

SUBMITTAL DATA
GTW - Aston Series
Geothermal Hydronic Heat Pump



60Hz / R-454B

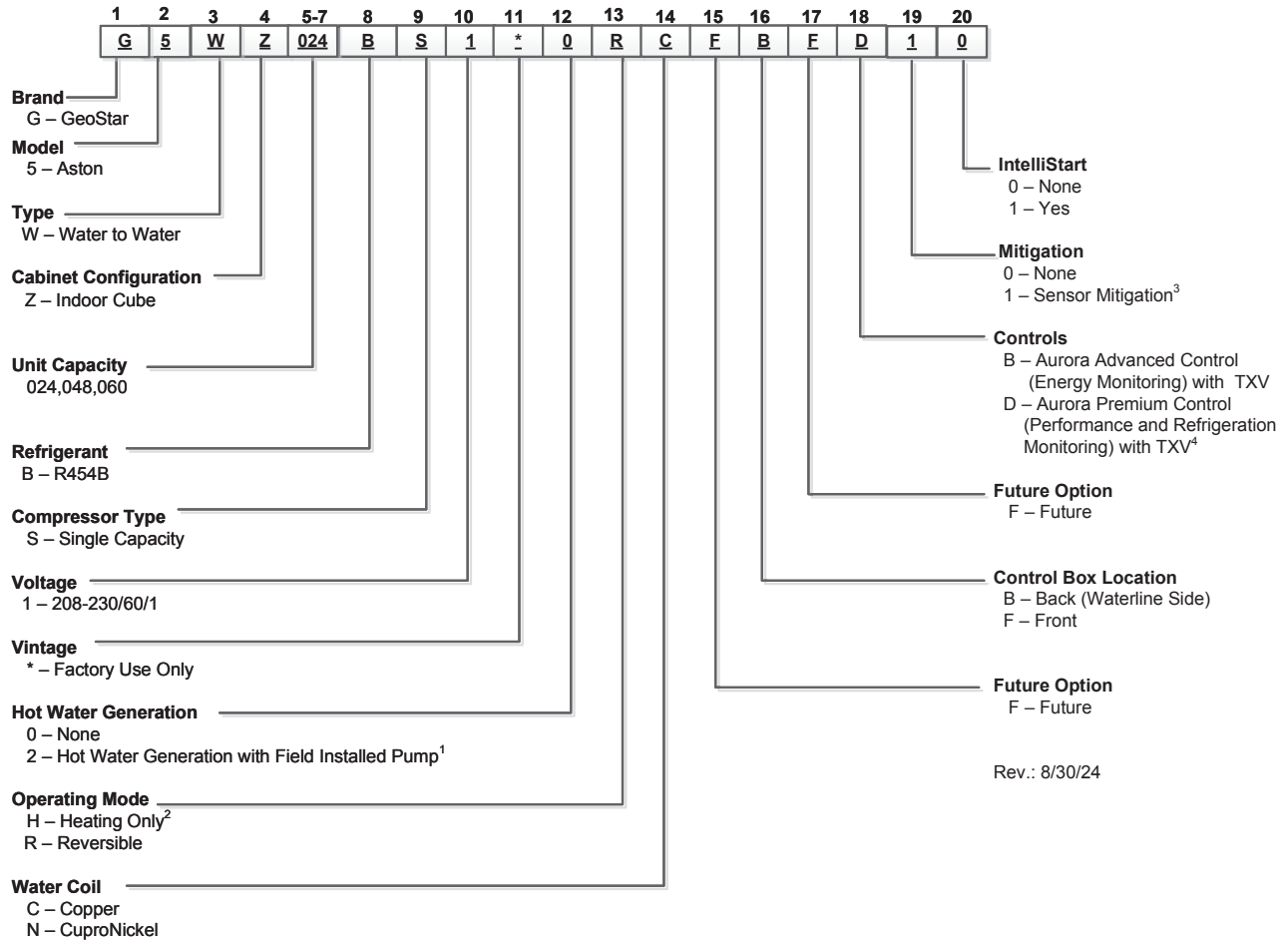
SDW5-0025G





Contractor: _____ P.O.: _____
 Engineer: _____
 Project Name: _____ Unit Tag: _____

Nomenclature



Rev.: 8/30/24

NOTES: 1 – Available on 048 and 060 only. Hot water generator requires field installed external pump kit.
 2 – 024 heating only model is available only with copper double wall vented load coax for potable water,
 and is not designed to be converted to dedicated cooling units.
 3 – Mitigation required on 060 model, not available on 024 and 048 models.
 4 – Flow meter for Performance option is shipped with unit, and must be externally field installed.



Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

AHRI/ISO 13256-1 Performance Ratings

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling 86°F Source 53.6°F Load		Heating 68°F Source 104°F Load		Cooling 59°F Source 53.6°F Load		Heating 50°F Source 104°F Load		Cooling 77°F Source 53.6°F Load		Heating 32°F Source 104°F Load	
		Load Gpm	Source Gpm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
024	Full	7	7	24,400	14.6	30,700	4.3	26,000	22.2	27,000	3.8	24,700	16.1	22,000	3.1
048	Full	15	15	48,100	14.0	63,000	4.4	51,100	20.9	52,600	3.6	49,700	16.1	42,700	3.1
060	Full	18	18	55,300	13.7	76,500	4.5	62,800	20.4	63,400	3.8	58,800	16.1	50,200	3.1

All ratings based upon 208V operation

10/11/24

Contractor: _____ P.O.: _____

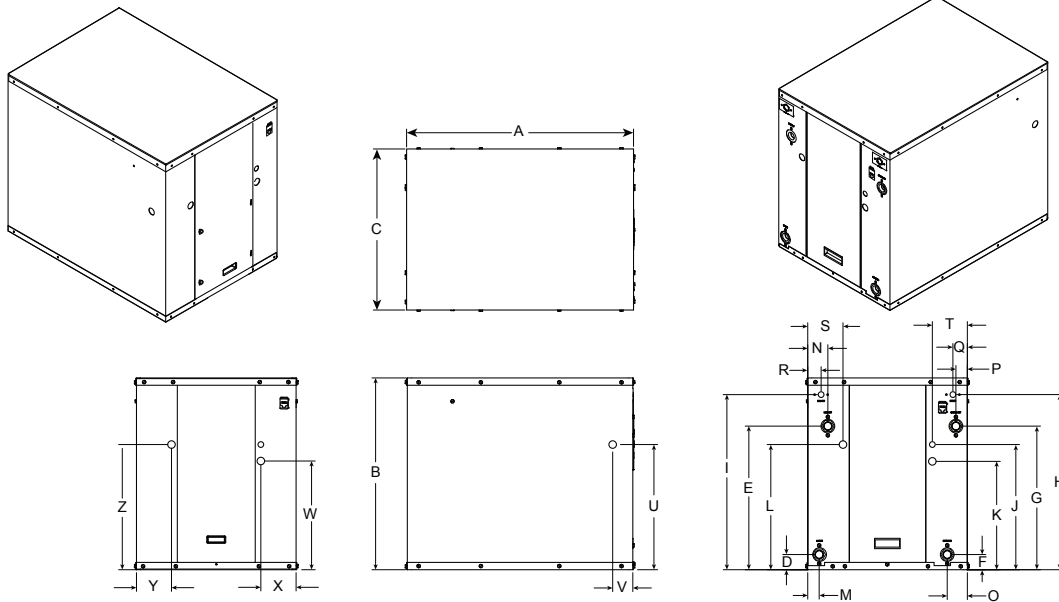
Engineer: _____

Project Name: _____ Unit Tag: _____

**GTW Aston Series -
Geothermal Hydronic Heat Pump
2-5 Tons 60Hz**



Dimensional Data



2/15/16

Model	Overall Cabinet			Water Connections									Electrical Knockouts			
	A	B	C	D	E	F	G	H	I				J 1/2" cond	K 3/4" cond	L 3/4" cond	
	Depth	Height	Width	Load Liquid In	Load Liquid Out	Source Liquid In	Source Liquid Out	HWG In	HWG Out	Load Water FPT	Source Water FPT	HWG Water FPT	Low Voltage	Ext Pump	Power Supply	
024	in.	23.5	26.1	19.5	10.0	22.2	10.0	22.2	-	-	1"	1"	-	16.0	14.2	14.2
	cm.	59.7	66.3	49.5	25.4	56.4	25.4	56.4	-	-	25.4	25.4	-	40.6	36.1	36.1
048	in.	31.0	26.2	22.0	2.2	20.6	2.2	20.6	23.9	23.9	1-1/4"	1-1/4"	1/2"	17.1	14.8	17.1
	cm.	78.7	66.5	55.9	5.6	52.3	5.6	52.3	60.7	60.7	31.8	31.8	12.7	43.4	37.6	43.4
060	in.	31.0	26.2	22.0	2.4	23.0	2.4	23.0	20.6	20.6	1-1/4"	1-1/4"	1/2"	17.1	14.8	17.1
	cm.	78.7	66.5	55.9	6.1	58.4	6.1	58.4	52.3	52.3	31.8	31.8	12.7	43.4	37.6	43.4

Model	Water Connections											Electrical Knockouts			
	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	
	Load Liquid In	Load Liquid Out	Source Liquid In	Source Liquid Out	HWG In	HWG Out	Power Supply	Low Voltage	Side Power Supply	Side Power Supply	Ext Pump	Ext Pump	Power Supply	Power Supply	
024	in.	2.4	2.4	2.4	2.4	-	-	3.5	2.9	14.9	2.6	2.1	1.8	2.9	4.1
	cm.	6.1	6.1	6.1	6.1	-	-	8.9	7.4	37.8	6.6	5.3	4.4	7.4	10.4
048	in.	1.8	3.6	3.6	1.8	2.1	1.8	4.8	4.8	17.1	2.8	14.9	4.8	4.8	17.1
	cm.	4.6	9.1	9.1	4.6	5.3	4.6	12.2	12.2	43.4	7.1	37.8	12.2	12.2	43.4
060	in.	1.8	4.0	4.0	1.8	4.2	1.4	4.8	4.8	17.1	2.8	14.9	4.8	4.8	17.1
	cm.	4.6	10.2	10.2	4.6	10.7	3.6	12.2	12.2	43.4	7.1	37.8	12.2	12.2	43.4

Note: Plastic front panel extends 1.4" (3.56 cm) beyond front of cabinet.

07/16/24

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Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

**GTW Aston Series -
Geothermal Hydronic Heat Pump
2-5 Tons 60Hz**



Physical Data

Model	024	024 Heating	048	060
Compressor (1 each)	Scroll			
Factory Charge R410a, oz [kg]	46.0 [1.30]	42.0 [1.19]	62 [1.76]	82 [2.32]
Coax & Piping Water Volume - gal [l]	.89 [3.38]	.89 [3.38]	1.4 [5.25]	1.6 [6.13]
Weight - Operating, lb [kg]	225 [102.1]	225 [102.1]	325 [147.4]	345 [156.5]
Weight - Packaged, lb [kg]	247 [112.0]	247 [112.0]	340 [154.2]	360 [163.3]



Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Electrical Data

Unit Model	Rated Voltage	Voltage Min/Max	Compressor				Load Pump	Source Pump	Total Unit FLA	Min Ckt Amp	Maximum Fuse/HACR
			MCC	RLA	LRA	LRA*					
024	208-230/60/1	187/253	19.8	12.7	75.6	26.5	1.8	5.4	19.9	23.1	35
048	208-230/60/1	187/253	37.0	23.7	157.0	55.00	1.8	5.4	30.9	36.8	60
060	208-230/60/1	187/253	43.0	27.5	170.0	59.5	1.8	5.4	34.7	41.6	70

Notes: All fuses type "D" time delay (or HACR circuit breaker in USA).
 Source pump amps shown are for up to a 1/2 HP pump
 Load pump amps shown are for small circulators.
 *With optional IntelliStart

9/12/24



Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Definitions

Abbreviations and Definitions

ELT = entering load fluid temperature to heat pump
 SWPD = source coax water pressure drop
 LLT = leaving load fluid temperature from heat pump
 PSI = pressure drop in pounds per square inch
 LGPM = load flow in gallons per minute
 FT HD = pressure drop in feet of head
 LWPD = load coax water pressure drop
 LWT = leaving water temperature
 EWT = entering water temperature
 Brine = water with a freeze inhibiting solution

kW = kilowatts
 EST = entering source fluid temperature to heat pump
 HE = heat extracted in MBTUH
 LST = leaving source fluid temperature from heat pump
 HC = total heating capacity in MBTUH
 COP = coefficient of performance, heating [HC/kW x 3.413]
 EER = energy efficiency ratio, cooling
 TC = total cooling capacity in MBTUH
 HR = heat rejected in MBTUH

Notes to Performance Data Tables

The following notes apply to all performance data tables:

- Three flow rates are shown for each unit. The lowest flow rate shown is used for geothermal open loop/well water systems with a minimum of 50°F EST. The middle flow rate shown is the minimum geothermal closed loop flow rate. The highest flow rate shown is optimum for geothermal closed loop systems and the suggested flow rate for boiler/tower applications.
- Entering water temperatures below 40°F assumes 15% antifreeze solution.
- Interpolation between ELT, EST, and GPM data is permissible.
- Operation in the gray areas is not recommended.

Reference Calculations

<p>Heating Calculations:</p> $LWT = EWT - \frac{HE}{GPM \times C^*}$ $HE = C^* \times GPM \times (EWT - LWT)$	<p>Cooling Calculations:</p> $LWT = EWT + \frac{HR}{GPM \times C^*}$ $HR = C^* \times GPM \times (LWT - EWT)$
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NOTE: * C = 500 for pure water, 485 for brine.



Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Pressure Drop

Pressure Drop Table

Model	GPM	Pressure Drop (psi)				
		30°F	60°F	80°F	100°F	120°F
024R*	4.0	0.9	0.7	0.6	0.5	0.4
	5.5	2.0	1.9	1.8	1.7	1.5
	7.0	3.2	3.0	2.9	2.8	2.6
	8.5	4.4	4.2	4.0	3.8	3.7
048H/R	8.0	1.7	1.4	1.4	1.3	1.3
	11.5	3.6	3.4	3.2	3.0	2.8
	15.0	5.6	5.4	5.0	4.6	4.2
	18.5	8.3	8.1	7.6	7.2	6.8
060H/R	9.0	1.4	1.1	1.0	1.0	0.9
	13.5	4.2	3.9	3.5	3.1	2.7
	18.0	6.9	6.7	6.0	5.2	4.5
	22.5	10.7	10.5	10.0	9.4	8.7

Heating Only Load Side Pressure Drop Table

Model	GPM	Pressure Drop (psi)			
		60°F	80°F	100°F	120°F
024H	4.0	1.3	1.3	1.2	1.2
	5.5	3.0	2.9	2.8	2.7
	7.0	4.6	4.4	4.3	4.1
	8.5	6.7	6.5	6.4	6.2

Note: Temperatures are Entering Water Temperatures 10/11/24

Note: Temperatures are Entering Water Temperatures 10/11/24
*Domestic water heating units source side pressure drop and reversible units load and source pressure drop.



Contractor: _____ P.O.: _____
 Engineer: _____
 Project Name: _____ Unit Tag: _____

Performance Data cont.

024 Heating Vented Load Coax

Source		Load Flow-4 GPM							Load Flow-5.5 GPM							Load Flow-7 GPM						
EST	Flow	10	LLT	HC	Power	HE	COP	LST	LLT	HC	Power	HE	COP	LST	LLT	HC	Power	HE	COP	LST		
° F	GPM	° F	° F	MBTUH	kW	MBTUH		° F	° F	MBTUH	kW	MBTUH		° F	° F	MBTUH	kW	MBTUH		° F		
25	5.5	60	Operation not recommended																			
		80	Operation not recommended																			
		100	Operation not recommended																			
		120	Operation not recommended																			
	7	60	71.0	21.3	1.33	16.8	4.69	2.01	68.0	21.4	1.34	16.8	4.70	2.00	66.3	21.5	1.34	16.9	4.70	2.00		
		80	90.6	20.6	1.79	14.5	3.38	20.7	87.7	20.6	1.79	14.5	3.38	20.7	86.1	20.7	1.79	14.6	3.39	20.7		
		100	110.3	19.9	2.24	12.2	2.60	21.4	107.4	19.9	2.24	12.2	2.60	21.4	105.8	19.8	2.23	12.2	2.60	21.4		
		120	129.9	19.2	2.70	10.0	2.08	22.1	127.2	19.1	2.69	9.9	2.08	22.1	125.6	19.0	2.68	9.9	2.08	22.1		
30	4	60	71.7	22.7	1.32	18.2	5.04	20.6	50.6	22.9	1.34	18.3	5.02	20.6	29.5	23.0	1.35	18.4	4.99	20.5		
		80	91.3	21.9	1.80	15.8	3.58	21.9	88.9	22.1	1.79	16.0	3.62	21.7	86.6	22.3	1.79	16.2	3.66	21.6		
		100	110.9	21.2	2.27	13.4	2.73	23.1	108.6	21.4	2.25	13.7	2.79	22.9	106.4	21.7	2.23	14.1	2.85	22.8		
		120	130.5	20.4	2.75	11.0	2.17	24.3	128.4	20.7	2.71	11.5	2.24	24.1	126.2	21.0	2.67	11.9	2.30	23.9		
	5.5	60	71.9	23.0	1.35	18.4	5.01	22.6	60.1	23.2	1.33	18.7	5.13	22.5	48.3	23.5	1.31	19.0	5.24	22.4		
		80	91.4	22.1	1.79	16.0	3.62	23.5	89.0	22.4	1.77	16.3	3.70	23.4	86.7	22.7	1.76	16.6	3.77	23.3		
		100	110.9	21.2	2.24	13.6	2.78	24.5	108.7	21.5	2.22	14.0	2.84	24.4	106.4	21.9	2.21	14.3	2.90	24.2		
		120	130.5	20.4	2.68	11.2	2.22	25.5	128.3	20.7	2.67	11.6	2.27	25.3	126.2	21.1	2.66	12.0	2.32	25.2		
	7	60	72.0	23.3	1.37	18.6	4.98	24.5	69.5	23.6	1.32	19.1	5.25	24.4	67.0	23.9	1.27	19.6	5.51	24.2		
		80	91.5	22.3	1.78	16.2	3.66	25.2	89.1	22.6	1.76	16.6	3.78	25.1	86.8	23.0	1.73	17.1	3.90	25.0		
		100	111.0	21.3	2.20	13.8	2.84	25.9	108.7	21.7	2.19	14.2	2.90	25.8	106.5	22.0	2.18	14.6	2.96	25.7		
		120	130.5	20.3	2.61	11.4	2.28	26.6	128.3	20.7	2.63	11.7	2.31	26.5	126.2	21.1	2.64	12.1	2.34	26.4		
50	4	60	74.6	28.4	1.39	23.7	5.94	37.8	62.2	28.6	1.38	23.9	6.06	37.7	49.8	28.9	1.37	24.2	6.18	37.5		
		80	94.1	27.4	1.86	21.0	4.28	39.2	91.2	27.6	1.85	21.3	4.35	39.0	88.2	27.8	1.84	21.6	4.42	38.9		
		100	113.6	26.4	2.34	18.4	3.29	40.5	110.7	26.6	2.32	18.7	3.34	40.4	107.9	26.8	2.31	18.9	3.39	40.2		
		120	133.1	25.4	2.81	15.8	2.64	41.9	130.3	25.6	2.79	16.0	2.67	41.7	127.6	25.8	2.78	16.3	2.70	41.6		
	5.5	60	75.0	29.1	1.41	24.3	6.06	40.2	67.2	29.3	1.37	24.6	6.29	40.1	59.4	29.6	1.33	25.0	6.53	40.0		
		80	94.4	27.9	1.85	21.5	4.40	41.3	91.4	28.1	1.82	21.9	4.52	41.2	88.3	28.3	1.79	22.2	4.63	41.1		
		100	113.7	26.7	2.30	18.8	3.39	42.4	110.9	26.9	2.28	19.1	3.45	42.3	108.0	27.1	2.26	19.4	3.52	42.2		
		120	133.1	25.5	2.75	16.1	2.71	43.5	130.4	25.7	2.74	16.3	2.75	43.4	127.6	25.9	2.73	16.6	2.78	43.3		
	7	60	75.3	29.7	1.42	24.9	6.09	42.7	72.1	30.0	1.35	25.4	6.49	42.5	68.9	30.3	1.29	25.9	6.88	42.4		
		80	94.6	28.3	1.84	22.0	4.47	43.5	91.5	28.6	1.80	22.5	4.64	43.4	88.5	28.9	1.75	22.9	4.82	43.3		
		100	113.9	26.9	2.27	19.2	3.46	44.3	111.0	27.2	2.24	19.6	3.54	44.2	108.1	27.5	2.22	19.9	3.62	44.1		
		120	133.2	25.6	2.69	16.4	2.77	45.2	130.4	25.8	2.69	16.7	2.80	45.1	127.7	26.1	2.69	16.9	2.84	45.0		
70	4	60	77.6	34.1	1.46	29.1	6.84	55.0	73.9	34.4	1.42	29.6	7.11	54.8	70.2	34.7	1.38	30.0	7.37	54.5		
		80	96.9	32.9	1.93	26.3	4.99	56.5	93.4	33.1	1.91	26.6	5.09	56.3	89.8	33.3	1.88	26.9	5.19	56.1		
		100	116.3	31.6	2.40	23.4	3.86	57.9	112.9	31.8	2.39	23.6	3.89	57.8	109.4	31.9	2.38	23.8	3.93	57.7		
		120	135.7	30.4	2.87	20.6	3.10	59.4	132.3	30.5	2.88	20.6	3.10	59.4	129.0	30.5	2.88	20.7	3.10	59.3		
	5.5	60	78.1	35.1	1.47	30.1	7.02	57.9	74.3	35.4	1.40	30.6	7.39	57.7	70.5	35.7	1.34	31.1	7.80	57.5		
		80	97.3	33.6	1.92	27.1	5.14	59.1	93.7	33.8	1.87	27.4	5.29	59.0	90.0	34.0	1.83	27.8	5.45	58.8		
		100	116.5	32.1	2.37	24.0	3.97	60.3	113.0	32.3	2.34	24.3	4.03	60.2	109.5	32.4	2.32	24.5	4.10	60.2		
		120	135.8	30.6	2.82	21.0	3.18	61.5	132.4	30.7	2.81	21.1	3.20	61.5	129.1	30.8	2.81	21.2	3.22	61.5		
	7	60	78.6	36.1	1.47	31.1	7.20	60.8	74.7	36.4	1.39	31.6	7.72	60.7	70.8	36.6	1.30	32.2	8.25	60.5		
		80	97.7	34.3	1.90	27.8	5.29	61.8	94.0	34.6	1.84	28.3	5.51	61.7	90.2	34.8	1.78	28.7	5.73	61.5		
		100	116.8	32.6	2.34	24.6	4.08	62.8	113.2	32.8	2.30	24.9	4.18	62.7	109.7	32.9	2.25	25.2	4.28	62.6		
		120	135.9	30.8	2.77	21.3	3.26	63.7	132.5	31.0	2.75	21.6	3.30	63.6	129.2	31.1	2.73	21.8	3.34	63.6		
90	4	Operation not recommended																				
	5.5	Operation not recommended																				
	7	Operation not recommended																				

EST = entering source fluid temperature to heat pump
 HC = total heating capacity in MBTUH
 ELT = entering load fluid temperature to heat pump
 HE = heat extracted in MBTUH
 LST = leaving source fluid temperature from heat pump
 COP = coefficient of performance
 LLT = leaving load fluid temperature from heat pump

8/29/24



Contractor: _____ P.O.: _____
 Engineer: _____
 Project Name: _____ Unit Tag: _____

Performance Data

024 Cooling

Source		Load Flow-4 GPM							Load Flow-5.5 GPM						Load Flow-7 GPM							
EST °F	Flow GPM	ELT °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F		
30	4	50	36.0	271	0.86	30.0	31.51	45.5	35.7	27.7	0.89	30.7	31.31	45.8	35.4	28.3	0.91	31.4	31.10	46.2		
		70	54.8	29.6	0.87	32.5	33.98	46.8	54.5	30.0	0.89	33.1	33.63	47.1	54.3	30.5	0.92	33.6	33.27	47.3		
		90	73.5	32.0	0.88	35.0	36.40	48.1	73.3	32.4	0.90	35.4	35.91	48.3	73.1	32.7	0.92	35.9	35.42	48.5		
		110	92.2	34.5	0.89	37.5	38.76	49.3	92.1	34.7	0.91	37.8	38.15	49.5	92.0	34.9	0.93	38.1	37.53	49.6		
	5.5	50	39.2	26.5	0.81	29.3	32.72	41.9	39.0	27.0	0.83	29.8	32.57	42.2	38.8	27.4	0.85	30.3	32.43	42.4		
		70	58.4	28.4	0.84	31.3	34.05	42.8	58.2	28.8	0.85	31.7	33.79	43.0	58.0	29.2	0.87	32.2	33.54	43.2		
		90	77.5	30.4	0.86	33.3	35.31	43.7	77.4	30.7	0.88	33.7	34.95	43.8	77.3	31.0	0.90	34.0	34.60	44.0		
		110	96.7	32.3	0.89	35.3	36.50	44.5	96.6	32.5	0.90	35.6	36.04	44.7	96.5	32.8	0.92	35.9	35.60	44.8		
	7	50	42.4	25.9	0.76	28.5	34.08	38.4	42.3	26.2	0.77	28.8	34.03	38.5	42.2	26.5	0.78	29.2	33.97	38.6		
		70	62.0	27.3	0.80	30.0	34.13	38.8	61.9	27.6	0.81	30.4	33.99	38.9	61.8	27.9	0.82	30.7	33.85	39.0		
		90	81.5	28.7	0.84	31.6	34.17	39.3	81.5	29.0	0.85	31.9	33.95	39.4	81.4	29.2	0.87	32.2	33.73	39.5		
		110	101.1	30.1	0.88	33.1	34.20	39.8	101.1	30.4	0.90	33.4	33.92	39.8	101.0	30.6	0.91	33.7	33.63	39.9		
50	4	50	36.7	25.9	1.14	29.7	24.48	65.3	36.2	26.7	1.18	30.7	24.42	65.8	35.8	27.6	1.22	31.7	24.37	66.3		
		70	54.6	30.0	1.16	33.9	27.42	67.5	54.2	30.6	1.20	34.7	27.16	67.9	53.9	31.3	1.24	35.5	26.91	68.3		
		90	72.4	34.1	1.19	38.2	30.22	69.7	72.2	34.6	1.23	38.7	29.80	70.0	72.0	35.0	1.26	39.3	29.37	70.3		
		110	90.3	38.2	1.22	42.4	32.90	71.8	90.2	38.5	1.25	42.7	32.32	72.0	90.0	38.8	1.29	43.1	31.75	72.2		
	5.5	50	39.6	25.6	1.11	29.3	23.07	61.9	39.3	26.2	1.12	30.0	23.40	62.2	39.0	26.9	1.13	30.7	23.73	62.6		
		70	58.0	29.4	1.14	33.3	25.88	63.6	57.8	29.9	1.15	33.9	25.94	63.8	57.6	30.5	1.17	34.5	26.00	64.1		
		90	76.4	33.3	1.16	37.2	28.56	65.2	76.3	33.7	1.19	37.7	28.34	65.4	76.1	34.1	1.21	38.2	28.13	65.6		
		110	94.9	37.1	1.19	41.2	31.11	66.8	94.7	37.4	1.22	41.5	30.60	67.0	94.6	37.7	1.25	41.9	30.12	67.1		
	7	50	42.6	25.3	1.08	28.9	25.83	58.5	42.4	25.7	1.07	29.4	26.31	58.6	42.3	26.2	1.05	29.8	26.80	58.8		
		70	61.5	28.8	1.11	32.6	27.78	59.6	61.4	29.2	1.11	33.0	28.02	59.7	61.3	29.7	1.11	33.4	28.26	59.8		
		90	80.5	32.4	1.14	36.3	29.69	60.7	80.4	32.8	1.15	36.7	29.64	60.8	80.3	33.1	1.16	37.1	29.58	60.9		
		110	99.4	36.0	1.17	40.0	31.55	61.8	99.3	36.3	1.19	40.3	31.17	61.9	99.2	36.6	1.22	40.7	30.79	62.0		
70	4	50	37.3	24.6	1.41	29.4	17.45	85.2	36.8	25.7	1.47	30.7	17.54	85.8	36.2	26.8	1.52	32.0	17.63	86.5		
		70	54.3	30.4	1.46	35.3	20.85	88.2	53.9	31.2	1.51	36.4	20.70	88.7	53.5	32.1	1.56	37.4	20.56	89.3		
		90	71.4	36.1	1.50	41.3	24.04	91.3	71.1	36.7	1.55	42.0	23.68	91.7	70.8	37.3	1.60	42.8	23.33	92.1		
		110	Operation not recommended																			
	5.5	50	40.0	24.6	1.41	29.4	17.51	81.9	39.7	25.5	1.41	30.3	18.04	82.3	39.3	26.4	1.42	31.2	18.56	82.7		
		70	57.7	30.4	1.44	35.3	21.14	84.3	57.4	31.1	1.46	36.0	21.35	84.6	57.1	31.8	1.47	36.8	21.55	85.0		
		90	75.4	36.1	1.47	41.1	24.61	86.7	75.1	36.6	1.50	41.8	24.47	86.9	74.9	37.2	1.53	42.4	24.33	87.2		
		110	Operation not recommended																			
	7	50	42.8	24.6	1.40	29.4	17.57	78.7	42.6	25.3	1.36	29.9	18.60	78.8	42.4	25.9	1.32	30.4	19.62	79.0		
		70	61.1	30.4	1.42	35.2	21.44	80.4	60.9	30.9	1.40	35.7	22.05	80.5	60.7	31.4	1.39	36.2	22.67	80.7		
		90	79.4	36.1	1.43	41.0	25.21	82.1	79.2	36.6	1.44	41.5	25.32	82.2	79.1	37.0	1.45	41.9	25.44	82.3		
		110	97.7	41.9	1.45	46.8	28.90	83.8	97.6	42.2	1.49	47.3	28.43	83.9	97.5	42.5	1.52	47.7	27.96	84.0		
90	4	50	38.9	21.5	1.85	27.8	12.74	104.3	38.3	22.6	1.91	29.1	12.93	105.0	37.8	23.8	1.97	30.5	13.11	105.7		
		70	55.7	27.8	1.91	34.3	15.76	107.7	55.2	28.8	1.96	35.5	15.83	108.3	54.7	29.8	2.00	36.6	15.89	108.9		
		90	Operation not recommended																			
		110	Operation not recommended																			
	5.5	50	41.3	21.4	1.84	27.6	11.63	101.2	40.9	22.3	1.86	28.7	12.03	101.7	40.5	23.3	1.88	29.7	12.41	102.1		
		70	58.8	27.7	1.87	34.1	14.79	103.8	58.4	28.5	1.89	35.0	15.06	104.2	58.1	29.4	1.92	35.9	15.32	104.6		
		90	Operation not recommended																			
		110	Operation not recommended																			
	7	50	43.7	21.3	1.83	27.5	12.76	98.1	43.5	22.1	1.81	28.2	13.48	98.3	43.3	22.9	1.79	29.0	14.19	98.5		
		70	61.9	27.6	1.84	33.9	16.23	100.0	61.7	28.3	1.83	34.5	16.69	100.2	61.5	29.0	1.83	35.2	17.16	100.4		
		90	Operation not recommended																			
		110	Operation not recommended																			
110	4	50	40.5	18.4	2.29	26.2	8.03	123.5	39.9	19.6	2.35	27.6	8.31	124.2	39.3	20.7	2.41	28.9	8.59	124.9		
		70	57.0	25.2	2.36	33.3	10.68	127.2	56.4	26.3	2.40	34.5	10.95	127.8	55.9	27.4	2.44	35.8	11.23	128.4		
		90	Operation not recommended																			
		110	Operation not recommended																			
	5.5	50	42.6	18.2	2.27	25.9	8.00	120.5	42.2	19.2	2.30	27.1	8.34	121.0	41.7	20.3	2.34	28.2	8.67	121.5		
		70	59.8	25.0	2.31	32.9	10.84	123.4	59.4	26.0	2.33	34.0	11.14	123.8	59.0	27.0	2.36	35.0	11.43	124.3		
		90	Operation not recommended																			
		110	Operation not recommended																			
	7	50	44.7	17.9	2.25	25.6	7.96	117.5	44.4	18.9	2.26	26.5	8.36	117.8	44.2	19.8	2.26	27.5	8.76	118.1		
		70	62.7	24.8	2.25	32.5	11.02	119.6	62.4	25.7	2.26	33.4	11.3	119.8	62.2	26.5	2.27	34.2	11.64	120.1		
		90	Operation not recommended																			
		110	Operation not recommended																			

EST = entering source fluid temperature to heat pump
 TC = total cooling capacity in MBTUH
 ELT = entering load fluid temperature to heat pump
 HR = heat rejected in MBTUH
 LST = leaving source fluid temperature from heat pump
 EER = energy efficiency ratio
 LLT = leaving load fluid temperature from heat pump

08/29/24

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Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

**GTW Aston Series -
Geothermal Hydronic Heat Pump
2-5 Tons 60Hz**



Performance Data cont.

048 Cooling

Source		Load Flow-8 GPM							Load Flow-11.5 GPM							Load Flow-15 GPM						
EST °F	Flow GPM	ELT °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F	LLT °F	TC MBTUH	Power kW	HR MBTUH	EER	LST °F		
30	8	50	36.5	52.3	1.88	58.7	27.82	45.1	39.4	54.1	1.94	60.7	27.93	45.6	42.3	55.8	1.99	62.6	28.04	46.1		
		70	55.4	56.5	1.92	63.0	29.48	46.2	58.7	57.7	1.96	64.4	29.43	46.6	61.9	59.0	2.01	65.8	29.39	47.0		
		90	74.4	60.7	1.95	67.4	31.08	47.4	77.9	61.4	1.99	68.2	30.89	47.6	81.5	62.1	2.02	69.0	30.71	47.8		
		110	93.3	64.9	1.99	71.7	32.61	48.5	97.1	65.1	2.02	72.0	32.31	48.6	101.0	65.3	2.04	72.3	32.01	48.6		
	11.5	50	36.3	53.2	1.85	59.5	28.76	41.7	39.3	54.8	1.89	61.3	28.99	42.1	42.2	56.4	1.93	63.0	29.22	42.4		
		70	55.5	56.4	1.87	62.8	30.15	42.4	58.7	57.5	1.90	64.0	30.25	42.7	61.9	58.6	1.93	65.2	30.35	42.9		
		90	74.6	59.7	1.89	66.1	31.51	43.1	78.1	60.3	1.91	66.8	31.50	43.3	81.6	60.9	1.93	67.5	31.48	43.4		
		110	93.8	62.9	1.92	69.4	32.85	43.9	97.6	63.0	1.93	69.6	32.73	43.9	101.3	63.1	1.94	69.7	32.61	43.9		
	15	50	36.1	54.1	1.82	60.3	29.73	38.3	39.1	55.6	1.85	61.8	30.10	38.5	42.2	57.0	1.87	63.4	30.48	38.7		
		70	55.5	56.4	1.83	62.6	30.86	38.6	58.7	57.3	1.84	63.6	31.13	38.7	62.0	58.3	1.86	64.6	31.40	38.9		
		90	74.9	58.6	1.83	64.9	31.98	38.9	78.3	59.1	1.84	65.4	32.16	39.0	81.8	59.6	1.84	65.9	32.33	39.1		
		110	94.3	60.9	1.84	67.2	33.10	39.2	98.0	60.9	1.84	67.2	33.19	39.2	101.6	60.9	1.83	67.1	33.28	39.2		
50	8	50	37.4	49.1	2.44	57.4	21.57	64.8	40.0	51.2	2.48	59.7	21.97	65.4	42.7	53.4	2.52	62.0	22.36	66.0		
		70	55.5	56.5	2.51	65.0	23.85	66.8	58.6	58.2	2.54	66.9	24.15	67.2	61.7	60.0	2.57	68.8	24.45	67.7		
		90	73.5	63.9	2.58	72.6	26.00	68.7	77.2	65.3	2.60	74.1	26.23	69.1	80.8	66.7	2.62	75.6	26.46	69.5		
		110	91.6	71.3	2.65	80.3	28.03	70.7	95.8	72.3	2.66	81.4	28.21	71.0	99.9	73.4	2.67	82.5	28.39	71.3		
	11.5	50	40.2	50.1	2.38	58.2	21.09	61.5	39.8	52.0	2.40	60.2	21.63	61.9	42.6	53.9	2.43	62.2	22.15	62.3		
		70	58.8	57.0	2.41	65.2	23.62	62.9	58.6	58.3	2.43	66.6	23.94	63.2	61.8	59.6	2.46	67.9	24.26	63.5		
		90	77.4	63.9	2.45	72.3	26.07	64.3	77.3	64.6	2.46	73.0	26.20	64.5	81.0	65.2	2.48	73.7	26.33	64.7		
		110	96.0	70.8	2.49	79.3	28.44	65.7	96.0	70.9	2.50	79.4	28.40	65.8	100.3	70.9	2.50	79.4	28.36	65.9		
	15	50	43.0	51.2	2.32	59.1	23.44	58.1	39.7	52.8	2.33	60.7	23.93	58.3	42.5	54.4	2.35	62.4	24.43	58.6		
		70	62.1	57.6	2.32	65.5	25.87	59.0	58.5	58.3	2.33	66.3	26.08	59.1	61.9	59.1	2.34	67.1	26.28	59.2		
		90	81.2	64.0	2.33	71.9	28.30	59.9	77.4	63.9	2.33	71.8	28.22	59.9	81.2	63.7	2.34	71.7	28.14	59.9		
		110	100.3	70.4	2.33	78.4	30.72	60.8	96.2	69.4	2.33	77.4	30.36	60.6	100.6	68.4	2.34	76.4	30.00	60.5		
70	8	50	38.2	45.8	2.99	56.0	15.32	84.4	40.6	48.4	3.02	58.7	16.00	85.1	43.0	50.9	3.05	61.3	16.69	85.8		
		70	55.5	56.4	3.10	67.0	18.21	87.3	58.5	58.8	3.11	69.4	18.87	87.9	61.6	61.1	3.13	71.8	19.52	88.5		
		90	72.7	67.0	3.20	77.9	20.92	90.1	76.5	69.2	3.21	80.1	21.56	90.6	80.2	71.3	3.21	82.3	22.21	91.2		
		110	Operation not recommended																			
	11.5	50	37.9	47.0	2.90	56.9	16.21	81.2	40.4	49.2	2.92	59.1	16.86	81.7	42.9	51.4	2.94	61.4	17.50	82.1		
		70	55.2	57.6	2.96	67.7	19.49	83.3	58.4	59.0	2.97	69.2	19.90	83.7	61.7	60.5	2.98	70.6	20.30	84.0		
		90	72.4	68.2	3.01	78.4	22.65	85.5	76.4	68.9	3.02	79.2	22.84	85.7	80.4	69.6	3.02	79.9	23.03	85.9		
		110	Operation not recommended																			
	15	50	37.6	48.2	2.81	57.8	17.15	77.9	40.2	50.0	2.82	59.6	17.76	78.2	42.9	51.8	2.82	61.4	18.37	78.4		
		70	54.9	58.8	2.81	68.4	20.89	79.4	58.3	59.3	2.82	68.9	21.03	79.5	61.8	59.8	2.83	69.5	21.17	79.6		
		90	72.1	69.3	2.82	78.9	24.62	80.9	76.4	68.6	2.83	78.2	24.28	80.8	80.7	67.9	2.83	77.5	23.95	80.7		
		110	89.4	79.9	2.82	89.5	28.33	82.3	94.5	77.9	2.83	87.6	27.53	82.0	99.6	75.9	2.84	85.6	26.73	81.8		
90	8	50	39.4	41.0	3.85	54.1	11.49	103.9	41.7	42.8	3.89	56.1	11.92	104.4	43.9	44.7	3.92	58.0	12.35	105.0		
		70	56.6	52.2	3.96	65.7	14.07	106.9	59.5	53.9	3.99	67.5	14.47	107.4	62.4	55.6	4.01	69.3	14.88	107.9		
		90	73.7	63.4	4.07	77.3	16.50	109.9	77.3	65.0	4.09	78.9	16.89	110.3	80.9	66.6	4.11	80.6	17.28	110.8		
		110	Operation not recommended																			
	11.5	50	39.2	41.8	3.73	54.5	11.20	100.7	41.5	43.5	3.76	56.3	11.56	101.1	43.8	45.1	3.79	58.0	11.92	101.5		
		70	56.4	52.7	3.80	65.7	13.88	103.0	59.4	54.1	3.82	67.1	14.15	103.3	62.4	55.4	3.84	68.5	14.42	103.6		
		90	73.6	63.7	3.86	76.8	16.47	105.2	77.3	64.7	3.88	77.9	16.66	105.5	81.0	65.7	3.90	79.0	16.85	105.7		
		110	Operation not recommended																			
	15	50	39.0	42.7	3.62	55.0	12.77	97.6	41.4	44.1	3.63	56.5	13.18	97.8	43.7	45.6	3.65	58.1	13.58	98.0		
		70	56.3	53.3	3.64	65.7	15.81	99.0	59.3	54.3	3.65	66.7	16.00	99.2	62.4	55.2	3.67	67.7	16.19	99.3		
		90	73.5	64.0	3.66	76.4	18.82	100.5	77.3	64.4	3.67	76.9	18.80	100.6	81.1	64.8	3.69	77.4	18.78	100.6		
		110	Operation not recommended																			
110	8	50	40.7	36.1	4.71	52.2	7.66	123.4	42.7	37.3	4.75	53.5	7.84	123.8	44.7	38.4	4.79	54.7	8.02	124.1		
		70	57.7	47.9	4.83	64.4	9.92	126.6	60.4	49.0	4.86	65.6	10.08	126.9	63.1	50.1	4.90	66.8	10.23	127.2		
		90	Operation not recommended																			
		110	Operation not recommended																			
	11.5	50	40.6	36.6	4.57	52.2	8.02	120.3	42.6	37.8	4.60	53.4	8.21	120.6	44.7	38.9	4.64	54.7	8.39	120.8		
		70	57.7	47.9	4.64	63.7	10.31	122.6	60.4	49.1	4.67	65.0	10.51	122.9	63.1	50.3	4.70	66.4	10.7	123.1		
		90	Operation not recommended																			
		110	Operation not recommended																			
	15	50	40.4	37.1	4.42	52.2	8.39	117.2	42.5	38.3	4.45	53.4	8.59	117.3	44.6	39.4	4.48	54.7	8.79	117.5		
		70	57.7	47.8	4.46	63.0	10.7	118.7	60.4	49.2	4.48	64.5	10.97	118.9	63.0	50.6	4.51	66.0	11.21	119.1		
		90	Operation not recommended																			
		110	Operation not recommended																			

EST = entering source fluid temperature to heat pump
TC = total cooling capacity in MBTUH
ELT = entering load fluid temperature to heat pump
HR = heat rejected in MBTUH
LST = leaving source fluid temperature from heat pump
EER = energy efficiency ratio
LLT = leaving load fluid temperature from heat pump

9/6/24

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Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Revision Guide

Pages:	Description:	Date:	By:
	Guide Creation	12 Nov, 2024	SW