

AIR HANDLERS



Comfort Control² System™

Equipped with **Comfort Control² System™**

- Serial communication enabled
- Increased system reliability and efficiency
- 13 on-board diagnostic and operating codes
- Homeowner "Call for Service" alert

AIR HANDLERS

RHPN- SERIES –

Ultra High Efficiency Air Handler
Featuring Earth-Friendly
R-410A Refrigerant



Features

- Includes an energy efficient GE® ECM® Motor, which in most applications, enhances the SEER rating of the outdoor unit. It also slowly ramps its speed up for quiet operation and enhanced customer satisfaction.
- Versatile 4-way convertible design for upflow, downflow, horizontal left and horizontal right applications.
- Nominal airflow up to 1.0" external static pressure.
- Factory-installed high efficiency indoor coil.
- Sturdy cabinet construction with 1.0 inch [25.4 mm] of foil faced insulation for excellent sound and insulating characteristics.
- Field-installed auxiliary electric heater kits provide exact heat for indoor comfort. Kits include circuit breakers which meet U.L. and cUL requirements for service disconnect.
- Dip switch settings for selectable, customized cooling airflow over a wide variety of applications when wired in 24V conventional configurations.
- On-demand dehumidification terminal that adjusts airflow to help control humidity for unsurpassed comfort in cooling mode.
- External filter required.
- Advanced controls provide more comfort and diagnostic options.
- Blower self-configures when installed with a communicating outdoor unit and a 500-Series Rheem thermostat.



Engineering Features

RHPN- Series

- Quiet, efficient ECM motor technology providing nominal airflow up to 1.0 inch [25 kPa] of external static pressure.
- Interface board with dip switches conveniently located in the blower compartment allows for precise, field selectable airflow to meet the requirements of particular applications.
- Selectable continuous fan “on” options.
- Compact unit design.
- Attractive pre-painted cabinet exterior.
- Rugged steel cabinet construction, designed for added strength and versatility.
- 1.0" foil faced insulation mechanically retained in blower compartment.
- Four leg rubber insulated motor mount.
- Field-installed auxiliary heater kit includes circuit breakers that meet UL and cUL requirements as a service disconnect switch.
- Blower housing with integrated controls, motor and blower. Slide out design for service and maintenance convenience.
- Field convertible for vertical upflow, vertical downflow, horizontal left hand or right hand air supply.
- Combustible floor base accessory available when required for downflow installations on combustible floors.
- Advanced controls provide more comfort and diagnostic options.
- Indoor coil design provides low air side pressure drop, high performance and extremely compact size. All coils come with PVC condensate elbow standard.
- Coils are constructed of aluminum fins bonded to internally grooved copper tubing.
- Molded polymer corrosion resistant condensate drain pan is provided on all indoor coils.
- Supply duct flanges provided as standard on air handler cabinet.
- Provisions for field electrical connections available from either side or top of the air handler cabinet.
- Connection point for high voltage wiring is inside the air handler cabinet. Low voltage connection is made on the outside of the air handler cabinet.
- Concentric knockouts are provided for power connection to cabinet. Installer may pull desired hole size up to 2 inches [51 mm] for 1½ inch [38 mm] conduit.
- Internal checked TX valves are used on the Heat Pump indoor coil for more quiet refrigerant metering.
- Front refrigerant and drain connections.

[] Designates Metric Conversions

GENERAL TERMS OF LIMITED WARRANTY

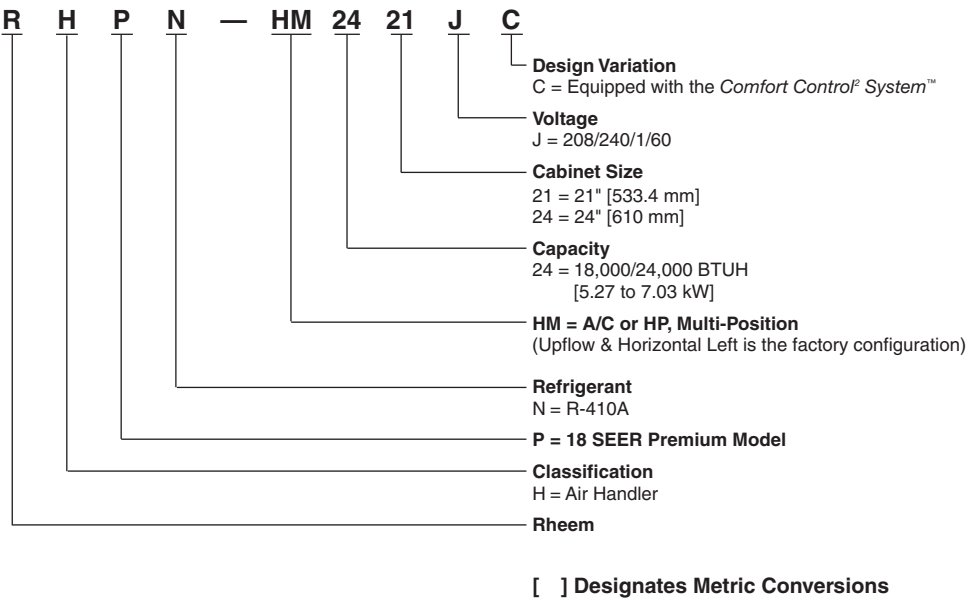
Rheem will furnish a replacement for any part of this product which fails in normal use and service within the applicable periods stated, in accordance with the terms of the limited warranty.

For Complete Details of the Limited Warranty, Including Applicable Terms and Conditions, See Your Local Installer or Contact the Manufacturer for a Copy.

Rheem RHPN equipment features a 10-year limited parts warranty.*

***This 10-year limited parts warranty is applicable only to single-phase products installed in residential applications.**

MODEL NUMBER DATA



Available Models
RHPN-HM2421JC
RHPN-HM3624JC
RHPN-HM4824JC
RHPN-HM6024JC

Unit Dimensions

ELECTRICAL CONNECTIONS
MAY EXIT TOP OR EITHER SIDE

HIGH VOLTAGE CONNECTION 7/8" [22.2 mm],
1 3/32" [27.8 mm], 1 31/32" [50 mm] DIA.
KNOCKOUTS.

LOW VOLTAGE CONNECTION
5/8" [15.9 mm] AND 7/8" [22.2 mm] KNOCKOUT

AUXILIARY DRAIN CONNECTION
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)
HORIZONTAL APPLICATION ONLY

PRIMARY DRAIN CONNECTION
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)

AUXILIARY DRAIN CONNECTION
3/4" [19.1 mm] FEMALE PIPE THREAD (NPT)
UPFLOW/DOWNFLOW APPLICATION ONLY

LIQUID LINE CONNECTION
COPPER (SWEAT)

VAPOR LINE CONNECTION
COPPER (SWEAT)

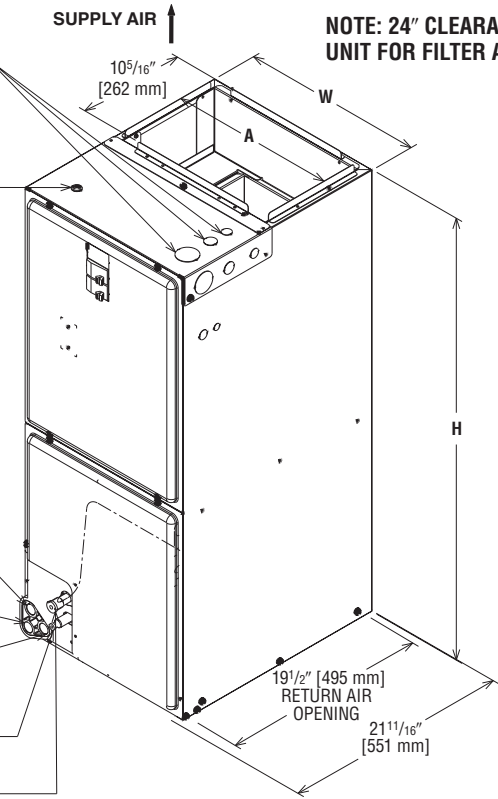
DOWNFLOW APPLICATION AND HORIZONTAL RIGHT
INDOOR COIL AND COIL DOOR ROTATES 180°
HORIZONTAL ADAPTER KIT

VAPOR LINE
CONNECTION

AUXILIARY HORIZONTAL
DRAIN CONNECTION

PRIMARY DRAIN
CONNECTION

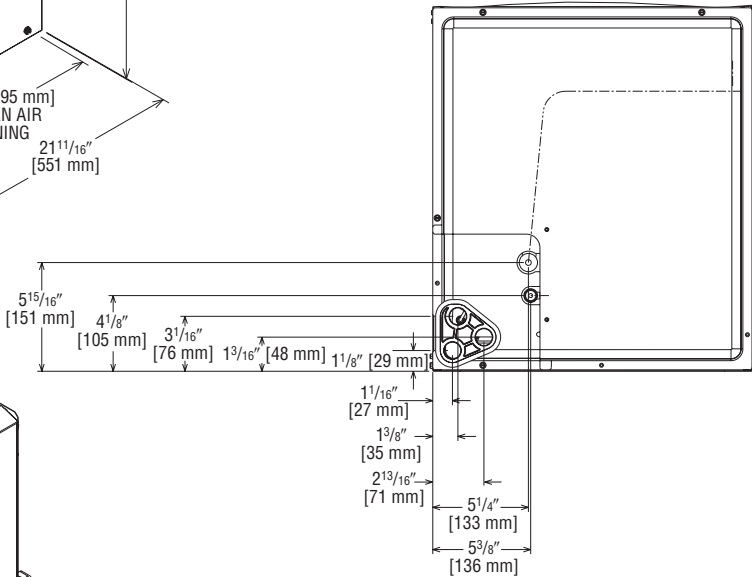
AUXILIARY UPFLOW/DOWNFLOW
DRAIN CONNECTION



NOTE: 24" CLEARANCE REQUIRED IN FRONT OF
UNIT FOR FILTER AND COIL MAINTENANCE.

Return Air Opening Dimensions

Model Cabinet Size	Return Air Opening Width (Inches)	Return Air Opening Depth/Length (Inches)
21	19 3/8	19 1/2
24	22 7/8	19 1/2



UPFLOW UNIT SHOWN:
UNIT MAY BE INSTALLED UPFLOW,
DOWNFLOW, HORIZONTAL RIGHT
OR LEFT AIR SUPPLY.

Dimensional Data

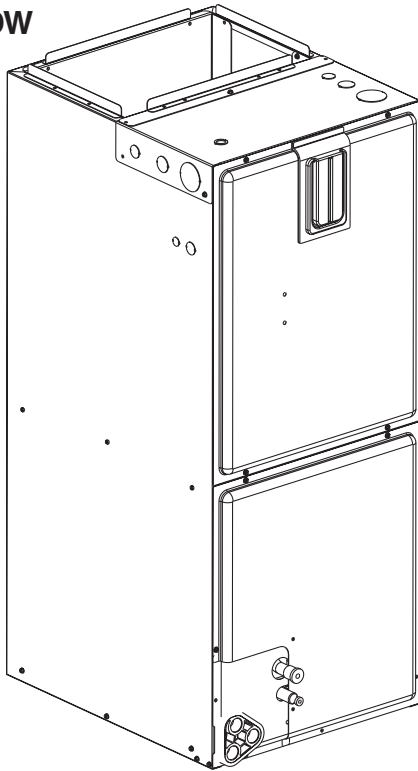
RHPN-	Unit Width "W" In. [mm]	Unit Height "H" In. [mm]	Supply Duct "A" In. [mm]	Matched to Outdoor Unit	Nominal Coil Airflow [L/s]				Unit Weight/Shipping Weight (Lbs.) [kg]	
					1st Stage		2nd Stage		Unit With Coil (Max. KW)	
					ODD*	Normal	ODD*	Normal		
2421	21 [533]	42 1/2 [1080]	19 1/2 [495]	RARL/RASL-024JEC	500 [238]	600 [283]	860 [307]	775 [366]	92/106	[42]/[48]
3624	24 1/2 [622]	55 1/2 [1410]	23 [584]	RASL-039JEC	725 [342]	825 [389]	975 [460]	1175 [555]	181/198	[82]/[90]
				RARL/RASL-036JEC	825 [389]	950 [448]	1000 [472]	1175 [555]		
4824	24 1/2 [622]	55 1/2 [1410]	23 [584]	RASL-048JEC	825 [389]	1000 [472]	1300 [614]	1600 [755]	181/198	[82]/[90]
				RARL-048JEC	1000 [472]	1200 [566]	1350 [637]	1600 [755]		
6024	24 1/2 [622]	55 1/2 [1410]	23 [584]	RASL-060JEC	925 [437]	1050 [496]	1325 [625]	1700 [802]	181/198	[82]/[90]
				RARL-060JEC	1025 [484]	1275 [602]	1400 [661]	1700 [802]		

*Maximum dehumidification airflow. Refer to interface board section for more information.
†Proper airflow is set automatically when the air handler is used in a serial communicating system. If not using serial communications, reference Section 5.11 Conventional 24VAC Thermostat Control Wiring

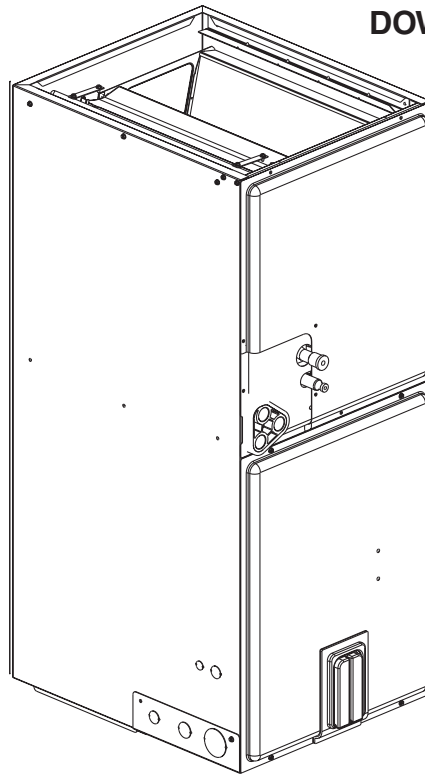
[] Designates Metric Conversions

Airflow Directions

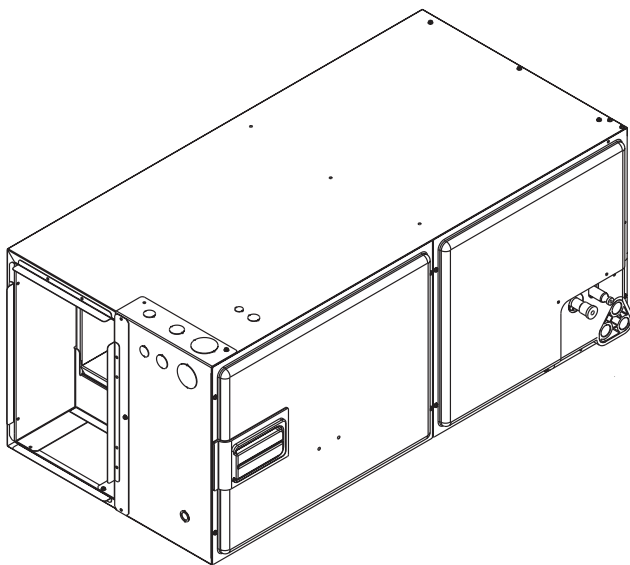
UPFLOW



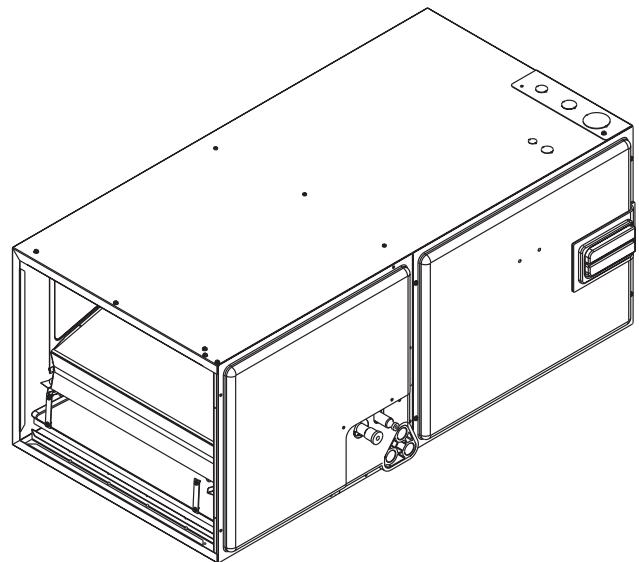
DOWNFLOW



**HORIZONTAL LEFT
HAND AIRFLOW**



**HORIZONTAL RIGHT
HAND AIRFLOW**



Airflow Performance

Airflow performance data is based on cooling performance with a coil and no filter in place. Select performance table for appropriate unit size, voltage and number of electric heaters to be used. Make sure external static applied to unit allows operation within the minimum and maximum limits shown in table

below for both cooling and electric heat operation. For optimum blower performance, operate the unit in the .1 [2.54 mm] to 1.00 inches [25.4 mm] W.C. external static range. Units with coils should be applied with a minimum of .1 inch [2.54 mm] W.C., external static.

Airflow Performance Data

Air Handler	Outdoor Unit	Cabinet Size	Blower		Nominal Airflow CFM		External Static Pressure - In. W.C. CFM [L/s] Air Delivery/RPM/Watts-230 Volts										
			Size Motor HP	Unit Operation			External Static Pressure – Inches W.C. [kPa]										
							0.10	0.20	0.30	0.40	0.50	0.60	0.70	0.80	0.90	1.00	
RHPN-HM2421	RARL-024 or RASL-024	21	10 x 8 1/3	First Stage	600	CFM	550 [260]	575 [271]	600 [283]	600 [283]	625 [295]	625 [295]	625 [295]	600 [283]	575 [271]	550 [260]	
						RPM	455	540	620	695	760	825	885	940	985	1030	
						Watts	40	55	70	85	105	120	135	150	170	185	
				Second Stage	775	CFM	775 [366]	775 [366]	775 [366]	800 [378]	800 [378]	825 [389]	825 [389]	825 [389]	825 [389]	825 [389]	
						RPM	540	615	685	750	810	870	925	975	1020	1065	
						Watts	70	90	115	135	160	180	205	225	250	270	
RHPN-HM3624	RARL-036 or RASL-036	24	11 x 11 3/4	First Stage	950	CFM	950 [448]	950 [448]	1000 [472]	975 [460]	975 [460]	975 [460]	925 [437]	925 [437]	925 [437]		
						RPM	495	555	610	665	720	770	820	865	910	955	
						Watts	95	115	140	165	185	210	240	265	290	320	
					Second Stage	1175	CFM	1150 [543]	1150 [543]	1175 [555]	1175 [555]	1175 [555]	1150 [543]	1150 [543]	1150 [543]	1125 [531]	1125 [531]
							RPM	550	600	650	700	750	800	850	900	925	975
							Watts	125	175	200	225	250	275	300	325	375	400
	RASL-039			First Stage	825	CFM	825 [389]	825 [389]	875 [413]	875 [413]	850 [401]	850 [401]	825 [389]	825 [389]	800 [378]	800 [378]	
						RPM	455	515	575	630	680	730	780	830	875	915	
						Watts	70	90	115	135	155	180	205	230	255	280	
					Second Stage	1175	CFM	1150 [543]	1150 [543]	1175 [555]	1175 [555]	1175 [555]	1150 [543]	1150 [543]	1150 [543]	1125 [531]	1125 [531]
							RPM	550	600	650	700	750	800	850	900	925	975
							Watts	125	175	200	225	250	275	300	325	375	400
RHPN-HM4824	RARL-048	24	11 x 11 3/4	First Stage	1200	CFM	1275 [602]	1275 [602]	1250 [590]	1250 [590]	1275 [602]	1250 [590]	1250 [590]	1225 [578]	1225 [578]	1225 [578]	
						RPM	533	593	649	702	752	798	841	881	917	950	
						Watts	131	161	191	221	250	279	307	335	363	390	
					Second Stage	1600	CFM	1650 [779]	1650 [779]	1675 [791]	1700 [802]	1700 [802]	1700 [802]	1675 [791]	1675 [791]	1675 [791]	1675 [791]
							RPM	635	698	761	824	887	950	1013	1075	1120	1006
							Watts	244	293	340	384	425	464	500	533	564	592
	RASL-048			First Stage	1000	CFM	1000 [472]	1000 [472]	1025 [484]	1025 [484]	1000 [472]	1000 [472]	975 [460]	975 [460]	975 [460]	975 [460]	
						RPM	500	575	625	675	725	775	825	875	925	950	
						Watts	100	125	150	175	200	225	250	275	300	325	
					Second Stage	1600	CFM	1650 [779]	1650 [779]	1675 [791]	1700 [802]	1700 [802]	1700 [802]	1675 [791]	1675 [791]	1675 [791]	1675 [791]
							RPM	635	698	761	824	887	950	1013	1075	1120	1006
							Watts	244	293	340	384	425	464	500	533	564	592
RHPN-HM6024	RARL-060	24	11 x 11 3/4	First Stage	1275	CFM	1275 [602]	1275 [602]	1275 [602]	1275 [602]	1275 [602]	1275 [602]	1250 [590]	1250 [590]	1250 [590]		
						RPM	577	633	687	738	786	831	874	914	951	986	
						Watts	159	189	218	248	279	310	341	372	404	436	
					Second Stage	1700	CFM	1625 [767]	1625 [767]	1650 [779]	1675 [791]	1675 [791]	1650 [779]	1650 [779]	1625 [767]	1625 [767]	1625 [767]
							RPM	691	742	790	835	877	916	953	986	1016	1044
							Watts	289	334	377	417	456	493	529	562	593	623
	RASL-060			First Stage	1050	CFM	1050 [496]	1050 [496]	1075 [507]	1075 [507]	1050 [496]	1025 [484]	1025 [484]	1025 [484]	1025 [484]	1000 [472]	
						RPM	525	575	625	675	750	800	825	875	925	975	
						Watts	100	125	150	175	225	250	275	300	325	350	
					Second Stage	1700	CFM	1625 [767]	1625 [767]	1650 [779]	1675 [791]	1675 [791]	1650 [779]	1650 [779]	1625 [767]	1625 [767]	1625 [767]
							RPM	691	742	790	835	877	916	953	986	1016	1044
							Watts	289	334	377	417	456	493	529	562	593	623

IMPORTANT: Observe airflow operating limits. Do not operate above 1.0 in. W.C. system external static.

[] Designates Metric Conversions

Blower Motor Electrical Data

Nominal Cooling Capacity Tons	HP [W]	Voltage	Phase	Hertz	RPM	Circuit Amps.	Minimum Circuit Ampacity	Maximum Circuit Protector
2	1/3 [249]	208/230	1	60	300-1100	1.7	4.0	15
3	3/4 [560]	208/230	1	60	300-1100	4.9	9.0	15
4	3/4 [560]	208/230	1	60	300-1100	4.9	9.0	15
5	3/4 [560]	208/230	1	60	300-1100	4.9	9.0	15

[] Designates Metric Conversions

Electrical Wiring

Power Wiring

- Field wiring must comply with the National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- Supply wiring must be 75°C minimum copper conductors only.
- See electrical data for product Ampacity rating and Circuit Protector requirement.

Grounding

- This product must be sufficiently grounded in accordance with National Electrical Code (C.E.C. in Canada) and any applicable local ordinance.
- A grounding lug is provided.

Electric Heat Electrical Data

Installation of the UL Listed original equipment manufacturer provided heater kits listed in the table below is recommended for all auxiliary heating requirements.

Air Handler Cabinet Size/ Cooling Capacity	Manufacturer Model Number	Type Supply Circuit	Voltage	PH/HZ	Heater kW	Heater AMPS	Motor Ampacity	Maximum Circuit Protection	Minimum Circuit Ampacity
21" / 2 Ton	RXBH-24A05J	Single	208/240	1/60	3.6/4.8	17.3/20.0	1.7	25/30	24/28
	RXBH-24A07J	Single	208/240	1/60	5.4/7.2	26.0/30.0	1.7	35/40	35/40
	RXBH-24A10J	Single	208/240	1/60	7.2/9.6	34.6/40.0	1.7	50/60	46/53
24" / 3 Ton	RXBH-24A05J	Single	208/240	1/60	3.6/4.8	17.3/20.0	4.9	30/35	28/32
	RXBH-24A07J	Single	208/240	1/60	5.4/7.2	26.0/30.0	4.9	40/45	39/44
	RXBH-24A10J	Single	208/240	1/60	7.2/9.6	34.6/40.0	4.9	50/60	60/67
	RXBH-24A15J	Single	208/240	1/60	10.8/14.4	51.9/60.0	4.9	80/90	72/82
		MULTI. CKT 1	208/240	1/60	3.6/4.8	17.3/20.0	4.9	30/35	28/32
		MULTI. CKT 2	208/240	1/60	7.2/9.8	34.6/40.0	0	45/50	44/50
	RXBH-24A18J	Single	208/240	1/60	12.8/17	61.6/70.8	4.9	90/100	84/95
		MULTI. CKT 1	208/240	1/60	6.4/6.5	30.8/35.4	4.9	45/60	45/51
		MULTI. CKT 2	208/240	1/60	6.4/6.5	30.8/35.4	0	40/45	39/45
	RXBH-24A20J	Single	208/240	1/60	14.4/19.2	69.2/80.0	4.9	100/110	93/107
		MULTI. CKT 1	208/240	1/60	7.2/9.6	34.6/40.0	4.9	50/60	50/57
		MULTI. CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0	45/50	44/50
	RXBH-24A25J (4-ton only)	Single	208/240	1/60	18.0/24.0	87.0/99.9	4.9	125/150	115/132
		MULTI. CKT 1	208/240	1/60	6.0/8.0	29.0/33.3	4.9	45/50	43/48
		MULTI. CKT 2	208/240	1/60	6.0/8.0	29.0/33.3	0	40/45	37/42
		MULTI. CKT 3	208/240	1/60	6.0/8.0	29.0/33.3	0	40/45	37/42
24" / 4 Ton	RXBH-24A05J	Single	208/240	1/60	3.6/4.8	17.3/20.0	4.9	30/36	28/32
	RXBH-24A07J	Single	208/240	1/60	5.4/7.2	26.0/30.0	4.9	40/45	39/44
	RXBH-24A10J	Single	208/240	1/60	7.2/9.6	34.6/40.0	4.9	50/60	50/57
	RXBH-24A15J	Single	208/240	1/60	10.8/14.4	51.9/60.0	4.9	60/90	72/82
		MULTI. CKT 1	208/240	1/60	3.6/4.8	17.3/20.0	4.9	30/35	28/32
		MULTI. CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0	45/50	44/50
	RXBH-24A18J	Single	208/240	1/60	12.8/17	61.6/70.8	4.9	90/100	84/95
		MULTI. CKT 1	208/240	1/60	6.4/8.6	30.8/35.4	4.9	45/60	45/51
		MULTI. CKT 2	208/240	1/60	6.4/8.5	30.6/35.4	0	40/45	39/45
	RXBH-24A20J	Single	208/240	1/60	14.4/19.2	69.2/80.0	4.9	100/110	93/107
		MULTI. CKT 1	208/240	1/60	7.2/9.6	34.6/40.0	4.9	50/60	50/57
		MULTI. CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0	45/50	44/50
	RXBH-24A25J (4-ton only)	Single	208/240	1/60	18.0/24.0	87.0/99.9	4.9	126/150	115/132
		MULTI. CKT 1	208/240	1/60	6.0/8.0	29.0/33.3	4.9	45/50	43/48
		MULTI. CKT 2	208/240	1/60	6.0/8.0	29.0/33.3	0	40/45	37/42
		MULTI. CKT 3	208/240	1/60	6.0/8.0	29.0/33.3	0	40/45	37/42
24" / 5 Ton	RXBH-24A07J	Single	208/240	1/60	5.4/7.3	26.0/30.0	4.9	40/45	39/44
	RXBH-24A10J	Single	208/240	1/60	5.4/7.3	26.0/30.0	4.9	40/45	39/44
	RXBH-24A15J	Single	208/240	1/60	10.8/14.4	51.9/60.0	4.9	80/90	72/82
		MULTI. CKT 1	208/240	1/60	3.6/4.6	17.3/20.0	4.9	30/35	28/32
		MULTI. CKT 2	208/240	1/50	7.2/9.6	34.6/40.0	0	45/50	44/50
	RXBH-24A18J	Single	208/240	1/60	12.8/17	61.6/70.8	4.9	90/100	84/95
		MULTI. CKT 1	208/240	1/60	6.4/6.5	30.8/35.4	4.9	45/60	45/51
		MULTI. CKT 2	208/240	1/60	6.4/8.6	30.8/35.4	0	40/45	39/45
	RXBH-24A20J	Single	208/240	1/60	14.4/19.2	69.2/80.0	4.9	100/110	93/107
		MULTI. CKT 1	208/240	1/60	7.2/9.6	34.6/40.0	4.9	50/60	50/57
		MULTI. CKT 2	208/240	1/60	7.2/9.6	34.6/40.0	0	45/50	44/50
	RXBH-24A25J	Single	208/240	1/60	18.0/24.0	87.0/99.9	4.9	125/150	115/132
		MULTI. CKT 1	208/240	1/60	6.0/6.0	29.0/33.3	4.9	45/50	43/48
		MULTI. CKT 2	208/240	1/60	6.0/6.0	29.0/33.3	0	40/45	37/42
		MULTI. CKT 3	208/240	1/60	6.0/6.0	29.0/33.3	0	40/45	37/42
	RXBH-24A30J	Single	208/240	1/60	21.6/28.8	103.8/120.0	4.9	136/156	150/175
		MULTI. CKT 1	208/240	1/60	7.2/9.5	34.6/40.0	4.9	49/56	50/60
		MULTI. CKT 2	208/240	1/60	2-4.8	34.6/40.0	0	44/50	45/50
		MULTI. CKT 3	208/240	1/60	7.2/9.6	34.6/40.0	0	44/50	45/50

• Supply circuit protective devices may be fuses or "HACR" type circuit breakers.

• Largest motor load is included in single circuit and multiple circuit 1.

• If non-standard fuse size is specified, use next size larger standard fuse size.

• J Voltage (230V) single phase air handler is designed to be used with single or three phase 230 volt electric heaters. In the case of connecting 3-phase power to the air handler terminal block without the heater, bring only two leads to the terminal block cap, insulate and fully secure the third lead.

[] Designates Metric Conversions

Accessories-Kits—Parts

• Combustible Floor Base RXHB-

Model Cabinet Size	Combustible Floor Base Model Number
21	RXHB-21
24	RXHB-24

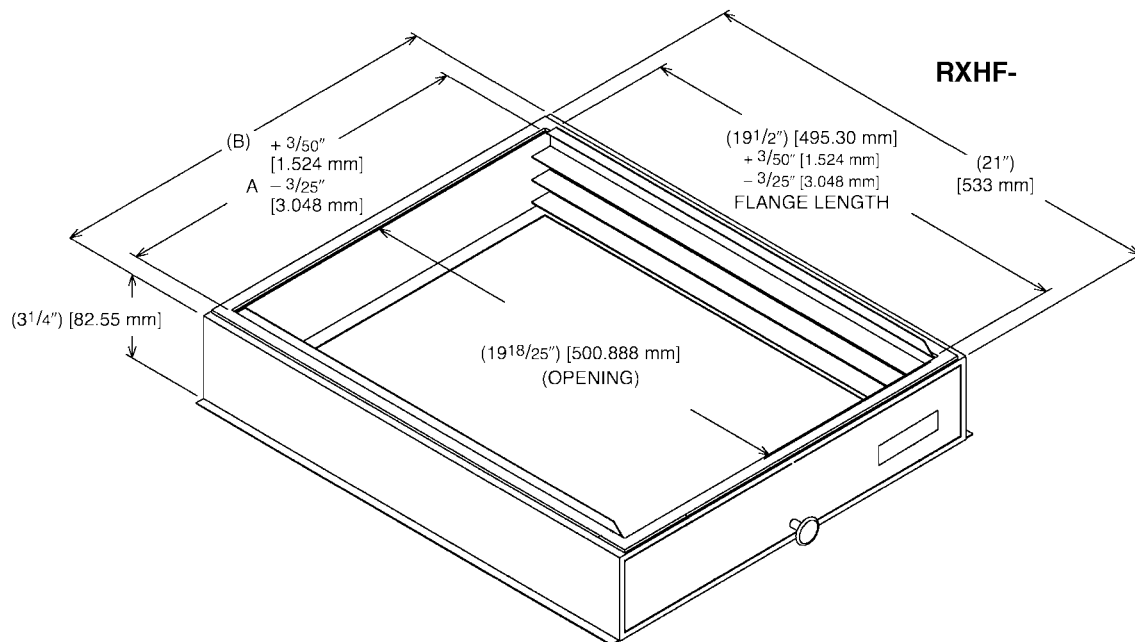
- **Jumper Bar Kit 3 Ckt. to 1 Ckt. RXBJ-A31** is used to convert single phase multiple three circuit units to a single supply circuit. Kit includes cover and screw for line side terminals.
- **Jumper Bar Kit 2 Ckt. to 1 Ckt. RXBJ-A21** is used to convert single phase multiple two circuit units to a single supply circuit. Kit includes cover and screw for line side terminals.
- **Note:** No jumper bar kit is available to convert three phase multiple two circuit units to a single supply circuit.

• External Filter Base RXHF-

Model Cabinet Size	Filter Size In. [mm]	Part Number	A	B
21	20 x 20 [508 x 508]	RXHF-21	19.20	21.00
24	25 x 20 [635 x 508]	RXHF-24	22.70	25.50

Nominal Cooling Capacity-Tons	Cabinet Size	Auxiliary Horizontal Overflow Pan Accessory Model Number
2 ton	21	RXBM-AC48
3 - 5 ton	24	RXBM-AC61

- **Auxiliary Electric Heater Kits RXBH-** Heater Kits include circuit breakers which meet UL and cUL requirements for service disconnect. See the Electric Heat Electrical Data in this specification sheet for specific Heater Kit Model numbers.
- **Thermistor Kit – RXHT-A01-** is used with the communicating air handler control to monitor the system return and supply air temperatures.

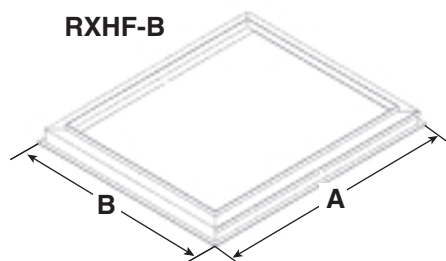


• External Filter Base RXHF-B

Model Cabinet Size	Filter Size In. [mm]	Part Number*	A	B
21	20 x 20 [508 x 508]	RXHF-B21	20.40	20.77
24	25 x 20 [635 x 508]	RXHF-B24	25.00	21.04

*Accommodates 1" filter

[] Designates Metric Conversions



NOTES

NOTES

Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.

**Rheem Heating,
Cooling and
Water Heating**

P.O. Box 17010, Fort Smith, AR 72917



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