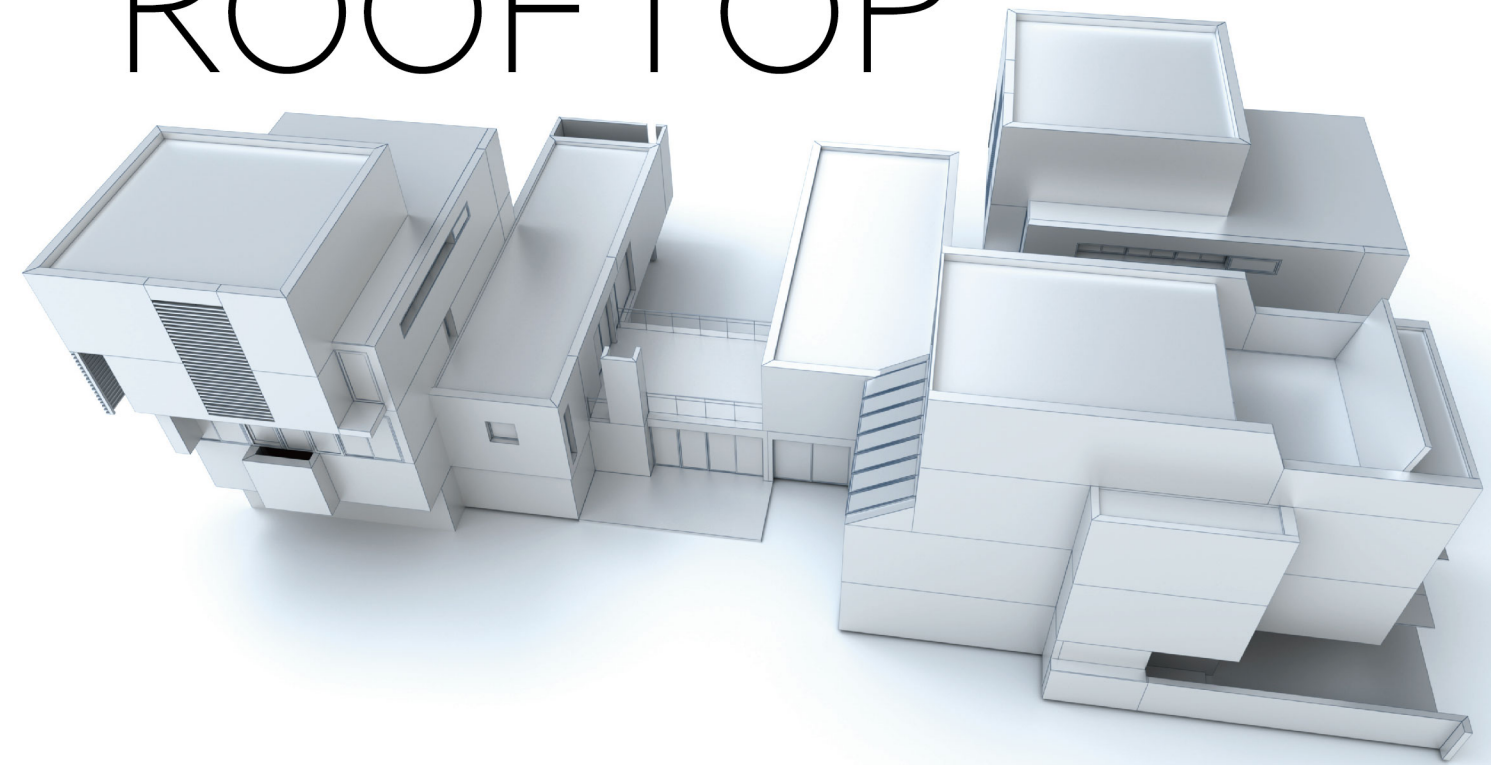




# GREE

# ROOFTOP



## GREE ELECTRIC APPLIANCES, INC. OF ZHUHAI

Add: West Jinji Rd, Qianshan, Zhuhai, Guangdong, China 519070  
Tel: (+86-756) 852 2218 Fax: (+86-756) 866 9426  
Email: gree@gree.com.cn Http://www.gree.com

## HONG KONG GREE ELECTRIC APPLIANCES SALES LIMITED




Add: Unit 2612, 26/F, Mira Place Tower A, 132 Nathan Road, Tsimshatsui, Kowloon, Hong Kong  
Tel: (852) 3165 8898 Fax: (852) 3165 1029

**Note:**  
Gree is committed to continuously improving its products to ensure the highest quality and reliability standards, and to meet local regulations and market requirements.

All features and specifications are subject to change without prior notice.

All images provided in this catalogue are used for illustration purposes only.  
Copyright© Gree Electric Appliances, Inc. of Zhuhai. All rights reserved.

# MODELS LIST

Model	Nominal Capacity (Ton)	Refrigerant	Power Supply (V,Ph,Hz)	Appearance
GK-H03NH3AS	3	R410A	220~240V, 1Ph, 50/60Hz	
GK-H5.5NH3AS	5.5	R410A	220~240V, 1Ph, 50/60Hz	
GK-H5.5NH3AF	5.5	R410A	220~240V, 3Ph, 60Hz	
GK-H10NH3AF	10	R410A	220~240V, 3Ph, 60Hz	
GK-H15NH3AF	15	R410A	220~240V, 3Ph, 60Hz	
GK-H20NH3AF	20	R410A	220~240V, 3Ph, 60Hz	

# FUNCTION

## Description

GREE R410A rooftop packaged units provide a wide capacity range from 3 to 20 Ton. These units are completely assembled, piped and wired at the factory to provide one-piece shipment and rigging. Each unit is pressurized with a holding charge of refrigerant-410A for storage and shipping. GREE R410A rooftop packaged units can offer the perfect combination of superior product quality, high operating efficiency and cost efficiency. The compact design, attractive appearance, outstanding anti-rust cabinet and quiet operation make these units suitable for almost any manufactured or modular homes, offices, restaurants, residences or similar places. 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. Compressors are mounted on rubber isolators to reduce the vibration during transportation. Vertical discharge condenser fans direct sound upward and away from any surrounding structures. All sheet metal parts are constructed of commercial grade galvanized steel. After fabricated, each part is thoroughly cleaned to remove any grease or dirt from its surfaces. The external parts are coated with a power-paint to assure a quality finish for many years. The power-paint finishes with 500-hour salt spray test.

## Features

### Standard Features

#### ●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.

#### ●High efficient coil

Internal screw copper pipe and aluminum fin is used. It makes the coil exchanging heat efficiently.

#### ●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

#### ●Quiet operation

The Vertical discharge condenser fan blowing upward, it carries the sound away from any surrounding structures.

#### ●Overload protection

Once the heat exchanger temperature of outdoor unit is too high, the compressor frequency will slow down.

#### ●High/low pressure protection

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

#### ●Discharge high temperature protection

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

#### ●Sensor malfunction alarming

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

#### ●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.

#### ●Washable filter

The filter can be washed for using again.

#### ●Compact structure and easy installation

A smaller dimension makes a larger loading quantity. All units feature base rail design with forklift slots and rigging holes for easier maneuvering. Durable packaging protects all units during shipment and storage.

#### ●Communication malfunction

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

#### ●Simple electrical connections

Electric box facilitate connections to room thermostat or outdoor thermostat. Both power and control connections are made on the same side of the unit to simplify installation. In addition, color-coded wires permit easy tracing and diagnostics.



# FUNCTION

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

### ◆IPM module protection

When the 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 to protect the compressor.

### ◆IPM temperature too high protection

When the temperature of the the IPM module is too high, the compressor frequency will slow down to protect the whole system.

### ◆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 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.

# Rigorous Test

### ◆Rain Test

Place the unit on the test table, energize it, and then shower the unit round and round along the direction of the condenser and the fan with the spraying nozzle above the test table. This test lasts for 30 minutes with the water pressure of 1.0kgf/cm<sup>2</sup>. After the test, the unit should be immediately conducted for the dielectric strength test.

### ◆Random Vibration Test

Place a sample on the vibration table in the same way as it is put for normal transportation or as per the test requirement. Around the sample, guard rails with an interval of some 15mm should be installed. Set the test parameters, overall g rms: 1.14G, test frequency: 2Hz-200Hz, test duration: 4h.

Report the temperature and humidity at the test field. After the test, check if the packaging and the inside sample are damaged or not.

### ◆Long Run Test

With the rated/low/high voltage, the unit is conducted to run in the cooling and heating mode alternately for the long run test, frequent ON/OFF test and refrigerant leakage test lasting for 1000 hours (approx. 42days).

# PRODUCT DATA

## Product Data at Rated Condition

Model			GK-H03NH3AS	GK-H5.5NH3AS	GK-H5.5NH3AF	
Total Capacity	Cooling	Btu/h	35800 (13650-42660)	66500 (20500-66500)	71700 (20500-75100)	
		kW	10.5 (4.0-12.5)	19.5 (6.0-19.5)	21.0 (6.0-22.0)	
	Heating	Btu/h	39250 (17070-46100)	70000 (27300-73400)	75100 (27300-78500)	
		kW	11.5 (5.0-13.5)	20.5 (8.0-21.5)	22.0 (8.0-23.0)	
Electrical Data	Power supply		V-Hz-Ph	220-240V-50/60Hz-1Ph	220-240V-50/60Hz-1Ph	220-240V-60Hz-3Ph
	Power input	Cooling	kW	3.1	6.8	7.9
		Heating	kW	3.2	5.8	6.6
	Current input	Cooling	A	13.5	30	21
Heating		A	14	25.5	18	
SEER		Btu/(W.h)	20	16	16	
Sound Pressure Level		dB(A)	61	63	63	
Refrigerant	Type/weight		—	R410A/3.5kg	R410A/5.0kg	R410A/5.0kg
Air Flow Volume		CFM	1177	1942	1942	
		m <sup>3</sup> /h	2000	3300	3300	
External Static Pressure	Rated/Range	Pa	50(0-150)	60(0-180)	60(0-180)	
		InWg	0.20(0-0.6)	0.24(0-0.72)	0.24(0-0.72)	
Dehumidifying Volume		l/h	2.63	7.2	7.73	
Evaporator Side	Fan motor	Drive Type	-	Direct Drive	Direct Drive	Direct Drive
		Power Output	HP	4月15日	1	1
	Fan	Type	-	Centrifugal	Centrifugal	Centrifugal
		Quantity	-	2	2	2
		Motor Speed	rpm	1100	1080	1080
	Evaporator	Material	-	Copper tube- Aluminum fin	Copper tube- Aluminum fin	Copper tube- Aluminum fin
		Face Area	sq.ft	4.31	4.31	4.31
			m <sup>2</sup>	0.4	0.4	0.4
		Fins per Inch(FPI)	-	16	16	16
	Drain Connection Size		Inch	0.80×0.047	0.80×0.047	0.80×0.047
Condenser Side	Compressor	Type	-	Inverter Rotary	Inverter Rotary	Inverter Rotary
		Quantity	-	1	1	1
	Fan motor	Drive Type	-	Direct Drive	Direct Drive	Direct Drive
		Power Output	HP	1	1	1
	Fan	Type	-	Axial-flow	Axial-flow	Axial-flow
		Quantity	-	1	1	1
	Condenser	Material	-	Copper tube -Aluminum fin	Copper tube -Aluminum fin	Copper tube -Aluminum fin
		Face Area	sq.ft	13.89	13.89	13.89
m <sup>2</sup>			1.29	1.29	1.29	
	Fins per Inch(FPI)	-	16	16	16	
Permissible Excessive Operating Pressure for the Discharge Side		Mpa	4.4	4.4	4.4	
Permissible Excessive Operating Pressure for the Suction Side		Mpa	2.5	2.5	2.5	
Operation temp	Cooling	℃	18-48	18-48	18-48	
	Heating	℃	-34	-34	-34	
Filter		-	PP	PP	PP	
Dimension	Outline dimension (W×D×H)	mm	1450×1120×815	1450×1120×815	1450×1120×815	
	Package dimension (W×D×H)	mm	1463×1133×860	1463×1133×860	1463×1133×860	
Weight	Net weight	kg	206	268	268	
	Gross weight	kg	227	289	289	
Loading quantity		20'GP	16	16	16	
		40'GP	32	32	32	
		40'HQ	48	48	48	

# PRODUCT DATA

Model			GK-H10NH3AF	GK-H15NH3AF	GK-H20NH3AF	
Total Capacity	Cooling	Btu/h	116000(34100-119400)	174000(44400-180800)	232000 (58000-242300)	
		kW	34.0(10.0-35.0)	51.0(13.0-53.0)	68.0 (17.0-71.0)	
	Heating	Btu/h	119400(37500-122800)	182500(47800-191100)	242300 (61400-256000)	
		kW	35.0(11.0-36.0)	53.5(14.0-56.0)	74.0 (18.0-78.0)	
Electrical Data	Power supply		V-Hz-Ph	220-240V-60Hz-3Ph	220-240V-60Hz-3Ph	220-240V-60Hz-3Ph
	Power input	Cooling	kW	13.7	22	27
		Heating	kW	11.5	16	25.5
	Current input	Cooling	A	36	63	74
Heating		A	30	46	70	
SEER		Btu/(W.h)	16	16	16	
Sound Pressure Level		dB(A)	72	78	78	
Refrigerant	Type/weight		-	R410A/10.0kg	R410A/12.0kg	R410A/16.0kg
Air Flow Volume		CFM	3413	5591	8417	
		m³/h	5800	9500	14300	
External Static Pressure	Rated/Range	Pa	90(0-210)	120(0-320)	150 (0-350)	
		InWg	0.36(0-0.84)	0.48(0-1.28)	0.6 (0-1.4)	
Dehumidifying Volume		l/h	11.08	14.31	16.2	
Evaporator Side	Fan motor	Drive Type	-	Direct Drive	Belt	Belt
		Power Output	HP	2	4	5.5
	Fan	Type	-	Centrifugal	Centrifugal	Centrifugal
		Quantity	-	2	1	2
		Motor Speed	rpm	1400	916	960
	Evaporator	Material	-	Copper tube- Aluminum fin	Copper tube- Aluminum fin	Copper tube- Aluminum fin
		Face Area	sq.ft	7	10.12	12.32
			m²	0.65	0.94	1.145
		Fins per Inch(FPI)	-	16	18	18
	Drain Connection Size		Inch	0.80×0.047	0.80×0.047	1.20×0.059
Condenser Side	Compressor	Type	-	Inverter Rotary	Inverter Rotary	Inverter Rotary
		Quantity	-	1	2	2
	Fan motor	Drive Type	-	Direct Drive	Direct Drive	Direct Drive
		Power Output	HP	2	2	2
	Fan	Type	-	Axial-flow	Axial-flow	Axial-flow
		Quantity	-	1	1	2
	Condenser	Material	-	Copper tube -Aluminum fin	Copper tube -Aluminum fin	Copper tube -Aluminum fin
		Face Area	sq.ft	25.19	26.16	34.22
			m²	2.34	2.43	3.18
		Fins per Inch(FPI)	-	16	16	16
Permissible Excessive Operating		Mpa	4.4	4.4	4.4	
Permissible Excessive Operating		Mpa	2.5	2.5	2.5	
Operation temp	Cooling	°C	18-48	18-48	18-48	
	Heating	°C	-34	-34	-34	
Filter		-	PP	PP	PP	
Dimension	Outline dimension (W×D×H)	mm	1450×1120×1215	2260×1140×1245	1880×2240×1250	
	Package dimension (W×D×H)	mm	1463×1133×1260	2283×1163×1290	1898×2258×1300	
Weight	Net weight	kg	339	572	770	
	Gross weight	kg	360	600	810	
Loading quantity		20'GP	7	4	3	
		40'GP	16	10	6	
		40'HQ	32	20	12	

◆The cooling capacity stated above is measured under following conditions

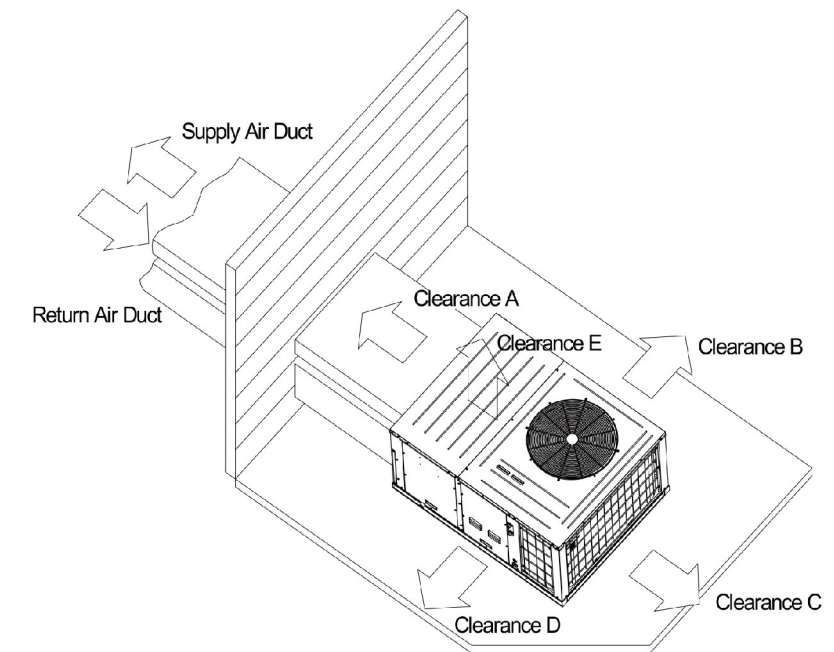
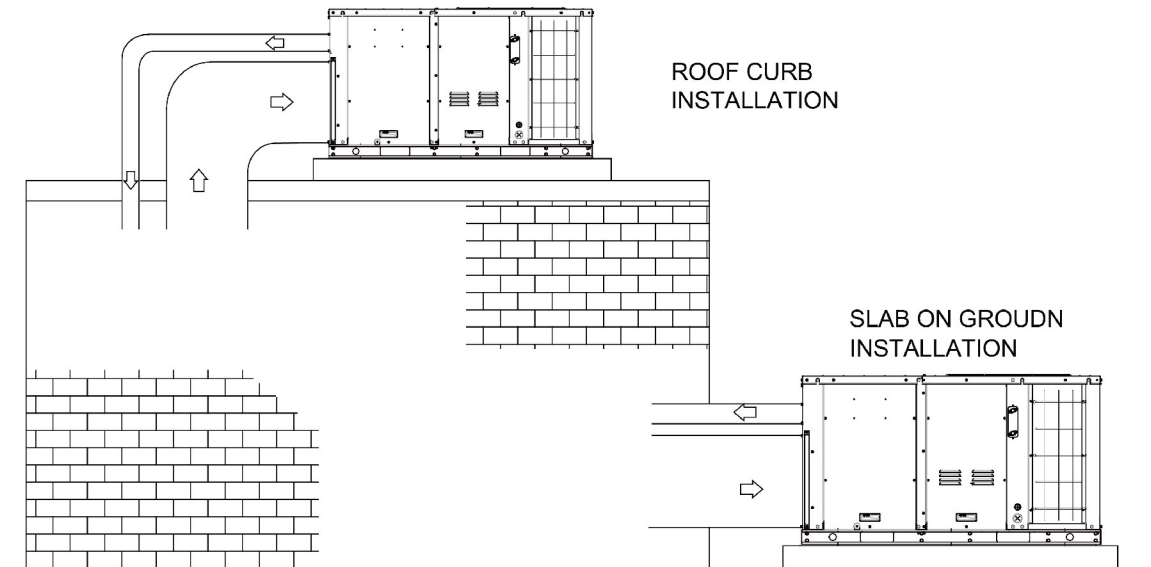
Indoor Conditions:27°C (81 °F )DB/19°C (67 °F )WB; Outdoor Conditions:35°C (95 °F )DB/24°C (76 °F )WB;

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

◆The technical parameters are changed along with the products improvement; please refer to the nameplate of the unit for actual data.

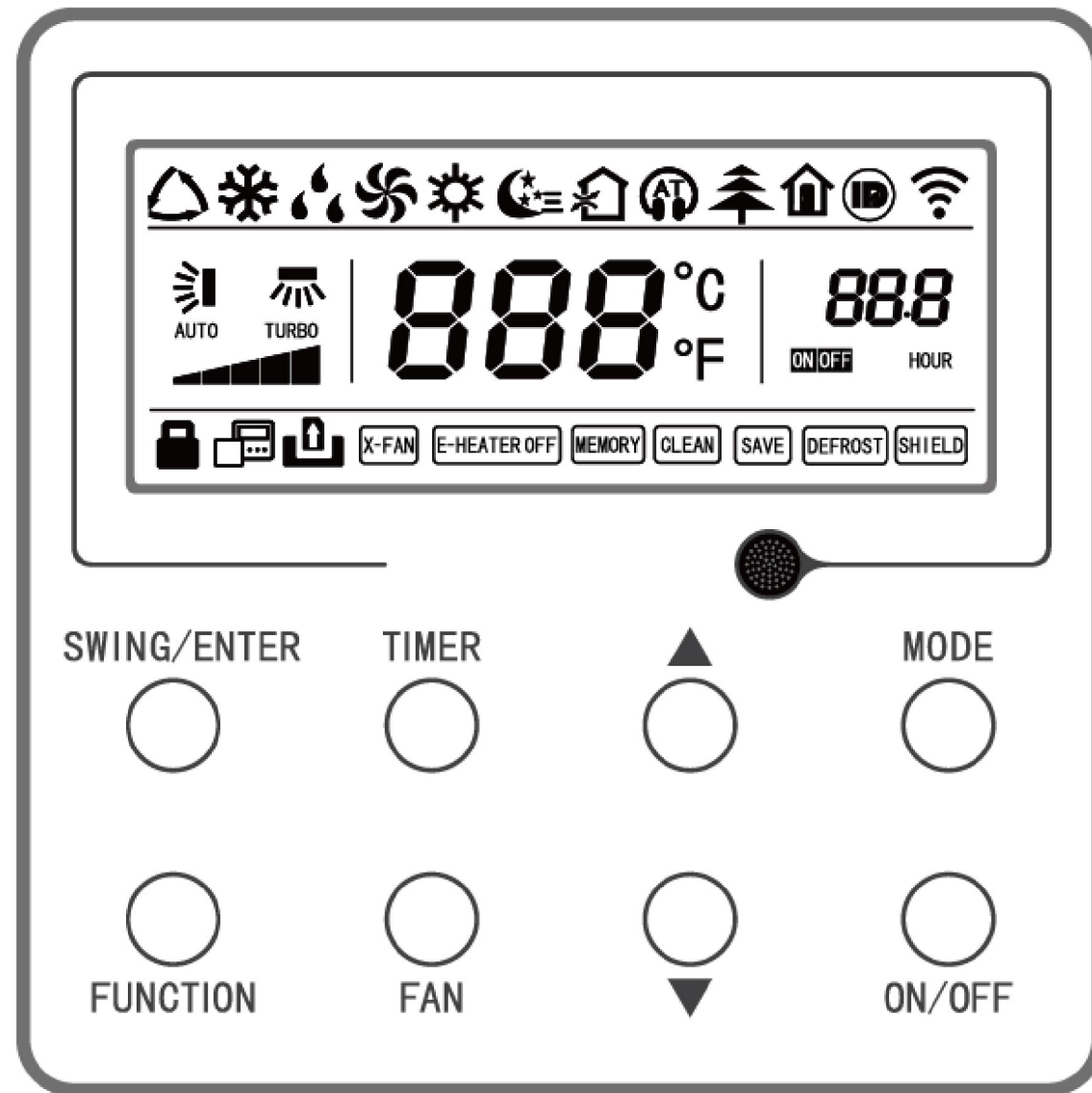
6 CLEARANCES DATA

# Installation Positions and Clearances



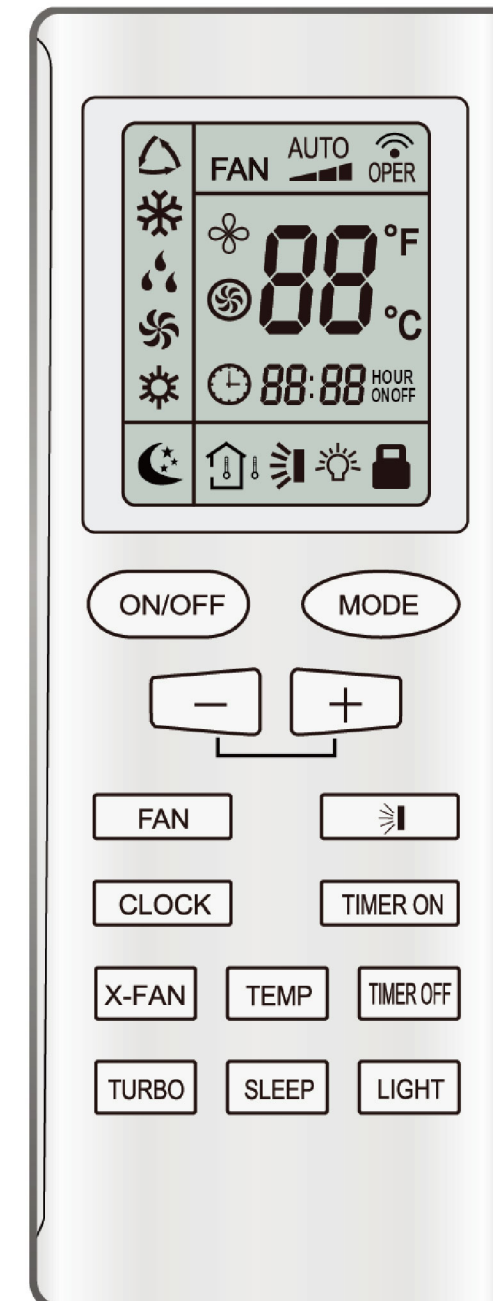
3 and 5.5 Tons Side Supply/Return Installation Clearances		
DIMENSION(Minimum)	mm	inch
A	600	24
B	1100	43
C	860	34
D	1100	43
E	1100	43

# CONTROLLER



Wired Controller (Standard)

# CONTROLLER



Wireless remote controller