YORK®
Heating and Air Conditioning

SUBMITTAL SET

LX ULTRA
COMMERCIAL GEOTHERMAL/
WATER SOURCE HEAT PUMPS
SINGLE CAPACITY

MODELS:
YFV018 - 041
(1.5 THRU 3.5 NOMINAL TONS)

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

ETL LISTED®

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 Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

Model Nomenclature

1-2	3	4-6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21-22	23
YF	V	031	T	L	0	0	0	C	A	N	N	2	1	N	0	0	SS	*

Model Type
YF – YF Series

Cabinet Configuration
V – Vertical

Unit Capacity (MBTUH)
018, 023, 031, 041

Discharge Configuration
T – Top (Vertical)

Return Air Configuration
L – Left
R – Right

Voltage
0 – 208-230/60/1
2 – 265-277/60/1

Hot Water Generation Option
0 – No HWG
2 – HWG without Pump

Blower Options
0 – PSC Blower

Water Coil Option
C – Copper
N – CuproNickel

Sound Kit Option
A – None
B – Sound Kit

Vintage
* - Factory Use Only

Non-Standard Options
SS – Standard

Drain Pan Option
0 – Composite, No Secondary Connection

Cabinet Option
0 – Unpainted, 1 in MERV 4, Filter Rail
1 – Painted, 1 in MERV 4, Filter Rail

Phase Guard
N – No Phase Guard, No Disconnect

Air Coil Option
1 – FormiShield™, Extended Range
4 – No Coating, Standard Range

Control Option
2 – Versatec Microprocessor

Water Control Option
N – None

Future Option
N – None

Rev.: 20 September 2013D

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

ETL LISTED

All LX Condo 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 Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

AHRI/ISO 13256-1 Performance Ratings

PSC 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 Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP	Capacity Btuh	EER Btuh/W	Capacity Btuh	COP
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	22,000	13.8	27,000	4.5	26,400	21.0	22,300	3.9	24,000	15.6	17,500	3.2
031	8.0	1000	29,000	14.0	34,600	4.5	32,900	20.5	28,300	3.9	29,500	15.6	22,800	3.2
041	11.0	1300	39,000	13.0	45,000	4.0	44,500	19.0	36,000	3.5	41,000	14.9	29,000	2.9

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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

Contractor:P.O.: _____ _____

Engineer: _____

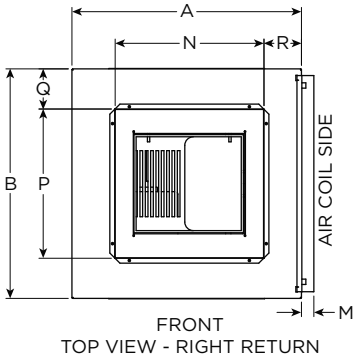
Project Name: _____ Unit Tag: _____

LX Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

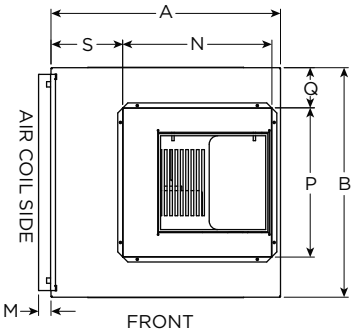
YORK®

Dimensional Data

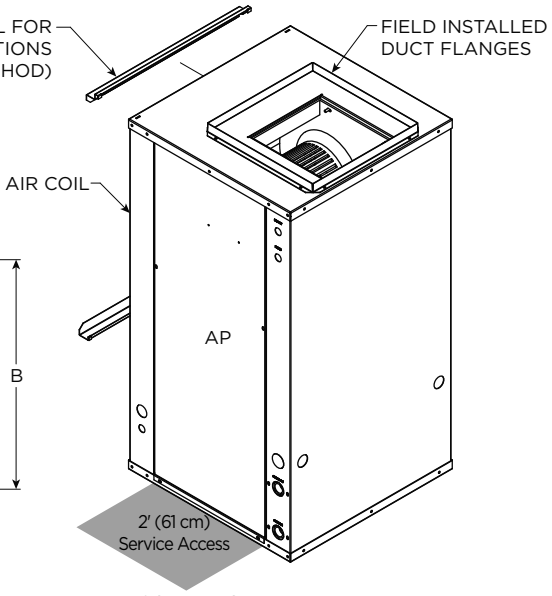
Legend
AP = Alternate Service Panel
BP = Blower Service Panel
CP = Control Access Panel
CMP = Compressor Service Panel



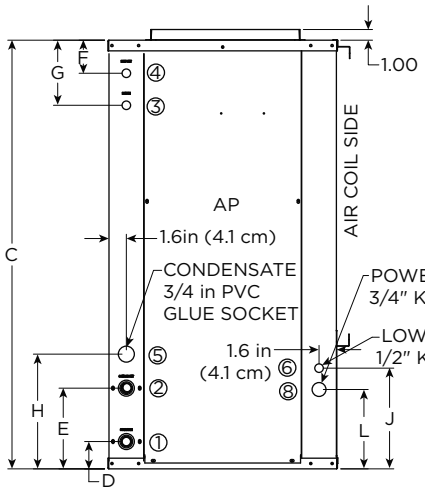
FRONT
TOP VIEW - RIGHT RETURN



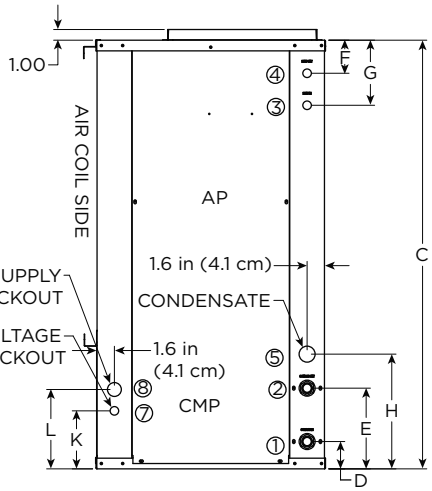
FRONT
TOP VIEW - LEFT RETURN



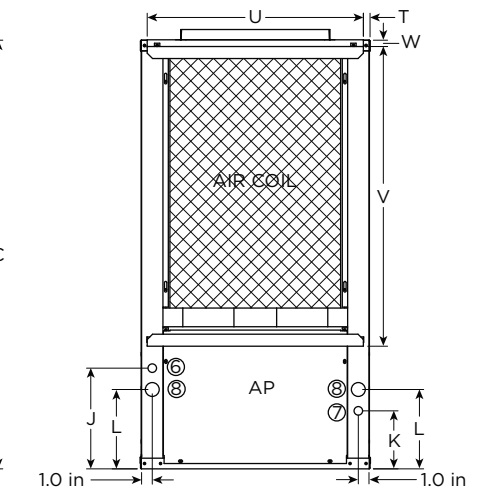
ISOMETRIC VIEW - LEFT RETURN



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 Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

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 Provisions	1/2 in. cond	1/2 in. cond	1 in. cond
018-031	in.	21.5	21.5	36.2	2.6	7.6	3.1	6.1	10.8	3/4"	0.875	9.4	5.4	7.4
	cm.	54.6	54.6	91.9	6.6	19.3	7.9	15.5	27.4	19.1 mm	22.2 mm	23.9	13.7	18.8
041	in.	21.5	21.5	40.2	2.6	7.6	3.1	6.1	10.8	3/4"	0.875	9.4	5.4	7.4
	cm.	54.6	54.6	102.1	6.6	19.3	7.9	15.5	27.4	19.1 mm	22.2 mm	23.9	13.7	18.8

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	
018-031	in.	1.2	14.0	14.0	3.8	3.5	6.7	0.6	20.2	24.0	0.6
	cm.	3.0	35.6	35.6	9.7	8.9	17.0	1.5	51.3	61.0	1.5
041	in.	1.2	14.0	14.0	3.8	3.5	6.7	0.6	20.2	28.0	0.6
	cm.	3.0	35.6	35.6	9.7	8.9	17.0	1.5	51.3	71.1	1.5

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

***Dimensions for return connections are for a standard rail design with open return application only. The open filter rail, used in non-ducted returns, extends 1.2 in. [3.11 cm] from the unit.**

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

Contractor:P.O.: _____ _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

Physical Data

Model		Single Speed			
		018	**023**	**031**	**041**
Compressor (1 each)		Rotary	Scroll		
Factory Charge R-410A, oz [kg]		52 [1.47]	44 [1.25]	50 [1.42]	68 [1.93]
Blower Motor & Blower					
Blower Motor Type/Speeds	PSC	3 speeds			
Blower Motor- hp [W]	PSC	1/6 [134]	1/5 [149]	1/3 [249]	1/3 [249]
Blower Wheel Size (Dia x W), in [mm]	PSC	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]	9 x 7 [229 x 178]
Coax and Water Piping					
Water Connection Size - FPT - in [mm]		3/4 [19.1]	3/4 [19.1]	3/4 [19.1]	3/4 [19.1]
HWG 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]		0.4 [1.49]	0.4 [1.49]	0.75 [2.83]	0.9 [3.41]
Vertical					
Air Coil Dimensions (H x W), in. [mm]		22 x 16 [559 x 406]	22 x 16 [559 x 406]	22 x 16 [559 x 406]	26 x 16 [660 x 406]
Air Coil Total Face Area, ft^2 [m^2]		2.4 [0.220]	2.4 [0.220]	2.4 [0.220]	2.9 [0.269]
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	3	3
Filter Standard - 1 in [25mm] MERV 4 Throwaway, in [mm]		24 x 20 [610 x 508]	24 x 20 [610 x 508]	24 x 20 [610 x 508]	28 x 24 [711 x 610]
Shipping Weight- lb [kg]		170 [77]	220 [100]	240 [109]	275 [125]

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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				
018	208-230/60/1	187/253	10.4	6.7	33.5	1.1	7.8	9.5	15
	265/60/1	238/292	8.7	5.6	28.0	1.0	6.6	8.0	10
023	208-230/60/1	187/253	21.0	13.5	58.3	1.2	14.7	18.1	30
	265/60/1	238/292	14.0	9.0	54.0	1.1	10.1	12.4	20
031	208-230/60/1	187/253	22.0	14.1	73.0	1.5	15.6	19.1	30
	265/60/1	238/292	17.5	11.2	60.0	1.5	12.7	15.5	25
041	208-230/60/1	187/253	31.0	20.0	115.0	3.5	23.5	28.5	45

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HACR circuit breaker in USA only

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**
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	995	975	950	925	895	865	835	795	750	715	680	595	-	-	-	-
	M			860	840	820	805	785	755	725	690	655	620	580	-	-	-	-	-
	L			790	775	760	745	725	690	655	635	610	575	535	-	-	-	-	-
031	H	9 x 7	1/3	1160	1135	1110	1085	1055	1025	995	965	930	890	850	765	650	-	-	-
	M			1035	1015	1000	975	955	930	905	875	845	810	780	685	-	-	-	-
	L			855	845	840	830	820	800	785	760	740	710	685	610	-	-	-	-
041	**H**	9 x 7	1/2	1200	1170	1145	1115	1080	1035	995	955	915	875	835	765	640	-	-	-
	M			1110	1085	1065	1035	1010	975	940	900	860	825	795	715	585	-	-	-
	L			1040	1020	1000	975	950	920	890	860	830	795	765	683	560	-	-	-

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Factory settings are in Bold

Air flow values are with dry coil and standard filter

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

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

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 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

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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

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Air Flow 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

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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 Condo Series YFV023 PSC.

The corrected cooling capacity at 90°F would be: 23,500 MBtuh x 0.969 = 22,772 MBtuh

The corrected heating capacity at 30°F would be: 16,000 MBtuh x 0.913 = 14,608 MBtuh

The corrected pressure drop at 30°F and 6 GPM would be: 10.5 feet of head x 1.270 = 13.34 feet of head

Pressure Drop

Model	GPM	Pressure Drop (psi)				
		30°F	50°F	70°F	90°F	110°F
018	3.0	1.1	1.0	0.8	0.7	0.5
	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
031	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
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

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Model 018 - Performance Data

Single Speed PSC (600 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F						COOLING - EAT 80/67°F						
		PSI	FT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
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

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Model 023 - Performance Data

Single Speed PSC (700 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F					COOLING - EAT 80/67°F					
		PSI	FT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	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

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Contractor: P.O.: _____ _____

Engineer: _____

Project Name: _____ Unit Tag: _____

LX Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

Model 031 - Performance Data

Single Speed PSC (1000 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F						COOLING - EAT 80/67°F						
		PSI	FT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
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	20.7	2.10	13.5	87.2	2.89	1.9							
30	4.0	0.9	2.1	Operation not recommended						Operation not recommended						
	6.0	1.9	4.4	24.6	2.10	17.4	90.8	3.43	2.1	30.4	20.8	0.68	1.24	34.6	24.6	---
	8.0	3.7	8.5	24.0	2.12	16.8	90.2	3.32	2.1	30.8	21.2	0.69	1.16	34.8	26.6	---
40	4.0	0.9	2.0	Operation not recommended						Operation not recommended						
	6.0	1.8	4.3	27.2	2.17	19.8	93.2	3.68	2.3	32.0	22.5	0.70	1.35	36.6	23.7	---
	8.0	3.7	8.4	27.6	2.19	20.1	93.5	3.69	2.4	32.5	23.1	0.71	1.28	36.8	25.4	---
50	4.0	0.8	1.9	29.0	2.21	21.5	94.9	3.85	2.5	33.1	23.5	0.71	1.54	38.4	21.5	1.4
	6.0	1.8	4.1	30.1	2.24	22.4	95.8	3.94	2.6	33.6	24.3	0.72	1.47	38.6	22.9	1.3
	8.0	3.6	8.3	31.1	2.26	23.4	96.8	4.03	2.7	34.1	25.0	0.73	1.40	38.9	24.4	1.3
60	4.0	0.8	1.8	32.3	2.28	24.5	97.9	4.15	2.9	31.9	23.1	0.72	1.70	37.7	18.8	1.6
	6.0	1.7	4.0	33.4	2.31	25.6	98.9	4.25	2.9	32.5	23.5	0.72	1.63	38.0	19.9	1.5
	8.0	3.6	8.2	34.6	2.34	26.6	100.0	4.34	3.0	33.1	24.0	0.72	1.56	38.4	21.2	1.4
70	4.0	0.7	1.6	35.6	2.35	27.6	101.0	4.44	3.2	30.7	22.6	0.74	1.86	37.0	16.5	2.0
	6.0	1.7	3.9	36.8	2.38	28.7	102.1	4.53	3.3	31.4	22.8	0.73	1.79	37.5	17.5	1.9
	8.0	3.5	8.1	38.0	2.41	29.8	103.2	4.62	3.4	32.0	22.9	0.72	1.72	37.9	18.6	1.8
80	4.0	0.7	1.5	39.3	2.46	30.9	104.4	4.68	3.6	28.8	20.8	0.72	2.07	35.9	13.9	2.5
	6.0	1.6	3.8	40.2	2.49	31.7	105.2	4.73	3.7	29.6	21.4	0.72	1.97	36.3	15.0	2.4
	8.0	3.5	8.0	41.2	2.53	32.5	106.1	4.78	3.8	30.2	22.3	0.74	1.91	36.7	15.8	2.3
90	4.0	0.6	1.4	43.0	2.57	34.2	107.8	4.89	4.1	27.0	19.0	0.70	2.27	34.7	11.9	3.3
	6.0	1.6	3.7	43.6	2.61	34.7	108.4	4.90	4.2	27.8	20.0	0.72	2.17	35.2	12.8	3.1
	8.0	3.4	7.9	44.3	2.64	35.3	109.0	4.92	4.3	28.4	21.6	0.76	2.10	35.6	13.5	3.0
100	4.0	0.6	1.3	Operation not recommended						Operation not recommended						
	6.0	1.6	3.6							26.3	20.7	0.78	2.43	34.7	10.8	3.9
	8.0	3.4	7.8							26.8	20.9	0.78	2.36	34.8	11.4	3.7
110	4.0	0.5	1.2							Operation not recommended						
	6.0	1.5	3.5							24.6	19.8	0.81	2.68	33.8	9.2	4.9
	8.0	3.3	7.6							25.1	20.1	0.80	2.61	34.0	9.6	4.5
120	4.0	0.5	1.1							Operation not recommended						
	6.0	1.5	3.3							22.5	19.1	0.85	3.03	32.8	7.4	5.7
	8.0	3.3	7.5							23.0	19.4	0.84	2.94	33.0	7.8	5.4

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Model 041 - Performance Data

Single Speed PSC (1200 CFM)

EWT °F	Flow gpm	WPD		HEATING - EAT 70°F						COOLING - EAT 80/67°F						
		PSI	FT	HC kBtuh	Power kW	HE kBtuh	LAT °F	COP	HWC kBtuh	TC kBtuh	SC kBtuh	S/T Ratio	Power kW	HR kBtuh	EER	HWC kBtuh
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	26.3	2.40	18.1	88.3	3.21	1.9							
30	5.0	1.5	3.4	Operation not recommended						Operation not recommended						
	8.0	3.4	7.8	31.9	2.86	22.1	92.6	3.27	2.1	43.3	25.6	0.59	1.81	49.5	23.9	---
	11.0	7.9	18.1	32.0	2.90	22.1	92.7	3.23	2.1	43.9	26.1	0.59	1.70	49.7	25.8	---
40	5.0	1.3	3.0	Operation not recommended						Operation not recommended						
	8.0	3.2	7.5	35.3	2.96	25.2	95.2	3.50	2.3	44.7	27.7	0.62	1.96	51.4	22.9	---
	11.0	7.7	17.8	36.2	3.00	26.0	95.9	3.54	2.4	45.3	27.9	0.62	1.85	51.6	24.5	---
50	5.0	1.2	2.7	37.5	3.00	27.3	96.9	3.66	2.5	45.7	30.0	0.66	2.20	53.2	20.8	1.4
	8.0	3.1	7.1	39.0	3.05	28.5	98.1	3.74	2.6	46.2	29.8	0.65	2.10	53.3	22.0	1.3
	11.0	7.5	17.4	40.4	3.10	29.8	99.2	3.82	2.7	46.6	29.6	0.64	2.00	53.4	23.3	1.3
60	5.0	1.0	2.3	41.6	3.10	31.0	100.1	3.93	2.9	44.3	29.1	0.66	2.45	52.7	18.1	1.6
	8.0	2.9	6.7	43.3	3.15	32.6	101.4	4.03	2.9	44.6	29.1	0.65	2.33	52.5	19.2	1.5
	11.0	7.4	17.0	45.0	3.20	34.1	102.7	4.12	3.0	44.9	29.1	0.65	2.20	52.4	20.4	1.4
70	5.0	0.9	2.0	45.7	3.20	34.8	103.3	4.19	3.2	42.9	28.1	0.66	2.70	52.1	15.9	2.0
	8.0	2.8	6.4	47.7	3.25	36.6	104.8	4.30	3.3	43.1	28.3	0.66	2.55	51.8	16.9	1.9
	11.0	7.2	16.7	49.6	3.30	38.3	106.3	4.41	3.4	43.2	28.5	0.66	2.40	51.4	18.0	1.8
80	5.0	0.7	1.6	51.5	3.31	40.2	107.7	4.56	3.6	40.1	26.5	0.66	2.92	50.1	13.7	2.5
	8.0	2.6	6.0	52.9	3.35	41.4	108.8	4.62	3.7	40.8	24.2	0.59	2.79	50.3	14.6	2.4
	11.0	7.1	16.3	54.3	3.40	42.7	109.9	4.68	3.8	41.3	26.8	0.65	2.70	50.5	15.3	2.3
90	5.0	0.5	1.2	57.2	3.41	45.6	112.2	4.92	4.1	37.3	24.9	0.67	3.25	48.4	11.5	3.3
	8.0	2.5	5.7	58.1	3.46	46.3	112.8	4.93	4.2	38.5	20.0	0.52	3.10	49.1	12.4	3.1
	11.0	6.9	16.0	59.0	3.50	47.1	113.5	4.94	4.3	39.3	25.1	0.64	3.00	49.5	13.1	3.0
100	5.0	0.4	0.9	Operation not recommended						Operation not recommended						
	8.0	2.3	5.3							36.8	24.1	0.66	3.46	48.6	10.6	3.9
	11.0	6.8	15.6							37.4	24.4	0.65	3.35	48.8	11.2	3.7
110	5.0	0.4	0.9							Operation not recommended						
	8.0	2.1	4.9							34.8	23.3	0.67	3.80	47.8	9.1	4.9
	11.0	6.6	15.2							35.5	23.6	0.66	3.70	48.1	9.6	4.5
120	5.0	0.4	0.9							Operation not recommended						
	8.0	2.0	4.6							32.4	22.3	0.69	4.22	46.8	7.7	5.7
	11.0	6.5	14.9							33.1	22.6	0.68	4.10	47.1	8.1	5.4

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Contractor:P.O.: _____ _____

Engineer: _____

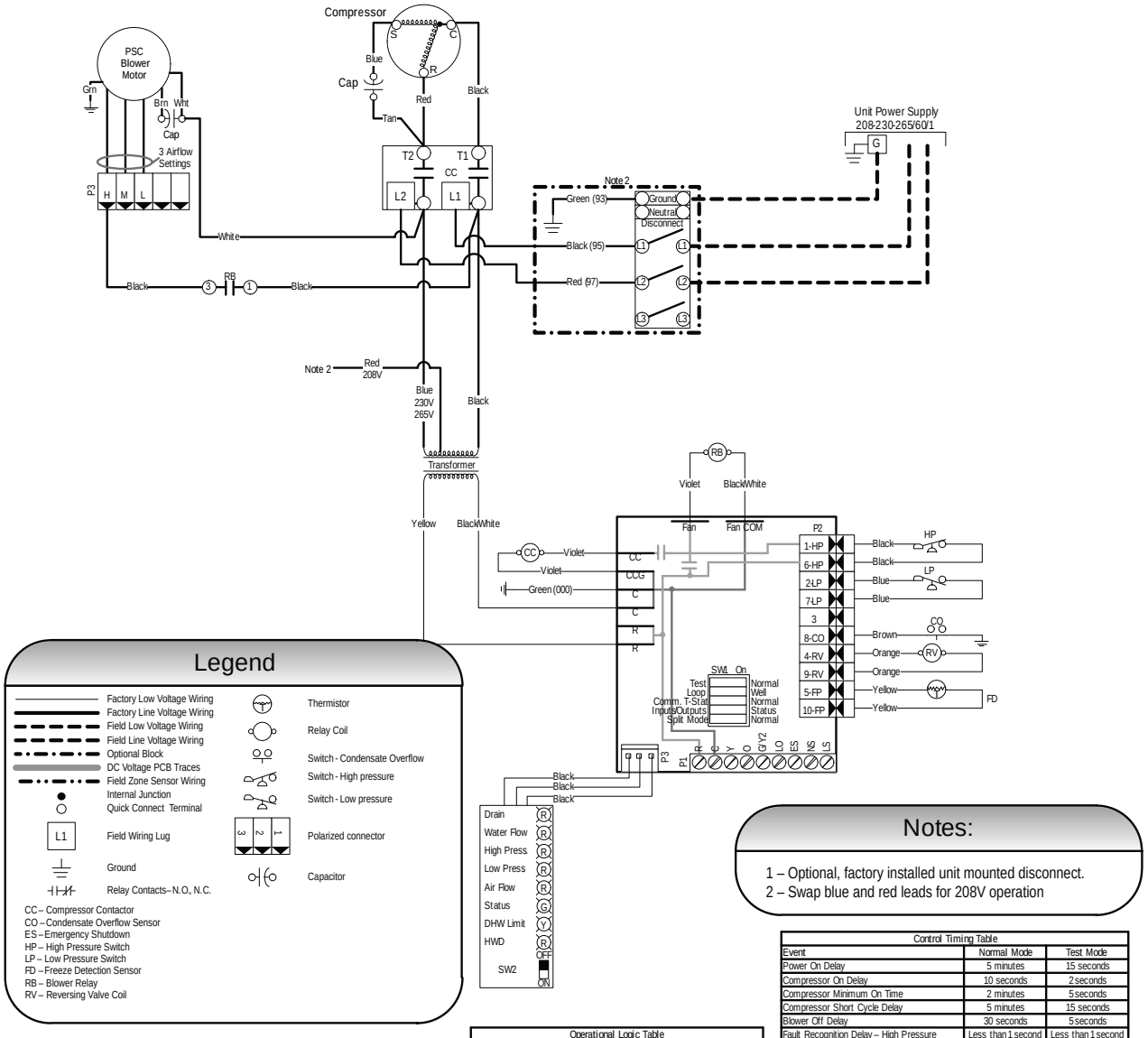
Project Name: _____ Unit Tag: _____

LX Condo Series
Single Capacity
1.5 - 3.5 Tons 60Hz

YORK®

Wiring Schematic

Versatec Microprocessor 208-230/60/1 PSC



Legend

- Factory Low Voltage Wiring
- Factory Line Voltage Wiring
- Field Low Voltage Wiring
- Field Line Voltage Wiring
- Optional Block
- DC Voltage PCB Traces
- Field Zone Sensor Wiring
- Internal Junction
- Quick Connect Terminal
- Field Wiring Lug (L1)
- Ground
- Relay Contacts–N.O, N.C.
- Thermistor
- Relay Coil
- Switch - Condensate Overflow
- Switch - High pressure
- Switch - Low pressure
- Polarized connector
- Capacitor

CC – Compressor Contactor
CO – Condensate Overflow Sensor
ES – Emergency Shutdown
HP – High Pressure Switch
LP – Low Pressure Switch
FD – Freeze Detection Sensor
RB – Blower Relay
RV – Reversing Valve Coil

Notes:

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

Control Timing Table		
Event	Normal Mode	Test Mode
Power On Delay	5 minutes	15 seconds
Compressor On Delay	10 seconds	2 seconds
Compressor Minimum On Time	2 minutes	5 seconds
Compressor Short Cycle Delay	5 minutes	15 seconds
Blower Off Delay	30 seconds	5 seconds
Fault Recognition Delay – High Pressure	Less than 1 second	Less than 1 second
Start-Up Bypass–Low Pressure	2 minutes	0 seconds
Fault Recognition Delay – Low Pressure	30 seconds	30 seconds
Start-Up Bypass–Freeze Detection	2 minutes	0 seconds
Fault Recognition Delay – Freeze Detection	30 seconds	30 seconds
Fault Recognition Delay – Condensate Overflow	30 seconds	30 seconds

LED Display Mode Table	
Status Display Mode	
LED	SW1-4 On, SW2 Off
Drain	Drain Pan Overflow Lockout
Water Flow	Freeze Detection Lockout(Loop <= 15°F, Well <= 30°F)
High Press.	High Pressure Lockout
Low Press.	Low Pressure Lockout
Air Flow	Not Used
Status	Microprocessor Malfunction*
DHW Limit	Not Used
DHW	SW2 Status(Off=Down Position, On=Up Position)

Diagnostic Display Modes			
	Current Fault Display Mode	Inputs Display Mode	Outputs Display Mode
LED	SW1-4 On, SW2 On	SW1-4 Off, SW2 Off	SW1-4 Off, SW2 On
Drain	Drain Pan Overflow Lockout	Y	Compressor
Water Flow	Freeze Detection Lockout	G	Blower
High Press.	High Pressure Lockout	O	Reversing Valve
Low Press.	Low Pressure Lockout	ES	ES
Air Flow	Not Used	NS	NS
Status	Not Used	LS	LS
DHW Limit	Not Used	Not Used	Not Used
HWD	SW2 = On	SW2 = Off	SW2 = On

* Flashing Status Light Indicates the Board is Functioning Properly
A Solid "On" Indicates a Board Malfunction

Operational Logic Table				
Single Speed				
Mode	Inputs	Blower	Comp	RV
Htg	Y	Auto	ON	OFF
Clg	Y,O	Auto	ON	ON
Blower Only	G	ON	OFF	OFF

Factory Setup DIP Switches(SW1)				
DIP Switch Number		Description	"OFF" Position	"ON" Position
SW1-	1	Service Test Mode On the control allows field selection of "NORMAL" or "TEST" operational modes. Test mode accelerates most timing functions 16 times to allow faster troubleshooting. Test mode also allows viewing the "CURRENT" status of the fault inputs on the LED display.	Test Mode	Normal Speed Operation
SW1-	2	Freeze Detection Setting This DIP switch allows field selection of low source water thermistor fault sensing for "WELL" water (30°F) or "LOOP" (15°F) for anti-freeze protected earth loops	"LOOP" (15°F)	"WELL" (30°F)
SW1-	3	Not Available	N/A	Normal Operation
SW1-	4	I/O Display Mode This DIP switch enables Input/Output Display or Status/Current Fault on LED Board. Refer to SW2 for operation and positioning	Input/Output Display Mode	Status/Current Fault Display Mode
SW1-	5	Not Available	N/A	Normal Operation
SW2		LED Display (On LED Board) This DIP switch enables Normal Status or Input display mode in the "OFF" position and Current Fault or Output display mode in the "ON" position.	Status or Inputs Display Mode	Current Fault or Output Display Mode

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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 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.

The compressor shall be mounted using selected durometer grommets to provide vibration free compressor mounting.

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. 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 copper tubes in a staggered pattern not less than three rows deep for enhanced performance.

Option: FormiShield electro-coated air coil for maximum protection against formicary corrosion.

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.

Engineering Guide Specifications cont.

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.

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.

A Versatec 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.

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.

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

Engineering Guide Specifications cont.

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

Revision Guide

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