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## ASTON SERIES COMPACT

Commercial 0.75-6 Ton  
Water Source/Geothermal Heat Pump

Submittal Data  
English Language/IP Units  
SD1022AGA 05/14

**GEOSTAR**

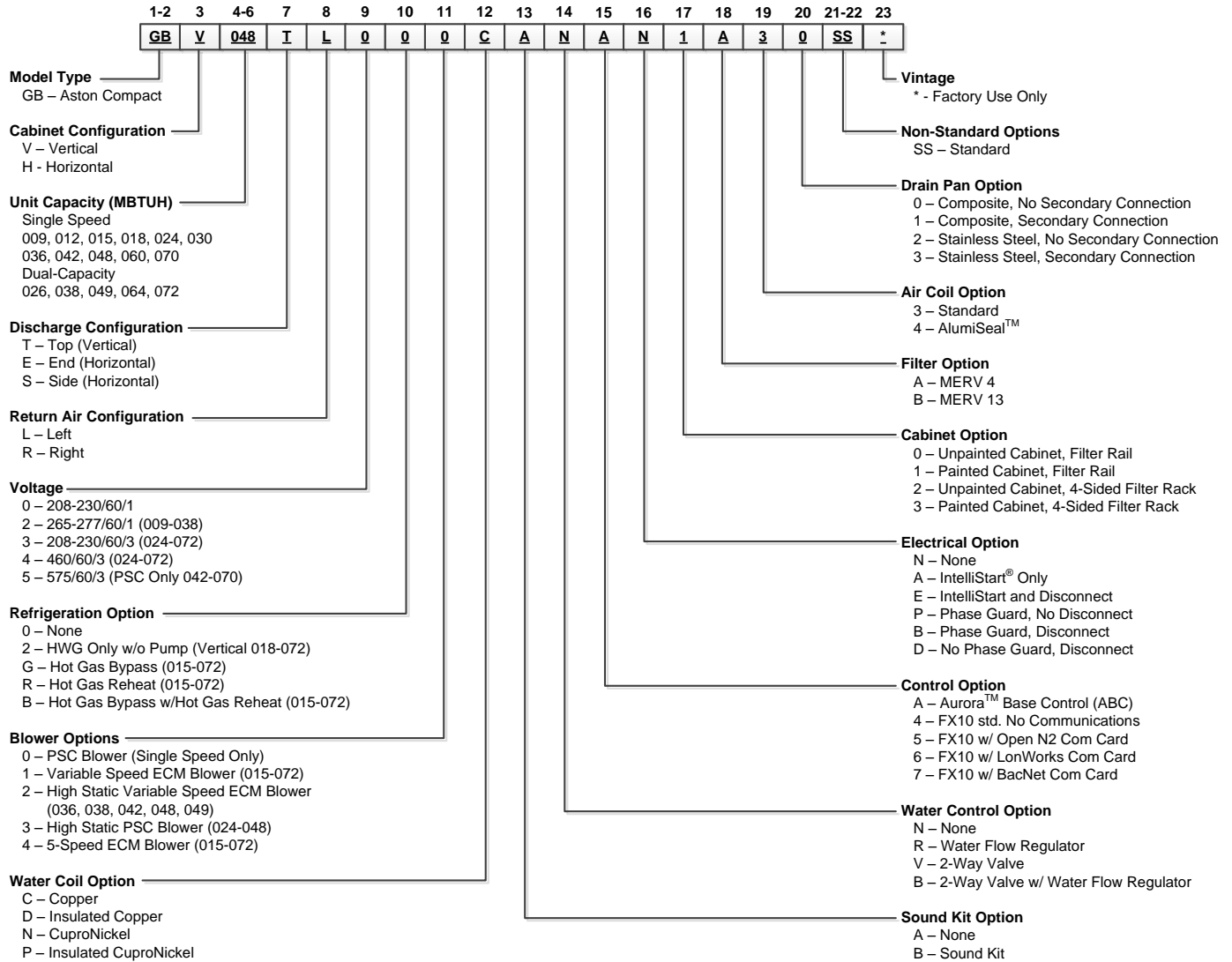
Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Model Nomenclature



**Note:** Phase Guard Only Available on 208-230/60/3, 460/60/3, and 575/60/3

**Rev.:** 24 April 2014D

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## AHRI Data

### PSC Motors

ARI/ASHRAE/ISO 13256-1  
English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EWT 86°F		Heating EWT 68°F		Cooling EWT 59°F		Heating EWT 50°F		Cooling Brine Full Load 77°F Part Load 68°F		Heating Brine Full Load 32°F Part Load 41°F	
		gpm	cfm	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP
009	Single	3.0	350	9,600	14.5	13,200	5.2	10,800	22.2	10,600	4.4	9,800	16.7	7,800	3.4
012	Single	3.5	400	12,300	15.7	14,800	5.1	14,500	25.5	12,300	4.5	13,000	18.0	9,600	3.7
015	Single	4.0	500	14,400	15.9	18,500	5.1	16,700	26.0	15,500	4.5	15,000	18.0	12,000	3.8
018	Single	5.0	600	18,000	15.6	23,000	5.1	21,000	25.5	19,000	4.4	18,500	18.0	14,700	3.8
024	Single	8.0	850	24,800	16.2	29,600	5.0	28,100	24.0	23,900	4.3	26,000	19.2	18,900	3.7
030	Single	8.0	900	27,600	18.2	30,600	5.4	30,800	27.1	24,400	4.7	29,200	21.1	19,800	3.8
036	Single	9.0	1200	34,100	17.6	34,200	5.6	36,300	25.7	28,200	4.7	34,600	19.6	24,100	4.0
042	Single	11.0	1300	40,100	16.6	42,800	5.1	44,600	24.5	34,900	4.3	41,600	18.6	27,500	3.7
048	Single	12.0	1500	46,400	15.5	53,100	4.9	51,600	22.5	43,400	4.2	48,900	17.3	35,000	3.6
060	Single	15.0	1800	61,300	15.4	69,000	5.0	68,700	23.2	55,100	4.4	65,500	18.2	43,200	3.7
070	Single	18.0	2000	67,000	14.5	81,800	4.6	75,900	21.6	66,100	4.0	70,600	17.0	52,000	3.4

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature  
Heating capacities based upon 68°F DB, 59°F WB entering air temperature  
All ratings based upon 208V operation

3/16/12

### Variable Speed ECM and 5-Speed ECM Motors

AHRI/ASHRAE/ISO 13256-1  
English (IP) Units

Model	Capacity Modulation	Flow Rate		Water Loop Heat Pump				Ground Water Heat Pump				Ground Loop Heat Pump			
				Cooling EWT 86°F		Heating EWT 68°F		Cooling EWT 59°F		Heating EWT 50°F		Cooling Brine Full Load 77°F Part Load 68°F		Heating Brine Full Load 32°F Part Load 41°F	
		gpm	cfm	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btuh/W	Capacity Btu/h	COP
015	Single	4.0	500	14,400	16.5	18,500	5.3	16,700	27.0	15,500	4.7	15,000	18.8	12,000	4.0
018	Single	5.0	600	18,000	16.5	23,000	5.3	21,000	26.8	19,000	4.7	18,500	19.0	14,700	4.1
024	Single	8.0	800	24,800	17.0	29,600	5.3	28,100	27.5	23,900	4.6	26,000	19.6	18,900	3.8
030	Single	8.0	900	27,800	19.2	30,600	5.7	31,200	29.5	24,400	4.8	29,400	21.9	20,000	4.0
036	Single	9.0	1200	34,900	21.6	34,200	6.0	38,000	30.1	28,200	5.1	35,400	22.4	24,100	4.4
042	Single	11.0	1300	40,800	20.0	42,800	5.7	46,200	29.5	35,000	4.9	42,000	21.8	27,500	4.2
048	Single	12.0	1500	47,300	18.5	53,100	5.4	53,000	26.1	43,400	4.7	49,300	20.1	35,000	3.9
060	Single	15.0	1800	61,300	16.6	69,000	5.3	69,000	24.7	57,000	4.7	65,500	19.2	45,000	4.0
070	Single	18.0	2000	67,000	15.4	81,800	5.0	77,400	23.8	67,000	4.4	70,600	18.0	52,500	3.7
026	Full	8.0	950	26,000	17.3	30,300	5.5	29,000	24.0	25,100	5.0	27,700	20.4	19,500	4.3
	Part	7.0	750	20,000	19.5	22,300	6.4	22,600	32.7	18,300	5.3	22,000	27.9	16,300	4.8
038	Full	9.0	1300	39,000	18.0	40,300	5.4	39,400	24.1	33,600	4.8	40,200	21.0	26,700	4.1
	Part	8.0	1150	28,500	20.3	29,100	6.3	31,500	35.4	24,000	5.1	30,100	30.0	22,000	4.8
049	Full	12.0	1600	50,300	17.1	56,100	5.2	56,200	24.5	46,300	4.6	52,000	20.0	37,400	4.0
	Part	11.0	1400	37,200	19.2	39,800	5.8	41,500	33.0	32,300	4.7	40,600	28.5	30,000	4.6
064	Full	16.0	1800	62,000	16.3	70,600	5.2	70,100	23.9	58,000	4.7	65,100	18.7	47,100	4.0
	Part	14.0	1500	45,000	18.0	50,100	5.8	51,500	29.9	41,300	5.0	50,000	25.9	37,000	4.4
072	Full	18.0	2000	69,000	15.0	81,900	4.8	78,500	22.0	67,500	4.3	71,600	17.0	54,200	3.7
	Part	16.0	1500	52,800	16.0	61,400	5.2	61,000	27.0	49,400	4.4	59,000	23.4	45,000	4.1

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature  
Heating capacities based upon 68°F DB, 59°F WB entering air temperature  
All ratings based upon 208V operation

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

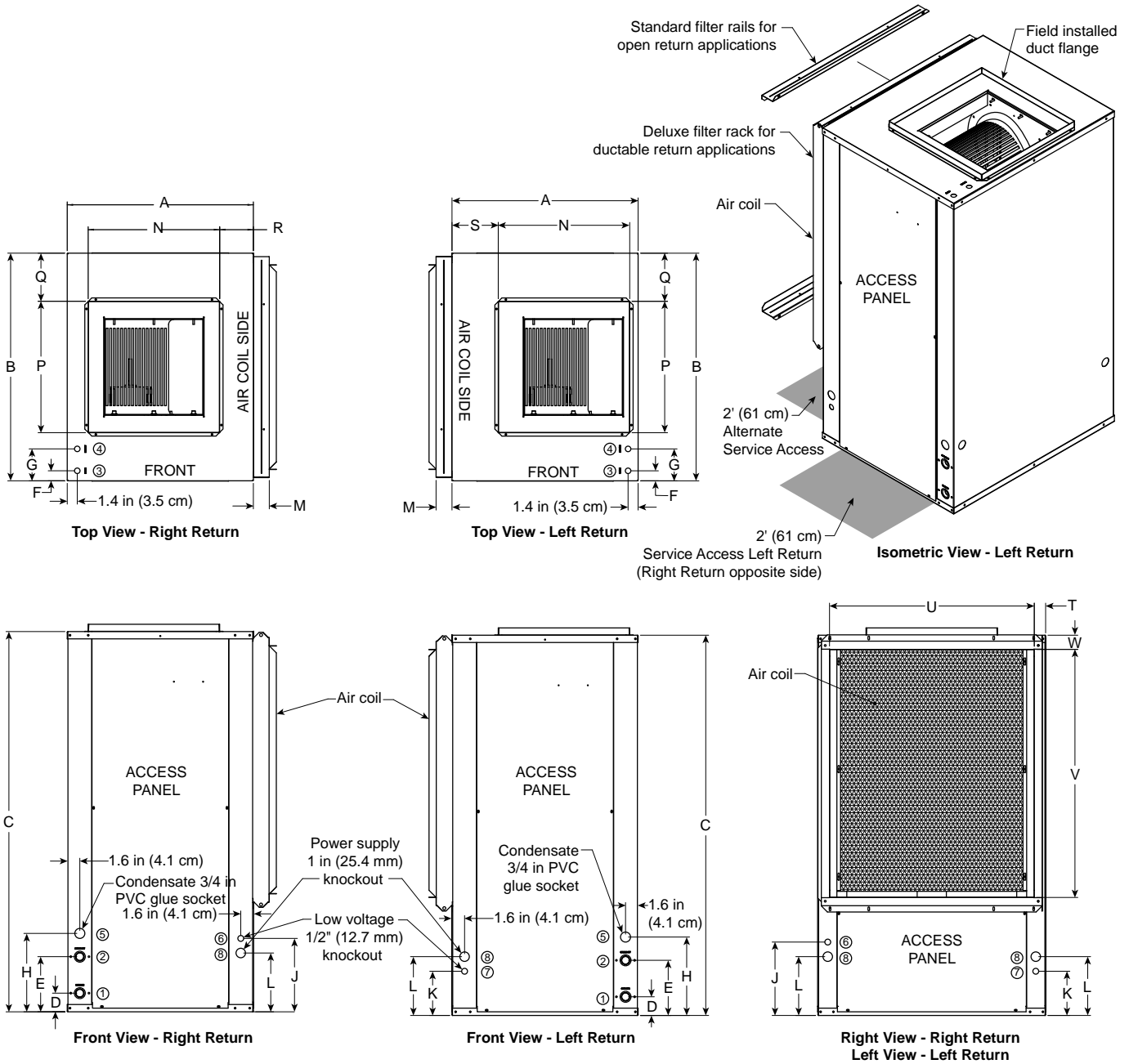
Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_

**Aston Compact Series**  
**0.75 - 6 Tons 60Hz**



## Vertical Dimensional Data



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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Vertical Dimensional Data cont.

Vertical Models	Overall Cabinet			Water Connections							Electrical Knockouts			
	A	B	C	1	2	3	4	5			6	7	8	
	Width	Depth	Height*	D	E	F	G	H	Loop	Knockout	J	K	L	
				In	Out	HWG In	HWG Out	Condensate	Water FPT	HWG Provisions	1/2 in. cond	1/2 in. cond	1 in. cond	
009-012	in.	22.5	22.2	30.2	2.6	7.6	N/A	N/A	10.8	1/2 in.	N/A	9.4	5.4	7.4
	cm.	57.2	56.4	76.7	6.6	19.3	N/A	N/A	27.4	12.7 mm	N/A	23.9	13.7	18.8
015-018	in.	22.5	26.2	40.2	2.6	7.6	1.4	4.4	10.8	3/4 in.	0.875	10.1	6.1	8.1
	cm.	57.2	66.5	102.1	6.6	19.3	3.6	11.2	27.4	19.1 mm	22.2 mm	25.7	15.5	20.6
024-030	in.	22.5	26.2	44.2	2.6	7.6	1.4	4.4	10.8	3/4 in.	0.875	10.1	6.1	8.1
	cm.	57.2	66.5	112.3	6.6	19.3	3.6	11.2	27.4	19.1 mm	22.2 mm	25.7	15.5	20.6
036-038	in.	25.5	31.2	44.2	2.6	7.6	1.4	4.4	10.8	1 in.	0.875	10.1	6.1	8.1
	cm.	64.8	79.2	112.3	6.6	19.3	3.6	11.2	27.4	25.4 mm	22.2 mm	25.7	15.5	20.6
042-049	in.	25.5	31.2	48.2	2.6	7.6	1.4	4.4	10.8	1 in.	0.875	10.1	6.1	8.1
	cm.	64.8	79.2	122.4	6.6	19.3	3.6	11.2	27.4	25.4 mm	22.2 mm	25.7	15.5	20.6
060-072	in.	25.5	31.2	52.2	2.6	7.6	1.4	4.4	10.8	1 in.	0.875	10.1	6.1	8.1
	cm.	64.8	79.2	132.6	6.6	19.3	3.6	11.2	27.4	25.4 mm	22.2 mm	25.7	15.5	20.6

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Vertical Models	Discharge Connection duct flange installed (±0.10 in)						**Return Connection using deluxe filter rack (±0.10 in)				
	M	N	P	Q	R	S	T	U	V	W	
	Filter Rack Width	Supply Width	Supply Depth					Return Depth	Return Height		
009-012	in.	2.2	10.0	10.0	6.1	5.3	9.8	2.0	18.1	14.0	2.0
	cm.	5.6	25.4	25.4	15.5	13.5	24.9	5.1	46.0	35.6	5.1
015-018	in.	2.2	14.0	14.0	6.1	4.5	7.7	2.0	22.1	22.0	1.9
	cm.	5.6	35.6	35.6	15.5	11.4	19.6	5.1	56.1	55.9	4.8
024-030	in.	2.2	14.0	14.0	6.1	4.5	7.7	2.0	22.1	26.1	1.8
	cm.	5.6	35.6	35.6	15.5	11.4	19.6	5.1	56.1	66.3	4.6
036-038	in.	2.2	18.0	18.0	6.6	4.6	6.3	1.6	28.1	26.1	2.0
	cm.	5.6	45.7	45.7	16.8	11.7	16.0	4.1	71.4	66.3	5.1
042-049	in.	2.2	18.0	18.0	6.6	4.6	6.3	1.6	28.1	30.0	2.0
	cm.	5.6	45.7	45.7	16.8	11.7	16.0	4.1	71.4	76.2	5.1
060-072	in.	2.2	18.0	18.0	6.6	5.0	6.4	1.6	28.1	34.0	2.0
	cm.	5.6	45.7	45.7	16.8	12.7	16.3	4.1	71.4	86.4	5.1

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Condensate is 3/4 in. PVC female glue socket and is switchable from side to front.

\*Discharge flange is field installed and extends 1 in. (25.4 mm) from top of cabinet.

\*\*Vertical units shipped with standard 2 in. (field adjustable to 1 in.) open application filter rack extending 2.2 in. from unit and is not suitable for duct connection, for ductable return connection applications, order the deluxe 2 in. (field adjustable to 1 in.) duct collar/filter rack which extends 3.25 in. from the unit and is suitable for duct connections.

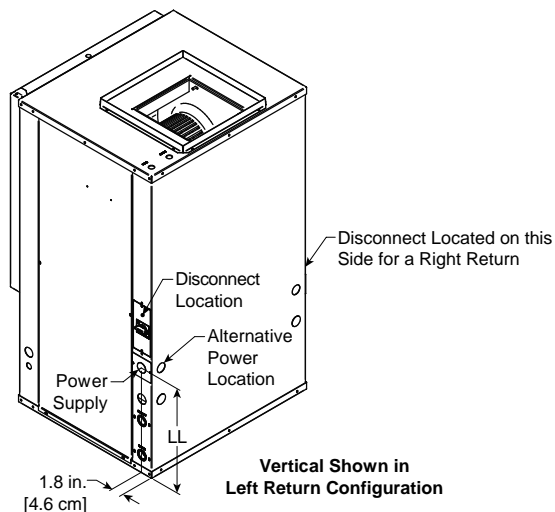
### Vertical Disconnect

When using disconnect, do not use dimension L from the standard vertical dimensional data. Use dimension LL from the vertical disconnect dimensional data.

Vertical Models	LL
009-012	17.8 [45.2]
015-018	14.3 [36.3]
024-030	15.3 [38.9]
036-038	14.3 [36.3]
042-049	14.3 [36.3]
060-064	14.3 [36.3]
070-072	External

Dimensions in inches [cm]

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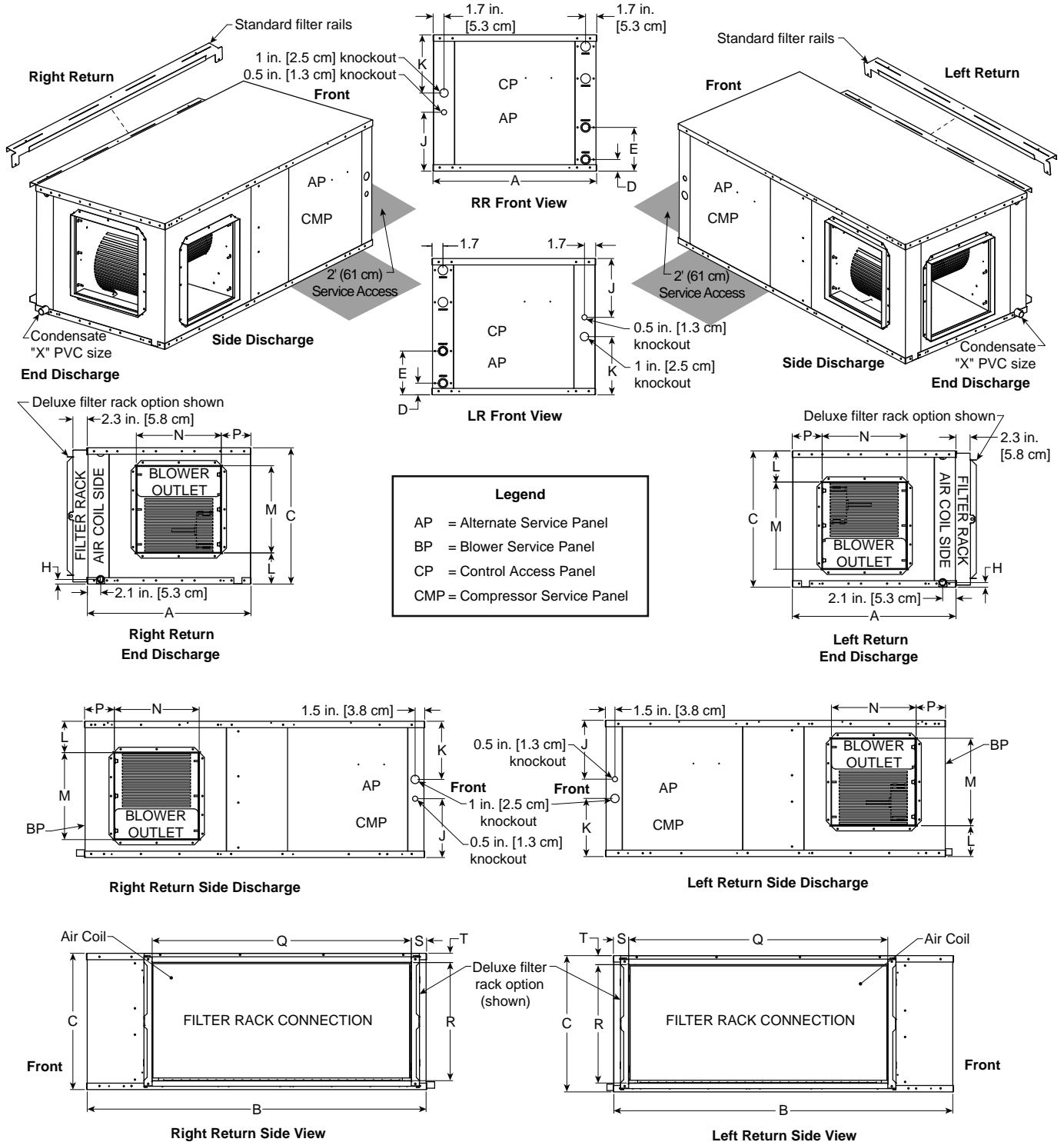
Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Horizontal Dimensional Data



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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Horizontal Dimensional Data cont.

Horizontal Models	Overall Cabinet			Water Connections				Electrical Knockouts		
	A	B	C	1	2	3	J	K		
	Width	Depth	Height*	D In	E Out	H Condensate	Loop Water FPT	1/2 in. cond Low Voltage	1 in. cond Power Supply	
009-012	in.	22.5	35.0	17.2	1.8	6.8	0.8	1/2 in.	7.1	7.1
	cm.	57.2	88.9	43.7	4.6	17.3	2.0	12.7 mm	18.0	18.0
015-018	in.	22.5	42.0	19.2	1.8	6.8	0.8	3/4 in.	9.1	7.1
	cm.	57.2	106.7	48.8	4.6	17.3	2.0	19.05 mm	23.1	18.0
024-030	in.	22.5	45.0	19.2	1.8	6.8	0.8	3/4 in.	9.2	7.1
	cm.	57.2	114.3	48.8	4.6	17.3	2.0	19.05 mm	23.4	18.0
036-038	in.	25.5	48.0	21.2	1.8	6.8	0.8	1 in.	9.2	9.1
	cm.	64.8	121.9	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1
042-049	in.	25.5	53.0	21.2	1.8	6.8	0.8	1 in.	9.2	9.1
	cm.	64.8	134.6	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1
060-064	in.	25.5	61.0	21.2	1.8	6.8	0.8	1 in.	9.2	9.1
	cm.	64.8	154.9	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1
070-072	in.	25.5	68.0	21.2	1.8	6.8	0.8	1 in.	9.2	9.1
	cm.	64.8	172.7	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1

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Horizontal Models	Discharge Connection duct flange installed (±0.10 in.)				Return Connection using deluxe filter rack option (±0.10 in.)				PVC Size	
	L	M	N	P	Q	R	S	T	X	
		Supply Width	Supply Depth		Return Depth	Return Height				
009-012	in.	5.9	7.2	9.5	6.0	16.4	14.5	2.0	1.4	3/4"
	cm.	15.0	18.3	24.1	15.2	41.7	36.8	5.1	3.6	1.9
015-018	in.	6.7	10.5	9.4	4.9	27.4	16.6	2.0	1.4	3/4"
	cm.	17.0	26.7	23.9	12.4	69.6	42.2	5.1	3.6	1.9
024-030	in.	6.7	10.5	9.4	4.9	30.4	16.6	2.0	1.5	3/4"
	cm.	17.0	26.7	23.9	12.4	77.2	42.2	5.1	3.8	1.9
036-038	in.	4.9	13.6	13.2	4.6	35.4	18.6	2.3	1.4	3/4"
	cm.	12.4	34.5	33.5	11.7	89.9	47.2	5.8	3.6	1.9
042-049	in.	4.9	13.6	13.2	4.6	40.4	18.6	2.3	1.4	3/4"
	cm.	12.4	34.5	33.5	11.7	102.6	47.2	5.8	3.6	1.9
060-064	in.	4.9	13.6	13.2	4.6	45.4	18.6	2.3	1.4	3/4"
	cm.	12.4	34.5	33.5	11.7	115.3	47.2	5.8	3.6	1.9
070-072	in.	4.9	13.6	13.2	4.6	45.4	18.6	2.3	1.4	3/4"
	cm.	12.4	34.5	33.5	11.7	115.3	47.2	5.8	3.6	1.9

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Horizontal units shipped with standard 2 in. (field adjustable to 1 in.) open application filter rack extending 2.2 in. from unit and is not suitable for duct connection, for ductable return connection applications, order the deluxe 2 in. (field adjustable to 1 in.) filter rail/filter rack which extends 3.25 in. from the unit and is suitable for duct connections.

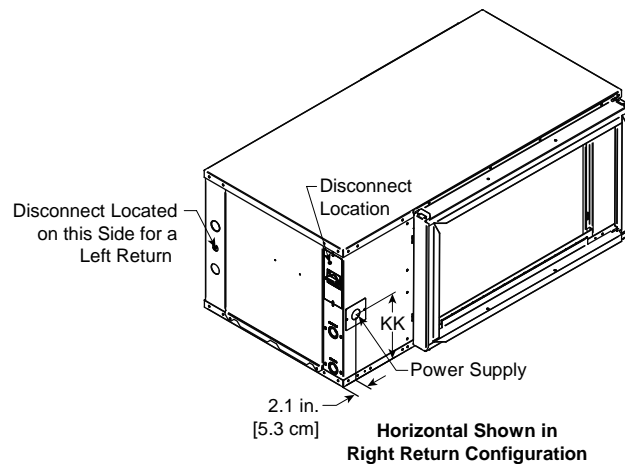
## Horizontal Disconnect

When using disconnect, do not use dimension K from the standard horizontal dimensional data. Use dimension KK from the horizontal disconnect dimensional data.

Horizontal Models	KK
009-012	8.2 [20.8]
015-018	9.2 [23.4]
024-030	9.2 [23.4]
036-038	11.2 [28.4]
042-049	10.2 [25.9]
060-064	11.2 [28.4]
070-072	10.2 [25.9]

Dimensions in inches [cm]

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Horizontal Shown in Right Return Configuration

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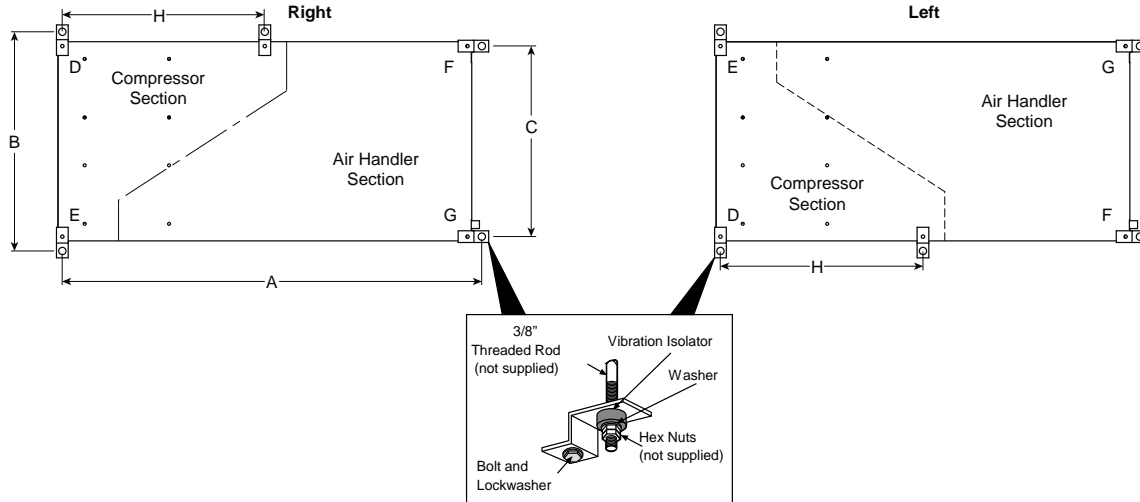
Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Hanger Bracket Locations



**NOTE:** Model sizes 070-072 will be shipped with six (6) hanger brackets. Only five (5) hanger brackets will be used on the unit. See the above illustration for the fifth hanger bracket location. All other models will use four (4) hanger brackets.

### Hanger Bracket Dimensions

Model	Hanger Kit Part Number	Unit Hanger Dimensions					
		A	B	C	H		
Single Speed	009-012	in.	99S500A04	35.7	25.1	21.4	n/a
		cm.		90.7	63.8	54.4	n/a
	015-018	in.	99S500A04	42.8	25.1	21.4	n/a
		cm.		108.7	63.8	54.4	n/a
	024-030	in.	99S500A04	45.8	25.1	21.4	n/a
		cm.		116.3	63.8	54.4	n/a
	036	in.	99S500A04	48.8	28.1	24.4	n/a
		cm.		124.0	71.4	62.0	n/a
	042-048	in.	99S500A04	53.8	28.1	24.4	n/a
		cm.		136.7	71.4	62.0	n/a
	060	in.	99S500A04	61.8	28.1	24.4	n/a
		cm.		157.0	71.4	62.0	n/a
070	in.	99S500A03	68.8	28.1	24.4	34.0	
	cm.		174.8	71.4	62.0	74.4	
Dual Capacity	026	in.	99S500A04	45.8	25.1	21.4	n/a
		cm.		116.3	63.8	54.4	n/a
	038	in.	99S500A03	48.8	28.1	24.4	n/a
		cm.		124.0	71.4	62.0	n/a
	049	in.	99S500A04	53.8	28.1	24.4	n/a
		cm.		136.7	71.4	62.0	n/a
	064	in.	99S500A04	61.8	28.1	24.4	n/a
		cm.		157.0	71.4	62.0	n/a
	072	in.	99S500A03	68.8	28.1	24.4	34.0
		cm.		174.8	71.4	62.0	74.4

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### Weight Distribution

Model	Vertical Weight	Horizontal Weight	Horizontal Weight Distribution				
			Front		Back		
			D	E	F	G	
Single Speed	009	171	176	32	67	32	45
		[78]	[80]	[15]	[30]	[15]	[20]
	012	171	176	32	67	32	45
		[78]	[80]	[15]	[30]	[15]	[20]
	015	210	220	65	40	70	35
		[95]	[100]	[29]	[18]	[32]	[16]
	018	210	220	65	40	70	35
		[95]	[100]	[29]	[18]	[32]	[16]
	024	280	295	75	70	75	20
		[127]	[134]	[34]	[31]	[34]	[13]
	030	285	295	75	70	75	30
		[129]	[134]	[34]	[31]	[34]	[13]
036	300	305	85	80	85	40	
	[136]	[138]	[39]	[36]	[39]	[18]	
042	365	375	115	95	75	60	
	[166]	[170]	[52]	[43]	[34]	[27]	
048	370	380	120	100	80	65	
	[168]	[172]	[54]	[45]	[36]	[29]	
060	410	420	120	110	95	80	
	[186]	[191]	[54]	[50]	[43]	[36]	
070	445	455	135	120	100	85	
	[202]	[206]	[61]	[54]	[45]	[39]	
Dual Capacity	026	280	295	75	70	75	50
		[127]	[134]	[34]	[31]	[34]	[13]
	038	360	375	115	95	75	60
		[163]	[170]	[52]	[43]	[34]	[27]
	049	370	380	120	100	80	65
		[168]	[172]	[54]	[45]	[36]	[29]
	064	410	420	120	110	95	80
		[186]	[191]	[54]	[50]	[43]	[36]
	072	445	455	135	120	100	85
		[202]	[206]	[61]	[54]	[45]	[39]

Weights are listed in lbs. [kg].

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Physical Data

Model		Single Speed										
		009	012	015	018	024	030	036	042	048	060	070
Compressor (1 each)		Rotary					Scroll					
Factory Charge R-410A, oz [kg] Vertical		29 [0.82]	36 [1.02]	38 [1.08]	48 [1.36]	56 [1.59]	68 [1.93]	84 [2.38]	86 [2.44]	92 [2.61]	100 [2.83]	128 [3.63]
Factory Charge R-410A, oz [kg] Horizontal		29 [0.82]	36 [1.02]	42 [1.19]	42 [1.19]	54 [1.53]	64 [1.81]	78 [2.21]	84 [2.38]	92 [2.61]	84 [2.38]	118 [3.35]
<b>Blower Motor &amp; Blower</b>												
Blower Motor Type/Speeds	VS ECM	Not Available			Variable Speed ECM							
	5-Spd ECM	Not Available			5-Speed ECM							
	PSC	PSC 4 Speeds			PSC - 3 Speeds							
Blower Motor, hp [W]	VS ECM	Not Available		1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
	5-Spd ECM	Not Available		1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]	1 [746]	1 [746]
	PSC	1/10 [75]	1/10 [75]	1/6 [134]	1/6 [134]	1/5 [149]	1/3 [249]	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
Oversized PSC Blower Motor, hp [W]	VS ECM	Not Available							1 [746]	1 [746]	Not Available	
	PSC	Not Available				1/3 [249]	1/2 [373]	1/2 [373]	3/4 [560]	3/4 [560]	N/A	N/A
Blower Wheel Size (Dia x W), in. [mm]	VS ECM	Not Available		9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
	5-Spd ECM	Not Available		9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
	PSC	6 x 8 [152 x 203]	6 x 8 [152 x 203]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Oversized Blower Wheel Size (Dia x W), in. [mm]	VS ECM	Not Available						11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	Not Available	
	PSC	Not Available				9 x 7 [229 x 178]	9 x 7 [229 x 178]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	10 x 10 [254 x 254]	Not Available	
<b>Coax and Water Piping</b>												
Water Connections Size - FPT - in. [mm]		1/2 [12.7]	1/2 [12.7]	3/4 [19.05]	3/4 [19.05]	3/4 [19.05]	3/4 [19.05]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
HWG Connection Size - Female Sweat I.D. - in [mm] (Vertical Only)		Not Available			1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]
Coax and Piping Water Volume - gal [l]		0.26 [0.98]	0.3 [1.12]	0.4 [1.49]	0.4 [1.49]	0.4 [1.49]	0.75 [2.83]	0.9 [3.41]	0.9 [3.41]	1.25 [4.72]	1.5 [5.68]	1.5 [5.68]
<b>Vertical</b>												
Air Coil Dimensions (H x W), in. [mm]		12 x 16 [305 x 406]	16 x 16 [406 x 406]	19 x 20 [483 x 508]	19 x 20 [483 x 508]	24 x 20 [610 x 508]	28 x 20 [711 x 508]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Air Coil Total Face Area, ft² [m²]		1.3 [0.121]	1.8 [0.167]	2.6 [0.242]	2.6 [0.242]	3.3 [0.307]	3.9 [0.362]	4.9 [0.455]	5.6 [0.520]	5.6 [0.520]	6.3 [0.585]	6.3 [0.585]
Air Coil Tube Size, in [mm]		5/16 [7.9]	3/8 [9.5]	5/16 [7.9]	5/16 [7.9]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	3	3	3	3	3	3	4	4
Filter Standard - 1 in. [25mm] Pleated MERV 4 Throwaway, in [mm]		1 - 16 x 20 [406 x 508]	1 - 16 x 18 [406 x 457]	1 - 24 x 24 [610 x 610]	1 - 24 x 24 [610 x 610]	28 x 24 [712 x 610]	28 x 24 [712 x 610]	28 x 30 [712 x 762]	32 x 30 [813 x 762]	32 x 30 [813 x 762]	30 x 36 [762 x 914]	30 x 36 [762 x 914]
Filter Standard - 2 in. [51mm] Pleated MERV 13 Throwaway, in [mm]		1 - 16 x 20 [406 x 508]	1 - 16 x 18 [406 x 457]	1 - 24 x 24 [610 x 610]	1 - 24 x 24 [610 x 610]	28 x 24 [712 x 610]	28 x 24 [712 x 610]	28 x 30 [712 x 762]	32 x 30 [813 x 762]	32 x 30 [813 x 762]	30 x 36 [762 x 914]	30 x 36 [762 x 914]
<b>Horizontal</b>												
Air Coil Dimensions (H x W), in. [mm]		12 x 16 [305 x 406]	16 x 16 [406 x 406]	18 x 21 [457 x 533]	18 x 21 [457 x 533]	18 x 27 [457 x 686]	18 x 30 [457 x 762]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 40 [508 x 1016]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Air Coil Total Face Area, ft² [m²]		1.3 [0.121]	1.8 [0.167]	2.6 [0.242]	2.6 [0.242]	3.4 [0.316]	3.8 [0.353]	4.9 [0.455]	5.6 [0.520]	5.6 [0.520]	6.3 [0.585]	6.3 [0.585]
Air Coil Tube Size, in. [mm]		5/16 [7.9]	3/8 [9.5]	5/16 [7.9]	5/16 [7.9]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	3	3	3	3	3	3	3	3
Filter Standard - 1 in. [25mm] Pleated MERV 4 Throwaway, in. [mm]		1 - 16 x 18 [406 x 508]	1 - 16 x 18 [406 x 508]	2 - 18 x 14 [457 x 356]	2 - 18 x 14 [457 x 356]	1 - 18 x 18 [457 x 457] 1 - 18 x 14 [457 x 356]	1 - 18 x 18 [457 x 457] 1 - 18 x 14 [457 x 356]	2 - 18 x 20 [457 x 508]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]
Filter Standard - 2 in. [51mm] Pleated MERV 13 Throwaway, in. [mm]		1 - 16 x 18 [406 x 508]	1 - 16 x 18 [406 x 508]	1 - 18 x 29 [457 x 737]	1 - 18 x 29 [457 x 737]	1 - 18 x 32 [457 x 813]	1 - 18 x 32 [457 x 813]	1 - 20 x 37 [686 x 940]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Physical Data cont.

Model		Dual Capacity				
		026	038	049	064	072
Compressor (1 each)		Copeland 2-speed Scroll, UltraTech				
Factory Charge R410-A, oz [kg]	Vertical	56 [1.59]	78 [2.21]	93 [2.64]	104 [2.95]	128 [3.63]
Factory Charge R410-A, oz [kg]	Horizontal	52 [1.47]	74 [2.10]	93 [2.64]	118 [3.35]	138 [3.91]
<b>Variable Speed ECM Blower Motor and Blower</b>		Variable Speed ECM				
Blower Motor Type/Speeds		5-Speed ECM				
Blower Motor- hp [W]	VS ECM	1/2 [373]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
	5-Spd ECM	1/2 [373]	1/2 [373]	1 [746]	1 [746]	1 [746]
Oversized Blower Motor- hp [W]	VS ECM	not available	1 [746]	1 [746]	Not Available	Not Available
Blower Wheel Size (Dia x W), in. [mm]	VS ECM	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
	5-Spd ECM	9 x 7 [229 x 178]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]	11 x 10 [279 x 254]
Oversized Blower Wheel Size (Dia x W), in. [mm]	VS ECM	Not Available	11 x 10 [279 x 254]	11 x 10 [279 x 254]	Not Available	Not Available
<b>Coax and Water Piping</b>						
Water Connections Size - FPT - in [mm]		3/4 [19.05]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
HWG Connection Size - Female Sweat I.D. - in. [mm] (Vertical Only)		1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]	1/2 [12.7]
Coax and Piping Water Volume - gal [l]		0.7 [2.6]	1.3 [4.9]	1.6 [6.1]	1.6 [6.1]	2.3 [8.7]
<b>Vertical</b>						
Air Coil Dimensions (H x W), in. [mm]		24 x 20 [610 x 508]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]	36 x 25 [914 x 635]
Air Coil Total Face Area, ft <sup>2</sup> [m <sup>2</sup> ]		3.3 [0.307]	4.9 [0.451]	5.6 [0.520]	6.3 [0.585]	6.3 [0.585]
Air Coil Tube Size, in. [mm]		3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	4	4
Filter Standard - 1 in. [25mm] Pleated MERV 4 Throwaway, in. [mm]		28 x 24 [712 x 610]	28 x 30 [711 x 762]	32 x 30 [813 x 762]	36 x 30 [914 x 762]	30 x 36 [762 x 914]
Filter Standard - 2 in. [51mm] Pleated MERV 13 Throwaway, in. [mm]		28 x 24 [712 x 610]	28 x 30 [711 x 762]	32 x 30 [813 x 762]	30 x 36 [762 x 914]	30 x 36 [762 x 914]
<b>Horizontal</b>						
Air Coil Dimensions (H x W), in. [mm]		18 x 27 [457 x 686]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 45 [508 x 1143]	20 x 45 [508 x 1143]
Air Coil Total Face Area, ft <sup>2</sup> [m <sup>2</sup> ]		3.4 [0.316]	4.9 [0.451]	5.6 [0.520]	6.3 [0.585]	6.3 [0.585]
Air Coil Tube Size, in. [mm]		3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	3	4	4
Filter Standard - 1 in. [25mm] Pleated MERV 4 Throwaway, in. [mm]		1 - 18 x 18 [457 x 457] 1 - 18 x 14 [457 x 356]	2 - 18 x 20 [457 x 508]	1 - 20 x 22 [508 x 559] 1 - 20 x 20 [508 x 508]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]
Filter Standard - 2 in. [51mm] Pleated MERV 13 Throwaway, in. [mm]		1 - 18 x 32 [457 x 813]	1 - 20 x 37 [508 x 940]	1 - 20 x 20 [508 x 508] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]	1 - 20 x 25 [508 x 635] 1 - 20 x 22 [508 x 559]

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Electrical Availability

### PSC

Voltage	Static Option	Single Speed Models										Dual Capacity Models					
		009	012	015	018	024	030	036	042	048	060	070	026	038	049	064	072
208-230/60/1	Standard	.	.	.	.	.	.	.	.	.	.	.					
208-230/60/1 w/IntelliStart					.	.	.	.	.	.	.	.					
265/60/1		.	.	.	.	.	.	.									
208-230/60/3 (also w/IntelliStart)						.	.	.	.	.	.	.					
460/60/3 (also w/IntelliStart)						.	.	.	.	.	.	.					
575/60/3									.			.	.				
208-230/60/1 (also w/IntelliStart)	High					.	.	.	.	.	.						
265/60/1						.	.	.									
208-230/60/3 (also w/IntelliStart)						.	.	.	.	.							
460/60/3 (also w/IntelliStart)						.	.	.	.	.							
575/60/3									.	.							

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### 5-Speed ECM

Voltage	Static Option	Single Speed Models									Dual Capacity Models				
		015	018	024	030	036	042	048	060	070	026	038	049	064	072
208-230/60/1	Standard	.	.	.	.	.	.	.	.	.	.	.	.	.	.
208-230/60/1 w/IntelliStart			.	.	.	.	.	.	.	.	.	.	.	.	.
265/60/1		.	.	.	.	.					.	.			
208-230/60/3 (also w/IntelliStart)					.	.	.	.	.	.	.	.	.	.	.
460/60/3 (also w/IntelliStart)					.	.	.	.	.	.	.	.	.	.	.
575/60/3															

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### Variable Speed ECM

Voltage	Static Option	Single Speed Models									Dual Capacity Models				
		015	018	024	030	036	042	048	060	070	026	038	049	064	072
208-230/60/1	Standard	.	.	.	.	.	.	.	.	.	.	.	.	.	.
208-230/60/1 w/IntelliStart			.	.	.	.	.	.	.	.	.	.	.	.	.
265/60/1		.	.	.	.	.					.	.			
208-230/60/3 (also w/IntelliStart)					.	.	.	.	.	.	.	.	.	.	.
460/60/3 (also w/IntelliStart)					.	.	.	.	.	.	.	.	.	.	.
575/60/3															
208-230/60/1	High					.	.	.				.	.		
265/60/1						.						.			
208-230/60/3 (also w/IntelliStart)						.	.	.				.	.		
460/60/3 (also w/IntelliStart)						.	.	.				.	.		
575/60/3															

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Electrical Data

### PSC Motor

Model	Rated Voltage	Voltage Min/Max	Compressor				Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/HACR Breaker
			MCC	RLA	LRA	LRA**				
009	208-230/60/1	187/253	6.4	4.1	21.0	n/a	0.6	4.7	5.7	10/15
	265/60/1	238/292	6.7	4.3	22.0	n/a	0.6	4.9	6.0	10/15
012	208-230/60/1	187/253	7.7	4.9	25.0	n/a	0.6	5.5	6.7	10/15
	265/60/1	238/292	7.0	4.5	22.0	n/a	0.6	5.1	6.2	10/15
015	208-230/60/1	187/253	9.7	6.2	29.0	n/a	1.1	7.3	8.9	15
	265/60/1	238/292	7.8	5.0	28.0	n/a	1.0	6.0	7.3	10/15
018	208-230/60/1	187/253	13.1	8.4	33.5	13.4	1.1	9.5	11.6	20
	265/60/1	238/292	8.7	5.6	28.0	n/a	1.0	6.6	8.0	10/15
024	208-230/60/1	187/253	21.0	13.5	58.3	23.3	1.2	14.7	18.1	25
	265/60/1	238/292	14.0	9.0	54.0	n/a	1.1	10.1	12.4	20
	208-230/60/3	187/253	11.0	7.1	55.4	33.2	1.2	8.3	10.1	15
	460/60/3	414/506	5.5	3.5	28.0	16.8	0.6	4.1	5.0	10/15
024*	208-230/60/1	187/253	21.0	13.5	58.3	23.3	1.5	15.0	18.4	30
	265/60/1	238/292	14.0	9.0	54.0	n/a	1.5	10.5	12.8	20
	208-230/60/3	187/253	11.0	7.1	55.4	33.2	1.5	8.6	10.4	15
	460/60/3	414/506	5.5	3.5	28.0	16.8	1.0	4.5	5.4	10/15
030	208-230/60/1	187/253	20.0	12.8	58.0	23.2	1.5	14.3	17.5	30
	265/60/1	238/292	15.0	9.6	54.0	n/a	1.5	11.1	13.5	20
	208-230/60/3	187/253	12.0	7.7	55.4	33.2	1.5	9.2	11.1	15
030*	460/60/3	414/506	5.6	3.6	28.0	16.8	1.0	4.6	5.5	10/15
	208-230/60/1	187/253	20.0	12.8	58.0	23.2	2.8	15.6	18.8	30
	265/60/1	238/292	15.0	9.6	54.0	n/a	2.0	11.6	14.0	20
	208-230/60/3	187/253	12.0	7.7	55.4	33.2	2.2	9.9	11.8	15
036	460/60/3	414/506	5.6	3.6	28.0	16.8	1.1	4.7	5.6	10/15
	208-230/60/1	187/253	22.0	14.1	73.0	29.2	2.8	16.9	20.4	30
	265/60/1	238/292	17.5	11.2	60.0	n/a	2.0	13.2	16.0	25
	208-230/60/3	187/253	13.9	8.9	58.0	34.8	2.8	11.7	13.9	20
036*	460/60/3	414/506	6.5	4.2	28.0	16.8	1.4	5.6	6.7	10/15
	208-230/60/1	187/253	22.0	14.1	73.0	29.2	3.5	17.6	21.1	35
	265/60/1	238/292	17.5	11.2	60.0	n/a	3.5	14.7	17.5	25
	208-230/60/3	187/253	13.9	8.9	58.0	34.8	1.8	10.7	12.9	20
042	460/60/3	414/506	6.5	4.2	28.0	16.8	1.8	5.6	6.7	10/15
	208-230/60/1	187/253	26.0	16.7	79.0	31.6	3.5	20.2	24.4	40
	208-230/60/3	187/253	16.3	10.4	73.0	43.8	3.5	13.9	16.5	25
	460/60/3	414/506	9.0	5.8	38.0	22.8	1.8	7.6	9.0	10/15
042*	575/60/3	517/633	5.9	3.8	36.5	n/a	1.4	5.2	6.1	10/15
	208-230/60/1	187/253	26.0	16.7	79.0	31.6	4.6	21.3	25.5	40
	208-230/60/3	187/253	16.3	10.4	73.0	43.8	4.6	15.0	17.6	25
	460/60/3	414/506	9.0	5.8	38.0	22.8	2.3	8.1	9.5	15
048	575/60/3	517/633	5.9	3.8	36.5	n/a	1.9	5.7	6.6	10/15
	208-230/60/1	187/253	31.0	19.9	109.0	43.6	3.5	23.4	28.4	45
	208-230/60/3	187/253	21.2	13.6	83.1	49.9	3.5	17.1	20.5	30
	460/60/3	414/506	9.5	6.1	41.0	24.6	1.8	7.9	9.4	15
048*	575/60/3	517/633	6.5	4.2	33.0	n/a	1.4	5.6	6.7	10/15
	208-230/60/1	187/253	31.0	19.9	109.0	43.6	4.6	24.5	29.5	45
	208-230/60/3	187/253	21.2	13.6	83.1	49.9	4.6	18.2	21.6	35
	460/60/3	414/506	9.5	6.1	41.0	24.6	2.3	8.4	9.9	15
060	575/60/3	517/633	6.5	4.2	33.0	n/a	1.9	6.1	7.2	10/15
	208-230/60/1	187/253	41.2	26.4	134.0	53.6	5.9	32.3	38.9	60
	208-230/60/3	187/253	24.9	16.0	110.0	66.0	5.9	21.9	25.9	40
	460/60/3	414/506	12.1	7.8	52.0	31.2	3.0	10.8	12.8	20
070	575/60/3	517/633	8.9	5.7	38.9	n/a	1.9	7.6	9.0	10/15
	208-230/60/1	187/253	44.2	28.3	178.0	71.2	5.9	34.2	41.3	70
	208-230/60/3	187/253	30.0	19.2	136.0	81.6	5.9	25.1	29.9	45
	460/60/3	414/506	13.6	8.7	66.1	39.7	3.0	11.7	13.9	20

8/06/13

HACR circuit breaker in USA only  
\*With optional High-static PSC motor  
\*\*With optional IntelliStart

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Electrical Data cont.

### 5-Speed ECM Motor

Model	Rated Voltage	Voltage Min/Max	Compressor				Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/HACR Breaker		
			MCC	RLA	LRA	LRA**						
Single Speed	015	208-230/60/1	187/253	9.7	6.2	29.0	n/a	4.1	10.3	11.9	15	
		265/60/1	238/292	7.8	5.0	28.0	n/a	3.6	8.6	9.9	10/15	
	018	208-230/60/1	187/253	13.1	8.4	33.5	13.4	4.1	12.5	14.6	20	
		265/60/1	238/292	8.7	5.6	28.0	n/a	3.6	9.2	10.6	15	
	024	208-230/60/1	187/253	21.0	13.5	58.3	23.3	4.1	17.6	21.0	30	
		265/60/1	238/292	14.0	9.0	54.0	n/a	3.6	12.6	14.9	20	
		208-230/60/3	187/253	11.0	7.1	55.4	33.2	4.1	11.2	13.0	20	
		460/60/3	414/506	5.5	3.5	28.0	16.8	2.1	5.6	6.5	10/15	
	030	208-230/60/1	187/253	20.0	12.8	58.0	23.2	4.1	16.9	20.1	30	
		265/60/1	238/292	15.0	9.6	54.0	n/a	3.6	13.2	15.6	25	
		208-230/60/3	187/253	12.0	7.7	55.4	33.2	4.1	11.8	13.7	20	
		460/60/3	414/506	5.6	3.6	28.0	16.8	2.1	5.7	6.6	10/15	
	036	208-230/60/1	187/253	22.0	14.1	73.0	29.2	4.1	18.2	21.7	35	
		265/60/1	238/292	17.5	11.2	60.0	n/a	3.6	14.8	17.6	25	
		208-230/60/3	187/253	13.9	8.9	58.0	34.8	4.1	13.0	15.2	20	
		460/60/3	414/506	6.5	4.2	28.0	16.8	2.1	6.3	7.4	10/15	
	042	208-230/60/1	187/253	26.0	16.7	79.0	31.6	7.6	24.3	28.5	45	
		208-230/60/3	187/253	16.3	10.4	73.0	43.8	7.6	18.0	20.6	30	
		460/60/3	414/506	9.0	5.8	38.0	22.8	4.0	9.8	11.2	15	
	048	208-230/60/1	187/253	31.0	19.9	109.0	43.6	7.6	27.5	32.5	50	
208-230/60/3		187/253	21.2	13.6	83.1	49.9	7.6	21.2	24.6	35		
460/60/3		414/506	9.5	6.1	41.0	24.6	4.0	10.1	11.6	15		
060	208-230/60/1	187/253	41.2	26.4	134.0	53.6	7.6	34.0	40.6	60		
	208-230/60/3	187/253	24.9	16.0	110.0	66.0	7.6	23.6	27.6	40		
	460/60/3	414/506	12.1	7.8	52.0	31.2	4.0	11.8	13.8	20		
070	208-230/60/1	187/253	44.2	28.3	178.0	71.2	7.6	35.9	43.0	70		
	208-230/60/3	187/253	30.0	19.2	136.0	81.6	7.6	26.8	31.6	50		
	460/60/3	414/506	13.6	8.7	66.1	39.7	4.0	12.7	14.9	20		
Dual Capacity	026	208-230/60/1	187/253	18.2	11.7	58.3	23.3	4.1	15.8	18.7	30	
		265/60/1	238/292	14.2	9.1	54.0	n/a	3.6	12.7	15.0	20	
		208-230/60/3	187/253	10.1	6.5	55.4	33.2	4.1	10.6	12.2	15	
		460/60/3	414/506	5.4	3.5	28.0	16.8	2.1	5.6	6.4	10/15	
	038	208-230/60/1	187/253	23.8	15.3	83.0	33.2	4.1	19.4	23.2	35	
		265/60/1	238/292	20.3	13.0	72.0	n/a	3.6	16.6	19.9	30	
		208-230/60/3	187/253	18.1	11.6	73.0	43.8	4.1	15.7	18.6	30	
		460/60/3	414/506	8.9	5.7	38.0	22.8	2.1	7.8	9.2	10/15	
	049	208-230/60/1	187/253	33.0	21.1	104.0	41.6	7.6	28.7	34.0	50	
		208-230/60/3	187/253	21.9	14.0	83.1	49.9	7.6	21.6	25.1	35	
		460/60/3	414/506	10.0	6.4	41.0	24.6	4.0	10.4	12.0	15	
	064	208-230/60/1	187/253	42.3	27.1	152.9	61.2	7.6	34.7	41.5	60	
		208-230/60/3	187/253	25.8	16.5	110.0	66.0	7.6	24.1	28.2	40	
		460/60/3	414/506	11.3	7.2	52.0	31.2	4.0	11.2	13.0	20	
	072	208-230/60/1	187/253	46.3	29.7	179.2	71.7	7.6	37.3	44.7	70	
		208-230/60/3	187/253	27.4	17.6	136.0	81.6	7.6	25.2	29.6	45	
			460/60/3	414/506	13.2	8.5	66.1	39.7	4.0	12.5	14.6	20

HACR circuit breaker in USA only

\*\*With optional IntelliStart

5/21/13

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Electrical Data cont.

### Variable Speed ECM Motor

Model	Rated Voltage	Voltage Min/Max	Compressor				Blower Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/HACR Breaker	
			MCC	RLA	LRA	LRA**					
Single Speed	015	208-230/60/1	187/253	9.7	6.2	29.0	n/a	4.0	10.2	11.8	15
		265/60/1	238/292	7.8	5.0	28.0	n/a	4.1	9.1	10.4	15
	018	208-230/60/1	187/253	13.1	8.4	33.5	13.4	4.0	12.4	14.5	20
		265/60/1	238/292	8.7	5.6	28.0	n/a	4.1	9.7	11.1	15
	024	208-230/60/1	187/253	21.0	13.5	58.3	23.3	4.0	17.5	20.9	30
		265/60/1	238/292	14.0	9.0	54.0	n/a	4.1	13.1	15.4	20
		208-230/60/3	187/253	11.0	7.1	55.4	33.2	4.0	11.1	12.9	20
	030	460/60/3	414/506	5.5	3.5	28.0	16.8	4.1	7.6	8.5	10/15
		208-230/60/1	187/253	20.0	12.8	58.0	23.2	4.0	16.8	20.0	30
		265/60/1	238/292	15.0	9.6	54.0	n/a	4.1	13.7	16.1	25
	036	208-230/60/3	187/253	12.0	7.7	55.4	33.2	4.0	11.7	13.6	20
		460/60/3	414/506	5.6	3.6	28.0	16.8	4.1	7.7	8.6	10/15
		208-230/60/1	187/253	22.0	14.1	73.0	29.2	4.0	18.1	21.6	35
	036*	265/60/1	238/292	17.5	11.2	60.0	n/a	4.1	15.3	18.1	25
		208-230/60/3	187/253	13.9	8.9	58.0	34.8	4.0	12.9	15.1	20
		460/60/3	414/506	6.5	4.2	28.0	16.8	4.1	8.3	9.4	10/15
	042	208-230/60/1	187/253	22.0	14.1	73.0	29.2	7.0	21.1	24.6	35
		265/60/1	238/292	17.5	11.2	60.0	n/a	6.9	18.1	20.9	30
		208-230/60/3	187/253	13.9	8.9	58.0	34.8	7.0	15.9	18.1	25
	042*	460/60/3	414/506	6.5	4.2	28.0	16.8	6.9	11.1	12.2	15
		208-230/60/1	187/253	26.0	16.7	79.0	31.6	4.0	20.7	24.9	40
		208-230/60/3	187/253	16.3	10.4	73.0	43.8	4.0	14.4	17.0	25
	048	460/60/3	414/506	9.0	5.8	38.0	22.8	4.1	9.9	11.3	15
		208-230/60/1	187/253	26.0	16.6	79.0	31.6	7.0	23.6	27.8	40
208-230/60/3		187/253	16.3	10.4	73.0	43.8	7.0	17.4	20.0	30	
048*	460/60/3	414/506	9.0	5.8	38.0	22.8	6.9	12.7	14.1	15	
	208-230/60/1	187/253	31.0	19.9	109.0	43.6	4.0	23.9	28.9	45	
	208-230/60/3	187/253	21.2	13.6	83.1	49.9	4.0	17.6	21.0	30	
048*	460/60/3	414/506	9.5	6.1	41.0	24.6	4.1	10.2	11.7	15	
	208-230/60/1	187/253	31.0	19.9	109.0	43.6	7.0	26.9	31.9	50	
	208-230/60/3	187/253	21.2	13.6	83.1	49.9	7.0	20.6	24.0	35	
060	460/60/3	414/506	9.5	6.1	41.0	24.6	6.9	13.0	14.5	20	
	208-230/60/1	187/253	41.2	26.4	134.0	53.6	7.0	33.4	40.0	60	
	208-230/60/3	187/253	24.9	16.0	110.0	66.0	7.0	23.0	27.0	40	
070	460/60/3	414/506	12.1	7.8	52.0	31.2	6.9	14.7	16.7	20	
	208-230/60/1	187/253	44.2	28.3	178.0	71.2	7.0	35.3	42.4	70	
	208-230/60/3	187/253	30.0	19.2	136.0	81.6	7.0	26.2	31.0	50	
Dual Capacity	026	460/60/3	414/506	13.6	8.7	66.1	39.7	6.9	15.6	17.8	25
		208-230/60/1	187/253	18.2	11.7	58.3	23.3	4.0	15.7	18.6	30
		265/60/1	238/292	14.2	9.1	54.0	n/a	4.1	13.2	15.5	20
038	208-230/60/3	187/253	10.1	6.5	55.4	33.2	4.0	10.5	12.1	15	
	460/60/3	414/506	5.4	3.5	28.0	16.8	4.1	7.6	8.4	10/15	
	208-230/60/1	187/253	23.8	15.3	83.0	33.2	4.0	19.3	23.1	35	
038*	265/60/1	238/292	20.3	13.0	72.0	n/a	4.1	17.1	20.4	30	
	208-230/60/3	187/253	18.1	11.6	73.0	43.8	4.0	15.6	18.5	30	
	460/60/3	414/506	8.9	5.7	38.0	22.8	4.1	9.8	11.2	15	
049	208-230/60/1	187/253	23.8	15.3	83.0	33.2	7.0	22.3	26.1	40	
	265/60/1	238/292	20.3	13.0	72.0	n/a	7.0	20.0	23.3	35	
	208-230/60/3	187/253	18.1	11.6	73.0	43.8	7.0	18.6	21.5	30	
049*	460/60/3	414/506	8.9	5.7	38.0	22.8	6.9	12.6	14.0	15	
	208-230/60/1	187/253	33.0	21.1	104.0	41.6	4.0	25.1	30.4	50	
	208-230/60/3	187/253	21.9	14.0	83.1	49.9	4.0	18.0	21.5	35	
064	460/60/3	414/506	10.0	6.4	41.0	24.6	4.1	10.5	12.1	15	
	208-230/60/1	187/253	33.0	21.1	104.0	41.6	7.0	28.1	33.4	50	
	208-230/60/3	187/253	21.9	14.0	83.1	49.9	7.0	21.0	24.5	35	
072	460/60/3	414/506	10.0	6.4	41.0	24.6	6.9	13.3	14.9	20	
	208-230/60/1	187/253	42.3	27.1	152.9	61.2	7.0	34.1	40.9	60	
	208-230/60/3	187/253	25.8	16.5	110.0	66.0	7.0	23.5	27.6	40	
072	460/60/3	414/506	11.3	7.2	52.0	31.2	6.9	14.1	15.9	20	
	208-230/60/1	187/253	46.3	29.7	179.2	71.7	7.0	36.7	44.1	70	
	208-230/60/3	187/253	27.4	17.6	136.0	81.6	7.0	24.6	29.0	45	
		460/60/3	414/506	13.2	8.5	66.1	39.7	6.9	15.4	17.5	25

5/21/13

HACR circuit breaker in USA only  
\*With optional 1 HP variable speed ECM motor  
\*\*With optional IntelliStart



**CAUTION: When installing a unit with a variable speed ECM blower motor in 460/60/3 voltage, a neutral wire is required to allow proper unit operation.**

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Blower Performance Data

### Standard PSC Motor

Model	Blower Spd	Blower Size	Motor HP	Airflow (cfm) at External Static Pressure (in. wg)															
				0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
009	H	6 x 8	1/10	480	450	440	420	410	380	360	340	330	310	300	-	-	-	-	-
	MH*			440	410	400	380	370	350	330	310	300	280	270	-	-	-	-	-
	ML*			395	370	360	340	330	310	290	280	270	250	240	-	-	-	-	-
	L			325	310	300	280	270	250	240	230	220	210	200	-	-	-	-	-
012	H	6 x 8	1/10	480	450	440	420	410	380	360	340	330	310	300	-	-	-	-	-
	MH*			440	410	400	380	370	350	330	310	300	280	270	-	-	-	-	-
	ML*			395	370	360	340	330	310	290	280	270	250	240	-	-	-	-	-
	L			325	310	300	280	270	250	240	230	220	210	200	-	-	-	-	-
015	H	9 x 7	1/6	845	835	825	815	800	790	775	755	735	710	680	565	-	-	-	-
	M			735	730	725	715	705	700	690	675	660	630	600	485	-	-	-	-
	L			620	615	610	605	600	590	580	565	550	520	490	-	-	-	-	-
018	H	9 x 7	1/6	845	835	825	815	800	790	775	755	735	710	680	565	-	-	-	-
	M			735	730	725	715	705	700	690	675	660	630	600	485	-	-	-	-
	L			620	615	610	605	600	590	580	565	550	520	490	-	-	-	-	-
024	H	9 x 7	1/5	1085	1055	1030	1005	980	950	925	895	870	830	795	735	555	-	-	-
	M			915	895	875	855	835	815	795	765	735	705	675	590	520	-	-	-
	L			845	830	815	795	775	750	725	702.5	680	650	625	505	-	-	-	-
030	H	9 x 7	1/3	1290	1270	1245	1220	1190	1160	1125	1090	1055	1020	985	880	760	-	-	-
	M			1100	1090	1075	1060	1045	1020	995	970	940	910	875	785	625	-	-	-
	L			910	905	900	895	885	875	865	850	835	810	780	710	560	-	-	-
036	H	10 x 10	1/2	1665	1640	1610	1580	1550	1515	1480	1450	1415	1315	1215	1090	980	-	-	-
	M			1465	1445	1425	1400	1375	1350	1325	1260	1190	1140	1090	990	890	-	-	-
	L			1130	1115	1100	1090	1075	1035	995	965	930	895	860	795	730	-	-	-
042	H	10 x 10	1/2	2010	1975	1940	1905	1870	1825	1780	1735	1690	1640	1590	1470	1210	-	-	-
	M			1670	1650	1630	1610	1590	1560	1530	1495	1460	1425	1390	1190	1080	-	-	-
	L			1220	1215	1210	1295	1200	1180	1160	1130	1100	1060	1020	930	-	-	-	-
048	H	10 x 10	1/2	2010	1975	1940	1905	1870	1825	1780	1735	1690	1640	1590	1470	1210	-	-	-
	M			1670	1650	1630	1610	1590	1560	1530	1495	1460	1425	1390	1190	1080	-	-	-
	L			1220	1215	1210	1295	1200	1180	1160	1130	1100	1060	1020	930	-	-	-	-
060	H	11 x 10	1	2430	2400	2365	2330	2290	2255	2215	2180	2140	2095	2045	1945	1835	1715	1510	1330
	M			2265	2235	2205	2175	2145	2110	2070	2035	2000	1960	1915	1825	1730	1605	1440	1260
	L			2075	2050	2020	1995	1965	1940	1915	1885	1850	1820	1785	1720	1610	1505	1335	1175
070	H	11 x 10	1	2430	2400	2365	2330	2290	2255	2215	2180	2140	2095	2045	1945	1835	1715	1510	1330
	M			2265	2235	2205	2175	2145	2110	2070	2035	2000	1960	1915	1825	1730	1605	1440	1260
	L			2075	2050	2020	1995	1965	1940	1915	1885	1850	1820	1785	1720	1610	1505	1335	1175

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### Optional High Static PSC Motor

Model	Blower Spd	Blower Size	Motor HP	Airflow (cfm) at External Static Pressure (in. wg)															
				0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
024	H	9 x 7	1/3	1290	1270	1245	1220	1190	1160	1125	1090	1055	1020	985	880	760	-	-	-
	M			1100	1090	1075	1060	1045	1020	995	970	940	910	875	785	625	-	-	-
	L			910	905	900	895	885	875	865	850	835	810	780	710	560	-	-	-
030	H	9 x 7	1/2	1365	1340	1325	1305	1280	1250	1215	1180	1140	1100	1055	960	850	-	-	-
	M			1040	1040	1035	1030	1020	1005	990	970	945	915	885	810	735	-	-	-
	L			880	880	880	880	875	870	860	840	820	800	775	730	480	-	-	-
036	H	10 x 10	1/2	1930	1905	1875	1840	1805	1765	1725	1680	1635	1530	1425	1270	1150	1025	-	-
	M			1635	1620	1600	1580	1555	1530	1505	1465	1425	1335	1240	1135	1035	775	-	-
	L			1230	1230	1225	1215	1200	1165	1130	1095	1060	1035	1005	935	795	675	-	-
042	H	10 x 10	3/4	2115	2075	2035	1980	1920	1900	1880	1840	1795	1730	1660	1390	1225	1070	-	-
	M			2005	1980	1950	1910	1865	1815	1765	1725	1685	1585	1485	1315	1140	1025	-	-
	L			1860	1835	1805	1780	1750	1715	1675	1635	1590	1540	1490	1260	1115	980	-	-
048	H	10 x 10	3/4	2115	2075	2035	1980	1920	1900	1880	1840	1795	1730	1660	1390	1225	1070	-	-
	M			2005	1980	1950	1910	1865	1815	1765	1725	1685	1585	1485	1315	1140	1025	-	-
	L			1860	1835	1805	1780	1750	1715	1675	1635	1590	1540	1490	1260	1115	980	-	-

3/16/12

Factory settings are in Bold

Air flow values are with dry coil and 1 in. MERV 4.

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [fpm] = Airflow [cfm] / Face Area [sq ft]).

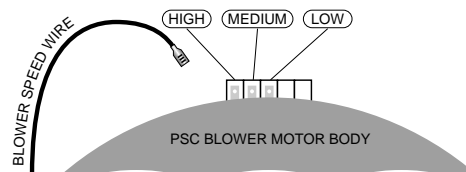
Then for velocities of 200 fpm reduce the static capability by 0.03 in. wg, 300 fpm by 0.08 in. wg, 400 fpm by 0.12 in. wg. and 500 fpm by 0.16 in. wg.

\* Denotes setting for 265 V operation.

### Setting Blower Speed - PSC



**CAUTION: Disconnect all power before performing this operation.**



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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Blower Performance Data cont.

### 5-Speed ECM - Single Speed

Model	Motor Spd	Motor Tap	T'Stat Cnct.	Blower Size	Motor HP	Airflow (cfm) at External Static Pressure (in. wg)															
						0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
015	High	5		9 x 7	1/2	916	898	881	866	851	679	813	804	795	774	754	731	695	643	-	-
	Med High	4	W			809	787	765	754	743	725	707	688	669	654	639	606	536	-	-	-
	Med	3				727	715	703	682	661	638	616	601	587	561	536	485	-	-	-	-
	Med Low	2	Y1			699	675	652	631	611	594	577	551	525	490	455	-	-	-	-	-
	Low	1	G			656	604	552	530	508	493	479	436	394	350	-	-	-	-	-	-
018	High	5		9 x 7	1/2	916	898	881	866	851	679	813	804	795	774	754	731	695	643	-	-
	Med High	4	W			809	787	765	754	743	725	707	688	669	654	639	606	536	-	-	-
	Med	3				727	715	703	682	661	638	616	601	587	561	536	485	-	-	-	-
	Med Low	2	Y1			699	675	652	631	611	594	577	551	525	490	455	-	-	-	-	-
	Low	1	G			656	604	552	530	508	493	479	436	394	350	-	-	-	-	-	-
024	High	5	W	9 x 7	1/2	1015	1003	990	975	955	945	935	920	905	890	880	850	825	745	-	-
	Med High	4	Y1			935	915	895	880	875	855	840	825	815	800	785	755	720	580	-	-
	Med	3				865	855	845	825	810	795	780	765	750	735	720	675	610	570	-	-
	Med Low	2	G			810	790	770	755	740	725	710	695	680	660	640	560	530	-	-	-
	Low	1				695	645	595	575	550	520	495	455	420	400	-	-	-	-	-	-
030	High	5		9 x 7	1/2	1407	1381	1354	1327	1300	1267	1233	1201	1168	1131	1094	1009	-	-	-	-
	Med High	4	W			1146	1134	1122	1111	1099	1085	1071	1062	1052	1042	1031	966	-	-	-	-
	Med	3	Y1			1023	1012	1001	985	969	959	949	937	925	913	901	-	-	-	-	-
	Med Low	2				978	962	946	934	922	907	891	882	872	858	843	-	-	-	-	-
	Low	1	G			795	777	759	748	737	718	698	686	673	650	626	-	-	-	-	-
036	High	5	W	11 x 10	1/2	1530	1503	1476	1453	1429	1413	1397	1376	1355	1342	1329	1276	1231	1173	-	-
	Med High	4	Y1			1413	1388	1363	1342	1321	1303	1285	1263	1240	1226	1212	1173	1016	946	-	-
	Med	3				1355	1325	1294	1276	1258	1235	1212	1188	1164	1144	1123	982	909	883	-	-
	Med Low	2				1336	1299	1261	1242	1222	1202	1181	1157	1132	1111	1090	937	874	830	-	-
	Low	1	G			1243	1182	1121	1061	1000	964	928	856	784	744	703	647	592	-	-	-
042	High	5		11 x 10	1	1934	1910	1886	1871	1855	1827	1799	1780	1760	1747	1734	1700	1659	1617	-	-
	Med High	4	W			1799	1783	1767	1744	1720	1693	1666	1649	1631	1617	1603	1560	1530	1492	-	-
	Med	3				1694	1680	1666	1642	1617	1592	1567	1552	1537	1519	1500	1453	1421	1372	-	-
	Med Low	2	Y1			1575	1560	1540	1520	1502	1487	1471	1448	1424	1409	1393	1351	1308	1266	-	-
	Low	1	G			1454	1406	1358	1333	1308	1285	1261	1239	1217	1198	1179	1072	1002	988	-	-
048	High	5		11 x 10	1	1934	1910	1886	1871	1855	1827	1799	1780	1760	1747	1734	1700	1659	1617	-	-
	Med High	4	W			1799	1783	1767	1744	1720	1693	1666	1649	1631	1617	1603	1560	1530	1492	-	-
	Med	3	Y1			1694	1680	1666	1642	1617	1592	1567	1552	1537	1519	1500	1453	1421	1372	-	-
	Med Low	2				1575	1560	1540	1520	1502	1487	1471	1448	1424	1409	1393	1351	1308	1266	-	-
	Low	1	G			1454	1406	1358	1333	1308	1285	1261	1239	1217	1198	1179	1072	1002	988	-	-
060	High	5	W	11 x 10	1	2230	2212	2193	2173	2152	2139	2125	2109	2092	2076	2059	2026	1992	1951	1892	1806
	Med High	4	Y1			2081	2065	2048	2032	2015	1998	1980	1963	1946	1928	1910	1880	1849	1806	1767	1728
	Med	3				1951	1931	1910	1889	1868	1850	1831	1812	1793	1774	1755	1722	1688	1654	1612	1562
	Med Low	2				1812	1790	1767	1748	1728	1708	1688	1671	1654	1640	1626	1584	1547	1510	1472	1417
	Low	1	G			1668	1651	1633	1612	1591	1566	1540	1525	1510	1491	1472	1433	1400	1351	1299	1208
070	High	5	W	11 x 10	1	2472	2454	2435	2414	2393	2371	2349	2328	2306	2289	2271	2236	2189	2121	2033	1936
	Med High	4	Y1			2271	2248	2225	2205	2184	2166	2147	2129	2110	2094	2078	2039	2011	1977	1930	1846
	Med	3				2133	2115	2096	2072	2047	2030	2013	1996	1979	1965	1950	1909	1873	1837	1793	1748
	Med Low	2				2008	1985	1962	1939	1915	1898	1880	1862	1843	1828	1812	1774	1742	1703	1669	1635
	Low	1	G			1806	1784	1761	1742	1722	1696	1669	1656	1642	1625	1607	1564	1527	1490	1443	1404

Factory settings are in Bold  
Air flow values are with dry coil and standard 1 in. filter

11/20/12

### About 5-Speed ECM Constant Torque Motors

The 5-speed ECM is a 'Constant Torque' ECM motor and delivers air flow similar to a PSC but operates as efficiently as a variable speed ECM motor. Because it is an ECM motor, the 5-speed ECM can ramp slowly up or down like the variable speed ECM motor. There are 5 possible speed taps available on the 5-speed ECM motor with #1 being the lowest airflow and #5 being the highest airflow. These speed selections are preset at the time of manufacture and are easily changed in the field if necessary.

If more than one tap are energized at the same time, built in logic gives precedence to the highest tap number and allows air flow to change with G, Y1, Y2 and W signals. Each of those 5 speeds has a specific 'Torque' value programmed into the motor for each speed selection. As static pressure increases, airflow decreases resulting in less torque on

the rotor. The motor responds only to changes in torque and adjusts its speed accordingly.

The 5-speed ECM motor is powered by line voltage but the motor speed is energized by 24VAC.

#### 5-Speed ECM Benefits:

- High efficiency
- Soft start
- 5 speeds with up to 4 speeds on-line
- Built in logic allows air flow to change with G, Y1, Y2 and W signals
- Super efficient low airflow continuous blower setting (G)



Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Blower Performance Data cont.

### 5-Speed ECM - Dual Capacity

Model	Motor Speed	Motor Tap	T'stat Cnct.	Blower Size	Motor HP	Airflow (cfm) at External Static Pressure (in. wg)															
						0	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.45	0.50	0.60	0.70	0.80	0.90	1.00
026	High	5	W	9 x 7	1/2	1120	1109	1097	1082	1066	1055	1044	1028	1011	1001	991	932	839	-	-	-
	Med High	4	Y2			1020	1006	991	980	968	950	932	922	911	894	876	849	812	-	-	-
	Med	3				917	906	895	884	872	854	836	824	812	792	772	754	719	-	-	-
	Med Low	2	Y1			836	824	812	794	776	765	754	735	715	703	691	653	631	-	-	-
	Low	1	G			735	721	707	687	666	653	640	622	603	589	574	533	-	-	-	-
038	High	5	W	11 x 10	1/2	1530	1503	1476	1453	1429	1413	1397	1376	1355	1342	1329	1276	1231	1173	-	-
	Med High	4	Y2			1413	1388	1363	1342	1321	1303	1285	1263	1240	1226	1212	1173	1016	946	-	-
	Med	3	Y1			1355	1325	1294	1276	1258	1235	1212	1188	1164	1144	1123	982	909	883	-	-
	Med Low	2				1336	1299	1261	1242	1222	1202	1181	1157	1132	1111	1090	937	874	830	-	-
	Low	1	G			1243	1182	1121	1061	1000	964	928	856	784	744	703	647	592	-	-	-
049	High	5	W	11 x 10	1	1934	1910	1886	1871	1855	1827	1799	1780	1760	1747	1734	1700	1659	1617	-	-
	Med High	4				1799	1783	1767	1744	1720	1693	1666	1649	1631	1617	1603	1560	1530	1492	-	-
	Med	3	Y2			1694	1680	1666	1642	1617	1592	1567	1552	1537	1519	1500	1453	1421	1372	-	-
	Med Low	2	Y1			1575	1560	1540	1520	1502	1487	1471	1448	1424	1409	1393	1351	1308	1266	-	-
	Low	1	G			1454	1406	1358	1333	1308	1285	1261	1239	1217	1198	1179	1072	1002	988	-	-
064	High	5	W	11 x 10	1	2245	2360	2214	2315	2173	2290	2136	2275	2103	2250	2070	2032	1998	1957	1910	1825
	Med High	4	Y2			2092	2073	2054	2035	2015	1995	1975	1958	1940	1922	1904	1880	1843	1806	1767	1728
	Med	3				1951	1931	1910	1889	1868	1850	1831	1812	1793	1774	1755	1722	1688	1654	1612	1562
	Med Low	2	Y1			1812	1796	1780	1761	1741	1718	1695	1682	1668	1651	1633	1591	1555	1518	1480	1433
	Low	1	G			1682	1661	1640	1616	1591	1573	1555	1533	1510	1495	1480	1441	1400	1351	1316	1263
072	High	5	W	11 x 10	1	2472	2360	2435	2315	2393	2290	2349	2275	2306	2250	2271	2236	2189	2121	2033	1936
	Med High	4	Y2			2271	2248	2225	2205	2184	2166	2147	2129	2110	2094	2078	2039	2011	1977	1930	1846
	Med	3				2133	2115	2096	2072	2047	2030	2013	1996	1979	1965	1950	1909	1873	1837	1793	1748
	Med Low	2	Y1			2008	1985	1962	1939	1915	1898	1880	1862	1843	1828	1812	1774	1742	1703	1669	1635
	Low	1	G			1806	1784	1761	1742	1722	1696	1669	1656	1642	1625	1607	1564	1527	1490	1443	1404

Factory speed settings are in Bold

Air flow values are with dry coil and standard filter

For wet coil performance first calculate the face velocity of the air coil (Face Velocity [fpm] = Airflow [cfm] / Face Area [sq ft]).

Then for velocities of 200 fpm reduce the static capability by 0.03 in. wg, 300 fpm by 0.08 in. wg, 400 fpm by 0.12 in. wg., and 500 fpm by 0.16 in. wg.

Highest setting is for auxiliary heat (W) and lowest setting is for constant blower (G). The "Y1" and "Y2" settings must be between the "G" and "W" settings.

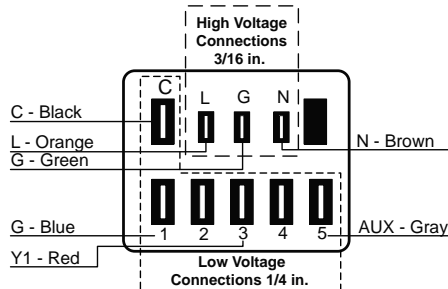
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### Setting Blower Speed - 5-Speed ECM

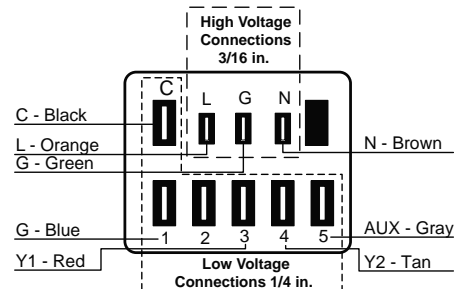
5-speed ECM blower motors have five (5) speeds of which three (3) are selectable on single speed and four (4) are selectable on dual capacity.

**CAUTION: Disconnect all power before performing this operation.**

#### 5-Speed ECM Motor Connections - Single Speed



#### 5-Speed ECM Motor Connections - Dual Capacity



Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Blower Performance Data cont.

### Variable Speed ECM Motor Single Speed

Model	Max ESP	Blower Size	Motor hp	Airflow DIP Switch Settings												
				1	2	3	4	5	6	7	8	9	10	11	12	
015	0.50	9 x 7	1/2	300	400 L	<b>500</b>	<b>600</b> M	<b>700</b> H								
018	0.50	9 x 7	1/2	300	400 L	<b>500</b>	<b>600</b> M	<b>700</b> H	<b>800</b>							
024	0.50	9 x 7	1/2		400	500 L	<b>600</b> M	<b>700</b> H	<b>800</b> H	<b>900</b>	1000	1100	1200			
030	0.50	9 x 7	1/2		400	500 L	600	<b>700</b> M	<b>800</b> H	<b>900</b> H	<b>1000</b>	<b>1100</b>	1200			
036	0.50	11 x 10	1/2	650	750	850 L	1000	<b>1100</b> M	<b>1200</b> H	<b>1300</b> H	<b>1400</b>	<b>1500</b>				
036 w/1hp*	0.75	11 x 10	1	800	1000 L	<b>1100</b> M	<b>1300</b> H	<b>1500</b>	<b>1600</b>	1800						
042	0.50	11 x 10	1/2	650	800	900 L	1050	<b>1150</b> M	<b>1250</b> H	<b>1350</b> H	<b>1450</b> H	<b>1550</b>				
042 w/1hp*	0.75	11 x 10	1	800	900 L	1000	<b>1200</b> M	<b>1400</b> H	<b>1600</b>	<b>1700</b>	<b>1850</b>	2000	2200	2300	2400	
048	0.50	11 x 10	1/2	650	800	900 L	1050	1150	<b>1250</b> H	<b>1350</b> M	<b>1450</b> H	<b>1550</b> H				
048 w/1hp*	0.75	11 x 10	1	800	900	1000 L	1200	<b>1400</b> M	<b>1600</b> H	<b>1700</b> H	<b>1850</b>	2000	2200	2300	2400	
060	0.75	11 x 10	1	800	950	1100 L	1300	<b>1500</b> M	<b>1750</b> H	<b>1950</b> H	<b>2100</b>	<b>2300</b>				
070	0.75	11 x 10	1	800	950	1100 L	1300	<b>1500</b> M	<b>1750</b> H	<b>1950</b> H	<b>2100</b>	<b>2300</b>				

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### Dual Capacity

Model	Max ESP	Blower Size	Motor hp	Air Flow DIP Switch Settings												
				1	2	3	4	5	6	7	8	9	10	11	12	
026	0.50	9 x 7	1/2		400	500 L	600	<b>700</b> M	<b>800</b> H	<b>900</b> H	<b>1000</b>	1100	1200			
038	0.50	11 x 10	1/2	650	750 L	850	1000	<b>1100</b> M	<b>1200</b> H	<b>1300</b> H	<b>1400</b>	<b>1500</b>				
038 w/1hp*	0.75	11 x 10	1	800 L	1000	<b>1100</b> M	<b>1300</b> H	<b>1500</b>	<b>1600</b>	1800						
049	0.50	11 x 10	1/2	650	800 L	900	1050	1150	<b>1250</b> H	<b>1350</b> M	<b>1450</b> H	<b>1550</b> H				
049 w/1hp*	0.75	11 x 10	1	800 L	900	1000	1200	<b>1400</b> M	<b>1600</b> H	<b>1700</b> H	<b>1850</b>	2000	2200	2300	2400	
064	0.75	11 x 10	1	800	950 L	1100	1300	<b>1500</b> M	<b>1750</b> H	<b>1950</b> H	<b>2100</b>	<b>2300</b>				
072	0.75	11 x 10	1	800	950	1100 L	1300	<b>1500</b> M	<b>1750</b> H	<b>1950</b> H	<b>2100</b>	<b>2300</b>				

Factory settings are at recommended L-M-H DIP switch locations

M-H settings MUST be located within boldface cfm range

Lowest and Highest DIP switch settings are assumed to be L and H respectively

cfm is controlled within ±5% up to the maximum ESP

Max ESP includes allowance for wet coil and 1 in. MERV 4

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Operating Limits

Operating Limits	Cooling		Heating	
	(°F)	(°C)	(°F)	(°C)
<b>Air Limits</b>				
Min. Ambient Air	45	7.2	45	7.2
Rated Ambient Air	80	26.7	70	21.1
Max. Ambient Air	100	37.8	85	29.4
Min. Entering Air	50	10.0	40	4.4
Rated Entering Air db/wb	80.6/66.2	27/19	68	20.0
Max. Entering Air db/wb	110/83	43/28.3	80	26.7
<b>Water Limits</b>				
Min. Entering Water	30	-1.1	20	-6.7
Normal Entering Water	50-110	10-43.3	30-70	-1.1
Max. Entering Water	120	48.9	90	32.2

**NOTE:** Minimum/maximum limits are only for start-up conditions, and are meant for bringing the space up to occupancy temperature. Units are not designed to operate at the minimum/maximum conditions on a regular basis. The operating limits are dependent upon three primary factors: 1) water temperature, 2) return air temperature, and 3) ambient temperature. When any of the factors are at the minimum or maximum levels, the other two factors must be at the normal level for proper and reliable unit operation.

## Legend

### ABBREVIATIONS AND DEFINITIONS:

cfm = airflow, cubic feet/minute  
 EWT = entering water temperature, Fahrenheit  
 gpm = water flow in gallons/minute  
 WPD = water pressure drop, psi and feet of water  
 EAT = entering air temperature, Fahrenheit  
 (dry bulb/wet bulb)  
 HC = air heating capacity, MBtu/h  
 TC = total cooling capacity, MBtu/h  
 SC = sensible cooling capacity, MBtu/h  
 kW = total power unit input, kilowatts  
 HR = total heat of rejection, MBtu/h

HE = total heat of extraction, MBtu/h  
 HWC = hot water generator capacity, MBtu/h  
 EER = Energy Efficient Ratio  
 = BTU output/Watt input  
 COP = Coefficient of Performance  
 = Btu output/Btu input  
 LWT = leaving water temperature, °F  
 LAT = leaving air temperature, °F  
 TH = total heating capacity, MBtu/h  
 LC = latent cooling capacity, MBtu/h  
 S/T = sensible to total cooling ratio

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Correction Factor Tables

### Cooling Capacity Corrections

Entering Air WB °F	Total Clg Cap	Sensible Cooling Capacity Multipliers - Entering DB °F										Power Input	Heat of Rejection
		60	65	70	75	80	80.6	85	90	95	100		
55	0.898	0.723	0.866	1.048	1.185	*	*	*	*	*	*	0.985	0.913
60	0.912		0.632	0.880	1.078	1.244	1.260	*	*	*	*	0.994	0.927
65	0.967			0.694	0.881	1.079	1.085	1.270	*	*	*	0.997	0.972
66.2	0.983			0.655	0.842	1.040	1.060	1.232	*	*	*	0.999	0.986
<b>67</b>	<b>1.000</b>			0.616	0.806	<b>1.000</b>	1.023	1.193	1.330	*	*	<b>1.000</b>	<b>1.000</b>
70	1.053				0.693	0.879	0.900	1.075	1.250	1.404	*	1.003	1.044
75	1.168					0.687	0.715	0.875	1.040	1.261	1.476	1.007	1.141

NOTE: \* Sensible capacity equals total capacity at conditions shown.

11/10/09

### Heating Corrections

Ent Air DB °F	Htg Cap	Power	Heat of Ext
45	1.062	0.739	1.158
50	1.050	0.790	1.130
55	1.037	0.842	1.096
60	1.025	0.893	1.064
65	1.012	0.945	1.030
68	1.005	0.976	1.012
<b>70</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
75	0.987	1.048	0.970
80	0.975	1.099	0.930

11/10/09

### Airflow Corrections

Airflow		Cooling				Heating		
cfm Per Ton of Clg	% of Nominal	Total Cap	Sens Cap	Power	Heat of Rej	Htg Cap	Power	Heat of Ext
240	60	0.922	0.786	0.910	0.920	0.943	1.150	0.893
275	69	0.944	0.827	0.924	0.940	0.958	1.105	0.922
300	75	0.959	0.860	0.937	0.955	0.968	1.078	0.942
325	81	0.971	0.894	0.950	0.967	0.977	1.053	0.959
350	88	0.982	0.929	0.964	0.978	0.985	1.031	0.973
375	94	0.992	0.965	0.982	0.990	0.993	1.014	0.988
<b>400</b>	<b>100</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>	<b>1.000</b>
425	106	1.007	1.034	1.020	1.010	1.007	0.990	1.011
450	113	1.012	1.065	1.042	1.018	1.013	0.983	1.020
475	119	1.017	1.093	1.066	1.026	1.018	0.980	1.028
500	125	1.019	1.117	1.092	1.033	1.023	0.978	1.034
520	130	1.020	1.132	1.113	1.038	1.026	0.975	1.038

11/10/09

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Antifreeze Corrections

Catalog performance can be corrected for antifreeze use. Please use the following table and note the example given.

Antifreeze Type	Antifreeze % by wt	Cooling Capacity	Heating Capacity	Pressure Drop
EWT - degF [DegC]		90 [32.2]	30 [-1.1]	30 [-1.1]
Water	0	1.000	1.000	1.000
Ethylene Glycol	10	0.991	0.973	1.075
	20	0.979	0.943	1.163
	30	0.965	0.917	1.225
	40	0.955	0.890	1.324
	50	0.943	0.865	1.419
Propylene Glycol	10	0.981	0.958	1.130
	20	0.969	0.913	1.270
	30	0.950	0.854	1.433
	40	0.937	0.813	1.614
	50	0.922	0.770	1.816
Ethanol	10	0.991	0.927	1.242
	20	0.972	0.887	1.343
	30	0.947	0.856	1.383
	40	0.930	0.815	1.523
	50	0.911	0.779	1.639
Methanol	10	0.986	0.957	1.127
	20	0.970	0.924	1.197
	30	0.951	0.895	1.235
	40	0.936	0.863	1.323
	50	0.920	0.833	1.399

**Warning:** Gray area represents antifreeze concentrations greater than 35% by weight and should be avoided due to the extreme performance penalty they represent.

### Antifreeze Correction Example

Antifreeze solution is Propylene Glycol 20% by weight. Determine the corrected heating and cooling performance at 30°F and 90°F respectively as well as pressure drop at 30°F for model GB\*024-PSC.

The corrected cooling capacity at 90°F would be: 24,300 Btu/h x 0.969 = 23,547 Btu/h

The corrected heating capacity at 30°F would be: 18,900 Btu/h x 0.913 = 17,256 Btu/h

The corrected pressure drop at 30°F and 6 gpm would be: 9.5 ft. hd x 1.270 = 12.07 ft. hd.

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Pressure Drop

## Single Speed

Model	gpm	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
009	1.5	1.9	1.8	1.7	1.6	1.5
	2.0	3.5	3.4	3.2	3.1	3.0
	3.0	6.9	6.5	6.3	6.0	5.7
	4.0	12.0	11.4	11.0	10.8	10.5
012	1.5	0.3	0.3	0.3	0.3	0.3
	2.5	1.0	1.0	1.0	1.0	1.0
	3.5	1.7	1.7	1.7	1.6	1.6
	4.5	2.5	2.4	2.4	2.4	2.3
015	2.0	0.6	0.6	0.6	0.6	0.6
	3.0	1.6	1.6	1.6	1.6	1.6
	4.0	2.6	2.6	2.6	2.6	2.5
	5.0	3.7	3.7	3.6	3.6	3.5
018	3.0	1.6	1.6	1.5	1.5	1.4
	4.0	2.9	2.9	2.8	2.8	2.7
	5.0	4.2	4.2	4.1	4.0	3.9
	6.0	6.0	5.8	5.7	5.6	5.5
024	3.0	1.1	1.1	0.9	0.8	0.6
	4.5	2.1	2.0	1.8	1.7	1.5
	6.0	4.1	4.0	3.8	3.7	3.5
	8.0	4.5	4.4	4.1	3.9	3.7
030	4.0	1.5	1.4	1.3	1.2	1.1
	6.0	3.0	2.8	2.7	2.5	2.3
	8.0	5.1	4.8	4.5	4.2	3.9
	10.0	7.7	7.2	6.8	6.3	5.8
036	5.0	1.0	1.0	0.9	0.8	0.8
	7.0	2.1	1.9	1.8	1.7	1.6
	9.0	3.6	3.3	3.0	2.8	2.6
	12.0	6.3	5.9	5.5	5.1	4.8
042	5.0	0.8	0.7	0.7	0.7	0.6
	8.0	2.1	2.1	1.9	1.8	1.7
	11.0	4.2	4.1	3.8	3.5	3.3
	14.0	7.6	6.7	6.3	5.8	5.4
048	6.0	1.1	1.0	1.0	0.9	0.8
	9.0	2.3	2.1	2.0	1.9	1.7
	12.0	3.9	3.7	3.4	3.2	3.0
	16.0	6.7	6.3	5.9	5.5	5.1
060	9.0	2.4	2.2	2.1	2.0	1.8
	12.0	3.9	3.6	3.4	3.2	2.9
	15.0	5.7	5.3	5.0	4.7	4.3
	20.0	9.5	8.9	8.3	7.8	7.2
070	12.0	3.0	2.8	2.6	2.4	2.2
	15.0	4.4	4.0	3.8	3.5	3.3
	18.0	6.0	5.5	5.1	4.8	4.4
	24.0	9.7	9.1	8.5	7.9	7.3

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Valve	gpm	Cv	Pressure Drop (psi)
1/2 in.	1.5	9.6	0.02
	2.0	9.7	0.04
	3.0	9.9	0.09
	4.0	10.1	0.16
1/2 in.	1.5	9.6	0.02
	2.5	9.8	0.06
	3.5	10.0	0.12
	4.5	10.2	0.19
3/4 in.	2.0	9.7	0.04
	3.0	9.9	0.09
	4.0	10.1	0.16
	5.0	10.4	0.23
3/4 in.	3.0	9.9	0.09
	4.0	10.1	0.16
	5.0	10.4	0.23
	6.0	10.6	0.32
3/4 in.	3.0	9.9	0.09
	4.5	10.2	0.19
	6.0	10.6	0.32
	8.0	11.0	0.53
3/4 in.	4.0	10.1	0.16
	6.0	10.6	0.32
	8.0	11.0	0.53
	10.0	11.5	0.76
1 in.	5.0	15.9	0.10
	7.0	16.6	0.23
	9.0	17.2	0.41
	12.0	17.9	0.61
1 in.	5.0	15.9	0.10
	8.0	16.6	0.23
	11.0	17.2	0.41
	14.0	17.9	0.61
1 in.	6.0	16.1	0.14
	9.0	16.8	0.29
	12.0	17.4	0.47
	16.0	18.3	0.76
1 in.	9.0	16.8	0.29
	12.0	17.4	0.47
	15.0	18.1	0.69
	20.0	19.2	1.09
1 in.	12.0	17.4	0.47
	15.0	18.1	0.69
	18.0	18.7	0.92
	24.0	20.1	1.43

3/16/12

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Pressure Drop cont.

### Dual Capacity

Model	gpm	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
026	4.0	1.4	1.3	1.2	1.1	1.0
	6.0	2.8	2.6	2.4	2.3	2.1
	8.0	4.7	4.4	4.1	3.8	3.5
	10.0	7.0	6.6	6.2	5.8	5.3
038	5.0	1.2	1.2	1.1	1.0	1.0
	7.0	2.2	2.1	1.9	1.8	1.7
	9.0	3.4	3.2	3.0	2.8	2.6
	11.0	4.9	4.6	4.3	4	3.7
049	6.0	1.2	1.2	1.1	1.0	1.0
	9.0	2.4	2.2	2.1	2.0	1.8
	12.0	3.9	3.6	3.4	3.2	2.9
	15.0	5.7	5.3	5	4.7	4.3
064	8.0	1.8	1.7	1.6	1.4	1.3
	12.0	3.8	3.5	3.3	3.0	2.8
	16.0	6.5	6.0	5.6	5.2	4.8
	20.0	9.7	9.1	8.5	8.0	7.4
072	12.0	3.2	3.0	2.8	2.6	2.4
	15.0	4.5	4.2	4.0	3.7	3.4
	18.0	6.0	5.7	5.3	4.9	4.6
	21.0	7.8	7.3	6.8	6.4	5.9

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Valve	gpm	Cv	Pressure Drop (psi)
3/4 in.	4.0	10.1	0.16
	6.0	10.6	0.32
	8.0	11.0	0.53
	10.0	11.5	0.76
3/4 in.	5.0	10.4	0.23
	7.0	10.8	0.42
	9.0	11.2	0.64
	12.0	11.9	1.02
1 in.	6.0	16.1	0.14
	9.0	16.8	0.29
	12.0	17.4	0.47
	15.0	18.1	0.69
1 in.	9.0	16.8	0.29
	12.0	17.4	0.47
	16.0	18.3	0.76
	20.0	19.2	1.09
1 in.	12.0	17.4	0.47
	15.0	18.1	0.69
	18.0	18.7	0.92
	24.0	20.1	1.43

3/16/12

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB009 - Performance Data

### Single Speed with PSC (350 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		Pressure Drop psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	1.5	2.0	4.5	Operation not recommended					Operation not recommended					
	2.0	3.6	8.3											
	3.0	7.0	16.2	6.4	0.65	4.2	84.9	2.86						
30	1.5	1.9	4.4	Operation not recommended					Operation not recommended					
	2.0	3.5	8.1	7.4	0.68	5.1	87.5	3.19	12.0	7.8	0.65	0.38	13.3	31.6
	3.0	6.9	15.9	7.3	0.68	5.0	87.3	3.16	11.6	7.5	0.65	0.38	12.9	30.3
40	1.5	1.9	4.3	Operation not recommended					Operation not recommended					
	2.0	3.4	7.9	8.2	0.69	5.9	89.8	3.47	11.7	7.7	0.66	0.42	13.2	27.8
	3.0	6.7	15.5	8.4	0.70	6.1	90.3	3.55	11.6	7.6	0.65	0.41	13.0	28.6
50	1.5	1.8	4.2	9.0	0.71	6.5	91.7	3.69	11.4	7.6	0.67	0.48	13.0	23.7
	2.0	3.4	7.8	9.2	0.71	6.7	92.3	3.77	11.5	7.6	0.67	0.46	13.0	24.8
	3.0	6.5	15.0	9.6	0.72	7.1	93.4	3.91	11.6	7.7	0.66	0.43	13.1	27.2
60	1.5	1.8	4.0	10.1	0.73	7.6	94.6	4.04	10.9	7.4	0.68	0.55	12.7	19.9
	2.0	3.3	7.6	10.3	0.73	7.8	95.3	4.12	10.9	7.4	0.68	0.53	12.7	20.7
	3.0	6.4	14.8	10.8	0.74	8.2	96.5	4.27	11.1	7.4	0.67	0.50	12.7	22.3
70	1.5	1.7	3.9	11.2	0.75	8.6	97.6	4.37	10.4	7.1	0.69	0.61	12.4	17.0
	2.0	3.2	7.5	11.4	0.75	8.9	98.3	4.45	10.4	7.1	0.69	0.60	12.4	17.5
	3.0	6.3	14.6	11.9	0.76	9.3	99.6	4.60	10.5	7.1	0.68	0.56	12.4	18.6
80	1.5	1.7	3.8	12.5	0.77	9.9	101.1	4.77	9.9	6.9	0.70	0.69	12.2	14.3
	2.0	3.2	7.3	12.8	0.77	10.2	101.9	4.85	9.9	6.9	0.70	0.68	12.2	14.6
	3.0	6.2	14.2	13.2	0.78	10.6	103.0	4.97	9.8	6.9	0.70	0.63	12.0	15.6
90	1.5	1.6	3.7	14.0	0.79	11.3	105.0	5.19	9.4	6.7	0.71	0.78	12.1	12.1
	2.0	3.1	7.2	14.3	0.80	11.6	105.8	5.27	9.4	6.7	0.71	0.77	12.1	12.3
	3.0	6.0	13.9	14.5	0.80	11.8	106.4	5.31	9.2	6.7	0.73	0.70	11.6	13.2
100	1.5	1.6	3.6	Operation not recommended					Operation not recommended					
	2.0	3.0	7.0											
	3.0	5.9	13.6						9.0	6.5	0.72	0.87	12.0	10.3
110	1.5	1.5	3.5	Operation not recommended					Operation not recommended					
	2.0	3.0	6.9											
	3.0	5.7	13.2						8.6	6.2	0.73	0.99	11.9	8.7
120	1.5	1.5	3.4	Operation not recommended					Operation not recommended					
	2.0	2.9	6.8											
	3.0	5.6	12.9						8.2	6.0	0.74	1.12	12.0	7.3

3/16/12



Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB012 - Performance Data

### Single Speed with PSC (400 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		Pressure Drop		HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
		psi	ft/hd											
20	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3											
	3.5	1.7	3.9	7.5	0.78	4.8	85.3	2.80						
30	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3	9.0	0.80	6.3	88.8	3.29	16.3	10.3	0.63	0.43	17.8	37.7
	3.5	1.7	3.9	9.1	0.81	6.3	89.1	3.29	16.5	10.3	0.62	0.41	18.0	40.2
40	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.3	10.0	0.82	7.2	91.1	3.57	15.8	10.1	0.64	0.49	17.4	31.9
	3.5	1.7	3.9	10.3	0.83	7.4	91.7	3.64	16.0	10.1	0.63	0.46	17.6	34.9
50	1.5	0.3	0.7	10.6	0.83	7.8	92.5	3.75	15.0	10.0	0.66	0.61	17.1	24.6
	2.5	1.0	2.3	11.0	0.83	8.2	93.5	3.86	15.2	9.9	0.65	0.56	17.1	27.3
	3.5	1.7	3.8	11.4	0.84	8.5	94.4	3.97	15.5	9.9	0.64	0.51	17.2	30.6
60	1.5	0.3	0.7	11.8	0.85	8.9	95.2	4.08	14.5	9.7	0.67	0.69	16.9	21.1
	2.5	1.0	2.3	12.2	0.85	9.3	96.3	4.21	14.7	9.7	0.66	0.64	16.9	23.1
	3.5	1.7	3.8	12.7	0.86	9.8	97.4	4.33	14.9	9.7	0.65	0.59	16.9	25.3
70	1.5	0.3	0.7	12.9	0.86	10.0	98.0	4.40	14.1	9.4	0.67	0.77	16.7	18.3
	2.5	1.0	2.3	13.5	0.87	10.5	99.2	4.54	14.2	9.5	0.67	0.72	16.7	19.8
	3.5	1.7	3.8	14.0	0.88	11.0	100.4	4.67	14.4	9.6	0.67	0.67	16.7	21.4
80	1.5	0.3	0.7	14.3	0.88	11.3	101.2	4.76	13.6	9.2	0.68	0.87	16.6	15.7
	2.5	1.0	2.2	14.9	0.89	11.9	102.6	4.92	13.8	9.3	0.68	0.82	16.6	16.8
	3.5	1.6	3.8	15.3	0.90	12.2	103.4	5.00	13.9	9.4	0.68	0.76	16.5	18.2
90	1.5	0.3	0.7	15.8	0.90	12.8	104.7	5.15	13.2	9.0	0.68	0.97	16.5	13.6
	2.5	1.0	2.2	16.5	0.91	13.4	106.3	5.34	13.3	9.2	0.69	0.93	16.5	14.2
	3.5	1.6	3.8	16.6	0.92	13.5	106.4	5.32	13.4	9.2	0.69	0.85	16.3	15.7
100	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.2						12.9	9.0	0.70	1.06	16.5	12.1
	3.5	1.6	3.7						13.0	9.1	0.70	0.95	16.2	13.7
110	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.2						12.4	8.8	0.71	1.21	16.5	10.3
	3.5	1.6	3.6						12.6	8.9	0.71	1.05	16.2	12.0
120	1.5	0.3	0.7	Operation not recommended					Operation not recommended					
	2.5	1.0	2.2						12.0	8.6	0.72	1.37	16.7	8.8
	3.5	1.5	3.5						12.1	8.7	0.72	1.16	16.0	10.5

3/16/12

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB015 - Performance Data

### Single Speed with PSC (500 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70 °F					COOLING - EAT 80/67 °F					
		Pressure Drop psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7	Operation not recommended					Operation not recommended					
	4.0	2.7	6.1	10.5	0.95	7.2	87.4	3.22	Operation not recommended					
30	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7	11.3	0.99	7.9	88.8	3.32	16.2	10.5	0.65	0.52	18.0	31.1
	4.0	2.6	6.1	11.4	0.99	8.0	89.1	3.37	15.3	10.0	0.65	0.52	17.1	29.7
40	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.7	12.4	1.01	9.0	91.0	3.59	16.7	10.9	0.66	0.59	18.7	28.2
	4.0	2.6	6.0	12.7	1.01	9.3	91.6	3.68	16.4	10.7	0.66	0.57	18.3	28.7
50	2.0	0.6	1.4	13.3	1.04	9.7	92.6	3.76	16.9	11.3	0.67	0.70	19.3	24.2
	3.0	1.6	3.7	13.7	1.04	10.1	93.3	3.87	17.1	11.4	0.66	0.66	19.4	25.9
	4.0	2.6	6.0	14.1	1.04	10.5	94.1	3.98	17.4	11.5	0.66	0.62	19.5	27.8
60	2.0	0.6	1.4	14.7	1.05	11.1	95.2	4.09	16.1	10.9	0.68	0.79	18.8	20.3
	3.0	1.6	3.7	15.2	1.06	11.5	96.1	4.20	16.3	11.0	0.67	0.75	18.9	21.6
	4.0	2.6	6.0	15.6	1.06	12.0	96.9	4.31	16.5	11.1	0.67	0.72	19.0	23.1
70	2.0	0.6	1.4	16.1	1.07	12.4	97.8	4.40	15.2	10.5	0.69	0.89	18.3	17.2
	3.0	1.6	3.7	16.6	1.08	13.0	98.8	4.51	15.4	10.6	0.69	0.85	18.3	18.2
	4.0	2.6	6.0	17.2	1.09	13.5	99.8	4.62	15.7	10.6	0.68	0.81	18.4	19.4
80	2.0	0.6	1.4	17.7	1.09	14.0	100.8	4.76	14.5	10.2	0.70	1.00	17.9	14.4
	3.0	1.6	3.7	18.4	1.11	14.6	102.0	4.88	14.7	10.2	0.70	0.96	17.9	15.3
	4.0	2.6	5.9	18.8	1.11	15.0	102.8	4.96	14.9	10.4	0.70	0.91	18.0	16.4
90	2.0	0.6	1.4	19.5	1.11	15.7	104.2	5.15	13.7	9.9	0.72	1.13	17.6	12.2
	3.0	1.6	3.6	20.3	1.13	16.4	105.6	5.26	13.9	9.8	0.71	1.09	17.6	12.8
	4.0	2.6	5.9	20.4	1.13	16.5	105.7	5.28	14.2	10.1	0.71	1.02	17.6	13.9
100	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.6	Operation not recommended					13.2	9.5	0.72	1.23	17.4	10.7
	4.0	2.5	5.9	Operation not recommended					13.3	9.8	0.74	1.13	17.1	11.7
110	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.6	Operation not recommended					12.5	9.2	0.73	1.39	17.3	9.0
	4.0	2.5	5.9	Operation not recommended					12.4	9.5	0.76	1.25	16.7	9.9
120	2.0	0.6	1.4	Operation not recommended					Operation not recommended					
	3.0	1.6	3.6	Operation not recommended					11.9	8.8	0.74	1.58	17.3	7.6
	4.0	2.5	5.8	Operation not recommended					11.2	9.2	0.82	1.38	15.9	8.1

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB018 - Performance Data

### Single Speed with PSC (600 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70 °F						COOLING - EAT 80/67 °F				
		psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h
20	3.0	1.6	3.8	Operation not recommended						Operation not recommended				
	4.0	2.9	6.8	Operation not recommended						Operation not recommended				
	5.0	4.3	9.9	12.7	1.18	8.7	87.6	3.16	1.4	Operation not recommended				
30	3.0	1.6	3.7	Operation not recommended						Operation not recommended				
	4.0	2.9	6.7	14.4	1.25	10.1	90.2	3.36	1.5	19.5	12.9	0.66	0.76	22.1
	5.0	4.2	9.7	14.6	1.26	10.3	90.5	3.40	1.5	18.8	12.4	0.66	0.74	21.4
40	3.0	1.6	3.6	Operation not recommended						Operation not recommended				
	4.0	2.9	6.6	15.9	1.31	11.4	92.5	3.55	1.6	19.9	13.0	0.65	0.81	22.7
	5.0	4.2	9.6	16.3	1.32	11.8	93.1	3.61	1.6	19.8	12.7	0.64	0.75	22.3
50	3.0	1.6	3.6	17.1	1.36	12.4	94.3	3.69	1.7	20.1	13.2	0.65	0.95	23.3
	4.0	2.9	6.6	17.5	1.37	12.8	95.0	3.75	1.7	20.4	13.1	0.64	0.86	23.3
	5.0	4.2	9.6	17.9	1.38	13.2	95.7	3.81	1.8	20.7	13.1	0.63	0.77	23.3
60	3.0	1.5	3.5	19.0	1.42	14.2	97.4	3.94	1.9	19.2	12.6	0.66	1.00	22.6
	4.0	2.8	6.5	19.4	1.43	14.5	98.0	3.98	1.9	19.4	12.6	0.65	0.94	22.6
	5.0	4.1	9.5	19.8	1.45	14.9	98.6	4.02	2.0	19.6	12.6	0.64	0.88	22.6
70	3.0	1.5	3.5	21.0	1.48	16.0	100.4	4.17	2.1	18.3	12.1	0.66	1.05	21.9
	4.0	2.8	6.5	21.4	1.50	16.3	101.0	4.18	2.1	18.4	12.1	0.66	1.02	21.9
	5.0	4.1	9.5	21.7	1.52	16.6	101.6	4.20	2.2	18.5	12.1	0.66	0.99	21.9
80	3.0	1.5	3.4	23.3	1.54	18.1	104.0	4.44	2.4	17.5	11.6	0.66	1.11	21.3
	4.0	2.8	6.4	23.7	1.57	18.3	104.5	4.43	2.4	17.5	11.6	0.67	1.12	21.3
	5.0	4.1	9.4	24.0	1.58	18.6	105.1	4.45	2.5	17.7	11.8	0.67	1.12	21.5
90	3.0	1.5	3.4	25.9	1.61	20.4	108.0	4.72	2.8	16.7	11.1	0.66	1.17	20.7
	4.0	2.8	6.4	26.1	1.64	20.5	108.3	4.68	2.8	16.6	11.2	0.67	1.22	20.8
	5.0	4.0	9.2	26.3	1.65	20.7	108.6	4.67	2.8	16.8	11.4	0.68	1.24	21.1
100	3.0	1.4	3.3	Operation not recommended						Operation not recommended				
	4.0	2.7	6.3	Operation not recommended						15.8	10.7	0.68	1.34	20.4
	5.0	4.0	9.1	Operation not recommended						15.8	11.0	0.70	1.37	20.4
110	3.0	1.4	3.2	Operation not recommended						Operation not recommended				
	4.0	2.7	6.2	Operation not recommended						15.0	10.3	0.69	1.46	20.0
	5.0	3.9	9.0	Operation not recommended						14.7	10.7	0.73	1.50	19.8
120	3.0	1.4	3.2	Operation not recommended						Operation not recommended				
	4.0	2.7	6.2	Operation not recommended						14.3	9.9	0.70	1.60	19.7
	5.0	3.9	8.9	Operation not recommended						13.7	10.2	0.75	1.66	19.4

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB030 - Performance Data

### Single Speed with PSC (900 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		Pressure Drop		HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
		psi	ft/hd													
20	4.0	1.4	3.5	Operation not recommended												
	6.0	2.8	7.2	Operation not recommended												
	8.0	4.6	12.1	17.6	1.67	11.9	88.1	3.09	2.0							
30	4.0	1.4	3.4	Operation not recommended												
	6.0	2.7	7.0	20.2	1.66	14.6	90.8	3.57	2.2	26.4	18.9	0.71	1.06	30.0	24.9	---
	8.0	4.4	11.8	20.7	1.68	14.9	91.2	3.61	2.2	26.9	18.8	0.70	1.03	30.4	26.1	---
40	4.0	1.3	3.3	Operation not recommended												
	6.0	2.6	6.8	23.7	1.70	17.9	94.4	4.07	2.4	28.7	20.4	0.71	1.14	32.6	25.1	---
	8.0	4.3	11.4	24.2	1.72	18.3	94.9	4.12	2.5	29.1	20.3	0.70	1.11	32.9	26.1	---
50	4.0	1.3	3.2	25.9	1.74	20.0	96.6	4.36	2.6	30.7	21.8	0.71	1.29	35.1	23.8	1.5
	6.0	2.5	6.6	26.8	1.75	20.8	97.6	4.49	2.7	30.8	21.9	0.71	1.25	35.0	24.7	1.4
	8.0	4.2	11.1	27.4	1.76	21.3	98.1	4.55	2.8	31.2	21.9	0.70	1.22	35.3	25.5	1.4
60	4.0	1.2	3.1	29.1	1.80	23.0	99.9	4.75	3.0	30.0	21.4	0.72	1.40	34.7	21.4	1.8
	6.0	2.4	6.4	30.1	1.81	23.9	101.0	4.89	3.0	30.0	21.5	0.71	1.35	34.7	22.2	1.7
	8.0	3.9	10.7	30.7	1.82	24.5	101.6	4.93	3.1	30.4	21.5	0.71	1.32	34.9	22.9	1.6
70	4.0	1.2	3.0	32.4	1.87	26.0	103.3	5.08	3.3	30.1	21.7	0.72	1.54	35.4	19.5	2.2
	6.0	2.4	6.2	33.5	1.88	27.1	104.5	5.22	3.4	30.2	21.7	0.72	1.49	35.3	20.3	2.1
	8.0	3.9	10.4	34.1	1.90	27.6	105.1	5.24	3.5	30.6	21.8	0.71	1.46	35.5	20.9	2.0
80	4.0	1.2	2.9	35.1	1.93	28.5	106.1	5.32	3.7	28.9	21.4	0.74	1.70	34.7	17.0	2.8
	6.0	2.3	5.9	36.4	1.95	29.7	107.4	5.46	3.8	29.0	21.4	0.74	1.64	34.6	17.7	2.7
	8.0	3.8	10.0	36.9	1.98	30.2	108.0	5.48	3.9	29.3	21.5	0.73	1.61	34.8	18.2	2.5
90	4.0	1.1	2.8	37.9	2.01	31.0	108.9	5.51	4.2	26.7	20.2	0.76	1.87	33.1	14.3	3.5
	6.0	2.2	5.7	39.3	2.04	32.3	110.4	5.64	4.3	26.9	20.2	0.75	1.80	33.0	14.9	3.3
	8.0	3.6	9.6	39.9	2.06	32.8	111.0	5.66	4.4	27.1	20.3	0.75	1.77	33.2	15.3	3.2
100	4.0	11.1	2.7	Operation not recommended												
	6.0	2.1	5.5	Operation not recommended												
	8.0	3.5	9.3	Operation not recommended												
110	4.0	1.0	2.6	Operation not recommended												
	6.0	2.0	5.3	Operation not recommended												
	8.0	3.4	8.9	Operation not recommended												
120	4.0	1.0	2.5	Operation not recommended												
	6.0	2.0	5.1	Operation not recommended												
	8.0	3.2	8.6	Operation not recommended												

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB042 - Performance Data

### Single Speed with PSC (1350 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		Pressure Drop psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	5.0	0.8	1.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3													
	11.0	4.4	10.3	25.4	2.41	17.1	87.4	3.09	3.7							
30	5.0	0.8	1.8	Operation not recommended						Operation not recommended						
	8.0	2.2	5.1	29.3	2.45	21.0	90.1	3.51	3.9	41.0	28.4	0.69	1.73	43.4	23.8	---
	11.0	4.3	10.0	29.7	2.45	21.4	90.4	3.56	4.0	41.4	27.8	0.67	1.69	43.7	24.6	---
40	5.0	0.8	1.8	Operation not recommended						Operation not recommended						
	8.0	2.1	4.9	33.3	2.52	24.7	92.9	3.88	4.3	42.7	29.7	0.70	1.81	45.1	23.5	---
	11.0	4.2	9.7	33.9	2.52	25.3	93.3	3.94	4.4	43.1	29.7	0.69	1.77	45.5	24.4	---
50	5.0	0.7	1.7	35.8	2.52	27.2	94.6	4.16	4.7	43.3	30.7	0.71	2.01	45.7	21.6	2.6
	8.0	2.1	4.8	37.3	2.57	28.5	95.6	4.26	4.8	43.8	31.0	0.71	1.93	46.2	22.7	2.5
	11.0	4.1	9.4	38.0	2.58	29.3	96.1	4.33	5.0	44.2	31.0	0.70	1.88	46.6	23.5	2.4
60	5.0	0.7	1.7	39.3	2.57	30.5	97.0	4.48	5.3	43.1	31.4	0.73	2.17	45.6	19.8	3.2
	8.0	2.0	4.6	41.1	2.63	32.1	98.2	4.58	5.4	43.6	31.7	0.73	2.08	46.1	20.9	3.0
	11.0	3.9	9.1	42.0	2.65	33.0	98.8	4.66	5.6	44.1	31.7	0.72	2.03	46.5	21.7	2.9
70	5.0	0.7	1.6	42.7	2.63	33.7	99.3	4.76	6.0	43.1	32.4	0.75	2.37	45.7	18.2	4.0
	8.0	1.9	4.5	44.8	2.70	35.5	100.7	4.86	6.1	43.8	32.8	0.75	2.26	46.4	19.4	3.8
	11.0	3.8	8.8	45.9	2.73	36.6	101.5	4.94	6.3	44.3	32.8	0.74	2.21	46.8	20.1	3.6
80	5.0	0.7	1.6	45.9	2.65	36.9	101.5	5.09	6.7	41.4	31.7	0.77	2.59	44.0	15.9	5.1
	8.0	1.9	4.3	48.4	2.73	39.0	103.2	5.18	6.9	42.1	32.0	0.76	2.47	44.7	17.0	4.8
	11.0	3.7	8.5	49.8	2.77	40.3	104.1	5.28	7.1	42.6	32.0	0.75	2.41	45.1	17.7	4.6
90	5.0	0.7	1.5	49.1	2.68	40.0	103.7	5.37	7.5	39.0	30.8	0.79	2.86	41.7	13.7	6.4
	8.0	1.8	4.2	51.8	2.78	42.4	105.6	5.47	7.8	39.8	31.1	0.78	2.72	42.5	14.7	6.1
	11.0	3.5	8.2	53.5	2.82	43.9	106.7	5.57	8.0	40.2	31.1	0.77	2.64	42.9	15.2	5.8
100	5.0	0.6	1.5	Operation not recommended						Operation not recommended						
	8.0	1.7	4.0							38.2	30.5	0.80	2.98	40.9	12.8	7.5
	11.0	3.4	7.9							38.6	30.5	0.79	2.91	41.3	13.3	7.2
110	5.0	0.6	1.4	Operation not recommended						Operation not recommended						
	8.0	1.7	3.9							34.6	28.2	0.82	3.29	37.4	10.5	9.2
	11.0	3.3	7.6							35.0	28.2	0.81	3.20	37.7	10.9	8.8
120	5.0	0.6	1.3	Operation not recommended						Operation not recommended						
	8.0	1.6	3.7							32.5	27.9	0.86	3.61	35.4	9.0	11.1
	11.0	3.2	7.3							32.8	27.9	0.85	3.52	35.7	9.3	10.6

3/16/12

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB048 - Performance Data

### Single Speed with PSC (1500 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		Pressure Drop psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	6.0	1.1	2.6	Operation not recommended						Operation not recommended						
	9.0	2.3	5.4	Operation not recommended						Operation not recommended						
	12.0	4.0	9.2	32.8	3.05	22.4	90.2	3.15	4.8	Operation not recommended						
30	6.0	1.1	2.5	Operation not recommended						Operation not recommended						
	9.0	2.3	5.3	Operation not recommended						Operation not recommended						
	12.0	3.9	9.0	37.5	3.13	26.8	93.1	3.51	5.2	49.7	34.1	0.69	1.90	52.0	26.1	---
40	6.0	1.1	2.5	Operation not recommended						Operation not recommended						
	9.0	2.2	5.1	Operation not recommended						Operation not recommended						
	12.0	3.8	8.7	43.0	3.23	32.0	96.6	3.90	5.7	51.5	35.3	0.69	2.06	53.9	25.0	---
50	6.0	1.0	2.4	Operation not recommended						Operation not recommended						
	9.0	2.1	4.9	Operation not recommended						Operation not recommended						
	12.0	3.7	8.4	43.8	3.24	32.7	97.0	3.96	5.8	52.1	35.3	0.68	2.01	54.4	25.9	---
60	6.0	1.0	2.4	Operation not recommended						Operation not recommended						
	9.0	2.1	4.9	Operation not recommended						Operation not recommended						
	12.0	3.7	8.4	46.2	3.26	35.1	98.5	4.16	6.2	52.5	36.7	0.70	2.35	54.9	22.3	3.1
70	6.0	1.0	2.3	Operation not recommended						Operation not recommended						
	9.0	2.1	4.8	Operation not recommended						Operation not recommended						
	12.0	3.5	8.2	48.1	3.32	36.7	99.7	4.25	6.4	53.1	37.1	0.70	2.26	55.5	23.5	2.9
80	6.0	1.0	2.2	Operation not recommended						Operation not recommended						
	9.0	2.0	4.6	Operation not recommended						Operation not recommended						
	12.0	3.4	7.9	49.0	3.33	37.7	100.3	4.31	6.5	53.6	37.1	0.69	2.20	56.0	24.4	2.8
90	6.0	0.9	2.1	Operation not recommended						Operation not recommended						
	9.0	1.9	4.3	Operation not recommended						Operation not recommended						
	12.0	3.2	7.4	50.8	3.33	39.5	101.4	4.48	7.0	51.1	36.3	0.71	2.58	53.5	19.8	3.7
100	6.0	0.9	2.0	Operation not recommended						Operation not recommended						
	9.0	1.8	4.2	Operation not recommended						Operation not recommended						
	12.0	3.1	7.1	53.1	3.41	41.5	102.8	4.57	7.2	51.8	36.6	0.71	2.47	54.2	21.0	3.6
110	6.0	0.8	1.9	Operation not recommended						Operation not recommended						
	9.0	1.7	4.0	Operation not recommended						Operation not recommended						
	12.0	3.0	6.8	54.4	3.43	42.7	103.6	4.64	7.4	52.3	36.6	0.70	2.40	54.7	21.8	3.4
120	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	1.7	3.8	Operation not recommended						Operation not recommended						
	12.0	2.8	6.6	55.5	3.41	43.9	104.3	4.78	7.9	50.8	36.7	0.72	2.86	53.2	17.8	4.7
100	6.0	0.9	2.1	Operation not recommended						Operation not recommended						
	9.0	1.9	4.5	Operation not recommended						Operation not recommended						
	12.0	3.3	7.6	58.2	3.51	46.3	105.9	4.87	8.1	51.5	37.1	0.72	2.72	54.0	18.9	4.5
110	6.0	0.9	2.1	Operation not recommended						Operation not recommended						
	9.0	1.9	4.3	Operation not recommended						Operation not recommended						
	12.0	3.2	7.4	59.7	3.54	47.7	106.9	4.95	8.3	52.1	37.1	0.71	2.65	54.5	19.6	4.2
120	6.0	0.9	2.0	Operation not recommended						Operation not recommended						
	9.0	1.8	4.2	Operation not recommended						Operation not recommended						
	12.0	3.1	7.1	59.4	3.46	47.5	106.6	5.03	8.8	48.5	35.9	0.74	3.17	51.0	15.3	5.9
110	6.0	0.8	1.9	Operation not recommended						Operation not recommended						
	9.0	1.7	4.0	Operation not recommended						Operation not recommended						
	12.0	3.0	6.8	62.5	3.58	50.3	108.6	5.11	9.1	49.4	36.2	0.73	3.01	51.9	16.4	5.6
120	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	1.7	3.8	Operation not recommended						Operation not recommended						
	12.0	2.8	6.6	64.3	3.62	51.9	109.7	5.20	9.4	49.9	36.2	0.73	2.93	52.4	17.0	5.4
100	6.0	0.9	2.0	Operation not recommended						Operation not recommended						
	9.0	1.9	4.3	Operation not recommended						Operation not recommended						
	12.0	3.2	7.4	63.2	3.52	51.2	109.0	5.26	9.9	45.1	34.2	0.76	3.50	47.7	12.9	7.4
110	6.0	0.9	2.1	Operation not recommended						Operation not recommended						
	9.0	1.9	4.3	Operation not recommended						Operation not recommended						
	12.0	3.2	7.4	66.8	3.66	54.3	111.2	5.35	10.2	46.0	34.6	0.75	3.32	48.6	13.9	7.1
120	6.0	0.9	2.0	Operation not recommended						Operation not recommended						
	9.0	1.8	4.2	Operation not recommended						Operation not recommended						
	12.0	3.1	7.1	68.9	3.71	56.2	112.5	5.44	10.6	46.5	34.6	0.74	3.23	49.0	14.4	6.7
110	6.0	0.8	1.9	Operation not recommended						Operation not recommended						
	9.0	1.7	4.0	Operation not recommended						Operation not recommended						
	12.0	3.0	6.8	44.3	3.41	0.77	3.69	46.9	12.0	8.8	44.8	34.1	0.76	3.58	47.4	12.5
120	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	1.7	3.8	Operation not recommended						Operation not recommended						
	12.0	2.8	6.6	39.9	31.7	0.79	4.07	42.6	9.8	10.8	40.3	31.7	0.79	3.96	43.0	10.2
100	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	1.7	3.8	Operation not recommended						Operation not recommended						
	12.0	2.8	6.6	37.6	31.1	0.83	4.50	40.4	8.4	13.0	38.0	31.1	0.82	4.38	40.8	8.7

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB060 - Performance Data

### Single Speed with PSC (2000 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	9.0	2.5	5.7	Operation not recommended												
	12.0	4.0	9.2	Operation not recommended												
	15.0	5.9	13.5	40.4	4.06	26.5	88.7	2.92	5.8							
30	9.0	2.4	5.5	Operation not recommended												
	12.0	3.9	8.9	45.4	4.06	31.5	91.0	3.28	6.2	68.8	47.6	0.69	2.91	71.2	23.7	---
	15.0	5.7	13.1	46.8	4.16	32.6	91.7	3.30	6.4	70.0	48.1	0.69	2.74	72.3	25.6	---
40	9.0	2.3	5.3	Operation not recommended												
	12.0	3.7	8.7	53.6	4.23	39.1	94.8	3.71	6.9	70.3	49.8	0.71	3.10	72.7	22.7	---
	15.0	5.5	12.7	54.8	4.30	40.1	95.4	3.73	7.1	71.1	49.6	0.70	2.95	73.5	24.1	---
50	9.0	2.2	5.2	58.9	4.35	44.1	97.3	3.97	7.5	71.4	50.5	0.71	3.44	73.8	20.8	4.1
	12.0	3.6	8.4	60.4	4.39	45.5	98.0	4.04	7.7	71.4	51.0	0.71	3.38	73.9	21.1	3.9
	15.0	5.3	12.3	61.5	4.43	46.4	98.5	4.07	7.9	72.2	51.0	0.71	3.23	74.6	22.3	3.7
60	9.0	2.2	5.0	65.4	4.47	50.1	100.3	4.29	8.4	69.1	49.4	0.71	3.63	71.5	19.0	5.0
	12.0	3.5	8.1	66.8	4.51	51.4	100.9	4.34	8.7	69.4	49.6	0.71	3.53	71.9	19.7	4.8
	15.0	5.2	11.9	68.7	4.58	53.1	101.8	4.40	8.9	69.8	49.9	0.71	3.41	72.2	20.5	4.6
70	9.0	2.1	4.9	72.0	4.60	56.3	103.4	4.59	9.5	67.8	49.4	0.73	3.97	70.3	17.1	6.3
	12.0	3.4	7.9	73.4	4.65	57.5	104.0	4.63	9.8	68.5	49.4	0.72	3.83	71.0	17.9	6.0
	15.0	5.0	11.6	76.1	4.74	59.9	105.2	4.71	10.0	68.5	49.9	0.73	3.73	71.0	18.4	5.7
80	9.0	2.0	4.7	76.7	4.71	60.7	105.5	4.78	10.7	64.8	48.0	0.74	4.35	67.3	14.9	8.0
	12.0	3.3	7.6	79.4	4.73	63.2	106.7	4.92	11.0	65.4	48.0	0.73	4.16	67.9	15.7	7.6
	15.0	4.8	11.2	81.5	4.87	64.9	107.7	4.91	11.3	65.8	48.5	0.74	4.05	68.3	16.2	7.2
90	9.0	2.0	4.5	81.6	4.83	65.2	107.8	4.96	12.0	60.3	45.8	0.76	4.74	62.9	12.7	10.0
	12.0	3.2	7.3	85.5	4.83	69.1	109.6	5.19	12.4	61.0	45.8	0.75	4.49	63.5	13.6	9.5
	15.0	4.7	10.8	87.2	5.02	70.1	110.4	5.09	12.8	61.6	46.3	0.75	4.37	64.1	14.1	9.1
100	9.0	1.9	4.4	Operation not recommended												
	12.0	3.1	7.1	Operation not recommended												
	15.0	4.5	10.4	Operation not recommended												
110	9.0	1.8	4.2	Operation not recommended												
	12.0	2.9	6.8	Operation not recommended												
	15.0	4.3	10.0	Operation not recommended												
120	9.0	1.7	4.0	Operation not recommended												
	12.0	2.8	6.5	Operation not recommended												
	15.0	4.2	9.6	Operation not recommended												

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB070 - Performance Data

### Single Speed with PSC (2200 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		psi	ft/hd	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	12.0	3.0	7.0	Operation not recommended						Operation not recommended						
	15.0	4.4	10.2	Operation not recommended						Operation not recommended						
	18.0	6.0	13.9	46.9	4.62	31.2	89.8	2.98	6.9							
30	12.0	3.0	6.8	Operation not recommended						Operation not recommended						
	15.0	4.3	9.9	54.1	4.73	37.9	92.8	3.35	7.4	72.1	48.7	0.68	2.87	74.4	25.1	---
	18.0	5.8	13.5	54.3	4.75	38.1	92.8	3.35	7.6	72.5	49.1	0.68	2.86	74.8	25.3	---
40	12.0	2.9	6.6	Operation not recommended						Operation not recommended						
	15.0	4.1	9.6	63.1	4.89	46.4	96.5	3.78	8.2	75.8	52.8	0.70	3.11	78.2	24.4	---
	18.0	5.7	13.1	63.5	4.91	46.7	96.7	3.79	8.4	76.4	52.6	0.69	3.09	78.7	24.7	---
50	12.0	2.8	6.4	69.5	5.00	52.4	99.3	4.07	8.9	79.1	55.5	0.70	3.51	81.5	22.5	4.5
	15.0	4.0	9.3	70.9	5.04	53.7	99.9	4.13	9.2	79.5	55.7	0.70	3.41	81.9	23.3	4.3
	18.0	5.5	12.7	71.6	5.06	54.3	100.1	4.14	9.4	80.3	56.0	0.70	3.38	82.7	23.8	4.1
60	12.0	2.7	6.2	77.1	5.15	59.5	102.4	4.39	10.0	75.8	53.7	0.71	3.81	78.2	19.9	5.5
	15.0	3.9	9.0	79.3	5.21	61.6	103.4	4.47	10.3	76.1	53.9	0.71	3.70	78.6	20.6	5.2
	18.0	5.3	12.3	80.3	5.24	62.4	103.8	4.49	10.6	77.1	54.6	0.71	3.65	79.5	21.1	5.0
70	12.0	2.6	6.0	85.1	5.31	66.9	105.8	4.69	11.3	75.2	54.5	0.72	4.19	77.7	17.9	6.9
	15.0	3.8	8.7	88.2	5.39	69.8	107.1	4.79	11.6	75.5	54.6	0.72	4.08	78.0	18.5	6.6
	18.0	5.1	11.9	89.4	5.43	70.9	107.6	4.83	11.9	76.7	55.8	0.73	4.01	79.1	19.1	6.3
80	12.0	2.5	5.8	91.0	5.46	72.3	108.3	4.89	12.7	71.9	52.2	0.73	4.61	74.3	15.6	8.7
	15.0	3.6	8.4	95.1	5.56	76.2	110.0	5.01	13.1	72.1	52.2	0.72	4.49	74.6	16.1	8.3
	18.0	5.0	11.5	96.8	5.60	77.6	110.7	5.06	13.5	73.3	53.8	0.73	4.40	75.8	16.7	7.9
90	12.0	2.4	5.6	97.3	5.62	78.1	110.9	5.07	14.3	65.7	48.5	0.74	5.06	68.2	13.0	10.9
	15.0	3.5	8.1	102.5	5.75	82.9	113.1	5.23	14.7	65.9	48.4	0.73	4.93	68.4	13.4	10.4
	18.0	4.8	11.1	104.5	5.80	84.7	114.0	5.28	15.2	67.2	50.3	0.75	4.81	69.7	14.0	9.9
100	12.0	2.3	5.4	Operation not recommended						Operation not recommended						
	15.0	3.4	7.8	Operation not recommended						63.7	47.8	0.75	5.47	66.3	11.6	13.0
	18.0	4.6	10.7	Operation not recommended						65.1	50.2	0.77	5.33	67.7	12.2	12.3
110	12.0	2.2	5.2	Operation not recommended						Operation not recommended						
	15.0	3.3	7.5	Operation not recommended						56.2	42.5	0.76	6.03	58.8	9.3	15.9
	18.0	4.4	10.2	Operation not recommended						57.6	45.0	0.78	5.85	60.3	9.9	15.1
120	12.0	2.2	5.0	Operation not recommended						Operation not recommended						
	15.0	3.1	7.2	Operation not recommended						53.2	43.1	0.81	6.69	55.9	7.9	19.2
	18.0	4.3	9.8	Operation not recommended						54.6	46.0	0.84	6.47	57.5	8.4	18.2

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB015 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (500 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F						COOLING - EAT 80/67 °F						
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7	Operation not recommended						Operation not recommended						
	4.0	2.7	6.1	400	10.2	0.94	7.0	91.6	3.19	Operation not recommended						
				500	10.5	0.95	7.2	87.4	3.22	Operation not recommended						
30	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7	400	10.9	0.91	7.8	93.3	3.50	400	15.8	9.4	0.60	0.42	17.2	37.2
	4.0	2.6	6.1	400	11.1	0.91	8.0	93.6	3.58	400	14.9	9.0	0.60	0.48	16.6	31.1
				500	11.4	0.93	8.2	89.1	3.61	500	15.3	10.0	0.65	0.52	17.1	29.7
40	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.7	400	12.0	0.93	8.9	95.9	3.78	400	16.2	9.8	0.61	0.49	17.9	33.2
	4.0	2.6	6.0	400	12.4	0.93	9.2	96.6	3.89	400	15.9	9.7	0.61	0.50	17.6	32.0
				500	12.7	0.95	9.5	91.6	3.93	500	16.4	10.7	0.66	0.54	18.2	30.5
50	2.0	0.6	1.4	400	12.9	0.95	9.6	97.8	3.97	400	16.5	10.1	0.62	0.59	18.5	27.9
	3.0	1.6	3.7	400	13.3	0.95	10.0	98.7	4.08	400	16.7	10.2	0.61	0.55	18.6	30.2
	4.0	2.6	6.0	400	13.6	0.96	10.4	99.6	4.19	400	16.9	10.3	0.61	0.52	18.7	32.8
				500	13.3	0.97	10.4	93.3	4.12	500	17.1	11.4	0.66	0.60	19.2	28.8
				500	14.1	0.98	10.7	94.1	4.23	500	17.4	11.5	0.66	0.56	19.3	31.3
60	2.0	0.6	1.4	400	14.2	0.97	10.9	101.0	4.31	400	15.6	9.8	0.63	0.68	18.0	23.0
	3.0	1.6	3.7	400	14.7	0.99	11.3	95.2	4.36	500	16.1	10.9	0.68	0.73	18.6	22.0
	4.0	2.6	6.0	400	15.2	0.98	11.8	103.1	4.53	400	16.1	10.0	0.62	0.60	18.1	26.6
				500	15.6	1.00	12.2	96.9	4.58	500	16.5	11.1	0.67	0.65	18.7	25.4
70	2.0	0.6	1.4	400	15.6	0.98	12.2	104.1	4.64	400	14.8	9.5	0.64	0.77	17.4	19.3
	3.0	1.6	3.7	400	16.1	1.01	12.7	97.8	4.69	500	15.2	10.5	0.69	0.83	18.1	18.5
	4.0	2.6	6.0	400	16.7	1.00	13.2	106.6	4.87	400	15.2	9.6	0.63	0.69	17.6	22.0
				500	17.2	1.03	13.7	99.8	4.92	500	15.7	10.6	0.68	0.75	18.2	21.0
80	2.0	0.6	1.4	400	17.2	1.00	13.8	107.8	5.03	400	14.1	9.2	0.65	0.88	17.1	16.1
	3.0	1.6	3.7	400	17.8	1.02	14.4	109.3	5.14	400	14.3	9.2	0.64	0.84	17.1	17.0
	4.0	2.6	5.9	400	18.2	1.02	14.7	110.2	5.21	400	14.5	9.3	0.64	0.79	17.2	18.3
				500	18.8	1.05	15.2	102.8	5.27	500	14.9	10.4	0.70	0.85	17.8	17.5
90	2.0	0.6	1.4	400	18.9	1.02	15.5	111.8	5.44	400	13.4	8.9	0.66	1.00	16.8	13.4
	3.0	1.6	3.6	400	19.7	1.04	16.1	113.5	5.55	400	13.5	8.9	0.65	0.97	16.8	14.0
	4.0	2.6	5.9	400	19.8	1.04	16.2	113.7	5.55	400	13.8	9.1	0.66	0.89	16.8	15.5
				500	20.4	1.07	16.7	105.7	5.61	500	14.2	10.1	0.71	0.96	17.4	14.8
100	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.6	Operation not recommended						Operation not recommended						
	4.0	2.5	5.9	Operation not recommended						Operation not recommended						
				400	12.9	8.5	0.66	1.11	16.6	11.6	Operation not recommended					
				500	13.2	9.5	0.72	1.19	17.3	11.1	Operation not recommended					
110	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.6	Operation not recommended						Operation not recommended						
	4.0	2.5	5.9	Operation not recommended						Operation not recommended						
				400	12.2	8.2	0.68	1.27	16.5	9.6	Operation not recommended					
				500	12.5	9.2	0.73	1.37	17.2	9.1	Operation not recommended					
				400	12.1	8.5	0.71	1.10	15.8	11.0	Operation not recommended					
				500	12.4	9.5	0.76	1.19	16.5	10.5	Operation not recommended					
120	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.6	3.6	Operation not recommended						Operation not recommended						
	4.0	2.5	5.8	Operation not recommended						Operation not recommended						
				400	11.6	8.0	0.69	1.46	16.6	7.9	Operation not recommended					
				500	11.9	8.8	0.74	1.57	17.3	7.6	Operation not recommended					
				400	10.9	8.3	0.76	1.22	15.1	8.9	Operation not recommended					
				500	11.2	9.2	0.82	1.32	15.7	8.5	Operation not recommended					

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB018 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (600 cfm)

EWT °F	Flow GPM	Water Pressure Drop		Heating - EAT 70°F							Cooling - EAT 80/67 °F										
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h			
20	3.0	1.8	4.1	Operation not recommended							Operation not recommended										
	4.0	3.0	6.9	Operation not recommended							Operation not recommended										
	5.0	4.3	9.9	500	12.3	1.09	8.6	90.8	3.30	1.6	600	12.7	1.12	8.9	87.6	3.34	1.5				
30	3.0	1.7	3.9	Operation not recommended							Operation not recommended										
	4.0	3.0	6.8	500	13.9	1.16	10.0	93.8	3.51	1.6	500	19.0	11.6	0.61	0.65	21.2	29.4	--			
				600	14.4	1.19	10.3	90.2	3.55	1.6	600	19.5	12.9	0.66	0.70	21.9	28.1	--			
	5.0	4.2	9.7	500	14.2	1.17	10.2	94.2	3.54	1.7	500	18.3	11.2	0.61	0.63	20.4	29.1	--			
600				14.6	1.20	10.5	90.5	3.58	1.6	600	18.8	12.4	0.66	0.68	21.1	27.9	--				
40	3.0	1.7	3.8	Operation not recommended							Operation not recommended										
	4.0	2.9	6.7	500	15.4	1.22	11.2	96.5	3.70	1.8	500	19.4	11.7	0.60	0.69	21.8	28.0	--			
				600	15.9	1.24	11.6	92.5	3.74	1.6	600	20.0	13.0	0.65	0.75	22.5	26.8	--			
	5.0	4.2	9.6	500	15.8	1.23	11.6	97.2	3.76	1.8	500	19.2	11.5	0.60	0.64	21.4	29.9	--			
600				16.3	1.26	12.0	93.1	3.79	1.7	600	19.8	12.8	0.65	0.69	22.1	28.6	--				
50	3.0	1.6	3.7	500	16.6	1.27	12.3	98.7	3.83	1.9	500	19.6	11.9	0.61	0.82	22.4	23.8	0.9			
				600	17.1	1.30	12.7	94.4	3.87	1.7	600	20.1	13.2	0.66	0.89	23.1	22.7	1.0			
	4.0	2.9	6.6	500	17.0	1.28	12.6	99.4	3.89	1.9	500	19.8	11.8	0.60	0.74	22.4	26.8	0.8			
				600	17.5	1.31	13.0	95.0	3.93	1.8	600	20.4	13.2	0.64	0.80	23.1	25.7	0.9			
	5.0	4.2	9.6	500	17.4	1.29	13.0	100.2	3.95	1.9	500	20.1	11.8	0.59	0.66	22.4	30.7	0.8			
				600	17.9	1.32	13.4	95.6	3.99	1.9	600	20.7	13.1	0.63	0.71	23.1	29.4	0.9			
60	3.0	1.6	3.6	500	18.5	1.33	13.9	102.2	4.08	2.1	500	18.7	11.4	0.61	0.87	21.6	21.5	1.0			
				600	19.1	1.36	14.4	97.4	4.12	2.0	600	19.2	12.7	0.66	0.94	22.4	20.5	1.1			
	4.0	2.8	6.6	500	18.8	1.34	14.3	102.9	4.11	2.1	500	18.9	11.4	0.60	0.81	21.7	23.2	1.0			
				600	19.4	1.37	14.8	98.0	4.16	2.0	600	19.4	12.6	0.65	0.88	22.4	22.2	1.1			
	5.0	4.1	9.5	500	19.2	1.36	14.6	103.6	4.15	2.2	500	19.1	11.3	0.59	0.76	21.7	25.2	0.9			
				600	19.8	1.39	15.1	98.6	4.19	2.0	600	19.6	12.6	0.64	0.82	22.4	24.0	1.0			
70	3.0	1.5	3.5	500	20.4	1.39	15.6	105.7	4.31	2.4	500	17.8	10.9	0.61	0.92	20.9	19.4	1.2			
				600	21.0	1.42	16.2	100.4	4.35	2.2	600	18.3	12.1	0.66	0.99	21.7	18.6	1.3			
	4.0	2.8	6.5	500	20.7	1.41	15.9	106.4	4.32	2.4	500	17.9	10.9	0.61	0.89	20.9	20.2	1.1			
				600	21.4	1.44	16.5	100.9	4.36	2.2	600	18.4	12.1	0.66	0.96	21.7	19.3	1.3			
	5.0	4.1	9.5	500	21.0	1.43	16.2	107.0	4.33	2.4	500	18.0	10.9	0.60	0.86	20.9	20.9	1.1			
				600	21.7	1.46	16.7	101.5	4.37	2.2	600	18.5	12.1	0.65	0.93	21.7	20.0	1.2			
80	3.0	1.5	3.4	500	22.6	1.45	17.7	109.9	4.57	2.7	500	17.0	10.4	0.61	0.97	20.3	17.6	1.6			
				600	23.3	1.48	18.3	104.0	4.62	2.5	600	17.5	11.6	0.66	1.04	21.0	16.8	1.7			
	4.0	2.8	6.4	500	22.9	1.48	17.9	110.4	4.55	2.7	500	17.0	10.4	0.61	0.97	20.3	17.5	1.5			
				600	23.6	1.51	18.5	104.5	4.60	2.4	600	17.5	11.6	0.66	1.05	21.1	16.7	1.6			
	5.0	4.1	9.4	500	23.3	1.49	18.2	111.1	4.58	2.7	500	17.2	10.6	0.62	0.95	20.4	18.1	1.4			
				600	24.0	1.52	18.8	105.0	4.63	2.5	600	17.7	11.8	0.67	1.02	21.1	17.3	1.5			
90	3.0	1.4	3.2	500	25.1	1.52	19.9	114.4	4.85	3.0	500	16.2	10.0	0.62	1.02	19.7	15.9	1.9			
				600	25.8	1.55	20.6	107.9	4.90	2.8	600	16.7	11.1	0.67	1.10	20.4	15.2	2.1			
	4.0	2.7	6.3	500	25.3	1.55	20.0	114.9	4.79	3.0	500	16.2	10.0	0.62	1.07	19.8	15.1	1.8			
				600	26.1	1.58	20.7	108.3	4.84	2.8	600	16.6	11.1	0.67	1.15	20.5	14.5	2.0			
	5.0	4.0	9.2	500	25.5	1.55	20.2	115.2	4.81	3.1	500	16.3	10.3	0.63	1.04	19.9	15.7	1.7			
				600	26.3	1.59	20.9	108.6	4.86	2.9	600	16.8	11.4	0.68	1.12	20.6	15.0	1.9			
100	3.0	1.4	3.1	Operation not recommended							Operation not recommended										
	4.0	2.7	6.2	Operation not recommended							500	15.3	9.6	0.63	1.17	19.3	13.1	2.2			
				600	15.8	10.7	0.68	1.26	20.1	12.5	2.4										
	5.0	4.0	9.1	Operation not recommended							500	15.3	9.9	0.65	1.19	19.4	12.9	2.0			
600				15.8	11.1	0.70	1.28	20.1	12.3	2.3											
110	3.0	1.3	3.0	Operation not recommended							Operation not recommended										
	4.0	2.7	6.1	Operation not recommended							500	14.6	9.2	0.63	1.28	19.0	11.4	2.9			
				600	15.0	10.2	0.68	1.38	19.7	10.9	3.2										
	5.0	3.9	9.0	Operation not recommended							500	14.3	9.6	0.67	1.33	18.9	10.7	2.6			
600				14.7	10.7	0.73	1.44	19.6	10.2	3.0											
120	3.0	1.3	2.9	Operation not recommended							Operation not recommended										
	4.0	2.6	6.1	Operation not recommended							500	13.8	8.8	0.64	1.41	18.6	9.8	3.5			
				600	14.2	9.8	0.69	1.51	19.4	9.4	4.0										
	5.0	3.9	8.9	Operation not recommended							500	13.3	9.2	0.69	1.48	18.4	9.0	3.1			
600				13.7	10.2	0.74	1.60	19.1	8.6	3.5											

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB024 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (800 cfm)

EWT °F	Flow GPM	Water Pressure Drop		Heating - EAT 70°F							Cooling - EAT 80/67 °F														
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h							
20	3.0	1.2	2.8	Operation not recommended							Operation not recommended														
	4.5	2.1	4.9	Operation not recommended							Operation not recommended														
	6.0	4.2	9.7	600	15.0	1.42	10.3	87.3	3.14	1.7	800	15.4	1.43	10.5	85.8	3.16	1.6	Operation not recommended							
30	3.0	1.1	2.6	Operation not recommended							Operation not recommended														
	4.5	2.1	4.9	600	19.0	1.51	14.0	90.1	3.72	1.7	800	19.1	1.51	14.0	90.1	3.72	1.7	600	26.5	17.0	0.64	0.92	29.7	29.0	---
	6.0	4.1	9.5	600	18.7	1.51	13.4	91.2	3.62	1.8	800	18.9	1.52	13.7	89.9	3.64	1.7	600	26.6	15.2	0.61	0.82	29.2	30.8	---
40	3.0	1.1	2.5	Operation not recommended							Operation not recommended														
	4.5	2.0	4.6	600	21.0	1.54	15.8	95.1	4.01	2.0	800	21.3	1.55	16.1	92.7	4.04	1.9	600	27.2	16.4	0.64	0.89	30.1	29.7	---
	6.0	4.1	9.5	600	21.4	1.56	16.1	96.0	4.03	2.0	800	21.7	1.57	16.4	93.1	4.06	1.9	600	27.4	16.5	0.64	0.87	30.2	30.5	---
50	3.0	1.1	2.5	600	22.5	1.56	17.2	96.8	4.25	2.2	800	23.0	1.57	17.6	94.6	4.29	2.1	600	28.0	17.8	0.65	0.93	31.2	30.1	1.2
	4.5	2.0	4.6	600	23.4	1.58	18.0	97.9	4.32	2.2	800	23.8	1.59	18.3	95.5	4.38	2.1	600	28.1	17.8	0.65	0.94	31.1	29.5	1.1
	6.0	4.0	9.3	600	24.0	1.60	18.6	98.8	4.41	2.3	800	24.5	1.61	19.0	96.4	4.46	2.2	600	27.9	17.6	0.65	0.95	31.0	29.1	1.1
60	3.0	1.0	2.2	600	25.4	1.61	20.0	100.2	4.62	2.4	800	25.9	1.62	20.3	97.9	4.69	2.3	600	27.3	17.4	0.68	1.01	30.8	26.3	1.4
	4.5	1.9	4.4	600	26.2	1.63	20.7	101.0	4.73	2.5	800	26.7	1.64	21.1	98.8	4.78	2.4	600	27.8	17.4	0.68	1.07	30.9	25.5	1.3
	6.0	3.9	9.0	600	27.0	1.65	21.4	102.4	4.82	2.5	800	27.5	1.66	21.8	99.8	4.86	2.4	600	27.3	17.3	0.67	1.09	31.0	25.3	1.3
70	3.0	0.9	2.1	600	28.2	1.65	22.4	103.6	5.02	2.7	800	28.7	1.66	23.0	101.2	5.07	2.6	600	27.3	17.3	0.67	1.09	31.0	25.3	1.3
	4.5	1.8	4.2	600	29.1	1.67	23.5	104.6	5.11	2.7	800	29.6	1.68	23.8	102.2	5.16	2.6	600	27.8	19.4	0.70	1.12	31.6	24.8	1.4
	6.0	3.8	8.7	600	30.0	1.69	24.0	105.7	5.19	2.8	800	30.4	1.70	24.6	103.2	5.24	2.7	600	27.3	17.3	0.67	1.09	31.0	25.3	1.3
80	3.0	0.8	1.9	600	31.2	1.72	25.2	106.4	5.32	3.0	800	31.8	1.73	25.9	104.8	5.38	2.9	600	27.8	19.3	0.69	1.15	31.7	24.2	1.4
	4.5	1.7	3.9	600	32.0	1.74	26.1	107.9	5.39	3.0	800	32.5	1.75	26.5	105.6	5.43	2.9	600	27.8	19.4	0.70	1.12	31.6	24.8	1.4
	6.0	3.7	8.5	600	31.8	1.77	26.6	108.8	5.42	3.1	800	33.2	1.78	27.1	106.4	5.48	3.0	600	27.3	17.3	0.67	1.09	31.0	25.3	1.3
90	3.0	0.8	1.7	600	34.0	1.79	28.2	110.8	5.62	3.4	800	34.5	1.80	28.8	108.4	5.67	3.3	600	27.8	19.4	0.70	1.12	31.6	24.8	1.4
	4.5	1.7	3.9	600	35.0	1.82	28.8	111.4	5.63	3.5	800	35.5	1.83	29.2	109.0	5.69	3.4	600	25.2	16.5	0.70	1.34	29.8	18.1	2.0
	6.0	3.7	8.5	600	35.8	1.84	29.3	112.0	5.65	3.6	800	36.0	1.85	29.7	109.7	5.70	3.5	600	25.7	18.7	0.73	1.46	30.7	17.6	2.1
100	3.0	0.7	1.6	Operation not recommended							Operation not recommended														
	4.5	1.6	3.7	Operation not recommended							Operation not recommended														
	6.0	3.6	8.3	Operation not recommended							Operation not recommended														
110	3.0	0.6	1.4	Operation not recommended							Operation not recommended														
	4.5	1.5	3.5	Operation not recommended							Operation not recommended														
	6.0	3.5	8.1	Operation not recommended							Operation not recommended														
120	3.0	0.6	1.3	Operation not recommended							Operation not recommended														
	4.5	1.5	3.5	Operation not recommended							Operation not recommended														
	6.0	3.5	8.1	Operation not recommended							Operation not recommended														

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# GB030 - Performance Data

## Single Speed with Variable Speed ECM or 5-Speed ECM (900 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F							COOLING - EAT 80/67 °F								
		Pressure Drop		Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h	
		psi	ft/hd																
20	4.0	1.4	3.5	Operation not recommended							Operation not recommended								
	6.0	2.8	7.2	Operation not recommended							Operation not recommended								
	8.0	4.6	12.1	700	16.9	1.52	11.7	92.4	3.26	2.2	Operation not recommended								
				900	17.2	1.55	11.9	87.7	3.25	2.0	Operation not recommended								
30	4.0	1.4	3.4	Operation not recommended							Operation not recommended								
	6.0	2.7	7.0	700	19.4	1.51	14.2	95.7	3.77	2.4	700	26.1	16.7	0.64	0.87	29.1	30.0	---	
				900	19.8	1.54	14.6	90.4	3.77	2.2	900	26.8	18.7	0.70	0.94	30.0	28.5	---	
	8.0	4.4	11.8	700	19.9	1.53	14.7	96.3	3.82	2.4	700	26.3	16.7	0.63	0.85	29.2	30.8	---	
				900	20.2	1.56	14.9	90.8	3.81	2.2	900	27.3	18.7	0.68	0.91	30.4	30.0	---	
40	4.0	1.3	3.3	Operation not recommended							Operation not recommended								
	6.0	2.6	6.8	700	22.7	1.56	17.4	100.1	4.27	2.6	700	28.3	18.0	0.64	0.95	31.5	29.7	---	
				900	23.3	1.58	17.9	93.9	4.31	2.4	900	29.1	20.2	0.70	1.02	32.6	28.4	---	
	8.0	4.3	11.4	700	23.3	1.58	17.9	100.8	4.32	2.7	700	28.5	18.0	0.63	0.93	31.7	30.5	---	
				900	23.8	1.60	18.3	94.5	4.36	2.5	900	29.5	20.2	0.68	0.99	32.9	29.7	---	
50	4.0	1.3	3.2	700	24.9	1.60	19.4	102.9	4.55	2.8	700	30.2	19.3	0.64	1.10	34.0	27.5	1.4	
				900	25.5	1.62	20.0	96.2	4.61	2.6	900	31.1	21.7	0.70	1.17	35.1	26.6	1.5	
	6.0	2.5	6.6	700	25.7	1.61	20.2	104.0	4.68	2.9	700	30.3	19.5	0.64	1.06	33.9	28.6	1.3	
				900	26.4	1.63	20.8	97.1	4.75	2.7	900	31.2	21.8	0.70	1.13	35.0	27.7	1.4	
	8.0	4.2	11.1	700	26.3	1.63	20.7	104.8	4.72	3.0	700	30.6	19.5	0.64	1.04	34.1	29.5	1.2	
				900	26.9	1.64	21.3	97.7	4.81	2.8	900	31.6	21.8	0.69	1.10	35.3	28.7	1.4	
60	4.0	1.2	3.1	700	27.9	1.67	22.2	107.0	4.90	3.2	700	29.5	18.9	0.64	1.21	33.6	24.4	1.7	
				900	28.7	1.67	23.0	99.5	5.02	3.0	900	30.4	21.3	0.70	1.28	34.7	23.7	1.8	
	6.0	2.4	6.4	700	28.9	1.69	23.1	108.2	5.01	3.3	700	29.6	19.1	0.65	1.16	33.5	25.4	1.6	
				900	29.7	1.69	23.9	100.6	5.16	3.0	900	30.5	21.3	0.70	1.23	34.7	24.7	1.7	
	8.0	4.0	10.7	700	29.5	1.71	23.6	109.0	5.05	3.4	700	29.9	19.1	0.64	1.14	33.8	26.2	1.5	
				900	30.3	1.70	24.5	101.1	5.21	3.1	900	30.8	21.4	0.69	1.20	34.9	25.6	1.6	
70	4.0	1.2	3.0	700	31.1	1.76	25.1	111.1	5.19	3.6	700	29.7	19.2	0.65	1.35	34.3	22.0	2.1	
				900	32.0	1.75	26.0	102.9	5.36	3.3	900	30.6	21.6	0.71	1.42	35.4	21.5	2.2	
	6.0	2.4	6.2	700	32.1	1.78	26.0	112.5	5.28	3.7	700	29.7	19.3	0.65	1.30	34.2	22.9	2.0	
				900	33.1	1.76	27.1	104.1	5.50	3.4	900	30.6	21.6	0.70	1.37	35.3	22.4	2.1	
	8.0	3.9	10.4	700	32.7	1.81	26.5	113.2	5.31	3.8	700	30.1	19.3	0.64	1.27	34.4	23.6	1.8	
				900	33.7	1.78	27.6	104.6	5.53	3.5	900	31.0	21.7	0.70	1.34	35.5	23.1	2.0	
80	4.0	1.2	2.9	700	33.6	1.84	27.3	114.4	5.36	4.0	700	28.4	19.0	0.67	1.51	33.6	18.9	2.6	
				900	34.7	1.81	28.5	105.7	5.61	3.7	900	29.3	21.3	0.73	1.58	34.7	18.5	2.8	
	6.0	2.3	5.9	700	34.8	1.87	28.4	116.0	5.46	4.1	700	28.6	19.1	0.67	1.45	33.5	19.7	2.5	
				900	36.0	1.83	29.7	107.0	5.75	3.8	900	29.4	21.3	0.72	1.52	34.6	19.4	2.7	
	8.0	3.8	10.0	700	35.3	1.89	28.9	116.7	5.47	4.3	700	28.8	19.1	0.66	1.42	33.7	20.3	2.3	
				900	36.5	1.85	30.2	107.6	5.77	3.9	900	29.7	21.4	0.72	1.49	34.8	19.9	2.5	
90	4.0	1.1	2.8	700	36.2	1.94	29.6	117.8	5.47	4.5	700	26.3	18.0	0.68	1.68	32.0	15.6	3.3	
				900	37.4	1.89	31.0	108.5	5.80	4.2	900	27.1	20.1	0.74	1.75	33.1	15.5	3.5	
	6.0	2.2	5.7	700	37.5	1.97	30.8	119.6	5.59	4.6	700	26.5	18.0	0.68	1.62	32.0	16.4	3.1	
				900	38.9	1.92	32.3	110.0	5.93	4.3	900	27.3	20.1	0.74	1.68	33.0	16.2	3.3	
	8.0	3.6	9.6	700	38.0	2.00	31.2	120.3	5.58	4.8	700	26.7	18.1	0.68	1.58	32.1	16.9	2.8	
				900	39.5	1.94	32.8	110.6	5.95	4.4	900	27.6	20.2	0.73	1.65	33.2	16.7	3.2	
100	4.0	1.1	2.7	Operation not recommended							Operation not recommended								
	6.0	2.1	5.5	700	25.3	1.80	0.71	1.83	31.5	13.8	3.8	700	25.3	18.0	0.71	1.83	31.5	13.8	3.8
				900	26.0	20.1	0.77	1.89	32.5	13.8	4.1	900	26.0	20.1	0.77	1.89	32.5	13.8	4.1
	8.0	3.5	9.3	700	25.5	18.1	0.71	1.79	31.6	14.3	3.5	700	25.5	18.1	0.71	1.79	31.6	14.3	3.5
900				26.3	20.2	0.77	1.85	32.6	14.2	3.9	900	26.3	20.2	0.77	1.85	32.6	14.2	3.9	
110	4.0	1.0	2.6	Operation not recommended							Operation not recommended								
	6.0	2.0	5.3	700	21.5	16.9	0.79	2.04	28.5	10.6	4.6	700	21.5	16.9	0.79	2.04	28.5	10.6	4.6
				900	22.2	18.8	0.85	2.10	29.3	10.6	5.0	900	22.2	18.8	0.85	2.10	29.3	10.6	5.0
	8.0	3.4	8.9	700	21.7	17.0	0.78	1.99	28.5	10.9	4.3	700	21.7	17.0	0.78	1.99	28.5	10.9	4.3
900				22.4	18.9	0.84	2.05	29.4	10.9	4.7	900	22.4	18.9	0.84	2.05	29.4	10.9	4.7	
120	4.0	1.0	2.5	Operation not recommended							Operation not recommended								
	6.0	2.0	5.1	700	20.8	16.3	0.78	2.30	28.7	9.1	5.5	700	20.8	16.3	0.78	2.30	28.7	9.1	5.5
				900	21.4	18.1	0.85	2.35	29.5	9.1	6.0	900	21.4	18.1	0.85	2.35	29.5	9.1	6.0
	8.0	3.2	8.6	700	20.9	16.4	0.78	2.25	28.6	9.3	5.1	700	20.9	16.4	0.78	2.25	28.6	9.3	5.1
900				21.7	18.2	0.84	2.30	29.5	9.4	5.7	900	21.7	18.2	0.84	2.30	29.5	9.4	5.7	

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB036 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (1250 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F						COOLING - EAT 80/67 °F												
		Pressure Drop		Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h				
		psi	ft/hd																			
20	5.0	1.0	2.4	Operation not recommended						Operation not recommended												
	7.0	2.1	4.9	Operation not recommended						Operation not recommended												
	9.0	3.6	8.2	1050	21.0	1.83	14.8	88.5	3.36	2.7	1250	21.4	1.87	15.0	85.8	3.35	2.4	Operation not recommended				
30	5.0	1.0	2.3	Operation not recommended						Operation not recommended												
	7.0	2.1	4.7	1050	23.6	1.84	17.3	90.8	3.76	2.9	1050	30.2	19.5	0.65	1.05	33.8	28.6	---				
				1250	24.1	1.88	17.7	87.8	3.76	2.6	1250	31.0	21.9	0.70	1.14	34.9	27.2	---				
	9.0	3.5	8.0	1050	24.2	1.86	17.9	91.3	3.82	3.0	1050	30.4	19.4	0.64	1.04	34.0	29.4	---				
				1250	24.6	1.89	18.1	88.2	3.81	2.7	1250	31.5	21.8	0.69	1.10	35.3	28.7	---				
40	5.0	1.0	2.3	Operation not recommended						Operation not recommended												
	7.0	2.0	4.6	1050	27.4	1.89	20.9	94.2	4.24	3.2	1050	33.1	21.7	0.66	1.15	37.0	28.7	---				
				1250	28.0	1.92	21.5	90.8	4.28	3.0	1250	34.0	24.3	0.71	1.24	38.3	27.5	---				
	9.0	3.4	7.8	1050	28.0	1.92	21.5	94.7	4.29	3.3	1050	33.4	21.6	0.65	1.13	37.2	29.5	---				
				1250	28.6	1.94	22.0	91.2	4.33	3.0	1250	34.5	24.3	0.70	1.20	38.6	28.7	---				
50	5.0	1.0	2.2	1050	29.8	1.94	23.2	96.3	4.52	3.5	1050	35.6	23.4	0.66	1.33	40.2	26.8	1.7				
				1250	30.5	1.95	23.8	92.6	4.58	3.2	1250	36.7	26.3	0.72	1.41	41.5	26.0	1.8				
	7.0	1.9	4.5	1050	30.8	1.94	24.2	97.1	4.64	3.6	1050	35.7	23.6	0.66	1.28	40.1	27.9	1.6				
				1250	31.6	1.96	24.9	93.4	4.72	3.3	1250	36.8	26.4	0.72	1.36	41.4	27.0	1.7				
	9.0	3.3	7.5	1050	31.5	1.97	24.7	97.7	4.68	3.7	1050	36.1	23.6	0.65	1.25	40.4	28.8	1.4				
1250				32.2	1.98	25.5	93.9	4.78	3.4	1250	37.2	26.4	0.71	1.33	41.8	28.0	1.6					
60	5.0	0.9	2.1	1050	33.4	1.99	26.6	99.4	4.92	3.9	1050	35.4	24.0	0.68	1.45	40.3	24.4	2.0				
				1250	34.3	1.99	27.5	95.4	5.04	3.6	1250	36.4	26.9	0.74	1.54	41.7	23.7	2.1				
	7.0	1.9	4.3	1050	34.5	2.01	27.6	100.4	5.03	4.0	1050	35.4	24.1	0.68	1.40	40.2	25.4	1.9				
				1250	35.5	2.01	28.6	96.3	5.18	3.7	1250	36.5	27.0	0.74	1.48	41.6	24.7	2.0				
	9.0	3.1	7.3	1050	35.2	2.04	28.2	101.0	5.06	4.2	1050	35.8	24.1	0.67	1.37	40.5	26.2	1.7				
1250				36.2	2.03	29.2	96.8	5.23	3.8	1250	36.9	27.0	0.73	1.45	41.9	25.6	1.9					
70	5.0	0.9	2.1	1050	37.1	2.05	30.1	102.8	5.31	4.4	1050	35.9	24.9	0.69	1.61	41.3	22.3	2.5				
				1250	38.2	2.04	31.3	98.3	5.48	4.1	1250	36.9	28.0	0.76	1.70	42.7	21.8	2.6				
	7.0	1.8	4.2	1050	38.4	2.09	31.3	103.9	5.40	4.5	1050	36.0	25.0	0.70	1.55	41.2	23.2	2.3				
				1250	39.6	2.06	32.6	99.3	5.63	4.2	1250	37.0	28.0	0.76	1.63	42.6	22.7	2.5				
	9.0	3.0	7.0	1050	39.1	2.11	31.9	104.5	5.43	4.7	1050	36.3	25.0	0.69	1.52	41.5	24.0	2.2				
1250				40.3	2.09	33.2	99.8	5.66	4.3	1250	37.4	28.1	0.75	1.60	42.9	23.4	2.4					
80	5.0	0.9	2.0	1050	40.1	2.11	32.9	105.4	5.57	4.9	1050	35.0	24.8	0.71	1.78	41.0	19.6	3.1				
				1250	41.4	2.08	34.3	100.7	5.83	4.6	1250	36.0	27.8	0.77	1.87	42.4	19.3	3.3				
	7.0	1.7	4.0	1050	41.6	2.15	34.3	106.7	5.68	5.1	1050	35.1	24.9	0.71	1.72	41.0	20.4	2.9				
				1250	43.0	2.11	35.8	101.8	5.97	4.7	1250	36.2	27.8	0.77	1.80	42.3	20.2	3.1				
	9.0	2.9	6.8	1050	42.2	2.18	34.8	107.2	5.69	5.2	1050	35.5	24.9	0.70	1.68	41.2	21.1	2.7				
1250				43.7	2.13	36.4	102.3	6.00	4.8	1250	36.6	27.9	0.76	1.76	42.6	20.7	3.0					
90	5.0	0.8	1.9	1050	43.3	2.18	35.9	108.2	5.82	5.5	1050	32.8	24.2	0.74	1.97	39.5	16.6	3.9				
				1250	44.9	2.13	37.6	103.2	6.16	5.1	1250	33.8	27.0	0.80	2.05	40.8	16.5	4.1				
	7.0	1.7	3.9	1050	45.0	2.22	37.4	109.6	5.95	5.7	1050	33.0	24.2	0.73	1.90	39.5	17.4	3.6				
				1250	46.6	2.17	39.2	104.5	6.31	5.3	1250	34.0	27.0	0.79	1.97	40.7	17.3	3.9				
	9.0	2.8	6.6	1050	45.5	2.25	37.9	110.2	5.93	5.9	1050	33.3	24.3	0.73	1.85	39.6	17.9	3.4				
1250				47.3	2.19	39.8	105.0	6.32	5.4	1250	34.3	27.1	0.79	1.94	40.9	17.7	3.7					
100	5.0	0.8	1.8	Operation not recommended						Operation not recommended												
	7.0	1.6	3.8	1050	32.1	24.0	0.75	2.12	39.3	15.1	4.5											
				1250	33.1	26.8	0.81	2.20	40.6	15.0	4.8											
9.0	2.7	6.3	1050	32.4	24.1	0.75	2.08	39.4	15.6	4.1												
			1250	33.4	26.9	0.81	2.15	40.7	15.5	4.6												
110	5.0	0.8	1.8	Operation not recommended						Operation not recommended												
	7.0	1.6	3.6	1050	28.9	22.3	0.77	2.35	36.9	12.3	5.4											
				1250	29.8	24.9	0.84	2.42	38.0	12.3	5.9											
	9.0	2.6	6.1	1050	29.1	22.4	0.77	2.30	37.0	12.7	5.0											
1250				30.1	25.0	0.83	2.37	38.2	12.7	5.6												
120	5.0	0.7	1.7	Operation not recommended						Operation not recommended												
	7.0	1.5	3.5	1050	27.1	22.0	0.81	2.63	36.1	10.3	6.5											
				1250	27.9	24.5	0.88	2.70	37.1	10.4	7.1											
	9.0	2.5	5.8	1050	27.3	22.2	0.81	2.57	36.1	10.6	6.1											
1250				28.2	24.6	0.87	2.63	37.2	10.7	6.7												

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB042 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (1350 cfm)

EWT °F	Flow GPM	Water		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		Pressure Drop		Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
		psi	ft/hd															
20	5.0	0.8	1.9	Operation not recommended							Operation not recommended							
	8.0	2.3	5.3	Operation not recommended							Operation not recommended							
	11.0	4.4	10.3	1150	24.0	2.12	16.8	89.3	3.32	4.1	Operation not recommended							
				1350	24.3	2.10	17.1	86.7	3.39	3.7	Operation not recommended							
30	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.2	5.1	1150	27.9	2.16	20.6	92.5	3.80	4.3	1150	40.2	24.5	0.61	1.34	44.8	29.9	---
				1350	28.3	2.14	21.0	89.4	3.87	3.9	1350	42.1	27.5	0.65	1.42	46.9	29.6	---
	11.0	4.3	10.0	1150	28.3	2.16	21.0	92.8	3.85	4.4	1150	40.6	24.5	0.60	1.31	45.0	31.1	---
				1350	28.7	2.14	21.4	89.7	3.93	4.0	1350	42.5	27.5	0.65	1.38	47.2	30.8	---
40	5.0	0.8	1.8	Operation not recommended							Operation not recommended							
	8.0	2.1	4.9	1150	31.8	2.24	24.1	95.6	4.15	4.7	1150	41.9	26.2	0.62	1.43	46.8	29.3	---
				1350	32.3	2.21	24.7	92.1	4.28	4.3	1350	43.8	29.4	0.67	1.51	48.9	29.0	---
	11.0	4.2	9.7	1150	32.4	2.25	24.7	96.1	4.21	4.9	1150	42.3	26.2	0.62	1.39	47.1	30.5	---
				1350	32.9	2.21	25.3	92.5	4.35	4.4	1350	44.2	29.4	0.66	1.47	49.2	30.1	---
50	5.0	0.7	1.7	1150	34.2	2.26	26.5	97.5	4.44	5.1	1150	42.6	27.0	0.63	1.62	48.1	26.3	2.5
				1350	34.8	2.21	27.2	93.8	4.61	4.7	1350	44.4	30.4	0.68	1.71	50.2	26.0	2.6
	8.0	2.1	4.8	1150	35.6	2.31	27.7	98.7	4.52	5.3	1150	43.1	27.3	0.63	1.55	48.3	27.9	2.3
				1350	36.2	2.26	28.5	94.8	4.71	4.8	1350	44.8	30.7	0.68	1.63	50.4	27.6	2.5
	11.0	4.1	9.4	1150	36.3	2.32	28.4	99.3	4.58	5.4	1150	43.5	27.3	0.63	1.50	48.6	29.0	2.1
1350				37.0	2.27	29.3	95.4	4.78	5.0	1350	45.3	30.7	0.68	1.58	50.7	28.7	2.4	
60	5.0	0.7	1.7	1150	37.5	2.32	29.6	100.2	4.73	5.7	1150	42.5	27.7	0.65	1.78	48.5	23.8	3.0
				1350	38.3	2.26	30.5	96.2	4.96	5.3	1350	44.1	31.1	0.71	1.87	50.5	23.6	3.2
	8.0	2.0	4.6	1150	39.2	2.39	31.0	101.6	4.80	5.9	1150	43.0	28.0	0.65	1.70	48.8	25.4	2.8
				1350	40.0	2.32	32.1	97.4	5.06	5.4	1350	44.7	31.4	0.70	1.78	50.8	25.1	3.0
	11.0	3.9	9.1	1150	40.1	2.41	31.9	102.3	4.87	6.1	1150	43.4	28.0	0.64	1.65	49.1	26.4	2.6
1350				41.0	2.34	33.0	98.1	5.14	5.6	1350	45.1	31.4	0.70	1.73	51.0	26.1	2.9	
70	5.0	0.7	1.6	1150	40.7	2.40	32.5	102.8	4.97	6.4	1150	42.6	28.6	0.67	1.97	49.4	21.6	3.8
				1350	41.6	2.32	33.7	98.6	5.26	6.0	1350	44.2	32.1	0.73	2.06	51.2	21.4	4.0
	8.0	1.9	4.5	1150	42.7	2.48	34.2	104.4	5.04	6.6	1150	43.3	28.9	0.67	1.87	49.7	23.1	3.5
				1350	43.7	2.39	35.5	100.0	5.36	6.1	1350	44.9	32.5	0.72	1.96	51.5	22.9	3.8
	11.0	3.8	8.8	1150	43.8	2.51	35.2	105.2	5.11	6.8	1150	43.7	28.9	0.66	1.82	49.9	24.1	3.3
1350				44.9	2.42	36.6	100.8	5.45	6.3	1350	45.3	32.5	0.72	1.90	51.8	23.8	3.6	
80	5.0	0.7	1.6	1150	43.7	2.44	35.4	105.2	5.26	7.2	1150	41.0	27.9	0.68	2.19	48.5	18.7	4.8
				1350	44.9	2.34	36.9	100.8	5.63	6.7	1350	42.4	31.4	0.74	2.29	50.2	18.5	5.1
	8.0	1.9	4.3	1150	46.0	2.54	37.4	107.0	5.32	7.5	1150	41.8	28.2	0.68	2.08	48.9	20.1	4.5
				1350	47.3	2.42	39.0	102.4	5.72	6.9	1350	43.2	31.7	0.73	2.17	50.6	19.9	4.8
	11.0	3.7	8.5	1150	47.3	2.57	38.6	108.1	5.39	7.7	1150	42.2	28.2	0.67	2.02	49.1	20.9	4.1
1350				48.7	2.46	40.3	103.4	5.82	7.1	1350	43.6	31.7	0.73	2.11	50.8	20.7	4.6	
90	5.0	0.7	1.5	1150	46.7	2.48	38.2	107.6	5.51	8.1	1150	38.9	27.1	0.70	2.45	47.2	15.9	6.0
				1350	48.0	2.37	40.0	102.9	5.95	7.5	1350	40.1	30.5	0.76	2.55	48.8	15.7	6.4
	8.0	1.8	4.2	1150	49.2	2.60	40.4	109.6	5.55	8.4	1150	39.7	27.4	0.69	2.31	47.6	17.1	5.6
				1350	50.8	2.47	42.4	104.8	6.03	7.8	1350	40.9	30.8	0.75	2.41	49.1	17.0	6.1
	11.0	3.5	8.2	1150	50.8	2.64	41.8	110.9	5.63	8.6	1150	40.1	27.4	0.68	2.25	47.7	17.8	5.2
1350				52.4	2.51	43.9	106.0	6.14	8.0	1350	41.3	30.8	0.75	2.34	49.3	17.6	5.8	
100	5.0	0.6	1.5	Operation not recommended							Operation not recommended							
	8.0	1.7	4.0	1150	38.2	26.9	0.70	2.58	47.0	14.8	6.9	Operation not recommended						
				1350	39.2	30.2	0.77	2.68	48.4	14.6	7.5	Operation not recommended						
	11.0	3.4	7.9	1150	38.5	26.9	0.70	2.50	47.1	15.4	6.4	Operation not recommended						
1350				39.6	30.2	0.76	2.60	48.5	15.2	7.2	Operation not recommended							
110	5.0	0.6	1.4	Operation not recommended							Operation not recommended							
	8.0	1.7	3.9	1150	34.8	24.9	0.71	2.88	44.6	12.1	8.5	Operation not recommended						
				1350	35.7	27.9	0.78	2.98	45.9	12.0	9.2	Operation not recommended						
	11.0	3.3	7.6	1150	35.1	24.9	0.71	2.79	44.7	12.6	7.9	Operation not recommended						
1350				36.0	27.9	0.77	2.89	45.9	12.5	8.8	Operation not recommended							
120	5.0	0.6	1.3	Operation not recommended							Operation not recommended							
	8.0	1.6	3.7	1150	32.8	24.6	0.75	3.20	43.7	10.2	10.3	Operation not recommended						
				1350	33.5	27.6	0.82	3.31	44.8	10.1	11.1	Operation not recommended						
	11.0	3.2	7.3	1150	33.1	24.6	0.74	3.11	43.7	10.7	9.5	Operation not recommended						
1350				33.9	27.6	0.81	3.21	44.8	10.6	10.6	Operation not recommended							

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# GB048 - Performance Data

## Single Speed with Variable Speed ECM or 5-Speed ECM (1500 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	6.0	1.1	2.6	Operation not recommended							Operation not recommended							
	9.0	2.3	5.4	Operation not recommended							Operation not recommended							
	12.0	4.0	9.2	1300	31.6	2.84	21.9	92.5	3.26	5.3	Operation not recommended							
				1500	32.0	2.82	22.4	89.7	3.33	4.8	Operation not recommended							
30	6.0	1.1	2.5	Operation not recommended							Operation not recommended							
	9.0	2.3	5.3	1300	36.3	2.92	26.3	95.8	3.64	5.6	1300	48.2	29.6	0.61	1.58	53.6	30.5	---
				1500	36.7	2.90	26.8	92.6	3.71	5.2	1500	50.5	33.3	0.66	1.67	56.2	30.2	---
	12.0	3.9	9.0	1300	36.8	2.93	26.8	96.2	3.68	5.8	1300	48.7	29.6	0.61	1.53	53.9	31.8	---
				1500	37.2	2.90	27.3	93.0	3.76	5.3	1500	51.0	33.3	0.65	1.62	56.5	31.4	---
	40	6.0	1.1	2.5	Operation not recommended							Operation not recommended						
9.0		2.2	5.1	1300	41.7	3.05	31.3	99.7	4.00	6.2	1300	50.1	31.2	0.62	1.74	56.0	28.9	---
				1500	42.2	3.00	32.0	96.1	4.13	5.7	1500	52.3	35.1	0.67	1.83	58.6	28.6	---
12.0		3.8	8.7	1300	42.4	3.06	31.9	100.2	4.06	6.4	1300	50.6	31.2	0.62	1.68	56.4	30.0	---
				1500	43.0	3.01	32.7	96.5	4.19	5.8	1500	52.9	35.1	0.66	1.78	58.9	29.7	---
50		6.0	1.0	2.4	1300	44.7	3.09	34.1	101.8	4.24	6.7	1300	51.2	32.5	0.63	2.02	58.1	25.3
	1500				45.4	3.02	35.1	98.0	4.40	6.2	1500	53.3	36.5	0.68	2.13	60.6	25.1	3.1
	9.0	2.1	4.9	1300	46.5	3.16	35.7	103.1	4.32	6.9	1300	51.7	32.8	0.63	1.93	58.3	26.8	2.7
				1500	47.3	3.08	36.7	99.2	4.49	6.4	1500	53.9	36.8	0.68	2.03	60.8	26.6	2.9
	12.0	3.7	8.4	1300	47.4	3.18	36.6	103.8	4.37	7.2	1300	52.2	32.8	0.63	1.87	58.6	27.9	2.5
				1500	48.2	3.10	37.7	99.8	4.56	6.5	1500	54.4	36.8	0.68	1.97	61.1	27.6	2.8
60	6.0	1.0	2.3	1300	49.1	3.18	38.2	105.0	4.52	7.6	1300	50.0	32.1	0.64	2.24	57.6	22.3	3.5
				1500	50.0	3.10	39.5	100.9	4.74	7.0	1500	51.9	36.0	0.69	2.35	59.9	22.1	3.7
	9.0	2.1	4.8	1300	51.3	3.28	40.1	106.5	4.59	7.8	1300	50.6	32.4	0.64	2.13	57.9	23.7	3.3
				1500	52.3	3.18	41.5	102.3	4.83	7.2	1500	52.6	36.4	0.69	2.24	60.2	23.5	3.6
	12.0	3.5	8.2	1300	52.5	3.31	41.2	107.4	4.65	8.0	1300	51.1	32.4	0.63	2.07	58.2	24.7	3.0
				1500	53.6	3.20	42.7	103.1	4.91	7.4	1500	53.1	36.4	0.69	2.17	60.5	24.4	3.4
70	6.0	1.0	2.2	1300	53.6	3.29	42.4	108.2	4.78	8.5	1300	49.7	32.4	0.65	2.51	58.3	19.8	4.4
				1500	54.7	3.17	43.9	103.8	5.05	7.9	1500	51.5	36.5	0.71	2.63	60.5	19.6	4.7
	9.0	2.0	4.6	1300	56.1	3.40	44.5	110.0	4.84	8.8	1300	50.5	32.8	0.65	2.38	58.6	21.2	4.1
				1500	57.4	3.27	46.3	105.5	5.14	8.1	1500	52.3	36.8	0.70	2.50	60.9	21.0	4.5
	12.0	3.4	7.9	1300	57.6	3.44	45.8	111.0	4.91	9.0	1300	51.0	32.8	0.64	2.31	58.9	22.0	3.8
				1500	59.0	3.31	47.7	106.4	5.22	8.3	1500	52.9	36.8	0.70	2.42	61.1	21.8	4.2
80	6.0	0.9	2.1	1300	57.1	3.37	45.6	110.7	4.97	9.6	1300	47.7	31.7	0.67	2.81	57.3	17.0	5.6
				1500	58.6	3.23	47.5	106.2	5.32	8.8	1500	49.3	35.6	0.72	2.94	59.3	16.8	5.9
	9.0	1.9	4.5	1300	60.1	3.50	48.1	112.8	5.03	9.8	1300	48.5	32.0	0.66	2.66	57.6	18.2	5.2
				1500	61.7	3.35	50.3	108.1	5.40	9.1	1500	50.2	36.0	0.72	2.78	59.7	18.0	5.6
	12.0	3.3	7.6	1300	61.8	3.55	49.7	114.0	5.10	10.1	1300	49.0	32.0	0.65	2.59	57.8	19.0	4.8
				1500	63.5	3.39	51.9	109.2	5.49	9.4	1500	50.7	36.0	0.71	2.70	59.9	18.8	5.4
90	6.0	0.9	2.1	1300	60.7	3.45	48.9	113.2	5.16	10.7	1300	44.5	30.3	0.68	3.14	55.2	14.2	7.0
				1500	62.4	3.29	51.2	108.5	5.56	9.9	1500	45.9	34.0	0.74	3.27	57.0	14.0	7.4
	9.0	1.9	4.3	1300	64.1	3.61	51.7	115.6	5.20	11.1	1300	45.4	30.6	0.67	2.97	55.5	15.3	6.5
				1500	66.0	3.43	54.3	110.7	5.64	10.2	1500	46.8	34.3	0.73	3.09	57.4	15.1	7.1
	12.0	3.2	7.4	1300	66.1	3.67	53.5	117.0	5.27	11.4	1300	45.9	30.6	0.67	2.88	55.7	15.9	6.1
				1500	68.1	3.48	56.2	112.0	5.74	10.6	1500	47.3	34.3	0.73	3.00	57.5	15.7	6.7
100	6.0	0.9	2.0	Operation not recommended							Operation not recommended							
	9.0	1.8	4.2	Operation not recommended							1300	43.9	30.1	0.69	3.33	55.2	13.2	8.1
				1500	45.1	33.9	0.75	3.46	56.9	13.0	8.8							
	12.0	3.1	7.1	Operation not recommended							1300	44.3	30.1	0.68	3.23	55.3	13.7	7.5
1500				45.6	33.9	0.74	3.36	57.0	13.6	8.4								
110	6.0	0.8	1.9	Operation not recommended							Operation not recommended							
	9.0	1.7	4.0	Operation not recommended							1300	39.7	28.0	0.71	3.71	52.3	10.7	9.9
				1500	40.7	31.4	0.77	3.84	53.8	10.6	10.8							
	12.0	3.0	6.8	Operation not recommended							1300	40.1	28.0	0.70	3.60	52.3	11.1	9.2
1500				41.1	31.4	0.77	3.73	53.8	11.0	10.2								
120	6.0	0.8	1.8	Operation not recommended							Operation not recommended							
	9.0	1.7	3.8	Operation not recommended							1300	37.6	27.4	0.73	4.13	51.7	9.1	12.0
				1500	38.4	30.8	0.80	4.27	53.0	9.0	13.0							
	12.0	2.8	6.6	Operation not recommended							1300	37.9	27.4	0.72	4.01	51.6	9.5	11.1
1500				38.8	30.8	0.79	4.15	53.0	9.4	12.4								

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB060 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (2000 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	9.0	2.5	5.7	Operation not recommended							Operation not recommended							
	12.0	4.0	9.2	Operation not recommended							Operation not recommended							
	15.0	5.9	13.5	1500	38.6	3.70	26.0	93.8	3.06	6.5	Operation not recommended							
2000				39.4	3.77	26.5	88.2	3.06	5.8	Operation not recommended								
30	9.0	2.4	5.5	Operation not recommended							Operation not recommended							
	12.0	3.9	8.9	1500	43.5	3.70	30.9	96.9	3.45	6.8	1500	73.6	46.9	0.64	2.16	81.0	34.1	---
				2000	44.4	3.77	31.5	90.5	3.45	6.2	2000	71.2	48.3	0.68	2.61	80.2	27.3	---
	15.0	5.7	13.1	1500	44.9	3.80	31.9	97.7	3.46	7.0	1500	74.3	47.0	0.63	2.16	81.7	34.4	---
				2000	45.8	3.86	32.6	91.2	3.47	6.4	2000	72.4	47.8	0.66	2.44	80.8	29.6	---
	40	9.0	2.3	5.3	Operation not recommended							Operation not recommended						
12.0		3.7	8.7	1500	51.3	3.86	38.2	101.7	3.90	7.5	1500	71.9	47.4	0.66	2.40	80.1	30.0	---
				2000	52.5	3.94	39.1	94.3	3.91	6.9	2000	71.3	49.5	0.69	2.81	80.9	25.4	---
15.0		5.5	12.7	1500	52.8	3.94	39.3	102.6	3.92	7.8	1500	72.6	47.6	0.66	2.39	80.8	30.4	---
				2000	53.8	4.01	40.1	94.9	3.93	7.1	2000	72.1	49.3	0.68	2.65	81.2	27.2	---
50		9.0	2.2	5.2	1500	57.3	4.00	43.6	105.4	4.19	8.1	1500	72.2	48.4	0.67	2.81	81.8	25.7
	2000				57.9	4.05	44.1	96.8	4.19	7.5	2000	72.4	50.2	0.69	3.15	83.1	23.0	4.1
	12.0	3.6	8.4	1500	57.9	3.99	44.3	105.7	4.25	8.4	1500	72.3	48.5	0.67	2.71	81.6	26.7	3.6
				2000	59.4	4.09	45.5	97.5	4.26	7.7	2000	72.4	50.7	0.70	3.09	82.9	23.5	3.9
	15.0	5.3	12.3	1500	59.4	4.08	45.5	106.6	4.27	8.6	1500	73.0	48.7	0.67	2.70	82.2	27.1	3.4
				2000	60.5	4.13	46.4	98.0	4.29	7.9	2000	73.1	50.7	0.69	2.94	83.2	24.9	3.7
60	9.0	2.2	5.0	1500	63.3	4.14	49.2	109.1	4.48	9.1	1500	68.5	46.2	0.68	3.04	78.9	22.5	4.7
				2000	64.4	4.17	50.1	99.8	4.52	8.4	2000	70.0	49.1	0.70	3.33	81.4	21.0	5.0
	12.0	3.5	8.1	1500	64.9	4.16	50.7	110.0	4.57	9.4	1500	68.7	46.4	0.68	2.93	78.7	23.4	4.4
				2000	65.8	4.21	51.4	100.5	4.57	8.7	2000	70.4	49.3	0.70	3.24	81.4	21.7	4.8
	15.0	5.2	11.9	1500	66.3	4.23	51.9	110.9	4.59	9.7	1500	69.4	46.7	0.67	2.91	79.3	23.9	4.1
				2000	67.7	4.28	53.1	101.3	4.63	8.9	2000	70.8	49.6	0.70	3.12	81.4	22.7	4.6
70	9.0	2.1	4.9	1500	69.5	4.29	54.9	112.9	4.75	10.3	1500	65.9	45.2	0.69	3.42	77.5	19.3	5.9
				2000	71.0	4.31	56.3	102.9	4.83	9.5	2000	68.8	49.1	0.71	3.68	81.3	18.7	6.3
	12.0	3.4	7.9	1500	72.0	4.33	57.2	114.5	4.87	10.6	1500	66.2	45.5	0.69	3.29	77.4	20.1	5.5
				2000	72.4	4.35	57.5	103.5	4.87	9.8	2000	69.5	49.1	0.71	3.54	81.6	19.6	6.0
	15.0	5.0	11.6	1500	73.4	4.40	58.4	115.3	4.89	10.9	1500	66.8	45.8	0.69	3.25	77.9	20.6	5.1
				2000	75.1	4.44	59.9	104.7	4.95	10.0	2000	69.5	49.6	0.71	3.44	81.2	20.2	5.7
80	9.0	2.0	4.7	1500	74.3	4.41	59.3	115.9	4.94	11.5	1500	64.1	44.6	0.70	3.81	77.0	16.8	7.5
				2000	75.7	4.41	60.6	105.0	5.03	10.7	2000	65.7	47.7	0.73	4.06	79.6	16.2	8.0
	12.0	3.3	7.6	1500	77.7	4.48	62.4	117.9	5.08	11.9	1500	64.4	45.0	0.70	3.66	76.9	17.6	7.0
				2000	78.3	4.44	63.2	106.3	5.18	11.0	2000	66.4	47.7	0.72	3.87	79.6	17.2	7.6
	15.0	4.8	11.2	1500	78.9	4.54	63.4	118.7	5.10	12.2	1500	65.1	45.4	0.70	3.60	77.4	18.1	6.5
				2000	80.5	4.57	64.9	107.3	5.16	11.3	2000	66.7	48.2	0.72	3.76	79.6	17.8	7.2
90	9.0	2.0	4.5	1500	79.3	4.54	63.8	119.0	5.12	13.0	1500	60.9	43.2	0.71	4.20	75.2	14.5	9.4
				2000	80.6	4.53	65.1	107.3	5.21	12.0	2000	61.3	45.5	0.74	4.45	76.5	13.8	10.0
	12.0	3.2	7.3	1500	83.5	4.65	67.7	121.6	5.27	13.4	1500	61.3	43.7	0.71	4.03	75.1	15.2	8.8
				2000	84.5	4.53	69.1	109.1	5.47	12.4	2000	61.9	45.5	0.73	4.20	76.3	14.7	9.5
	15.0	4.7	10.8	1500	84.7	4.69	68.6	122.3	5.29	13.8	1500	61.9	44.1	0.71	3.96	75.4	15.7	8.2
				2000	86.2	4.72	70.0	109.9	5.35	12.8	2000	62.6	46.0	0.73	4.08	76.5	15.3	9.1
100	9.0	1.9	4.4	Operation not recommended							Operation not recommended							
	12.0	3.1	7.1	Operation not recommended							1500	58.8	42.9	0.73	4.59	74.5	12.8	10.9
				2000	59.4	44.7	0.75	4.70	75.5	12.6	11.8							
	15.0	4.5	10.4	Operation not recommended							1500	59.4	43.4	0.73	4.49	74.8	13.2	10.1
2000				60.0	45.2	0.75	4.58	75.7	13.1	11.2								
110	9.0	1.8	4.2	Operation not recommended							Operation not recommended							
	12.0	2.9	6.8	Operation not recommended							1500	53.8	39.9	0.74	5.08	71.2	10.6	13.4
				2000	54.4	41.5	0.76	5.14	71.9	10.6	14.5							
	15.0	4.3	10.0	Operation not recommended							1500	54.4	40.4	0.74	4.96	71.3	11.0	12.4
2000				54.9	42.1	0.77	5.01	72.0	11.0	13.8								
120	9.0	1.7	4.0	Operation not recommended							Operation not recommended							
	12.0	2.8	6.5	Operation not recommended							1500	51.8	40.5	0.78	5.78	71.5	9.0	16.1
				2000	50.8	41.2	0.81	5.80	70.6	8.8	17.5							
	15.0	4.2	9.6	Operation not recommended							1500	52.3	41.1	0.78	5.62	71.5	9.3	15.0
2000				51.7	41.7	0.81	5.63	70.9	9.2	16.7								

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB070 - Performance Data

### Single Speed with Variable Speed ECM or 5-Speed ECM (2200 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	12.0	3.0	7.0	Operation not recommended							Operation not recommended							
	15.0	4.4	10.2	Operation not recommended							Operation not recommended							
	18.0	6.0	13.9	1700	45.6	4.45	30.4	94.8	3.00	7.7	Operation not recommended							
				2200	46.6	4.54	31.2	89.6	3.01	6.9	Operation not recommended							
30	12.0	3.0	6.8	Operation not recommended							Operation not recommended							
	15.0	4.3	9.9	1700	52.5	4.55	37.0	98.6	3.38	8.1	1700	69.3	43.4	0.63	2.39	77.5	29.0	---
				2200	53.8	4.65	37.9	92.6	3.39	7.4	2200	73.9	49.6	0.67	2.79	83.4	26.5	---
	18.0	5.8	13.5	1700	52.7	4.57	37.1	98.7	3.38	8.4	1700	69.7	42.9	0.62	2.38	77.8	29.3	---
				2200	54.0	4.66	38.1	92.7	3.39	7.6	2200	74.3	49.0	0.66	2.78	83.8	26.7	---
	40	12.0	2.9	6.6	Operation not recommended							Operation not recommended						
15.0		4.1	9.6	1700	61.3	4.75	45.1	103.4	3.78	8.9	1700	71.7	46.1	0.64	2.63	80.6	27.3	---
				2200	62.8	4.80	46.4	96.4	3.83	8.2	2200	76.1	52.7	0.69	3.03	86.4	25.1	---
18.0		5.7	13.1	1700	61.7	4.77	45.4	103.6	3.79	9.2	1700	72.2	45.9	0.64	2.61	81.1	27.7	---
				2200	63.2	4.82	46.7	96.6	3.84	8.4	2200	76.6	52.5	0.68	3.01	86.9	25.5	---
50		12.0	2.8	6.4	1700	67.6	4.89	50.9	106.8	4.05	9.7	1700	75.1	48.4	0.64	3.01	85.4	24.9
	2200				69.2	4.91	52.4	99.1	4.13	8.9	2200	79.4	55.4	0.70	3.43	91.1	23.2	4.5
	15.0	4.0	9.3	1700	68.9	4.94	52.1	107.5	4.09	10.0	1700	75.5	48.7	0.64	2.92	85.5	25.8	4.0
				2200	70.6	4.95	53.7	99.7	4.18	9.2	2200	79.8	55.7	0.70	3.33	91.2	24.0	4.3
	18.0	5.5	12.7	1700	69.5	4.97	52.6	107.9	4.10	10.3	1700	76.3	48.9	0.64	2.89	86.1	26.4	3.7
				2200	71.3	4.98	54.3	100.0	4.20	9.4	2200	80.6	55.9	0.69	3.29	91.9	24.5	4.1
60	12.0	2.7	6.2	1700	74.9	5.09	57.5	110.8	4.31	10.8	1700	72.3	46.9	0.65	3.31	83.5	21.8	5.2
				2200	76.8	5.06	59.5	102.3	4.45	10.0	2200	76.1	53.6	0.70	3.72	88.8	20.4	5.5
	15.0	3.9	9.0	1700	77.1	5.16	59.5	112.0	4.38	11.2	1700	72.6	47.0	0.65	3.22	83.5	22.6	4.8
				2200	79.1	5.12	61.6	103.3	4.53	10.3	2200	76.4	53.8	0.70	3.62	88.8	21.1	5.2
	18.0	5.3	12.3	1700	78.0	5.20	60.2	112.5	4.39	11.5	1700	73.5	47.6	0.65	3.17	84.3	23.2	4.5
				2200	80.0	5.15	62.4	103.7	4.55	10.6	2200	77.4	54.5	0.70	3.57	89.5	21.7	5.0
70	12.0	2.6	6.0	1700	82.6	5.30	64.5	115.0	4.57	12.2	1700	72.0	47.5	0.66	3.69	84.6	19.5	6.5
				2200	84.8	5.22	66.9	105.7	4.76	11.3	2200	75.5	54.4	0.72	4.11	89.5	18.4	6.9
	15.0	3.8	8.7	1700	85.6	5.40	67.2	116.6	4.65	12.6	1700	72.3	47.6	0.66	3.59	84.5	20.2	6.1
				2200	87.9	5.30	69.8	107.0	4.86	11.6	2200	75.8	54.5	0.72	3.99	89.4	19.0	6.6
	18.0	5.1	11.9	1700	86.8	5.44	68.2	117.3	4.67	13.0	1700	73.4	48.7	0.66	3.53	85.4	20.8	5.6
				2200	89.1	5.34	70.9	107.5	4.89	11.9	2200	76.9	55.7	0.72	3.93	90.3	19.6	6.3
80	12.0	2.5	5.8	1700	88.2	5.50	69.4	118.0	4.70	13.7	1700	69.1	45.5	0.66	4.12	83.1	16.8	8.2
				2200	90.7	5.37	72.3	108.2	4.95	12.7	2200	72.1	52.1	0.72	4.53	87.6	15.9	8.7
	15.0	3.6	8.4	1700	92.2	5.62	73.0	120.2	4.81	14.1	1700	69.3	45.5	0.66	4.00	82.9	17.3	7.7
				2200	94.8	5.47	76.2	109.9	5.08	13.1	2200	72.4	52.1	0.72	4.40	87.4	16.4	8.3
	18.0	5.0	11.5	1700	93.6	5.68	74.3	121.0	4.83	14.6	1700	70.5	46.9	0.67	3.92	83.9	18.0	7.1
				2200	96.5	5.52	77.6	110.6	5.12	13.5	2200	73.6	53.7	0.73	4.31	88.3	17.1	7.9
90	12.0	2.4	5.6	1700	94.2	5.72	74.7	121.3	4.83	15.4	1700	63.4	42.2	0.67	4.57	79.0	13.9	10.3
				2200	97.0	5.53	78.1	110.8	5.14	14.3	2200	66.0	48.4	0.73	4.98	83.0	13.3	10.9
	15.0	3.5	8.1	1700	99.2	5.87	79.2	124.1	4.96	15.9	1700	63.6	42.1	0.66	4.45	78.8	14.3	9.6
				2200	102.2	5.66	82.9	113.0	5.29	14.7	2200	66.2	48.3	0.73	4.84	82.7	13.7	10.4
	18.0	4.8	11.1	1700	100.9	5.93	80.7	125.0	4.99	16.4	1700	64.9	43.8	0.68	4.35	79.7	14.9	8.9
				2200	104.2	5.71	84.8	113.9	5.35	15.2	2200	67.5	50.3	0.74	4.73	83.6	14.3	9.9
100	12.0	2.3	5.4	Operation not recommended							Operation not recommended							
	15.0	3.4	7.8	1700	61.7	41.6	0.67	5.01	78.9	12.3	12.0	Operation not recommended						
				2200	64.0	47.7	0.75	5.39	82.4	11.9	13.0	Operation not recommended						
	18.0	4.6	10.7	1700	63.1	43.7	0.69	4.88	79.8	12.9	11.1	Operation not recommended						
2200				65.4	50.1	0.77	5.24	83.3	12.5	12.3	Operation not recommended							
110	12.0	2.2	5.2	Operation not recommended							Operation not recommended							
	15.0	3.3	7.5	1700	54.8	37.0	0.67	5.58	73.8	9.8	14.6	Operation not recommended						
				2200	56.5	42.4	0.75	5.94	76.8	9.5	15.9	Operation not recommended						
	18.0	4.4	10.2	1700	56.1	39.1	0.70	5.41	74.6	10.4	13.6	Operation not recommended						
2200				57.9	44.9	0.78	5.76	77.6	10.0	15.1	Operation not recommended							
120	12.0	2.2	5.0	Operation not recommended							Operation not recommended							
	15.0	3.1	7.2	1700	52.0	37.4	0.72	6.27	73.4	8.3	17.7	Operation not recommended						
				2200	53.4	43.0	0.80	6.60	76.0	8.1	19.2	Operation not recommended						
	18.0	4.3	9.8	1700	53.4	40.0	0.75	6.06	74.1	8.8	16.4	Operation not recommended						
2200				54.9	45.9	0.84	6.38	76.7	8.6	18.2	Operation not recommended							

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB026 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM Low Speed (700 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F												
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h					
20	3.0	0.8	1.9	Operation not recommended							Operation not recommended												
	5.0	2.0	4.7	Operation not recommended							Operation not recommended												
	7.0	3.7	8.7	500	11.8	1.05	8.2	91.8	3.30	1.8	700	11.9	1.05	8.3	85.8	3.32	1.6	Operation not recommended					
30	3.0	0.8	1.8	Operation not recommended							Operation not recommended												
	5.0	2.0	4.5	500	13.5	1.06	9.9	95.1	3.75	1.8	500	22.5	14.1	0.63	0.52	24.3	43.2	---					
				700	13.8	1.07	10.2	88.3	3.80	1.6	700	22.8	15.4	0.67	0.55	24.7	41.6	---					
	7.0	3.6	8.4	500	13.8	1.07	10.2	95.6	3.80	1.8	500	22.6	14.1	0.62	0.51	24.3	44.7	---					
			700	14.0	1.08	10.3	88.5	3.81	1.6	700	23.2	15.4	0.67	0.53	25.0	43.6	---						
40	3.0	0.8	1.8	Operation not recommended							Operation not recommended												
	5.0	1.9	4.4	500	16.0	1.068	12.3	99.6	4.38	1.8	500	23.3	14.7	0.63	0.57	25.3	40.8	---					
				700	16.3	1.07	12.6	91.5	4.45	1.7	700	23.8	16.0	0.67	0.60	25.8	39.6	---					
	7.0	3.5	8.2	500	16.2	1.08	12.6	100.1	4.40	1.9	500	23.5	14.7	0.63	0.56	25.4	42.3	---					
			700	16.6	1.08	12.9	91.9	4.49	1.7	700	24.0	16.0	0.67	0.58	26.0	41.4	---						
50	3.0	0.7	1.7	500	17.3	1.06	13.6	102.0	4.75	1.9	500	23.8	15.1	0.63	0.68	26.1	35.2	0.7					
				700	17.6	1.06	14.0	93.3	4.85	1.7	700	24.3	16.4	0.68	0.70	26.7	34.5	0.8					
	5.0	1.8	4.3	500	18.1	1.09	14.4	103.6	4.89	1.9	500	24.0	15.2	0.63	0.64	26.2	37.4	0.7					
				700	18.5	1.09	14.8	94.5	4.98	1.8	700	24.5	16.6	0.68	0.67	26.8	36.6	0.7					
	7.0	3.4	7.9	500	18.4	1.10	14.6	104.1	4.89	2.0	500	24.3	15.2	0.63	0.62	26.4	39.0	0.6					
				700	18.8	1.10	15.1	94.9	5.04	1.8	700	24.8	16.6	0.67	0.65	27.0	38.1	0.7					
60	3.0	0.7	1.7	500	19.5	1.08	15.8	106.2	5.29	2.1	500	23.0	14.8	0.64	0.76	25.6	30.1	1.0					
				700	20.0	1.07	16.3	96.4	5.46	1.9	700	23.5	16.1	0.69	0.79	26.2	29.6	1.0					
	5.0	1.8	4.1	500	20.4	1.10	16.7	107.9	5.42	2.1	500	23.2	14.9	0.64	0.72	25.7	32.1	0.9					
				700	21.0	1.10	17.2	97.7	5.60	2.0	700	23.7	16.3	0.69	0.75	26.3	31.5	1.0					
	7.0	3.3	7.6	500	20.8	1.12	17.0	108.5	5.44	2.2	500	23.5	14.9	0.64	0.70	25.9	33.4	0.8					
			700	21.3	1.10	17.5	98.2	5.65	2.0	700	23.9	16.3	0.68	0.73	26.4	32.8	0.9						
70	3.0	0.7	1.6	500	21.9	1.10	18.2	110.6	5.86	2.3	500	23.0	15.0	0.65	0.87	26.0	26.4	1.3					
				700	22.4	1.07	18.8	99.7	6.12	2.1	700	23.5	16.3	0.69	0.91	26.6	25.9	1.4					
	5.0	1.7	4.0	500	22.9	1.12	19.0	112.3	6.00	2.4	500	23.2	15.1	0.65	0.82	26.0	28.2	1.3					
				700	23.6	1.10	19.8	101.2	6.26	2.2	700	23.7	16.5	0.69	0.86	26.7	27.7	1.4					
	7.0	3.2	7.4	500	23.3	1.13	19.4	113.1	6.03	2.4	500	23.5	15.1	0.64	0.80	26.2	29.2	1.2					
			700	23.9	1.11	20.1	101.6	6.31	2.2	700	23.9	16.5	0.69	0.83	26.7	28.8	1.3						
80	3.0	0.7	1.6	500	23.8	1.13	19.9	114.0	6.19	2.6	500	21.7	14.5	0.67	1.00	25.1	21.8	1.8					
				700	24.5	1.10	20.7	102.4	6.54	2.4	700	22.2	15.7	0.71	1.03	25.7	21.5	1.9					
	5.0	1.7	3.9	500	24.8	1.15	20.9	116.0	6.32	2.6	500	21.9	14.6	0.67	0.94	25.1	23.2	1.7					
				700	25.6	1.12	21.8	103.9	6.70	2.4	700	22.4	15.9	0.71	0.98	25.7	22.9	1.9					
	7.0	3.1	7.1	500	25.3	1.16	21.3	116.8	6.36	2.7	500	22.2	14.6	0.66	0.92	25.3	24.2	1.6					
				700	26.1	1.13	22.2	104.5	6.75	2.5	700	22.6	15.9	0.70	0.95	25.8	23.8	1.8					
90	3.0	0.7	1.5	500	25.8	1.15	21.9	117.8	6.56	2.9	500	19.8	13.6	0.69	1.14	23.7	17.4	2.4					
				700	26.6	1.12	22.8	105.2	6.99	2.7	700	20.3	14.8	0.73	1.17	24.3	17.3	2.6					
	5.0	1.6	3.7	500	26.9	1.18	22.9	119.8	6.69	3.0	500	20.0	13.8	0.69	1.08	23.7	18.5	2.3					
				700	27.8	1.14	24.0	106.8	7.17	2.8	700	20.5	15.0	0.73	1.11	24.2	18.5	2.5					
	7.0	3.0	6.9	500	27.3	1.19	23.3	120.6	6.71	3.1	500	20.3	13.8	0.68	1.04	23.8	19.4	2.1					
				700	28.4	1.15	24.4	107.5	7.22	2.8	700	20.6	15.0	0.73	1.08	24.3	19.1	2.4					
100	3.0	0.6	1.5	Operation not recommended							Operation not recommended												
	5.0	1.6	3.6	Operation not recommended							500	19.3	13.7	0.71	1.23	23.5	15.7	3.0					
				Operation not recommended							700	19.7	14.8	0.75	1.27	24.1	15.6	3.2					
	7.0	2.9	6.6	Operation not recommended							500	19.5	13.7	0.70	1.19	23.6	16.4	2.8					
			Operation not recommended							700	19.9	14.8	0.75	1.23	24.1	16.1	3.1						
110	3.0	0.6	1.4	Operation not recommended							Operation not recommended												
	5.0	1.5	3.4	Operation not recommended							500	16.9	12.6	0.74	1.40	21.7	12.1	3.8					
				Operation not recommended							700	17.3	13.7	0.79	1.44	22.2	12.0	4.1					
	7.0	2.8	6.4	Operation not recommended							500	17.1	12.6	0.74	1.36	21.8	12.6	3.5					
			Operation not recommended							700	17.5	13.7	0.78	1.40	22.2	12.5	3.9						
120	3.0	0.6	1.3	Operation not recommended							Operation not recommended												
	5.0	1.4	3.3	Operation not recommended							500	16.2	12.5	0.77	1.59	21.6	10.2	4.7					
				Operation not recommended							700	16.5	13.5	0.82	1.63	22.1	10.1	5.1					
	7.0	2.7	6.1	Operation not recommended							500	16.3	12.5	0.76	1.54	21.6	10.6	4.3					
			Operation not recommended							700	16.7	13.5	0.81	1.59	22.1	10.5	4.8						

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB026 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM High Speed (900 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F												
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h					
20	4.0	1.4	3.2	Operation not recommended							Operation not recommended												
	6.0	2.9	6.6	Operation not recommended							Operation not recommended												
	8.0	4.8	11.1	700	16.2	1.40	11.4	91.5	3.40	2.1	900	16.4	1.41	11.6	86.9	3.41	1.9	Operation not recommended					
30	4.0	1.4	3.2	Operation not recommended							Operation not recommended												
	6.0	2.8	6.4	700	18.6	1.44	13.7	94.6	3.79	2.3	700	29.8	18.6	0.62	0.93	33.0	32.1	---					
				900	19.0	1.45	14.0	89.5	3.83	2.1	900	30.3	20.3	0.67	0.98	33.6	31.0	---					
	8.0	4.7	10.8	700	19.0	1.45	14.0	95.1	3.83	2.3	700	30.0	18.6	0.62	0.90	33.0	33.3	---					
				900	19.2	1.46	14.3	89.8	3.85	2.1	900	30.7	20.3	0.66	0.95	33.9	32.5	---					
40	4.0	1.3	3.1	Operation not recommended							Operation not recommended												
	6.0	2.7	6.2	700	21.6	1.50	16.5	98.6	4.24	2.5	700	30.2	19.1	0.63	1.01	33.7	29.9	---					
				900	22.1	1.50	16.9	92.7	4.30	2.3	900	30.8	20.8	0.68	1.06	34.4	29.1	---					
	8.0	4.5	10.4	700	22.0	1.51	16.8	99.1	4.26	2.6	700	30.5	19.1	0.63	0.98	33.8	31.1	---					
				900	22.4	1.51	17.3	93.1	4.34	2.4	900	31.2	20.8	0.67	1.02	34.7	30.4	---					
50	4.0	1.3	3.0	700	23.4	1.53	18.1	100.9	4.46	2.7	700	30.0	19.3	0.64	1.18	34.0	25.5	1.3					
				900	23.8	1.53	18.6	94.5	4.55	2.5	900	30.7	21.0	0.69	1.22	34.8	25.1	1.4					
	6.0	2.6	6.0	700	24.5	1.57	19.2	102.5	4.59	2.8	700	30.3	19.5	0.64	1.12	34.2	27.1	1.3					
				900	25.0	1.57	19.7	95.7	4.67	2.6	900	31.0	21.3	0.69	1.16	34.9	26.6	1.4					
	8.0	4.4	10.1	700	24.9	1.59	19.5	102.9	4.59	2.9	700	30.7	19.5	0.64	1.08	34.4	28.3	1.2					
900				25.5	1.58	20.1	96.2	4.73	2.7	900	31.3	21.3	0.68	1.13	35.1	27.7	1.3						
60	4.0	1.2	2.9	700	26.3	1.62	20.8	104.8	4.77	3.1	700	29.7	19.2	0.65	1.28	34.0	23.2	1.6					
				900	26.9	1.60	21.4	97.6	4.93	2.9	900	30.3	20.9	0.69	1.33	34.8	22.8	1.7					
	6.0	2.5	5.8	700	27.5	1.65	21.9	106.4	4.89	3.2	700	30.0	19.4	0.65	1.21	34.1	24.7	1.5					
				900	28.2	1.64	22.6	99.0	5.05	2.9	900	30.6	21.1	0.69	1.26	34.9	24.3	1.6					
	8.0	4.2	9.8	700	28.0	1.67	22.3	107.0	4.91	3.3	700	30.3	19.4	0.64	1.18	34.3	25.7	1.4					
900				28.7	1.65	23.1	99.5	5.10	3.0	900	30.9	21.1	0.68	1.22	35.1	25.3	1.6						
70	4.0	1.2	2.8	700	29.3	1.70	23.5	108.8	5.05	3.5	700	29.3	19.1	0.65	1.42	34.2	20.6	2.0					
				900	30.0	1.67	24.3	100.9	5.28	3.2	900	29.9	20.8	0.69	1.48	34.9	20.2	2.1					
	6.0	2.4	5.6	700	30.6	1.73	24.7	110.5	5.17	3.6	700	29.6	19.3	0.65	1.34	34.1	22.0	1.9					
				900	31.5	1.71	25.7	102.5	5.40	3.3	900	30.2	21.0	0.69	1.40	35.0	21.6	2.0					
	8.0	4.1	9.5	700	31.2	1.76	25.2	111.3	5.20	3.7	700	29.9	19.3	0.64	1.31	34.4	22.8	1.7					
900				32.0	1.72	26.1	102.9	5.44	3.4	900	30.5	21.0	0.69	1.35	35.1	22.5	1.9						
80	4.0	1.2	2.7	700	32.0	1.80	25.8	112.3	5.20	3.9	700	28.2	18.8	0.67	1.57	33.5	17.9	2.5					
				900	32.9	1.76	26.9	103.9	5.48	3.6	900	28.7	20.4	0.71	1.63	34.3	17.6	2.7					
	6.0	2.4	5.4	700	33.4	1.84	27.1	114.2	5.31	4.0	700	28.4	18.9	0.67	1.49	33.5	19.0	2.3					
				900	34.5	1.80	28.4	105.5	5.62	3.7	900	29.0	20.6	0.71	1.54	34.3	18.9	2.5					
	8.0	4.0	9.2	700	34.0	1.87	27.6	114.9	5.33	4.1	700	28.7	18.9	0.66	1.45	33.7	19.9	2.2					
900				35.1	1.82	28.9	106.1	5.66	3.8	900	29.3	20.6	0.70	1.50	34.4	19.6	2.4						
90	4.0	1.1	2.6	700	34.8	1.91	28.2	116.0	5.33	4.3	700	26.7	18.1	0.68	1.74	32.6	15.3	3.1					
				900	35.9	1.86	29.6	107.0	5.67	4.0	900	27.3	19.7	0.72	1.79	33.4	15.2	3.3					
	6.0	2.3	5.2	700	36.3	1.96	29.6	118.0	5.43	4.5	700	26.9	18.4	0.68	1.65	32.5	16.3	2.9					
				900	37.6	1.89	31.1	108.6	5.82	4.1	900	27.5	19.9	0.72	1.69	33.3	16.3	3.2					
	8.0	3.8	8.8	700	36.9	1.98	30.1	118.8	5.45	4.6	700	27.3	18.4	0.67	1.59	32.7	17.1	2.7					
900				38.3	1.91	31.7	109.4	5.86	4.3	900	27.8	19.9	0.72	1.65	33.4	16.8	3.0						
100	4.0	1.1	2.5	Operation not recommended							Operation not recommended												
	6.0	2.2	5.1	700	25.6	1.78	0.70	1.85	31.9	13.8	3.6												
				900	26.1	1.93	0.74	1.90	32.6	13.8	3.9												
	8.0	3.7	8.5	700	25.9	1.78	0.69	1.79	32.0	14.5	3.3												
900				26.4	1.93	0.73	1.85	32.7	14.3	3.7													
110	4.0	1.0	2.4	Operation not recommended							Operation not recommended												
	6.0	2.1	4.9	700	23.4	1.68	0.72	2.04	30.4	11.5	4.4												
				900	23.9	1.82	0.76	2.10	31.1	11.4	4.7												
	8.0	3.5	8.2	700	23.7	1.68	0.71	1.98	30.4	12.0	4.1												
900				24.2	1.82	0.76	2.04	31.1	11.8	4.5													
120	4.0	1.0	2.3	Operation not recommended							Operation not recommended												
	6.0	2.0	4.7	700	21.7	1.61	0.74	2.29	29.5	9.5	5.3												
				900	22.1	1.75	0.79	2.35	30.1	9.4	5.7												
	8.0	3.4	7.9	700	21.9	1.61	0.74	2.21	29.4	9.9	4.9												
900				22.3	1.75	0.78	2.28	30.1	9.8	5.4													

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB038 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM Low Speed (1050 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		PSI	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	4.0	0.9	2.1	Operation not recommended							Operation not recommended							
	6.0	1.7	4.0	Operation not recommended							Operation not recommended							
	8.0	2.9	6.7	900	15.1	1.40	10.3	85.5	3.17	2.5	Operation not recommended							
				1050	15.7	1.43	10.8	83.9	3.22	2.3	Operation not recommended							
30	4.0	0.9	2.0	Operation not recommended							Operation not recommended							
	6.0	1.7	3.9	900	16.8	1.38	12.1	87.3	3.56	2.4	900	29.1	18.4	0.63	0.74	31.6	39.3	---
				1050	17.5	1.42	12.6	85.4	3.61	2.2	1050	29.9	20.4	0.68	0.75	32.5	39.6	---
	8.0	2.8	6.5	900	17.9	1.42	13.0	88.4	3.69	2.5	900	29.6	18.9	0.64	0.73	32.1	40.3	---
				1050	18.6	1.45	13.6	86.4	3.75	2.3	1050	30.4	20.9	0.69	0.75	33.0	40.6	---
	40	4.0	0.8	1.9	Operation not recommended							Operation not recommended						
6.0		1.6	3.8	900	19.8	1.41	15.0	90.4	4.13	2.5	900	30.3	19.7	0.65	0.80	33.0	37.8	---
				1050	20.5	1.44	15.6	88.1	4.19	2.3	1050	31.1	21.8	0.70	0.82	33.9	38.1	---
8.0		2.7	6.3	900	20.9	1.44	16.0	91.5	4.24	2.6	900	30.8	20.2	0.66	0.79	33.5	38.8	---
				1050	21.6	1.47	16.6	89.1	4.31	2.4	1050	31.7	22.4	0.71	0.81	34.4	39.1	---
50		4.0	0.8	1.9	900	21.8	1.43	16.9	92.5	4.46	2.6	900	31.3	21.1	0.67	0.91	34.4	34.3
	1050				22.5	1.45	17.6	89.8	4.54	2.4	1050	32.2	23.4	0.73	0.93	35.3	34.6	1.1
	6.0	1.6	3.7	900	22.6	1.43	17.7	93.2	4.62	2.7	900	31.6	21.2	0.67	0.89	34.6	35.5	0.9
				1050	23.3	1.45	18.3	90.5	4.70	2.5	1050	32.5	23.5	0.72	0.91	35.6	35.8	1.0
	8.0	2.6	6.1	900	23.7	1.47	18.6	94.3	4.72	2.8	900	32.1	21.8	0.68	0.88	35.1	36.4	0.9
				1050	24.4	1.49	19.3	91.5	4.81	2.5	1050	33.0	24.1	0.73	0.90	36.1	36.7	1.0
60	4.0	0.8	1.8	900	24.6	1.46	19.6	95.3	4.94	2.9	900	30.1	20.3	0.68	1.02	33.5	29.5	1.3
				1050	25.2	1.47	20.2	92.2	5.02	2.6	1050	30.9	22.5	0.73	1.04	34.4	29.7	1.4
	6.0	1.5	3.6	900	25.6	1.46	20.6	96.3	5.15	3.0	900	30.3	20.5	0.67	0.99	33.7	30.5	1.3
				1050	26.2	1.47	21.2	93.1	5.24	2.7	1050	31.2	22.6	0.73	1.01	34.6	30.8	1.4
	8.0	2.5	5.9	900	26.5	1.49	21.4	97.3	5.21	3.0	900	30.8	21.0	0.68	0.98	34.2	31.3	1.2
				1050	27.1	1.50	22.0	93.9	5.30	2.8	1050	31.7	23.2	0.73	1.00	35.1	31.6	1.3
70	4.0	0.8	1.8	900	27.3	1.49	22.3	98.1	5.39	3.2	900	29.7	20.6	0.69	1.16	33.6	25.7	1.9
				1050	27.9	1.49	22.8	94.6	5.49	2.9	1050	30.5	22.8	0.75	1.18	34.5	25.9	2.0
	6.0	1.5	3.5	900	28.5	1.48	23.5	99.4	5.65	3.3	900	29.9	20.7	0.69	1.13	33.8	26.6	1.7
				1050	29.1	1.48	24.0	95.6	5.76	3.0	1050	30.8	23.0	0.75	1.15	34.7	26.8	1.9
	8.0	2.5	5.7	900	29.3	1.51	24.1	100.1	5.67	3.4	900	30.4	21.3	0.70	1.12	34.2	27.3	1.6
				1050	29.8	1.51	24.6	96.3	5.78	3.1	1050	31.3	23.5	0.75	1.14	35.2	27.5	1.8
80	4.0	0.7	1.7	900	29.9	1.51	24.8	100.8	5.79	3.6	900	28.6	20.2	0.71	1.32	33.1	21.7	2.5
				1050	30.3	1.51	25.2	96.7	5.91	3.3	1050	29.4	22.4	0.76	1.34	33.9	21.9	2.7
	6.0	1.4	3.3	900	31.4	1.50	26.2	102.3	6.11	3.7	900	28.8	20.3	0.71	1.28	33.2	22.5	2.4
				1050	31.7	1.49	26.6	98.0	6.23	3.4	1050	29.6	22.5	0.76	1.31	34.1	22.7	2.6
	8.0	2.4	5.5	900	31.8	1.54	26.6	102.7	6.07	3.8	900	29.3	20.8	0.71	1.27	33.6	23.0	2.2
				1050	32.1	1.52	26.9	98.3	6.19	3.5	1050	30.1	23.1	0.77	1.30	34.5	23.2	2.5
90	4.0	0.7	1.6	900	32.5	1.54	27.2	103.4	6.18	4.0	900	26.5	18.9	0.71	1.50	31.6	17.6	3.4
				1050	32.7	1.52	27.5	98.9	6.31	3.7	1050	27.2	20.9	0.77	1.53	32.4	17.8	3.6
	6.0	1.4	3.2	900	34.1	1.53	28.9	105.1	6.56	4.2	900	26.7	19.0	0.71	1.46	31.7	18.3	3.2
				1050	34.3	1.50	29.2	100.3	6.69	3.8	1050	27.4	21.0	0.77	1.49	32.5	18.4	3.4
	8.0	2.3	5.3	900	34.3	1.56	29.0	105.3	6.45	4.3	900	27.1	19.5	0.72	1.45	32.1	18.7	2.9
				1050	34.4	1.53	29.2	100.4	6.59	4.0	1050	27.9	21.6	0.77	1.48	32.9	18.9	3.3
100	4.0	0.7	1.6	Operation not recommended							Operation not recommended							
	6.0	1.3	3.1	900	25.8	1.93	0.75	1.67	31.5	15.4	4.1	Operation not recommended						
				1050	26.5	2.14	0.81	1.70	32.3	15.6	4.5	Operation not recommended						
	8.0	2.2	5.1	900	26.2	1.98	0.76	1.65	31.8	15.8	3.8	Operation not recommended						
1050				26.9	2.19	0.81	1.69	32.7	16.0	4.2	Operation not recommended							
110	4.0	0.7	1.5	Operation not recommended							Operation not recommended							
	6.0	1.3	3.0	900	23.1	1.81	0.79	1.90	29.6	12.2	5.2	Operation not recommended						
				1050	23.7	2.01	0.85	1.93	30.3	12.3	5.7	Operation not recommended						
	8.0	2.1	4.9	900	23.5	1.86	0.79	1.88	29.9	12.5	4.8	Operation not recommended						
1050				24.1	2.06	0.85	1.92	30.7	12.6	5.4	Operation not recommended							
120	4.0	0.6	1.5	Operation not recommended							Operation not recommended							
	6.0	1.2	2.9	900	21.9	1.80	0.82	2.15	29.2	10.2	6.5	Operation not recommended						
				1050	22.5	1.99	0.88	2.20	30.0	10.2	7.0	Operation not recommended						
	8.0	2.0	4.7	900	22.2	1.84	0.83	2.13	29.5	10.4	6.0	Operation not recommended						
1050				22.9	2.04	0.89	2.18	30.3	10.5	6.7	Operation not recommended							

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB038 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM High Speed (1250 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F										
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h			
20	5.0	1.3	3.0	Operation not recommended							Operation not recommended										
	7.0	2.3	5.2	Operation not recommended							Operation not recommended										
	9.0	3.5	8.1	1050	21.6	1.90	15.1	89.0	3.34	2.9	1250	22.3	1.95	15.6	86.5	3.34	2.6				
30	5.0	1.2	2.9	Operation not recommended							Operation not recommended										
	7.0	2.2	5.1	1050	24.9	1.93	18.3	91.9	3.77	3.1	1050	37.9	22.5	0.59	1.41	42.8	27.0	---			
				1250	25.6	1.99	18.8	88.9	3.77	2.8	1250	40.1	25.1	0.63	1.49	45.2	26.9	---			
	9.0	3.4	7.9	1050	25.3	1.95	18.6	92.3	3.80	3.2	1050	38.2	24.8	0.65	1.37	42.9	28.0	---			
				1250	26.1	2.01	19.2	89.3	3.80	2.9	1250	40.5	27.5	0.68	1.46	45.5	27.8	---			
40	5.0	1.2	2.8	Operation not recommended							Operation not recommended										
	7.0	2.1	4.9	1050	29.0	2.05	22.0	95.6	4.16	3.4	1050	39.4	24.1	0.61	1.55	44.7	25.4	---			
				1250	29.9	2.09	22.8	92.2	4.19	3.1	1250	41.5	26.8	0.65	1.64	47.1	25.4	---			
	9.0	3.3	7.6	1050	29.6	2.07	22.5	96.1	4.20	3.5	1050	39.7	26.1	0.66	1.51	44.9	26.3	---			
				1250	30.5	2.11	23.3	92.6	4.24	3.2	1250	42.0	29.0	0.69	1.60	47.4	26.2	---			
50	5.0	1.2	2.7	1050	31.4	2.10	24.3	97.7	4.39	3.7	1050	39.6	25.1	0.63	1.84	45.9	21.5	1.9			
				1250	32.4	2.13	25.1	94.0	4.46	3.4	1250	41.7	27.9	0.67	1.94	48.3	21.5	2.0			
	7.0	2.1	4.8	1050	32.6	2.15	25.3	98.7	4.45	3.8	1050	40.5	25.4	0.63	1.74	46.4	23.3	1.8			
				1250	33.6	2.17	26.2	94.9	4.53	3.5	1250	42.6	28.2	0.66	1.82	48.8	23.4	1.9			
	9.0	3.2	7.4	1050	33.3	2.17	25.9	99.4	4.51	3.9	1050	40.9	27.1	0.66	1.69	46.7	24.1	1.7			
			1250	34.4	2.19	26.9	95.5	4.59	3.6	1250	43.1	30.1	0.70	1.78	49.1	24.2	1.8				
60	5.0	1.1	2.6	1050	34.7	2.20	27.2	100.6	4.62	4.2	1050	39.2	25.7	0.66	1.96	45.9	20.0	2.3			
				1250	35.8	2.22	28.2	96.5	4.73	3.8	1250	41.1	28.6	0.70	2.05	48.1	20.1	2.4			
	7.0	2.0	4.6	1050	36.2	2.26	28.5	102.0	4.69	4.3	1050	40.2	26.0	0.65	1.87	46.5	21.5	2.2			
				1250	37.4	2.28	29.6	97.7	4.81	4.0	1250	42.1	28.9	0.69	1.94	48.7	21.6	2.3			
	9.0	3.1	7.2	1050	37.1	2.29	29.3	102.7	4.76	4.4	1050	40.5	27.4	0.68	1.82	46.8	22.3	2.0			
			1250	38.3	2.30	30.5	98.4	4.89	4.1	1250	42.5	30.4	0.71	1.90	49.0	22.4	2.2				
70	5.0	1.1	2.5	1050	38.0	2.32	30.1	103.5	4.80	4.7	1050	39.2	26.6	0.68	2.15	46.5	18.2	2.9			
				1250	39.3	2.32	31.4	99.1	4.96	4.3	1250	40.9	29.6	0.72	2.24	48.5	18.3	3.0			
	7.0	1.9	4.5	1050	39.9	2.40	31.8	105.2	4.88	4.8	1050	40.2	26.9	0.67	2.06	47.2	19.5	2.7			
				1250	41.2	2.40	33.1	100.6	5.04	4.4	1250	41.9	29.8	0.71	2.13	49.2	19.6	2.9			
	9.0	3.0	6.9	1050	41.0	2.43	32.7	106.1	4.95	5.0	1050	40.6	28.0	0.69	2.01	47.5	20.2	2.5			
			1250	42.4	2.42	34.1	101.4	5.14	4.6	1250	42.4	31.0	0.73	2.09	49.6	20.3	2.8				
80	5.0	1.1	2.5	1050	40.4	2.41	32.2	105.6	4.90	5.2	1050	37.8	26.2	0.69	2.34	45.8	16.1	3.6			
				1250	41.8	2.40	33.7	101.0	5.12	4.8	1250	39.3	29.2	0.74	2.42	47.5	16.3	3.8			
	7.0	1.9	4.3	1050	42.7	2.51	34.2	107.7	4.99	5.4	1050	38.8	26.6	0.68	2.26	46.6	17.2	3.3			
				1250	44.2	2.49	35.7	102.7	5.21	5.0	1250	40.4	29.4	0.73	2.33	48.3	17.4	3.6			
	9.0	2.9	6.7	1050	44.0	2.54	35.3	108.8	5.07	5.6	1050	39.3	27.2	0.69	2.21	46.8	17.7	3.1			
			1250	45.5	2.51	36.9	103.7	5.32	5.1	1250	40.9	30.1	0.74	2.28	48.7	17.9	3.4				
90	5.0	1.0	2.4	1050	42.9	2.52	34.3	107.8	4.98	5.9	1050	35.7	25.5	0.71	2.53	44.3	14.1	4.4			
				1250	44.4	2.49	35.9	102.9	5.24	5.4	1250	37.0	28.4	0.77	2.59	45.8	14.3	4.7			
	7.0	1.8	4.2	1050	45.6	2.64	36.6	110.2	5.06	6.0	1050	36.8	25.9	0.70	2.46	45.1	15.0	4.1			
				1250	47.2	2.59	38.4	105.0	5.34	5.6	1250	38.1	28.7	0.75	2.52	46.7	15.1	4.5			
	9.0	2.8	6.5	1050	47.0	2.68	37.9	111.5	5.15	6.2	1050	37.2	26.1	0.70	2.42	45.4	15.4	3.9			
			1250	48.6	2.61	39.7	106.0	5.46	5.8	1250	38.6	28.9	0.75	2.47	47.0	15.6	4.3				
100	5.0	1.0	2.3	Operation not recommended							Operation not recommended										
	7.0	1.7	4.0	Operation not recommended							1050	35.4	25.6	0.72	2.74	44.8	12.9	5.1			
				Operation not recommended							1250	36.6	28.4	0.78	2.78	46.1	13.1	5.5			
	9.0	2.7	6.2	Operation not recommended							1050	35.8	25.6	0.71	2.69	45.0	13.3	4.8			
			Operation not recommended							1250	37.0	28.3	0.76	2.74	46.3	13.5	5.3				
110	5.0	1.0	2.2	Operation not recommended							Operation not recommended										
	7.0	1.7	3.9	Operation not recommended							1050	32.4	24.1	0.74	2.99	42.6	10.8	6.2			
				Operation not recommended							1250	33.3	26.7	0.80	3.01	43.6	11.0	6.8			
	9.0	2.6	6.0	Operation not recommended							1050	32.7	23.7	0.73	2.94	42.8	11.1	5.8			
			Operation not recommended							1250	33.6	26.2	0.78	2.97	43.8	11.3	6.4				
120	5.0	0.9	2.1	Operation not recommended							Operation not recommended										
	7.0	1.6	3.7	Operation not recommended							1050	30.5	23.6	0.77	3.34	41.9	9.1	7.5			
				Operation not recommended							1250	31.2	26.2	0.84	3.34	42.6	9.3	8.1			
	9.0	2.5	5.8	Operation not recommended							1050	30.8	23.0	0.75	3.29	42.0	9.4	7.0			
			Operation not recommended							1250	31.5	25.3	0.81	3.30	42.7	9.5	7.7				

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB049 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM Low Speed (1350 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	5.0	0.9	2.2	Operation not recommended														
	8.0	2.0	4.6	Operation not recommended														
	11.0	3.4	7.8	1150	22.1	2.23	14.4	87.8	2.90	4.2	Operation not recommended							
				1350	22.9	2.26	15.1	85.7	2.96	3.8	Operation not recommended							
30	5.0	0.9	2.1	Operation not recommended														
	8.0	1.9	4.4	1150	25.4	2.28	17.7	90.5	3.27	4.3	1150	37.5	20.0	0.53	1.13	41.4	33.3	---
				1350	26.2	2.29	18.4	88.0	3.35	3.9	1350	38.8	23.6	0.61	1.20	42.9	32.4	---
	11.0	3.3	7.6	1150	26.1	2.29	18.2	91.0	3.33	4.4	1150	37.6	19.9	0.53	1.05	41.2	35.7	---
1350				27.0	2.32	19.1	88.5	3.40	4.0	1350	38.6	23.5	0.61	1.12	42.4	34.5	---	
40	5.0	0.9	2.0	Operation not recommended														
	8.0	1.9	4.3	1150	29.2	2.36	21.1	93.5	3.63	4.5	1150	39.6	21.8	0.55	1.24	43.9	31.9	---
				1350	30.2	2.36	22.2	90.7	3.76	4.2	1350	40.9	25.7	0.63	1.31	45.4	31.3	---
	11.0	3.2	7.4	1150	30.1	2.37	22.0	94.3	3.72	4.7	1150	39.8	21.8	0.55	1.17	43.8	34.1	---
1350				31.2	2.39	23.0	91.4	3.82	4.2	1350	40.9	25.7	0.63	1.23	45.1	33.3	---	
50	5.0	0.9	2.0	1150	30.2	2.35	22.2	94.3	3.77	4.8	1150	40.4	23.3	0.58	1.60	45.9	25.2	1.6
				1350	31.2	2.35	23.2	91.4	3.89	4.4	1350	41.7	27.5	0.66	1.67	47.4	24.9	1.7
	8.0	1.8	4.2	1150	32.6	2.43	24.3	96.2	3.93	4.9	1150	41.3	23.4	0.57	1.39	46.0	29.8	1.5
				1350	33.8	2.41	25.6	93.2	4.11	4.5	1350	42.5	27.6	0.65	1.45	47.5	29.2	1.6
11.0	3.1	7.2	1150	33.8	2.44	25.5	97.2	4.06	5.1	1150	41.5	23.4	0.56	1.31	46.0	31.8	1.4	
			1350	34.9	2.44	26.6	94.0	4.19	4.6	1350	42.8	27.6	0.65	1.37	47.5	31.1	1.5	
60	5.0	0.8	1.9	1150	33.0	2.44	24.7	96.6	3.97	5.2	1150	40.2	23.3	0.58	1.73	46.1	23.3	2.3
				1350	34.2	2.43	25.9	93.5	4.14	4.8	1350	41.5	27.4	0.66	1.80	47.6	23.0	2.4
	8.0	1.8	4.0	1150	35.7	2.50	27.2	98.8	4.19	5.4	1150	40.9	23.5	0.57	1.53	46.1	26.7	2.1
				1350	37.1	2.47	28.7	95.5	4.40	5.0	1350	42.1	27.6	0.66	1.60	47.6	26.3	2.3
11.0	3.0	6.9	1150	37.3	2.52	28.7	100.0	4.33	5.5	1150	41.3	23.5	0.57	1.46	46.3	28.4	1.9	
			1350	38.6	2.49	30.1	96.5	4.54	5.1	1350	42.6	27.7	0.65	1.52	47.8	28.0	2.2	
70	5.0	0.8	1.8	1150	35.7	2.53	27.1	98.8	4.14	5.8	1150	40.4	24.5	0.61	1.90	46.9	21.3	3.2
				1350	37.1	2.50	28.6	95.5	4.36	5.4	1350	41.7	28.8	0.69	1.99	48.5	20.9	3.4
	8.0	1.7	3.9	1150	38.8	2.57	30.0	101.2	4.42	6.0	1150	40.8	24.7	0.61	1.72	46.7	23.7	3.0
				1350	40.3	2.53	31.7	97.6	4.67	5.5	1350	42.1	29.1	0.69	1.80	48.3	23.4	3.2
11.0	2.9	6.7	1150	40.5	2.60	31.7	102.6	4.57	6.1	1150	41.6	24.8	0.60	1.65	47.2	25.2	2.8	
			1350	42.1	2.54	33.4	98.8	4.85	5.7	1350	42.8	29.2	0.68	1.71	48.7	25.0	3.1	
80	5.0	0.8	1.8	1150	37.9	2.59	29.1	100.5	4.30	6.5	1150	39.2	23.4	0.60	2.07	46.2	18.9	4.4
				1350	39.4	2.54	30.7	97.0	4.54	6.0	1350	40.4	27.5	0.68	2.16	47.8	18.7	4.6
	8.0	1.6	3.8	1150	41.2	2.62	32.3	103.2	4.61	6.7	1150	39.4	23.7	0.60	1.93	45.9	20.4	4.1
				1350	42.9	2.55	34.2	99.4	4.92	6.1	1350	40.5	27.9	0.69	2.00	47.4	20.2	4.4
11.0	2.8	6.5	1150	43.3	2.65	34.3	104.9	4.80	6.9	1150	40.2	23.9	0.59	1.84	46.5	21.8	3.8	
			1350	45.0	2.57	36.2	100.9	5.13	6.3	1350	41.5	28.1	0.68	1.92	48.0	21.6	4.2	
90	5.0	0.7	1.7	1150	40.0	2.64	31.0	102.2	4.43	7.2	1150	36.9	21.6	0.58	2.27	44.7	16.3	5.9
				1350	41.6	2.59	32.7	98.5	4.71	6.7	1350	38.1	25.4	0.67	2.36	46.2	16.1	6.2
	8.0	1.6	3.6	1150	43.5	2.66	34.4	105.0	4.79	7.4	1150	36.9	21.8	0.59	2.15	44.3	17.2	5.5
				1350	45.3	2.57	36.5	101.1	5.16	6.9	1350	38.0	25.7	0.68	2.23	45.6	17.0	5.9
11.0	2.7	6.2	1150	45.9	2.69	36.7	107.0	5.00	7.7	1150	38.0	22.1	0.58	2.06	45.0	18.4	5.1	
			1350	47.8	2.60	38.9	102.8	5.39	7.1	1350	39.1	26.0	0.66	2.15	46.5	18.2	5.6	
100	5.0	0.7	1.7	Operation not recommended														
	8.0	1.5	3.5	Operation not recommended														
				1150	35.2	22.5	0.64	2.42	43.5	14.6	7.1	Operation not recommended						
	1350	36.3	26.5	0.73	2.51	44.9	14.4	7.7	Operation not recommended									
11.0	2.6	6.0	1150	36.5	22.8	0.63	2.33	44.5	15.7	6.6	Operation not recommended							
			1350	37.6	26.8	0.71	2.43	45.9	15.5	7.3	Operation not recommended							
110	5.0	0.7	1.6	Operation not recommended														
	8.0	1.5	3.4	Operation not recommended														
				1150	31.6	21.2	0.67	2.69	40.8	11.7	9.0	Operation not recommended						
	1350	32.6	24.9	0.76	2.80	42.2	11.6	9.8	Operation not recommended									
11.0	2.5	5.8	1150	33.1	21.6	0.65	2.61	42.0	12.7	8.4	Operation not recommended							
			1350	34.0	25.3	0.74	2.72	43.3	12.5	9.3	Operation not recommended							
120	5.0	0.7	1.5	Operation not recommended														
	8.0	1.4	3.3	Operation not recommended														
				1150	29.1	20.6	0.71	3.01	39.4	9.7	11.2	Operation not recommended						
	1350	30.1	24.2	0.80	3.14	40.8	9.6	12.1	Operation not recommended									
11.0	2.4	5.6	1150	30.8	21.0	0.68	2.92	40.8	10.6	10.4	Operation not recommended							
			1350	31.6	24.7	0.78	3.06	42.0	10.3	11.5	Operation not recommended							

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB049 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM High Speed (1550 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F												
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h					
20	6.0	1.3	3.0	Operation not recommended							Operation not recommended												
	9.0	2.5	5.7	Operation not recommended							Operation not recommended												
	12.0	4.0	9.2	1350	30.7	2.72	21.4	91.1	3.31	5.3	1550	31.7	2.80	22.2	89.0	3.32	4.8	Operation not recommended					
30	6.0	1.2	2.9	Operation not recommended							Operation not recommended												
	9.0	2.4	5.5	1350	35.1	2.84	25.3	94.0	3.61	5.6	1550	49.6	27.8	0.56	1.79	55.7	27.6	---					
				1550	36.1	2.94	26.1	91.6	3.61	5.2	1550	52.6	30.9	0.59	1.91	59.1	27.5	---					
	12.0	3.9	8.9	1350	35.6	2.88	25.8	94.4	3.63	5.8	1350	50.1	27.8	0.55	1.71	56.0	29.4	---					
				1550	36.8	2.97	26.7	92.0	3.63	5.3	1550	53.0	30.8	0.58	1.83	59.3	29.1	---					
40	6.0	1.2	2.8	Operation not recommended							Operation not recommended												
	9.0	2.3	5.3	1350	40.0	2.97	29.8	97.4	3.94	6.2	1350	51.5	29.4	0.57	1.98	58.2	25.9	---					
				1550	41.1	3.04	30.8	94.6	3.97	5.7	1550	54.4	32.7	0.60	2.10	61.6	25.9	---					
	12.0	3.7	8.7	1350	40.7	3.01	30.4	97.9	3.97	6.4	1350	52.0	29.4	0.57	1.90	58.5	27.4	---					
				1550	42.0	3.07	31.5	95.1	4.01	5.8	1550	54.9	32.7	0.60	2.01	61.8	27.2	---					
50	6.0	1.2	2.7	1350	42.8	3.08	32.3	99.3	4.07	6.7	1350	52.1	30.2	0.58	2.37	60.2	22.0	3.0					
				1550	44.1	3.12	33.5	96.4	4.15	6.2	1550	54.8	33.5	0.61	2.50	63.4	22.0	3.2					
	9.0	2.2	5.2	1350	44.4	3.14	33.7	100.5	4.15	6.9	1350	52.7	30.6	0.58	2.22	60.3	23.8	2.8					
				1550	45.7	3.18	34.8	97.3	4.21	6.4	1550	55.5	34.0	0.61	2.33	63.5	23.8	3.0					
	12.0	3.6	8.4	1350	45.3	3.18	34.5	101.1	4.18	7.2	1350	53.3	30.7	0.58	2.13	60.6	25.0	2.6					
			1550	46.8	3.21	35.8	98.0	4.27	6.5	1550	56.0	34.1	0.61	2.25	63.7	24.9	2.9						
60	6.0	1.1	2.6	1350	46.7	3.20	35.7	102.0	4.27	7.6	1350	51.5	30.5	0.59	2.51	60.1	20.5	3.7					
				1550	48.1	3.22	37.2	98.8	4.38	7.0	1550	54.0	33.8	0.63	2.63	63.0	20.6	3.9					
	9.0	2.2	5.0	1350	48.8	3.28	37.6	103.4	4.35	7.8	1350	52.3	30.9	0.59	2.38	60.4	22.0	3.4					
				1550	50.2	3.30	39.0	100.0	4.46	7.2	1550	54.9	34.3	0.62	2.48	63.4	22.2	3.7					
	12.0	3.5	8.1	1350	49.9	3.33	38.6	104.2	4.40	8.0	1350	52.9	31.0	0.59	2.30	60.7	23.0	3.2					
			1550	51.5	3.34	40.1	100.8	4.53	7.4	1550	55.5	34.5	0.62	2.40	63.6	23.1	3.5						
70	6.0	1.1	2.5	1350	50.5	3.32	39.2	104.6	4.46	8.5	1350	51.2	31.0	0.61	2.75	60.6	18.6	4.6					
				1550	52.1	3.31	40.8	101.1	4.61	7.9	1550	53.5	34.5	0.64	2.85	63.2	18.8	4.9					
	9.0	2.1	4.9	1350	53.0	3.42	41.3	106.3	4.54	8.8	1350	52.3	31.4	0.60	2.62	61.2	20.0	4.3					
				1550	54.6	3.41	43.0	102.6	4.70	8.1	1550	54.6	34.8	0.64	2.72	63.9	20.1	4.6					
	12.0	3.4	7.9	1350	54.4	3.46	42.6	107.3	4.60	9.0	1350	52.8	31.6	0.60	2.54	61.5	20.8	4.0					
			1550	56.1	3.45	44.4	103.5	4.77	8.3	1550	55.2	35.1	0.64	2.64	64.3	20.9	4.4						
80	6.0	1.1	2.5	1350	53.6	3.49	41.7	106.7	4.50	9.6	1350	49.0	30.3	0.62	2.98	59.2	16.5	5.8					
				1550	55.3	3.45	43.5	103.0	4.70	8.8	1550	51.1	33.7	0.66	3.06	61.5	16.7	6.2					
	9.0	2.0	4.7	1350	56.6	3.62	44.2	108.8	4.58	9.8	1350	50.3	30.7	0.61	2.87	60.1	17.6	5.4					
				1550	58.4	3.57	46.2	104.9	4.79	9.1	1550	52.4	34.0	0.65	2.95	62.4	17.8	5.9					
	12.0	3.3	7.6	1350	58.2	3.66	45.7	109.9	4.66	10.1	1350	50.8	30.9	0.61	2.80	60.4	18.2	5.0					
			1550	60.1	3.62	47.8	105.9	4.87	9.4	1550	52.9	34.3	0.65	2.88	62.7	18.4	5.6						
90	6.0	1.0	2.4	1350	56.5	3.66	44.1	108.8	4.53	10.7	1350	46.1	29.1	0.63	3.20	57.0	14.4	7.3					
				1550	58.5	3.58	46.2	104.9	4.78	9.9	1550	47.8	32.3	0.68	3.27	59.0	14.6	7.7					
	9.0	2.0	4.5	1350	60.0	3.81	47.0	111.2	4.62	11.1	1350	47.5	29.4	0.62	3.11	58.1	15.3	6.8					
				1550	62.0	3.73	49.3	107.1	4.88	10.2	1550	49.3	32.6	0.66	3.17	60.1	15.5	7.4					
	12.0	3.2	7.3	1350	61.9	3.85	48.8	112.4	4.72	11.4	1350	48.0	29.7	0.62	3.05	58.4	15.8	6.3					
			1550	64.0	3.77	51.1	108.2	4.97	10.6	1550	49.7	33.0	0.66	3.11	60.3	16.0	7.0						
100	6.0	1.0	2.3	Operation not recommended							Operation not recommended												
	9.0	1.9	4.4	Operation not recommended							Operation not recommended												
	12.0	3.1	7.1	Operation not recommended							Operation not recommended												
				1350	45.3	28.8	0.64	3.45	57.1	13.1	8.4	1550	46.8	31.9	0.68	3.50	58.8	13.4	9.2				
110	6.0	1.0	2.2	Operation not recommended							Operation not recommended												
	9.0	1.8	4.2	Operation not recommended							Operation not recommended												
	12.0	2.9	6.8	Operation not recommended							Operation not recommended												
				1350	41.0	26.8	0.66	3.75	53.8	10.9	10.3	1550	42.1	29.7	0.70	3.78	55.0	11.1	11.2				
				1350	41.4	27.2	0.66	3.71	54.0	11.2	9.6	1550	42.5	30.1	0.71	3.74	55.3	11.4	10.7				
120	6.0	0.9	2.1	Operation not recommended							Operation not recommended												
	9.0	1.7	4.0	Operation not recommended							Operation not recommended												
	12.0	2.8	6.5	Operation not recommended							Operation not recommended												
				1350	38.0	25.7	0.68	4.18	52.3	9.1	12.5	1550	38.9	28.4	0.73	4.18	53.2	9.3	13.5				
			1350	38.4	26.1	0.68	4.14	52.5	9.3	11.6	1550	39.3	28.9	0.74	4.14	53.4	9.5	12.9					

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB064 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM Low Speed (1500 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	6.0	1.0	2.4	Operation not recommended							Operation not recommended							
	10.0	2.7	6.2	Operation not recommended							Operation not recommended							
	14.0	5.1	11.8	1250	26.5	2.53	17.8	89.6	3.07	4.9	Operation not recommended							
				1500	27.4	2.56	18.6	86.9	3.13	4.5	Operation not recommended							
30	6.0	1.0	2.3	Operation not recommended							Operation not recommended							
	10.0	2.6	6.0	1250	30.7	2.60	21.8	92.8	3.46	5.0	1250	50.1	28.9	0.58	1.36	54.8	36.8	---
				1500	31.8	2.64	22.8	89.6	3.53	4.6	1500	51.6	32.9	0.64	1.42	56.5	36.2	---
	14.0	5.0	11.5	1250	31.8	2.60	22.9	93.6	3.58	5.1	1250	50.2	28.8	0.57	1.33	54.8	37.8	---
				1500	32.9	2.64	23.9	90.3	3.66	4.7	1500	51.5	32.8	0.64	1.40	56.3	36.7	---
40	6.0	1.0	2.3	Operation not recommended							Operation not recommended							
	10.0	2.5	5.9	1250	36.3	2.70	27.1	96.9	3.94	5.3	1250	51.6	29.6	0.57	1.50	56.7	34.5	---
				1500	37.3	2.70	28.0	93.0	4.04	4.9	1500	53.1	33.7	0.63	1.57	58.5	33.9	---
	14.0	4.8	11.1	1250	37.4	2.70	28.2	97.7	4.06	5.5	1250	51.7	29.5	0.57	1.46	56.7	35.4	---
				1500	38.4	2.71	29.2	93.7	4.15	5.0	1500	53.1	33.6	0.63	1.54	58.4	34.5	---
50	6.0	0.9	2.2	1250	40.8	2.74	31.5	100.2	4.37	5.6	1250	52.8	30.0	0.57	1.73	58.7	30.5	2.0
				1500	41.9	2.74	32.6	95.9	4.49	5.2	1500	54.4	34.1	0.63	1.83	60.6	29.7	2.1
	10.0	2.5	5.7	1250	41.4	2.79	31.9	100.7	4.36	5.7	1250	53.0	30.3	0.57	1.67	58.7	31.7	1.9
				1500	42.4	2.77	32.9	96.2	4.48	5.3	1500	54.5	34.3	0.63	1.75	60.5	31.1	2.0
	14.0	4.7	10.8	1250	42.7	2.80	33.1	101.6	4.46	5.9	1250	53.1	30.3	0.57	1.64	58.7	32.4	1.7
			1500	43.6	2.79	34.1	96.9	4.59	5.4	1500	54.6	34.3	0.63	1.72	60.5	31.8	1.9	
60	6.0	0.9	2.1	1250	45.4	2.83	35.8	103.6	4.71	6.1	1250	50.9	29.4	0.58	1.94	57.5	26.3	2.8
				1500	46.4	2.80	36.8	98.6	4.85	5.7	1500	52.5	33.1	0.63	2.03	59.4	25.9	3.0
	10.0	2.4	5.5	1250	46.8	2.88	37.0	104.7	4.77	6.3	1250	51.1	29.6	0.58	1.87	57.5	27.3	2.6
				1500	47.6	2.84	37.9	99.4	4.92	5.8	1500	52.7	33.5	0.64	1.96	59.4	26.9	2.9
	14.0	4.5	10.4	1250	47.9	2.90	38.0	105.5	4.84	6.5	1250	51.4	29.7	0.58	1.84	57.6	28.0	2.5
			1500	48.7	2.86	38.9	100.1	4.99	6.0	1500	52.9	33.5	0.63	1.92	59.4	27.5	2.7	
70	6.0	0.9	2.0	1250	49.9	2.92	39.9	107.0	5.01	6.8	1250	50.0	29.7	0.59	2.19	57.5	22.9	4.0
				1500	50.7	2.87	41.0	101.3	5.19	6.3	1500	51.6	33.3	0.65	2.28	59.4	22.6	4.2
	10.0	2.3	5.3	1250	52.0	2.97	41.9	108.5	5.14	7.0	1250	50.4	30.0	0.59	2.13	57.6	23.7	3.7
				1500	52.6	2.90	42.7	102.5	5.31	6.5	1500	51.9	33.7	0.65	2.22	59.5	23.4	4.0
	14.0	4.4	10.1	1250	53.0	3.00	42.8	109.3	5.18	7.2	1250	50.7	30.1	0.59	2.08	57.8	24.4	3.5
			1500	53.6	2.93	43.6	103.1	5.35	6.6	1500	52.2	33.8	0.65	2.17	59.6	24.0	3.9	
80	6.0	0.9	2.0	1250	54.1	3.01	43.9	110.1	5.27	7.6	1250	47.9	28.7	0.60	2.47	56.3	19.4	5.5
				1500	54.6	2.94	44.6	103.7	5.44	7.0	1500	49.3	32.0	0.65	2.56	58.0	19.3	5.9
	10.0	2.2	5.1	1250	57.2	3.06	46.7	112.3	5.48	7.8	1250	48.3	28.9	0.60	2.41	56.5	20.0	5.2
				1500	57.4	2.97	47.3	105.5	5.68	7.2	1500	49.7	32.4	0.65	2.50	58.3	19.9	5.6
	14.0	4.2	9.8	1250	57.8	3.10	47.3	112.9	5.47	8.0	1250	48.6	29.1	0.60	2.37	56.7	20.5	4.8
			1500	58.1	3.01	47.8	105.8	5.66	7.4	1500	50.1	32.6	0.65	2.46	58.5	20.4	5.3	
90	6.0	0.8	1.9	1250	58.2	3.10	47.6	113.1	5.51	8.5	1250	44.3	27.2	0.61	2.79	53.9	15.9	7.4
				1500	58.3	3.01	48.0	106.0	5.67	7.8	1500	45.7	30.2	0.66	2.87	55.5	15.9	7.8
	10.0	2.1	5.0	1250	62.1	3.14	51.4	116.0	5.79	8.7	1250	44.8	27.5	0.61	2.73	54.1	16.4	6.9
				1500	62.1	3.03	51.8	108.3	6.01	8.1	1500	46.1	30.6	0.66	2.82	55.8	16.3	7.5
	14.0	4.1	9.4	1250	62.5	3.19	51.6	116.3	5.74	9.0	1250	45.2	27.7	0.61	2.70	54.4	16.7	6.4
			1500	62.4	3.08	51.9	108.5	5.94	8.3	1500	46.6	30.9	0.66	2.78	56.1	16.8	7.1	
100	6.0	0.8	1.8	Operation not recommended							Operation not recommended							
	10.0	2.1	4.8	Operation not recommended							1250	43.0	27.5	0.64	3.12	53.6	13.8	9.0
				Operation not recommended							1500	44.3	30.5	0.69	3.20	55.2	13.8	9.7
	14.0	3.9	9.1	Operation not recommended							1250	43.4	27.9	0.64	3.07	53.9	14.1	8.3
				Operation not recommended							1500	44.8	30.8	0.69	3.15	55.5	14.2	9.2
110	6.0	0.8	1.8	Operation not recommended							Operation not recommended							
	10.0	2.0	4.6	Operation not recommended							1250	38.7	26.0	0.67	3.53	50.7	10.9	11.3
				Operation not recommended							1500	39.9	28.6	0.72	3.60	52.2	11.1	12.3
	14.0	3.8	8.7	Operation not recommended							1250	39.2	26.4	0.67	3.48	51.1	11.3	10.5
				Operation not recommended							1500	40.4	29.0	0.72	3.55	52.5	11.4	11.7
120	6.0	0.7	1.7	Operation not recommended							Operation not recommended							
	10.0	1.9	4.4	Operation not recommended							1250	36.2	26.1	0.72	4.01	49.8	9.0	14.0
				Operation not recommended							1500	37.3	28.5	0.76	4.05	51.1	9.2	15.2
	14.0	3.6	8.4	Operation not recommended							1250	36.7	26.6	0.72	3.96	50.2	9.3	13.0
				Operation not recommended							1500	37.8	29.0	0.77	4.00	51.5	9.5	14.5

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB064 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM High Speed (1800 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	8.0	1.8	4.2	Operation not recommended							Operation not recommended							
	12.0	3.8	8.8	Operation not recommended							Operation not recommended							
	16.0	6.5	15.1	1500	39.7	3.44	28.0	94.5	3.38	6.2	Operation not recommended							
1800				40.7	3.60	28.4	90.9	3.31	5.6	Operation not recommended								
30	8.0	1.8	4.1	Operation not recommended							Operation not recommended							
	12.0	3.7	8.6	1500	45.8	3.46	34.0	98.3	3.88	6.5	1500	65.1	40.8	0.63	2.23	72.7	29.1	---
				1800	47.1	3.68	34.5	94.2	3.75	6.0	1800	65.7	44.4	0.68	2.37	73.7	27.7	---
	16.0	6.4	14.7	1500	46.4	3.55	34.3	98.7	3.84	6.7	1500	65.7	41.2	0.63	2.19	73.2	30.0	---
				1800	47.6	3.71	34.9	94.5	3.76	6.1	1800	66.2	44.8	0.68	2.33	74.1	28.4	---
40	8.0	1.7	4.0	Operation not recommended							Operation not recommended							
	12.0	3.6	8.3	1500	52.7	3.69	40.1	102.5	4.19	7.2	1500	67.6	41.9	0.62	2.56	76.4	26.4	---
				1800	53.9	3.84	40.8	97.7	4.11	6.6	1800	68.6	45.6	0.66	2.72	77.9	25.2	---
	16.0	6.2	14.2	1500	53.5	3.75	40.7	103.0	4.18	7.4	1500	68.3	42.3	0.62	2.52	76.9	27.1	---
				1800	54.7	3.88	41.5	98.2	4.13	6.7	1800	69.2	46.0	0.66	2.68	78.4	25.9	---
50	8.0	1.7	3.8	1500	56.2	3.84	43.1	104.7	4.29	7.8	1500	68.7	42.2	0.61	3.00	78.9	22.9	4.0
				1800	57.4	3.96	43.9	99.5	4.25	7.2	1800	70.1	45.9	0.65	3.19	81.0	22.0	4.2
	12.0	3.5	8.1	1500	59.5	3.91	46.1	106.7	4.45	8.0	1500	69.4	42.6	0.61	2.94	79.4	23.6	3.7
				1800	60.7	4.01	47.0	101.2	4.43	7.4	1800	70.8	46.4	0.65	3.12	81.5	22.7	4.0
	16.0	6.0	13.8	1500	60.4	3.96	46.9	107.3	4.48	8.2	1500	70.1	43.1	0.61	2.89	80.0	24.3	3.4
1800				61.8	4.05	47.9	101.8	4.47	7.5	1800	71.5	46.8	0.65	3.07	82.0	23.3	3.8	
60	8.0	1.6	3.7	1500	63.1	4.10	49.1	108.9	4.51	8.7	1500	67.1	41.8	0.62	3.23	78.2	20.8	4.8
				1800	64.4	4.17	50.2	103.1	4.53	8.0	1800	68.8	45.5	0.66	3.44	80.6	20.0	5.1
	12.0	3.4	7.8	1500	65.9	4.17	51.7	110.7	4.64	9.0	1500	67.8	42.2	0.62	3.17	78.6	21.4	4.5
				1800	67.4	4.22	53.0	104.7	4.68	8.3	1800	69.6	45.9	0.66	3.37	81.1	20.7	4.9
	16.0	5.8	13.4	1500	67.4	4.22	53.0	111.6	4.68	9.2	1500	68.5	42.7	0.62	3.12	79.1	22.0	4.2
1800				68.9	4.26	54.3	105.4	4.74	8.5	1800	70.2	46.4	0.66	3.31	81.5	21.2	4.6	
70	8.0	1.6	3.6	1500	70.0	4.39	55.0	113.2	4.67	9.8	1500	67.7	42.2	0.62	3.60	80.0	18.8	6.1
				1800	71.5	4.41	56.4	106.8	4.75	9.0	1800	69.8	45.9	0.66	3.83	82.9	18.2	6.4
	12.0	3.3	7.5	1500	72.5	4.46	57.3	114.8	4.77	10.1	1500	68.4	42.6	0.62	3.53	80.4	19.4	5.7
				1800	74.2	4.47	58.9	108.2	4.87	9.3	1800	70.6	46.3	0.66	3.75	83.4	18.8	6.1
	16.0	5.6	12.9	1500	74.4	4.51	59.0	115.9	4.84	10.4	1500	69.0	43.0	0.62	3.46	80.9	19.9	5.3
1800				76.1	4.51	60.7	109.2	4.95	9.6	1800	71.2	46.8	0.66	3.69	83.8	19.3	5.8	
80	8.0	1.5	3.5	1500	76.9	4.68	60.9	117.4	4.82	11.0	1500	63.8	40.8	0.64	3.90	77.1	16.3	7.7
				1800	78.6	4.65	62.8	110.5	4.95	10.2	1800	66.1	44.3	0.67	4.16	80.3	15.9	8.1
	12.0	3.2	7.3	1500	78.7	4.74	62.5	118.6	4.87	11.3	1500	64.4	41.1	0.64	3.83	77.5	16.8	7.1
				1800	80.6	4.69	64.6	111.4	5.04	10.5	1800	66.8	44.7	0.67	4.07	80.7	16.4	7.7
	16.0	5.4	12.5	1500	81.1	4.79	64.7	120.0	4.96	11.7	1500	65.1	41.6	0.64	3.76	77.9	17.3	6.6
1800				83.1	4.74	66.9	112.7	5.14	10.8	1800	67.5	45.2	0.67	4.00	81.1	16.9	7.4	
90	8.0	1.4	3.3	1500	83.8	5.00	66.8	121.7	4.92	12.4	1500	58.7	39.3	0.67	4.18	72.9	14.0	9.6
				1800	85.8	4.92	69.0	114.2	5.11	11.4	1800	61.3	42.7	0.70	4.45	76.5	13.8	10.2
	12.0	3.0	7.0	1500	84.9	5.05	67.7	122.4	4.93	12.7	1500	59.3	39.6	0.67	4.10	73.3	14.5	9.0
				1800	87.1	4.95	70.2	114.8	5.16	11.8	1800	61.8	43.1	0.70	4.36	76.7	14.2	9.7
	16.0	5.2	12.0	1500	87.9	5.12	70.4	124.2	5.03	13.1	1500	59.9	40.1	0.67	4.03	73.7	14.9	8.3
1800				90.2	5.00	73.1	116.4	5.29	12.2	1800	62.5	43.5	0.70	4.29	77.2	14.6	9.2	
100	8.0	1.4	3.2	Operation not recommended							Operation not recommended							
	12.0	2.9	6.8	Operation not recommended							1500	57.7	38.6	0.67	4.53	73.1	12.7	11.1
				1800	60.4	42.0	0.70	4.83	76.9	12.5	12.1							
16.0	5.0	11.6	Operation not recommended							1500	58.2	39.1	0.67	4.45	73.4	13.1	10.3	
			1800	61.0	42.4	0.70	4.75	77.2	12.9	11.5								
110	8.0	1.3	3.1	Operation not recommended							Operation not recommended							
	12.0	2.8	6.5	Operation not recommended							1500	51.0	35.3	0.69	4.84	67.5	10.5	13.6
				1800	53.7	38.3	0.71	5.17	71.4	10.4	14.8							
	16.0	4.8	11.2	Operation not recommended							1500	51.5	35.7	0.69	4.76	67.7	10.8	12.7
1800				54.2	38.8	0.72	5.08	71.5	10.7	14.1								
120	8.0	1.3	3.0	Operation not recommended							Operation not recommended							
	12.0	2.7	6.3	Operation not recommended							1500	49.6	35.9	0.72	5.34	67.9	9.3	16.5
				1800	52.5	39.0	0.74	5.70	72.0	9.2	17.9							
	16.0	4.6	10.7	Operation not recommended							1500	50.1	36.3	0.73	5.25	68.0	9.5	15.3
1800				53.0	39.5	0.75	5.61	72.1	9.4	17.0								

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB072 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM Low Speed (1700 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	10.0	2.3	5.4	Operation not recommended							Operation not recommended							
	13.0	3.6	8.2	Operation not recommended							Operation not recommended							
	16.0	5.0	11.6	1400	31.8	3.36	20.3	91.0	2.77	6.0	Operation not recommended							
				1700	33.3	3.40	21.7	88.1	2.87	5.4	Operation not recommended							
30	10.0	2.3	5.3	Operation not recommended							Operation not recommended							
	13.0	3.5	8.0	1400	35.5	3.38	23.9	93.5	3.07	6.1	1400	54.0	33.0	0.61	1.78	60.1	30.3	---
				1700	37.2	3.43	25.5	90.3	3.18	5.6	1700	55.9	37.9	0.68	1.90	62.4	29.4	---
	16.0	4.9	11.3	1400	37.0	3.38	25.5	94.5	3.21	6.3	1400	54.1	32.9	0.61	1.71	59.9	31.6	---
				1700	38.8	3.43	27.1	91.1	3.32	5.7	1700	55.7	37.8	0.68	1.84	61.9	30.2	---
40	10.0	2.2	5.1	Operation not recommended							Operation not recommended							
	13.0	3.4	7.8	1400	41.7	3.48	29.8	97.6	3.51	6.5	1400	56.5	35.0	0.62	1.96	63.2	28.9	---
				1700	43.5	3.49	31.6	93.7	3.65	5.9	1700	58.3	39.9	0.68	2.07	65.4	28.1	---
	16.0	4.7	11.0	1400	43.2	3.49	31.3	98.6	3.62	6.7	1400	56.6	34.9	0.62	1.90	63.1	29.9	---
				1700	45.1	3.50	33.1	94.6	3.77	6.1	1700	58.3	39.9	0.68	2.02	65.2	28.9	---
50	10.0	2.1	4.9	1400	46.6	3.52	34.6	100.8	3.88	6.8	1400	58.5	36.5	0.62	2.26	66.2	25.9	2.3
				1700	48.7	3.49	36.8	96.5	4.10	6.3	1700	60.3	41.4	0.69	2.37	68.4	25.4	2.4
	13.0	3.3	7.5	1400	47.3	3.56	35.2	101.3	3.89	7.0	1400	58.7	36.8	0.63	2.18	66.1	26.9	2.1
				1700	49.2	3.54	37.1	96.8	4.07	6.4	1700	60.5	41.8	0.69	2.29	68.3	26.4	2.3
	16.0	4.6	10.6	1400	48.7	3.58	36.5	102.2	3.99	7.2	1400	58.8	36.8	0.63	2.12	66.1	27.7	2.0
			1700	50.8	3.56	38.6	97.7	4.18	6.6	1700	60.6	41.8	0.69	2.24	68.3	27.1	2.2	
60	10.0	2.1	4.8	1400	51.8	3.64	39.4	104.3	4.18	7.5	1400	56.8	36.0	0.63	2.48	65.3	22.9	3.2
				1700	54.0	3.56	41.9	99.4	4.45	6.9	1700	58.5	40.7	0.70	2.59	67.4	22.6	3.4
	13.0	3.2	7.3	1400	53.3	3.67	40.8	105.3	4.25	7.7	1400	57.1	36.4	0.64	2.40	65.2	23.8	3.0
				1700	55.4	3.61	43.1	100.2	4.50	7.1	1700	58.8	41.2	0.70	2.51	67.3	23.4	3.2
	16.0	4.4	10.3	1400	54.5	3.71	41.9	106.1	4.30	7.9	1400	57.3	36.5	0.64	2.35	65.3	24.4	2.8
			1700	56.7	3.65	44.3	100.9	4.56	7.3	1700	59.1	41.2	0.70	2.45	67.4	24.1	3.1	
70	10.0	2.0	4.6	1400	57.2	3.77	44.3	107.8	4.45	8.3	1400	56.4	36.6	0.65	2.77	65.9	20.4	4.5
				1700	59.5	3.66	47.0	102.4	4.77	7.7	1700	58.1	41.2	0.71	2.88	67.9	20.2	4.8
	13.0	3.0	7.0	1400	59.3	3.80	46.4	109.3	4.57	8.5	1400	56.8	37.0	0.65	2.68	65.9	21.2	4.2
				1700	61.7	3.69	49.1	103.6	4.89	7.9	1700	58.4	41.7	0.71	2.79	67.9	20.9	4.5
	16.0	4.3	9.9	1400	60.4	3.86	47.3	110.0	4.59	8.8	1400	57.1	37.2	0.65	2.65	66.1	21.6	3.9
			1700	62.7	3.75	50.0	104.2	4.91	8.1	1700	58.9	41.8	0.71	2.74	68.2	21.5	4.3	
80	10.0	1.9	4.5	1400	61.6	3.86	48.4	110.7	4.67	9.2	1400	53.8	35.8	0.66	3.09	64.4	17.4	6.2
				1700	63.9	3.72	51.1	104.8	5.02	8.5	1700	55.5	40.0	0.72	3.18	66.3	17.5	6.6
	13.0	2.9	6.8	1400	64.8	3.91	51.5	112.9	4.86	9.5	1400	54.3	36.2	0.67	3.01	64.5	18.0	5.8
				1700	67.2	3.75	54.4	106.6	5.25	8.8	1700	55.9	40.5	0.72	3.10	66.5	18.0	6.3
	16.0	4.2	9.6	1400	65.6	3.96	52.1	113.4	4.85	9.8	1400	54.7	36.4	0.67	2.96	64.8	18.5	5.4
			1700	67.8	3.82	54.8	107.0	5.21	9.1	1700	56.4	40.7	0.72	3.04	66.8	18.5	6.0	
90	10.0	1.9	4.3	1400	66.1	3.98	52.6	113.7	4.87	10.3	1400	49.7	34.0	0.68	3.43	61.4	14.5	8.3
				1700	68.3	3.81	55.3	107.2	5.25	9.5	1700	51.3	37.7	0.74	3.50	63.2	14.6	8.8
	13.0	2.8	6.6	1400	70.4	4.03	56.7	116.6	5.12	10.6	1400	50.2	34.3	0.68	3.36	61.7	14.9	7.7
				1700	72.8	3.83	59.7	109.6	5.57	9.8	1700	51.8	38.2	0.74	3.43	63.5	15.1	8.4
	16.0	4.0	9.3	1400	70.9	4.09	56.9	116.9	5.08	11.0	1400	50.7	34.6	0.68	3.31	62.0	15.3	7.2
			1700	73.1	3.90	59.8	109.8	5.49	10.2	1700	52.3	38.5	0.74	3.38	63.8	15.5	8.0	
100	10.0	1.8	4.2	Operation not recommended							Operation not recommended							
	13.0	2.7	6.3	Operation not recommended							1400	48.2	34.2	0.71	3.80	61.1	12.7	10.0
				Operation not recommended							1700	49.7	37.9	0.76	3.84	62.8	12.9	10.9
	16.0	3.9	8.9	Operation not recommended							1400	48.8	34.6	0.71	3.74	61.6	13.0	9.3
			Operation not recommended							1700	50.3	38.3	0.76	3.79	63.2	13.3	10.4	
110	10.0	1.7	4.0	Operation not recommended							Operation not recommended							
	13.0	2.6	6.1	Operation not recommended							1400	42.8	32.1	0.75	4.24	57.3	10.1	12.7
				Operation not recommended							1700	44.3	35.3	0.80	4.26	58.8	10.4	13.8
	16.0	3.7	8.6	Operation not recommended							1400	43.5	32.6	0.75	4.19	57.8	10.4	11.8
			Operation not recommended							1700	44.8	35.8	0.80	4.20	59.1	10.7	13.1	
120	10.0	1.7	3.8	Operation not recommended							Operation not recommended							
	13.0	2.5	5.8	Operation not recommended							1400	40.0	31.2	0.78	4.79	56.3	8.4	15.8
				Operation not recommended							1700	41.5	34.2	0.83	4.76	57.7	8.7	17.1
	16.0	3.6	8.2	Operation not recommended							1400	40.8	31.8	0.78	4.70	56.9	8.7	14.6
			Operation not recommended							1700	42.0	34.8	0.83	4.70	58.0	8.9	16.3	

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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## GB072 - Performance Data

### Dual Capacity with Variable Speed ECM or 5-Speed ECM High Speed (2200 cfm)

EWT °F	Flow GPM	Water Pressure Drop		HEATING - EAT 70°F							COOLING - EAT 80/67 °F							
		psi	ft/hd	Airflow cfm	HC MBtu/h	Power kW	HE MBtu/h	LAT °F	COP	HWC MBtu/h	Airflow cfm	TC MBtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER	HWC MBtu/h
20	12.0	3.3	7.6	Operation not recommended							Operation not recommended							
	15.0	4.6	10.7	Operation not recommended							Operation not recommended							
	18.0	6.2	14.3	1850	45.4	4.17	31.2	92.7	3.19	7.9	Operation not recommended							
				2200	47.1	4.44	31.9	89.8	3.11	7.1	Operation not recommended							
30	12.0	3.2	7.4	Operation not recommended							Operation not recommended							
	15.0	4.5	10.4	1850	52.6	4.33	37.8	96.3	3.56	8.3	1850	70.5	43.0	0.61	2.51	79.1	28.1	---
				2200	54.5	4.60	38.7	92.9	3.47	7.6	2200	71.8	46.8	0.65	2.66	80.9	27.0	---
	18.0	6.0	13.9	1850	53.0	4.37	38.1	96.5	3.56	8.6	1850	71.2	43.8	0.61	2.46	79.6	28.9	---
				2200	55.0	4.65	39.1	93.1	3.47	7.8	2200	72.5	47.1	0.65	2.62	81.5	27.7	---
	40	12.0	3.1	7.1	Operation not recommended							Operation not recommended						
15.0		4.4	10.1	1850	61.0	4.60	45.3	100.5	3.89	9.2	1850	73.3	45.8	0.62	3.03	83.6	24.2	---
				2200	63.1	4.81	46.7	96.5	3.84	8.4	2200	74.7	49.8	0.67	3.21	85.7	23.3	---
18.0		5.8	13.5	1850	61.9	4.65	46.0	101.0	3.90	9.5	1850	74.1	46.6	0.63	2.97	84.2	24.9	---
				2200	64.0	4.86	47.4	96.9	3.86	8.6	2200	75.5	50.2	0.66	3.16	86.3	23.9	---
50		12.0	3.0	6.9	1850	64.9	4.79	48.6	102.5	3.97	9.9	1850	74.7	47.6	0.64	3.68	87.2	20.3
	2200				67.1	4.96	50.2	98.2	3.97	9.2	2200	76.2	51.8	0.68	3.90	89.6	19.5	4.6
	15.0	4.2	9.8	1850	68.6	4.88	51.9	104.3	4.12	10.3	1850	75.4	48.1	0.64	3.60	87.7	21.0	4.0
				2200	70.9	5.04	53.7	99.8	4.12	9.4	2200	76.9	52.4	0.68	3.83	90.0	20.1	4.4
	18.0	5.7	13.1	1850	69.8	4.94	53.0	104.9	4.14	10.6	1850	76.2	49.1	0.64	3.54	88.3	21.5	3.7
				2200	72.1	5.09	54.7	100.3	4.15	9.7	2200	77.7	52.8	0.68	3.77	90.6	20.6	4.2
60	12.0	2.9	6.7	1850	73.0	5.10	55.6	106.5	4.19	11.1	1850	73.3	47.7	0.65	3.91	86.7	18.8	5.3
				2200	75.4	5.20	57.6	101.7	4.24	10.3	2200	74.9	51.6	0.69	4.15	89.0	18.0	5.6
	15.0	4.1	9.5	1850	76.2	5.19	58.5	108.2	4.30	11.5	1850	74.1	48.2	0.65	3.82	87.1	19.4	4.9
				2200	78.7	5.27	60.7	103.1	4.37	10.6	2200	75.6	52.1	0.69	4.06	89.4	18.6	5.3
	18.0	5.5	12.7	1850	77.9	5.25	60.0	109.0	4.35	11.8	1850	74.9	48.9	0.65	3.76	87.7	19.9	4.6
				2200	80.5	5.33	62.3	103.9	4.43	10.9	2200	76.4	52.7	0.69	4.00	90.0	19.1	5.1
70	12.0	2.8	6.5	1850	81.2	5.42	62.7	110.6	4.39	12.5	1850	73.3	48.7	0.66	4.34	88.1	16.9	6.6
				2200	83.7	5.46	65.1	105.2	4.49	11.6	2200	74.8	52.3	0.70	4.62	90.6	16.2	7.0
	15.0	4.0	9.1	1850	84.0	5.51	65.2	112.0	4.47	12.9	1850	74.0	49.2	0.66	4.26	88.5	17.4	6.2
				2200	86.7	5.52	67.8	106.5	4.60	11.9	2200	75.5	52.8	0.70	4.52	91.0	16.7	6.7
	18.0	5.3	12.2	1850	86.2	5.57	67.2	113.1	4.53	13.3	1850	74.8	49.7	0.66	4.18	89.1	17.9	5.7
				2200	89.0	5.57	70.0	107.5	4.68	12.3	2200	76.4	53.4	0.70	4.45	91.5	17.1	6.4
80	12.0	2.7	6.3	1850	88.3	5.78	68.6	114.2	4.48	14.1	1850	70.1	47.4	0.68	4.67	86.0	15.0	8.4
				2200	91.2	5.74	71.6	108.4	4.66	13.0	2200	71.6	51.2	0.72	4.97	88.5	14.4	8.9
	15.0	3.8	8.8	1850	90.4	5.86	70.4	115.3	4.52	14.5	1850	70.8	47.8	0.68	4.57	86.4	15.5	7.8
				2200	93.3	5.78	73.6	109.3	4.73	13.4	2200	72.2	51.6	0.71	4.86	88.8	14.9	8.4
	18.0	5.1	11.8	1850	93.2	5.94	72.9	116.6	4.60	15.0	1850	71.6	48.5	0.68	4.49	86.9	15.9	7.2
				2200	96.3	5.84	76.3	110.5	4.83	13.8	2200	73.0	52.2	0.71	4.79	89.4	15.3	8.0
90	12.0	2.6	6.0	1850	95.6	6.15	74.6	117.9	4.56	15.8	1850	65.5	45.0	0.69	4.88	82.2	13.4	10.5
				2200	98.8	6.03	78.2	111.6	4.80	14.7	2200	66.9	48.9	0.73	5.19	84.6	12.9	11.1
	15.0	3.7	8.5	1850	97.0	6.22	75.7	118.5	4.57	16.3	1850	66.2	45.4	0.69	4.78	82.5	13.9	9.8
				2200	100.1	6.06	79.4	112.1	4.84	15.1	2200	67.5	49.3	0.73	5.09	84.9	13.3	10.6
	18.0	4.9	11.4	1850	100.3	6.30	78.8	120.2	4.66	16.8	1850	66.9	46.3	0.69	4.70	82.9	14.2	9.1
				2200	103.6	6.12	82.7	113.6	4.96	15.6	2200	68.3	49.8	0.73	5.00	85.3	13.6	10.1
100	12.0	2.5	5.8	Operation not recommended							Operation not recommended							
	15.0	3.6	8.2	1850	63.4	44.7	0.71	5.27	81.4	12.0	12.2	Operation not recommended						
				2200	64.7	48.4	0.75	5.61	83.9	11.5	13.2	Operation not recommended						
	18.0	4.8	11.0	1850	64.1	45.4	0.71	5.18	81.8	12.4	11.3	Operation not recommended						
2200				65.5	48.9	0.75	5.51	84.3	11.9	12.5	Operation not recommended							
110	12.0	2.4	5.6	Operation not recommended							Operation not recommended							
	15.0	3.4	7.9	1850	56.6	41.4	0.73	5.51	75.4	10.3	14.9	Operation not recommended						
				2200	57.8	44.6	0.77	5.86	77.8	9.9	16.1	Operation not recommended						
	18.0	4.6	10.6	1850	57.3	41.9	0.73	5.41	75.7	10.6	13.8	Operation not recommended						
2200				58.4	45.0	0.77	5.76	78.1	10.2	15.3	Operation not recommended							
120	12.0	2.3	5.4	Operation not recommended							Operation not recommended							
	15.0	3.3	7.6	1850	53.6	40.2	0.75	6.04	74.3	8.9	18.0	Operation not recommended						
				2200	54.7	43.4	0.79	6.43	76.7	8.5	19.5	Operation not recommended						
	18.0	4.4	10.2	1850	54.2	40.7	0.75	5.94	74.5	9.1	16.7	Operation not recommended						
2200				55.3	43.7	0.79	6.31	76.9	8.8	18.5	Operation not recommended							

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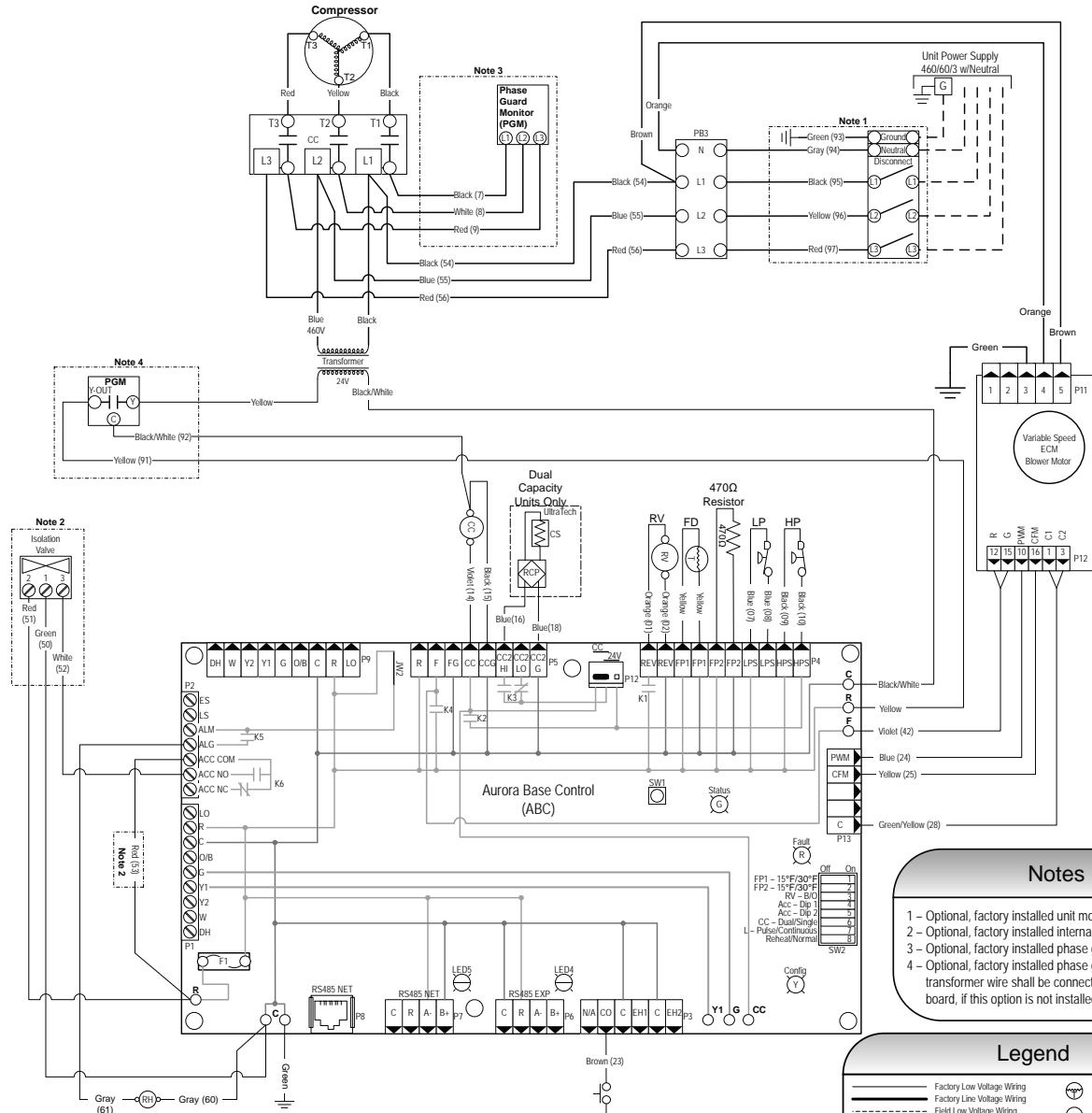
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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Wiring Schematics

## Aurora Control 460/60/3 Variable Speed ECM



- Notes**
- 1 - Optional, factory installed unit mounted disconnect.
  - 2 - Optional, factory installed internal isolation valve.
  - 3 - Optional, factory installed phase guard
  - 4 - Optional, factory installed phase guard. The yellow transformer wire shall be connected directly to the CPU board, if this option is not installed.

**Legend**

	Factory Low Voltage Wiring		Thermistor
	Factory Line Voltage Wiring		Relay Coil
	Field Low Voltage Wiring		Switch - Condensate Overflow
	Field Line Voltage Wiring		Switch - High Pressure
	Optional Block		Switch - Low Pressure
	DC Voltage PCB Traces		Internal Junction
	Field Zone Sensor Wiring		Quick Connect Terminal
	Field Wiring Lug		Polarized connector
	Ground		Light Emitting Diode - Green
	Relay Contacts - N.O., N.C.		Light Emitting Diode - Yellow
	Capacitor		Light Emitting Diode - Red
	Fuse		

CC - Compressor Contactor  
 CO - Condensate Overflow Sensor  
 ES - Emergency Shutdown  
 HP - High Pressure Switch  
 LP - Low Pressure Switch  
 FD - Freeze Detection Sensor  
 F1 - Fuse

SW1 - Push button  
 SW2 - DIP package 8 position  
 RB - Blower Relay  
 RV - Reversing Valve Coil  
 PGM - Phase Guard Monitor  
 RH - Reheat Valve Coil

Accessory Relay		
Operation	SW2-1	SW2-5
Cycle with Blower	On	On
Cycle with Compressor	Off	Off
Water Valve Slow Open	On	Off
Outdoor Air Damper	Off	On

Aurora Timing Events		
Event	Normal Mode	Test Mode
Random Start Delay	5 to 80 seconds	1 second
Compressor On Delay	5 seconds	< 1 second
Fault Recognition Delay - Low Pressure	30 seconds	30 seconds
Compressor Minimum On Time	2 minutes	5 seconds
Compressor Start Cycle Delay	4 minutes	15 seconds
Blower Off Delay	30 seconds	2 seconds
Start-Up Bypass - Low Pressure	2 minutes	30 seconds
Fault Recognition Delay - Low Pressure	30 seconds	30 seconds
Start-Up Bypass - Low Water/Air Coil Limit	2 minutes	30 seconds
Fault Recognition Delay - Low Water/Air Coil Limit	30 seconds	30 seconds
Fault Recognition Delay - Condensate Overflow	30 seconds	30 seconds
Thermostat Call Recognition Time	2 seconds	2 seconds
Auxiliary Heat Staging Delay	5 minutes	20 seconds
Emergency Heat Staging Delay	2 minutes	7.5 seconds
Water Valve Slow Open Delay	90 seconds	90 seconds
Reheat Delay	30 seconds	30 seconds

Aurora LED Flash Codes			
Flash Code	Normal Mode	Configuration LED (LED2, Yellow)	Fault LED (LED3, Red)
<b>Slow Flash</b>	1 second on and 1 second off		
<b>Fast Flash</b>	100 milliseconds on and 100 milliseconds off		
<b>Flash Code</b>	100 milliseconds on and 400 milliseconds off with a 2 second pause before repeating		
Status LED (LED1, Green)	Fast Flash		
Configuration LED (LED2, Yellow)	Fast Flash		
Fault LED (LED3, Red)	Fast Flash		
Normal Mode	ON	No Software Overrides	Flash ECM Setting
Control is Non-Functional	OFF	DIP Switch Overrides	Slow Flash
Test Mode	Slow Flash	ECM Configure Mode	Fast Flash
Lockout Active	Fast Flash	Reset Configure Mode	Off
Dehumidification Mode	Flash Code 2		Low Air Coil Limit Lockout - FP2
Reserved	Flash Code 3		Low Water Coil Limit Lockout - FP1
Reserved	Flash Code 4		Reserved
Load Shed	Flash Code 5		Condensate Overflow Lockout
ESD	Flash Code 6		Over Under Voltage Shutdown
Reserved	Flash Code 7		Reserved
			Flash Code 8
			Flash Code 9
			Flash Code 10
			Flash Code 11

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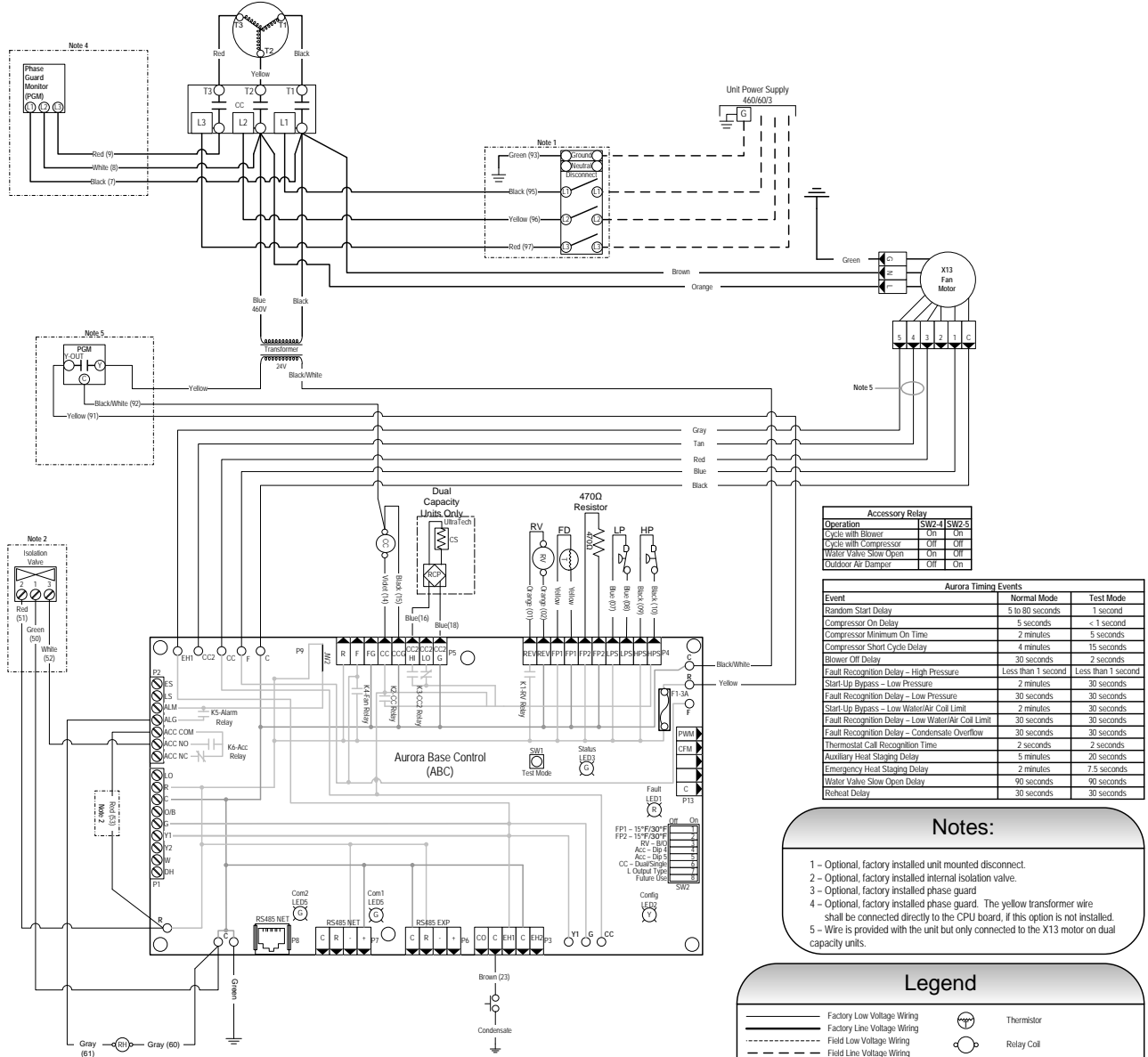
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Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_  
 Engineer: \_\_\_\_\_  
 Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Wiring Schematics cont.

## Aurora Base Control 460/60/3 5-Speed ECM with Reheat



Operation	SW2.4	SW2.5
Cycle with Blower	On	On
Cycle with Compressor	Off	Off
Water Valve Slow Open	On	Off
Outdoor Air Damper	Off	On

Aurora Timing Events		
Event	Normal Mode	Test Mode
Random Start Delay	5 to 80 seconds	1 second
Compressor On Delay	5 seconds	< 1 second
Compressor Minimum On Time	2 minutes	5 seconds
Compressor Short Cycle Delay	4 minutes	15 seconds
Blower Off Delay	30 seconds	2 seconds
Fault Recognition Delay - High Pressure	Less than 1 second	Less than 1 second
Start-Up Bypass - Low Pressure	2 minutes	30 seconds
Fault Recognition Delay - Low Pressure	30 seconds	30 seconds
Start-Up Bypass - Low Water/Air Coil Limit	2 minutes	30 seconds
Fault Recognition Delay - Low Water/Air Coil Limit	30 seconds	30 seconds
Fault Recognition Delay - Condensate Overflow	30 seconds	30 seconds
Thermostat Call Recognition Time	2 seconds	2 seconds
Auxiliary Heat Staging Delay	5 minutes	20 seconds
Emergency Heat Staging Delay	2 minutes	7.5 seconds
Water Valve Slow Open Delay	90 seconds	90 seconds
Reheat Delay	30 seconds	30 seconds

**Notes:**

- Optional, factory installed unit mounted disconnect.
- Optional, factory installed internal isolation valve.
- Optional, factory installed phase guard.
- Optional, factory installed phase guard. The yellow transformer wire shall be connected directly to the CPU board, if this option is not installed.
- Wire is provided with the unit but only connected to the X13 motor on dual capacity units.

**Legend**

	Factory Low Voltage Wiring		Thermistor
	Factory Line Voltage Wiring		Relay Coil
	Field Line Voltage Wiring		Switch - Condensate Overflow
	Field Zone Sensor Wiring		Switch - High pressure
	Internal Junction		Switch - Low pressure
	Quick Connect Terminal		Polarized connector
	Field Wiring Lug		Light Emitting Diode - Green
	Ground		Light Emitting Diode - Yellow
	Relay Contacts - N.O., N.C.		Light Emitting Diode - Red
	Capacitor		
	Fuse		

CC - Compressor Contactor  
 CO - Condensate Overflow Sensor  
 ES - Emergency Shutdown  
 HP - High Pressure Switch  
 RB - Blower Relay  
 LP - Low Pressure Switch  
 FD - Freeze Detection Sensor  
 F1 - Fuse

SW1 - Push button  
 SW2 - DIP package 8 position  
 RV - Reversing Valve Coil  
 PGM - Phase Guard Monitor  
 RH - Reheat Valve Coil

Aurora LED Flash Codes			
Flash Code	Flash Description	Flash Description	Flash Description
Slow Flash	1 second on and 1 second off		
Fast Flash	100 milliseconds on and 100 milliseconds off		
Flash Code	100 milliseconds on and 400 milliseconds off with a 2 second pause before repeating		
Random Start Delay			
Status LED (LED1, Green)	Fast Flash		
Configuration LED (LED2, Yellow)	Fast Flash		
Fault LED (LED3, Red)	Fast Flash		
Status LED (LED1, Green)		Configuration LED (LED2, Yellow)	
Normal Mode	ON	No Software Override	Flash ECM Setting
Control is Non-Functional	OFF	DIP Switch Override	Slow Flash
Test Mode	Slow Flash	ECM Configure Mode	Fast Flash
Lockout Active	Fast Flash	Reset Configure Mode	Off
Dihumidification Mode	Flash Code 2		
Reserved	Flash Code 3		
Reserved	Flash Code 4		
Load Shed	Flash Code 5		
ESD	Flash Code 6		
Reserved	Flash Code 7		
Normal Mode		Flash ECM Setting	
Normal Mode	ON	Normal Mode	OFF
Input Fault Lockout	Flash Code 1	High Pressure Lockout	Flash Code 2
Low Pressure Lockout	Flash Code 3	Low Air Coil Limit Lockout - FP2	Flash Code 4
Low Water Coil Limit Lockout - FP1	Flash Code 5	Reserved	Flash Code 6
Condensate Overflow Lockout	Flash Code 7	Over/Under Voltage Shutdown	Flash Code 8
Reserved	Flash Code 9	Reserved	Flash Code 10
Air/Water Coil Limit Sensor Error	Flash Code 11		

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Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Wiring Schematics cont.

## FX10 Control 460/60/3 5-Speed ECM

### Notes:

- 1 - Disconnect for 15 degree freeze detection limit.
- 2 - Acc 1 output is cycled with the compressor.
- 3 - Acc 2 output is cycled with the blower.
- 4 - R, C, Y1, Y2, and G inputs are for use with a wall mount thermostat. TO, SC, RS, AIC, and SS are for use with a TAXXJ02 zone sensor.
- 5 - Network controllable 24VAC output.
- 6 - Network controllable PWM output.
- 7 - Wire #52 can be used to connect a field supplied and installed 0-5 VDC humidity transmitter.
- 8 - Not Used - Bundle in the air handler.
- 9 - Optional, factory installed unit mounted disconnect
- 10 - Optional, factory installed phase guard
- 11 - Optional, factory installed phase guard. The yellow transformer wire shall be connected directly to the PB1-1, if this option is not installed.
- 12 - Optional, factory installed internal isolation valve.
- 14 - Network configurable input.
- 15 - Refer to the 5-Spd ECM Low Voltage Connection Table.

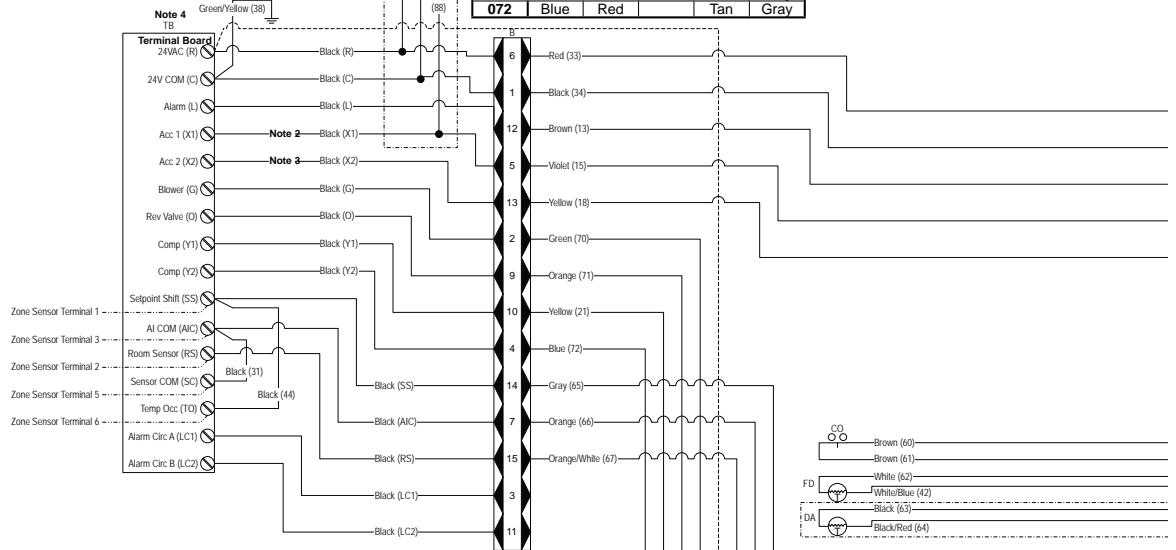
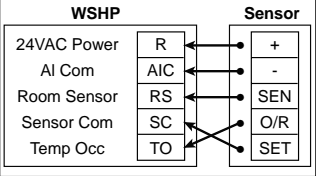
5-Spd ECM Low Voltage Connections Single Speed

Model	TAP-1	TAP-2	TAP-3	TAP-4	TAP-5
015	Blue	Red		Gray	
018	Blue	Red		Gray	
024	Blue			Red	Gray
030	Blue			Red	Gray
036	Blue			Red	Gray
042	Blue		Red	Red	Gray
048	Blue		Red	Red	Gray
060	Blue		Red	Red	Gray
070	Blue		Red	Red	Gray

Motor Low Voltage Connections Dual Capacity

Model	TAP-1	TAP-2	TAP-3	TAP-4	TAP-5
026	Blue	Red		Tan	Gray
038	Blue	Red		Tan	Gray
049	Blue	Red		Tan	Gray
064	Blue	Red		Tan	Gray
072	Blue	Red		Tan	Gray

### TAXXA04 Room Command Module with LCD



### Legend

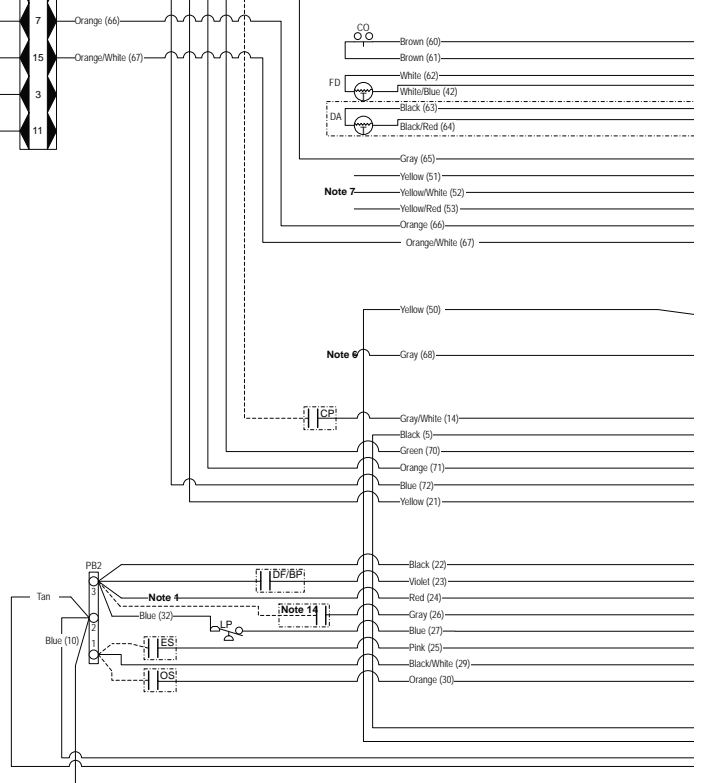
Factory Low voltage wiring  
 Factory Line voltage wiring  
 Field low voltage wiring  
 Field line voltage wiring  
 Optional block  
 DC Voltage PCB traces  
 Field Zone Sensor Wiring

Internal junction  
 Quick connect terminal  
 Field wire lug  
 Ground  
 Relay Contacts- N.O., N.C.  
 Rectified Compressor Solenoid Plug  
 Compressor Solenoid

**CC** - Compressor Contactor  
**CO** - Condensate Overflow Sensor  
**CP** - Compressor Proving  
**CS** - Compressor Solenoid  
**DA** - Discharge Air Temperature Sensor  
**DF/BP** - Dirty Filter or Blower Proving  
**DH** - Dehumidification Switch or Humidistat  
**ES** - Emergency Shutdown  
**HP** - High Pressure Switch  
**LP** - Low Pressure Switch

Relay coil  
 Capacitor w/ bleed resistor  
 Switch - Condensate overflow  
 Switch - High pressure  
 Switch - Low pressure  
 Polarized connector  
 Open Jumper  
 Closed Jumper

**OS** - Occupied Switch  
**PB1, PB2** - Power blocks  
**PR** - Pump Relay  
**RB** - Blower Relay  
**RCP** - Rectified Solenoid Compressor Plug  
**RV** - Reversing Valve coil  
**TB** - Terminal Board  
**FD** - Freeze Detection Sensor  
**PGM** - Phase Guard Module  
**RH** - Reheat Valve Coil



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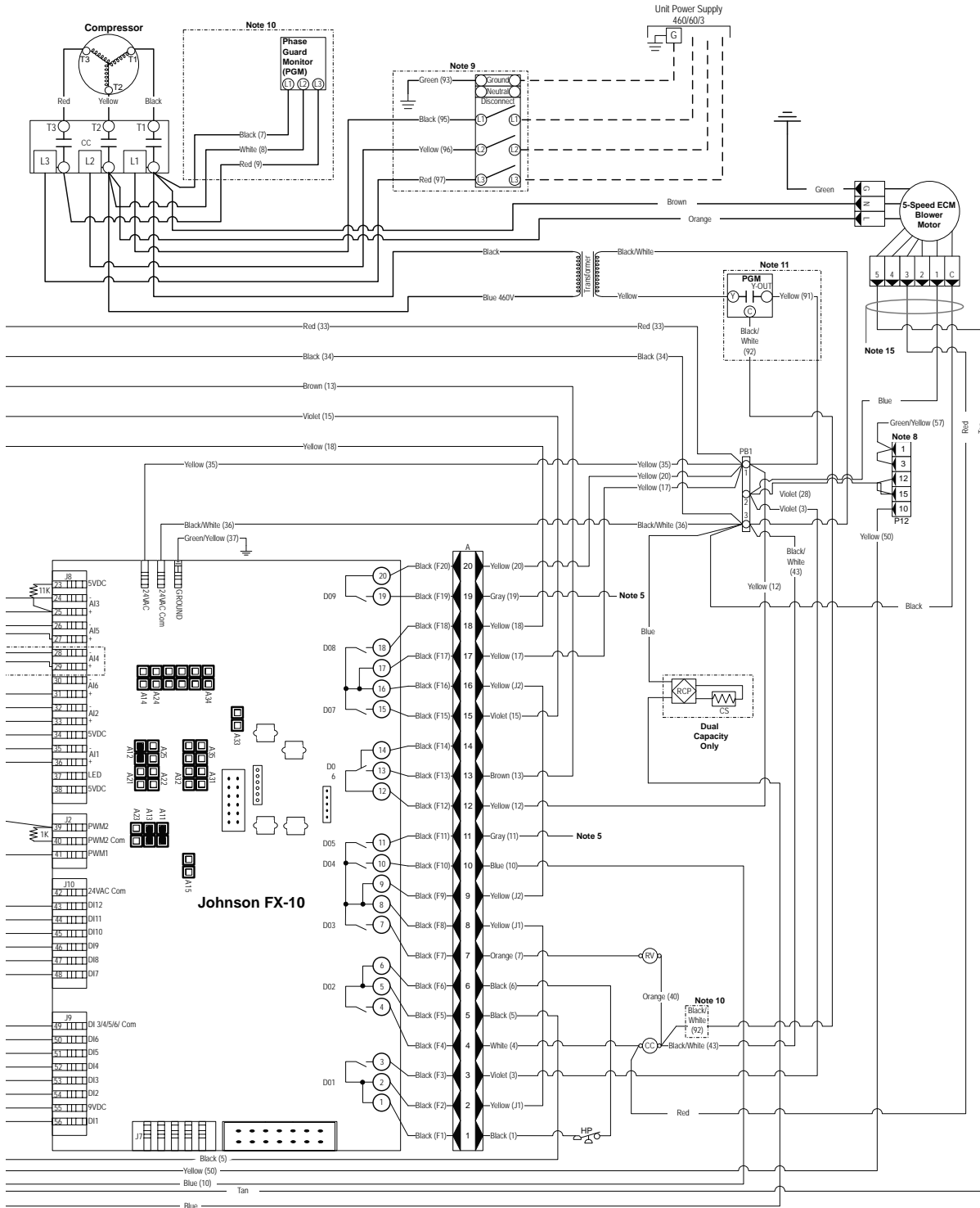
Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



# Wiring Schematics cont.

## FX10 Control 460/60/3 5-Speed ECM cont.



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Engineer: \_\_\_\_\_

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## Engineering Guide Specifications

### General

Furnish and install Water Source Heat Pumps as indicated on the plans. Equipment shall be completely assembled, piped and internally wired. Capacities and characteristics as listed in the schedule and the specifications that follow. The reverse cycle heating/cooling units shall be either suspended type with horizontal air inlet and discharge or floor mounted type with horizontal air inlet and vertical upflow air discharge. Units shall be AHRI/ISO 13256-1 certified and listed by a nationally recognized safety-testing laboratory or agency, such as ETL Testing Laboratory. Each unit shall be computer run-tested at the factory with conditioned water and operation verified to catalog data. Each unit shall be mounted on a pallet and shipped in a corrugated box or stretch-wrapped. The units shall be designed to operate with entering liquid temperature between 20°F and 120°F [-6.7°C and 48.9°C].

### Casing and Cabinet

The cabinet shall be fabricated from heavy-gauge galvanized steel and finished with optional corrosion-resistant powder coating. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117. The interior shall be insulated with 1/2 in. thick, multi-density, cleanable aluminum foil coated glass fiber with edges sealed or tucked under flanges to prevent the introduction of glass fibers into the discharge air. Standard cabinet panel insulation must meet NFPA 90A 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. Unit insulation must meet these stringent requirements or unit(s) will not be accepted.

One (horizontal) to two (vertical) blower and two compressor compartment access panels shall be 'lift-out' removable with supply and return ductwork in place.

A duct collar shall be provided on the supply air opening. Standard size 1 in. [2.54 cm] MERV 4 filters shall be provided with each unit. Units shall have a return air filter rack that is field convertible from 1 in. [2.54 cm] to 2 in. [5.1 cm]. The units shall have an insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise. Vertical units shall be supplied with left or right horizontal air inlet and top vertical air discharge. Horizontal units shall be supplied with left or right air inlet and side or end air discharge.

The compressor shall be double isolation mounted using selected durometer grommets to provide vibration free compressor mounting. The compressor mounting bracket shall be acoustically deadened galvanized steel to prevent vibration transmission to the cabinet.

**Option:** AlpinePure MERV 13 filter - A 2 in. thick [51 mm] MERV 13 filter can help fulfill a credit under the LEED Rating System. Its low initial resistance promotes low energy consumption (0.21 in. w.g. @ 300 fpm) and provides nearly twice the life of a standard filter (300 fpm vs. standard 500 fpm application).

**Option:** A Super Quiet Sound package shall include multi-density full coverage compressor blanket.

**Option:** An internally mounted low pressure drop (high Cv) water solenoid valve shall be factory installed for use in variable speed pumping applications.

**Option:** An internally mounted automatic flow regulator shall be set to 3 gpm/ton to deliver optimal flow to the unit.

### Refrigerant Circuit

All units shall utilize the non-ozone depleting and low global warming potential refrigerant R-410A. All units shall contain a sealed refrigerant circuit including a hermetic motor-compressor, bidirectional thermostatic expansion valve, finned tube air-to-refrigerant heat exchanger, reversing valve, coaxial tube water-to-refrigerant heat exchanger, optional hot water generator coil, and service ports.

Compressors shall be high-efficiency single speed rotary or scroll type designed for heat pump duty and mounted on vibration isolators. The compressor shall be double isolation mounted using selected durometer grommets to provide vibration free compressor mounting.

**Option: AlumiSeal electro-coated air coil.**

The coaxial water-to-refrigerant heat exchanger shall be designed for low water pressure drop and constructed of a convoluted copper (cupronickel option) inner tube and a steel outer tube. Refrigerant to air heat exchangers shall utilize enhanced corrugated lanced aluminum fins and rifled aluminum tube construction rated to withstand 600 psig (4135 kPa) refrigerant working pressure. Refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 600 psig (4135 kPa) working refrigerant pressure and 450 psig (3101 kPa) working water pressure.

The thermostatic expansion valve shall provide proper superheat over the entire liquid temperature range with minimal "hunting." The valve shall operate bidirectionally without the use of check valves.

**Option:** Cupronickel refrigerant to water heat exchanger shall be of copper-nickel inner water tube and steel refrigerant outer tube design, rated to withstand 600 psig (4135 kPa) working refrigerant pressure and 450 psig (3101 kPa) working water pressure. Water lines shall also be of cupronickel construction.

**Option:** Hot water generator - Internal double wall vented hot water generator coil refrigerant to water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 600 psig (4135 kPa) working refrigerant pressure and 450 psig (3101 kPa) working water pressure.

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

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Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Engineering Guide Specifications cont.

**Option:** ThermaShield coated water-to-refrigerant heat exchanger, water lines and refrigerant suction lines shall be insulated to prevent condensation at low liquid temperatures below 50°F.

**Option:** AlpinePure hot gas bypass

**Option:** AlpinePure hot gas reheat

### Blower Motor and Assembly

The blower shall be a direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low outlet velocity operation. The blower housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the blower motor. The blower motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermostatic overload protection.

**Option:** PSC blower motor shall be a three-speed PSC type.

**Option:** 5-Speed ECM blower motor shall be a 5-speed ECM type. The 5-speed ECM blower motor shall be soft starting, shall maintain constant torque over its operating static range, and shall provide 5 speed settings. The blower motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermostatic overload protection. 5-speed ECM motors shall be long-life ball bearing type.

**Option:** Variable speed ECM blower motor shall be a variable speed ECM type. The variable speed ECM blower motor shall be soft starting, shall maintain constant cfm over its operating static range, and shall provide 12 cfm settings. Variable speed ECM motors shall be long-life ball bearing type.

**Option:** High static blower motors shall be available on certain PSC and variable speed ECM models.

### Electrical

A control box shall be located within the unit compressor compartment and shall contain a 50VA or 75VA transformer, 24 volt activated, 2 pole compressor contactor, terminal block for thermostat wiring and solid-state controller for complete unit operation. Electromechanical operation WILL NOT be accepted. Units shall be name-plated for use with time delay fuses or HACR circuit breakers. Unit controls shall be 24 volt and provide heating or cooling as required by the remote thermostat/sensor.

An Aurora microprocessor-based controller that interfaces with a multi-stage electronic thermostat to monitor and control unit operation shall be provided. The control shall provide operational sequencing, blower speed control, high and low pressure switch monitoring, freeze detection, condensate overflow sensing, lockout mode control, LED status and fault indicators, fault memory, field selectable options and accessory output. The control shall provide fault retry three times before locking out to limit nuisance trips.

A detachable terminal block with screw terminals will be provided for field control wiring. All units shall have knockouts for entrance of low and line voltage wiring. The blower motor and control box shall be harness plug wired for easy removal.

**Option:** A FX10 microprocessor-based controller that interfaces with a multi-stage electronic thermostat to monitor and control unit operation. The control shall provide operational sequencing, blower speed control, high, low and loss of charge pressure monitoring, freeze detection, condensate overflow sensing, lockout mode control, hot water and loop pump control, fault memory, field selectable options and accessory output. The control shall communicate all mode, status, fault and lockout codes to the front end system for fast and accurate equipment diagnosis. The control shall provide fault retry three times before locking out to limit nuisance trips.

**Option:** IntelliStart® (compressor soft starter) shall be factory installed for use in applications that require low starting amps, reduced compressor start-up noise, off-grid, and improved start-up behavior. IntelliStart shall reduce normal starting current up to 60%.

### Piping

Supply and return water connections shall be FPT copper fittings fixed to the corner post, which eliminate the need for backup pipe wrenches.

With vertical units, the condensate connection shall be a 3/4 in. [19.1 mm] PVC socket with internally-trapped hose that can be routed to front or side corner post locations.

### Hanger Kit

(included with horizontal units only - field installed)

The hanger kit shall consist of galvanized steel brackets, bolts, lock washers, and isolators and shall be designed to fasten to the unit bottom panel for suspension from 3/8 in. threaded rods. Unit sizes 009-060 shall require four brackets and unit sizes 070-072 shall require five brackets. Brackets shall not inhibit filter removal in any way.

### Accessories

**Thermostat** (field-installed)

A multi-stage auto-changeover electronic digital thermostat shall be provided. The thermostat shall offer two heating stages and one cooling stage with precise temperature control. An OFF-HEAT-AUTO-COOL-EMERG system switch, OFF-AUTO blower switch, and indicating LEDs shall be provided. The thermostat shall display in °F or °C.

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Engineering Guide Specifications cont.

### Hose Kits – Ball Valves (field-installed)

A flexible steel braid hose featuring Kevlar® reinforced EPDM core with ANSI 302/304 stainless steel outer braid and fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1). Ball valve at one end; swivel connector with adapter at the other end (swivel to adapter connection via fiber or EPDM gasket). Swivel connection provides union between heat pump and piping system. The hoses feature brass fittings, stainless steel ferrules. A full port ball valve shall be provided with integral P/T (pressure/temperature) port on supply hose.

#### Specifications:

- Temperature range of 35°F [2°C] to 180°F [82°C].
- Max. working pressure of 400 psi [2757 kPa] for 1/2 in. and 3/4 in. hose kits; max. working pressure of 350 psi [kPa] for 1 in. and 1-1/4 in. hose kits.

### Hose Kits – Automatic Balancing and Ball Valves

(field-installed)

A flexible steel braid hose featuring Kevlar® reinforced EPDM core with ANSI 302/304 stainless steel outer braid and fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1). Ball valve at one end; swivel connector with adapter at the other end (swivel to adapter connection via fiber or EPDM gasket). Swivel connection provides union between heat pump and piping system. The hoses feature brass fittings, stainless steel ferrules. A full port ball valve shall be provided with integral P/T (pressure/temperature) port on supply hose and automatic balancing valve with integral P/T ports and full port ball valve on return hose.

#### Specifications:

- Temperature range of 35°F [2°C] to 180°F [82°C]
- Max. working pressure of 400 psi [2757 kPa] for 1/2 in. and 3/4 in. hose kits; max. working pressure of 350 psi [2413 kPa] for 1 in. and 1-1/4 in. hose kits
- Minimum burst pressure of four times working pressure

### Hose Kits – Automatic Balancing and Ball Valves with ‘Y’ strainer (field-installed)

A flexible steel braid hose featuring Kevlar® reinforced EPDM core with ANSI 302/304 stainless steel outer braid and fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1). Ball valve at one end; swivel connector with adapter at the other end (swivel to adapter connection via fiber or EPDM gasket). Swivel connection provides union between heat pump and piping system. The hoses feature brass fittings, stainless steel ferrules. A “y” strainer is provided on one end for fluid straining and integral “blowdown” valve. A full port ball valve shall be provided with integral P/T (pressure/temperature) port on supply hose and automatic balancing valve with integral P/T ports and full port ball valve on return hose.

#### Specifications:

- Temperature range of 35°F [2°C] to 180°F [82°C]
- Max. working pressure of 400 psi [2756 kPa] for 1/2 in. and 3/4 in. hose kits; max. working pressure of 350 psi [2413 kPa] for 1 in. and 1-1/4 in. hose kits
- Minimum burst pressure of four times working pressure

### Hot Water Pump Kit (field-installed)

An accessory pump kit is available for hot water generation option. This kit includes hot water pump, fittings, and water heater kit necessary for potable water application. Order DPK5 for use with Aurora and FX10 controls.

Contractor: \_\_\_\_\_ P.O.: \_\_\_\_\_

Engineer: \_\_\_\_\_

Project Name: \_\_\_\_\_ Unit Tag: \_\_\_\_\_



## Revision Guide

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Pages:	Description:	Date:	By:
All	Updated with All-Aluminum Air Coils	19 May 2014	DS
12-14	Updated Compressor LRA with IntelliStart	02 Aug 2013	DS
All	First Published	08 Apr 2013	DS