YORK®
Heating and Air Conditioning

SUBMITTAL SET

AFFINITY AIR HANDLER
GEOTHERMAL HEAT PUMPS
SINGLE AND DUAL CAPACITY

MODELS:
YAH022 - 060
(2 THRU 5 NOMINAL TONS)

ENERGY STAR

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.york-geothermal.com

Additional rating information can found at
www.ahridirectory.org

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Model Nomenclature

1-3	4-6	7	8-9	10	11	12
YAH	036	*	00	0	1	R

Model
YAH – Affinity Series Air Handler

Unit Capacity
Refrigeration (DX) Models with Nominal CFM
022 MBTUH 800
026 MBTUH 925
030 MBTUH 980
036 MBTUH 1225
042 MBTUH 1425
048 MBTUH 1625
060 MBTUH 1760
Hydronic Models with Nominal CFM
026 MBTUH 925
036 MBTUH 1225
048 MBTUH 1625
060 MBTUH 1760

Vintage
* = Factory Use Only

Air Coil
R – Refrigerant
H - Hydronic

Motor
1 – ECM 208-230/60/1

Disconnect
0 – No Breaker Installed
(only on 5kW & 10kW Heaters)
1 – Breaker Installed
(only on 15kW & 20kW Heaters)

Electric Heat
00 – None
05 – 5kW (022 – 036 only)
10 – 10kW (030 – 060 only)
15 – 15kW (042 – 060 only)
20 – 20kW (060 only)

Rev.: 16 August 2013D

NOTE: To field convert the YAH042-060 to bottomflow air discharge, the NAHBC kit must be ordered.

Compatibility

Air Handler Sizing Selection

The Affinity Series Air Handlers are designed for R410a refrigerant and should be matched with YAZ/YAS series compressor section according to the table below.

Air Handler	Indoor Split Model (Single)	Indoor Split Model (Dual Capacity)	Outdoor Split Model (Dual Capacity)	Airflow(CFM)	Electric Heat (kW)
YAH022B*1R**	YAZS022	-		800	5
YAH026B*1R**	-	YAZT026	YAST026	925	5
YAH030B*1R**	YAZS030	-	-	980	5, 10
YAH036B*1R**	YAZS036	-	-	1225	5, 10
YAH036B*1R**	-	YAZT038	YAST038	1225	5, 10
YAH042B*1R**	YAZS042	-	-	1425	10, 15
YAH048B*1R**	YAZS048	-	-	1625	10, 15
YAH048B*1R**	-	YAZT049	YAST049	1625	10, 15
YAH060B*1R**	YAZS060	-	-	1760	10, 15, 20
YAH060B*1R**	-	YAZT064	YAST064	1760	10, 15, 20
YAH060B*1R**	YAZS070	-	-	1760	10, 15, 20
YAH060B*1R**	-	YAZT072	YAST072	1760	10, 15, 20

01/25/13

Contractor: _____ P.O.: _____

Engineer: _____

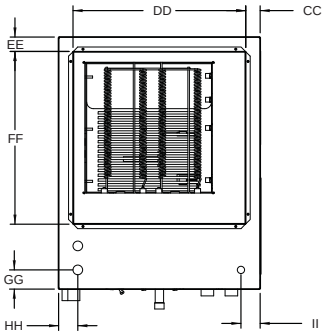
Project Name: _____ Unit Tag: _____

Affinity Series Air Handler
2 - 6 Tons 60Hz

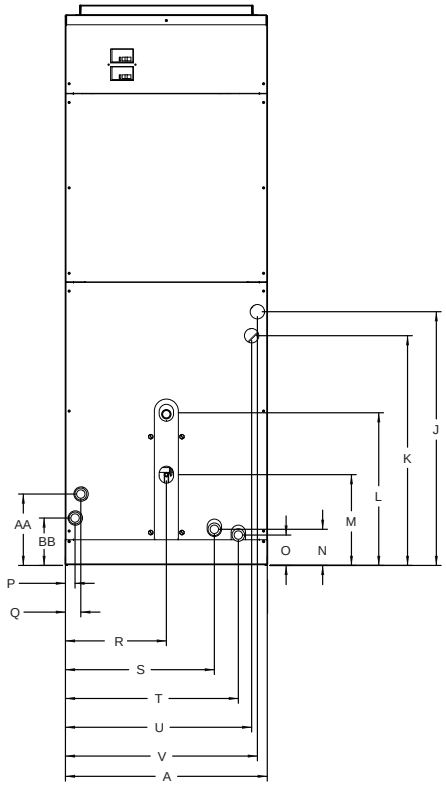
Dimensional Data - DX Air Handler

Top Flow/Horizontal Unit Configuration

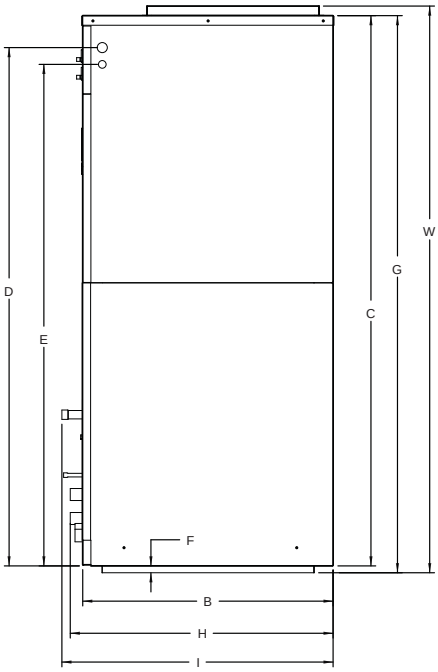
TOP VIEW



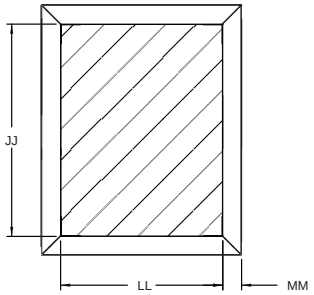
FRONT VIEW



RIGHT SIDE VIEW



BOTTOM VIEW



Topflow/ Horizontal Configuration		Overall Cabinet			D	E	F						Refrigerant/Water Connections						
		A Width	B Depth	C Height	3/4" cond Power Supply	1/2" cond Low Voltage	Return Air Duct Flange	G	H	I	J	K	L Suction / Water Out	M Liquid / Water In	N	O	P	Q	R	S
026-060	in.	21.0	26.1	57.3	54.0	52.3	0.7	58.1	27.4	28.3	26.8	24.3	16.0	9.8	4.0	3.1	0.8	1.5	10.5	15.5
	cm.	53.4	66.3	145.6	137.2	132.7	1.8	147.4	69.6	71.8	68.1	61.7	40.6	24.9	10.2	7.9	2.0	3.9	26.7	39.4

															GG	HH	II				
S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	1" cond Power Supply			1/2" cond Low Voltage	JJ	KK	LL	MM
15.5	18.0	19.5	20.1	59.5	15.1	53.1	51.3	7.8	5.2	1.5	18.0	1.5	18.0	2.0	2.0		2.0	22.1	2.0	16.9	1.96
39.4	45.8	49.5	51.0	151.1	38.4	134.9	130.2	19.8	13.2	3.8	45.7	3.8	45.7	5.1	5.1		5.1	56.2	5.0	42.9	5.0

Rev: 4/28/14

Condensate is stainless steel 3/4" O.D. tube
Discharge flange is field installed and extends 1" (25.4 mm) from cabinet

Contractor: _____ P.O.: _____

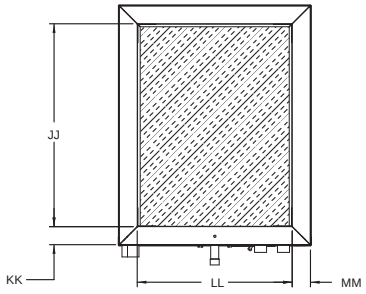
Engineer: _____

Project Name: _____ Unit Tag: _____

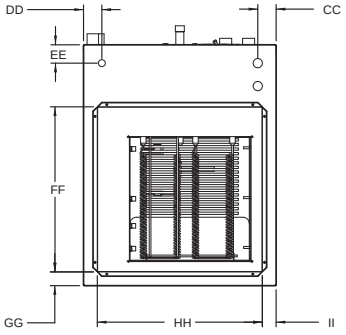
Dimensional Data - DX Air Handler

Bottom Flow Unit Configuration

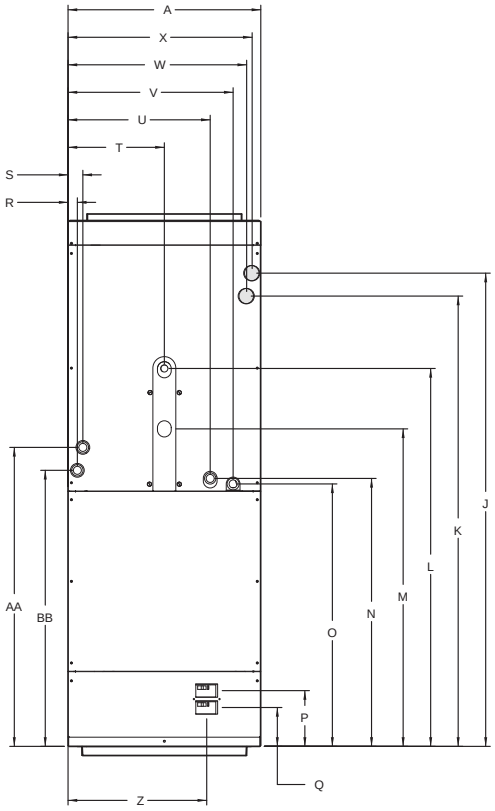
TOP VIEW



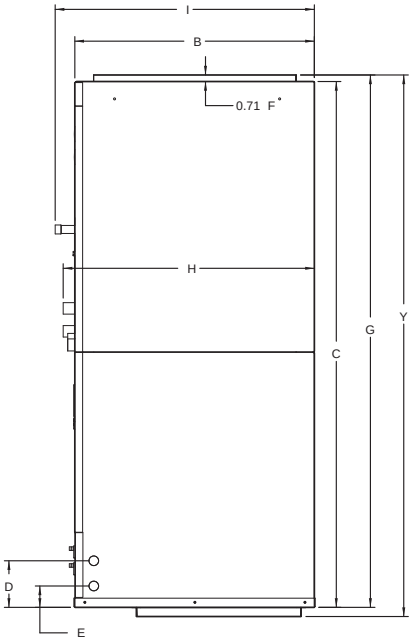
BOTTOM VIEW



FRONT VIEW



RIGHT SIDE VIEW



Bottomflow Configuration		Overall Cabinet			D	E	F						Refrigerant/Water Connections						
		A	B	C	3/4" cond	1" cond	Return	G	H	I	J	K	L	M	N	O	P	Q	R
		Width	Depth	Height	Low Voltage	Power Supply	Air Duct Flange						Suction / Water Out	Liquid / Water In					
026-060	in.	21.0	26.1	57.3	5.1	3.3	0.7	58.1	27.4	28.3	51.9	49.4	41.2	34.9	29.2	28.2	6.1	4.2	0.9
	cm.	53.4	66.3	145.6	12.9	8.5	1.8	147.4	69.6	71.8	131.8	125.5	104.7	88.7	74.2	71.6	15.4	10.8	2.4

											CC	DD	EE							
S	T	U	V	W	X	Y	Z	AA	BB	1" cond	1/2" cond		FF	GG	**HH**	II	JJ	KK	LL	MM
										Power Supply	Low Voltage									
1.5	10.5	15.5	18.0	19.5	20.1	59.1	15.1	32.9	30.4	2.0	2.0	2.0	18.0	1.5	18.0	1.5	22.1	2.0	16.9	1.96
3.9	26.7	39.4	45.8	49.5	51.0	150.0	38.4	83.6	77.2	5.1	5.1	5.1	45.7	3.8	45.7	3.8	56.2	5.0	42.9	5.0

Condensate is stainless steel 3/4" O.D. tube
Discharge flange is field installed and extends 1" (25.4 mm) from cabinet

Rev: 4/28/14

Contractor: _____ P.O.: _____

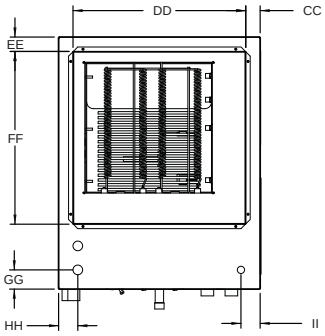
Engineer: _____

Project Name: _____ Unit Tag: _____

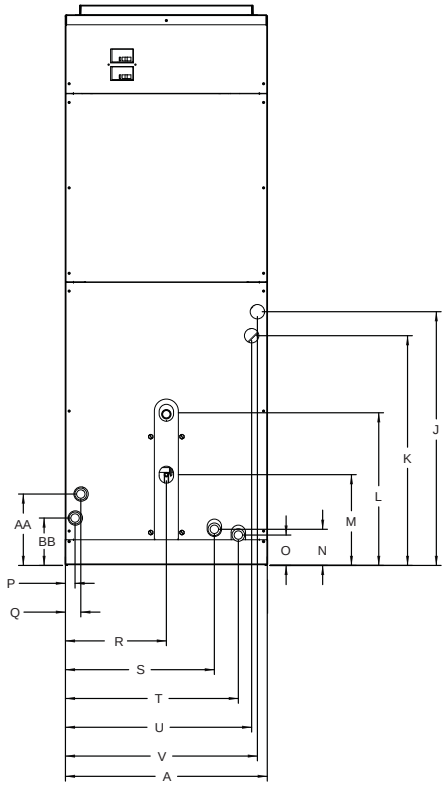
Dimensional Data - Hydronic Air Handler

Top Flow/Horizontal Unit Configuration

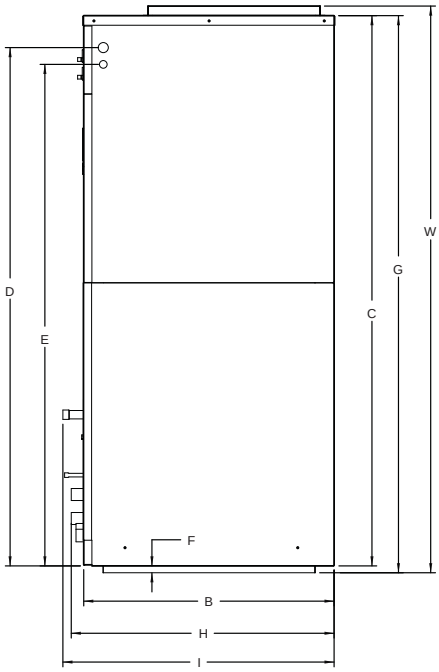
TOP VIEW



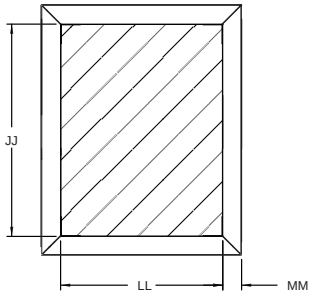
FRONT VIEW



RIGHT SIDE VIEW



BOTTOM VIEW



Topflow/ Horizontal Configuration		Overall Cabinet			D	E	F						Refrigerant/Water Connections						
		A Width	B Depth	C Height	3/4" cond Power Supply	1/2" cond Low Voltage	Return Air Duct Flange	G	H	I	J	K	L Suction / Water Out	M Liquid / Water In	N	O	P	Q	R	S
026-060	in.	21.0	26.1	57.3	54.0	52.3	0.7	58.1	27.4	28.3	26.8	24.3	15.9	9.5	4.0	3.1	0.8	1.5	10.5	15.5
	cm.	53.4	66.3	145.6	137.2	132.7	1.8	147.4	69.6	71.8	68.1	61.7	40.4	24.0	10.2	7.9	2.0	3.9	26.7	39.4

														GG	HH	II				
S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE	FF	1" cond Power Supply		1/2" cond Low Voltage	JJ	KK	LL	MM
15.5	18.0	19.5	20.1	59.5	15.1	53.1	51.3	7.8	4.9	1.5	18.0	1.5	18.0	2.0	2.0	2.0	22.1	2.0	16.9	1.96
39.4	45.8	49.5	51.0	151.1	38.4	134.9	130.2	19.8	12.5	3.8	45.7	3.8	45.7	5.1	5.1	5.1	56.2	5.0	42.9	5.0

Rev: 8/15/14

Condensate is stainless steel 3/4" O.D
Discharge flange is field installed and extends 1" (25.4 mm) from cabinet

Contractor: _____ P.O.: _____

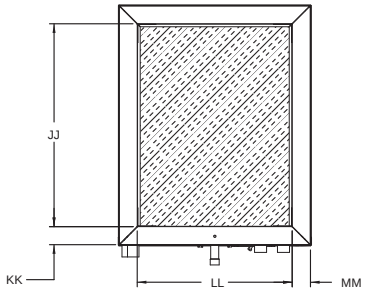
Engineer: _____

Project Name: _____ Unit Tag: _____

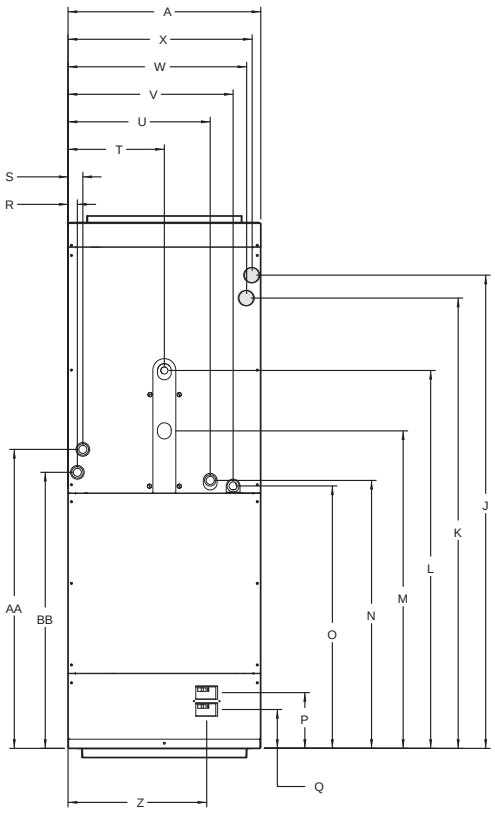
Dimensional Data - Hydronic Air Handler

Bottom Flow Unit Configuration

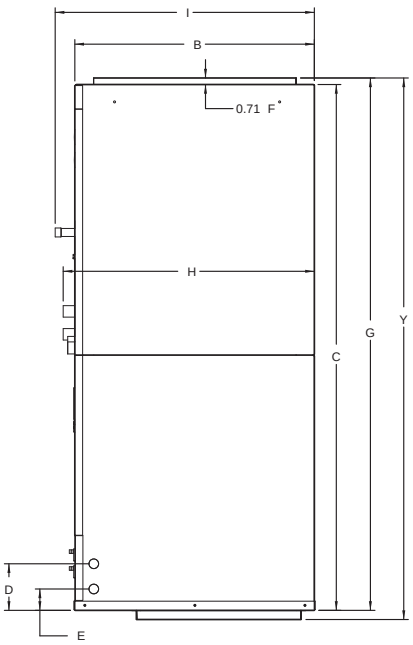
TOP VIEW



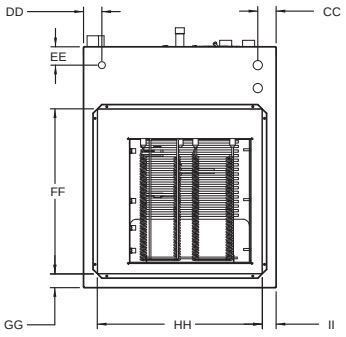
FRONT VIEW



RIGHT SIDE VIEW



BOTTOM VIEW



Bottomflow Configuration		Overall Cabinet			D	E	F						Refrigerant/Water Connections						
		A	B	C	3/4" cond	1" cond	Return	G	H	I	J	K	L	M	N	O	P	Q	R
		Width	Depth	Height	Low Voltage	Power Supply	Air Duct Flange						Suction / Water Out	Liquid / Water In					
026-060	in.	21.0	26.1	57.3	5.1	3.3	0.7	58.1	27.4	28.3	51.9	49.4	41.2	34.6	29.2	28.6	6.1	4.2	0.9
	cm.	53.4	66.3	145.6	12.9	8.5	1.8	147.4	69.6	71.8	131.8	125.5	104.7	87.9	74.2	72.7	15.4	10.8	2.4

											CC	DD	EE							
S	T	U	V	W	X	Y	Z	AA	BB	1" cond	1/2" cond		FF	GG	**HH**	II	JJ	KK	LL	MM
										Power Supply	Low Voltage									
1.5	10.5	15.5	18.0	19.5	20.1	59.1	15.1	32.9	30.4	2.0	2.0	2.0	18.0	1.5	18.0	1.5	22.1	2.0	16.9	1.96
3.9	26.7	39.4	45.8	49.5	51.0	150.0	38.4	83.6	77.2	5.1	5.1	5.1	45.7	3.8	45.7	3.8	56.2	5.0	42.9	5.0

Condensate is stainless steel 3/4" O.D

Discharge flange is field installed and extends 1" (25.4 mm) from cabinet

Rev: 8/15/14

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Physical Data

Air Handler Model Number (Refrigerant)		YAH022	YAH026	YAH030	YAH036	YAH042	YAH048	YAH060
Evaporator Coil	Air Coil Total Face Area, ft2 [m2]	5.83 [0.54]						
	Tube outside diameter - in. [mm]	3/8 [9.52]						
	Number of rows	2				3		
	Fins per inch	12						
	Suction line connection - in. [mm] sweat	5/8 [15.87]				7/8 [22.22]		
	Liquid line connection - in. [mm] sweat	3/8 [9.52]						
Refrigerant		R-410a						
Nominal cooling capacity - tons [kW]		1.8 [6.44]	2.1 [7.59]	2.5 [8.79]	3 [10.55]	3.5 [12.30]	4 [14.06]	5 [17.58]
Condensate drain connection - (O.D.) in. [mm]		3/4 [19.05]						
Blower Wheel Size (Dia x W), in. [mm]		11 x 10 [279 x 254]						
Blower motor type/speeds		ECM variable speed						
Blower motor output - hp [W]		1/2 [373]				1 [746]		
Filter Standard - 1" [51mm] MERV3 disposable, in. [mm]		20 x 24 [508 x 635]						
Electrical characteristics (60hz)		208/230 - 1ph						
Shipping weight - lbs. [kg]		215 [97.52]				220 [99.79]		
Operating weight - lbs. [kg]		195 [88.45]				200 [90.71]		

4/28/14

Air Handler Model Number (Hydronic)		YAH026	YAH036	YAH048	YAH060
Hydronic Coil	Air Coil Total Face Area, ft2 [m2]	6.94 [0.64]			
	Tube outside diameter - in. [mm]	3/8 [9.52]			
	Number of rows	3			
	Fins per inch	13			
	Water In connection - in. [mm] sweat	7/8 [22.22]			
	Water Out connection - in. [mm] sweat	7/8 [22.22]			
Nominal cooling capacity - tons [kW]		2.1 [7.59]	3 [10.55]	4 [14.06]	5 [17.58]
Condensate drain connection - (O.D) in. [mm]		3/4 [19.05]			
Blower Wheel Size (Dia x W), in. [mm]		11 x 10 [279 x 254]			
Blower motor type/speeds		ECM variable speed			
Blower motor output - hp [W]		1/2 [373]		1 [746]	
Filter Standard - 1" [51mm] MERV3 disposable, in. [mm]		20 x 24 [508 x 635]			
Electrical characteristics (60hz)		208/230 - 1ph			
Shipping weight - lbs. [kg]		220 [99.79]			
Operating weight - lbs. [kg]		200 [90.71]			

Note: Water connection dimensions are O.D.

8/14/14

Pressure Drop

Water Pressure Drop - Hydronic Coil

Flow gpm	Pressure Drop (PSI)						
	40°F	50°F	60°F	100°F	110°F	120°F	130°F
3.0	0.5	0.5	0.5	0.4	0.4	0.4	0.4
4.5	0.9	0.9	0.9	0.8	0.8	0.8	0.8
6.0	1.4	1.4	1.4	1.2	1.2	1.2	1.2
9.0	2.8	2.6	2.5	2.4	2.4	2.4	2.3
12.0	4.6	4.4	4.2	4.0	4.0	4.0	3.9
15.0	7.0	6.8	6.6	6.0	6.0	5.9	5.8

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Blower Performance

Blower Performance Variable Speed ECM

Model	Max ESP (wg)	Blower Motor (hp)	HP CFM Setting		Normal Mode Htg & Clg			Dehumidification Mode Clg				Aux CFM Setting		Aux Emerg Mode
			S1	S2	Stg 2	Stg 1	Blower	S9	Stg 2	Stg 1	Blower	S5	S6	
022	0.50	1/2	On	On	900	700	450	Off	775	600	450	On	On	1000
	0.50	1/2	**Off**	**On**	**800**	**625**	**400**	Off	680	530	400	**Off**	**On**	**800**
	0.50	1/2	On	Off	700	540	375	Off	600	450	375	On	Off	775
	0.50	1/2	Off	Off	640	480	350					Off	Off	740
026	0.50	1/2	On	On	1050	800	525	Off	850	700	525	On	On	1150
	0.50	1/2	**Off**	**On**	**925**	**725**	**475**	Off	760	620	475	**Off**	**On**	**950**
	0.50	1/2	On	Off	800	625	425	Off	670	540	425	On	Off	925
	0.50	1/2	Off	Off	740	575	400					Off	Off	825
030	0.50	1/2	On	On	1150	950	600	Off	975	775	600	On	On	1250
	0.50	1/2	**Off**	**On**	**980**	**780**	**500**	Off	825	640	500	**Off**	**On**	**1000**
	0.50	1/2	On	Off	900	700	440	Off	750	580	440	On	Off	975
	0.50	1/2	Off	Off	800	630	425					Off	Off	900
036	0.50	1/2	On	On	1300	1025	760	Off	1105	871	760	On	On	1300
	0.50	1/2	**Off**	**On**	**1225**	**950**	**685**	Off	1041	808	685	**Off**	**On**	**1250**
	0.50	1/2	On	Off	1150	850	620	Off	940	690	620	On	Off	1225
	0.50	1/2	Off	Off	1075	800	550					Off	Off	1200
042	0.75	1	On	On	1500	1100	750	Off	1250	900	750	On	On	1550
	0.75	1	**Off**	**On**	**1425**	**1010**	**650**	Off	1180	840	650	**Off**	**On**	**1450**
	0.75	1	On	Off	1300	975	635	Off	1080	800	635	On	Off	1400
	0.75	1	Off	Off	1150	850	625					Off	Off	1275
048	0.75	1	On	On	1700	1300	975	Off	1400	1080	975	On	On	1700
	0.75	1	**Off**	**On**	**1625**	**1240**	**875**	Off	1350	1025	875	**Off**	**On**	**1550**
	0.75	1	On	Off	1450	1100	750	Off	1200	900	750	On	Off	1525
	0.75	1	Off	Off	1300	1000	675					Off	Off	1400
060	0.75	1	On	On	1850	1750	1175	Off	1540	1450	1175	On	On	1850
	0.75	1	**Off**	**On**	**1760**	**1625**	**1050**	Off	1460	1350	1050	**Off**	**On**	**1760**
	0.75	1	On	Off	1720	1575	1015	Off	1425	1300	1015	On	Off	1725
	0.75	1	Off	Off	1680	1525	975		1428			Off	Off	1700

2/3/10

Factory CFM settings are in boldface
CFM is controlled within 5% up to maximum ESP
Maximum ESP includes allowance for wet coil and standard filter
DIP switch 9 must be 'OFF' to select dehumidification mode

	DIPS	Switch Description
Air Handler DIP Switches	1	Used to set normal CFM
	2	
	3	Not used
	4	
	5	Used to set aux./emergency heat CFM
	6	
	7	Not used
	8	
	9	Used to set dehumidification CFM
	10	Not used

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Electrical Data

Model	Electric Heat Capacity		Supply Circuit	Aux. Heat Minimum CFM	Rated Voltage	Voltage Min/ Max	Blower Motor FLA	Heater Ampacity		Total Unit FLA		Minimum Circuit Ampacity		Maximum Fuse/ HACR	
	KW	BTUH													
	240v	240v						208v	240v	208v	240v	208v	240v	208v	240v
022	0	0	-		208-230/60/1	197/253	4.0	-	-	4.0	4.0	5.0	5.0	10	10
	4.8	16,382	single	740			4.0	17.3	20.0	21.3	24.0	26.6	30.0	30	30
026	0	0	-				4.0	-	-	4.0	4.0	5.0	5.0	10	10
	4.8	16,382	single	740			4.0	17.3	20.0	21.3	24.0	26.6	30.0	30	30
030	0	0	-				4.0	-	-	4.0	4.0	5.0	5.0	10	10
	4.8	16,382	single	740			4.0	17.3	20.0	21.3	24.0	26.6	30.0	30	30
	9.6	32,765	single	900			4.0	34.7	40.0	38.7	44.0	48.4	55.0	50	60
036	0	0	-				4.0	-	-	4.0	4.0	5.0	5.0	10	10
	4.8	16,382	single	740			4.0	17.3	20.0	21.3	24.0	26.6	30.0	30	30
	9.6	32,765	single	900			4.0	34.7	40.0	38.7	44.0	48.4	55.0	50	60
042	0	0	-				7.0	-	-	7.0	7.0	8.8	8.8	15	15
	9.6	32,765	single	900			7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
	14.4	49,147	single	1,275			7.0	52.0	60.0	59.0	67.0	73.8	83.8	80	90
	14.4	49,147	L1/L2				7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
			L3/L4				-	17.3	20.0	17.3	20.0	21.6	25.0	25	25
048	0	0	-				7.0	-	-	7.0	7.0	8.8	8.8	15	15
	9.6	32,765	single	900			7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
	14.4	49,147	single	1,275			7.0	52.0	60.0	59.0	67.0	73.8	83.8	80	90
	14.4	49,147	L1/L2				7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
			L3/L4				-	17.3	20.0	17.3	20.0	21.6	25.0	25	25
060	0	0	-				7.0	-	-	7.0	7.0	8.8	8.8	15	15
	9.6	32,765	single	900			7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
	14.4	49,147	single	1,275			7.0	52.0	60.0	59.0	67.0	73.8	83.8	80	90
	14.4	49,147	L1/L2				7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
			L3/L4				-	17.3	20.0	17.3	20.0	21.6	25.0	25	25
	19.2	65,530	single	1,700			7.0	69.3	80.0	76.3	87.0	95.4	108.8	100	110
	19.2	65,530	L1/L2				7.0	34.7	40.0	41.7	47.0	52.1	58.8	60	60
			L3/L4				-	34.7	40.0	34.7	40.0	43.4	50.0	50	50

7/11/08

Rated Voltage of 208/230/60/1
HACR circuit breaker in USA only

Low Voltage Point to Point Wiring

To Air Handler	From Thermostat	To Compressor Section
C	C	C
R	R	R
G	G	
O	O	O
Y1	Y1	Y1
Y2	Y2	Y2
W2	W	
	L	L

Air Handler transformer must be 75VA. 5/29/08

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

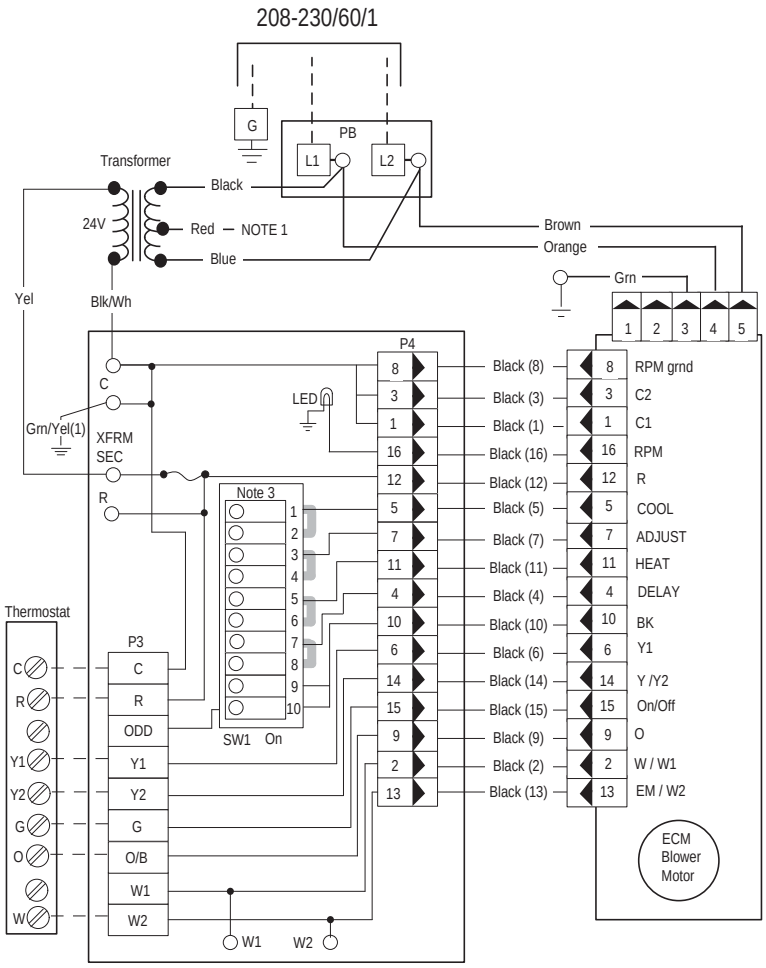
Wiring Schematics

Air Handler Wiring Schematic - 208-230/60/1 97P787-02

Legend

Factory Low voltage wiring	Light emitting diode - Green
Factory Line voltage wiring	208-230V Relay coil
Field low voltage wiring	Electric Heat Contactor
Field line voltage wiring	Polarized connector
Optional block	Power block
DC Voltage PCB traces	DIP package 10 position
Internal junction	Heater element
Quick connect terminal	Breaker
TS Thermal Limit Switch	
L1 Field wire lug	
Ground	
N.O., N.C.	
ER1 to ER4 - Aux heat stage relays	

Notes:
1 – To operate in 208V mode replace the blue transformer wire connected to PB-L2 with red transformer wire.
2 – Jumper wires are Factory Installed, and are needed for electric heat operation.
3 – Dip switches are used to select the air flow.
4 – Use manufacturer's part number 19P592-01 (jumper bar assembly) when single source power is required.
5 – Low voltage wiring CLASS 2.

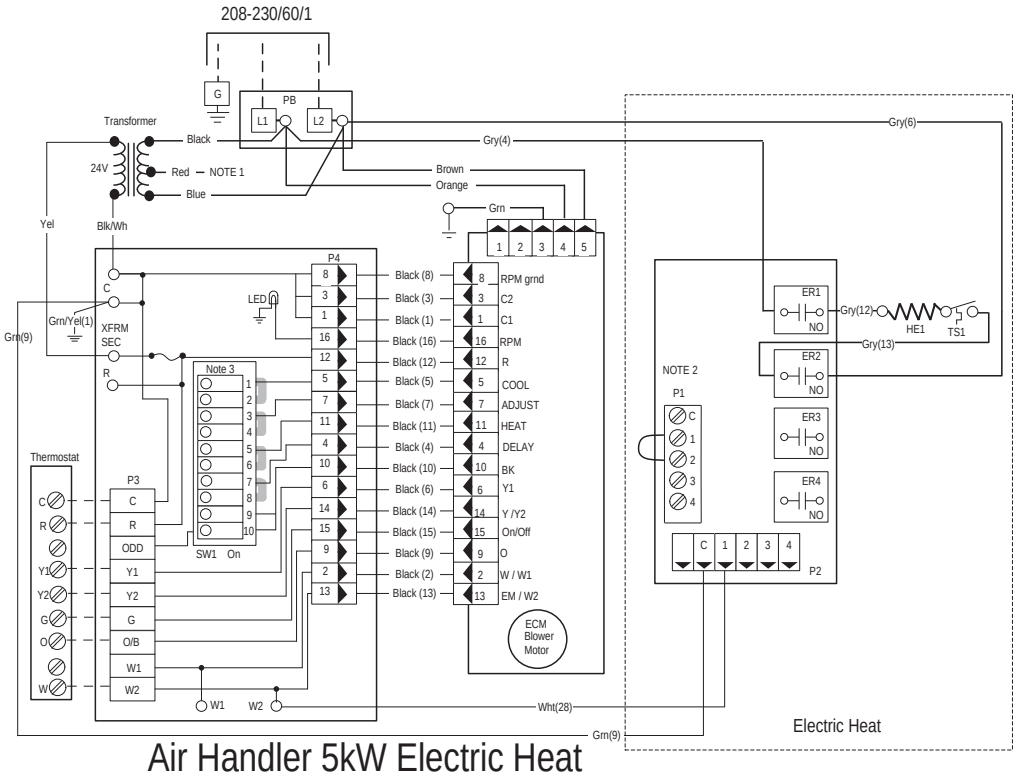


Air Handler No Electric Heat

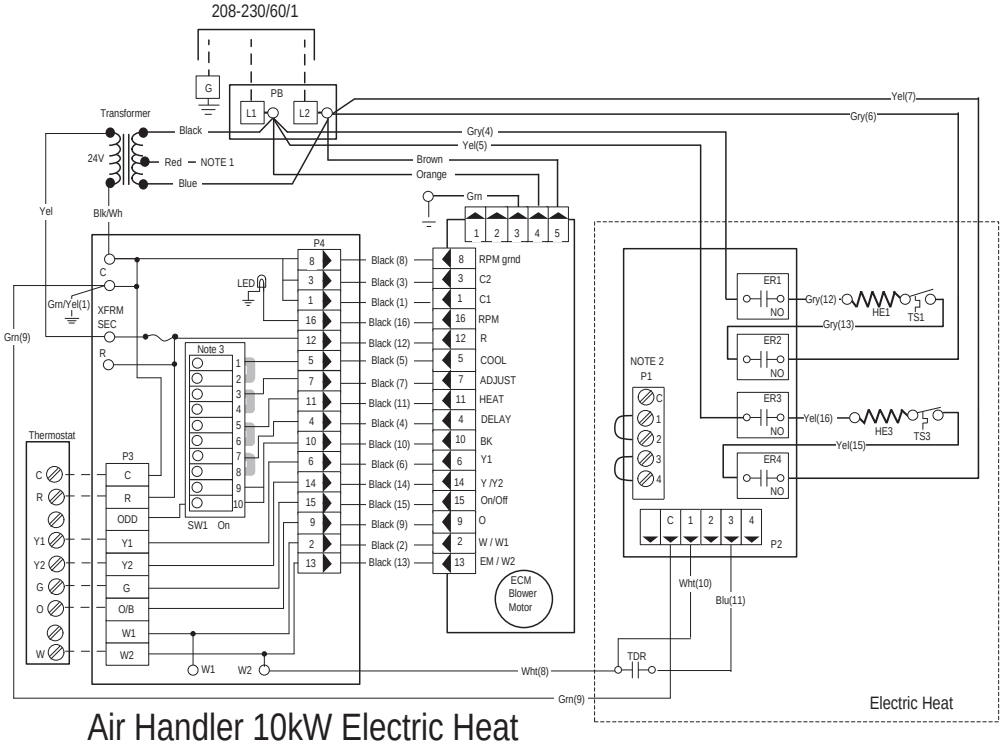
Dual Power Supply Connections

If two separate circuits are used to supply power to the auxiliary heat kit, the Installer will need to verify that each leg of the auxiliary heat circuit breakers are wired from the power supply correctly in order for the electric heat kit to operate properly. This can be done by measuring the supply side voltage of the auxiliary heat circuit breakers. Put a voltmeter on the L2 side of Circuit Breaker One and on the L2 side of Circuit Breaker Two. The voltmeter should read approximately 0 volts. If the meter reads high voltage, the auxiliary heat breakers need to be rewired so that breakers in the auxiliary heat kit match the wiring of the Disconnect Panel breakers. Meaning, L1 and L2 from one breaker in the disconnect panel must connect to L1 and L2 at one of the auxiliary heat circuit breakers and L1 and L2 from the other breaker in the disconnect panel must connect to L1 and L2 of the other auxiliary heat circuit breaker, making sure that the L1 and L2 from each disconnect breaker matches the L1 and L2 at each of the auxiliary heat breakers.

Wiring Schematics cont.

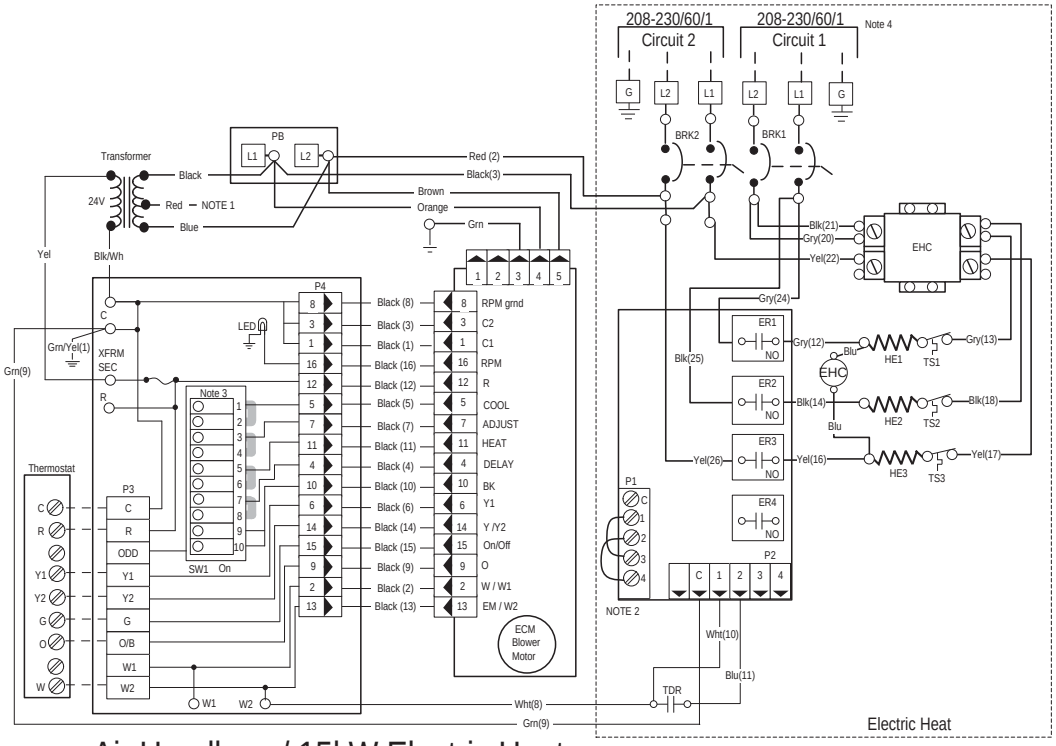


Air Handler 5kW Electric Heat

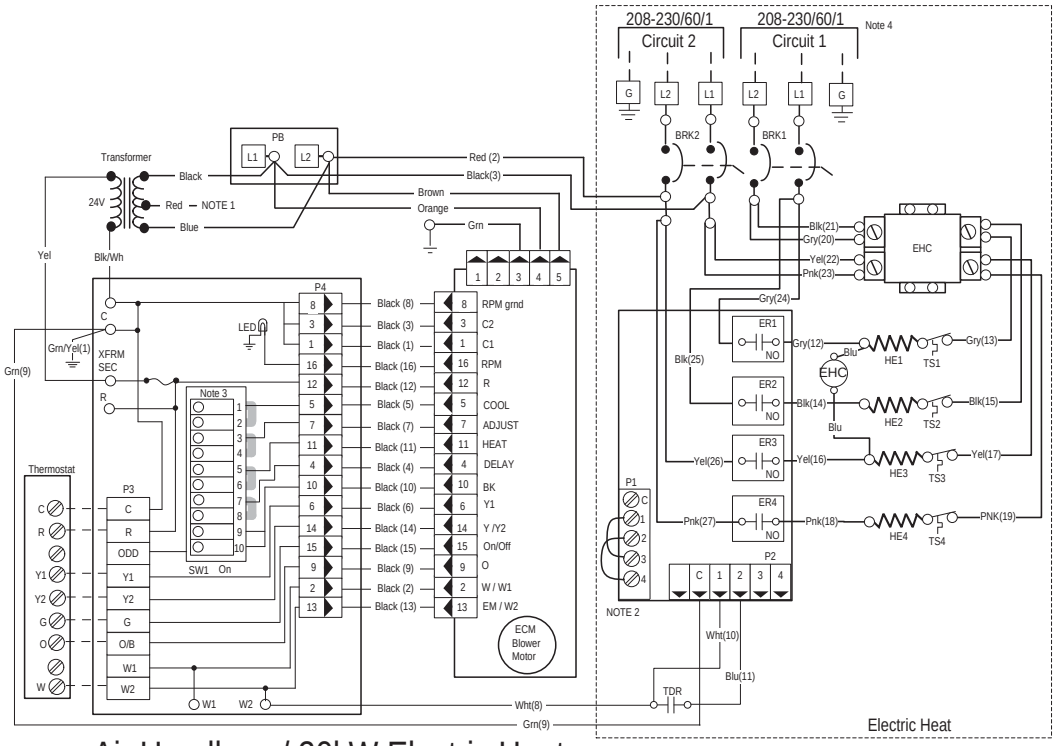


Air Handler 10kW Electric Heat

Wiring Schematics cont.



Air Handler w/ 15kW Electric Heat



Air Handler w/ 20kW Electric Heat

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Engineering Guide Specifications

General

The air handler shall provide vertical upflow, downflow, or horizontal configurations in one package. Units shall be listed by a nationally recognized safety-testing laboratory or agency, such as Underwriter's Laboratory (UL) or Environmental Testing Laboratories (Intertek-ETL). The air handler units shall be designed and ARI performance listed to operate with the G Series geothermal split condensing units. Each unit shall be pallet mounted and shipped using dense cardboard corners/top and stretch wrap for easy shipping damage inspection.

Casing and Cabinet

The cabinet shall be fabricated from heavy-gauge galvanized steel and polyester powder coat paint to withstand 1000 hours of salt spray testing. The interior shall be insulated with 1/2˝-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. One large blower compartment access panel shall be provided and shall be removable with supply and return ductwork in place. The internal components layout shall provide for major service with the unit in-place for restricted access installations. The blower assembly access shall be slide-out serviceable via a 'works-in-a-drawer' design. The cabinet shall be convertible to horizontal or downflow applications by reconfiguring the cabinet using only a nut driver. The unit shall be 'zero clearance' approved on any of its surfaces. The cabinet shall be divided into two cubes to facilitate easy transport up attic ladders when needed. Standard-size MERV 3 1˝ filters shall be provided with each unit.

Refrigeration Circuit

All units shall provide a fin tube air-to-refrigerant heat exchanger of the "A" coil design. The finned tube coil shall be sized for low-face velocity and constructed of lanced aluminum fins bonded to rifled copper tubes in a staggered pattern. The coil shall include an integral corrosion resistant e-coated galvanized steel drain pan.

The thermal expansion valve shall be factory installed and provide proper superheat over the entire liquid temperature range with minimal "hunting." The valve shall operate in the cooling mode through the use of an internal check valve.

Blower Motor and Assembly

The blower shall be an oversized direct drive centrifugal type with a dynamically balanced wheel. The housing and wheel shall be designed for quiet low outlet velocity operation and of galvanized or galvalume steel construction. Tight blower housing geometry shall not be permitted. The blower housing shall be removable from the unit without disconnecting the supply air ductwork for servicing of the blower motor through a 'works-in-a-drawer' design. The high efficiency blower motor shall be a variable speed ECM type. The blower motor shall be isolated from the housing by rubber grommets. The motor shall be permanently lubricated ball bearings and have thermal overload protection.

Electrical

A solid state electronic control module shall be provided for the control of the blower and each stage of electric heat. Single or dual circuit line voltage terminal blocks shall be provided for the air handler power supply. Fuse protection shall be provided for the 75 VA control transformer. Units shall have knockouts for entrance of the low and line voltage wiring. The blower motor shall incorporate a harness plug-connection for easy removal. An integral circuit breaker shall be provided on all units employing 15 or 20 kW electric heat. The control shall maintain the blower operation 30 seconds after the compressor or electric heat have shut off to improve efficiency.

Piping

Refrigerant connections shall be made using sweat copper joints. The condensate connections shall be a 3/4˝ O.D. tube.

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

General Specifications

Refrigerant Air Coil

Designed for R-410A refrigerant. Configured as an 'A' coil, rifled copper tubes and enhanced corrugated lanced aluminum fins to provide high efficiencies at low face velocities. Exclusive FormiShield™ coating for added protection.

Hydronic Air Coil

Designed for hydronic applications. Configured as an 'A' coil, smooth copper tubes and enhanced corrugated lanced aluminum fins that provide increased performance. Exclusive FormiShield™ coating for added protection.

Filter Rack

Integral filter rack holds 1 in. or 2 in. filters (field changeable). 1 in. MERV 3 disposable filter included.

Cabinet (Encased Models)

Cabinets are designed for upflow, horizontal, and bottomflow applications. Constructed of heavy gauge environmentally-responsible galvanized steel and finished with corrosion-resistant powder coating which meets ASTM B117 (1,000 hour salt spray). Front access panel for ease of service.

Insulation (Encased Models)

The interior surfaces shall be lined with ½" thick multi-density, cleanable aluminum foil coated glass fiber which meets NFPA 90A requirements, air erosion and mold growth limits of UL-181, stringent fungal resistance test per ASTM-C1071 and ASTM G21, and zero level bacteria growth per ASTM G22.

Controls

24 volt 75VA transformer, ECM interface board allows for blower speed selection and thermostat inputs.

Auxiliary/Emergency Heat

Optional factory installed electric heat. 15 kW and 20 kW heaters include circuit breakers.

Drain Pans

Two e-coated galvanized steel drain pans included, one for vertical and one for horizontal applications. The pans comes equipped with primary and secondary drain connections.

Expansion Device

Factory installed TXV with internal check valve. The TXV is inside the cabinet on the encased models.

Refrigerant Connections

Suction and liquid lines have sweat connections extended outside the cabinet on encased models for ease of connection.

Hydronic Connections

Water in and water out lines have sweat connections extended outside the cabinet on encased models for ease of connection.

Contractor: _____ P.O.: _____

Engineer: _____

Project Name: _____ Unit Tag: _____

Revision Guide

Pages:	Description:	Date:	By:
10-13	Updated Wiring Schematics	01 April 2015	MA
3-5, 10	Drain Pipe Update	20 May 2014	DS/MA
6-9,13	Updated Hydronic Data	14 Aug 2014	MA
All	Updated Dimensional Data for New Vertical Condensate Drain	02 May 2014	DS
All	First Published	03 Sept 2013	DS