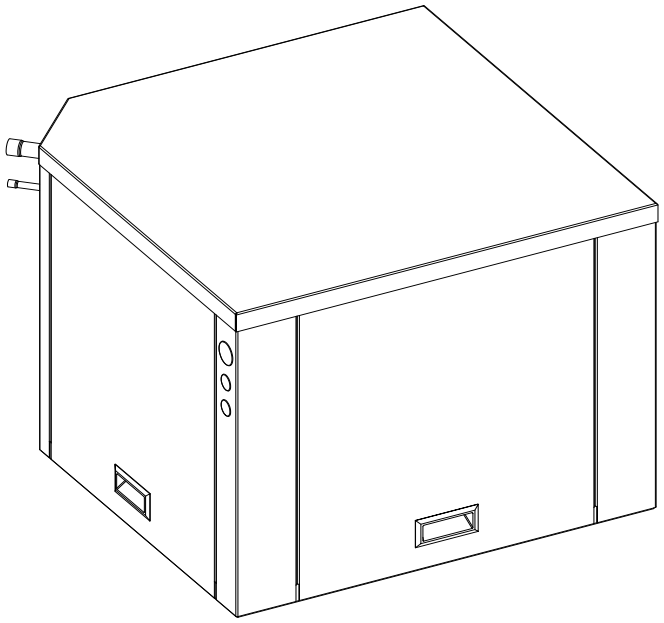
ENERTECH
ENERGY + TECHNOLOGY

Engineering Submittal Data

BS/BT MODELS SPLIT SYSTEM WATER-TO-AIR HEAT PUMPS

w/ EAD MULTI-POSITION AIR HANDLERS & EED MICRO CHANNEL CASED "A" COILS



Project Name: _____

Engineer: _____

Contractor: _____

Architect: _____

Date Received: _____

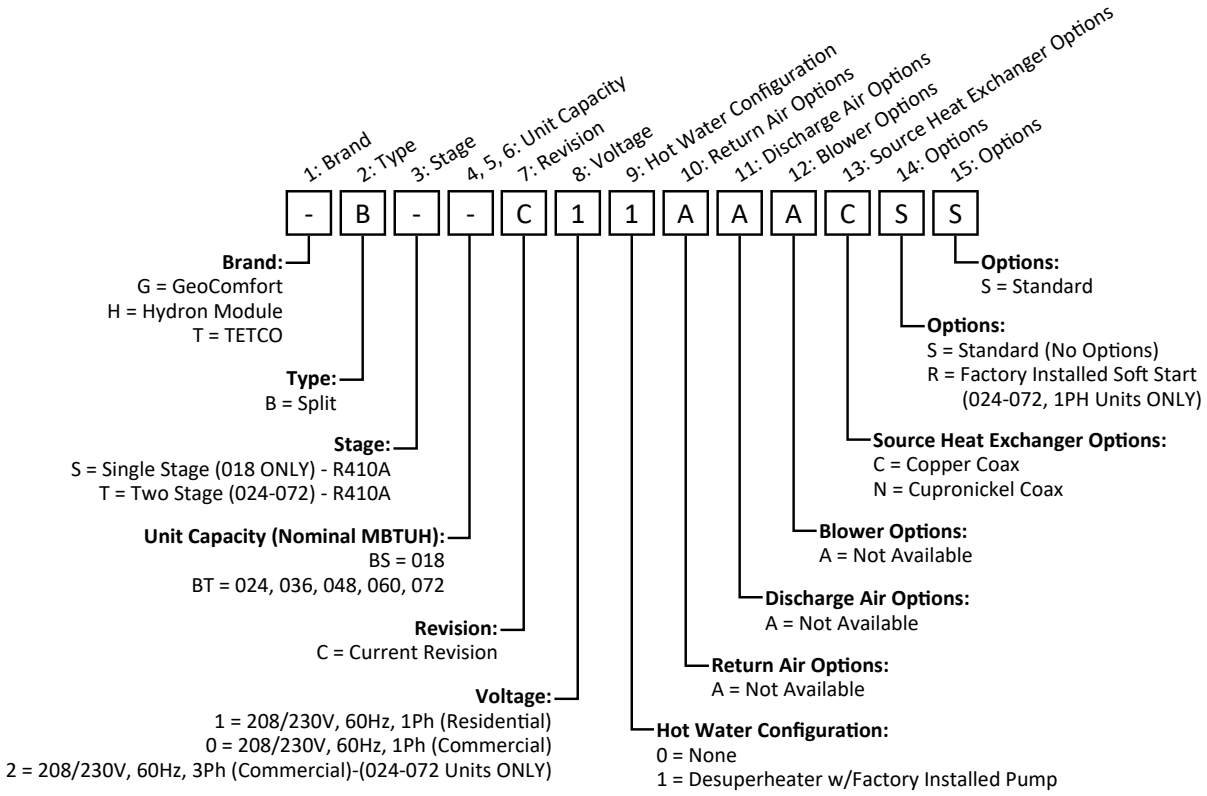
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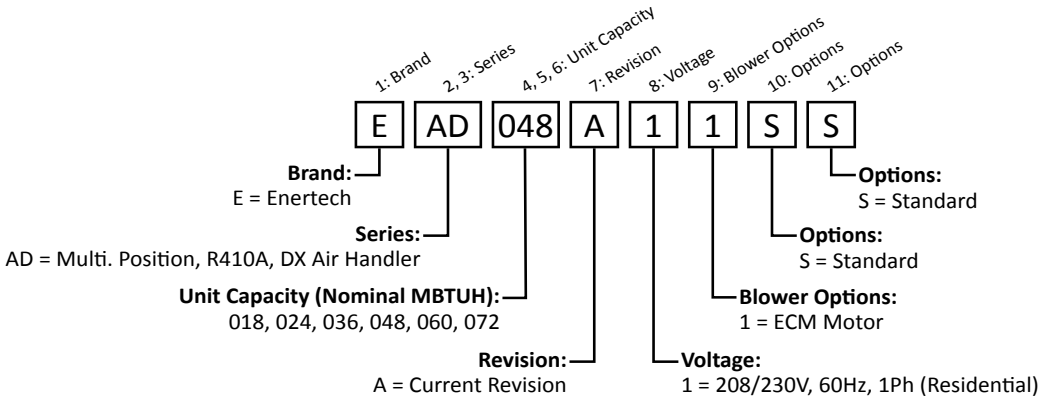
Unit Tag	Model Number

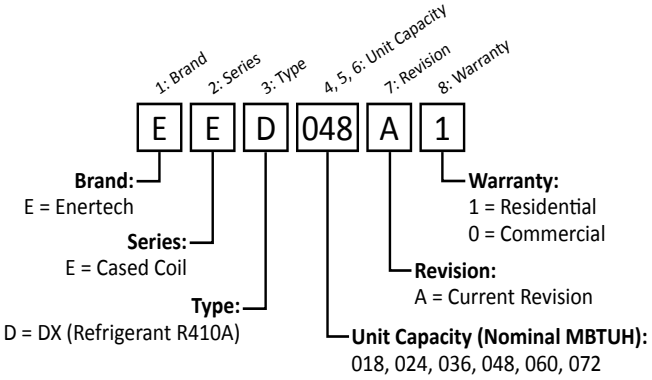
Notes:

20D218-44NN

Nomenclature Decoder







AHRI Performance Data

BS/BT Models with AD Series Air Handler

UNIT	Rating TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP
BS018	WL	21,100	18.3	23,300	6.0				
	GW	24,300	31.6	18,700	5.0				
	GL	22,200	22.2	14,400	3.9				
BT024	WL	24,100	17.5	29,400	5.0	19,500	18.8	22,300	5.5
	GW	28,900	26.9	23,900	4.7	22,300	33.3	17,900	4.7
	GL	26,300	20.4	18,800	3.9	21,500	27.8	15,900	4.3
BT036	WL	35,200	16.6	46,000	5.3	25,600	19.5	33,100	6.0
	GW	39,700	24.8	37,200	4.7	30,600	35.0	26,700	4.8
	GL	36,900	19.3	29,000	3.9	29,300	28.9	23,500	4.3
BT048	WL	47,800	16.6	62,000	5.4	35,900	18.8	45,700	6.2
	GW	54,200	25.4	50,800	4.8	41,500	34.6	36,700	5.1
	GL	50,300	19.5	41,000	3.9	39,600	28.6	32,900	4.5
BT060	WL	58,400	15.8	71,300	4.9	43,900	17.0	52,900	5.5
	GW	65,700	23.5	58,300	4.4	50,400	30.1	42,700	4.6
	GL	61,100	18.2	46,800	3.8	48,400	25.2	38,200	4.2
BT072	WL	65,300	14.5	85,500	4.5	50,700	15.3	65,200	5.1
	GW	70,700	21.1	70,500	4.1	58,100	26.8	52,900	4.4
	GL	68,400	16.9	57,300	3.5	56,000	22.4	47,700	4.0

BS/BT Models with ED Series Cased Coils

UNIT	Rating TYPE	F/L COOL	F/L EER	F/L HEAT	F/L COP	P/L COOL	P/L EER	P/L HEAT	P/L COP
BS018	WL	20,900	18.0	23,400	6.0				
	GW	24,200	30.5	18,600	5.0				
	GL	22,100	21.7	14,500	3.9				
BT024	WL	25,600	16.8	30,300	5.3	19,500	18.2	23,100	5.5
	GW	28,800	25.3	24,400	4.8	22,400	31.4	18,400	4.7
	GL	26,800	19.5	19,200	4.1	21,500	26.4	16,300	4.5
BT036	WL	35,800	16.6	45,200	4.9	27,300	19.3	32,900	5.9
	GW	40,500	24.6	36,800	4.7	31,300	33.5	26,600	4.9
	GL	37,600	19.2	28,800	3.8	30,100	28.2	23,600	4.3
BT048	WL	49,100	16.7	61,600	5.6	36,600	18.7	45,700	6.3
	GW	55,000	24.9	50,800	4.9	41,700	32.6	37,000	5.2
	GL	51,300	19.3	40,700	4.1	40,100	27.2	33,100	4.6
BT060	WL	60,700	15.6	73,500	5.0	44,800	17.1	52,900	5.5
	GW	63,600	21.9	60,200	4.5	51,700	29.1	42,400	4.6
	GL	63,400	17.8	48,100	3.8	50,000	24.8	37,500	4.2
BT072	WL	67,000	14.4	85,400	4.7	52,600	15.5	65,500	5.2
	GW	70,700	20.7	70,700	4.2	59,300	26.1	53,500	4.4
	GL	69,900	16.7	56,800	3.5	57,400	22.1	47,900	4.0

Unit Physical Data

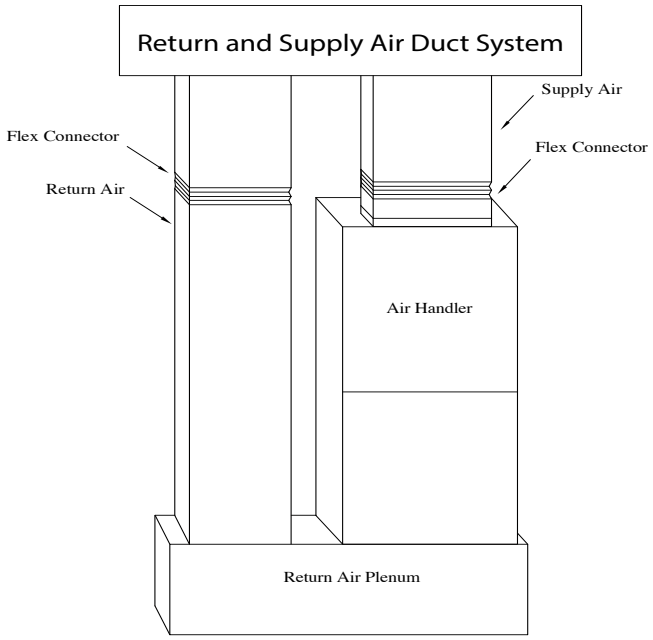
Split - BS/BT Compressor Section						
Model Number	**BS018**	**BT024**	**BT036**	**BT048**	**BT060**	**BT072**
Compressor Type	Single Stage Scroll Compressor	Dual Stage Unloading Scroll Compressor				
Connection Size (I.D.) Liquid - Vapor	3/8" - 5/8"	3/8" - 5/8"	3/8" - 5/8"	3/8" - 3/4"	3/8" - 7/8"	3/8" - 7/8"
Source Water Conn. (Resid.)	1" Dbl. O-Ring	1" Dbl. O-Ring	1" Dbl. O-Ring	1" Dbl. O-Ring	1" Dbl. O-Ring	1" Dbl. O-Ring
Source Water Conn. (Comm.)	1" FPT	1" FPT	1" FPT	1" FPT	1" FPT	1" FPT
HWG Water (if applicable)	3/4" FPT	3/4" FPT	3/4" FPT	3/4" FPT	3/4" FPT	3/4" FPT
Refrigerant Charge (oz.) *	39	42	61	93	92	93
UNIT WEIGHT DATA (lbs)						
Unit Weight	190	190	201	226	229	244
Tare Weight	26	26	26	26	26	26
Shipped Weight	216	216	227	252	255	270
Corner A	53	53	61	68	69	74
Corner B	53	53	52	58	59	63
Corner C	42	42	48	54	54	58
Corner D	42	42	41	46	46	49

* Always check the unit data plate for specific charge volume.



AHRI Air Handler and "A" Coil Matches		
Compressor Section	**Air Handler Match**	**Cased Coil Match**
BS018	EAD018	EED018
BT024	EAD024	EED024
BT036	EAD036	EED036
BT048	EAD048	EED048
BT060	EAD060	EED060
BT072	EAD072	EED072

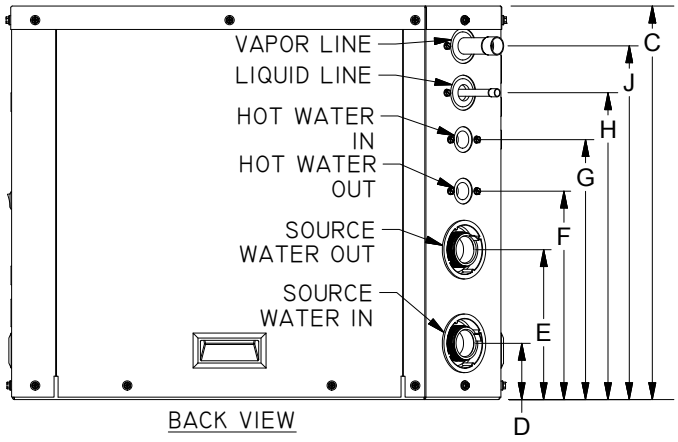
Note: In order to have an AHRI/Energy Star Certified product, the unit must be installed with its certified match.



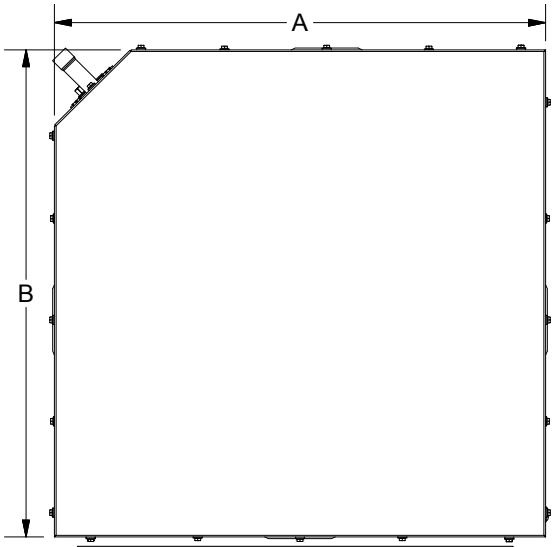
⚠ WARNING ⚠

IF USING A DUAL FUEL APPLICATION, CASED COIL MUST BE INSTALLED ON THE OUTLET OF THE FURNACE. INSTALLATION ON THE RETURN COULD CAUSE FURNACE HEAT EXCHANGER FAILURE, AND MAY VOID FURNACE WARRANTY.

Unit Dimensional Data : BS/BT

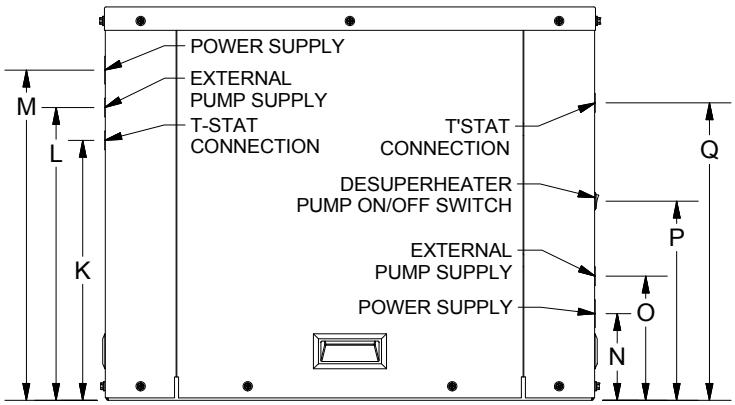


BACK VIEW



Enertech Recommends A Minimum of 2 to 2 1/2 Feet of Service Area Clearance For Installation And Maintenance.

TOP VIEW

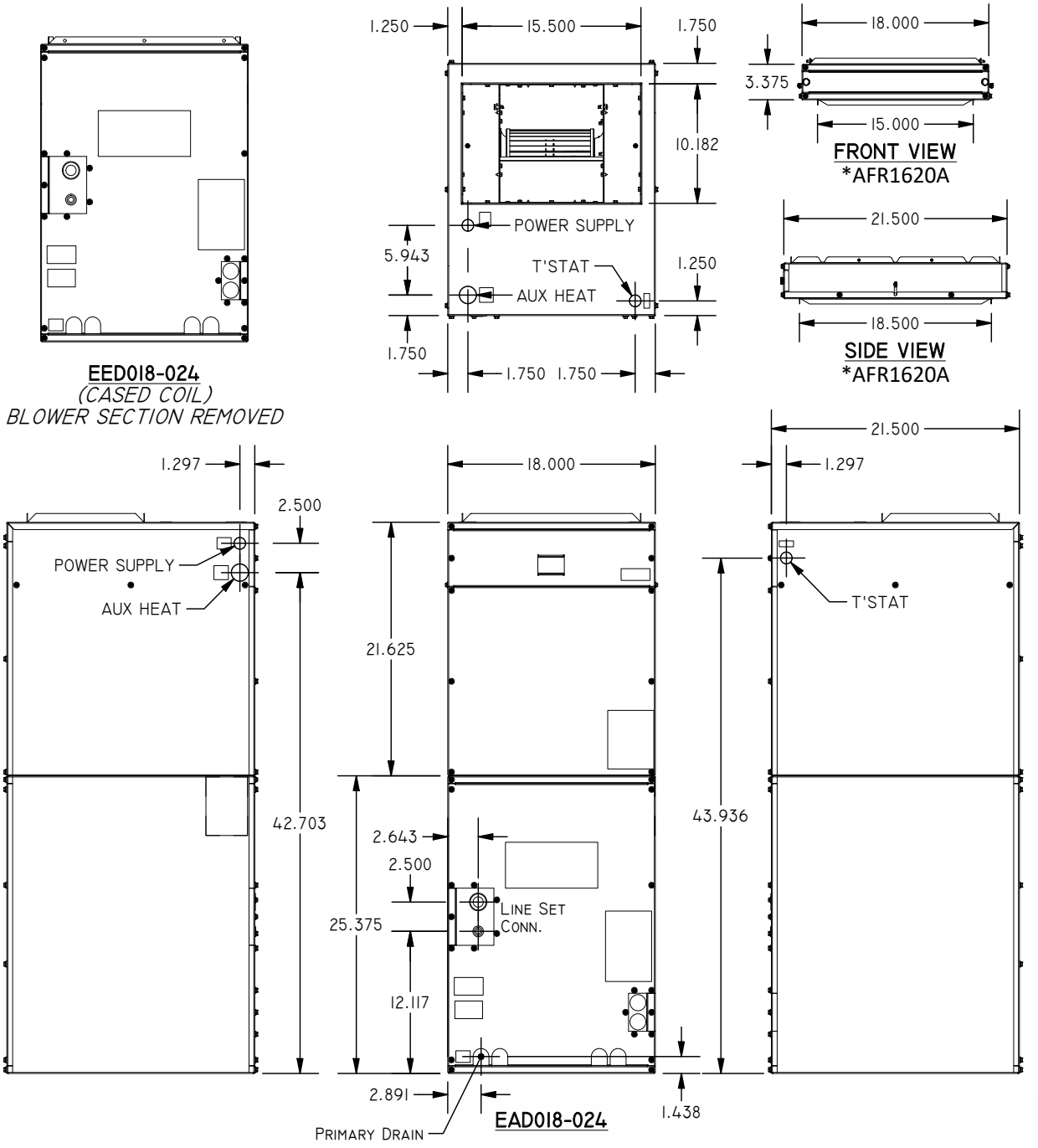


FRONT VIEW

Cabinet Dimensions in Inches		018-072
CABINET OVERALL	A	26
	B	26
	C	21
WATER CONNECTIONS	D	3
	E	8
	F	11.125
	G	13.875
LINE-SET CONNECTIONS	H	16.375
	J	18.875
ELECTRICAL KNOCKOUTS	K	13.875
	L	15.625
	M	17.625
	N	4.625
	O	6.625
	P	10.625
	Q	15.875

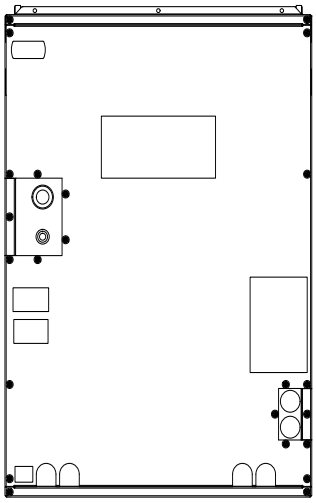
NOTES:
- All desuperheater connections are 3/4” FPT.
- All electrical knockouts are sized 1/2” or 3/4” conduit.
- All measurements are in inches.
- All drawings are typical, individual models may vary.

Unit Dimensional Data : AD/ED018-024

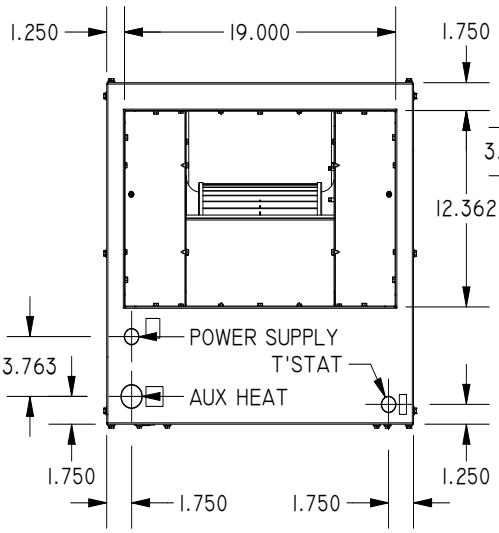


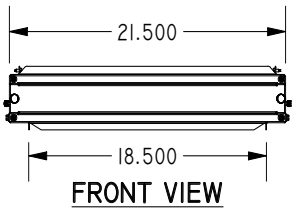
(EAD) Air Handler & (EED) Cased Coil					
Model	**Line Set Connections**	**Electrical Knockouts**	**EAD Unit Weight**	**EED Unit Weight**	***Accessory Filter Rack**
018-024	3/8” - 5/8”	Sized for 1/2” or 1” Conduit	155 Lbs	80 Lbs	AFR1620A
036	3/8” - 5/8”		190 Lbs	95 Lbs	AFR2020A
048	3/8” - 3/4”				
060-072	3/8” - 7/8”		210 Lbs	100 Lbs	AFR2320A

Unit Dimensional Data : AD/ED036-048

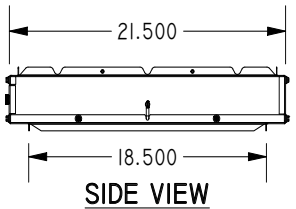


EED036-048
(CASED COIL)
BLOWER SECTION REMOVED

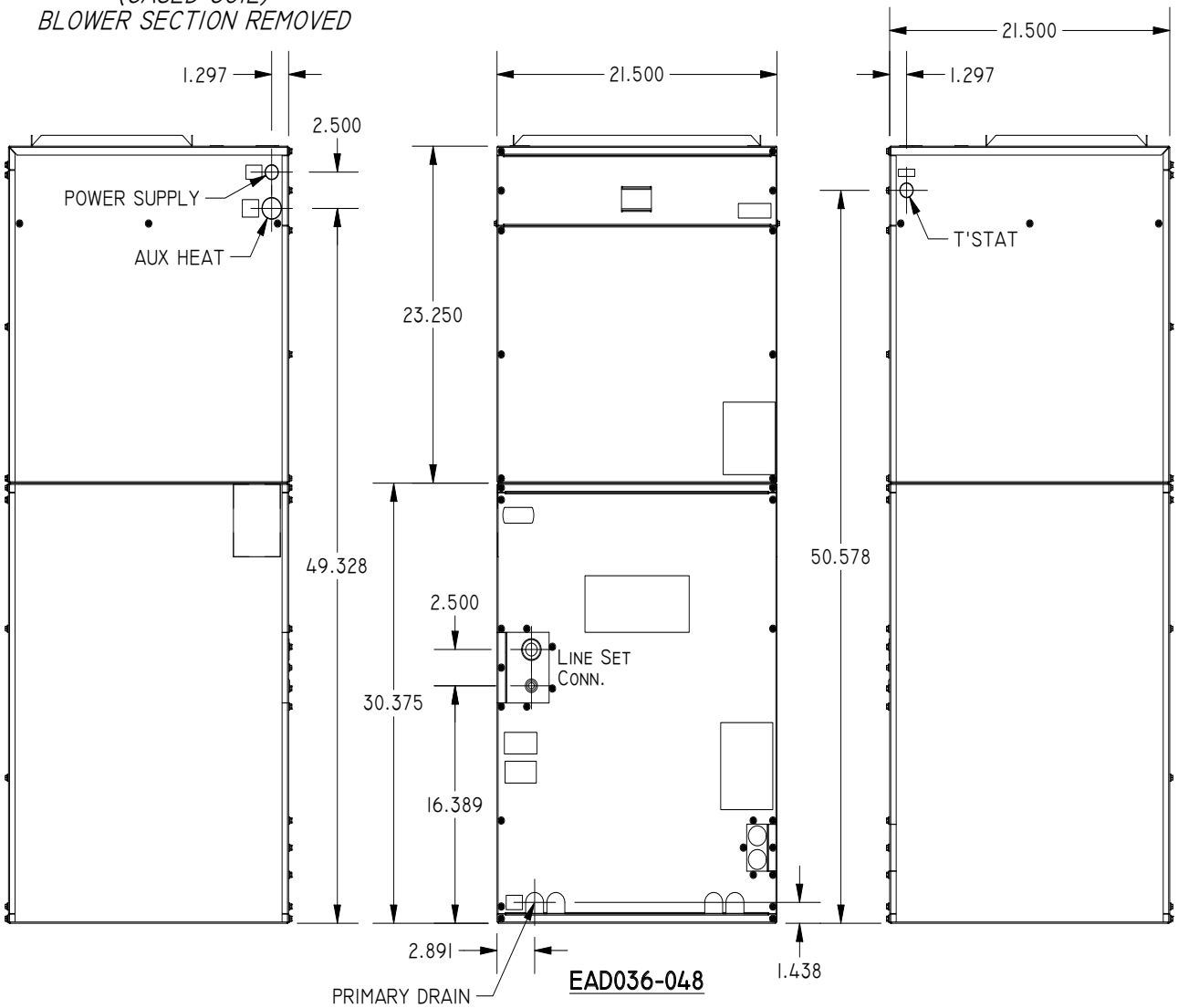




FRONT VIEW
*AFR2020A

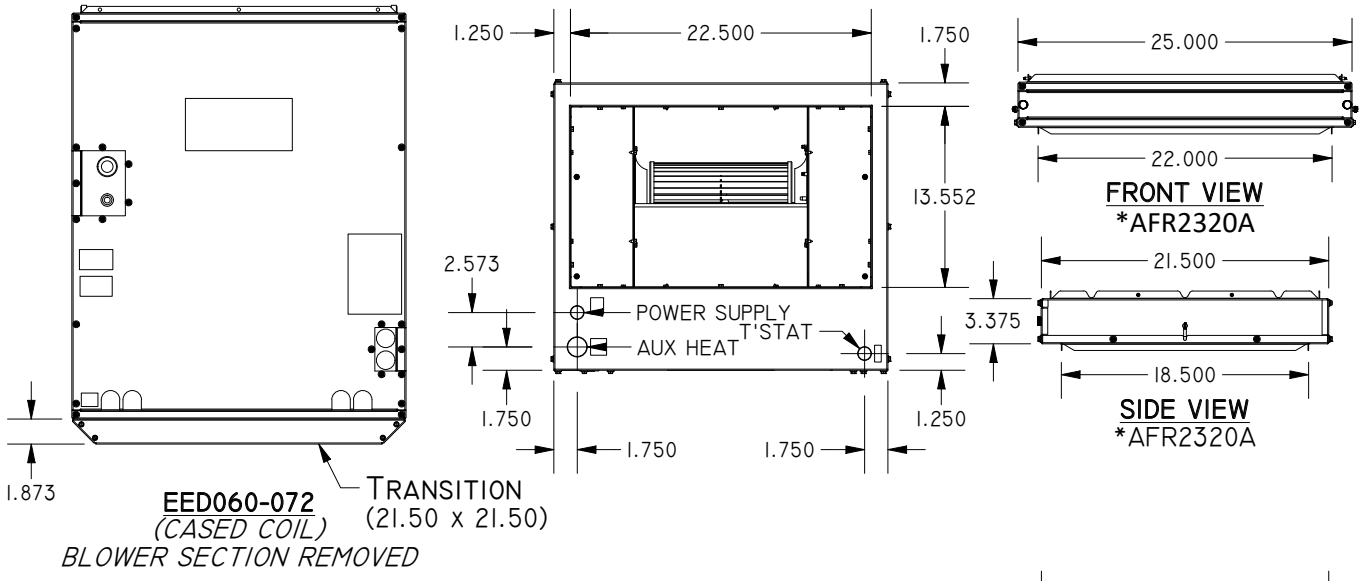


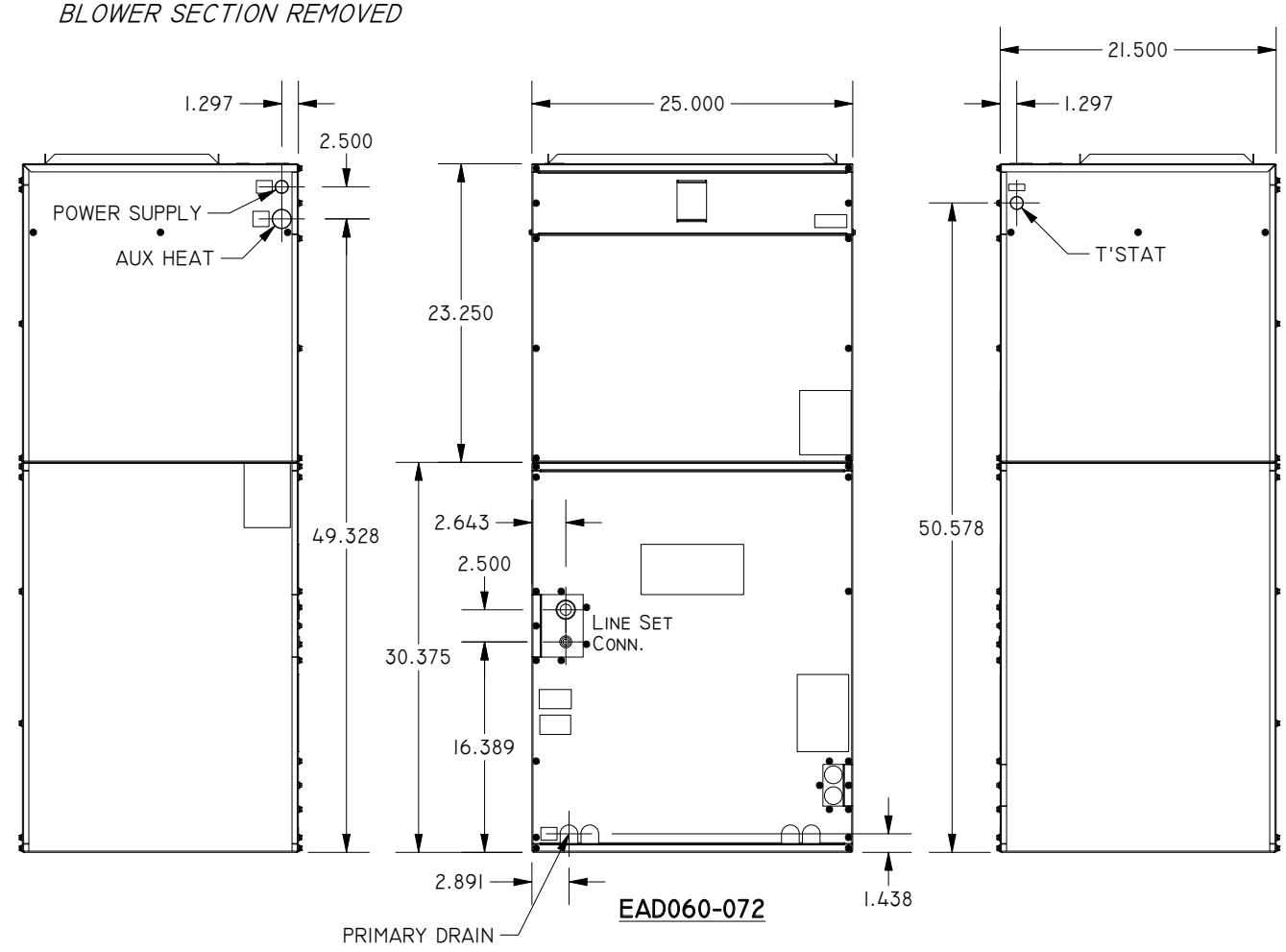
SIDE VIEW
*AFR2020A



EAD036-048

Unit Dimensional Data : AD/ED060-072





Unit Electrical Data : BS/BT

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		Fan Motor FLA	HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA						
BS018	00	208/230	1	48.0	9.0	0.0	0.0	0.0	9.0	11.3	20
	01	208/230	1	48.0	9.0	0.0	0.5	0.0	9.5	11.8	20
	10	208/230	1	48.0	9.0	0.0	0.0	4.0	13.0	15.3	20
	11	208/230	1	48.0	9.0	0.0	0.5	4.0	13.5	15.8	25
BT024	00	208/230	1	58.3	11.7	0.0	0.0	0.0	11.7	14.6	25
	01	208/230	1	58.3	11.7	0.0	0.5	0.0	12.2	15.1	25
	10	208/230	1	58.3	11.7	0.0	0.0	4.0	15.7	18.6	30
	11	208/230	1	58.3	11.7	0.0	0.5	4.0	16.2	19.1	30
	20	208/230	3	55.4	6.5	0.0	0.0	0.0	6.5	8.1	15
	21	208/230	3	55.4	6.5	0.0	0.5	0.0	7.0	8.6	15
BT036	00	208/230	1	83.0	15.6	0.0	0.0	0.0	15.6	19.5	35
	01	208/230	1	83.0	15.6	0.0	0.5	0.0	16.1	20.0	35
	10	208/230	1	83.0	15.6	0.0	0.0	4.0	19.6	23.5	35
	11	208/230	1	83.0	15.6	0.0	0.5	4.0	20.1	24.0	40
	20	208/230	3	73.0	11.6	0.0	0.0	0.0	11.6	14.5	25
	21	208/230	3	73.0	11.6	0.0	0.5	0.0	12.1	15.0	25
BT048	00	208/230	1	104.0	21.2	0.0	0.0	0.0	21.2	26.5	45
	01	208/230	1	104.0	21.2	0.0	0.5	0.0	21.7	27.0	45
	10	208/230	1	104.0	21.2	0.0	0.0	5.5	26.7	32.0	50
	11	208/230	1	104.0	21.2	0.0	0.5	5.5	27.2	32.5	50
	20	208/230	3	83.1	14.0	0.0	0.0	0.0	14.0	17.5	30
	21	208/230	3	83.1	14.0	0.0	0.5	0.0	14.5	18.0	30
BT060	00	208/230	1	152.9	27.1	0.0	0.0	0.0	27.1	33.9	60
	01	208/230	1	152.9	27.1	0.0	0.5	0.0	27.6	34.4	60
	10	208/230	1	152.9	27.1	0.0	0.0	5.5	32.6	39.4	60
	11	208/230	1	152.9	27.1	0.0	0.5	5.5	33.1	39.9	60
	20	208/230	3	110.0	16.5	0.0	0.0	0.0	16.5	20.6	35
	21	208/230	3	110.0	16.5	0.0	0.5	0.0	17.0	21.1	35
BT072	00	208/230	1	179.2	29.7	0.0	0.0	0.0	29.7	37.1	60
	01	208/230	1	179.2	29.7	0.0	0.5	0.0	30.2	37.6	60
	10	208/230	1	179.2	29.7	0.0	0.0	5.5	35.2	42.6	70
	11	208/230	1	179.2	29.7	0.0	0.5	5.5	35.7	43.1	70
	20	208/230	3	136.0	17.6	0.0	0.0	0.0	17.6	22.0	40
	21	208/230	3	136.0	17.6	0.0	0.5	0.0	18.1	22.5	40

Notes:

1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
3. Min/Max Voltage: 208/230/60 = 187-252

*The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 048-072 and two pumps for 018-036.

Unit Electrical Data : AD

Model	Voltage Code	60 Hz Power		Fan Motor FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase				
EAD018	00/10	208/230	1	3.9	3.9	4.9	15
EAD024	00/10	208/230	1	3.9	3.9	4.9	15
EAD036	00/10	208/230	1	5.9	5.9	7.4	15
EAD048	00/10	208/230	1	5.9	5.9	7.4	15
EAD060	00/10	208/230	1	7.4	7.4	9.3	15
EAD072	00/10	208/230	1	7.4	7.4	9.3	15

Notes:
1. All line and low voltage wiring must adhere to the National Electrical Code and local codes, whichever is the most stringent.
2. In determining the correct supply wire size and maximum length, reference NFPA 70, Section 310. If the calculation is close to the maximum allowable ampacity of a particular wire size, use the next size up. This will ensure that no adverse effects occur, such as light dimming and/or shortened compressor life.
3. Min/Max Voltage: 208/230/60 = 187-252

Unit Electrical Data : AD Electric Heat

Technical Data 60Hz, Single Phase, w/ Circuit Breaker (*Single Point Connection)											
Heater Model	**Supply Circuit Number**	**Heat kW**		**Heater kW Per Circuit**		**FLA Total AMPS**		**MCA- Minimum Circuit Ampacity**		**MOCP Maximum Overcurrent Protective Device (AMPS) NEC 240.4(B)**	
		240	**208**	**240**	**208**	**240**	**208**	**240**	**208**	**240**	**208**
AHA051SA	Single	5	3.75	2.5	1.875	20.8	18.0	26.0	22.5	30	25
AHA101MA	Single	10	7.5	5	3.75	41.7	36.1	52.1	45.1	60	50
				5	3.75						
AHA151LA*	Single	15	11.25	5	3.75	62.5	54.1	78.1	67.6	80	70
				10	7.50						
Dual Point Technical Data (US Customers ONLY!!) 60Hz, Single Phase, w/ Circuit Breaker- (Single Point Connection Removed)											
Heater Model	**Supply Circuit Number**	**Heat kW**		**Heater kW Per Circuit**		**FLA Total AMPS**		**MCA- Minimum Circuit Ampacity**		**MOCP Maximum Overcurrent Protective Device (AMPS) NEC 240.4(B)**	
		240	**208**	**240**	**208**	**240**	**208**	**240**	**208**	**240**	**208**
AHA151LA	L1/L2	15	11.25	5	3.75	20.8	18.0	26.0	22.5	30	25
	L3/L4			10	7.50	41.7	36.1	52.1	45.1	60	50

Available Options		
Electric Heat Model	**Description**	**AD Models**
AHA051SA	5kW, 208/230V, 60HZ, 1 Phase, with Circuit Breaker	018-024
AHA101MA	10kW, 208/230V, 60HZ, 1 Phase, with Circuit Breaker	036-048
AHA151LA	15kW, 208/230V, 60HZ, 1 Phase, with Circuit Breaker and Single Point Connection	060-072

Note: All heaters are only approved for use on single phase, 208/230V units. The 15kW heaters come with a single point connection jumper bar assembly already installed.

ECM Fan Performance

EAD Series ECM Fan Performance Data: One & Two-Stage Compressor Units																			
Model	Max ESP in. w.c.[2]	Program[3]	Heating Mode		Cooling Mode		Dehumidification Mode		Fan Only	AUX/EMG Heat[4]	DIP Switch Settings							
			1st	2nd	1st	2nd	1st	2nd			S1	S2	S3	S4	S5	S6	S7	S8
018	1.2	A		950		980		830	490	900	Off	Off	Off	Off	Off	Off	Off	Off
		B		**860**		**890**		**760**	**445**	**810**	**Off**	**Off**	**Off**	**On**	**Off**	**Off**	**Off**	**Off**
		C		740		770		650	385	675	On	Off	Off	Off	On	Off	Off	Off
		D		650		680		580	340	550	Off	On	On	Off	Off	On	Off	Off
024	1.1	A	750	950	770	980	650	830	490	900	Off	Off	Off	Off	Off	Off	Off	Off
		B	**720**	**860**	**730**	**890**	**620**	**760**	**445**	**810**	**Off**	**Off**	**Off**	**On**	**Off**	**Off**	**Off**	**Off**
		C	600	740	620	770	530	650	385	675	On	Off	Off	Off	On	Off	Off	Off
		D	500	650	500	680			340	550	Off	On	On	Off	Off	On	Off	Off
036	1.2	A	1300	1700	1150	1450	980	1230	725	1650	On	Off	Off	Off	On	Off	Off	Off
		B	**1120**	**1440**	**1000**	**1270**	**850**	**1080**	**635**	**1410**	**Off**	**On**	**Off**	**Off**	**Off**	**On**	**Off**	**Off**
		C	1000	1250	850	1100	720	940	550	1270	Off	On	Off	On	Off	On	Off	Off
		D	850	1050	700	950			475	1050	On	On	Off	Off	On	On	Off	Off
048	1.0	A	1500	1900	1300	1700	1110	1450	850	1925	Off	Off	On	Off	Off	Off	Off	Off
		B	**1400**	**1820**	**1230**	**1590**	**1050**	**1350**	**795**	**1750**	**Off**	**Off**	**Off**	**Off**	**Off**	**Off**	**Off**	**Off**
		C	1200	1550	1100	1400	940	1190	700	1575	Off	Off	Off	On	Off	Off	Off	Off
		D	1150	1450	1000	1300			650	1485	On	Off	Off	On	On	Off	Off	Off
060	1.2	A	1600	1900	1700	2000	1450	1700	1000	1900	Off	Off	Off	On	Off	Off	Off	Off
		B	**1480**	**1750**	**1540**	**1830**	**1310**	**1560**	**915**	**1705**	**Off**	**On**	**On**	**Off**	**Off**	**On**	**Off**	**Off**
		C	1300	1550	1400	1650			825	1550	Off	On	Off	Off	Off	On	Off	Off
		D	1200	1400	1250	1500			750	1395	Off	On	Off	On	Off	On	Off	Off
072	1.3	A	1850	2150	1900	2250	1620	1910	1125	2200	Off	Off	On	Off	Off	Off	Off	Off
		B	**1800**	**2100**	**1690**	**2000**	**1440**	**1700**	**1000**	**2110**	**On**	**Off**	**Off**	**Off**	**On**	**Off**	**Off**	**Off**
		C	1650	1950	1750	2050			1025	1900	On	Off	Off	On	On	Off	Off	Off
		D	1600	1850	1500	1800			900	1650	On	On	On	Off	On	On	Off	Off

Notes:

1. Program **B (Bold Type)** is factory settings and rated CFM. CFM is controlled within 5% up to the Max ESP.

2. Max ESP testing was done with dry coil.

3. Max ESP for AD018 through AD072 models with external electric heat is 0.8 in. w.c. Exceeding the Max ESP may result in nuisance trips of the electric heat. Thermal limits are rated at 100,000 cycles.

EAD Series Dehumidification Mode Options

DIP Switch		Mode	Operation
S9	S10		
ON	OFF	Normal	Dehumidification mode disabled (Normal Htg/Clg CFM)-- Factory setting.
OFF	ON	ODD	On Demand Dehumidification mode (humidistat input at terminal ODD)-- Humidistat required.
OFF	OFF	Constant Dehum	Constant Dehumidification mode (always uses dehum CFM for cooling and normal CFM for heating)--No humidistat required.
ON	ON	Not Used	Not an applicable selection.

Notes:

1. To enter dehumidification mode, ODD input should be 0 VAC; for normal cooling CFM, ODD input should be 24 VAC.

2. Heating CFM is not affected by dehumidification mode. When in dehumidification mode, cooling CFM is 85% of normal CFM.

Glossary of Terms	
CFM = Airflow, Cubic Feet/Minute	HR = Total Heat Of Rejection, Btu/hr
COP = Coefficient of Performance = BTU Output / BTU Input	KW = Total Power Unit Input, Kilowatts
DH = Desuperheater Capacity, Btu/hr	LAT = Leaving Air Temperature, Fahrenheit
EAT = Entering Air Temperature, Fahrenheit (Dry Bulb/Wet Bulb)	LC = Latent Cooling Capacity, Btu/hr
EER = Energy Efficiency Ratio = BTU output/Watts input	SC = Sensible Cooling Capacity, Btu/hr
EWT = Entering Source Water Temperature, Fahrenheit	LWT = Leaving Source Water Temperature, Fahrenheit
ELT = Entering Load Water Temperature, Fahrenheit	LLT = Leaving Load Water Temperature, Fahrenheit
GPM = Water Flow, Gallons Per Minute	TC = Total Cooling Capacity, Btu/hr
HC = Total Heating Capacity, Btu/hr	WPD = Water Pressure Drop, PSI & Feet of Water
HE = Total Heat Of Extraction, Btu/hr	

Sensible Cooling Correction Factors					
EAT (WB) °F	EAT (DB) °F				
	70	75	80	85	90
55	1.201	1.289			
60	0.943	1.067	1.192		
65	0.797	0.952	1.106	1.261	
67	0.624	0.812	1.000	1.188	1.343
70		0.697	0.820	0.944	1.067
75			0.637	0.817	0.983

Cooling Correction Factors			
EAT (WB) °F	TC	HR	kW
55	0.8215	0.8293	0.8635
60	0.8955	0.9001	0.9205
65	0.9701	0.9715	0.9774
67	1.0000	1.0000	1.0000
70	1.0446	1.0425	1.0335
75	1.1179	1.1124	1.0878

Heating and Cooling Calculations	
Heating	Cooling
$LAT = EAT + \frac{HC}{CFM \times 1.08}$	$LAT\ (DB) = EAT\ (DB) - \frac{SC}{CFM \times 1.08}$
$LWT = EWT - \frac{HE}{GPM \times 500}$	$LWT = EWT + \frac{HR}{GPM \times 500}$
$LC = TC - SC$	

Heating Correction Factors			
EAT °F	HC	HE	kW
50	1.0465	1.1188	0.8024
55	1.0351	1.0918	0.8436
60	1.0253	1.0645	0.8928
65	1.0108	1.0300	0.9454
70	1.0000	1.0000	1.0000
75	0.9895	0.9701	1.0553
80	0.9742	0.9489	1.0518

Water Flow Selection

Proper flow rate is crucial for reliable operation of geothermal heat pumps. The performance data shows three flow rates for each entering water temperature (EWT column). The general "rule of thumb" when selecting flow rates is the following:

- Top flow rate: Open loop systems (1.5 to 2.0 gpm per ton)
- Middle flow rate: Minimum closed loop system flow rate (2.25 to 2.50 gpm/ton)
- Bottom flow rate: Nominal (optimum) closed loop system flow rate (3.0 gpm/ton)

Although the industry standard is adequate in most areas of North America, it is important to consider the application type before applying this "rule of thumb." Antifreeze is generally required for all closed loop (geothermal) applications. Extreme Southern U.S. locations are the only exception. Open loop (well water) systems cannot use antifreeze, and must have enough flow rate in order to avoid freezing conditions at the Leaving Source Water Temperature (LWT) connection.

Calculations must be made for all systems without antifreeze to determine if the top flow rate is adequate to prevent LWT at or near freezing conditions. The following steps should be taken in making this calculation:

- Determine minimum EWT based upon your geographical area.
- Go to the performance data table for the heat pump model selected and look up the Heat of Extraction (HE) at the "rule of thumb" water flow rate (GPM) and at the design Entering Air Temperature (EAT).
- Calculate the temperature difference (TD) based upon the HE and GPM of the model.
- TD = HE / (GPM x 485).
- Calculate the LWT.
- LWT = EWT - TD.
- If the LWT is below 35-38°F, there is potential for freezing conditions if the flow rate or water temperature is less than ideal conditions, and the flow rate must be increased.

Example 1:
EWT = 50 ^{O}F
Model YT036, full load. Flow rate = 4.5 GPM.
Air Flow = 1380 CFM. HE = 29,400 Btuh.
TD = 29,400 / (4.5 x 485) = 13.5 ^{O}F
LWT = 50 - 13.5 = 36.5 ^{O}F
Water flow rate is acceptable.

Example 2:
EWT = 40 ^{O}F
Model YT036, full load. Flow rate = 4.5 GPM.
Air Flow = 1380 CFM. HE = 25,300 Btuh.
TD = 25,300 / (4.5 x 485) = 11.6 ^{O}F
LWT = 40 - 11.6 = 28.4 ^{O}F
Water flow rate must be increased to avoid freezing.

Performance Data Notes

1. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485).
2. Heating data is based on 70°F EAT. Cooling data is based on 80/67°F EAT. Any condition outside performance table(s) requires correction factor(s).
3. Performance data accurate within ±15%.
4. Unit performance test is run without hot water generation.
5. Desuperheater capacity is based upon 2.0 GPM water flow at 70 oF entering water temperature.
6. Capacity data includes fan power but not pump power and it does not reflect fan or pump power correction for AHRI/ISO conditions.
7. Performance data is based upon the lower voltage of dual voltage rated units.
8. Interpolation of unit performance data is permissible; extrapolation is not.
9. Performance data is a result of lab testing and is not related to warranty.
10. Due to variations in installation, actual unit performance may vary from the tabulated data.
11. See Flow Rate Selection above for proper application.
12. Continuous research and development may result in a change to the current product design and specifications without notice.

BS018 Performance Data

Source				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	4.5	1.9	4.3	550	92.5	12.7	9.7	1.2	3.1	11.7	Operation Not Recommended							
		1.9	4.3	610	90.0	12.8	9.8	1.2	3.2	10.1	630	66.8	17.4	7.8	19.4	0.54	35.47	5.3
		1.9	4.3	700	86.7	12.8	10.1	1.2	3.4	7.6	720	68.4	17.5	8.4	19.9	0.56	35.12	7.4
		1.9	4.3	800	84.2	12.8	10.2	1.1	3.5	5.2	830	70.0	17.8	8.9	20.3	0.57	35.29	10.2
		1.9	4.3	900	82.1	13.1	10.3	1.1	3.6	3.4	930	71.3	17.9	9.4	20.6	0.59	34.58	12.7
30	2.5	1.0	2.4	550	92.1	13.1	11.2	1.2	3.2	11.6	Operation Not Recommended							
		1.0	2.4	610	89.6	13.2	11.4	1.2	3.4	10.0	630	64.7	19.0	9.6	21.3	0.62	33.09	5.3
		1.0	2.4	700	86.4	13.2	11.7	1.1	3.6	7.6	720	66.2	19.3	10.3	21.8	0.64	33.30	7.3
		1.0	2.4	800	83.8	13.3	11.8	1.1	3.7	5.2	830	67.8	19.5	11.0	22.3	0.65	33.46	10.1
		1.0	2.4	900	81.8	13.5	11.9	1.1	3.8	3.4	930	69.1	19.7	11.6	22.7	0.67	32.79	12.6
	3.5	1.4	3.2	550	93.2	13.5	10.8	1.3	3.3	11.7	Operation Not Recommended							
		1.4	3.2	610	90.7	13.6	10.9	1.2	3.4	10.1	630	64.6	18.9	9.7	21.1	0.60	34.07	5.3
		1.4	3.2	700	87.4	13.6	11.2	1.2	3.6	7.6	720	66.2	19.1	10.4	21.6	0.61	34.29	7.4
		1.4	3.2	800	84.8	13.7	11.3	1.1	3.7	5.2	830	67.7	19.4	11.1	22.1	0.63	34.45	10.2
		1.4	3.2	900	82.8	13.9	11.4	1.1	3.8	3.4	930	69.0	19.5	11.7	22.4	0.65	33.76	12.7
	4.5	1.8	4.2	550	94.1	13.8	10.4	1.3	3.3	11.8	Operation Not Recommended							
		1.8	4.2	610	91.5	13.9	10.6	1.2	3.4	10.2	630	64.5	18.8	9.8	21.0	0.58	35.13	5.4
		1.8	4.2	700	88.2	13.9	10.9	1.2	3.6	7.7	720	66.1	19.1	10.4	21.5	0.59	35.36	7.4
		1.8	4.2	800	85.6	14.0	11.0	1.1	3.8	5.3	830	67.7	19.3	11.2	22.0	0.60	35.53	10.3
		1.8	4.2	900	83.6	14.2	11.1	1.1	3.8	3.5	930	68.9	19.4	11.7	22.3	0.63	34.81	12.9
50	2.5	0.9	2.0	550	98.7	18.1	16.1	1.3	4.2	12.1	540	55.9	23.7	14.6	26.0	0.79	31.53	3.81
		0.9	2.0	610	96.0	18.2	16.3	1.3	4.4	10.4	630	57.4	24.5	15.8	27.1	0.80	32.38	5.5
		0.9	2.0	700	92.6	18.2	16.8	1.2	4.6	7.9	720	58.8	24.9	16.8	27.8	0.81	32.59	7.7
		0.9	2.0	800	89.8	18.3	16.9	1.2	4.7	5.4	830	60.2	25.2	18.0	28.4	0.83	32.75	10.6
		0.9	2.0	900	87.7	18.6	17.1	1.2	4.9	3.5	930	61.3	25.4	18.9	28.8	0.86	32.09	13.2
	3.5	1.2	2.7	550	100.0	18.6	15.4	1.3	4.2	12.2	540	55.8	23.5	14.7	25.8	0.76	32.46	3.85
		1.2	2.7	610	97.2	18.7	15.6	1.3	4.4	10.5	630	57.3	24.4	16.0	26.8	0.77	33.34	5.6
		1.2	2.7	700	93.7	18.7	16.0	1.2	4.6	8.0	720	58.7	24.7	17.0	27.5	0.79	33.56	7.7
		1.2	2.7	800	90.9	18.8	16.2	1.2	4.8	5.5	830	60.1	25.1	18.2	28.1	0.80	33.72	10.7
		1.2	2.7	900	88.7	19.1	16.3	1.2	4.9	3.6	930	61.2	25.2	19.1	28.5	0.83	33.04	13.3
	4.5	1.6	3.6	550	100.9	19.0	14.9	1.3	4.2	12.3	540	55.7	23.4	14.8	25.6	0.73	33.47	3.89
		1.6	3.6	610	98.1	19.2	15.1	1.3	4.4	10.6	630	57.3	24.3	16.1	26.7	0.74	34.38	5.6
		1.6	3.6	700	94.6	19.2	15.5	1.2	4.6	8.0	720	58.7	24.6	17.1	27.3	0.76	34.61	7.8
		1.6	3.6	800	91.8	19.3	15.7	1.2	4.8	5.5	830	60.1	25.0	18.3	27.9	0.77	34.77	10.8
		1.6	3.6	900	89.6	19.6	15.8	1.2	4.9	3.6	930	61.2	25.1	19.2	28.3	0.80	34.07	13.5
70	2.5	0.8	1.8	550	104.4	22.5	21.3	1.4	5.0	13.6	540	56.7	21.8	13.9	24.8	1.03	22.04	4.0
		0.8	1.8	610	101.5	22.7	21.7	1.3	5.3	11.7	630	58.3	22.6	15.1	25.9	1.04	22.64	5.7
		0.8	1.8	700	97.9	22.7	22.3	1.2	5.5	8.9	720	59.7	22.9	16.1	26.5	1.06	22.79	8.0
		0.8	1.8	800	95.0	22.8	22.5	1.2	5.8	6.1	830	61.1	23.2	17.2	27.1	1.08	22.90	11.0
		0.8	1.8	900	92.7	23.2	22.7	1.2	5.9	4.0	930	62.2	23.4	18.1	27.5	1.12	22.44	13.7
	3.5	1.0	2.4	550	105.7	23.1	20.4	1.4	5.1	13.7	540	56.6	21.7	14.1	24.6	0.99	22.70	4.0
		1.0	2.4	610	102.7	23.3	20.8	1.3	5.3	11.8	630	58.2	22.4	15.3	25.6	1.00	23.31	5.8
		1.0	2.4	700	99.1	23.4	21.3	1.3	5.6	8.9	720	59.6	22.8	16.2	26.2	1.02	23.46	8.0
		1.0	2.4	800	96.1	23.4	21.5	1.2	5.8	6.1	830	61.0	23.1	17.4	26.8	1.05	23.58	11.1
		1.0	2.4	900	93.8	23.8	21.7	1.2	5.9	4.0	930	62.1	23.2	18.3	27.2	1.08	23.10	13.9
	4.5	1.4	3.1	550	106.6	23.7	19.8	1.4	5.1	13.9	540	56.6	21.6	14.1	24.4	0.96	23.41	4.0
		1.4	3.1	610	103.7	23.9	20.1	1.3	5.4	11.9	630	58.1	22.3	15.3	25.5	0.97	24.04	5.8
		1.4	3.1	700	100.0	23.9	20.6	1.3	5.6	9.0	720	59.5	22.7	16.4	26.0	0.99	24.20	8.1
		1.4	3.1	800	97.0	24.0	20.8	1.3	5.8	6.2	830	61.0	23.0	17.5	26.6	1.01	24.31	11.2
		1.4	3.1	900	94.7	24.4	21.0	1.2	6.0	4.1	930	62.1	23.1	18.4	27.0	1.05	23.83	14.0
90	2.5	0.7	1.6	550	110.2	26.8	25.8	1.6	5.2	16.5	540	57.7	19.5	13.1	23.1	1.33	15.13	4.4
		0.7	1.6	610	107.1	27.0	26.2	1.5	5.5	14.2	630	59.3	20.2	14.2	24.1	1.35	15.54	6.3
		0.7	1.6	700	103.3	27.1	26.9	1.4	5.7	10.8	720	60.7	20.5	15.1	24.7	1.37	15.64	8.8
		0.7	1.6	800	100.3	27.1	27.1	1.4	5.9	7.4	830	62.2	20.8	16.2	25.2	1.40	15.72	12.2
		0.7	1.6	900	97.8	27.6	27.3	1.4	6.1	4.8	930	63.3	20.9	17.0	25.6	1.45	15.40	15.1
	3.5	0.9	2.1	550	111.6	27.5	24.7	1.6	5.2	16.7	540	57.6	19.4	13.2	22.9	1.28	15.58	4.4
		0.9	2.1	610	108.5	27.7	25.1	1.5	5.5	14.4	630	59.2	20.1	14.3	23.8	1.30	16.01	6.4
		0.9	2.1	700	104.6	27.8	25.7	1.5	5.8	10.9	720	60.6	20.4	15.3	24.4	1.32	16.11	8.9
		0.9	2.1	800	101.5	27.9	26.0	1.4	6.0	7.4	830	62.1	20.6	16.4	24.9	1.35	16.19	12.3
		0.9	2.1	900	99.0	28.4	26.2	1.4	6.1	4.9	930	63.2	20.8	17.2	25.3	1.40	15.86	15.3
	4.5	1.2	2.8	550	112.6	28.2	23.9	1.6	5.3	16.8	540	57.5	19.3	13.3	22.7	1.24	16.07	4.5
		1.2	2.8	610	109.5	28.4	24.3	1.5	5.5	14.5	630	59.1	20.0	14.4	23.7	1.25	16.51	6.4
		1.2	2.8	700	105.5	28.5	24.9	1.5	5.8	11.0	720	60.6	20.3	15.4	24.2	1.27	16.61	8.9
		1.2	2.8	800	102.4	28.6	25.1	1.4	6.0	7.5	830	62.0	20.5	16.5	24.8	1.30	16.69	12.4
		1.2	2.8	900	100.0	29.1	25.4	1.4	6.2	4.9	930	63.2	20.7	17.3	25.1	1.35	16.36	15.4

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT024 Full Load Performance Data

Source				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	6	5.3	12.2	570	98.8	16.7	12.7	1.7	3.0	12.2	Operation Not Recommended							
		5.3	12.2	590	97.7	16.8	12.8	1.6	3.1	11.6	610	60.8	21.1	11.8	20.5	0.77	28.62	4.1
		5.3	12.2	680	93.6	17.0	13.1	1.5	3.3	9.3	700	62.7	21.8	12.6	21.1	0.78	29.20	5.9
		5.3	12.2	790	89.8	17.2	13.2	1.4	3.6	6.5	820	64.7	22.5	13.6	21.4	0.80	29.56	8.8
		5.3	12.2	870	87.6	17.2	13.6	1.4	3.7	4.8	900	65.8	22.9	14.3	21.6	0.82	29.69	10.7
30	3	1.6	3.7	570	98.7	16.9	12.1	1.7	3.0	12.0	Operation Not Recommended							
		1.6	3.7	590	97.7	17.0	12.3	1.7	3.1	11.5	610	59.0	22.7	13.4	25.0	0.92	25.73	4.1
		1.6	3.7	680	93.6	17.2	12.5	1.5	3.4	9.2	700	60.8	23.4	14.4	25.7	0.93	26.25	5.8
		1.6	3.7	790	89.8	17.4	12.6	1.5	3.6	6.4	820	62.8	24.2	15.5	26.1	0.95	26.57	8.7
		1.6	3.7	870	87.5	17.5	13.0	1.4	3.8	4.7	900	63.8	24.6	16.2	26.4	0.97	26.68	10.6
	4.5	3.2	7.4	570	99.9	17.7	12.8	1.7	3.2	12.2	Operation Not Recommended							
		3.2	7.4	590	98.8	17.7	12.9	1.7	3.2	11.7	610	59.1	22.7	13.3	24.1	0.86	27.62	4.1
		3.2	7.4	680	94.7	17.9	13.2	1.5	3.5	9.3	700	61.0	23.5	14.3	24.8	0.87	28.18	5.9
		3.2	7.4	790	90.8	18.1	13.3	1.5	3.8	6.5	820	62.9	24.2	15.4	25.2	0.89	28.52	8.8
		3.2	7.4	870	88.6	18.2	13.7	1.4	3.9	4.8	900	64.0	24.6	16.1	25.5	0.91	28.64	10.8
	6	5.1	11.7	570	100.5	18.1	13.1	1.7	3.2	12.3	Operation Not Recommended							
		5.1	11.7	590	99.5	18.2	13.3	1.7	3.3	11.8	610	59.0	22.8	13.4	24.0	0.83	28.62	4.2
		5.1	11.7	680	95.3	18.4	13.5	1.5	3.6	9.4	700	60.9	23.5	14.3	24.7	0.84	29.20	5.9
		5.1	11.7	790	91.4	18.6	13.6	1.5	3.8	6.5	820	62.8	24.3	15.4	25.1	0.86	29.56	8.9
		5.1	11.7	870	89.2	18.7	14.1	1.4	4.0	4.8	900	63.9	24.7	16.1	25.4	0.88	29.69	10.9
50	3	1.3	3.0	570	106.1	22.6	17.6	2.0	3.5	12.6	570	52.7	27.9	17.6	33.8	1.17	24.47	3.63
		1.3	3.0	590	104.9	22.7	17.8	1.9	3.6	12.0	610	53.5	28.4	18.2	34.5	1.18	24.81	4.3
		1.3	3.0	680	100.5	23.0	18.2	1.8	3.9	9.6	700	55.2	29.3	19.5	35.6	1.20	25.31	6.1
		1.3	3.0	790	96.5	23.2	18.3	1.7	4.2	6.7	820	57.0	30.2	21.0	36.1	1.23	25.62	9.1
		1.3	3.0	870	94.1	23.3	18.9	1.6	4.3	4.9	900	57.9	30.8	21.9	36.5	1.25	25.73	11.1
	4.5	2.6	6.0	570	107.3	23.6	18.6	2.0	3.6	12.7	570	52.8	27.9	17.5	32.6	1.09	26.27	3.68
		2.6	6.0	590	106.2	23.7	18.8	1.9	3.7	12.2	610	53.6	28.4	18.1	33.3	1.10	26.63	4.3
		2.6	6.0	680	101.7	24.0	19.2	1.8	4.0	9.7	700	55.3	29.4	19.3	34.3	1.12	27.17	6.2
		2.6	6.0	790	97.6	24.2	19.3	1.7	4.3	6.8	820	57.1	30.3	20.8	34.8	1.15	27.50	9.2
		2.6	6.0	870	95.2	24.3	19.9	1.6	4.5	5.0	900	58.1	30.8	21.8	35.3	1.17	27.62	11.3
	6	4.1	9.5	570	108.0	24.2	19.1	2.0	3.6	12.9	570	52.7	28.0	17.6	32.5	1.06	27.23	3.72
		4.1	9.5	590	106.9	24.3	19.3	1.9	3.7	12.3	610	53.6	28.5	18.2	33.2	1.06	27.60	4.4
		4.1	9.5	680	102.4	24.6	19.7	1.8	4.1	9.8	700	55.3	29.5	19.4	34.2	1.08	28.16	6.2
		4.1	9.5	790	98.3	24.8	19.8	1.7	4.4	6.8	820	57.0	30.4	20.9	34.7	1.11	28.50	9.3
		4.1	9.5	870	95.8	25.0	20.4	1.6	4.5	5.0	900	58.0	31.0	21.9	35.2	1.13	28.63	11.4
70	3	1.1	2.5	570	113.7	28.3	23.1	2.2	3.9	14.1	570	53.5	25.8	16.9	31.8	1.43	18.59	3.8
		1.1	2.5	590	112.5	28.4	23.4	2.2	4.0	13.5	610	54.4	26.3	17.5	32.5	1.44	18.85	4.5
		1.1	2.5	680	107.7	28.8	23.8	2.0	4.3	10.7	700	56.1	27.2	18.6	33.5	1.46	19.23	6.3
		1.1	2.5	790	103.4	29.0	24.0	1.9	4.6	7.5	820	57.9	28.0	20.1	33.9	1.50	19.46	9.4
		1.1	2.5	870	100.8	29.2	24.7	1.9	4.8	5.5	900	58.9	28.5	21.0	34.4	1.53	19.55	11.6
	4.5	2.2	5.0	570	115.0	29.6	24.4	2.2	4.0	14.3	570	53.6	25.9	16.8	30.7	1.33	19.96	3.8
		2.2	5.0	590	113.8	29.7	24.7	2.2	4.1	13.7	610	54.5	26.3	17.3	31.4	1.34	20.23	4.5
		2.2	5.0	680	109.0	30.0	25.1	2.0	4.5	10.9	700	56.2	27.2	18.5	32.3	1.37	20.64	6.4
		2.2	5.0	790	104.6	30.3	25.3	1.9	4.8	7.6	820	58.0	28.1	20.0	32.8	1.40	20.89	9.6
		2.2	5.0	870	102.0	30.5	26.1	1.9	5.0	5.6	900	59.0	28.6	20.9	33.2	1.43	20.99	11.7
	6	3.4	7.9	570	115.8	30.4	25.0	2.2	4.0	14.4	570	53.5	26.0	16.8	30.6	1.29	20.69	3.9
		3.4	7.9	590	114.6	30.4	25.3	2.2	4.1	13.8	610	54.4	26.4	17.4	31.3	1.30	20.97	4.6
		3.4	7.9	680	109.8	30.8	25.8	2.0	4.5	11.0	700	56.1	27.3	18.6	32.2	1.32	21.40	6.5
		3.4	7.9	790	105.3	31.1	26.0	1.9	4.8	7.7	820	57.9	28.2	20.0	32.7	1.35	21.66	9.7
		3.4	7.9	870	102.7	31.3	26.8	1.9	5.0	5.6	900	58.9	28.7	20.9	33.1	1.38	21.75	11.8
90	3	0.9	2.1	570	121.3	34.0	27.8	2.5	4.1	17.1	570	54.5	23.3	16.0	30.9	1.78	13.34	4.2
		0.9	2.1	590	120.0	34.2	28.2	2.5	4.2	16.4	610	55.4	23.7	16.5	31.6	1.80	13.53	4.9
		0.9	2.1	680	115.0	34.6	28.7	2.3	4.6	13.0	700	57.2	24.5	17.6	32.5	1.83	13.80	7.0
		0.9	2.1	790	110.3	34.9	28.9	2.2	4.9	9.1	820	59.0	25.3	19.0	33.0	1.87	13.97	10.4
		0.9	2.1	870	107.6	35.1	29.8	2.1	5.1	6.7	900	60.0	25.7	19.9	33.4	1.91	14.03	12.7
	4.5	1.8	4.2	570	122.8	35.5	29.3	2.5	4.2	17.3	570	54.7	23.3	15.8	29.9	1.67	14.32	4.2
		1.8	4.2	590	121.5	35.7	29.7	2.5	4.4	16.6	610	55.6	23.7	16.4	30.5	1.68	14.52	5.0
		1.8	4.2	680	116.4	36.1	30.3	2.3	4.7	13.2	700	57.3	24.5	17.5	31.4	1.71	14.81	7.1
		1.8	4.2	790	111.6	36.4	30.5	2.2	5.1	9.2	820	59.2	25.3	18.9	31.9	1.75	14.99	10.5
		1.8	4.2	870	108.9	36.6	31.4	2.1	5.3	6.8	900	60.2	25.8	19.7	32.3	1.79	15.06	12.9
	6	2.9	6.6	570	123.6	36.5	30.1	2.6	4.3	17.5	570	54.6	23.4	15.9	29.8	1.61	14.84	4.3
		2.9	6.6	590	122.3	36.6	30.5	2.5	4.4	16.8	610	55.5	23.8	16.4	30.4	1.62	15.05	5.0
		2.9	6.6	680	117.1	37.0	31.1	2.3	4.8	13.3	700	57.3	24.6	17.6	31.3	1.65	15.35	7.1
		2.9	6.6	790	112.4	37.4	31.3	2.2	5.1	9.3	820	59.1	25.4	18.9	31.8	1.69	15.54	10.6
		2.9	6.6	870	109.6	37.6	32.3	2.1	5.3	6.8	900	60.1	25.9	19.8	32.2	1.72	15.61	13.1

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT024 Part Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, PART LOAD							LOAD SIDE, COOLING MODE, PART LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	4.5	3.3	7.7	400	99.0	11.5	8.4	1.4	2.6	12.6	Operation Not Recommended							
		3.3	7.7	450	95.9	11.7	8.8	1.3	2.8	11.2	430	62.6	14.9	6.5	17.9	0.48	35.94	3.9
		3.3	7.7	540	91.2	12.0	9.3	1.2	3.1	8.5	560	66.2	15.9	7.4	18.7	0.49	38.31	6.7
		3.3	7.7	660	86.8	12.2	9.5	1.1	3.4	5.3	660	68.3	16.5	8.0	19.5	0.49	39.28	9.5
		3.3	7.7	680	86.2	12.2	9.5	1.1	3.4	4.8	700	69.0	16.7	8.3	19.9	0.50	39.52	10.6
30	2.5	1.1	2.6	400	97.7	11.0	9.2	1.1	3.1	12.6	Operation Not Recommended							
		1.1	2.6	450	94.6	11.2	9.6	1.0	3.4	11.1	430	59.9	16.2	8.4	17.3	0.55	33.21	3.8
		1.1	2.6	540	90.0	11.4	10.2	1.0	3.7	8.5	560	63.3	17.3	9.6	18.1	0.55	35.40	6.6
		1.1	2.6	660	85.6	11.6	10.5	0.9	4.1	5.2	660	65.3	17.9	10.4	18.8	0.56	36.29	9.4
		1.1	2.6	680	85.1	11.6	10.5	0.9	4.1	4.8	700	65.9	18.1	10.7	19.2	0.57	36.52	10.5
	3.5	2.1	4.8	400	99.8	12.1	9.2	1.3	2.9	12.7	Operation Not Recommended							
		2.1	4.8	450	96.7	12.3	9.6	1.2	3.1	11.2	430	59.8	16.5	8.5	18.9	0.53	34.85	3.9
		2.1	4.8	540	92.0	12.6	10.2	1.1	3.4	8.5	560	63.2	17.6	9.7	19.8	0.53	37.15	6.7
		2.1	4.8	660	87.5	12.8	10.5	1.1	3.8	5.3	660	65.2	18.1	10.5	20.6	0.54	38.09	9.5
		2.1	4.8	680	87.0	12.8	10.5	1.0	3.8	4.9	700	65.9	18.4	10.8	21.1	0.55	38.32	10.6
	4.5	3.2	7.4	400	100.6	12.5	9.4	1.4	2.8	12.8	Operation Not Recommended							
		3.2	7.4	450	97.4	12.7	9.8	1.3	3.0	11.3	430	59.8	16.5	8.5	19.0	0.51	36.37	3.9
		3.2	7.4	540	92.7	13.0	10.4	1.2	3.3	8.6	560	63.2	17.6	9.7	19.8	0.51	38.77	6.8
		3.2	7.4	660	88.2	13.2	10.7	1.1	3.7	5.3	660	65.2	18.2	10.5	20.6	0.52	39.75	9.6
		3.2	7.4	680	87.7	13.2	10.7	1.1	3.7	4.9	700	65.9	18.4	10.8	21.1	0.52	39.99	10.7
50	2.5	0.9	2.1	400	104.7	15.1	13.1	1.3	3.8	13.1	400	52.1	20.2	12.8	21.0	0.71	30.33	3.50
		0.9	2.1	450	101.4	15.4	13.6	1.2	4.1	11.6	430	52.9	20.6	13.2	21.3	0.71	30.99	4.0
		0.9	2.1	540	96.5	15.7	14.4	1.1	4.5	8.8	560	55.9	22.0	15.0	22.2	0.72	33.04	6.9
		0.9	2.1	660	91.8	15.9	14.8	1.0	4.9	5.5	660	57.7	22.7	16.3	23.1	0.73	33.87	9.8
		0.9	2.1	680	91.2	16.0	14.8	1.0	5.0	5.0	700	58.3	23.0	16.8	23.6	0.73	34.08	11.0
	3.5	1.7	3.9	400	107.0	16.6	13.1	1.5	3.5	13.2	400	52.0	20.5	12.9	23.0	0.69	31.83	3.54
		1.7	3.9	450	103.6	16.9	13.6	1.4	3.8	11.7	430	52.9	20.9	13.4	23.3	0.69	32.53	4.0
		1.7	3.9	540	98.6	17.3	14.4	1.3	4.1	8.9	560	55.9	22.3	15.2	24.2	0.69	34.67	7.0
		1.7	3.9	660	93.8	17.6	14.8	1.2	4.5	5.5	660	57.6	23.1	16.4	25.2	0.70	35.55	9.9
		1.7	3.9	680	93.2	17.6	14.8	1.2	4.6	5.1	700	58.2	23.4	16.9	25.8	0.71	35.77	11.1
	4.5	2.6	6.0	400	107.8	17.2	13.3	1.5	3.4	13.4	400	52.0	20.6	12.9	23.0	0.66	33.22	3.57
		2.6	6.0	450	104.5	17.5	13.9	1.5	3.6	11.8	430	52.8	21.0	13.4	23.3	0.66	33.94	4.1
		2.6	6.0	540	99.4	17.8	14.7	1.3	4.0	9.0	560	55.9	22.4	15.2	24.3	0.66	36.19	7.1
		2.6	6.0	660	94.6	18.1	15.1	1.3	4.4	5.6	660	57.6	23.1	16.4	25.3	0.67	37.10	10.0
		2.6	6.0	680	94.0	18.2	15.1	1.2	4.5	5.1	700	58.2	23.5	16.9	25.9	0.68	37.33	11.2
70	2.5	0.8	1.8	400	111.4	18.9	17.8	1.3	4.5	14.7	400	53.2	18.6	12.1	20.2	0.96	20.35	3.6
		0.8	1.8	450	107.9	19.2	18.5	1.3	4.8	13.0	430	54.0	19.0	12.5	20.5	0.96	20.80	4.2
		0.8	1.8	540	102.7	19.6	19.6	1.2	5.3	9.9	560	57.1	20.3	14.2	21.3	0.96	22.17	7.2
		0.8	1.8	660	97.7	19.9	20.1	1.1	5.8	6.1	660	58.9	20.9	15.4	22.2	0.98	22.73	10.2
		0.8	1.8	680	97.1	20.0	20.1	1.1	5.9	5.6	700	59.5	21.2	15.8	22.7	0.99	22.87	11.4
	3.5	1.4	3.3	400	113.9	20.8	17.8	1.6	4.1	14.8	400	53.1	18.9	12.2	22.1	0.93	21.36	3.7
		1.4	3.3	450	110.3	21.2	18.5	1.5	4.4	13.1	430	54.0	19.3	12.6	22.4	0.93	21.82	4.2
		1.4	3.3	540	104.9	21.6	19.6	1.4	4.9	10.0	560	57.0	20.6	14.3	23.4	0.93	23.27	7.3
		1.4	3.3	660	99.9	22.0	20.1	1.3	5.3	6.2	660	58.8	21.3	15.5	24.3	0.95	23.85	10.3
		1.4	3.3	680	99.2	22.1	20.1	1.3	5.4	5.7	700	59.4	21.5	16.0	24.9	0.95	24.00	11.5
	4.5	2.2	5.0	400	114.8	21.5	18.1	1.6	4.0	15.0	400	53.1	18.9	12.2	22.2	0.89	22.29	3.7
		2.2	5.0	450	111.2	21.9	18.9	1.5	4.3	13.2	430	53.9	19.4	12.6	22.5	0.89	22.78	4.3
		2.2	5.0	540	105.8	22.3	19.9	1.4	4.7	10.1	560	57.0	20.6	14.3	23.4	0.89	24.28	7.4
		2.2	5.0	660	100.7	22.7	20.5	1.3	5.2	6.3	660	58.8	21.3	15.5	24.4	0.91	24.89	10.4
		2.2	5.0	680	100.0	22.8	20.5	1.3	5.3	5.7	700	59.4	21.6	16.0	24.9	0.92	25.05	11.6
90	2.5	0.6	1.5	400	118.8	23.0	22.0	1.4	5.1	17.8	400	54.0	16.6	11.5	18.8	1.28	13.52	4.0
		0.6	1.5	450	115.1	23.4	22.9	1.3	5.5	15.8	430	54.9	17.0	11.9	19.0	1.28	13.81	4.6
		0.6	1.5	540	109.5	23.9	24.2	1.2	6.1	12.0	560	58.0	18.1	13.5	19.8	1.29	14.73	8.0
		0.6	1.5	660	104.2	24.3	24.9	1.2	6.6	7.4	660	59.8	18.7	14.6	20.6	1.31	15.10	11.3
		0.6	1.5	680	103.5	24.4	24.9	1.1	6.7	6.8	700	60.4	19.0	15.1	21.1	1.32	15.19	12.6
	3.5	1.2	2.7	400	121.4	25.4	22.0	1.7	4.7	18.0	400	54.0	16.9	11.6	20.6	1.24	14.19	4.1
		1.2	2.7	450	117.6	25.9	22.9	1.6	5.1	15.9	430	54.8	17.3	12.0	20.8	1.24	14.50	4.6
		1.2	2.7	540	111.9	26.4	24.2	1.4	5.6	12.1	560	57.9	18.4	13.6	21.7	1.24	15.45	8.0
		1.2	2.7	660	106.5	26.8	24.9	1.4	6.1	7.5	660	59.8	19.0	14.8	22.6	1.26	15.84	11.4
		1.2	2.7	680	105.8	26.9	24.9	1.3	6.2	6.9	700	60.4	19.3	15.2	23.1	1.27	15.94	12.7
	4.5	1.8	4.2	400	122.4	26.2	22.4	1.7	4.6	18.2	400	54.0	16.9	11.6	20.6	1.18	14.81	4.1
		1.8	4.2	450	118.6	26.7	23.4	1.6	4.9	16.1	430	54.8	17.3	12.0	20.9	1.18	15.13	4.7
		1.8	4.2	540	112.8	27.2	24.7	1.5	5.4	12.2	560	57.9	18.5	13.7	21.7	1.19	16.13	8.1
		1.8	4.2	660	107.3	27.7	25.4	1.4	5.9	7.6	660	59.8	19.1	14.8	22.6	1.21	16.53	11.5
		1.8	4.2	680	106.7	27.8	25.4	1.4	6.0	7.0	700	60.4	19.3	15.2	23.2	1.22	16.64	12.8

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT036 Full Load Performance Data

Source				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	9	4.0	9.2	900	99.1	26.4	19.2	2.4	3.2	14.5	Operation Not Recommended							
		4.0	9.2	1050	94.6	26.6	19.3	2.3	3.5	12.1	950	63.9	30.9	15.4	37.4	1.20	28.27	4.0
		4.0	9.2	1290	89.1	26.7	19.9	2.2	3.6	8.2	1140	66.6	31.6	16.5	38.5	1.21	28.80	6.9
		4.0	9.2	1440	86.9	27.1	20.5	2.2	3.7	6.0	1270	67.8	32.2	17.1	39.3	1.24	28.61	9.2
		4.0	9.2	1700	83.8	27.4	20.3	2.3	3.6	3.2	1480	69.7	32.6	18.2	40.5	1.32	27.72	13.1
30	4.5	1.3	3.0	900	98.2	25.9	18.5	2.3	3.3	14.3	Operation Not Recommended							
		1.3	3.0	1050	93.7	26.1	18.6	2.2	3.6	12.0	950	61.5	33.0	18.5	39.4	1.34	26.33	4.0
		1.3	3.0	1290	88.3	26.2	19.2	2.1	3.7	8.2	1140	64.0	34.0	20.0	40.5	1.39	26.37	6.8
		1.3	3.0	1440	86.2	26.7	19.8	2.1	3.8	5.9	1270	65.2	34.6	20.7	41.4	1.44	26.20	9.1
		1.3	3.0	1700	83.1	26.9	19.6	2.2	3.8	3.1	1480	67.1	35.0	22.0	42.7	1.52	25.39	12.9
	7	2.6	5.9	900	99.7	27.4	19.1	2.4	3.5	14.5	Operation Not Recommended							
		2.6	5.9	1050	95.2	27.7	19.2	2.2	3.7	12.2	950	61.4	33.4	18.7	39.1	1.26	28.36	4.1
		2.6	5.9	1290	89.6	27.8	19.9	2.2	3.9	8.3	1140	63.9	34.4	20.1	40.3	1.31	28.40	6.9
		2.6	5.9	1440	87.5	28.2	20.5	2.1	4.0	6.0	1270	65.1	35.0	20.9	41.2	1.35	28.22	9.2
		2.6	5.9	1700	84.3	28.5	20.3	2.2	3.9	3.2	1480	67.0	35.4	22.2	42.4	1.43	27.34	13.1
	9	4.0	9.2	900	100.1	27.8	20.5	2.4	3.4	14.7	Operation Not Recommended							
		4.0	9.2	1050	95.6	28.1	20.6	2.3	3.7	12.3	950	61.5	33.2	18.6	39.1	1.23	28.75	4.1
		4.0	9.2	1290	90.0	28.2	21.3	2.2	3.8	8.4	1140	64.0	34.2	20.0	40.2	1.28	28.80	7.0
		4.0	9.2	1440	87.9	28.7	21.9	2.2	3.9	6.1	1270	65.2	34.8	20.8	41.1	1.32	28.61	9.3
		4.0	9.2	1700	84.7	28.9	21.7	2.3	3.9	3.2	1480	67.0	35.2	22.1	42.4	1.39	27.72	13.2
50	4.5	1.0	2.2	900	105.1	34.5	26.6	2.7	3.8	15.0	900	54.5	38.6	24.6	43.7	1.70	23.43	3.21
		1.0	2.2	1050	100.3	34.8	26.7	2.5	4.1	12.5	950	55.8	39.7	26.0	45.1	1.66	24.68	4.2
		1.0	2.2	1290	94.5	34.9	27.6	2.5	4.3	8.5	1140	58.1	40.9	28.0	46.5	1.73	24.72	7.1
		1.0	2.2	1440	92.2	35.5	28.4	2.4	4.4	6.2	1270	59.2	41.6	29.1	47.5	1.78	24.57	9.5
		1.0	2.2	1700	88.9	35.8	28.1	2.5	4.4	3.3	1480	60.9	42.1	30.9	48.9	1.88	23.80	13.5
	7	1.9	4.4	900	106.6	36.5	27.5	2.7	4.0	15.2	900	54.5	38.9	24.6	44.4	1.64	24.43	3.22
		1.9	4.4	1050	101.8	36.9	27.6	2.6	4.3	12.7	950	55.7	40.2	26.3	44.8	1.56	26.58	4.3
		1.9	4.4	1290	95.9	37.0	28.5	2.5	4.4	8.6	1140	58.0	41.4	28.3	46.1	1.62	26.63	7.2
		1.9	4.4	1440	93.6	37.6	29.3	2.5	4.6	6.3	1270	59.1	42.1	29.3	47.2	1.67	26.46	9.7
		1.9	4.4	1700	90.2	37.9	29.0	2.6	4.5	3.3	1480	60.8	42.6	31.1	48.6	1.77	25.63	13.7
	9	3.0	7.0	900	107.1	37.0	29.4	2.8	3.9	15.3	900	54.4	39.4	24.9	44.1	1.55	26.23	3.26
		3.0	7.0	1050	102.3	37.4	29.5	2.6	4.2	12.8	950	55.8	39.9	26.1	44.8	1.53	26.95	4.3
		3.0	7.0	1290	96.3	37.5	30.5	2.6	4.4	8.7	1140	58.1	41.1	28.1	46.1	1.58	27.00	7.3
		3.0	7.0	1440	94.0	38.2	31.4	2.5	4.5	6.3	1270	59.1	41.9	29.2	47.1	1.63	26.82	9.8
		3.0	7.0	1700	90.6	38.5	31.1	2.6	4.5	3.4	1480	60.8	42.4	31.0	48.6	1.72	25.99	13.9
70	4.5	1.1	2.6	900	112.9	43.9	33.3	3.1	4.3	16.8	900	55.5	35.7	23.3	41.9	2.03	18.11	3.3
		1.1	2.6	1050	107.7	44.4	33.4	2.9	4.6	14.0	950	56.9	36.7	24.6	43.3	1.99	19.08	4.4
		1.1	2.6	1290	101.4	44.5	34.5	2.8	4.8	9.6	1140	59.2	37.8	26.5	44.5	2.07	19.11	7.4
		1.1	2.6	1440	99.0	45.3	35.5	2.8	4.9	6.9	1270	60.3	38.5	27.5	45.5	2.13	18.99	9.9
		1.1	2.6	1700	95.4	45.7	35.2	2.9	4.9	3.7	1480	62.0	39.0	29.2	46.9	2.25	18.40	14.1
	7	2.2	5.0	900	114.6	46.6	34.4	3.1	4.5	17.0	900	55.5	36.0	23.3	42.6	1.96	18.89	3.4
		2.2	5.0	1050	109.3	47.0	34.5	2.9	4.8	14.2	950	56.8	37.2	24.8	43.0	1.87	20.55	4.4
		2.2	5.0	1290	103.0	47.2	35.6	2.9	5.0	9.7	1140	59.1	38.3	26.7	44.2	1.94	20.58	7.5
		2.2	5.0	1440	100.5	48.0	36.7	2.8	5.1	7.0	1270	60.2	39.0	27.7	45.2	2.00	20.45	10.1
		2.2	5.0	1700	96.9	48.4	36.3	2.9	5.1	3.7	1480	61.9	39.4	29.5	46.6	2.11	19.81	14.3
	9	3.4	7.9	900	115.1	47.3	36.8	3.2	4.4	17.2	900	55.4	36.4	23.5	42.3	1.85	20.28	3.4
		3.4	7.9	1050	109.8	47.7	36.9	3.0	4.8	14.4	950	56.8	36.9	24.7	42.9	1.82	20.83	4.5
		3.4	7.9	1290	103.4	47.9	38.1	2.9	4.9	9.8	1140	59.1	38.0	26.6	44.2	1.89	20.87	7.6
		3.4	7.9	1440	101.0	48.7	39.3	2.9	5.1	7.1	1270	60.2	38.8	27.6	45.2	1.95	20.73	10.2
		3.4	7.9	1700	97.3	49.1	38.9	3.0	5.0	3.8	1480	61.9	39.2	29.3	46.5	2.06	20.09	14.4
90	4.5	1.0	2.2	900	120.2	52.7	40.9	3.5	4.6	20.4	900	56.6	32.4	21.9	39.4	2.47	13.46	3.7
		1.0	2.2	1050	114.7	53.2	41.1	3.3	4.9	17.0	950	57.9	33.3	23.1	40.8	2.42	14.18	4.8
		1.0	2.2	1290	108.1	53.4	42.5	3.2	5.1	11.6	1140	60.3	34.3	24.9	41.9	2.52	14.20	8.2
		1.0	2.2	1440	105.5	54.3	43.7	3.1	5.2	8.4	1270	61.4	34.9	25.8	42.9	2.59	14.11	10.9
		1.0	2.2	1700	101.7	54.8	43.3	3.2	5.2	4.5	1480	63.2	35.4	27.4	44.2	2.74	13.67	15.5
	7	1.9	4.4	900	122.0	55.8	42.3	3.5	4.7	20.6	900	56.5	32.6	21.9	40.1	2.39	14.04	3.7
		1.9	4.4	1050	116.5	56.4	42.5	3.3	5.1	17.3	950	57.9	33.7	23.4	40.5	2.27	15.27	4.9
		1.9	4.4	1290	109.7	56.6	43.9	3.2	5.3	11.8	1140	60.2	34.7	25.1	41.7	2.36	15.30	8.3
		1.9	4.4	1440	107.1	57.5	45.2	3.2	5.4	8.5	1270	61.3	35.4	26.1	42.6	2.43	15.20	11.1
		1.9	4.4	1700	103.2	58.0	44.7	3.3	5.3	4.5	1480	63.1	35.8	27.7	43.9	2.57	14.72	15.7
	9	3.0	6.9	900	122.6	56.7	45.3	3.6	4.7	20.8	900	56.4	33.0	22.1	39.8	2.25	15.07	3.7
		3.0	6.9	1050	117.0	57.2	45.5	3.4	5.0	17.4	950	57.9	33.5	23.2	40.4	2.22	15.48	5.0
		3.0	6.9	1290	110.2	57.4	47.0	3.3	5.2	11.9	1140	60.2	34.5	25.0	41.6	2.31	15.51	8.4
		3.0	6.9	1440	107.6	58.3	48.4	3.3	5.4	8.6	1270	61.4	35.2	25.9	42.5	2.37	15.41	11.2
		3.0	6.9	1700	103.6	58.9	47.9	3.4	5.3	4.6	1480	63.1	35.6	27.5	43.8	2.51	14.93	15.9

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT036 Part Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, PART LOAD							LOAD SIDE, COOLING MODE, PART LOAD							
EWT	GPM	Source Flow	WPD	Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	6	1.6	3.8	800	91.3	17.7	12.4	1.7	3.2	12.6	Operation Not Recommended							
		1.6	3.8	840	90.1	17.8	12.5	1.7	3.2	11.8	740	63.9	22.0	12.2	26.9	0.67	37.42	4.1
		1.6	3.8	1010	86.2	18.0	12.8	1.6	3.4	8.2	890	66.2	22.7	13.3	27.9	0.69	38.42	6.8
		1.6	3.8	1130	84.5	18.4	13.3	1.6	3.7	5.9	990	67.3	23.3	14.1	28.4	0.70	38.80	9.0
		1.6	3.8	1320	81.4	18.3	13.2	1.6	3.6	3.2	1160	69.4	23.4	14.9	28.8	0.73	38.10	12.8
30	3.5	1.2	2.9	800	91.0	17.7	13.5	1.7	3.1	12.6	Operation Not Recommended							
		1.2	2.9	840	89.8	17.8	13.6	1.7	3.2	11.7	740	61.6	24.1	14.4	28.2	0.78	34.64	4.1
		1.2	2.9	1010	85.9	18.0	13.9	1.6	3.4	8.2	890	63.8	24.9	15.7	29.3	0.79	35.56	6.8
		1.2	2.9	1130	84.2	18.4	14.4	1.6	3.6	5.9	990	64.8	25.6	16.7	29.8	0.80	35.92	9.0
		1.2	2.9	1320	81.1	18.4	14.4	1.6	3.6	3.2	1160	66.8	25.7	17.6	30.2	0.84	35.27	12.8
	4.5	1.3	3.0	800	91.6	18.2	14.6	1.7	3.2	12.7	Operation Not Recommended							
		1.3	3.0	840	90.4	18.3	14.7	1.7	3.3	11.8	740	61.5	24.3	14.5	28.2	0.73	37.01	4.1
		1.3	3.0	1010	86.4	18.5	15.1	1.6	3.5	8.3	890	63.7	25.2	15.8	29.2	0.75	37.99	6.8
		1.3	3.0	1130	84.7	18.9	15.6	1.6	3.7	5.9	990	64.7	25.8	16.8	29.7	0.76	38.37	9.0
		1.3	3.0	1320	81.6	18.8	15.6	1.6	3.7	3.2	1160	66.7	26.0	17.7	30.2	0.79	37.68	12.9
	6	1.7	3.8	800	92.5	18.9	15.2	1.7	3.3	12.8	Operation Not Recommended							
		1.7	3.8	840	91.3	18.9	15.3	1.7	3.4	11.9	740	61.4	24.4	14.7	28.4	0.70	38.98	4.1
		1.7	3.8	1010	87.3	19.1	15.7	1.6	3.6	8.4	890	63.6	25.3	15.9	29.4	0.71	40.02	6.9
		1.7	3.8	1130	85.6	19.6	16.3	1.6	3.9	6.0	990	64.6	25.9	16.9	29.9	0.72	40.42	9.1
		1.7	3.8	1320	82.4	19.5	16.2	1.6	3.9	3.3	1160	66.7	26.1	17.9	30.4	0.75	39.69	13.0
50	3.5	0.9	2.2	800	97.5	24.3	18.2	1.9	3.9	13.1	630	54.2	29.2	18.3	31.5	0.96	32.03	2.85
		0.9	2.2	840	96.2	24.4	18.3	1.9	3.9	12.2	740	56.1	30.1	19.6	32.7	0.97	33.25	4.3
		0.9	2.2	1010	92.0	24.7	18.7	1.8	4.2	8.6	890	58.1	31.1	21.4	33.9	0.99	34.13	7.1
		0.9	2.2	1130	90.2	25.3	19.4	1.7	4.5	6.2	990	59.0	31.9	22.7	34.5	1.00	34.47	9.4
		0.9	2.2	1320	86.9	25.2	19.3	1.7	4.5	3.4	1160	60.9	32.1	23.9	35.0	1.04	33.85	13.4
	4.5	1.0	2.2	800	98.1	25.0	19.7	1.9	3.9	13.2	630	54.1	29.4	18.4	31.5	0.91	34.22	2.87
		1.0	2.2	840	96.8	25.0	19.8	1.9	4.0	12.3	740	56.0	30.3	19.7	32.7	0.92	35.52	4.3
		1.0	2.2	1010	92.6	25.3	20.3	1.8	4.3	8.6	890	58.0	31.3	21.5	33.9	0.93	36.46	7.1
		1.0	2.2	1130	90.7	25.9	21.0	1.7	4.5	6.2	990	58.9	32.2	22.8	34.5	0.95	36.83	9.5
		1.0	2.2	1320	87.4	25.8	21.0	1.8	4.5	3.4	1160	60.8	32.4	24.0	35.0	0.99	36.16	13.5
	6	1.3	2.9	800	99.1	25.9	20.5	1.9	4.1	13.3	630	54.0	29.6	18.6	31.7	0.87	36.05	2.90
		1.3	2.9	840	97.7	26.0	20.7	1.9	4.2	12.4	740	55.9	30.4	19.9	32.9	0.87	37.41	4.3
		1.3	2.9	1010	93.5	26.3	21.1	1.8	4.5	8.7	890	57.9	31.5	21.7	34.1	0.89	38.41	7.2
		1.3	2.9	1130	91.6	26.9	21.9	1.7	4.7	6.3	990	58.9	32.3	23.0	34.7	0.90	38.79	9.6
		1.3	2.9	1320	88.3	26.8	21.8	1.7	4.7	3.4	1160	60.7	32.5	24.3	35.2	0.94	38.09	13.6
70	3.5	1.1	2.5	800	103.4	30.6	24.1	1.9	4.8	14.7	630	55.4	26.6	17.2	30.5	1.29	21.34	3.0
		1.1	2.5	840	102.0	30.7	24.2	1.9	4.9	13.7	740	57.3	27.4	18.5	31.6	1.30	22.14	4.4
		1.1	2.5	1010	97.6	31.0	24.8	1.8	5.3	9.6	890	59.4	28.4	20.1	32.8	1.32	22.73	7.4
		1.1	2.5	1130	95.7	31.7	25.7	1.7	5.6	6.9	990	60.4	29.1	21.3	33.4	1.35	22.96	9.8
		1.1	2.5	1320	92.1	31.6	25.6	1.7	5.6	3.8	1160	62.2	29.3	22.5	33.9	1.40	22.55	13.9
	4.5	1.1	2.6	800	104.0	31.3	26.1	1.9	4.9	14.8	630	55.3	26.9	17.3	30.4	1.22	22.79	3.0
		1.1	2.6	840	102.6	31.5	26.3	1.9	5.0	13.8	740	57.2	27.7	18.5	31.6	1.23	23.66	4.5
		1.1	2.6	1010	98.2	31.8	26.9	1.8	5.4	9.7	890	59.3	28.6	20.2	32.7	1.25	24.29	7.4
		1.1	2.6	1130	96.2	32.5	27.9	1.7	5.7	7.0	990	60.3	29.4	21.4	33.3	1.27	24.53	9.9
		1.1	2.6	1320	92.7	32.4	27.7	1.8	5.7	3.8	1160	62.1	29.5	22.6	33.8	1.33	24.09	14.0
	6	1.4	3.3	800	105.1	32.5	27.1	1.9	5.1	15.0	630	55.2	27.0	17.5	30.6	1.17	24.01	3.0
		1.4	3.3	840	103.6	32.6	27.4	1.9	5.2	13.9	740	57.2	27.8	18.7	31.8	1.17	24.92	4.5
		1.4	3.3	1010	99.1	33.0	28.0	1.8	5.6	9.8	890	59.3	28.7	20.4	32.9	1.19	25.58	7.5
		1.4	3.3	1130	97.2	33.7	29.0	1.7	5.9	7.0	990	60.2	29.5	21.7	33.5	1.21	25.84	10.0
		1.4	3.3	1320	93.6	33.6	28.9	1.7	5.9	3.8	1160	62.1	29.6	22.8	34.0	1.26	25.37	14.1
90	3.5	0.9	2.2	800	110.4	37.6	28.8	2.3	5.0	17.8	630	56.5	23.9	16.1	30.0	1.73	14.05	3.3
		0.9	2.2	840	109.0	37.8	29.0	2.2	5.1	16.6	740	58.5	24.6	17.3	31.1	1.74	14.58	4.9
		0.9	2.2	1010	104.2	38.2	29.7	2.1	5.5	11.7	890	60.6	25.4	18.8	32.2	1.77	14.97	8.1
		0.9	2.2	1130	102.2	39.1	30.8	2.1	5.8	8.4	990	61.6	26.1	19.9	32.8	1.80	15.12	10.8
		0.9	2.2	1320	98.4	38.9	30.7	2.1	5.8	4.6	1160	63.5	26.2	21.0	33.3	1.88	14.85	15.3
	4.5	1.0	2.2	800	111.1	38.6	31.2	2.3	5.1	18.0	630	56.4	24.1	16.2	29.9	1.64	15.01	3.3
		1.0	2.2	840	109.6	38.7	31.4	2.2	5.2	16.8	740	58.4	24.8	17.3	31.1	1.65	15.58	4.9
		1.0	2.2	1010	104.9	39.1	32.2	2.1	5.5	11.8	890	60.5	25.6	18.9	32.2	1.68	16.00	8.2
		1.0	2.2	1130	102.8	40.0	33.4	2.1	5.9	8.4	990	61.5	26.3	20.0	32.8	1.71	16.16	10.9
		1.0	2.2	1320	99.0	39.9	33.2	2.1	5.9	4.6	1160	63.4	26.5	21.1	33.3	1.78	15.86	15.4
	6	1.2	2.9	800	112.2	40.0	32.5	2.3	5.3	18.1	630	56.4	24.2	16.4	30.1	1.56	15.81	3.3
		1.2	2.9	840	110.7	40.1	32.8	2.2	5.4	16.9	740	58.3	24.9	17.5	31.3	1.57	16.41	5.0
		1.2	2.9	1010	105.9	40.6	33.5	2.1	5.8	11.9	890	60.4	25.7	19.1	32.4	1.60	16.85	8.3
		1.2	2.9	1130	103.8	41.5	34.8	2.0	6.1	8.5	990	61.4	26.4	20.2	33.0	1.63	17.02	11.0
		1.2	2.9	1320	100.0	41.4	34.6	2.1	6.1	4.6	1160	63.3	26.6	21.4	33.5	1.70	16.71	15.6

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT048 Full Load Performance Data

Source				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	12	5.5	12.7	1270	98.1	36.9	28.8	3.2	3.3	13.7	Operation Not Recommended							
		5.5	12.7	1500	93.2	37.3	29.9	3.1	3.5	9.4	1340	63.7	41.8	22.1	47.2	1.57	27.44	5.6
		5.5	12.7	1620	91.2	37.5	29.7	3.1	3.5	7.2	1410	64.4	42.3	22.6	47.4	1.54	28.06	6.9
		5.5	12.7	1820	88.6	37.9	30.2	3.2	3.5	4.1	1580	66.0	42.9	23.8	48.2	1.60	27.61	10.1
		5.5	12.7	1900	87.6	38.0	30.0	3.2	3.5	3.3	1740	67.6	43.4	24.5	49.2	1.68	26.70	13.1
30	6	1.8	4.1	1270	98.2	37.4	27.4	3.3	3.4	13.5	Operation Not Recommended							
		1.8	4.1	1500	93.3	37.8	28.5	3.2	3.6	9.3	1340	62.1	44.0	25.1	49.8	1.79	25.58	5.6
		1.8	4.1	1620	91.3	37.9	28.3	3.2	3.6	7.0	1410	62.9	44.3	25.6	50.2	1.81	25.50	6.8
		1.8	4.1	1820	88.7	38.4	28.8	3.2	3.6	4.1	1580	64.3	45.0	26.9	51.1	1.88	25.09	9.9
		1.8	4.1	1900	87.7	38.4	28.5	3.2	3.6	3.2	1740	65.9	45.5	27.7	52.1	1.97	24.27	12.9
	9	3.4	7.8	1270	99.3	38.9	29.0	3.3	3.5	13.7	Operation Not Recommended							
		3.4	7.8	1500	94.4	39.3	30.1	3.2	3.7	9.4	1340	61.9	44.3	25.3	49.6	1.68	27.23	5.7
		3.4	7.8	1620	92.4	39.5	30.0	3.2	3.7	7.2	1410	62.7	44.7	25.7	50.0	1.70	27.16	6.9
		3.4	7.8	1820	89.7	39.9	30.5	3.2	3.7	4.1	1580	64.2	45.3	27.1	50.9	1.77	26.71	10.1
		3.4	7.8	1900	88.7	40.0	30.2	3.2	3.7	3.3	1740	65.7	45.9	27.9	51.9	1.86	25.84	13.1
	12	5.4	12.4	1270	99.9	39.8	29.8	3.3	3.5	13.9	Operation Not Recommended							
		5.4	12.4	1500	94.9	40.2	30.9	3.2	3.7	9.5	1340	61.9	44.5	25.4	49.4	1.63	27.93	5.7
		5.4	12.4	1620	92.9	40.4	30.8	3.2	3.7	7.3	1410	62.7	44.8	25.8	49.8	1.65	27.85	7.0
		5.4	12.4	1820	90.3	40.9	31.3	3.2	3.7	4.2	1580	64.1	45.5	27.2	50.7	1.71	27.39	10.2
		5.4	12.4	1900	89.2	40.9	31.0	3.2	3.7	3.3	1740	65.7	46.0	27.9	51.7	1.80	26.50	13.3
50	6	1.5	3.5	1270	104.9	48.3	37.3	3.5	4.1	14.1	1200	55.2	51.0	32.6	57.2	2.19	23.97	3.86
		1.5	3.5	1500	99.6	48.8	38.7	3.3	4.4	9.6	1340	56.7	52.0	34.1	58.4	2.25	23.98	5.8
		1.5	3.5	1620	97.5	49.0	38.5	3.3	4.4	7.3	1410	57.5	52.4	34.7	58.9	2.28	23.91	7.1
		1.5	3.5	1820	94.7	49.5	39.2	3.4	4.4	4.3	1580	58.8	53.2	36.5	59.9	2.36	23.52	10.4
		1.5	3.5	1900	93.6	49.6	38.8	3.4	4.4	3.4	1740	60.2	53.8	37.5	61.2	2.48	22.75	13.5
	9	2.9	6.8	1270	106.1	50.3	39.5	3.5	4.3	14.3	1200	55.1	51.4	32.9	57.0	2.06	25.52	3.92
		2.9	6.8	1500	100.8	50.8	41.0	3.3	4.5	9.8	1340	56.6	52.4	34.3	58.2	2.11	25.53	5.9
		2.9	6.8	1620	98.6	51.0	40.8	3.3	4.6	7.5	1410	57.3	52.8	34.9	58.7	2.14	25.46	7.2
		2.9	6.8	1820	95.8	51.6	41.5	3.4	4.6	4.3	1580	58.7	53.6	36.8	59.7	2.22	25.05	10.6
		2.9	6.8	1900	94.7	51.7	41.1	3.4	4.6	3.4	1740	60.1	54.3	37.8	60.9	2.34	24.23	13.7
	12	4.7	10.7	1270	106.7	51.4	40.5	3.5	4.3	14.5	1200	55.0	51.6	33.0	56.7	1.99	26.17	3.97
		4.7	10.7	1500	101.4	51.9	42.1	3.4	4.5	9.9	1340	56.6	52.6	34.4	57.9	2.04	26.18	6.0
		4.7	10.7	1620	99.3	52.1	41.8	3.4	4.6	7.6	1410	57.3	53.0	35.0	58.4	2.07	26.11	7.3
		4.7	10.7	1820	96.4	52.8	42.6	3.4	4.6	4.4	1580	58.7	53.8	36.9	59.4	2.15	25.68	10.7
		4.7	10.7	1900	95.3	52.8	42.2	3.4	4.6	3.5	1740	60.1	54.4	37.9	60.7	2.26	24.84	13.9
70	6	1.4	3.2	1270	112.2	60.0	47.5	3.7	4.8	15.8	1200	55.5	49.8	32.2	58.6	2.67	19.21	4.0
		1.4	3.2	1500	106.6	60.6	49.4	3.6	5.1	10.8	1340	57.1	50.8	33.6	59.8	2.74	19.22	6.1
		1.4	3.2	1620	104.4	60.9	49.1	3.6	5.1	8.2	1410	57.8	51.2	34.2	60.4	2.78	19.16	7.4
		1.4	3.2	1820	101.4	61.6	50.0	3.6	5.1	4.8	1580	59.2	52.0	36.0	61.4	2.88	18.85	10.8
		1.4	3.2	1900	100.2	61.7	49.5	3.6	5.1	3.8	1740	60.6	52.6	37.0	62.7	3.03	18.23	14.0
	9	2.7	6.1	1270	113.5	62.5	50.3	3.7	4.9	16.0	1200	55.4	50.2	32.4	58.4	2.51	20.45	4.1
		2.7	6.1	1500	107.9	63.1	52.3	3.6	5.2	11.0	1340	57.0	51.2	33.8	59.6	2.58	20.46	6.2
		2.7	6.1	1620	105.6	63.4	52.0	3.6	5.3	8.4	1410	57.7	51.6	34.4	60.2	2.61	20.41	7.5
		2.7	6.1	1820	102.5	64.2	52.9	3.6	5.3	4.9	1580	59.1	52.4	36.3	61.2	2.71	20.07	11.0
		2.7	6.1	1900	101.4	64.3	52.4	3.6	5.3	3.8	1740	60.5	53.0	37.2	62.5	2.85	19.42	14.3
	12	4.2	9.7	1270	114.2	63.9	51.7	3.8	5.0	16.3	1200	55.4	50.3	32.5	58.1	2.43	20.97	4.1
		4.2	9.7	1500	108.5	64.6	53.6	3.6	5.2	11.1	1340	56.9	51.3	33.9	59.4	2.49	20.98	6.2
		4.2	9.7	1620	106.2	64.9	53.4	3.6	5.3	8.5	1410	57.7	51.7	34.5	59.9	2.53	20.93	7.6
		4.2	9.7	1820	103.2	65.6	54.3	3.7	5.3	4.9	1580	59.0	52.5	36.4	60.9	2.62	20.58	11.1
		4.2	9.7	1900	102.0	65.7	53.8	3.7	5.3	3.9	1740	60.5	53.1	37.3	62.2	2.75	19.91	14.4
90	6	1.2	2.9	1270	119.1	70.8	58.1	4.1	5.2	19.2	1200	56.9	45.1	29.7	54.4	3.29	14.11	4.4
		1.2	2.9	1500	113.1	71.5	60.3	3.9	5.5	13.1	1340	58.5	46.0	31.0	55.6	3.37	14.12	6.7
		1.2	2.9	1620	110.8	71.8	60.0	3.9	5.5	10.0	1410	59.3	46.4	31.6	56.1	3.42	14.08	8.1
		1.2	2.9	1820	107.6	72.6	61.0	4.0	5.5	5.8	1580	60.7	47.1	33.3	57.0	3.55	13.85	11.9
		1.2	2.9	1900	106.3	72.7	60.5	4.0	5.6	4.6	1740	62.1	47.6	34.2	58.2	3.73	13.40	15.5
	9	2.4	5.5	1270	120.5	73.7	61.5	4.1	5.4	19.5	1200	56.8	45.5	30.0	54.2	3.10	15.03	4.5
		2.4	5.5	1500	114.5	74.4	63.8	3.9	5.7	13.3	1340	58.4	46.4	31.3	55.4	3.17	15.03	6.8
		2.4	5.5	1620	112.0	74.7	63.5	3.9	5.7	10.2	1410	59.2	46.7	31.8	55.9	3.22	14.99	8.2
		2.4	5.5	1820	108.8	75.6	64.6	4.0	5.7	5.9	1580	60.5	47.4	33.5	56.8	3.34	14.75	12.1
		2.4	5.5	1900	107.6	75.7	64.0	4.0	5.7	4.7	1740	62.0	48.0	34.4	58.0	3.51	14.26	15.7
	12	3.8	8.7	1270	121.2	75.4	63.1	4.1	5.4	19.7	1200	56.8	45.6	30.0	54.0	2.99	15.41	4.6
		3.8	8.7	1500	115.2	76.1	65.5	4.0	5.7	13.5	1340	58.4	46.5	31.3	55.1	3.07	15.42	6.9
		3.8	8.7	1620	112.7	76.4	65.1	4.0	5.7	10.3	1410	59.1	46.9	31.9	55.6	3.11	15.37	8.3
		3.8	8.7	1820	109.5	77.3	66.3	4.0	5.7	6.0	1580	60.5	47.6	33.6	56.6	3.23	15.12	12.3
		3.8	8.7	1900	108.2	77.5	65.7	4.0	5.7	4.7	1740	62.0	48.1	34.5	57.8	3.39	14.63	15.9

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT048 Part Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, PART LOAD							LOAD SIDE, COOLING MODE, PART LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	8	2.9	6.6	1000	94.5	25.1	18.1	2.4	3.1	13.6	Operation Not Recommended							
		2.9	6.6	1170	90.4	25.3	18.7	2.3	3.3	9.9	1050	63.5	30.9	18.6	29.4	0.90	38.64	5.7
		2.9	6.6	1250	88.9	25.4	18.9	2.3	3.4	8.2	1100	64.1	31.3	19.1	29.4	0.86	41.04	6.9
		2.9	6.6	1400	86.5	25.7	18.8	2.2	3.5	5.3	1230	65.6	31.8	20.2	30.1	0.87	41.29	9.9
		2.9	6.6	1540	84.5	25.8	19.4	2.2	3.5	3.3	1350	66.6	32.3	20.9	30.6	0.90	40.96	12.8
30	4	1.0	2.4	1000	94.2	25.0	17.5	2.4	3.1	13.4	Operation Not Recommended							
		1.0	2.4	1170	90.1	25.2	18.2	2.3	3.3	9.8	1050	61.5	33.5	21.0	34.2	1.07	34.20	5.7
		1.0	2.4	1250	88.5	25.3	18.3	2.3	3.4	8.1	1100	62.2	33.7	21.4	34.2	1.08	34.26	6.8
		1.0	2.4	1400	86.2	25.6	18.3	2.3	3.4	5.2	1230	63.6	34.2	22.6	35.0	1.10	34.47	9.8
		1.0	2.4	1540	84.2	25.7	18.8	2.3	3.5	3.3	1350	64.6	34.7	23.4	35.7	1.13	34.19	12.6
	6	1.8	4.1	1000	95.5	26.5	18.9	2.4	3.3	13.6	Operation Not Recommended							
		1.8	4.1	1170	91.3	26.7	19.5	2.3	3.5	10.0	1050	61.3	33.9	21.1	34.1	0.96	38.64	5.8
		1.8	4.1	1250	89.7	26.8	19.7	2.3	3.5	8.2	1100	62.0	34.1	21.6	34.2	0.97	38.71	6.9
		1.8	4.1	1400	87.4	27.2	19.7	2.3	3.6	5.3	1230	63.4	34.6	22.8	34.9	0.99	38.95	9.9
		1.8	4.1	1540	85.4	27.2	20.2	2.3	3.7	3.3	1350	64.4	35.1	23.6	35.6	1.01	38.63	12.8
	8	2.8	6.4	1000	96.1	27.2	19.3	2.4	3.4	13.8	Operation Not Recommended							
		2.8	6.4	1170	91.9	27.4	20.0	2.3	3.6	10.1	1050	61.3	34.1	21.3	34.1	0.91	40.97	5.8
		2.8	6.4	1250	90.4	27.5	20.1	2.3	3.7	8.3	1100	62.0	34.3	21.8	34.1	0.92	41.04	6.9
		2.8	6.4	1400	88.0	27.9	20.1	2.3	3.7	5.3	1230	63.4	34.8	23.0	34.9	0.93	41.29	10.0
		2.8	6.4	1540	85.9	27.9	20.6	2.2	3.8	3.3	1350	64.4	35.3	23.8	35.5	0.96	40.96	12.9
50	4	0.9	2.1	1000	100.5	33.2	26.2	2.5	4.1	14.0	940	54.7	40.9	26.0	45.2	1.39	30.74	3.95
		0.9	2.1	1170	96.2	33.5	27.1	2.4	4.3	10.3	1050	56.1	41.8	27.3	46.3	1.41	31.21	6.0
		0.9	2.1	1250	94.5	33.6	27.3	2.3	4.4	8.5	1100	56.7	42.1	27.9	46.4	1.42	31.26	7.1
		0.9	2.1	1400	92.0	34.1	27.3	2.3	4.5	5.4	1230	58.0	42.7	29.4	47.4	1.44	31.45	10.2
		0.9	2.1	1540	89.9	34.1	28.0	2.3	4.6	3.4	1350	58.9	43.4	30.5	48.3	1.48	31.20	13.2
	6	1.5	3.5	1000	101.9	35.2	28.1	2.5	4.3	14.2	940	54.6	41.4	26.2	45.2	1.25	34.73	4.01
		1.5	3.5	1170	97.5	35.5	29.1	2.4	4.6	10.4	1050	55.9	42.3	27.5	46.3	1.26	35.26	6.0
		1.5	3.5	1250	95.8	35.6	29.3	2.3	4.6	8.6	1100	56.5	42.6	28.1	46.3	1.27	35.32	7.2
		1.5	3.5	1400	93.3	36.1	29.3	2.3	4.7	5.5	1230	57.8	43.1	29.7	47.3	1.30	35.54	10.4
		1.5	3.5	1540	91.1	36.1	30.1	2.3	4.8	3.5	1350	58.8	43.9	30.8	48.2	1.33	35.25	13.4
	8	2.4	5.6	1000	102.7	36.1	28.7	2.4	4.4	14.4	940	54.5	41.6	26.4	45.1	1.18	36.82	4.05
		2.4	5.6	1170	98.2	36.4	29.8	2.3	4.7	10.5	1050	55.9	42.5	27.8	46.2	1.20	37.38	6.1
		2.4	5.6	1250	96.5	36.5	29.9	2.3	4.8	8.7	1100	56.5	42.8	28.4	46.2	1.20	37.45	7.3
		2.4	5.6	1400	93.9	37.0	29.9	2.3	4.9	5.6	1230	57.8	43.4	29.9	47.3	1.22	37.68	10.5
		2.4	5.6	1540	91.8	37.1	30.8	2.3	5.0	3.5	1350	58.7	44.1	31.0	48.2	1.26	37.37	13.5
70	4	0.8	1.9	1000	107.5	41.7	34.6	2.5	5.0	15.7	940	56.0	37.4	24.6	43.2	1.89	20.40	4.1
		0.8	1.9	1170	102.8	42.1	35.8	2.4	5.3	11.5	1050	57.4	38.2	25.8	44.3	1.92	20.71	6.2
		0.8	1.9	1250	101.1	42.2	36.1	2.4	5.4	9.5	1100	58.1	38.4	26.4	44.3	1.93	20.75	7.4
		0.8	1.9	1400	98.4	42.8	36.0	2.4	5.5	6.1	1230	59.4	39.0	27.8	45.3	1.97	20.87	10.6
		0.8	1.9	1540	96.1	42.8	37.0	2.4	5.6	3.8	1350	60.3	39.6	28.9	46.2	2.02	20.70	13.7
	6	1.4	3.2	1000	109.0	44.2	37.2	2.5	5.2	15.9	940	55.9	37.8	24.8	43.2	1.70	23.05	4.2
		1.4	3.2	1170	104.3	44.5	38.5	2.4	5.6	11.7	1050	57.3	38.6	26.0	44.2	1.72	23.40	6.3
		1.4	3.2	1250	102.5	44.7	38.8	2.4	5.7	9.6	1100	57.9	38.9	26.6	44.2	1.73	23.44	7.5
		1.4	3.2	1400	99.8	45.3	38.8	2.4	5.8	6.2	1230	59.2	39.4	28.0	45.2	1.77	23.59	10.8
		1.4	3.2	1540	97.5	45.4	39.8	2.4	5.9	3.9	1350	60.2	40.1	29.1	46.1	1.81	23.39	13.9
	8	2.2	5.1	1000	109.8	45.4	38.0	2.5	5.4	16.1	940	55.8	38.0	25.0	43.1	1.61	24.44	4.2
		2.2	5.1	1170	105.0	45.7	39.4	2.4	5.8	11.8	1050	57.2	38.9	26.3	44.1	1.63	24.81	6.4
		2.2	5.1	1250	103.2	45.9	39.6	2.4	5.9	9.8	1100	57.9	39.1	26.8	44.2	1.64	24.85	7.6
		2.2	5.1	1400	100.4	46.5	39.6	2.4	6.0	6.3	1230	59.2	39.7	28.3	45.2	1.67	25.01	10.9
		2.2	5.1	1540	98.1	46.6	40.7	2.3	6.1	3.9	1350	60.1	40.3	29.3	46.0	1.72	24.80	14.1
90	4	0.7	1.7	1000	114.4	50.1	41.2	2.7	5.7	19.1	940	57.5	33.2	22.6	40.7	2.56	13.32	4.5
		0.7	1.7	1170	109.4	50.5	42.7	2.6	6.0	14.0	1050	59.0	34.0	23.7	41.7	2.60	13.52	6.8
		0.7	1.7	1250	107.5	50.6	42.9	2.5	6.1	11.6	1100	59.6	34.2	24.2	41.8	2.62	13.55	8.1
		0.7	1.7	1400	104.6	51.4	42.9	2.5	6.2	7.4	1230	60.9	34.6	25.6	42.7	2.66	13.63	11.7
		0.7	1.7	1540	102.2	51.4	44.1	2.5	6.4	4.6	1350	61.9	35.2	26.5	43.5	2.74	13.52	15.1
	6	1.2	2.9	1000	116.0	53.1	44.3	2.7	6.0	19.3	940	57.4	33.6	22.7	40.7	2.30	15.05	4.6
		1.2	2.9	1170	110.9	53.5	45.9	2.6	6.3	14.2	1050	58.8	34.3	23.9	41.6	2.33	15.28	6.9
		1.2	2.9	1250	109.0	53.6	46.1	2.5	6.5	11.7	1100	59.4	34.6	24.4	41.7	2.35	15.31	8.2
		1.2	2.9	1400	106.1	54.4	46.1	2.5	6.6	7.5	1230	60.8	35.0	25.8	42.6	2.39	15.40	11.9
		1.2	2.9	1540	103.7	54.5	47.4	2.5	6.7	4.7	1350	61.8	35.6	26.7	43.4	2.46	15.28	15.3
	8	2.0	4.5	1000	116.8	54.5	45.2	2.6	6.1	19.6	940	57.3	33.8	22.9	40.6	2.18	15.96	4.6
		2.0	4.5	1170	111.7	54.9	46.9	2.5	6.6	14.3	1050	58.8	34.5	24.1	41.6	2.21	16.20	7.0
		2.0	4.5	1250	109.7	55.1	47.1	2.5	6.7	11.8	1100	59.4	34.8	24.6	41.6	2.22	16.23	8.3
		2.0	4.5	1400	106.8	55.9	47.1	2.5	6.8	7.6	1230	60.7	35.2	26.0	42.6	2.26	16.33	12.0
		2.0	4.5	1540	104.4	55.9	48.4	2.5	6.9	4.8	1350	61.7	35.8	26.9	43.4	2.32	16.19	15.5

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT060 Full Load Performance Data

Source				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	15	7.4	17.1	1400	100.1	44.8	33.7	4.0	3.2	14.3	Operation Not Recommended							
		7.4	17.1	1440	99.1	44.9	33.5	3.9	3.3	13.4	1520	61.4	51.1	30.4	58.9	2.03	25.34	3.2
		7.4	17.1	1590	96.0	45.0	33.3	3.8	3.4	10.0	1590	61.9	51.7	31.2	59.0	1.97	25.90	4.2
		7.4	17.1	1750	92.9	44.8	34.0	3.7	3.5	6.4	1750	63.3	52.4	32.3	60.9	2.03	25.78	7.0
		7.4	17.1	1940	90.4	45.4	34.5	3.7	3.6	3.4	1940	64.8	53.2	33.7	60.8	2.09	25.51	11.2
30	7.5	2.5	5.7	1400	100.5	45.8	32.8	4.0	3.3	14.0	Operation Not Recommended							
		2.5	5.7	1440	99.6	45.8	32.7	4.0	3.4	13.1	1520	60.2	53.4	32.5	61.7	2.28	23.77	3.2
		2.5	5.7	1590	96.4	46.0	32.5	3.9	3.5	9.8	1590	60.9	53.8	33.1	61.9	2.30	23.76	4.1
		2.5	5.7	1750	93.3	45.8	33.1	3.8	3.6	6.3	1750	62.3	54.6	34.3	63.9	2.36	23.65	6.9
		2.5	5.7	1940	90.8	46.4	33.6	3.7	3.7	3.3	1940	63.7	55.5	35.8	63.8	2.43	23.40	11.0
	12	5.1	11.7	1400	102.1	48.0	34.5	4.1	3.4	14.3	Operation Not Recommended							
		5.1	11.7	1440	101.1	48.1	34.4	4.1	3.4	13.4	1520	60.1	53.6	32.7	61.1	2.13	25.39	3.3
		5.1	11.7	1590	97.9	48.3	34.2	3.9	3.5	10.0	1590	60.8	54.1	33.3	61.3	2.15	25.38	4.2
		5.1	11.7	1750	94.7	48.0	34.8	3.8	3.6	6.4	1750	62.2	54.8	34.5	63.3	2.20	25.27	7.0
		5.1	11.7	1940	92.2	48.7	35.4	3.8	3.7	3.4	1940	63.6	55.7	36.0	63.2	2.27	25.00	11.2
	15	7.1	16.3	1400	102.4	48.5	35.4	4.1	3.4	14.5	Operation Not Recommended							
		7.1	16.3	1440	101.4	48.5	35.3	4.1	3.4	13.6	1520	59.9	53.7	32.9	61.1	2.07	25.76	3.3
		7.1	16.3	1590	98.2	48.7	35.0	3.9	3.5	10.1	1590	60.6	54.2	33.5	61.3	2.09	25.75	4.2
		7.1	16.3	1750	95.0	48.4	35.7	3.8	3.6	6.5	1750	62.0	54.9	34.7	63.3	2.15	25.64	7.1
		7.1	16.3	1940	92.5	49.1	36.3	3.8	3.7	3.4	1940	63.4	55.8	36.2	63.2	2.21	25.36	11.3
50	7.5	2.2	5.0	1400	107.8	58.0	44.2	4.4	3.9	14.6	1480	55.3	63.2	40.2	72.1	2.85	22.53	2.90
		2.2	5.0	1440	106.8	58.0	44.0	4.3	3.9	13.7	1520	55.7	63.5	40.7	72.1	2.86	22.53	3.3
		2.2	5.0	1590	103.4	58.3	43.7	4.2	4.1	10.2	1590	56.3	64.1	41.4	72.3	2.89	22.52	4.3
		2.2	5.0	1750	100.0	57.9	44.6	4.1	4.2	6.6	1750	57.6	64.9	43.0	74.7	2.96	22.42	7.2
		2.2	5.0	1940	97.4	58.8	45.3	4.1	4.3	3.4	1940	59.0	66.0	44.8	74.6	3.05	22.18	11.5
	12	4.4	10.3	1400	109.5	60.8	46.5	4.4	4.0	14.9	1480	55.2	63.5	40.4	71.5	2.65	24.06	2.96
		4.4	10.3	1440	108.5	60.9	46.3	4.4	4.0	14.0	1520	55.6	63.8	40.9	71.5	2.67	24.06	3.4
		4.4	10.3	1590	105.0	61.1	46.0	4.3	4.2	10.4	1590	56.2	64.3	41.6	71.7	2.69	24.06	4.4
		4.4	10.3	1750	101.6	60.8	46.9	4.2	4.3	6.7	1750	57.5	65.2	43.2	74.0	2.76	23.95	7.3
		4.4	10.3	1940	98.9	61.7	47.7	4.1	4.4	3.5	1940	58.8	66.3	45.0	73.9	2.84	23.69	11.7
	15	6.2	14.4	1400	109.8	61.3	47.6	4.5	4.0	15.1	1480	55.0	63.6	40.7	71.4	2.58	24.42	2.99
		6.2	14.4	1440	108.8	61.4	47.5	4.4	4.0	14.1	1520	55.4	63.9	41.1	71.4	2.60	24.42	3.4
		6.2	14.4	1590	105.3	61.7	47.2	4.3	4.2	10.5	1590	56.0	64.5	41.9	71.6	2.62	24.41	4.4
		6.2	14.4	1750	101.9	61.3	48.1	4.2	4.3	6.8	1750	57.4	65.4	43.5	74.0	2.69	24.30	7.4
		6.2	14.4	1940	99.2	62.2	48.8	4.1	4.4	3.6	1940	58.7	66.4	45.3	73.9	2.77	24.04	11.8
70	7.5	1.9	4.4	1400	116.6	72.3	57.0	4.9	4.4	16.4	1480	55.5	61.8	39.7	73.1	3.49	18.18	3.0
		1.9	4.4	1440	115.5	72.4	56.8	4.8	4.5	15.4	1520	55.9	62.1	40.2	73.1	3.50	18.18	3.5
		1.9	4.4	1590	111.8	72.7	56.5	4.7	4.6	11.5	1590	56.5	62.7	40.9	73.3	3.54	18.17	4.4
		1.9	4.4	1750	108.2	72.2	57.5	4.6	4.7	7.4	1750	57.9	63.5	42.4	75.7	3.63	18.09	7.5
		1.9	4.4	1940	105.3	73.3	58.5	4.5	4.9	3.9	1940	59.2	64.5	44.2	75.6	3.73	17.90	11.9
	12	3.8	8.9	1400	118.4	75.9	60.0	4.9	4.5	16.8	1480	55.4	62.1	39.9	72.5	3.25	19.41	3.1
		3.8	8.9	1440	117.3	75.9	59.8	4.9	4.5	15.7	1520	55.8	62.4	40.4	72.5	3.26	19.41	3.5
		3.8	8.9	1590	113.5	76.3	59.4	4.7	4.7	11.7	1590	56.4	62.9	41.1	72.7	3.30	19.41	4.5
		3.8	8.9	1750	109.8	75.8	60.6	4.6	4.8	7.5	1750	57.8	63.8	42.7	75.1	3.38	19.32	7.6
		3.8	8.9	1940	106.9	76.9	61.5	4.6	5.0	3.9	1940	59.1	64.8	44.5	75.0	3.48	19.11	12.2
	15	5.4	12.4	1400	118.7	76.5	61.5	5.0	4.5	16.9	1480	55.2	62.2	40.2	72.4	3.16	19.70	3.1
		5.4	12.4	1440	117.6	76.6	61.3	4.9	4.5	15.9	1520	55.6	62.5	40.6	72.4	3.18	19.70	3.6
		5.4	12.4	1590	113.8	76.9	60.9	4.7	4.7	11.8	1590	56.2	63.1	41.4	72.6	3.21	19.69	4.6
		5.4	12.4	1750	110.1	76.4	62.0	4.6	4.8	7.6	1750	57.6	63.9	42.9	75.0	3.29	19.60	7.7
		5.4	12.4	1940	107.2	77.5	63.1	4.6	4.9	4.0	1940	58.9	65.0	44.8	74.9	3.39	19.39	12.3
90	7.5	1.7	4.0	1400	124.8	85.5	66.6	5.4	4.7	19.9	1480	56.9	56.2	37.1	70.3	4.28	13.49	3.3
		1.7	4.0	1440	123.7	85.6	66.4	5.4	4.7	18.7	1520	57.3	56.5	37.5	70.3	4.30	13.49	3.8
		1.7	4.0	1590	119.7	86.0	66.0	5.2	4.9	13.9	1590	57.9	56.9	38.2	70.5	4.34	13.49	4.9
		1.7	4.0	1750	115.8	85.4	67.2	5.1	5.0	8.9	1750	59.3	57.7	39.6	72.8	4.45	13.43	8.3
		1.7	4.0	1940	112.7	86.7	68.3	5.0	5.2	4.7	1940	60.6	58.6	41.3	72.7	4.59	13.28	13.2
	12	3.5	8.1	1400	126.8	89.7	70.1	5.5	4.8	20.3	1480	56.8	56.4	37.2	69.7	3.99	14.41	3.4
		3.5	8.1	1440	125.6	89.8	69.9	5.5	4.8	19.0	1520	57.2	56.7	37.7	69.7	4.01	14.41	3.9
		3.5	8.1	1590	121.5	90.2	69.4	5.3	5.0	14.2	1590	57.8	57.2	38.4	69.9	4.05	14.41	5.0
		3.5	8.1	1750	117.6	89.6	70.8	5.2	5.1	9.1	1750	59.2	58.0	39.8	72.2	4.15	14.34	8.4
		3.5	8.1	1940	114.5	90.9	71.9	5.1	5.3	4.8	1940	60.5	58.9	41.5	72.1	4.27	14.19	13.4
	15	4.9	11.3	1400	127.1	90.5	71.8	5.5	4.8	20.6	1480	56.6	56.5	37.5	69.6	3.89	14.62	3.4
		4.9	11.3	1440	126.0	90.6	71.6	5.5	4.8	19.2	1520	57.0	56.8	37.9	69.6	3.91	14.62	3.9
		4.9	11.3	1590	121.9	90.9	71.2	5.3	5.0	14.4	1590	57.6	57.3	38.6	69.8	3.94	14.62	5.1
		4.9	11.3	1750	118.0	90.4	72.5	5.2	5.1	9.2	1750	59.0	58.1	40.0	72.1	4.05	14.55	8.5
		4.9	11.3	1940	114.8	91.7	73.7	5.1	5.2	4.8	1940	60.3	59.0	41.8	72.0	4.16	14.40	13.6

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT060 Part Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, PART LOAD							LOAD SIDE, COOLING MODE, PART LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	10	4.0	9.2	1200	94.7	31.7	22.8	3.0	3.2	13.8	Operation Not Recommended							
		4.0	9.2	1220	94.2	31.7	22.8	2.9	3.2	13.3	1280	65.1	37.6	18.9	46.8	1.19	34.37	3.3
		4.0	9.2	1350	91.5	31.7	22.8	2.8	3.3	9.9	1410	66.4	38.4	19.7	47.3	1.14	36.76	5.6
		4.0	9.2	1480	89.4	32.0	23.1	2.8	3.4	6.6	1540	67.6	39.0	20.4	47.5	1.16	36.94	8.6
		4.0	9.2	1650	86.6	31.9	23.8	2.7	3.5	3.4	1710	68.9	39.5	21.3	49.1	1.19	36.52	12.8
30	5	1.3	3.0	1200	94.0	31.4	22.1	2.9	3.2	13.6	Operation Not Recommended							
		1.3	3.0	1220	93.6	31.4	22.1	2.9	3.2	13.1	1280	62.5	40.6	23.4	48.6	1.41	30.89	3.3
		1.3	3.0	1350	90.9	31.5	22.1	2.8	3.4	9.8	1410	63.8	41.4	24.3	49.7	1.42	31.37	5.5
		1.3	3.0	1480	88.8	31.7	22.4	2.8	3.4	6.5	1540	65.0	42.1	25.2	49.9	1.44	31.52	8.5
		1.3	3.0	1650	86.0	31.7	23.1	2.7	3.6	3.4	1710	66.2	42.6	26.4	51.6	1.49	31.17	12.6
	8	2.7	6.3	1200	95.5	33.2	23.5	3.0	3.4	13.9	Operation Not Recommended							
		2.7	6.3	1220	95.1	33.2	23.5	2.9	3.4	13.3	1280	62.4	40.9	23.5	48.1	1.26	34.84	3.4
		2.7	6.3	1350	92.3	33.3	23.6	2.9	3.5	10.0	1410	63.7	41.8	24.4	49.2	1.27	35.39	5.6
		2.7	6.3	1480	90.2	33.5	23.8	2.8	3.6	6.6	1540	64.9	42.4	25.3	49.4	1.29	35.56	8.6
		2.7	6.3	1650	87.4	33.4	24.6	2.7	3.7	3.4	1710	66.1	42.9	26.5	51.0	1.33	35.16	12.8
	10	3.8	8.8	1200	96.1	33.7	23.7	3.0	3.4	14.0	Operation Not Recommended							
		3.8	8.8	1220	95.6	33.7	23.7	3.0	3.4	13.4	1280	62.3	41.0	23.5	47.7	1.21	36.20	3.4
		3.8	8.8	1350	92.9	33.8	23.8	2.9	3.5	10.1	1410	63.6	41.8	24.4	48.8	1.22	36.76	5.7
		3.8	8.8	1480	90.8	34.1	24.1	2.8	3.6	6.7	1540	64.8	42.5	25.3	48.9	1.24	36.94	8.7
		3.8	8.8	1650	87.9	34.0	24.8	2.8	3.7	3.5	1710	66.0	43.0	26.5	50.6	1.28	36.52	12.9
50	5	1.1	2.6	1200	100.9	41.0	31.9	3.1	4.0	14.2	1230	55.8	49.9	33.3	55.5	1.84	28.10	2.85
		1.1	2.6	1220	100.4	41.0	31.9	3.0	4.1	13.7	1280	56.2	50.5	33.8	56.0	1.85	28.43	3.5
		1.1	2.6	1350	97.5	41.1	32.0	2.9	4.2	10.2	1410	57.4	51.5	35.2	57.3	1.87	28.87	5.8
		1.1	2.6	1480	95.3	41.4	32.4	2.9	4.3	6.8	1540	58.5	52.3	36.5	57.5	1.90	29.02	8.9
		1.1	2.6	1650	92.3	41.3	33.4	2.8	4.5	3.5	1710	59.6	52.9	38.2	59.4	1.95	28.69	13.2
	8	2.4	5.6	1200	102.5	43.3	33.9	3.1	4.2	14.4	1230	55.7	50.3	33.3	54.9	1.65	31.70	2.90
		2.4	5.6	1220	102.1	43.3	33.9	3.0	4.2	13.9	1280	56.1	50.9	33.9	55.4	1.65	32.07	3.5
		2.4	5.6	1350	99.1	43.4	34.0	2.9	4.4	10.4	1410	57.3	51.9	35.3	56.7	1.67	32.57	5.9
		2.4	5.6	1480	96.9	43.7	34.4	2.9	4.5	6.9	1540	58.4	52.7	36.6	56.9	1.69	32.73	9.0
		2.4	5.6	1650	93.8	43.6	35.5	2.8	4.6	3.6	1710	59.5	53.4	38.3	58.8	1.75	32.36	13.4
	10	3.4	7.7	1200	103.1	44.0	34.3	3.1	4.2	14.6	1230	55.6	50.4	33.4	54.4	1.58	32.93	2.93
		3.4	7.7	1220	102.7	44.0	34.3	3.1	4.2	14.0	1280	56.1	51.0	33.9	54.9	1.59	33.32	3.6
		3.4	7.7	1350	99.7	44.1	34.4	3.0	4.4	10.5	1410	57.2	52.0	35.3	56.2	1.60	33.84	5.9
		3.4	7.7	1480	97.4	44.4	34.8	2.9	4.5	7.0	1540	58.3	52.8	36.6	56.4	1.63	34.01	9.1
		3.4	7.7	1650	94.3	44.3	35.9	2.8	4.7	3.6	1710	59.4	53.5	38.3	58.3	1.68	33.62	13.5
70	5	1.0	2.2	1200	108.1	51.1	41.8	3.2	4.8	15.9	1230	56.8	46.4	31.6	54.4	2.52	18.97	3.0
		1.0	2.2	1220	107.6	51.1	41.8	3.2	4.9	15.3	1280	57.3	46.9	32.1	54.9	2.52	19.20	3.6
		1.0	2.2	1350	104.5	51.2	41.9	3.1	5.1	11.5	1410	58.5	47.8	33.4	56.2	2.55	19.49	6.0
		1.0	2.2	1480	102.1	51.6	42.4	3.0	5.2	7.6	1540	59.6	48.6	34.6	56.4	2.59	19.59	9.2
		1.0	2.2	1650	98.8	51.5	43.8	3.0	5.4	3.9	1710	60.7	49.1	36.2	58.3	2.67	19.37	13.7
	8	2.1	4.8	1200	109.8	53.9	44.5	3.2	5.0	16.2	1230	56.7	46.7	31.7	53.8	2.25	21.40	3.0
		2.1	4.8	1220	109.3	54.0	44.5	3.2	5.1	15.6	1280	57.2	47.3	32.2	54.3	2.25	21.66	3.7
		2.1	4.8	1350	106.1	54.1	44.6	3.1	5.3	11.6	1410	58.4	48.2	33.5	55.6	2.28	21.99	6.1
		2.1	4.8	1480	103.7	54.5	45.1	3.0	5.4	7.8	1540	59.5	49.0	34.7	55.8	2.31	22.10	9.4
		2.1	4.8	1650	100.4	54.3	46.5	3.0	5.6	4.0	1710	60.6	49.6	36.3	57.6	2.38	21.85	14.0
	10	2.9	6.7	1200	110.5	54.8	44.9	3.2	5.1	16.4	1230	56.7	46.8	31.7	53.3	2.16	22.23	3.0
		2.9	6.7	1220	109.9	54.9	44.9	3.2	5.1	15.7	1280	57.2	47.4	32.2	53.8	2.16	22.50	3.7
		2.9	6.7	1350	106.8	55.0	45.1	3.1	5.3	11.8	1410	58.3	48.3	33.5	55.1	2.19	22.85	6.2
		2.9	6.7	1480	104.3	55.4	45.6	3.0	5.4	7.8	1540	59.4	49.1	34.7	55.3	2.22	22.96	9.5
		2.9	6.7	1650	101.0	55.2	47.0	3.0	5.6	4.0	1710	60.6	49.7	36.3	57.1	2.29	22.70	14.1
90	5	0.9	2.0	1200	115.3	61.0	51.8	3.3	5.5	19.3	1230	58.3	41.5	29.2	51.4	3.35	12.68	3.3
		0.9	2.0	1220	114.7	61.0	51.8	3.3	5.6	18.6	1280	58.8	42.0	29.6	51.9	3.35	12.83	4.0
		0.9	2.0	1350	111.4	61.1	51.9	3.2	5.8	13.9	1410	60.0	42.8	30.8	53.1	3.39	13.03	6.6
		0.9	2.0	1480	108.9	61.6	52.6	3.1	5.9	9.3	1540	61.1	43.5	32.0	53.3	3.44	13.09	10.2
		0.9	2.0	1650	105.4	61.4	54.2	3.1	6.1	4.8	1710	62.3	44.0	33.5	55.0	3.54	12.95	15.1
	8	1.9	4.4	1200	117.1	64.4	55.1	3.3	5.8	19.7	1230	58.2	41.8	29.2	50.8	2.99	14.30	3.3
		1.9	4.4	1220	116.6	64.4	55.1	3.3	5.8	18.9	1280	58.6	42.3	29.7	51.3	2.99	14.47	4.1
		1.9	4.4	1350	113.2	64.5	55.2	3.2	6.0	14.1	1410	59.8	43.2	30.9	52.5	3.03	14.70	6.7
		1.9	4.4	1480	110.6	65.0	55.9	3.2	6.2	9.4	1540	61.0	43.8	32.1	52.7	3.07	14.77	10.4
		1.9	4.4	1650	107.1	64.8	57.7	3.1	6.4	4.9	1710	62.1	44.4	33.5	54.4	3.17	14.60	15.4
	10	2.6	6.1	1200	117.8	65.4	55.7	3.3	5.8	19.9	1230	58.1	41.9	29.3	50.4	2.87	14.86	3.4
		2.6	6.1	1220	117.3	65.4	55.7	3.3	5.8	19.1	1280	58.6	42.4	29.7	50.9	2.88	15.04	4.1
		2.6	6.1	1350	113.9	65.6	55.8	3.2	6.0	14.3	1410	59.8	43.2	30.9	52.0	2.91	15.27	6.8
		2.6	6.1	1480	111.3	66.1	56.5	3.2	6.2	9.5	1540	61.0	43.9	32.1	52.2	2.95	15.35	10.5
		2.6	6.1	1650	107.7	65.9	58.3	3.1	6.4	4.9	1710	62.1	44.5	33.6	54.0	3.04	15.17	15.5

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT072 Full Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, FULL LOAD							LOAD SIDE, COOLING MODE, FULL LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	18	10.2	23.5	1700	98.5	51.8	41.3	4.9	3.0	12.0	Operation Not Recommended							
		10.2	23.5	1880	95.3	52.0	42.0	4.8	3.1	8.1	1800	59.3	63.5	40.3	81.5	2.45	25.12	3.9
		10.2	23.5	1970	93.9	52.1	41.7	4.8	3.1	6.2	2000	61.0	64.6	41.7	79.0	2.46	25.03	7.3
		10.2	23.5	2080	92.4	52.2	42.3	4.7	3.2	4.4	2080	61.5	64.9	42.5	81.2	2.49	24.83	8.9
		10.2	23.5	2160	91.4	52.3	42.5	4.7	3.2	3.3	2270	62.8	65.3	43.8	82.2	2.59	24.19	12.8
30	9	3.4	7.8	1700	98.9	52.8	38.1	5.0	3.2	11.8	Operation Not Recommended							
		3.4	7.8	1880	95.7	53.0	38.7	4.8	3.3	8.0	1800	58.3	65.1	42.4	80.5	2.74	23.48	3.9
		3.4	7.8	1970	94.3	53.2	38.5	4.8	3.3	6.1	2000	59.9	66.2	44.0	80.1	2.83	23.17	7.1
		3.4	7.8	2080	92.7	53.2	39.1	4.8	3.3	4.3	2080	60.5	66.4	44.8	82.5	2.87	23.00	8.8
		3.4	7.8	2160	91.8	53.4	39.2	4.8	3.3	3.3	2270	61.7	67.0	46.2	83.4	2.98	22.40	12.5
	13.5	6.3	14.5	1700	99.9	54.5	40.2	5.0	3.2	12.0	Operation Not Recommended							
		6.3	14.5	1880	96.7	54.7	40.8	4.9	3.3	8.1	1800	58.3	65.1	42.3	79.9	2.58	24.67	4.0
		6.3	14.5	1970	95.3	54.9	40.6	4.8	3.4	6.2	2000	60.0	66.2	43.9	79.6	2.67	24.35	7.3
		6.3	14.5	2080	93.6	54.9	41.2	4.8	3.4	4.4	2080	60.5	66.4	44.7	81.9	2.71	24.16	8.9
		6.3	14.5	2160	92.7	55.1	41.3	4.8	3.4	3.3	2270	61.8	67.0	46.1	82.9	2.81	23.54	12.8
	18	9.8	22.6	1700	100.5	55.6	41.0	5.0	3.2	12.2	Operation Not Recommended							
		9.8	22.6	1880	97.2	55.8	41.7	4.9	3.3	8.2	1800	58.3	65.1	42.2	77.7	2.50	24.90	4.0
		9.8	22.6	1970	95.8	56.0	41.4	4.8	3.3	6.3	2000	60.0	66.2	43.8	77.4	2.59	24.58	7.4
		9.8	22.6	2080	94.2	56.0	42.1	4.8	3.4	4.4	2080	60.5	66.5	44.6	79.6	2.62	24.39	9.1
		9.8	22.6	2160	93.2	56.2	42.2	4.8	3.4	3.4	2270	61.8	67.0	46.0	80.6	2.72	23.75	12.9
50	9	2.9	6.7	1700	106.2	67.1	51.6	5.3	3.8	12.3	1700	54.9	70.4	47.0	81.8	3.33	21.22	2.94
		2.9	6.7	1880	102.7	67.4	52.5	5.1	3.9	8.3	1800	55.6	71.7	48.5	83.2	3.35	21.48	4.1
		2.9	6.7	1970	101.2	67.6	52.1	5.1	4.0	6.4	2000	57.1	73.0	50.3	82.9	3.47	21.20	7.5
		2.9	6.7	2080	99.5	67.6	53.0	5.1	4.0	4.5	2080	57.6	73.3	51.2	85.3	3.52	21.04	9.2
		2.9	6.7	2160	98.5	67.9	53.1	5.1	4.0	3.4	2270	58.8	73.8	52.9	86.3	3.66	20.49	13.1
	13.5	5.4	12.5	1700	107.3	69.3	54.4	5.3	3.9	12.5	1700	55.0	70.4	46.9	81.2	3.14	22.30	2.99
		5.4	12.5	1880	103.8	69.6	55.3	5.2	4.0	8.4	1800	55.6	71.7	48.4	82.7	3.16	22.57	4.2
		5.4	12.5	1970	102.3	69.8	55.0	5.1	4.0	6.5	2000	57.1	73.0	50.1	82.3	3.27	22.28	7.6
		5.4	12.5	2080	100.6	69.8	55.8	5.1	4.1	4.6	2080	57.7	73.3	51.1	84.7	3.32	22.11	9.3
		5.4	12.5	2160	99.6	70.1	56.0	5.1	4.1	3.5	2270	58.9	73.8	52.7	85.7	3.45	21.53	13.4
	18	8.4	19.5	1700	107.9	70.7	55.6	5.3	3.8	12.7	1700	55.0	70.4	46.8	79.0	3.04	22.51	3.04
		8.4	19.5	1880	104.4	71.0	56.5	5.2	4.0	8.6	1800	55.6	71.8	48.3	80.4	3.06	22.78	4.2
		8.4	19.5	1970	102.9	71.2	56.1	5.1	4.0	6.6	2000	57.1	73.0	50.1	80.1	3.17	22.48	7.7
		8.4	19.5	2080	101.1	71.2	57.0	5.1	4.0	4.6	2080	57.7	73.3	51.0	82.4	3.21	22.31	9.5
		8.4	19.5	2160	100.1	71.4	57.2	5.1	4.1	3.5	2270	58.9	73.9	52.6	83.3	3.34	21.73	13.6
70	9	2.5	5.8	1700	114.0	82.0	65.0	5.7	4.3	13.8	1700	55.0	70.3	46.6	83.8	4.08	17.50	3.1
		2.5	5.8	1880	110.4	82.3	66.1	5.6	4.5	9.3	1800	55.7	71.7	48.1	85.3	4.11	17.72	4.2
		2.5	5.8	1970	108.7	82.6	65.7	5.5	4.5	7.2	2000	57.2	73.0	49.8	85.0	4.25	17.49	7.8
		2.5	5.8	2080	106.9	82.6	66.7	5.5	4.5	5.0	2080	57.7	73.2	50.7	87.4	4.31	17.35	9.5
		2.5	5.8	2160	105.8	82.9	66.9	5.5	4.6	3.8	2270	59.0	73.8	52.4	88.4	4.48	16.90	13.7
	13.5	4.7	10.9	1700	115.2	84.7	68.5	5.7	4.4	14.1	1700	55.1	70.3	46.5	83.3	3.84	18.39	3.1
		4.7	10.9	1880	111.5	85.0	69.7	5.6	4.5	9.5	1800	55.7	71.7	47.9	84.7	3.87	18.62	4.3
		4.7	10.9	1970	109.9	85.3	69.2	5.6	4.6	7.3	2000	57.3	73.0	49.7	84.4	4.01	18.37	7.9
		4.7	10.9	2080	108.0	85.3	70.3	5.5	4.6	5.1	2080	57.8	73.2	50.6	86.8	4.06	18.23	9.7
		4.7	10.9	2160	107.0	85.6	70.5	5.5	4.6	3.9	2270	59.0	73.8	52.2	87.8	4.22	17.76	13.9
	18	7.4	17.0	1700	115.9	86.3	70.0	5.8	4.4	14.3	1700	55.1	70.4	46.4	81.0	3.72	18.56	3.2
		7.4	17.0	1880	112.1	86.7	71.1	5.6	4.5	9.6	1800	55.7	71.7	47.9	82.4	3.75	18.79	4.4
		7.4	17.0	1970	110.5	86.9	70.6	5.6	4.5	7.4	2000	57.3	73.0	49.6	82.1	3.88	18.54	8.0
		7.4	17.0	2080	108.6	87.0	71.7	5.5	4.6	5.2	2080	57.8	73.3	50.5	84.4	3.93	18.40	9.9
		7.4	17.0	2160	107.6	87.3	72.0	5.5	4.6	4.0	2270	59.0	73.8	52.1	85.4	4.08	17.92	14.1
90	9	2.3	5.2	1700	121.1	96.0	78.1	6.3	4.6	16.8	1700	56.5	63.8	43.4	80.8	5.06	12.87	3.4
		2.3	5.2	1880	117.2	96.4	79.3	6.2	4.8	11.3	1800	57.2	65.0	44.7	82.2	5.10	13.02	4.7
		2.3	5.2	1970	115.4	96.7	78.8	6.1	4.8	8.7	2000	58.8	66.2	46.4	81.9	5.27	12.85	8.6
		2.3	5.2	2080	113.5	96.8	80.1	6.1	4.9	6.1	2080	59.3	66.4	47.2	84.2	5.35	12.76	10.5
		2.3	5.2	2160	112.4	97.1	80.3	6.1	4.9	4.7	2270	60.5	66.9	48.7	85.2	5.55	12.42	15.0
	13.5	4.2	9.7	1700	122.4	99.2	82.3	6.3	4.7	17.1	1700	56.6	63.8	43.2	80.2	4.77	13.52	3.4
		4.2	9.7	1880	118.4	99.6	83.6	6.2	4.8	11.5	1800	57.2	65.0	44.6	81.6	4.80	13.69	4.8
		4.2	9.7	1970	116.7	99.9	83.1	6.1	4.9	8.8	2000	58.8	66.2	46.2	81.3	4.97	13.51	8.7
		4.2	9.7	2080	114.7	99.9	84.4	6.1	4.9	6.2	2080	59.3	66.4	47.1	83.7	5.04	13.40	10.7
		4.2	9.7	2160	113.6	100.2	84.6	6.1	5.0	4.7	2270	60.6	66.9	48.6	84.6	5.24	13.05	15.3
	18	6.6	15.2	1700	123.0	101.1	84.0	6.3	4.7	17.3	1700	56.6	63.9	43.2	78.0	4.62	13.65	3.5
		6.6	15.2	1880	119.1	101.5	85.3	6.2	4.8	11.7	1800	57.2	65.1	44.5	79.4	4.65	13.81	4.8
		6.6	15.2	1970	117.3	101.8	84.8	6.1	4.9	9.0	2000	58.8	66.2	46.2	79.1	4.81	13.63	8.8
		6.6	15.2	2080	115.3	101.9	86.1	6.1	4.9	6.3	2080	59.3	66.5	47.0	81.4	4.88	13.53	10.9
		6.6	15.2	2160	114.2	102.2	86.4	6.1	4.9	4.8	2270	60.6	67.0	48.5	82.3	5.07	13.18	15.5

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

BT072 Part Load Performance Data

SOURCE				LOAD SIDE, HEATING MODE, PART LOAD							LOAD SIDE, COOLING MODE, PART LOAD							
EWT	GPM	Source Flow WPD		Airflow	LAT (DB)	HC	HE	Power	COP	DSH	Airflow	LAT (DB)	TC	SC	HR	Power	EER	DSH
°F		PSI	FT	CFM	°F	MBtuh	MBtuh	kW	W/W	MBtuh	CFM	°F	MBtuh	MBtuh	MBtuh	kW	Btuh/W	MBtuh
25	12	5.4	12.5	1400	94.6	36.1	26.4	3.8	2.9	13.1	Operation Not Recommended							
		5.4	12.5	1610	90.9	36.4	27.1	3.6	3.0	8.0	1610	59.7	49.4	36.0	46.8	1.55	33.19	5.5
		5.4	12.5	1680	89.8	36.5	27.1	3.6	3.1	6.3	1680	60.1	50.2	36.8	46.9	1.49	34.69	7.1
		5.4	12.5	1790	88.3	36.6	27.1	3.5	3.1	4.2	1790	61.0	50.5	37.9	48.0	1.53	34.49	9.7
		5.4	12.5	1850	87.6	36.7	27.8	3.5	3.1	3.3	1850	61.4	50.8	38.4	48.2	1.54	34.31	11.1
30	6	1.8	4.2	1400	94.5	36.4	29.1	3.8	3.0	12.9	Operation Not Recommended							
		1.8	4.2	1610	90.8	36.8	29.9	3.6	3.1	7.8	1610	58.8	52.6	37.5	53.1	1.83	29.84	5.5
		1.8	4.2	1680	89.7	36.8	29.9	3.6	3.2	6.2	1680	59.4	53.1	38.3	53.4	1.84	29.90	7.0
		1.8	4.2	1790	88.1	36.9	29.8	3.6	3.2	4.1	1790	60.2	53.5	39.4	54.6	1.88	29.72	9.5
		1.8	4.2	1850	87.5	37.0	30.6	3.5	3.2	3.3	1850	60.6	53.8	40.0	54.8	1.90	29.57	10.9
	9	3.4	7.8	1400	95.7	37.9	30.7	3.7	3.1	13.1	Operation Not Recommended							
		3.4	7.8	1610	91.9	38.3	31.5	3.6	3.2	8.0	1610	58.7	53.0	37.8	53.0	1.67	33.01	5.6
		3.4	7.8	1680	90.8	38.4	31.5	3.6	3.3	6.3	1680	59.2	53.6	38.6	53.2	1.68	33.08	7.1
		3.4	7.8	1790	89.2	38.5	31.4	3.5	3.3	4.2	1790	60.1	53.9	39.7	54.5	1.72	32.88	9.7
		3.4	7.8	1850	88.6	38.6	32.3	3.5	3.4	3.3	1850	60.5	54.2	40.3	54.7	1.74	32.71	11.1
	12	5.2	12.1	1400	96.2	38.8	31.2	3.7	3.1	13.3	Operation Not Recommended							
		5.2	12.1	1610	92.4	39.2	32.1	3.6	3.3	8.1	1610	58.6	53.3	37.9	52.9	1.59	34.44	5.7
		5.2	12.1	1680	91.3	39.3	32.1	3.6	3.3	6.4	1680	59.1	53.8	38.6	53.1	1.60	34.50	7.2
		5.2	12.1	1790	89.7	39.4	32.0	3.5	3.4	4.3	1790	60.0	54.2	39.8	54.3	1.64	34.30	9.8
		5.2	12.1	1850	89.1	39.5	32.8	3.5	3.4	3.4	1850	60.3	54.5	40.4	54.6	1.66	34.13	11.2
50	6	1.6	3.6	1400	101.5	48.1	38.0	3.9	3.8	13.5	1440	55.3	58.7	39.3	66.9	2.35	25.79	3.06
		1.6	3.6	1610	97.5	48.6	39.0	3.7	4.0	8.2	1610	56.5	60.2	41.4	68.4	2.39	26.21	5.8
		1.6	3.6	1680	96.3	48.7	39.0	3.7	4.0	6.4	1680	57.0	60.9	42.2	68.7	2.41	26.26	7.3
		1.6	3.6	1790	94.7	48.9	38.9	3.7	4.1	4.3	1790	57.8	61.3	43.5	70.3	2.46	26.11	10.0
		1.6	3.6	1850	94.0	48.9	40.0	3.7	4.1	3.4	1850	58.2	61.6	44.1	70.6	2.49	25.98	11.5
	9	2.9	6.7	1400	102.8	50.1	40.1	3.9	3.9	13.7	1440	55.2	59.3	39.7	66.7	2.15	28.53	3.11
		2.9	6.7	1610	98.8	50.6	41.2	3.7	4.1	8.3	1610	56.4	60.8	41.7	68.3	2.18	29.00	5.8
		2.9	6.7	1680	97.6	50.7	41.1	3.7	4.2	6.5	1680	56.9	61.4	42.6	68.6	2.20	29.06	7.4
		2.9	6.7	1790	95.9	50.9	41.1	3.6	4.2	4.4	1790	57.7	61.8	43.8	70.2	2.24	28.89	10.1
		2.9	6.7	1850	95.2	51.0	42.1	3.6	4.3	3.5	1850	58.1	62.1	44.5	70.4	2.27	28.74	11.6
	12	4.5	10.4	1400	103.3	51.4	40.8	3.9	4.0	13.9	1440	55.1	59.5	39.7	66.5	2.05	29.76	3.15
		4.5	10.4	1610	99.3	51.9	41.9	3.7	4.2	8.4	1610	56.3	61.0	41.8	68.1	2.08	30.25	5.9
		4.5	10.4	1680	98.1	52.0	41.9	3.7	4.2	6.6	1680	56.8	61.7	42.6	68.4	2.10	30.31	7.5
		4.5	10.4	1790	96.4	52.1	41.8	3.6	4.3	4.4	1790	57.6	62.1	43.9	70.0	2.14	30.13	10.3
		4.5	10.4	1850	95.7	52.2	42.9	3.6	4.3	3.5	1850	58.0	62.4	44.6	70.3	2.16	29.98	11.8
70	6	1.4	3.2	1400	108.9	59.9	50.5	4.1	4.5	15.1	1440	56.5	54.5	37.2	63.4	3.11	17.88	3.2
		1.4	3.2	1610	104.6	60.5	51.9	3.9	4.7	9.2	1610	57.7	55.8	39.2	64.9	3.16	18.17	6.0
		1.4	3.2	1680	103.3	60.6	51.9	3.9	4.8	7.2	1680	58.3	56.5	40.0	65.1	3.19	18.21	7.6
		1.4	3.2	1790	101.6	60.8	51.8	3.8	4.8	4.9	1790	59.1	56.8	41.2	66.7	3.25	18.10	10.4
		1.4	3.2	1850	100.8	60.9	53.2	3.8	4.9	3.8	1850	59.5	57.1	41.8	66.9	3.29	18.01	11.9
	9	2.5	5.8	1400	110.2	62.4	53.3	4.0	4.7	15.4	1440	56.3	54.9	37.6	63.2	2.84	19.78	3.2
		2.5	5.8	1610	105.9	63.0	54.7	3.9	4.9	9.3	1610	57.6	56.3	39.5	64.7	2.88	20.10	6.1
		2.5	5.8	1680	104.6	63.2	54.7	3.8	5.0	7.3	1680	58.1	56.9	40.3	65.0	2.90	20.15	7.7
		2.5	5.8	1790	102.8	63.4	54.6	3.8	5.0	4.9	1790	58.9	57.3	41.5	66.5	2.96	20.03	10.5
		2.5	5.8	1850	102.1	63.5	56.0	3.8	5.1	3.9	1850	59.3	57.6	42.2	66.8	3.00	19.92	12.1
	12	3.9	9.1	1400	110.8	63.9	54.2	4.0	4.7	15.6	1440	56.2	55.2	37.6	63.1	2.71	20.63	3.3
		3.9	9.1	1610	106.5	64.6	55.7	3.9	5.0	9.4	1610	57.5	56.6	39.6	64.5	2.75	20.97	6.2
		3.9	9.1	1680	105.2	64.7	55.7	3.8	5.0	7.4	1680	58.0	57.2	40.4	64.8	2.77	21.01	7.8
		3.9	9.1	1790	103.4	64.9	55.6	3.8	5.1	5.0	1790	58.8	57.6	41.6	66.3	2.83	20.89	10.7
		3.9	9.1	1850	102.6	65.0	57.0	3.8	5.1	4.0	1850	59.2	57.9	42.2	66.6	2.86	20.78	12.3
90	6	1.2	2.8	1400	116.1	71.8	59.8	4.3	5.0	18.4	1440	58.2	48.3	34.1	59.9	4.10	12.02	3.5
		1.2	2.8	1610	111.6	72.5	61.5	4.2	5.3	11.1	1610	59.5	49.6	35.9	61.4	4.16	12.22	6.6
		1.2	2.8	1680	110.2	72.7	61.5	4.1	5.3	8.8	1680	60.0	50.1	36.6	61.6	4.19	12.24	8.4
		1.2	2.8	1790	108.3	72.9	61.3	4.1	5.4	5.9	1790	60.9	50.4	37.7	63.1	4.28	12.17	11.4
		1.2	2.8	1850	107.5	73.1	63.0	4.1	5.5	4.7	1850	61.3	50.7	38.3	63.3	4.33	12.11	13.1
	9	2.3	5.2	1400	117.6	74.9	63.1	4.3	5.2	18.7	1440	58.1	48.8	34.4	59.8	3.74	13.30	3.6
		2.3	5.2	1610	113.0	75.6	64.8	4.1	5.5	11.3	1610	59.4	50.0	36.2	61.2	3.79	13.52	6.7
		2.3	5.2	1680	111.6	75.7	64.8	4.1	5.6	8.9	1680	59.9	50.5	36.9	61.5	3.82	13.55	8.5
		2.3	5.2	1790	109.7	76.0	64.6	4.1	5.6	6.0	1790	60.7	50.9	38.0	62.9	3.90	13.46	11.6
		2.3	5.2	1850	108.9	76.1	66.4	4.1	5.7	4.7	1850	61.1	51.1	38.6	63.2	3.95	13.40	13.3
	12	3.5	8.1	1400	118.2	76.7	64.2	4.3	5.3	18.9	1440	58.0	49.0	34.4	59.6	3.57	13.87	3.6
		3.5	8.1	1610	113.6	77.4	66.0	4.1	5.6	11.5	1610	59.3	50.2	36.3	61.0	3.62	14.10	6.8
		3.5	8.1	1680	112.2	77.5	65.9	4.1	5.6	9.0	1680	59.8	50.8	37.0	61.3	3.65	14.13	8.6
		3.5	8.1	1790	110.3	77.8	65.8	4.1	5.7	6.1	1790	60.6	51.1	38.1	62.7	3.72	14.05	11.8
		3.5	8.1	1850	109.5	77.9	67.6	4.1	5.7	4.8	1850	61.0	51.4	38.7	63.0	3.77	13.97	13.5

1. It is permissible to operate temporarily in the shaded areas but it is recommended to avoid extended operation in these areas.
2. Capacity data is based on 15% (by mass) methanol antifreeze solution (multiplier: 485) on the source side.
3. Any condition outside this performance table is not allowed to ensure safe and continuous operation.
4. Performance data accurate within ±15%.
5. Unit performance test is run without hot water generation.
6. Performance data is based upon the lower voltage of dual voltage rated units.
7. Interpolation of unit performance data is permissible; extrapolation is not.
8. Due to variations in installation, actual unit performance may vary from the tabulated data.

General Information

Packaged Geothermal Heat Pumps shall be constructed based on all information to follow. Equipment shall be completely assembled, piped, internally wired, charged with refrigerant, and tested.

Units shall be supplied factory built, capable of operating over an entering water temperature range from 25° to 120°F (-3.9° to 48.9°C) (extended data tables; Heating 25°F – 90°F, cooling 50°F – 110°F) as standard. All equipment listed in this section must be rated and certified in accordance with Air-Conditioning, Heating and Refrigeration Institute/International Standards Organization (AHRI/ISO 13256-1). All equipment must be tested, investigated, and determined to comply with the requirements of the standards for Heating and Cooling Equipment UL-1995 for the United States and CAN/CSA-C22.2 NO.236 for Canada, by Intertek Testing Laboratories (ETL). The units shall have AHRI/ISO and ETL-US-C labels.

All units shall be quality tested by factory run testing under normal operating conditions as described herein. Quality control system shall automatically perform via computer: helium leak check of both the water and refrigerant circuits, pressure tests, double evacuation and accurately charged system, perform detailed heating and cooling mode tests, and quality cross check all operational and test conditions to pass/fail criteria.

Basic Construction

The heat pumps shall be fabricated from powder coated heavy gauge galvanized steel. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117.

All units must have a minimum of three access panels for serviceability of compressor compartment. See IOM manuals for service clearances. All interior surfaces shall be lined with acoustic type closed cell, non-porous, non-fibrous Nitrile/Vinyl insulation. Standard cabinet panel insulation must meet UL-1995 and ASTM E 84/UL 723 Flame 25 / Smoke 50 requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and shall meet zero level bacteria growth per ASTM G22. The insulation shall be UL-GREENGUARD certified under the Children and Schools classification and approved by the Factory Mutual Research Corporation. For added protection it shall be protected with an EPA-approved antimicrobial agent.

Cabinets shall have separate holes and knockouts for entrance of line voltage and low voltage control wiring. All factory-installed wiring passing through factory knockouts and openings shall be protected from sheet metal edges at openings by plastic ferrules. Supply and return water connections shall be copper MPT fittings, and shall be securely mounted flush to the cabinet allowing for connection to a flexible hose without the use of a back-up wrench. All water connections and electrical knockouts must be in the compressor compartment as to not interfere with the serviceability of unit.

The unit shall be supplied with extended range internal insulation. All internal water lines and the evaporator side refrigeration tubing shall all have closed cell EPDM insulation. The water to refrigerant heat exchanger shall have 8lb. Envelo-Seal rigid closed cell spray foam applied.

Option: Sound attenuating compressor blanket for additional noise reduction.

All vertical units to have field installed discharge air duct collar, shipped loose, and 1” (25.4mm) field installed return air duct collar.

Option: Units shall have a field installed 1” (25.4mm) wide filter rack. Filter rack provided by heat pump manufacturer. Filter removal from either side with access door as part of the bracket. Units shall have a 1” (25.4mm) thick throwaway type glass fiber or pleated filter.

Option: Units shall have a field installed 2-inch (50.8mm) wide filter rack with removable access door and 2-inch (50.8mm) thick MERV11 pleated throwaway filter available.

Refrigerant Circuit

All units shall contain R-410A sealed refrigerant circuit including a high efficiency scroll compressor designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, micro-channel refrigerant to air heat exchanger, reversing valve, coaxial (tube in tube) refrigerant to water heat exchanger, and safety controls (see controls section). Refrigerant access ports shall be factory installed on high and low pressure refrigerant lines to facilitate field service.

Hermetic compressors shall be internally sprung. The compressor shall have a dual level vibration isolation system. The compressor will be mounted on rubber grommets secured to a large heavy gauge compressor mounting plate, which is then mounted to the cabinet base with specially engineered sound-tested PU Foam vibration isolation pads for maximized vibration attenuation. Compressor shall have thermal overload protection. Compressor discharge and suction refrigerant lines to have shock loops directly at compressor for additional vibration elimination. Compressor shall be located in an insulated compartment away from air stream to minimize sound transmission.

Refrigerant to air heat exchangers (air coil) shall utilize an all aluminium micro-channel construction and be rated to withstand 625 PSIG (4309 kPa) refrigerant working pressure. Refrigerant to water coaxial heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design (water coil), shall have enhanced rifled and knurled inner tube, rated to withstand 625 PSIG (4309 kPa) working refrigerant pressure and 500 PSIG (3445 kPa) working water pressure, and designed to have a low water pressure drop (max. 15ft.hd.).

Refrigerant metering shall be accomplished by thermostatic expansion valve only. Expansion valves shall be dual port balanced types with external equalizer for optimum refrigerant metering. The expansion valves must be bi-directional without the use of check valves. Units shall be designed and tested for operating ranges of entering water temperatures from 25° to 120°F (-3.9° to 48.9°C). Reversing valve shall be four-way solenoid activated refrigerant valve, which shall default to heating mode should the solenoid fail to function.

Option: The unit will be supplied with a cupro-nickel coaxial water to refrigerant heat exchanger.

Option: The unit shall be supplied with a hot water generator (desuperheater) heat exchanger, which shall be double wall and vented.

Fan and Motor Assembly
Blower shall have an orifice ring to allow removal of wheel and motor from front side without removing housing and be mounted such thaat the blower assembly can be removed with two sscrews via the rear access panel. The fan assembly or housing shall be removable without removing the ductwork. Units shall have a direct-drive centrifugal fan with a dynamic balanced wheel. The fan motor shall be an ECM variable speed ball bearing type motor. The fan motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermal overload protection. The motor will have 3 fan speed selections, a constant fan operation mode, as well as a dehumification mode. The ECM fan motor incorporates a soft start feature.

Drain Pan
The drain pan shall be constructed of 304 Stainless Steel to inhibit corrosion, or PC/ABS with Ionpure antimicrobial powder. The corrosion protection shall meet the stringent 1000 hour salt spray test per ASTM B117. Drain pan shall be fully insulated. The unit as standard will be supplied with solid-state electronic condensate overflow protection. Units shall be furnished with a 3/4" PVC condensate drain connection.

Electrical
A control box shall be located on top of the unit and shall contain or 75VA transformer, 24 volt activated, 2 or 3 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation and control. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 Volt and provide heating or cooling as required by the remote thermostat/sensor.

Source pump high voltage terminal block including minimum 7amp circuit breaker protection to be provided for field wiring of source pumps.

A detachable low voltage thermostat terminal strip with screw terminals to be provided for field wiring.

Option: Auxiliary electric heat system installed internal of the unit. The unit shall have a sheet metal plenum installed to house the electric heat strip without removing the blower housing. Field installed kit includes controls and circuit breakers for service.

Option: Unit will come with factory installed soft start device to reduce start-up amps by 60% to avoid light flicker where power supply is a concern.

Solid State ECM Fan Control Board
Airflow selection shall be accomplished via dip switch settings on the ECM control board. Actual airflow shall be indicated by the CFM LED with each 100 CFM being represented by one flash of the LED. Airflow shall be automatically maintained (±5%) by the ECM motor regardless of external static pressure up to its maximum output capacity. A dip switch shall allow selection of a special dehumidification mode, which reduces airflow in cooling by 50 CFM/ton to increase the latent capacity of the unit. A terminal shall be provided on the control board to allow an external humidistat to activate dehumidification mode, or the control board can be set to constant dehumidification mode.

Solid State Control Board System
Units shall have a solid-state control system. The control system microprocessor board shall be specifically designed to protect against building electrical system noise contamination, EMI, and RFI interference. The control system shall interface with a heat pump type 24V thermostat. The control system shall have the following features:

- Anti-short cycle time delay (5 minutes) on compressor operation.
- Random start on power up mode.
- Low voltage protection.
- High voltage protection.
- Unit shutdown on high or low refrigerant pressures.
- Unit shutdown on low temperature (low source coil temp OR low air coil temp).
- Condensate overflow electronic protection.
- Option to reset unit at thermostat or disconnect (soft or hard reset functions)
- Fault retry logic. The same fault trip has to occur 3 times before a hard lockout. If a fault occurs 3 times sequentially without thermostat meeting temperature, then lockout requiring manual reset will occur. A soft or hard reset will restart the unit.
- Ability to defeat time delays for servicing (test mode).
- Light emitting diode (LED) on circuit board to indicate high pressure, low pressure, low/high voltage, low water/air temperature, condensate overflow, high discharge gas temperature, faulty temperature sensor(s), and control voltage status.
- The low-pressure switch shall not be monitored for the first 90 seconds after a compressor start command to prevent nuisance safety trips.
- 24V output to cycle a motorized water valve or other device with compressor contactor.
- Water coil (evaporator) low temperature sensing selectable for water or anti-freeze.
- High discharge gas temperature sensing and protection.
- Smart desuperheater operation and logic to eliminate any heat transfer from the water tank to the source loop during cooling mode.

Revision Table

Date	Description of Revision	Page
24AUG2022	Revamped	ALL
14MARCH2022	BS/BT Unit Revision C EDSM created.	ALL

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