TAG: _____

SUBMITTAL

2 Ton Convertible Heat Pump Packaged Units
4WCZ6024A1000A

PRODUCT SPECIFICATIONS

MODEL		4WCZ6024A1000A
RATED Volts/PH/Hz		208-230/1/60
Performance Cooling		
BTUH (High)		24000
Indoor Airflow (CFM)		800
Power Input (KW)		1.84
BTUH (Low)		20300
Indoor Airflow (CFM)		620
Power Input (KW)		1.10
EER - HI / LOW / SEER		12.0/18.4/16.0
Sound Power Rating [dB(A)]②		66.8
Performance Heating①		
(High Temp.)BTUH / COP	(High)	20200 / 3.60
Power Input (KW)		1.68
(Low Temp.) BTUH / COP	(High)	11300 / 2.17
Power Input (KW)		1.53
(High Temp.)BTUH / COP	(Low)	15100 / 3.44
Power Input (KW)		1.29
(Low Temp.) BTUH / COP	(Low)	8300 / 1.96
Power Input (KW)		1.24
HSPF (BTU / Watt-Hr.)⑥		8.2
POWER CONN.—V/Ph/Hz		208-230/1/60
Min. Brch. Cir. Ampacity③		19.5
Fuse Size — Max. / Recmd. (amps)		30 / 30
COMPRESSOR		2-STAGE SCROLL
Volts/Ph/Hz		208-230/1/60
R.L. Amps — L.R. Amps		11.7 / 58.3
OUTDOOR COIL — TYPE		SPINE-FIN
Rows/F.P.I.		2 / 24
Face Area (sq.ft.)		15.49
Tube Size (in.)		3/8
Refrigerant Control		EXPANSION VALVE
INDOOR COIL — TYPE		PLATE FIN
Rows/F.P.I.		4 / 15
Face Area (sq.ft.)		3.54
Tube Size (in.)		3/8
Refrigerant 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.④		2550
Motor — HP/R.P.M.		1/12 / 810
Volts/Ph/Hz		208-230/1/60
F.L. Amps/L.R. Amps		0.54 / .82
INDOOR FAN — TYPE		CENTRIFUGAL
Dia x Width (in.)		10 X 10
Drive/No. Speeds		DIRECT / VARIABLE
CFM @ 0.0 in. w.g.⑤		SEE FAN PERFORMANCE TABLE
Motor — HP/R.P.M.		1/2 / VARIABLE
Volts/Ph/Hz		208-230/1/60
F.L. Amps/L.R. Amps		4.3
FILTER / FURNISHED		NO
Type Recommended		THROWAWAY
Recmd. Face Area (sq. ft.)⑦		4.0
REFRIGERANT / Charge (lbs.)		R410A / 8.06
Subcooling		8°
DIMENSIONS		H X W X L
Crated (in.)		48 / 45 / 52
WEIGHT / Shipping / Net (lbs.)		442 / 372

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.

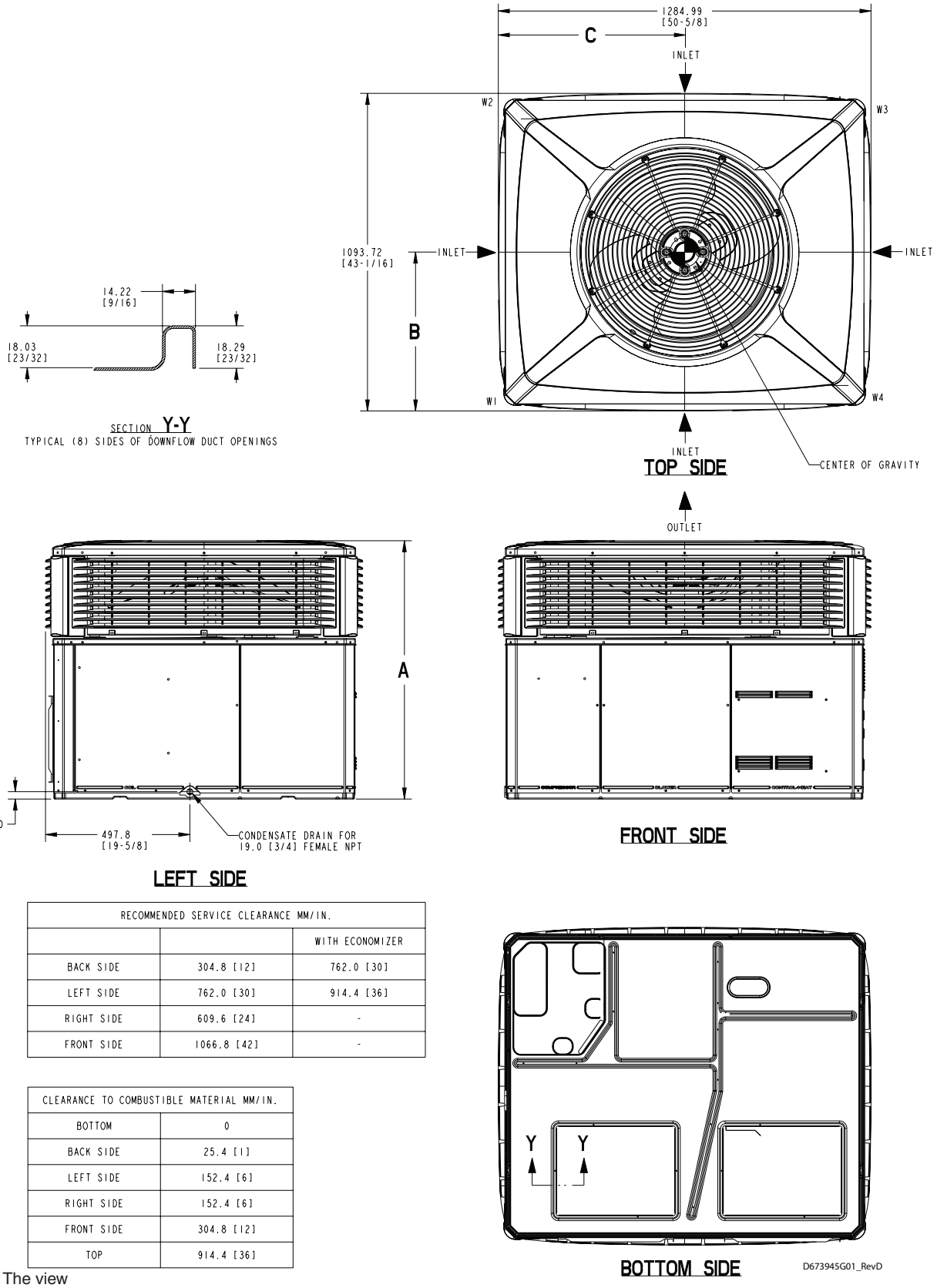
④ Standard Air — Dry Coil — Outdoor.

⑤ Standard Air — Wet Coil — Indoor.

⑥ 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



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]

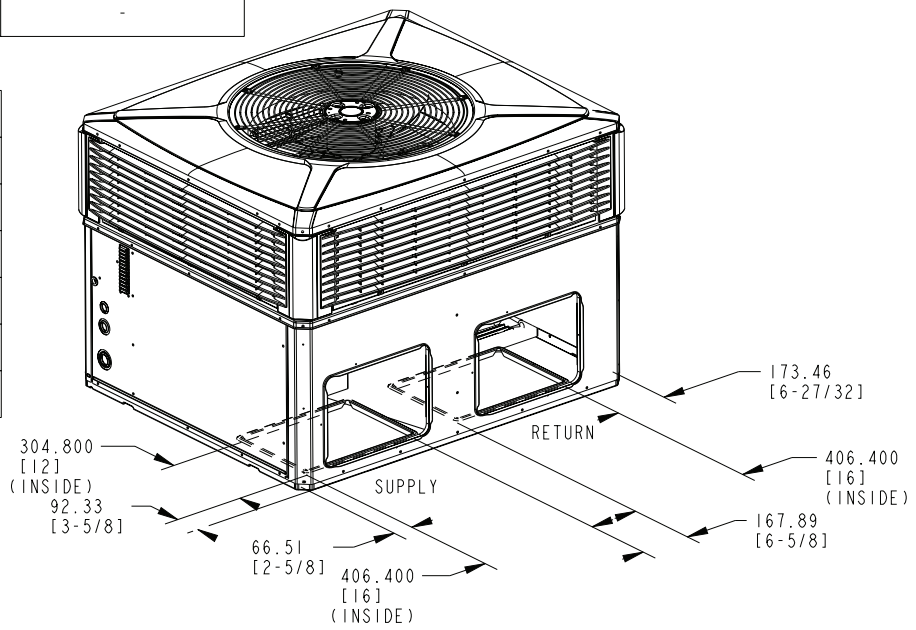
NOTE: The view labeled “Bottom Side” represents the Base as viewed looking up from underneath the unit.

Figure 1. WCZ6024 (1 of 3)

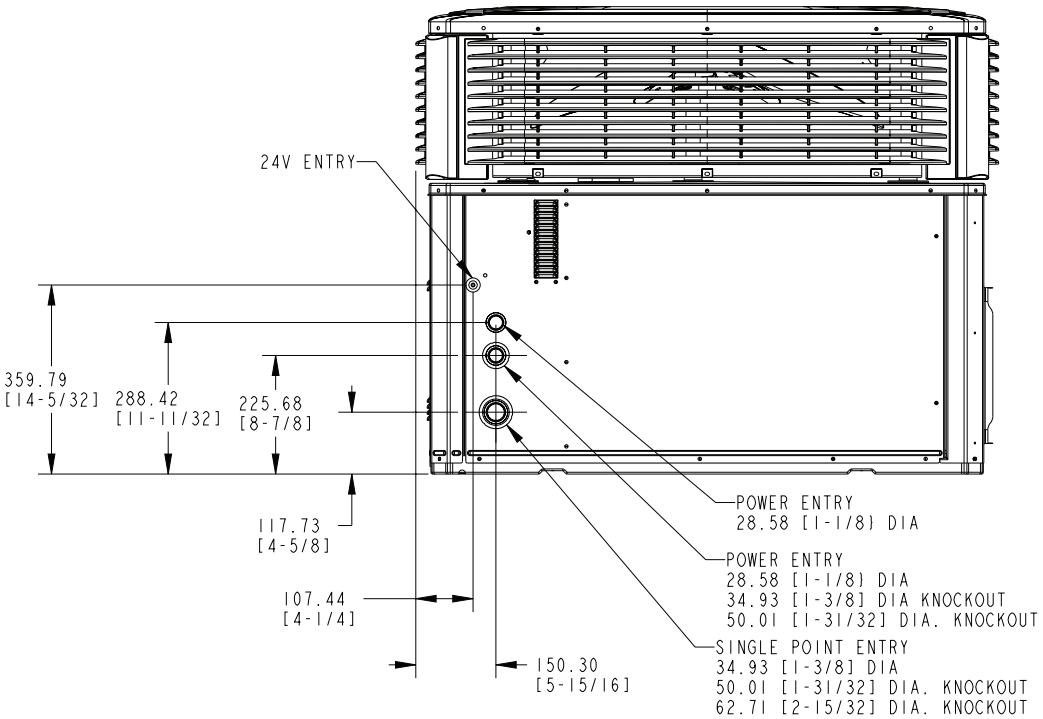
Dimensional Data and Weights

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]



BOTTOM DUCT OPENINGS

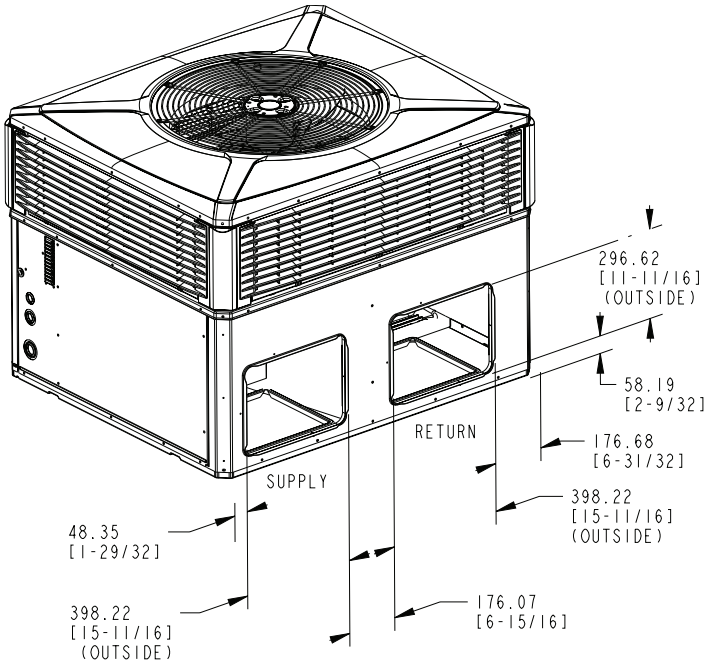


RIGHT SIDE

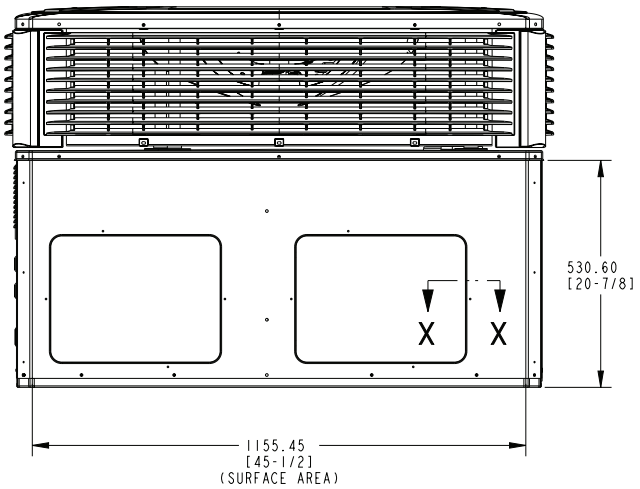
D673945G01_RevD

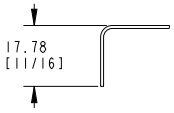
Figure 2. WCZ6024 (2 of 3)

Dimensional Data and Weights



BACK DUCT OPENINGS





SECTION X-X
TYPICAL (8) SIDES OF SIDEFLOW DUCT OPENINGS

BACK SIDE

MODEL	HEIGHT MM/IN.	APPROX. CORNER WEIGHT - KG/LBS				SHIPPING WEIGHT KG/LBS	TOTAL UNIT WEIGHT KG/LBS	CENTER OF GRAVITY MM/IN.	
	A	W1	W2	W3	W4			B	C
4TCY4024/030	898.53 [35-3/8]	56.7 [125]	35.8 [79]	25.4 [56]	39.9 [88]	201.6 [444]	157.9 [348]	401.3 [15.8]	508.0 [20.0]
4TCY5024	898.53 [35-3/8]	51.8 [114]	32.7 [72]	23.2 [51]	36.5 [80]	176.0 [388]	144.2 [318]	401.3 [15.8]	508.0 [20.0]
4TCY4036	949.33 [37-3/8]	57.6 [127]	36.3 [80]	25.9 [57]	40.8 [90]	204.3 [450]	160.6 [354]	401.3 [15.8]	508.0 [20.0]
4TCY5030	949.33 [37-3/8]	56.7 [125]	35.8[79]	25.4 [56]	39.9 [88]	189.6 [418]	157.9 [348]	401.3 [15.8]	508.0 [20.0]
4TCY5036	949.33 [37-3/8]	57.4 [126]	36.2 [80]	25.7 [57]	40.4 [89]	191.4 [422]	159.7 [352]	401.3 [15.8]	508.0 [20.0]
4WCY4024/030	898.53 [35-3/8]	57.6 [127]	36.3 [80]	26.3 [58]	41.7 [92]	205.7 [453]	161.9 [357]	401.3 [15.8]	515.6 [20.3]
4WCY4036	949.33 [37-3/8]	60.8 [134]	38.1 [84]	27.2 [60]	42.6 [94]	212.5 [468]	168.7 [372]	401.3 [15.8]	508.0 [20.0]
▲ 4WCZ6024/036	949.33 [37-3/8]	60.8 [134]	38.1 [84]	27.2 [60]	42.6 [94]	200.5 [442]	168.7 [372]	401.3 [15.8]	508.0 [20.0]
4WCY5024	898.53 [35-3/8]	57.6 [127]	36.3 [80]	26.3 [58]	41.7 [92]	205.7 [453]	161.9 [357]	401.3 [15.8]	515.6 [20.3]
4WCY5030/036	949.33 [37-3/8]	60.8 [134]	38.1 [84]	27.2 [60]	42.6 [94]	212.5 [468]	168.7 [372]	401.3 [15.8]	508.0 [20.0]

Figure 3. WCZ6024 (3 of 3)

Indoor Blower Performance

Indoor Fan Performance 4WCZ6024

Horizontal		External Static Pressure (in. wg)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
350 CFM/Ton Setting	Low	590	583	575	571	566	546	525	507	488
	High	721	724	727	717	706	701	695	678	660
400 CFM/Ton Setting	Low	627	624	621	615	608	593	578	559	540
	High	801	806	811	806	800	789	777	745	712
450 CFM/Ton Setting	Low	672	673	673	664	654	648	641	620	599
	High	880	888	895	894	893	883	872	817	761

Down Flow		External Static Pressure (in. wg)								
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9
350 CFM/Ton Setting	Low	601	588	571	562	563	549	525	517	504
	High	734	731	722	706	702	706	695	692	681
400 CFM/Ton Setting	Low	638	622	619	617	613	600	588	575	554
	High	815	803	808	808	807	798	791	766	731

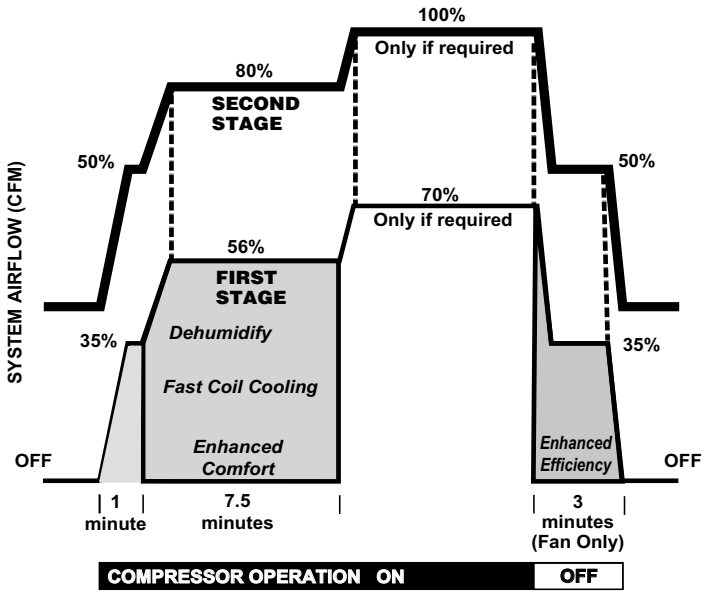
4WCZ6024 AIRFLOW WITH AUXILIARY HEAT (CFM)

SWITCH SETTINGS		SELECTION	NOMINAL AIRFLOW
7-OFF	8-OFF	LOW	700 CFM
7-ON	8-OFF	HIGH	800 CFM
7-OFF	8-ON	HIGH	800 CFM
7-ON	8-ON	HIGH	800 CFM

COOLING FAN DELAY OPTIONS

SWITCH SETTINGS		DELAY	NOMINAL 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%

** 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

BAYHTRV105, 108, 110

UNIT MODEL	ELECTRIC HEATER MODEL	RATED VOLTAGE	PHASE	AMPS	HEATER CAPACITY		NO. OF STAGES	KW/STAGE		MCA	MAX FUSE OR HACR CKT BKR SIZE (4)	CANADA ONLY MAX. CKT BKR SIZE (5)
					KW	BTUH		1	2			
^WCZ6024-060‡1	BAYHTRV105E	208/240	1	18/21	3.76/5.0	12800/17100	1	3.76/5.0		23/26	25/30	25/30
^WCZ6024-060‡1	BAYHTRV108E	208/240	1	29/33	6.0/8.0	20500/27300	1	6.0/8.0		36/41	40/45	40/45
^WCZ6024-060‡1	BAYHTRV110E	208/240	1	36/42	7.5/10.0	25600/34100	1	7.5/10.0	3.76/5.0	46/52	45/60	45/60

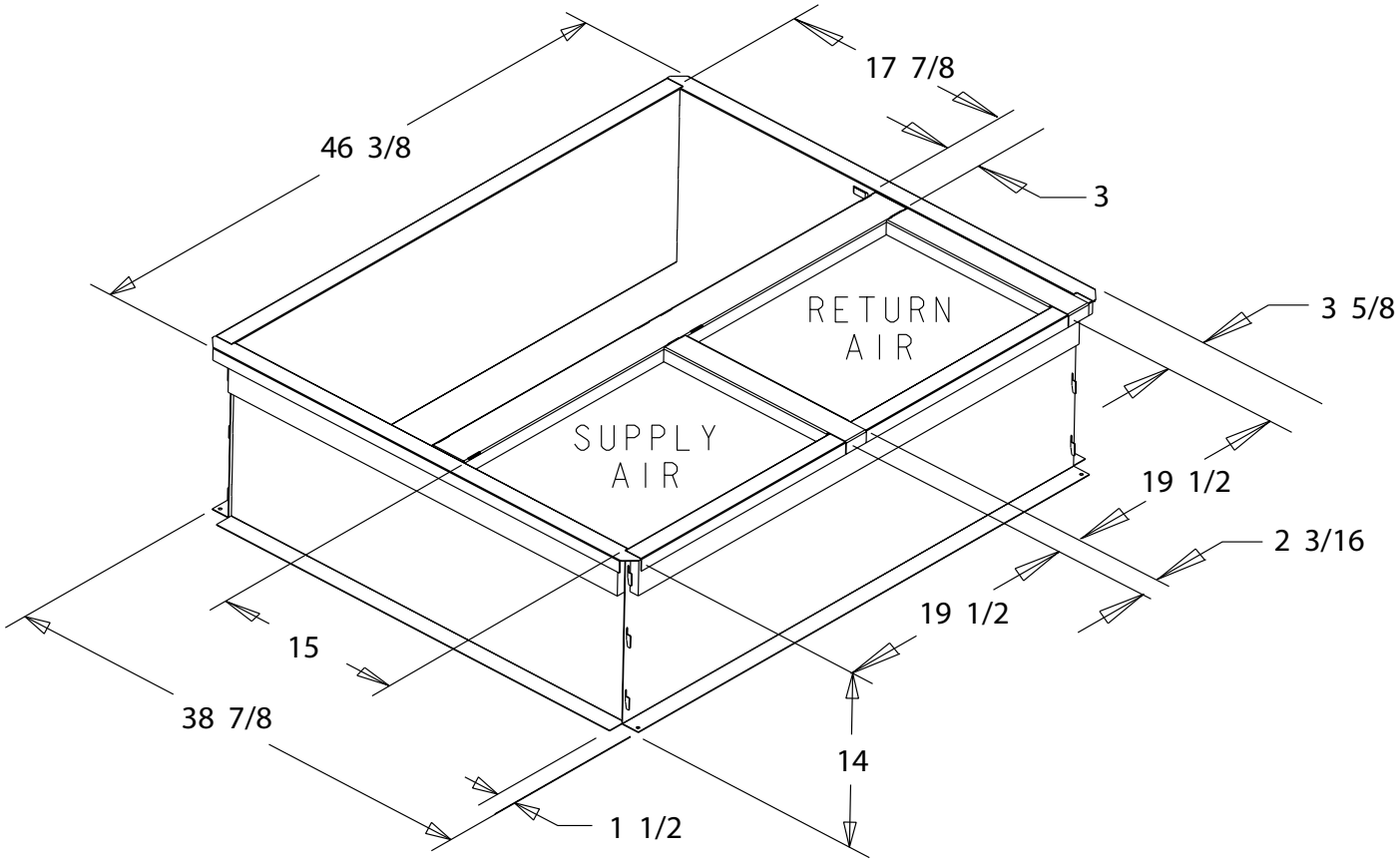
Single Power Entry Kit

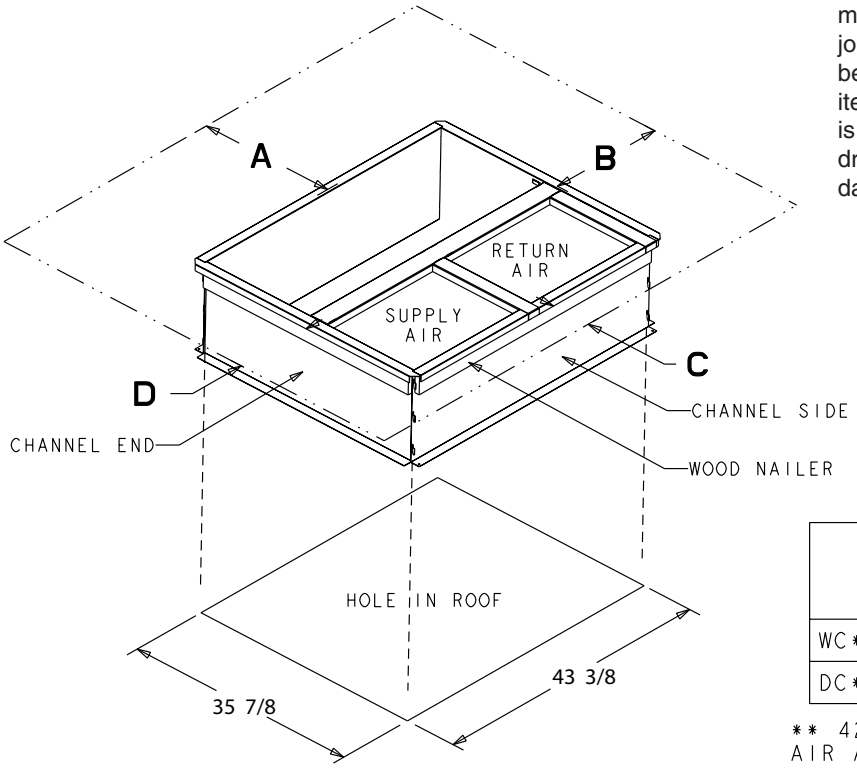
BAYSPEK60, 62, 63E

SINGLE POWER ENTRY KIT	HEATER MODEL	UNIT MODEL	MIN CKT. AMP.	MAX OVER CUR– RENT PROTECT DEVICE
BAYSPEK060F	BAYHTRV105F	4WCZ6024	46	50
BAYSPEK062F	BAYHTRV108F	4WCZ6024	61	70
BAYSPEK062F	BAYHTRV110F	4WCZ6024	72	80

Optional Equipment

BAYCURB050A FULL PERIMETER ROOF MOUNTING CURB FOR 4WCZ6024





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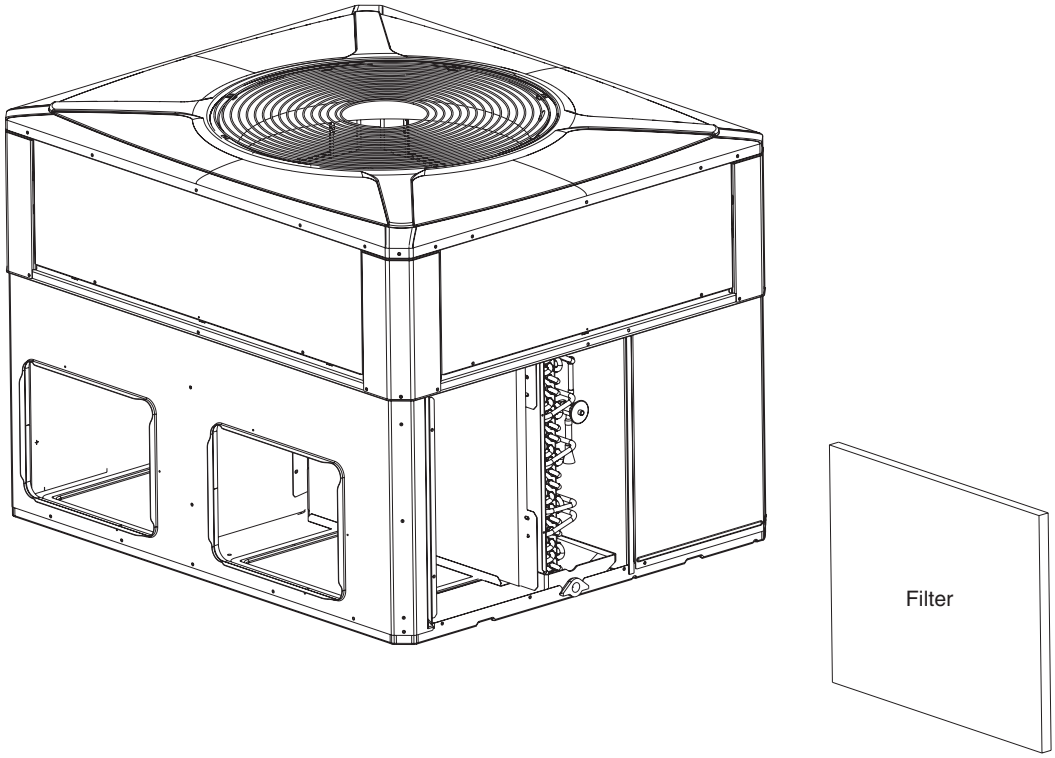
	SERVICE CLEARANCE DIMENSIONS			
	A	B	C	D
WC*/TC*	42.00	36.00	12.00**	24.00
DC*/YC*	42.00	36.00	12.00**	36.00

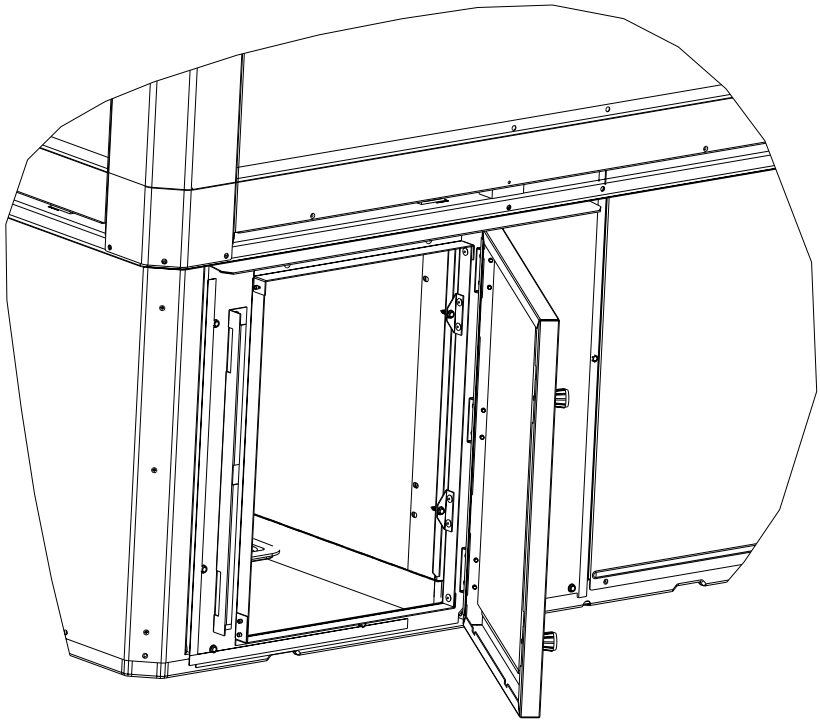
** 42.00 WITH ECONOMIZER WITH 25% FRESH AIR ACCESSORY

Optional Equipment

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

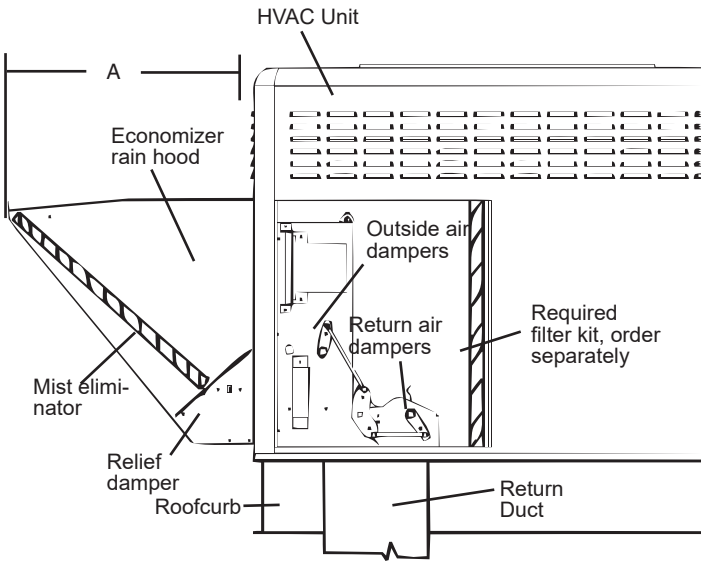


BAYACCDOR1A & BAYACCDOR2A Hinged Filter Access Door
Replaces Filter/Coil Access Panel



Optional Equipment

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



Economizer	Models	A
BAYECON103A	4WCZ6024/6036 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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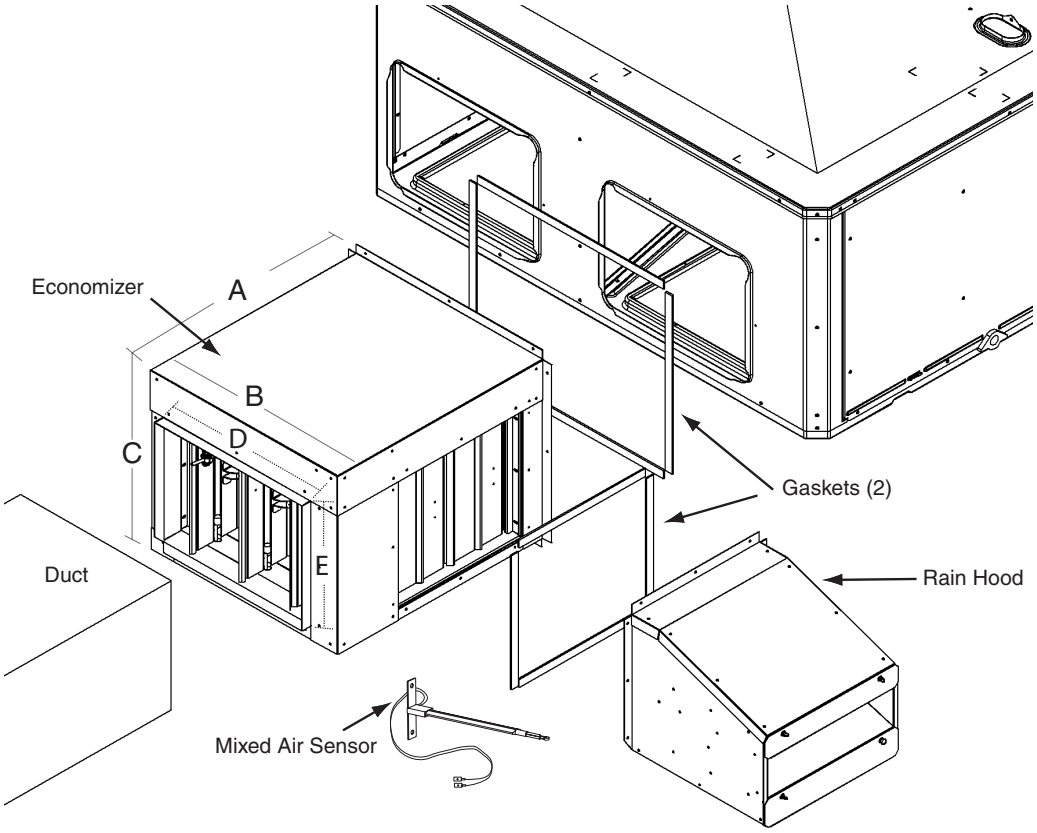

Economizer	A	B	C	D	E	F
BAYECON203AA	22"	20"	16 7/8"	15 11/16"	11 11/16"	15"
BAYECON204AA	26"	22 21/32"	19"	17 11/16"	14 11/16"	21-3/8"

Optional Equipment

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

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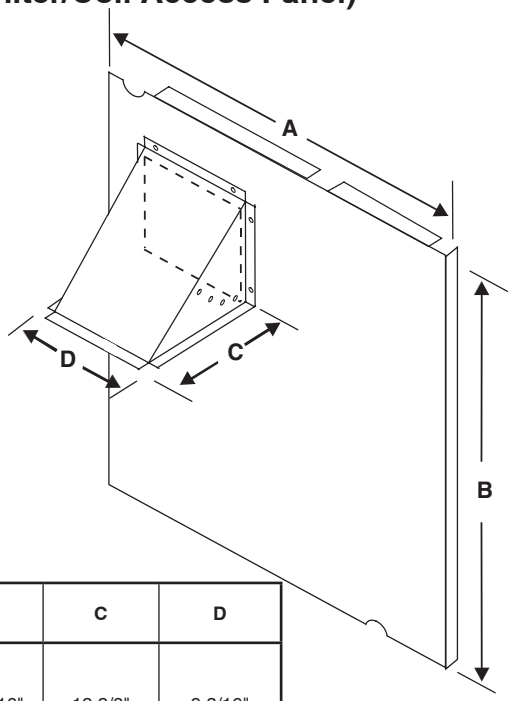
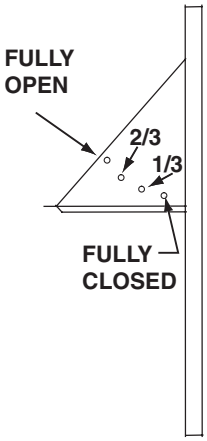
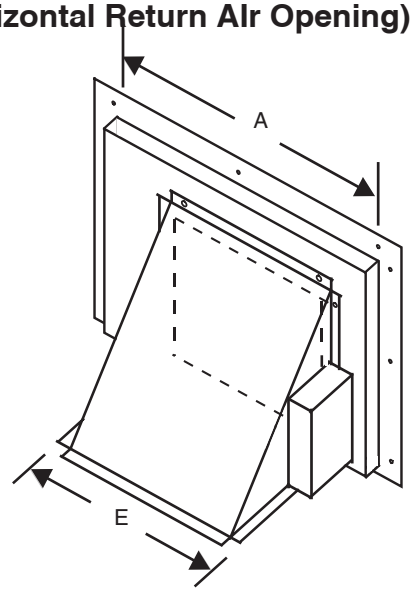
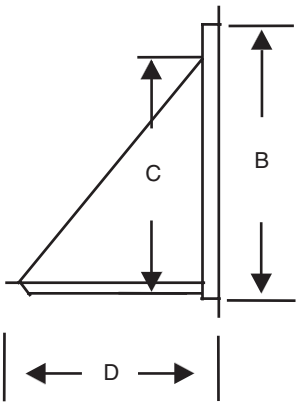




Manual Fresh Air Model	Unit Application Models	A	B	C	D
BAYOSAH001	4YC,WC3018-036 4TC*3018-036 4W/T/Y/D CY4024-036 4W/Y/D CZ6024-6036	22 7/16"	20 11/16"	12 3/8"	9 3/16"
BAYOSAH002	4YC,WC3042-060 4TC*3042-060 4W/T/Y/D CY4042-060 4W/Y/D CZ6048-060	25 3/16"	20 11/16"	12 3/8"	9 3/16"

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





	Unit Application Models	A	B	C	D	E
BAYDMPR101A	4YC,WC3018-036 4TC3018-036 4W/T/Y/DCY4024-036 4W/Y/DCZ6024-036	15 13/16"	11 13/16"	10 1/4"	11 1/2"	12 1/4"
BAYDMPR102A	4YC,WC3042-060 4TC3042-060 4W/T/Y/DCY4042-060 4W/Y/DCZ6048-060	18 3/16"	15 1/8"	10 1/4"	11 1/2"	12 1/4"

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.

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.

(5 Ton Models) 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 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.

About Trane and American Standard Heating and Air Conditioning

Trane and American Standard create comfortable, energy efficient indoor environments for residential applications. For more information, please visit www.trane.com or www.americanstandardair.com

The manufacturer has a policy of continuous data improvement and it reserves the right to change design and specifications without notice. We are committed to using environmentally conscious print practices.

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Unitary Small HP
AHRI Standard 210/240
Certification applies only when the complete system is listed with AHRI.

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The AHRI Certified mark indicates company participation in the AHRI Certification program. For verification of individual certified products, go to ahridirectory.org.

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