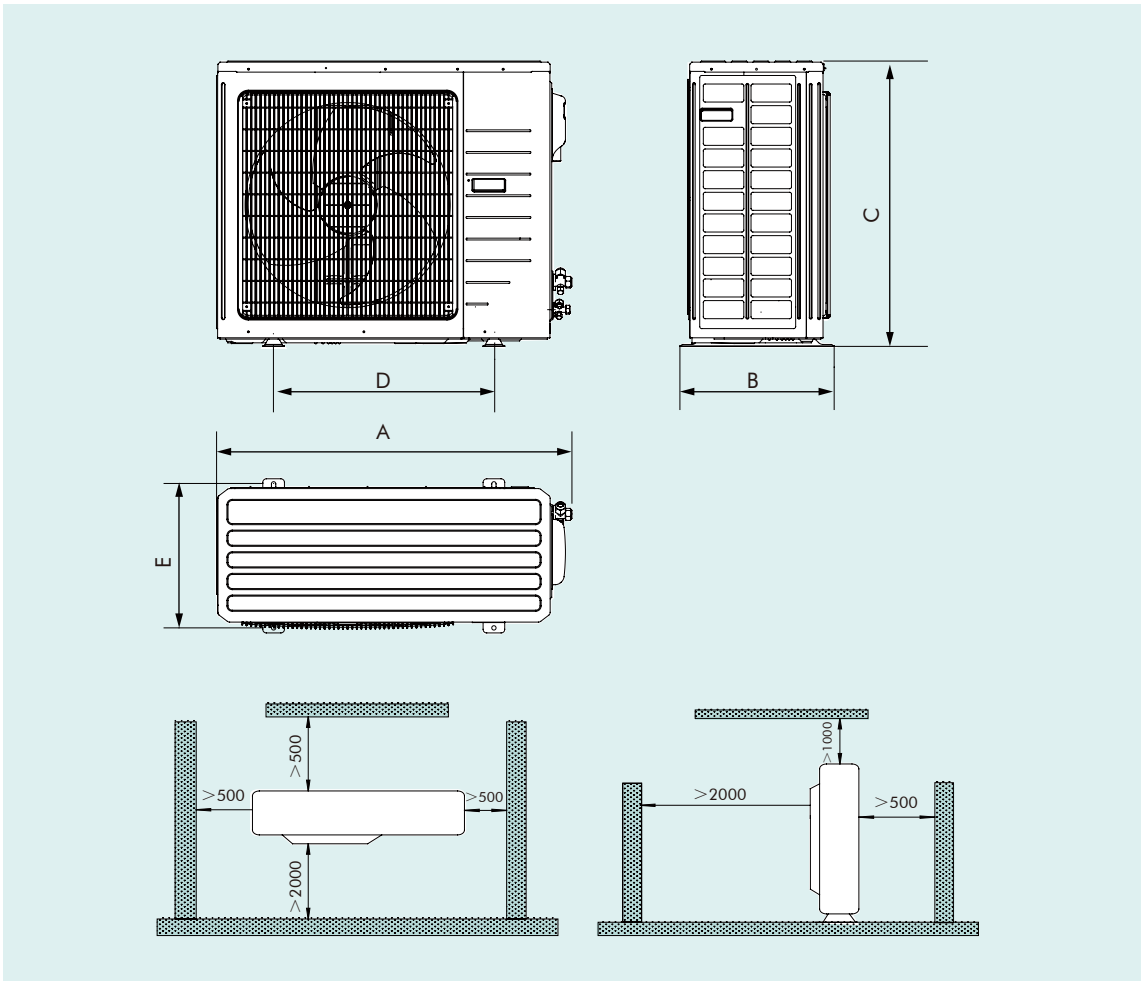
Note: there should be an angle of inclination of 5° along the drain pipe during the installation of the duct type unit so as to drain easily.

Unit: mm

Item / Model	A	B	C	D	E	F	G	H	I	J
GFH24S3GI GFH24S3G1I	1011	748	820	1115	1225	775	978	160	230	290
GFH36S3GI GFH36S3G1I	1175	646	852	1150	1340	750	953	190	316	350
GFH42S3GI GFH42S3G1I										
GFH48S3GI GFH48S3G1I										
GFH60S3GI GFH60S3G1I	1353	632	992	1150	192	340	1500	390	800	--

6.2 Outdoor Units

Be suit for: 18/24/36(kBtu/h):

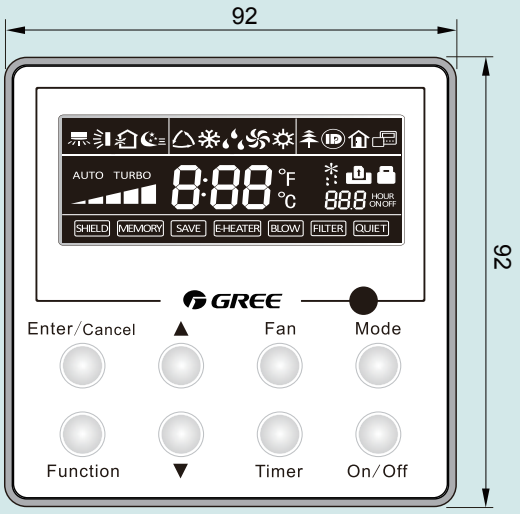


Unit: mm

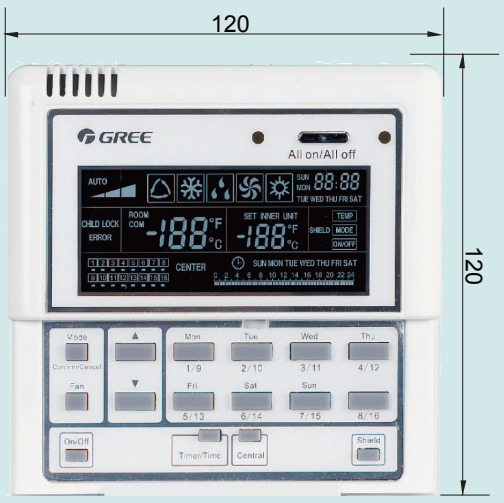
Item / Model	A	B	C	D	E
GUHD24NS3GO	1005	425	790	610	391
GUHD36NS3GO	1105	440	1105	631	401
GUHD42NS3GO	1105	440	1105	631	401
GUHD48NS3GO	1085	425	1365	620	393
GUHD60NS3GO	1085	425	1365	620	393

6.3 Dimension – Controller

Wired Controller (Standard)



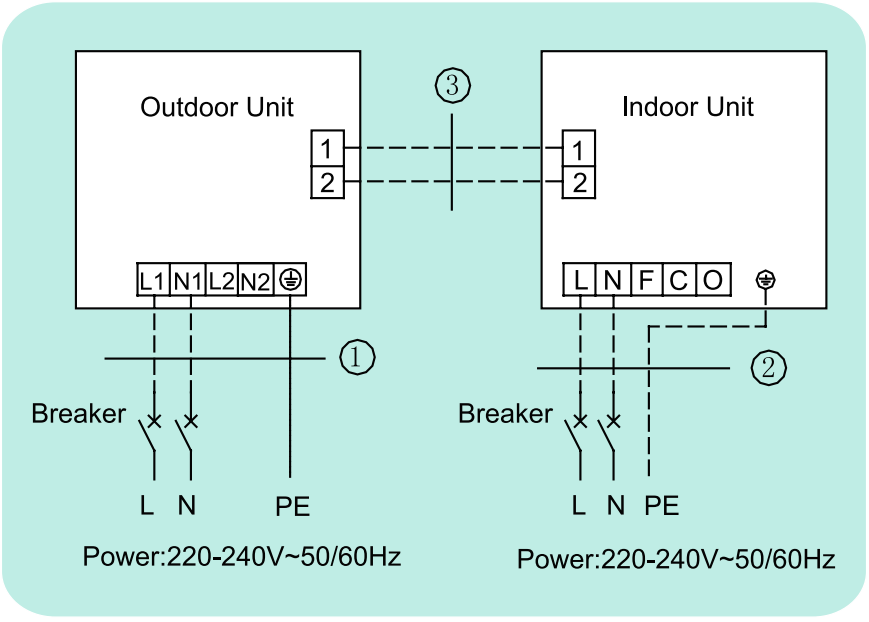
Centralized Controller



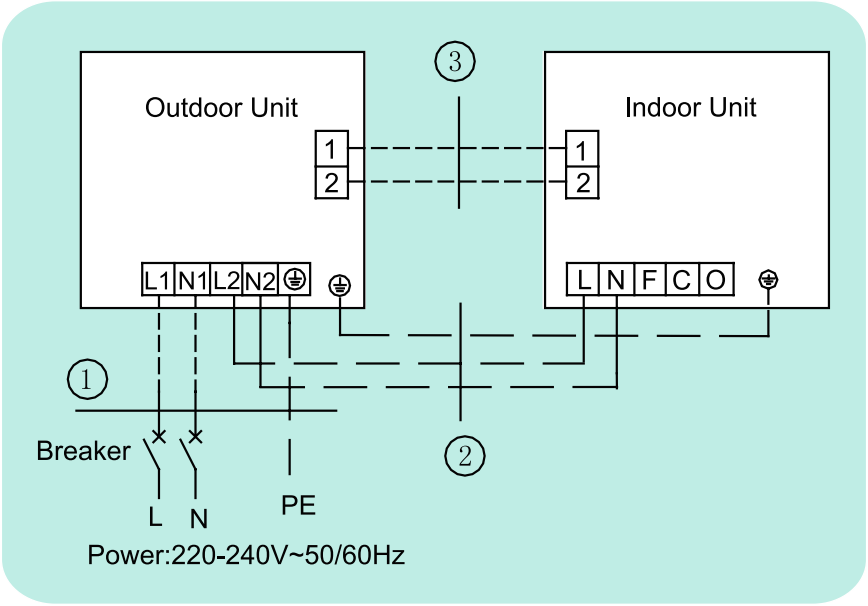
7 WIRING DIAGRAM

7.1 Field Wiring Diagrams

Separate Power Supply for indoor unit and outdoor unit:



② If power supply of the indoor unit is from outdoor unit:



GUHD24NS3GO+GFH24S3GI/GFH24S3G1I
①. Power cord 3×2.5mm²(H07RN-F)
②. Power cord 3×1.0mm²(H05RN-F)
③. Communication Cords 2×0.75mm²(H05RN-F)

GUHD36NS3GO+GFH36S3GI/GFH36S3G1I
①. Power cord 3×4.0mm²(H07RN-F)
②. Power cord 3×1.0mm²(H05RN-F)
③. Communication Cords 2×0.75mm²(H05RN-F)

GUHD42NS3GO+GFH42S3GI/GFH42S3G1I
GUHD48NS3GO+GFH48S3GI/GFH48S3G1I
GUHD60NS3GO+GFH60S3GI/GFH60S3G1I
①. Power cord 3×6.0mm²(H07RN-F)
②. Power cord 3×1.0mm²(H05RN-F)
③. Communication Cords 2×0.75mm²(H05RN-F)

7.2 Specification of Power Supply Wire and Air Switchw

7.2.1 Outdoor Unit

Model	Power Supply (V,Ph,Hz)	Capability of Air Swith	Minimum Sectional Area of Earth Wire	Minimum Sectional Area of Power Supply Wire
		(A)	(mm^2)	(mm^2)
GUHD24NS3GO	220-240V ~ 50/60Hz	20	2.5	2.5
GUHD36NS3GO	220-240V ~ 50/60Hz	25	4.0	4.0
GUHD42NS3GO	220-240V ~ 50/60Hz	40	6.0	6.0
GUHD48NS3GO	220-240V ~ 50/60Hz	40	6.0	6.0
GUHD60NS3GO	220-240V ~ 50/60Hz	40	6.0	6.0

7.2.2 Indoor Unit

Model	Power Supply (V,Ph,Hz)	Capability of Air Swith	Minimum Sectional Area of Earth Wire	Minimum Sectional Area of Power Supply Wire
		(A)	(mm^2)	(mm^2)
GFH24S3GI	220-240,1,50/60	6	1.0	1.0
GFH24S3G1I	220-240,1,50/60	6	1.0	1.0
GFH36S3GI	220-240,1,50/60	6	1.0	1.0
GFH36S3G1I	220-240,1,50/60	6	1.0	1.0
GFH42S3GI	220-240,1,50/60	6	1.0	1.0
GFH42S3G1I	220-240,1,50/60	6	1.0	1.0
GFH48S3GI	220-240,1,50/60	6	1.0	1.0
GFH48S3G1I	220-240,1,50/60	6	1.0	1.0
GFH60S3GI	220-240,1,50/60	6	1.0	1.0
GFH60S3G1I	220-240,1,50/60	6	1.0	1.0

8 ACCESSORIES

7.1 Indoor Unit

Class / Model Name	Wireless controller	wired controller	Central controller with weekly timer	Long-distance monitoring system	Communication cable	Water pump	Flexible pipe
GFH24S3GI	○	●	○	○	○	/	●
GFH24S3G1I	○	●	○	○	○	●	●
GFH36S3GI	○	●	○	○	○	/	●
GFH36S3G1I	○	●	○	○	○	●	●
GFH42S3GI	○	●	○	○	○	/	●
GFH42S3G1I	○	●	○	○	○	●	●
GFH48S3GI	○	●	○	○	○	/	●
GFH48S3G1I	○	●	○	○	○	●	●
GFH60S3GI	○	●	○	○	○	/	●
GFH60S3G1I	○	●	○	○	○	●	●

Note: "●" is standard part ; "○" is optional; "/" is unavailable.

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