

PIONEER®

QUANTUM Ultra™

# Ceiling Concealed Ducted Split Systems

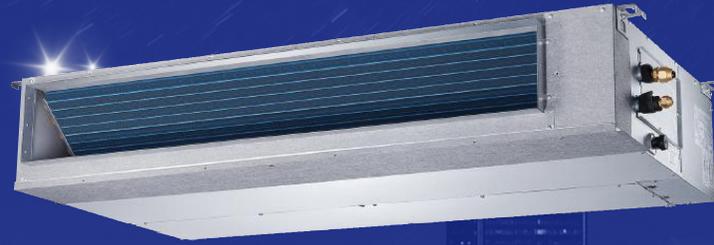
17~18 SEER Ultra High Efficiency

Heat Pump + DC Inverter in One System

Single Zone (36,000~48,000 BTU/hr)

208V~230V, 60Hz, 1 Ph

Wireless Access Via Free Smartphone App



RYB-20

DC INVERTER HEAT PUMP

INVERTER++  
TECHNOLOGY

R454b

Smart  
Airflow

High  
Efficiency

Insulated  
DESIGN

Cloud  
connected

DUAL  
DRAINAGE

Low Noise

WORKS  
WITH

- amazon alexa
- Google Assistant
- Siri



Whisper-Quiet Operation



Dual Drain Options



LED Display



Convenient Maintenance



Eco-Friendly Refrigerant



Customizable Timer



Soft Breeze Airflow



3D Air Flow



Ultra-Thin Design



Power Loss Memory Recovery



Rapid Delivery Output



Energy Saving



Wireless Control

## STANDARD FEATURES

- Horizontal Ceiling Concealed Ducted Indoor Unit
- Cooling Only or Heat Pump Applications
- Ultra Slim Fully Cased Compact Cabinet Design
- Furred-In Ceiling Concealed Ducted Applications
- Full Galvanized Heavy Steel Casing for Indoor Units
- Convertible (Rear-Bottom) Air Return
- Digital LCD Screen Wired Remote Controller
- Ultra-Quiet Air Delivery with High Performance
- Variable Speed ECM Indoor Fan Motors
- Heavy Gauge Closed Cell External Rubber Installation
- Auto-Restart with Memory for Power Outages
- Timer for Preset Starting and Stopping
- Auto Changeover, Dry, and Fan Only Modes
- Season Sensitive Operational Logic
- Self Learning Time-Demand Defrost
- Automatic Swing Directional Louvers

- Three + Auto Speed PSC Blower Motor
- Digital Motor Speed Control System
- Whisper Quiet Indoor Motor with Ball Bearings
- High Airflow Volume for Quick Performance
- Ultra-High Efficiency Grooved Copper Tubes
- Enhanced Louvered Hydrophilic Aluminum Fins
- Latest Technologies in DC Inverter Driver System
- Dynamically Balanced Ultra-Quiet Scirocco Blowers
- Anti-Mildew Treatment on Blower Wheels
- Superior Energy Efficiency and Performance
- Fully Variable Speed Compressor and Fan Motors
- Fully Charged with Environmentally Friendly R454B Gas
- Precision Controlled Compressor and Fan Motors
- Ultra-Galvanized Sheet Metal Parts
- Heavy Coat of Baked Enamel Paint for the Outdoor Unit
- Durable Outdoor Fan with High Glass Content

- Extra Durable, Permanently Lubricated Outdoor Motor
- Internal Overload Protection for Motors
- Flare Type Refrigerant Connections
- Full Operating Charge of Refrigerant
- Standardized Cabinet Design for All Models
- Easy Access for Piping and Wiring Connections
- Highest Grade Components for Life Long Expectancy
- Ample Availability of Spare Parts and Accessories

Full System Model Number			RYB036GMSI20RL	RYB048GMSI20RL
	Indoor Unit Model Number		RB036GMSILDHFG	RB048GMSILDHFG
	Indoor Unit Model Code		22023011005615	22023011005614
	Outdoor Unit Model Number		YN036GMSI20RUG	YN048GMSI20RUG
	Outdoor Unit Model Code		22022516002464	22022516002442
System Type			QUANTUM ULTRA Series Ceiling Recessed Concealed Duct Mounting Type Split Heat Pump System	
Modes			Cooling, Heating, Dehumidification, Ventilation	
Control type			Standard set with wired remote (Other optional controllers are available)	
Input power supply			208~230V~/60Hz/1P	208~230V~/60Hz/1P
Power supply range			187~253 VAC	187~253 VAC
Energy Star Rating			x	x
NEEP Rating			✓	✓
Cooling performance	Rated cooling capacity (at 95°F)	Btu/h	36,000	48,000
	Cooling capacity range	Btu/h	7,900~42,500	11,000~56,500
	EER2 Rating	Btu/W.h	10.1	10.0
	SEER2 Rating	Btu/W.h	18.7	17.1
Heating performance	Rated Heating capacity (at 47°F)	Btu/h	40,000	50,000
	Rated Heating capacity (at 17°F)	Btu/h	27,400	46,400
	Heating capacity range	Btu/h	8,100~43,500	11,200~60,500
	HSPF2 Rating (Region IV)	Btu/W.h	10.2	9.8
	HSPF2 Rating (Region V)	Btu/W.h	7.8	7.7
	COP2 (at 47°F)	W/W	3.7	3.49
	Max. Heating capacity (at 5°F)	Btu/h	25,600	38,000
	Performance percentage		64%	76%
	COP2 (at 5°F)	W/W	2.1	2.0
	Max. Heating capacity (at -4°F)	Btu/h	21,400	32,900
Max. Heating capacity (at -13°F)	Btu/h	17,400	27,800	
Rated power consumption	Cooling	W	3,530	4,800
	Heating	W	3,170	4,200
Rated power current	Cooling	A	15.3	21.3
	Heating	A	14.2	19.0
Min. circuit ampacity		A	35	41
Max. circuit breaker		A	40	45
Moisture removal		Pint/day	210	315
Refrigerant and room size specifications	Type		R454b (A2L rated refrigerant with a lower GWP rating of 466)	
	Amount	Ozs	92.0	127.0
	Sufficiency for max line set length	Ft	25	25
	Adjustment amount per feet	Ozs	0.32	0.32
	Recommended room size	Sq.Ft	1,000~1,400	1,400~1,800
	Refrigerant leakage detector module			Standard / Assembled in indoor unit
Air volume and sound level	Turbo/High/Med/Low/Mute	CFM	1,235/1,059/941/765	1,467/1,471/1,294/1,059
		dB(A)	45/39.5/33/30	51/46/42/40
External static duct pressure max		Inch WC	0.8	0.8
Outdoor sound		dB(A)	63	64
		In (OD)	3/4"	3/4"
Connecting pipe	Gas	In (OD)	3/8"	3/8"
	Liquid	In (OD)	3/8"	3/8"
	Accessory line set length available	Feet	10' / 16' / 25' / 33' / 50' (can be further extended using coupling kits). Both Standard copper and fully flexible sets are available	
	Maximum allowable length	Feet	250	250
	Maximum allowable vertical run	Feet	100	100
Indoor unit dimensions and weight	Net unit dimensions (WxDxH)	Inch	47"-1/4 x 29"-1/2 x 11"-7/8	47"-1/4 x 29"-1/2 x 11"-7/8
	Carton box dimensions (WxDxH)	Inch	56"-1/8 x 33"-7/8 x 14"-1/8	56"-1/8 x 33"-7/8 x 14"-1/8
	Shipping factor		0.00680	0.00680
	Net unit weight	Lbs	106.3	111.3
	Shipping weight	Lbs	120.3	124.8
Outdoor unit dimensions and weight	Net unit dimensions (WxDxH)	Inch	37"-1/4 x 16"-1/4 x 31"-7/8	37"-1/2 x 16"-3/8 x 52"-1/2
	Carton box dimensions (WxDxH)	Inch	42"-7/8 x 19"-5/8 x 34"-7/8	43"-1/8 x 19"-1/2 x 57"-1/2
	Shipping factor		0.00725	0.02083
	Net unit weight	Lbs	152.4	208.8
	Shipping weight	Lbs	162.5	237.5
Connecting cable			AWG #16 x 4 Core TC-ER cable	
Temperature setting range		°F	62 ~ 86	
Working ambient temperature range for cooling		°F	5 ~ 131	
Temperature setting range for heating		°F	-13 ~ 86	

Rated cooling performance data is based on standard ARI conditions of 80°F-DB/67°F-WB Indoor and 95°F Outdoor ambient conditions. Rated heating performance data is based on standard ARI conditions of 70°F-DB/60°F-WB Indoor and 47°F Outdoor ambient conditions. Variable speed inverter systems adjust their output capacity automatically based on actual indoor and outdoor temperatures, thermostat settings and other heating or cooling loads. Capacity of the system output and related power input will vary based on these conditions. System contains A2L refrigerant and the minimal room size data must be strictly adhered to for any standard installation to avoid fire risk. This data assumes the indoor unit installation height of minimum 6 feet from the floor level. Lower levels require larger min. room sizes. Specifications and data listed herein are subject to change without notice due to constant product and engineering improvements. Always refer to the equipment nameplate for applicable exact information.