

Air Handler Heat Pump System	
Location:	Approval:
Engineer:	Date:
Submitted to:	Construction:
Submitted by:	Unit Qty:
Reference:	Unit Designation (Model #):



INDOOR SPECIFICATION	
Indoor Air Flow (High/Low) (CFM)	605/512
Indoor Noise Level (High/Low) (dBA)	49
Dimension (W×D×H)	20-15/32×14-61/64×36-1/32
	520×380×915
Package (W×D×H)	23-15/64×17-23/32×39-11/64
	580×436×995
Net/Gross Weight	88/95
	39.9/43.1

OUTDOOR SPECIFICATION	
Compressor Type	ROTARY
Compressor Model	KTN210D60UMT3
Refrigerant	R32
Refrigerant Oil Charge(mL)	630
Refrigerant Oil	VG74
Outdoor Air Flow (Max) (CFM)	2100.0
Outdoor Noise Level (dBA)	58
Dimension (W×D×H)	23-5/8×23-5/8×25
	600×600×635
Package (W×D×H)	25-63/64×25-63/64×26-3/16
	660×660×665
Net/Gross Weight	111/118
	50.5/53.5

EFFICIENCY			
Cooling		Heating	
SEER2	15.0	HSPF2-5	7.1
EER2	10.0	COP	3.50

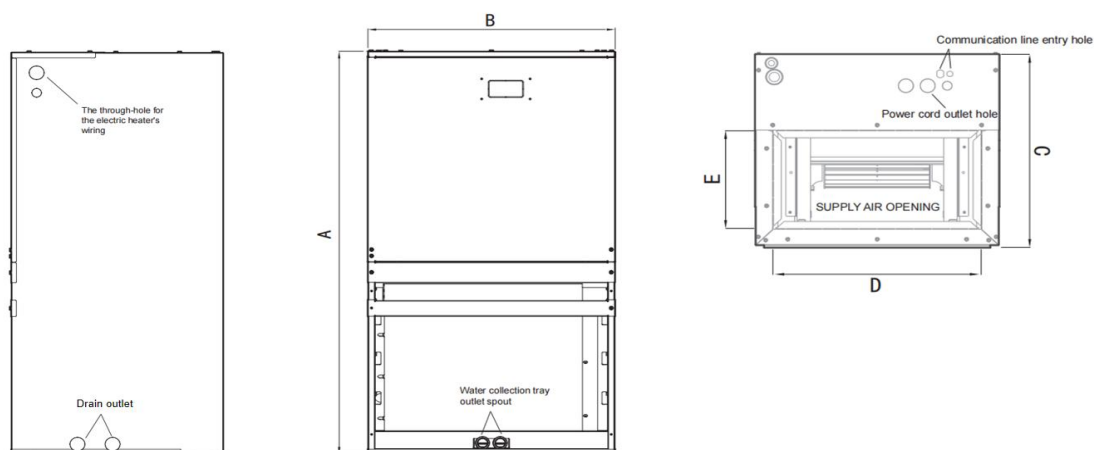
PERFORMANCE of Cooling	
Cooling (Btu/hr)	
Rated Capacity	18000
Min/Max Capacity	6500~19000
Moisture Removal(L/h)	1.67
Standard Operating Range(*F/*C)	5~131(-15~55)
Rated Cooling Conditions:	
Indoor: 80°F DB/67°F WB	
Outdoor: 95°F DB/75°F WB	

PERFORMANCE of Heating	
Heating (Btu/hr)	
1. @ 47°F Rated	19000
1. @ 47°F Min/Max Capacity	6800~21000
2. @ 17°F Rated	12500
3. @ 5°F Rated: Capacity / COP	17000/1.85
3. @ 5°F Max: Capacity	16000
Standard Operating Range(*F/*C)	-4~75(-20~24)
1. Rated Heating Conditions:	
Indoor: 70°F DB/60°F WB	
Outdoor: 47°F DB/43°F WB	
2. Rated Heating Conditions:	
Indoor: 70°F DB/60°F WB	
Outdoor: 17°F DB/15°F WB	
3. Heating Conditions, Compressor	
Indoor: 70°F DB/60°F WB	
Operating at Max. Frequency	
Outdoor: 5°F DB/5°F WB	

ELECTRICAL	
Indoor Power Supply	208/230V,60Hz,1Ph
Indoor MCA 115V/(208/230V)	1.5
Indoor MOP	3
Outdoor Power Supply	208/230V,60Hz,1Ph
Outdoor MCA	16
Outdoor MOP	20
Communication Wiring	AWG 25×3 Shielded
Compressor RLA	8.4
Outdoor Fan Motor RLA	2.3
Outdoor Fan Motor W	200
Indoor Fan Motor RLA	1.19
Indoor Fan Motor W	100
System Power Input @ Cooling (W)	1800(600~1800)
System Power Input @ Heating (W)	1590(500~1860)
MCA: Min. circuit amps (A)	MOCP: Max. over current protection (A)
RLA: Rated load amps (A)	W: Fan motor rated output (W)

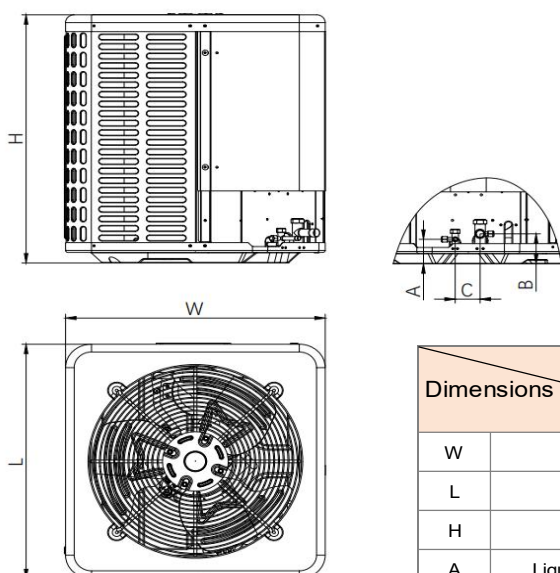
PIPING	
Throttle type(Indoor)	Piston
Throttle type(Outdoor)	Capillary
Liquid Size	9.52mm(3/8in)
Gas Size	19mm(3/4in)
Max. Piping Length(ft/m)	98.4(30)
Max. Height Difference(ft/m)	65.6(20)
Max. Pre-charged Length(ft/m)	24.6(7.5)
Refrigerant Pre-charged Amount(oz/kg)	65.26(1.85)
Additional Charge of Refrigerant((oz/ft)/(g/m))	0.52(48)
Connection Method	Welding

Indoor Unit Dimension



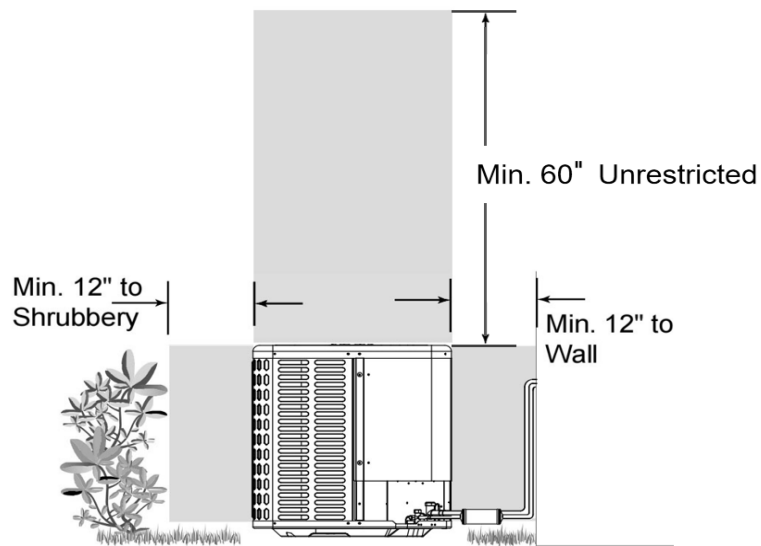
Dimensions		Model		18/24K		24/36K	
				inch	mm	inch	mm
A	Model Height			36-1/32	915	39-9/16	1005
B	Model width			20-15/32	520	22-3/64	560
C	Supply Air Opening width			14-61/64	380	19-3/32	485
D	Return Air Opening Width			17-33/64	445	18-57/64	480
E	Model Depth			9-29/64	240	9-27/32	250

Outdoor Unit Dimension

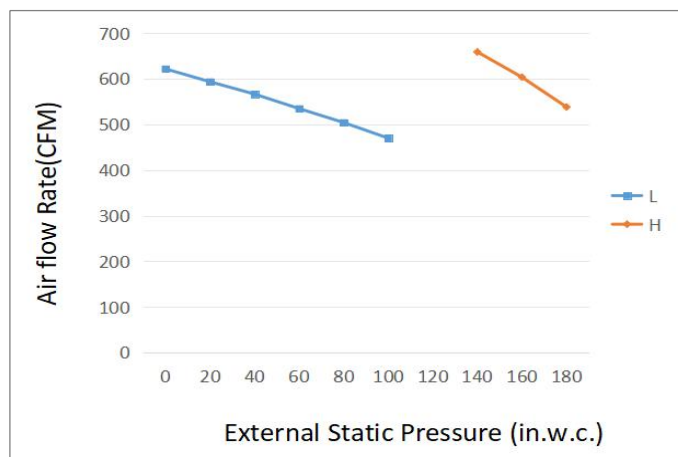


Dimensions		Model		18K/24K		30K/36K	
				inch	mm	inch	mm
W	Model width			23-5/8	600	29-9/64	740
L	Model length			23-5/8	600	29-9/64	740
H	Model height			25	635	25	635
A	Liquid side valve height			2-31/64	63	2-31/64	63
B	Distance between two valves			3-1/32	77	3-1/32	77
C	Gas side valve height			2-9/32	58	2-9/32	58

Installation Instruction For Outdoor Unit



Fan Performance For Indoor Unit



Features

- Front air intake, easy installation
- External static pressure up to 0.80 In.W.G
- 1 inch R4.2 fiberglass free insulation reduces condensation and boosts efficiency(optional)
- Optional Auxiliary heat kit up to 20kW
- Easy Maintenance
- Multiple control options available:
 - Wired controller with built-in WiFi
 - Third-Party 24V Thermostat
- Adaptive Control System
- Crankcase heater equipped as standard

ComfortStar®

Air Conditioning & Heating Products

Performance Capacity Ratings

COOLING PERFORMANCE DATA

OD_Model	ID_Model	Furnace	Brand	ARIREF	ID_Type	Stage	Est_Airf_low	ACHP	IshSVTC												
BAH32-18-15	CWM32-18-15		ComfortStar		A	High	650	H													
OUTDOOR		59					63					67					71				
DB	IDB (°F)	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80	72	74	76	78	80
85	TC ¹	16.60	16.65	16.70	16.75	16.80	17.70	17.75	17.81	17.86	17.91	18.80	18.86	18.91	18.97	19.03	20.00	20.06	20.12	20.18	20.24
	Sensible ²	13.19	14.29	15.39	16.49	16.60	10.86	11.96	13.06	14.16	15.27	8.47	9.57	10.67	11.77	12.87	6.07	7.17	8.27	9.37	10.47
	kW	1.37	1.37	1.37	1.37	1.38	1.37	1.37	1.37	1.37	1.38	1.37	1.37	1.37	1.37	1.38	1.38	1.38	1.38	1.38	1.39
90	TC ¹	16.20	16.25	16.30	16.35	16.40	17.20	17.25	17.30	17.36	17.41	18.30	18.35	18.41	18.47	18.52	19.40	19.46	19.52	19.58	19.63
	Sensible ²	12.99	14.09	15.19	16.20	16.20	10.63	11.73	12.83	13.93	15.03	8.25	9.35	10.45	11.55	12.66	5.82	6.92	8.02	9.12	10.23
	kW	1.44	1.44	1.44	1.44	1.45	1.44	1.44	1.44	1.44	1.45	1.45	1.45	1.45	1.45	1.46	1.45	1.45	1.45	1.45	1.46
95	TC ¹	15.70	15.75	15.79	15.84	15.89	16.70	16.75	16.80	16.85	16.90	17.80	17.85	17.91	17.96	18.01	18.90	18.96	19.01	19.07	19.13
	Sensible ²	12.74	13.84	14.94	15.70	15.70	10.39	11.49	12.60	13.70	14.80	8.04	9.14	10.24	11.34	12.44	5.62	6.72	7.82	8.92	10.03
	kW	1.51	1.51	1.51	1.51	1.52	1.51	1.51	1.51	1.51	1.52	1.52	1.52	1.52	1.52	1.53	1.53	1.53	1.53	1.53	1.54
100	TC ¹	15.20	15.25	15.29	15.34	15.38	16.20	16.25	16.30	16.35	16.40	17.30	17.35	17.40	17.46	17.51	18.40	18.46	18.51	18.57	18.62
	Sensible ²	12.49	13.59	14.69	15.20	15.20	10.16	11.26	12.36	13.47	14.57	7.82	8.92	10.02	11.13	12.23	5.42	6.52	7.62	8.72	9.83
	kW	1.59	1.59	1.59	1.59	1.60	1.59	1.59	1.59	1.59	1.60	1.60	1.60	1.60	1.60	1.61	1.61	1.61	1.61	1.61	1.62
105	TC ¹	14.70	14.74	14.79	14.83	14.88	15.70	15.75	15.79	15.84	15.89	16.70	16.75	16.80	16.85	16.90	17.80	17.85	17.91	17.96	18.01
	Sensible ²	12.24	13.34	14.44	14.70	14.70	9.93	11.03	12.13	13.24	14.34	7.57	8.67	9.77	10.87	11.97	5.19	6.29	7.39	8.49	9.59
	kW	1.67	1.67	1.67	1.68	1.68	1.68	1.68	1.68	1.68	1.69	1.69	1.69	1.69	1.69	1.70	1.70	1.70	1.70	1.71	1.71
115	TC ¹	13.70	13.74	13.78	13.82	13.87	14.60	14.64	14.69	14.73	14.78	15.60	15.65	15.69	15.74	15.79	16.60	16.65	16.70	16.75	16.80
	Sensible ²	11.75	12.85	13.70	13.70	13.70	9.43	10.53	11.63	12.74	13.84	7.10	8.20	9.30	10.40	11.50	4.71	5.81	6.91	8.01	9.12
	kW	1.86	1.86	1.86	1.87	1.87	1.86	1.86	1.86	1.87	1.87	1.87	1.87	1.87	1.87	1.88	1.88	1.89	1.89	1.89	1.90

HEATING PERFORMANCE DATA

Model	Heating		Outdoor conditions (DB)										
	Indoor Conditions DB		5°F	10°F	17°F	20°F	25°F	32°F	35°F	40°F	47°F	50°F	57°F
			-15°C	-12.2°C	-8.3°C	-6.7°C	-3.9°C	0°C	1.7°C	4.4°C	8.3°C	10°C	13.9°C
CWM32-18-15 BAH32-18-15 (208-230V)	60°F	TC	13.32	15.81	18.29	18.61	18.93	19.24	19.56	19.88	20.34	20.54	20.77
	(15.6°C)	Input	1.44	1.46	1.54	1.54	1.53	1.52	1.50	1.52	1.49	1.44	1.42
	65°F	TC	12.94	15.35	17.76	18.07	18.38	18.68	18.99	19.30	19.75	19.94	20.17
	(18.3°C)	Input	1.48	1.50	1.57	1.57	1.56	1.56	1.54	1.56	1.52	1.48	1.45
	70°F	TC	12.56	14.90	17.24	17.54	17.84	18.14	18.44	18.74	19.17	19.36	19.58
	(21.1°C)	Input	1.51	1.54	1.61	1.61	1.60	1.59	1.58	1.60	1.59	1.52	1.48
	75°F	TC	12.18	14.45	16.72	17.01	17.30	17.60	17.89	18.18	18.59	18.78	18.99
	(23.9°C)	Input	1.56	1.59	1.66	1.65	1.64	1.64	1.62	1.64	1.60	1.56	1.52