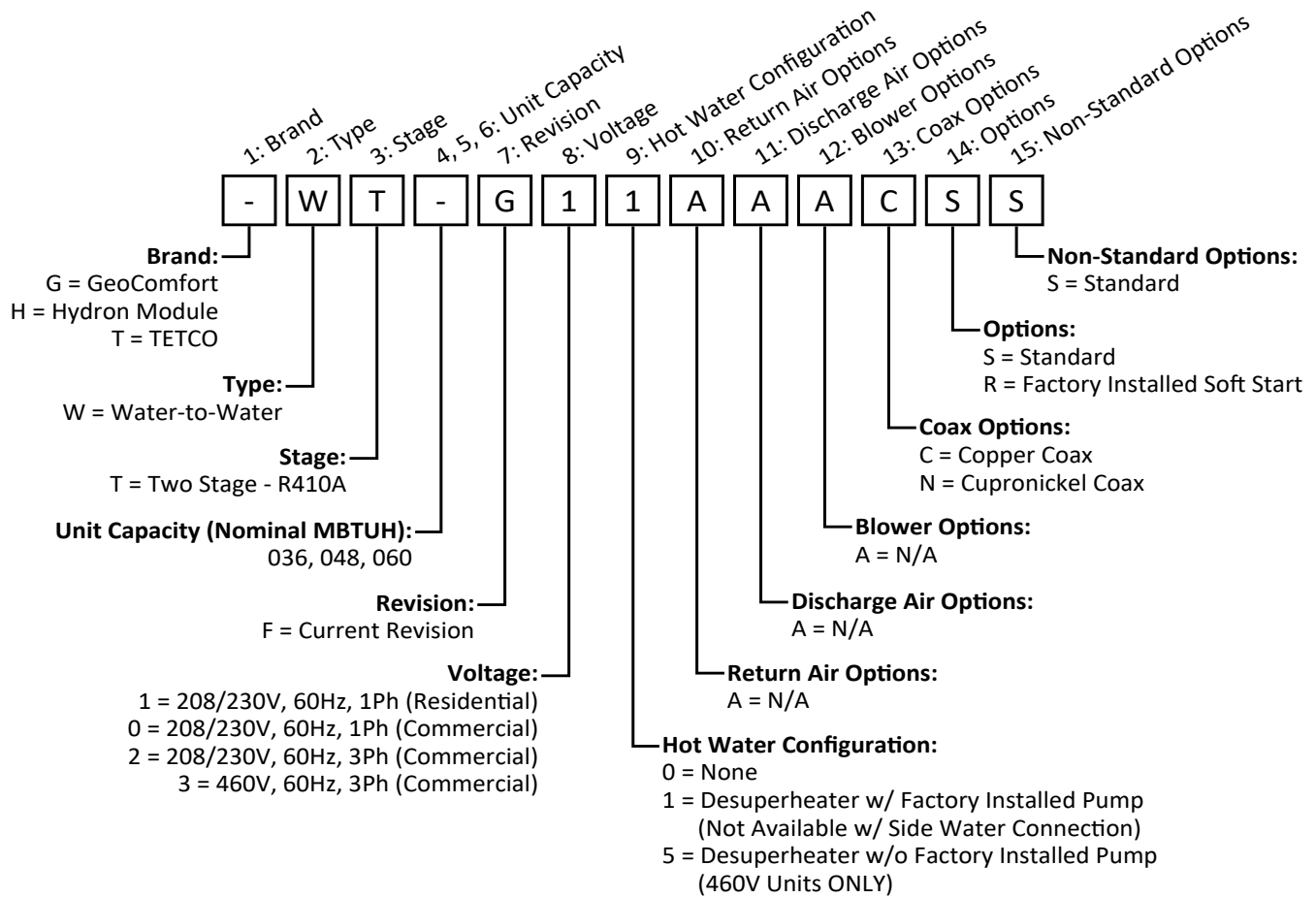


ENGINEERING SPECIFICATIONS

WT Nomenclature



AHRI Performance Data, Models 036 to 060

UNIT	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
WT036	GW	43,500	20.5	46,100	3.8	33,300	24.1	32,500	3.6
	GL	41,200	15.7	36,700	3.0	32,100	20.2	28,800	3.1
WT048	GW	54,300	19.8	55,100	3.6	40,800	23.0	40,500	3.4
	GL	49,400	15.1	44,100	3.0	38,800	19.2	35,700	3.1
WT060	GW	62,300	20.7	66,900	3.9	47,900	23.1	50,100	3.7
	GL	57,900	15.8	52,400	3.1	45,800	19.2	44,300	3.2

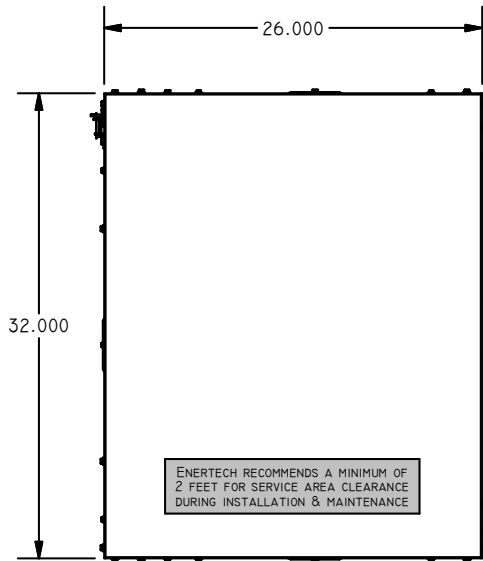
Ground Loop (GL) Notes:

Rated in accordance with ISO Standard 13256-2 which includes Pump Penalties.
 Heating Full Load capacities based on 32°F EST & 104°F ELT.
 Heating Part Load capacities based on 41°F EST & 104°F ELT.
 Cooling Full Load capacities based on 77°F EST & 53.6°F ELT.
 Cooling Part Load capacities based on 68°F EST & 53.6°F ELT.
 Entering load temperature over 120°F heating and under 45°F Cooling is not permissible.
 Floor heating is most generally designed for 85°F entering load temperature.

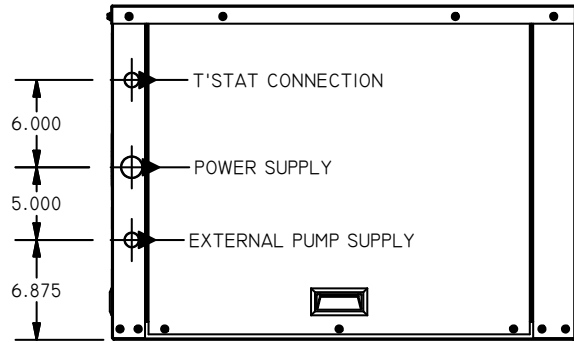
Ground Water (GW) Notes:

Rated in accordance with ISO Standard 13256-2 which includes Pump Penalties.
 Heating capacities based on 50°F EST & 104°F ELT.
 Cooling capacities based on 59°F EST & 53.6°F ELT.
 Entering load temperature over 120°F heating and under 45°F Cooling is not permissible.
 Floor heating is most generally designed for 85°F entering load temperature.

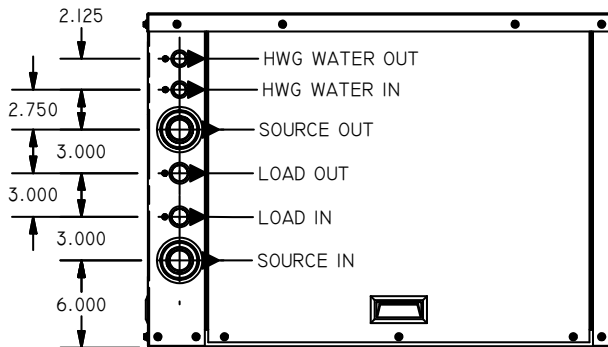
Unit Dimensional Data - 036



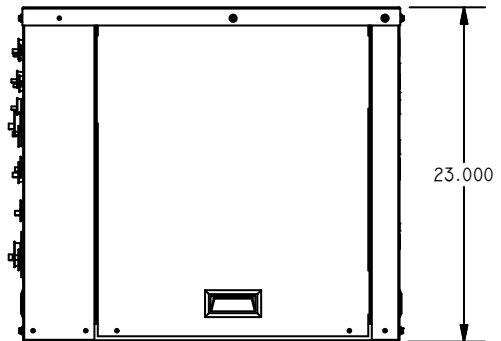
TOP VIEW



RIGHT SIDE VIEW



LEFT SIDE VIEW



FRONT VIEW

Single Compressor Unit										
MODEL	SOURCE Water: D/O*		SOURCE Water: FPT		LOAD Water: FPT		HWG Water: FPT		Factory Charge	Unit Weight
	IN	OUT	IN	OUT	IN	OUT	IN	OUT		
036	1-1/4"	1-1/4"	1"	1"	1"	1"	3/4"	3/4"	69 oz	334 Lbs
	RESIDENTIAL		COMMERCIAL							

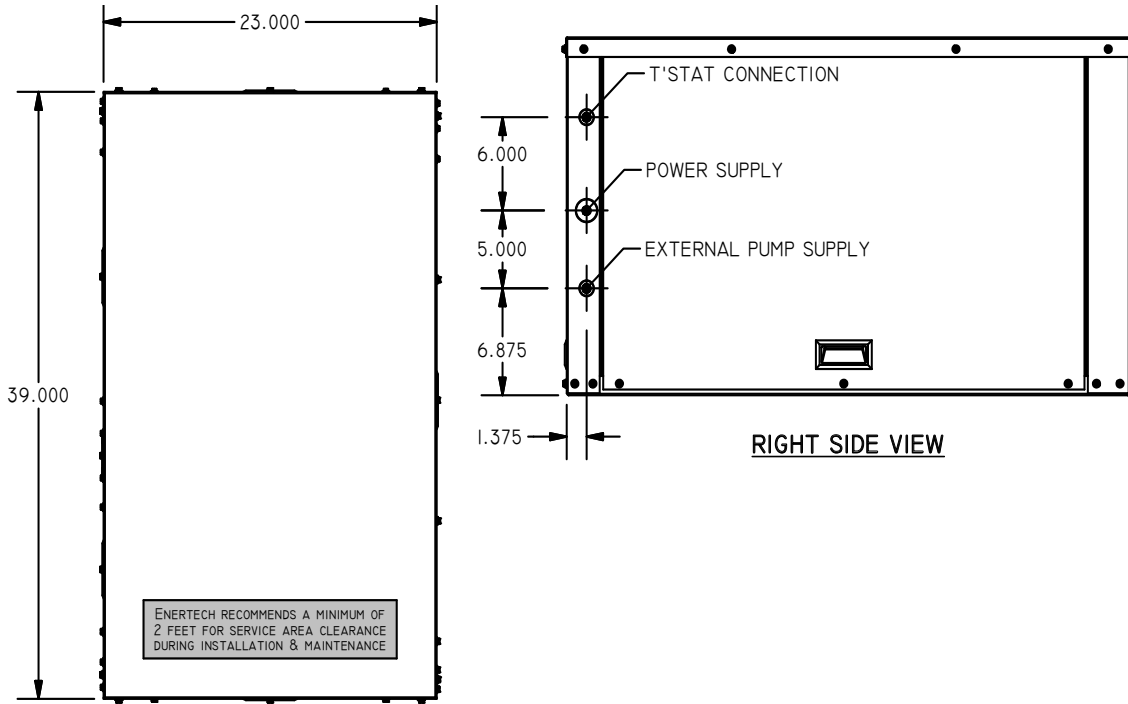
Notes:

- Electrical connections are 1" DIA for high voltage, & 1/2" DIA for low voltage.

*D/O = Double O-ring connections (requires double O-ring hose kit or adapters)

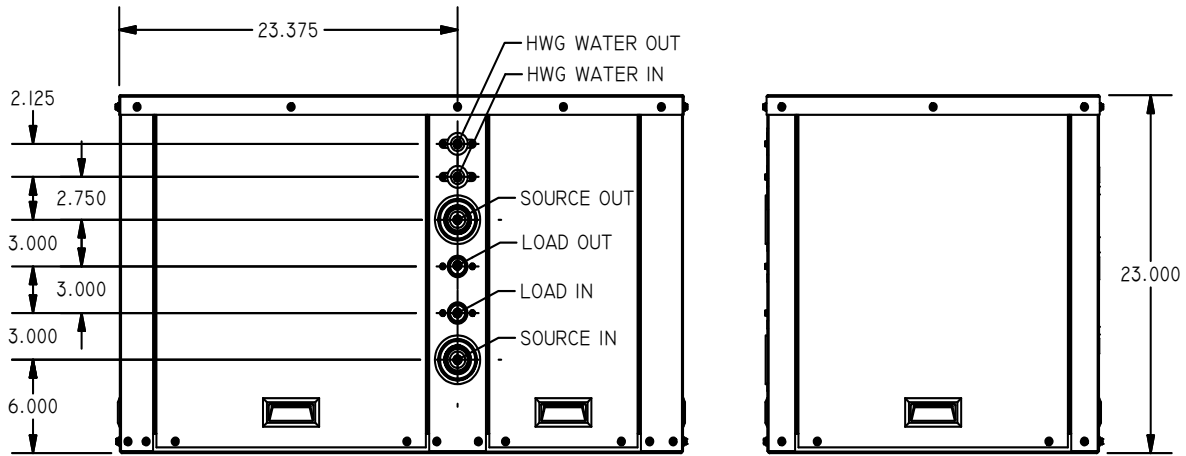
ENGINEERING SPECIFICATIONS

Unit Dimensional Data - 048 and 060



TOP VIEW

RIGHT SIDE VIEW



LEFT SIDE VIEW

FRONT VIEW

Single Compressor Unit										
MODEL	SOURCE Water: D/O*		SOURCE Water: FPT		LOAD Water: FPT		HWG Water: FPT		Factory Charge	Unit Weight
	IN	OUT	IN	OUT	IN	OUT	IN	OUT		
048	1-1/4"	1-1/4"	1"	1"	1"	1"	3/4"	3/4"	118 oz	430 Lbs
060									119 oz	430 Lbs
	RESIDENTIAL		COMMERCIAL							

Notes:

- Electrical connections are 1" DIA for high voltage, & 1/2" DIA for low voltage.
- *D/O = Double O-ring connections (requires double O-ring hose kit or adapters)

Unit Electrical Data

Model	Voltage Code/ HWG Option	60 Hz Power		Compressor		HWG Pump FLA	Ext. Loop Pump FLA	Total Unit FLA	Min Circuit AMPS	Max Brkr HACR
		Volts	Phase	LRA	RLA					
WT036	00	208/230	1	104.0	21.2	0.0	0.0	21.2	26.5	45
	01	208/230	1	104.0	21.2	0.5	0.0	21.7	27.0	45
	10	208/230	1	104.0	21.2	0.0	4.0	25.2	30.5	50
	11	208/230	1	104.0	21.2	0.5	4.0	25.7	31.0	50
	20	208/230	3	83.1	14.0	0.0	0.0	14.0	17.5	30
	21	208/230	3	83.1	14.0	0.5	0.0	14.5	18.0	30
	30/35	460	3	41.0	6.4	0.0	0.0	6.4	8.0	15
WT048	00	208/230	1	152.9	27.1	0.0	0.0	27.1	33.9	60
	01	208/230	1	152.9	27.1	0.5	0.0	27.6	34.4	60
	10	208/230	1	152.9	27.1	0.0	5.5	32.6	39.4	60
	11	208/230	1	152.9	27.1	0.5	5.5	33.1	39.9	60
	20	208/230	3	110.0	16.5	0.0	0.0	16.5	20.6	35
	21	208/230	3	110.0	16.5	0.5	0.0	17.0	21.1	35
	30/35	460	3	52.0	7.2	0.0	0.0	7.2	9.0	15
WT060	00	208/230	1	179.2	29.7	0.0	0.0	29.7	37.1	60
	01	208/230	1	179.2	29.7	0.5	0.0	30.2	37.6	60
	10	208/230	1	179.2	29.7	0.0	5.5	35.2	42.6	70
	11	208/230	1	179.2	29.7	0.5	5.5	35.7	43.1	70
	20	208/230	3	136.0	17.6	0.0	0.0	17.6	22.0	40
	21	208/230	3	136.0	17.6	0.5	0.0	18.1	22.5	40
	30/35	460	3	66.1	8.5	0.0	0.0	8.5	10.6	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, 460/60 = 432-504

*The external loop pump FLA is based on a maximum of three UP26-116F-230V pumps (1/2hp) for 048-060 and two pumps for 036.

ENGINEERING SPECIFICATIONS

Glossary	
COP = Coefficient of Performance = BTU Output / BTU Input	HR = Total Heat Of Rejection, Btu/hr
DH = Desuperheater Capacity, Btu/hr	KW = Total Power Unit Input, Kilowatts
EER = Energy Efficiency Ratio = BTU output/Watts input	LWT = Leaving Source Water Temperature, Fahrenheit
EST = Entering Source Water Temperature, Fahrenheit	LLT = Leaving Load Water Temperature, Fahrenheit
ELT = Entering Load Water Temperature, Fahrenheit	TC = Total Cooling Capacity, Btu/hr
GPM = Water Flow, Gallons Per Minute	HC = Heating Capacity, Btu/hr
HE = Total Heat Of Extraction, Btu/hr	WPD = Water Pressure Drop, PSI & Feet of Water

Heating & Cooling Calculations	
Heating	Cooling
$LWT = EST - \frac{HE}{GPM \times 500^*}$	$LWT = EST + \frac{HR}{GPM \times 500^*}$
$HE = 500^* \times GPM \times (EWT - LWT)$	$HR = 500^* \times GPM \times (LWT - EWT)$
*500 = Constant factor for pure water. Brine should be 485.	

Source 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 (EST 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 "rule of thumb" 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 EST based upon your geographical area. If EST is 50 deg F or higher, 1.5 gpm/ton is adequate for open loop systems; otherwise, 2 gpm/ton should be used.
- 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 Load Temperature (ELT).
- Calculate the temperature difference (TD) based upon the HE and GPM of the model.

$$TD = HE / (GPM \times 500).$$

Calculate the LWT.

$$LWT = EST - TD.$$

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:

EST = 50°F, ELT = 95°F.

Model 036 Full Load, heating. Flow rate = 5 GPM. HE = 33,600 Btu/h.

$$TD = 33,600 / (5 \times 500) = 13.4^\circ\text{F}$$

$$LWT = 50 - 13.4 = 36.6^\circ\text{F}$$

Water flow rate should be adequate under these conditions.

Example 2:

EST = 40°F, ELT = 95°F.

Model 036 Full Load, heating. Flow rate = 5 GPM. HE = 28,700 Btu/h.

$$TD = 28,700 / (5 \times 500) = 11.5^\circ\text{F}$$

$$LWT = 40 - 11.5 = 28.5^\circ\text{F}$$

Water flow rate must be increased.

Performance Data Notes:

1. Capacity is based on 15% (by mass) methanol antifreeze solution as source water and pure water as load water.
2. Any condition outside performance table(s) requires correction factor(s).
3. Full-load performance data is accurate within $\pm 15\%$.
4. Unit performance test is run without hot water generation.
5. Capacity data does not include pump power and it does not reflect pump power correction for AHRI/ISO conditions.
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.
9. See Flow Rate Selection above for proper application.
10. Continuous research and development may result in a change to the current product design and specifications without notice.

Model 036, 3 Ton, Load Side, Cooling Mode, Part Load Performance Data

WT036		EXTENDED DATA		LOAD SIDE, COOLING MODE, PART LOAD																								
SOURCE SIDE				LOAD SIDE, COOLING MODE, PART LOAD																								
EST °F	Source Flow			ELT °F	Load Flow GPM 3												Load Flow GPM 5						Load Flow GPM 6					
	GPM	Source Flow WPD			LFT	LTT	TC	HR	Power	EER	DSH	LFT	LTT	TC	HR	Power	EER	DSH	LFT	LTT	TC	HR	Power	EER	DSH			
		PSI	FT																							°F	MBtuh	MBtuh
45	6	1.8	4.2	45	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		1.8	4.2	55	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		1.8	4.2	65	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		1.8	4.2	75	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
50	3	1.1	2.4	45	0.2	0.5	58.5	42.7	46.3	1.10	39.5	4.0	1.2	2.8	64.5	46.0	49.0	1.10	43.0	4.1	1.7	4.0	67.8	47.8	50.4	1.09	44.9	4.2
		1.1	2.4	55	0.1	0.3	30.5	24.8	30.0	1.39	17.3	3.9	0.8	1.8	33.6	26.7	31.7	1.39	18.8	4.0	1.1	2.6	35.3	27.8	32.7	1.38	19.6	4.1
		1.1	2.4	65	0.1	0.3	37.3	29.3	34.0	1.36	20.9	4.1	0.7	1.7	41.1	31.6	35.9	1.35	22.8	4.2	1.1	2.4	43.2	32.8	37.0	1.34	23.8	4.3
		1.1	2.4	75	0.2	0.4	44.2	34.0	38.7	1.32	24.9	4.3	0.8	1.9	48.8	36.6	40.9	1.32	27.1	4.4	1.1	2.6	51.3	38.1	42.1	1.31	28.3	4.5
	5	1.1	2.4	45	0.1	0.3	30.4	25.0	30.0	1.36	18.8	3.6	0.8	1.8	33.6	26.9	31.7	1.35	20.4	3.7	1.1	2.6	35.3	28.0	32.6	1.34	21.4	3.8
		1.5	3.5	55	0.1	0.3	37.3	29.5	34.0	1.32	22.8	3.8	0.7	1.7	41.1	31.8	35.9	1.32	24.8	4.0	1.1	2.4	43.2	33.0	36.9	1.31	25.9	4.0
		1.5	3.5	65	0.1	0.3	44.2	34.3	38.7	1.29	27.0	4.0	0.8	1.9	48.8	36.9	40.9	1.29	29.4	4.1	1.1	2.6	51.3	38.3	42.1	1.28	30.8	4.2
		1.5	3.5	75	0.2	0.4	51.3	38.7	43.2	1.26	31.2	4.3	1.0	2.2	56.6	41.6	45.7	1.26	34.0	4.4	1.4	3.2	59.5	43.2	47.0	1.25	35.5	4.5
	6	1.5	3.5	45	0.2	0.5	58.9	41.8	46.4	1.25	34.1	4.6	1.2	2.8	65.0	45.0	49.0	1.24	37.1	4.8	1.7	4.0	68.3	46.7	50.5	1.23	38.8	4.8
		1.8	4.1	55	0.1	0.3	30.4	25.1	30.0	1.30	19.6	3.5	0.8	1.8	33.6	27.0	31.7	1.29	21.3	3.6	1.1	2.6	35.3	28.1	32.6	1.28	22.3	3.7
		1.8	4.1	65	0.1	0.3	37.2	29.7	33.9	1.26	23.8	3.7	0.7	1.7	41.1	31.9	35.9	1.26	25.9	3.8	1.1	2.4	43.2	33.2	36.9	1.25	27.0	3.9
		1.8	4.1	75	0.1	0.3	44.2	34.4	38.6	1.23	28.2	3.9	0.8	1.9	48.8	37.0	40.8	1.23	30.7	4.0	1.1	2.6	51.2	38.5	42.0	1.22	32.1	4.0
70	3	1.8	4.1	45	0.2	0.4	51.3	38.8	43.2	1.21	32.6	4.1	1.0	2.2	56.5	41.8	45.6	1.20	35.5	4.2	1.4	3.2	59.4	43.4	47.0	1.19	37.0	4.3
		1.8	4.1	55	0.2	0.5	58.9	42.0	46.4	1.19	35.6	4.5	1.2	2.8	64.9	45.2	49.0	1.19	38.7	4.6	1.7	4.0	68.2	46.9	50.4	1.18	40.5	4.7
		0.9	2.2	45	0.1	0.3	30.7	23.5	29.5	1.93	11.8	6.1	0.8	1.8	33.9	25.3	31.2	1.92	12.8	6.3	1.1	2.6	35.6	26.3	32.1	1.91	13.4	6.4
		0.9	2.2	55	0.1	0.3	37.6	27.7	33.4	1.88	14.3	6.4	0.7	1.7	41.5	29.8	35.3	1.87	15.6	6.7	1.1	2.4	43.6	31.0	36.3	1.86	16.3	6.8
	5	0.9	2.2	65	0.1	0.3	44.6	32.2	38.0	1.83	17.0	6.7	0.8	1.9	49.2	34.6	40.2	1.83	18.5	6.9	1.1	2.6	51.7	36.0	41.3	1.81	19.3	7.0
		0.9	2.2	75	0.2	0.4	51.8	36.3	42.5	1.79	19.6	7.2	1.0	2.2	57.1	39.1	44.9	1.79	21.3	7.4	1.4	3.2	60.0	40.6	46.2	1.77	22.3	7.5
		1.4	3.2	45	0.1	0.3	30.7	23.7	29.5	1.88	12.8	5.7	0.8	1.8	33.9	25.5	31.2	1.87	14.0	5.9	1.1	2.6	35.6	26.4	32.1	1.86	14.6	6.0
		1.4	3.2	55	0.1	0.3	37.6	27.9	33.4	1.83	15.5	6.0	0.7	1.7	41.5	30.1	35.3	1.82	16.9	6.2	1.1	2.4	43.6	31.2	36.3	1.81	17.7	6.3
	6	1.4	3.2	65	0.1	0.3	44.6	32.4	38.0	1.79	18.5	6.3	0.8	1.9	49.2	34.9	40.2	1.78	20.1	6.5	1.1	2.6	51.7	36.2	41.3	1.77	21.0	6.6
		1.4	3.2	75	0.2	0.4	51.7	36.6	42.5	1.75	21.3	6.7	1.0	2.2	57.1	39.3	44.9	1.74	23.2	6.9	1.4	3.2	60.0	40.9	46.2	1.73	24.2	7.0
		1.4	3.2	45	0.2	0.5	59.4	39.5	45.6	1.7	23.3	7.3	1.2	2.8	65.6	42.5	48.2	1.7	25.3	7.5	Operation Not Recommended							
		1.6	3.6	45	0.1	0.3	30.7	23.8	29.5	1.80	13.4	5.5	0.8	1.8	33.8	25.6	31.2	1.79	14.6	5.7	1.1	2.6	35.6	26.6	32.1	1.78	15.2	5.8
90	3	1.6	3.6	55	0.1	0.3	37.6	28.1	33.4	1.75	16.2	5.8	0.7	1.7	41.4	30.2	35.3	1.74	17.7	6.0	1.1	2.4	43.6	31.4	36.3	1.73	18.5	6.1
		1.6	3.6	65	0.1	0.3	44.6	32.5	38.0	1.71	19.3	6.1	0.8	1.9	49.2	35.0	40.1	1.70	21.0	6.3	1.1	2.6	51.7	36.4	41.3	1.69	21.9	6.4
		1.6	3.6	75	0.2	0.4	51.7	36.7	42.4	1.67	22.2	6.5	1.0	2.2	57.0	39.5	44.9	1.66	24.2	6.7	1.4	3.2	59.9	41.0	46.2	1.65	25.3	6.8
		1.6	3.6	85	0.2	0.5	59.4	39.7	45.6	1.7	24.3	7.0	1.2	2.8	65.5	42.7	48.2	1.6	26.4	7.3	Operation Not Recommended							
	5	0.9	2.0	45	0.1	0.3	31.3	21.3	28.7	2.59	7.9	8.7	0.8	1.8	34.5	22.9	30.4	2.58	8.7	9.0	1.1	2.6	36.2	23.8	31.3	2.56	9.0	9.1
		0.9	2.0	55	0.1	0.3	38.3	25.2	32.5	2.52	9.6	9.2	0.7	1.7	42.2	27.1	34.4	2.51	10.5	9.5	1.1	2.4	44.4	28.1	35.4	2.50	11.0	9.7
		0.9	2.0	65	0.1	0.3	45.4	29.2	37.0	2.47	11.5	9.6	0.8	1.9	50.1	31.4	39.1	2.46	12.5	9.9	1.1	2.6	52.7	32.6	40.3	2.44	13.0	10.1
		0.9	2.0	75	0.2	0.4	52.7	32.9	41.4	2.41	13.2	10.2	1.0	2.2	58.1	35.4	43.7	2.40	14.4	10.6	1.4	3.2	61.1	36.8	45.0	2.39	15.0	10.7
	6	1.3	3.0	45	0.1	0.3	31.2	21.5	28.7	2.53	8.6	8.2	0.8	1.8	34.5	23.1	30.4	2.52	9.4	8.4	1.1	2.6	36.2	24.0	31.3	2.50	9.8	8.5
		1.3	3.0	55	0.1	0.3	38.3	25.3	32.5	2.46	10.5	8.6	0.7	1.7	42.2	27.3	34.4	2.45	11.4	8.9	1.1	2.4	44.4	28.3	35.4	2.43	11.9	9.1
		1.3	3.0	65	0.1	0.3	45.4	29.4	37.0	2.40	12.5	9.0	0.8	1.9	50.1	31.6	39.1	2.40	13.6	9.3	1.1	2.6	52.6	32.9	40.3	2.38	14.2	9.4
		1.3	3.0	75	0.2	0.4	52.7	33.2	41.4	2.35	14.4	9.6	1.0	2.2	58.1	35.7	43.7	2.34	15.6	9.9	1.4	3.2	61.0	37.1	45.0	2.33	16.3	10.0
110	3	1.3	3.0	85	0.2	0.5	60.5	35.8	44.4	2.3	15.7	10.4	Operation Not Recommended						Operation Not Recommended									
		1.5	3.4	45	0.1	0.3	31.2	21.6	28.7	2.42	9.0	7.9	0.8	1.8	34.4	23.2	30.4	2.41	9.8	8.1	1.1	2.6	36.2	24.1	31.2	2.39	10.3	8.2
		1.5	3.4	55	0.1	0.3	38.2	25.5	32.5	2.35	11.0	8.3	0.7	1.7	42.2	27.4	34.4	2.34	11.9	8.6	1.1	2.4	44.3	28.5	35.4	2.33	12.5	8.7
		1.5	3.4	65	0.1	0.3	45.4	29.5	37.0	2.30	13.0	8.7	0.8	1.9	50.1	31.8	39.1	2.29	14.2	9.0	1.1	2.6	52.6	33.0	40.2	2.27	14.8	9.1
	5	1.5	3.4	75	0.2	0.4	52.6	33.3	41.3	2.25	15.0	9.2	1.0	2.2	58.0	35.8	43.7	2.24	16.3	9.5	1.4	3.2	61.0	37.2	45.0	2.22	17.1	9.7
		1.5	3.4	85	0.2	0.5	60.4	36.0	44.4	2.2	16.4	10.0	Operation Not Recommended						Operation Not Recommended									
		0.8	2.0	45	0.1	0.3	32.2	17.9	27.0	3.42	5.1	11.7	0.8	1.8	35.5	19.3	28.5	3.40	5.5	12.1	1.1	2.6	37.3	20.0	29.3	3.38	5.8	12.3
		0.8	2.0	55	0.1	0.3	39.4	21.2	30.5	3.33	6.1	12.4	0.7	1.7	43.5	22.8	32.3	3.32	6.7	12.8	1.1	2.4	45.7	23.7	33.2	3.29	7.0	13.0
	6	0.8	2.0	65	0.1	0.3	46.8	24.6	34.7	3.25	7.3	12.9	0.8	1.9	51.6	26.4	36.7	3.24	7.9	13.3	1.1	2.6	54.2	27.4	37.8	3.22	8.3	13.5
		0.8	2.0	75	0.2	0.4	54.2	27.7	38.8	3.18	8.4	13.7	1.0	2.2	59.8	29.8	41.0	3.17	9.2	14.2	1.4	3.2	62.9	31.0	42.2	3.15	9.6	14.4
		0.8	2.0	85	0.2	0.5	62.3	29.9	41.7	3.1	9.2	14.9	Operation Not Recommended						Operation Not Recommended									
		1.2	2.8	45	0.1	0.3	32.2	18.0	27.0	3.33	5.5	11.0	0.8	1.8	35.5	19.4	28.5	3.32	6.0	11.3	1.1	2.6	37.3	20.2	29.3	3.30	6.3	11.5
5	1.2	2.8	55	0.1	0.3	39.4	21.3	30.5	3.25	6.7	11.6	0.7	1.7	43.5	22													

ENGINEERING SPECIFICATIONS

Model 036, 3 Ton, Load Side, Cooling Mode, Full Load Performance Data

WT036		EXTENDED DATA																										
SOURCE SIDE				LOAD SIDE, COOLING MODE, FULL LOAD																								
EST °F	GPM	Source Flow		ELT	Load Flow GPM 4.5						Load Flow GPM 7						Load Flow GPM 9											
		PSI	FT		°F	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH		
		PSI	FT	°F	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh
45	9	3.0	6.8	45	Operation Not Recommended						Operation Not Recommended						Operation Not Recommended											
		3.0	6.8	55	Operation Not Recommended						Operation Not Recommended						Operation Not Recommended											
		3.0	6.8	65	Operation Not Recommended						Operation Not Recommended						Operation Not Recommended											
		3.0	6.8	75	Operation Not Recommended						Operation Not Recommended						Operation Not Recommended											
		3.0	6.8	85	0.4	1.0	61.2	53.7	58.5	1.82	29.5	5.2	1.9	4.4	67.2	56.8	61.6	1.83	31.0	5.4	3.1	7.2	71.8	59.2	63.9	1.84	32.2	5.5
50	4.5	1.4	3.3	45	0.3	0.8	31.2	36.0	42.2	2.01	17.9	5.3	1.4	3.2	34.2	38.1	44.4	2.02	18.8	5.5	2.3	5.2	36.5	39.6	46.1	2.03	19.5	5.7
		1.4	3.3	55	0.3	0.7	38.2	41.7	47.8	2.04	20.4	5.7	1.3	3.0	42.0	44.1	50.3	2.05	21.5	5.9	2.2	5.0	44.8	45.9	52.2	2.06	22.2	6.0
		1.4	3.3	65	0.3	0.8	45.7	47.4	53.4	2.08	22.8	5.9	1.4	3.3	50.2	50.1	56.2	2.09	23.9	6.1	2.3	5.3	53.5	52.2	58.3	2.10	24.8	6.3
		1.4	3.3	75	0.4	0.9	53.3	51.2	57.1	2.11	24.2	6.3	1.6	3.7	58.6	54.1	60.1	2.13	25.4	6.5	2.6	6.1	62.5	56.3	62.3	2.14	26.3	6.7
		1.4	3.3	85	0.4	1.0	61.7	53.4	59.6	2.15	24.8	6.8	1.9	4.4	67.8	56.5	62.7	2.16	26.1	7.1	3.1	7.2	72.3	58.8	65.1	2.17	27.0	7.2
	7	2.0	4.7	45	0.3	0.8	31.1	36.0	41.7	1.90	19.3	4.9	1.4	3.2	34.1	38.1	43.9	1.91	20.3	5.1	2.3	5.2	36.4	39.6	45.6	1.92	21.0	5.2
		2.0	4.7	55	0.3	0.7	38.1	41.7	47.2	1.93	22.0	5.2	1.3	3.0	41.9	44.1	49.7	1.94	23.2	5.4	2.2	5.0	44.7	46.0	51.6	1.95	24.0	5.5
		2.0	4.7	65	0.3	0.8	45.5	47.4	52.8	1.96	24.6	5.4	1.4	3.3	50.0	50.1	55.5	1.97	25.8	5.6	2.3	5.3	53.4	52.2	57.7	1.98	26.8	5.7
		2.0	4.7	75	0.4	0.9	53.2	51.2	56.4	1.99	26.1	5.7	1.6	3.7	58.4	54.1	59.4	2.01	27.4	5.9	2.6	6.1	62.3	56.4	61.7	2.02	28.4	6.1
		2.0	4.7	85	0.4	1.0	61.5	53.4	59.0	2.02	26.8	6.2	1.9	4.4	67.6	56.5	62.0	2.04	28.2	6.5	3.1	7.2	72.1	58.8	64.4	2.05	29.2	6.6
		2.9	6.6	45	0.3	0.8	31.0	36.0	41.4	1.78	20.2	4.5	1.4	3.2	34.1	38.1	43.6	1.79	21.2	4.7	2.3	5.2	36.3	39.6	45.2	1.80	22.0	4.8
		2.9	6.6	55	0.3	0.7	38.0	41.7	46.9	1.81	23.1	4.8	1.3	3.0	41.8	44.1	49.3	1.82	24.2	4.9	2.2	5.0	44.6	46.0	51.2	1.83	25.1	5.1
		2.9	6.6	65	0.3	0.8	45.4	47.4	52.4	1.84	25.7	5.0	1.4	3.3	49.9	50.1	55.1	1.86	27.0	5.1	2.3	5.3	53.3	52.2	57.2	1.86	28.0	5.3
		2.9	6.6	75	0.4	0.9	53.1	51.2	56.0	1.87	27.3	5.3	1.6	3.7	58.3	54.1	58.9	1.89	28.7	5.5	2.6	6.1	62.2	56.4	61.2	1.90	29.7	5.6
		2.9	6.6	85	0.4	1.0	61.4	53.4	58.5	1.90	28.0	5.7	1.9	4.4	67.4	56.5	61.9	1.91	29.5	5.9	3.1	7.2	72.0	58.8	63.9	1.92	30.5	6.1
70	4.5	1.3	3.0	45	0.3	0.8	31.5	33.8	41.3	2.57	13.2	8.4	1.4	3.2	34.5	35.7	43.5	2.58	13.8	8.7	2.3	5.2	36.9	37.2	45.1	2.59	14.3	8.9
		1.3	3.0	55	0.3	0.7	38.6	39.2	46.7	2.60	15.0	8.9	1.3	3.0	42.4	41.4	49.2	2.62	15.8	9.2	2.2	5.0	45.2	43.1	51.1	2.63	16.4	9.4
		1.3	3.0	65	0.3	0.8	46.1	44.5	52.2	2.65	16.8	9.2	1.4	3.3	50.6	47.1	55.0	2.67	17.6	9.6	2.3	5.3	54.0	49.0	57.1	2.68	18.3	9.8
		1.3	3.0	75	0.4	0.9	53.8	48.1	55.9	2.70	17.8	9.8	1.6	3.7	59.1	50.8	58.8	2.72	18.7	10.2	2.6	6.1	63.1	52.9	61.0	2.73	19.4	10.4
		1.3	3.0	85	0.4	1.0	62.3	50.1	58.3	2.7	18.3	10.7	1.9	4.4	68.4	53.0	61.4	2.8	19.2	11.1	3.1	7.2	73.0	55.2	63.7	2.77	19.9	11.3
	7	1.8	4.2	45	0.3	0.8	31.4	33.8	40.8	2.42	14.2	7.6	1.4	3.2	34.4	35.7	43.0	2.44	14.9	7.9	2.3	5.2	36.8	37.2	44.6	2.45	15.5	8.1
		1.8	4.2	55	0.3	0.7	38.5	39.2	46.2	2.46	16.2	8.1	1.3	3.0	42.2	41.4	48.6	2.47	17.0	8.4	2.2	5.0	45.1	43.1	50.5	2.48	17.7	8.6
		1.8	4.2	65	0.3	0.8	46.0	44.5	51.7	2.50	18.1	8.4	1.4	3.3	50.5	47.1	54.4	2.52	19.0	8.8	2.3	5.3	53.9	49.0	56.4	2.53	19.7	9.0
		1.8	4.2	75	0.4	0.9	53.7	48.1	55.2	2.55	19.2	9.0	1.6	3.7	58.9	50.8	58.1	2.56	20.2	9.3	2.6	6.1	62.9	52.9	60.3	2.57	20.9	9.5
		1.8	4.2	85	0.4	1.0	62.1	50.1	57.7	2.6	19.7	9.8	1.9	4.4	68.2	53.0	60.7	2.6	20.7	10.1	3.1	7.2	72.8	55.2	63.0	2.61	21.5	10.4
		2.6	5.9	45	0.3	0.8	31.3	33.8	40.5	2.27	14.9	7.0	1.4	3.2	34.4	35.7	42.6	2.29	15.6	7.3	2.3	5.2	36.7	37.2	44.3	2.30	16.2	7.5
		2.6	5.9	55	0.3	0.7	38.4	39.2	45.9	2.31	17.0	7.5	1.3	3.0	42.2	41.4	48.3	2.32	17.8	7.7	2.2	5.0	45.0	43.2	50.1	2.33	18.5	7.9
		2.6	5.9	65	0.3	0.8	45.9	44.5	51.2	2.35	18.9	7.8	1.4	3.3	50.4	47.1	53.9	2.37	19.9	8.1	2.3	5.3	53.7	49.0	56.0	2.38	20.6	8.3
		2.6	5.9	75	0.4	0.9	53.6	48.1	54.8	2.39	20.1	8.3	1.6	3.7	58.8	50.8	57.6	2.41	21.1	8.6	2.6	6.1	62.8	52.9	59.8	2.42	21.9	8.8
		2.6	5.9	85	0.4	1.0	62.0	50.2	57.2	2.4	20.6	9.0	1.9	4.4	68.1	53.0	60.2	2.4	21.7	9.3	3.1	7.2	72.6	55.2	62.5	2.45	22.5	9.6
90	4.5	1.2	2.8	45	0.3	0.8	32.2	31.1	40.6	3.31	9.4	12.1	1.4	3.2	35.4	32.8	42.7	3.33	9.9	12.5	2.3	5.2	37.7	34.2	44.3	3.35	10.2	12.8
		1.2	2.8	55	0.3	0.7	39.5	36.0	45.9	3.36	10.7	12.8	1.3	3.0	43.4	38.1	48.3	3.38	11.3	13.3	2.2	5.0	46.3	39.7	50.2	3.40	11.7	13.6
		1.2	2.8	65	0.3	0.8	47.2	40.9	51.3	3.42	12.0	13.3	1.4	3.3	51.8	43.3	54.0	3.45	12.6	13.8	2.3	5.3	55.3	45.0	56.0	3.46	13.0	14.2
		1.2	2.8	75	0.4	0.9	55.1	44.2	54.9	3.48	12.7	14.2	1.6	3.7	60.5	46.7	57.7	3.50	13.3	14.7	2.6	6.1	64.6	48.6	59.9	3.52	13.8	15.1
		1.2	2.8	85	0.4	1.0	63.7	46.1	57.3	3.5	13.0	15.4	1.9	4.4	70.0	48.7	60.3	3.6	13.7	16.0	3.1	7.2	74.7	50.7	62.6	3.57	14.2	16.4
	7	1.7	3.9	45	0.3	0.8	32.1	31.1	40.1	3.12	10.1	11.0	1.4	3.2	35.2	32.9	42.2	3.14	10.6	11.5	2.3	5.2	37.6	34.2	43.8	3.16	11.0	11.7
		1.7	3.9	55	0.3	0.7	39.4	36.0	45.4	3.17	11.6	11.7	1.3	3.0	43.2	38.1	47.8	3.19	12.1	12.1	2.2	5.0	46.1	39.7	49.6	3.20	12.6	12.4
		1.7	3.9	65	0.3	0.8	47.0	40.9	50.7	3.23	12.9	12.2	1.4	3.3	51.7	43.3	53.4	3.25	13.5	12.6	2.3	5.3	55.1	45.0	55.4	3.27	14.0	13.0
		1.7	3.9	75	0.4	0.9	54.9	44.2	54.3	3.28	13.7	13.0	1.6	3.7	60.3	46.7	57.1	3.30	14.4	13.5	2.6	6.1	64.4	48.6	59.3	3.32	14.9	13.8
		1.7	3.9	85	0.4	1.0	63.6	46.1	56.7	3.3	14.1	14.1	1.9	4.4	69.8	48.7	59.6	3.4	14.8	14.6	3.1	7.2	74.5	50.8	61.9	3.37	15.3	15.0
		2.4	5.5	45	0.3	0.8	32.0	31.1	39.8	2.93	10.6	10.2	1.4	3.2	35.2	32.9	41.9	2.95	11.1	10.6	2.3	5.2	37.5	34.2	43.5	2.97	11.5	10.8
		2.4	5.5	55	0.3	0.7	39.3	36.0	45.0	2.98	12.1	10.8	1.3	3.0	43.1	38.1	47.4	3.00	12.7	11.2	2.2	5.0	46.0	39.7	49.2	3.01	13.2	11.5
		2.4	5.5	65	0.3	0.8	46.9	40.9	50.3	3.03	13.5	11.2	1.4	3.3	51.5	43.3	53.0	3.05	14.2	11.7	2.3	5.3	55.0	45.1	55.0	3.07	14.7	11.9
		2.4	5.5	75	0.4	0.9	54.8	44.2	53.8	3.08	14.3	12.0	1.6	3.7	60.2	46.7	56.6	3.10	15.1	12.4	2.6	6.1	64.2	48.7	58.8	3.12	15.6	12.7
		2.4	5.5	85	0.4	1.0	63.4	46.1	56.2	3.1	14.7	13.0	1.9	4.4	69.6	48.8	59.2	3.2	15.5	13.5	3.1	7.2	74.3	50.8	61.4	3.17	16.0	13.8
110	4.5	1.1	2.6	45	0.3	0.8	32.9	27.3	39.0	4.24	6.4	16.2	1.4	3.2	36.1	28.8	41.0	4.27	6.8	16.8	2.3	5.2	38.5	30.0	42.6	4.29	7.0	17.2
		1.1																										

Model 036, 3 Ton, Load Side, Heating Mode, Part Load Performance Data

WT036		EXTENDED DATA																											
SOURCE SIDE		LOAD SIDE, HEATING MODE, PART LOAD																											
EST °F	GPM	Source Flow			Load Flow GPM																								
		WPD			3						5						6												
		PSI	FT	°F	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	COP	DSH	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	COP	DSH	PSI	FT	°F	MBtuh	MBtuh	kW	W/W
25	6	2.1	4.8	70	0.1	0.2	83.9	23.8	15.7	1.79	4.02	2.6	0.6	1.3	82.6	23.7	16.0	1.75	4.24	2.4	Operation Not Recommended								
		2.1	4.8	80	0.1	0.2	94.4	23.6	15.0	2.08	3.26	3.1	0.6	1.3	92.9	23.6	15.3	2.04	3.44	2.9	0.8	1.8	90.3	23.6	15.4	1.97	3.54	2.8	
		2.1	4.8	90	0.1	0.2	104.7	23.1	14.2	2.41	2.75	3.6	0.6	1.3	103.1	23.1	14.5	2.37	2.90	3.4	0.8	1.9	100.1	23.1	14.6	2.29	2.98	3.2	
		2.1	4.8	100	0.1	0.2	115.0	22.5	13.3	2.79	2.32	4.1	0.6	1.3	113.2	22.5	13.5	2.74	2.44	3.9	0.8	1.9	110.0	22.4	13.6	2.64	2.51	3.7	
		2.1	4.8	110	0.1	0.2	125.5	21.9	12.1	3.21	1.96	4.7	0.5	1.2	123.5	21.9	12.4	3.15	2.07	4.4	0.8	1.8	120.1	21.9	12.5	3.04	2.13	4.2	
30	3	0.9	2.0	70	0.1	0.2	83.9	24.4	16.4	1.80	4.11	2.6	0.6	1.3	82.6	24.4	16.7	1.76	4.34	2.4	Operation Not Recommended								
		0.9	2.0	80	0.1	0.2	94.4	24.3	15.6	2.09	3.33	3.1	0.6	1.3	92.9	24.3	15.9	2.05	3.52	2.9	0.8	1.8	90.3	24.2	16.1	1.98	3.62	2.8	
		0.9	2.0	90	0.1	0.2	104.7	23.8	14.8	2.42	2.81	3.6	0.6	1.3	103.0	23.8	15.1	2.38	2.97	3.3	0.8	1.9	100.1	23.8	15.2	2.30	3.05	3.2	
		0.9	2.0	100	0.1	0.2	115.0	23.1	13.8	2.80	2.37	4.1	0.6	1.3	113.2	23.1	14.1	2.75	2.50	3.8	0.8	1.9	110.0	23.1	14.2	2.66	2.57	3.7	
		0.9	2.0	110	0.1	0.2	125.5	22.5	12.7	3.22	2.01	4.7	0.5	1.2	123.5	22.5	12.9	3.16	2.12	4.3	0.8	1.8	120.0	22.5	13.0	3.06	2.18	4.2	
	5	1.6	3.7	70	0.1	0.2	84.1	25.5	17.4	1.79	4.32	2.6	0.6	1.3	82.8	25.5	17.7	1.76	4.55	2.5	Operation Not Recommended								
		1.6	3.7	80	0.1	0.2	94.6	25.4	16.6	2.08	3.50	3.1	0.6	1.3	93.1	25.3	16.9	2.04	3.69	2.9	0.8	1.8	90.5	25.3	17.1	1.98	3.80	2.8	
		1.6	3.7	90	0.1	0.2	105.0	24.8	15.7	2.42	2.95	3.6	0.6	1.3	103.3	24.8	16.0	2.37	3.11	3.4	0.8	1.9	100.4	24.8	16.2	2.30	3.20	3.3	
		1.6	3.7	100	0.1	0.2	115.3	24.2	14.7	2.79	2.49	4.2	0.6	1.3	113.5	24.1	15.0	2.74	2.62	3.9	0.8	1.9	110.3	24.1	15.1	2.65	2.70	3.7	
		1.6	3.7	110	0.1	0.2	125.8	23.5	13.4	3.21	2.11	4.7	0.5	1.2	123.8	23.5	13.7	3.16	2.22	4.4	0.8	1.8	120.4	23.5	13.8	3.05	2.28	4.2	
6	2.0	4.6	70	0.1	0.2	84.2	26.1	18.0	1.79	4.43	2.7	0.6	1.3	82.9	26.1	18.3	1.75	4.67	2.5	Operation Not Recommended									
	2.0	4.6	80	0.1	0.2	94.8	25.9	17.1	2.08	3.59	3.1	0.6	1.3	93.3	25.9	17.4	2.04	3.79	2.9	0.8	1.8	90.6	25.9	17.6	1.97	3.89	2.8		
	2.0	4.6	90	0.1	0.2	105.1	25.4	16.2	2.41	3.03	3.7	0.6	1.3	103.4	25.4	16.5	2.37	3.19	3.4	0.8	1.9	100.5	25.4	16.7	2.29	3.28	3.3		
	2.0	4.6	100	0.1	0.2	115.4	24.7	15.2	2.78	2.55	4.2	0.6	1.3	113.6	24.7	15.4	2.73	2.69	3.9	0.8	1.9	110.4	24.7	15.6	2.64	2.77	3.8		
	2.0	4.6	110	0.1	0.2	126.0	24.1	13.9	3.20	2.16	4.8	0.5	1.2	124.0	24.1	14.1	3.14	2.28	4.4	0.8	1.8	120.5	24.1	14.3	3.04	2.34	4.3		
50	3	0.8	1.8	70	0.1	0.2	85.8	33.1	25.5	1.77	5.66	2.7	0.6	1.3	84.4	33.1	26.0	1.73	5.97	2.5	0.8	1.9	82.0	33.1	26.2	1.68	6.14	2.4	
		0.8	1.8	80	0.1	0.2	96.5	32.9	24.3	2.05	4.59	3.2	0.6	1.3	95.0	32.8	24.8	2.01	4.84	3.0	0.8	1.8	92.3	32.8	25.0	1.95	4.98	2.9	
		0.8	1.8	90	0.1	0.2	107.0	32.2	23.1	2.38	3.87	3.7	0.6	1.3	105.3	32.2	23.5	2.34	4.08	3.5	0.8	1.9	102.4	32.2	23.7	2.26	4.20	3.4	
		0.8	1.8	100	0.1	0.2	117.6	31.3	21.5	2.75	3.26	4.3	0.6	1.3	115.7	31.3	21.9	2.70	3.44	4.0	0.8	1.9	112.4	31.3	22.1	2.61	3.53	3.9	
		0.8	1.8	110	0.1	0.2	128.3	30.5	19.7	3.2	2.8	4.9	0.5	1.2	126.3	30.5	20.0	3.1	2.9	4.5	0.8	1.8	122.7	30.5	20.3	3.01	2.99	4.4	
	5	1.4	3.3	70	0.1	0.2	86.0	34.6	27.1	1.76	5.94	2.8	0.6	1.3	84.6	34.6	27.6	1.73	6.27	2.6	0.8	1.9	82.3	34.5	27.9	1.67	6.44	2.5	
		1.4	3.3	80	0.1	0.2	96.7	34.3	25.8	2.05	4.82	3.2	0.6	1.3	95.2	34.3	26.3	2.01	5.08	3.0	0.8	1.8	92.5	34.3	26.6	1.94	5.23	2.9	
		1.4	3.3	90	0.1	0.2	107.3	33.6	24.5	2.38	4.06	3.8	0.6	1.3	105.6	33.6	24.9	2.33	4.29	3.5	0.8	1.9	102.6	33.6	25.2	2.26	4.41	3.4	
		1.4	3.3	100	0.1	0.2	117.9	32.7	22.9	2.75	3.42	4.4	0.6	1.3	116.0	32.7	23.3	2.70	3.61	4.1	0.8	1.9	112.7	32.7	23.5	2.61	3.71	3.9	
		1.4	3.3	110	0.1	0.2	128.6	31.9	20.9	3.2	2.9	4.9	0.5	1.2	126.6	31.9	21.3	3.1	3.1	4.6	0.8	1.8	123.1	31.8	21.5	3.00	3.14	4.4	
	6	1.8	4.1	70	0.1	0.2	86.1	35.4	28.0	1.76	6.09	2.8	0.6	1.3	84.8	35.3	28.5	1.72	6.43	2.6	0.8	1.9	82.4	35.3	28.8	1.67	6.61	2.5	
		1.8	4.1	80	0.1	0.2	96.9	35.1	26.7	2.04	4.94	3.3	0.6	1.3	95.4	35.1	27.1	2.00	5.21	3.0	0.8	1.8	92.7	35.1	27.4	1.94	5.36	2.9	
		1.8	4.1	90	0.1	0.2	107.4	34.4	25.3	2.37	4.17	3.8	0.6	1.3	105.8	34.4	25.7	2.33	4.40	3.5	0.8	1.9	102.8	34.4	26.0	2.25	4.52	3.4	
		1.8	4.1	100	0.1	0.2	118.0	33.4	23.6	2.74	3.51	4.4	0.6	1.3	116.2	33.4	24.0	2.69	3.70	4.1	0.8	1.9	112.9	33.4	24.3	2.60	3.81	3.9	
		1.8	4.1	110	0.1	0.2	128.8	32.6	21.6	3.2	3.0	5.0	0.5	1.2	126.8	32.6	22.0	3.1	3.1	4.6	0.8	1.8	123.2	32.6	22.2	2.99	3.23	4.4	
70	3	0.7	1.6	70	0.1	0.2	87.8	41.8	34.3	1.71	7.40	3.1	0.6	1.3	86.4	41.8	34.9	1.67	7.81	2.8	0.8	1.9	83.9	41.8	35.3	1.62	8.03	2.7	
		0.7	1.6	80	0.1	0.2	98.7	41.5	32.7	1.98	6.00	3.6	0.6	1.3	97.2	41.5	33.3	1.95	6.34	3.3	0.8	1.8	94.4	41.5	33.6	1.88	6.51	3.2	
		0.7	1.6	90	0.1	0.2	109.5	40.7	31.0	2.30	5.06	4.2	0.6	1.3	107.8	40.7	31.6	2.26	5.34	3.9	0.8	1.9	104.7	40.7	31.9	2.18	5.49	3.8	
		0.7	1.6	100	0.1	0.2	120.3	39.6	29.0	2.66	4.26	4.8	0.6	1.3	118.4	39.6	29.5	2.61	4.50	4.5	0.8	1.9	115.1	39.5	29.8	2.52	4.63	4.3	
		0.7	1.6	110	0.1	0.2	131.3	38.6	26.5	3.1	3.6	5.4	0.5	1.2	129.2	38.6	27.0	3.0	3.8	5.1	0.8	1.8	125.6	38.5	27.2	2.90	3.92	4.9	
	5	1.3	2.9	70	0.1	0.2	88.0	43.7	36.4	1.70	7.77	3.1	0.6	1.3	86.6	43.7	37.1	1.67	8.20	2.9	0.8	1.9	84.2	43.6	37.5	1.62	8.43	2.8	
		1.3	2.9	80	0.1	0.2	99.0	43.4	34.8	1.98	6.31	3.6	0.6	1.3	97.4	43.4	35.4	1.94	6.65	3.4	0.8	1.8	94.7	43.3	35.7	1.88	6.84	3.3	
		1.3	2.9	90	0.1	0.2	109.8	42.5	33.0	2.30	5.32	4.2	0.6	1.3	108.1	42.5	33.5	2.25	5.61	4.0	0.8	1.9	105.0	42.5	33.9	2.18	5.77	3.8	
		1.3	2.9	100	0.1	0.2	120.6	41.3	30.8	2.65	4.48	4.9	0.6	1.3	118.7	41.3	31.3	2.61	4.72	4.5	0.8	1.9	115.4	41.3	31.6	2.52	4.86	4.4	
		1.3	2.9	110	0.1	0.2	131.6	40.3	28.1	3.1	3.8	5.5	0.5	1.2	129.6	40.3	28.6	3.0	4.0	5.1	0.8	1.8	125.9	40.3	28.9	2.90	4.12	5.0	
	6	1.6	3.6	70	0.1	0.2	88.1	44.7	37.6	1.70	7.97	3.1	0.6	1.3	86.7	44.7	38.3	1.66	8.41	2.9	0.8	1.9	84.3	44.6	38.7	1.61	8.65	2.8	
		1.6	3.6	80	0.1	0.2	99.1	44.4	35.9	1.97	6.47	3.7	0.6	1.3	97.6	44.4	36.5	1.94	6.82	3.4	0.8	1.8	94.8	44.3	36.9	1.87	7.02	3.3	
		1.6	3.6	90	0.1	0.2	109.9	43.5	34.0	2.29	5.45	4.3	0.6	1.3	108.2	43.5	34.6	2.25	5.75	4.0	0.8	1.9	105.2	43.4	35.0	2.17	5.92	3.8	
		1.6	3.6	100	0.1	0.2	120.8	42.3	31.7	2.64	4.59	4.9	0.6	1.3	118.9	42.3	32.3	2.60	4.85	4.6	0.8	1.9	115.5	42.2	32.6	2.51	4.98	4.4	
		1.6	3.6	110	0.1	0.2	131.8	41.2	29.0	3.0	3.9	5.6	0.5	1.2	129.7	41.2	29.5	3.0	4.1	5.2</									

ENGINEERING SPECIFICATIONS

Model 036, 3 Ton, Load Side, Heating Mode, Full Load Performance Data

WT036		EXTENDED DATA																												
SOURCE SIDE		LOAD SIDE, HEATING MODE, FULL LOAD																												
EST °F	Source Flow			Load Flow GPM 4.5									Load Flow GPM 7									Load Flow GPM 9								
	GPM	Source Flow WPD		Load Flow WPD			Load Flow WPD			Load Flow WPD			Load Flow WPD			Load Flow WPD			Load Flow WPD			Load Flow WPD								
		PSI	FT	°F	°F	MBtuh	HC	HE	Power	COP	DSH	°F	MBtuh	HC	HE	Power	COP	DSH	°F	MBtuh	HC	HE	Power	COP	DSH					
25	9	3.5	8.2	70	0.4	0.9	86.6	35.9	34.8	2.41	4.54	6.4	1.1	2.5	82.7	35.7	35.1	2.29	4.78	5.9	Operation Not Recommended									
		3.5	8.2	80	0.4	0.9	97.2	35.6	33.6	2.71	3.85	7.56	1.1	2.5	92.8	35.4	33.9	2.58	4.05	6.9	1.7	4.0	88.4	35.1	34.1	2.46	4.19	6.5		
		3.5	8.2	90	0.4	0.9	107.7	35.1	32.0	3.09	3.34	8.81	1.1	2.5	102.8	34.9	32.3	2.94	3.52	8.1	1.7	4.0	98.0	34.7	32.5	2.80	3.64	7.6		
		3.5	8.2	100	0.4	0.9	118.3	34.5	30.1	3.50	2.89	10.13	1.1	2.5	112.9	34.3	30.4	3.34	3.04	9.3	1.7	4.0	107.6	34.1	30.6	3.17	3.15	8.8		
		3.5	8.2	110	0.4	0.8	129.1	33.8	28.4	3.96	2.51	11.46	1.1	2.5	123.3	33.6	28.7	3.77	2.64	10.5	1.7	3.9	117.5	33.4	28.8	3.58	2.73	9.9		
45	9	1.4	3.1	70	0.4	0.9	86.5	35.4	34.8	2.41	4.47	6.3	1.1	2.5	82.6	35.1	35.1	2.29	4.71	5.8	Operation Not Recommended									
		1.4	3.1	80	0.4	0.9	97.0	35.1	33.5	2.71	3.79	7.45	1.1	2.5	92.6	34.8	33.9	2.59	3.99	6.8	1.7	4.0	88.2	34.6	34.0	2.46	4.13	6.4		
		1.4	3.1	90	0.4	0.9	107.5	34.6	31.9	3.09	3.29	8.69	1.1	2.5	102.6	34.4	32.2	2.94	3.47	8.0	1.7	4.0	97.8	34.2	32.4	2.80	3.59	7.5		
		1.4	3.1	100	0.4	0.9	118.0	34.0	30.1	3.50	2.85	10.00	1.1	2.5	112.7	33.8	30.4	3.34	3.00	9.2	1.7	4.0	107.4	33.6	30.6	3.17	3.10	8.6		
		1.4	3.1	110	0.4	0.8	128.9	33.4	28.3	3.96	2.47	11.30	1.1	2.5	123.1	33.1	28.6	3.77	2.60	10.4	1.7	3.9	117.2	32.9	28.8	3.58	2.69	9.8		
30	7	2.5	5.7	70	0.4	0.9	86.8	37.3	36.7	2.42	4.69	6.44	1.1	2.5	82.9	37.1	37.0	2.31	4.94	5.9	Operation Not Recommended									
		2.5	5.7	80	0.4	0.9	97.3	37.0	35.4	2.73	3.97	7.58	1.1	2.5	92.9	36.8	35.7	2.60	4.19	6.9	1.7	4.0	88.5	36.5	35.9	2.47	4.33	6.6		
		2.5	5.7	90	0.4	0.9	107.9	36.5	33.7	3.11	3.45	8.84	1.1	2.5	103.0	36.3	34.0	2.96	3.64	8.1	1.7	4.0	98.1	36.0	34.2	2.81	3.76	7.6		
		2.5	5.7	100	0.4	0.9	118.5	35.9	31.8	3.53	2.98	10.16	1.1	2.5	113.1	35.7	32.1	3.36	3.14	9.3	1.7	4.0	107.8	35.4	32.2	3.20	3.25	8.8		
		2.5	5.7	110	0.4	0.8	129.3	35.2	29.9	3.98	2.59	11.49	1.1	2.5	123.5	34.9	30.2	3.80	2.73	10.5	1.7	3.9	117.7	34.7	30.4	3.61	2.82	9.9		
9	9	3.4	7.9	70	0.4	0.9	87.0	38.6	37.9	2.43	4.83	6.51	1.1	2.5	83.1	38.3	38.2	2.31	5.09	6.0	Operation Not Recommended									
		3.4	7.9	80	0.4	0.9	97.6	38.2	36.5	2.74	4.09	7.66	1.1	2.5	93.2	38.0	36.9	2.61	4.31	7.0	1.7	4.0	88.8	37.7	37.1	2.48	4.45	6.6		
		3.4	7.9	90	0.4	0.9	108.1	37.7	34.8	3.12	3.55	8.94	1.1	2.5	103.3	37.5	35.1	2.97	3.75	8.2	1.7	4.0	98.4	37.2	35.3	2.82	3.87	7.7		
		3.4	7.9	100	0.4	0.9	118.8	37.1	32.8	3.54	3.07	10.28	1.1	2.5	113.4	36.8	33.1	3.37	3.24	9.4	1.7	4.0	108.1	36.6	33.3	3.21	3.35	8.9		
		3.4	7.9	110	0.4	0.8	129.7	36.3	30.9	3.99	2.67	11.62	1.1	2.5	123.8	36.1	31.2	3.81	2.81	10.6	1.7	3.9	118.0	35.8	31.4	3.62	2.90	10.0		
45	9	1.2	2.8	70	0.4	0.9	88.2	45.8	49.4	2.47	5.64	6.60	1.1	2.5	84.3	45.5	49.9	2.35	5.95	6.1	1.7	4.0	80.3	45.2	50.1	2.23	6.15	5.7		
		1.2	2.8	80	0.4	0.9	99.0	45.4	47.7	2.78	4.78	7.77	1.1	2.5	94.5	45.1	48.1	2.65	5.04	7.1	1.7	4.0	90.1	44.8	48.4	2.52	5.21	6.7		
		1.2	2.8	90	0.4	0.9	109.7	44.8	45.4	3.16	4.15	9.06	1.1	2.5	104.7	44.5	45.8	3.02	4.38	8.3	1.7	4.0	99.8	44.2	46.1	2.87	5.53	7.8		
		1.2	2.8	100	0.4	0.9	120.5	44.0	42.8	3.59	3.59	10.42	1.1	2.5	115.1	43.8	43.2	3.42	3.79	9.6	1.7	4.0	109.6	43.5	43.4	3.25	5.91	9.0		
		1.2	2.8	110	0.4	0.8	131.5	43.2	40.3	4.1	3.1	11.8	1.1	2.5	125.6	42.9	40.7	3.9	3.3	10.8	1.7	3.9	119.7	42.6	40.9	3.67	5.39	10.2		
7	9	2.2	5.0	70	0.4	0.9	88.6	48.3	52.1	2.48	5.91	6.71	1.1	2.5	84.6	48.0	52.6	2.37	6.23	6.2	1.7	4.0	80.6	47.6	52.9	2.25	6.44	5.8		
		2.2	5.0	80	0.4	0.9	99.3	47.9	50.3	2.80	5.01	7.90	1.1	2.5	94.9	47.6	50.8	2.67	5.28	7.2	1.7	4.0	90.4	47.2	51.1	2.54	5.46	6.8		
		2.2	5.0	90	0.4	0.9	110.1	47.3	47.9	3.18	4.36	9.21	1.1	2.5	105.1	46.9	48.3	3.04	4.59	8.4	1.7	4.0	100.2	46.6	48.6	2.89	4.74	8.0		
		2.2	5.0	100	0.4	0.9	120.9	46.5	45.1	3.62	3.77	10.59	1.1	2.5	115.5	46.2	45.6	3.45	3.97	9.7	1.7	4.0	110.0	45.8	45.8	3.28	4.10	9.2		
		2.2	5.0	110	0.4	0.8	132.0	45.5	42.5	4.1	3.3	12.0	1.1	2.5	126.1	45.2	42.9	3.9	3.4	11.0	1.7	3.9	120.1	44.9	43.2	3.70	3.56	10.4		
9	9	3.0	7.0	70	0.4	0.9	88.8	49.9	53.8	2.49	6.09	6.79	1.1	2.5	84.8	49.6	54.3	2.37	6.42	6.2	1.7	4.0	80.8	49.2	54.6	2.26	6.63	5.9		
		3.0	7.0	80	0.4	0.9	99.6	49.5	51.9	2.81	5.16	7.99	1.1	2.5	95.1	49.1	52.4	2.68	5.44	7.3	1.7	4.0	90.6	48.8	52.7	2.54	5.62	6.9		
		3.0	7.0	90	0.4	0.9	110.4	48.8	49.5	3.19	4.48	9.32	1.1	2.5	105.4	48.5	49.9	3.04	4.73	8.5	1.7	4.0	100.4	48.2	50.2	2.89	4.88	8.1		
		3.0	7.0	100	0.4	0.9	121.3	48.0	46.6	3.63	3.88	10.71	1.1	2.5	115.8	47.7	47.1	3.46	4.09	9.8	1.7	4.0	110.3	47.3	47.3	3.29	4.22	9.3		
		3.0	7.0	110	0.4	0.8	132.4	47.0	43.9	4.1	3.4	12.1	1.1	2.5	126.4	46.7	44.3	3.9	3.5	11.1	1.7	3.9	120.4	46.4	44.6	3.71	3.66	10.5		
45	9	1.1	2.5	70	0.4	0.9	90.3	57.2	65.3	2.50	6.96	7.41	1.1	2.5	86.2	56.8	65.9	2.38	7.33	6.8	1.7	4.0	82.1	56.4	66.3	2.26	7.58	6.4		
		1.1	2.5	80	0.4	0.9	101.3	56.7	63.0	2.82	5.90	8.72	1.1	2.5	96.7	56.3	63.6	2.69	6.22	8.0	1.7	4.0	92.1	56.0	63.9	2.55	6.42	7.5		
		1.1	2.5	90	0.4	0.9	112.2	56.0	60.0	3.21	5.12	10.17	1.1	2.5	107.2	55.6	60.5	3.06	5.40	9.3	1.7	4.0	102.1	55.2	60.9	2.90	5.58	8.8		
		1.1	2.5	100	0.4	0.9	123.3	55.0	56.5	3.64	4.43	11.70	1.1	2.5	117.7	54.7	57.1	3.47	4.67	10.7	1.7	4.0	112.2	54.3	57.4	3.30	4.82	10.1		
		1.1	2.5	110	0.4	0.8	134.6	53.9	53.2	4.1	3.8	13.2	1.1	2.5	128.5	53.6	53.7	3.9	4.1	12.1	1.7	3.9	122.4	53.2	54.0	3.72	4.19	11.4		
7	9	2.0	4.5	70	0.4	0.9	90.6	60.4	68.8	2.52	7.29	7.53	1.1	2.5	86.5	60.0	69.5	2.40	7.69	6.9	1.7	4.0	82.4	59.5	69.9	2.28	7.94	6.5		
		2.0	4.5	80	0.4	0.9	101.6	59.8	66.4	2.84	6.18	8.86	1.1	2.5	97.1	59.4	67.1	2.70	6.52	8.1	1.7	4.0	92.5	59.0	67.4	2.57	6.73	7.7		
		2.0	4.5	90	0.4	0.9	112.6	59.1	63.3	3.23	5.37	10.34	1.1	2.5	107.6	58.7	63.9	3.08	5.66	9.5	1.7	4.0	102.5	58.3	64.2	2.92	5.85	8.9		
		2.0	4.5	100	0.4	0.9	123.7	58.1	59.6	3.67	4.64	11.89	1.1	2.5	118.2	57.7	60.2	3.49	4.89	10.9	1.7	4.0	112.6	57.3	60.5	3.32	5.06	10.3		
		2.0	4.5	110	0.4	0.8	135.1	56.9	56.2	4.1	4.0	13.4	1.1	2.5	129.0	56.5	56.7	3.9	4.2	12.3	1.7	3.9	122.9	56.1	57.0	3.75	4.39	11.6		
9	9	2.7	6.3	70	0.4	0.9	90.9	62.4	71.1	2.52	7.51	7.62	1.1	2.5	86.8	61.9	71.8	2.41	7.92	7.0	1.7	4.0	82.7	61.5	72.2	2.29	8.18	6.6		
		2.7	6.3	80	0.4	0.9	101.9	61.8	68.6	2.85	6.37	8.96	1.1	2.5	97.3	61.4	69.3	2.71	6.71	8.2	1.7	4.0	92.7	61.0	69.7	2.58	6.93	7.7		
		2.7	6.3	90	0.4	0.9	112.9	61.0	65.3	3.24	5.53	10.45	1.1	2.5	107.9	60.6	66.0	3.09	5.83	9.6	1.7	4.0	102.8	60.2	66.3	2.93	6.02	9.0		
		2.7	6.3	100	0.4	0.9	124.1	60.0	61.6	3.68	4.78	12.02	1.1	2.5	118.5	59.6	62.2	3.50	5.04	11.0	1.7	4.0	112.9	59.2	62.5	3.33</				

Model 048, 4 Ton, Load Side, Cooling Mode, Part Load Performance Data

WT048		EXTENDED DATA																																												
SOURCE SIDE		LOAD SIDE, COOLING MODE, PART LOAD																																												
EST °F	GPM	Source Flow			Load Flow GPM 5												Load Flow GPM 6						Load Flow GPM 8																							
		Source Flow WPD			Load Flow WPD			LLT			TC			HR			Power			EER			DSH			Load Flow WPD			LLT			TC			HR			Power			EER			DSH		
		PSI	FT	°F	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh										
45	8	1.4	3.1	45	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended																							
		1.4	3.1	55	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended																							
		1.4	3.1	65	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended																							
		1.4	3.1	75	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended																							
50	5	1.4	3.1	85	1.2	2.7	62.8	60.3	65.7	1.27	47.8	3.7	1.4	3.2	64.6	61.8	67.0	1.27	49.1	3.7	1.8	4.2	68.3	65.0	69.7	1.26	51.9	3.8																		
		0.2	0.5	45	1.3	3.1	32.9	33.2	40.0	1.52	21.3	3.6	1.6	3.7	33.9	34.0	40.8	1.52	21.9	3.6	2.1	4.8	35.9	35.8	42.5	1.52	23.1	3.7																		
		0.2	0.5	55	1.3	2.9	40.4	39.4	46.0	1.49	25.7	3.8	1.5	3.5	41.6	40.4	46.9	1.49	26.4	3.8	2.0	4.6	44.0	42.5	48.7	1.49	27.9	3.9																		
		0.2	0.5	65	1.2	2.8	47.9	46.3	52.5	1.46	30.8	3.9	1.5	3.4	49.3	47.5	53.5	1.46	31.7	4.0	1.9	4.4	52.1	49.9	55.7	1.46	33.4	4.1																		
	6	0.2	0.5	75	1.2	2.8	55.4	53.1	59.2	1.44	35.9	4.2	1.5	3.4	57.1	54.5	60.3	1.44	36.9	4.3	1.9	4.4	60.4	57.2	62.7	1.43	39.0	4.4																		
		0.2	0.5	85	1.2	2.7	63.0	59.5	65.5	1.42	40.8	4.5	1.4	3.2	64.9	61.0	66.8	1.42	41.9	4.6	1.8	4.2	68.6	64.1	69.4	1.41	44.3	4.7																		
		0.6	1.4	45	1.3	3.1	32.9	33.3	40.1	1.52	21.8	3.4	1.6	3.7	33.9	34.1	40.8	1.52	22.4	3.5	2.1	4.8	35.9	35.8	42.5	1.52	23.7	3.6																		
		0.6	1.4	55	1.3	2.9	40.4	39.5	46.0	1.49	26.4	3.6	1.5	3.5	41.6	40.5	46.9	1.49	27.1	3.7	2.0	4.6	44.0	42.5	48.7	1.49	28.6	3.8																		
	8	0.6	1.4	65	1.2	2.8	47.9	46.4	52.5	1.46	31.6	3.8	1.5	3.4	49.3	47.5	53.6	1.46	32.5	3.9	1.9	4.4	52.1	49.9	55.7	1.46	34.3	4.0																		
		0.6	1.4	75	1.2	2.8	55.4	53.2	59.2	1.44	36.9	4.1	1.5	3.4	57.1	54.5	60.4	1.44	37.9	4.1	1.9	4.4	60.4	57.3	62.8	1.43	40.0	4.2																		
		0.6	1.4	85	1.2	2.7	63.0	59.6	65.5	1.42	41.8	4.4	1.4	3.2	64.9	61.1	66.8	1.42	43.0	4.5	1.8	4.2	68.6	64.2	69.4	1.41	45.4	4.6																		
		1.3	3.0	45	1.3	3.1	32.9	33.4	40.1	1.46	22.9	3.2	1.6	3.7	33.9	34.2	40.9	1.46	23.6	3.2	2.1	4.8	35.9	35.9	42.5	1.46	24.9	3.3																		
70	5	1.3	3.0	55	1.3	2.9	40.4	39.6	46.0	1.43	27.7	3.4	1.5	3.5	41.6	40.6	46.9	1.43	28.5	3.4	2.0	4.6	44.0	42.7	48.8	1.43	30.1	3.5																		
		1.3	3.0	65	1.2	2.8	47.8	46.5	52.5	1.40	33.2	3.5	1.5	3.4	49.2	47.7	53.6	1.40	34.1	3.6	1.9	4.4	52.1	50.1	55.7	1.40	36.0	3.7																		
		1.3	3.0	75	1.2	2.8	55.4	53.4	59.2	1.38	38.8	3.8	1.5	3.4	57.0	54.7	60.4	1.38	39.8	3.8	1.9	4.4	60.4	57.5	62.8	1.38	42.1	3.9																		
		1.3	3.0	85	1.2	2.7	63.0	59.8	65.5	1.36	44.0	4.1	1.4	3.2	64.8	61.3	66.8	1.36	45.2	4.1	1.8	4.2	68.6	64.4	69.5	1.36	47.7	4.2																		
	6	0.2	0.5	45	1.3	3.1	33.4	30.6	38.7	2.10	14.2	5.6	1.6	3.7	34.4	31.4	39.5	2.10	14.6	5.7	2.1	4.8	36.4	33.0	41.1	2.09	15.4	5.9																		
		0.2	0.5	55	1.3	2.9	41.0	36.3	44.4	2.06	17.2	6.0	1.5	3.5	42.2	37.3	45.3	2.06	17.7	6.1	2.0	4.6	44.7	39.1	47.1	2.05	18.7	6.2																		
		0.2	0.5	65	1.2	2.8	48.6	42.7	50.8	2.02	20.6	6.2	1.5	3.4	50.0	43.7	51.8	2.02	21.2	6.3	1.9	4.4	52.9	46.0	53.8	2.01	22.4	6.5																		
		0.2	0.5	75	1.2	2.8	56.3	49.0	57.2	1.98	24.1	6.6	1.5	3.4	57.9	50.2	58.4	1.98	24.7	6.7	1.9	4.4	61.3	52.8	60.7	1.97	26.1	6.9																		
	8	0.2	0.5	85	1.2	2.7	64.0	54.9	63.3	2.0	27.3	7.2	1.4	3.2	65.8	56.3	64.6	2.0	28.0	7.3	Operation Not Recommended																									
		0.5	1.2	45	1.3	3.1	33.4	30.7	38.7	2.10	14.6	5.4	1.6	3.7	34.4	31.4	39.5	2.10	15.0	5.5	2.1	4.8	36.4	33.0	41.1	2.09	15.8	5.7																		
		0.5	1.2	55	1.3	2.9	41.0	36.4	44.4	2.06	17.7	5.8	1.5	3.5	42.2	37.3	45.3	2.06	18.1	5.8	2.0	4.6	44.7	39.2	47.1	2.05	19.2	6.0																		
		0.5	1.2	65	1.2	2.8	48.6	42.7	50.8	2.02	21.2	6.0	1.5	3.4	50.0	43.8	51.8	2.02	21.7	6.1	1.9	4.4	52.9	46.0	53.9	2.01	23.0	6.3																		
90	5	0.5	1.2	75	1.2	2.8	56.3	49.1	57.2	1.98	24.7	6.4	1.5	3.4	57.9	50.3	58.4	1.98	25.4	6.5	1.9	4.4	61.3	52.8	60.7	1.97	26.8	6.7																		
		0.5	1.2	85	1.2	2.7	64.0	55.0	63.3	2.0	28.0	6.9	1.4	3.2	65.8	56.3	64.6	2.0	28.8	7.0	Operation Not Recommended																									
		1.2	2.7	45	1.3	3.1	33.4	30.8	38.7	2.01	15.3	5.0	1.6	3.7	34.4	31.5	39.5	2.01	15.8	5.1	2.1	4.8	36.4	33.1	41.1	2.01	16.7	5.2																		
		1.2	2.7	55	1.3	2.9	41.0	36.5	44.5	1.97	18.6	5.3	1.5	3.5	42.2	37.4	45.3	1.97	19.1	5.4	2.0	4.6	44.7	39.3	47.2	1.97	20.1	5.6																		
	6	1.2	2.7	65	1.2	2.8	48.6	42.9	50.8	1.94	22.2	5.6	1.5	3.4	50.0	43.9	51.8	1.94	22.8	5.6	1.9	4.4	52.9	46.2	53.9	1.93	24.1	5.8																		
		1.2	2.7	75	1.2	2.8	56.3	49.2	57.3	1.90	25.9	5.9	1.5	3.4	57.9	50.4	58.4	1.90	26.7	6.0	1.9	4.4	61.3	53.0	60.7	1.90	28.1	6.2																		
		1.2	2.7	85	1.2	2.7	64.0	55.1	63.4	1.9	29.4	6.4	1.4	3.2	65.8	56.5	64.6	1.9	30.2	6.5	Operation Not Recommended																									
		0.2	0.4	45	1.3	3.1	34.2	27.1	36.9	2.81	9.4	8.1	1.6	3.7	35.2	27.8	37.6	2.81	9.7	8.2	2.1	4.8	37.2	29.2	39.1	2.80	10.2	8.4																		
	8	0.2	0.4	55	1.3	2.9	41.9	32.2	42.3	2.75	11.4	8.5	1.5	3.5	43.2	33.0	43.2	2.75	11.7	8.7	2.0	4.6	45.7	34.6	44.9	2.74	12.4	8.9																		
		0.2	0.4	65	1.2	2.8	49.6	37.8	48.4	2.70	13.6	8.9	1.5	3.4	51.1	38.7	49.3	2.70	14.0	9.0	1.9	4.4	54.1	40.7	51.3	2.69	14.8	9.3																		
		0.2	0.4	75	1.2	2.8	57.5	43.3	54.5	2.65	15.9	9.5	1.5	3.4	59.2	44.4	55.6	2.65	16.3	9.6	1.9	4.4	62.6	46.7	57.8	2.64	17.3	9.9																		
		0.2	0.4	85	1.2	2.7	65.4	48.6	60.3	2.6	18.1	10.3	Operation Not Recommended												Operation Not Recommended																					
110	5	0.5	1.1	45	1.3	3.1	34.2	27.1	36.9	2.81	9.7	7.8	1.6	3.7	35.2	27.8	37.6	2.81	9.9	7.9	2.1	4.8	37.2	29.2	39.1	2.80	10.5	8.1																		
		0.5	1.1	55	1.3	2.9	41.9	32.2	42.3	2.75	11.7	8.2	1.5	3.5	43.2	33.0	43.2	2.75	12.0	8.4	2.0	4.6	45.7	34.7	44.9	2.74	12.7	8.6																		
		0.5	1.1	65	1.2	2.8	49.6	37.8	48.4	2.70	14.0	8.6	1.5	3.4	51.1	38.8	49.3	2.70	14.4	8.7	1.9	4.4	54.1	40.7	51.3	2.69	15.2	8.9																		
		0.5	1.1	75	1.2	2.8	57.5	43.4	54.5	2.65	16.3	9.1	1.5	3.4	59.2	44.5	55.6	2.65	16.8	9.3	1.9	4.4	62.6	46.8	57.8	2.64	17.7	9.5																		
6	0.5	1.1	85	1.2	2.7	65.4	48.6	60.3	2.6	18.5	9.9	Operation Not Recommended												Operation Not Recommended																						
	1.1	2.5	45	1.3	3.1	34.2	27.2	36.9	2.70	10.2	7.2	1.6	3.7	35.2	27.9	37.6	2.70	10.4	7.3	2.1	4.8	37.2	29.3	39.1	2.68	11.0	7.5																			
	1.1	2.5	55	1.3	2.9	41.9	32.3	42.4	2.64	12.3	7.6	1.5	3.5	43.1	33.1	43.2	2.64	12.6	7.7	2.0	4.6	45.6	34.8	44.9	2.63	13.3	7.9																			
	1.1	2.5	65	1.2	2.8	49.6	37.9	48.4	2.59	14.7	8.0	1.5	3.4	51.1	38.9	49.4	2.59	15.1	8.1	1.9	4.4	54.0	40.9	51.3	2.58	16.0	8.3																			
8	1.1	2.5	75	1.2	2.8	57.5	43.5	54.6	2.55	17.2	8.5	1.5	3.4	59.2	44.6	55.6	2.55	17.6	8.6	1.9	4.4	62.6	46.9	57.8	2.54	18.6	8.8																			
	1.1	2.5	85	1.2	2.7	65.4	48.8	60.4	2.5	19.5	9.2	Operation Not Recommended												Operation Not Recommended																						
	0.2	0.4	45	1.3	3.1	35.1	22.8	34.5	3.71	6.0	10.8	1.6	3.7	36.2	23.4	35.2	3.71	6.2	11.0	2.1	4.8	38.2	24.6	36.6	3.69	6.5	11.3																			
	0.2	0.4	55	1.3	2.9	43.1	27.1	39.6	3.64	7.2	11.5	1.5	3.5	44.4	27.7	40.3	3.64	7.4	11.6	2.0	4.6	46.9	29.1	42.0	3.62	7.9	12.0																			
110	5	0.2	0.4	65	1.2	2.8	51.0	31.8	45.2	3.56	8.7	12.0	1.5	3.4	52.5	32.6	46.1	3.56	8.9	12.1	1.9	4.4	55.6	34.2	47.9	3.52	9.4	12.5																		
		0.2	0.																																											

ENGINEERING SPECIFICATIONS

Model 048, 4 Ton, Load Side, Cooling Mode, Full Load Performance Data

WT048		EXTENDED DATA																										
SOURCE SIDE		LOAD SIDE, COOLING MODE, FULL LOAD																										
EST °F	GPM	Source Flow			ELT	Load Flow GPM 6						Load Flow GPM 9						Load Flow GPM 12										
		PSI	FT	°F		Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH		
		PSI	FT	°F	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh
45	12	3.2	7.5	45	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		3.2	7.5	55	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		3.2	7.5	65	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		3.2	7.5	75	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		3.2	7.5	85	1.1	2.5	62.6	72.1	81.6	2.25	32.0	4.6	2.2	5.0	67.1	76.4	85.6	2.28	33.6	4.7	3.3	7.6	71.4	80.6	89.5	2.30	35.1	4.9
50	6	0.6	1.4	45	1.2	2.8	32.1	44.4	54.7	2.27	19.0	5.2	2.4	5.5	34.3	47.0	57.4	2.29	19.9	5.4	3.6	8.3	36.6	49.6	60.0	2.31	20.8	5.5
		0.6	1.4	55	1.2	2.7	39.6	51.9	62.4	2.33	21.6	5.5	2.3	5.4	42.4	55.0	65.5	2.36	22.7	5.7	3.5	8.1	45.2	58.0	68.5	2.38	23.7	5.9
		0.6	1.4	65	1.1	2.6	47.2	59.9	70.8	2.41	24.2	5.7	2.3	5.2	50.5	63.5	74.3	2.43	25.4	5.9	3.4	7.8	53.8	66.9	77.7	2.46	26.5	6.1
		0.6	1.4	75	1.1	2.6	54.7	67.7	78.8	2.48	26.5	6.1	2.3	5.2	58.6	71.8	82.7	2.51	27.8	6.3	3.4	7.8	62.4	75.7	86.5	2.53	29.1	6.5
	0.6	1.4	85	1.1	2.5	63.0	70.7	81.3	2.51	27.4	6.6	2.2	5.0	67.4	75.0	85.3	2.53	28.7	6.8	3.3	7.6	71.8	79.0	89.2	2.56	30.0	7.0	
	9	1.7	3.9	45	1.2	2.8	32.0	44.7	54.7	2.26	20.0	4.6	2.4	5.5	34.3	47.3	57.4	2.28	20.9	4.8	3.6	8.3	36.6	49.9	60.0	2.30	21.9	4.9
		1.7	3.9	55	1.2	2.7	39.6	52.2	62.4	2.32	22.7	4.9	2.3	5.4	42.4	55.4	65.5	2.34	23.8	5.0	3.5	8.1	45.2	58.4	68.5	2.36	24.9	5.2
		1.7	3.9	65	1.1	2.6	47.1	60.3	70.8	2.39	25.4	5.1	2.3	5.2	50.5	63.9	74.3	2.42	26.7	5.3	3.4	7.8	53.8	67.4	77.7	2.44	27.8	5.4
		1.7	3.9	75	1.1	2.6	54.7	68.2	78.8	2.47	27.9	5.4	2.3	5.2	58.6	72.3	82.7	2.49	29.3	5.6	3.4	7.8	62.4	76.2	86.5	2.51	30.6	5.8
	1.7	3.9	85	1.1	2.5	62.9	71.2	81.3	2.49	28.8	5.8	2.2	5.0	67.4	75.5	85.3	2.52	30.2	6.1	3.3	7.6	71.8	79.6	89.2	2.54	31.5	6.3	
	12	3.1	7.2	45	1.2	2.8	31.9	44.9	54.7	2.15	20.9	4.0	2.4	5.5	34.2	47.6	57.4	2.17	21.9	4.1	3.6	8.3	36.4	50.2	60.0	2.19	22.9	4.2
		3.1	7.2	55	1.2	2.7	39.5	52.6	62.4	2.21	23.8	4.2	2.3	5.4	42.3	55.7	65.5	2.23	25.0	4.4	3.5	8.1	45.0	58.7	68.5	2.25	26.1	4.5
3.1		7.2	65	1.1	2.6	47.0	60.7	70.9	2.28	26.6	4.4	2.3	5.2	50.3	64.3	74.3	2.30	27.9	4.6	3.4	7.8	53.6	67.8	77.7	2.33	29.1	4.7	
3.1		7.2	75	1.1	2.6	54.5	68.6	78.9	2.35	29.2	4.7	2.3	5.2	58.4	72.7	82.7	2.37	30.6	4.9	3.4	7.8	62.2	76.7	86.5	2.40	32.0	5.0	
3.1	7.2	85	1.1	2.5	62.7	71.6	81.3	2.38	30.2	5.1	2.2	5.0	67.2	75.9	85.3	2.40	31.6	5.3	3.3	7.6	71.5	80.0	89.2	2.42	33.0	5.4		
70	6	0.5	1.2	45	1.2	2.8	32.4	41.9	53.3	2.82	14.4	8.2	2.4	5.5	34.7	44.4	55.9	2.85	15.1	8.5	3.6	8.3	37.0	46.8	58.4	2.88	15.8	8.7
		0.5	1.2	55	1.2	2.7	40.0	49.0	60.7	2.90	16.4	8.6	2.3	5.4	42.9	51.9	63.7	2.93	17.2	9.0	3.5	8.1	45.7	54.7	66.6	2.96	18.0	9.2
		0.5	1.2	65	1.1	2.6	47.7	56.5	68.9	3.00	18.3	9.0	2.3	5.2	51.1	59.9	72.3	3.03	19.2	9.4	3.4	7.8	54.4	63.2	75.6	3.05	20.1	9.6
		0.5	1.2	75	1.1	2.6	55.3	63.9	76.7	3.09	20.1	9.6	2.3	5.2	59.2	67.8	80.5	3.12	21.1	10.0	3.4	7.8	63.1	71.5	84.2	3.15	22.1	10.3
	0.5	1.2	85	1.1	2.5	63.6	66.7	79.1	3.1	20.8	10.4	2.2	5.0	68.2	70.7	83.0	3.2	21.8	10.8	3.3	7.6	72.6	74.6	86.8	3.18	22.8	11.1	
	9	1.5	3.5	45	1.2	2.8	32.4	42.1	53.3	2.81	15.1	7.2	2.4	5.5	34.7	44.7	55.9	2.83	15.9	7.5	3.6	8.3	36.9	47.1	58.4	2.86	16.6	7.7
		1.5	3.5	55	1.2	2.7	40.0	49.3	60.7	2.88	17.2	7.7	2.3	5.4	42.9	52.3	63.7	2.91	18.1	8.0	3.5	8.1	45.6	55.1	66.6	2.94	18.9	8.2
		1.5	3.5	65	1.1	2.6	47.6	56.9	68.9	2.98	19.3	8.0	2.3	5.2	51.0	60.3	72.3	3.01	20.2	8.3	3.4	7.8	54.4	63.6	75.6	3.04	21.1	8.6
		1.5	3.5	75	1.1	2.6	55.2	64.4	76.7	3.07	21.2	8.5	2.3	5.2	59.2	68.2	80.5	3.10	22.2	8.9	3.4	7.8	63.0	71.9	84.2	3.13	23.2	9.1
	1.5	3.5	85	1.1	2.5	63.6	67.2	79.1	3.1	21.8	9.2	2.2	5.0	68.1	71.2	83.0	3.1	22.9	9.6	3.3	7.6	72.5	75.1	86.8	3.16	23.9	9.9	
	12	2.8	6.5	45	1.2	2.8	32.3	42.4	53.3	2.68	15.9	6.3	2.4	5.5	34.6	44.9	55.9	2.70	16.6	6.5	3.6	8.3	36.8	47.4	58.4	2.73	17.4	6.7
		2.8	6.5	55	1.2	2.7	39.9	49.6	60.7	2.75	18.1	6.6	2.3	5.4	42.7	52.6	63.7	2.78	18.9	6.9	3.5	8.1	45.5	55.4	66.6	2.80	19.8	7.1
2.8		6.5	65	1.1	2.6	47.5	57.2	68.9	2.84	20.2	6.9	2.3	5.2	50.9	60.7	72.3	2.87	21.2	7.2	3.4	7.8	54.2	64.0	75.6	2.89	22.1	7.4	
2.8		6.5	75	1.1	2.6	55.1	64.7	76.7	2.92	22.2	7.4	2.3	5.2	59.0	68.6	80.5	2.95	23.2	7.7	3.4	7.8	62.8	72.4	84.2	2.98	24.3	7.9	
2.8	6.5	85	1.1	2.5	63.4	67.6	79.1	3.0	22.9	8.0	2.2	5.0	67.9	71.6	83.0	3.0	24.0	8.3	3.3	7.6	72.3	75.5	86.8	3.01	25.1	8.5		
90	6	0.5	1.1	45	1.2	2.8	33.2	37.5	50.9	3.57	10.2	11.7	2.4	5.5	35.5	39.7	53.4	3.61	10.7	12.1	3.6	8.3	37.8	41.9	55.8	3.64	11.2	12.5
		0.5	1.1	55	1.2	2.7	41.0	43.8	58.0	3.67	11.6	12.4	2.3	5.4	43.9	46.5	60.9	3.71	12.2	12.8	3.5	8.1	46.7	49.0	63.6	3.74	12.7	13.2
		0.5	1.1	65	1.1	2.6	48.8	50.6	65.8	3.79	13.0	12.9	2.3	5.2	52.3	53.6	69.1	3.83	13.6	13.4	3.4	7.8	55.7	56.5	72.2	3.86	14.2	13.8
		0.5	1.1	75	1.1	2.6	56.6	57.2	73.3	3.90	14.2	13.7	2.3	5.2	60.6	60.7	76.9	3.94	14.9	14.3	3.4	7.8	64.6	63.9	80.4	3.98	15.6	14.7
	0.5	1.1	85	1.1	2.5	65.1	59.7	75.5	3.9	14.7	14.9	2.2	5.0	69.8	63.3	79.3	4.0	15.4	15.5	3.3	7.6	74.3	66.7	82.9	4.02	16.1	15.9	
	9	1.4	3.2	45	1.2	2.8	33.1	37.7	50.9	3.55	10.7	10.4	2.4	5.5	35.5	40.0	53.4	3.58	11.2	10.8	3.6	8.3	37.8	42.2	55.8	3.62	11.7	11.1
		1.4	3.2	55	1.2	2.7	40.9	44.1	58.0	3.65	12.2	11.0	2.3	5.4	43.9	46.8	60.9	3.68	12.8	11.4	3.5	8.1	46.7	49.3	63.6	3.72	13.4	11.7
		1.4	3.2	65	1.1	2.6	48.8	50.9	65.8	3.76	13.6	11.4	2.3	5.2	52.2	54.0	69.1	3.80	14.3	11.9	3.4	7.8	55.6	56.9	72.2	3.84	14.9	12.2
		1.4	3.2	75	1.1	2.6	56.5	57.6	73.3	3.88	15.0	12.2	2.3	5.2	60.6	61.1	76.9	3.92	15.7	12.7	3.4	7.8	64.5	64.4	80.4	3.96	16.4	13.0
	1.4	3.2	85	1.1	2.5	65.1	60.1	75.5	3.9	15.5	13.2	2.2	5.0	69.7	63.7	79.3	4.0	16.2	13.7	3.3	7.6	74.2	67.2	82.9	4.00	16.9	14.1	
	12	2.6	5.9	45	1.2	2.8	33.0	37.9	50.9	3.38	11.2	9.0	2.4	5.5	35.4	40.2	53.4	3.42	11.8	9.3	3.6	8.3	37.7	42.4	55.8	3.45	12.3	9.6
		2.6	5.9	55	1.2	2.7	40.8	44.4	58.0	3.48	12.8	9.5	2.3	5.4	43.7	47.1	60.9	3.51	13.4	9.9	3.5	8.1	46.6	49.6	63.6	3.55	14.0	10.1
2.6		5.9	65	1.1	2.6	48.6	51.2	65.8	3.59	14.3	9.9	2.3	5.2	52.1	54.3	69.1	3.63	15.0	10.3	3.4	7.8	55.4	57.3	72.2	3.66	15.6	10.6	
2.6		5.9	75	1.1	2.6	56.4	57.9	73.3	3.70	15.7	10.5	2.3	5.2	60.4	61.4	76.9	3.74	16.4	10.9	3.4	7.8	64.3	64.8	80.4	3.77	17.2	11.3	
2.6	5.9	85	1.1	2.5	64.9	60.5	75.5	3.7	16.2	11.4	2.2	5.0	69.5	64.1	79.3	3.8	17.0	11.9	3.3	7.6	74.0	67.6	82.9	3.81	17.7	12.2		
110	6	0.4	1.0	45	1.2	2.8	33.9	33.1	48.5	4.55	7.1	15.7	2.4	5.5	36.3	35.0	50.8	4.60	7.4	16.3	3.6	8.3	38.6	36.9	53.1	4.64		

Model 048, 4 Ton, Load Side, Heating Mode, Part Load Performance Data

WT048		EXTENDED DATA		LOAD SIDE, HEATING MODE, PART LOAD																												
EST °F	GPM	SOURCE SIDE			LOAD FLOW GPM 5												LOAD FLOW GPM 8															
		Source Flow			Load Flow WPD				Power				COP				DSH				Load Flow WPD			Power			COP			DSH		
		PSI	FT	°F	LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH	PSI	FT	°F	LLT	HC	HE	Power	COP	DSH							
																										Operation Not Recommended	Operation Not Recommended	Operation Not Recommended				
25	8	1.7	4.0	70	1.2	2.7	80.1	28.3	20.7	2.01	4.29	2.5	1.5	3.4	80.1	28.3	20.7	2.01	4.35	2.4	Operation Not Recommended											
		1.7	4.0	80	1.1	2.6	90.5	28.5	20.0	2.34	3.52	2.9	1.4	3.2	90.5	28.5	20.0	2.34	3.57	2.8	1.9	4.4	88.2	28.3	19.8	2.27	3.67	2.6				
		1.7	4.0	90	1.1	2.6	100.4	28.2	19.0	2.70	3.02	3.4	1.4	3.2	100.4	28.2	19.0	2.70	3.06	3.3	1.9	4.4	97.8	28.0	18.9	2.63	3.14	3.1				
		1.7	4.0	100	1.1	2.6	110.2	27.7	17.8	3.11	2.57	3.9	1.4	3.2	110.2	27.7	17.8	3.11	2.61	3.8	1.9	4.4	107.3	27.5	17.6	3.02	2.68	3.5				
	30	5	0.3	0.6	70	1.2	2.7	80.3	29.4	22.6	2.01	4.45	2.5	1.5	3.4	80.3	29.4	22.6	2.01	4.52	2.4	Operation Not Recommended										
			0.3	0.6	80	1.1	2.6	90.8	29.6	21.9	2.34	3.66	2.9	1.4	3.2	90.8	29.6	21.9	2.34	3.70	2.8	1.9	4.4	88.4	29.4	21.7	2.27	3.80	2.6			
			0.3	0.6	90	1.1	2.6	100.6	29.3	20.9	2.71	3.13	3.4	1.4	3.2	100.6	29.3	20.9	2.71	3.17	3.3	1.9	4.4	98.0	29.1	20.7	2.63	3.26	3.1			
			0.3	0.6	100	1.1	2.6	110.4	28.8	19.5	3.12	2.67	3.9	1.4	3.2	110.4	28.8	19.5	3.12	2.71	3.7	1.9	4.4	107.6	28.6	19.3	3.03	2.78	3.5			
		50	6	0.8	1.7	70	1.2	2.7	80.4	29.8	23.0	2.01	4.52	2.5	1.5	3.4	80.4	29.8	23.0	2.01	4.58	2.4	Operation Not Recommended									
				0.8	1.7	80	1.1	2.6	90.9	30.0	22.3	2.34	3.71	2.9	1.4	3.2	90.9	30.0	22.3	2.34	3.76	2.8	1.9	4.4	88.5	29.8	22.1	2.27	3.86	2.6		
				0.8	1.7	90	1.1	2.6	100.8	29.7	21.2	2.71	3.18	3.4	1.4	3.2	100.8	29.7	21.2	2.71	3.22	3.3	1.9	4.4	98.2	29.6	21.0	2.63	3.31	3.1		
				0.8	1.7	100	1.1	2.6	110.6	29.2	19.8	3.12	2.71	3.9	1.4	3.2	110.6	29.2	19.8	3.12	2.75	3.8	1.9	4.4	107.7	29.0	19.6	3.03	2.82	3.5		
70			8	0.8	1.7	110	1.0	2.4	120.8	28.6	18.2	3.59	2.30	4.4	1.3	2.9	120.8	28.6	18.2	3.59	2.33	4.3	1.7	4.0	117.7	28.4	18.1	3.49	2.39	4.0		
				1.7	3.9	70	1.2	2.7	80.6	30.6	23.7	2.01	4.65	2.5	1.5	3.4	80.6	30.6	23.7	2.01	4.71	2.4	Operation Not Recommended									
				1.7	3.9	80	1.1	2.6	91.2	30.8	23.0	2.34	3.81	3.0	1.4	3.2	91.2	30.8	23.0	2.34	3.86	2.9	1.9	4.4	88.8	30.6	22.7	2.27	3.97	2.7		
				1.7	3.9	90	1.1	2.6	101.1	30.5	21.8	2.70	3.26	3.4	1.4	3.2	101.1	30.5	21.8	2.70	3.31	3.3	1.9	4.4	98.5	30.4	21.6	2.67	3.40	3.1		
	90		5	0.2	0.6	70	1.2	2.7	82.3	41.0	35.6	1.98	6.30	2.6	1.5	3.4	82.3	41.0	35.6	1.98	6.38	2.5	2.0	4.6	80.1	40.8	35.3	1.93	6.55	2.3		
				0.2	0.6	80	1.1	2.6	93.0	41.3	34.5	2.31	5.17	3.0	1.4	3.2	93.0	41.3	34.5	2.31	5.24	2.9	1.9	4.4	90.6	41.0	34.2	2.24	5.38	2.7		
				0.2	0.6	90	1.1	2.6	103.1	40.9	32.8	2.67	4.42	3.5	1.4	3.2	103.1	40.9	32.8	2.67	4.48	3.4	1.9	4.4	100.5	40.6	32.5	2.59	4.60	3.2		
				0.2	0.6	100	1.1	2.6	113.2	40.1	30.6	3.07	3.77	4.0	1.4	3.2	113.2	40.1	30.6	3.07	3.82	3.9	1.9	4.4	110.2	39.9	30.4	2.99	3.93	3.7		
		90	6	0.2	0.6	110	1.0	2.4	123.6	39.3	28.3	3.5	3.2	4.6	1.3	2.9	123.6	39.3	28.3	3.5	3.2	4.4	1.7	4.0	120.4	39.0	28.0	3.44	3.33	4.1		
				0.7	1.5	70	1.2	2.7	82.4	41.6	36.2	1.98	6.39	2.6	1.5	3.4	82.4	41.6	36.2	1.98	6.48	2.5	2.0	4.6	80.2	41.3	35.8	1.93	6.65	2.3		
				0.7	1.5	80	1.1	2.6	93.1	41.8	35.0	2.31	5.24	3.0	1.4	3.2	93.1	41.8	35.0	2.31	5.31	2.9	1.9	4.4	90.7	41.6	34.7	2.24	5.46	2.8		
				0.7	1.5	90	1.1	2.6	103.3	41.5	33.3	2.67	4.49	3.5	1.4	3.2	103.3	41.5	33.3	2.67	4.55	3.4	1.9	4.4	100.6	41.2	33.0	2.59	4.67	3.2		
90			8	0.7	1.5	100	1.1	2.6	113.3	40.7	31.1	3.07	3.83	4.1	1.4	3.2	113.3	40.7	31.1	3.07	3.88	3.9	1.9	4.4	110.4	40.4	30.8	2.99	3.99	3.7		
				0.7	1.5	110	1.0	2.4	123.8	39.8	28.7	3.5	3.2	4.6	1.3	2.9	123.8	39.8	28.7	3.5	3.3	4.4	1.7	4.0	120.6	39.6	28.4	3.44	3.38	4.2		
				1.5	3.4	70	1.2	2.7	82.6	42.7	37.3	1.98	6.57	2.6	1.5	3.4	82.6	42.7	37.3	1.98	6.66	2.5	2.0	4.6	80.5	42.5	36.9	1.93	6.84	2.4		
				1.5	3.4	80	1.1	2.6	93.4	43.0	36.1	2.31	5.39	3.1	1.4	3.2	93.4	43.0	36.1	2.31	5.46	3.0	1.9	4.4	91.0	42.7	35.8	2.24	5.61	2.8		
	90		5	1.5	3.4	90	1.1	2.6	103.6	42.6	34.3	2.67	4.61	3.6	1.4	3.2	103.6	42.6	34.3	2.67	4.68	3.5	1.9	4.4	100.9	42.3	34.0	2.59	4.80	3.2		
				1.5	3.4	100	1.1	2.6	113.6	41.8	32.1	3.07	3.94	4.1	1.4	3.2	113.6	41.8	32.1	3.07	3.99	4.0	1.9	4.4	110.7	41.5	31.8	2.98	4.10	3.7		
				1.5	3.4	110	1.0	2.4	124.1	40.9	29.6	3.5	3.3	4.7	1.3	2.9	124.1	40.9	29.6	3.5	3.4	4.5	1.7	4.0	120.9	40.6	29.3	3.44	3.47	4.2		
				0.2	0.5	70	1.2	2.7	84.2	52.7	49.5	1.94	8.28	2.9	1.5	3.4	84.2	52.7	49.5	1.94	8.40	2.8	2.0	4.6	82.0	52.3	49.1	1.88	8.62	2.6		
		90	6	0.2	0.5	80	1.1	2.6	95.2	53.0	48.0	2.25	6.80	3.4	1.4	3.2	95.2	53.0	48.0	2.25	6.89	3.3	1.9	4.4	92.7	52.6	47.5	2.19	7.07	3.1		
				0.2	0.5	90	1.1	2.6	105.6	52.5	45.6	2.60	5.82	3.9	1.4	3.2	105.6	52.5	45.6	2.60	5.90	3.8	1.9	4.4	102.8	52.2	45.2	2.53	6.06	3.6		
				0.2	0.5	100	1.1	2.6	115.8	51.5	42.6	3.00	4.96	4.5	1.4	3.2	115.8	51.5	42.6	3.00	5.03	4.4	1.9	4.4	112.8	51.2	42.2	2.91	5.17	4.1		
				0.2	0.5	110	1.0	2.4	126.5	50.4	39.3	3.5	4.2	5.1	1.3	2.9	126.5	50.4	39.3	3.5	4.3	5.0	1.7	4.0	123.2	50.1	38.9	3.36	4.38	4.7		
90			8	0.5	1.3	70	1.2	2.7	84.3	53.4	50.3	1.94	8.41	2.9	1.5	3.4	84.3	53.4	50.3	1.94	8.52	2.8	2.0	4.6	82.1	53.1	49.8	1.88	8.75	2.6		
				0.5	1.3	80	1.1	2.6	95.3	53.7	48.8	2.25	6.90	3.4	1.4	3.2	95.3	53.7	48.8	2.25	6.99	3.3	1.9	4.4	92.9	53.4	48.3	2.19	7.18	3.1		
				0.5	1.3	90	1.1	2.6	105.7	53.2	46.3	2.60	5.90	4.0	1.4	3.2	105.7	53.2	46.3	2.60	5.98	3.8	1.9	4.4	103.0	52.9	45.9	2.53	6.15	3.6		
				0.5	1.3	100	1.1	2.6	116.0	52.2	43.3	3.00	5.04	4.6	1.4	3.2	116.0	52.2	43.3	3.00	5.11	4.4	1.9	4.4	113.0	51.9	42.9	2.91	5.24	4.1		
	90		5	0.5	1.3	110	1.0	2.4	126.7	51.1	39.9	3.5	4.3	5.2	1.3	2.9	126.7	51.1	39.9	3.5	4.3	5.0	1.7	4.0	123.4	50.8	39.6	3.36	4.45	4.7		
				1.2	2.8	70	1.2	2.7	84.5	54.8	51.8	1.93	8.64	2.9	1.5	3.4	84.5	54.8	51.8	1.93	8.76	2.8	2.0	4.6	82.4	54.5	51.4	1.88	8.99	2.6		
				1.2	2.8	80	1.1	2.6	95.6	55.1	50.2	2.25	7.09	3.5	1.4	3.2	95.6	55.1	50.2	2.25	7.19	3.3	1.9	4.4	93.1	54.8	49.8	2.19	7.38	3.1		
				1.2	2.8	90	1.1	2.6	106.0	54.6	47.7	2.60	6.07	4.0	1.4	3.2	106.0	54.6	47.7	2.60	6.15	3.9	1.9	4.4	103.2	54.3	47.3	2.53	6.32	3.6		
		90	6	1.2	2.8	100	1.1	2.6	116.3	53.6	44.6	3.00	5.18	4.6	1.4	3.2	116.3	53.6	44.6	3.00	5.25	4.4	1.9	4.4	113.3	53.3	44.2	2.91	5.39	4.2		
				1.2	2.8	110	1.0	2.4	127.0	52.5	41.1	3.5	4.4	5.2	1.3	2.9	127.0	52.5	41.1	3.5	4.5	5.0	1.7	4.0	123.7	52.2	40.7	3.36	4.57	4.7		
				0.2	0.4	70	1.2	2.7	86.3	65.1	63.8	1.88	10.56	3.5	1.5	3.4	86.3	65.1	63.8	1.88	10.70	3.4	2.0	4.6	84.1	64.7	63.2	1.83	10.99	3.2		
				0.2	0.4	80	1.1	2.6	97.6	65.5	61.8	2.18	8.66	4.1	1.4	3.2	97.6	65.5	61.8	2.18	8.78	4.0	1.9	4.4	95.1	65.1	61.2	2.12	9.02	3.7		
90			8	0.2	0.4	90	1.1	2.6	108.2	64.9	58.7	2.53	7.42	4.8	1.4	3.2	108.2	64.9	58.7	2.53	7.52	4.6										

ENGINEERING SPECIFICATIONS

Model 048, 4 Ton, Load Side, Heating Mode, Full Load Performance Data

WT048		EXTENDED DATA																																						
EST °F	GPM	SOURCE SIDE			LOAD SIDE, HEATING MODE, FULL LOAD																																			
		Source Flow			Load Flow GPM 6												Load Flow GPM 9												Load Flow GPM 12											
		WPD	FT	°F	LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH												
																													PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh
25	12	3.8	8.9	70	1.4	3.3	81.3	44.1	43.3	2.70	4.88	6.2	2.3	5.4	80.9	44.0	43.3	2.68	5.00	5.6	Operation Not Recommended																			
		3.8	8.9	80	1.4	3.2	91.3	44.2	42.4	3.02	4.22	7.22	2.3	5.3	90.8	44.1	42.4	3.00	4.32	6.6	3.2	7.4	87.4	43.6	42.4	2.89	4.42	6.2												
		3.8	8.9	90	1.4	3.2	101.6	43.9	40.8	3.43	3.69	8.45	2.3	5.3	101.1	43.8	40.8	3.41	3.78	7.7	3.2	7.4	97.2	43.3	40.7	3.28	3.87	7.2												
		3.8	8.9	100	1.4	3.2	111.4	43.3	38.7	3.87	3.23	9.69	2.3	5.3	110.9	43.2	38.7	3.85	3.30	8.8	3.2	7.4	106.6	42.7	38.7	3.70	3.38	8.3												
30	6	0.6	1.3	70	1.4	3.3	81.4	44.0	44.2	2.71	4.85	6.1	2.3	5.4	80.9	43.9	44.2	2.69	4.96	5.5	Operation Not Recommended																			
		0.6	1.3	80	1.4	3.2	91.3	44.1	43.3	3.03	4.20	7.10	2.3	5.3	90.8	44.0	43.3	3.02	4.29	6.5	3.2	7.4	87.4	43.5	43.3	2.90	4.39	6.1												
		0.6	1.3	90	1.4	3.2	101.6	43.8	41.7	3.44	3.67	8.31	2.3	5.3	101.1	43.7	41.7	3.43	3.76	7.6	3.2	7.4	97.3	43.1	41.6	3.29	3.84	7.1												
		0.6	1.3	100	1.4	3.2	111.4	43.2	39.6	3.89	3.21	9.53	2.3	5.3	110.9	43.1	39.6	3.87	3.28	8.7	3.2	7.4	106.7	42.6	39.5	3.72	3.36	8.1												
30	9	2.1	4.9	70	1.4	3.3	81.6	45.4	45.7	2.72	5.00	6.16	2.3	5.4	81.2	45.3	45.7	2.70	5.12	5.6	Operation Not Recommended																			
		2.1	4.9	80	1.4	3.2	91.5	45.6	44.8	3.04	4.33	7.22	2.3	5.3	91.1	45.5	44.8	3.03	4.43	6.6	3.2	7.4	87.6	44.9	44.8	2.91	4.53	6.2												
		2.1	4.9	90	1.4	3.2	101.9	45.3	43.1	3.45	3.78	8.46	2.3	5.3	101.4	45.2	43.1	3.44	3.87	7.7	3.2	7.4	97.5	44.6	43.0	3.30	3.96	7.2												
		2.1	4.9	100	1.4	3.2	111.7	44.6	40.9	3.90	3.31	9.69	2.3	5.3	111.1	44.5	40.9	3.88	3.38	8.8	3.2	7.4	106.9	44.0	40.9	3.73	3.46	8.3												
50	12	3.7	8.6	70	1.4	3.3	81.8	46.9	47.2	2.72	5.15	6.25	2.3	5.4	81.3	46.8	47.2	2.71	5.27	5.7	Operation Not Recommended																			
		3.7	8.6	80	1.4	3.2	91.8	47.0	46.3	3.05	4.45	7.32	2.3	5.3	91.3	46.9	46.2	3.03	4.56	6.7	3.2	7.4	87.8	46.4	46.2	2.92	4.66	6.3												
		3.7	8.6	90	1.4	3.2	102.1	46.7	44.5	3.46	3.89	8.57	2.3	5.3	101.6	46.6	44.5	3.45	3.98	7.8	3.2	7.4	97.7	46.0	44.4	3.31	4.07	7.3												
		3.7	8.6	100	1.4	3.2	112.0	46.1	42.2	3.91	3.40	9.82	2.3	5.3	111.4	46.0	42.2	3.89	3.48	9.0	3.2	7.4	107.2	45.4	42.2	3.74	3.56	8.4												
70	6	0.5	1.1	70	1.4	3.3	83.0	57.2	62.1	2.80	6.11	6.32	2.3	5.4	82.6	57.1	62.0	2.79	6.25	5.8	3.2	7.5	79.5	56.4	62.0	2.68	6.39	5.4												
		0.5	1.1	80	1.4	3.2	93.2	57.4	60.8	3.14	5.28	7.40	2.3	5.3	92.7	57.3	60.8	3.12	5.41	6.8	3.2	7.4	89.2	56.6	60.8	3.00	5.53	6.3												
		0.5	1.1	90	1.4	3.2	103.7	57.0	58.5	3.56	4.62	8.66	2.3	5.3	103.2	56.9	58.5	3.54	4.73	7.9	3.2	7.4	99.3	56.2	58.4	3.41	4.84	7.4												
		0.5	1.1	100	1.4	3.2	113.7	56.2	55.5	4.02	4.04	9.93	2.3	5.3	113.1	56.1	55.5	4.00	4.13	9.1	3.2	7.4	108.8	55.4	55.5	3.84	4.23	8.5												
70	9	1.9	4.4	70	1.4	3.3	83.2	59.2	64.2	2.81	6.30	6.43	2.3	5.4	82.8	59.0	64.1	2.79	6.44	5.9	3.2	7.5	79.7	58.3	64.1	2.69	6.59	5.5												
		1.9	4.4	80	1.4	3.2	93.4	59.3	62.9	3.14	5.45	7.53	2.3	5.3	92.9	59.2	62.9	3.13	5.57	6.9	3.2	7.4	89.4	58.5	62.8	3.01	5.70	6.4												
		1.9	4.4	90	1.4	3.2	104.0	58.9	60.4	3.57	4.76	8.81	2.3	5.3	103.4	58.8	60.4	3.55	4.87	8.0	3.2	7.4	99.5	58.1	60.4	3.42	4.98	7.5												
		1.9	4.4	100	1.4	3.2	114.0	58.1	57.4	4.03	4.16	10.10	2.3	5.3	113.4	58.0	57.4	4.01	4.26	9.2	3.2	7.4	109.1	57.3	57.4	3.86	4.35	8.6												
90	12	3.3	7.7	70	1.4	3.3	83.6	61.1	66.2	2.82	6.48	6.51	2.3	5.4	83.0	60.9	66.2	2.80	6.63	5.9	3.2	7.5	79.9	60.2	66.2	2.69	6.78	5.6												
		3.3	7.7	80	1.4	3.2	93.6	61.2	64.9	3.15	5.61	7.63	2.3	5.3	93.2	61.1	64.9	3.14	5.74	7.0	3.2	7.4	89.6	60.4	64.8	3.02	5.87	6.5												
		3.3	7.7	90	1.4	3.2	104.2	60.8	62.4	3.58	4.90	8.93	2.3	5.3	103.7	60.7	62.4	3.56	5.02	8.2	3.2	7.4	99.7	59.9	62.3	3.43	5.13	7.6												
		3.3	7.7	100	1.4	3.2	114.3	60.0	59.3	4.04	4.28	10.24	2.3	5.3	113.7	59.8	59.2	4.02	4.38	9.3	3.2	7.4	109.4	59.1	59.2	3.87	4.48	8.8												
90	6	0.4	1.0	70	1.4	3.3	85.2	73.2	83.7	2.89	7.57	7.09	2.3	5.4	84.8	73.1	83.7	2.87	7.75	6.5	3.2	7.5	81.5	72.2	83.6	2.76	7.93	6.1												
		0.4	1.0	80	1.4	3.2	95.6	73.4	82.0	3.23	6.55	8.31	2.3	5.3	95.1	73.3	82.0	3.22	6.71	7.6	3.2	7.4	91.5	72.4	81.9	3.09	6.86	7.1												
		0.4	1.0	90	1.4	3.2	106.4	72.9	78.8	3.67	5.73	9.72	2.3	5.3	105.9	72.8	78.8	3.65	5.86	8.9	3.2	7.4	101.8	71.9	78.7	3.51	6.00	8.3												
		0.4	1.0	100	1.4	3.2	116.7	71.9	74.9	4.14	5.01	11.14	2.3	5.3	116.1	71.8	74.9	4.12	5.12	10.2	3.2	7.4	111.7	70.9	74.8	3.97	5.24	9.5												
90	9	1.7	3.8	70	1.4	3.3	85.4	75.7	86.5	2.90	7.44	7.21	2.3	5.4	85.0	75.5	86.5	2.88	7.99	6.6	3.2	7.5	81.7	74.6	86.4	2.77	8.17	6.2												
		1.7	3.8	80	1.4	3.2	95.8	75.9	84.8	3.24	6.75	8.45	2.3	5.3	95.4	75.8	84.8	3.23	6.91	7.7	3.2	7.4	91.7	74.8	84.7	3.10	7.07	7.2												
		1.7	3.8	90	1.4	3.2	106.7	75.4	81.5	3.68	5.91	9.89	2.3	5.3	106.1	75.2	81.5	3.67	6.04	9.0	3.2	7.4	102.1	74.3	81.4	3.52	6.18	8.5												
		1.7	3.8	100	1.4	3.2	117.0	74.4	77.4	4.16	5.16	11.34	2.3	5.3	116.4	74.2	77.4	4.14	5.28	10.3	3.2	7.4	112.0	73.3	77.3	3.98	5.40	9.7												
90	12	2.9	6.7	70	1.4	3.3	85.6	78.1	89.3	2.91	8.04	7.31	2.3	5.4	85.2	78.0	89.3	2.89	8.22	6.7	3.2	7.5	81.9	77.0	89.2	2.78	8.41	6.3												
		2.9	6.7	80	1.4	3.2	96.1	78.4	87.5	3.25	6.95	8.56	2.3	5.3	95.6	78.2	87.5	3.24	7.11	7.8	3.2	7.4	92.0	77.3	87.4	3.11	7.28	7.3												
		2.9	6.7	90	1.4	3.2	106.9	77.8	84.1	3.69	6.08	10.03	2.3	5.3	106.4	77.6	84.1	3.68	6.22	9.1	3.2	7.4	102.3	76.7	84.0	3.53	6.36	8.6												
		2.9	6.7	100	1.4	3.2	117.3	76.7	79.9	4.17	5.31	11.49	2.3	5.3	116.7	76.6	79.9	4.15	5.44	10.5	3.2	7.4	112.2	75.7	79.8	3.99	5.56	9.8												
90	6	0.4	0.9	70	1.4	3.3	86.8	86.5	100.6	2.99	8.65	8.60	2.3	5.4	86.3	86.3	100.6	2.97	8.85	7.8	3.2	7.5	83.1	85.2	100.5	2.86	9.05	7.4												
		0.4	0.9	80	1.4	3.2	97.4	86.7	98.6	3.35	7.48	10.08	2.3	5.3	96.9	86.6	98.6	3.33	7.66	9.2	3.2	7.4	93.2	85.5	98.5	3.20	7.83	8.6												
		0.4	0.9	90	1.4	3.2	108.4	86.1	94.8	3.80	6.54	11.80	2.3	5.3	107.8	85.9	94.8	3.78	6.70	10.8	3.2	7.4	103.7	84.9	94.7	3.63	6.85	10.1												
		0.4	0.9	100	1.4	3.2	118.9	84.9	90.0	4.29	5.72	13.52	2.3	5.3	118.3	84.8	90.0	4.27	5.85	12.3	3.2	7.4	113.8	83.7	89.9	4.10	5.98	11.6												
90	9	1.5	3.5	70	1.4	3.3	87.0	89.4	104.0	3.00	8.92	8.75	2.3	5.4	86.6	89.2	104.0	2.98	9.12	8.0	3.2	7.5	83.3	88.1	103.9	2.87	9.33	7.5												
		1.5	3.5	80	1.4	3.2	97.6	89.7	102.0	3.35	7.71	10.26	2.3	5.3	97.1	89.5	101.9	3.34	7.89	9.4	3.2	7.4	93.4	88.4	101.9	3.21	8.07	8.8												
		1.5	3.5	90	1.4	3.2	108.7	89.0	98.0	3.81	6.75	12.01	2.3	5.3	108.1	88.8	98.0	3.79	6.90	11.0	3.2	7.4	104.0	87.8	97.9	3.65	7.06	10.3												
		1.5	3.5	100	1.4	3.2	119.2	87.8	93.1	4.30	5.89	13.76	2.3	5.3	118.6	87.6	93.1	4.28	6.03	12.6	3.2	7.4	114.0	86.6	93.0	4.11														

Model 060, 5 Ton, Load Side, Cooling Mode, Part Load Performance Data

WT060		EXTENDED DATA																											
SOURCE SIDE				LOAD SIDE, COOLING MODE, PART LOAD																									
EST °F	Source Flow			ELT °F	Load Flow GPM 5												Load Flow GPM 8						Load Flow GPM 10						
	GPM	Source Flow WPD			Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH				
		PSI	FT																							°F	MBtuh	MBtuh	kW
45	10	3.5	8.1	45	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended						
		3.5	8.1	55	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended						
		3.5	8.1	65	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended						
		3.5	8.1	75	1.2	2.8	64.7	45.8	49.0	1.00	46.3	3.5	2.9	6.7	72.7	50.0	52.4	0.99	51.0	3.7	4.4	10.1	75.1	50.7	53.4	0.99	51.8	3.7	
50	5	1.5	3.5	45	0.8	1.8	33.6	26.9	31.7	1.35	20.4	3.7	1.9	4.3	37.7	29.4	34.0	1.33	22.5	3.9	2.8	6.5	39.0	29.8	34.6	1.33	22.9	4.0	
		1.5	3.5	55	0.7	1.7	41.1	31.8	35.9	1.32	24.8	4.0	1.8	4.1	46.2	34.7	38.4	1.30	27.3	4.1	2.7	6.1	47.7	35.2	39.2	1.30	27.8	4.2	
		1.5	3.5	65	0.8	1.9	48.8	36.9	40.9	1.29	29.4	4.1	1.9	4.4	54.9	40.2	43.8	1.27	32.5	4.3	2.9	6.7	56.6	40.8	44.6	1.27	33.0	4.4	
		1.5	3.5	75	1.0	2.2	56.6	41.6	45.7	1.26	34.0	4.4	2.3	5.3	63.6	45.4	48.9	1.24	37.4	4.6	3.5	8.0	65.7	46.1	49.8	1.24	38.0	4.7	
	8	1.5	3.5	85	1.2	2.8	65.0	45.0	49.0	1.24	37.1	4.8	2.9	6.7	73.1	49.0	52.5	1.23	40.9	5.0	4.4	10.1	75.4	49.8	53.5	1.22	41.5	5.1	
		2.4	5.6	45	0.8	1.8	33.5	27.1	31.7	1.20	22.6	3.3	1.9	4.3	37.7	29.6	33.9	1.19	24.9	3.5	2.8	6.5	38.9	30.0	34.6	1.19	25.3	3.6	
		2.4	5.6	55	0.7	1.7	41.1	32.0	35.9	1.17	27.4	3.5	1.8	4.1	46.2	34.9	38.4	1.16	30.2	3.7	2.7	6.1	47.7	35.4	39.1	1.16	30.6	3.8	
		2.4	5.6	65	0.8	1.9	48.7	37.2	40.8	1.15	32.5	3.7	1.9	4.4	54.8	40.5	43.7	1.13	35.8	3.8	2.9	6.7	56.6	41.1	44.5	1.13	36.4	3.9	
		2.4	5.6	75	1.0	2.2	56.5	41.9	45.6	1.12	37.5	3.9	2.3	5.3	63.5	45.7	48.8	1.11	41.3	4.1	3.5	8.0	65.6	46.4	49.8	1.10	42.0	4.2	
		2.4	5.6	85	1.2	2.8	64.9	45.3	49.0	1.11	40.9	4.3	2.9	6.7	73.0	49.4	52.4	1.09	45.1	4.4	4.4	10.1	75.3	50.1	53.4	1.09	45.9	4.5	
		3.4	7.9	45	0.8	1.8	33.6	27.0	31.7	1.18	23.0	3.1	1.9	4.3	37.8	29.4	33.9	1.16	25.3	3.2	2.8	6.5	39.0	29.8	34.6	1.16	25.7	3.3	
		3.4	7.9	55	0.7	1.7	41.2	31.8	35.9	1.15	27.9	3.2	1.8	4.1	46.3	34.7	38.4	1.13	30.7	3.4	2.7	6.1	47.8	35.2	39.1	1.13	31.2	3.5	
70	5	3.4	7.9	65	0.8	1.9	48.9	36.9	40.8	1.12	33.1	3.4	1.9	4.4	54.9	40.3	43.7	1.10	36.5	3.5	2.9	6.7	56.7	40.9	44.5	1.10	37.1	3.6	
		3.4	7.9	75	1.0	2.2	56.7	41.7	45.6	1.09	38.2	3.6	2.3	5.3	63.7	45.4	48.9	1.08	42.1	3.7	3.5	8.0	65.8	46.1	49.8	1.08	42.8	3.8	
		3.4	7.9	85	1.2	2.8	65.1	45.0	49.0	1.08	41.7	3.9	2.9	6.7	73.2	49.1	52.5	1.07	46.0	4.1	4.4	10.1	75.6	49.8	53.4	1.07	46.7	4.2	
		1.4	3.2	45	0.8	1.8	33.9	25.5	31.2	1.87	14.0	5.9	1.9	4.3	38.1	27.8	33.4	1.85	15.4	6.1	2.8	6.5	39.3	28.2	34.0	1.84	15.6	6.3	
	8	1.4	3.2	55	0.7	1.7	41.5	30.1	35.3	1.82	16.9	6.2	1.8	4.1	46.6	32.8	37.8	1.80	18.7	6.5	2.7	6.1	48.1	33.3	38.5	1.80	19.0	6.7	
		1.4	3.2	65	0.8	1.9	49.2	34.9	40.2	1.78	20.1	6.5	1.9	4.4	55.3	38.0	43.0	1.76	22.2	6.8	2.9	6.7	57.1	38.6	43.8	1.75	22.5	6.9	
		1.4	3.2	75	1.0	2.2	57.1	39.3	44.9	1.74	23.2	6.9	2.3	5.3	64.2	42.9	48.1	1.72	25.6	7.2	3.5	8.0	66.3	43.5	49.0	1.72	26.0	7.4	
		1.4	3.2	85	1.2	2.8	65.6	42.5	48.2	1.7	25.3	7.5	2.9	6.7	73.7	46.4	51.6	1.7	27.9	7.8	Operation Not Recommended								
		2.2	5.0	45	0.8	1.8	33.8	25.6	31.1	1.67	15.4	5.3	1.9	4.3	38.0	28.0	33.4	1.64	17.0	5.5	2.8	6.5	39.3	28.4	34.0	1.64	17.2	5.6	
		2.2	5.0	55	0.7	1.7	41.4	30.3	35.2	1.62	18.7	5.6	1.8	4.1	46.6	33.0	37.7	1.60	20.6	5.8	2.7	6.1	48.1	33.5	38.5	1.60	20.9	5.9	
		2.2	5.0	65	0.8	1.9	49.2	35.1	40.1	1.59	22.2	5.8	1.9	4.4	55.3	38.3	43.0	1.56	24.5	6.1	2.9	6.7	57.1	38.9	43.8	1.56	24.9	6.2	
		2.2	5.0	75	1.0	2.2	57.0	39.6	44.8	1.55	25.6	6.2	2.3	5.3	64.1	43.2	48.0	1.53	28.2	6.4	3.5	8.0	66.2	43.9	48.9	1.53	28.7	6.6	
90	5	2.2	5.0	85	1.2	2.8	65.5	42.8	48.1	1.5	28.0	6.7	2.9	6.7	73.6	46.7	51.6	1.5	30.8	7.0	Operation Not Recommended								
		3.0	7.0	45	0.8	1.8	33.9	25.5	31.1	1.63	15.7	4.8	1.9	4.3	38.1	27.8	33.4	1.61	17.3	5.0	2.8	6.5	39.4	28.2	34.0	1.60	17.6	5.1	
		3.0	7.0	55	0.7	1.7	41.6	30.1	35.3	1.59	19.0	5.1	1.8	4.1	46.7	32.8	37.8	1.56	21.0	5.3	2.7	6.1	48.2	33.3	38.5	1.56	21.3	5.4	
		3.0	7.0	65	0.8	1.9	49.3	34.9	40.1	1.55	22.6	5.3	1.9	4.4	55.4	38.1	43.0	1.53	24.9	5.5	2.9	6.7	57.2	38.6	43.8	1.53	25.3	5.7	
	8	3.0	7.0	75	1.0	2.2	57.2	39.4	44.8	1.52	26.1	5.7	2.3	5.3	64.3	42.9	48.0	1.49	28.7	5.9	3.5	8.0	66.4	43.6	48.9	1.49	29.2	6.0	
		3.0	7.0	85	1.2	2.8	65.7	42.6	48.1	1.5	28.5	6.1	2.9	6.7	73.8	46.4	51.6	1.5	31.4	6.4	Operation Not Recommended								
		1.3	3.0	45	0.8	1.8	34.5	23.1	30.4	2.52	9.4	8.4	1.9	4.3	38.8	25.2	32.5	2.48	10.4	8.8	2.8	6.5	40.0	25.6	33.1	2.48	10.5	9.0	
		1.3	3.0	55	0.7	1.7	42.2	27.3	34.4	2.45	11.4	8.9	1.8	4.1	47.5	29.7	36.8	2.42	12.6	9.3	2.7	6.1	49.0	30.2	37.5	2.42	12.8	9.5	
		1.3	3.0	65	0.8	1.9	50.1	31.6	39.1	2.40	13.6	9.3	1.9	4.4	56.3	34.5	41.9	2.36	15.0	9.7	2.9	6.7	58.1	35.0	42.7	2.36	15.2	9.9	
		1.3	3.0	75	1.0	2.2	58.1	35.7	43.7	2.34	15.6	9.9	2.3	5.3	65.3	38.9	46.8	2.31	17.2	10.3	3.5	8.0	67.4	39.5	47.7	2.31	17.5	10.5	
		1.3	3.0	85	1.2	2.8	66.7	38.6	46.9	2.3	17.1	10.7	Operation Not Recommended						Operation Not Recommended										
		2.0	4.7	45	0.8	1.8	34.4	23.3	30.3	2.24	10.4	7.5	1.9	4.3	38.7	25.4	32.5	2.21	11.5	7.8	2.8	6.5	40.0	25.7	33.1	2.21	11.6	8.0	
110	5	2.0	4.7	55	0.7	1.7	42.2	27.5	34.3	2.18	12.6	8.0	1.8	4.1	47.4	30.0	36.8	2.15	13.9	8.3	2.7	6.1	48.9	30.4	37.5	2.15	14.1	8.5	
		2.0	4.7	65	0.8	1.9	50.0	31.9	39.1	2.13	15.0	8.3	1.9	4.4	56.2	34.8	41.9	2.10	16.5	8.7	2.9	6.7	58.1	35.3	42.6	2.10	16.8	8.8	
		2.0	4.7	75	1.0	2.2	58.0	35.9	43.7	2.09	17.3	8.8	2.3	5.3	65.2	39.2	46.8	2.06	19.0	9.2	3.5	8.0	67.3	39.8	47.6	2.06	19.3	9.4	
		2.0	4.7	85	1.2	2.8	66.6	38.8	46.9	2.1	18.9	9.6	Operation Not Recommended						Operation Not Recommended										
	8	2.9	6.6	45	0.8	1.8	34.5	23.1	30.3	2.19	10.6	6.9	1.9	4.3	38.8	25.2	32.5	2.16	11.7	7.2	2.8	6.5	40.1	25.6	33.1	2.16	11.9	7.3	
		2.9	6.6	55	0.7	1.7	42.3	27.3	34.3	2.13	12.8	7.3	1.8	4.1	47.5	29.8	36.8	2.10	14.2	7.6	2.7	6.1	49.1	30.2	37.5	2.10	14.4	7.8	
		2.9	6.6	65	0.8	1.9	50.2	31.7	39.1	2.08	15.3	7.6	1.9	4.4	56.4	34.5	41.9	2.05	16.8	7.9	2.9	6.7	58.2	35.1	42.6	2.05	17.1	8.1	
		2.9	6.6	75	1.0	2.2	58.2	35.7	43.7	2.04	17.6	8.1	2.3	5.3	65.4	39.0	46.8	2.01	19.4	8.4	3.5	8.0	67.5	39.6	47.6	2.01	19.7	8.6	
		2.9	6.6	85	1.2	2.8	66.8	38.6	46.9	2.0	19.2	8.8	Operation Not Recommended						Operation Not Recommended										
		1.2	2.8	45	0.8	1.8	35.5	19.4	28.5	3.32	6.0	11.3	1.9	4.3	39.9	21.2	30.5	3.27	6.6	11.8	2.8	6.5	41.2	21.5	31.1	3.27	6.7	12.1	
		1.2	2.8	55	0.7	1.7	43.5	22.9	32.2	3.23	7.3	12.0	1.8	4.1	48.9	25.0	34.5	3.19	8.0	12.5	2.7	6.1	50.5	25.4	35.2	3.19	8.1	12.8	
		1.2	2.8	65	0.8	1.9	51.6	26.6	36.7	3.16	8.6	12.5	1.9	4.4	58.0	29.0	39.3	3.11	9.5	13.0	2.9	6.7	59.9	29.5	40.0	3.11	9.7	13.3	
1.2	2.8	75	1.0	2.2	59.8	30.0	41.0	3.09	10.0	13.3	2.3	5.3																	

ENGINEERING SPECIFICATIONS

Model 060, 5 Ton, Load Side, Cooling Mode, Full Load Performance Data

WT060		EXTENDED DATA																										
SOURCE SIDE		LOAD SIDE, COOLING MODE, FULL LOAD																										
EST °F	GPM	Source Flow			Load Flow GPM 7.5												Load Flow GPM 15						Load Flow GPM 20					
		Source Flow WPD		ELT °F	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH	Load Flow WPD	LLT	TC	HR	Power	EER	DSH			
		PSI	FT																							PSI	FT	°F
45	20	5.3	12.2	45	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		5.3	12.2	55	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		5.3	12.2	65	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		5.3	12.2	75	Operation Not Recommended												Operation Not Recommended						Operation Not Recommended					
		5.3	12.2	85	1.4	3.2	63.6	87.1	93.1	2.49	35.0	2.7	3.5	8.1	71.9	95.8	101.7	2.52	38.0	2.9	5.6	13.0	74.7	99.4	104.2	2.53	39.3	3.0
50	7.5	2.2	5.1	45	1.7	4.0	32.9	51.3	61.5	2.73	18.8	5.0	4.4	10.1	37.2	56.4	67.2	2.76	20.4	5.3	7.0	16.2	38.7	58.5	68.8	2.77	21.1	5.6
		2.2	5.1	55	1.5	3.5	40.6	60.4	70.7	2.79	21.7	5.3	3.9	8.9	45.8	66.4	77.2	2.82	23.5	5.7	6.2	14.3	47.6	68.9	79.1	2.83	24.3	5.9
		2.2	5.1	65	1.5	3.4	48.0	70.8	81.2	2.87	24.7	5.5	3.7	8.6	54.2	77.8	88.6	2.90	26.8	5.9	5.9	13.7	56.4	80.8	90.8	2.91	27.7	6.1
		2.2	5.1	75	1.4	3.3	55.4	80.7	91.4	2.95	27.4	5.8	3.6	8.3	62.6	88.7	99.8	2.98	29.7	6.3	5.7	13.3	65.1	92.1	102.2	3.00	30.7	6.5
		2.2	5.1	85	1.4	3.2	63.8	85.7	96.4	2.99	28.7	6.3	3.5	8.1	72.1	94.2	105.2	3.03	31.1	6.8	5.6	13.0	75.0	97.8	107.8	3.04	32.2	7.1
	15	5.1	11.8	45	1.7	4.0	32.9	51.6	59.7	2.47	20.9	3.4	4.4	10.1	37.2	56.7	65.2	2.50	22.7	3.6	7.0	16.2	38.7	58.9	66.8	2.51	23.5	3.8
		5.1	11.8	55	1.5	3.5	40.6	60.7	68.6	2.52	24.1	3.6	3.9	8.9	45.9	66.8	74.9	2.55	26.2	3.9	6.2	14.3	47.7	69.3	76.7	2.56	27.1	4.0
		5.1	11.8	65	1.5	3.4	48.0	71.2	78.8	2.59	27.4	3.7	3.7	8.6	54.2	78.3	86.0	2.62	29.8	4.0	5.9	13.7	56.4	81.3	88.1	2.64	30.8	4.2
		5.1	11.8	75	1.4	3.3	55.4	81.2	88.7	2.67	30.4	4.0	3.6	8.3	62.6	89.3	96.9	2.70	33.1	4.3	5.7	13.3	65.1	92.7	99.2	2.71	34.2	4.5
		5.1	11.8	85	1.4	3.2	63.9	86.2	93.6	2.71	31.9	4.3	3.5	8.1	72.1	94.8	102.1	2.74	34.6	4.6	5.6	13.0	75.0	98.4	104.6	2.75	35.8	4.8
		5.1	11.8	45	1.7	4.0	32.9	51.7	59.3	2.41	21.5	2.3	4.4	10.1	37.2	56.8	64.7	2.44	23.3	2.5	7.0	16.2	38.7	59.0	66.3	2.45	24.1	2.6
		5.1	11.8	55	1.5	3.5	40.6	60.8	68.1	2.46	24.8	2.4	3.9	8.9	45.8	66.9	74.3	2.49	26.9	2.6	6.2	14.3	47.6	69.4	76.2	2.50	27.8	2.7
		5.1	11.8	65	1.5	3.4	48.0	71.3	78.2	2.53	28.2	2.5	3.7	8.6	54.2	78.4	85.4	2.56	30.6	2.7	5.9	13.7	56.3	81.4	87.5	2.57	31.7	2.8
		5.1	11.8	75	1.4	3.3	55.4	81.3	88.0	2.60	31.3	2.7	3.6	8.3	62.6	89.4	96.1	2.63	34.0	2.9	5.7	13.3	65.1	92.8	98.5	2.64	35.1	3.0
		5.1	11.8	85	1.4	3.2	63.8	86.4	92.9	2.64	32.7	2.9	3.5	8.1	72.1	95.0	101.4	2.67	35.6	3.2	5.6	13.0	74.9	98.6	103.9	2.68	36.8	3.3
70	7.5	2.0	4.6	45	1.7	4.0	33.4	48.1	60.0	3.46	13.9	7.8	4.4	10.1	37.7	52.9	65.5	3.50	15.1	8.4	7.0	16.2	39.2	54.9	67.1	3.51	15.6	8.8
		2.0	4.6	55	1.5	3.5	41.1	56.6	68.9	3.53	16.0	8.3	3.9	8.9	46.4	62.2	75.3	3.57	17.4	8.9	6.2	14.3	48.3	64.6	77.1	3.59	18.0	9.3
		2.0	4.6	65	1.5	3.4	48.6	66.3	79.2	3.63	18.3	8.6	3.7	8.6	54.9	73.0	86.4	3.67	19.8	9.3	5.9	13.7	57.1	75.7	88.6	3.69	20.5	9.7
		2.0	4.6	75	1.4	3.3	56.1	75.7	89.1	3.74	20.2	9.2	3.6	8.3	63.4	83.2	97.3	3.78	22.0	9.9	5.7	13.3	65.9	86.4	99.7	3.80	22.7	10.3
		2.0	4.6	85	1.4	3.2	64.7	80.4	94.0	3.8	21.2	10.0	3.5	8.1	73.1	88.4	102.6	3.8	23.0	10.7	5.6	13.0	75.9	91.7	105.2	3.85	23.8	11.2
	15	4.6	10.5	45	1.7	4.0	33.4	48.4	58.2	3.13	15.5	5.3	4.4	10.1	37.7	53.2	63.6	3.17	16.8	5.7	7.0	16.2	39.2	55.2	65.1	3.18	17.4	6.0
		4.6	10.5	55	1.5	3.5	41.1	57.0	66.9	3.19	17.8	5.7	3.9	8.9	46.5	62.6	73.1	3.23	19.4	6.1	6.2	14.3	48.3	65.0	74.8	3.24	20.0	6.3
		4.6	10.5	65	1.5	3.4	48.6	66.8	76.8	3.29	20.3	5.9	3.7	8.6	55.0	73.4	83.9	3.33	22.1	6.3	5.9	13.7	57.1	76.2	85.9	3.34	22.8	6.6
		4.6	10.5	75	1.4	3.3	56.2	76.1	86.5	3.38	22.5	6.3	3.6	8.3	63.5	83.7	94.5	3.42	24.5	6.7	5.7	13.3	66.0	86.9	96.8	3.44	25.3	7.0
		4.6	10.5	85	1.4	3.2	64.7	80.9	91.2	3.4	23.6	6.8	3.5	8.1	73.1	88.9	99.6	3.5	25.6	7.3	5.6	13.0	76.0	92.3	102.0	3.49	26.5	7.6
		4.6	10.5	45	1.7	4.0	33.3	48.5	57.8	3.05	15.9	3.6	4.4	10.1	37.7	53.3	63.1	3.09	17.3	3.9	7.0	16.2	39.2	55.3	64.7	3.10	17.8	4.1
		4.6	10.5	55	1.5	3.5	41.1	57.1	66.4	3.11	18.3	3.9	3.9	8.9	46.4	62.7	72.5	3.15	19.9	4.1	6.2	14.3	48.3	65.1	74.3	3.16	20.6	4.3
		4.6	10.5	65	1.5	3.4	48.6	66.9	76.3	3.20	20.9	4.0	3.7	8.6	54.9	73.5	83.3	3.24	22.7	4.3	5.9	13.7	57.1	76.3	85.3	3.26	23.4	4.5
		4.6	10.5	75	1.4	3.3	56.1	76.3	85.9	3.30	23.1	4.3	3.6	8.3	63.4	83.9	93.7	3.34	25.1	4.6	5.7	13.3	65.9	87.0	96.0	3.35	26.0	4.8
		4.6	10.5	85	1.4	3.2	64.6	81.0	90.6	3.3	24.2	4.6	3.5	8.1	73.0	89.1	98.9	3.4	26.3	5.0	5.6	13.0	75.9	92.5	101.3	3.40	27.2	5.2
90	7.5	1.9	4.3	45	1.7	4.0	33.8	44.0	58.3	4.46	9.9	11.3	4.4	10.1	38.2	48.4	63.6	4.51	10.7	12.1	7.0	16.2	39.7	50.2	65.2	4.53	11.1	12.6
		1.9	4.3	55	1.5	3.5	41.7	51.8	66.9	4.55	11.4	11.9	3.9	8.9	47.1	56.9	73.1	4.60	12.4	12.8	6.2	14.3	48.9	59.1	74.9	4.62	12.8	13.4
		1.9	4.3	65	1.5	3.4	49.3	60.7	76.9	4.68	13.0	12.5	3.7	8.6	55.7	66.8	83.9	4.74	14.1	13.4	5.9	13.7	57.9	69.3	86.0	4.76	14.6	13.9
		1.9	4.3	75	1.4	3.3	56.9	69.2	86.5	4.82	14.4	13.3	3.6	8.3	64.3	76.1	94.5	4.88	15.6	14.2	5.7	13.3	66.8	79.0	96.8	4.89	16.1	14.8
		1.9	4.3	85	1.4	3.2	65.6	73.5	91.3	4.9	15.1	14.4	3.5	8.1	74.1	80.9	99.6	4.9	16.4	15.5	5.6	13.0	77.0	83.9	102.1	4.97	16.9	16.1
	15	4.3	9.9	45	1.7	4.0	33.8	44.3	56.5	4.03	11.0	7.7	4.4	10.1	38.2	48.7	61.7	4.08	11.9	8.3	7.0	16.2	39.7	50.5	63.2	4.10	12.3	8.6
		4.3	9.9	55	1.5	3.5	41.7	52.1	65.0	4.12	12.7	8.2	3.9	8.9	47.1	57.3	70.9	4.17	13.8	8.8	6.2	14.3	49.0	59.5	72.7	4.18	14.2	9.1
		4.3	9.9	65	1.5	3.4	49.3	61.1	74.6	4.24	14.4	8.5	3.7	8.6	55.7	67.2	81.4	4.29	15.7	9.1	5.9	13.7	57.9	69.7	83.4	4.31	16.2	9.5
		4.3	9.9	75	1.4	3.3	56.9	69.7	84.0	4.36	16.0	9.1	3.6	8.3	64.3	76.6	91.7	4.41	17.4	9.7	5.7	13.3	66.9	79.5	93.9	4.43	17.9	10.1
		4.3	9.9	85	1.4	3.2	65.6	74.0	88.6	4.4	16.7	9.8	3.5	8.1	74.1	81.4	96.7	4.5	18.2	10.6	5.6	13.0	77.0	84.5	99.1	4.50	18.8	11.0
		4.3	9.9	45	1.7	4.0	33.8	44.3	56.1	3.93	11.3	5.2	4.4	10.1	38.2	48.8	61.3	3.98	12.3	5.6	7.0	16.2	39.7	50.6	62.8	4.00	12.7	5.9
		4.3	9.9	55	1.5	3.5	41.7	52.2	64.5	4.02	13.0	5.5	3.9	8.9	47.1	57.4	70.4	4.06	14.1	6.0	6.2	14.3	48.9	59.6	72.1	4.08	14.6	6.2
		4.3	9.9	65	1.5	3.4	49.3	61.2	74.0	4.13	14.8	5.8	3.7	8.6	55.7	67.3	80.8	4.18	16.1	6.2	5.9	13.7	57.9	69.8	82.8	4.20	16.6	6.5
		4.3	9.9	75	1.4	3.3	56.9	69.8	83.4	4.25	16.4	6.2	3.6	8.3	64.3	76.7	91.0	4.30	17.8	6.6	5.7	13.3	66.8	79.6	93.2	4.32	18.4	6.9
		4.3	9.9	85	1.4	3.2	65.5	74.1	87.9	4.3	17.2	6.7	3.5	8.1	74.0	81.5	96.0	4.4	18.7	7.2	5.6	13.0	77.0	84.6	98.3	4.38	19.3	7.5

Model 060, 5 Ton, Load Side, Heating Mode, Part Load Performance Data

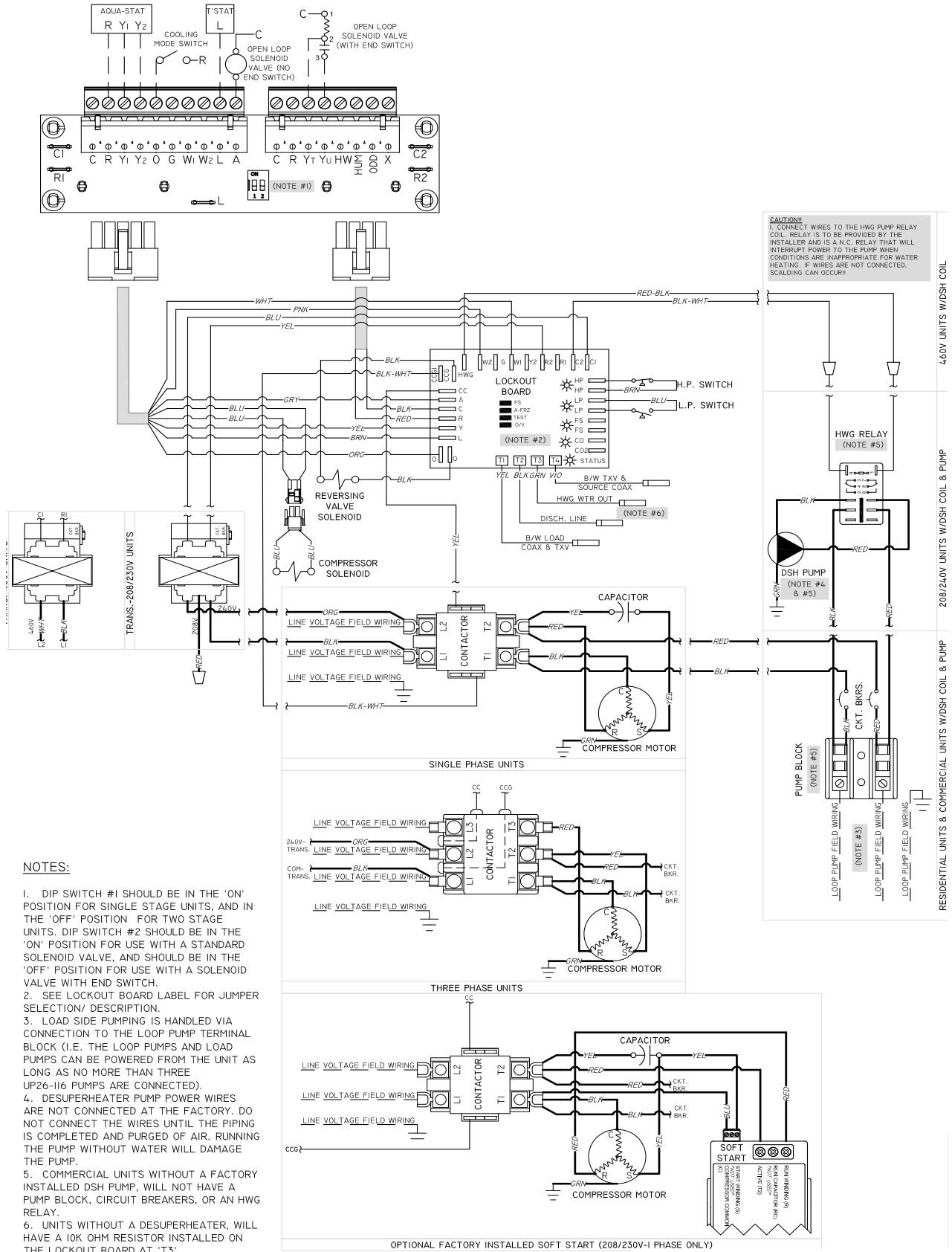
WT060		EXTENDED DATA											LOAD SIDE, HEATING MODE, PART LOAD																		
SOURCE SIDE		LOAD SIDE, HEATING MODE, PART LOAD																													
EST °F	GPM	Source Flow			Load Flow GPM																										
		PSI	FT	°F	5					8					10																
Source Flow WPD				Load Flow WPD					Load Flow WPD					Load Flow WPD																	
ELT				LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH	LLT	HC	HE	Power	COP	DSH										
				PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh	PSI	FT	°F	MBtuh	MBtuh	kW	W/W	MBtuh
25	10	3.1	7.1	70	0.8	1.8	82.5	35.8	24.7	2.58	4.19	2.5	1.7	3.8	81.2	35.6	24.8	2.53	4.37	2.3	Operation Not Recommended										
		3.1	7.1	80	0.7	1.7	93.2	36.2	24.5	2.98	3.50	2.9	1.5	3.5	91.7	36.1	24.6	2.93	3.65	2.7	2.1	4.8	88.8	35.9	24.7	2.82	3.75	2.5			
		3.1	7.1	90	0.7	1.7	103.6	35.6	23.3	3.47	2.96	3.4	1.5	3.5	102.0	35.4	23.4	3.41	3.09	3.1	2.1	4.8	98.7	35.3	23.5	3.29	3.17	2.9			
		3.1	7.1	100	0.7	1.7	113.9	34.5	21.4	4.02	2.48	3.9	1.5	3.5	112.1	34.4	21.5	3.95	2.59	3.6	2.1	4.8	108.5	34.2	21.6	3.80	2.66	3.4			
5	10	1.1	2.5	70	0.8	1.8	82.4	36.1	25.4	2.57	4.25	2.5	1.7	3.8	81.1	36.0	25.5	2.52	4.43	2.2	Operation Not Recommended										
		1.1	2.5	80	0.7	1.7	93.0	36.5	25.2	2.97	3.55	2.9	1.5	3.5	91.6	36.4	25.3	2.92	3.70	2.6	2.1	4.8	98.7	36.2	25.4	2.81	3.80	2.5			
		1.1	2.5	90	0.7	1.7	103.4	35.9	24.0	3.46	3.00	3.4	1.5	3.5	101.8	35.8	24.1	3.40	3.13	3.1	2.1	4.8	98.5	35.6	24.2	3.27	3.22	2.9			
		1.1	2.5	100	0.7	1.7	113.7	34.9	22.1	4.01	2.51	3.9	1.5	3.5	111.9	34.8	22.2	3.94	2.62	3.5	2.1	4.8	108.3	34.6	22.2	3.79	2.69	3.3			
30	8	2.3	5.2	70	0.8	1.8	82.8	37.7	26.9	2.57	4.44	2.5	1.7	3.8	81.5	37.6	27.0	2.52	4.63	2.3	Operation Not Recommended										
		2.3	5.2	80	0.7	1.7	93.5	38.2	26.6	2.97	3.71	2.9	1.5	3.5	92.0	38.1	26.8	2.92	3.87	2.7	2.1	4.8	89.0	37.9	26.8	2.81	3.97	2.5			
		2.3	5.2	90	0.7	1.7	103.9	37.5	25.3	3.46	3.14	3.4	1.5	3.5	102.3	37.4	25.5	3.40	3.27	3.1	2.1	4.8	99.0	37.2	25.5	3.28	3.36	3.0			
		2.3	5.2	100	0.7	1.7	114.3	36.5	23.3	4.01	2.63	4.0	1.5	3.5	112.5	36.3	23.4	3.94	2.74	3.6	2.1	4.8	108.8	36.1	23.5	3.79	2.81	3.4			
10	10	3.0	6.9	70	0.8	1.8	83.1	38.8	27.8	2.57	4.57	2.5	1.7	3.8	81.7	38.7	28.0	2.52	4.76	2.3	Operation Not Recommended										
		3.0	6.9	80	0.7	1.7	93.8	39.3	27.6	2.98	3.82	3.0	1.5	3.5	92.3	39.2	27.7	2.92	3.98	2.7	2.1	4.8	89.3	39.0	27.8	2.81	4.09	2.6			
		3.0	6.9	90	0.7	1.7	104.2	38.6	26.3	3.46	3.23	3.5	1.5	3.5	102.6	38.5	26.4	3.40	3.36	3.1	2.1	4.8	99.3	38.3	26.4	3.28	3.46	3.0			
		3.0	6.9	100	0.7	1.7	114.6	37.5	24.2	4.01	2.70	4.0	1.5	3.5	112.8	37.4	24.3	3.94	2.82	3.6	2.1	4.8	109.2	37.2	24.3	3.79	2.89	3.4			
50	8	1.9	4.4	70	0.8	1.8	84.4	50.7	40.8	2.53	6.04	2.6	1.7	3.8	83.1	50.5	41.0	2.49	6.30	2.4	2.2	5.2	80.4	50.2	41.1	2.40	6.47	2.2			
		1.9	4.4	80	0.7	1.7	95.3	51.3	40.4	2.93	5.05	3.1	1.5	3.5	93.8	51.1	40.6	2.88	5.27	2.8	2.1	4.8	90.8	50.8	40.7	2.77	5.41	2.6			
		1.9	4.4	90	0.7	1.7	105.9	50.4	38.5	3.42	4.27	3.6	1.5	3.5	104.3	50.2	38.6	3.35	4.45	3.2	2.1	4.8	100.9	50.0	38.7	3.23	4.58	3.1			
		1.9	4.4	100	0.7	1.7	116.5	49.0	35.4	3.95	3.58	4.1	1.5	3.5	114.7	48.8	35.5	3.88	3.73	3.7	2.1	4.8	111.0	48.5	35.6	3.74	3.83	3.5			
10	10	2.6	5.9	70	0.8	1.8	84.7	52.1	42.2	2.53	6.22	2.6	1.7	3.8	83.3	52.0	42.4	2.49	6.48	2.4	2.2	5.2	80.7	51.7	42.6	2.40	6.66	2.3			
		2.6	5.9	80	0.7	1.7	95.6	52.8	41.9	2.93	5.19	3.1	1.5	3.5	94.1	52.6	42.1	2.88	5.42	2.8	2.1	4.8	91.1	52.3	42.2	2.78	5.56	2.7			
		2.6	5.9	90	0.7	1.7	106.3	51.8	39.8	3.42	4.39	3.6	1.5	3.5	104.6	51.7	40.0	3.35	4.58	3.3	2.1	4.8	101.2	51.4	40.1	3.23	4.70	3.1			
		2.6	5.9	100	0.7	1.7	116.9	50.4	36.7	3.96	3.68	4.2	1.5	3.5	115.0	50.2	36.8	3.88	3.84	3.8	2.1	4.8	111.3	49.9	36.9	3.74	3.94	3.6			
70	5	0.8	1.8	70	0.8	1.8	85.8	62.0	53.2	2.47	7.60	2.9	1.7	3.8	84.5	61.8	53.5	2.42	7.92	2.6	2.2	5.2	81.7	61.5	53.6	2.33	8.13	2.5			
		0.8	1.8	80	0.7	1.7	96.9	62.7	52.8	2.86	6.35	3.4	1.5	3.5	95.4	62.5	53.0	2.81	6.62	3.1	2.1	4.8	93.3	62.2	53.1	2.70	6.80	2.9			
		0.8	1.8	90	0.7	1.7	107.7	61.6	50.2	3.33	5.37	3.9	1.5	3.5	106.0	61.5	50.4	3.27	5.60	3.6	2.1	4.8	102.6	61.1	50.6	3.14	5.75	3.4			
		0.8	1.8	100	0.7	1.7	118.4	59.9	46.2	3.85	4.49	4.5	1.5	3.5	116.6	59.7	46.4	3.78	4.69	4.1	2.1	4.8	112.8	59.4	46.5	3.64	4.81	3.9			
8	8	1.7	3.8	70	0.8	1.8	86.2	64.8	56.3	2.47	7.93	2.9	1.7	3.8	84.8	64.6	56.5	2.42	8.27	2.7	2.2	5.2	82.1	64.2	56.7	2.33	8.50	2.5			
		1.7	3.8	80	0.7	1.7	97.3	65.6	55.8	2.86	6.63	3.4	1.5	3.5	95.8	65.4	56.0	2.81	6.91	3.1	2.1	4.8	92.7	65.0	56.2	2.70	7.10	3.0			
		1.7	3.8	90	0.7	1.7	108.2	64.4	53.1	3.33	5.61	4.0	1.5	3.5	106.5	64.2	53.3	3.27	5.85	3.6	2.1	4.8	103.1	63.9	53.5	3.15	6.01	3.5			
		1.7	3.8	100	0.7	1.7	119.0	62.6	48.8	3.85	4.70	4.6	1.5	3.5	117.1	62.4	49.0	3.78	4.90	4.2	2.1	4.8	113.3	62.0	49.2	3.64	5.03	4.0			
10	10	2.2	5.1	70	0.8	1.8	86.5	66.6	58.3	2.47	8.16	3.0	1.7	3.8	85.1	66.4	58.6	2.42	8.51	2.7	2.2	5.2	82.4	66.1	58.7	2.33	8.74	2.5			
		2.2	5.1	80	0.7	1.7	97.6	67.4	57.8	2.86	6.82	3.5	1.5	3.5	96.1	67.2	58.0	2.81	7.11	3.2	2.1	4.8	93.0	66.9	58.2	2.70	7.30	3.0			
		2.2	5.1	90	0.7	1.7	108.5	66.3	55.0	3.33	5.77	4.1	1.5	3.5	106.8	66.1	55.2	3.27	6.01	3.7	2.1	4.8	103.4	65.7	55.4	3.15	6.18	3.5			
		2.2	5.1	100	0.7	1.7	119.3	64.4	50.6	3.85	4.83	4.7	1.5	3.5	117.5	64.2	50.8	3.78	5.04	4.2	2.1	4.8	113.7	63.8	51.0	3.64	5.17	4.0			
90	5	0.7	1.6	70	0.8	1.8	87.5	75.1	67.5	2.40	9.44	3.5	1.7	3.8	86.1	74.8	67.8	2.36	9.84	3.2	2.2	5.2	83.4	74.4	68.0	2.27	10.11	3.0			
		0.7	1.6	80	0.7	1.7	98.8	76.0	66.9	2.78	7.89	4.1	1.5	3.5	97.2	75.7	67.2	2.73	8.23	3.7	2.1	4.8	94.1	75.3	67.4	2.63	8.45	3.5			
		0.7	1.6	90	0.7	1.7	109.8	74.6	63.6	3.24	6.67	4.8	1.5	3.5	108.1	74.4	63.9	3.18	6.96	4.3	2.1	4.8	104.6	74.0	64.1	3.06	7.14	4.1			
		0.7	1.6	100	0.7	1.7	120.8	72.5	58.5	3.75	5.59	5.5	1.5	3.5	118.9	72.3	58.8	3.68	5.82	5.0	2.1	4.8	115.0	71.9	59.0	3.55	5.98	4.7			
8	8	1.4	3.3	70	0.8	1.8	87.9	78.4	71.3	2.40	9.86	3.6	1.7	3.8	86.5	78.2	71.7	2.36	10.28	3.2	2.2	5.2	83.7	77.8	71.9	2.27	10.56	3.4			
		1.4	3.3	80	0.7	1.7	99.3	79.4	70.7	2.78	8.24	4.2	1.5	3.5	97.7	79.1	71.0	2.73	8.59	3.8	2.1	4.8	94.6	78.7	71.2	2.63	8.83	3.6			
		1.4	3.3	90	0.7	1.7	110.3	78.0	67.3	3.24	6.97	4.9	1.5	3.5	108.6	77.8	67.6	3.18	7.27	4.4	2.1	4.8	105.1	77.3	67.8	3.06	7.46	4.2			
		1.4	3.3	100	Operation Not Recommended						Operation Not Recommended						Operation Not Recommended														
10	10	1.9	4.4	70	0.8	1.8	88.2	80.7	73.9	2.40	10.14																				

ENGINEERING SPECIFICATIONS

Model 060, 5 Ton, Load Side, Heating Mode, Full Load Performance Data

WT060		EXTENDED DATA																																		
		SOURCE SIDE					LOAD SIDE, HEATING MODE, FULL LOAD																													
EST °F	GPM	Source Flow			ELT °F	Load Flow GPM					7.5					12					15															
		PSI	FT	°F		Load Flow WPD	LLT	HC	HE	Power	COP	DSH	Load Flow WPD	LLT	HC	HE	Power	COP	DSH	Load Flow WPD	LLT	HC	HE	Power	COP	DSH										
25	15	5.1	11.8	70	1.7	3.8	84.0	51.4	49.0	3.36	4.63	5.9	2.6	6.1	80.3	50.8	49.1	3.20	4.86	5.3	Operation Not Recommended															
		5.1	11.8	80	1.5	3.4	94.8	52.1	48.9	3.80	4.03	6.98	2.4	5.5	90.6	51.6	49.0	3.61	4.23	6.3	3.2	7.4	87.2	51.2	49.0	3.46	4.35	6.0								
		5.1	11.8	90	1.4	3.3	105.2	51.1	46.9	4.31	3.49	8.14	2.3	5.2	100.5	50.6	46.9	4.10	3.67	7.3	3.0	7.0	96.8	50.3	47.0	3.93	3.77	7.0								
		5.1	11.8	100	1.4	3.2	115.5	49.6	43.5	4.89	2.98	9.37	2.2	5.1	110.3	49.1	43.6	4.65	3.14	8.4	3.0	6.9	106.2	48.8	43.6	4.46	3.22	8.0								
30	7.5	1.7	4.0	70	1.7	3.8	83.9	51.5	50.6	3.36	4.63	5.8	2.6	6.1	80.2	50.9	50.7	3.19	4.87	5.2	Operation Not Recommended															
		1.7	4.0	80	1.5	3.4	94.7	52.2	50.5	3.80	4.03	6.85	2.4	5.5	90.5	51.7	50.6	3.61	4.24	6.2	3.2	7.4	87.1	51.3	50.6	3.46	4.35	5.9								
		1.7	4.0	90	1.4	3.3	105.0	51.2	48.4	4.31	3.49	7.99	2.3	5.2	100.4	50.7	48.5	4.09	3.67	7.2	3.0	7.0	96.6	50.4	48.5	3.92	3.77	6.8								
		1.7	4.0	100	1.4	3.2	115.3	49.7	45.0	4.89	2.98	9.19	2.2	5.1	110.2	49.2	45.0	4.64	3.14	8.3	3.0	6.9	106.1	48.9	45.1	4.45	3.22	7.9								
	12	3.7	8.5	70	1.7	3.8	84.3	54.0	53.1	3.38	4.83	5.94	2.6	6.1	80.5	53.4	53.2	3.21	5.08	5.3	Operation Not Recommended															
		3.7	8.5	80	1.5	3.4	95.1	54.8	53.0	3.82	4.21	7.00	2.4	5.5	90.8	54.2	53.1	3.63	4.42	6.3	3.2	7.4	87.5	53.9	53.1	3.48	4.54	6.0								
		3.7	8.5	90	1.4	3.3	105.5	53.7	50.8	4.33	3.64	8.17	2.3	5.2	100.8	53.2	50.9	4.11	3.83	7.3	3.0	7.0	97.0	52.8	50.9	3.94	4.39	7.0								
		3.7	8.5	100	1.4	3.2	115.8	52.2	47.2	4.91	3.11	9.39	2.2	5.1	110.6	51.6	47.3	4.67	3.28	8.4	3.0	6.9	106.5	51.3	47.3	4.47	3.36	8.0								
		3.7	8.5	110	1.4	3.2	126.3	51.5	44.5	5.59	2.70	10.62	2.2	5.1	120.7	51.0	44.6	5.31	2.84	9.5	3.0	6.9	116.2	50.6	44.6	5.09	2.91	9.1								
		15	5.1	11.8	70	1.7	3.8	84.5	55.4	54.5	3.39	4.94	6.01	2.6	6.1	80.7	54.8	54.6	3.22	5.20	5.4	Operation Not Recommended														
			5.1	11.8	80	1.5	3.4	95.3	56.2	54.3	3.83	4.30	7.08	2.4	5.5	91.1	55.6	54.4	3.64	4.52	6.4	3.2	7.4	87.7	55.2	54.5	3.49	4.64	6.0							
			5.1	11.8	90	1.4	3.3	105.7	55.1	52.1	4.34	3.73	8.26	2.3	5.2	101.0	54.5	52.2	4.12	3.92	7.4	3.0	7.0	97.3	54.2	52.2	3.95	4.02	7.1							
5.1	11.8		100	1.4	3.2	116.1	53.5	48.4	4.92	3.19	9.50	2.2	5.1	110.9	53.0	48.5	4.68	3.35	8.5	3.0	6.9	106.8	52.6	48.5	4.49	3.44	8.1									
50	7.5	1.5	3.5	70	1.7	3.8	85.6	66.4	70.9	3.45	5.82	6.06	2.6	6.1	81.8	65.7	71.0	3.28	6.12	5.4	3.5	8.2	78.7	65.3	71.0	3.14	6.28	5.2								
		1.5	3.5	80	1.5	3.4	96.6	67.3	70.7	3.90	5.06	7.14	2.4	5.5	92.3	66.6	70.8	3.70	5.32	6.4	3.2	7.4	88.8	66.2	70.9	3.55	5.47	6.1								
		1.5	3.5	90	1.4	3.3	107.1	66.1	67.7	4.42	4.39	8.33	2.3	5.2	102.4	65.4	67.9	4.20	4.61	7.5	3.0	7.0	98.6	65.0	67.9	4.03	4.74	7.1								
		1.5	3.5	100	1.4	3.2	117.6	64.2	62.9	5.01	3.75	9.58	2.2	5.1	112.4	63.5	63.1	4.76	3.94	8.6	3.0	6.9	108.2	63.1	63.1	4.57	4.05	8.2								
	12	3.2	7.3	70	1.7	3.8	86.0	69.7	74.3	3.46	6.07	6.20	2.6	6.1	82.1	68.9	74.5	3.29	6.39	5.6	3.5	8.2	79.1	68.5	74.5	3.16	6.56	5.3								
		3.2	7.3	80	1.5	3.4	97.0	70.6	74.2	3.91	5.29	7.29	2.4	5.5	92.7	69.9	74.3	3.72	5.56	6.6	3.2	7.4	89.2	69.5	74.4	3.57	5.71	6.2								
		3.2	7.3	90	1.4	3.3	107.6	69.3	71.1	4.44	4.58	8.51	2.3	5.2	102.8	68.6	71.2	4.22	4.82	7.6	3.0	7.0	99.0	68.2	71.3	4.05	4.94	7.3								
		3.2	7.3	100	1.4	3.2	118.1	67.3	66.0	5.04	3.92	9.79	2.2	5.1	112.8	66.6	66.1	4.79	4.12	8.8	3.0	6.9	108.7	66.2	66.2	4.59	4.23	8.4								
		3.2	7.3	110	1.4	3.2	128.8	66.4	62.3	5.7	3.4	11.1	2.2	5.1	123.1	65.7	62.4	5.5	3.6	9.9	3.0	6.9	118.5	65.3	62.5	5.23	3.66	9.5								
		15	4.4	10.1	70	1.7	3.8	86.1	71.5	76.2	3.47	6.21	6.27	2.6	6.1	82.3	70.7	76.4	3.30	6.53	5.6	3.5	8.2	79.2	70.3	76.4	3.17	6.71	5.4							
			4.4	10.1	80	1.5	3.4	97.2	72.4	76.1	3.93	5.41	7.38	2.4	5.5	92.9	71.7	76.2	3.73	5.69	6.6	3.2	7.4	89.4	71.3	76.3	3.58	5.84	6.3							
			4.4	10.1	90	1.4	3.3	107.8	71.1	72.9	4.45	4.69	8.61	2.3	5.2	103.0	70.3	73.0	4.23	4.93	7.7	3.0	7.0	99.2	69.9	73.1	4.06	5.06	7.4							
4.4	10.1		100	1.4	3.2	118.4	69.0	67.7	5.05	4.01	9.90	2.2	5.1	113.1	68.3	67.8	4.80	4.21	8.9	3.0	6.9	108.9	67.9	67.9	4.60	4.32	8.5									
70	7.5	1.4	3.3	70	1.7	3.8	87.5	83.4	94.5	3.52	7.16	6.80	2.6	6.1	83.6	82.6	94.7	3.34	7.53	6.1	3.5	8.2	80.5	82.1	94.8	3.21	7.73	5.8								
		1.4	3.3	80	1.5	3.4	98.7	84.6	94.3	3.98	6.23	8.00	2.4	5.5	94.4	83.7	94.5	3.78	6.56	7.2	3.2	7.4	90.8	83.2	94.6	3.62	6.73	6.8								
		1.4	3.3	90	1.4	3.3	109.6	83.0	90.4	4.51	5.40	9.34	2.3	5.2	104.7	82.1	90.6	4.28	5.68	8.4	3.0	7.0	100.8	81.6	90.6	4.11	5.83	8.0								
		1.4	3.3	100	1.4	3.2	120.3	80.6	84.0	5.12	4.62	10.74	2.2	5.1	114.9	79.8	84.1	4.86	4.85	9.6	3.0	6.9	110.6	79.3	84.2	4.66	4.98	9.2								
	12	3.0	6.9	70	1.7	3.8	87.9	87.5	99.2	3.53	7.48	6.95	2.6	6.1	84.0	86.6	99.4	3.36	7.86	6.2	3.5	8.2	80.8	86.1	99.4	3.22	8.07	5.9								
		3.0	6.9	80	1.5	3.4	99.2	88.7	98.9	3.99	6.51	8.18	2.4	5.5	94.7	87.8	99.1	3.80	6.84	7.3	3.2	7.4	91.2	87.3	99.2	3.64	7.02	7.0								
		3.0	6.9	90	1.4	3.3	110.0	87.1	94.8	4.53	5.64	9.54	2.3	5.2	105.1	86.1	95.0	4.31	5.93	8.6	3.0	7.0	101.2	85.6	95.1	4.13	6.09	8.2								
		3.0	6.9	100	1.4	3.2	120.8	84.6	88.1	5.14	4.82	10.97	2.2	5.1	115.4	83.7	88.3	4.89	5.07	9.9	3.0	6.9	111.1	83.2	88.3	4.69	5.20	9.4								
		3.0	6.9	110	1.4	3.2	131.7	83.4	83.1	5.9	4.2	12.4	2.2	5.1	125.9	82.6	83.3	5.6	4.4	11.1	3.0	6.9	121.2	82.1	83.4	5.33	4.51	10.6								
		15	4.2	9.6	70	1.7	3.8	88.1	89.8	101.7	3.54	7.65	7.03	2.6	6.1	84.2	88.8	101.9	3.37	8.04	6.3	3.5	8.2	81.0	88.3	102.0	3.23	8.26	6.0							
			4.2	9.6	80	1.5	3.4	99.4	91.0	101.5	4.01	6.66	8.27	2.4	5.5	95.0	90.1	101.7	3.81	7.00	7.4	3.2	7.4	91.4	89.5	101.8	3.65	7.19	7.1							
			4.2	9.6	90	1.4	3.3	110.3	89.3	97.3	4.54	5.77	9.65	2.3	5.2	105.3	88.4	97.4	4.32	6.07	8.7	3.0	7.0	101.4	87.8	97.5	4.14	6.23	8.2							
4.2	9.6		100	1.4	3.2	121.0	86.7	90.4	5.15	4.93	11.10	2.2	5.1	115.7	85.8	90.5	4.90	5.18	10.0	3.0	6.9	111.4	85.3	90.6	4.70	5.32	9.5									
90	7.5	2.7	6.1	70	1.7	3.8	89.2	103.6	121.0	3.61	8.65	8.45	2.6	6.1	85.3	102.5	121.3	3.44	9.10	7.6	3.5	8.2	82.1	101.9	121.3	3.29	9.34	7.2								
		2.7	6.1	80	1.5	3.4	100.7	105.0	120.7	4.09	7.53	9.95	2.4	5.5	96.2	103.9	121.0	3.88	7.92	8.9	3.2	7.4	92.6	103.3	121.1	3.72	8.13	8.5								
		2.7	6.1	90	1.4	3.3	111.7	103.0	115.7	4.63	6.53	11.61	2.3	5.2	106.7	102.0	115.9	4.40	6.86	10.4	3.0	7.0	102.8	101.4	116.0	4.22	7.05	9.9								
		2.7	6.1	100	1.4	3.2	122.6	100.1	107.5	5.26	5.58	13.36	2.2	5.1	117.2	99.0	107.7	5.00	5.87	12.0	3.0	6.9	112.8	98.4	107.8	4.79	6.02	11.4								
	15	3.7	8.5	70	1.7	3.8	89.4	106.3	124.1	3.62	8.85	8.55	2.6	6.1	85.5	105.1	124.4	3.45	9.31	7.7	3.5	8.2	82.3	104.5	124.5	3.30	9.56	7.3								
		3.7	8.5	80	1.5	3.4	100.9	107.7	123.9	4.10	7.71	10.07	2.4	5.5	96.4	106.6	124.1	3.89	8.10	9.0	3.2	7.4	92.8	106.0	124.2	3.73	8.32	8.6								
		3.7	8.5	90	1.4	3.3	112																													

WT - Two-Stage, Wiring Diagram



NOTES:

1. DIP SWITCH #1 SHOULD BE IN THE 'ON' POSITION FOR SINGLE STAGE UNITS, AND IN THE 'OFF' POSITION FOR TWO STAGE UNITS. DIP SWITCH #2 SHOULD BE IN THE 'ON' POSITION FOR USE WITH A STANDARD SOLENOID VALVE, AND SHOULD BE IN THE 'OFF' POSITION FOR USE WITH A SOLENOID VALVE WITH END SWITCH.
2. SEE LOCKOUT BOARD LABEL FOR JUMPER SELECTION/ DESCRIPTION.
3. LOAD SIDE PUMPING IS HANDLED VIA CONNECTION TO THE LOOP PUMP TERMINAL BLOCK (I.E. THE LOOP PUMPS AND LOAD PUMPS CAN BE POWERED FROM THE UNIT AS LONG AS NO MORE THAN THREE UP26-116 PUMPS ARE CONNECTED).
4. DESUPERHEATER PUMP POWER WIRES ARE NOT CONNECTED AT THE FACTORY. DO NOT CONNECT THE WIRES UNTIL THE PIPING IS COMPLETED AND PURGED OF AIR. RUNNING THE PUMP WITHOUT WATER WILL DAMAGE THE PUMP.
5. COMMERCIAL UNITS WITHOUT A FACTORY INSTALLED DSH PUMP, WILL NOT HAVE A PUMP BLOCK, CIRCUIT BREAKERS, OR AN HWG RELAY.
6. UNITS WITHOUT A DESUPERHEATER, WILL HAVE A 10K OHM RESISTOR INSTALLED ON THE LOCKOUT BOARD AT 'T3'.

ENGINEERING SPECIFICATIONS

General

Packaged Water-to-Water Two-Stage “WT” Series 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 completely 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 25F – 90F, cooling 50F – 110F) 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 13256-2). 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 fully 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.

Notices, Cautions, Warnings, & Dangers:

“NOTICE” Notification of installation, operation or maintenance information which is important, but which is NOT hazard-related.

“CAUTION” Indicates a potentially hazardous situation or an unsafe practice which, if not avoided, COULD result in minor or moderate injury or product or property damage.

“WARNING” Indicates potentially hazardous situation which, if not avoided, COULD result in death or serious injury.

“DANGER” Indicates an immediate hazardous situation which, if not avoided, WILL result in death or serious injury.

Inspection

Upon receipt of any geothermal equipment, carefully check the shipment against the packing slip and the freight company bill of lading. Verify that all units and packages have been received. Inspect the packaging of each package and each unit for damages. Insure that the carrier makes proper notation of all damages or shortage on all bill of lading papers. Concealed damage should be reported to the freight company within 5 days. If not filed within 5 days the freight company can deny all claims.

Note: Notify Enertech Global, LLC shipping department of all damages within 5 days. It is the responsibility of the purchaser to file all necessary claims with the freight company.

Unit Protection

Protect units from damage and contamination due to plastering (spraying), painting and all other foreign materials that may be used at the job site. Keep all units covered on the job site with either the original packaging or equivalent protective covering. Cap or recap unit connections and all piping until unit is installed. Precautions must be taken to avoid physical damage and contamination which may prevent proper start-up and may result in costly equipment repair.

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 3/8 inch (9.5mm) thick, 3-6 lb/ft³ (24 kg/m³) 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 Childrens 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 brass FPT 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 coaxial heat exchanger shall have 8# closed cell foam applied or closed cell EPDM oam tape wrap.

Option: Sound attenuating compressor blanket for additional noise reduction.

Refrigerant Circuit

All units shall contain R-410A sealed refrigerant circuit including a high efficiency two-stage unloading scroll compressor designed for heat pump operation, a thermostatic expansion valve for refrigerant metering, reversing valve, coaxial refrigerant to water heat exchangers (source and load), and safety controls (see controls section). Refrigerant access ports shall be factory installed on high and low pressure refrigerant lines to facilitate field service. All units have factory installed bi-directional filter/drier for added moisture protection. All dual compressor models shall be complete and independent circuits with each having its own reversing valve, expansion valve, compressor and heat exchangers.

Hermetic compressors shall be internally sprung. The compressor shall have a dual level vibration isolation system. The compressor will be mounted on EPDM 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.

Refrigerant to water heat exchangers (source and load water coils) shall be of copper inner water tube and steel refrigerant outer tube coaxial design, 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 cupronickel coaxial water to refrigerant heat exchanger (source heat exchanger only).

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

Storage

All geothermal units should be stored inside in the original packaging in a clean, dry location. Units should be stored in an upright position at all times. Units should not be stacked unless specially noted on the packaging.



Pre-Installation

Special care should be taken in locating the geothermal unit. Installation location chosen should include adequate service clearance around the unit. All units should be placed on a formed plastic air pad, or a high density, closed cell polystyrene pad slightly larger than the base of the unit. If units are being placed on racking, the unit must be placed on a solid foundation. All units should be located in an indoor area where the ambient temperature will remain above 55°F and should be located in a way that piping and ductwork or other permanently installed fixtures do not have to be removed for servicing and filter replacement.

Pre-Installation Steps

1. Compare the electrical data on the unit nameplate with packing slip and ordering information to verify that the correct unit has been shipped.
2. Inspect all electrical connections and wires. Connections must be clean and tight at the terminals, and wires should not touch any sharp edges or copper pipe.
3. Verify that all refrigerant tubing is free of dents and kinks. Refrigerant tubing should not be touching other unit components.
4. Before unit start-up, read all manuals and become familiar with unit components and operation. Thoroughly check the unit before operating.

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.

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 on compressor operation (5 minutes).
- 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.

ENGINEERING SPECIFICATIONS

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- Smart desuperheater operation and logic to eliminate any heat transfer from the water tank to the source loop during cooling mode.

⚠ CAUTION ⚠

ALL GEOTHERMAL EQUIPMENT IS DESIGNED FOR INDOOR INSTALLATION ONLY. DO NOT INSTALL OR STORE UNIT IN A CORROSIVE ENVIRONMENT OR IN A LOCATION WHERE TEMPERATURE AND HUMIDITY ARE SUBJECT TO EXTREMES.

EQUIPMENT IS NOT CERTIFIED FOR OUTDOOR APPLICATIONS. SUCH INSTALLATION WILL VOID ALL WARRANTIES.

⚠ WARNING ⚠

FAILURE TO FOLLOW THIS CAUTION MAY RESULT IN PERSONAL INJURY. USE CARE AND WEAR APPROPRIATE PROTECTIVE CLOTHING, SAFETY GLASSES AND PROTECTIVE GLOVES WHEN SERVICING UNIT AND HANDLING PARTS.

⚠ CAUTION ⚠

BEFORE DRILLING OR DRIVING ANY SCREWS INTO CABINET, CHECK TO BE SURE THE SCREW WILL NOT HIT ANY INTERNAL PARTS OR REFRIGERANT LINES.

Components

Master Contactor: Energizes Compressor and optional Hydronic Pump and/or Desuperheater pump package.

Logic Board: Logic Board operates the compressor and protects unit by locking out when safety switches are engaged. It also provides fault indicator(s).

Terminal Strip: Provides connection to the thermostat or other accessories to the low voltage circuit.

Transformer: Converts incoming (source) voltage to 24V AC.

Low Voltage Breaker: Attached directly to transformer, protects the transformer and low voltage circuit.

Reversing Valve: Controls the cycle of the refrigerant system (heating or cooling). Energized in cooling mode.

High Pressure Switch: Protects the refrigerant system from high refrigerant pressure, by locking unit out if pressure exceeds setting.

Low Pressure Switch: Protects the refrigerant system from low suction pressure, if suction pressure falls below setting.

Flow Switch (Freeze Protection Device): Protects the water heat exchanger from freezing, by shutting down compressor if water flow decreases.

Compressor: Pumps refrigerant through the heat exchangers and pressurizes the refrigerant, which increases the temperature of the refrigerant.

Shipping Bolts: This unit is equipped with the new COMPRESSOR ISOLATION feature. **Do not loosen or remove the bolts.**

Consumer Instructions

Dealer should instruct the consumer in proper operation, maintenance, filter replacements, thermostat and indicator lights. Also provide the consumer with the manufacturer's Owner's Manual for the equipment being installed.

Enertech Global D-I-Y Policy

Enertech Global's geothermal heat pumps and system installations may include electrical, refrigerant and/or water connections. Federal, state and local codes and regulations apply to various aspects of the installation. Improperly installed equipment can lead to equipment failure and health/safety concerns. For these reasons, only qualified technicians should install a Enertech Global built geothermal system. Because of the importance of proper installation, Enertech Global does not sell equipment direct to homeowners. Internet websites and HVAC outlets may allow for purchases directly by homeowners and do-it-yourselfers, but Enertech Global offers no warranty on equipment that is purchased via the internet or installed by persons without proper training.

Enertech Global has set forth this policy to ensure installations of Enertech Global geothermal systems are done safely and properly. The use of well-trained, qualified technicians helps ensure that your system provides many years of comfort and savings.

Equipment Installation

Special care should be taken in locating the unit. All units should be placed on a formed plastic air pad, or a high density, closed cell polystyrene pad slightly larger than the base of the unit. All units should be located in an indoor area where the ambient temperature will remain above 55°F and should be located in a way that piping and ductwork or other permanently installed fixtures do not have to be removed for servicing and filter replacement.

Electrical

All wiring, line and low voltage, should comply with the manufacturer's recommendations, The National Electrical Code, and all local codes and ordinances.

Thermostat

Thermostats should be installed approximately 54 inches off the floor on an inside wall in the return air pattern and where they are not in direct sunlight at anytime.

The Desuperheater package can make up to 60% (depending on heat pump usage) of most domestic water needs, but a water heater is still recommended.

Desuperheater Piping

All copper tubes & fittings should be 5/8" O.D (1/2" nom) minimum with a maximum of 50ft separation. Piping should be insulated with 3/8" wall closed cell insulation.

Note: Copper is the only approved material for piping the desuperheater.

Loop Pumping Modules

Must be wired to the heat pump's electric control box. A special entrance knockout is provided below the thermostat entrance knockout. A pump module connection block, connected to the master contactor, and circuit breaker is provided to connect the Pump Module wiring.

Desuperheater Package

Water heating is standard on all residential units (units may be ordered without). It uses excess heat during both heating and cooling cycles, to provide hot water for domestic needs. A double wall desuperheater exchanger (coil) located between the compressor and the reversing valve, extracts superheated vapor to heat domestic water; still satisfying its heating and cooling needs. The water circulation pump comes pre-mounted in all residential units, but must be electrically connected to the master contactor. Leaving it disconnected ensures that the pump will not run without a water supply.

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Revision Table

Date	Description of Revision	Page
14MAR2022	WT Revision G models Submittal created	ALL

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