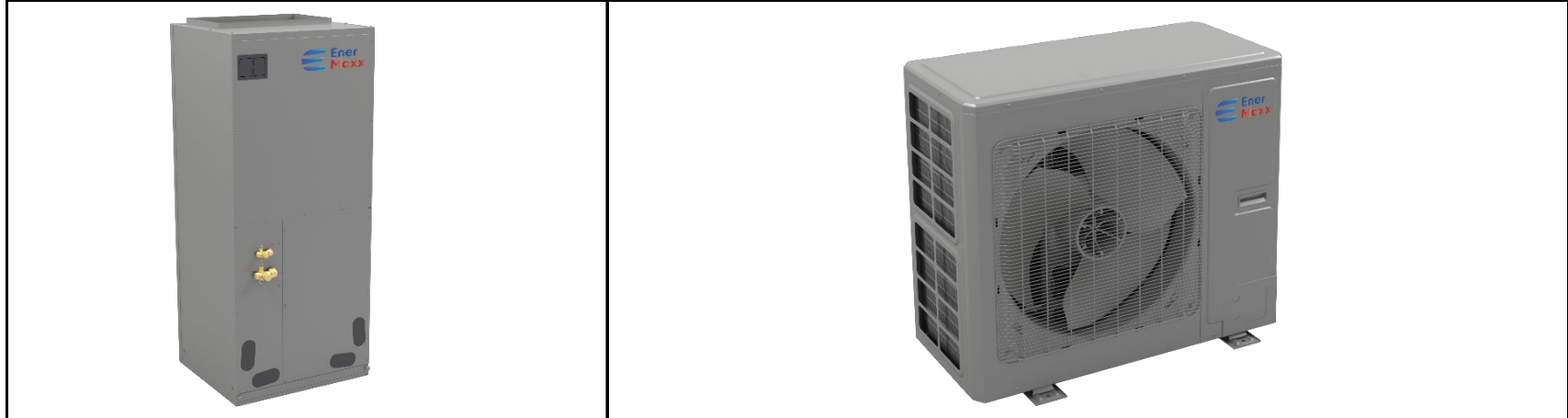




**SUBMITTAL DATA: ENVBR24HPJ1B / ENVBR36HPJ1OA** **24000 BTU/H Unitary Heat Pump Split System**

Job Name	Location	Date
Purchaser	Engineer	
Submitted To	For	
Unit Designation	Schedule No.	

<b>ENVBR24HPJ1B</b>	<b>ENVBR36HPJ1OA</b>
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**GENERAL FEATURES**

**AHRI Certificate: 208130264**

**High Efficiency DC Inverter Technology**

**Compact and Quiet 55 dB(A) Side Discharge Outdoor Unit**

**Zero Lot Line Design**

**Match with ENERMAXX or Competitive Indoor Unit**

**Designed for New Construction or Replacement Market**

**24VAC Thermostat Compatible**

**8 Speed Fan Motor**

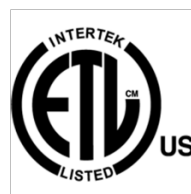
**Low Ambient Cooling down to -15°C (5°F)**

**Low Ambient Heating down to -30°C (-22°F)**

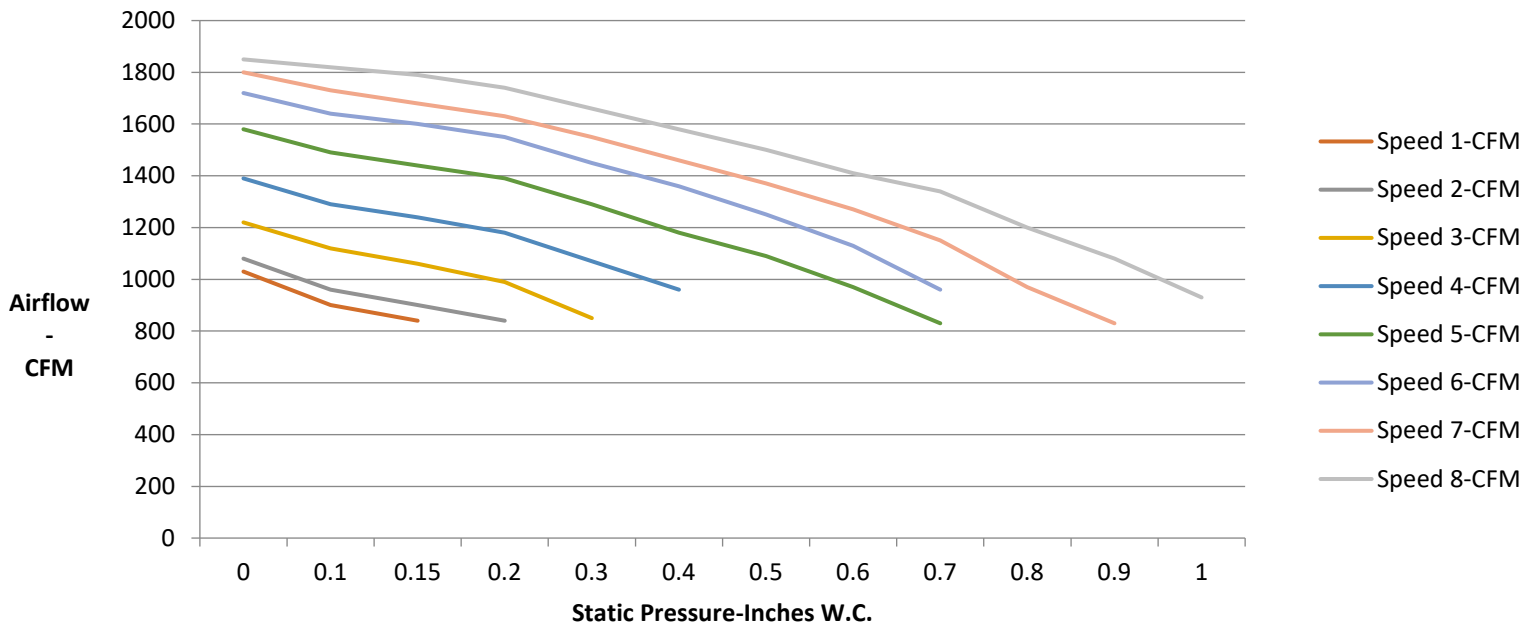
**Outdoor Coil has Copper Tube/Aluminum Fin with Acrylic Resin/Anti-Corrosion coil coating (Gold Color Fin - 1500Hr Salt Spray Rating)**

**Indoor Coil has Copper Tube/Aluminum Fin with Acrylic Resin/Anti-Corrosion coil coating (Blue Color Fin - 500Hr Salt Spray Rating)**

**Limited Warranty: Residential - 10 Years Parts & Compressor. Commercial - 5 Years Parts, 7 Years Compressor**



SPECIFICATIONS		ENVBR24HPJ1IB / ENVBR36HPJ1OA	
System Type		HEAT PUMP	
SYSTEM PERFORMANCE			
Cooling	Rated Capacity @ 35°C (95°F)	Btu/h	24000
	Min-Max Capacity	Btu/h	12000 - 24000
Heating	Rated Capacity @ 8.33°C (47°F)	Btu/h	24000
	Rated Capacity @ -8.33°C (17°F)	Btu/h	16300
	Min-Max Capacity	Btu/h	12000 - 30000
SEER / EER		20 / 12.5	
HSPF / COP		10.5 / 4.2	
Energy Star®		YES	
Cooling Temperature Range		°C (°F)	-15 - 54 (5 - 129)
Heating Temperature Range		°C (°F)	-30 - 24 (-22 - 75)
INDOOR UNIT		ENVBR24HPJ1IB	
Fan Motor Output Power		W	373
Fan Motor FLA		A	3
Air Flow		m <sup>3</sup> /h (CFM)	1630 (960)
External Static Pressure (Up to)		In w.c	1
Sound Pressure Level (Cooling / Heating)		dB(A)	45
Dehumidification		pt/hr	3.06
Condensate Drain Size (OD)		mm (in)	9.525 (3/4)
Unit Dimension (WxHxD)		mm (in)	540 × 1224 × 540 (21 1/4 × 48 1/4 × 21 1/4)
Package Dimension (WxHxD)		mm (in)	660 × 1281 × 603.25 (26 × 50 7/16 × 23 3/4)
Weight (Net / Gross)		kg (lbs)	71 / 77 (156 / 169)
Electric Heater (Optional)		kW	5, 8, 10
Coil Type (Blue Color Fin)		Copper Tube / Aluminum Fin	
OUTDOOR UNIT		ENVBR36HPJ1OA	
Compressor Type		Inverter Rotary	
Compressor RLA		A	16
Fan Motor Output Power		W	149
Fan Motor		A	1.5
Sound Pressure Level (Cooling / Heating)		dB(A)	55
Unit Dimension (WxHxD)		mm (in)	940 × 820 × 460 (32 1/4 × 37 × 18 1/8)
Package Dimension (WxHxD)		mm (in)	975 × 1084 × 573 (38 3/8 × 42 11/16 × 22 9/16)
Weight (Net / Gross)		kg (lbs)	98.5 / 109 (217 / 240)
Refrigerant Charge - R410A		kg (oz)	4.2 (148)
Coil Type (Gold Color Fin)		Copper Tube / Aluminum Fin	
REFRIGERANT PIPING			
Line Set Size (Liquid - Gas)		mm (in)	φ9.52 - φ19 (3/8 - 3/4)
Pre-Charge Length		m (ft)	9.4 (31)
Additional Charge		kg/m (oz/ft)	0.03 (0.32)
Pipe Length (Min - Max)		m (ft)	4.5 - 50 (10 - 164)
Max. Pipe Elevation		m (ft)	30 (98)
ELECTRICAL			
Power Supply (Voltage Operating Range)		208/230V / 1Ph / 60 Hz	
Outdoor Unit	Rated Current (Cooling / Heating)	A	21 / 25
	MCA / MOCP	A	24 / 35
Indoor Unit	Rated Current (Cooling / Heating)	A	3 / 3
	MCA / MOCP	A	4 / 15
Main Power Wire Size		AWG	Size Per Local Code
LIMITED WARRANTY		10 Year Parts & Compressor - Residential, 5 Year Parts, 7 Years Compressor - Commercial	



Static Pressure-Inches W.C.	0	0.1	0.15	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0
Speed 1-CFM	1030	900	840									
Speed 2-CFM	1080	960	900	840								
Speed 3-CFM	1220	1120	1060	990	850							
Speed 4-CFM	1390	1290	1240	1180	1070	960						
Speed 5-CFM	1580	1490	1440	1390	1290	1180	1090	970	830			
Speed 6-CFM	1720	1640	1600	1550	1450	1360	1250	1130	960			
Speed 7-CFM	1800	1730	1680	1630	1550	1460	1370	1270	1150	970	830	
Speed 8-CFM	1850	1820	1790	1740	1660	1580	1500	1410	1340	1200	1080	930

**NOTES:**

1. Above chart CFM ratings are based on dry coil with factory filter installed.
2. For wet coil CFM ratings, multiply the cfm by 0.96 correction factor

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature																			
		21.1°C (70°F) (DB) / 15°C (59°F) (WB)					23.9°C (75°F) (DB) / 17.2°C (63°F) (WB)					26.7°C (80°F) (DB) / 19.4°C (67°F) (WB)					32.2°C (90°F) (DB) / 22.8°C (73°F) (WB)				
		TC (Btu/h)	SC (Btu/h)	SHR	EER	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER(Btu/(h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER(Btu/(h·W))	Power Input (W)	TC (Btu/h)	SC (Btu/h)	SHR	EER(Btu/(h·W))	Power Input (W)
<b>MAX OUTPUT*</b>	-15° (5°F)	20400	16023	78.54%	20.40	1000	22200	17551	79.02%	21.14	1050	24000	19078	79.49%	21.82	1100	25300	20178	79.75%	21.94	1153
	-12.2°C (10°F)	20400	16052	78.69%	19.81	1030	22200	17569	79.10%	20.56	1080	24000	19085	79.52%	21.24	1130	25300	20185	79.78%	21.39	1183
	-9.4°C (15°F)	20400	16125	79.04%	19.07	1070	22200	17569	79.13%	19.91	1115	24000	19012	79.22%	20.69	1160	25300	20112	79.49%	20.86	1213
	-6.7°C (20°F)	20400	16098	78.91%	18.38	1110	22200	17565	79.11%	19.30	1150	24000	19032	79.30%	20.17	1190	25300	20132	79.57%	20.35	1243
	-3.9°C (25°F)	20400	16256	79.69%	17.74	1150	22200	17695	79.71%	18.73	1185	24000	19134	79.73%	19.67	1220	25300	20234	79.98%	19.87	1273
	-1.1°C (30°F)	20400	16012	78.49%	17.29	1180	22200	17534	78.95%	18.27	1215	24000	19056	79.40%	19.20	1250	25300	20156	79.67%	19.42	1303
	1.7°C (35°F)	20400	16103	78.94%	16.86	1210	22200	17612	79.30%	17.83	1245	24000	19120	79.67%	18.75	1280	25300	20220	79.92%	18.98	1333
	4.4°C (40°F)	20400	16065	78.75%	16.32	1250	22200	17558	79.06%	17.34	1280	24000	19050	79.38%	18.32	1310	25300	20150	79.64%	18.56	1363
	7.2°C (45°F)	20400	16203	79.43%	15.81	1290	22200	17667	79.57%	16.88	1315	24000	19130	79.71%	17.91	1340	25300	20230	79.96%	18.16	1393
	10°C (50°F)	20400	16014	78.50%	15.45	1320	22200	17427	78.50%	16.51	1345	24000	18840	78.50%	17.52	1370	25300	19940	78.81%	17.78	1423
	12.8°C (55°F)	20400	16158	79.21%	15.11	1350	22200	17604	79.29%	16.17	1372.5	24000	19050	79.38%	17.20	1395	25300	20150	79.64%	17.47	1448
	15.6°C (60°F)	20400	16243	79.62%	14.84	1375	22200	17682	79.64%	15.89	1397.5	24000	19120	79.67%	16.90	1420	25300	20220	79.92%	17.18	1473
	18.3°C (65°F)	20400	16320	80.00%	14.57	1400	22200	17760	80.00%	15.58	1425	24000	19200	80.00%	16.55	1450	25300	20300	80.24%	16.83	1503
	21.1°C (70°F)	20400	16219	79.50%	13.97	1460	22200	17697	79.70%	15.05	1475	24000	19175	79.90%	16.11	1490	25300	20275	80.14%	16.40	1543
	23.9°C (75°F)	20400	16279	79.80%	13.42	1520	22200	17716	79.80%	14.56	1525	24000	19152	79.80%	15.69	1530	25300	20252	80.05%	15.98	1583
	26.7°C (80°F)	20400	16217	79.50%	12.67	1610	22450	17902	79.72%	13.56	1655	24500	19587	79.95%	14.41	1700	25800	20687	80.18%	14.72	1753
	29.4°C (85°F)	20400	16218	79.50%	11.93	1710	22700	18047	79.50%	12.68	1790	25000	19875	79.50%	13.37	1870	26300	20975	79.75%	13.68	1923
	32.2°C (90°F)	20400	16257	79.69%	11.40	1790	22700	18104	79.75%	11.95	1900	25000	19950	79.80%	12.44	2010	26300	21050	80.04%	12.75	2063
	35°C (95°F)	20400	16320	80.00%	11.03	1850	22700	18160	80.00%	11.35	2000	25000	20000	80.00%	11.63	2150	26300	21100	80.23%	11.94	2203
	37.8°C (100°F)	20400	16245	79.63%	9.76	2090	22450	17873	79.61%	10.37	2165	24500	19500	79.59%	10.94	2240	25800	20600	79.84%	11.25	2293
40.6°C (105°F)	20400	16116	79.00%	9.07	2250	22200	17538	79.00%	9.67	2295	24000	18960	79.00%	10.26	2340	25300	20060	79.29%	10.57	2393	
43.3°C (110°F)	20400	16362	80.21%	8.41	2425	22200	17796	80.17%	8.98	2472.5	24000	19230	80.13%	9.52	2520	25300	20330	80.36%	9.83	2573	
46.1° (115°F)	20400	16524	81.00%	7.85	2600	22200	17982	81.00%	8.38	2650	24000	19440	81.00%	8.89	2700	25300	20540	81.19%	9.19	2753	
48.9°C (120°F)	20400	16250	79.66%	7.42	2750	22200	17875	80.45%	7.91	2805	24000	19500	81.25%	8.39	2860	25300	20600	81.42%	8.69	2913	
50°C (122°F)	20400	16283	79.82%	7.06	2890	22200	17802	80.16%	7.51	2955	24000	19321	80.50%	7.95	3020	25300	20421	80.72%	8.23	3073	
51.7°C (125°F)	20400	16542	81.09%	6.69	3050	22200	17784	80.18%	7.23	3070	24000	19025	79.27%	7.77	3090	25300	20125	79.55%	8.05	3143	
53.9°C (129°F)	20400	16345	80.12%	6.20	3290	22200	17903	80.60%	6.76	3285	24000	19460	81.08%	7.32	3280	25300	20560	81.26%	7.59	3333	

\*Maximum Output values are not based on AHRI test conditions

**LEGEND:** W - Watts  
 DB - Dry Bulb  
 TC - Total Capacity  
 SC - Total Capacity  
 SHR - Sensible Heat Ratio  
 COP - Coefficient of Performance

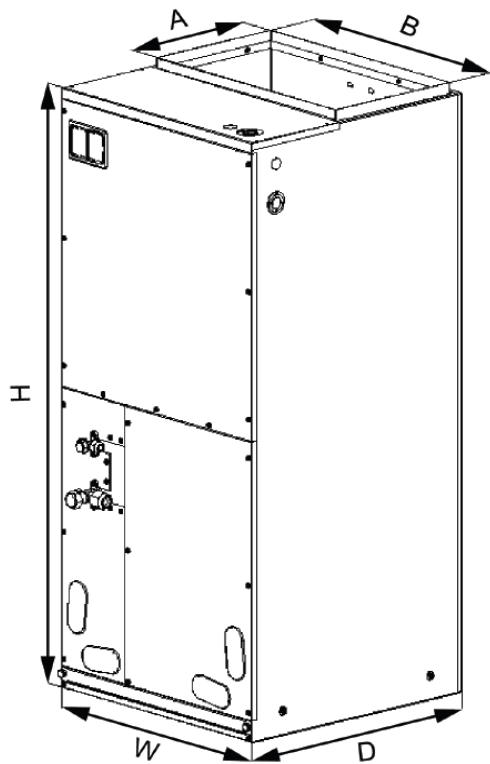
HEATING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature											
		21.1°C (70°F) (DB) / 15°C (59°F) (WB)			23.9°C (75°F) (DB) / 17.2°C (63°F) (WB)			26.7°C (80°F) (DB) / 19.4°C (67°F) (WB)			32.2°C (90°F) (DB) / 22.8°C (73°F) (WB)		
		TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)	TC (Btu/h)	COP(W/W)	Power Input (W)
<b>MAX OUTPUT*</b>	-30°C (-22°F)	18700	1.40	3920	18700	1.40	3920	18700	1.40	3920	20000	1.48	3973
	-28.9°C (-20°F)	20500	1.52	3960	20450	1.51	3960	20400	1.51	3960	21700	1.58	4013
	-26.1°C (-15°F)	22000	1.61	4000	22000	1.61	4000	22000	1.61	4000	23300	1.68	4053
	-23.3°C (-10°F)	23000	1.64	4100	23000	1.64	4100	23000	1.64	4100	24300	1.71	4153
	-20.6°C (-5°F)	24000	1.67	4200	24000	1.67	4200	24000	1.67	4200	25300	1.74	4253
	-17.8°C (0°F)	24000	1.85	3800	24000	1.85	3800	24000	1.85	3800	25300	1.92	3853
	-15°C (5°F)	24000	2.10	3350	24000	2.10	3350	24000	2.10	3350	25300	2.18	3403
	-12.2°C (10°F)	24000	2.20	3200	24000	2.20	3195	24000	2.21	3190	25300	2.29	3243
	-9.4°C (15°F)	24000	2.31	3050	24000	2.31	3045	24000	2.31	3040	25300	2.40	3093
	-8.3°C (17°F)	24000	2.43	2900	24000	2.43	2900	24000	2.43	2900	25300	2.51	2953
	-6.7°C (20°F)	24000	2.61	2700	24000	2.61	2700	24000	2.61	2700	25300	2.69	2753
	-3.9°C (25°F)	24000	2.81	2500	24000	2.81	2500	24000	2.81	2500	25300	2.90	2553
	-1.1°C (30°F)	24000	3.06	2300	24000	3.06	2300	24000	3.06	2300	25300	3.15	2353
	1.7°C (35°F)	24000	3.20	2200	24000	3.20	2200	24000	3.20	2200	25300	3.29	2253
	4.4°C (40°F)	24000	3.32	2120	24000	3.32	2120	24000	3.32	2120	25300	3.41	2173
	7.2°C (45°F)	24000	3.43	2050	24500	3.50	2050	25000	3.57	2050	26300	3.67	2103
	8.33°C (47°F)	26000	3.85	1980	26000	3.85	1980	26000	3.85	1980	27300	3.94	2033
	10°C (50°F)	26800	3.89	2020	26750	3.89	2015	26700	3.89	2010	28000	3.98	2063
	12.8°C (55°F)	27400	3.90	2060	27400	3.91	2055	27400	3.92	2050	28700	4.00	2103
	15.6°C (60°F)	28000	3.91	2100	28000	3.91	2100	28000	3.91	2100	29300	3.99	2153
18.3°C (65°F)	28000	3.83	2140	28000	3.95	2080	28000	4.06	2020	29300	4.14	2073	
21.1°C (70°F)	28000	3.76	2180	28000	3.96	2070	28000	4.19	1960	29300	4.27	2013	
23.9°C (75°F)	28000	3.71	2210	28000	3.99	2055	28000	4.32	1900	29300	4.40	1953	
26.7°C (80°F)													
30°C (86°F)													

\*Maximum Output values are not based on AHRI test conditions

- LEGEND: W - Watts**  
**DB - Dry Bulb**  
**TC - Total Capacity**  
**SC - Total Capacity**  
**SHR - Sensible Heat Ratio**  
**COP - Coefficient of Performance**

SYSTEM FEATURES	
Compressor	Inverter
Ultra Low Frequency Torque Control	YES
Power Factor Correction	YES
Compressor Type	Rotary
Refrigerant Type	R410A
Outdoor Electronic Expansion Valve (EEV)	YES
Indoor TXV Control	YES
Basepan With Electric Heater	YES
Compressor With Electric Heater	YES
Fin Coating (Outdoor - Gold Color & Indoor - Blue Color)	Acrylic Resin
Intelligent Defrosting	YES
Intelligent Preheating	YES
Low Voltage Startup	YES
Memory/Power Failure Recovery	YES
Self Diagnosis	YES
Low Ambient Cooling	YES
24VAC Thermostat Compatible	YES
Indoor Fan Type	Centrifugal
Blower Speed Configurations	8
Auxiliary Electrical Heater	Optional



Dimensions	
A	295.3 (11 5/8)
B	508 (20)
H	1225.5 (48 1/4)
W	540 (21 1/4)
D	540 (21 1/4)

Filter Size	
Supplied*	489 x 514.4 x 12.7 (19 1/4 x 20 1/4 x 1/2)
Suggested	489 x 514.4 x 25.4 (19 1/4 x 20 1/4 x 1)

\*Supplied filter is metal mesh

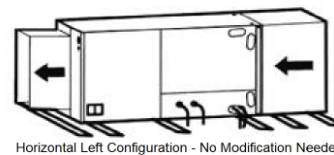
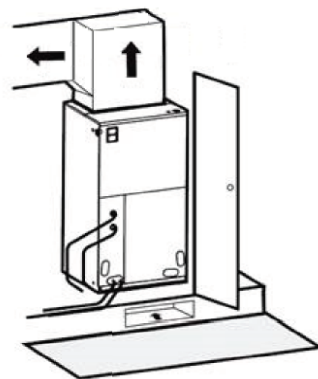
**Unit = mm (inch)**

Clearances	
Front	> 609.6 (24)

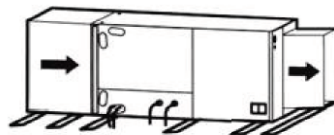
Allow a minimum of 609.6mm (24") in front of the unit for service clearance. When installing in an area directly over a finished ceiling (such as an attic), an emergency drain pan is required directly under the unit. **See local and state codes for requirements.** When installing this unit in an area that may become wet, elevate the unit with a sturdy, non-porous material. In installations that may lead to physical damage (i.e. a garage) it is advised to install a protective barrier to prevent such damage.

This air handler is designed for a complete supply and return ductwork system.

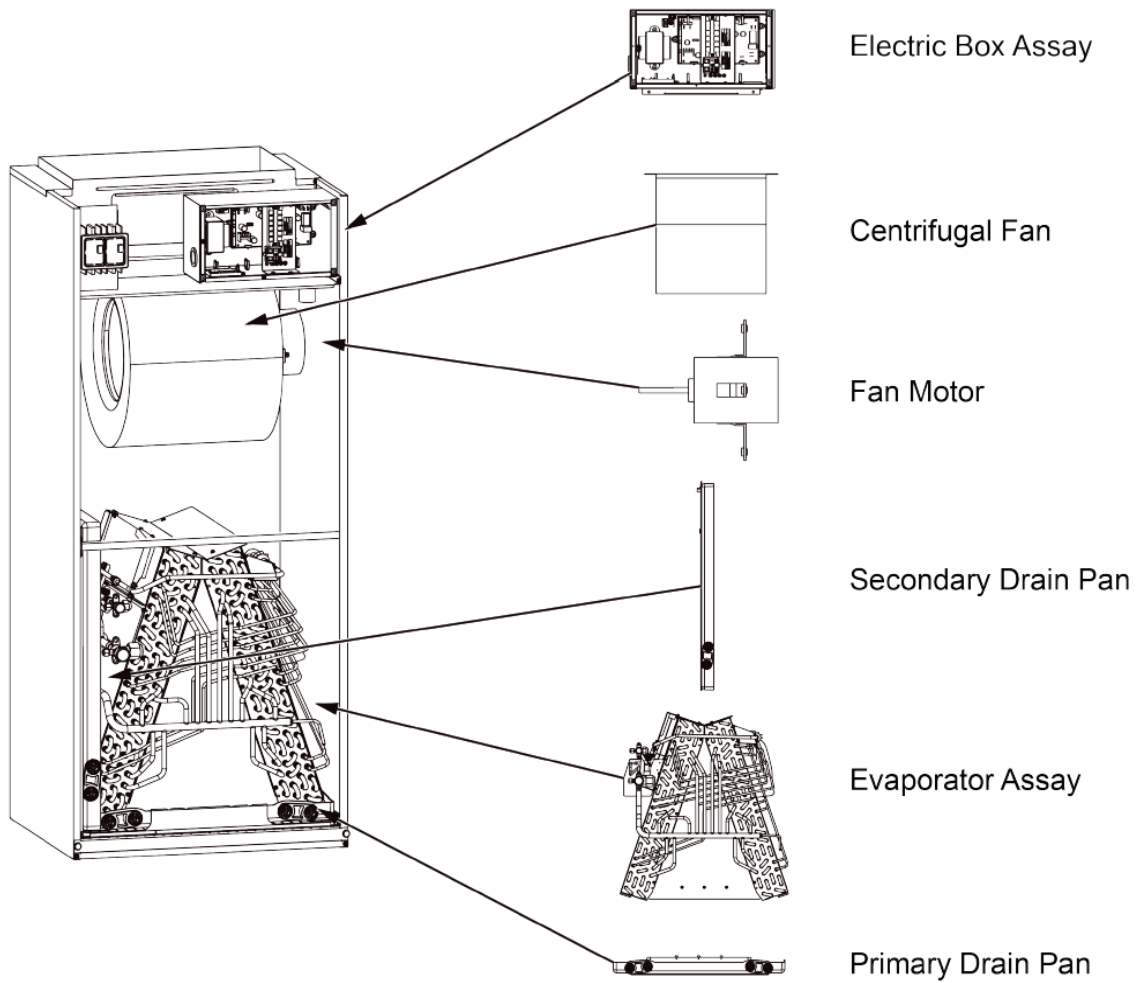
**Multi-Position Capabilities**



Horizontal Left Configuration - No Modification Needed



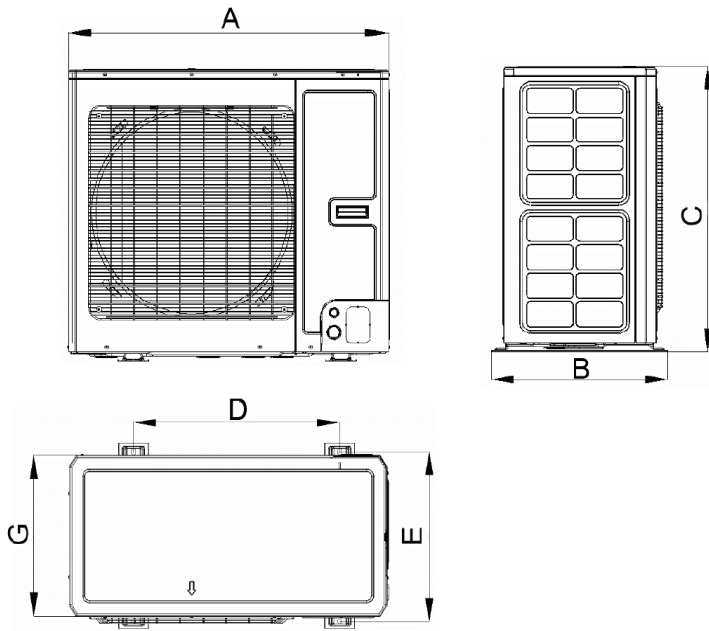
Horizontal Right Configuration - Must Relocate Drain Pan



Model	Heat Kit Model	Electric Heat (kW)		Min. Circuit		Max.Fuse or Breaker	
		240V	208V	240V	208V	240V	208V
ENVBR24HPJ1B	FLEXXHTR5KW	5	3.76	26	22.6	30	25
	FLEXXHTR8KW	8	6	41.7	36	45	40
	FLEXXHTR10KW	10	7.51	52	45	60	45
	21-4227-00	5	3.76	26	22.6	30	25
	21-4216-00	8	6	41.7	36	45	40
	21-4216-01	10	7.51	52	45	60	45

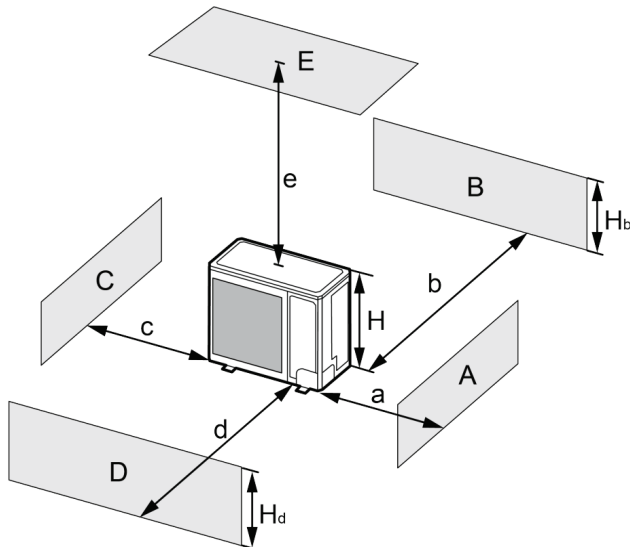






Dimensions	
A	940 (37)
B	511.2 (20 1/8)
C	819.2 (32 1/4)
D	609.6 (24)
E	485.8 (19 1/8)
G	460.4 (18 1/8)

Unit = mm (inch)



A~E	$H_b$	$H_d$	H	mm (in)				
				a	b	c	d	e
B	-	-	-	-	$\geq 101.6$ (4)	-	-	-
A,B,C,	-	-	-	$\geq 304.8$ (12)	$\geq 101.6$ (4)	$\geq$	-	-
B,E	-	-	-	-	$\geq 101.6$ (4)	-	-	$\geq 1016$ (40)
A,B,C,E	-	-	-	$\geq 304.8$ (12)	$\geq 152.4$ (6)	$\geq$	-	$\geq 1016$ (40)
D	-	-	-	-	-	-	$\geq 1016$ (40)	-
D,E	-	-	-	-	-	-	$\geq 1016$ (40)	$\geq 1016$ (40)
B,D	$H_b < H_d$	$H_d > H$	-	-	$\geq 101.6$ (4)	-	$\geq 1016$ (40)	-
	$H_b > H_d$	$H_d < H$	-	-	$\geq 101.6$ (4)	-	$\geq 1016$ (40)	-
B,D,E	$H_b < H_d$	$H_b \leq 1/2H$	-	$\geq 254$ (10)	-	$\geq 2032$ (80)	$\geq 1016$ (40)	
		$1/2H < H_b \leq H$	-	$\geq 254$ (10)	-	$\geq 2032$ (80)	$\geq 1016$ (40)	
		$H_b > H$	Prohibited					
	$H_b > H_d$	$H_d \leq 1/2H$	-	$\geq 101.6$ (4)	-	$\geq 2032$ (80)	$\geq 1016$ (40)	
		$1/2H < H_d \leq H$	-	$\geq 203.2$ (8)	-	$\geq 2032$ (80)	$\geq 1016$ (40)	
$H_d > H$	Prohibited							

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