YORK®
Heating and Air Conditioning

SUBMITTAL SET

AFFINITY LOW SILL CONSOLE COMMERCIAL GEOTHERMAL/ WATER SOURCE HEAT PUMPS SINGLE CAPACITY

MODELS:
YCL09 - 18
(.75 THRU 1.5 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: _____

Affinity Low Sill Console Series
Single Capacity
.75 - 1.5 Tons 60Hz

Model Nomenclature

1-3	3	5-6	7	8	9	10	11	12	13	14	15	16-17	18
YCL	S	09	L	0	1	1	C	N	N	B	5	SS	*

Model Type
YCL – YCL Series

Cabinet Configuration
C – Chassis Only
W – Chassis with Cabinet
S – Chassis with Slope Top

Unit Capacity
09, 12, 15, 18

Piping Option
L – Left
R – Right

Voltage
0 – 208-230/60/1
2 – 265-277/60/1
9 – 115/60/1 (09 & 12 Only)

Unit Control
1 – CCM
A – Aurora™ Base Control (ABC)

Vintage
* - Factory Use Only

Non-Standard Options
SS – Standard

Air Coil/Insulation Option
5 – AlumiSeal™/Extended Range
6 – AlumiSeal™/Standard Range
7 – No Coating/Extended Range
8 – No Coating/Standard Range

Sound Kit
A – None
B – Blanket

Future Option
N – None

Future Option
N – None

Coax Option
C – Copper
N – CuproNickel

Thermostat Control
1 – Unit Mounted Thermostat
2 – Remote Wall-Mount Thermostat

NOTES: Chassis only available with left piping option.

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

AHRI Data

ECM 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
09	2.5	300	8,500	13.4	10,500	4.4	10,200	22.5	8,700	3.8	9,000	16.0	6,700	3.1
12	3.5	350	10,500	12.3	14,400	4.3	12,400	19.5	11,800	3.7	11,000	14.2	9,500	3.5
15	4.5	450	13,500	13.6	17,000	4.9	16,200	22.0	14,000	4.1	14,200	15.9	10,500	3.4
18	5.5	500	16,200	12.5	21,000	4.4	19,000	19.6	17,000	3.7	16,600	15.1	13,300	3.1

Cooling capacities based upon 80.6°F DB, 66.2°F WB entering air temperature
Heating capacities based upon 70°F DB, 59°C WB entering air temperature
All ratings based upon 208V operation

5/24/18

Voltage Availability

Voltage	Low Sill Console			
	09	12	15	18
115/60/1	•	•		
208-230/60/1	•	•	•	•
265/60/1	•	•	•	•

6/10/13

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

Intertek

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

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

Contractor: _____ P.O.: _____

Engineer: _____

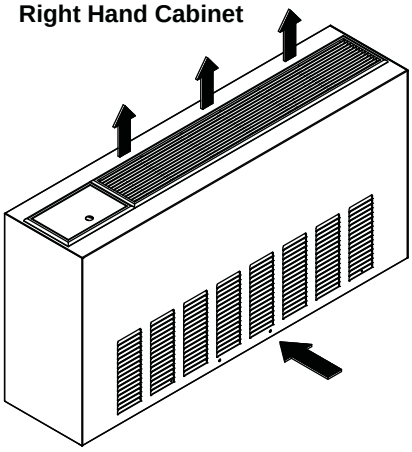
Project Name: _____ Unit Tag: _____

Affinity Low Sill Console Series
Single Capacity
.75 - 1.5 Tons 60Hz

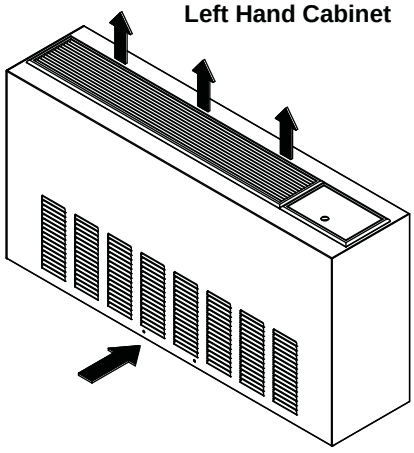
Dimensional Data - Flat Top Cabinet

YCLW09-18

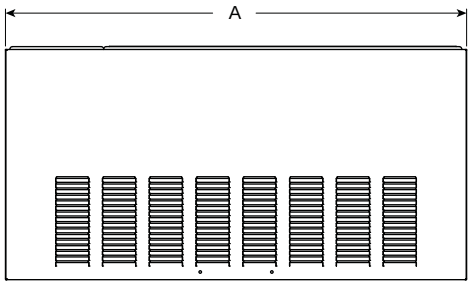
Right Hand Cabinet



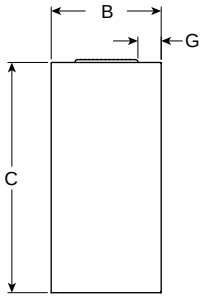
Left Hand Cabinet



TOP



FRONT



SIDE

Right return cabinet shown in dimensional views

Flat Top Configuration		Overall Cabinet			Grille			
		A	B	C	D	E	F	G
		Width	Depth	Height	Grille Lid	Grille Length	Grille Width	
09-12	in.	45.1	10.8	22.5	9.2	35.0	6.1	2.3
	cm.	114.6	27.4	57.2	23.4	88.9	15.6	5.8
15-18	in.	50.0	12.8	22.5	9.2	35.0	6.1	3.3
	cm.	127.0	32.4	57.2	23.4	88.9	15.6	8.3

Contractor: _____ P.O.: _____

Engineer: _____

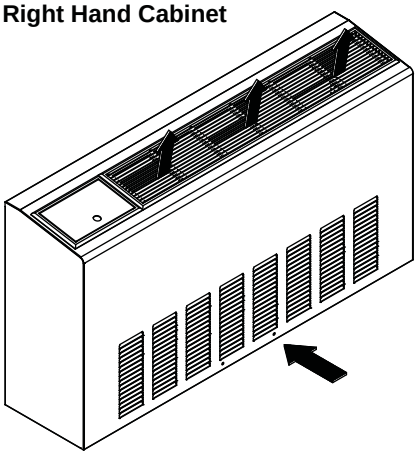
Project Name: _____ Unit Tag: _____

Affinity Low Sill Console Series
Single Capacity
.75 - 1.5 Tons 60Hz

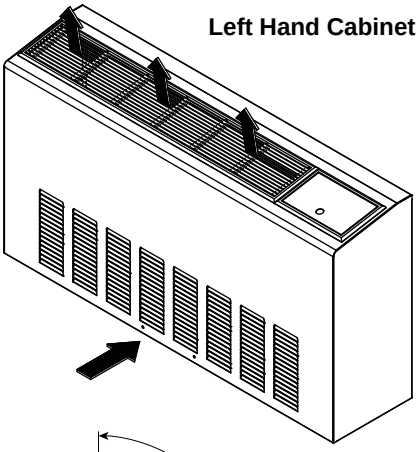
Dimensional Data - Slope Top Cabinet

YCLS09-18

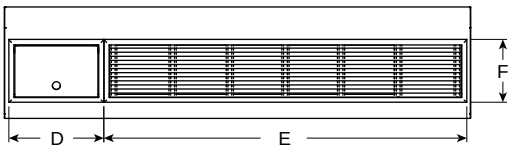
Right Hand Cabinet

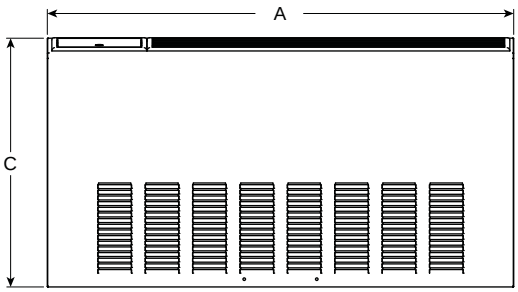


Left Hand Cabinet



TOP





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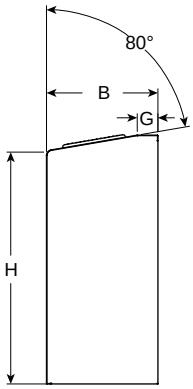


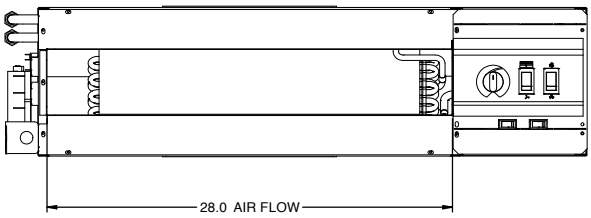
SIDE

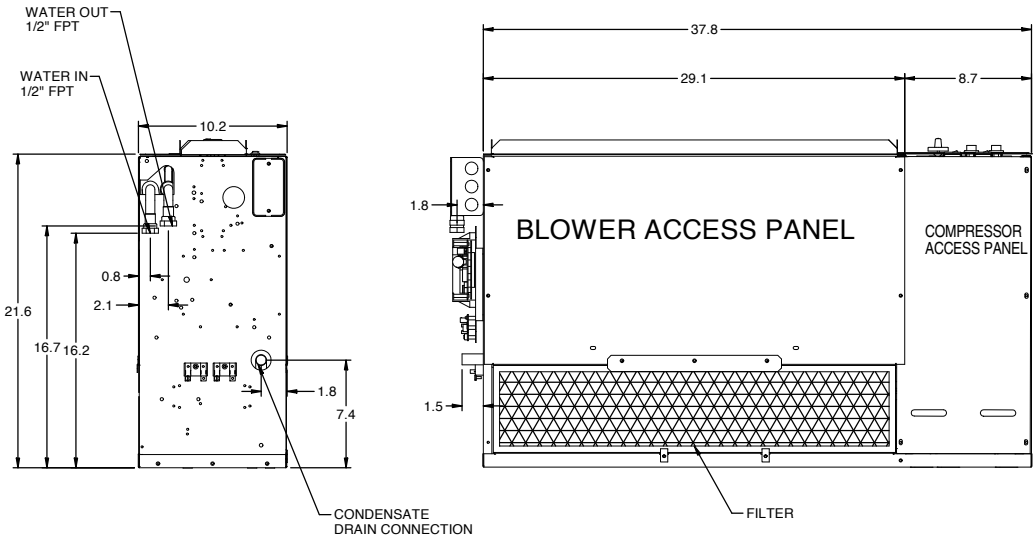
Right return cabinet shown in dimensional views

Slope Top Configuration		Overall Cabinet			Grille				
		A	B	C	D	E	F	G	H
		Width	Depth	Height	Grille Lid	Grille Length	Grille Width		
09-12	in.	45.1	10.8	24.0	9.2	35.0	6.1	2.0	22.4
	cm.	114.6	27.4	61.0	23.4	88.9	15.6	5.1	56.9
15-18	in.	50.0	12.8	24.0	9.2	35.0	6.1	2.0	22.5
	cm.	127.0	32.4	61.0	23.4	88.9	15.6	5.1	57.2

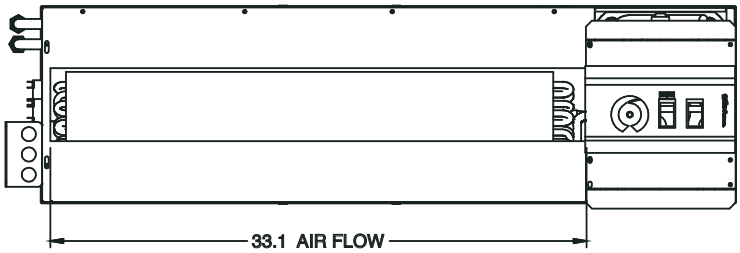
Dimensional Data - Chassis

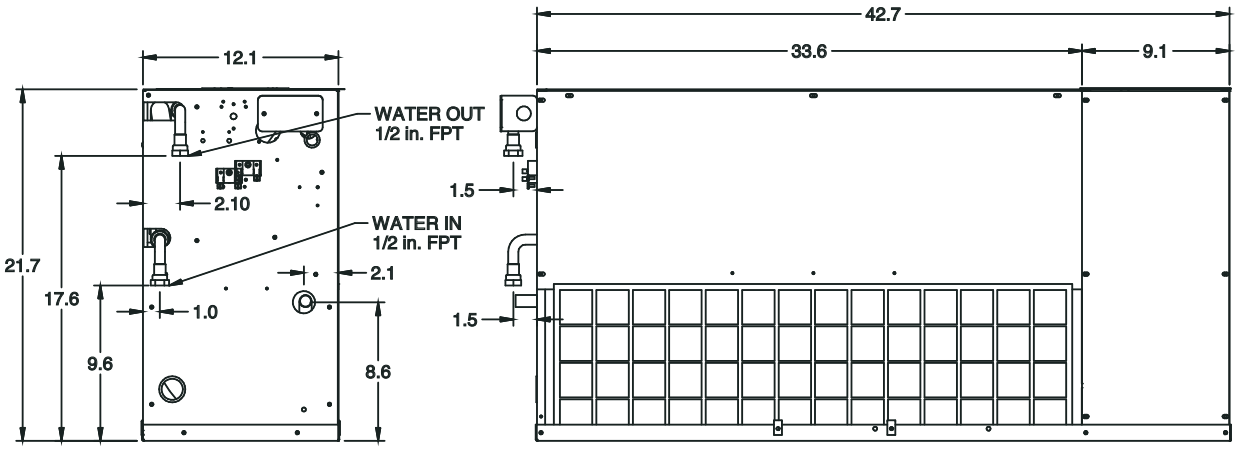
YCL09-12





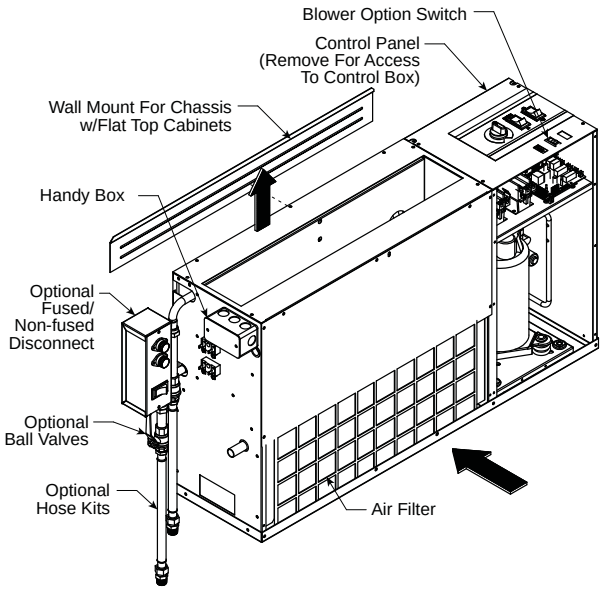
YCLC15-18



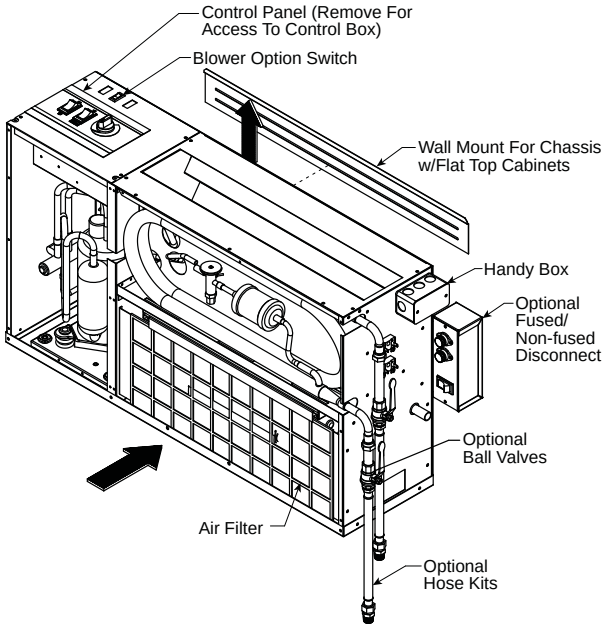


Dimensional Data - Controls Detail: Flat Top Chassis

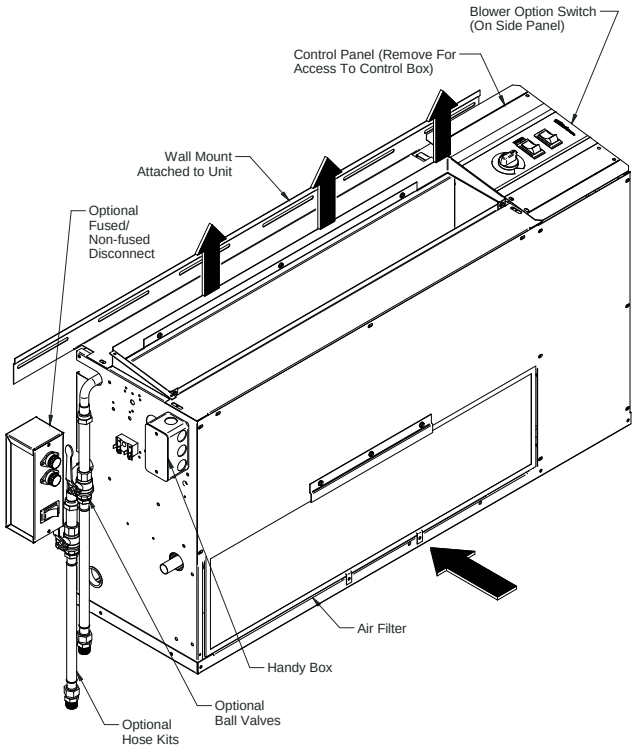
Left Return

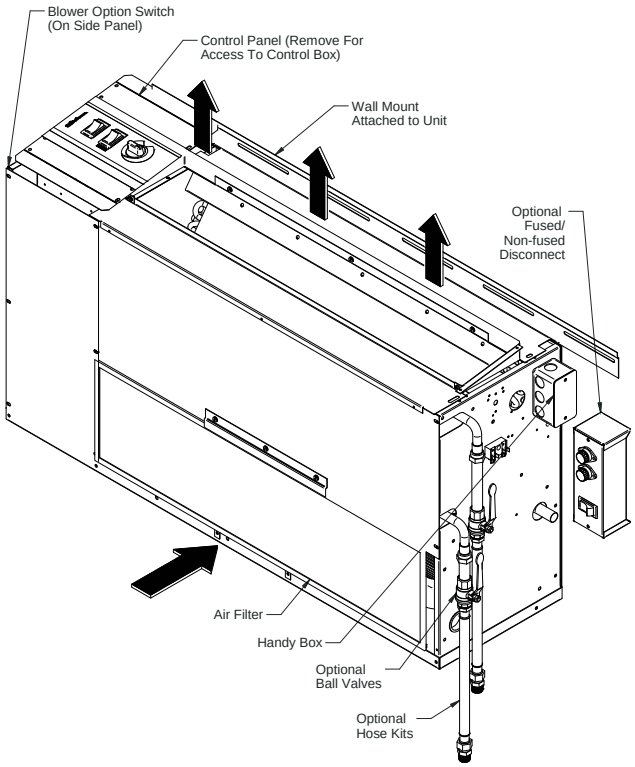


Right Return



Dimensional Data - Controls Detail: Slope Top Chassis





Physical Data

Model		Console			
		09	**12**	**15**	**18**
Compressor (1 each)		Rotary			
Factory Charge R410A, oz [kg]		27 [0.77]	27 [0.77]	36 [1.02]	34 [0.96]
Blower Motor & Blower					
Blower Motor Type/Speeds	ECM	3 Speeds			
Blower Motor - hp [W]	ECM	0.25 [186]	0.25 [186]	0.25 [186]	0.25 [186]
Blower Wheel Size (Dia x W), in. [mm]	ECM	5.75 x 5.5 [146 x 140]	5.75 x 5.5 [146 x 140]	6.0 x 6.5 [152 x 165]	6.0 x 6.5 [152 x 165]
Coax and Water Piping					
Water Connection Size - FPT - in [mm]		1/2" [12.7]	1/2" [12.7]	1/2" [12.7]	1/2" [12.7]
Coax & Piping Water Volume - gal [l]		0.15 [0.6]	0.18 [0.7]	0.15 [0.6]	0.18 [0.7]
Air Coil					
Air Coil Dimensions (H x W), in. [mm]		8 x 22 [203 x 559]	8 x 22 [203 x 559]	8 x 30 [203 x 762]	8 x 30 [203 x 762]
Air Coil Total Face Area, ft2 [m2]		1.2 [0.114]	1.2 [0.114]	1.7 [0.16]	1.7 [0.16]
Air Coil Tube Size, in [mm]		3/8 [9.5]	3/8 [9.5]	3/8 [9.5]	3/8 [9.5]
Air Coil Number of rows		3	3	4	4
Filter Standard - Throwaway, in [mm]		23 x 9.6 [584 x 244]	23 x 9.6 [584 x 244]	32 x 9.6 [813 x 244]	32 x 9.6 [813 x 244]
Weight - Packaged, lb [kg]		200 [91]	205 [93]	215 [98]	220 [100]

5/24/2018

Blower Performance Data

Model	CFM		
	Low Speed	Medium Speed	High Speed
09	300	325	400
12	300	325	400
15	350	450	600
18	350	450	600

Factory settings are in Bold 5/24/2018

Air flow values are with dry coil and standard filter

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

Electrical Data

Model	Rated Voltage	Voltage Min/Max	Compressor			Fan Motor FLA	Total Unit FLA	Min Circ Amp	Max Fuse/ HACR
			MCC	RLA	LRA				
09	115/60/1	104/127	12.5	8.0	50.0	4.25	12.3	14.3	20
	208-230/60/1	187/253	6.4	4.1	21.0	2.6	6.7	7.7	10/15
	265/60/1	238/292	6.7	4.3	22.0	2.5	6.8	7.9	10/15
12	115/60/1	104/127	14.8	9.5	50.0	4.25	13.8	16.1	25
	208-230/60/1	187/253	7.7	4.9	25.0	2.6	7.5	8.8	10/15
	265/60/1	238/292	7.0	4.5	22.0	2.5	7.0	8.1	10/15
15	208-230/60/1	187/253	9.2	5.9	29.0	2.6	8.5	10.0	15
	265/60/1	238/292	7.8	5.0	28.0	2.5	7.5	8.8	10/15
18	208-230/60/1	187/253	10.4	6.7	33.5	2.6	9.3	10.9	15
	265/60/1	238/292	8.7	5.6	28.0	2.5	8.1	9.5	15

HACR circuit breaker in USA only 5/24/18

Pressure Drop

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
09	1.2	1.0	0.9	0.8	0.7	0.6
	1.8	2.3	2.2	2.0	1.9	1.8
	2.5	3.8	3.7	3.5	3.3	3.1
12	1.5	0.9	0.8	0.7	0.6	0.5
	2.3	1.7	1.5	1.4	1.3	1.1
	3.5	3.0	2.7	2.5	2.4	2.2
15	2.0	1.7	1.6	1.5	1.4	1.3
	3.0	3.3	3.2	3.0	2.9	2.8
	4.5	5.7	5.5	5.3	5.1	4.9
18	3.0	1.7	1.6	1.5	1.4	1.3
	4.0	4.1	4.0	3.9	3.7	3.6
	5.5	7.9	7.6	7.4	7.2	6.9

6/10/13

Antifreeze Corrections

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.*

Correction Factor Tables

Cooling Capacity Corrections

Entering Air WB ºF	Total Clg Cap	Sensible Cooling Capacity Multipliers - Entering DB ºF										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 ºF	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

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

YCL*09 - Performance Data

Single Speed ECM (300 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	TC Mbtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	1.2	1.1	2.5	Operation not recommended					Operation not recommended					
	1.8	2.4	5.5											
	2.5	3.8	8.8	6.3	0.67	4.0	87.3	2.74						
30	1.2	1.0	2.3	Operation not recommended					Operation not recommended					
	1.8	2.3	5.3	7.5	0.72	5.0	91.0	3.02	12.2	8.1	0.67	0.50	13.9	24.3
	2.5	3.8	8.8	7.4	0.72	5.0	90.9	3.02	12.4	8.3	0.67	0.47	14.0	26.2
40	1.2	1.0	2.3	Operation not recommended					Operation not recommended					
	1.8	2.3	5.3	8.3	0.75	5.7	93.6	3.26	11.6	7.9	0.68	0.56	13.5	20.8
	2.5	3.8	8.8	8.5	0.75	5.9	94.2	3.32	11.9	8.1	0.68	0.52	13.7	22.7
50	1.2	0.9	2.1	8.8	0.76	6.2	95.3	3.41	10.7	7.5	0.70	0.65	12.9	16.5
	1.8	2.2	5.1	9.2	0.77	6.6	96.3	3.50	11.0	7.7	0.70	0.61	13.1	17.9
	2.5	3.7	8.5	9.6	0.78	6.9	97.6	3.60	11.4	7.9	0.69	0.58	13.4	19.8
60	1.2	0.9	2.1	9.9	0.79	7.2	98.4	3.68	10.1	7.2	0.72	0.71	12.5	14.4
	1.8	2.1	4.9	10.3	0.79	7.6	99.7	3.79	10.4	7.4	0.71	0.67	12.7	15.5
	2.5	3.6	8.3	10.7	0.81	8.0	101.1	3.91	10.8	7.6	0.71	0.64	13.0	17.0
70	1.2	0.8	1.8	10.9	0.81	8.1	101.6	3.94	9.5	7.0	0.73	0.76	12.1	12.5
	1.8	2.0	4.6	11.3	0.82	8.5	103.0	4.06	9.9	7.2	0.73	0.73	12.4	13.5
	2.5	3.5	8.1	11.9	0.83	9.0	104.6	4.19	10.3	7.4	0.72	0.70	12.6	14.8
80	1.2	0.8	1.8	12.2	0.82	9.4	105.6	4.33	9.1	6.8	0.75	0.82	11.9	11.0
	1.8	2.0	4.6	12.5	0.83	9.7	106.6	4.39	9.3	6.9	0.74	0.79	12.0	11.9
	2.5	3.4	7.9	12.9	0.85	10.0	107.7	4.47	9.6	7.1	0.74	0.76	12.2	12.6
90	1.2	0.7	1.6	13.5	0.84	10.6	109.5	4.70	8.7	6.7	0.77	0.90	11.8	9.7
	1.8	1.9	4.4	13.7	0.85	10.8	110.2	4.71	8.8	6.7	0.76	0.86	11.7	10.3
	2.5	3.3	7.6	13.9	0.86	10.9	110.8	4.73	9.0	6.8	0.76	0.83	11.8	10.9
100	1.2	0.7	1.6	Operation not recommended					Operation not recommended					
	1.8	1.8	4.2						8.2	6.5	0.79	0.93	11.4	8.8
	2.5	3.2	7.4						8.3	6.6	0.79	0.90	11.4	9.3
110	1.2	0.6	1.4						Operation not recommended					
	1.8	1.8	4.2						7.5	6.2	0.83	1.00	10.9	7.5
	2.5	3.1	7.2						7.7	6.3	0.82	0.97	11.0	7.9
120	1.2	0.6	1.4						Operation not recommended					
	1.8	1.7	3.9						6.8	5.8	0.86	1.08	10.4	6.2
	2.5	3.0	6.9						6.9	5.9	0.86	1.05	10.5	6.6

6/20/11

YCL*12 - Performance Data

Single Speed ECM (340 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	TC Mbtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	1.5	1.0	2.3	Operation not recommended					Operation not recommended					
	2.3	1.7	3.9											
	3.5	3.2	7.4	8.1	0.85	5.2	90.1	2.80						
30	1.5	0.9	2.1	Operation not recommended					Operation not recommended					
	2.3	1.7	3.9	9.3	0.89	6.3	93.3	3.07	14.2	8.8	0.62	0.62	16.3	22.8
	3.5	3.0	6.9	9.3	0.91	6.2	93.3	2.99	14.3	9.0	0.63	0.58	16.3	24.6
40	1.5	0.9	2.1	Operation not recommended					Operation not recommended					
	2.3	1.6	3.7	10.3	0.92	7.1	96.0	3.28	13.5	8.6	0.63	0.68	15.8	19.7
	3.5	2.9	6.7	10.6	0.94	7.4	96.8	3.30	13.9	8.8	0.63	0.64	16.1	21.7
50	1.5	0.8	1.8	11.0	0.94	7.8	97.9	3.43	12.5	8.1	0.65	0.78	15.2	15.9
	2.3	1.5	3.5	11.3	0.95	8.1	98.9	3.49	12.9	8.3	0.65	0.75	15.4	17.2
	3.5	2.7	6.2	11.9	0.97	8.6	100.3	3.59	13.4	8.6	0.64	0.70	15.8	19.2
60	1.5	0.8	1.8	12.2	0.98	8.9	101.4	3.68	11.9	7.9	0.66	0.85	14.8	13.9
	2.3	1.4	3.2	12.6	0.99	9.2	102.3	3.74	12.2	8.0	0.66	0.82	15.0	14.9
	3.5	2.6	6.0	13.2	1.01	9.7	103.8	3.84	12.7	8.3	0.65	0.77	15.4	16.5
70	1.5	0.7	1.6	13.5	1.01	10.1	104.8	3.92	11.3	7.6	0.67	0.92	14.4	12.2
	2.3	1.4	3.2	13.9	1.02	10.4	105.8	3.98	11.6	7.8	0.67	0.89	14.6	13.0
	3.5	2.5	5.8	14.4	1.04	10.9	107.3	4.07	12.1	8.0	0.67	0.85	14.9	14.2
80	1.5	0.7	1.6	14.9	1.07	11.2	108.5	4.09	10.7	7.4	0.69	1.00	14.1	10.7
	2.3	1.3	3.0	15.2	1.08	11.5	109.3	4.12	11.0	7.6	0.69	0.95	14.2	11.5
	3.5	2.5	5.8	15.6	1.10	11.8	110.4	4.17	11.3	7.7	0.68	0.92	14.5	12.2
90	1.5	0.6	1.4	16.2	1.12	12.4	112.2	4.24	10.2	7.3	0.72	1.08	13.9	9.4
	2.3	1.3	3.0	16.5	1.14	12.6	112.8	4.25	10.3	7.4	0.72	1.03	13.9	10.0
	3.5	2.4	5.5	16.7	1.15	12.8	113.5	4.26	10.6	7.5	0.71	1.00	14.0	10.6
100	1.5	0.6	1.4	Operation not recommended					Operation not recommended					
	2.3	1.2	2.8						9.6	7.1	0.74	1.12	13.5	8.6
	3.5	2.3	5.3						9.8	7.1	0.73	1.09	13.5	9.0
110	1.5	0.5	1.2						Operation not recommended					
	2.3	1.1	2.5						8.8	6.7	0.76	1.21	12.9	7.3
	3.5	2.2	5.1						9.0	6.8	0.76	1.18	13.0	7.7
120	1.5	0.5	1.2						Operation not recommended					
	2.3	1.1	2.5						7.9	6.4	0.80	1.31	12.4	6.0
	3.5	2.1	4.9						8.1	6.5	0.80	1.27	12.4	6.4

6/20/11

YCL*15 - Performance Data

3-Speed ECM (450 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	TC Mbtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	2.0	1.5	3.5	Operation not recommended					Operation not recommended					
	3.0	5.1	11.8											
	4.5	6.1	14.2	9.7	1.05	6.2	88.0	2.72						
30	2.0	1.5	3.5	Operation not recommended					Operation not recommended					
	3.0	5.0	11.6	12.5	1.10	8.8	93.8	3.33	17.0	11.9	0.70	0.71	19.4	23.7
	4.5	6.0	13.9	11.1	1.08	7.4	90.8	3.02	17.2	12.2	0.71	0.67	19.5	25.6
40	2.0	1.4	3.2	Operation not recommended					Operation not recommended					
	3.0	4.9	11.3	13.5	1.11	9.7	95.8	3.55	16.9	11.8	0.70	0.78	19.6	21.7
	4.5	5.9	13.6	13.1	1.11	9.4	95.0	3.48	17.2	12.0	0.70	0.73	19.7	23.7
50	2.0	1.4	3.2	14.1	1.12	10.3	97.0	3.70	16.7	11.7	0.70	0.88	19.7	18.9
	3.0	4.8	11.1	14.5	1.12	10.7	97.9	3.79	16.9	11.7	0.69	0.84	19.8	20.1
	4.5	5.8	13.4	15.2	1.13	11.3	99.2	3.92	17.3	11.8	0.69	0.79	19.9	22.0
60	2.0	1.3	3.0	15.2	1.13	11.4	99.3	3.95	15.7	11.5	0.74	0.97	19.0	16.2
	3.0	4.7	10.9	15.7	1.13	11.8	100.3	4.05	15.8	11.6	0.73	0.93	19.0	17.0
	4.5	5.7	13.2	16.4	1.14	12.5	101.7	4.20	16.1	11.7	0.73	0.88	19.1	18.4
70	2.0	1.3	3.0	16.3	1.14	12.4	101.6	4.19	14.6	11.4	0.78	1.05	18.2	13.8
	3.0	4.6	10.6	16.8	1.14	12.9	102.7	4.31	14.7	11.5	0.78	1.02	18.2	14.5
	4.5	5.5	12.7	17.6	1.15	13.7	104.3	4.49	14.9	11.6	0.77	0.97	18.2	15.5
80	2.0	1.2	2.8	18.3	1.14	14.4	105.7	4.71	15.1	10.9	0.72	1.15	19.1	13.2
	3.0	4.5	10.4	18.7	1.15	14.8	106.6	4.77	15.3	11.0	0.72	1.10	19.1	14.0
	4.5	5.4	12.5	19.3	1.16	15.3	107.7	4.87	15.6	11.1	0.71	1.06	19.2	14.7
90	2.0	1.2	2.8	20.3	1.14	16.4	109.8	5.22	15.7	10.4	0.66	1.25	19.9	12.5
	3.0	4.4	10.2	20.6	1.16	16.7	110.5	5.23	15.9	10.5	0.66	1.19	20.0	13.3
	4.5	5.3	12.2	20.9	1.17	17.0	111.1	5.25	16.2	10.6	0.65	1.16	20.2	14.1
100	2.0	1.2	2.8	Operation not recommended					Operation not recommended					
	3.0	4.3	9.9						15.0	10.1	0.68	1.32	19.4	11.4
	4.5	5.2	12.0						15.2	10.2	0.67	1.27	19.5	11.9
110	2.0	1.1	2.5						Operation not recommended					
	3.0	4.2	9.7						13.8	9.7	0.70	1.43	18.7	9.7
	4.5	5.1	11.8						14.1	9.8	0.69	1.39	18.9	10.1
120	2.0	1.1	2.5						Operation not recommended					
	3.0	4.1	9.5						12.7	9.3	0.73	1.56	18.0	8.1
	4.5	5.0	11.6						13.0	9.4	0.73	1.52	18.2	8.5

6/10/13

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

YCL*18 - Performance Data

3-Speed ECM (600 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	TC Mbtu/h	SC MBtu/h	S/T Ratio	Power kW	HR MBtu/h	EER
20	3.0	3.3	7.6	Operation not recommended					Operation not recommended					
	4.0	5.4	12.5											
	5.5	9.2	21.3	11.5	1.32	7.0	89.2	2.55						
30	3.0	3.2	7.4	Operation not recommended					Operation not recommended					
	4.0	5.3	12.2	14.1	1.34	9.5	94.2	3.09	20.2	12.6	0.62	0.93	23.4	21.7
	5.5	9.0	20.8	13.2	1.35	8.5	92.4	2.85	20.5	12.8	0.63	0.88	23.5	23.4
40	3.0	3.1	7.2	Operation not recommended					Operation not recommended					
	4.0	5.1	11.8	15.6	1.39	10.8	96.9	3.28	20.3	13.2	0.65	0.98	23.6	20.6
	5.5	9.1	21.0	15.4	1.41	10.6	96.5	3.20	20.5	13.4	0.65	0.94	23.7	21.9
50	3.0	3.0	6.9	16.9	1.44	12.0	99.3	3.43	20.2	13.8	0.68	1.06	23.8	19.0
	4.0	5.0	11.6	17.2	1.45	12.2	99.8	3.47	20.3	13.9	0.68	1.04	23.9	19.6
	5.5	8.9	20.6	17.6	1.46	12.6	100.5	3.53	20.5	14.0	0.68	1.00	23.9	20.6
60	3.0	2.9	6.7	18.7	1.50	13.6	102.7	3.66	18.9	13.5	0.71	1.18	22.9	16.1
	4.0	4.8	11.1	19.0	1.50	13.9	103.2	3.70	19.0	13.5	0.71	1.15	22.9	16.5
	5.5	8.6	19.9	19.5	1.51	14.3	104.0	3.77	19.1	13.6	0.71	1.11	22.9	17.3
70	3.0	2.8	6.5	20.6	1.56	15.2	106.1	3.87	17.6	13.1	0.75	1.29	22.0	13.6
	4.0	4.7	10.9	20.9	1.56	15.5	106.7	3.92	17.6	13.1	0.75	1.26	21.9	14.0
	5.5	8.3	19.2	21.4	1.57	16.0	107.5	3.99	17.7	13.2	0.74	1.21	21.9	14.6
80	3.0	2.7	6.2	21.8	1.56	16.4	108.3	4.08	16.5	12.7	0.77	1.44	21.4	11.5
	4.0	4.5	10.4	22.1	1.58	16.7	109.0	4.11	16.6	12.8	0.77	1.37	21.3	12.1
	5.5	8.0	18.5	22.5	1.59	17.1	109.7	4.15	16.8	12.8	0.76	1.33	21.4	12.7
90	3.0	2.6	6.0	23.0	1.57	17.6	110.6	4.29	15.4	12.3	0.80	1.56	20.7	9.8
	4.0	4.3	9.9	23.4	1.59	17.9	111.3	4.30	15.6	12.4	0.79	1.49	20.7	10.5
	5.5	7.7	17.8	23.7	1.61	18.2	111.9	4.31	15.9	12.5	0.78	1.44	20.9	11.1
100	3.0	2.5	5.8	Operation not recommended					Operation not recommended					
	4.0	4.2	9.7						14.6	11.8	0.81	1.63	20.1	9.0
	5.5	7.5	17.3						14.8	11.9	0.81	1.58	20.2	9.4
110	3.0	2.4	5.5						Operation not recommended					
	4.0	4.0	9.2						13.4	11.2	0.84	1.76	19.4	7.6
	5.5	7.2	16.6						13.7	11.4	0.83	1.71	19.5	8.0
120	3.0	2.3	5.3						Operation not recommended					
	4.0	3.9	9.0						12.0	10.8	0.90	1.92	18.5	6.2
	5.5	6.9	15.9						12.2	10.9	0.89	1.86	18.6	6.6

6/10/13

Contractor: _____ P.O.: _____

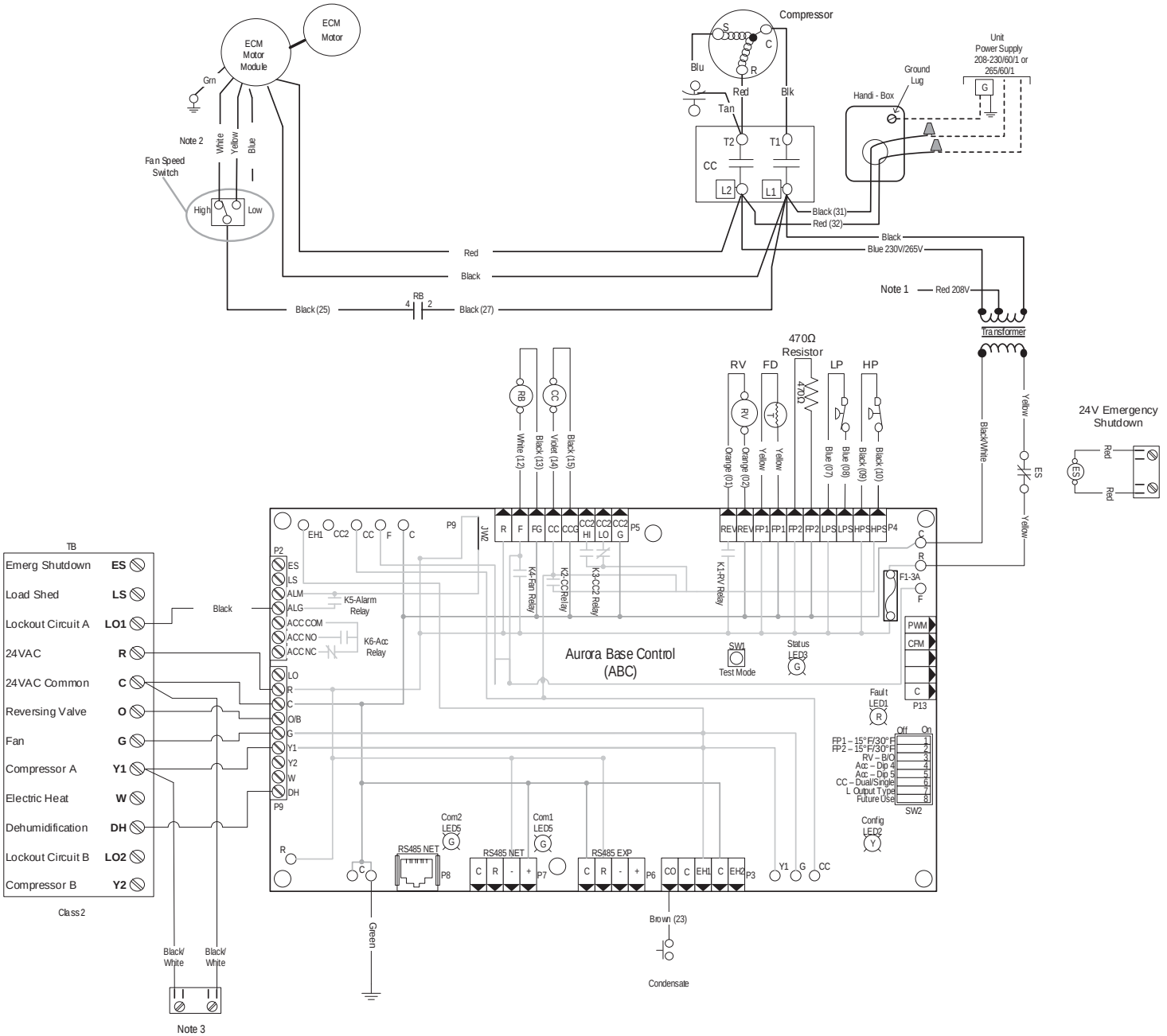
Engineer: _____

Project Name: _____ Unit Tag: _____

Affinity Low Sill Console Series
Single Capacity
.75 - 1.5 Tons 60Hz

Wiring Schematics

ABC - ECM with Remote Stat - 208-230-265/60/1



Wiring Schematics cont.

ABC - ECM with Remote Stat - 208-230-265/60/1

Notes:

1 – Swap blue and red leads for 208V operation.
2 – Factory wired. Refer to blower table settings.
3 - When field installed 24VAC motorized valve is used, connect to C and Y.

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

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

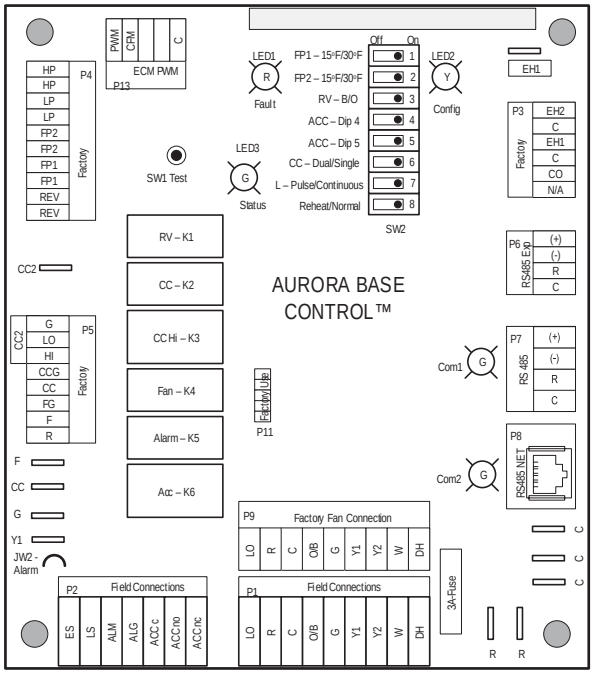
Chart 1		
Blower Settings		
	High	Low
YCL *09	Yellow	White
YCL *12	Blue	Yellow
YCL *15	Yellow	White
YCL *18	Blue	Yellow

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
- Temperature Switch
- 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
- Wire nut

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
PB – Power Block
RB – Blower Relay
RV – Reversing Valve Coil



Wiring Schematics cont.

CCM - with ECM Motor and Unit Mounted Thermostat - 208-230-265/60/1

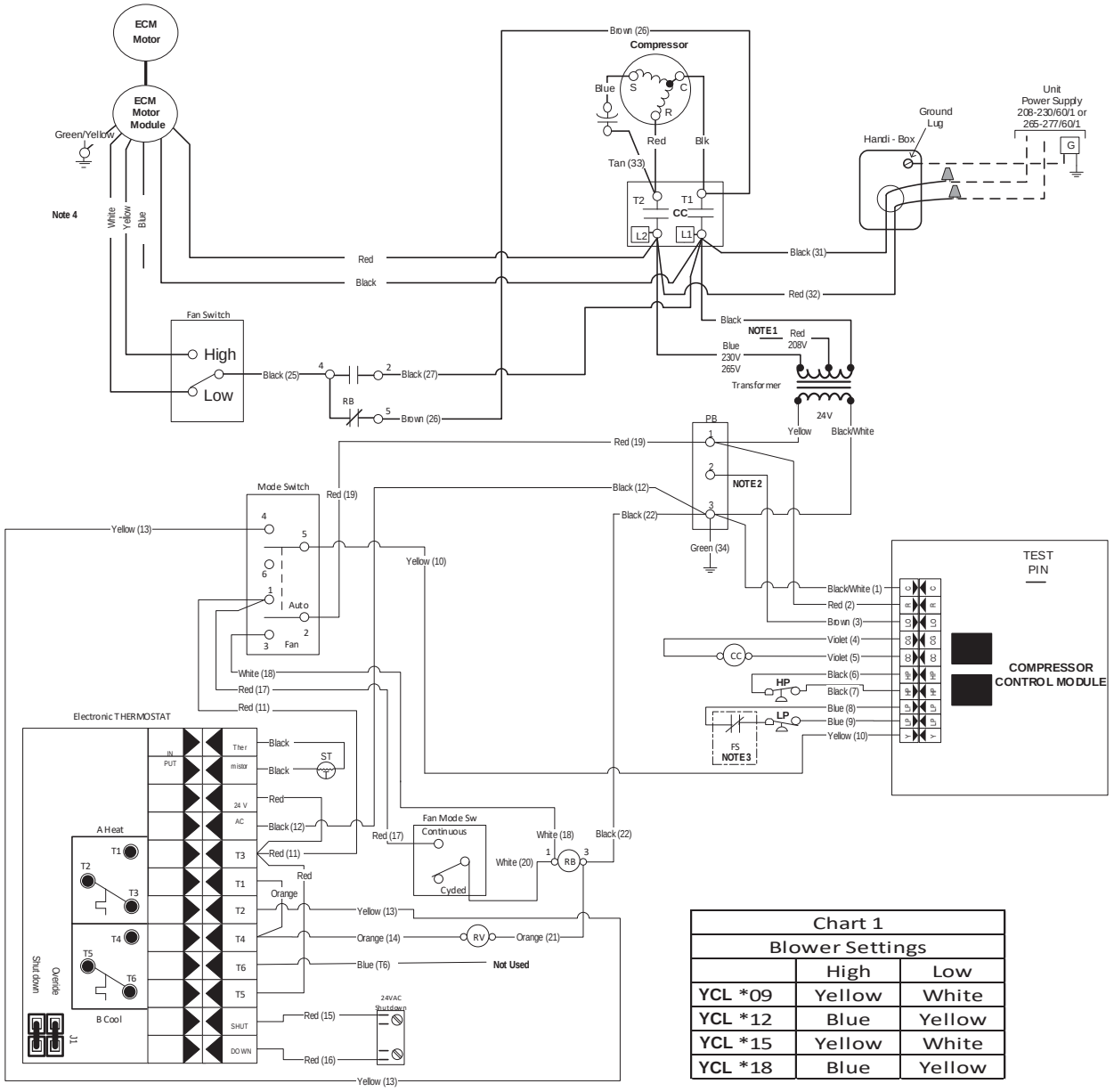


Chart 1		
Blower Settings		
	High	Low
YCL *09	Yellow	White
YCL *12	Blue	Yellow
YCL *15	Yellow	White
YCL *18	Blue	Yellow

Legend

- Factory low voltage wiring
- Factory line voltage wiring
- Field low voltage wiring
- Field line voltage wiring
- Quick connect terminal
- Wire nut

CC - Compressor Contactor
DT - Damper Terminal Block
FS - Freeze Sensing Device
HP - High Pressure Switch
LP - Low Pressure Switch
PB - Power Block
RB - Blower Relay
RV - Reversing Valve Coil
ST - Entering Air Temperature Sensor

- L1 — Field wire lug
- Earth Ground
- Relay Contacts - N.O., N.C.
- P — Polarized connector
- HP — Switch - High Pressure
- LP — Switch - Low Pressure
- Relay coil
- Capacitor
- Thermistor
- Temperature Switch

Notes:

1. Switch Red and Blue wires for 208 volt operation
2. Terminal C of 24 V PB is used as "L" output for Brown wire 3 for Lockout.
3. Optional field installed freeze sensing device.
4. Factory wired. Refer to blower table settings.

Wiring Schematics cont.

CCM - Low Sill with Remote Stat and ECM Motor - 208-230-265/60/1

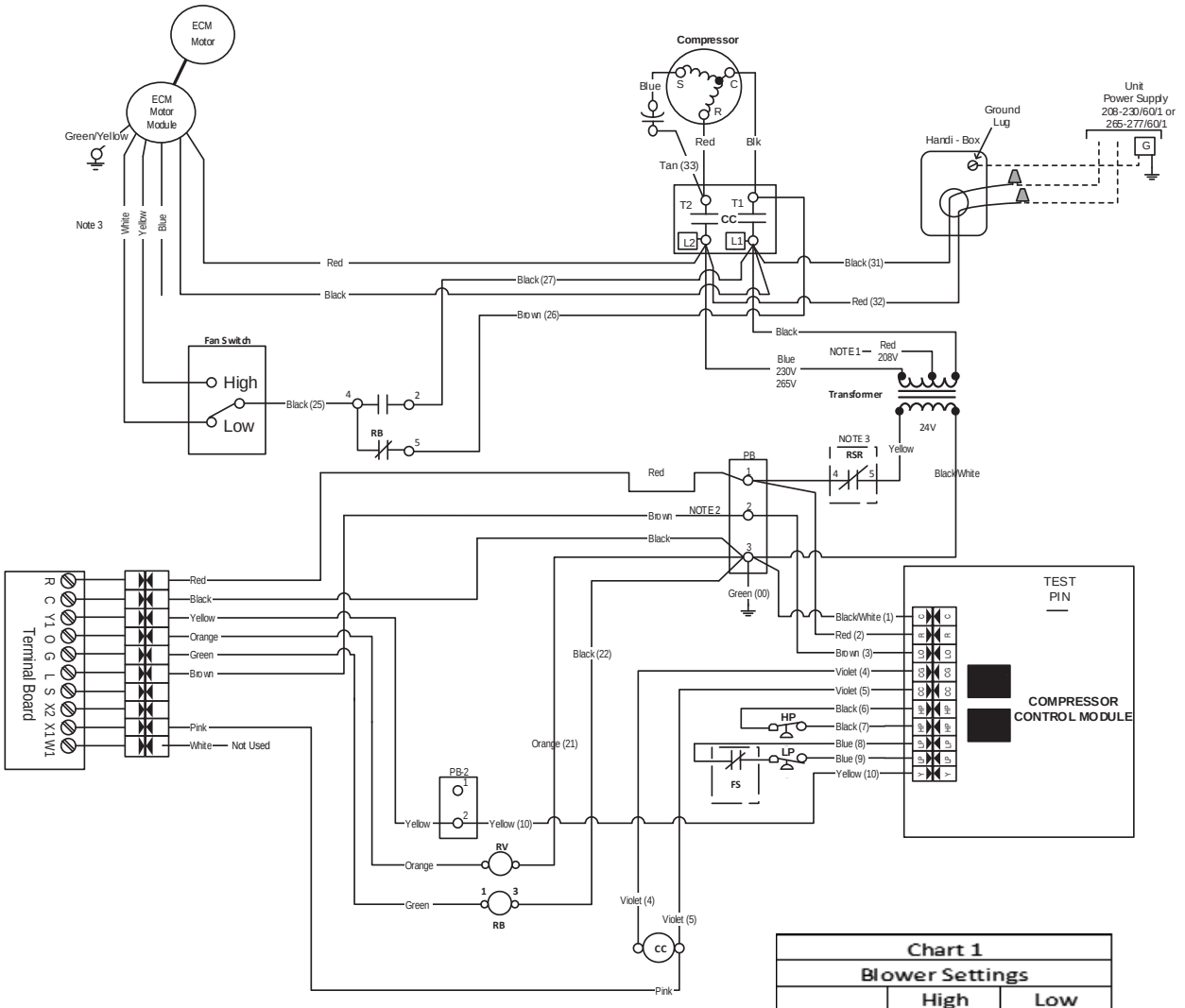


Chart 1		
Blower Settings		
	High	Low
YCL*09	Yellow	White
YCL*12	Blue	Yellow
YCL*15	Yellow	White
YCL*18	Blue	Yellow

Legend

- Factory low voltage wiring
- Factory line voltage wiring
- Factory low voltage wiring
- Factory line voltage wiring
- Quick connect terminal
- Wire nut

CC - Compressor Contactor
DT - Damper Terminal Block
FS - Freeze Sensing Device
HP - High Pressure Switch
LP - Low Pressure Switch
PB - Power Block
RB - Blower Relay
RSR – Remote Start/Stop Relay
RV - Reversing Valve Coil
ST - Entering Air Temperature Sensor

- L1 — Wiring lug
- Ground
- Relay Contacts - N.O., N.C.
- HP — Switch - High Pressure
- LP — Switch - Low Pressure
- Relay coil
- Capacitor
- T — Thermistor
- Temperature Switch

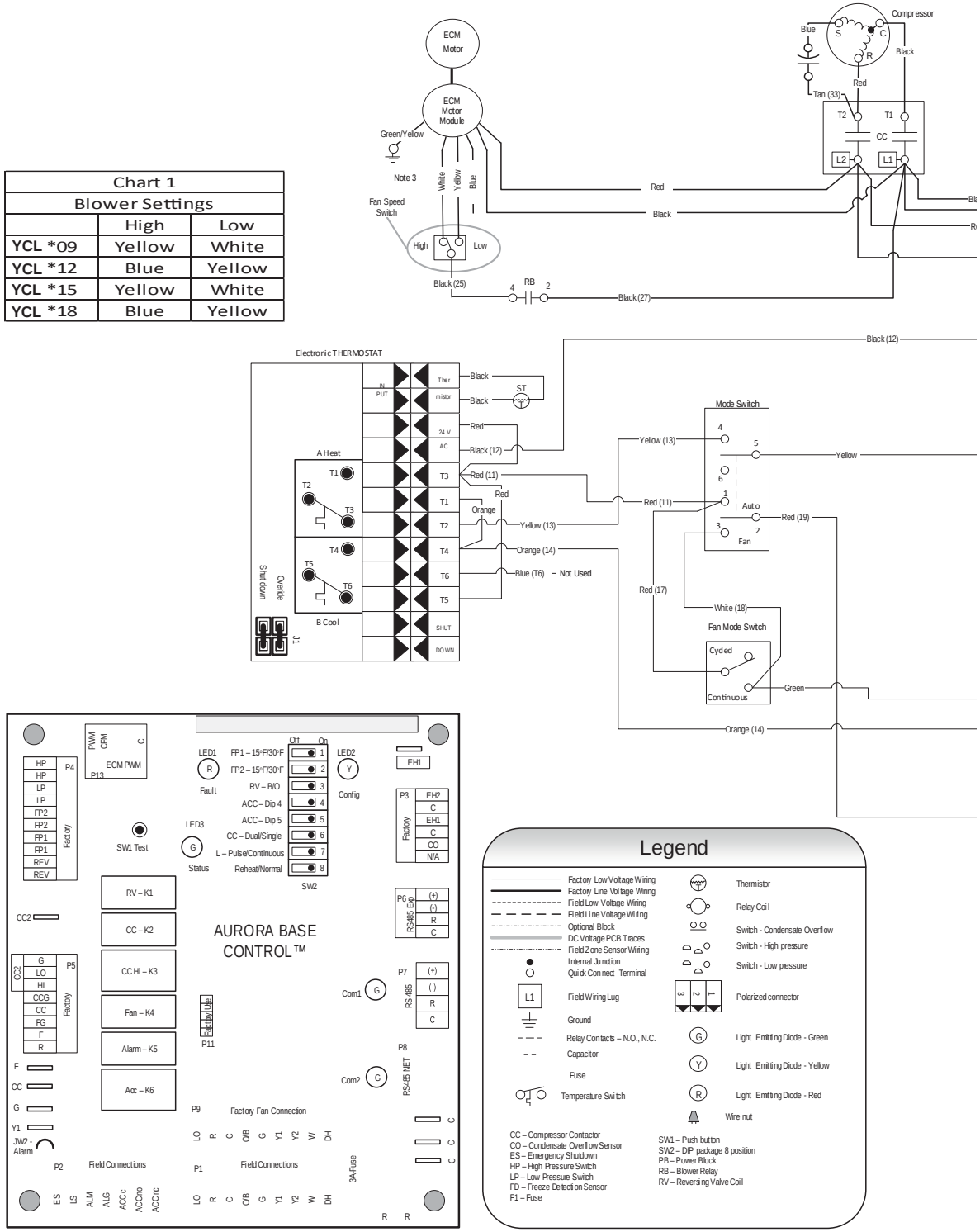
Notes:

1. Switch Red and Blue wires for 208 volt operation.
2. Terminal C of the 24V PB is used as "L" output for Brown wire 3 for Lockout.
3. Factory wired. Refer to blower table settings.

Wiring Schematics cont.

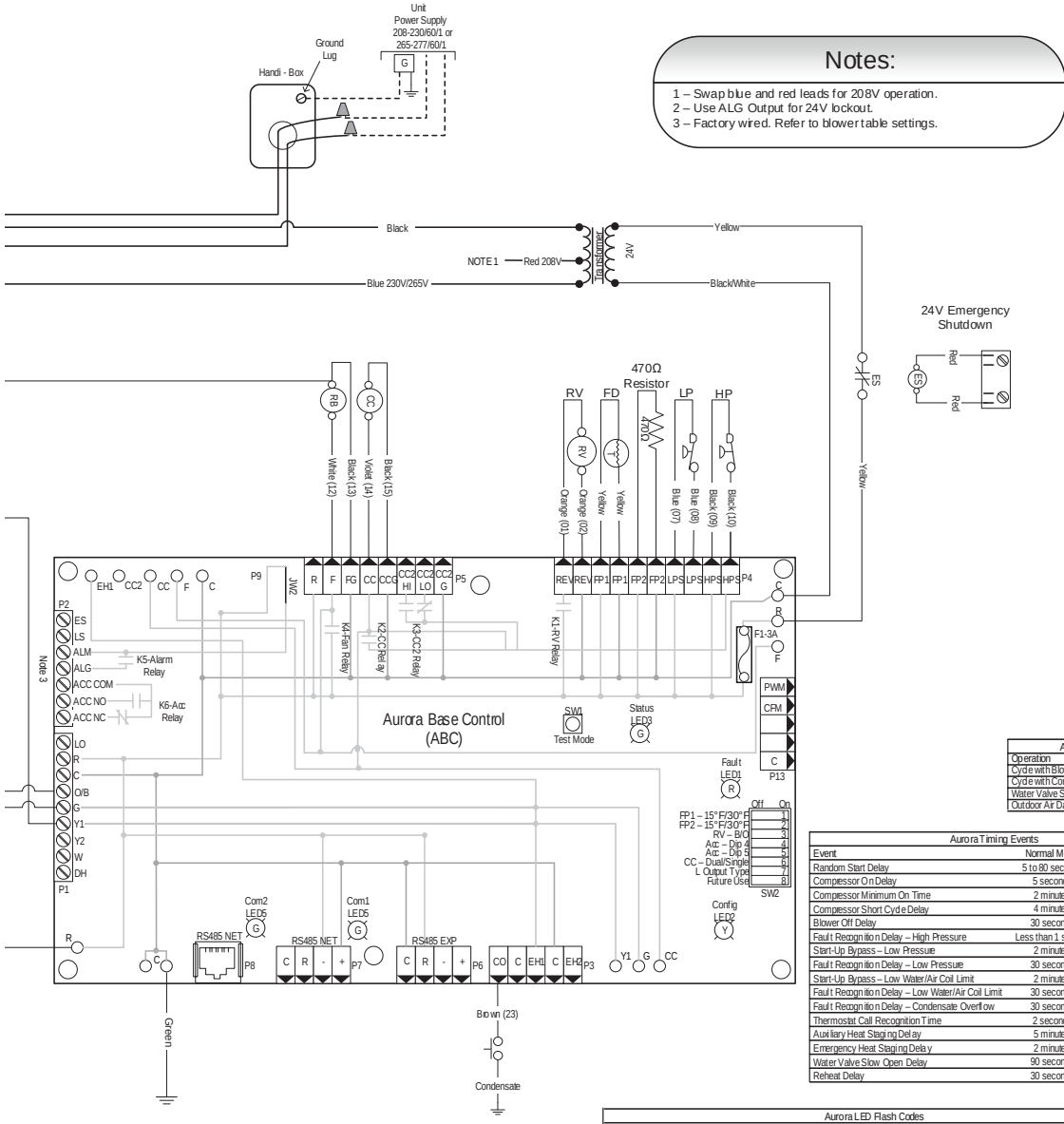
ABC - with ECM Motor and Electronic Stat - 208-230-265/60/1

Chart 1		
Blower Settings		
	High	Low
YCL *09	Yellow	White
YCL *12	Blue	Yellow
YCL *15	Yellow	White
YCL *18	Blue	Yellow



Wiring Schematics cont.

ABC - with ECM Motor and Electronic Stat - 208-230-265/60/1



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

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

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. Chassis shall be installed with factory built cabinet or other custom cabinet approved by the manufacturer's engineering department. Chassis SHALL NOT be installed without an approved cabinet enclosure. Capacities and characteristics as listed in the schedule and the specifications that follow. The reverse cycle heating/cooling units shall be floor mounted console type with horizontal air inlet and up-flow 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].

Chassis and Cabinet

The cabinet shall be fabricated from heavy-gauge galvanized steel and finished with a beige textured epoxy powder coating on both sides for added protection. This corrosion protection system shall meet the stringent 1000 hour salt spray test per ASTM B117.

The cabinet shall be easily removable to allow for ease of service to the controls compartment, chassis, and piping. The top of the cabinet and grille is a horizontally flat (optional sloped) surface with a hinged control door cover. The return air filter shall be disposable type media.

The return and supply air sections are insulated with a 1/4 in. (6.4 mm) thick, dual density, 2 lb/ft^3 (32 kg/m^3) coated mat glass fiber with edges sealed or tucked under flanges to prevent the introduction of glass fibers into the discharge supply air through the aluminum grille. 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.

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

The drain pan shall be of stainless steel construction to inhibit corrosion and bacterial growth. Drain outlet shall be located on pan as to allow complete and unobstructed drainage of condensate. The unit as standard will be supplied with solid-state electronic condensate overflow protection with Aurora Base Control. Mechanical float switches WILL NOT be accepted. Condensate tube shall be constructed of stainless steel and have an internal factory installed condensate trap.

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, bi-directional thermostatic expansion valve, finned tube air-to-refrigerant heat exchanger, reversing valve, coaxial tube water-to-refrigerant heat exchanger, and service ports.

Compressors shall be high-efficiency single speed rotary type designed for heat pump duty and mounted on durometer grommets to provide vibration free compressor mounting. Compressor motors shall be single-phase PSC with external 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 aluminum tube construction rated to withstand 600 psig (4135 kPa) refrigerant working pressure. Refrigerant-to-water heat exchangers shall be of copper inner water tube and steel refrigerant outer tube design, rated to withstand 600 psig (4135 kPa) working refrigerant pressure and 450 psig (3101 kPa) working water pressure. The thermostatic expansion valve shall provide proper superheat over the entire liquid temperature range with minimal “hunting.” The valve shall operate bi-directionally 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: 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.

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 constructed of galvanized steel and shall be removable from the unit for servicing of the blower motor. The blower motor shall be a two-speed PSC or three-speed ECM type and shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated and have thermal overload protection.

Electrical

A control box shall be located within the unit compressor compartment and shall contain a 50VA transformer, 24 Volt activated, 2 pole compressor contactor, and solid-state controller for complete unit operation. 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.

Unit mounted controls shall consist of switches for “OFF”, “FAN”, and “AUTO” or “HEAT/COOL”. An additional switch is provided for blower speed setting of “HI” or “LO”. The unit shall be equipped with a blower switch on the side of the control to provide “CONTINUOUS” or “CYCLED” blower operation. “CYCLED” blower will turn the blower on with the compressor. A unit-mounted electronic thermostat with a remote electronic thermistor located

Engineering Guide Specifications cont.

in the return air will control compressor operation in heating and cooling modes. Unit mounted thermostat shall be the standard thermostat option. All unit mounted thermostats shall be auto changeover. Manual changeover WILL NOT be accepted. Electromechanical operation WILL NOT be accepted.

Controls

Standard: A compressor control module (CCM) shall be included to disable compressor operation in the event of a trip of any of the safety switches and to send a signal to activate a fault indicator light at the thermostat. The CCM shall be capable of being reset from the thermostat or from the unit main disconnect switch. A terminal block with screw terminals shall be provided for field connection of all low-voltage wiring.

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

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

Option: Remote mounted thermostat is available for CCM and Aurora Base Control. A terminal block with screw terminals will be provided for field control wiring.

Piping

Supply and return water connections shall be 1/2 in. [12.7 mm] FPT copper threaded fittings. All water piping shall be insulated to prevent condensation at low liquid temperatures.

A stainless steel tube stubbed out from the chassis is provided for condensate drain attachment. A short piece of polyvinyl hose is supplied to assist in adapting to drain.

Accessories

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 [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.

Revision Guide

Pages:	Description:	Date:	By:
Misc.	ECM Motor Changes	15 Nov 2018	JM
All	Released ABC Control Option	01 Sept 2015	MA
19	Updated Wiring Schematics	11 May 2015	MA
All	Updated with All-Aluminum Air Coils	10 Mar 2014	DS
All	First Published	22 Oct 2013	DS