

RIO

Ductless Mini-Split Heat Pump

9,000– 24,000 BtuH



rio

Technical Product Guide



Compact & Quiet Solution

Table of Contents

1.0	PRODUCT OVERVIEW	3
2.0	FEATURES AND BENEFITS	3
3.0	PRODUCT NOMENCLATURE	6
4.0	AHRI CERTIFICATION	6
5.0	SYSTEM FEATURES	7
6.0	USER CONTROL FUNCTIONS	8
7.0	SYSTEM PERFORMANCE	9
8.0	SOUND DATA	12
9.0	ELECTRICAL DATA	13
10.0	MAJOR COMPONENTS & WEIGHTS	14
11.0	DIMENSIONAL SPECIFICATIONS	15
12.0	CLEARANCE SPECIFICATIONS	21
13.0	EXTENDED PERFORMANCE RATINGS	22
14.0	ELECTRICAL WIRING	28
15.0	CONDENSATE REMOVAL	29
16.0	PRODUCT LIMITED WARRANTY	30

PRODUCT OVERVIEW

Compact, quiet and provides unmatched comfort in any room.

The Gree Rio High-Efficiency Duct-free Mini-Split Heat Pump system is compact, quiet & provides unmatched comfort in any room. This system includes an indoor cabinet, outdoor compressor, wireless remote and remote cradle. Without needing duct work, installation is simple, fast & cost effective. In addition The Gree Rio provides quiet comfort & improved efficiency by eliminating heat loss inefficiencies of conventional central air conditioning systems.

FEATURES AND BENEFITS

HIGH EFFICIENCY G-10 INVERTER - The G10 Inverter uses a broad range of variable frequencies to drive the compressor, marking the highest level of inverter control technology available today. Unlike conventional technology that generally regulates room temperature by running at maximum capacity and then shutting off completely, G10 Inverter technology eliminates these harsh starts/stops. This cutting edge functionality results in quicker arrival at desired temperatures and superior maintenance of consistent comfort levels. Higher efficiency and significant energy savings? Yes, it yields those too.



HEAT PUMP ADVANTAGE – Gree heat pumps, powered by the G10 Inverter, provide the same heating capacity as electric heat, while using as little as 1/3 the electricity.

WHISPER QUIET - Not only is the Rio systems energy efficient, it's quiet too. Wall mounted units operate with sound levels starting as low as 32 dB(A).

INTELLIGENT DEFROST - The Intelligent Defrost function increases room comfort and saves energy by eliminating unnecessary defrost cycles. In heating mode, the control system monitors the outdoor coil for frost buildup, and the system switches to defrost mode only when frost buildup is actually detected. This avoids unnecessary and wasteful defrosts.

LOW VOLTAGE START UP – Having stable electrical power is not always an option. The Gree system will operate from 170v to 253v (230v model) and 104v to 127v (115v models) which is suitable for unstable power supply areas.

SUBTLE APPEARANCE -Designed for a comfortable fit in virtually any living space. This slim compact cabinet sits inconspicuously on the wall, and blends into most interior designs

FEATURES AND BENEFITS (Cont.)

UNIT DISPLAY – Rio wall mounted units have a large easy-to-read display and indicator lights giving instead feedback on room setpoint, operating mode and much more. The display can also be turned off based on your personal preference.

MULTI-SPEED FAN – The indoor fan can run at up to four different speeds (*Low, Medium, High or Turbo*) for either COOLING or HEATING mode for maximum comfort and quiet operation.

TIME GUARD - Among the system's many safeties is a Time Guard function to prevent rapid cycling of the compressor. A protective five-minute time delay restricts compressor restarts after shutoff.

POWER FAILURE MODE - Power interruptions are no problem. User selections and system parameters are stored in non-volatile memory. These parameters are retained during a power failure. When power is returned, the system will automatically return to the last operating mode.

INTELLIGENT PRE-HEATING - The system guards against the annoying COLD BLOW in heating mode, and constantly monitors the discharge air temperature. It will delay the indoor fan until the indoor coil has warmed up to prevent blowing uncomfortable cool air into the room.

WIRELESS IR REMOTE CONTROLLER - The Gree multi-functional infrared hand held wireless controller is sleek, ergonomically designed, easy to use and has a large backlit LCD display.

MODE BUTTON - The units can be set to five different operating modes: *HEAT, COOL, DRY, FAN ONLY and AUTO*.

Note: AUTO MODE has fixed setpoints of 68° F heating and 78° F cooling, which are not changeable. The system will automatically select heating or cooling to maintain room temperature within this temperature band.

TIMER MODE – The unit can be programmed to turned ON or OFF after a specific amount time. The time period is adjustable between one half and 24 hours.

SWING LOUVER – The unit has adjustable swing louvers which can be controlled from the wired tether or wireless controllers. Vertical swing louver allows five different vertical (up & down) air discharge directions including Continuous Sweep. Maximize comfort by adjusting the direction of airflow in the room by moving the louvers up or down.

PRIVACY LOCK MODE – Both wired tether and wireless controllers have a Privacy Lock to avert unauthorized access and stop tampering with system settings.

SLEEP MODE –The unit will automatically adjust room temperature during sleep time. This slight change in temperature will not affect your comfort level due to the natural effects that sleeping has on the body, but it will save on energy consumption and will lower electric bills.

FEATURES AND BENEFITS (Cont.)

FAHRENHEIT ° F / CELSIUS ° C - The wired tether and wireless controllers can be set to display in either °F or °C.

POLYMERIC AIR FILTERS –Two-piece removable polymeric air filters easily slide in and out from the front of the indoor unit and are interchangeable. The front panel does not need to be removed to access or change the filters. The filters are washable and permanent.

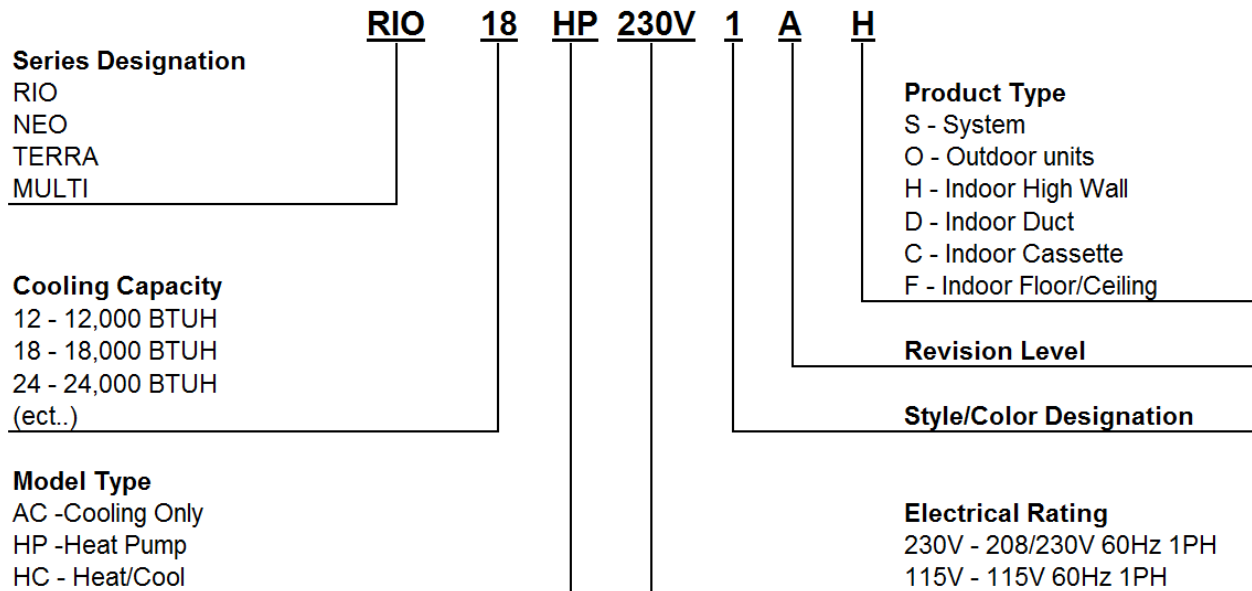
SELF-DIAGNOSIS –With an on-board computer using real-time diagnostics, the Gree system helps to prolong its own life. The automatic diagnosis feature continuously scans for unacceptable operating conditions or malfunctions. If such conditions occur, the system takes corrective action or stops. Fault codes are shown on the unit display to facilitate easy troubleshooting and repair.

AGENCY LISTINGS - All systems are listed with AHRI (Air conditioning, Heating, and Refrigeration Institute) and are ETL Certified per UL Standards.



5/7 YEAR LIMITED WARRANTY - Enjoy one of the most comprehensive warranties in the industry. Seven (7) years on compressor and Five (5) years on all parts.

NOMENCLATURE



AHRI CERTIFICATION

MODEL NUMBER	BRAND	AHRI CERTIFICATION
RIO09HP115V1A	GREE	7077793
RIO12HP115V1A	GREE	7084752
RIO09HP230V1A	GREE	7077585
RIO12HP230V1A	GREE	7077586
RIO18HP230V1A	GREE	7077587
RIO24HP230V1A	GREE	7077588



SYSTEM FEATURES

Model	RI009HP115V1A	RI012HP115V1A	RI009HP230V1A	RI012HP230V1A	RI018HP230V1A	RI024HP230V1A
Nominal Cooling Capacity (Btu/H)	9,000	12,000	9,000	12,000	18,000	24,000
Operating Voltage	115V	115V	208/230V	208/230V	208/230V	208/230V
System Type	Heat Pump	Heat Pump	Heat Pump	Heat Pump	Heat Pump	Heat Pump
SYSTEM FEATURES						
Auxiliary Electrical Heater	NO	NO	NO	NO	NO	NO
Basepan With Electric Heater	NO	NO	NO	NO	NO	NO
Compressor With Electric Heater	NO	NO	YES	YES	NO	NO
Corrosion Protection	Blue Fin	Blue Fin	Blue Fin	Blue Fin	Blue Fin	Blue Fin
Inverter Type	G10	G10	G10	G10	G10	G10
Intelligent Defrosting	YES	YES	YES	YES	YES	YES
Intelligent Preheating	YES	YES	YES	YES	YES	YES
LED Display Indoor Unit	YES	YES	YES	YES	YES	YES
Low Ambient Cooling	NO	NO	YES	YES	YES	YES
Low Ambient Heating	YES	YES	YES	YES	YES	NO
Low Voltage Startup	YES	YES	YES	YES	YES	YES
Memory/Power Failure Recovery	YES	YES	YES	YES	YES	YES
Multi Fan Speeds	4 Speeds	4 Speeds	4 Speeds	4 Speeds	4 Speeds	4 Speeds
Self-Diagnosis	YES	YES	YES	YES	YES	YES
PhotoCatalytic Filter	NO	NO	NO	NO	NO	NO
Ventilation (Outdoor Air)	NO	NO	NO	NO	NO	NO
Ambient Cooling Operating Range	64~113 F	64~113 F	5~109 F	5~109 F	5~109 F	5~109 F
Ambient Heating Operating Range	5°F~75°F	5°F~75°F	5°F~75°F	5°F~75°F	5°F~75°F	19~75 F

USER CONTROL FUNCTIONS

Model	RI009HP115V1A	RI012HP115V1A	RI009HP230V1A	RI012HP230V1A	RI018HP230V1A	RI024HP230V1A
Nominal Cooling Capacity (Btu/H	9,000	12,000	9,000	12,000	18,000	24,000
Operating Voltage	115V	115V	208/230V	208/230V	208/230V	208/230V
REMOTE CONTROLLER FUNCTIONS						
Auto Mode	YES	YES	YES	YES	YES	YES
Auto Fan	NO	NO	NO	NO	NO	NO
Auto Swing (Horizontal Auto Swing)	NO	NO	NO	NO	NO	NO
Auto Swing (Vertical Auto Swing)	YES	YES	YES	YES	YES	YES
Clock on Remote Controller	NO	NO	NO	NO	NO	NO
Dry Mode	YES	YES	YES	YES	YES	YES
Dry Anti-Mildew (X-Fan) Mode	YES	YES	YES	YES	YES	YES
Energy Saving Mode	NO	NO	NO	NO	NO	NO
Dirty Filter Alert	NO	NO	NO	NO	NO	NO
I Feel Function	NO	NO	NO	NO	NO	NO
Wired Controller Interface	NO	NO	NO	NO	NO	NO
Lock on Remote Controller	YES	YES	YES	YES	YES	YES
Room Temperature Display	YES	YES	YES	YES	YES	YES
Sleep Mode	YES	YES	YES	YES	YES	YES
Multi Sleep Modes Options	NO	NO	NO	NO	NO	NO
Timer Mode	YES	YES	YES	YES	YES	YES
Turbo Mode	YES	YES	YES	YES	YES	YES

SYSTEM PERFORMANCE

Model Numbers	SEER	EER	Cooling Capacity		Dehumidification (Pts./Hr.)	Outdoor Temperature Operating Range	
			Rated (BtuH)	Range (BtuH)		Min	Max
RIO09HP115V1A	16	12.0	9,000	(3,500-11,000)	1.7	64 °F	113 °F
RIO12HP115V1A	16	9.4	11,800	(3,300-12,500)	2.9	64 °F	113 °F
RIO09HP230V1A	16	10.2	9,000	(3,800-11,500)	1.7	5 °F	109 °F
RIO12HP230V1A	16	9.8	12,000	(3,300-12,500)	2.9	5 °F	109 °F
RIO18HP230V1A	16	11.1	18,000	(4,500-21,000)	3.8	5 °F	109 °F
RIO24HP230V1A	16	10.0	22,000	(6,400-24,000)	4.2	5 °F	109 °F

Model Numbers	HSPF	COP	Heating Capacity		Outdoor Temperature Operating Range	
			Rated (BtuH)	Range (BtuH)	Min	Max
RIO09HP115V1A	8.6	3.5	9,800	(2,500-11,000)	5 °F	75 °F
RIO12HP115V1A	8.6	2.9	13,000	(3,400-13,500)	5 °F	75 °F
RIO09HP230V1A	8.5	3.4	9,000	(3,300-11,500)	5 °F	75 °F
RIO12HP230V1A	8.5	3.4	12,000	(3,400-12,500)	5 °F	75 °F
RIO18HP230V1A	8.0	2.8	19,200	(4,000-23,000)	5 °F	75 °F
RIO24HP230V1A	8.5	3.0	24,200	(4,100-26,600)	19 °F	75 °F

NOTES:

1. Ratings are based on: Cooling Standard: 80 F (26.7 C) db, 67 F (19.4 C) wb air entering indoor unit and 95 F (35 C) db air entering outdoor unit. Heating Standard: 70 F (21.1 C) db air entering indoor unit and 47 F (8.3 C) db, 43 F (6.1 C) wb air entering outdoor unit.
2. Ratings are based on 25 ft. (7.62 m) of interconnecting refrigerant lines.
3. All system ratings are based on fan coil units operating at high fan speed. Consult Physical Data tables for air flows at selected fan speeds.

Legend

EER - Energy Efficiency Ratio
HSPF - Heating Seasonal Performance Ratio
SEER - Seasonal Energy Efficiency Ratio
COP - Coefficient of Performance

AIR FLOW PERFORMANCE

Indoor Unit

Model Numbers	Cooling (CFM)				Heating (CFM)			
	Low Fan	Medium Fan	High Fan	Turbo Fan	Low Fan	Medium Fan	High Fan	Turbo Fan
RIO09HP115V1AH	188	223	276	329	188	223	276	329
RIO12HP115V1AH	200	235	288	341	200	235	288	341
RIO09HP230V1AH	141	194	282	330	141	194	282	330
RIO12HP230V1AH	153	206	294	341	153	206	294	341
RIO18HP230V1AH	271	330	400	471	271	330	400	471
RIO24HP230V1AH	206	306	441	589	206	306	441	589

Outdoor Unit

Model Numbers	Air Flow (CFM)
RIO09HP115V1AO	1057
RIO12HP115V1AO	1057
RIO09HP230V1AO	942
RIO12HP230V1AO	942
RIO18HP230V1AO	1882
RIO24HP230V1AO	1883

Indoor Air Throw

Model Numbers	Approximate Air Throw (ft.)			
	Low	Medium	High	Turbo
RIO09HP115V1AH	NA	NA	26	33
RIO12HP115V1AH	NA	NA	26	33
RIO09HP230V1AH	NA	NA	26	33
RIO12HP230V1AH	NA	NA	26	33
RIO18HP230V1AH	NA	NA	21	24
RIO24HP230V1AH	NA	NA	21	31

REFRIGERATION & PIPING SPECIFICATIONS

REFRIGERANT CHARGE

Model Number	Refrigerant Type	Factory System Charge (oz.)	Max Total Pipe Length Without Adding Refrigerant (ft.)	Additional Charge Level (oz./ft.)
RIO09HP115V1AO	R-410A	37.5	25	0.2
RIO12HP115V1AO	R-410A	41.1	25	0.2
RIO09HP230V1AO	R-410A	26.1	25	0.2
RIO12HP230V1AO	R-410A	35.3	25	0.2
RIO18HP230V1AO	R-410A	45.9	25	0.2
RIO24HP230V1AO	R-410A	54.7	25	0.2

REFRIGERANT PIPING LENGTHS

Model Number	Min. Pipe Length for System (ft.)	Max Pipe Length for System (ft.)	Max Elevation between Outdoor & Indoor Units (ft.)
RIO09HP115V1AO	10	66	33
RIO12HP115V1AO	10	66	33
RIO09HP230V1AO	10	50	33
RIO12HP230V1AO	10	50	33
RIO18HP230V1AO	10	82	33
RIO24HP230V1AO	10	82	33



SOUND DATA

Indoor High Wall Units

Model Numbers	Low Fan		Medium Fan		High Fan		Turbo Fan	
	Sound Power (dBA)	Sound Pressure (dBA)	Sound Power (dBA)	Sound Pressure (dBA)	Sound Power (dBA)	Sound Pressure (dBA)	Sound Power (dBA)	Sound Pressure (dBA)
RIO09HP115V1AH	42	32	45	35	47	37	50	40
RIO12HP115V1AH	42	32	45	35	47	37	50	40
RIO09HP230V1AH	36	26	42	32	48	38	53	43
RIO12HP230V1AH	38	28	43	33	49	39	54	44
RIO18HP230V1AH	44	34	48	38	53	43	58	48
RIO24HP230V1AH	44	34	49	39	53	43	59	49

Outdoor Unit

Model Numbers	Sound Power (dBA)	Sound Pressure (dBA)
RIO09HP115V1AO	63	53
RIO12HP115V1AO	65	55
RIO09HP230V1AO	59	49
RIO12HP230V1AO	62	52
RIO18HP230V1AO	66	56
RIO24HP230V1AO	63	53

Note:

1. Sound pressure ratings are estimated sound pressure measurements, 3 feet from unit.
2. Sound power ratings are per AHRI 270 and AHRI 350

ELECTRICAL DATA

Outdoor Unit

Model Numbers	Rated Power Supply (volt-phase-hz)	Voltage Range (volts)	Rated Input Power (watts)	
			Cooling	Heating
RIO09HP115V1AO	115v-1ph-60hz	104-127	750	830
RIO12HP115V1AO	115v-1ph-60hz	104-127	1260	1320
RIO09HP230V1AO	208/230v-1ph-60hz	187-253	880	770
RIO12HP230V1AO	208/230v-1ph-60hz	187-253	1620	1050
RIO18HP230V1AO	208/230v-1ph-60hz	187-253	1620	2400
RIO24HP230V1AO	208/230v-1ph-60hz	187-253	2200	2800

Outdoor Unit

Model Numbers	Rated Input Current (amps)		Min. Circuit Amp. (MCA)	Max Fuse Size (Amps)
	Cooling	Heating		
RIO09HP115V1AO	9.0	9.5	13	20
RIO12HP115V1AO	15.0	15.5	15	25
RIO09HP230V1AO	3.9	3.4	10	15
RIO12HP230V1AO	5.4	4.7	10	15
RIO18HP230V1AO	7.9	11.8	15	25
RIO24HP230V1AO	11.5	13.0	17	25

Model Numbers	Compressor		Outdoor Fan		Indoor Fan	
	RLA (amps)	LRA (amps)	RLA (amps)	Input Power (Watts)	RLA (amps)	Input Power (Watts)
RIO09HP115V1AO	9.8	25.0	0.2	30	0.4	10
RIO12HP115V1AO	11.2	25.0	0.3	30	0.4	10
RIO09HP230V1AO	7.3	16.5	0.3	21	0.2	15
RIO12HP230V1AO	7.3	16.5	0.3	21	0.2	15
RIO18HP230V1AO	10.9	27.0	0.6	60	0.3	20
RIO24HP230V1AO	12.4	41.0	0.6	60	0.4	35

Legend:

RLA – Rated Load Amps
FLA – Full Load Amps
LRA – Locked Rotor Amps
MCA – Min. Circuit Amps

INDOOR UNIT MAJOR COMPONENTS

Model Numbers	Air Filter	Fan Motor	Fan Type
RIO09HP115V1AH	Polymeric Mesh	AC Sync	Cross flow
RIO12HP115V1AH	Polymeric Mesh	AC Sync	Cross flow
RIO09HP230V1AH	Polymeric Mesh	AC Sync	Cross flow
RIO12HP230V1AH	Polymeric Mesh	AC Sync	Cross flow
RIO18HP230V1AH	Polymeric Mesh	AC Sync	Cross flow
RIO24HP230V1AH	Polymeric Mesh	AC Sync	Cross flow

OUTDOOR UNIT MAJOR COMPONENTS

Model Numbers	Compressor	Metering Device	Inverter
RIO09HP115VA1O	Rotary	EXV	G10
RIO12HP115VA1O	Rotary	EXV	G10
RIO09HP230VA1O	Rotary	EXV	G10
RIO12HP230VA1O	Rotary	EXV	G10
RIO18HP230VA1O	Rotary	EXV	G10
RIO24HP230VA1O	Rotary	EXV	G10

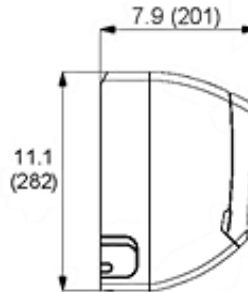
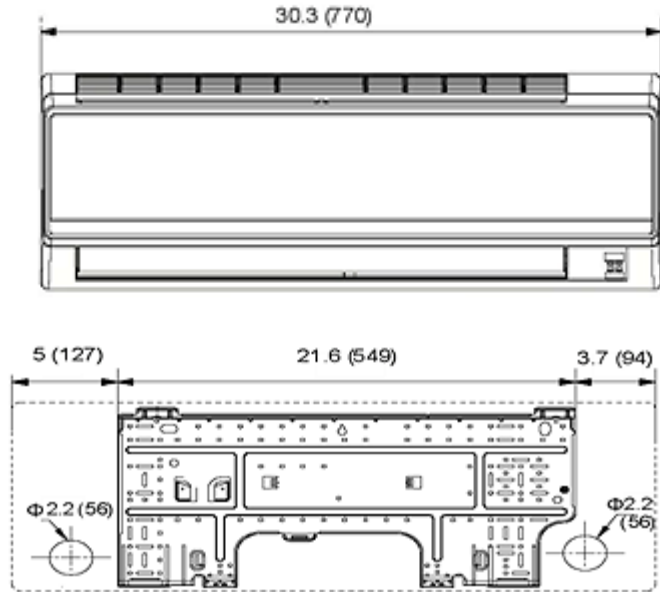
PRODUCT WEIGHT

Model Numbers	Outdoor Unit		Indoor Unit	
	Net Operating (lbs.)	Gross Shipping (lbs.)	Net Operating (lbs.)	Gross Shipping (lbs.)
RIO09HP115V1A	75	84	19	26
RIO12HP115V1A	75	84	19	26
RIO09HP230V1A	64	73	19	25
RIO12HP230V1A	68	77	20	27
RIO18HP230V1A	106	117	27	35
RIO24HP230V1A	115	126	33	44

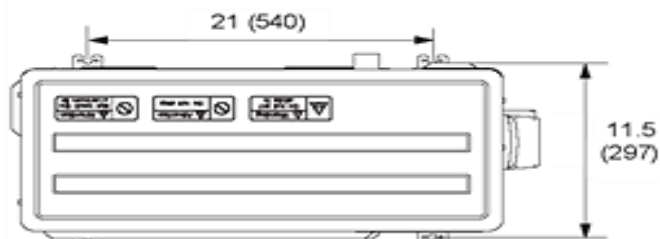
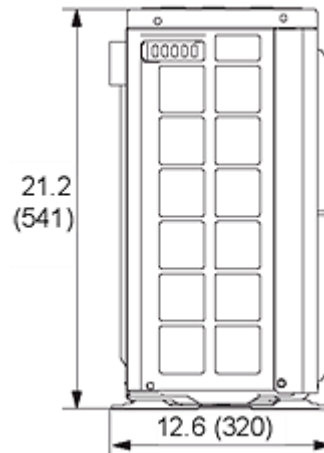
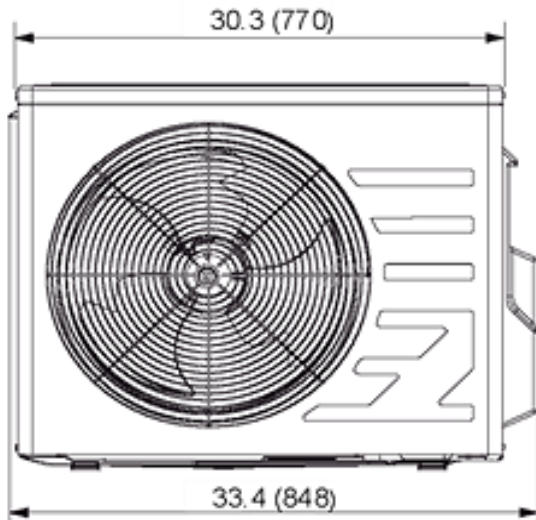
DIMENSIONAL SPECIFICATIONS

Model No: RIO09HP115V1A

9,000 BtuH 115V



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared
Drain Connector	5/8-in OD

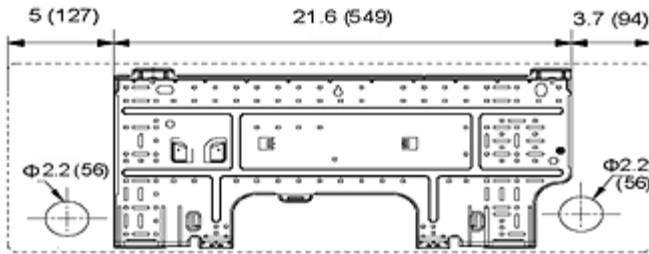
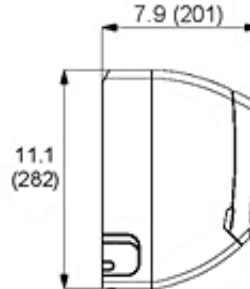


Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared

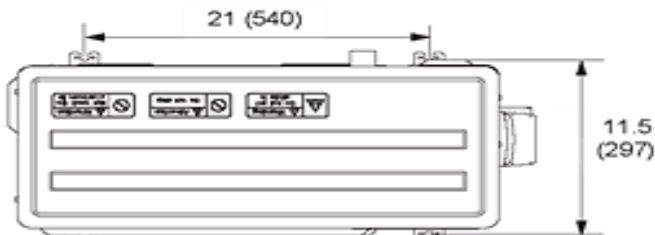
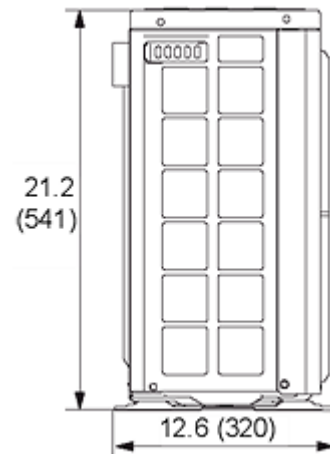
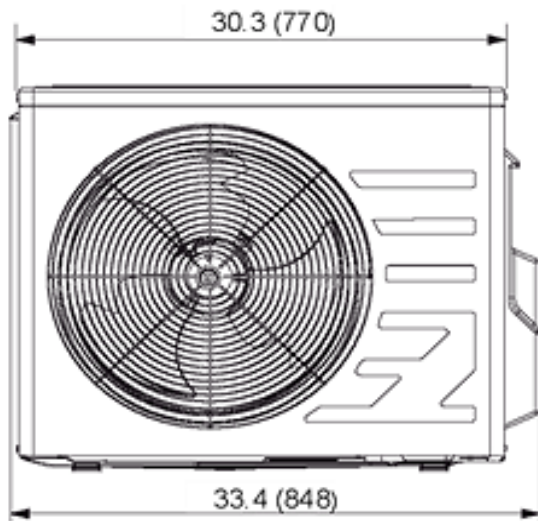
DIMENSIONAL SPECIFICATIONS

Model No: RIO12HP115V1A

12,000 BtuH 115V



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared
Drain Connector	5/8-in OD

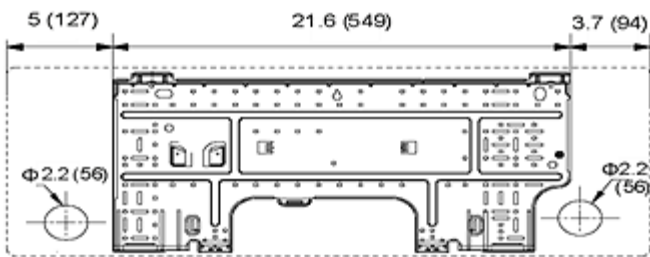
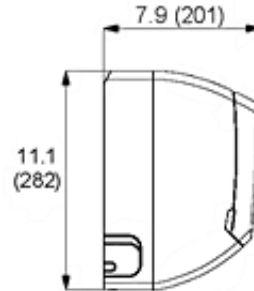
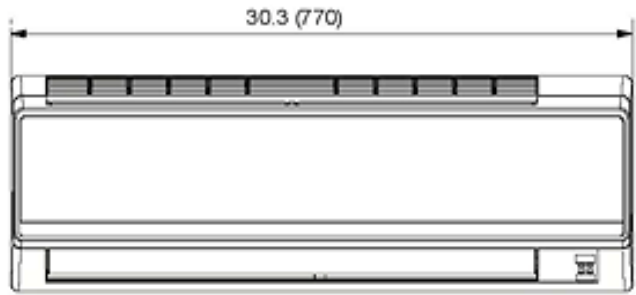


Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared

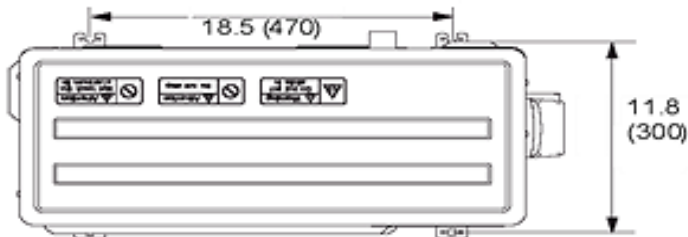
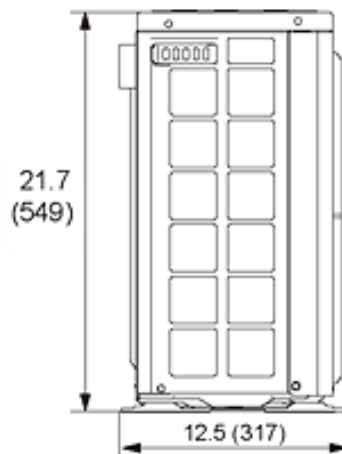
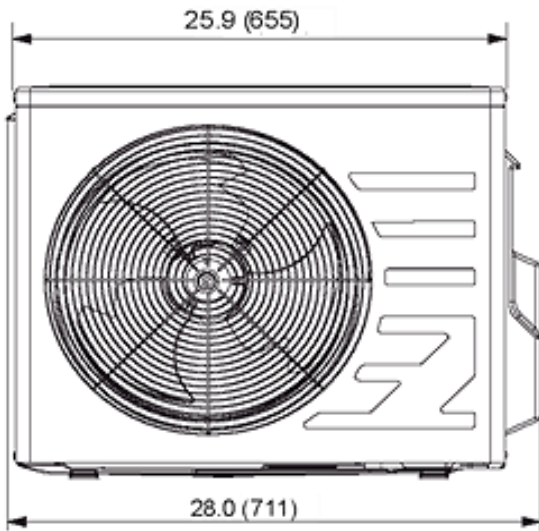
DIMENSIONAL SPECIFICATIONS

Model No: RIO09HP230V1A

9,000 BtuH 230V



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared
Drain Connector	5/8-in OD

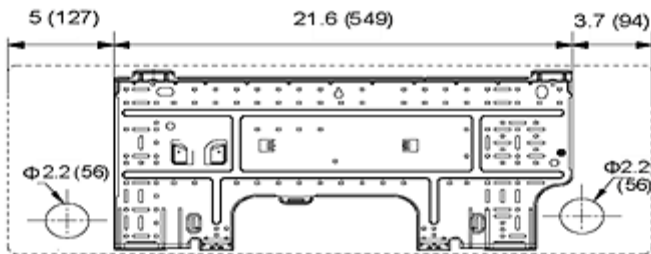
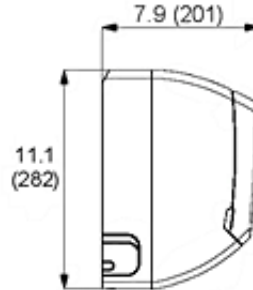
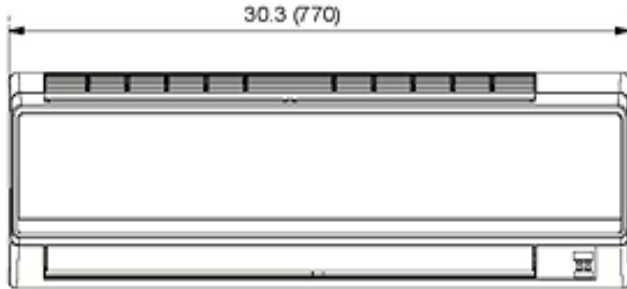


Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared

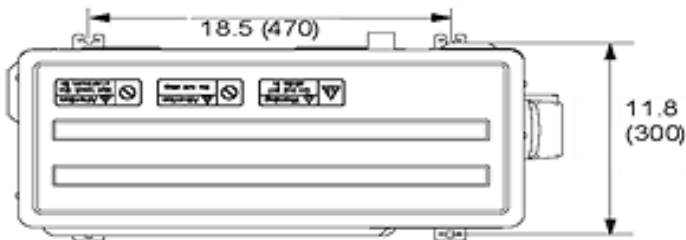
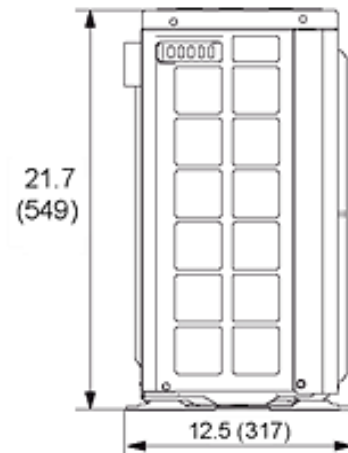
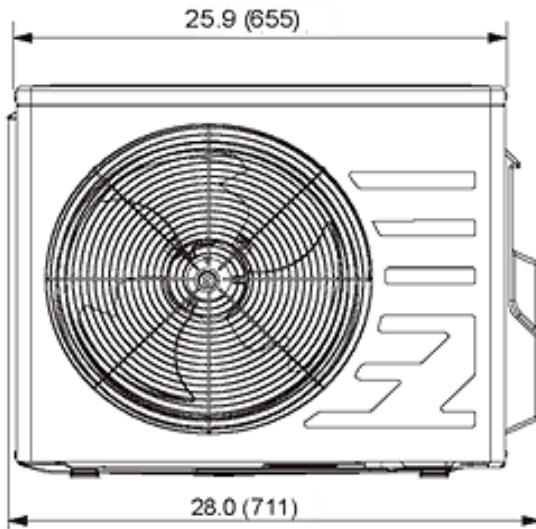
DIMENSIONAL SPECIFICATIONS

Model No: RIO12HP230V1A

12,000 BtuH 230V



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared
Drain Connector	5/8-in OD

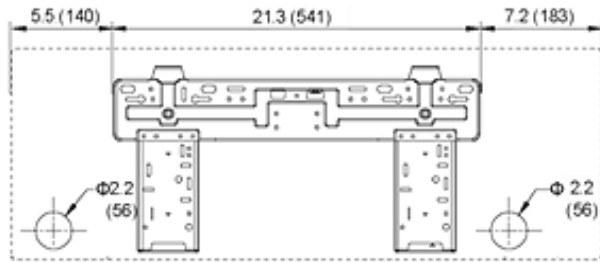
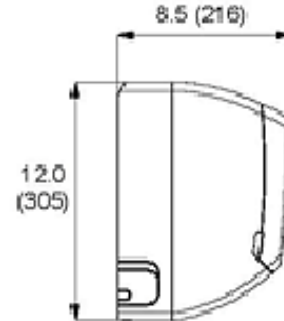
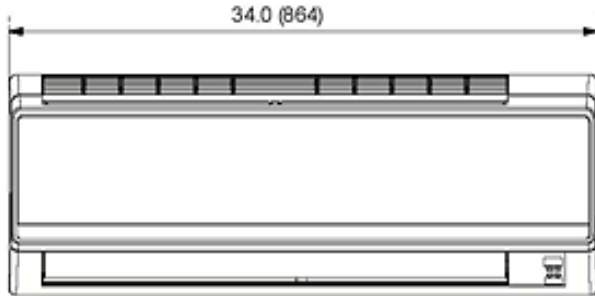


Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	3/8-in OD Flared

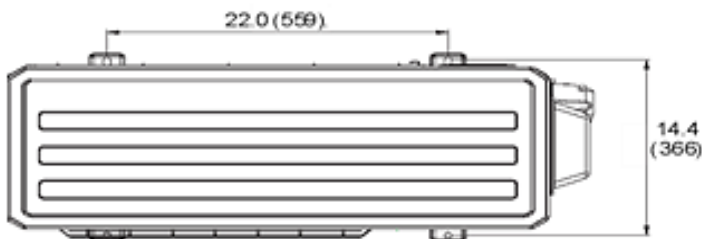
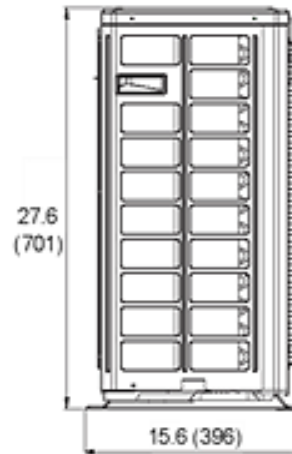
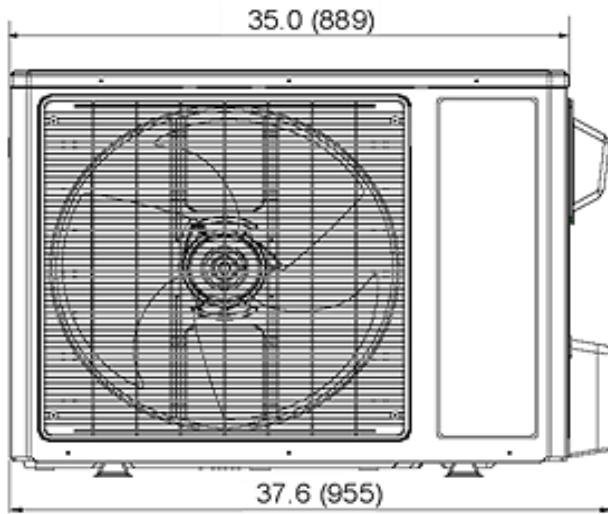
DIMENSIONAL SPECIFICATIONS

Model No: RIO18HP230V1A

18,000 BtuH 230V



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD

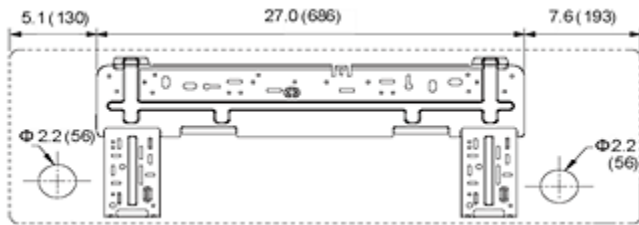
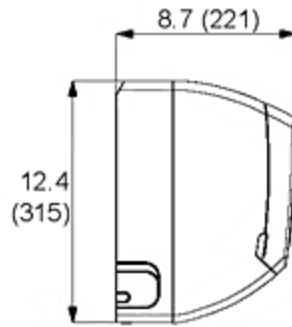
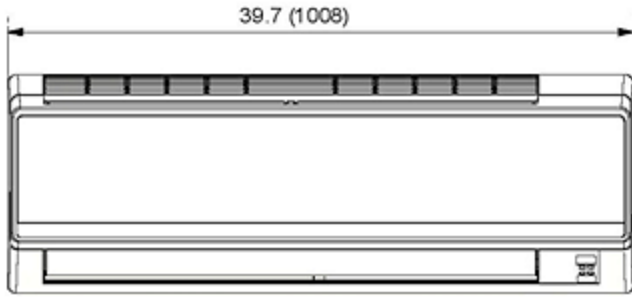


Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	1/2-in OD Flared

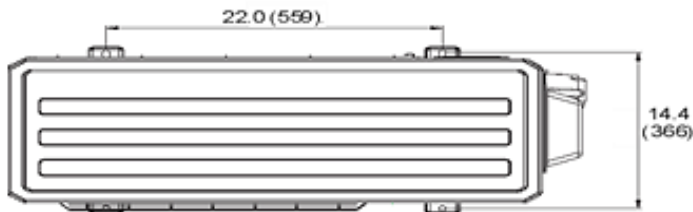
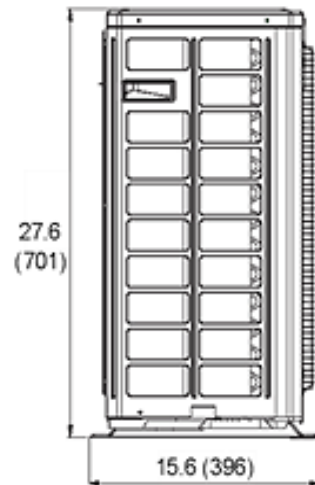
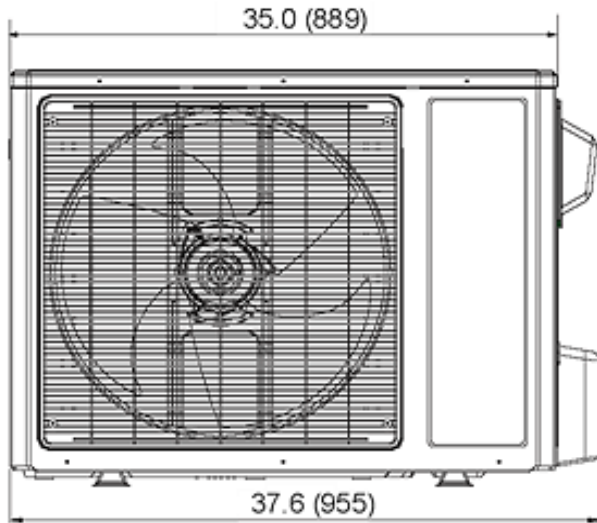
DIMENSIONAL SPECIFICATIONS

Model No: RIO24HP230V1A

24,000 BtuH 230V



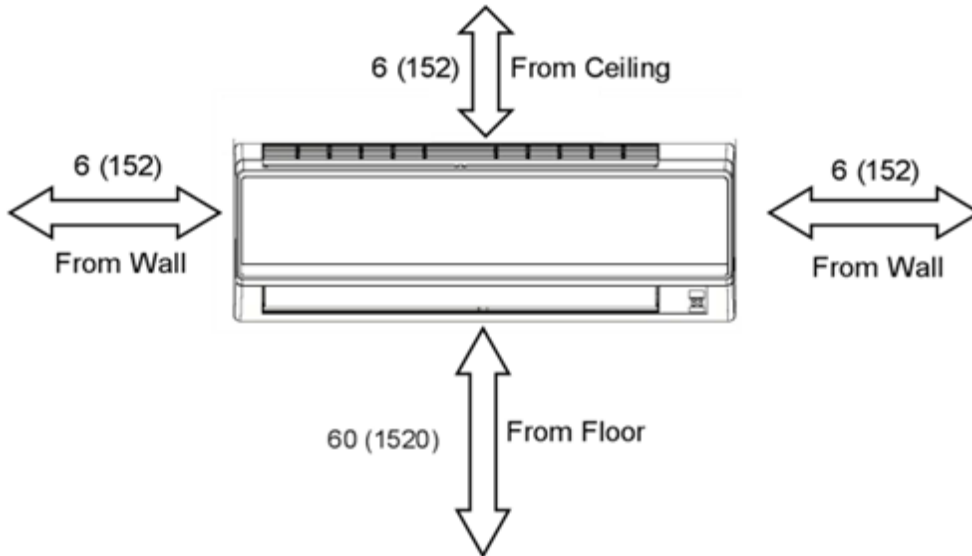
Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	1/2-in OD Flared
Drain Connector	5/8-in OD



Liquid Line Valve	1/4-in OD Flared
Gas Line Valve	1/2-in OD Flared

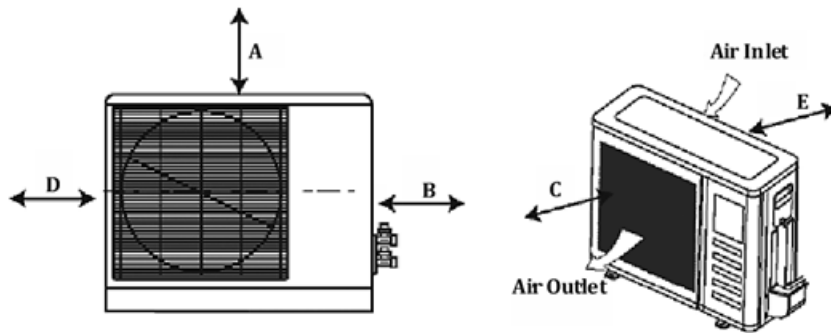
CLEARANCE SPECIFICATIONS

Indoor Minimum Clearance*



Inch (mm)

Outdoor Unit Minimum Clearance*



Outdoor Unit	Minimum Distance	
	A	20 in
B	20in	508 mm
C	78 in	1,981 mm
D	12 in	305 mm
E	12in	305 mm

*All Models

EXTENDED PERFORMANCE RATINGS

Model No: RIO09HP115V1A

9,000 BtuH 115V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25 F	NA	NA	NA	NA	NA	NA
35 F	NA	NA	NA	NA	NA	NA
45 F	NA	NA	NA	NA	NA	NA
55 F	NA	NA	NA	NA	NA	NA
65F	9,569	7,434	10,520	7,985	11,165	8,152
75F	9,179	7,176	9,910	7,614	10,642	7,859
85F	8,810	7,013	9,445	7,289	10,266	7,666
95F	8,370	6,688	9,000	7,191	9,846	7,394
105F	7,912	6,436	8,532	6,809	9,274	7,115
115F	7,458	6,166	7,911	6,423	8,450	6,629

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	8,239	8,239	7,881	7,881	7,629	7,629
15F	8,926	8,926	8,239	8,239	8,231	8,231
25F	9,439	9,439	9,631	9,631	9,559	9,559
35F	10,911	10,911	11,392	11,392	10,889	10,889
45F	12,357	12,357	12,243	12,943	12,386	12,386
55F	13,368	13,368	13,116	13,116	12,596	12,596
65F	13,350	13,350	13,203	13,203	12,856	12,856

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions
 Indoor: 80°F DB/67°F WB
 Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions
 Indoor: 70°F DB/60°F WB
 Outdoor: 47°F DB/43°F WB

EXTENDED PERFORMANCE RATINGS

Model No: RIO12HP115V1A

12,000 BtuH 115V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25F	NA	NA	NA	NA	NA	NA
35F	NA	NA	NA	NA	NA	NA
45F	NA	NA	NA	NA	NA	NA
55F	NA	NA	NA	NA	NA	NA
65F	12,754	9,920	14,043	10,641	14,890	10,887
75F	12,262	9,571	13,210	10,141	14,187	10,487
85F	11,764	9,347	12,602	9,737	13,650	10,259
95F	11,162	8,916	12,005	9,581	13,125	9,855
105F	10,556	8,571	11,370	9,079	12,361	9,496
115F	9,957	8,204	10,556	8,563	11,289	8,822

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	9,221	9,221	8,663	8,663	8,436	8,436
15F	11,598	11,598	10,968	10,968	10,619	10,619
25F	11,845	11,845	11,683	11,683	11,476	11,476
35F	12,876	12,876	12,642	12,642	12,535	12,535
45F	14,195	14,195	13,989	13,989	13,546	13,546
55F	14,513	14,513	14,245	14,245	14,128	14,128
65F	14,459	14,459	14,375	14,375	14,274	14,274

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions

Indoor: 70°F DB/60°F WB

Outdoor: 47°F DB/43°F W

EXTENDED PERFORMANCE RATINGS

Model No: RIO09HP230V1A

9,000 BtuH 230V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25F	11,073	8,222	11,968	8,665	12,794	9,211
35F	10,821	8,212	11,524	8,412	12,083	8,736
45F	10,286	7,900	11,000	8,162	11,786	8,544
55F	9,903	7,665	10,560	7,920	11,320	8,264
65F	9,565	7,432	10,525	7,988	11,160	8,158
75F	9,189	7,186	9,900	7,613	10,648	7,858
85F	8,820	7,003	9,450	7,295	10,260	7,664
95F	8,370	6,688	9,000	7,191	9,846	7,394
105F	7,920	6,431	8,530	6,807	9,270	7,119
115F	7,469	6,155	7,919	6,415	8,459	6,624

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	7,435	7,435	7,017	7,017	6,845	6,845
15F	7,947	7,947	7,250	7,250	7,206	7,206
25F	8,432	8,432	8,003	8,003	7,548	7,548
35F	8,903	8,903	8,240	8,240	7,894	7,894
45F	9,368	9,368	9,050	9,050	8,502	8,502
55F	9,380	9,380	9,109	9,109	8,710	8,710
65F	9,336	9,336	9,199	9,199	8,916	8,916

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions

Indoor: 70°F DB/60°F WB

Outdoor: 47°F DB/43°F W

EXTENDED PERFORMANCE RATINGS

Model No: RIO12HP230V1A

12,000 BtuH 230V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25F	14,764	10,962	15,958	11,553	17,058	12,282
35F	14,428	10,949	15,365	11,216	16,111	11,648
45F	13,715	10,533	14,666	10,883	15,714	11,393
55F	13,204	10,219	14,080	10,560	15,094	11,018
65F	12,754	9,910	14,033	10,651	14,880	10,877
75F	12,252	9,581	13,200	10,151	14,197	10,477
85F	11,760	9,337	12,600	9,727	13,680	10,219
95F	11,160	8,917	12,000	9,588	13,128	9,859
105F	10,560	8,575	11,374	9,076	12,360	9,492
115F	9,959	8,206	10,559	8,553	11,279	8,832

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	9,907	9,907	9,350	9,350	9,121	9,121
15F	10,590	10,590	9,661	9,661	9,603	9,603
25F	11,236	11,236	10,665	10,665	10,058	10,058
35F	11,864	11,864	10,981	10,981	10,520	10,520
45F	12,483	12,483	12,060	12,060	11,329	11,329
55F	12,500	12,500	12,139	12,139	11,608	11,608
65F	12,441	12,441	12,259	12,259	11,881	11,881

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions

Indoor: 80°F DB/67°F WB

Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions

Indoor: 70°F DB/60°F WB

Outdoor: 47°F DB/43°F W

EXTENDED PERFORMANCE RATINGS

Model No: RIO18HP230V1A

18,000 BtuH 230V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25F	22,145	16,443	23,936	17,330	25,587	18,422
35F	21,641	16,423	23,047	16,825	24,167	17,473
45F	20,572	15,799	22,000	16,324	23,571	17,089
55F	19,805	15,329	21,119	15,839	22,640	16,528
65F	19,130	14,864	21,049	15,977	22,320	16,316
75F	18,378	14,371	19,800	15,226	21,296	15,716
85F	17,640	14,006	18,900	14,591	20,520	15,329
95F	16,740	13,375	18,000	14,382	19,692	14,789
105F	15,840	12,862	17,060	13,614	18,540	14,239
115F	14,939	12,309	15,839	12,829	16,919	13,248

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	15,978	15,978	15,080	15,080	14,710	14,710
15F	17,079	17,079	15,581	15,581	15,488	15,488
25F	18,121	18,121	17,200	17,200	16,221	16,221
35F	19,133	19,133	17,709	17,709	16,966	16,966
45F	20,133	20,133	19,450	19,450	18,272	18,272
55F	20,160	20,160	19,577	19,577	18,720	18,720
65F	20,064	20,064	19,771	19,771	19,162	19,162

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions
 Indoor: 80°F DB/67°F WB
 Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions
 Indoor: 70°F DB/60°F WB
 Outdoor: 47°F DB/43°F W

EXTENDED PERFORMANCE RATINGS

Model No: RIO24HP230V1A

24,000 BtuH 230V

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)	Indoor Entering Air Temperatures (DB) 50% RH					
	62 F		67 F		72 F	
	TC	SHC	TC	SHC	TC	SHC
25F	27,066	20,097	29,255	21,181	31,273	22,516
35F	26,450	20,073	28,169	20,564	29,537	21,356
45F	25,144	19,310	26,889	19,951	28,809	20,886
55F	24,206	18,736	25,812	19,359	27,671	20,201
65F	23,381	18,167	25,727	19,527	27,280	19,942
75F	22,462	17,565	24,200	18,610	26,028	19,209
85F	21,560	17,119	23,100	17,833	25,080	18,735
95F	20,460	16,347	22,000	17,578	24,068	18,075
105F	19,360	15,720	20,851	16,640	22,660	17,403
115F	18,259	15,045	19,359	15,680	20,678	16,191

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB) (80% RH)	Indoor Entering Air Temperatures (DB)					
	65 F		70 F		75 F	
	TC	SHC	TC	SHC	TC	SHC
5F	20,004	20,004	18,880	18,880	18,417	18,417
15F	21,383	21,383	19,508	19,508	19,390	19,390
25F	22,688	22,688	21,534	21,534	20,309	20,309
35F	23,954	23,954	22,172	22,172	21,242	21,242
45F	25,206	25,206	24,351	24,351	22,876	22,876
55F	25,240	25,240	24,510	24,510	23,437	23,437
65F	25,120	25,120	24,753	24,753	23,990	23,990

TC- Total Capacity (BtuH)

SHC- Sensible Capacity (BtuH)

Capacity data is based on the following conditions:

Cooling Nominal Test Conditions
 Indoor: 80°F DB/67°F WB
 Outdoor: 95°F DB/75°F WB

Heating Normal Test Conditions
 Indoor: 70°F DB/60°F WB
 Outdoor: 47°F DB/43°F W

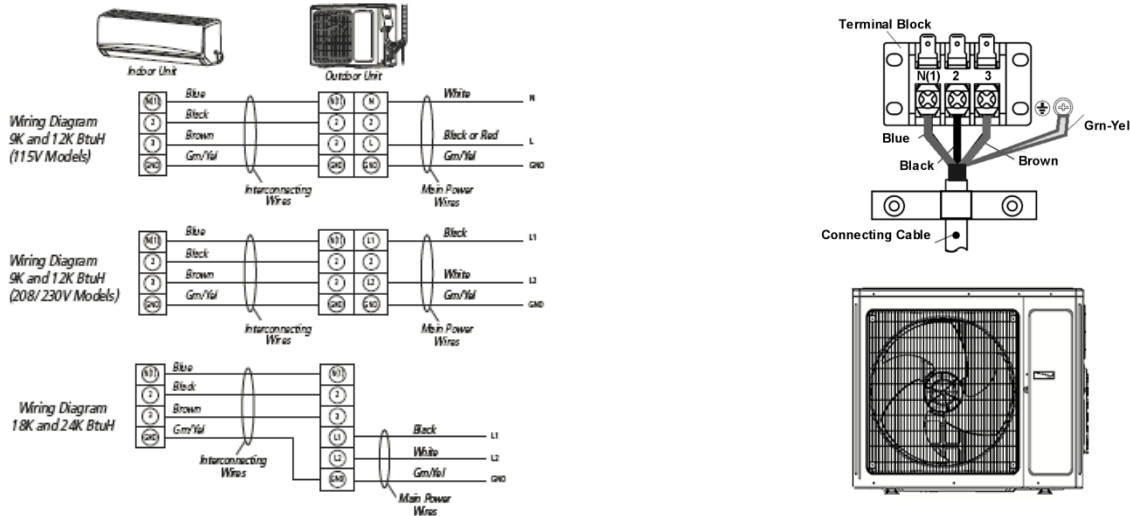
ELECTRICAL WIRING



⚠ CAUTION

- *Electrical Disconnecting means must be provided and shall be located within sight and readily accessible from the unit.*
- *Failure to follow this caution may result in equipment damage or improper operation. All wires running from the indoor unit must comply with National Electrical Code (NEC) and local codes.*
- *No Wire should be allowed to touch refrigerant tubing, compressor or moving parts.*
- *All wires must be connected firmly to terminal block to avoid unit malfunction, overheating, and possible fire hazard.*

The main power is supplied to the outdoor unit. System must be on a single dedicated circuit. Use appropriate wire size and circuit breaker (or fuse) size for proper system overcurrent protection. Follow all local building codes and NEC (National Electrical Code) regulations.

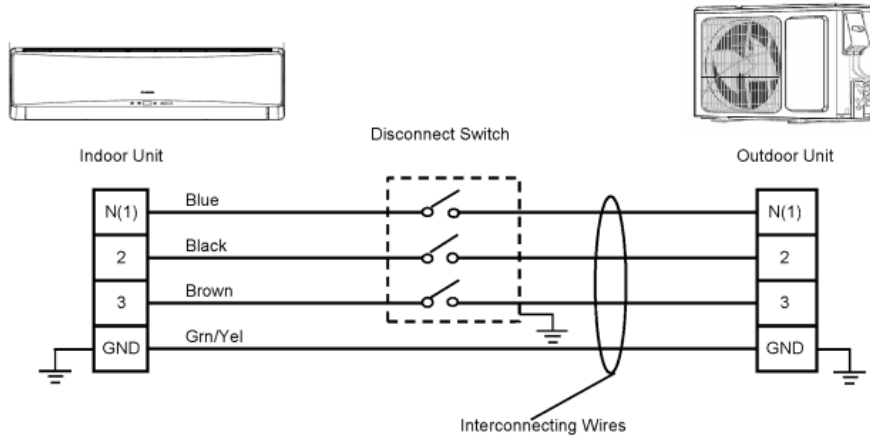


Interconnecting Cable Wiring Diagram

The indoor unit is powered by the outdoor unit. The interconnecting cable between the outdoor and indoor unit must be a 14/4 AWG stranded copper conductors THHN 600V unshielded wire. The interconnecting cable should not be buried underground and must be recognized by UL or ETL and CSA certified.

Note: Use shield cable if installation is in close proximity of RF and EMI transmitting devices.

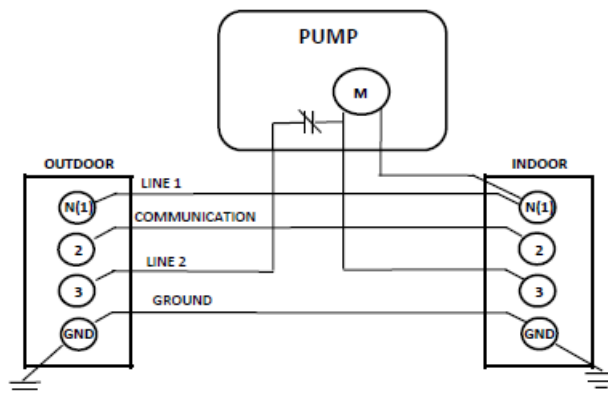
Local codes may require a disconnect switch within sight of the indoor unit. For these installations, use a DFS Disconnect Switch Accessory Kit (Part No: DFS-SWITCH-A) to break wires going to the N(1), 2, 3 terminals on the indoor unit, as shown in the wiring diagram below:



CONDENSATE REMOVAL

Install condensate drain to safely and effectively route condensate water to a safe location. Use a flexible condensate drain hose to fit over the factory 5/8-inch (16mm) drainage port. The high wall indoor units have an internal condensate trap. Adding an external trap is not required.

All condensate drains must meet local codes and regulations. If adequate gravity drainage cannot be provided, a field-installed condensate pump must be used. Refer to manufacturer's installation instructions, specifications and operating details supplied with condensate pump.



Typical Condensate Pump Wiring Diagram

LIMITED WARRANTY STATEMENT

Effective on new GREE Ductless purchases on or after March 1, 2013

Ductless Heat Pump Mini-Split Systems

RIO09HP115V1A

RIO09HP230V1A

RIO18HP230V1A

RIO12HP115V1A

RIO12HP230V1A

RIO24HP230V1A

GREE distributor (hereinafter “Company”) warrants this product against failure due to defect in materials or workmanship under normal use and maintenance as follows. All warranty periods begin on the date of original installation. If the date cannot be verified, the warranty period begins one hundred twenty (120) days from date of manufacture. If a part fails due to defect during the applicable warranty period Company will provide a new or remanufactured part, at Company’s option, to replace the failed defective part at no charge for the part. This limited warranty is subject to all provisions, conditions, limitations and exclusions listed below.

- A warranty period of Seven (7) years on compressor to the original registered end-user.
- A warranty period of Five (5) years on all parts to the original registered end user.
- A warranty period of One (1) year on the remote control provided with the original unit.
- Limited warranty applies only to systems that are properly installed by a state certified or licensed HVAC contractor, under applicable local and state law in accordance with all applicable building codes and permits; GREE installation and operation instructions and good trade practices.
- Warranty applies only to products remaining in their original installation location.
- Defective parts must be returned to the distributor through a registered servicing dealer for credit.

LIMITATIONS OF WARRANTIES: ALL IMPLIED WARRANTIES AND/OR CONDITIONS (INCLUDING IMPLIED WARRANTIES OR CONDITIONS OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR USE OR PURPOSE) ARE LIMITED TO THE DURATION OF THIS LIMITED WARRANTY, SOME STATES OR PROVINCES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY OR CONDITION LASTS, SO THE ABOVE MAY NOT APPLY TO YOU. THE EXPRESS WARRANTIES MADE IN THIS WARRANTY ARE EXCLUSIVE AND MAY NOT BE ALTERED, ENLARGED, OR CHANGED BY ANY DISTRIBUTOR, DEALER, OR OTHER PERSON, WHATSOEVER.

THIS WARRANTY DOES NOT COVER:

1. Labor or other costs incurred for diagnosing, repairing, removing, installing, shipping, servicing or handling of either defective parts, or replacement parts, or new units.
2. Product cleaning required prior to warranty service and repair.
3. Normal maintenance as outlined in the installation and servicing instructions or Owner's Manual, including filter cleaning and/or replacement and lubrication.
4. Failure, damage or repairs due to faulty installation, misapplication, abuse, improper servicing, unauthorized alteration or improper operation.
5. Failure to start due to voltage conditions, blown fuses, open circuit breakers, or damages due to the inadequacy or interruption of electrical service.
6. Failure or damage due to floods, winds, fires, lightning, accidents, corrosive environments (rust, etc.) or other conditions beyond the control of the Company.
7. Failure or damage of coils or piping due to corrosion on installations within one (1) miles of sea coast or corrosive body.
8. Parts not supplied or designated by Company, or damages resulting from their use.
9. Products installed outside continental USA and Canada.
10. Electricity or fuel costs, or increases in electricity or fuel costs from any reason whatsoever, including additional or unusual use of supplemental electric heat.
11. Any cost to replace, refill or dispose of refrigerant, including the cost of refrigerant.
12. Shipping damage or damage as a result of transporting the unit.
13. Accessories such as condensate pumps, line sets and so forth are not covered.
14. Any special, indirect or consequential property or commercial damage of any nature whatsoever. Some states or provinces do not allow the exclusion of incidental or consequential damages, so the above limitation may not apply to you.

FOR WARRANTY SERVICE OR REPAIR:

Contact your installing contractor. You may find the installer's name on the equipment or in your Owner's packet.

Complete product registration below and send back by e-mail at service@twclimate.com

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state or province to province.

WSO021513-DLSWARR-HP – Rev. 3-8-13



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