



VRF
VWHA

High Efficiency Wall-Hung Air Handlers - 60 Hz

Form Number 210964

January 2024

Supersedes all previous versions

**COMMERCIAL
PRODUCT SPECIFICATIONS**

FEATURES

Installation and Service

- Units fits between standard stud spacing
- All service access is located in the front of the unit
- Primary and secondary drain connections on the bottom or sides, access panel in bottom of cabinet for servicing
- No return air ductwork required in specific applications
- Wall hanging brackets included with the unit
- Unit can also be frame mounted (field fabricated)



Cabinet

- Painted, galvanized steel cabinet, fully insulated for conditioned spaces
- Cabinet air leakage rate below 1.4% when tested to ASHRAE Standard 193
- Front return (field convertible to bottom return) air discharge installations
- Flanges on cabinet allow easy supply air duct connection
- Built-in filter rack
- High voltage electrical inlets provided in top and sides of cabinet
- Low voltage electrical inlets provided in top of cabinet
- Fresh air intake holes on both sides of cabinet

Indoor Coil

- Copper tube, aluminum fin coil
- Tin plated copper hairpin coil

Expansion Valve

- Assures optimal performance throughout the application range

Braze Connections

- Vapor and liquid lines have braze connections that extended outside of the top of cabinet for ease of connection

Constant Torque Blower Motor

- DC Brushless Motor
- High Efficiency Constant Torque
- ECM (Electronically Commutated Motor)
- Motor is programmed to provide constant torque at each of the selectable speeds

Optional Accessories

Electric Heat With Circuit Breaker

- Field installed internal to unit cabinet
- Available in several kW sizes
- Electric heat low voltage controls plug-in to air handler

WARRANTY

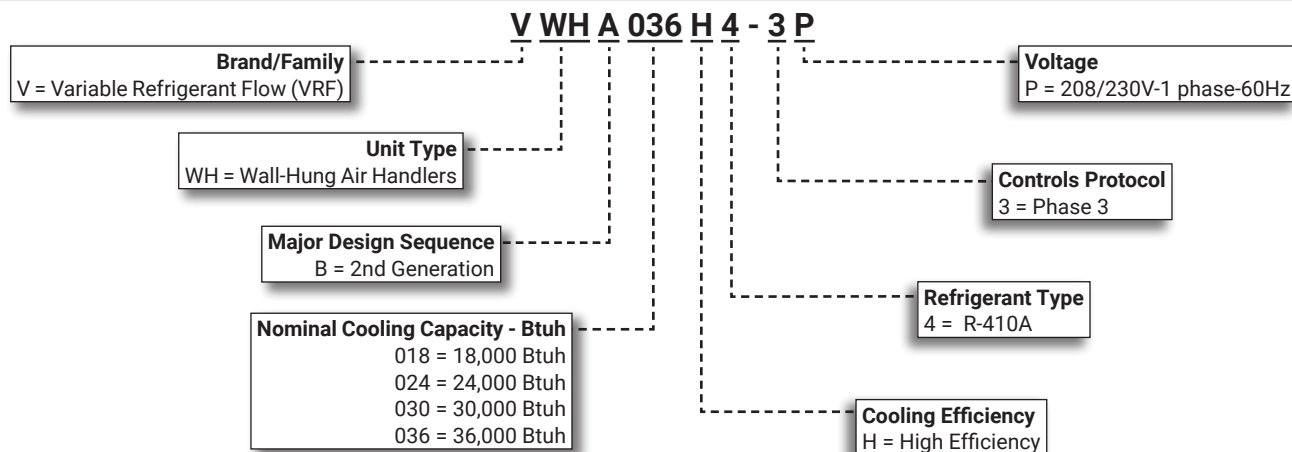
Components

- Limited ten years for qualifying installations

TABLE OF CONTENTS

Blower Data	4
Dimensions	3
Electric Heat Data	6
Installation Clearances With Electric Heat	3
Model Number Identification.	1
Specifications	2

MODEL NUMBER IDENTIFICATION



SPECIFICATIONS

General Data		Nominal kBtuh	018	024	030	036
		Model Number	VWHA018H4	VWHA024H4	VWHA030H4	VWHA036H4
¹ Cooling Performance	Net Cooling Capacity - Btuh		18,000	24,000	30,000	36,000
¹ Heating Performance	Net Heating Capacity - Btuh		18,000	24,000	30,000	36,000
Refrigerant	Type		R-410A	R-410A	R-410A	R-410A
Indoor Fan Motor (ECM)	Motor Output - hp		1/3	1/3	1/2	1/2
	RPM		1050	1050	1050	1050
Indoor Coil	Fin spacing - in.		17	17	17	17
	Coil lace area (ft. ²)		2.149	2.149	2.955	2.955
	Tube outside diameter and type - in.		1/4 - Rifled Copper Tubing			
	Fin type		Hydrophilic Coated Aluminum			
	Expansion device type		Electronic Expansion Valve			
Indoor Coil Connections	Liquid pipe o.d. - in. (sweat)		3/8	3/8	3/8	3/8
	Vapor pipe o.d. - in. (sweat)		3/4	3/4	3/4	3/4
	Drain connection o.d. - in.		(2) 3/4	(2) 3/4	(2) 3/4	(2) 3/4
Indoor Blower	Minimum/Maximum Airflow (cfm)		450 - 675	600 - 900	750 - 1125	900 - 1350
Sound Power Levels (dBA)			50	54	54	54
Filter size (in.)			16 x 20 x 1		20 x 20 x 1	
Weight Data	Unit weight (net/shipping) - lbs.		79 / 95	79 / 95	97 / 119	97 / 119

ELECTRICAL DATA

	Line voltage data - 60 Hz - 1ph	208/230V	208/230V	208/230V	208/230V
	² Maximum overcurrent protection (amps)	15	15	15	15
	³ Minimum circuit ampacity	2.4	2.4	3.4	3.4
	Indoor Blower Motor - Full load amps	1.9	1.9	2.7	2.7

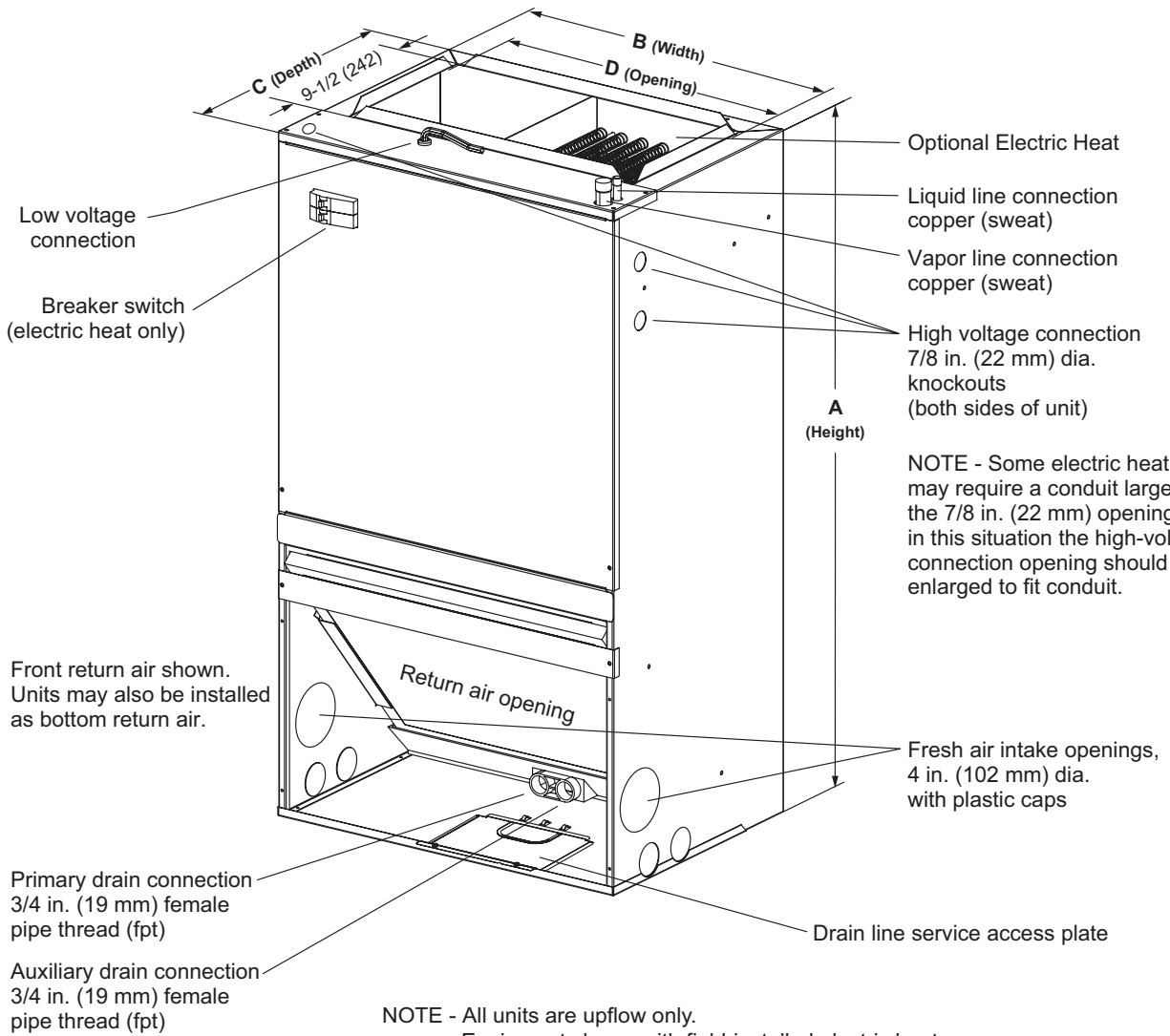
¹ Nominal capacities are based on the following conditions (with 25 ft. of connecting refrigerant lines);

- Cooling Ratings - 95°F outdoor air temperature and 80°F db/67°F wb entering indoor coil air.
- Heating Ratings - 47°F db/43°F wb outdoor air temperature and 70°F db entering indoor coil air.

² HACR type circuit breaker or fuse.

³ Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

DIMENSIONS



Dimension	018-024		030-036	
	in.	mm	in.	mm
A (height)	36-1/2	927	39-1/2	1003
B (width)	20-1/2	521	22	559
C (depth)	15	381	19	483
D (opening width)	17-3/8	441	18-7/8	479

INSTALLATION CLEARANCES WITH ELECTRIC HEAT

Cabinet	0 inch (0 mm)
To Plenum	0 inch (0 mm)
To Outlet Duct within 3 feet (914 mm)	0 inch (0 mm)
Service / Maintenance	See Note #1

¹ Front service access - 24 inches (610 mm) minimum.

BLOWER DATA

VWHA018H4 PERFORMANCE

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds				
	High (Tap 5)	Medium-High (Tap 4)	Medium (Tap 3)	Medium-Low (Tap 2) (factory)	Low (Tap 1)
	cfm	cfm	cfm	cfm	cfm
0.00	913	825	737	675	590
0.10	881	787	700	632	548
0.20	848	753	663	596	499
0.30	818	717	630	555	455
0.40	792	682	589	521	430
0.50	763	650	550	480	368
0.60	731	617	511	440	338
0.70	691	580	474	399	309
0.80	650	540	436	366	263

NOTE - Shaded area is outside of the required 300-450 cfm per ton range.

NOTE - Airflow data is measured with dry coil, filter and no electric heat.

NOTE - Airflow is the same for front or bottom return air.

VWHA024H4 PERFORMANCE

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds				
	High (Tap 5)	Medium-High (Tap 4) (factory)	Medium (Tap 3)	Medium-Low (Tap 2)	Low (Tap 1)
	cfm	cfm	cfm	cfm	cfm
0.00	913	825	737	675	590
0.10	881	787	700	632	548
0.20	848	753	663	596	499
0.30	818	717	630	555	455
0.40	792	682	589	521	430
0.50	763	650	550	480	368
0.60	731	617	511	440	338
0.70	691	580	474	399	309
0.80	650	540	436	366	263

NOTE - Shaded area is outside of the required 300-450 cfm per ton range.

NOTE - Airflow data is measured with dry coil, filter and no electric heat.

NOTE - Airflow is the same for front or bottom return air.

BLOWER DATA

VWHA030H4 PERFORMANCE

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds				
	High (Tap 5)	Medium-High (Tap 4)	Medium (Tap 3)	Medium-Low (Tap 2) (factory)	Low (Tap 1)
	cfm	cfm	cfm	cfm	cfm
0.00	1362	1282	1267	1157	1077
0.10	1325	1242	1225	1111	1028
0.20	1266	1176	1143	1052	965
0.30	1238	1151	1120	1016	932
0.40	1197	1111	1078	971	886
0.50	1159	1071	1036	929	850
0.60	1119	1028	993	884	804
0.70	1080	975	942	842	768
0.80	1040	936	897	802	732

NOTE - Shaded area is outside of the required 300-450 cfm per ton range.

NOTE - Airflow data is measured with dry coil, filter and no electric heat.

NOTE - Airflow is the same for front or bottom return air.

VWHA036H4 PERFORMANCE

External Static Pressure in. w.g.	Air Volume at Various Blower Speeds				
	High (Tap 5)	Medium-High (Tap 4) (factory)	Medium (Tap 3)	Medium-Low (Tap 2)	Low (Tap 1)
	cfm	cfm	cfm	cfm	cfm
0.00	1362	1282	1267	1157	1077
0.10	1325	1242	1225	1111	1028
0.20	1266	1176	1143	1052	965
0.30	1238	1151	1120	1016	932
0.40	1197	1111	1078	971	886
0.50	1159	1071	1036	929	850
0.60	1119	1028	993	884	804
0.70	1080	975	942	842	768
0.80	1040	936	897	802	732

NOTE - Shaded area is outside of the required 300-450 cfm per ton range.

NOTE - Airflow data is measured with dry coil, filter and no electric heat.

NOTE - Airflow is the same for front or bottom return air.

ELECTRIC HEAT DATA

Air Handler Usage	Description	Nominal Heat Capacity @ 240V	Input			² Minimum Circuit Ampacity	³ Maximum Overcurrent Protection	Minimum CFM	Heating Blower Speed				
			Volt	kW	¹ Btuh				1	2	3	4	5
VWHA018H4	5 kW (30U88)	5	208	3.8	12,800	25	30	450	•	•	•	•	•
			240	5.0	17,100	28.5	30	450	•	•	•	•	•
	8 kW (30U89)	7.5	208	5.6	19,200	36.3	45	500	⁵ - - -	•	•	•	•
			240	7.5	25,600	41.5	45	500	⁵ - - -	•	•	•	•
	10 kW (30U90)	10	208	7.5	25,600	47.6	60	600	⁵ - - -	⁵ - - -	•	•	•
			240	10.0	34,100	54.5	60	600	⁵ - - -	⁵ - - -	•	•	•
VWHA024H4	5 kW (30U88)	5	208	3.8	12,800	25	30	450	•	•	•	•	•
			240	5.0	17,100	28.5	30	450	•	•	•	•	•
	8 kW (30U89)	7.5	208	5.6	19,200	36.3	45	500	⁵ - - -	•	•	•	•
			240	7.5	25,600	41.5	45	500	⁵ - - -	•	•	•	•
	10 kW (30U90)	10	208	7.5	25,600	47.6	60	600	⁵ - - -	⁵ - - -	•	•	•
			240	10.0	34,100	54.5	60	600	⁵ - - -	⁵ - - -	•	•	•
VWHA030H4	5 kW (30U88)	5	208	3.8	12,800	25.9	30	700	•	•	•	•	•
			240	5.0	17,100	29.3	30	700	•	•	•	•	•
	8 kW (30U89)	7.5	208	5.6	19,200	37.	45	725	•	•	•	•	•
			240	7.5	25,600	42.4	45	725	•	•	•	•	•
	10 kW (30U90)	10	208	7.5	25,600	48.4	60	750	•	•	•	•	•
			240	10.0	34,100	55.4	60	750	•	•	•	•	•
VWHA036H4	5 kW (30U88)	5	208	3.8	12,800	25.9	30	700	•	•	•	•	•
			240	5.0	17,100	29.3	30	700	•	•	•	•	•
	8 kW (30U89)	7.5	208	5.6	19,200	37.2	45	725	•	•	•	•	•
			240	7.5	25,600	42.4	45	725	•	•	•	•	•
	10 kW (30U90)	10	208	7.5	25,600	48.4	60	750	•	•	•	•	•
			240	10.0	34,100	55.4	60	750	•	•	•	•	•

NOTE - Circuit 1 Minimum Circuit Ampacity includes the Blower Motor Full Load Amps.

¹ Electric heater capacity only - does not include additional blower motor heat capacity.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F.

³ HACR type breaker or fuse.

⁴ Bold text indicates that the circuit breaker must be replaced with size noted. See Table on page 6.

⁵ Do not operate fan on low speed when Electric Heat Kit is used with VWHA air handler.

REPLACEMENT CIRCUIT BREAKERS

Voltage	Description	Catalog No.
208/240V - 1 Phase	25 amp, 2 pole	41K13
	30 amp, 2 pole	17K70
	40 amp, 2 pole	49K14
	50 amp, 2 pole	41K12



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