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# **SUBMITTAL**

# 4 Ton Convertible Heat Pump Packaged Units PRODUCT SPECIFICATIONS 4WCZ6048B4000A

FRODUCTS	OF ECILICATIONS
MODEL	4WCZ6048B4000A
RATED Volts/PH/Hz	460/3/60
Performance Cooling	100/0/00
BTUH (High)	47500
Indoor Airflow (CFM)	1575
Power Input (KW)	3.42
BTUH (Low)	39000
Indoor Airflow (CFM)	1150
Power Input (KW)	2.22
EER - HI / LOW / SEER	12.0 / 17.5 / 16.0
Sound Power Rating [dB(A)]	72
Performance Heating ①	12
(High Temp.)BTUH / COP	(High) 42000 / 3.83
Power Input (KW)	· ·
(Low Temp.) BTUH / COP	3.32
Power Input (KW)	(High) 23200 / 2.27
	2.99
(High Temp.)BTUH / COP	(Low) 31200 / 3.77
Power Input (KW)	2.4
(Low Temp.) BTUH / COP	(Low) 17000 / 2.12
Power Input (KW)	2.32
HSPF (BTU / Watt-Hr.) © POWER CONN.—V/Ph/Hz	8.5
	460/3/60
Min. Brch. Cir. Ampacity®	15.3
Fuse Size — Max. / Recmd.	
	2-STAGE SCROLL
Volts/Ph/Hz	460/3/60
R.L. Amps — L.R. Amps	6.4 / 41.0
OUTDOOR COIL — TYPE	SPINE-FIN
Rows/F.P.I.	2/24
Face Area (sq.ft.)	23.57
Tube Size (in.)	3/8
Refrigerant Control	EXPANSION VALVE
INDOOR COIL — TYPE	PLATE FIN
Rows/F.P.I.	4 / 15
Face Area (sq.ft.)	5.0
Tube Size (in.)	3/8
Refrigerant Control	EXPANSION VALVE
Drain Conn. Size (in.)	3/4 FEMALE NPT
OUTDOOR FAN — TYPE	PROPELLER
Dia. (in.)	28.2
Drive/No. Speeds	DIRECT / 1
CFM @ 0.0 in. w.g.⊕	4220
Motor — HP/R.P.M.	1/6 / 830
Volts/Ph/Hz	460/1/60
F.L. Amps/L.R. Amps	0.5 / 0.84
INDOOR FAN — TYPE	CENTRIFUGAL
Dia x Width (in.)	10 X 10
Drive/No. Speeds	DIRECT / VARIABLE
CFM @ 0.0 in. w.g. ®	SEE FAN PERFORMANCE TABLE
Motor — HP/R.P.M.	3/4 / VARIABLE
Volts/Ph/Hz	208-230/1/60
F.L. Amps/L.R. Amps	6.8 / 6.8
FILTER / FURNISHED	NO
Type Recommended	THROWAWAY
Recmd. Face Area (sq. ft.)	5.3
REFRIGERANT / Charge (	
DIMENSIONS	HXWXL
Crated (in.)	52.0 / 47.0 / 62.0
WEIGHT / Shipping / Net (	lbs.) 607 / 479

- ① Certified in accordance with the Unitary Air-Conditioner Equipment certification program, which is based on AHRI Standard 210/240.
- ② Sound Power values are not adjusted for AHRI 270-95 tonal corrections.
- ③ Calculated in accordance with currently prevailing Nat'l Electrical Code.
- Standard Air Dry Coil Outdoor.
- Standard Air Wet Coil Indoor.
- ® Rated in accordance with D.O.E. test procedure.
- ⑦ Filters must be installed in return air system. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendations with clean resistance of 0.05" W.C.

# **Dimensional Data and Weights**

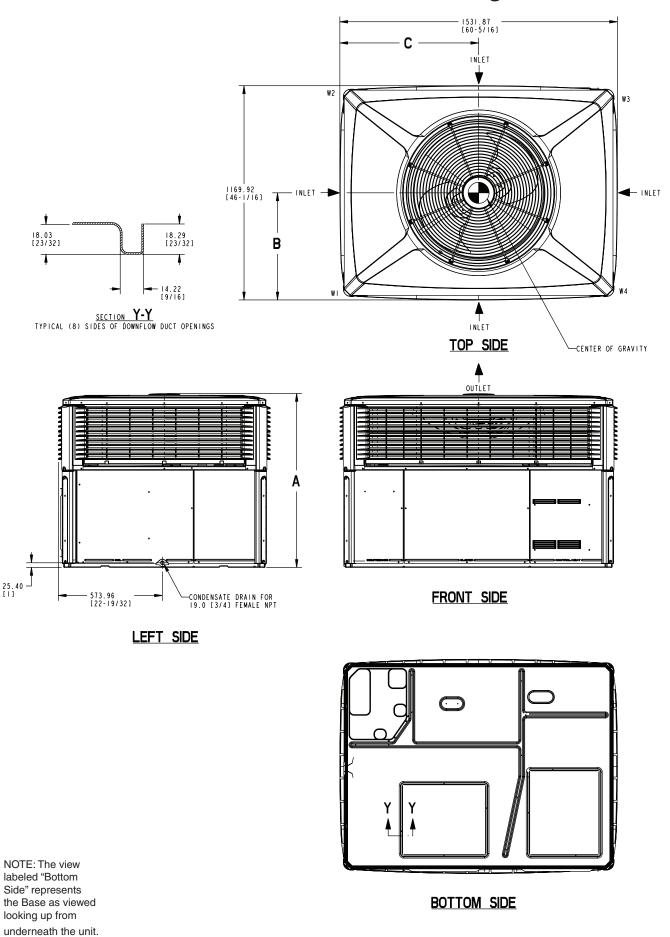
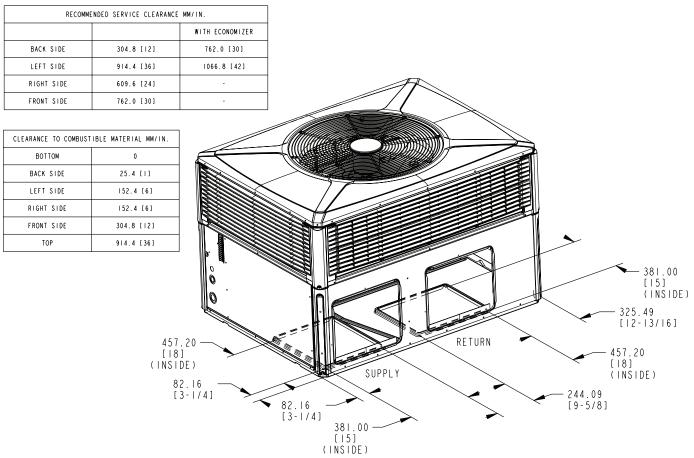


Figure 1. WCZ6048 through WCZ6060 (1 of 3)

### **Dimensional Data and Weights**



### **BOTTOM DUCT OPENINGS**

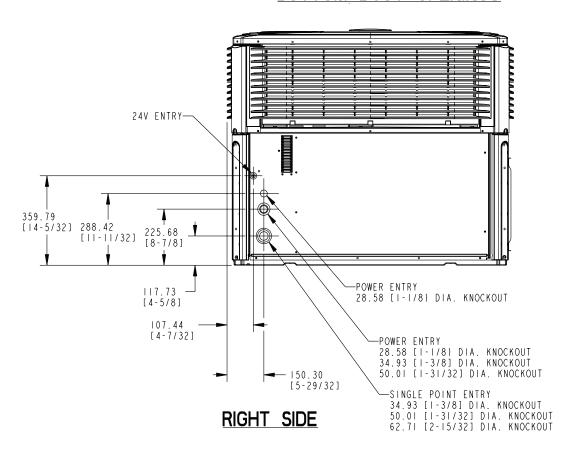
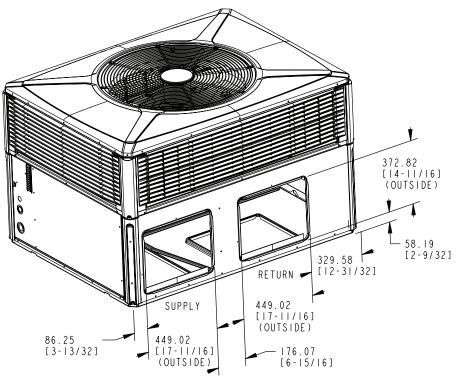
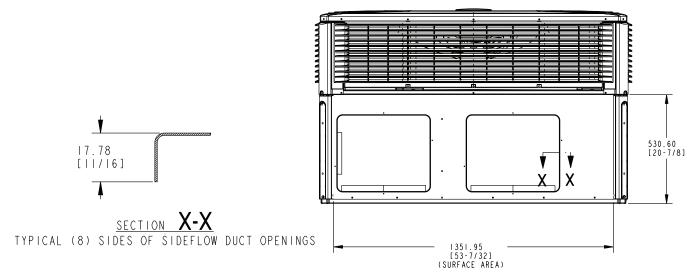


Figure 2. WCZ6048 through WCZ6060 (2 of 3)

# **Dimensional Data and Weights**



**BACK DUCT OPENINGS** 



**BACK SIDE** 

MODEL	HEIGHT MM/IN.		APPROX. CORNER	WEIGHT - KG/LBS		SHIPPING	TOTAL UNIT	CENTER OF GRAVITY MM/IN.		
MODEL	A	w i	W2	W3	W 4	WEIGHT KG/LBS	KG/LBS	В	С	
4TCY4042/048A	949.33 [37-3/8]	76.2 [168]	47.6 [105]	35.8 [79]	57.6 [127]	275.6 (607)	217.3 [479]	426.7 [16.8]	635.0 [25.0]	
4TCY4048B	949.33 [37-3/8]	78.0 [172]	49.4 [109]	37.6 [83]	59.4 [ 3 ]	282.5 [623]	224.4 [495]	426.7 [16.8]	635.0 [25.0]	
4TCY4060	1050.93 [41-3/8]	78.9 [174]	46.7 [103]	34.9 [77]	59.1 [130]	277.8 (612)	219.5 [484]	414.0 [16.3]	635.0 [25.0]	
4WCY4042/048A	949.33 [37-3/8]	68.9 [152]	40.8 [90]	30.8 [68]	52.2 [115]	275.6 (607)	217.5 [479]	414.0 [16.3]	635.0 [25.0]	
4WCY4048B	949.33 [37-3/8]	78.0 [172]	49.4 [109]	37.6 [83]	59.4 [ 3 ]	282.5 [623]	224.4 [495]	414.0 [16.3]	635.0 [25.0]	
4WC Y 4060	1050.93 [41-3/8]	80.3 [177]	47.6 [105]	35.8 [79]	60.8 [134]	282.8 (623)	224.5 [495]	414.0 [16.3]	635.0 [25.0]	
4WC Z 6 0 48	1050.93 [41-3/8]	68.9 [152]	40.8 [90]	30.8 [68]	52.2 [115]	275.6 (607)	217.5 [479]	414.0 [16.3]	635.0 [25.0]	
4WC Z 6 0 6 0	1050.93 [41-3/8]	80.3 [177]	47.6 [105]	35.8 [79]	60.8 [134]	282.8 (623)	224.5 [495]	414.0 [16.3]	635.0 [25.0]	

Figure 3. WCZ6048 through WCZ6060 (3 of 3)

### **Indoor Blower Performance**

### **Indoor Fan Performance 4WCZ6048**

Horizontal			External Static Pressure (in. wg)											
		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0		
1350 CEM/Lon Setting	Low	-	954	973	977	973	966	957	950	944	-	-		
	High	-	1363	1390	1396	1390	1379	1368	1358	1349	-	-		
400 CFM/Ton Setting	Low	•	1121	1106	1104	1106	1108	1108	1104	1097	-	-		
400 CFW/Ton Setting	High	•	1601	1580	1577	1580	1583	1583	1577	1567	-	-		
	Low	•	1223	1254	1268	1271	1268	1264	1261	1258	-	-		
	High	-	1747	1792	1811	1816	1812	1806	1801	1797	-	-		

Down Flow			External Static Pressure (in. wg)											
		0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	8.0	0.9	1.0		
350 CFM/Ton Setting	Low		948	977	977	970	969	975	979	962	-	-		
	High	-	1354	1396	1396	1386	1384	1393	1399	1375	-	-		
400 CFM/Ton Setting	Low		1102	1106	1109	1113	1116	1119	1120	1118	-	-		
400 Crivi/Ton Setting	High	-	1574	1580	1585	1589	1594	1599	1601	1597	-	-		
450 CFM/Ton Setting	Low	-	1295	1277	1272	1273	1274	1273	1272	1273	-	-		
	High	-	1851	1824	1817	1818	1820	1819	1817	1819	-	-		

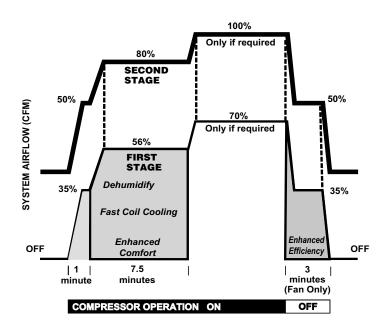
### 4WCZ6048 AIRFLOW WITH AUXILIARY HEAT (CFM)

SWITCH	SETTINGS	SELECTION	NOMINAL AIRFLOW	
7-OFF	8-OFF	LOW	1400 CFM	
7-ON	8-OFF	HIGH	1600 CFM	
7-OFF	8-ON	HIGH	1600 CFM	
7-ON	8-ON	HIGH	1600 CFM	

### **COOLING FAN DELAY OPTIONS**

			NOMINAL
SWITCH SETTINGS		DELAY	AIRFLOW
5-OFF	6-OFF	NONE	100%
5-ON	6-OFF	45 SEC	100%
5-OFF	6-ON	90 SEC	50%
5-ON	6-ON	**	50-100%

<sup>\*\*</sup> This ENHANCED MODE selection provides a ramping up and ramping down of the indoor blower speed to provide improved comfort, quietness, and potential energy savings. The Graph below shows the ramping process



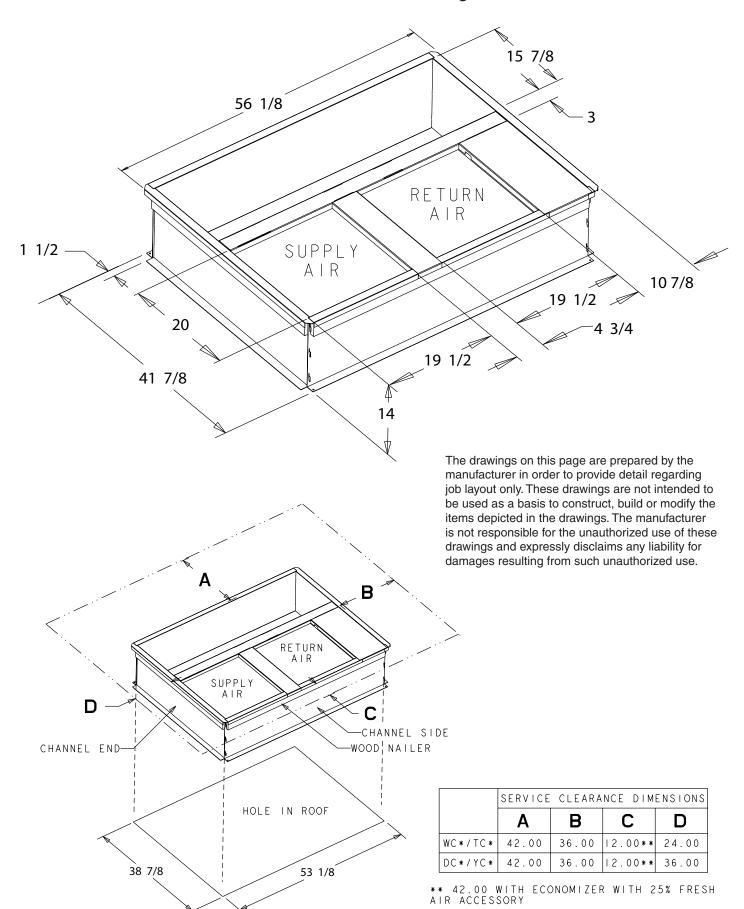
# Supplementary Electric Heaters BAYHTRV405, 408, 410, 415, 420, 425E

UNIT MODEL ELECTRIC HEATER MODEL	ELECTRIC	RATED			HEATER CAPACITY NO		NO. OF	NO. OF KW/STAGE				CANADA ONLY
	VOLTAGE	PHASE	AMPS	KW	втин	STAGES	1	2	MCA	HACR CKT BKR SIZE (4)	MAX. CKT BKR SIZE (5)	
^WCZ6036-060‡4	BAYHTRV405E	480	3	6	5.0	17100	1	5.0		8	15	15
^WCZ6036-060‡4	BAYHTRV408E	480	3	10	8.0	27300	1	8.0		13	15	15
^WCZ6036-060‡4	BAYHTRV410E	480	3	12	10.0	34100	1	10.0		15	15	15
^WCZ6036-060‡4	BAYHTRV415E	480	3	18	15.0	51200	2	10.0	5.0	23	25	25
^WCZ6048-060‡4	BAYHTRV420E	480		24	20.0	68300	2	10.0	10.0	30	30	30
^WCZ6048-060‡4	BAYHTRV425E	480	3	30	25.0	85300	2	15.0	10.0	38	40	40

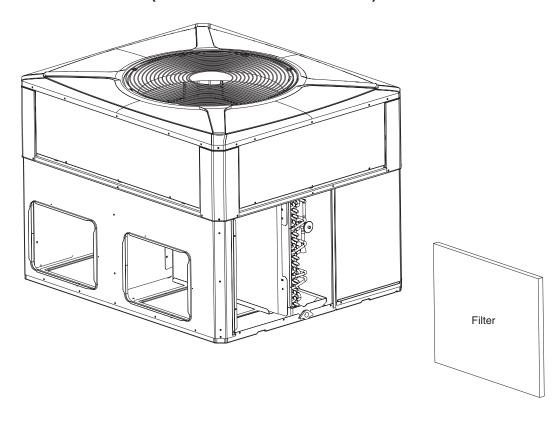
# Single Power Entry Kit BAYSPEK61E

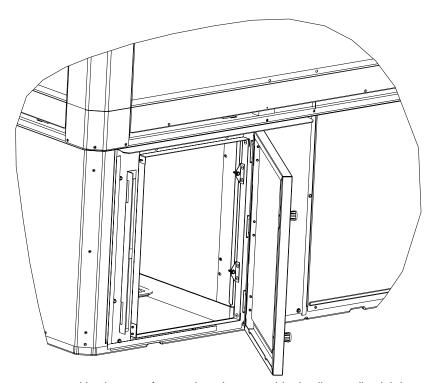
SINGLE POWER ENTRY KIT	HEATER MODEL	UNIT MODEL	MIN CKT. AMP.	MAX OVER CUR- RENT PROTECT DEVICE
	BAYHTRV405E	4WCZ6048	23	25
	BAYHTRV408E	4WCZ6048	27	30
BAYSPEK061E	BAYHTRV410E	4WCZ6048	30	30
	BAYHTRV415E	4WCZ6048	38	40
	BAYHTRV420E	4WCZ6048	45	45

### BAYCURB051A Full Perimeter Roof Mounting Curb for 4WCZ6048-060



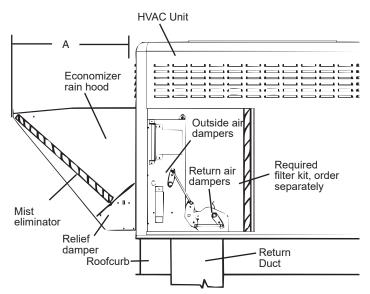
BAYFLTR101, 201B, 1" - 2" Filter Rack (Mounts in Filter/Coil Section)





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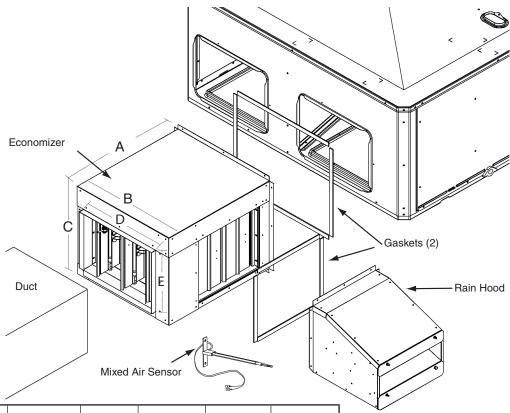
# BAYECON103,104A Down Discharge Economizer and Rain Hood (Mounts Over Horizontal Return Air Opening)



Economizer	Models	Α
BAYECON103A	4WCZ6036 4DCZ6036 4YCZ6036	20 1/8"
BAYECON104A	4WCZ6048-060 4DCZ6048-060 4YCZ6048-060	24 3/8"

### BAYCON203,204A Horizontal Economizer and Rain Hood

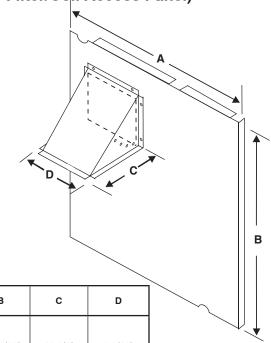
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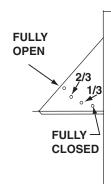


Economizer	Α	В	С	D	E	F
BAYECON203AA	22"	20"	16 7/8"	15 11/16"	11 11/16"	15"
BAYECON204AA	26"	22 21/32"	19"	17 11/16"	14 11/16"	21-3/8"

BAYOSAH001,002A, 25% Outside Air Damper (Replaces Filter/Coil Access Panel)

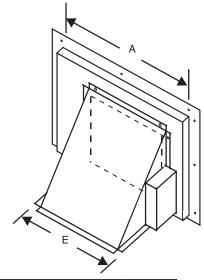
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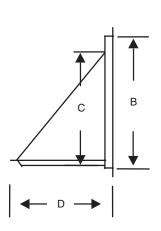




Manual Fresh Air Model	Unit Application Models	Α	В	С	D	
	4YC,WC3018-036		20 11/16"	12 3/8"		
BAYOSAH001	4TC*3018-036	22 7/16"			9 3/16"	
BAYOSAHUUT	4W/T/Y/DCY4024-036				9 3/10	
	4W/Y/DCZ6036					
	4YC,WC3042-060			12 3/8"		
BAYOSAH002	4TC*3042-060	25 3/16"	20 11/16"		9 3/16"	
DATUSAHUU2	4W/T/Y/DCY4042-060	25 3/16	ZU 11/16"		9 3/10	
	4W/Y/DCZ6048-060					

BAYDMPR101,102A, 25% Motorized Outside Air Damper (Mounts Over Horizontal Return Alr Opening)





	Unit Application Models	Α	В	С	D	E
BAYDMPR101A	4YC,WC3018-036					
	4TC3018-036	15 13/16"	11 13/16"	10 1/4"	11 1/2"	12 1/4"
	4W/T/Y/DCY4024-036					
	4W/Y/DCZ6036					
BAYDMPR102A	4YC,WC3042-060	18 3/16"	15 1/8"	10 1/4"	11 1/2"	12 1/4"
	4TC3042-060					
	4W/T/Y/DCY4042-060					
	4W/Y/DCZ6048-060					

### **Mechanical Specifications**

#### General

The units shall be horizontal airflow as shipped and convertible to downflow. All units shall be factory assembled, piped, internally wired and fully charged with refrigerant. Units shall be certified to UL Standard 1995. All units shall be factory run tested to check cooling operation, fan and blower rotation and control or TXV sequence. Units shall be designed to operate at ambient temperatures between 115°F and 55°F in cooling as manufactured. Cooling performance shall be rated in accordance with A.H.R.I. standards.

#### **Unit Casing**

All components shall be mounted in a weather-resistant steel cabinet with an enamel finish. Access panels shall be provided for unit controls and indoor coil and fans. Indoor air section compartment shall be completely insulated with fireproof, permanent, odorless glass fiber material. Knockouts shall be provided for utility and control connections. Drain connections shall be provided to accommodate indoor water runoff.

#### Compressor

The compressor shall be hermetically sealed, high efficiency Climatuff® two-stage compressors. Internal overcurrent and over temperature protection, internal pressure relief shall be standard.

#### **Refrigeration System**

All units shall have TXV in cooling and TXV in heating. Service pressure tap ports, and a refrigerant line filter dryer shall be standard.

#### **Indoor Coil**

Coils shall be internally finned or smooth bore 3/8" copper tubes mechanically bonded to configured aluminum plate fin as standard. Evaporator coil leak and pressure tested to 200 psig; condenser coil tested to 450 psig.

#### Condenser Coil —

The Spine Fin™ condenser coil shall be continuously wrapped, corrosion resistant all aluminum with minimum brazed joints. This coil is 3/8 inch O.D. seamless aluminum tubing glued to a continuous aluminum fin. Coils are lab tested to withstand 2,000 pounds of pressure per square inch. The outdoor coil provides low airflow resistance and efficient heat transfer. The coil is protected on all four sides by louvered panels.

Indoor Air Fan — Direct-drive, forward-curved, centrifugal wheel in a Composite Vortica® Blower housing. Motor shall have thermal overload protection. Permanently lubricated motor bearings. Motor/blower assembly isolated from unit with rubber mounts.

Condenser Fan — Direct-drive, draw thru propeller type. Weather-proofed permanent split capacitor fan motor shall have built-in thermal overload and permanently lubricated motor bearings.

#### **System Controls**

System controls include condenser fan, evaporator fan and compressor contactors.

#### **Accessories**

Roof Curb — The roof curb shall be designed to mate with the unit and provide support and complete weathertight installation when properly installed. Adhesive back polyurethane sealing strips shall be provided to ensure an airtight seal between supply and return openings of the curb and unit. The roof curb design allows field fabricated ductwork to be connected directly to the curb. Curb ships knocked down for field assembly, and includes factory-installed wood nailer strips.

Electric Heaters — Each heater assembly shall include power supply fusing if over 48 amps, automatic resetting limit switches and heat limiters for thermal protection. Heaters shall be provided with polarized plugs for quick connection to unit low voltage wiring. Electric heat modules shall be UL listed.

Single Source Power Entry — This accessory when used with electric heat accessory shall allow single source power connection to unit and heater combination. Single source power entry kits shall have specific matching heater(s). Kit shall include high voltage terminal blocks, fuse blocks and fuses, cut-to-length interconnecting wiring, and junction box (if required) to provide power sources with fuse protection as required for both the unit and accessory heater. Kit components shall install within the unit cabinet in the heater access section. Single source branch power circuit shall be protected and wired in accordance with local codes.

Fully Modulating Economizer — This accessory shall be field installed and be composed of the following items: 0-100% fresh air damper, damper drive motor, fixed dry bulb enthalpy control, and low voltage wiring plug for electrical connections. Solid state enthalpy or differential enthalpy control is optional. Economizer operations shall be controlled by the preset position of the enthalpy control. A barometic relief damper shall be standard with the economizer and provide a pressure operated damper that shall be gravity closing and prohibit entrance of outside air on equipment "off" cycle. Economizer requires BAYRLAY004A relay kit to interface the economizer to the heat pump.

**Manual Outside Air Dampers** — Rain hood and screen shall be field installed. Suitable for up to 25% outside air.

**Start Kit** — Extra compressor starting capacity for single phase equipment.

#### **Control Options**

**Standard Indoor Thermostats** — Two stage heating/cooling or one stage heating/cooling thermostats shall be available in either manual or automatic changeover.

Programmable Electronic Night Setback Thermostat — Programmable electronic thermostat shall provide heating setback and cooling setup with 7-day, programming capability. 1H/1C or 2H/2C models available.

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