

Ruud *Value Series* Heat Pumps





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13PJP- Series

Efficiencies up to 13 SEER Nominal Sizes 1.5-4 Ton [5.28 to 14.7 kW] Cooling Capacities 17.7 to 48.5 kBTU [5.19 to 14.2 kW]













"Proper sizing and installation of equipment is critical to achieve optimal performance. Ask your Contractor for details or visit www.energystar.gov."

- Outdoor heat pump designed for ground level or rooftop installations. These units offer comfort and dependability for single, multi-family and light commercial applications
- Painted louvered steel cabinet
- Easily accessible control box
- Suction line accumulator

- Piston metering device
- Condenser coils constructed with copper tubing and enhanced aluminum fins
- Grille/Motor mount for quiet fan operation
- Filter Drier (shipped not installed)

TABLE OF CONTENTS

Model Features	3
Model Number Identification	4
Accessories	4
Scroll Compressor	4
Performance Data	5
Electrical & Physical Data	6
Unit Dimensions	7
Refrigerant Line Size Information	8
I imited Warranty	9

Model Features:

- Coils constructed with copper tubing and enhanced aluminum fins.
- Includes factory installed low pressure control.
- Strong, attractive cabinet—louvered design protects the coil from damage.
- Piston metering device with suction line accumulator.
- Demand Defrost Control
- Non-Cycling Reversing Valve

- Hot Gas Muffler
- Service Valves
- Grille/motor mount for quiet fan operation.
- Easily accessible control box.
- Bi-Directional Filter Drier (shipped not installed)
- Certified and rated under AHRI Standard 240.
- U.L listed.

Model Number Identification

<u>13</u>	<u>P</u>	<u>J</u>	<u>P</u>	<u>18</u>	<u>A</u>	<u>01</u>
13 SEER	P = HEAT PUMP	VOLTAGE	P = R-410A/ PISTON	NOMINAL COOLING CAPACITY	CABINET	RUUD VALUE SERIES
		J = 208-230 SINGLE PHASE	1101014	18 = 18,000 BTU/HR [5.28 kW] 24 = 24,000 BTU/HR [7.03 kW]	A = FULL METAL JACKET	VALUE OFFICE
				30 = 30,000 BTU/HR [8.79 kW] 36 = 36,000 BTU/HR [10.55 kW]		
				42 = 42,000 BTU/HR [12.31 kW] 48 = 48,000 BTU/HR [14.07 kW]		

Accessories

- Heat Pump Thermostat Warning Light Kit (Model No. RXPX-D01)
- Low Ambient Control (Model No. RXAD-A08)
- Outdoor Thermostats (Model No. RXPT-A01, A02, A03 or A04)
- Heat Pump Monitor (Model No. RXPM-B01)
- Thermostats and Subbases (Available through the PROSTOCK® department)
- Compressor Time Delay Control (Model No. RXMD-B01)
- Blower Time Delay Control (Model No. RXMD-C04) RXMD-C04 is not required if the outdoor unit is matched with a Ruud Value Series furnace or air handler, or if the furnace or air handler used has a blower off time delay built-in.
- Sound Enclosure*
- High Pressure Control (Model No. RXAB-A07)
- Start Components*

Thermostats



200-Series * Programmable



300-Series * Deluxe Programmable 400-Series * Special Applications

Programmable



500-Series * Communicating/ Programmable

Brand		Descripter (3 Characters)	Series (3 Characters)	System (2 Characters)	Type (2 Characters)
UHC	-	TST	213	UN	MS
UHC=Ruud		TST=Thermostat	200=Programmable 300=Deluxe Programmable 400=Special Applications/ Programmable 500=Communicating/ Programmable	GE=Gas/Electric UN=Universal (AC/HP/GE) MD=Modulating Furnace DF=Dual Fuel CM=Communicating	SS=Single-Stage MS=Multi-Stage

^{*} Photos are representative. Actual models may vary.

For detailed thermostat match-up information, see specification sheet form number T22-001.

Scroll® Compressor

The reliable scroll compressor is the key to efficiency for this Ruud model. It's the latest in high-efficiency compressor technology. The advanced scroll compressor offers low noise and vibration characteristics and features tolerance to liquid refrigerant and system contamination. The scroll compressor also has low start torque, reducing start problems in the field. And its unique design enables heat pumps to perform efficiently and quietly.





Performance Data @ AHRI Standard Conditions

		AHRI Cooling Performance							AHRI Heating Performance (70°F [21°C] Indoor)				
	Model Numbers	80°F [26.5°C] DB/67°F [19.5°C] WB Indoor Air 95°F [35°C] DB Outdoor Air							Outdoor Air 47°F [8.5°C] DB/		Outdoor Air 17°F [-8.5°C] DB/		DOE
Outdoor	Indoor	Total Capacity	Net Sens.	Net Latent			Snd.			C] WB Temp.	15°F [-9.5°C] WB DOE Low Temp.		Region IV
Unit 13PJP	Coil and/or Air Handler	BTU/H [kW]	BTU/H [kW]	BTU/H [kW]	EER	SEER	Rate dB	CFM [L/s]	BTU/H [kW]	COP	BTU/H [kW]	COP	HSPF
Rev. 10/4/12 18	RHLP-HM2417(RCSP-H*2417) ①	17,700 [5.2]	13,500 [4.0]	4,200 [1.2]	11.00	13.00	76	600 [283]	16,400 [4.8]	3.64	8,600 [2.5]	2.08	7.70
24	RHLP-HM2417(RCSP-H*2417) ①	23,000 [6.7]	17,800 [5.2]	5,200 [1.5]	11.00	13.00	74	775 [366]	22,200 [6.5]	3.68	13,100 [3.8]	2.48	7.70
30	RHLP-HM3617(RCSP-H*3617) ①	28,800 [8.4]	21,500 [6.3]	7,300 [2.1]	11.00	13.00	73	1,000 [472]	27,600 [8.1]	3.76	17,400 [5.1]	2.70	7.70
36	RHLP-HM3617(RCSP-H*3617) ①	34,800 [10.2]	26,100 [7.6]	8,700 [2.5]	11.00	13.00	75	1,175 [554]	34,600 [10.1]	3.54	21,800 [6.4]	2.58	7.70
42	RHLP-HM4821(RCSP-H*4821) ①	40,500 [11.9]	30,300 [8.9]	10,200 [3.0]	11.00	13.00	77	1,350 [637]	39,500 [11.6]	3.72	25,000 [7.3]	2.68	7.70
48	RHLP-HM4821(RCSP-H*4821) ①	48,500 [14.2]	36,700 [10.8]	11,800 [3.5]	11.00	13.00	77	1,550 [731]	46,000 [13.5]	3.66	29,200 [8.6]	2.66	7.70

① Highest sales volume tested combination required by D.O.E. test procedures.

^[] Designates Metric Conversions

Electrical and Physical Data

	ELECTRICAL								DUVEICAL						
Model									PHYSICAL Outdoor Coil Refrig. Weight						
Number	Phase			Fan Motor Full Load	Circuit		Fuse or HACR Circuit Breaker		Outdoor Coil			Weight			
13P.IP	Frequency (Hz) Voltage (Volts)	Amperes	Locked Rotor Amperes		Ampacity	Minimum	Maximum		No.	CFM [L/s]	Per Circuit	Net	Shipping		
	voltago (volto)		(RLA) (LRA)		Amperes	Amperes Ampere		Sq. Ft. [m ²]	Rows Crivite/Si		Oz. [g]	Lbs. [kg]	Lbs. [kg]		
Rev. 10	/4/2012														
18	1-60-208/230	9/9	48	0.6	12/12	15/15	20/20	11.06 [1.03]	1	1700 [802]	90 [2552]	144 [65.3]	152 [65.3]		
24	1-60-208/230	12.8/12.8	58.3	0.6	17/17	20/20	25/25	11.06 [1.03]	1	2370 [1118]	101 [2863]	130 [59]	138 [59]		
30	1-60-208/230	14.1/14.1	73	0.8	19/19	25/25	30/30	13.72 [1.27]	1	2800 [1321]	117 [3317]	198 [89.8]	208 [89.8]		
36	1-60-208/230	17/17	96.7	1.2	23/23	30/30	35/35	16.39 [1.52]	1	3575 [1687]	117 [3317]	215 [97.5]	227 [97.5]		
42	1-60-208/230	21.8/21.8	112	1.2	29/29	35/35	50/50	21.85 [2.03]	1	3575 [1687]	156 [4423]	202 [91.6]	214 [91.6]		
48	1-60-208/230	21.8/21.8	117	1.2	29/29	35/35	50/50	21.85 [2.03]	1	3575 [1687]	156 [4423]	205 [93]	217 [93]		

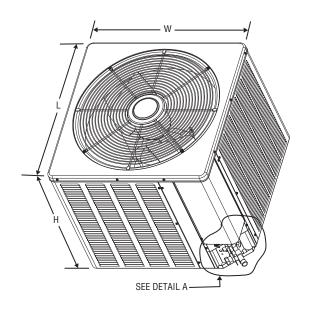
 ${\tt NOTE:}\ Factory\ Refrigerant\ Charge\ includes\ refrigerant\ for\ 15\ feet\ of\ standard\ line\ set.$

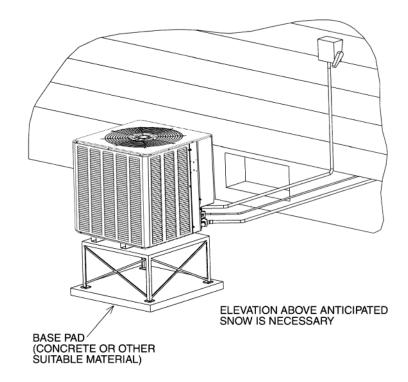
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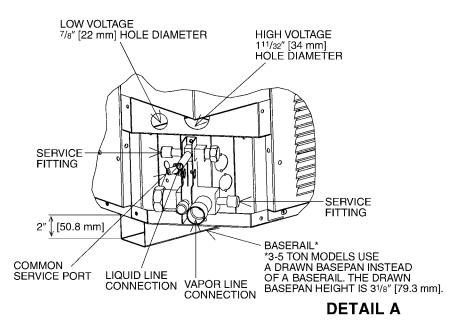
Unit Dimensions

Model Number 13PJP	Height "H" (Inches) [mm]	Length "L" (Inches) [mm]	Width "W" (Inches) [mm]		
18, 24	26 ¹ / ₄ [666.75]	235/8 [600.07]	235/8 [600.07]		
30	26 ¹ / ₄ [666.75]	275/8 [701.67]	275/8 [701.67]		
36	273/8 [695.32]	315/8 [803.27]	315/8 [803.27]		
42, 48	353/8 [898.52]	315/8 [803.27]	315/8 [803.27]		

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Heat Pump Refrigerant Line Size Information

System	Line Size Connection	Line Size	Liquid Line Sizing (R410A) Outdoor Unit Above or Below Indoor Coil (Heat Pumps Only) Total Equivalent Length—Feet [m]										
Capacity	Size (Inch I.D.)	(Inch O.D.) [mm]	25 [7.62]	50 [15.24]	75 [22.86]	100 [30.48]	125 [38.10]	150 [45.72]					
	[mm]	[]	23 [7.02]	25 [7.02] 50 [13.24] 75 [22.00] 100 [30.46] 125 [36.10] 130 [43.72] Maximum Vertical Separation—Feet [m]									
		1/4 [6.35]	25 [7.62]	40 [12.19]	25 [7.62]	9 [2.74]	N/A	N/A					
11/2 Ton	3/8" [9.53]	5/16 [7.94]	25 [7.62]	50 [15.24]	62 [18.90]	58 [17.68]	53 [16.15]	49 [14.94]					
	[9.55]	3/8* [9.53]	25 [7.62]	50 [15.24]	75 [22.86]	72 [21.95]	70 [21.34]	68 [20.73]					
		1/4 [6.35]	23 [7.01]	N/A	N/A	N/A	N/A	N/A					
2 Ton	3/8" [9.53]	5/16 [7.94]	25 [7.62]	36 [10.97]	29 [8.84]	23 [7.01]	16 [4.88]	9 [2.74]					
	[5.55]	3/8* [9.53]	25 [7.62]	50 [15.24]	72 [21.95]	70 [21.34]	68 [20.73]	65 [19.81]					
	2.121	1/4 [6.35]	25 [7.62]	N/A	N/A	N/A	N/A	N/A					
21/2 Ton	3/8" [9.53]	5/16 [7.94]	25 [7.62]	49 [14.94]	38 [11.58]	27 [8.23]	17 [5.18]	6 [1.83]					
	[0.00]	3/8* [9.53]	25 [7.62]	50 [15.24]	68 [20.73]	65 [19.81]	62 [18.90]	58 [17.68]					
3 Ton	3/8"	5/16 [7.94]	25 [7.62]	50 [15.24]	37 [11.28]	22 [6.71]	7 [2.13]	N/A					
3 1011	[9.53]	3/8* [9.53]	25 [7.62]	50 [15.24]	68 [20.73]	63 [19.20]	58 [17.68]	53 [16.15]					
31/2 Ton	3/8"	5/16 [7.94]	25 [7.62]	23 [7.01]	4 [1.22]	N/A	N/A	N/A					
31/2 1011	[9.53]	3/8* [9.53]	25 [7.62]	50 [15.24]	43 [13.11]	36 [10.97]	30 [9.14]	24 [7.32]					
4 Ton	3/8"	3/8* [9.53]	25 [7.62]	46 [14.02]	38 [11.58]	30 [9.14]	22 [6.71]	15 [4.57]					
4 1011	[9.53]	1/2 [12.7]	25 [7.62]	50 [15.24]	56 [17.07]	55 [16.76]	53 [16.15]	52 [15.85]					

NOTES:

*Standard line size

N/A = Application not recommended.

Suction Line Length/Size versus Capacity Multiplier (R-410A)									
Unit Size		1 ¹ / ₂ Ton	2 Ton	21/2 Ton	3 Ton	31/2 Ton	4 Ton		
	Suction Line Connection Size			i] I.D.	7/8" [22.23] I.D.				
Suction Lir Feet		⁵ /8" [15.88 m ³ /4" [19.05 mi		5/8" [15.88 mm] O.D. Opt. 3/4" [19.05 mm] O.D. Std.* 7/8" [22.23 mm] O.D. Opt.	3/4" [19.05 mm] O.D. Opt. 7/8" [22.23 mm] O.D. Std.*] O.D. Std.* 3/4 [19.05 IIIII] O.D. Opt. 11		⁷ /8" [22.23 mm] O.D. Opt. 1 ¹ /8" [28.58 mm] O.D. Std.*
25' [7.62]	Optional	1.00	1.00	1.00	1.00	1.00	1.00		
	Standard	1.00	1.00	1.00	1.00	1.00	1.00		
	Optional	—	—	1.00	—	—	—		
50' [15.24]	Optional	0.98	0.98	0.96	0.98	0.99	0.99		
	Standard	0.99	0.99	0.98	0.99	0.99	0.99		
	Optional	—	—	0.99	—	—	—		
100' [30.48]	Optional	0.95	0.95	0.94	0.96	0.96	0.96		
	Standard	0.96	0.96	0.96	0.97	0.98	0.98		
	Optional	—	—	0.97	—	—	—		
150' [45.72]	Optional	0.92	0.92	0.91	0.94	0.94	0.95		
	Standard	0.93	0.94	0.93	0.95	0.96	0.96		
	Optional	—	—	0.95	—	—	—		

NOTES:

*Standard line size

N/A = Using suction line larger than shown in chart will result in poor oil return and is not recommended.

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY*

Ruud will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

*For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.

Conditional Compressor
(Registration Required)Ten (10) Years
Conditional Parts
(Registration Required)Ten (10) Years



In keeping with its policy of continuous progress and product improvement, Ruud reserves the right to make changes without notice.

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