

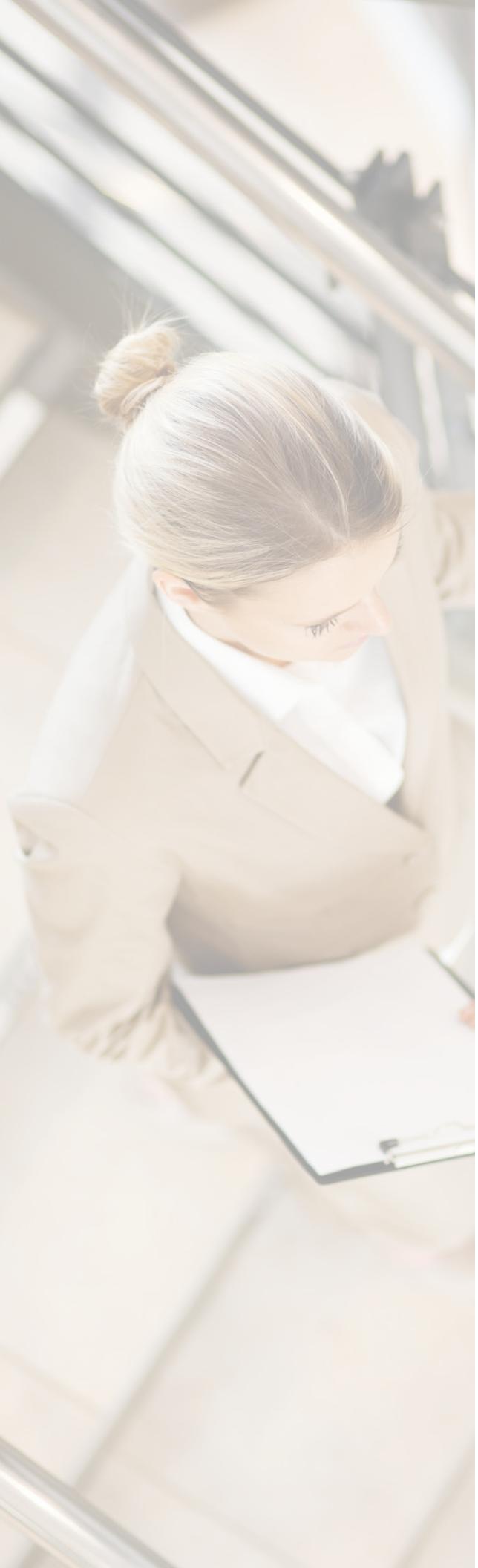


**Base Efficiency Air Conditioner
Packaged Rooftop Unit
DBC Commercial
7.5 - 12.5 Nominal Tons**

12.9 IEER / 11.2 EER



* Complete warranty details available from your local distributor or manufacturer's representative or at www.daikincomfort.com or www.daikinac.com



Our Perfect Package:

Harnessing energy-efficient performance, proven technology, and enhanced comfort for life.

Since becoming the first company in Japan to manufacture packaged air conditioning systems, in 1951, Daikin has supported comfortable indoor living based on the strengths and technologies that have led to the growth of the company becoming one of the world's largest manufacturers of HVAC products, systems and refrigerants.

Today, as a comprehensive global manufacturer of HVAC products and systems, the Daikin brand is committed to being recognized as a truly global and excellent company capable of continually creating new value for its customers. The company plans to pursue sustainable growth and foster business operations that consistently harmonize with the goals of improving indoor comfort.

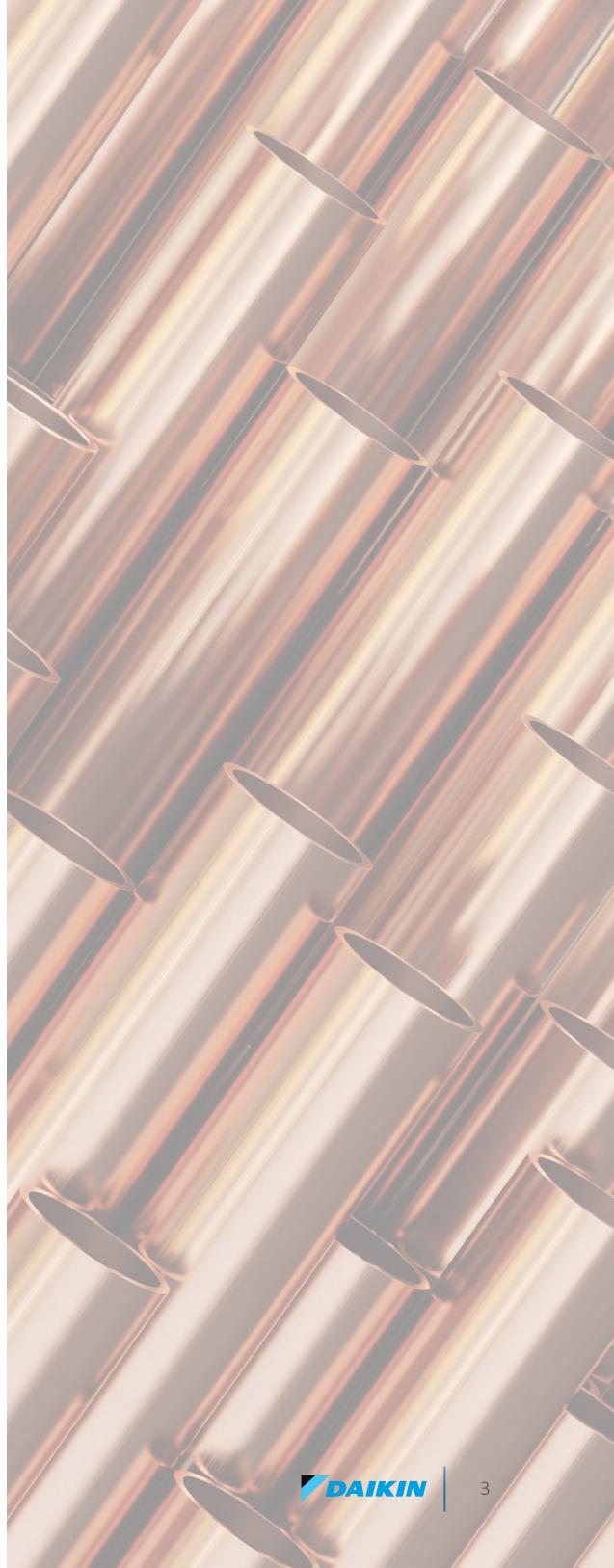
The group philosophy of the company includes:

- » Creating new value continuously for customers
- » Developing world leading energy-saving technology
- » Being a flexible and dynamic organization
- » Allowing employees to be the driving force for the success of the company
- » Fostering an atmosphere of best practices, boldness, and innovation
- » Thinking and acting globally

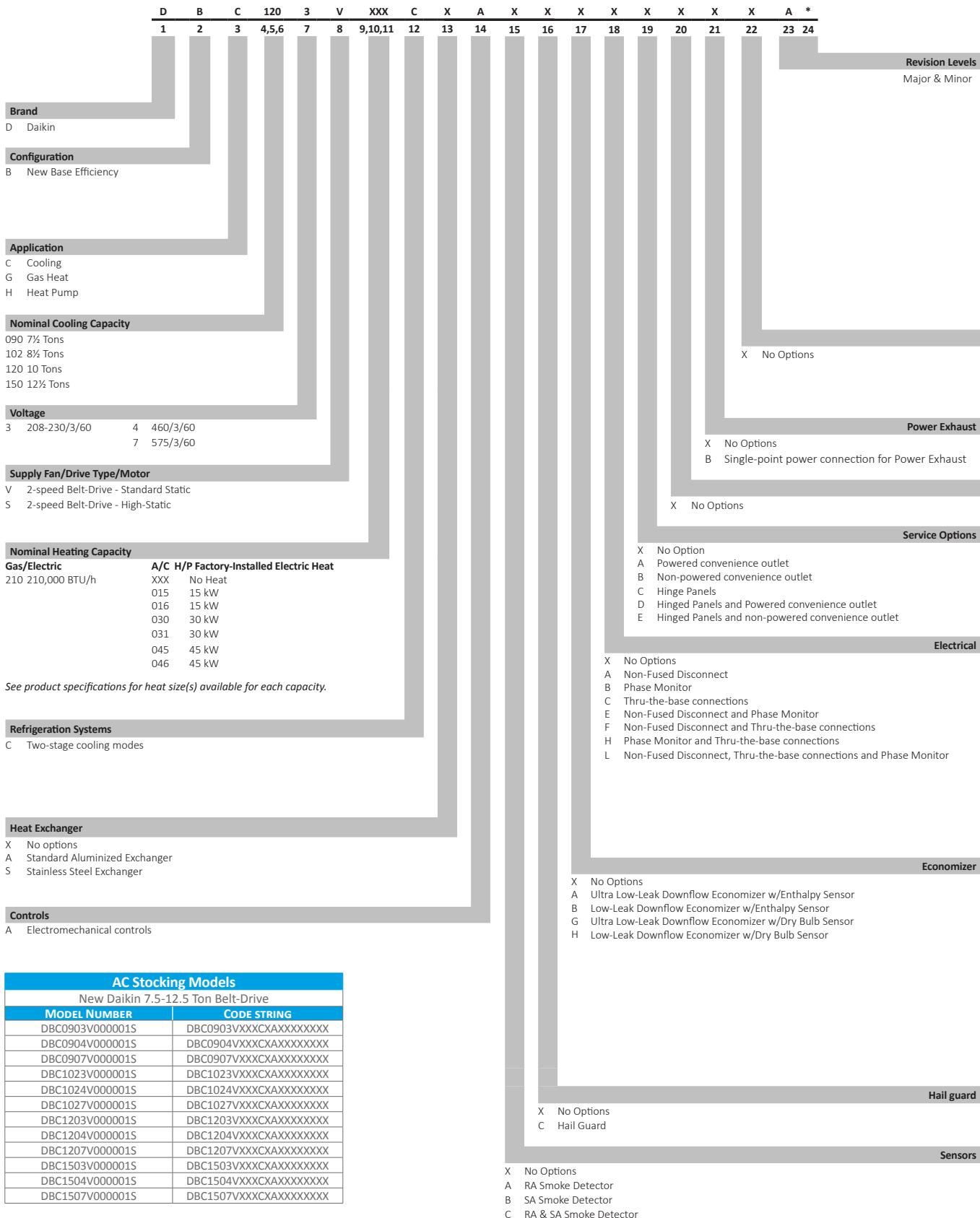


Contents

2 Introduction	2
4 Nomenclature	4
5 Features and Benefits	5
Applications	8
Serviceability	8
9 Product Specifications	9
AHRI Ratings	10
Sound Data	10
Expanding Cooling Data	11
Electric Heater Data	19
Air Flow	20
Electrical Data	24
Wiring Diagrams	31
32 Dimensional Data	32
33 Electrical Connections	33
Unit Clearances	33
Installation	34
Weights	34
35 Accessories	35
37 Factory Installed Options	37
37 Field Installed Options	37
38 Factory and Field Installed Options	38



Nomenclature



Features and Benefits

Daikin Packaged Rooftop Units (RTUs) are built to perform, with features and options that help provide low installation and operation costs, superior indoor air quality, efficient operation, and longevity.

Installation

Daikin Packaged units are designed with fast and easy installation in mind and are ideal for both new construction and retrofit projects. Our packaged rooftop units are built to be a direct replacement for most rooftop units on the field without the need of a curb adapter, to be able to replace the unit in a shorter time and at a lower cost (compared to the previous design).

Cabinet Construction

Daikin packaged rooftop units are made with high quality galvanized steel with a powder-paint finish to provide higher corrosion resistance.

- » Easy accessibility using our tool-less filter access.
- » The interior surface in the indoor air section is fully insulated to prevent sweating and thermal losses, using our foil face fiberglass insulation which also omits exposed filter fibers into the airstream.
- » 1" Raised flanged edges around the supply and return offer easy installation for the duct connections.



- » The full perimeter base rail is built using heavy gauge galvanized steel for a stronger structural installation, the base rails are a minimum of 3 ½" tall and include holes to allow for overhead rigging and lifting with forklifts.

- » Electrical lines and can be brought through the base of the unit or through the horizontal knockout for easy installation and accessibility on the field.

Compressor

High performance, low noise scroll compressors, adjust the speed to match the required total cooling and heating load for efficient part load control.

- » Resiliently factory-mounted on rubber grommets for vibration isolation
- » Refrigeration circuit includes both low- and high-pressure transducer, high pressure safety switch and temperature sensors for the suction and discharge.
- » Unit is factory charged with environmentally friendly R-410A refrigerant.
- » Dual single-stage scroll compressor
- » Compressor location outside the condenser section to avoid air bypass.
- » Internal overload protection included with compressor.

Supply Fan

Indoor forward curb fans paired with belt-drive motors provide an easy in the field belt and pulley adjustment for airflow control.

- » Slide out forward curb fan for easy maintenance and replacement.
- » High-static drive options for application with high airflow/ static requirements.
- » Each fan assembly is dynamically trim balanced at the factory before shipment for quick start-up and efficient operation.
- » Motor with thermal overload and phase failure protection is provided for motor long lasting operation.

Features and Benefits

Coils

All units use large face area outdoor coils. These coils are constructed with seamless copper tubes, mechanically bonded into aluminum plate-type fins with full drawn collars to completely cover the tubes for high operating efficiencies.

The indoor coil section is installed in a draw through configuration to provide better dehumidification.

- » Coils are factory pressure tested to ensure pressure and leak integrity.
- » High- and low-pressure switches to be factory installed as fittings instead of brazed for easy removal and replacement.
- » Copper tube / aluminum fin coils on condenser and evaporator
- » 5mm Smart Coil Technology on all condenser coils for improved performance and reduced refrigerant load.

Controls and Wiring

Packaged rooftop units come equipped with a well-organized, large, easy to use weatherproof internal control box with easy access, for a better user experience.

- » Units are factory-wired with labeled color-coded wires and complete 24-volt Electromechanical controls package.
- » Units include single-point power entry as standard and also available with electric heat kits if selected.
- » Terminal blocks are provided as standard for easy installation and field power wiring.

Filtration

Unit provides a draw-through filter section as standard for better air quality and long lasting component maintenance.

- » Filters installed on the units are standard off the shelf sizes for easy replacement.
- » One or two size filter per unit for low maintenance cost and easy replacement.
- » Tool-less filter access for easy and fast filter replacement and service.

Heating Section

Wide ranging of electric heat selections effectively handle most comfort heating demand from morning warm-up control to full heat.

Electric Heat

ETL approved electric heat is factory assembled, installed and tested.

- » Heating control is fully integrated into the unit's control system for quick start-up and reliable control.
- » Durable low watt density, nickel chromium elements provide longer life (compared to units without).
- » Fuses are provided in each branch circuit to a maximum of 48 Amps per NEC requirements.
- » Single-point power connection reduces installation cost.
- » For operational safeties electric heat includes automatic reset, and high temperature limit safety protection and an airflow safety switch to prevent electric heat operation in the event of no airflow.

Electrical

Units are completely wired and tested at the factory to provide faster commissioning and start-up.

- » Wiring complies with NEC requirements and all applicable UL standards.
- » For ease of use, wiring and electrical components are number coded and labeled according to the electrical diagram.
- » A 120 V GFI convenience receptacle requiring independent power supply for the receptacle is optional.
- » An optional unit powered 20 amp 115 V convenience receptacle, complete with factory mounted transformer, disconnect switch, and primary and secondary overload protection, eliminates the need to pull a separate 115 V power source.
- » Supply air fan, compressor, and condenser fan motor branch circuits have individual short circuit protection. Unit includes knockouts in the bottom of the main control panels for field wiring entrance.
- » A single-point power connection with power block is standard and a terminal board is provided for connecting low voltage control wiring.
- » For better serviceability an optional non-fused disconnect switch can be installed inside the control panel and operated by an externally mounted handle to disconnect the electrical power at the unit



Applications

Daikin Rooftop units are intended for comfort cooling applications in normal heating, ventilating, and air conditioning. Consult your local Daikin sales representative for applications involving operations at high ambient temperatures, high altitudes, non-cataloged voltages, or for job-specific unit selections that fall outside of the range of the catalog tables.

For proper operation, units should be rigged in accordance with instructions stated on the installation manual. Fire dampers, if required, must be installed in the ductwork according to local and/or state codes. No space is allowed for these dampers in the unit.

Follow factory check, test and start procedures explicitly to achieve satisfactory start-up and operation.

Most rooftop applications take advantage of the significant energy savings provided with economizer operation. When an economizer system is used, mechanical refrigeration is typically not required below an ambient temperature of 50°F.

Serviceability

Daikin packaged rooftop units are built with serviceability in mind, designed to make future maintenance and service on the unit easy and accessible.

- » Our packaged rooftop units offer a slide out blower to facilitate the access and removal of the fan.
- » Filter panels on the small chassis line offer tool-less access for easy maintenance.
- » Independent compressor outside of the air bypass to eliminate component blockage and provide easy access.
- » Labeled field connections, color coded and continuously marked wire to identify point-to-point component connections.
- » All 7.5-12.5 ton units are designed for convertible airflow orientation to serve downflow or horizontal applications. Every unit ships prepared to convert to horizontal orientation in the field if required.
- » Condenser clean out from inside-out.
- » Easy access to gas valves and control panel.



Model	DBC0903V000001S	DBC0904V000001S	DBC0907V000001S	DBC1023V000001S	DBC1024V000001S
COOLING CAPACITY					
Total BTU/H	86,000	86,000	86,000	97,000	97,000
IEER / EER	12.9/11.2	12.9/11.2	12.9/11.2	12.9/11.2	12.9/11.2
EVAPORATOR MOTOR COIL					
Motor Type	Belt-Drive	Belt-Drive	Belt-Drive	Belt-Drive	Belt-Drive
External Static Pressure (ESP)	Standard	Standard	Standard	Standard	Standard
Wheel Dia. X Width	15x12	15x12	15x12	15x12	15x12
Indoor Nominal CFM	3000	3000	3000	3400	3400
RPM	1740	1740	1745	1740	1740
Indoor Horsepower	2.00	2.00	2.00	2.00	2.00
Filter Size (in)	20 X 25 X 2 (4)				
Drain Size (NPT)	3/4	3/4	3/4	3/4	3/4
R-410A Refrigerant Charge (oz.)	80/78	80/78	80/78	85/87.5	85/87.5
Evaporator Coil Face Area (ft ²)	13.3	13.3	13.3	13.3	13.3
Rows Deep / Fins per Inch	2 / 16	2 / 16	2 / 16	2 / 16	2 / 16
CONDENSER FAN/COIL					
Quantity of Condenser Fan Motors	2	2	2	2	2
RPM (High/Low stage)	1120	1050	1050	1120	1050
Outdoor Horsepower	0.33	0.33	0.33	0.33	0.33
Fan Diameter/ # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3
Face Area (ft ²)	22	22	22	28.2	28.2
Rows Deep / Fins per Inch	2 / 28	2 / 28	2 / 28	2 / 28	2 / 28
COMPRESSOR					
Quantity / Type / Stages	2/ Scroll / 1				
Compressor RLA / LRA	13.1/83.1	6.1/41	4.4/33	14.5/98	6.3/55
ELECTRICAL DATA					
Voltage-Phase-Frequency	208/230-3-60	460-3-60	575-3-60	208/230-3-60	460-3-60
Indoor Blower FLA	6	2.9	2.4	6	2.9
Max External Static (In. W.C.)	0.8	0.8	0.8	0.8	0.8
Outdoor Fan FLA	2	0.85	0.67	2	0.85
Min. Circuit Ampacity ¹	39.6/39.6	18.3	13.5	42.6/42.6	18.9
Max. Overcurrent Protection (A) ²	50/50	20	15	50/50	25
Power Supply Conduit Hole Dia. (in)	1.375	1.375	1.375	1.375	1.375
Low-Voltage Conduit Hole Dia. (in)	0.375	0.375	0.375	0.375	0.375
OPERATING WEIGHT (LBS.)					
Operating Weight (lbs)	1015	1015	1015	1026	1026
SHIPPING WEIGHT (LBS.)					
Ship Weight (lbs)	1095	1095	1095	1106	1106

¹ Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

² May use fuses or HACR-type circuit breakers of the same size as noted.

Note: Always check the S&R plate for electrical data on the unit being installed.

Model	DBC1027V000001S	DBC1203V000001S	DBC1204V000001S	DBC1207V000001S	DBC1503V000001S	DBC1504V000001S	DBC1507V000001S
COOLING CAPACITY							
Total BTU/H	97,000	114,000	114,000	114,000	140,000	140,000	140,000
IEER / EER	12.9/11.2	12.9/11.2	12.9/11.2	12.9/11.2	12.4/11	12.4/11	12.4/11
EVAPORATOR MOTOR COIL							
Motor Type	Belt-Drive						
External Static Pressure (ESP)	Standard						
Wheel Dia. X Width	15x12	15x15	15x15	15x15	15x15	15x15	15x15
Indoor Nominal CFM	3400	3600	3600	3600	4400	4400	4400
RPM	1745	1740	1740	1745	1760	1760	1760
Indoor Horsepower	2.00	2.00	2.00	2.00	3.00	3.00	3.00
Filter Size (in)	20 X 25 X 2 (4)	20 X 20 X 2 (4)	20 X 20 X 2 (4)	20 X 20 X 2 (4)	20 X 25 X 2 (4)	20 X 25 X 2 (4)	20 X 25 X 2 (4)
Drain Size (NPT)	3/4	3/4	3/4	3/4	3/4	3/4	3/4
R-410A Refrigerant Charge (oz.)	85/87.5	103.5/103	103.5/103	103.5/103	230/246	230/246	230/246
Evaporator Coil Face Area (ft ²)	13.3	11	11	11	14.7	14.7	14.7
Rows Deep / Fins per Inch	2 / 16	4 / 16	4 / 16	4 / 16	4 / 16	4 / 16	4 / 16
CONDENSER FAN/COIL							
Quantity of Condenser Fan Motors	2	2	2	2	2	2	2
RPM (High/Low stage)	1050	1120	1050	1050	1130	1115	1075
Outdoor Horsepower	0.33	0.33	0.33	0.33	0.5	0.5	0.5
Fan Diameter / # Fan Blades	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3	22 / 3
Face Area (ft ²)	28.2	31.3	31.3	31.3	40.1	40.1	40.1
Rows Deep / Fins per Inch	2 / 28	2 / 28	2 / 28	2 / 28	3 / 20	3 / 20	3 / 20
COMPRESSOR							
Quantity / Type / Stages	2/ Scroll / 1						
Compressor RLA / LRA	6/41	16/110	7.8/52	5.7/38.9	19/123	9.7/62	7.4/50
ELECTRICAL DATA							
Voltage-Phase-Frequency	575-3-60	208/230-3-60	460-3-60	575-3-60	208/230-3-60	460-3-60	575-3-60
Indoor Blower FLA	2.4	6	2.9	2.4	9.1	4.3	3.5
Max External Static (In. W.C.)	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Outdoor Fan FLA	0.67	2	0.85	0.67	2.7	1.4	1
Min. Circuit Ampacity ¹	17.3	45.9/45.9	22.1	16.6	57.3/57.3	29	22.2
Max. Overcurrent Protection (A) ²	20	60/60	25	20	70/70	35	25
Power Supply Conduit Hole Dia. (in)	1.375	1.375	1.375	1.375	1.375	1.375	1.375
Low-Voltage Conduit Hole Dia. (in)	0.375	0.375	0.375	0.375	0.375	0.375	0.375
OPERATING WEIGHT (LBS.)							
Operating Weight (lbs)	1026	1070	1070	1070	1208	1208	1208
SHIPPING WEIGHT (LBS.)							
Ship Weight (lbs)	1106	1150	1150	1150	1288	1288	1288

¹ Wire size should be determined in accordance with National Electrical Codes. Extensive wire runs will require larger wire sizes.

² May use fuses or HACR-type circuit breakers of the same size as noted.

Note: Always check the S&R plate for electrical data on the unit being installed.

AHRI Ratings

AC				
Nominal Tonnage	Cooling Capacity (BTU/hr)	EER	IEER	Charge Stg1/Stg2
7.5	86,000	11.2	12.9	80/78
8.5	97,000	11.2	12.9	85/87.5
10	114,000	11.2	12.9	103.5/103
12.5	140,000	11	12.4	230/246

Sound Data

Model	OUTDOOR SOUND (dB) AT 60 Hz								
	A-Weighted	63	125	250	500	1000	2000	4000	8000
90	83	91.5	84.1	82.0	79.7	77.6	75.2	71.7	69.0
102	80	89.1	81.1	78.7	77.1	76.1	70.8	66.5	64.1
120	82	91.9	82.8	81.9	79.1	76.9	72.9	68.3	66.0
150	83	92.3	87.8	83.0	80.4	78.2	73.8	70.1	62.6

Notes:

¹ Outdoor sound data is measured in accordance with AHRI standard 270.

² Measurements are expressed in terms of sound power. Do not compare these values to sound pressure values because sound pressure depends on specific environment factors which normally do not match individual applications. Sound power values are independent of the environment and therefore more accurate.

³ A-weighted sound ratings filter out high and very low frequencies, to better approximate the response of "average" human ear. A-weighted measurements for Daikin units are taken in accordance with AHRI standard 270.

Expanded Cooling Data

DBC090

IDB	Airflow	ID WB	Outdoor Ambient Temperature																						
			65						75																
			59	63	67	71	59	63	67	71	59	63	67	71											
2625	Mbh	87.5	88.7	91.3	-	86.7	87.9	90.6	-	84.4	85.7	88.3	-	80.5	81.7	84.3	-	75.7	76.9	79.5	-	71.3	72.5	75.2	-
	S/T	0.70	0.58	0.41	-	0.71	0.60	0.42	-	0.74	0.61	0.43	-	0.76	0.63	0.44	-	0.77	0.66	0.45	-	0.81	0.66	0.46	-
	ΔT	18.63	16.91	13.69	-	18.59	16.86	13.65	-	18.83	17.11	13.89	-	18.57	16.85	13.63	-	18.34	16.62	13.40	-	19.42	17.69	14.48	-
	Hi PR	253	254	256	-	293	294	296	-	335	336	338	-	380	381	383	-	429	430	431	-	480	482	483	-
	Lo PR	116	117	120	-	123	124	127	-	129	131	134	-	134	136	139	-	139	141	144	-	146	147	150	-
3000	Mbh	88.6	89.9	92.5	-	87.9	89.1	91.7	-	85.6	86.8	89.4	-	81.6	82.9	85.5	-	76.8	78.1	80.7	-	72.5	73.7	76.3	-
	S/T	0.72	0.60	0.42	-	0.73	0.61	0.43	-	0.76	0.63	0.45	-	0.78	0.65	0.46	-	0.80	0.67	0.47	-	0.82	0.69	0.48	-
	ΔT	17.59	15.87	12.65	-	17.55	15.82	12.60	-	17.79	16.06	12.85	-	17.53	15.80	12.59	-	17.30	15.57	12.36	-	18.38	16.65	13.44	-
	Hi PR	255	256	258	-	295	296	298	-	337	338	340	-	382	383	385	-	431	432	434	-	483	484	485	-
	Lo PR	118	119	122	-	125	126	129	-	131	132	135	-	136	138	140	-	141	143	146	-	148	149	152	-
3375	Mbh	90.0	91.3	93.9	-	89.2	90.5	93.1	-	87.0	88.2	90.8	-	83.0	84.3	86.9	-	78.2	79.5	82.1	-	73.8	75.1	77.7	-
	S/T	0.73	0.62	0.43	-	0.76	0.63	0.44	-	0.78	0.65	0.46	-	0.80	0.67	0.47	-	0.82	0.69	0.49	-	0.86	0.72	0.50	-
	ΔT	16.72	14.99	11.78	-	16.67	14.95	11.73	-	16.91	15.19	11.97	-	16.65	14.93	11.71	-	16.42	14.70	11.48	-	17.50	15.78	12.56	-
	Hi PR	257	258	260	-	297	298	300	-	339	340	342	-	384	385	387	-	433	434	436	-	485	486	488	-
	Lo PR	120	121	124	-	127	128	131	-	133	134	137	-	138	139	142	-	143	145	147	-	150	151	154	-

Shaded area reflects ACCA (TVA) conditions

IDB: Entering indoor Dry Bulb Temperature
High and low pressures are measured at the liquid and suction access fittings.

Design Subcooling: 16 - 19 °F @ the liquid access fitting connection

kW = Total system power

Amps: Unit amps (comp.+ evaporator + condenser fan motors)

Expanded Cooling Data

DBC102

IDB	Airflow	ID WB	Outdoor Ambient Temperature									
			65					75				
Entering Indoor Wet Bulb Temperature												
IDB	Airflow	ID WB	59	63	67	71	59	63	67	71	59	63
2975	Mbh	98.7	100.1	103.0	-	97.8	99.2	102.1	-	95.2	96.6	99.6
	S/T	0.70	0.58	0.41	-	0.72	0.61	0.41	-	0.74	0.61	0.42
	ΔT	18.08	16.41	13.28	-	18.03	16.36	13.24	-	18.27	16.59	13.47
	Hi PR	255	256	258	-	295	296	298	-	337	339	340
	Lo PR	113	114	117	-	120	121	124	-	126	127	130
3400	Mbh	100.0	101.4	104.3	-	99.1	100.5	103.4	-	96.5	97.9	100.9
	S/T	0.72	0.61	0.42	-	0.74	0.62	0.45	-	0.77	0.65	0.45
	ΔT	17.07	15.40	12.27	-	17.02	15.35	12.23	-	17.26	15.58	12.46
	Hi PR	257	258	260	-	297	299	300	-	340	341	343
	Lo PR	115	116	119	-	122	123	126	-	128	129	132
3825	Mbh	101.5	102.9	105.9	-	100.7	102.1	105.0	-	98.1	99.5	102.4
	S/T	0.74	0.63	0.44	-	0.76	0.64	0.47	-	0.79	0.67	0.47
	ΔT	16.22	14.55	11.42	-	16.17	14.50	11.38	-	16.41	14.73	11.61
	Hi PR	259	260	262	-	300	301	302	-	342	343	345
	Lo PR	117	118	121	-	123	125	128	-	129	131	134
2975	Mbh	98.7	100.1	103.1	107.6	97.9	99.3	102.2	106.7	95.3	96.7	104.1
	S/T	0.78	0.68	0.52	0.35	0.83	0.74	0.55	0.37	0.84	0.71	0.56
	ΔT	21.75	20.08	16.96	13.7	21.71	20.04	16.91	13.7	21.94	20.27	17.15
	Hi PR	255	256	258	262.6	296	297	298	302.9	338	339	341
	Lo PR	113	115	117	122.2	120	121	124	129.1	126	127	130
3400	Mbh	100.0	101.4	104.4	108.9	99.2	100.6	103.5	108.0	96.6	98.0	100.9
	S/T	0.82	0.71	0.56	0.37	0.85	0.72	0.58	0.39	0.86	0.73	0.59
	ΔT	20.74	19.07	15.95	12.7	20.70	19.03	15.90	12.7	20.93	19.26	16.14
	Hi PR	257	259	260	264.8	298	299	301	305.0	340	341	343
	Lo PR	115	116	119	123.9	122	123	126	130.7	128	129	132
3825	Mbh	101.6	103.0	105.9	110.4	100.7	102.1	105.1	109.6	98.1	99.5	102.5
	S/T	0.84	0.73	0.58	0.40	0.87	0.74	0.61	0.42	0.88	0.75	0.61
	ΔT	19.89	18.22	15.10	11.9	19.85	18.18	15.05	11.8	20.08	18.41	15.29
	Hi PR	260	261	262	266.9	300	301	303	307.1	342	343	345
	Lo PR	117	118	121	125.7	123	125	128	132.6	130	131	134

kW = Total system power
Amps = Unit amps (comp.+ evaporator + condenser fan motors)

Shaded area reflects ACCA (TVA) conditions

IDB: Entering indoor Dry Bulb Temperature
High and low pressures are measured at the liquid and suction access fittings.

Design Subcooling: 16 - 19 °F @ the liquid access fitting connection / Design Superheat 8 - 12°F @ the compressor suction access fitting connection.

Electrical Heater Data

MODEL #	MIN AIRFLOW	MAX AIRFLOW	MINIMUM AIR FLOW FOR ELECTRIC HEAT				
			EHXB-*M15	EHXB-*M16	EHXB-*M30	EHXB-*M31	EHXB-*M45
DBC090*	2400	3375	X		X		X
DBC102*	2750	3825	X		X		X
DBC120*	3250	4500		X		X	
DBC150*	3750	5625		X		X	X

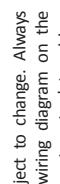
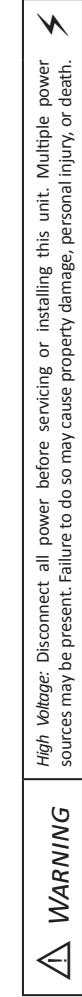
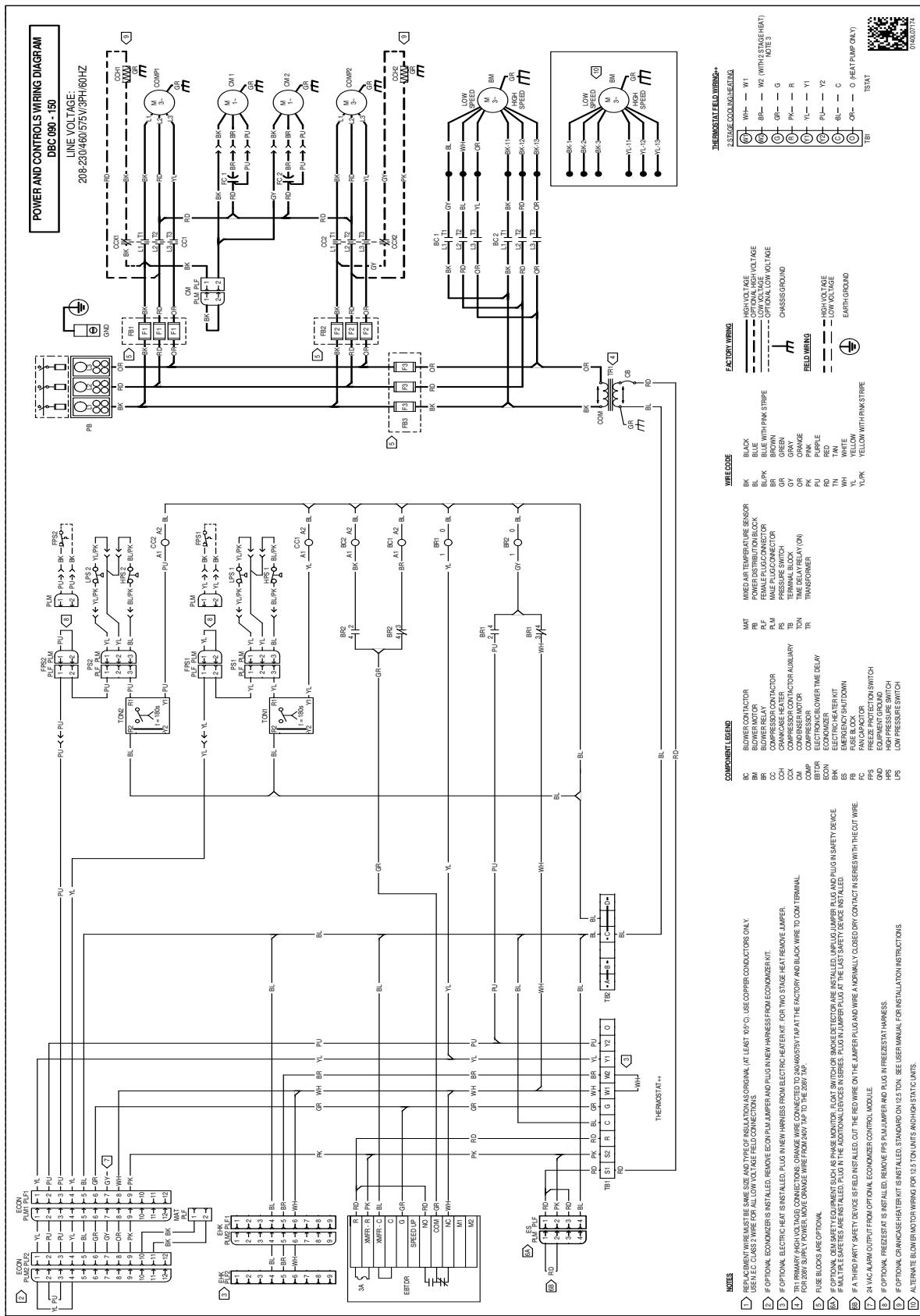
* = 3,4,7

Electrical Data

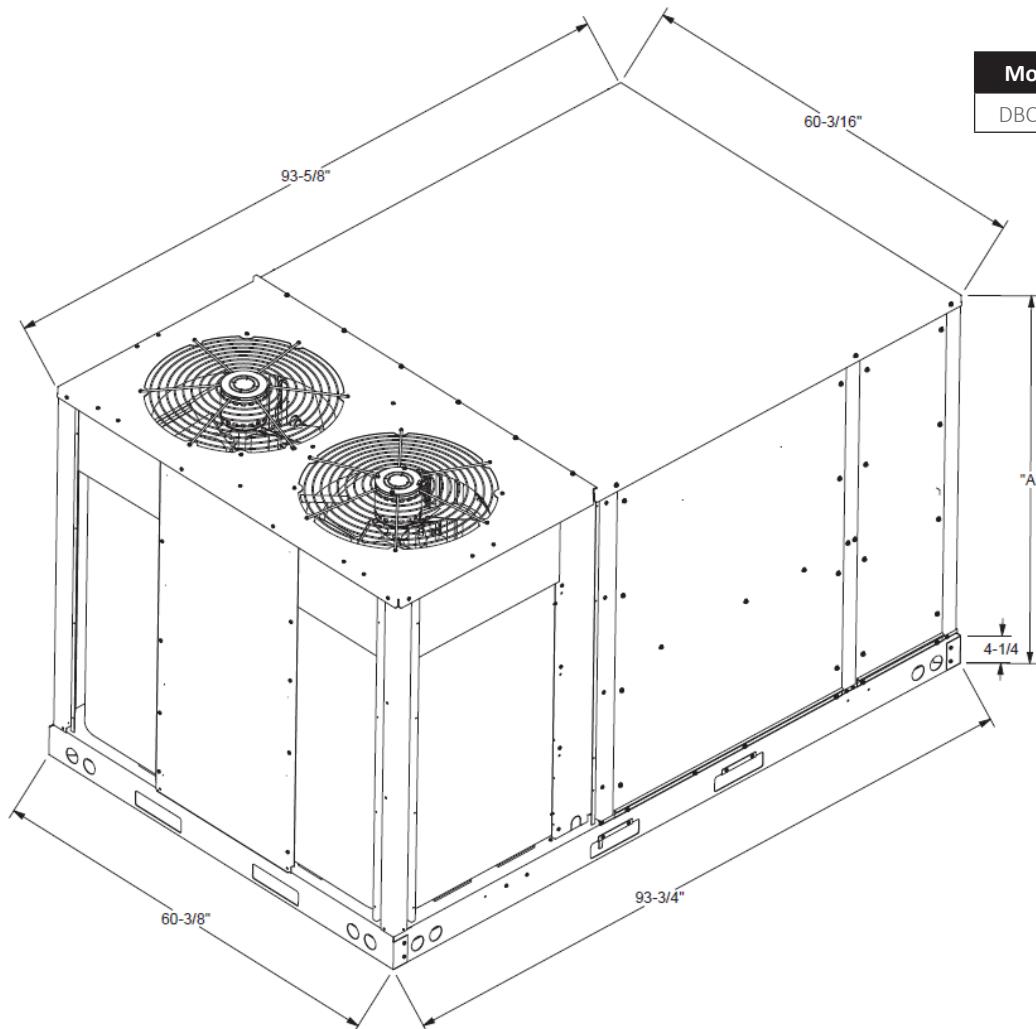
Model Number	Electrical Rating	Compressor			Outdoor Fan Motor			Indoor Fan Motor		Optional Electric Heat			Optional Powered Convenience Outlet	Optional Power Exhaust	Power Supply		
		QTY	RLA	LRA	QTY	HP	FLA	TYPE	HP	FLA	PART #	KW*	FLA	FLA	MCA	MOP	
DBC1207S	575/3/60	2	5.7	38.9	2	0.33	0.67	2-speed Belt-Drive High-Static	3	3.5	EH*B-7M16	15	14.4	-	-	17.7	20
											-	-	-	-	21.2	25	
											-	-	-	1.2	18.9	20	
											-	-	-	1.2	22.4	25	
											-	-	-	-	22.4	25	
											-	-	-	3.5	26.8	30	
											-	-	-	1.2	23.9	25	
											-	-	-	3.5	28.3	30	
											-	-	-	-	40.5	45	
											-	-	-	3.5	44.8	45	
											-	-	-	1.2	42	45	
											-	-	-	3.5	46.3	50	
											-	-	-	-	58.5	60	
											-	-	-	3.5	62.9	70	
											-	-	-	1.2	60	70	
											-	-	-	3.5	64.4	70	
DBC1207V	575/3/60	2	5.7	38.9	2	0.33	0.67	2-speed Belt-Drive Standard Static	2	2.4	EH*B-7M16	15	14.4	-	-	16.6	20
											-	-	-	-	20.1	25	
											-	-	-	1.2	17.8	20	
											-	-	-	3.5	21.3	25	
											-	-	-	-	21	25	
											-	-	-	3.5	25.4	30	
											-	-	-	1.2	22.5	25	
											-	-	-	3.5	26.9	30	
											-	-	-	-	39.1	40	
											-	-	-	3.5	43.5	45	
											-	-	-	1.2	40.6	45	
											-	-	-	3.5	45	45	
											-	-	-	-	57.1	60	
											-	-	-	3.5	61.5	70	
											-	-	-	1.2	58.6	60	
											-	-	-	1.2	63	70	

Wire Diagram

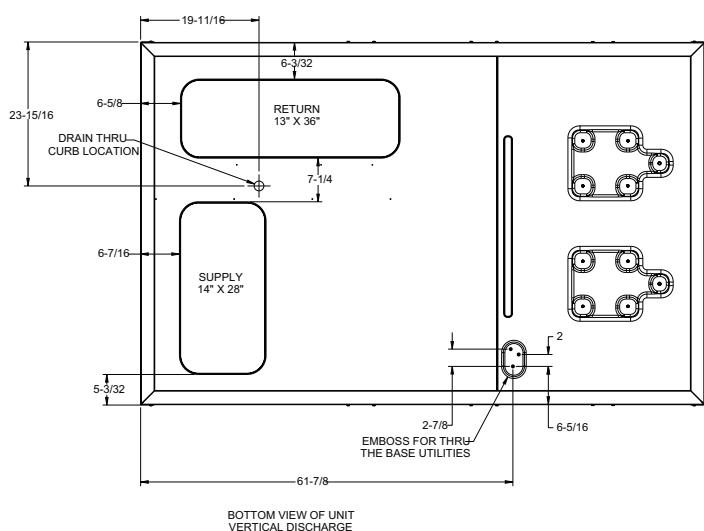
3-Phase Diagram



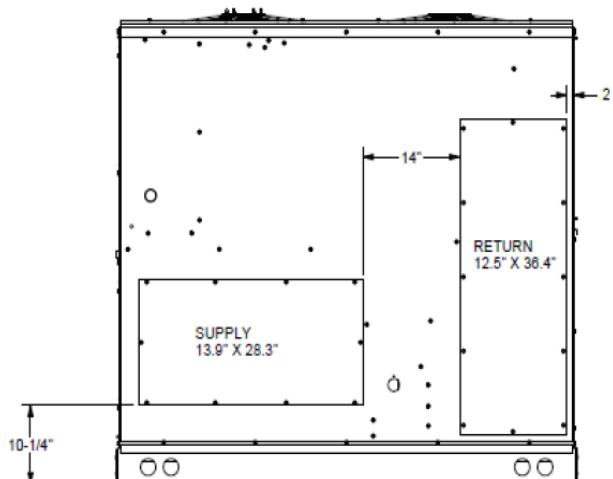
Wiring is subject to change. Always refer to the wiring diagram on the unit for the most up-to-date wiring.



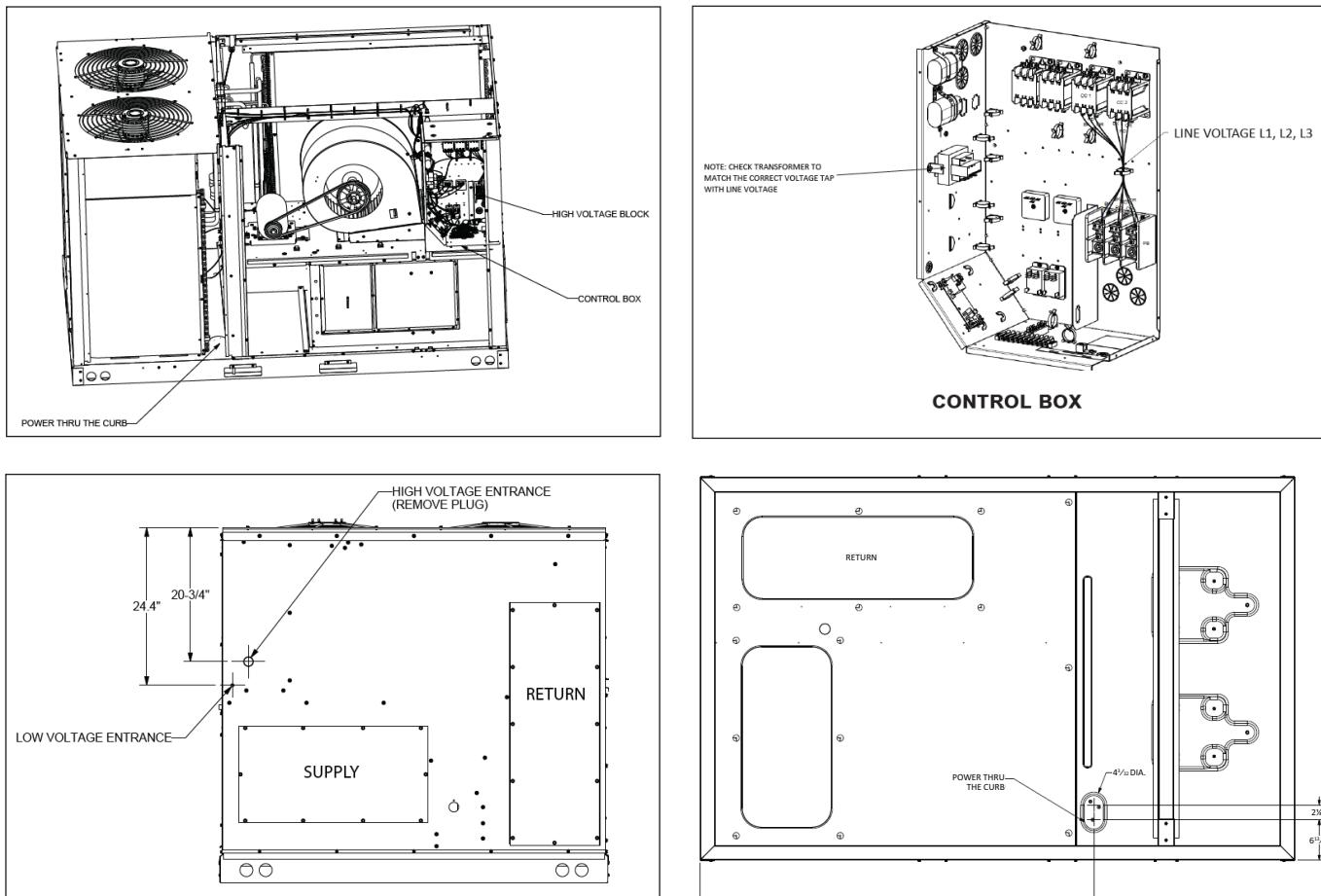
Model Size	DIM "A"
DBC090-150	57 $\frac{9}{20}$



**BOTTOM VIEW OF UNIT
VERTICAL DISCHARGE**



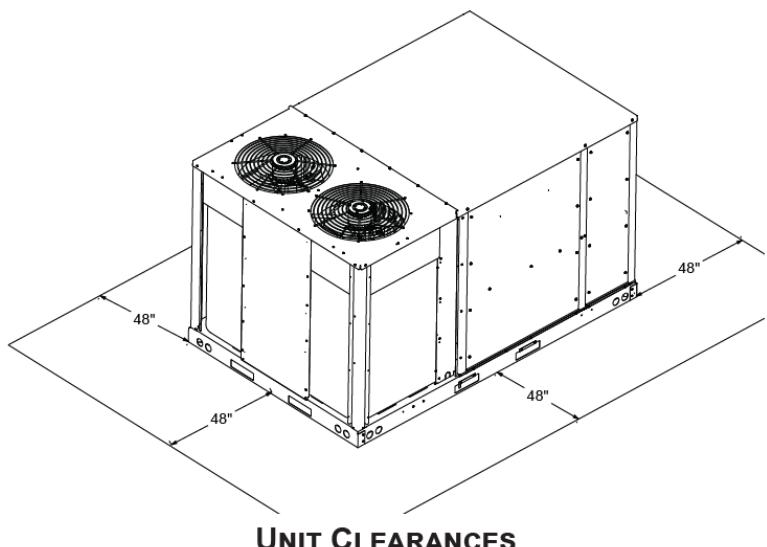
Electrical Connections



Unit Clearances

Service Clearance

Allow for recommended service clearances as shown in figure to the right. In situations that have multiple units, a 36" minimum clearance is required between the condenser coils. A clearance of 48" is recommended on all sides of the unit to allow service access and to ensure proper ventilation and condenser airflow. The top of the unit should be unobstructed. Provide a roof walkway along the sides of the unit for service and access to controls and components. Contact your Daikin sales representative for service requirements less than those recommended.



UNIT CLEARANCES

Installation

Unit Location

The structural engineer must verify that the roof has adequate support and ability to minimize deflection. Take extreme caution when using on a wooden roof structure. Unit condenser coils should be in a location that avoids any heated exhaust air.

Allow sufficient space around the unit for maintenance/service clearance. Consult your Daikin sales representative if available clearances do not meet minimum recommendations.

Where code considerations, such as the NEC, require extended clearances, these take precedence.

Provisions for forks have been included in the unit base frame. No other fork locations are approved.

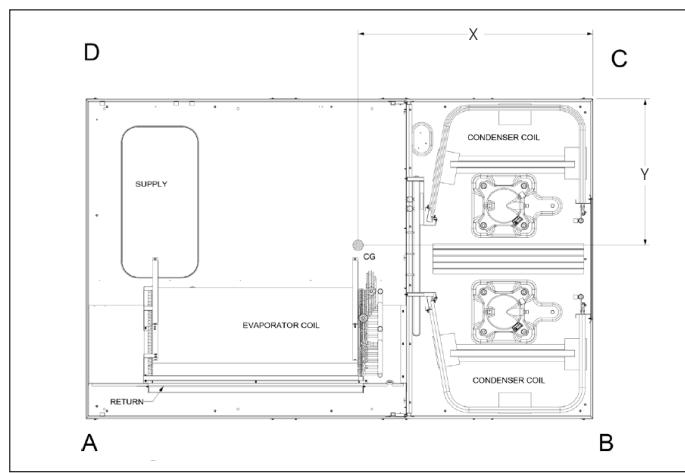
- » Unit must be lifted by the four lifting holes located at the base frame corners.
- » Lifting cables should be attached to the unit with shackles.
- » The distance between the crane hook and the top of the unit must not be less than 60".
- » Two spreader bars must span over the unit to prevent damage to the cabinet by the lift cables. Spreader bars must be of sufficient length so that cables do not come in contact with the unit during transport. Remove wood struts mounted beneath unit base

frame before setting unit on roof curb. These struts are intended to protect unit base frame from forklift damage. To remove the struts, extract the sheet metal retainers and pull the struts through the base of the unit. Refer to rigging label on the unit.

Important: If using bottom discharge with roof curb, duct-work should be attached to the curb prior to installing the unit. Refer to the Roof Curb Installation Instructions for proper curb installation. Curbing must be installed in compliance with the National Roofing Contractors Association Manual. Lower unit carefully onto roof mounting curb. While rigging the unit, the center of gravity will cause the condenser end to be lower than the supply air end. Bring condenser end of unit into alignment with the curb. With condenser end of the unit resting on curb member and using curb as a fulcrum, lower opposite end of the unit until entire unit is seated on the curb. When a rectangular cantilever curb is used, take care to center the unit. Check for proper alignment and orientation of supply and return openings with duct.

Roof Curb Installation

The roof curb is field-assembled and must be installed level (within 1/16" per foot side to side). A sub-base must be constructed by the contractor in applications involving pitched roofs. Gaskets are furnished and must be installed between the unit and curb. For proper installation, follow NRCA guidelines. In applications requiring post and rail installation, an I-beam securely mounted on multiple posts should support the unit on each side. In addition, the insulation on the underside of the unit should be protected from the elements. Applications in geographic areas subjected to seismic or hurricane conditions must meet code requirements for fastening the unit to the curb and the curb to the building structure. For further and more detailed information please refer to our Daikin Light Commercial Packaged unit IOD.



Weights

Model	Shipping Weight (lbs)	Operating Weight (lbs)	Corner Weights (lbs)				Length	Width
			A	B	C	D		
DBC090	1095	1015	154	339	229	373	44	27
DBC102	1106	1026	205	315	273	128	49	28
DBC120	1159	1070	166	331	224	349	45	30
DBC150	1288	1208	211	381	289	349	41	28

Accessories

Field Accessory part number	Description	Fits Model Sizes	Field-Installed	Factory-Installed	Operating Weight (lbs)
Electric Heat Kits					
EHXB-3M15	Electric Heater, Belt-Drive, 208-230V, 3PH, 15kW	7.5/8.5 ton	✓	✓	
EHXB-3M16	Electric Heater, Belt-Drive, 208-230V, 3PH, 15kW	10/12.5 ton	✓	✓	
EHXB-3M30	Electric Heater, Belt-Drive, 208-230V, 3PH, 30kW	7.5/8.5 ton	✓	✓	
EHXB-3M31	Electric Heater, Belt-Drive, 208-230V, 3PH, 30kW	10/12.5 ton	✓	✓	
EHXB-3M45	Electric Heater, Belt-Drive, 208-230V, 3PH, 45kW	7.5/8.5 ton	✓	✓	
EHXB-3M46	Electric Heater, Belt-Drive, 208-230V, 3PH, 45kW	10/12.5 ton	✓	✓	
EHXB-4M15	Electric Heater, Belt-Drive, 460V, 3PH, 15kW	7.5/8.5 ton	✓	✓	
EHXB-4M16	Electric Heater, Belt-Drive, 460V, 3PH, 15kW	10/12.5 ton	✓	✓	
EHXB-4M30	Electric Heater, Belt-Drive, 460V, 3PH, 30kW	7.5/8.5 ton	✓	✓	
EHXB-4M31	Electric Heater, Belt-Drive, 460V, 3PH, 30kW	10/12.5 ton	✓	✓	
EHXB-4M45	Electric Heater, Belt-Drive, 460V, 3PH, 45kW	7.5/8.5 ton	✓	✓	
EHXB-4M46	Electric Heater, Belt-Drive, 460V, 3PH, 45kW	10/12.5 ton	✓	✓	
EHXB-7M15	Electric Heater, Belt-Drive, 575V, 3PH, 15kW	7.5/8.5 ton	✓	✓	
EHXB-7M16	Electric Heater, Belt-Drive, 575V, 3PH, 15kW	10/12.5 ton	✓	✓	
EHXB-7M30	Electric Heater, Belt-Drive, 575V, 3PH, 30kW	7.5/8.5 ton	✓	✓	
EHXB-7M31	Electric Heater, Belt-Drive, 575V, 3PH, 30kW	10/12.5 ton	✓	✓	
EHXB-7M45	Electric Heater, Belt-Drive, 575V, 3PH, 45kW	7.5/8.5 ton	✓	✓	
EHXB-7M46	Electric Heater, Belt-Drive, 575V, 3PH, 45kW	10/12.5 ton	✓	✓	
Duct Smoke Detectors					
	Smoke Detectors - Return	7.5-10 ton		✓	
	Smoke Detectors - Return	12.5 ton		✓	
	Smoke Detectors - Supply	7.5-12.5 ton		✓	
	Smoke Detectors - Supply and Return	7.5-10 ton		✓	
	Smoke Detectors - Supply and Return	12.5 ton		✓	
Non-Fused Disconnect Switch					
	60 Amp Disconnect	7.5-12.5 ton		✓	
	100 Amp Disconnect	7.5-12.5 ton		✓	
	150 Amp Disconnect	7.5-12.5 ton		✓	
	250 Amp Disconnect	7.5-12.5 ton		✓	
Convenience Outlets					
	Convenience Outlets - Powered, 208/230 V	7.5-12.5 ton		✓	47
	Convenience Outlets - Powered, 460 V	7.5-12.5 ton		✓	47
	Convenience Outlets - Powered, 575 V	7.5-12.5 ton		✓	47
	Convenience Outlets - Non-Powered	7.5-12.5 ton		✓	2
Hinged Access Panels					
	Hinged Access Panels	7.5-12.5 ton		✓	
Economizer					
0270L01760	Horizontal Economizer Ultra Low-Leak JADE® Enthalpy Sensor	7.5-12.5 ton	✓		128
0270L01130	Horizontal Economizer Ultra Low-Leak JADE Dry-Bulb	7.5-12.5 ton	✓		128
0270L01754	Downflow Economizer Standard Low-Leak JADE Enthalpy Sensor	7.5-12.5 ton	✓	✓	103
0270L01756	Downflow Economizer Ultra Low-Leak JADE Enthalpy Sensor	7.5-12.5 ton	✓	✓	103
0270L01123	Downflow Economizer Standard Low-Leak JADE Dry-Bulb	7.5-12.5 ton	✓	✓	103
0270L01125	Downflow Economizer Ultra Low-Leak JADE Dry-Bulb	7.5-12.5 ton	✓	✓	103

Accessories

Field Accessory part number	Description	Fits Model Sizes	Field-Installed	Factory-Installed	Operating Weight (lbs)
Curbs and Restraint Clips					
0270L01153	Roof Curb 14" Tall, Knocked Down	7.5-12.5 ton	✓		116
0270L01154	Roof Curb 24" Tall, Knocked Down	7.5-12.5 ton	✓		174
0270L01262	Hold Down Bracket Kit	7.5-12.5 ton	✓		8
0270L01251	Hold Down Bracket Kit for Daikin Roof curb	7.5-12.5 ton	✓		8
0221L00017	14" Tall Seismic Curb	7.5-12.5 ton	✓		120
0221L00018	14" Tall Wind-Rated/Hurricane Curb	7.5-12.5 ton	✓		160
Concentrics					
0221L00011	Concentric Diffuser 30 x 48 with 20" Dia. collars	7.5/8.5 ton	✓		
0221L00012	Concentric Diffuser 36 x 48 with 18 x 28 duct size	10 ton	✓		
0221L00013	Concentric Diffuser 42 x 48 with 18 x 32 duct size	12.5 ton	✓		
0270L01336	Concentric adaptor for curb - 20" collar	7.5/8.5 ton	✓		40
0270L01768	Concentric adaptor for curb - 18 x 28 duct size	10 ton	✓		56
0270L01769	Concentric adaptor for curb - 18 x 32 duct size	12.5 ton	✓		54
Damper					
0270L01132	2 Position Motorized Damper	7.5-12.5 ton	✓		57
0270L01133	Manual Outdoor Air Damper	7.5-12.5 ton	✓		41
Hail Guard Kits					
HAILGD090120HE	Condenser Coil Hail Guards	7.5-12.5 ton	✓	✓	
Crankcase Heater Kits					
HECH90150230	Crankcase Heater Kit 230V	7.5-12.5 ton	✓		2
HECH90150460	Crankcase Heater Kit 460V	7.5-12.5 ton	✓		2
HECH90150575	Crankcase Heater Kit 575V	7.5-12.5 ton	✓		2
High-Efficiency Filters					
0160L00271	High-Efficiency MERV 8 Air Filter Kit - 20x25x2 (qty 4)	7.5/8.5/12.5 ton	✓		4
0160L00270	High-Efficiency MERV 8 Air Filter Kit - 20x20x2 (qty 4)	10 ton	✓		4
0160L00202	High-Efficiency MERV 13 Air Filter Kit - 20x25x2 (qty 4)	7.5/8.5/12.5 ton	✓		4
0160L00201	High-Efficiency MERV 13 Air Filter Kit - 20x20x2 (qty 4)	10 ton	✓		4
Misc Accessories					
TTBCKHE02	Through the Base Connections	7.5-12.5 ton	✓	✓	1
3PMKP2	Phase Monitor Kit	7.5-12.5 ton	✓	✓	2
0270L01233	Burglar bars Inserts	7.5-12.5 ton	✓		28
Power Exhaust					
0270L01134	Power Exhaust Prop Downflow Economizer 208/230 V	7.5-12.5 ton	✓		94
0270L01137	Power Exhaust Prop Horizontal Economizer 208/230 V	7.5-12.5 ton	✓		76
0270L01135	Power Exhaust Prop Downflow Economizer 460 V	7.5-12.5 ton	✓		94
0270L01138	Power Exhaust Prop Horizontal Economizer 460 V	7.5-12.5 ton	✓		76
Controls, Thermostats and Sensors					
DT4272C	Comm Touch Digital Stat w/ Wi-Fi 4h/2c	7.5-12.5 ton	✓		1
DT4273C	Comm Touch Digital Stat w/ Wi-Fi & Humidity Control 4h/2cc	7.5-12.5 ton	✓		1
TSTATGAC-WS	Remote indoor sensor	7.5-12.5 ton	✓		1
250803400	AppStat™ RTU 2H/2C Econ	7.5-12.5 ton	✓		1
250803600	AppStat™ RTU 3H/2C Econ (HP only)	7.5-12.5 ton	✓		1
D4271C	4h/2c Commercial 7 day Programmable Wi-Fi Capable thermostat	7.5-12.5 ton	✓		1
D4272C	4h/2c Commercial 7 day Programmable Wi-Fi Capable Hum/dehum thermostat	7.5-12.5 ton	✓		1
C7232B1022	CO ₂ Sensor (Duct Mtd)	7.5-12.5 ton	✓		1

Note: Where multiple variations are available, the heaviest combination is listed.

Factory and Field Installed Options

Factory Installed Options

- » **Non-Powered Convenience Outlet:** A 120V, 15A, GFCI outlet can be installed in the unit making it easier for technicians to service other units once an electrician runs power to the outlet. Outlet shall be factory-installed and internally mounted with easily accessible 120-v female receptacle. Transformer not included for this option. Outlet shall include a field-installed "While-in-Use" cover.
- » **High-Static Kit:** Allows for operation in higher static applications.
- » **Powered Convenience Outlet:** A 120V, 15A, GFCI outlet can be powered with a step-transformer built into the unit. For use when the unit is not running. When a factory-installed powered convenience outlet is installed in the equipment, the unit MCA (Min. Circuit Ampacity) will increase by 7.5A for 208/230V units; increase by 3.75A for 460V units; and by 3A for 575V units. The MOP (Max. Overcurrent Protection) device must be sized accordingly. Outlet shall be powered from main line power to the rooftop unit. Outlet shall include a field-installed "While-in-Use" cover.
- » **Return Air and/or Supply Air Smoke Detectors:** Return air and/or supply air smoke detectors can be installed in the unit. To safely identify the presence of smoke inside the air conditioning system and shutdown the blower to prevent the smoke to disperse into different zones.
- » **Disconnect Switch (non-fused):** A disconnect switch can be installed in the unit with factory wiring complete from the switch to the unit. Please note that for air conditioner and heat pump units, the appropriate electric heat kit must be ordered along with the disconnect switch (non-fused) to be factory-installed. For models with a powered convenience outlet option and a disconnect switch (non-fused) option, the power to the powered convenience outlet will be shut off when the disconnect switch (non-fused) is in the off position. National Electric Code (NEC) and UL approved non-fused switch shall provide unit power shutoff. The switch shall be accessible from outside of the unit and provide local shutdown and lockout capability.
- » **Hinged Access Panels:** Allows access to unit's major components. Combined with latches for easy access to control box, compressor, filters and blower motor.
- » **Through-the-base electrical connection:** Allows an easy and fast field installation through the unit base pan.
- » **Electromechanical Controls:** Basic controls that include terminal block for unit connectivity to T-Stat.

Field Installed Options

- » **Manual Fresh Air Damper:** Manual damper package shall consist of damper, air inlet screen, and rain hood which can be preset to admit up to 25% outdoor air for year round ventilation.
- » **Motorized Fresh Air Damper:** A two-position damper with rain hood and screen provides up to 50% outside air when the indoor fan starts and closes when the indoor fan shuts down. Consist of actuator, damper, air inlet screen, and rain hood. Damper shall close upon indoor (evaporator) fan shutoff and/or loss of power. The damper actuator shall plug into the rooftop unit's wiring harness plug. No hard wiring shall be required.
- » **Power Exhaust:** Power exhaust shall be used in conjunction with an integrated economizer. This accessory exhausts return air and may be used in either downflow or horizontal (duct-mounted) applications. Horizontal power exhaust shall be mounted in return ductwork. Power exhaust shall be controlled by economizer controller operation. Exhaust fans shall be energized when dampers open past the 0-100% adjustable setpoint on the economizer control.
- » **Horizontal Economizer:** Fully modulating between 0 and 100%, contain seals that meet ASHRAE 90.1 requirements. Includes motor and dampers, minimum position settings, preset linkage, wiring harness with plug, mixed air temperature sensor, and enthalpy control. An optional duct-mounted barometric relief damper is available. An optional return enthalpy sensor is available to provide comparative or differential enthalpy control. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements for 4 cfm per sq.ft. on the outside air dampers and 10 cfm per sq. ft. on the return dampers. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor. Economizer controller shall accept a 2-10 Vdc CO₂ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input.
- » Economizer controller shall be Honeywell® JADE® W7220 that provides:
 - 2-line LCD interface screen for setup, configuration and troubleshooting.
 - On-board Fault Detection and Diagnostics (FDD) that senses and alerts when the economizer is not operating properly, per California Title 24.
 - Sensor failure loss of communication identification
 - Automatic sensor detection
 - Capabilities for use with multiple-speed indoor fan systems
 - Utilize digital sensors: Dry bulb and Enthalpy
 - Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.

Factory and Field Installed Options

- » **Roof curbs:** Full perimeter roof curb with exhaust capability providing separate air streams for energy recovery from the exhaust air without supply air contamination. Two different heights 14" and 24", allows proper installation and structure stability. Formed galvanized steel with wood nailing strip and shall be capable of supporting entire unit weight.
- » **Concentric duct kits:** Designed to provide a single-point air distribution system with the added benefit of having directional air control.
- » **Restraint mounting clips:** Allows for installation reinforcement for Hurricane and/or seismic events.
- » **CO₂ sensor:** Sensor designed to alarm the system when the CO₂ levels are outside safe parameters.
- » **Burglar Bar Sleeves:** Designed to prevent the access thru the return or supply ducting inside the unit.
- » **Downflow square to round adapter 18":** Installed into a recessed portion of the roof curb, the concentric duct adaptor changes the orientation of the ductwork from square to round for applications utilizing that type of ducting system.
- » **Side discharge concentric diffuser system:** The Concentric diffuser system is an all in one supply and return duct free arrangement for RTU systems. This system comes with two separate duct connections, one for a supply and another for a return.
- » **Remote indoor sensor:** Remote sensor to monitor the temperature on zones away from the main thermostat.
- » **Drain pan overflow switch:** Allows the controls to detect and send an alarm when there is an overflow on the drain pan.
- » **Freeze stat:** Temperature sensing device that monitors the heat exchange to prevent the coil from freezing.

Factory and Field Installed Options

- » **Downflow Economizer:** Fully modulating between 0 and 100%, contain seals that meet ASHRAE 90.1 requirements. Includes motor and dampers, minimum position settings, a preset linkage, a wiring harness with plug, a mixed air temperature sensor, enthalpy control, and a barometric relief damper. An optional return enthalpy sensor is available to provide comparative or differential enthalpy control. Damper blades shall be galvanized steel with composite gears. Plastic or composite blades on intake or return shall not be acceptable. Standard leak rate shall be equipped with dampers not to exceed 2% leakage at 1 in. wg pressure differential. Ultra Low Leak design meets California Title 24 section 140.4 and ASHRAE 90.1 requirements for 4 cfm per sq.ft. on the outside air dampers and 10 cfm per sq. ft. on the return dampers. Shall be designed to close damper(s) during loss-of-power situations with spring return built into motor. Economizer controller shall accept a 2-10 Vdc CO₂ sensor input for IAQ/DCV control. In this mode, dampers shall modulate the outdoor air damper to provide ventilation based on the sensor input. Economizer controller shall be Honeywell® W7220 that provides:
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 - 2-line LCD interface screen for setup, configuration and troubleshooting.
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 - Sensor failure loss of communication identification
 - Automatic sensor detection
 - Capabilities for use with multiple-speed indoor fan systems
 - Utilize digital sensors: Dry bulb and Enthalpy
 - Economizer controller shall provide indications when in free cooling mode, in the DCV mode, or the exhaust fan contact is closed.
 - » **Allows cooling operation** down to 0°F outdoor ambient temperature.
 - » **Phase Monitor:** Phase monitor (3-Phase only) shall provide protection for motors and compressors against problems caused by phase loss, phase reversal and phase unbalance. Phase monitor is equipped with an LED that provides an ON or FAULT indicator.
 - » **Condenser Hail Guards:** Louvered metal guards help protect the condenser coil from hail and debris; available as a field-installed options on 3 – 12½ ton units.

Notes

Notes

Our continuing commitment to quality products may mean a change in specifications without notice.
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