

# PIONEER®

*Air Conditioning & Heat Pump Systems*

The "right choice" for those who want the "Best"....

## RYB-D22

### DC INVERTER++ SPECIFICATIONS

(DC Inverter Heat Pump)

### Ceiling Concealed Ducted Split Systems

( 9,000 through 48,000 BTU/Hr.)

## 16.5~21.5 SEER - DC Inverter++

STANDARD ACCESSORIES:  
• LCD WIRED CONTROLLER

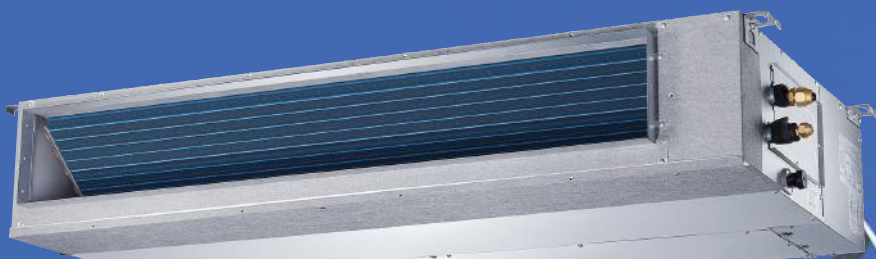


OPTIONAL ACCESSORIES:  
• LCD WIRELESS REMOTE  
• CONDENSATE REMOVAL PUMP



AVAILABLE VOLTAGES:  
• G : 208~230/1/60 (009~048)

AVAILABLE REFRIGERANTS:  
• F : R410A ONLY



Mod. 012~018



Mod. 024~036



Mod. 048

#### 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 WIRE REMOTE CONTROLLER
- ULTRA QUIET AIR DELIVERY WITH HIGH PERFORMANCE
- VARIABLE SPEED ECM INDOOR FAN MOTORS
- HEAVY GAUGE CLOSED CELL EXTERNAL RUBBER INSULATION
- 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 AIR FLOW VOLUME FOR QUICK PERFORMANCE
- ULTRA HIGH EFFICIENCY GROOVED COPPER TUBES
- ENHANCED LOUVERED HYDROPHILIC ALUMINUM FINNS
- 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 COMPRESSORS FOR ALL MODELS
- FULLY CHARGED WITH ENVIRONMENTALLY FRIENDLY R410A 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 LONG LIFE EXPECTANCY
- AMPLE AVAILABILITY OF SPARE PARTS AND ACCESSORIES

**PIONEER®**  
*Air Conditioning & Heat Pump Systems*

**RYB-D22 Series Product Line Up**

**PARKER DAVIS HVAC SYSTEMS, INC.**  
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MODEL SERIES			RYB SERIES, Inverter ++ Version (16.7 to 21.5 SEER Range) Concealed Recessed Ducted Split Systems (Horizontal or Vertical Mounting Options)					
System Set Model Number			RYB009GMFILDAD	RYB012GMFILDAD	RYB018GMFILDAD	RYB024GMFILDAD	RYB036GMFILDAD	RYB048GMFILDAD
System Set Code			22023010005123	22023010005046	22023010005723	22023010005183	22023010005604	22023010005603
Indoor Unit Model Number			RB009GMFILDAD	RB012GMFILDAD	RB018GMFILDAD	RB024GMFILDAD	RB036GMFILDAD	RB048GMFILDAD
Indoor Unit Code			22023011003874	22023011003875	22023011003474	22023011003414	22023011003415	22023011003416
Outdoor Unit Model Number			YN009GMF12RPE	YN012GMF12RPE	YN018GMF12RPE	YN024GMF12RPE	YN036GMF18RUE	YN048GMF18RUE
Outdoor Unit Code			22022016016320	22022016016322	22022016018180	22022016016500	22022016000121	22022016000122
Power supply			V, Ph, Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz	208/230V, 1Ph, 60Hz
Cooling Performance	Rated Capacity (Min ~ Max Range)	BTU / h	9,000 (2,220 ~ 11,600)	12,000 (2,100 ~ 13,450)	18,000 (5,800 ~ 18,000)	24,000 (6,100 ~ 28,200)	36,000 (5,973 ~ 36,000)	48,000 (12,077 ~ 48,000)
	Rated Power Input	W	667	960	1,455	1,920	4,000	5,217
	Rated Current	A	3.05	4.39	6.17	8.8	18.3	23.14
	EER / EER2	BTU / W	13.5 / 12.5	12.5 / 19	12.5 / 12.5	12.6 / 12.5	9 / 8.8	9.2 / 8.5
	SEER / SEER2	BTU / W	21 / 19.2	21.5 / 19	20.5 / 20	21.5 / 19	16.7 / 15.8	17.4 / 15.1
Heating Performance	Rated Capacity (Min ~ Max Range)	BTU / h	10,000 (2,240 ~ 13,350)	12,000 (1,900 ~ 15,000)	20,000 (5,000 ~ 20,000)	24,600 (11,700 ~ 33,000)	40,000 (12,765 ~ 40,000)	50,000 (11,607 ~ 50,000)
	Rated Power Input	W	780	1043	1,880	2,030	3,478	4,885
	Rated Current	A	3.57	4.78	7.90	9.3	15.9	21.5
	COP	W / W	3.76	3.37	3.12	3.52	3.37	3.00
	HSPF / HSPF2	BTU / W	11.5 / 10.2	11.5 / 10.3	11 / 10.6	11.2 / 11.2	11.5 / 8.8	10.3 / 9.3
Low Heating Capacity (@17F)	BTU / h	6,300	8,300	12,000	13,500	27,000	29,000	
MINIMUM CIRCUIT AMPACITY (Full Set)			A	13	13	19	22	30
MAX.FUSE (Full Set)			A	15	15	30	30	45
Indoor Fan Motor	Model		ZKFN-55-8-22-1	ZKFN-55-8-22-1	ZKFN-160-8-1-2	ZKFN-160-8-1-2	ZKFN-300-8-1	ZKFN-560-8-1-1
	Brand		Weiling	Weiling	Weiling	Weiling	Weiling	Weiling
	Speed (H / Md / Lo / Min)	RPM	1,170 / 1,030 / 850	1,170 / 1,030 / 850	850 / 700 / 450	850 / 700 / 450	1,130 / 1,050 / 990	800 / 720 / 650
Indoor Air Flow (H / Md / Lo)			m3 / h	600 / 480 / 300	600 / 480 / 300	900 / 765 / 630	1,318 / 1,178 / 739	1,839 / 1,551 / 1,195
Indoor Air Flow (H / Md / Lo)			CFM	353 / 282 / 176	353 / 282 / 176	529 / 450 / 371	775 / 693 / 435	1,082 / 912 / 703
Indoor Noise Level (H / Md / Lo)			dB(A)	33.5 / 28.5 / 27.0	38.0 / 34.5 / 31.0	42.0 / 38.0 / 35.5	44.0 / 41.0 / 37.0	48.0 / 43.5 / 40.5
External Static Pressure (Range)			Pa	0-40	0-40	0-100	0-160	0-160
			In. wg.	0.0-0.2	0.0-0.2	0.0-0.4	0.0-0.7	0.0-0.7
Indoor Unit (Measurements in horizontal position)	Net Dimensions (W"D"H)	mm	700 x 506 x 200	700 x 506 x 200	880 x 674 x 210	1,100 x 774 x 249	1,360 x 874 x 249	1,200 x 874 x 300
	Net Dimensions (W"D"H)	Inches	27"-1/2 x 20" x 7"-7/8	27"-1/2 x 20" x 7"-7/8	34"-5/8 x 26"-1/2 x 8"-1/4	43"-3/8 x 30"-1/2 x 9"-3/4	53"-1/2 x 30"-1/2 x 9"-3/4	47"-1/4 x 34"-3/8 x 11"-3/4
	Packing Dimensions (W"D"H)	mm	860 x 540 x 285	860 x 540 x 285	1,070 x 725 x 280	1,305 x 805 x 315	1,570 x 805 x 330	1,405 x 915 x 365
	Packing Dimensions (W"D"H)	Inches	33"-7/8 x 21"-3/4 x 11"-1/4	33"-7/8 x 21"-3/4 x 11"-1/4	42"-1/8 x 28"-1/2 x 11"	51"-3/8 x 31"-5/8 x 12"-3/8	61"-3/4 x 31"-5/8 x 13"	55"-3/8 x 36" x 14"
	Net / Gross Weight	Kg	17.7 / 21.9	17.8 / 22.0	25.1 / 30.4	41.0 / 48.0	50.3 / 58.1	54.3 / 64.3
Outdoor Fan Motor	Model		ZKFN-34-10-1	ZKFN-34-10-1	ZKFN-80-8-3	ZKFN-120-8-2	ZKFN-120-8-2	ZKFN-85-8-22-5 (Two)
	Brand		Weiling	Weiling	Weiling	Weiling	Weiling	Weiling
	Speed (H / Md / Lo / Min)	RPM	800 / - / 600	800 / - / 600	810 / - / 720	900 / 810 / 450 / 360	950 / 800 / 500	850 / 750 / 650 / 550
Outdoor Air Flow (H)			m3 / h	2,200	2,200	3,500	3,800	5,100
Outdoor Air Flow (H)			CFM	1,294	1,294	2,058	2,235	3,000
Outdoor Noise Level (H)			dB(A)	54.5	53.5	59.0	61.0	63.5
Compressor	Model		KSK103D33UEZ3	KSK103D33UEZ3	KSN140D58UFZ	KTM240D43UKT	KTF310D43UMT	KTQ420D1UMU
	Type		ROTARY	ROTARY	ROTARY	Twin-ROTARY	ROTARY	ROTARY
	Brand		GMCC	GMCC	GMCC	GMCC	GMCC	GMCC
	Rated Current (RLA)	A	6.4	6.4	12.0	15.4	23.5	28
	Refrigerant Oil / Oil Amount	Ozs	ESTER OIL VG74, 10.5 Ozs	ESTER OIL VG74, 10.5 Ozs	ESTER OIL VG74, 15 Ozs	ESTER OIL VG74, 21 Ozs	ESTER OIL VG74, 34 Ozs	ESTER OIL VG74, 47 Ozs
Outdoor Unit	Net Dimensions (W"D"H)	mm	765 x 303 x 555	765 x 303 x 555	890 x 342 x 673	946 x 410 x 810	946 x 410 x 810	952 x 415 x 1,333
	Net Dimensions (W"D"H)	Inches	30"-1/8 x 11"-7/8 x 21"-7/8	30"-1/8 x 11"-7/8 x 21"-7/8	35" x 13"-1/2 x 26"-1/2	37"-1/4 x 16"-1/8 x 31"-7/8	37"-1/4 x 16"-3/8 x 31"-7/8	37"-1/2 x 16"-3/8 x 52"-1/2
	Packing Dimensions (W"D"H)	mm	887 x 337 x 610	887 x 337 x 610	995 x 398 x 740	1090 x 500 x 885	1090 x 500 x 885	1095 x 495 x 1,480
	Packing Dimensions (W"D"H)	Inches	34"-7/8 x 13"-1/4 x 24"	34"-7/8 x 13"-1/4 x 24"	39"-1/8 x 15"-5/8 x 29"-1/8	42"-7/8 x 19"-5/8 x 34"-7/8	42"-7/8 x 19"-5/8 x 34"-7/8	43"-1/8 x 19"-1/2 x 58"-1/2
	Net / Gross Weight	Kg	28.9 / 31.3	28.9 / 31.3	42.8 / 45.8	56.8 / 61.2	70.5 / 75.4	99.4 / 113.0
Refrigerant Type		R410A	R410A	R410A	R410A	R410A	R410A	
Expansion Device Type, Location			EXV, Outdoor	EXV, Outdoor	EXV, Outdoor	EXV, Outdoor	EXV, Outdoor	EXV, Outdoor
Factory Charged Weight (Optimized for 16' Line Set)			Ozs	38.1	38.1	56.4	82.9	113.0
Adjustment Charge (Ea. Foot length for <10' or >25')			Ozs/Ft.	0.16	0.16	0.16	0.32	0.32
Design pressure			PSIG	550 / 340	550 / 340	550 / 340	550 / 340	550 / 340
Refrigerant Piping	Liquid Side/ Gas Side (OD)	Inch	1/4" / 3/8"	1/4" / 1/2"	1/4" / 1/2"	3/8" / 5/8"	3/8" / 5/8"	3/8" / 5/8"
	Max. Refrigerant Pipe Length	m	25	25	30	50	65	65
	Max. Refrigerant Pipe Length	Ft.	82	82	100	164	213	213
	Max. Height Difference	m	10	10	10	25	30	30
Condensate Drain Connection Diameter			mm (In)	OD Φ 25mm (1")	OD Φ 25mm (1")	OD Φ 25mm (1")	OD Φ 25mm (1")	OD Φ 25mm (1")
Inteconnecting Cable Specs				AWG 16# x 4 (TC-ER)	AWG 16# x 4 (TC-ER)	AWG 16# x 4 (TC-ER)	AWG 16# x 3 & 22# x 2Shielded	AWG 16# x 3 & 22# x 2Shielded
Controller Included				LCD Wired	LCD Wired	LCD Wired	LCD Wired	LCD Wired
Temperature Ranges	Indoor Temperature Setting Range	°C / °F	17~30 / 62~86	17~30 / 62~86	17~30 / 62~86	17~30 / 62~86	17~30 / 62~86	17~30 / 62~86
	Indoor Min Heat (Vacation Mode)	°C / °F	8 / 46	8 / 46	8 / 46	8 / 46	8 / 46	8 / 46
	Outdoor Ambient Range (Cooling)	°C / °F	-15 ~ +50 / +5 ~ +122	-15 ~ +50 / +5 ~ +122	-15 ~ +50 / +5 ~ +122	-15 ~ +50 / +5 ~ +122	-15 ~ +50 / +5 ~ +122	-15 ~ +50 / +5 ~ +122
	Outdoor Ambient Range (Heating)	°C / °F	-25 ~ +24 / -13 ~ +75	-25 ~ +24 / -13 ~ +75	-25 ~ +24 / -13 ~ +75	-25 ~ +24 / -13 ~ +75	-25 ~ +24 / -13 ~ +75	-25 ~ +24 / -13 ~ +75
Recommended Application Area Size (Min-Max)			m2	15~30	20~40	30~60	40~80	80~160
Based on average variables for cooling operation			Sq.Ft	160~325	215~430	325~650	430~860	650~1,720

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. Ratings are based on laboratory tests, performed in accordance with the applicable AHRI Standards for Variable Speed Mini Split Single Zone Heat Pump Systems.