YORK®
Heating and Air Conditioning

SUBMITTAL SET

LX ULTRA
COMMERCIAL GEOTHERMAL/
WATER SOURCE HEAT PUMPS
SINGLE CAPACITY

MODELS:
YGS009 - 070
(.75 THRU 6 NOMINAL TONS)

AHRI CERTIFIED™
www.ahridirectory.org
Water Source HP
ANSI/AHRI/ASHRAE/ISO13256-1

C ETL LISTED US
Intertek

Due to continuous product improvement, specifications are subject to change without notice.

Visit us on the web at www.yorkgeothermal.com

Additional rating information can found at
www.ahridirectory.org

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

YORK®

Model Nomenclature

1-2	3	4	5-7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22-23	24
YG	S	V	036	T	L	0	0	0	C	A	N	N	A	5	N	0	0	SS	*

Model Type
YG – YG Series

Operation Range
S – Single Stage

Cabinet Configuration
V – Vertical
H - Horizontal

Unit Capacity (MBTUH)
009, 012, 015, 018,
023 (Horizontal Only)
024, 030, 036,
041 (Vertical Only)
042, 048, 060, 070

Discharge Configuration
T – Top (Vertical)
E – End (Horizontal)
S – Side (Horizontal)

Return Air Configuration
L – Left
R – Right

Voltage
0 – 208-230/60/1
2 – 265-277/60/1 (009-030)
3 – 208-230/60/3 (023-070)
4 – 460/60/3 (023-070)
5 – 575/60/3 (PSC Only 041-070)

Hot Water Generation Option
0 – No HWG, No IntelliStart®
2 – HWG without Pump, No IntelliStart (V015 – 070)
3 – No HWG, IntelliStart
5 – HWG without Pump, IntelliStart

Blower Options
0 – PSC Blower
1 – Variable Speed ECM Blower (009-070)
2 – High Static Variable Speed ECM Blower (042-048)
3 – High Static PSC Blower (024, 030, 042, 048)
4 – 5-Speed ECM Blower (015-070)

Water Coil Option
C – Copper
N – CuproNickel

Sound Kit Option
A – None
B – Sound Kit (Not Available on H009-012)

Vintage
* - Factory Use Only

Non-Standard Options
SS – Standard

Drain Pan Option
0 – Composite, No Secondary Connection
1 – Composite, Secondary Connection
2 – Stainless Steel, No Secondary Connection
3 – Stainless Steel, Secondary Connection

Cabinet Option
0 – Unpainted, 1 in MERV 4, Filter Rail
1 – Painted, 1 in MERV 4, Filter Rail
2 – Unpainted, 2 in MERV 13, Filter Rail
3 – Painted, 2 in MERV 13, Filter Rail
4 – Unpainted, 1 in MERV 4, Filter Rack
5 – Painted, 1 in MERV 4, Filter Rack
6 – Unpainted, 2 in MERV 13, Filter Rack
7 – Painted, 2 in MERV 13, Filter Rack

Phase Guard
N – No Phase Guard, No Disconnect
P – Phase Guard, No Disconnect
B – Phase Guard, Disconnect
D – No Phase Guard, Disconnect

All-Aluminum Air Coil Option
5 – AlumiSeal™, Extended Range
6 – AlumiSeal, Standard Range
7 – No Coating, Extended Range
8 – No Coating, Standard Range

Control Option
A – Aurora™ Base Control (ABC)

Water Control Option
N – None
R – Water Flow Regulator (015-070)
V – 2-Way Valve (015-070)
B – 2-Way Valve w/ Water Flow Regulator (015-070)

Refrigeration Option
N – None
G – Hot Gas Bypass (015-072)
R – Hot Gas Reheat (015-072)
B – Hot Gas Bypass w/Hot Gas Reheat (015-072)

Note: Phase Guard Only Available on 208-230/60/3 and 460/60/3
50VA Transformer with Aurora

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

YORK®

AHRI Data

PSC Motors

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

Model	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 EWT 77°F		Heating EWT 32°F	
	gpm	cfm	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
009	3.0	350	8,500	12.2	11,500	4.4	10,500	18.2	9,600	3.7	9,100	13.5	7,600	3.0
012	3.5	400	10,900	12.7	14,700	4.4	12,500	18.2	12,000	3.8	11,500	14.7	9,600	3.2
015	4.0	500	14,000	15.0	16,500	4.8	16,000	24.0	15,000	4.1	14,700	17.2	11,500	3.5
018	5.0	600	17,600	14.6	21,000	4.7	20,600	23.5	17,500	4.0	18,500	17.0	13,700	3.5
023	6.0	800	23,000	14.5	26,000	4.5	25,400	22.5	21,900	3.9	23,900	16.8	17,000	3.4
024	6.0	800	23,900	14.6	27,000	4.7	26,400	22.8	22,300	4.0	24,400	17.0	17,500	3.5
030	8.0	1000	29,500	14.9	34,600	4.8	32,900	23.0	28,300	4.0	29,000	17.0	22,800	3.5
036	9.0	1150	33,300	14.4	40,600	4.5	37,700	21.2	33,000	3.9	34,500	16.6	26,000	3.3
041	11.0	1300	40,000	13.8	45,000	4.3	44,500	20.6	36,000	3.8	41,000	15.8	29,000	3.3
042	11.0	1400	40,800	14.5	45,400	4.5	45,800	22.0	37,000	3.8	42,300	16.8	29,900	3.3
048	12.0	1600	47,700	14.7	56,000	4.4	52,000	21.0	45,900	3.8	49,500	16.8	36,900	3.3
060	15.0	1900	58,400	14.7	72,500	4.4	65,500	20.8	58,400	3.8	60,900	16.6	47,100	3.3
070	18.0	2100	63,000	14.2	79,000	4.4	70,000	20.3	64,100	3.8	68,500	15.2	51,600	3.3

5/25/16

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

Variable Speed ECM, or 5-Speed ECM Motor

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

Model	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 EWT 77°F		Heating EWT 32°F	
	gpm	cfm	Capacity Btu/h	EER Btu/h/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btu/h/W	Capacity Btu/h	COP	Capacity Btu/h	EER Btu/h/W	Capacity Btu/h	COP
015	4.0	500	14,000	15.3	16,500	4.9	16,000	24.3	15,000	4.4	14,700	17.5	11,500	3.7
018	5.0	600	17,600	15.2	21,000	4.8	20,600	24.0	17,500	4.4	18,500	17.5	13,700	3.7
023	6.0	800	23,000	15.0	26,000	4.7	25,400	23.0	21,900	4.3	23,900	17.0	17,000	3.6
024	6.0	800	23,900	15.1	27,000	5.0	26,400	23.4	22,300	4.5	24,400	17.5	17,500	3.8
030	8.0	900	29,500	15.7	34,600	5.1	32,900	23.9	28,300	4.4	29,000	18.3	22,800	3.8
036	9.0	1150	33,300	15.0	40,600	4.8	37,700	23.0	33,000	4.3	34,500	17.3	26,000	3.5
041	11.0	1300	40,000	14.5	45,000	4.5	44,500	22.0	36,000	4.0	41,000	16.5	29,000	3.4
042	11.0	1400	40,800	15.6	45,400	5.0	45,800	23.5	37,000	4.3	42,300	18.5	29,900	3.7
048	12.0	1600	47,700	15.5	56,000	4.8	52,000	23.4	45,900	4.2	49,500	18.1	36,900	3.6
060	15.0	1900	58,400	15.3	72,500	4.7	65,500	23.0	58,400	4.0	60,900	17.9	47,100	3.6
070	18.0	2100	63,000	14.3	79,000	4.7	70,000	21.0	64,100	4.0	68,500	16.1	51,600	3.5

12/6/10

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

AHRI CERTIFIED™ www.ahridirectory.org Water Source HP ANSI/AHRI/ASHRAE/ISO13256-1

C ETL LISTED US Intertek

All LX Ultra Series product is safety listed under UL1995 thru ETL and performance listed with AHRI in accordance with standard 13256-1.

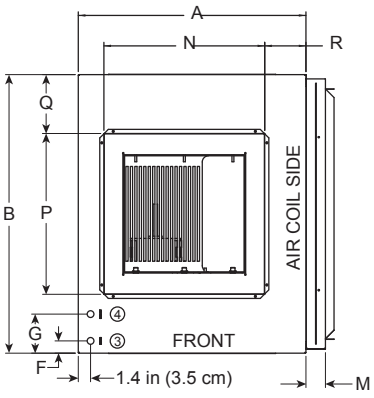
Contractor: _____ P.O.: _____

Engineer: _____

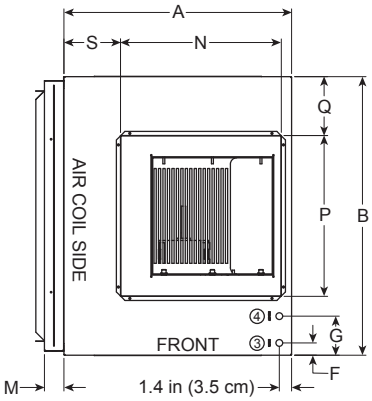
Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

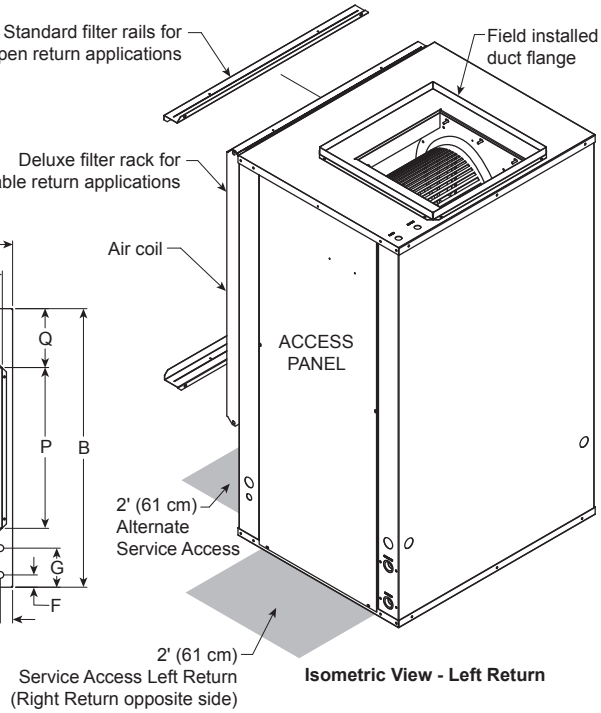
Vertical Dimensional Data



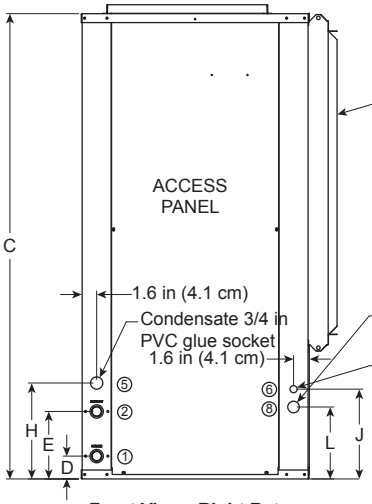
Top View - Right Return



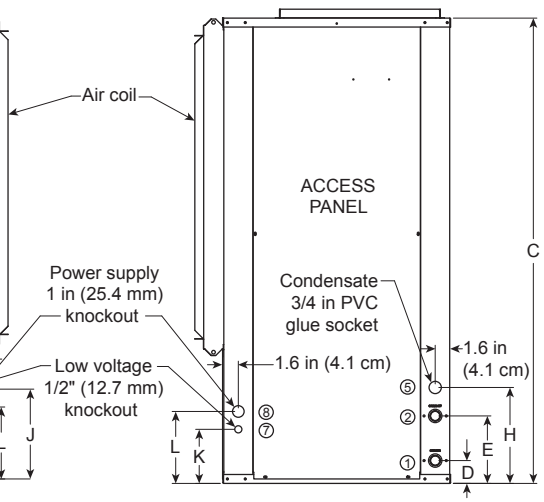
Top View - Left Return



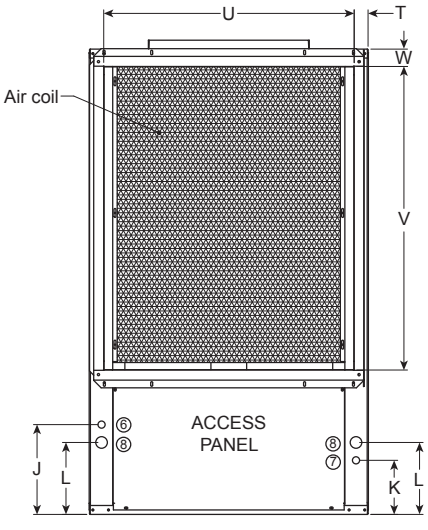
Isometric View - Left Return



Front View - Right Return



Front View - Left Return



Right View - Right Return
Left View - Left Return

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

YORK®

Vertical Dimensional Data cont.

Vertical Models		Overall Cabinet			Water Connections							Electrical Knockouts		
					1	2	3	4	5			6	7	8
		A	B	C	D	E	F	G	H	Loop	Knock-out	J	K	L
		Width	Depth	Height**	In	Out	HWG In	HWG Out	Cond-ensate	Water FPT	HWG Pro-visions	1/2 in. cond	1/2 in. cond	1 in. cond
009-012	in.	22.5	22.2	23.7	2.6	5.6	N/A	N/A	8.8	1/2	N/A	7.4	3.4	5.4
	cm.	57.2	56.4	60.2	6.6	14.2	N/A	N/A	22.4	12.7 mm	N/A	18.8	8.6	13.7
015-018	in.	22.5	22.2	36.2	2.6	7.6	1.4	2.9	10.8	3/4	0.875	9.4	5.4	7.4
	cm.	57.2	56.4	91.9	6.6	19.3	3.6	7.4	27.4	19.1 mm	22.2 mm	23.9	13.7	18.8
024-030	in.	22.5	26.2	40.2	2.6	7.6	1.4	4.4	10.8	3/4	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
036	in.	22.5	26.2	44.2	2.6	7.6	1.4	4.4	10.8	3/4	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
041	in.	22.5	26.2	44.2	2.6	7.6	1.4	2.9	10.8	3/4	0.875	10.1	6.1	8.1
	cm.	57.2	66.5	112.3	6.6	19.3	3.6	7.4	27.4	19.1 mm	22.2 mm	25.7	15.5	20.6
042-048	in.	25.5	31.2	44.2	2.6	7.6	1.4	4.4	10.8	1	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
060	in.	25.5	31.2	48.2	2.6	7.6	1.4	4.4	10.8	1	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
070	in.	25.5	31.2	52.2	2.6	7.6	1.4	4.4	10.8	1	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

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	9.4	9.4	2.1	18.1	10.0	1.9
	cm.	5.6	25.4	25.4	15.5	23.9	23.9	5.3	46.0	25.4	4.8
015-018	in.	2.2	14.0	14.0	4.1	4.3	7.7	2.1	18.1	20.0	1.9
	cm.	5.6	35.6	35.6	10.4	10.9	19.6	5.3	46.0	50.8	4.8
024-030	in.	2.2	14.0	14.0	6.1	4.5	7.7	2.1	22.1	22.1	1.9
	cm.	5.6	35.6	35.6	15.5	11.4	19.6	5.3	56.1	56.1	4.8
036	in.	2.2	14.0	14.0	6.1	4.5	7.7	2.1	22.1	26.1	1.9
	cm.	5.6	35.6	35.6	15.5	11.4	19.6	5.3	56.1	66.3	4.8
041	in.	2.2	18.0	18.0	4.1	3.9	3.9	2.1	22.1	26.1	1.9
	cm.	5.6	45.7	45.7	10.4	9.9	9.9	5.3	56.1	66.3	4.8
042-048	in.	2.2	18.0	18.0	6.6	4.6	6.3	1.6	28.1	26.0	2.0
	cm.	5.6	45.7	45.7	16.8	11.7	16.0	4.1	71.4	66.0	5.1
060	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
070	in.	2.2	18.0	18.0	6.6	4.6	6.3	1.6	28.1	34.0	2.0
	cm.	5.6	45.7	45.7	16.8	11.7	16.0	4.1	71.4	86.4	5.1

11/10/09

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

***Dimensions for return connections are for the deluxe filter rack that is suitable for ducted return applications and extends 3.25 in. [8.26 cm] from the unit. The open filter rack, used in non-ducted returns, extends 2.2 in. [5.59 cm] from the unit.**

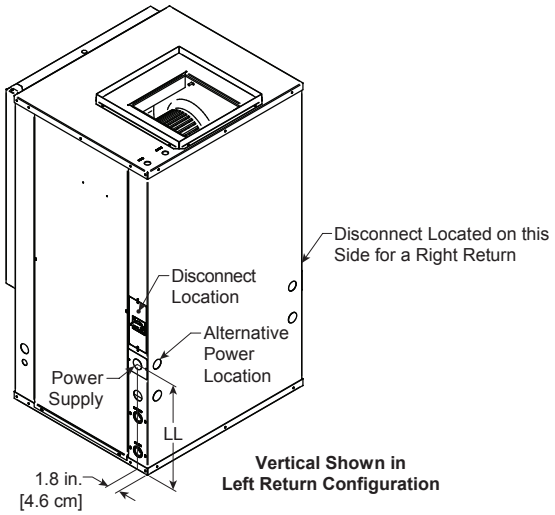
**Discharge flange is field installed and extends 1 in. (25.4 mm) from top of cabinet.

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	Externally Mounted
015-018	18.8 [47.8]
024-030	14.3 [36.3]
036	15.3 [38.9]
042-048	14.3 [36.3]
060	14.3 [36.3]
070	14.3 [36.3]

Dimensions in inches [cm] 02/06/13



Vertical Shown in Left Return Configuration

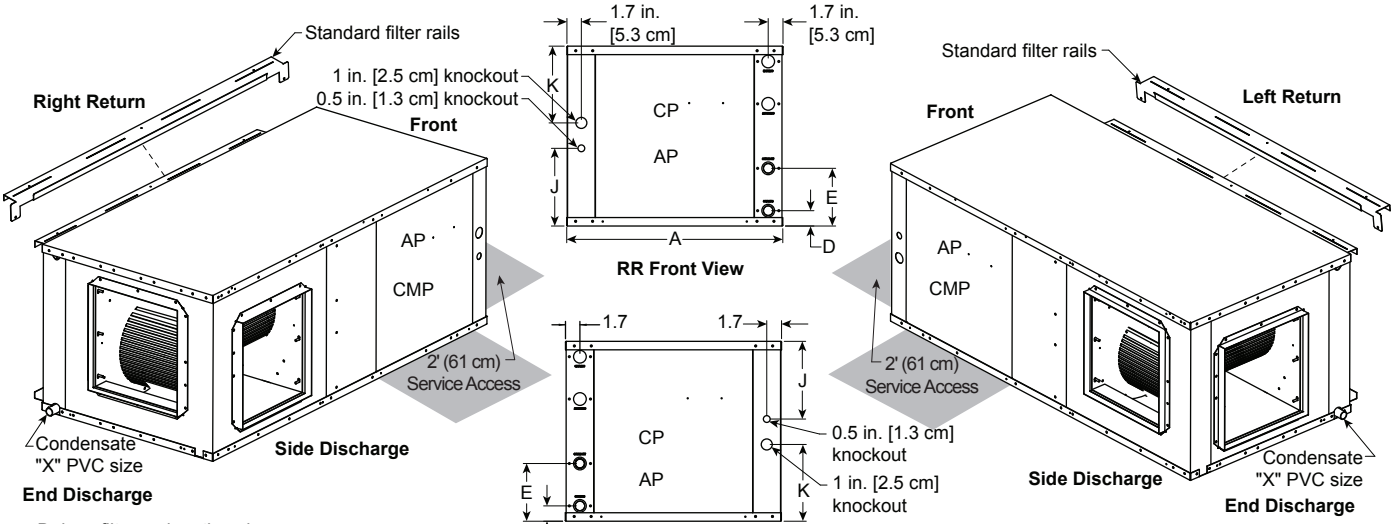
Contractor: _____ P.O.: _____

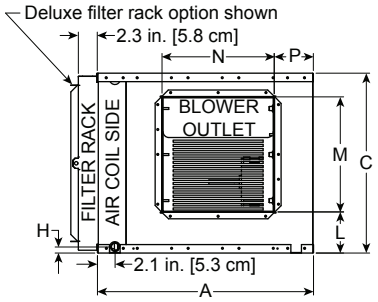
Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

Horizontal Dimensional Data

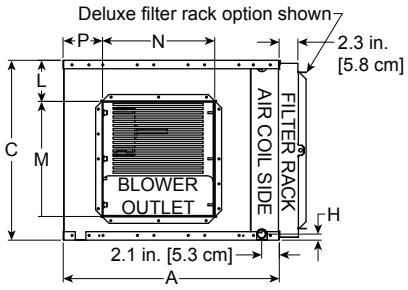




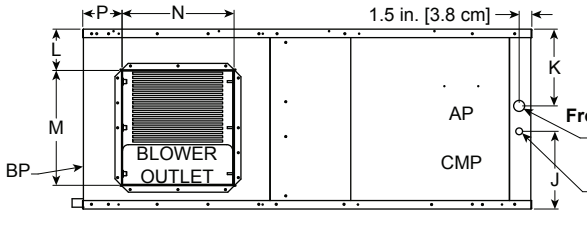
Right Return
End Discharge

Legend

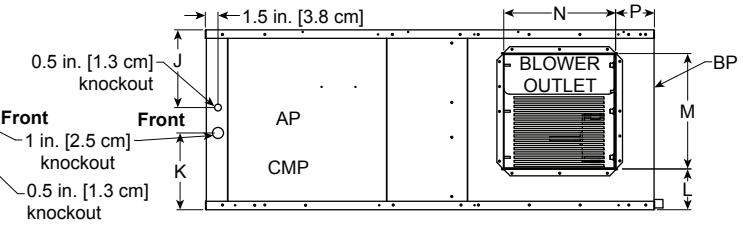
AP = Alternate Service Panel
BP = Blower Service Panel
CP = Control Access Panel
CMP = Compressor Service Panel



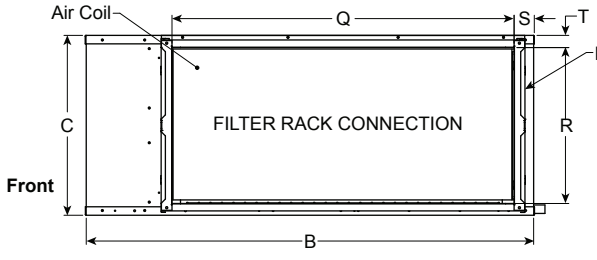
Left Return
End Discharge



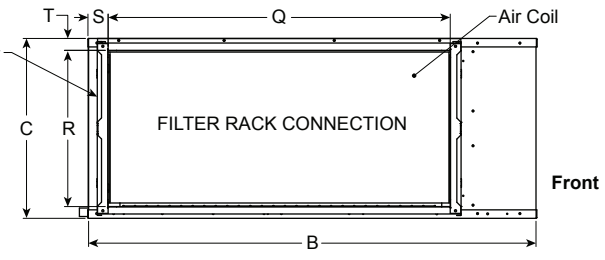
Right Return Side Discharge



Left Return Side Discharge



Right Return Side View



Left Return Side View

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

YORK®

Horizontal Dimensional Data cont.

Horizontal Models		Overall Cabinet			Water Connections				Electrical Knockouts	
					1	2	3		J	K
		A	B	C	D	E	H	Loop	1/2 in. cond	1 in. cond
		Width	Depth	Height*	In	Out	Cond-ensate	Water FPT	Low Voltage	Power Supply
009-012	in.	19.2	30.9	11.9	1.8	4.8	0.8	1/2	4.5	4.5
	cm.	48.8	78.5	30.2	4.6	12.2	2.0	12.7 mm	11.4	11.4
015-023	in.	22.5	42.0	17.2	1.8	6.8	0.8	3/4	7.1	7.1
	cm.	57.2	106.7	43.7	4.6	17.3	2.0	19.05 mm	18.0	18.0
024-030	in.	22.5	42.0	19.2	1.8	6.8	0.8	3/4	9.2	7.1
	cm.	57.2	106.7	48.8	4.6	17.3	2.0	19.05 mm	23.4	18.0
036	in.	22.5	45.0	19.2	1.8	6.8	0.8	3/4	9.2	7.1
	cm.	57.2	114.3	48.8	4.6	17.3	2.0	19.05 mm	23.4	18.0
042-048	in.	25.5	48.0	21.2	1.8	6.8	0.8	1	9.2	9.1
	cm.	64.8	121.9	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1
060	in.	25.5	53.0	21.2	1.8	6.8	0.8	1	9.2	9.1
	cm.	64.8	134.6	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1
070	in.	25.5	61.0	21.2	1.8	6.8	0.8	1	9.2	9.1
	cm.	64.8	154.9	53.8	4.6	17.3	2.0	25.4 mm	23.4	23.1

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.	2.3	8.0	10.0	2.3	15.4	9.4	3.0	1.4	1/2
	cm.	5.8	20.3	25.4	5.8	39.1	23.9	7.6	3.6	1.3
015-023	in.	5.7	10.5	9.4	4.9	23.4	14.5	2.0	1.4	3/4
	cm.	14.5	26.7	23.9	12.4	59.4	36.8	5.1	3.6	1.9
024-030	in.	6.7	10.5	9.4	4.9	27.4	16.4	2.0	1.5	3/4
	cm.	17.0	26.7	23.9	12.4	69.6	41.7	5.1	3.8	1.9
036	in.	6.7	10.5	9.4	4.9	30.4	16.4	2.1	1.5	3/4
	cm.	17.0	26.7	23.9	12.4	77.2	41.7	5.3	3.8	1.9
042-048	in.	4.9	13.6	13.2	4.6	35.4	18.6	2.4	1.5	3/4
	cm.	12.4	34.5	33.5	11.7	89.9	47.2	6.1	3.8	1.9
060	in.	4.9	13.6	13.2	4.6	40.4	18.4	2.4	1.5	3/4
	cm.	12.4	34.5	33.5	11.7	102.6	46.7	6.1	3.8	1.9
070	in.	4.9	13.6	13.2	4.6	45.6	18.6	2.3	1.5	3/4
	cm.	12.4	34.5	33.5	11.7	115.8	47.2	5.8	3.8	1.9

10/29/13

***Dimensions for return connections are for the deluxe filter rack that is suitable for ducted return applications and extends 3.25 in. [8.26 cm] from the unit. The open filter rack, used in non-ducted returns, extends 2.2 in. [5.59 cm] from the unit.**

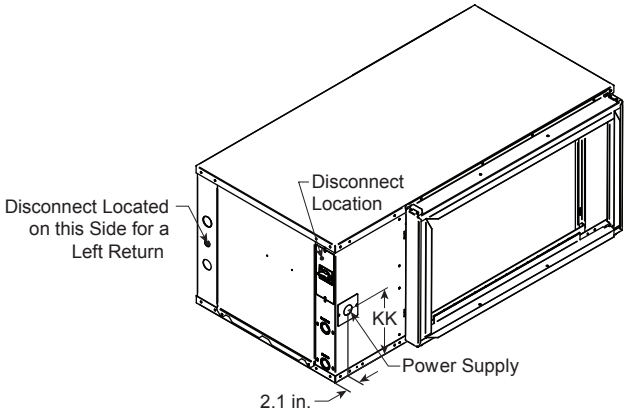
Condensate 3/4 in. PVC stub extends from cabinet approximately 1-1/2 in. [38.1 mm]

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	Externally Mounted
015-018	8.2 [20.8]
024-030	9.2 [23.4]
036	9.2 [23.4]
042-048	11.2 [28.4]
060	10.2 [25.9]
070	11.2 [28.4]

Dimensions in inches [cm] 02/06/13



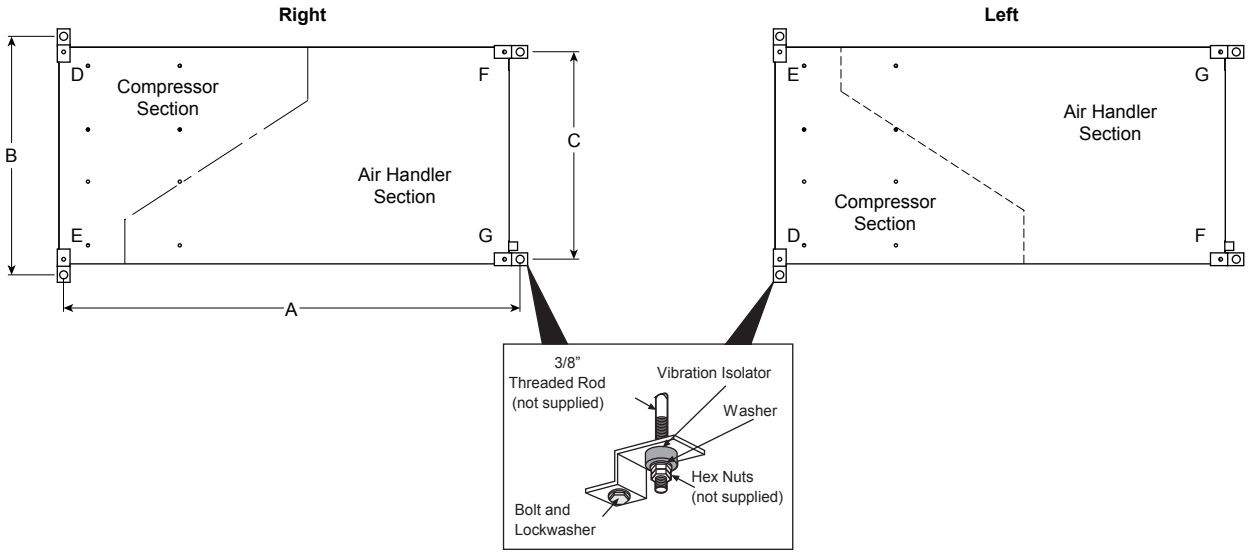
Horizontal Shown in Right Return Configuration

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Hanger Bracket Locations



Hanger Dimensions

Model		Hanger Kit Part Number	Unit Hanger Dimensions		
			A	B	C
009-012	in.	99S500A04	31.7	21.8	18.1
	cm		[80.5]	[55.4]	[46.0]
015-023	in.	99S500A04	42.8	25.1	21.4
	cm		[108.6]	[63.8]	[54.4]
024-030	in.	99S500A04	42.8	25.1	21.4
	cm		[108.7]	[63.8]	[54.4]
036	in.	99S500A04	45.8	25.1	21.4
	cm		[116.3]	[63.8]	[54.4]
042-048	in.	99S500A04	48.8	28.1	24.4
	cm		[124.0]	[71.4]	[62.0]
060	in.	99S500A04	53.8	28.1	24.4
	cm		[136.7]	[71.4]	[62.0]
070	in.	99S500A04	61.8	28.1	24.4
	cm		[157.0]	[71.4]	[62.0]

10/29/13

Weight Distribution

Model		Vertical Shipping Weight	Horizontal Shipping Weight	Horizontal Weight Distribution			
				Front		Back	
				D	E	F	G
009	lb.	110	120	46	23	26	25
	kg	[50]	[54]	[21]	[11]	[12]	[11]
012	lb.	115	125	48	24	27	26
	kg	[52]	[57]	[22]	[11]	[12]	[12]
015	lb.	165	175	67	34	37	36
	kg	[75]	[79]	[31]	[15]	[17]	[17]
018	lb.	170	180	69	35	38	38
	kg	[77]	[82]	[31]	[16]	[17]	[17]
023	lb.	na	185	71	36	39	39
	kg	na	[84]	[32]	[16]	[18]	[17]
024	lb.	230	245	94	47	52	51
	kg	[104]	[111]	[43]	[22]	[24]	[23]
030	lb.	240	255	98	49	54	53
	kg	[109]	[116]	[44]	[22]	[25]	[24]
036	lb.	265	285	110	55	61	59
	kg	[120]	[129]	[50]	[25]	[28]	[27]
041	lb.	275	na	na	na	na	na
	kg	[125]	na	na	na	na	na
042	lb.	285	300	115	58	64	63
	kg	[129]	[136]	[52]	[26]	[29]	[28]
048	lb.	290	310	119	60	66	65
	kg	[132]	[141]	[54]	[27]	[30]	[29]
060	lb.	335	360	138	70	77	75
	kg	[152]	[163]	[63]	[32]	[35]	[34]
070	lb.	380	405	156	78	86	84
	kg	[172]	[184]	[71]	[36]	[39]	[38]

11/10/09

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Ultra Series
Single Capacity
.75 - 6 Tons 60Hz

YORK®

Physical Data

Model		Single Speed												
		009	012	015	018	023	024	030	036	041	042	048	060	070
Compressor (1 each)		Rotary				Scroll								
Factory Charge R-410A, oz [kg] Vertical		26 [0.74]	32 [0.91]	38 [1.08]	40 [1.13]	n/a	46 [1.30]	54 [1.53]	56 [1.59]	54 [1.53]	68 [1.93]	76 [2.15]	88 [2.49]	92 [2.61]
Factory Charge R-410A, oz [kg] Horizontal		24 [0.68]	26 [0.74]	30 [0.85]	32 [0.91]	46 [1.30]	46 [1.30]	56 [1.59]	60 [1.70]	n/a	68 [1.93]	76 [2.15]	88 [2.49]	88 [2.49]
Blower Motor & Blower														
Blower Motor Type/Speeds	VS ECM	Not Available		Variable Speed										
	PSC	4 Speeds		3 Speeds										
	5-Spd ECM	Not Available		5 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]	1/2 [373]	1/2 [373]	1 [746]	1 [746]
	PSC	1/10 [75]	1/10 [75]	1/6 [134]	1/6 [134]	1/5 [149]	1/5 [149]	1/3 [249]	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]	1/2 [373]	1 [746]	1 [746]	1 [746]	1 [746]	1 [746]
Optional - Oversized Blower Motor - hp [W]	VS ECM	Not Available									1 [746]	1 [746]	Not Available	
	PSC	Not Available					1/3 [249]	1/2 [373]	Not Available		3/4 [560]	3/4 [560]	Not Available	
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]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	10 x 10 [254 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]	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]
	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]	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]
Coax and Water Piping														
Water Connection Size - FPT - in. [mm]		1/2 [12.7]	1/2 [12.7]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	1 [25.4]	1 [25.4]	1 [25.4]	1 [25.4]
HWG Connection Size - FPT - 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]	1/2 [12.7]	1/2 [12.7]
Coax & 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]	0.4 [1.49]	0.75 [2.83]	0.9 [3.41]	0.9 [3.41]	0.9 [3.41]	1.25 [4.72]	1.5 [5.68]	1.5 [5.68]
Vertical														
Air Coil Dimensions (H x W), in. [mm]		12 x 16 [305 x 406]	12 x 16 [305 x 406]	22 x 16 [559 x 406]	22 x 16 [559 x 406]	n/a	24 x 20 [610 x 508]	24 x 20 [610 x 508]	28 x 20 [711 x 508]	28 x 20 [711 x 508]	28 x 25 [711 x 635]	28 x 25 [711 x 635]	32 x 25 [813 x 635]	36 x 25 [914 x 635]
Air Coil Total Face Area, ft² [m²]		1.3 [0.121]	1.3 [0.121]	2.4 [0.220]	2.4 [0.220]	n/a	3.3 [0.310]	3.3 [0.310]	3.9 [0.362]	3.9 [0.362]	4.9 [0.452]	4.9 [0.452]	5.6 [0.516]	6.3 [0.581]
Air Coil Tube Size, in. [mm]		3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	n/a	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]	3/8 [9.5]
Air Coil Number of rows		3	3	3	3	n/a	3	3	3	3	3	3	3	3
Filter Standard - 1 in. [25mm] MERV4 Throwaway, in. [mm]		12 x 20 [305 x 508]	12 x 20 [305 x 508]	22 x 20 [559 x 508]	22 x 20 [559 x 508]	n/a	24 x 24 [610 x 610]	24 x 24 [610 x 610]	28 x 24 [711 x 610]	28 x 24 [711 x 610]	28 x 30 [711 x 762]	28 x 30 [711 x 762]	32 x 30 [813 x 762]	36 x 30 [914 x 762]
Filter Standard - 2 in. [51mm] Pleated MERV13 Throwaway, in. [mm]		12 x 20 [305 x 508]	12 x 20 [305 x 508]	22 x 20 [559 x 508]	22 x 20 [559 x 508]	n/a	24 x 24 [610 x 610]	24 x 24 [610 x 610]	28 x 24 [711 x 610]	28 x 24 [711 x 610]	28 x 30 [711 x 762]	28 x 30 [711 x 762]	32 x 30 [813 x 762]	36 x 30 [914 x 762]
Horizontal														
Air Coil Dimensions (H x W), in. [mm]		10 x 16 [254 x 406]	10 x 16 [254 x 406]	16 x 23 [406 x 584]	16 x 23 [406 x 584]	16 x 23 [406 x 584]	18 x 27 [457 x 686]	18 x 27 [457 x 686]	18 x 30 [457 x 762]	n/a	20 x 35 [508 x 889]	20 x 35 [508 x 889]	20 x 40 [508 x 1016]	20 x 45 [508 x 1143]
Air Coil Total Face Area, ft² [m²]		1.1 [0.103]	1.1 [0.103]	2.6 [0.238]	2.6 [0.238]	2.6 [0.238]	3.4 [0.316]	3.4 [0.316]	3.9 [0.362]	n/a	4.9 [0.452]	4.9 [0.452]	5.6 [0.516]	6.3 [0.581]
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]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	n/a	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	n/a	3	3	3	3
Filter Standard - 1 in. [25mm] MERV 4 Throwaway, in. [mm]		11 x 17 [279 x 432]	11 x 17 [279 x 432]	16 x 25 [406 x 635]	16 x 25 [406 x 635]	16 x 25 [406 x 635]	2 - 18 x 14 [457 x 356]	2 - 18 x 14 [457 x 356]	1 - 18 x 14 [457 x 356] 1 - 18 x 18 [457 x 457]	n/a	2 - 18 x 20 [457 x 508]	2 - 18 x 20 [457 x 508]	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]
Filter Standard - 2 in. [51mm] Pleated MERV 13 Throwaway, in. [mm]		11 x 17 [279 x 432]	11 x 17 [279 x 432]	16 x 25 [406 x 635]	16 x 25 [406 x 635]	16 x 25 [406 x 635]	18 x 29 [457 x 737]	18 x 29 [457 x 737]	18 x 32 [457 x 813]	n/a	20 x 37 [686 x 940]	20 x 37 [686 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]

10/23/13

Electrical Availability

PSC

Voltage	Static Option	Single Speed Models												
		009	012	015	018	023	024	030	036	041	042	048	060	070
208-230/60/1	Standard	•	•	•	•	•	•	•	•	•	•	•	•	•
208-230/60/1 w/IntelliStart					•	•	•	•	•	•	•	•	•	•
265-277/60/1		•	•	•	•	•	•	•	•					
208-230/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
460/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
575/60/3										•	•		•	•
208-230/60/1	High						•	•			•	•		
208-230/60/1 w/IntelliStart							•	•			•	•		
265-277/60/1							•	•						
208-230/60/3 (also w/IntelliStart)							•	•			•	•		
460/60/3 (also w/IntelliStart)							•	•			•	•		
575/60/3											•	•		

01/22/13

Variable Speed ECM

Voltage	Static Option	Single Speed Models												
		009	012	015	018	023	024	030	036	041	042	048	060	070
208-230/60/1	Standard			•	•	•	•	•	•	•	•	•	•	•
208-230/60/1 w/IntelliStart					•	•	•	•	•	•	•	•	•	•
265-277/60/1				•	•	•	•	•	•					
208-230/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
460/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
575/60/3														
208-230/60/1	High										•	•		
208-230/60/1 w/IntelliStart											•	•		
265-277/60/1														
208-230/60/3 (also w/IntelliStart)											•	•		
460/60/3 (also w/IntelliStart)											•	•		
575/60/3														

01/22/13

5-Speed ECM

Voltage	Static Option	Single Speed Models												
		009	012	015	018	023	024	030	036	041	042	048	060	070
208-230/60/1	Standard			•	•	•	•	•	•	•	•	•	•	•
208-230/60/1 w/IntelliStart					•	•	•	•	•	•	•	•	•	•
265-277/60/1						•	•	•	•					
208-230/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
460/60/3 (also w/IntelliStart)						•	•	•	•	•	•	•	•	•
575/60/3														

01/22/13

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
			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	9.2	5.9	29.0	n/a	1.1	7.0	8.5	10/15
	265/60/1	238/292	7.8	5.0	28.0	n/a	1.0	6.0	7.2	10/15
018	208-230/60/1	187/253	10.4	6.7	33.5	13.4	1.1	7.8	9.5	15
	265/60/1	238/292	8.7	5.6	28.0	n/a	1.0	6.6	8.0	10/15
023	208-230/60/1	187/253	21.0	13.5	58.3	23.3	1.2	14.7	18.1	30
	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	55.0	33.0	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	1.2	14.7	18.1	30
	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	55.0	33.0	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	55.0	33.0	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	22.0	14.1	73.0	29.2	1.5	15.6	19.1	30
	265/60/1	238/292	17.5	11.2	60.0	n/a	1.5	12.7	15.5	25
	208-230/60/3	187/253	13.9	8.9	58.0	34.8	1.5	10.4	12.6	20
	460/60/3	414/506	6.5	4.2	28.0	16.8	1.0	5.2	6.3	10/15
030*	208-230/60/1	187/253	22.0	14.1	73.0	29.2	2.2	16.3	19.8	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	2.2	11.1	13.3	20
	460/60/3	414/506	6.5	4.2	28.0	16.8	1.1	5.3	6.4	10/15
036	208-230/60/1	187/253	27.0	17.3	96.7	38.7	2.2	19.5	23.8	40
	265/60/1	238/292	19.0	12.2	72.0	n/a	1.1	13.3	16.3	20
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	2.2	15.0	18.2	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	1.1	7.5	9.1	15
041	208-230/60/1	187/253	31.0	20.0	115.0	46.0	3.5	23.5	28.5	45
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	3.5	16.3	19.5	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	1.8	8.2	9.8	15
	575/60/3	517/633	8.5	5.4	38.0	n/a	1.4	6.8	8.2	10/15
042	208-230/60/1	187/253	31.0	20.0	115.0	46.0	3.5	23.5	28.5	45
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	3.5	16.3	19.5	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	1.8	8.2	9.8	15
	575/60/3	517/633	8.5	5.4	38.0	n/a	1.4	6.8	8.2	10/15
042*	208-230/60/1	187/253	31.0	20.0	115.0	46.0	4.6	24.6	29.6	45
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	4.6	17.4	20.6	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	2.3	8.7	10.3	15
	575/60/3	517/633	8.5	5.4	38.0	n/a	1.9	7.3	8.7	10/15
048	208-230/60/1	187/253	32.0	21.0	115.0	46.0	3.5	24.5	29.8	50
	208-230/60/3	187/253	25.0	16.0	115.0	69.0	3.5	19.5	23.5	35
	460/60/3	414/506	12.0	7.7	50.0	30.0	1.8	9.5	11.4	15
048*	208-230/60/1	187/253	32.0	21.0	115.0	46.0	4.6	25.6	30.9	50
	208-230/60/3	187/253	25.0	16.0	115.0	69.0	4.6	20.6	24.6	40
	460/60/3	414/506	12.0	7.7	50.0	30.0	2.3	10.0	11.9	15
	575/60/3	517/633	10.0	6.4	40.0	n/a	1.9	8.3	9.9	15
060	208-230/60/1	187/253	41.0	26.3	150.0	60.0	5.9	32.3	38.8	60
	208-230/60/3	187/253	27.5	17.6	120.0	72.0	5.9	23.5	27.9	45
	460/60/3	414/506	13.0	8.3	70.0	42.0	3.0	11.3	13.4	20
	575/60/3	517/633	11.5	7.4	53.0	n/a	1.9	9.3	11.2	15
070	208-230/60/1	187/253	47.0	30.1	145.0	58.0	5.9	36.0	43.5	70
	208-230/60/3	187/253	28.0	17.3	120.0	72.0	5.9	23.2	27.5	40
	460/60/3	414/506	15.0	9.6	70.0	42.0	3.0	12.6	15.0	20
	575/60/3	517/633	12.5	8.0	53.0	n/a	1.9	9.9	11.9	15

05/21/13

HACR circuit breaker in USA only
* With optional high-static PSC motor
** With optional IntelliStart™
NOTE: High-static option not available on all model sizes.

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
			MCC	RLA	LRA	LRA**				
015	208-230/60/1	187/253	9.2	5.9	29.0	n/a	4.1	10.0	11.5	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	10.4	6.7	33.5	13.4	4.1	10.8	12.5	15
	265/60/1	238/292	8.7	5.6	28.0	n/a	3.6	9.2	10.6	15
023	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	55.0	33.0	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
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	55.0	33.0	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	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
036	208-230/60/1	187/253	27.0	17.3	96.7	38.7	4.1	21.4	25.7	40
	265/60/1	238/292	19.0	12.2	72.0	n/a	3.6	15.8	18.9	30
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	4.1	16.9	20.1	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	2.1	8.5	10.1	15
041	208-230/60/1	187/253	31.0	20.0	115.0	46.0	7.6	27.6	32.6	50
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	7.6	20.4	23.6	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	4.0	10.4	12.0	15
042	208-230/60/1	187/253	31.0	20.0	115.0	46.0	7.6	27.6	32.6	50
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	7.6	20.4	23.6	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	4.0	10.4	12.0	15
048	208-230/60/1	187/253	32.0	21.0	115.0	46.0	7.6	28.6	33.9	50
	208-230/60/3	187/253	25.0	16.0	115.0	69.0	7.6	23.6	27.6	40
	460/60/3	414/506	12.0	7.7	50.0	30.0	4.0	11.7	13.6	20
060	208-230/60/1	187/253	41.0	26.3	150.0	60.0	7.6	33.9	40.5	60
	208-230/60/3	187/253	27.5	17.6	120.0	72.0	7.6	25.2	29.6	45
	460/60/3	414/506	13.0	8.3	70.0	42.0	4.0	12.3	14.4	25
070	208-230/60/1	187/253	47.0	30.1	145.0	58.0	7.6	37.7	45.2	70
	208-230/60/3	187/253	28.0	17.3	120.0	72.0	7.6	24.9	29.2	45
	460/60/3	414/506	15.0	9.6	70.0	42.0	4.0	13.6	16.0	25

05/21/13

HACR circuit breaker in USA only
** With optional IntelliStart™

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
			MCC	RLA	LRA	LRA**				
015	208-230/60/1	187/253	9.2	5.9	29.0	n/a	4.0	9.9	11.4	15
	265/60/1	238/292	7.8	5.0	28.0	n/a	4.1	9.1	10.3	15
018	208-230/60/1	187/253	10.4	6.7	33.5	13.4	4.0	10.7	12.4	15
	265/60/1	238/292	8.7	5.6	28.0	n/a	4.1	9.7	11.1	15
023	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	55.0	33.0	4.0	11.1	12.9	15
	460/60/3	414/506	5.5	3.5	28.0	16.8	4.1	7.6	8.5	10/15
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	55.0	33.0	4.0	11.1	12.9	15
	460/60/3	414/506	5.5	3.5	28.0	16.8	4.1	7.6	8.5	10/15
030	208-230/60/1	187/253	22.0	14.1	73.0	29.2	4.0	18.1	21.6	35
	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
036	208-230/60/1	187/253	27.0	17.3	96.7	38.7	4.0	21.3	25.6	40
	265/60/1	238/292	19.0	12.2	72.0	n/a	4.1	16.3	19.3	30
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	4.0	16.8	20.0	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	4.1	10.5	12.1	15
041	208-230/60/1	187/253	31.0	20.0	115.0	46.0	4.0	24.0	29.0	45
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	4.0	16.8	20.0	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	4.1	10.5	12.1	15
042	208-230/60/1	187/253	31.0	20.0	115.0	46.0	4.0	24.0	29.0	45
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	4.0	16.8	20.0	30
	460/60/3	414/506	10.0	6.4	45.0	27.0	4.1	10.5	12.1	15
042*	208-230/60/1	187/253	31.0	20.0	115.0	46.0	7.0	27.0	32.0	50
	208-230/60/3	187/253	20.0	12.8	95.0	57.0	7.0	19.8	23.0	35
	460/60/3	414/506	10.0	6.4	45.0	27.0	6.9	13.3	14.9	20
048	208-230/60/1	187/253	32.0	21.0	115.0	46.0	4.0	25.0	30.3	50
	208-230/60/3	187/253	25.0	16.0	115.0	69.0	4.0	20.0	24.0	40
	460/60/3	414/506	12.0	7.7	50.0	30.0	4.1	11.8	13.7	20
048*	208-230/60/1	187/253	32.0	21.0	115.0	46.0	7.0	28.0	33.3	50
	208-230/60/3	187/253	25.0	16.0	115.0	69.0	7.0	23.0	27.0	40
	460/60/3	414/506	12.0	7.7	50.0	30.0	6.9	14.6	16.5	20
060	208-230/60/1	187/253	41.0	26.3	150.0	60.0	7.0	33.3	39.9	60
	208-230/60/3	187/253	27.5	17.6	120.0	72.0	7.0	24.6	29.0	45
	460/60/3	414/506	13.0	8.3	70.0	42.0	6.9	15.2	17.3	25
070	208-230/60/1	187/253	47.0	30.1	145.0	58.0	7.0	37.1	44.6	70
	208-230/60/3	187/253	28.0	17.3	120.0	72.0	7.0	24.9	29.4	45
	460/60/3	414/506	15.0	9.6	70.0	42.0	6.9	16.5	18.9	25

05/21/13

HACR circuit breaker in USA only
* With optional 1 HP 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.

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	530	515	500	485	470	450	430	405	385	355	330	-	-	-	-	-
	MH			475	460	450	435	420	405	385	365	345	320	300	-	-	-	-	-
	ML*			435	420	410	395	380	365	345	325	300	-	-	-	-	-	-	-
	L			370	355	340	325	310	290	275	-	-	-	-	-	-	-	-	-
012	**H**	6 x 8	1/10	530	515	500	485	470	450	430	405	385	355	330	-	-	-	-	-
	MH*			475	460	450	435	420	405	385	365	345	320	300	-	-	-	-	-
	ML			435	420	410	395	380	365	345	325	300	-	-	-	-	-	-	-
	L			370	355	340	325	310	290	275	-	-	-	-	-	-	-	-	-
015	H	9 x 7	1/6	875	860	845	830	820	805	790	770	750	725	700	-	-	-	-	-
	M			760	750	740	730	720	710	700	680	660	640	620	-	-	-	-	-
	L			630	620	610	600	590	580	570	560	550	520	490	-	-	-	-	-
018	H	9 x 7	1/6	875	860	845	830	820	805	790	770	750	725	700	-	-	-	-	-
	M			760	750	740	730	720	710	700	680	660	640	620	-	-	-	-	-
	L			630	620	610	600	590	580	570	560	550	520	490	-	-	-	-	-
023	H	9 x 7	1/5	1020	990	960	930	900	870	850	830	800	770	690	-	-	-	-	-
	M			960	840	820	800	780	760	740	720	690	670	-	-	-	-	-	-
	L			720	700	680	650	640	620	600	580	570	550	-	-	-	-	-	-
024	H	9 x 7	1/5	1065	1045	1030	1005	975	950	925	900	870	835	800	-	-	-	-	-
	M			880	865	850	830	815	795	775	750	725	700	670	-	-	-	-	-
	L			805	790	780	765	745	725	710	685	660	630	600	-	-	-	-	-
030	H	9 x 7	1/3	1240	1220	1200	1175	1150	1110	1080	1055	1030	975	920	840	730	-	-	-
	M			1095	1085	1080	1060	1045	1020	995	960	925	885	850	785	675	-	-	-
	L			860	860	855	850	850	845	845	825	805	775	750	680	-	-	-	-
036	**H**	9 x 7	1/2	1360	1340	1320	1290	1260	1220	1185	1130	1080	1045	1010	910	855	-	-	-
	M			1205	1190	1170	1145	1120	1085	1050	1015	980	940	900	845	-	-	-	-
	L			1070	1060	1050	1035	1020	995	970	940	910	875	840	780	-	-	-	-
041	H	10x10	1/2	1655	1635	1615	1590	1570	1535	1500	1425	1350	1270	1185	1080	970	-	-	-
	M			1470	1455	1445	1425	1410	1380	1350	1285	1240	1205	1170	905	-	-	-	-
	L			1150	1140	1130	1110	1090	1050	1010	970	930	900	865	800	-	-	-	-
042	H	10 x 10	1/2	1705	1685	1665	1645	1625	1595	1565	1530	1500	1450	1405	1260	1140	-	-	-
	M			1485	1475	1465	1445	1430	1410	1390	1350	1315	1260	1210	1110	1010	-	-	-
	L			1180	1165	1150	1135	1120	1090	1060	1030	1000	965	920	855	-	-	-	-
048	**H**	10 x 10	1/2	1930	1910	1885	1860	1830	1790	1750	1710	1665	1620	1580	1280	1235	-	-	-
	M			1580	1565	1550	1535	1525	1505	1485	1445	1410	1310	1215	1130	1030	-	-	-
	L			1180	1170	1160	1140	1120	1100	1080	1050	1020	970	930	875	-	-	-	-
060	H	11 x 10	1	2360	2330	2300	2270	2240	2215	2190	2160	2130	2095	2060	1985	1920	1855	-	-
	M			2165	2130	2095	2070	2050	2030	2010	1985	1965	1930	1900	1850	1775	1700	-	-
	L			1965	1940	1920	1900	1885	1870	1855	1825	1800	1780	1760	1720	1625	1530	-	-
070	**H**	11 x 10	1	2450	2435	2420	2395	2370	2340	2310	2280	2250	2225	2200	2040	2000	1950	-	-
	M			2215	2190	2170	2155	2140	2120	2095	2070	2045	2015	1990	1940	1876	1795	-	-
	L			2005	1990	1975	1960	1950	1940	1925	1910	1890	1865	1845	1780	1710	1565	-	-

7/6/10

Factory settings are in Bold
Airflow 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 0.12in. wg. and 500 fpm by 0.16 in. wg.

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	1240	1220	1200	1175	1150	1110	1080	1055	1030	975	920	840	730	-	-	-
	M			1095	1085	1080	1060	1045	1020	995	960	925	885	850	785	675	-	-	-
	L			860	860	855	850	850	845	845	825	805	775	750	680	-	-	-	-
030	H	9 x 7	1/2	1340	1320	1300	1270	1240	1200	1160	1115	1070	1025	985	880	-	-	-	-
	M			1185	1175	1165	1130	1095	1065	1035	1000	965	920	880	795	-	-	-	-
	L			1050	1040	1030	1015	1000	980	960	925	895	855	815	-	-	-	-	-
042	H	10 x 10	3/4	2095	2080	2060	2020	1980	1950	1920	1880	1840	1780	1725	1550	1335	1120	-	-
	M			1960	1940	1920	1890	1865	1830	1800	1760	1725	1670	1620	1435	1300	-	-	-
	L			1800	1780	1760	1740	1725	1695	1670	1625	1585	1525	1465	1300	1200	-	-	-
048	H	10 x 10	3/4	2095	2080	2060	2020	1980	1950	1920	1880	1840	1780	1725	1550	1335	1120	-	-
	M			1960	1940	1920	1890	1865	1830	1800	1760	1725	1670	1620	1435	1300	-	-	-
	L			1800	1780	1760	1740	1725	1695	1670	1625	1585	1525	1465	1300	1200	-	-	-

7/6/10

Factory settings are in Bold
Airflow 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 0.12in. wg. and 500 fpm by 0.16 in. wg.
* Setting for 265 V operation.

Blower Performance Data cont.

5-Speed ECM Motor

Model	Motor Speed	Motor Tap	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
	High	5			915	895	880	865	850	830	815	805	795	775	750	730	695	640	-	-
	Med High	**4**			805	785	765	750	740	725	705	685	665	655	635	605	535	-	-	-
015	Med	3	9 x 7	1/2	725	715	700	680	660	635	615	600	585	560	535	485	-	-	-	-
	Med Low	**2**			695	675	650	630	610	590	575	550	525	490	455	-	-	-	-	-
	Low	**1**			655	600	550	530	508	490	475	435	395	350	-	-	-	-	-	-
	High	5			915	895	880	865	850	830	815	805	795	775	750	730	695	640	-	-
	Med High	**4**			805	785	765	750	740	725	705	685	665	655	635	605	535	-	-	-
018	Med	3	9 x 7	1/2	725	715	700	680	660	635	615	600	585	560	535	485	-	-	-	-
	Med Low	**2**			695	675	650	630	610	590	575	550	525	490	455	-	-	-	-	-
	Low	**1**			655	600	550	530	508	490	475	435	395	350	-	-	-	-	-	-
	High	**5**			980	960	940	930	920	905	890	875	860	840	820	800	745	-	-	-
	Med High	**4**			890	878	865	845	825	813	800	785	770	753	735	710	665	-	-	-
023	Med	3	9 x 7	1/2	830	815	800	788	775	755	735	723	710	690	670	640	600	-	-	-
	Med Low	2			780	760	740	703	665	653	640	620	600	585	570	-	-	-	-	-
	Low	**1**			625	593	560	535	510	495	480	455	430	410	390	-	-	-	-	-
	High	**5**			980	960	940	930	920	905	890	875	860	840	820	800	745	-	-	-
	Med High	**4**			890	878	865	845	825	813	800	785	770	753	735	710	665	-	-	-
024	Med	3	9 x 7	1/2	830	815	800	788	775	755	735	723	710	690	670	640	600	-	-	-
	Med Low	2			780	760	740	703	665	653	640	620	600	585	570	-	-	-	-	-
	Low	**1**			625	593	560	535	510	495	480	455	430	410	390	-	-	-	-	-
	High	**5**			1340	1310	1280	1240	1200	1170	1140	1095	1050	1015	980	900	800	-	-	-
	Med High	**4**			1130	1115	1100	1085	1070	1057	1044	1022	1000	970	940	870	780	-	-	-
030	Med	3	9 x 7	1/2	1030	1005	980	965	950	935	920	900	880	870	860	830	750	-	-	-
	Med Low	2			960	945	930	915	900	885	870	855	840	825	810	790	740	-	-	-
	Low	**1**			790	765	740	725	710	690	670	660	650	630	610	580	500	-	-	-
	High	**5**			1370	1345	1320	1285	1250	1220	1190	1158	1125	1085	1045	960	-	-	-	-
	Med High	**4**			1265	1253	1240	1220	1200	1175	1150	1120	1090	1053	1015	-	-	-	-	-
036	Med	3	9 x 7	1/2	1160	1143	1125	1113	1100	1085	1070	1055	1040	1020	1000	-	-	-	-	-
	Med Low	2			1110	1095	1080	1065	1050	1038	1025	1008	990	980	970	-	-	-	-	-
	Low	**1**			825	803	780	770	760	740	720	705	690	670	650	-	-	-	-	-
	High	**5**			1840	1825	1810	1790	1770	1745	1720	1700	1680	1660	1640	1600	1570	1530	1480	-
	Med High	4			1730	1713	1695	1670	1645	1623	1600	1575	1550	1535	1520	1480	1440	1390	1350	-
041	**Med**	**3**	11 x 10	1	1630	1610	1590	1563	1535	1513	1490	1470	1450	1425	1400	1370	1330	1290	-	-
	Med Low	2			1550	1520	1490	1465	1440	1415	1390	1370	1350	1330	1310	1260	1220	1180	-	-
	Low	**1**			1380	1340	1300	1275	1250	1225	1200	1175	1150	1125	1100	1030	980	820	-	-
	High	**5**			1840	1825	1810	1790	1770	1745	1720	1700	1680	1660	1640	1600	1570	1530	1480	-
	Med High	4			1730	1713	1695	1670	1645	1623	1600	1575	1550	1535	1520	1480	1440	1390	1350	-
042	**Med**	**3**	11 x 10	1	1630	1610	1590	1563	1535	1513	1490	1470	1450	1425	1400	1370	1330	1290	-	-
	Med Low	2			1550	1520	1490	1465	1440	1415	1390	1370	1350	1330	1310	1260	1220	1180	-	-
	Low	**1**			1380	1340	1300	1275	1250	1225	1200	1175	1150	1125	1100	1030	980	820	-	-
	High	**5**			2060	2045	2030	2015	2000	1970	1940	1925	1910	1890	1870	1830	1800	1750	1740	-
	Med High	4			1880	1860	1840	1825	1810	1785	1760	1740	1720	1705	1690	1640	1610	1570	1535	-
048	**Med**	**3**	11 x 10	1	1790	1770	1750	1730	1710	1685	1660	1640	1620	1600	1580	1550	1510	1460	-	-
	Med Low	2			1670	1650	1630	1605	1580	1555	1530	1510	1490	1470	1450	1410	1370	1340	-	-
	Low	**1**			1430	1405	1380	1353	1325	1303	1280	1255	1230	1210	1190	1130	1070	925	-	-
	High	**5**			2400	2360	2330	2315	2300	2290	2285	2275	2265	2250	2230	2200	2165	2110	2080	2030
	Med High	4			2180	2160	2140	2130	2120	2105	2090	2075	2060	2045	2030	2000	1960	1930	1890	1850
060	**Med**	**3**	11 x 10	1	2080	2050	2020	2010	2000	1985	1970	1955	1940	1925	1910	1870	1840	1800	1760	1720
	Med Low	2			1930	1920	1910	1893	1875	1863	1850	1833	1815	1798	1780	1740	1700	1660	1620	1590
	Low	**1**			1750	1735	1720	1698	1675	1658	1640	1620	1600	1583	1565	1525	1490	1450	1410	1350
	High	**5**			2400	2360	2330	2315	2300	2290	2285	2275	2265	2250	2230	2200	2165	2110	2080	2030
	Med High	4			2180	2160	2140	2130	2120	2105	2090	2075	2060	2045	2030	2000	1960	1930	1890	1850
070	**Med**	**3**	11 x 10	1	2080	2050	2020	2010	2000	1985	1970	1955	1940	1925	1910	1870	1840	1800	1760	1720
	Med Low	2			1930	1920	1910	1893	1875	1863	1850	1833	1815	1798	1780	1740	1700	1660	1620	1590
	Low	**1**			1750	1735	1720	1698	1675	1658	1640	1620	1600	1583	1565	1525	1490	1450	1410	1350

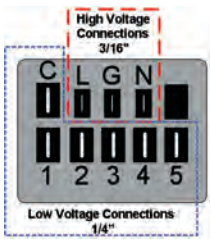
01/23/13

Factory settings are in Bold
Airflow values are with dry coil and standard 1 in. filter
ISO/AHRI rating point on the US*070 will require moving the red wire on the motor to high speed (tap 5) and disconnecting the tan wire from tap 5.

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.

5-Speed ECM Motor Connections



CAUTION: Disconnect all power before performing this operation.

Blower Performance Data cont.

Variable Speed ECM Motor

Model	Max esp	Airflow DIP Switch Settings											
		1	2	3	4	5	6	7	8	9	10	11	12
015	**0.50**	300 L	400	500 M	600 H	700							
018	**0.50**	300	400 L	500	600 M	700 H	800						
023	**0.50**		400	500 L	600 M	700	800 H	900	1000	1100	1200		
024	**0.50**		400	500 L	600 M	700	800 H	900	1000	1100	1200		
030	**0.50**		400	500 L	600	700 M	800	900 H	1000	1100	1200		
036	**0.50**				600	700 L	800	900 M	1000	1100 H	1150	1225	1300
041	**0.50**	650	750	850 L	950	1050 M	1150	1250	1325 H	1375	1475	1550	1600
042	**0.50**	650	750	850 L	950	1050 M	1150	1250	1325 H	1375	1475	1550	1600
042 w/1hp*	**0.75**	800 L	1000 M	1100	1300 H	1500	1600	1800					
048	**0.50**	650	750	850	950	1050 L	1150	1250 M	1325	1375	1475	1550 H	1600
048 w/1hp*	**0.75**	800	1000 L	1100	1300 M	1500 H	1600	1800					
060	**0.75**	750	900	1000	1200 L	1400 M	1600	1700	1850 H	2000	2200	2300	2400
070	**0.75**	800	950	1100 L	1300	1500	1750 M	1950	2100 H	2300			

11/10/09

Factory settings are at recommended L-M-H DIP switch locations.
Shaded regions are recommended for best performance. It is acceptable to operate outside of this area as long as the WSHP operates within the guidlines of the Operating Limits table and Correction Factor tables.
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 standard filter

Operating Limits

Operating Limits	Cooling		Heating	
	(°F)	(°C)	(°F)	(°C)
Air Limits				
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
Water Limits				
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 dependant 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.

Definitions

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, MBTUH
TC = total cooling capacity, MBTUH
SC = sensible cooling capacity, MBTUH
KW = total power unit input, kilowatts
HR = total heat of rejection, MBTUH
HE = total heat of extraction, MBTUH
HWC = hot water generator capacity, MBTUH
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, MBTUH
LC = latent cooling capacity, MBTUH
S/T = sensible to total cooling ratio

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
67	**1.000**			0.616	0.806	**1.000**	1.023	1.193	1.330	*	*	**1.000**	**1.000**
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

11/10/09

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

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
70	**1.000**	**1.000**	**1.000**
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
400	**100**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**	**1.000**
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

Antifreeze Corrections

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 a LX Ultra Series YGS*024-PSC.

The corrected cooling capacity at 90°F would be: 24,500 Btu/h x 0.969 = 23,740 Btu/h

The corrected heating capacity at 30°F would be: 19,000 Btu/h x 0.913 = 17,347 Btu/h

The corrected pressure drop at 30°F and 6 gpm would be: 10.5 ft. hd x 1.270 = 13.34 ft. hd.

Pressure Drop

Model	gpm	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
009	1.5	2.0	1.7	1.4	1.3	1.0
	2.0	3.8	3.2	2.8	2.3	1.8
	3.0	7.2	6.0	5.1	4.5	4.0
	4.0	12.0	10.0	9.0	7.5	6.0
012	1.5	1.1	1.0	0.9	0.8	0.7
	2.5	2.5	2.3	2.1	1.8	1.5
	3.5	3.9	3.6	3.2	2.7	2.3
	4.5	5.3	4.9	4.5	3.8	3.5
015	2.0	0.6	0.5	0.5	0.4	0.4
	3.0	1.1	1.0	0.9	0.8	0.6
	4.0	1.9	1.8	1.6	1.5	1.3
	5.0	3.3	3.2	3.0	2.9	2.7
018	3.0	1.1	1.0	0.9	0.8	0.6
	4.0	1.9	1.8	1.6	1.5	1.3
	5.0	3.3	3.2	3.0	2.9	2.7
	6.0	4.5	4.4	4.3	4.1	4.0
023	3.0	1.1	1.0	0.9	0.8	0.6
	4.5	2.4	2.2	2.1	2.0	1.9
	6.0	4.5	4.4	4.3	4.1	4.0
	8.0	6.7	6.6	6.5	6.3	6.2
024	3.0	1.1	1.0	0.9	0.8	0.6
	4.5	2.4	2.2	2.1	2.0	1.9
	6.0	4.5	4.4	4.3	4.1	4.0
	8.0	6.7	6.6	6.5	6.3	6.2
030	4.0	0.9	0.8	0.7	0.6	0.5
	6.0	1.9	1.8	1.7	1.6	1.5
	8.0	3.7	3.6	3.5	3.4	3.3
	10.0	4.8	4.7	4.6	4.5	4.4
036	5.0	1.4	1.1	0.9	0.7	0.5
	7.0	2.5	2.3	2.1	1.8	1.6
	9.0	6.0	5.8	5.5	5.3	5.1
	12.0	6.6	6.4	6.2	6.0	5.7
041	5.0	1.5	1.2	0.9	0.5	0.4
	8.0	3.4	3.1	2.8	2.5	2.1
	11.0	7.9	7.5	7.2	6.9	6.6
	14.0	9.1	8.8	8.5	8.2	7.9
042	5.0	1.5	1.2	0.9	0.5	0.4
	8.0	3.4	3.1	2.8	2.5	2.1
	11.0	7.9	7.5	7.2	6.9	6.6
	14.0	9.1	8.8	8.5	8.2	7.9
048	6.0	2.0	1.7	1.3	1.0	0.6
	9.0	4.2	3.8	3.5	3.1	2.7
	12.0	6.7	6.3	5.9	5.6	5.2
	16.0	11.5	11.2	10.8	10.5	10.1
060	9.0	3.6	3.3	3.0	2.7	2.3
	12.0	6.1	5.8	5.5	5.2	4.8
	15.0	9.6	9.2	8.9	8.6	8.3
	20.0	15.5	15.2	14.9	14.5	14.2
070	12.0	4.1	3.6	3.2	2.8	2.3
	15.0	5.9	5.0	4.6	4.1	3.7
	18.0	8.8	8.4	7.9	7.5	7.1
	24.0	12.9	12.0	11.5	11.1	10.7

7/6/10

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
1/2 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
1/2 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.	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
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
3/4 in.	5.0	10.4	0.23
	8.0	11.0	0.53
	11.0	11.7	0.89
	14.0	12.3	1.29
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

11/10/09

YG009 - Performance Data

Single Speed PSC (350 cfm)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F					COOLING - EAT 80/67°F					
		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	2.2	5.1	Operation not recommended					Operation not recommended					
	2.0	4.2	9.7											
	3.0	7.5	17.3	6.0	0.65	3.8	83.9	2.71						
30	1.5	2.0	4.6	Operation not recommended					Operation not recommended					
	2.0	3.8	8.8	6.1	0.64	3.9	84.1	2.79	11.2	7.5	0.67	0.52	13.0	21.7
	3.0	7.2	16.6	6.9	0.67	4.6	86.2	3.01	11.4	7.7	0.67	0.49	13.0	23.4
40	1.5	1.9	4.4	Operation not recommended					Operation not recommended					
	2.0	3.5	8.1	6.9	0.67	4.6	86.3	3.03	11.1	7.6	0.68	0.55	13.0	20.3
	3.0	6.5	15.0	7.5	0.69	5.2	87.9	3.21	11.2	7.7	0.68	0.52	13.0	21.6
50	1.5	1.7	3.9	7.6	0.69	5.2	88.1	3.23	11.1	7.6	0.69	0.59	13.1	18.6
	2.0	3.2	7.4	7.8	0.69	5.4	88.6	3.29	11.1	7.6	0.69	0.58	13.1	19.0
	3.0	6.0	13.8	8.2	0.70	5.8	89.6	3.41	11.1	7.6	0.69	0.56	13.0	19.9
60	1.5	1.6	3.6	8.7	0.72	6.2	90.9	3.52	10.4	7.3	0.70	0.66	12.6	15.9
	2.0	3.0	6.9	8.9	0.72	6.4	91.5	3.59	10.5	7.3	0.70	0.64	12.6	16.3
	3.0	5.6	12.8	9.3	0.73	6.8	92.7	3.74	10.5	7.4	0.70	0.61	12.6	17.2
70	1.5	1.4	3.2	9.7	0.75	7.1	93.7	3.79	9.8	7.0	0.71	0.72	12.2	13.6
	2.0	2.8	6.5	10.0	0.75	7.4	94.4	3.88	9.8	7.0	0.71	0.70	12.2	14.0
	3.0	5.1	11.9	10.5	0.76	7.9	95.8	4.05	10.0	7.2	0.72	0.67	12.3	14.9
80	1.5	1.4	3.1	11.2	0.77	8.5	97.5	4.27	9.0	6.8	0.75	0.80	11.7	11.3
	2.0	2.6	5.9	11.4	0.77	8.8	98.1	4.32	9.1	6.8	0.75	0.76	11.7	12.0
	3.0	4.8	11.0	11.8	0.78	9.1	99.1	4.42	9.3	7.0	0.75	0.74	11.8	12.6
90	1.5	1.3	3.0	12.6	0.78	9.9	101.4	4.74	8.3	6.6	0.79	0.87	11.3	9.5
	2.0	2.3	5.3	12.8	0.79	10.1	101.9	4.75	8.4	6.7	0.79	0.83	11.3	10.2
	3.0	4.5	10.4	13.0	0.80	10.3	102.4	4.76	8.6	6.8	0.79	0.80	11.3	10.7
100	1.5	1.3	2.9	Operation not recommended					Operation not recommended					
	2.0	2.1	4.7						7.9	6.5	0.83	0.91	11.0	8.6
	3.0	4.3	9.8						8.0	6.6	0.82	0.88	11.0	9.1
110	1.5	1.0	2.3						Operation not recommended					
	2.0	1.8	4.2						7.2	6.2	0.86	0.99	10.6	7.3
	3.0	4.0	9.2						7.4	6.3	0.86	0.96	10.6	7.7
120	1.5	0.9	2.1						Operation not recommended					
	2.0	1.7	3.9						6.2	5.6	0.89	1.07	9.9	5.8
	3.0	3.8	8.8						6.4	5.6	0.89	1.04	9.9	6.1

11/10/09

YG012 - Performance Data

Single Speed PSC (400 cfm)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F					COOLING - EAT 80/67°F					
		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	1.2	2.8	Operation not recommended					Operation not recommended					
	2.5	2.6	6.0											
	3.5	4.1	9.5	7.2	0.81	4.4	84.7	2.61						
30	1.5	1.1	2.5	Operation not recommended					Operation not recommended					
	2.5	2.5	5.8	8.6	0.81	5.9	88.0	3.13	15.7	10.0	0.64	0.47	17.3	33.5
	3.5	3.9	9.0	8.9	0.83	6.1	88.6	3.14	15.9	10.2	0.64	0.44	17.4	36.1
40	1.5	1.1	2.4	Operation not recommended					Operation not recommended					
	2.5	2.4	5.5	9.6	0.83	6.8	90.2	3.39	15.3	10.0	0.65	0.53	17.1	28.6
	3.5	3.8	8.7	10.0	0.85	7.1	91.0	3.45	15.5	10.1	0.65	0.50	17.1	31.2
50	1.5	1.0	2.3	10.3	0.85	7.4	91.8	3.55	14.7	10.0	0.68	0.65	16.9	22.6
	2.5	2.3	5.3	10.7	0.86	7.7	92.7	3.65	14.9	10.0	0.67	0.60	16.9	24.8
	3.5	3.6	8.3	11.0	0.86	8.1	93.5	3.75	15.0	9.9	0.66	0.55	16.9	27.3
60	1.5	1.0	2.2	11.5	0.87	8.5	94.5	3.86	14.2	9.7	0.68	0.73	16.7	19.5
	2.5	2.2	5.1	11.9	0.88	8.9	95.5	3.96	14.4	9.7	0.68	0.68	16.7	21.1
	3.5	3.4	7.9	12.4	0.89	9.3	96.6	4.07	14.5	9.8	0.67	0.63	16.6	23.0
70	1.5	0.9	2.1	12.6	0.89	9.6	97.2	4.15	13.7	9.4	0.69	0.81	16.5	16.9
	2.5	2.1	4.9	13.2	0.91	10.1	98.4	4.26	13.9	9.5	0.69	0.76	16.4	18.2
	3.5	3.2	7.4	13.7	0.92	10.6	99.7	4.36	14.0	9.6	0.69	0.71	16.4	19.7
80	1.5	0.9	2.0	14.2	0.91	11.0	100.8	4.54	13.0	9.2	0.70	0.89	16.1	14.6
	2.5	2.0	4.5	14.6	0.93	11.4	101.7	4.60	13.2	9.3	0.70	0.85	16.1	15.5
	3.5	2.9	6.7	15.0	0.94	11.7	102.6	4.66	13.4	9.4	0.70	0.83	16.2	16.2
90	1.5	0.8	1.8	15.7	0.94	12.5	104.4	4.92	12.4	8.9	0.72	1.02	15.8	12.1
	2.5	1.8	4.2	16.0	0.95	12.7	104.9	4.93	12.5	9.0	0.72	0.97	15.9	12.9
	3.5	2.7	6.2	16.2	0.96	12.9	105.5	4.95	12.8	9.2	0.71	0.94	16.0	13.6
100	1.5	0.8	1.7	Operation not recommended					Operation not recommended					
	2.5	1.7	3.8						12.2	9.0	0.73	1.11	16.0	11.0
	3.5	2.5	5.8						12.4	9.0	0.73	1.07	16.1	11.6
110	1.5	0.7	1.6						Operation not recommended					
	2.5	1.5	3.5						11.8	8.8	0.75	1.23	16.0	9.5
	3.5	2.3	5.3						12.0	8.9	0.74	1.20	16.1	10.0
120	1.5	0.7	1.5						Operation not recommended					
	2.5	1.4	3.1						11.3	8.6	0.76	1.34	15.8	8.4
	3.5	2.1	4.9						11.5	8.7	0.76	1.30	15.9	8.8

11/10/09

YG015 - Performance Data

Single Speed PSC (500 cfm)

EWT °F	Flow gpm	WPD		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	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.2	2.8													
	4.0	2.0	4.6	10.0	1.00	6.6	86.5	2.93	1.2							
30	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.1	2.6	11.0	1.04	7.4	88.3	3.09	1.3	14.5	9.8	0.68	0.71	16.9	20.3	---
	4.0	1.9	4.4	11.0	1.00	7.6	88.4	3.22	1.3	14.7	10.0	0.68	0.67	17.0	21.9	---
40	2.0	0.6	1.3	Operation not recommended						Operation not recommended						
	3.0	1.1	2.5	12.1	1.05	8.5	90.4	3.37	1.3	15.6	10.6	0.68	0.77	18.3	20.2	---
	4.0	1.8	4.3	12.4	1.04	8.8	90.9	3.50	1.3	15.9	10.8	0.68	0.74	18.4	21.4	---
50	2.0	0.5	1.2	13.0	1.06	9.4	92.1	3.59	1.4	16.5	11.3	0.68	0.85	19.4	19.4	0.8
	3.0	1.0	2.3	13.4	1.07	9.7	92.7	3.67	1.4	16.8	11.4	0.68	0.83	19.6	20.2	0.8
	4.0	1.8	4.1	13.7	1.07	10.1	93.4	3.75	1.5	17.0	11.5	0.68	0.81	19.8	21.0	0.8
60	2.0	0.5	1.2	14.4	1.07	10.7	94.6	3.93	1.6	15.7	10.9	0.69	0.92	18.8	17.2	0.9
	3.0	0.9	2.1	14.8	1.08	11.1	95.4	4.03	1.6	16.0	11.0	0.69	0.89	19.0	18.0	0.9
	4.0	1.7	3.9	15.3	1.09	11.5	96.2	4.12	1.7	16.2	11.1	0.68	0.86	19.1	18.9	0.8
70	2.0	0.5	1.1	15.7	1.08	12.0	97.1	4.26	1.8	14.9	10.5	0.70	0.98	18.2	15.2	1.1
	3.0	0.8	1.9	16.3	1.09	12.5	98.1	4.37	1.8	15.2	10.6	0.70	0.94	18.4	16.1	1.1
	4.0	1.6	3.7	16.8	1.10	13.1	99.1	4.48	1.8	15.4	10.6	0.69	0.90	18.5	17.1	1.0
80	2.0	0.5	1.1	17.6	1.10	13.8	100.5	4.69	2.0	14.2	10.2	0.72	1.03	17.7	13.7	1.4
	3.0	0.8	1.8	18.0	1.11	14.2	101.3	4.75	2.0	14.4	10.3	0.71	0.99	17.8	14.6	1.3
	4.0	1.5	3.6	18.4	1.12	14.6	102.1	4.81	2.1	14.7	10.4	0.71	0.96	17.9	15.3	1.3
90	2.0	0.4	1.0	19.4	1.11	15.6	103.9	5.12	2.3	13.4	9.9	0.74	1.09	17.1	12.3	1.8
	3.0	0.7	1.6	19.7	1.13	15.9	104.5	5.13	2.3	13.6	10.0	0.73	1.04	17.2	13.1	1.7
	4.0	1.5	3.4	20.0	1.14	16.1	105.0	5.14	2.3	13.9	10.1	0.73	1.01	17.3	13.8	1.6
100	2.0	0.4	0.9	Operation not recommended						Operation not recommended						
	3.0	0.6	1.4							12.8	9.7	0.76	1.16	16.7	11.0	2.1
	4.0	1.4	3.2							13.0	9.8	0.76	1.13	16.8	11.5	1.9
110	2.0	0.4	0.9							Operation not recommended						
	3.0	0.5	1.2							11.8	9.4	0.80	1.27	16.1	9.2	2.7
	4.0	1.3	3.0							12.0	9.5	0.79	1.24	16.2	9.7	2.5
120	2.0	0.4	0.9							Operation not recommended						
	3.0	0.5	1.1							10.8	9.1	0.84	1.41	15.6	7.6	3.3
	4.0	1.2	2.9							11.0	9.2	0.84	1.37	15.7	8.0	3.0

11/10/09

YG018 - Performance Data

Single Speed PSC (600 cfm)

EWT °F	Flow gpm	WPD		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	3.0	1.2	2.8	Operation not recommended						Operation not recommended						
	4.0	2.0	4.6													
	5.0	3.4	7.8	13.0	1.21	8.9	88.1	3.15	1.4							
30	3.0	1.1	2.6	Operation not recommended						Operation not recommended						
	4.0	1.9	4.4	14.5	1.29	10.1	90.3	3.29	1.5	18.2	11.8	0.65	0.86	21.1	21.0	---
	5.0	3.3	7.6	14.9	1.31	10.4	91.0	3.33	1.5	18.4	12.0	0.65	0.81	21.2	22.7	---
40	3.0	1.1	2.5	Operation not recommended						Operation not recommended						
	4.0	1.8	4.3	15.7	1.34	11.1	92.2	3.43	1.6	19.1	12.4	0.65	0.92	22.2	20.8	---
	5.0	3.2	7.5	16.5	1.37	11.8	93.4	3.52	1.6	19.4	12.6	0.65	0.89	22.4	21.9	---
50	3.0	1.0	2.3	16.0	1.36	11.4	92.7	3.45	1.7	19.7	12.8	0.65	0.98	23.0	20.1	0.9
	4.0	1.8	4.1	17.0	1.40	12.2	94.2	3.57	1.7	20.0	13.0	0.65	0.97	23.3	20.6	0.9
	5.0	3.2	7.3	18.0	1.43	13.1	95.8	3.69	1.8	20.3	13.1	0.65	0.96	23.6	21.1	0.9
60	3.0	0.9	2.1	17.5	1.43	12.6	95.0	3.60	1.9	18.7	12.4	0.66	1.07	22.3	17.6	1.1
	4.0	1.7	3.9	18.5	1.45	13.5	96.5	3.73	1.9	18.9	12.6	0.67	1.06	22.5	17.9	1.1
	5.0	3.1	7.1	19.5	1.48	14.5	98.1	3.86	2.0	19.2	12.8	0.67	1.05	22.7	18.3	1.0
70	3.0	0.8	1.9	19.0	1.49	13.9	97.3	3.74	2.1	17.7	12.0	0.68	1.15	21.6	15.4	1.3
	4.0	1.6	3.7	20.0	1.51	14.8	98.9	3.88	2.1	17.9	12.3	0.69	1.14	21.7	15.7	1.3
	5.0	3.0	6.9	21.0	1.53	15.8	100.4	4.02	2.2	18.0	12.5	0.69	1.13	21.9	15.9	1.2
80	3.0	0.8	1.8	21.9	1.56	16.5	101.7	4.10	2.4	16.6	11.4	0.69	1.36	21.2	12.2	1.7
	4.0	1.5	3.6	22.6	1.58	17.2	102.8	4.17	2.4	16.8	11.7	0.70	1.30	21.2	12.9	1.6
	5.0	2.9	6.8	23.3	1.61	17.8	103.9	4.25	2.5	17.0	12.0	0.70	1.26	21.3	13.5	1.5
90	3.0	0.7	1.6	24.7	1.64	19.1	106.2	4.43	2.8	15.4	10.8	0.70	1.49	20.5	10.3	2.2
	4.0	1.5	3.4	25.1	1.66	19.5	106.8	4.44	2.8	15.7	11.1	0.71	1.43	20.5	11.0	2.0
	5.0	2.9	6.6	25.5	1.68	19.8	107.4	4.45	2.8	16.0	11.4	0.71	1.38	20.7	11.6	1.9
100	3.0	0.6	1.4	Operation not recommended						Operation not recommended						
	4.0	1.4	3.2							14.9	11.0	0.74	1.52	20.1	9.8	2.5
	5.0	2.8	6.4							15.1	11.1	0.73	1.47	20.1	10.3	2.3
110	3.0	0.5	1.2							Operation not recommended						
	4.0	1.3	3.0							13.9	10.5	0.76	1.60	19.4	8.7	3.2
	5.0	2.7	6.2							14.2	10.7	0.75	1.56	19.5	9.1	3.0
120	3.0	0.5	1.1							Operation not recommended						
	4.0	1.2	2.9							13.2	10.1	0.76	1.76	19.2	7.5	4.0
	5.0	2.6	6.1							13.5	10.2	0.76	1.71	19.3	7.9	3.6

11/10/09

YG023 - Performance Data

Single Speed PSC (700 cfm)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F					COOLING - EAT 80/67°F					
		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	3.0	1.2	2.8	Operation not recommended					Operation not recommended					
	4.5	2.4	5.6											
	6.0	4.6	10.6	15.0	1.68	9.2	85.3	2.61						
30	3.0	1.1	2.6	Operation not recommended					Operation not recommended					
	4.5	2.4	5.5	17.9	1.74	11.9	88.7	3.01	26.3	16.7	0.63	1.11	30.1	23.8
	6.0	4.5	10.5	18.2	1.76	12.2	89.1	3.04	26.7	17.0	0.64	1.04	30.2	25.7
40	3.0	1.1	2.5	Operation not recommended					Operation not recommended					
	4.5	2.3	5.3	19.6	1.78	13.6	90.7	3.24	26.5	17.0	0.64	1.20	30.6	22.0
	6.0	4.5	10.3	20.3	1.80	14.1	91.4	3.30	26.8	17.3	0.64	1.14	30.7	23.6
50	3.0	1.0	2.3	20.8	1.79	14.7	92.1	3.41	26.4	17.3	0.66	1.37	31.1	19.3
	4.5	2.2	5.2	21.6	1.82	15.4	92.9	3.48	26.6	17.4	0.65	1.30	31.1	20.5
	6.0	4.4	10.2	22.3	1.84	16.0	93.8	3.55	26.9	17.5	0.65	1.23	31.1	21.9
60	3.0	1.0	2.2	23.0	1.83	16.7	94.6	3.68	25.7	17.0	0.66	1.52	30.9	16.9
	4.5	2.2	5.0	23.8	1.85	17.5	95.5	3.76	25.9	17.1	0.66	1.44	30.9	18.0
	6.0	4.3	10.0	24.6	1.88	18.2	96.4	3.84	26.2	17.2	0.66	1.36	30.8	19.3
70	3.0	0.9	2.0	25.2	1.87	18.8	97.1	3.94	25.0	16.7	0.67	1.67	30.7	15.0
	4.5	2.1	4.9	26.0	1.89	19.6	98.1	4.03	25.3	16.8	0.67	1.58	30.6	16.0
	6.0	4.3	9.9	26.9	1.91	20.4	99.1	4.12	25.5	16.9	0.66	1.49	30.6	17.1
80	3.0	0.8	1.9	27.9	1.88	21.5	100.2	4.35	23.8	16.1	0.68	1.81	30.0	13.1
	4.5	2.1	4.7	28.5	1.90	22.0	101.0	4.40	24.1	16.3	0.68	1.73	30.0	13.9
	6.0	4.2	9.7	29.2	1.92	22.6	101.8	4.46	24.5	16.5	0.67	1.68	30.2	14.6
90	3.0	0.8	1.7	30.6	1.88	24.1	103.4	4.76	22.7	15.6	0.69	2.01	29.6	11.3
	4.5	2.0	4.6	31.0	1.91	24.5	103.9	4.77	23.0	15.8	0.69	1.92	29.6	12.0
	6.0	4.1	9.6	31.5	1.93	24.9	104.5	4.78	23.5	16.0	0.68	1.86	29.8	12.6
100	3.0	0.7	1.6	Operation not recommended					Operation not recommended					
	4.5	1.9	4.4						21.7	15.1	0.69	2.20	29.2	9.9
	6.0	4.1	9.4						22.1	15.2	0.69	2.13	29.3	10.4
110	3.0	0.6	1.4						Operation not recommended					
	4.5	1.9	4.3						20.2	14.2	0.70	2.46	28.6	8.2
	6.0	4.0	9.3						20.6	14.4	0.70	2.39	28.8	8.6
120	3.0	0.6	1.3						Operation not recommended					
	4.5	1.8	4.1						18.4	14.2	0.77	2.85	28.2	6.5
	6.0	3.9	9.1						18.8	14.4	0.77	2.77	28.3	6.8

11/10/09

YG024 - Performance Data

Single Speed PSC (800 cfm)

EWT °F	Flow gpm	WPD		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	3.0	1.2	2.8	Operation not recommended						Operation not recommended						
	4.5	2.4	5.6													
	6.0	4.6	10.6	15.6	1.68	9.8	86.0	2.72	1.6							
30	3.0	1.1	2.6	Operation not recommended						Operation not recommended						
	4.5	2.4	5.5	18.7	1.74	12.7	89.6	3.14	1.7	27.5	17.4	0.63	1.11	31.2	24.8	---
	6.0	4.5	10.5	19.0	1.76	13.0	90.0	3.16	1.7	27.8	17.7	0.64	1.04	31.4	26.8	---
40	3.0	1.1	2.5	Operation not recommended						Operation not recommended						
	4.5	2.3	5.3	20.5	1.78	14.4	91.7	3.38	1.9	27.6	17.7	0.64	1.20	31.7	22.9	---
	6.0	4.5	10.3	21.1	1.80	15.0	92.4	3.44	1.9	27.9	18.0	0.64	1.14	31.8	24.6	---
50	3.0	1.0	2.3	21.7	1.79	15.6	93.2	3.56	2.1	27.5	18.0	0.65	1.37	32.2	20.1	1.3
	4.5	2.2	5.2	22.5	1.82	16.3	94.0	3.63	2.1	27.8	18.1	0.65	1.30	32.2	21.4	1.2
	6.0	4.4	10.2	23.2	1.84	16.9	94.9	3.70	2.2	28.0	18.2	0.65	1.23	32.2	22.7	1.2
60	3.0	1.0	2.2	24.0	1.83	17.7	95.7	3.84	2.3	26.8	17.7	0.66	1.52	32.0	17.6	1.5
	4.5	2.2	5.0	24.8	1.85	18.5	96.7	3.92	2.4	27.0	17.8	0.66	1.44	32.0	18.8	1.4
	6.0	4.3	10.0	25.6	1.88	19.2	97.6	4.00	2.4	27.3	17.9	0.66	1.36	31.9	20.1	1.4
70	3.0	0.9	2.0	26.2	1.87	19.8	98.3	4.10	2.6	26.1	17.4	0.67	1.67	31.8	15.6	1.8
	4.5	2.1	4.9	27.1	1.89	20.6	99.4	4.20	2.6	26.3	17.5	0.66	1.58	31.7	16.7	1.8
	6.0	4.3	9.9	28.0	1.91	21.5	100.4	4.30	2.7	26.6	17.6	0.66	1.49	31.6	17.8	1.7
80	3.0	0.8	1.9	29.0	1.88	22.6	101.5	4.53	2.9	24.9	16.8	0.68	1.81	31.1	13.7	2.3
	4.5	2.1	4.7	29.7	1.90	23.2	102.4	4.58	2.9	25.2	17.0	0.68	1.73	31.1	14.5	2.2
	6.0	4.2	9.7	30.4	1.92	23.8	103.2	4.64	3.0	25.5	17.1	0.67	1.68	31.2	15.2	2.1
90	3.0	0.8	1.7	31.8	1.88	25.4	104.8	4.95	3.3	23.6	16.2	0.69	2.01	30.5	11.7	2.8
	4.5	2.0	4.6	32.3	1.91	25.8	105.4	4.96	3.4	24.0	16.5	0.69	1.92	30.6	12.5	2.7
	6.0	4.1	9.6	32.8	1.93	26.2	105.9	4.98	3.5	24.5	16.7	0.68	1.86	30.8	13.2	2.5
100	3.0	0.7	1.6	Operation not recommended						Operation not recommended						
	4.5	1.9	4.4							22.7	16.0	0.71	2.20	30.2	10.3	3.4
	6.0	4.1	9.4							23.0	16.2	0.70	2.13	30.3	10.8	3.2
110	3.0	0.6	1.4							Operation not recommended						
	4.5	1.9	4.3							21.1	15.4	0.73	2.46	29.5	8.6	4.1
	6.0	4.0	9.3							21.5	15.6	0.73	2.39	29.7	9.0	3.9
120	3.0	0.6	1.3							Operation not recommended						
	4.5	1.8	4.1							19.1	14.8	0.77	2.85	28.9	6.7	4.9
	6.0	3.9	9.1							19.6	15.0	0.77	2.77	29.0	7.1	4.6

11/10/09

YG030 - Performance Data

Single Speed PSC (1000 cfm)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F						COOLING - EAT 80/67°F						
		PSI	FT	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	4.0	1.0	2.2	Operation not recommended						Operation not recommended						
	6.0	1.9	4.5													
	8.0	3.8	8.7	20.0	1.90	13.5	86.5	3.09	1.9							
30	4.0	0.9	2.1	Operation not recommended						Operation not recommended						
	6.0	1.9	4.4	21.2	1.96	14.5	87.6	3.16	2.1	30.4	19.3	0.64	1.38	35.1	21.9	---
	8.0	3.7	8.5	22.0	1.98	15.2	88.4	3.26	2.1	30.8	19.7	0.64	1.30	35.2	23.7	---
40	4.0	0.9	2.0	Operation not recommended						Operation not recommended						
	6.0	1.8	4.3	23.9	2.00	17.1	90.1	3.50	2.3	31.3	20.2	0.64	1.41	36.1	22.1	---
	8.0	3.7	8.4	25.0	2.02	18.1	91.1	3.62	2.4	32.4	20.9	0.65	1.40	37.2	23.1	---
50	4.0	0.8	1.9	25.8	2.01	18.9	91.9	3.76	2.5	30.5	19.9	0.65	1.39	35.2	21.9	1.4
	6.0	1.8	4.1	26.9	2.04	19.9	92.9	3.87	2.6	32.3	21.0	0.65	1.45	37.2	22.3	1.3
	8.0	3.6	8.3	27.9	2.06	20.9	93.8	3.97	2.7	34.0	22.1	0.65	1.50	39.1	22.7	1.3
60	4.0	0.8	1.8	29.4	2.05	22.4	95.2	4.20	2.9	30.1	19.7	0.66	1.54	35.3	19.5	1.6
	6.0	1.7	4.0	30.5	2.07	23.4	96.2	4.31	2.9	31.9	20.9	0.66	1.60	37.4	20.0	1.5
	8.0	3.6	8.2	31.6	2.10	24.5	97.3	4.42	3.0	33.8	22.1	0.66	1.65	39.4	20.5	1.4
70	4.0	0.7	1.6	33.0	2.09	25.9	98.6	4.63	3.2	29.6	19.5	0.66	1.69	35.4	17.5	2.0
	6.0	1.7	3.9	34.2	2.11	27.0	99.6	4.74	3.3	31.6	20.8	0.66	1.75	37.6	18.1	1.9
	8.0	3.5	8.1	35.3	2.13	28.0	100.7	4.86	3.4	33.6	22.2	0.66	1.80	39.7	18.7	1.8
80	4.0	0.7	1.5	36.9	2.19	29.4	102.1	4.93	3.6	29.3	19.3	0.66	2.16	36.6	13.6	2.5
	6.0	1.6	3.8	37.8	2.22	30.2	103.0	4.99	3.7	30.7	20.4	0.66	2.06	37.8	15.0	2.4
	8.0	3.5	8.0	38.7	2.24	31.0	103.8	5.06	3.8	32.1	21.5	0.67	1.99	38.8	16.1	2.3
90	4.0	0.6	1.4	40.7	2.29	32.9	105.7	5.21	4.1	29.0	19.0	0.66	2.36	37.0	12.3	3.3
	6.0	1.6	3.7	41.4	2.32	33.4	106.3	5.22	4.2	29.9	20.0	0.67	2.25	37.6	13.3	3.1
	8.0	3.4	7.9	42.0	2.35	34.0	106.9	5.24	4.3	30.5	20.7	0.68	2.18	37.9	14.0	3.0
100	4.0	0.6	1.3	Operation not recommended						Operation not recommended						
	6.0	1.6	3.6							27.5	19.7	0.72	2.58	36.3	10.7	3.9
	8.0	3.4	7.8							28.0	19.9	0.71	2.50	36.5	11.2	3.7
110	4.0	0.5	1.2							Operation not recommended						
	6.0	1.5	3.5							24.9	18.7	0.75	2.89	34.7	8.6	4.9
	8.0	3.3	7.6							25.4	19.0	0.75	2.81	35.0	9.0	4.5
120	4.0	0.5	1.1							Operation not recommended						
	6.0	1.5	3.3							21.1	17.2	0.82	3.09	31.7	6.8	5.7
	8.0	3.3	7.5							21.6	17.5	0.81	3.00	31.8	7.2	5.4

11/10/09

YG036 - Performance Data

Single Speed PSC (1250 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	7.0	2.6	6.0													
	9.0	6.1	14.1	23.4	2.43	15.1	86.9	2.83	2.3							
30	5.0	1.4	3.1	Operation not recommended						Operation not recommended						
	7.0	2.5	5.8	27.4	2.46	19.0	90.1	3.27	2.5	35.9	25.1	0.70	1.64	41.5	21.9	---
	9.0	6.0	13.8	28.2	2.51	19.6	90.7	3.29	2.6	36.4	25.6	0.70	1.54	41.7	23.6	---
40	5.0	1.3	2.9	Operation not recommended						Operation not recommended						
	7.0	2.4	5.5	30.8	2.52	22.2	92.8	3.58	2.9	38.7	27.2	0.70	1.74	44.6	22.2	---
	9.0	5.9	13.6	31.9	2.57	23.2	93.7	3.65	2.9	39.2	27.5	0.70	1.66	44.9	23.6	---
50	5.0	1.1	2.6	33.3	2.53	24.6	94.8	3.85	3.1	40.9	29.1	0.71	1.90	47.4	21.5	1.6
	7.0	2.3	5.2	34.5	2.58	25.7	95.8	3.92	3.2	41.5	29.2	0.70	1.84	47.7	22.5	1.5
	9.0	5.8	13.3	35.7	2.62	26.8	96.7	3.99	3.3	42.0	29.4	0.70	1.78	48.1	23.6	1.5
60	5.0	1.0	2.4	37.7	2.60	28.8	98.3	4.25	3.5	39.2	28.5	0.73	2.09	46.4	18.8	2.0
	7.0	2.2	5.0	39.0	2.64	30.0	99.4	4.33	3.6	39.9	28.7	0.72	2.02	46.8	19.7	1.9
	9.0	5.7	13.1	40.2	2.67	31.1	100.4	4.42	3.6	40.5	28.9	0.71	1.96	47.2	20.7	1.8
70	5.0	0.9	2.1	42.1	2.67	33.0	101.9	4.62	3.9	37.6	27.9	0.74	2.28	45.3	16.5	2.5
	7.0	2.1	4.7	43.5	2.70	34.3	103.0	4.73	4.0	38.3	28.2	0.74	2.21	45.8	17.4	2.4
	9.0	5.5	12.8	44.8	2.72	35.5	104.1	4.83	4.1	39.0	28.5	0.73	2.13	46.3	18.3	2.3
80	5.0	0.8	1.8	46.7	2.73	37.4	105.6	5.01	4.4	36.1	27.1	0.75	2.55	44.8	14.1	3.2
	7.0	1.9	4.5	47.7	2.76	38.3	106.4	5.07	4.5	36.7	27.6	0.75	2.43	45.0	15.1	3.0
	9.0	5.4	12.5	48.8	2.79	39.3	107.3	5.13	4.6	37.4	28.0	0.75	2.36	45.4	15.9	2.9
90	5.0	0.7	1.6	51.2	2.79	41.7	109.3	5.39	4.9	34.5	26.3	0.76	2.79	44.1	12.4	3.9
	7.0	1.8	4.2	52.0	2.83	42.4	109.9	5.40	5.1	35.1	27.0	0.77	2.67	44.2	13.2	3.7
	9.0	5.3	12.3	52.8	2.86	43.1	110.5	5.41	5.2	35.8	27.5	0.77	2.58	44.6	13.9	3.6
100	5.0	0.6	1.3	Operation not recommended						Operation not recommended						
	7.0	1.7	4.0							33.3	26.4	0.79	2.98	43.5	11.2	4.6
	9.0	5.2	12.0							33.8	26.6	0.79	2.89	43.6	11.7	4.4
110	5.0	0.5	1.1							Operation not recommended						
	7.0	1.6	3.7							31.2	25.3	0.81	3.28	42.4	9.5	5.7
	9.0	5.1	11.8							31.8	25.7	0.81	3.19	42.7	10.0	5.4
120	5.0	0.4	0.8							Operation not recommended						
	7.0	1.5	3.5							26.5	22.7	0.85	3.61	38.8	7.4	6.8
	9.0	5.0	11.5							27.1	23.0	0.85	3.50	39.0	7.7	6.4

11/10/09

YG041 - Performance Data

Single Speed PSC (1300 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.6	3.8	Operation not recommended						Operation not recommended						
	8.0	3.6	8.2													
	11.0	8.0	18.5	25.7	2.81	16.1	85.0	2.68	3.5							
30	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	8.0	3.4	7.8	28.5	2.82	18.9	86.9	2.97	3.7	41.9	30.4	0.73	1.93	48.4	21.7	---
	11.0	7.9	18.1	29.5	2.86	19.7	87.5	3.02	3.8	42.4	31.0	0.73	1.81	48.6	23.4	---
40	5.0	1.3	3.0	Operation not recommended						Operation not recommended						
	8.0	3.2	7.5	31.7	2.88	21.9	89.0	3.23	4.0	43.8	31.4	0.72	2.06	50.9	21.2	---
	11.0	7.7	17.8	33.0	2.91	23.1	89.8	3.33	4.1	44.4	31.9	0.72	1.95	51.1	22.8	---
50	5.0	1.2	2.7	33.7	2.92	23.7	90.3	3.38	4.4	45.2	32.0	0.71	2.31	53.1	19.6	2.4
	8.0	3.1	7.1	35.2	2.94	25.1	91.2	3.50	4.5	45.8	32.4	0.71	2.20	53.3	20.8	2.4
	11.0	7.5	17.4	36.6	2.96	26.5	92.2	3.62	4.7	46.5	32.7	0.70	2.09	53.6	22.2	2.3
60	5.0	1.0	2.3	37.8	2.99	27.7	93.0	3.72	5.0	44.2	31.5	0.71	2.57	52.9	17.2	3.0
	8.0	2.9	6.7	39.3	3.01	29.0	94.0	3.83	5.1	45.1	31.8	0.70	2.43	53.4	18.6	2.8
	11.0	7.4	17.0	40.7	3.03	30.4	94.9	3.95	5.3	46.1	32.1	0.70	2.30	53.9	20.1	2.7
70	5.0	0.9	2.0	42.0	3.05	31.6	95.8	4.03	5.6	43.1	30.9	0.72	2.82	52.7	15.3	3.8
	8.0	2.8	6.4	43.4	3.07	32.9	96.7	4.14	5.7	44.4	31.2	0.70	2.66	53.5	16.7	3.6
	11.0	7.2	16.7	44.8	3.09	34.3	97.7	4.25	5.9	45.7	31.5	0.69	2.50	54.2	18.3	3.4
80	5.0	0.7	1.6	46.9	3.11	36.3	99.0	4.42	6.3	41.7	30.4	0.73	3.02	52.0	13.8	4.8
	8.0	2.6	6.0	48.0	3.15	37.3	99.8	4.48	6.5	42.6	30.6	0.72	2.88	52.5	14.8	4.5
	11.0	7.1	16.3	49.2	3.18	38.3	100.5	4.54	6.7	43.7	30.8	0.71	2.79	53.2	15.7	4.3
90	5.0	0.5	1.2	51.9	3.18	41.0	102.3	4.78	7.1	40.2	29.8	0.74	3.34	51.6	12.1	6.0
	8.0	2.5	5.7	52.7	3.22	41.7	102.8	4.79	7.3	40.9	30.0	0.73	3.18	51.7	12.8	5.7
	11.0	6.9	16.0	53.5	3.26	42.4	103.4	4.81	7.5	41.7	30.1	0.72	3.08	52.2	13.5	5.5
100	5.0	0.4	0.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3							38.2	29.0	0.76	3.55	50.3	10.8	7.1
	11.0	6.8	15.6							38.8	29.2	0.75	3.44	50.5	11.3	6.8
110	5.0	0.4	0.9							Operation not recommended						
	8.0	2.1	4.9							35.2	27.9	0.79	3.91	48.5	9.0	8.6
	11.0	6.6	15.2							35.9	28.3	0.79	3.80	48.9	9.4	8.3
120	5.0	0.4	0.9							Operation not recommended						
	8.0	2.0	4.6							31.8	27.1	0.85	4.55	47.4	7.0	10.4
	11.0	6.5	14.9							32.5	27.5	0.84	4.42	47.6	7.4	10.0

11/10/09

YG042 - Performance Data

Single Speed PSC (1400 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.6	3.8	Operation not recommended						Operation not recommended						
	8.0	3.6	8.2													
	11.0	8.0	18.5	27.0	2.81	17.4	85.9	2.82	3.5							
30	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	8.0	3.4	7.8	30.0	2.82	20.4	87.8	3.12	3.7	43.6	31.7	0.73	1.93	50.2	22.6	---
	11.0	7.9	18.1	31.0	2.86	21.2	88.5	3.18	3.8	44.2	32.3	0.73	1.81	50.4	24.4	---
40	5.0	1.3	3.0	Operation not recommended						Operation not recommended						
	8.0	3.2	7.5	33.4	2.88	23.5	90.1	3.40	4.0	45.7	32.7	0.72	2.06	52.7	22.1	---
	11.0	7.7	17.8	34.8	2.91	24.8	91.0	3.50	4.1	46.3	33.2	0.72	1.95	53.0	23.7	---
50	5.0	1.2	2.7	35.5	2.92	25.5	91.5	3.56	4.4	47.1	33.4	0.71	2.31	55.0	20.4	2.4
	8.0	3.1	7.1	37.0	2.94	27.0	92.5	3.69	4.5	47.8	33.8	0.71	2.20	55.3	21.7	2.4
	11.0	7.5	17.4	38.5	2.96	28.4	93.5	3.81	4.7	48.4	34.1	0.70	2.09	55.5	23.2	2.3
60	5.0	1.0	2.3	39.9	2.99	29.7	94.4	3.91	5.0	46.0	32.8	0.71	2.57	54.8	17.9	3.0
	8.0	2.9	6.7	41.4	3.01	31.1	95.3	4.03	5.1	47.0	33.1	0.70	2.43	55.3	19.3	2.8
	11.0	7.4	17.0	42.9	3.03	32.5	96.3	4.15	5.3	48.0	33.5	0.70	2.30	55.8	20.9	2.7
70	5.0	0.9	2.0	44.2	3.05	33.8	97.2	4.25	5.6	44.9	32.2	0.72	2.82	54.5	15.9	3.8
	8.0	2.8	6.4	45.7	3.07	35.2	98.2	4.36	5.7	46.3	32.5	0.70	2.66	55.3	17.4	3.6
	11.0	7.2	16.7	47.2	3.09	36.7	99.2	4.48	5.9	47.6	32.8	0.69	2.50	56.1	19.0	3.4
80	5.0	0.7	1.6	49.4	3.11	38.8	100.7	4.65	6.3	43.4	31.6	0.73	3.02	53.8	14.4	4.8
	8.0	2.6	6.0	50.6	3.15	39.8	101.5	4.71	6.5	44.4	31.9	0.72	2.88	54.3	15.4	4.5
	11.0	7.1	16.3	51.8	3.18	40.9	102.2	4.78	6.7	45.6	32.1	0.70	2.79	55.1	16.3	4.3
90	5.0	0.5	1.2	54.6	3.18	43.8	104.1	5.04	7.1	42.0	31.0	0.74	3.34	53.4	12.6	6.0
	8.0	2.5	5.7	55.5	3.22	44.5	104.7	5.05	7.3	42.6	31.2	0.73	3.18	53.5	13.4	5.7
	11.0	6.9	16.0	56.3	3.26	45.2	105.2	5.06	7.5	43.5	31.4	0.72	3.08	54.0	14.1	5.5
100	5.0	0.4	0.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3							39.8	30.2	0.76	3.55	52.0	11.2	7.1
	11.0	6.8	15.6							40.5	30.5	0.75	3.44	52.2	11.8	6.8
110	5.0	0.4	0.9							Operation not recommended						
	8.0	2.1	4.9							36.7	29.1	0.79	3.91	50.0	9.4	8.6
	11.0	6.6	15.2							37.4	29.5	0.79	3.80	50.4	9.8	8.3
120	5.0	0.4	0.9							Operation not recommended						
	8.0	2.0	4.6							33.2	28.2	0.85	4.55	48.7	7.3	10.4
	11.0	6.5	14.9							33.9	28.6	0.84	4.42	49.0	7.7	10.0

11/10/09

YG048 - Performance Data

Single Speed PSC (1600 cfm)

EWT °F	Flow gpm	WPD		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	6.0	2.2	5.1	Operation not recommended						Operation not recommended						
	9.0	4.4	10.0													
	12.0	6.8	15.8	30.8	3.32	19.5	87.0	2.72	4.6							
30	6.0	2.0	4.7	Operation not recommended						Operation not recommended						
	9.0	4.2	9.6	35.3	3.31	24.0	89.8	3.12	4.9	50.3	31.3	0.62	2.33	58.3	21.6	---
	12.0	6.7	15.5	35.8	3.35	24.4	90.1	3.13	5.0	51.0	31.9	0.63	2.19	58.5	23.3	---
40	6.0	1.9	4.3	Operation not recommended						Operation not recommended						
	9.0	4.0	9.2	40.1	3.44	28.4	92.8	3.41	5.4	53.1	34.8	0.65	2.52	61.7	21.1	---
	12.0	6.5	15.0	41.9	3.51	30.0	93.9	3.51	5.5	54.0	35.5	0.66	2.39	62.2	22.6	---
50	6.0	1.7	3.9	42.9	3.50	31.0	94.5	3.60	5.9	54.9	37.4	0.68	2.84	64.6	19.3	2.9
	9.0	3.8	8.8	45.5	3.58	33.3	96.1	3.73	6.1	56.0	38.3	0.68	2.72	65.2	20.6	2.8
	12.0	6.3	14.6	48.1	3.66	35.6	97.7	3.85	6.2	57.0	39.1	0.69	2.59	65.8	22.0	2.7
60	6.0	1.5	3.5	49.5	3.67	37.0	98.6	3.96	6.7	54.5	37.4	0.69	3.14	65.2	17.4	3.5
	9.0	3.6	8.4	52.2	3.73	39.5	100.2	4.11	6.8	55.4	38.0	0.69	2.99	65.6	18.5	3.4
	12.0	6.1	14.1	54.9	3.79	42.0	101.9	4.25	7.0	56.2	38.6	0.69	2.85	65.9	19.8	3.2
70	6.0	1.3	3.0	56.1	3.83	43.0	102.6	4.29	7.5	54.1	37.3	0.69	3.43	65.8	15.8	4.5
	9.0	3.5	8.0	58.9	3.87	45.7	104.4	4.46	7.7	54.8	37.7	0.69	3.27	65.9	16.8	4.3
	12.0	5.9	13.7	61.7	3.91	48.4	106.1	4.63	7.9	55.4	38.2	0.69	3.10	66.0	17.9	4.0
80	6.0	1.1	2.6	61.3	3.91	47.9	105.8	4.59	8.4	51.4	35.8	0.70	3.71	64.0	13.9	5.6
	9.0	3.3	7.6	63.2	3.96	49.7	107.0	4.68	8.6	52.1	36.4	0.70	3.54	64.2	14.7	5.3
	12.0	5.8	13.3	65.2	4.01	51.5	108.2	4.77	8.9	52.9	36.9	0.70	3.43	64.6	15.5	5.1
90	6.0	1.0	2.2	66.5	4.00	52.9	109.1	4.88	9.4	48.7	34.3	0.70	4.06	62.5	12.0	7.0
	9.0	3.1	7.1	67.5	4.05	53.7	109.7	4.89	9.7	49.4	35.0	0.71	3.87	62.7	12.8	6.7
	12.0	5.6	12.9	68.6	4.10	54.6	110.3	4.90	10.1	50.4	35.6	0.70	3.75	63.2	13.5	6.4
100	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	2.9	6.7							46.7	34.3	0.74	4.37	61.6	10.7	8.4
	12.0	5.4	12.5							47.4	34.6	0.73	4.23	61.8	11.2	8.0
110	6.0	0.6	1.4							Operation not recommended						
	9.0	2.7	6.3							43.4	33.2	0.76	4.83	59.9	9.0	10.3
	12.0	5.2	12.1							44.3	33.7	0.76	4.70	60.4	9.4	9.7
120	6.0	0.4	1.0							Operation not recommended						
	9.0	2.6	5.9							40.1	32.0	0.80	5.40	58.5	7.4	12.4
	12.0	5.0	11.6							41.0	32.5	0.79	5.24	58.8	7.8	11.8

7/6/10

YG060 - Performance Data

Single Speed PSC (2000 cfm)

EWT °F	Flow gpm	WPD		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	3.8	8.7	Operation not recommended						Operation not recommended						
	12.0	6.3	14.5													
	15.0	9.7	22.5	41.9	4.06	28.0	87.4	3.02	5.5							
30	9.0	3.6	8.4	Operation not recommended						Operation not recommended						
	12.0	6.1	14.1	43.8	3.99	30.2	88.3	3.22	5.9	72.0	49.1	0.68	2.96	82.1	24.3	---
	15.0	9.6	22.2	46.5	4.11	32.5	89.5	3.31	6.1	73.0	50.0	0.68	2.78	82.5	26.3	---
40	9.0	3.5	8.0	Operation not recommended						Operation not recommended						
	12.0	6.0	13.7	49.7	4.12	35.6	91.0	3.53	6.6	70.8	48.8	0.69	3.11	81.4	22.8	---
	15.0	9.4	21.7	52.2	4.22	37.8	92.2	3.63	6.7	71.8	49.5	0.69	2.97	81.9	24.2	---
50	9.0	3.3	7.6	54.6	4.20	40.3	93.3	3.81	7.1	68.5	48.0	0.70	3.34	79.9	20.5	3.9
	12.0	5.8	13.4	56.2	4.26	41.7	94.0	3.87	7.3	69.5	48.5	0.70	3.25	80.6	21.4	3.7
	15.0	9.2	21.3	57.8	4.32	43.1	94.8	3.92	7.5	70.5	48.9	0.69	3.16	81.3	22.3	3.5
60	9.0	3.1	7.3	62.2	4.35	47.3	96.8	4.19	8.0	67.3	47.0	0.70	3.64	79.7	18.5	4.8
	12.0	5.6	13.0	64.3	4.41	49.3	97.8	4.28	8.3	68.2	47.6	0.70	3.54	80.3	19.3	4.6
	15.0	9.1	21.0	66.4	4.46	51.2	98.8	4.36	8.5	69.1	48.3	0.70	3.45	80.9	20.1	4.4
70	9.0	3.0	6.9	69.8	4.50	54.4	100.3	4.54	9.0	66.0	46.0	0.70	3.93	79.4	16.8	6.0
	12.0	5.5	12.6	72.4	4.55	56.9	101.5	4.66	9.3	66.9	46.8	0.70	3.83	79.9	17.5	5.7
	15.0	8.9	20.6	75.0	4.60	59.3	102.7	4.78	9.5	67.7	47.6	0.70	3.73	80.4	18.2	5.4
80	9.0	2.8	6.5	76.2	4.59	60.6	103.3	4.87	10.2	62.2	45.0	0.72	4.45	77.4	14.0	7.6
	12.0	5.3	12.3	78.2	4.65	62.3	104.2	4.93	10.5	63.1	45.7	0.72	4.25	77.6	14.9	7.2
	15.0	8.8	20.2	80.1	4.70	64.1	105.1	5.00	10.7	64.1	46.3	0.72	4.11	78.1	15.6	6.8
90	9.0	2.7	6.1	82.7	4.68	66.8	106.3	5.18	11.4	58.4	43.9	0.75	4.86	75.0	12.0	9.5
	12.0	5.2	11.9	84.0	4.74	67.8	106.9	5.19	11.8	59.3	44.6	0.75	4.64	75.2	12.8	9.0
	15.0	8.6	19.9	85.3	4.80	68.9	107.5	5.21	12.2	60.5	45.0	0.74	4.49	75.9	13.5	8.6
100	9.0	2.5	5.8	Operation not recommended						Operation not recommended						
	12.0	5.0	11.5							56.1	43.4	0.77	5.15	73.7	10.9	11.2
	15.0	8.4	19.5							57.0	43.7	0.77	4.99	74.0	11.4	10.6
110	9.0	2.3	5.4							Operation not recommended						
	12.0	4.8	11.2							52.3	41.8	0.80	5.63	71.6	9.3	13.8
	15.0	8.3	19.1							53.4	42.4	0.79	5.48	72.1	9.7	13.1
120	9.0	2.2	5.0							Operation not recommended						
	12.0	4.7	10.8							48.0	39.9	0.83	6.25	69.3	7.7	16.6
	15.0	8.1	18.8							49.0	40.5	0.83	6.07	69.7	8.1	15.9

7/6/10

YG070 - Performance Data

Single Speed PSC (2200 cfm)

EWT °F	Flow gpm	WPD		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	4.3	9.8	Operation not recommended						Operation not recommended						
	15.0	5.6	13.0													
	18.0	9.0	20.8	46.0	4.98	29.0	87.4	2.71	6.5							
30	12.0	4.1	9.4	Operation not recommended						Operation not recommended						
	15.0	5.9	13.6	52.0	4.92	35.2	89.9	3.09	7.0	73.0	46.1	0.63	3.30	84.3	22.1	---
	18.0	8.8	20.3	53.7	5.06	36.4	90.6	3.11	7.3	74.0	47.0	0.64	3.10	84.6	23.9	---
40	12.0	3.8	8.8	Operation not recommended						Operation not recommended						
	15.0	5.2	12.0	58.4	5.10	41.0	92.6	3.35	7.8	74.6	49.3	0.66	3.49	86.5	21.4	---
	18.0	8.6	19.8	60.9	5.20	43.1	93.6	3.43	8.0	76.1	50.5	0.66	3.36	87.5	22.7	---
50	12.0	3.6	8.4	62.8	5.25	44.9	94.4	3.51	8.5	74.2	51.0	0.69	3.74	87.0	19.8	4.3
	15.0	5.0	11.5	65.4	5.29	47.4	95.5	3.62	8.7	76.2	52.5	0.69	3.68	88.7	20.7	4.1
	18.0	8.4	19.3	68.0	5.33	49.8	96.6	3.74	8.9	78.2	54.0	0.69	3.61	90.5	21.7	3.9
60	12.0	3.4	7.9	71.9	5.46	53.3	98.3	3.86	9.5	71.6	50.0	0.70	4.08	85.5	17.6	5.2
	15.0	4.8	11.0	73.9	5.49	55.2	99.1	3.95	9.8	73.3	51.3	0.70	4.00	87.0	18.3	4.9
	18.0	8.2	18.8	76.0	5.52	57.2	100.0	4.03	10.1	75.1	52.5	0.70	3.92	88.4	19.1	4.8
70	12.0	3.2	7.4	81.0	5.66	61.7	102.1	4.19	10.7	69.0	49.0	0.71	4.41	84.0	15.6	6.6
	15.0	4.6	10.5	82.5	5.69	63.1	102.7	4.25	11.0	70.5	50.0	0.71	4.32	85.2	16.3	6.3
	18.0	7.9	18.3	84.0	5.71	64.5	103.3	4.31	11.3	71.9	51.0	0.71	4.23	86.4	17.0	6.0
80	12.0	3.0	6.9	89.7	5.82	69.8	105.8	4.52	12.1	65.3	47.4	0.73	5.04	82.5	12.9	8.3
	15.0	4.4	10.0	91.2	5.88	71.2	106.4	4.55	12.4	66.5	48.3	0.73	4.81	82.9	13.8	7.9
	18.0	7.7	17.9	92.7	5.93	72.5	107.0	4.59	12.8	67.9	49.0	0.72	4.66	83.8	14.6	7.5
90	12.0	2.8	6.4	98.4	5.99	78.0	109.4	4.82	13.6	61.6	45.8	0.74	5.50	80.4	11.2	10.4
	15.0	4.1	9.5	99.9	6.07	79.2	110.1	4.83	14.0	62.5	46.6	0.75	5.25	80.4	11.9	9.9
	18.0	7.5	17.3	101.5	6.14	80.5	110.7	4.84	14.4	63.8	47.0	0.74	5.08	81.1	12.6	9.4
100	12.0	2.5	5.9	Operation not recommended						Operation not recommended						
	15.0	3.9	9.1							59.7	44.9	0.75	5.83	79.6	10.2	12.4
	18.0	7.3	16.9							60.6	45.3	0.75	5.65	79.8	10.7	11.7
110	12.0	2.3	5.4							Operation not recommended						
	15.0	3.7	8.5							56.2	42.9	0.76	6.38	78.0	8.8	15.1
	18.0	7.1	16.4							57.4	43.5	0.76	6.21	78.5	9.2	14.3
120	12.0	2.1	4.9							Operation not recommended						
	15.0	3.5	8.1							51.9	41.4	0.80	7.09	76.0	7.3	18.2
	18.0	6.9	15.9							53.0	42.0	0.79	6.88	76.4	7.7	17.3

7/6/10

YG015 - Performance Data

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

EWT °F	Flow gpm	WPD		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	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.2	2.8													
	4.0	2.0	4.6	10.0	0.95	6.8	86.5	3.09	1.2							
30	2.0	0.6	1.4	Operation not recommended						Operation not recommended						
	3.0	1.1	2.6	11.0	0.99	7.6	88.3	3.25	1.3	14.5	9.8	0.68	0.66	16.8	22.0	---
	4.0	1.9	4.4	11.0	0.95	7.8	88.4	3.39	1.3	14.7	10.0	0.68	0.62	16.8	23.7	---
40	2.0	0.6	1.3	Operation not recommended						Operation not recommended						
	3.0	1.1	2.5	12.1	1.00	8.7	90.4	3.54	1.3	15.6	10.6	0.68	0.72	18.1	21.7	---
	4.0	1.8	4.3	12.4	0.99	9.0	90.9	3.67	1.3	15.9	10.8	0.68	0.69	18.2	23.0	---
50	2.0	0.5	1.2	13.0	1.01	9.6	92.1	3.77	1.4	16.5	11.3	0.68	0.80	19.2	20.6	0.8
	3.0	1.0	2.3	13.4	1.02	9.9	92.7	3.85	1.4	16.8	11.4	0.68	0.78	19.4	21.5	0.8
	4.0	1.8	4.1	13.7	1.02	10.2	93.4	3.94	1.5	17.0	11.5	0.68	0.76	19.6	22.4	0.8
60	2.0	0.5	1.2	14.4	1.02	10.9	94.6	4.12	1.6	15.7	10.9	0.69	0.87	18.7	18.2	0.9
	3.0	0.9	2.1	14.8	1.03	11.3	95.4	4.22	1.6	16.0	11.0	0.69	0.84	18.8	19.1	0.9
	4.0	1.7	3.9	15.3	1.04	11.7	96.2	4.32	1.7	16.2	11.1	0.68	0.81	18.9	20.1	0.8
70	2.0	0.5	1.1	15.7	1.03	12.2	97.1	4.47	1.8	14.9	10.5	0.70	0.93	18.1	16.0	1.1
	3.0	0.8	1.9	16.3	1.04	12.7	98.1	4.58	1.8	15.2	10.6	0.70	0.89	18.2	17.0	1.1
	4.0	1.6	3.7	16.8	1.05	13.2	99.1	4.69	1.8	15.4	10.6	0.69	0.85	18.3	18.1	1.0
80	2.0	0.5	1.1	17.6	1.05	14.0	100.5	4.92	2.0	14.2	10.2	0.72	0.98	17.5	14.4	1.4
	3.0	0.8	1.8	18.0	1.06	14.4	101.3	4.98	2.0	14.4	10.3	0.71	0.94	17.6	15.4	1.3
	4.0	1.5	3.6	18.4	1.07	14.7	102.1	5.04	2.1	14.7	10.4	0.71	0.91	17.7	16.2	1.3
90	2.0	0.4	1.0	19.4	1.06	15.8	103.9	5.35	2.3	13.4	9.9	0.74	1.04	17.0	12.9	1.8
	3.0	0.7	1.6	19.7	1.08	16.0	104.5	5.36	2.3	13.6	10.0	0.73	0.99	17.0	13.7	1.7
	4.0	1.5	3.4	20.0	1.09	16.3	105.0	5.38	2.3	13.9	10.1	0.73	0.96	17.2	14.5	1.6
100	2.0	0.4	0.9	Operation not recommended						Operation not recommended						
	3.0	0.6	1.4							12.8	9.7	0.76	1.11	16.5	11.5	2.1
	4.0	1.4	3.2							13.0	9.8	0.76	1.08	16.6	12.0	1.9
110	2.0	0.4	0.9							Operation not recommended						
	3.0	0.5	1.2							11.8	9.4	0.80	1.22	15.9	9.6	2.7
	4.0	1.3	3.0							12.0	9.5	0.79	1.19	16.1	10.1	2.5
120	2.0	0.4	0.9							Operation not recommended						
	3.0	0.5	1.1							10.8	9.1	0.84	1.36	15.4	7.9	3.3
	4.0	1.2	2.9							11.0	9.2	0.84	1.32	15.5	8.3	3.0

11/10/09

YG018 - Performance Data

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

EWT °F	Flow gpm	WPD		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	3.0	1.2	2.8	Operation not recommended						Operation not recommended						
	4.0	2.0	4.6													
	5.0	3.4	7.8	13.0	1.15	9.1	88.1	3.31	1.4							
30	3.0	1.1	2.6	Operation not recommended						Operation not recommended						
	4.0	1.9	4.4	14.5	1.23	10.3	90.3	3.45	1.5	18.2	11.8	0.65	0.80	20.9	22.7	---
	5.0	3.3	7.6	14.9	1.25	10.6	91.0	3.49	1.5	18.4	12.0	0.65	0.75	21.0	24.5	---
40	3.0	1.1	2.5	Operation not recommended						Operation not recommended						
	4.0	1.8	4.3	15.7	1.28	11.3	92.2	3.59	1.6	19.1	12.4	0.65	0.85	22.0	22.3	---
	5.0	3.2	7.5	16.5	1.31	12.0	93.4	3.68	1.6	19.4	12.6	0.65	0.83	22.2	23.5	---
50	3.0	1.0	2.3	16.0	1.30	11.6	92.7	3.61	1.7	19.7	12.8	0.65	0.92	22.8	21.4	0.9
	4.0	1.8	4.1	17.0	1.34	12.4	94.2	3.73	1.7	20.0	13.0	0.65	0.91	23.1	22.0	0.9
	5.0	3.2	7.3	18.0	1.37	13.3	95.8	3.85	1.8	20.3	13.1	0.65	0.90	23.4	22.6	0.9
60	3.0	0.9	2.1	17.5	1.37	12.8	95.0	3.76	1.9	18.7	12.4	0.66	1.01	22.1	18.6	1.1
	4.0	1.7	3.9	18.5	1.39	13.7	96.5	3.89	1.9	18.9	12.6	0.67	1.00	22.3	19.0	1.1
	5.0	3.1	7.1	19.5	1.42	14.7	98.1	4.02	2.0	19.2	12.8	0.67	0.99	22.5	19.4	1.0
70	3.0	0.8	1.9	19.0	1.43	14.1	97.3	3.89	2.1	17.7	12.0	0.68	1.09	21.4	16.2	1.3
	4.0	1.6	3.7	20.0	1.45	15.1	98.9	4.04	2.1	17.9	12.3	0.69	1.08	21.5	16.5	1.3
	5.0	3.0	6.9	21.0	1.47	16.0	100.4	4.19	2.2	18.0	12.5	0.69	1.07	21.7	16.8	1.2
80	3.0	0.8	1.8	21.9	1.50	16.7	101.7	4.26	2.4	16.6	11.4	0.69	1.29	21.0	12.8	1.7
	4.0	1.5	3.6	22.6	1.53	17.4	102.8	4.33	2.4	16.8	11.7	0.70	1.23	21.0	13.6	1.6
	5.0	2.9	6.8	23.3	1.55	18.0	103.9	4.41	2.5	17.0	12.0	0.70	1.20	21.1	14.2	1.5
90	3.0	0.7	1.6	24.7	1.58	19.3	106.2	4.59	2.8	15.4	10.8	0.70	1.43	20.3	10.8	2.2
	4.0	1.5	3.4	25.1	1.60	19.7	106.8	4.60	2.8	15.7	11.1	0.71	1.36	20.3	11.5	2.0
	5.0	2.9	6.6	25.5	1.62	20.0	107.4	4.61	2.8	16.0	11.4	0.71	1.32	20.5	12.1	1.9
100	3.0	0.6	1.4	Operation not recommended						Operation not recommended						
	4.0	1.4	3.2							14.9	11.0	0.74	1.46	19.8	10.2	2.5
	5.0	2.8	6.4							15.1	11.1	0.73	1.41	19.9	10.7	2.3
110	3.0	0.5	1.2							Operation not recommended						
	4.0	1.3	3.0							13.9	10.5	0.76	1.54	19.2	9.0	3.2
	5.0	2.7	6.2							14.2	10.7	0.75	1.50	19.3	9.5	3.0
120	3.0	0.5	1.1							Operation not recommended						
	4.0	1.2	2.9							13.2	10.1	0.76	1.70	19.0	7.8	4.0
	5.0	2.6	6.1							13.5	10.2	0.76	1.65	19.1	8.2	3.6

11/10/09

YG023 - Performance Data

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

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F					COOLING - EAT 80/67°F					
		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	3.0	1.2	2.8	Operation not recommended					Operation not recommended					
	4.5	2.4	5.6											
	6.0	4.6	10.6	15.0	1.53	9.8	85.4	2.87						
30	3.0	1.1	2.6	Operation not recommended					Operation not recommended					
	4.5	2.4	5.5	17.9	1.59	12.4	88.7	3.29	26.3	16.7	0.63	0.94	29.6	27.9
	6.0	4.5	10.5	18.2	1.61	12.7	89.1	3.31	26.7	17.0	0.64	0.89	29.7	30.2
40	3.0	1.1	2.5	Operation not recommended					Operation not recommended					
	4.5	2.3	5.3	19.6	1.63	14.1	90.7	3.54	26.5	17.0	0.64	1.04	30.1	25.4
	6.0	4.5	10.3	20.3	1.65	14.6	91.4	3.60	26.8	17.3	0.64	0.98	30.1	27.3
50	3.0	1.0	2.3	20.8	1.64	15.2	92.1	3.71	26.4	17.3	0.66	1.22	30.6	21.7
	4.5	2.2	5.2	21.6	1.66	15.9	92.9	3.79	26.7	17.4	0.65	1.15	30.6	23.2
	6.0	4.4	10.2	22.3	1.69	16.5	93.8	3.87	26.9	17.5	0.65	1.08	30.6	25.0
60	3.0	1.0	2.2	23.0	1.68	17.3	94.6	4.01	25.7	17.0	0.66	1.37	30.4	18.8
	4.5	2.2	5.0	23.8	1.70	18.0	95.5	4.09	26.0	17.1	0.66	1.29	30.3	20.2
	6.0	4.3	10.0	24.6	1.72	18.7	96.5	4.18	26.2	17.2	0.66	1.21	30.3	21.7
70	3.0	0.9	2.0	25.2	1.72	19.3	97.2	4.28	25.0	16.7	0.67	1.52	30.2	16.5
	4.5	2.1	4.9	26.1	1.74	20.1	98.2	4.38	25.3	16.8	0.67	1.43	30.1	17.7
	6.0	4.3	9.9	26.9	1.76	20.9	99.1	4.48	25.5	16.9	0.66	1.34	30.1	19.0
80	3.0	0.8	1.9	27.9	1.73	22.0	100.3	4.72	23.8	16.2	0.68	1.65	29.5	14.4
	4.5	2.1	4.7	28.5	1.75	22.6	101.0	4.78	24.1	16.3	0.68	1.58	29.5	15.3
	6.0	4.2	9.7	29.2	1.77	23.2	101.8	4.83	24.5	16.5	0.67	1.53	29.7	16.1
90	3.0	0.8	1.7	30.6	1.74	24.6	103.4	5.16	22.7	15.6	0.69	1.85	29.0	12.2
	4.5	2.0	4.6	31.0	1.76	25.0	103.9	5.17	23.0	15.8	0.69	1.77	29.1	13.0
	6.0	4.1	9.6	31.5	1.78	25.4	104.5	5.19	23.5	16.0	0.68	1.71	29.3	13.7
100	3.0	0.7	1.6	Operation not recommended					Operation not recommended					
	4.5	1.9	4.4						21.7	15.1	0.69	2.04	28.7	10.7
	6.0	4.1	9.4						22.1	15.2	0.69	1.97	28.8	11.2
110	3.0	0.6	1.4						Operation not recommended					
	4.5	1.9	4.3						20.2	14.2	0.70	2.30	28.0	8.8
	6.0	4.0	9.3						20.6	14.4	0.70	2.24	28.2	9.2
120	3.0	0.6	1.3						Operation not recommended					
	4.5	1.8	4.1						18.4	14.2	0.77	2.70	27.6	6.8
	6.0	3.9	9.1						18.8	14.4	0.77	2.63	27.8	7.2

11/10/09

YG024 - Performance Data

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

EWT °F	Flow gpm	WPD		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	3.0	1.2	2.8	Operation not recommended						Operation not recommended						
	4.5	2.4	5.6													
	6.0	4.6	10.6	15.6	1.53	10.3	86.0	2.98	1.6							
30	3.0	1.1	2.6	Operation not recommended						Operation not recommended						
	4.5	2.4	5.5	18.7	1.59	13.2	89.6	3.44	1.7	27.5	17.4	0.63	0.94	30.7	29.1	---
	6.0	4.5	10.5	19.0	1.61	13.5	90.0	3.46	1.7	27.8	17.7	0.64	0.89	30.9	31.5	---
40	3.0	1.1	2.5	Operation not recommended						Operation not recommended						
	4.5	2.3	5.3	20.5	1.63	14.9	91.7	3.69	1.9	27.6	17.7	0.64	1.04	31.2	26.4	---
	6.0	4.5	10.3	21.1	1.65	15.5	92.4	3.75	1.9	27.9	18.0	0.64	0.98	31.3	28.5	---
50	3.0	1.0	2.3	21.7	1.64	16.1	93.2	3.88	2.1	27.5	18.0	0.65	1.22	31.7	22.6	1.3
	4.5	2.2	5.2	22.5	1.66	16.8	94.0	3.96	2.1	27.8	18.1	0.65	1.15	31.7	24.2	1.2
	6.0	4.4	10.2	23.2	1.69	17.4	94.9	4.03	2.2	28.0	18.2	0.65	1.08	31.6	26.0	1.2
60	3.0	1.0	2.2	24.0	1.68	18.2	95.7	4.17	2.3	26.8	17.7	0.66	1.37	31.5	19.6	1.5
	4.5	2.2	5.0	24.8	1.70	19.0	96.7	4.26	2.4	27.0	17.8	0.66	1.29	31.4	21.0	1.4
	6.0	4.3	10.0	25.6	1.72	19.7	97.6	4.35	2.4	27.3	17.9	0.66	1.21	31.4	22.6	1.4
70	3.0	0.9	2.0	26.2	1.72	20.3	98.3	4.45	2.6	26.1	17.4	0.67	1.52	31.3	17.2	1.8
	4.5	2.1	4.9	27.1	1.74	21.1	99.4	4.56	2.6	26.3	17.5	0.66	1.43	31.2	18.4	1.8
	6.0	4.3	9.9	28.0	1.76	22.0	100.4	4.66	2.7	26.6	17.6	0.66	1.34	31.1	19.8	1.7
80	3.0	0.8	1.9	29.0	1.73	23.1	101.5	4.91	2.9	24.9	16.8	0.68	1.65	30.5	15.0	2.3
	4.5	2.1	4.7	29.7	1.75	23.7	102.4	4.97	2.9	25.2	17.0	0.68	1.58	30.5	16.0	2.2
	6.0	4.2	9.7	30.4	1.77	24.3	103.2	5.03	3.0	25.5	17.1	0.67	1.53	30.7	16.7	2.1
90	3.0	0.8	1.7	31.8	1.74	25.9	104.8	5.37	3.3	23.6	16.2	0.69	1.85	29.9	12.8	2.8
	4.5	2.0	4.6	32.3	1.76	26.3	105.4	5.38	3.4	24.0	16.5	0.69	1.77	30.0	13.6	2.7
	6.0	4.1	9.6	32.8	1.78	26.7	105.9	5.40	3.5	24.5	16.7	0.68	1.71	30.3	14.3	2.5
100	3.0	0.7	1.6	Operation not recommended						Operation not recommended						
	4.5	1.9	4.4							22.7	16.0	0.71	2.04	29.6	11.1	3.4
	6.0	4.1	9.4							23.0	16.2	0.70	1.97	29.7	11.7	3.2
110	3.0	0.6	1.4							Operation not recommended						
	4.5	1.9	4.3							21.1	15.4	0.73	2.30	29.0	9.2	4.1
	6.0	4.0	9.3							21.5	15.6	0.73	2.24	29.2	9.6	3.9
120	3.0	0.6	1.3							Operation not recommended						
	4.5	1.8	4.1							19.1	14.8	0.77	2.70	28.4	7.1	4.9
	6.0	3.9	9.1							19.6	15.0	0.77	2.63	28.5	7.4	4.6

11/10/09

YG030 - Performance Data

Single Speed Variable Speed ECM or 5-Speed ECM (1000 cfm)

EWT °F	Flow gpm	WPD		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	4.0	1.0	2.2	Operation not recommended						Operation not recommended						
	6.0	1.9	4.5													
	8.0	3.8	8.7	20.0	1.70	14.2	86.5	3.45	1.9							
30	4.0	0.9	2.1	Operation not recommended						Operation not recommended						
	6.0	1.9	4.4	21.2	1.76	15.1	87.6	3.52	2.1	30.4	19.3	0.64	1.17	34.4	25.9	---
	8.0	3.7	8.5	22.0	1.78	15.9	88.4	3.62	2.1	30.8	19.7	0.64	1.10	34.6	28.0	---
40	4.0	0.9	2.0	Operation not recommended						Operation not recommended						
	6.0	1.8	4.3	23.9	1.80	17.7	90.1	3.89	2.3	31.3	20.2	0.64	1.21	35.4	25.9	---
	8.0	3.7	8.4	25.0	1.82	18.7	91.1	4.02	2.4	32.4	20.9	0.65	1.20	36.5	27.0	---
50	4.0	0.8	1.9	25.8	1.81	19.6	91.9	4.18	2.5	30.5	19.9	0.65	1.19	34.6	25.6	1.4
	6.0	1.8	4.1	26.9	1.84	20.6	92.9	4.29	2.6	32.3	21.0	0.65	1.25	36.5	25.9	1.3
	8.0	3.6	8.3	27.9	1.86	21.6	93.8	4.40	2.7	34.0	22.1	0.65	1.30	38.4	26.2	1.3
60	4.0	0.8	1.8	29.4	1.85	23.1	95.2	4.66	2.9	30.1	19.7	0.66	1.34	34.6	22.4	1.6
	6.0	1.7	4.0	30.5	1.87	24.1	96.2	4.77	2.9	31.9	20.9	0.66	1.40	36.7	22.9	1.5
	8.0	3.6	8.2	31.6	1.90	25.1	97.3	4.89	3.0	33.8	22.1	0.66	1.45	38.7	23.3	1.4
70	4.0	0.7	1.6	33.0	1.89	26.6	98.6	5.12	3.2	29.6	19.5	0.66	1.49	34.7	19.9	2.0
	6.0	1.7	3.9	34.2	1.91	27.6	99.6	5.24	3.3	31.6	20.8	0.66	1.55	36.9	20.5	1.9
	8.0	3.5	8.1	35.3	1.93	28.7	100.7	5.36	3.4	33.6	22.2	0.66	1.60	39.1	21.0	1.8
80	4.0	0.7	1.5	36.9	1.99	30.1	102.1	5.42	3.6	29.3	19.3	0.66	1.94	35.9	15.1	2.5
	6.0	1.6	3.8	37.8	2.02	30.9	103.0	5.49	3.7	30.7	20.4	0.66	1.85	37.1	16.6	2.4
	8.0	3.5	8.0	38.7	2.04	31.7	103.8	5.55	3.8	32.1	21.5	0.67	1.79	38.2	17.9	2.3
90	4.0	0.6	1.4	40.7	2.10	33.6	105.7	5.70	4.1	29.0	19.0	0.66	2.14	36.3	13.5	3.3
	6.0	1.6	3.7	41.4	2.12	34.1	106.3	5.71	4.2	29.9	20.0	0.67	2.05	36.9	14.6	3.1
	8.0	3.4	7.9	42.0	2.15	34.7	106.9	5.73	4.3	30.5	20.7	0.68	1.98	37.3	15.4	3.0
100	4.0	0.6	1.3	Operation not recommended						Operation not recommended						
	6.0	1.6	3.6							27.5	19.7	0.72	2.37	35.6	11.6	3.9
	8.0	3.4	7.8							28.0	19.9	0.71	2.30	35.8	12.2	3.7
110	4.0	0.5	1.2							Operation not recommended						
	6.0	1.5	3.5							24.9	18.7	0.75	2.68	34.0	9.3	4.9
	8.0	3.3	7.6							25.4	19.0	0.75	2.61	34.3	9.7	4.5
120	4.0	0.5	1.1							Operation not recommended						
	6.0	1.5	3.3							21.1	17.2	0.82	2.88	31.0	7.3	5.7
	8.0	3.3	7.5							21.6	17.5	0.81	2.80	31.2	7.7	5.4

11/10/09

YG036 - Performance Data

Single Speed Variable Speed ECM or 5-Speed ECM (1150 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	7.0	2.6	6.0													
	9.0	6.1	14.1	23.4	2.31	15.6	86.9	2.97	2.3							
30	5.0	1.4	3.1	Operation not recommended						Operation not recommended						
	7.0	2.5	5.8	27.4	2.34	19.4	90.1	3.43	2.5	35.9	25.1	0.70	1.51	41.1	23.7	---
	9.0	6.0	13.8	28.2	2.38	20.1	90.7	3.47	2.6	36.4	25.6	0.70	1.42	41.2	25.6	---
40	5.0	1.3	2.9	Operation not recommended						Operation not recommended						
	7.0	2.4	5.5	30.8	2.40	22.6	92.8	3.76	2.9	38.7	27.2	0.70	1.62	44.2	23.9	---
	9.0	5.9	13.6	31.9	2.44	23.6	93.7	3.84	2.9	39.2	27.5	0.70	1.54	44.5	25.5	---
50	5.0	1.1	2.6	33.3	2.41	25.0	94.8	4.05	3.1	40.9	29.1	0.71	1.78	47.0	23.0	1.6
	7.0	2.3	5.2	34.5	2.46	26.1	95.8	4.12	3.2	41.5	29.2	0.70	1.72	47.3	24.1	1.5
	9.0	5.8	13.3	35.7	2.50	27.2	96.7	4.18	3.3	42.0	29.4	0.70	1.66	47.7	25.3	1.5
60	5.0	1.0	2.4	37.7	2.48	29.2	98.3	4.45	3.5	39.2	28.5	0.73	1.97	46.0	19.9	2.0
	7.0	2.2	5.0	39.0	2.52	30.4	99.4	4.54	3.6	39.9	28.7	0.72	1.90	46.4	21.0	1.9
	9.0	5.7	13.1	40.2	2.55	31.5	100.4	4.62	3.6	40.5	28.9	0.71	1.84	46.8	22.1	1.8
70	5.0	0.9	2.1	42.1	2.55	33.4	101.9	4.84	3.9	37.6	27.9	0.74	2.16	44.9	17.4	2.5
	7.0	2.1	4.7	43.5	2.58	34.7	103.0	4.95	4.0	38.3	28.2	0.74	2.09	45.4	18.4	2.4
	9.0	5.5	12.8	44.8	2.60	35.9	104.1	5.05	4.1	39.0	28.5	0.73	2.01	45.9	19.4	2.3
80	5.0	0.8	1.8	46.7	2.62	37.8	105.6	5.23	4.4	36.1	27.1	0.75	2.42	44.3	14.9	3.2
	7.0	1.9	4.5	47.7	2.65	38.7	106.4	5.29	4.5	36.7	27.6	0.75	2.31	44.6	15.9	3.0
	9.0	5.4	12.5	48.8	2.68	39.7	107.3	5.35	4.6	37.4	28.0	0.75	2.24	45.0	16.7	2.9
90	5.0	0.7	1.6	51.2	2.68	42.1	109.3	5.60	4.9	34.5	26.3	0.76	2.66	43.6	13.0	3.9
	7.0	1.8	4.2	52.0	2.72	42.8	109.9	5.61	5.1	35.1	27.0	0.77	2.54	43.8	13.8	3.7
	9.0	5.3	12.3	52.8	2.75	43.5	110.5	5.63	5.2	35.8	27.5	0.77	2.46	44.2	14.6	3.6
100	5.0	0.6	1.3	Operation not recommended						Operation not recommended						
	7.0	1.7	4.0							33.3	26.4	0.79	2.86	43.0	11.7	4.6
	9.0	5.2	12.0							33.8	26.6	0.79	2.77	43.2	12.2	4.4
110	5.0	0.5	1.1							Operation not recommended						
	7.0	1.6	3.7							31.2	25.3	0.81	3.16	41.9	9.9	5.7
	9.0	5.1	11.8							31.8	25.7	0.81	3.07	42.3	10.4	5.4
120	5.0	0.4	0.8							Operation not recommended						
	7.0	1.5	3.5							26.5	22.7	0.85	3.53	38.6	7.5	6.8
	9.0	5.0	11.5							27.1	23.0	0.85	3.43	38.8	7.9	6.4

11/10/09

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

YG041 - Performance Data

Single Speed Variable Speed ECM or 5-Speed ECM (1300 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.6	3.8	Operation not recommended						Operation not recommended						
	8.0	3.6	8.2													
	11.0	8.0	18.5	25.7	2.61	16.8	85.0	2.89	3.5							
30	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	8.0	3.4	7.8	28.5	2.61	19.6	86.9	3.20	3.7	41.8	30.4	0.73	1.71	47.7	24.5	---
	11.0	7.9	18.1	29.5	2.66	20.4	87.5	3.26	3.8	42.4	31.0	0.73	1.61	47.9	26.4	---
40	5.0	1.3	3.0	Operation not recommended						Operation not recommended						
	8.0	3.2	7.5	31.7	2.67	22.6	89.0	3.48	4.0	43.8	31.4	0.72	1.85	50.2	23.7	---
	11.0	7.7	17.8	33.1	2.71	23.8	89.9	3.58	4.1	44.5	31.9	0.72	1.75	50.4	25.5	---
50	5.0	1.2	2.7	33.7	2.72	24.4	90.3	3.64	4.4	45.2	32.0	0.71	2.11	52.4	21.5	2.4
	8.0	3.1	7.1	35.2	2.74	25.8	91.2	3.77	4.5	45.9	32.4	0.71	2.00	52.7	23.0	2.4
	11.0	7.5	17.4	36.6	2.76	27.2	92.2	3.89	4.7	46.5	32.7	0.70	1.89	52.9	24.7	2.3
60	5.0	1.0	2.3	37.9	2.78	28.4	93.0	3.99	5.0	44.2	31.5	0.71	2.36	52.2	18.7	3.0
	8.0	2.9	6.7	39.3	2.80	29.7	94.0	4.11	5.1	45.1	31.8	0.70	2.23	52.7	20.3	2.8
	11.0	7.4	17.0	40.7	2.82	31.1	94.9	4.23	5.3	46.1	32.1	0.70	2.09	53.2	22.1	2.7
70	5.0	0.9	2.0	42.0	2.85	32.3	95.8	4.33	5.6	43.1	30.9	0.72	2.62	52.0	16.5	3.8
	8.0	2.8	6.4	43.4	2.87	33.6	96.7	4.44	5.7	44.4	31.2	0.70	2.46	52.8	18.1	3.6
	11.0	7.2	16.7	44.8	2.89	35.0	97.6	4.55	5.9	45.7	31.5	0.69	2.30	53.5	19.9	3.4
80	5.0	0.7	1.6	46.9	2.91	37.0	99.0	4.73	6.3	41.7	30.4	0.73	2.80	51.2	14.9	4.8
	8.0	2.6	6.0	48.0	2.94	38.0	99.8	4.79	6.5	42.6	30.6	0.72	2.67	51.7	16.0	4.5
	11.0	7.1	16.3	49.2	2.97	39.0	100.5	4.85	6.7	43.7	30.8	0.70	2.59	52.5	16.9	4.3
90	5.0	0.5	1.2	51.9	2.98	41.7	102.3	5.11	7.1	40.2	29.8	0.74	3.11	50.9	12.9	6.0
	8.0	2.5	5.7	52.7	3.02	42.4	102.9	5.12	7.3	40.9	30.0	0.73	2.97	51.0	13.8	5.7
	11.0	6.9	16.0	53.5	3.06	43.1	103.4	5.13	7.5	41.7	30.1	0.72	2.88	51.5	14.5	5.5
100	5.0	0.4	0.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3							38.2	29.0	0.76	3.34	49.6	11.4	7.1
	11.0	6.8	15.6							38.8	29.2	0.75	3.24	49.8	12.0	6.8
110	5.0	0.4	0.9							Operation not recommended						
	8.0	2.1	4.9							35.2	27.9	0.79	3.70	47.8	9.5	8.6
	11.0	6.6	15.2							35.9	28.3	0.79	3.60	48.2	10.0	8.3
120	5.0	0.4	0.9							Operation not recommended						
	8.0	2.0	4.6							31.8	27.1	0.85	4.34	46.6	7.3	10.4
	11.0	6.5	14.9							32.5	27.5	0.85	4.22	46.9	7.7	10.0

11/10/09

YG042 - Performance Data

Single Speed Variable Speed ECM or 5-Speed ECM (1400 cfm)

EWT °F	Flow gpm	WPD		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	5.0	1.6	3.8	Operation not recommended						Operation not recommended						
	8.0	3.6	8.2													
	11.0	8.0	18.5	27.0	2.61	18.1	85.9	3.04	3.5							
30	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	8.0	3.4	7.8	30.0	2.61	21.1	87.8	3.37	3.7	43.6	31.7	0.73	1.71	49.4	25.5	---
	11.0	7.9	18.1	31.0	2.66	21.9	88.5	3.42	3.8	44.2	32.3	0.73	1.61	49.7	27.5	---
40	5.0	1.3	3.0	Operation not recommended						Operation not recommended						
	8.0	3.2	7.5	33.4	2.67	24.2	90.1	3.66	4.0	45.7	32.7	0.72	1.85	52.0	24.7	---
	11.0	7.7	17.8	34.8	2.71	25.5	91.0	3.77	4.1	46.3	33.2	0.72	1.75	52.3	26.5	---
50	5.0	1.2	2.7	35.5	2.72	26.2	91.5	3.83	4.4	47.1	33.4	0.71	2.11	54.3	22.4	2.4
	8.0	3.1	7.1	37.0	2.74	27.7	92.5	3.96	4.5	47.8	33.8	0.71	2.00	54.6	23.9	2.4
	11.0	7.5	17.4	38.5	2.76	29.1	93.5	4.10	4.7	48.4	34.1	0.70	1.89	54.8	25.7	2.3
60	5.0	1.0	2.3	39.9	2.78	30.4	94.4	4.20	5.0	46.0	32.8	0.71	2.36	54.1	19.5	3.0
	8.0	2.9	6.7	41.4	2.80	31.8	95.3	4.33	5.1	47.0	33.1	0.70	2.23	54.6	21.1	2.8
	11.0	7.4	17.0	42.9	2.82	33.2	96.3	4.45	5.3	48.0	33.5	0.70	2.09	55.1	23.0	2.7
70	5.0	0.9	2.0	44.2	2.85	34.5	97.2	4.55	5.6	44.9	32.2	0.72	2.62	53.8	17.2	3.8
	8.0	2.8	6.4	45.7	2.87	35.9	98.2	4.68	5.7	46.3	32.5	0.70	2.46	54.6	18.8	3.6
	11.0	7.2	16.7	47.2	2.89	37.4	99.2	4.79	5.9	47.6	32.8	0.69	2.30	55.4	20.7	3.4
80	5.0	0.7	1.6	49.4	2.91	39.5	100.7	4.97	6.3	43.4	31.6	0.73	2.80	53.0	15.5	4.8
	8.0	2.6	6.0	50.6	2.94	40.5	101.5	5.04	6.5	44.4	31.9	0.72	2.67	53.6	16.6	4.5
	11.0	7.1	16.3	51.8	2.97	41.6	102.2	5.11	6.7	45.6	32.1	0.70	2.59	54.4	17.6	4.3
90	5.0	0.5	1.2	54.6	2.98	44.4	104.1	5.37	7.1	42.0	31.0	0.74	3.11	52.6	13.5	6.0
	8.0	2.5	5.7	55.5	3.02	45.2	104.7	5.39	7.3	42.6	31.2	0.73	2.97	52.8	14.3	5.7
	11.0	6.9	16.0	56.3	3.06	45.9	105.2	5.40	7.5	43.5	31.4	0.72	2.88	53.3	15.1	5.5
100	5.0	0.4	0.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3							39.8	30.2	0.76	3.34	51.2	11.9	7.1
	11.0	6.8	15.6							40.5	30.5	0.75	3.24	51.5	12.5	6.8
110	5.0	0.4	0.9							Operation not recommended						
	8.0	2.1	4.9							36.7	29.1	0.79	3.70	49.3	9.9	8.6
	11.0	6.6	15.2							37.4	29.5	0.79	3.60	49.7	10.4	8.3
120	5.0	0.4	0.9							Operation not recommended						
	8.0	2.0	4.6							33.2	28.2	0.85	4.34	48.0	7.6	10.4
	11.0	6.5	14.9							33.9	28.6	0.84	4.22	48.3	8.0	10.0

11/10/09

YG048 - Performance Data

Single Speed Variable Speed ECM or 5-Speed ECM (1600 cfm)

EWT °F	Flow gpm	WPD		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	6.0	2.2	5.1	Operation not recommended						Operation not recommended						
	9.0	4.4	10.0													
	12.0	6.8	15.8	30.8	3.09	20.2	87.0	2.92	4.6							
30	6.0	2.0	4.7	Operation not recommended						Operation not recommended						
	9.0	4.2	9.6	35.3	3.12	24.6	89.8	3.31	4.9	50.3	31.3	0.62	2.09	57.4	24.1	---
	12.0	6.7	15.5	35.8	3.15	25.1	90.1	3.33	5.0	51.0	31.9	0.63	1.96	57.7	26.0	---
40	6.0	1.9	4.3	Operation not recommended						Operation not recommended						
	9.0	4.0	9.2	40.1	3.25	29.0	92.8	3.62	5.4	53.1	34.8	0.65	2.29	60.9	23.2	---
	12.0	6.5	15.0	41.9	3.29	30.7	93.9	3.74	5.5	54.0	35.5	0.66	2.16	61.4	25.0	---
50	6.0	1.7	3.9	42.9	3.32	31.6	94.5	3.79	5.9	54.9	37.4	0.68	2.61	63.8	21.0	2.9
	9.0	3.8	8.8	45.5	3.38	34.0	96.1	3.95	6.1	56.0	38.3	0.68	2.49	64.4	22.5	2.8
	12.0	6.3	14.6	48.1	3.43	36.4	97.7	4.11	6.2	57.0	39.1	0.69	2.36	65.1	24.1	2.7
60	6.0	1.5	3.5	49.5	3.47	37.7	98.6	4.18	6.7	54.5	37.4	0.69	2.91	64.4	18.7	3.5
	9.0	3.6	8.4	52.2	3.52	40.2	100.2	4.35	6.8	55.4	38.0	0.69	2.76	64.8	20.0	3.4
	12.0	6.1	14.1	54.9	3.56	42.8	101.9	4.52	7.0	56.2	38.6	0.69	2.62	65.1	21.5	3.2
70	6.0	1.3	3.0	56.1	3.62	43.7	102.6	4.54	7.5	54.1	37.3	0.69	3.20	65.0	16.9	4.5
	9.0	3.5	8.0	58.9	3.65	46.5	104.4	4.73	7.7	54.8	37.7	0.69	3.04	65.1	18.0	4.3
	12.0	5.9	13.7	61.7	3.68	49.2	106.1	4.91	7.9	55.4	38.2	0.69	2.87	65.2	19.3	4.0
80	6.0	1.1	2.6	61.3	3.70	48.7	105.8	4.86	8.4	51.4	35.8	0.70	3.48	63.2	14.8	5.6
	9.0	3.3	7.6	63.2	3.74	50.5	107.0	4.96	8.6	52.1	36.4	0.70	3.31	63.4	15.7	5.3
	12.0	5.8	13.3	65.2	3.78	52.3	108.2	5.05	8.9	52.9	36.9	0.70	3.21	63.9	16.5	5.1
90	6.0	1.0	2.2	66.5	3.78	53.6	109.1	5.16	9.4	48.7	34.3	0.70	3.84	61.8	12.7	7.0
	9.0	3.1	7.1	67.5	3.83	54.5	109.7	5.17	9.7	49.4	35.0	0.71	3.66	61.9	13.5	6.7
	12.0	5.6	12.9	68.6	3.87	55.4	110.3	5.19	10.1	50.4	35.6	0.70	3.54	62.5	14.2	6.4
100	6.0	0.8	1.8	Operation not recommended						Operation not recommended						
	9.0	2.9	6.7							46.7	34.3	0.74	4.14	60.8	11.3	8.4
	12.0	5.4	12.5							47.4	34.6	0.73	4.00	61.0	11.8	8.0
110	6.0	0.6	1.4							Operation not recommended						
	9.0	2.7	6.3							43.4	33.2	0.76	4.59	59.1	9.5	10.3
	12.0	5.2	12.1							44.3	33.7	0.76	4.46	59.5	9.9	9.7
120	6.0	0.4	1.0							Operation not recommended						
	9.0	2.6	5.9							40.1	32.0	0.80	5.16	57.7	7.8	12.4
	12.0	5.0	11.6							41.0	32.5	0.79	5.01	58.1	8.2	11.8

7/6/10

YG060 - Performance Data

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

EWT °F	Flow gpm	WPD		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	3.8	8.7	Operation not recommended						Operation not recommended						
	12.0	6.3	14.5													
	15.0	9.7	22.5	41.9	3.96	28.4	87.4	3.10	5.5							
30	9.0	3.6	8.4	Operation not recommended						Operation not recommended						
	12.0	6.1	14.1	43.8	3.89	30.5	88.3	3.30	5.9	72.0	49.1	0.68	2.86	81.8	25.2	---
	15.0	9.6	22.2	46.5	4.01	32.8	89.5	3.39	6.1	73.0	50.0	0.68	2.68	82.2	27.2	---
40	9.0	3.5	8.0	Operation not recommended						Operation not recommended						
	12.0	6.0	13.7	49.7	4.03	35.9	91.0	3.62	6.6	70.8	48.8	0.69	3.01	81.0	23.5	---
	15.0	9.4	21.7	52.2	4.12	38.1	92.2	3.71	6.7	71.8	49.5	0.69	2.87	81.6	25.0	---
50	9.0	3.3	7.6	54.6	4.10	40.6	93.3	3.90	7.1	68.5	48.0	0.70	3.24	79.6	21.1	3.9
	12.0	5.8	13.4	56.2	4.16	42.0	94.0	3.96	7.3	69.5	48.5	0.70	3.15	80.3	22.0	3.7
	15.0	9.2	21.3	57.8	4.22	43.4	94.8	4.01	7.5	70.5	48.9	0.69	3.06	81.0	23.0	3.5
60	9.0	3.1	7.3	62.2	4.25	47.7	96.8	4.28	8.0	67.3	47.0	0.70	3.54	79.3	19.0	4.8
	12.0	5.6	13.0	64.3	4.31	49.6	97.8	4.37	8.3	68.2	47.6	0.70	3.44	79.9	19.8	4.6
	15.0	9.1	21.0	66.4	4.36	51.5	98.8	4.46	8.5	69.1	48.3	0.70	3.35	80.5	20.6	4.4
70	9.0	3.0	6.9	69.8	4.40	54.8	100.3	4.64	9.0	66.0	46.0	0.70	3.83	79.1	17.2	6.0
	12.0	5.5	12.6	72.4	4.45	57.2	101.5	4.76	9.3	66.9	46.8	0.70	3.73	79.6	17.9	5.7
	15.0	8.9	20.6	75.0	4.50	59.6	102.7	4.88	9.5	67.7	47.6	0.70	3.63	80.1	18.6	5.4
80	9.0	2.8	6.5	76.2	4.50	60.9	103.3	4.97	10.2	62.2	45.0	0.72	4.35	77.0	14.3	7.6
	12.0	5.3	12.3	78.2	4.55	62.7	104.2	5.04	10.5	63.1	45.7	0.72	4.15	77.2	15.2	7.2
	15.0	8.8	20.2	80.1	4.60	64.4	105.1	5.10	10.7	64.1	46.3	0.72	4.01	77.8	16.0	6.8
90	9.0	2.7	6.1	82.7	4.59	67.1	106.3	5.29	11.4	58.4	43.9	0.75	4.76	74.7	12.3	9.5
	12.0	5.2	11.9	84.0	4.65	68.1	106.9	5.30	11.8	59.3	44.6	0.75	4.54	74.8	13.1	9.0
	15.0	8.6	19.9	85.3	4.70	69.2	107.5	5.31	12.2	60.5	45.0	0.74	4.39	75.5	13.8	8.6
100	9.0	2.5	5.8	Operation not recommended						Operation not recommended						
	12.0	5.0	11.5							56.1	43.4	0.77	5.05	73.4	11.1	11.2
	15.0	8.4	19.5							57.0	43.7	0.77	4.89	73.7	11.7	10.6
110	9.0	2.3	5.4							Operation not recommended						
	12.0	4.8	11.2							52.3	41.8	0.80	5.53	71.2	9.5	13.8
	15.0	8.3	19.1							53.4	42.4	0.79	5.38	71.8	9.9	13.1
120	9.0	2.2	5.0							Operation not recommended						
	12.0	4.7	10.8							48.0	39.9	0.83	6.15	69.0	7.8	16.6
	15.0	8.1	18.8							49.0	40.5	0.83	5.97	69.4	8.2	15.9

7/6/10

YG070 - Performance Data

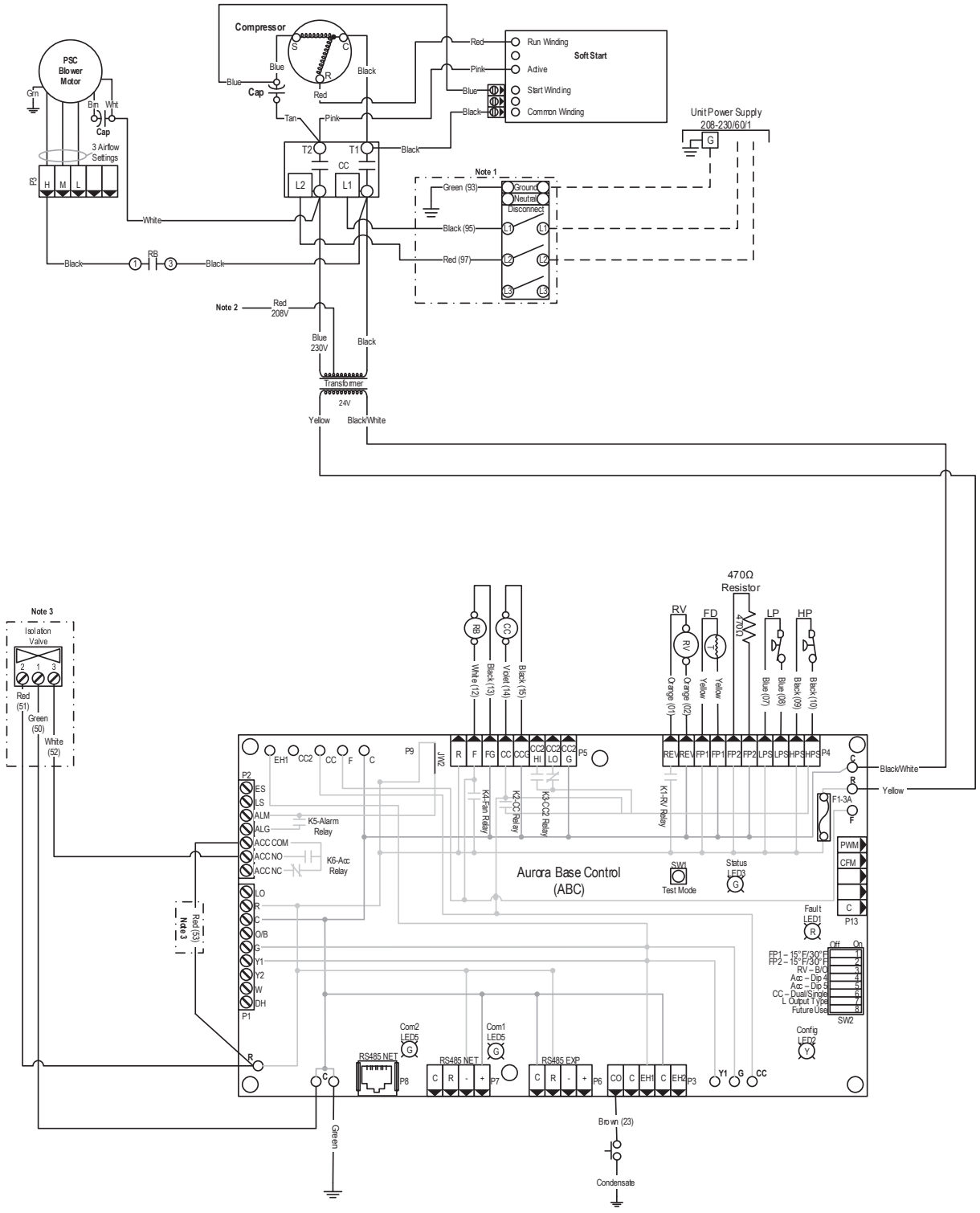
Single Speed Variable Speed ECM or 5-Speed ECM (2200 cfm)

EWT °F	Flow gpm	WPD		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	4.3	9.8	Operation not recommended						Operation not recommended						
	15.0	5.6	13.0													
	18.0	9.0	20.8	46.0	4.88	29.3	87.4	2.76	6.5							
30	12.0	4.1	9.4	Operation not recommended						Operation not recommended						
	15.0	5.9	13.6	52.0	4.82	35.5	89.9	3.16	7.0	73.0	46.1	0.63	3.18	83.9	22.9	---
	18.0	8.8	20.3	53.7	4.96	36.8	90.6	3.17	7.3	74.0	47.0	0.64	2.99	84.2	24.7	---
40	12.0	3.8	8.8	Operation not recommended						Operation not recommended						
	15.0	5.2	12.0	58.4	5.00	41.3	92.6	3.42	7.8	74.6	49.3	0.66	3.38	86.1	22.1	---
	18.0	8.6	19.8	60.9	5.10	43.5	93.6	3.50	8.0	76.1	50.5	0.66	3.25	87.2	23.4	---
50	12.0	3.6	8.4	62.8	5.15	45.2	94.4	3.57	8.5	74.2	51.0	0.69	3.64	86.6	20.4	4.3
	15.0	5.0	11.5	65.4	5.19	47.7	95.5	3.69	8.7	76.2	52.5	0.69	3.58	88.4	21.3	4.1
	18.0	8.4	19.3	68.0	5.23	50.2	96.6	3.81	8.9	78.2	54.0	0.69	3.51	90.2	22.3	3.9
60	12.0	3.4	7.9	71.9	5.36	53.6	98.3	3.94	9.5	71.6	50.0	0.70	3.98	85.2	18.0	5.2
	15.0	4.8	11.0	73.9	5.39	55.6	99.1	4.02	9.8	73.3	51.3	0.70	3.90	86.6	18.8	4.9
	18.0	8.2	18.8	76.0	5.42	57.5	100.0	4.11	10.1	75.1	52.5	0.70	3.82	88.1	19.7	4.8
70	12.0	3.2	7.4	81.0	5.56	62.0	102.1	4.27	10.7	69.0	49.0	0.71	4.31	83.7	16.0	6.6
	15.0	4.6	10.5	82.5	5.59	63.4	102.7	4.33	11.0	70.5	50.0	0.71	4.22	84.9	16.7	6.3
	18.0	7.9	18.3	84.0	5.61	64.8	103.3	4.39	11.3	71.9	51.0	0.71	4.13	86.0	17.4	6.0
80	12.0	3.0	6.9	89.7	5.72	70.2	105.8	4.59	12.1	65.3	47.4	0.73	4.93	82.1	13.2	8.3
	15.0	4.4	10.0	91.2	5.78	71.5	106.4	4.63	12.4	66.5	48.3	0.73	4.71	82.6	14.1	7.9
	18.0	7.7	17.9	92.7	5.83	72.9	107.0	4.67	12.8	67.9	49.0	0.72	4.56	83.4	14.9	7.5
90	12.0	2.8	6.4	98.4	5.89	78.3	109.4	4.90	13.6	61.6	45.8	0.74	5.39	80.0	11.4	10.4
	15.0	4.1	9.5	99.9	5.97	79.6	110.1	4.91	14.0	62.5	46.6	0.75	5.15	80.1	12.2	9.9
	18.0	7.5	17.3	101.5	6.04	80.9	110.7	4.92	14.4	63.8	47.0	0.74	4.98	80.8	12.8	9.4
100	12.0	2.5	5.9	Operation not recommended						Operation not recommended						
	15.0	3.9	9.1							59.7	44.9	0.75	5.73	79.2	10.4	12.4
	18.0	7.3	16.9							60.6	45.3	0.75	5.55	79.5	10.9	11.7
110	12.0	2.3	5.4							Operation not recommended						
	15.0	3.7	8.5							56.2	42.9	0.76	6.28	77.6	8.9	15.1
	18.0	7.1	16.4							57.4	43.5	0.76	6.11	78.2	9.4	14.3
120	12.0	2.1	4.9							Operation not recommended						
	15.0	3.5	8.1							51.9	41.4	0.80	6.98	75.7	7.4	18.2
	18.0	6.9	15.9							53.0	42.0	0.79	6.78	76.1	7.8	17.3

7/6/10

Wiring Schematics

Commercial Aurora with PSC Motor & Soft Start 208-230/60/1



Wiring Schematics cont.

Commercial Aurora with PSC Motor & Soft Start 208-230/60/1

Notes:

1 – Optional, factory installed unit mounted disconnect.
2 – Swap blue and red leads for 208V operation.
3 – Optional, factory installed internal isolation valve.

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
L1 Field Wiring Lug
Ground
Relay Contacts – N.O., N.C.
Capacitor
Fuse

Thermistor
Relay Coil
Switch - Condensate Overflow
Switch - High pressure
Switch - Low pressure
3 2 1 Polarized connector
G Light Emitting Diode - Green
Y Light Emitting Diode - Yellow
R Light Emitting Diode - Red

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

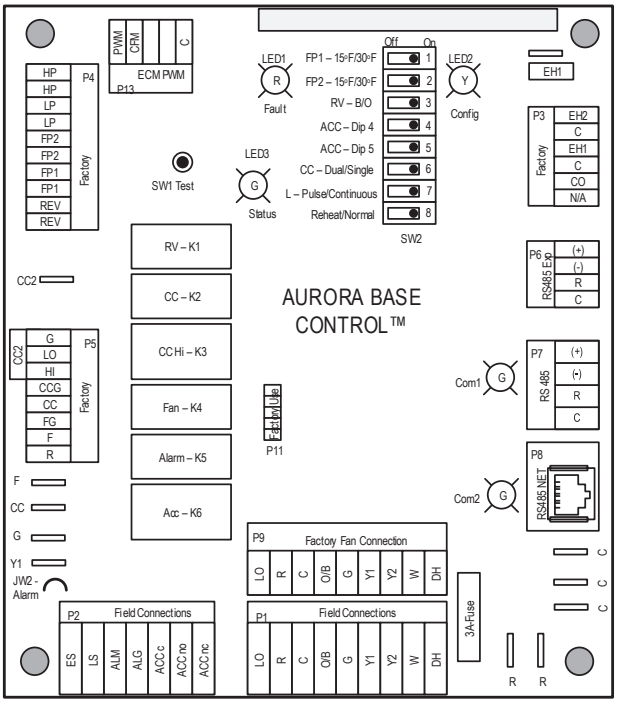
Aurora LED Flash Codes	
Slow Flash	1 second on and 1 second off
Fast Flash	100 milliseconds on and 100 milliseconds off
Flash Code	100 milliseconds on and 400 milliseconds off with a 2 second pause before repeating

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)		Fault LED (LED3, Red)	
Normal Mode	ON	No Software Overide	Flash ECM Setting	Normal Mode	OFF
Control is Non-Functional	OFF	DIP Switch Overide	Slow Flash	Input Fault Lockout	Flash Code 1
Test Mode	Slow Flash	ECM Configure Mode	Fast Flash	High Pressure Lockout	Flash Code 2
Lockout Active	Fast Flash	Reset Configure Mode	Off	Low Pressure Lockout	Flash Code 3
Dehumidification Mode	Flash Code 2			Low Air Coil Limit Lockout - FP2	Flash Code 4
Reserved	Flash Code 3			Low Water Coil Limit Lockout - FP1	Flash Code 5
Reserved	Flash Code 4			Reserved	Flash Code 6
Load Shed	Flash Code 5			Condensate Overflow Lockout	Flash Code 7
ESD	Flash Code 6			Over/Under Voltage Shutdown	Flash Code 8
Reserved	Flash Code 7			Reserved	Flash Code 9
				Reserved	Flash Code 10
				Air/Water Coil Limit Sensor Error	Flash Code 11

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

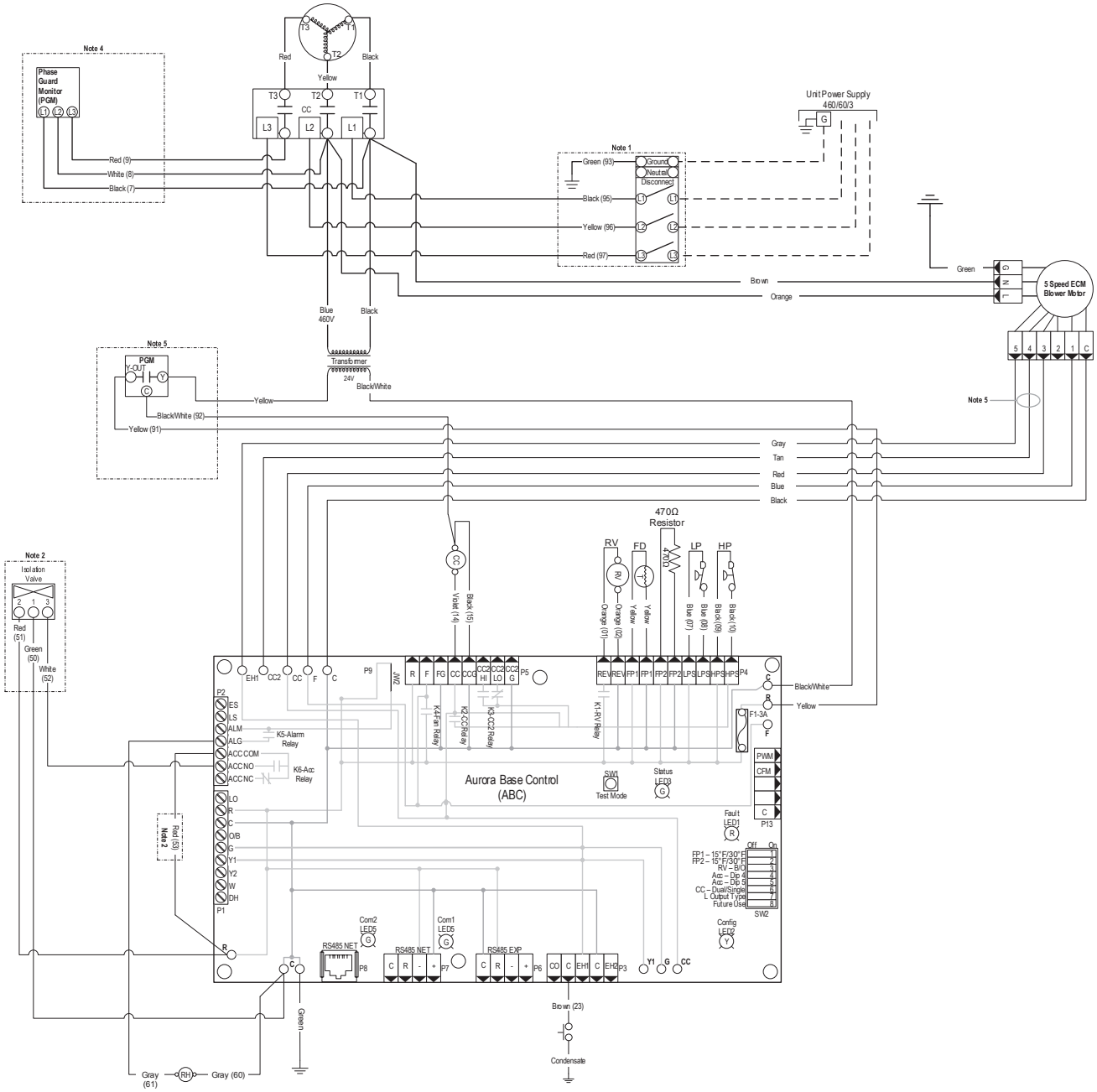
Accessory Relay		
Operation	**SW2-4**	**SW2-5**
Cycle with Blower	On	On
Cycle with Compressor	Off	Off
Water Valve Slow Open	On	Off
Outdoor Air Damper	Off	On



Wiring Schematics cont.

Wiring Schematics

Commercial Aurora Base with 5-Speed ECM and Hot Gas Reheat - 460/60/3



Wiring Schematics cont.

Wiring Schematics cont.

Commercial Aurora Base with 5-Speed ECM and Hot Gas Reheat - 460/60/3

07P819-08
10/30/12

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.
5 – Wire is provided with the unit but not connected to the 5-Speed ECM motor.

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
- L1 – Field Wiring Lug
- Ground
- Relay Contacts – N.O., N.C.
- Capacitor
- Fuse
- Thermistor
- Relay Coil
- Switch - Condensate Overflow
- Switch - High pressure
- Switch - Low pressure
- 3 2 1 – Polarized connector
- G – Light Emitting Diode - Green
- Y – Light Emitting Diode - Yellow
- R – Light Emitting Diode - Red

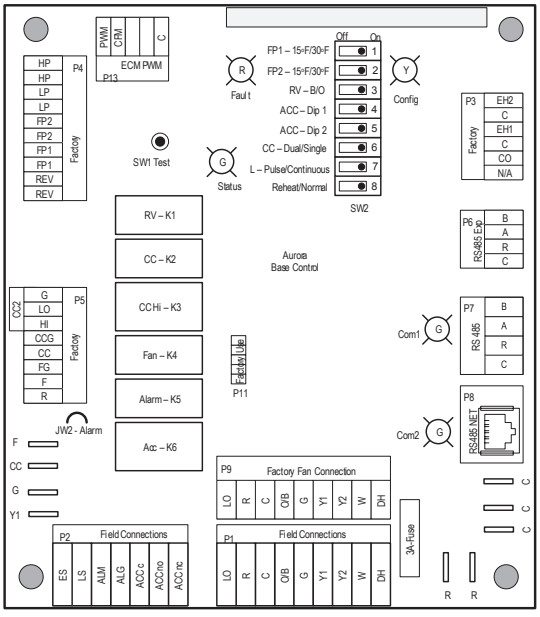
CC – Compressor Contactor
CO – Condensate Overflow Sensor
ES – Emergency Shutdown
HP – High Pressure Switch
LP – Low Pressure Switch
FD – Freeze Detection Sensor
F1 – Fuse

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

Aurora LED Flash Codes	
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)		Fault LED (LED3, Red)	
Normal Mode	ON	No Software Override	Flash ECM Setting	Normal Mode	OFF
Control is Non-Functional	OFF	DIP Switch Override	Slow Flash	Input Fault Lockout	Flash Code 1
Test Mode	Slow Flash	ECM Configure Mode	Fast Flash	High Pressure Lockout	Flash Code 2
Lockout Active	Fast Flash	Reset Configure Mode	Off	Low Pressure Lockout	Flash Code 3
Dehumidification Mode	Flash Code 2			Low Air Coil Limit Lockout - FP2	Flash Code 4
Reserved	Flash Code 3			Low Water Coil Limit Lockout - FP1	Flash Code 5
Reserved	Flash Code 4			Reserved	Flash Code 6
Load Shed	Flash Code 5			Condensate Overflow Lockout	Flash Code 7
ESD	Flash Code 6			Over/Under Voltage Shutdown	Flash Code 8
Reserved	Flash Code 7			Reserved	Flash Code 9
				Reserved	Flash Code 10
				Air/Water Coil Limit Sensor Error	Flash Code 11



Accessory Relay		
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

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Engineering Guide Specifications

General

Furnish and install York 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 upflow vertical units shall have a removable insulated divider panel between the air handling section and the compressor section to minimize the transmission of compressor noise and to permit operational service testing without air bypass. 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. Compressor motors shall be single-phase PSC with overload protection.

The air coil shall be sized for low-face velocity and constructed of lanced aluminum fins bonded to rifled aluminum tubes in a staggered pattern not less than three rows deep for enhanced performance.

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 copper 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.

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

Engineering Guide Specifications cont.

The hot gas bypass (HGB) option is designed to limit the minimum evaporating pressure in the cooling mode to prevent the air coil from icing. The option shall consist of a hot gas bypass valve installed in the discharge side of the compressor. The refrigerant control shall proportionately bypass hot gas refrigerant to the air coil when suction pressure falls below 115 psig thus limiting air coil freeze-up.

Optional AlpinePure hot gas reheat
An optional hot gas reheat coil shall be available to allow dehumidification-only operation. The internal reheat system shall be factory installed and include a high efficiency reheat coil located downstream of the evaporator coil, a reclaim valve and integral controls to allow heating, cooling and reheat/dehumidification modes. The reheat coil shall be sized so that during reheat/dehumidification mode the unit will produce neutral air (78 ±3°F DB @ 50-58% relative humidity) with typical 80 DB/67 WB °F entering air and 90°F entering water temperature. The reheat coil shall be sized to restrict airflow by no more than 0.17 in wg at 350 feet per minute airflow velocity.

The following control options are available:

Room wall dehumidistat – An optional room wall dehumidistat shall control the reheat mode thru a 24VAC 'Hum' input (On or Off). Setpoint and deadband shall be determined by the dehumidistat.

Dehumidification set point (used only with a humidity sensor) - The factory default set point for dehumidification is 52% this is field adjustable from 30% to 60%. In addition there shall be a factory default differential of 5% field adjustable from 5% to 15%. The control will enable re-heat when the space humidity rises above the set point plus the differential.

Reheat operation during periods of vacancy - The control logic contains an unoccupied set point that can be used for periods the unoccupied mode if desired. The factory default for the set point is 60% and is adjustable from 30% to 60%. The unoccupied setback must be enabled either through a building automation system or with a user interface. Factory default for unoccupied setback is off.

Space humidity high and low alarm limits (building automation system only) - The control has a high and low alarm limit that can be enumerated over a building automation system. The factory default set point for these alarm limits is 0% for the low alarm and 100% for the high alarm limit. These limits can be adjusted through a building automation system.

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 ECM models.

Electrical

A control box shall be located within the unit compressor compartment and shall contain a 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.

Optional IntelliStart® (compressor soft starter) shall be factory installed for use in applications that require low starting amps, reduced compressor startup noise, off-grid, and improved startup behavior. IntelliStart shall reduce normal starting current by 60% on 208-230/60/1 units.

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.

Engineering Guide Specifications cont.

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 009-070 shall include four 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.

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

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.

Revision Guide

Pages:	Description:	Date:	By:
Misc.	Updated Nomenclature, Wiring Schematics, AHRI Data	27 May 2016	MA
2, 20	Updated ETL Logo, Updated Pressure Drop Data	19 May 2015	MA
All	First Published	18 Oct 2013	DS