

Submittal Data Sheet

Submittal data model no. CPFX48A / WSEHV4860RA1-C
48000 BTU/H AIR SOURCE HEAT PUMP with AIR HANDLER UNIT



Approval: Location: Date: Engineer: Construction: Unit #: Drawing #: Submitted to: Submitted by: Reference:			 	
Set Model: Indoor Unit Model No: CPFX48A Outdoor Unit Model No: WSEHV4860RA1-C AHRI certification No: 211624979 Energy Star: Yes			Refrigerant Piping data: Gas Pipe Size (OD) 3/4 in (19.05 mm) Liquid Pipe Size (OD) 3/8 in (9.52 mm) Connection Method Flared (Std), Brazing (Opt) Factory Charge 220.8 oz Additional Charge 0.3 oz/ft Pre-Charge Length 25 ft (7.6 m) Max Refrigerant Pipe Length 98 ft (29.87 m) Min Refrigerant Pipe Length 10 ft (3.05 m) Max Refrigerant Pipe Elevation 49 ft (14.93 m)	
System Rating: Cooling: Rated Capacity 48000 BTU/H Capacity range 34000-48000 BTU/H Power Input 4360 W SEER (SEER2) 18 (17) EER (EER2) 11 (11) Heating: Rated Capacity @ 47°F 48000 BTU/H Capacity range 34000-52000 BTU/H Power Input 3910 W HSPF Region IV (HSPF2 Region IV) 10.5 (9) COP 3.6 (3.4) Rated Capacity @ 17°F 33000 BTU/H Power Input 3819 W COP 2.54			Indoor Unit CPFX48A Fan Motor Output Power 1 HP FLA 3.2 A Airflow 1470 CFM Rated External Static Pressure 0.2 in Wg External Static Pressure (Range) 0-4 in Wg Sound Pressure level 50 dB(A) Dehumidification 7 pt/hr Power Supply (dedicated circuit: Size per local code) Normal Operational Voltage 208/230V, 1 Phase, 60 Hz Voltage Range 187-253 V MCA 4 A MOCP/ Breaker Size 15 A	
Operating Range: Cooling Max 129°F (54°C) Min 5°F (-15°C) Heating Max 75°F (24°C) Min -22°F (-30°C)			Outdoor Unit WSEHV4860RA1-C Compressor DC Inverter Rotary Compressor RLA 19 A Refrigerant R410a Fan Motor Output Power 1/2 HP x 2 FLA 1.5 A x 2 Crankcase Heater 40 W Sound Preassure level 58 dB(A) Power Supply (dedicated circuit: Size per local code) Normal Operational Voltage 208/230V, 1 Phase, 60 Hz Voltage Range 187-253 V MCA 35 A MOCP/ Breaker Size 45 A	

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General Features:

Multi-speed Constant Torque (CT) ECM Blower Motor in the AHUs
All aluminum A-coil
Fully- insulated cabinet design
Integrated Filter rack with tool-less door access
Whisper Quiet Operation
24 VAC Thermostat Compatible
Anti-Corrosion Fin Coating
10 yrs limited Compressor & Part warranty (Residential Use)
Auxillary Heater compatible
Intelligent Defrosting
EEV in Outdoor Unit & TXV in Indoor Unit
Low Voltage Start up
Basepan with Electric Heater
Power Failure recovery
Self Diagnosis

Accessories (Optional)

Electrical Heat Strips

Air Handler Model	Cooling Capacity (Ton)	Optional Electric Strip Heater	
		Model	Capacity
CPFX24A/ CPFX24A36A	2.0 / 3.0	WH55KW	5 kW
CPFX24A/ CPFX24A36A	2.0 / 3.0	WH58KW	8 kW
CPFX24A36A/ CPFX48A/ CPFX48A60A	3.0 / 4.0 / 5.0	WH510KW	10 kW
CPFX24A36A/ CPFX48A/ CPFX48A60A	3.0 / 4.0 / 5.0	WH515KW	15 kW
CPFX48A/ CPFX48A60A	4.0 / 5.0	WH520KW	20 kW

Outdoor unit accessories				
No.	Name	Appearance	Qty	Usage
1	Throw-over pipe		1	Connect the unit with the liquid pipe
2	Throw-over pipe		1	Connect the unit with the gas pipe

To convert Flare nut connection to Brazing connection

Dip Switch Settings:

CAPACITY CAN BE SWITCHED BY DIP SWITCHES OF OUTDOOR UNIT

As a standard, outdoor units comes this setting for 3 Ton & 5 Ton capacities

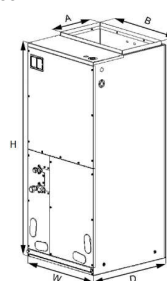


To convert to 2 Ton and 4 Ton, the following changes are made on site



Dimensional Specifications:

Indoor



W	24-3/4
D	21-1/4
H	57-1/4
A	11-5/8
B	20

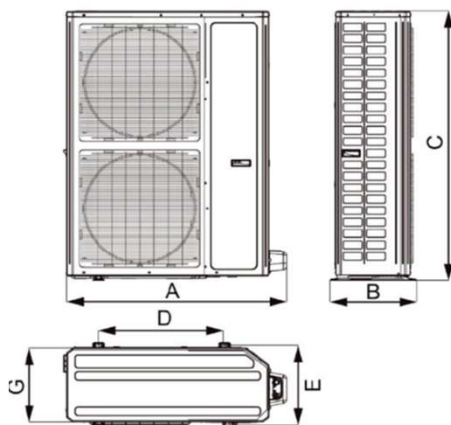
Units: inch

Net Weight (lbs)	202.8
Shipping Weight (lbs)	218

Drain Connector	3/4 in OD
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Dimensional Specifications:

Outdoor



A	42-3/4
B	16-7/8
C	53-3/4
D	24-1/2
E	15-1/2
G	14-1/2

Unit : inch

Net Weight (lbs)	308.6
Shipping Weight (lbs)	337

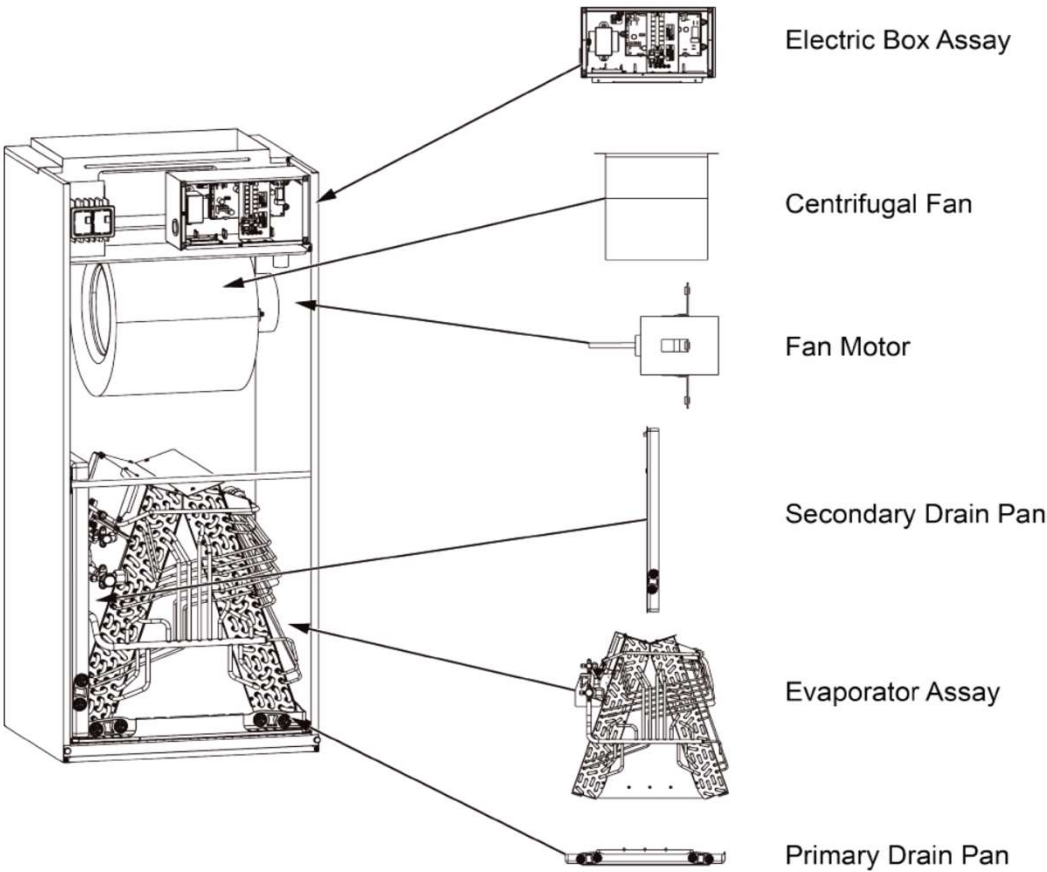
Notes:

- Power wiring size must comply with applicable National/ Regional/ Provincial/ State Codes for both Indoor & Outdoor unit Dedicated Circuit
- Test Conditions are based on AHRI 210/240

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Main Parts

INDOOR



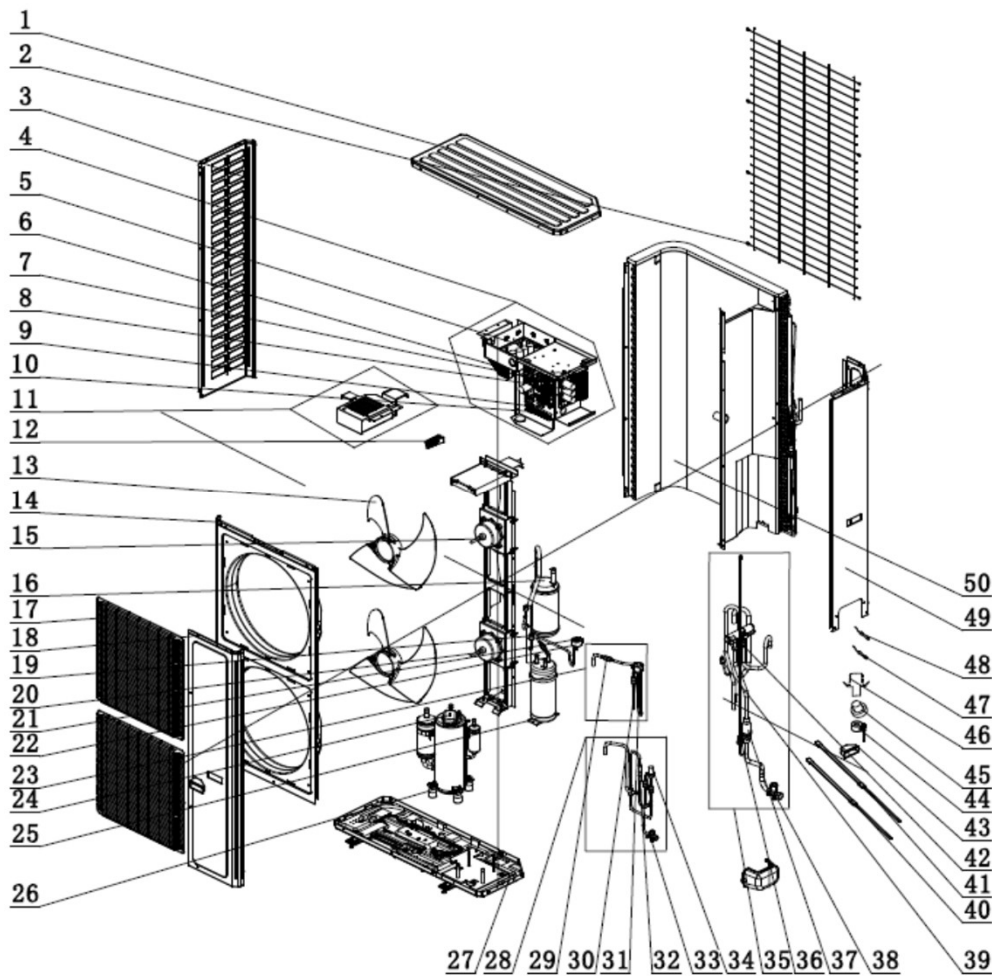
Model	Filter size
NPFX24A36A	490×516×15
NPFX48A60A	525×516×15

Unit: mm

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Main Parts

OUTDOOR

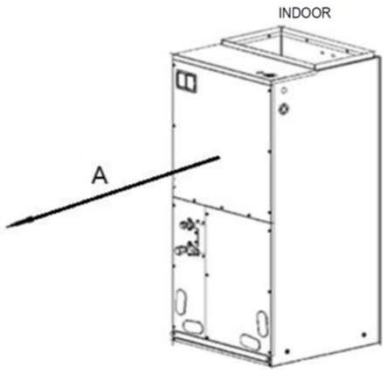


50	Condenser Assy
49	Rear Side Plate Sub-Assy
48	Temperature Sensor
47	Temperature Sensor
46	Drainage Joint
45	Drainage Hole Cap
44	4 Way Valve Coil
43	Handle
42	4-Way Valve
41	Electrical Heater(Compressor)
40	Electrical Heater(Compressor)
39	Pressure Protect Switch
38	Out Off Valve 3/8
37	Strainer
36	Pressure Sensor
35	4-Way Valve Assy
34	Electronic Expansion Valve
33	Out-off Valve
32	One Way Valve
31	Electric Expand Valve Fitting
30	Magnet Coil (Electromagnetic Valve)
29	Strainer
28	Out Off Valve Sub-Assy
27	Chassis Sub-Assy
26	Foot
25	Accumulator
24	Compressor and Fittings
23	Electric Expansion Valve Sub-Assy
22	Electric Expand Valve Fitting
21	Electromagnetic Valve
20	Brushless DC Motor
19	Pressure Protect Switch
18	Front Side Plate
17	Front Grill
16	Gas-liquid Separator Sub-Assy
15	Brushless DC Motor
14	Cabinet
13	Axial Flow Fan
12	Handle
11	Inductance Box Assy
10	Terminal Board
9	Terminal Board
8	Filter Board
7	Main Board
6	Radiator
5	Drive Board
4	Electric Box Assy
3	Left Side Plate
2	Rear Grill
1	Coping

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Minimum Space Requirement

INDOOR

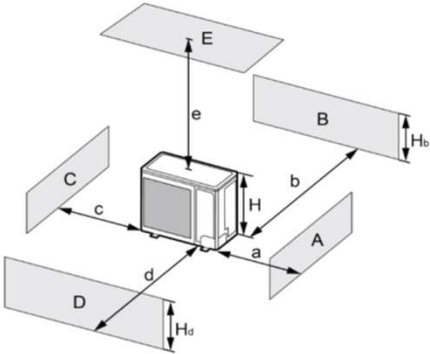


A	24
ALL OTHER SIDES	0

Units: inch

ALWAYS CHECK AND FOLLOW
STATE AND LOCAL CODE
REGULATIONS FOR MINIMUM
SPACING REQUIREMENTS

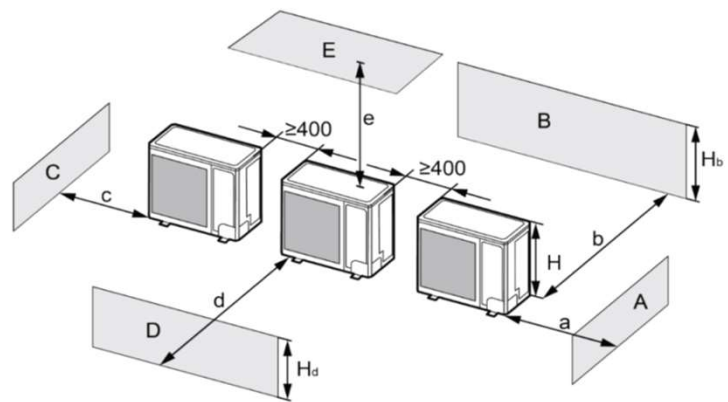
OUTDOOR



A~E	H _b	H _d	H	(mm)				
				a	b	c	d	e
B	—	—	—	-	≥100	-	-	-
A,B,C,	—	—	—	≥300	≥100	≥100	-	-
B,E	—	—	—	-	≥100	-	-	≥1000
A,B,C,E	—	—	—	≥300	≥150	≥150	-	≥1000
D	—	—	—	-	-	-	≥1000	-
D,E	—	—	—	-	-	-	≥1000	≥1000
B,D	H _b < H _d	H _d > H	—	-	≥100	-	≥1000	-
	H _b > H _d	H _d < H	—	-	≥100	-	≥1000	-
B,D,E	H _b < H _d	H _b ≤ 1/2H	—	-	≥250	-	≥2000	≥1000
		1/2H < H _b ≤ H	—	-	≥250	-	≥2000	≥1000
		H _b > H	Prohibited					
	H _b > H _d	H _d ≤ 1/2H	—	-	≥100	-	≥2000	≥1000
		1/2H < H _d ≤ H	—	-	≥200	-	≥2000	≥1000
		H _d > H	Prohibited					

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MULTIPLE OUTDOOR UNIT ARRANGEMENT

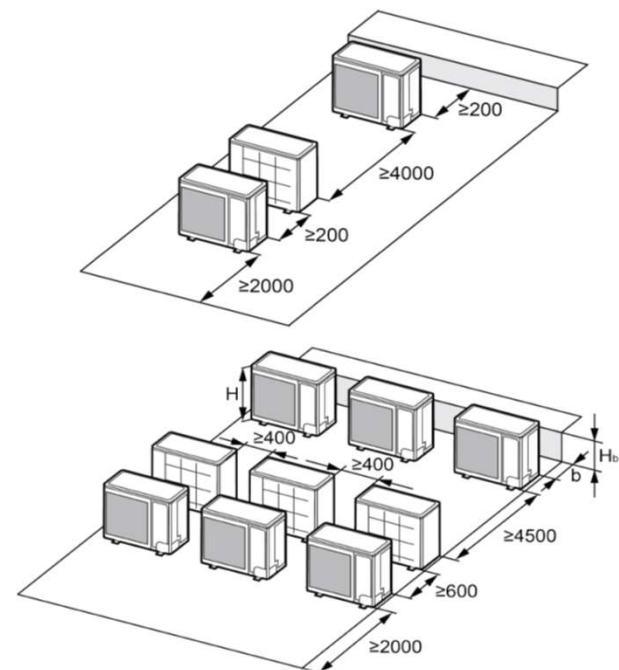


A~E	H _b H _d H		(mm)				
			a	b	c	d	e
A,B,C	—		≥300	≥300	≥1000	-	-
A,B,C,E	—		≥300	≥300	≥1000	-	≥1000
D	—		-	-	-	≥2000	-
D,E	—		-	-	-	≥2000	≥1000
B,D	H _b < H _d	H _d > H	-	≥300	-	≥2000	-
	H _b > H _d	H _d ≤ 1/2H	-	≥250	-	≥2000	-
		1/2H < H _d ≤ H	-	≥300	-	≥2500	-
B,D,E	H _b < H _d	H _b ≤ 1/2H	-	≥300	-	≥2000	≥1000
		1/2H < H _b ≤ H	-	≥300	-	≥2500	≥1000
		H _b > H	Prohibited				
	H _b > H _d	H _d ≤ 1/2H	-	≥250	-	≥2500	≥1000
		1/2H < H _d ≤ H	-	≥300	-	≥2500	≥1000
		H _d > H	Prohibited				

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MULTIPLE UNIT HORIZONTAL ARRANGEMENT

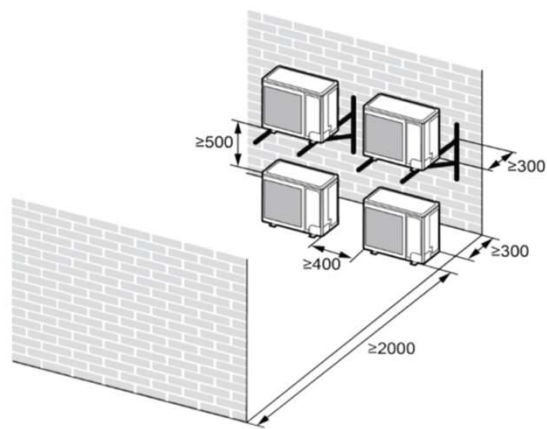
Unit: mm



H_b H	(mm)
$H_b \leq 1/2H$	$b \geq 250$
$1/2H < H_b \leq H$	$b \geq 300$
$H_b > H$	Prohibited

MULTIPLE UNIT VERTICAL ARRANGEMENT

Unit: mm



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PERFORMANCE

COOLING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature											
		60°F(15°C)				70°F(21°C)				80°F(27°C)			
		Capacity	Power Input	EER	SHC	Capacity	Power Input	EER	SHC	Capacity	Power Input	EER	SHC
MAX OUTPUT	50°F	29640	2720	10.89	21040	38760	3230	12	27520	45600	3400	13.41	32370
	65°F	31200	3000	10.4	22150	40800	3560	11.45	28970	48000	3750	12.80	34080
	75°F	31200	3080	10.12	22150	40800	3650	11.15	28970	48000	3850	12.47	34080
	85°F	31200	3240	9.62	22150	40800	3850	10.6	28970	48000	4050	11.85	34080
	95°F	31200	3480	8.96	22150	40800	4130	9.87	28970	48000	4360	11.01	34080
	105°F	31200	4240	7.35	22150	40800	5030	8.1	28970	48000	5300	9.06	34080
	115°F	28270	3880	7.27	20070	36970	4610	8	26250	43500	4860	8.95	30880

HEATING PERFORMANCE

Outdoor Ambient Temperature (DB)		Return Air Temperature											
		60°F(15°C)				70°F(21°C)				80°F(27°C)			
		TC (BtuH)	Input Power (watts)	COP		TC (BtuH)	Input Power (watts)	COP		TC (BtuH)	Input Power (watts)	COP	
MAX OUTPUT	-22°F	26660	5580	1.40		26400	5700	1.36		25870	5750	1.32	
	-15°F	28780	5780	1.46		28500	5900	1.41		27930	5960	1.37	
	-5°F	34540	6070	1.67		34200	6200	1.62		33510	6260	1.57	
	5°F	43430	6780	1.88		43000	6920	1.82		42140	6990	1.77	
	17°F	At AHRI Rated Conditions				32800	3810	2.52		@ 1470 SCFM			
	17°F	48480	6740	2.11		48000	6880	2.04		47040	6950	1.98	
	32°F	48480	5680	2.50		48000	5800	2.42		47040	5860	2.35	
	47°F	50500	4290	3.45		50000	4210	3.48		49000	4420	3.25	
	60°F	52520	4560	3.37		52000	4650	3.27		50960	4690	3.18	

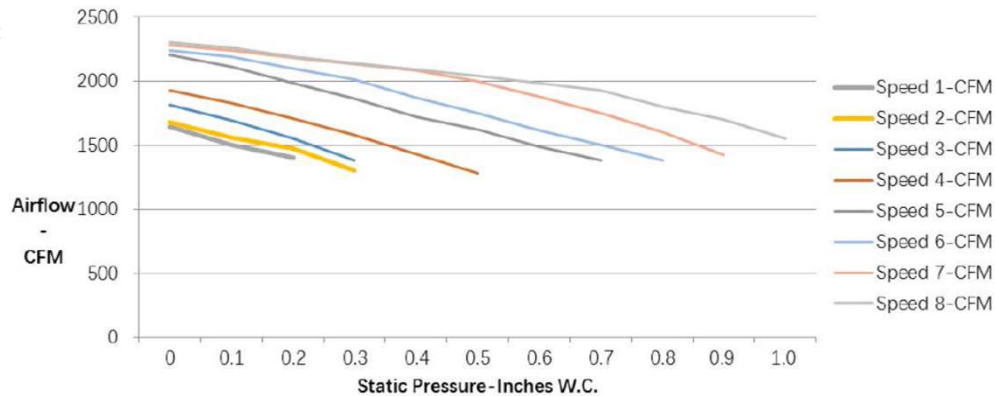
NOTE: THESE ARE "MAX OUTPUT" VALUES ARE BASED ON COMPUTER SIMULATIONS

LEGEND

DB --- Dry Bulb
WB --- Wet Bulb

TC --- Total Capacity (BtuH)
SC --- Sensible Capacity (BtuH)
Input Power---(Watts)
COP---Coefficient Of Performance

FAN CURVE



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Additional Listing with Gas Furnace and A Coils

AHRI Number	Heat Pump Model Number	Coil Model Number	Furnace Model Number	Capacity	EER2	SEER2	HSPF2 (Region IV)	ENERGY STAR Cold Climate Certified
212404705	WSEHV4860RA1-C	HE37960A200A0000AP	WPV070T4BA	4	10	17	8.5	Yes
212404705	WSEHV4860RA1-C	DE37960C225B2505AP	WPV070T4BA	4	10	17	8.5	Yes
212404705	WSEHV4860RA1-C	DE37960C225B2522AP	WPV070T4BA	4	10	17	8.5	Yes
212404708	WSEHV4860RA1-C	HE37960A200A0000AP	WPV080T4BA	4	10	17	8.5	Yes
212404708	WSEHV4860RA1-C	DE37960C225B2505AP	WPV080T4BA	4	10	17	8.5	Yes
212404708	WSEHV4860RA1-C	DE37960C225B2522AP	WPV080T4BA	4	10	17	8.5	Yes
212404706	WSEHV4860RA1-C	HE37960A200A0000AP	WUV070T4BA	4	10	17	8.5	Yes
212404706	WSEHV4860RA1-C	DE37960C225B2505AP	WUV070T4BA	4	10	17	8.5	Yes
212404706	WSEHV4860RA1-C	DE37960C225B2522AP	WUV070T4BA	4	10	17	8.5	Yes
212404707	WSEHV4860RA1-C	HE37960A200A0000AP	WUV080T4BA	4	10	17	8.5	Yes
212404707	WSEHV4860RA1-C	DE37960C225B2505AP	WUV080T4BA	4	10	17	8.5	Yes
212404707	WSEHV4860RA1-C	DE37960C225B2522AP	WUV080T4BA	4	10	17	8.5	Yes

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