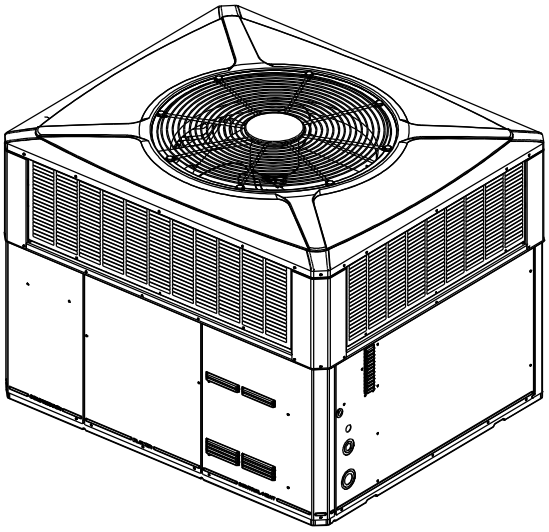
Submittal

Single Packaged Cooling/Electric Heat
14 SEER Convertible

4TCC4024A1000A



Note: *"Graphics in this document are for representation only. Actual model may differ in appearance."*

TAG:_____

⚠ SAFETY WARNING

Only qualified personnel should install and service the equipment. The installation, starting up, and servicing of heating, ventilating, and air-conditioning equipment can be hazardous and requires specific knowledge and training. Improperly installed, adjusted or altered equipment by an unqualified person could result in death or serious injury. When working on the equipment, observe all precautions in the literature and on the tags, stickers, and labels that are attached to the equipment.

December 2015 **4TCC4024A-SUB-1F-EN** Ingersoll Rand

Product Specifications

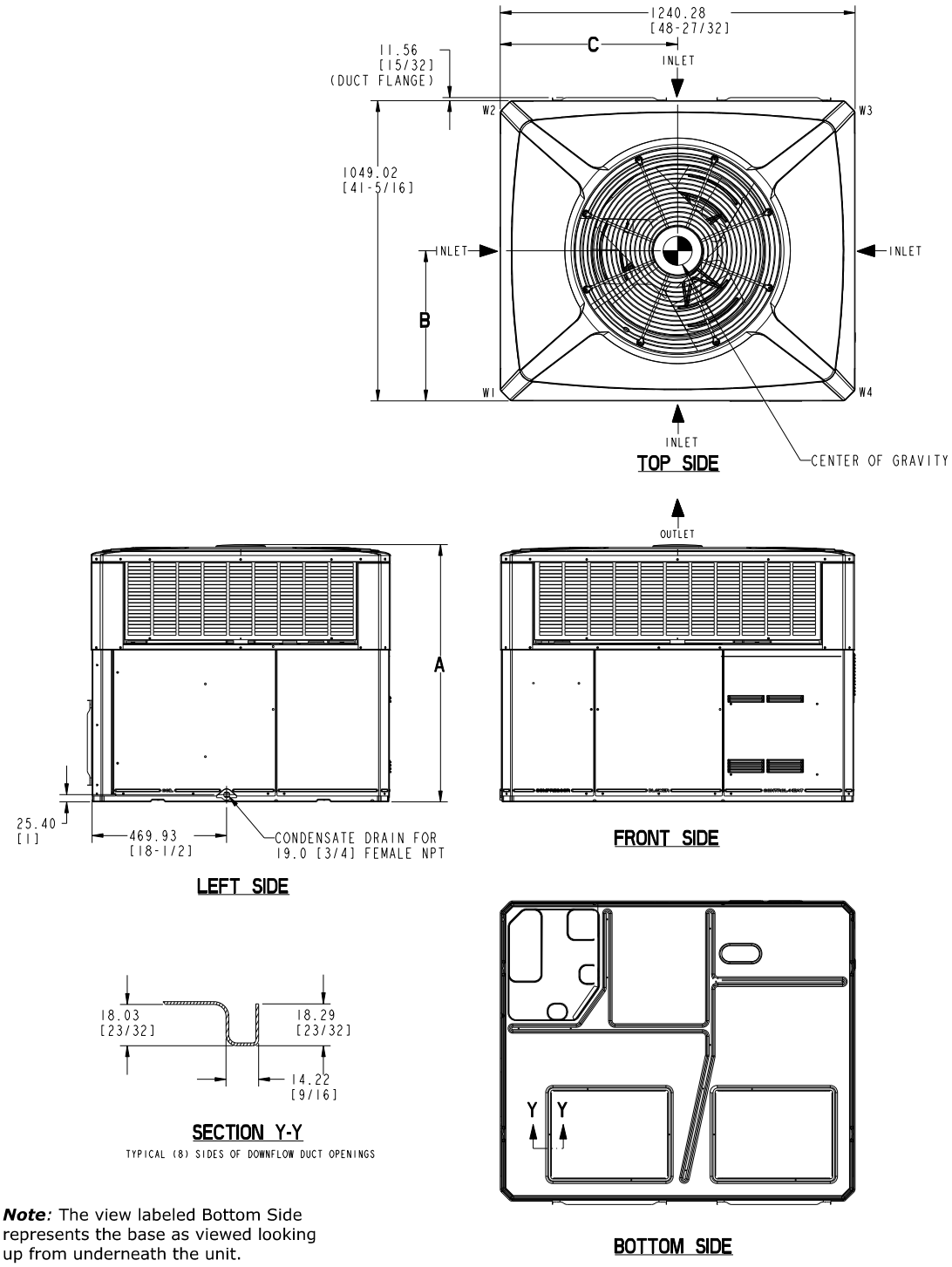
MODEL	4TCC4024A1000A
RATED Volts/PH/Hz	208–230/1/60
Performance Cooling BTUH [a]	24600
Indoor Airflow (CFM)	805
Power Input (KW)	1.99
EER/SEER (BTU/Watt-Hr.) [b]	12.0 / 14.00
Sound Power Rating [dB(A)] [c]	66.6
POWER CONN. — V/Ph/Hz	208–230/1/60
Min. Brch. Cir. Ampacity [d]	19.1
Fuse Size — Max. (amps)	30
Fuse Size — Recmd. (amps)	30
COMPRESSOR	SCROLL
Volts/Ph/Hz	208–230/1/60
R.L. Amps — L.R. Amps	12.8 / 58.0
OUTDOOR COIL — TYPE	SPINE-FIN
Rows/F.P.I	2 / 24
Face Area (sq. ft.)	13.32
Tube Size (in.)	3/8
INDOOR COIL — TYPE	MCHE
Rows/F.P.I	2 / 16
Face Area (sq. ft.)	2.7
Tube Size (in.)	.81
Refrigeration Control	EXPANSION VALVE
Drain Conn. Size (in.)	3/4 FEMALE NPT
OUTDOOR FAN — TYPE	PROPELLER
DIA. (IN.)	23.4
DRIVE/NO. SPEEDS	DIRECT / 1
CFM @ 0.0 in. w.g. [e]	2350

Motor — HP/R.P.M	1 / 12 / 810
Volts/Ph/Hz	208–230/1/60
F.L. Amps/L.R Amps	.54 / .82
INDOOR FAN — TYPE	CONSTANT TORQUE ECM
Dia. x Width (in.)	10.62 X 10.62
Drive/No. Speeds	DIRECT / 3
CFM @ 0.0 in. w.g. [f]	SEE FAN PERF TABLE
Motor — HP/R.P.M.	1/3 / 1050
Volts/Ph/Hz	208–230/1/60
F.L. Amps	2.6
FILTER / FURNISHED	NO
Type Recommended	THROWAWAY
Recmd. Face Area (sq. ft) [g]	4.0
REFRIGERANT	R-410
Charge (lbs.)	5.24
CHARGING SPECIFICATIONS	
Subcooling	12°
DIMENSIONS	H X D X W
Crated (in.)	46 X 45 X 52
WEIGHT	
Shipping (lbs.) / Net (lbs.)	432 / 358

[a] Rated in accordance with AHRI Standard 210/240.
[b] Rated in accordance with D.O.E. test procedure.
[c] Sound Power values are not adjusted for AHRI 270–95 tonal corrections.
[d] Calculated in accordance with currently prevailing Nat'l Electrical Code.
[e] Standard Air — Dry Coil — Outdoor.
[f] Standard Air — Dry Coil — Indoor
[g] Filters must be installed in return air stream. Square footages listed are based on 300 f.p.m. face velocity. If permanent filters are used size per manufacturer's recommendation with a clean resistance of 0.05" W.C.

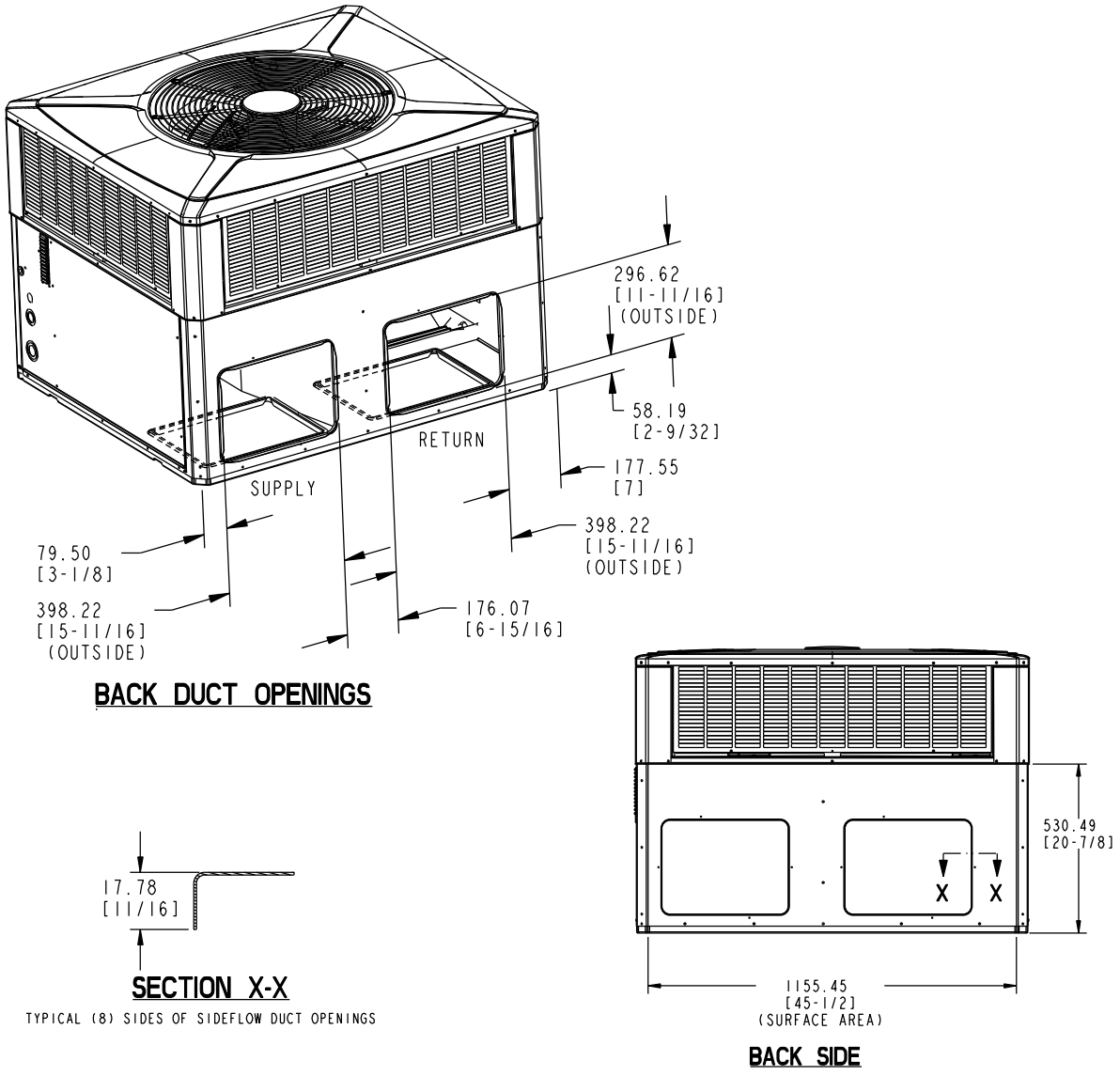
Outline Drawings

Figure 1. 2 — 3 TON MODELS



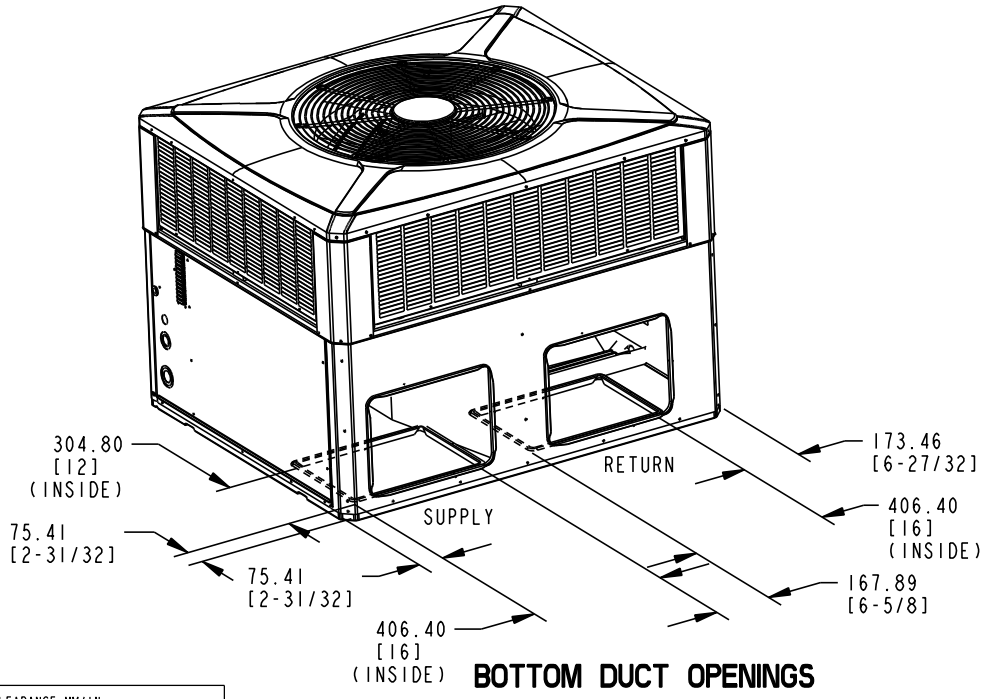
Note: The view labeled Bottom Side represents the base as viewed looking up from underneath the unit.

Figure 2. 2 — 3 TON MODELS



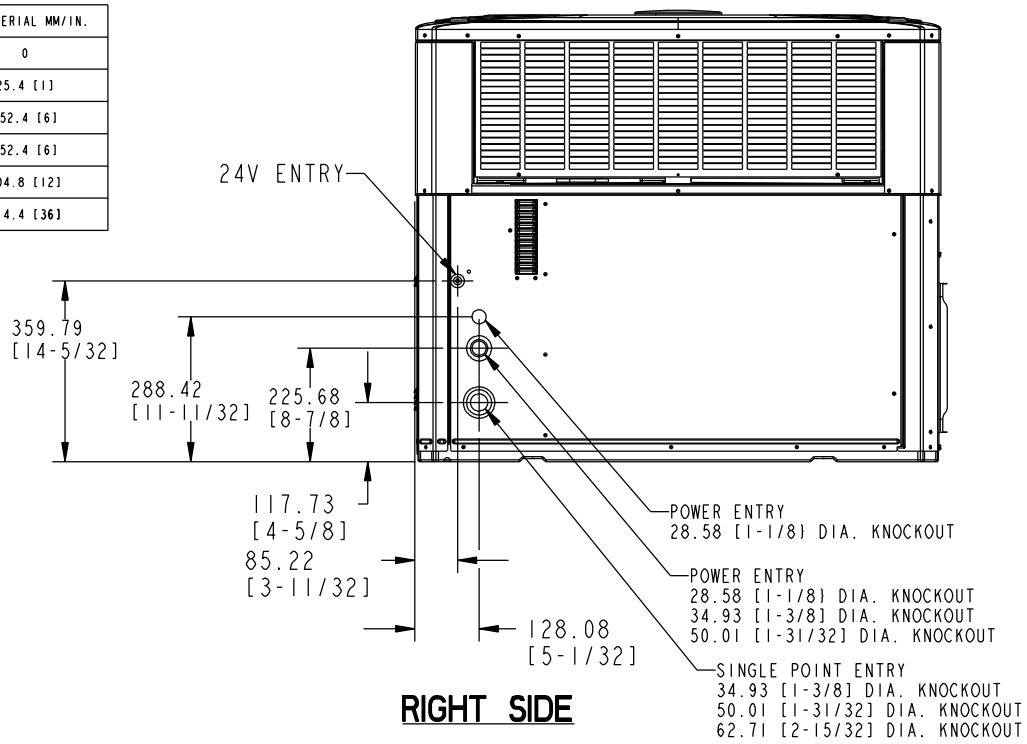
Model	Height MM/IN	APPROX. CORNER WEIGHT KG / LBS				SHIPPING WIGHT KG / LBS	TOTAL UNIT WEIGHT KG / LBS	CENTER OF GRAVITY MM/IN.	
	A	W1	W2	W3	W4			B	C
4TCC4024	898.53 [35 - 3/8]	58.3 [129]	36.8 [81]	26.1 [58]	41.0 [90]	196.1 (432)	162.4 (358)	479.8 [18.9]	527.8 [20.8]
4TCC4030		61.3 [135]	38.7 [85]	27.5 [61]	43.1 [95]	204.8 (451)	171.1 (377)	406.5 [16.0]	594.1 [23.4]
4TCC4036	949.33 [37-3/8]	61.7 [136]	38.9 [86]	27.7 [61]	43.7 [96]	205.7 (453)	172.0 (379)	414.3 [16.3]	697.6 [27.5]
4WCC4024	898.53 [35-3/8]	52.9 [117]	33.3 [73]	24.1 [53]	38.3 [84]	182.3 (402)	148.6 (328)	430 [16.9]	565.3 [22.3]
4WCC4030	949.33 [37-3/8]	55.3 [122]	50.3 [110]	16.6 [37]	39.2 [86]	195.0 (430)	161.3 (355)	413.5 [16.3]	581 [22.9]
4WCC4036		59.6 [131]	37.3 [82]	26.6 [59]	41.7 [92]	199.0 (439)	165.3 (364)	430 [17.0]	535 [21.1]

Figure 3. 2 — 3 TON MODELS



RECOMMENDED SERVICE CLEARANCE MM/IN.		
		WITH ECONOMIZER
BACK SIDE	304.8 [12]	762.0 [30]
LEFT SIDE	762.0 [30]	914.4 [36]
RIGHT SIDE	609.6 [24]	-
FRONT SIDE	1066.8 [42]	-

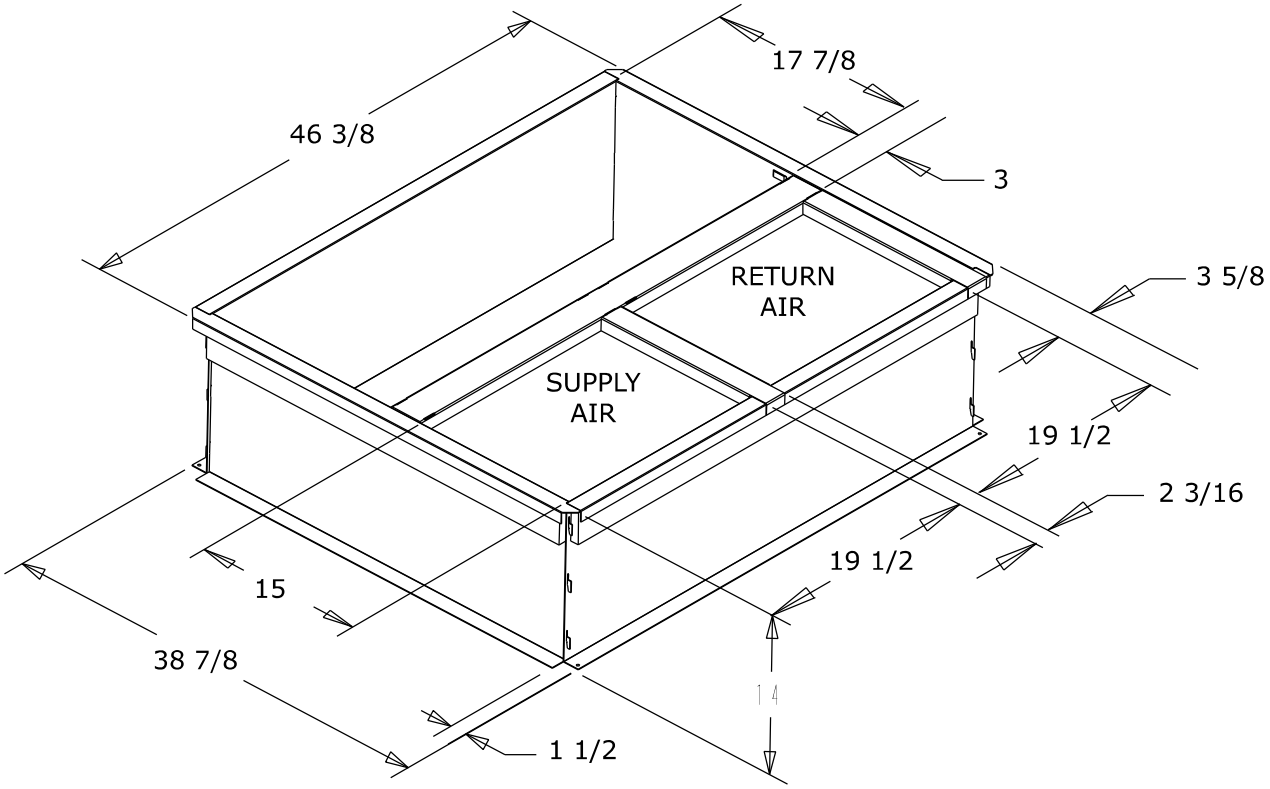
CLEARANCE TO COMBUSTIBLE MATERIAL MM/IN.	
BOTTOM	0
BACK SIDE	25.4 [1]
LEFT SIDE	152.4 [6]
RIGHT SIDE	152.4 [6]
FRONT SIDE	304.8 [12]
TOP	914.4 [36]



Full Perimeter Roof Mounting Curb

Figure 4. 4024 — 4036 Models

BAYCURB050A Full Perimeter Roof Mounting Curb



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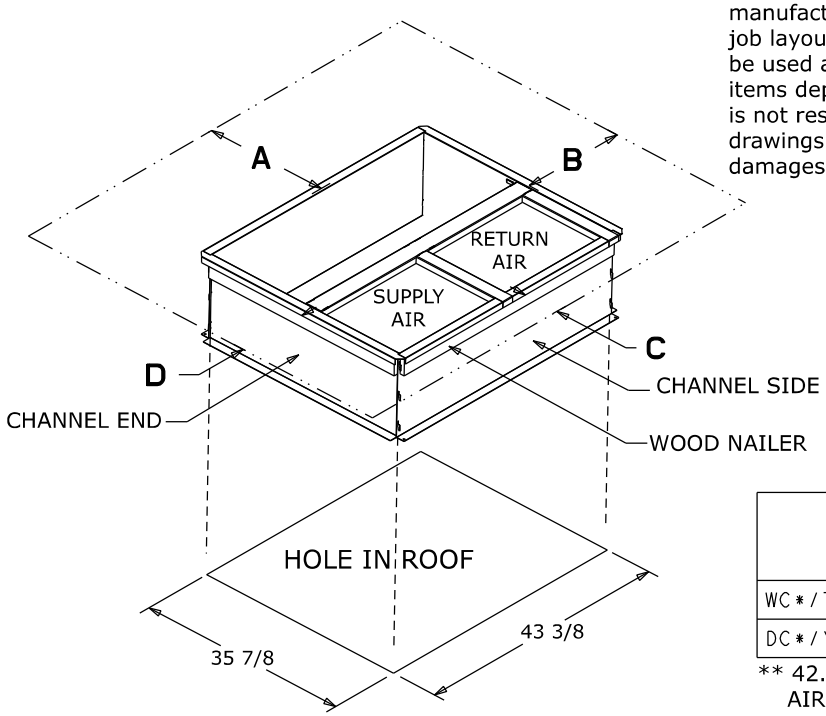


	SERVICE CLEARANCE DIMENSIONS			
	A	**B**	**C**	**D**
WC*/TC*	42.00	36.00	12.00**	24.00
DC*/YC*	42.00	36.00	12.00**	36.00

** 42.00 WITH ECONOMIZER WITH 25% FRESH AIR ACCESSORY

Supplementary Electric Heater

Table 1. BAYHTRV — Supplementary Electric Heaters

UNIT MODEL	ELECTRIC HEATER MODEL	RATED VOLT-AGE	PHASE	AMPS	HEATER CAPACITY		NO. OF STAGES	KW/STAGE		MCA	MAX. FUSE OR HACR CKT BKR SIZE	CANADA ONLY MAX. CKT BKR SIZE
					KW	BTUH		1	2			
4024–4060	BAYHTRV105	208/240	1	18/21	3.76/5.0	12800/ 17100	1	3.76/ 5.0	—	23/26	25/30	25/30
4024–4060	BAYHTRV108	208/240	1	29/33	6.0/8.0	20500/ 27300	1	6.0/ 8.0	—	36/41	40/45	40/45
4024–4060	BAYHTRV110	208/240	1	36/42	7.5/10.0	25600/ 34100	1	7.5/ 10.0	—	45/52	45/60	45/60
4030–4060	BAYHTRV115	208/240	1	54/63	11.27/ 15.0	38500/ 51200	2	7.5/ 10.0	3.76/ 5.0	68/78	70/80	70/80
4048–4060	BAYHTRV120	208/240	1	72/83	15.0/ 20.0	51200/ 68300	2	7.5/ 10.0	7.5/ 10.0	90/ 104	90/110	90/110
4060	BAYHTRV125	208/240	1	90/ 104	18.78/ 25.0	64100/ 85300	2	11.26/ 15.0	7.5/ 10.0	113/ 130	125/150	125/150

Table 2. BAYSPEK — Single Power Entry Kit

SINGLE CIRCUIT POWER AMPACITY AND OVER CURRENT PROTECTION				
UNIT MODEL	SINGLE POWER ENTRY KIT	HEATER MODEL	MIN CKT AMP	MAX OVER-CURRENT DEVICE
4TCC4024A	BAYSPEK60	BAYHTRV105	29	30
		BAYHTRV108	44	45
	BAYSPEK60	BAYHTRV110	55	60

Optional Equipment — Filter Rack

Figure 5. BAYFLTR101 Filter Rack (4024–4036)
BAYFLTR201 (4042–4060)
(Mounts in Filter/Coil Section)

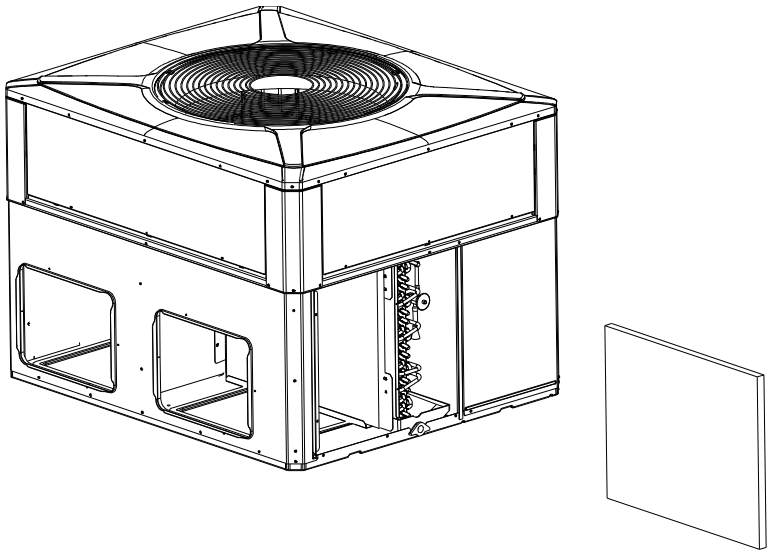
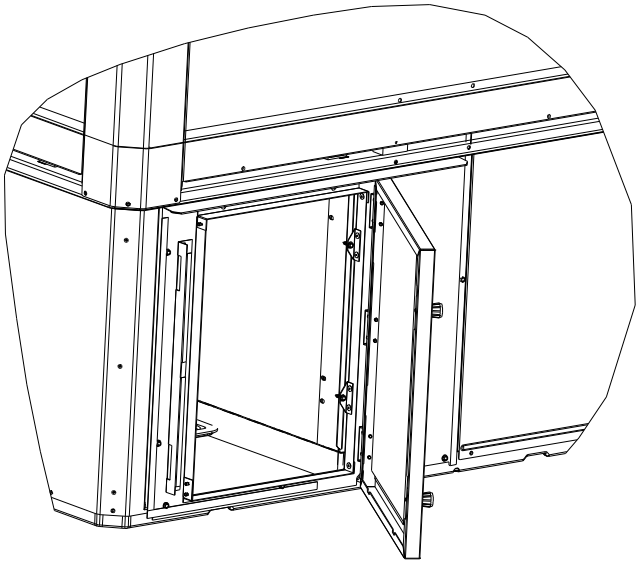


Figure 6. BAYACCDOR1A Hinged Filter Access Door (4024–4036)
BAYACCDOR2A (4042–4060)
Replaces Filter/Coil Access Panel



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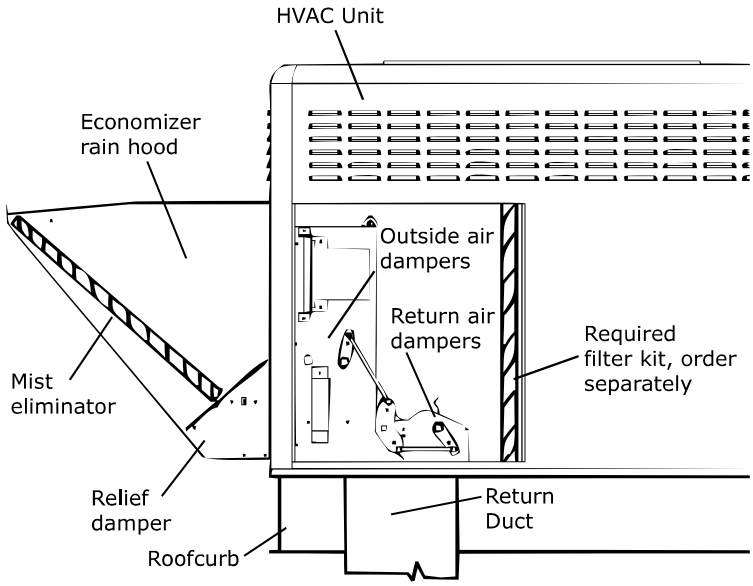
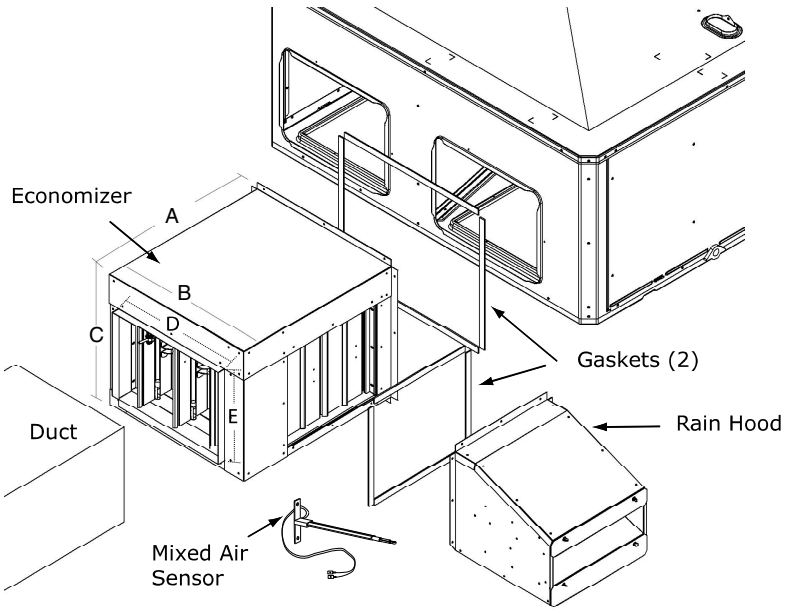
Optional Equipment — Economizer

Table 3. BAYECON101,102A Down Discharge Economizer and Rain Hood (Mounts Over Horizontal Return Air Opening)



Economizer	Unit Application Models
BAYECON101A	4024-036
BAYECON102A	4042-060

Table 4. BAYCON200, 201A Horizontal Economizer and Rain Hood



Economizer	Models	A	B	C	D	E	F
BAYECON200A	4024–4036	22″	20″	16–7/8″	15–11/16″	11–11/16″	15″
BAYECON201A	4042–4060	26″	22–21/32″	19″	17–11/16″	14–11/16″	21–3/8″

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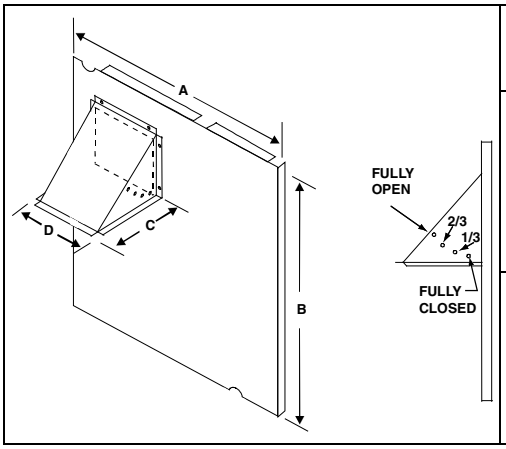
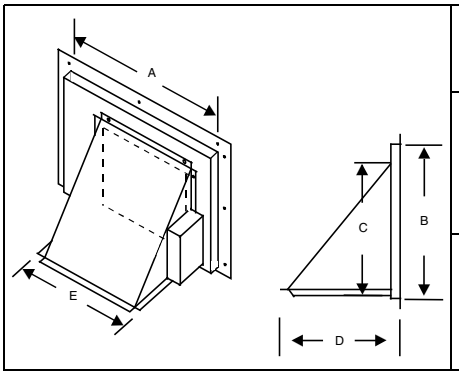
Optional Equipment — Outside Air Damper

Table 5. BAYOSAH001 and 002A



Manual Fresh Air Model	Unit Application Models	A	B	C	D
BAYOSAH001A	4024 – 4036	22–7/16″	20–11/16″	12–3/8″	9–3/16″
BAYOSAH002A	4042 — 4060	25–3/16″	20–11/16″	12–3/8″	9–3/16″

Table 6. BAYDMPR101 and 102A, 25% Motorized Outside Air Damper (Mounts Over Horizontal Return Air Opening)



Manual Fresh Air Model	Unit Application Models	A	B	C	D	E
BAYDM-PR101A	4024 — 4036	15–13/16″	11–13/16″	10–1/4″	11–1/2″	12–1/4″
BAYDM-PR102A	4042 — 4060	18–3/16″	15–1/8″	10–1/4″	11–1/2″	12–1/4″

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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 AHRI 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 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 scroll compressors. Internal overcurrent and over temperature protection, internal pressure relief shall be standard. Other features include centrifugal oil pump, low vibration and noise.

Refrigeration System

All units shall have refrigerant control. Service pressure tap ports and a refrigerant line filter shall be standard.

Evaporator Coil (2–4 Ton Models) All aluminum micro channel, extruded tubes, mechanically bonded to aluminum fins, and factory pressure and leak tested at 480 —650 psig. All units have TXV to control refrigerant flow.

Evaporator Coil (5 Ton Model) Internally enhanced 3/8″ OD seamless copper tubing mechanically bonded to aluminum fins, factory pressure and leak tested at 480 – 650 psig. All units have TXV to control refrigerant flow.

Condenser Coil

The Spine Fin ™ condenser coil shall be continuously wrapped, corrosion resistant all aluminum with minimum brazed joints. This coil is 3/8″ OD 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

Constant Torgue, forward-curved, centrifugal wheel in a Composite Vortica ® Blower housing. Motor shall have thermal overload protection and permanently lubricated motor bearings. Motor/blower assembly isolated from unit with rubber mounts.

Outdoor Fan

One direct-drive, statically and dynamically balanced propeller fan shall be used in a draw-through vertical discharge configuration. Permanently lubricated weather proof motor shall have built-in thermal overload protection.

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 heater 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 pigtails 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 barometric 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 Setting 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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