12 Doors walk in Cooler

BOHN

BN-HTS | **JANUARY 2022**
Replaces August 2021

Condensing unit

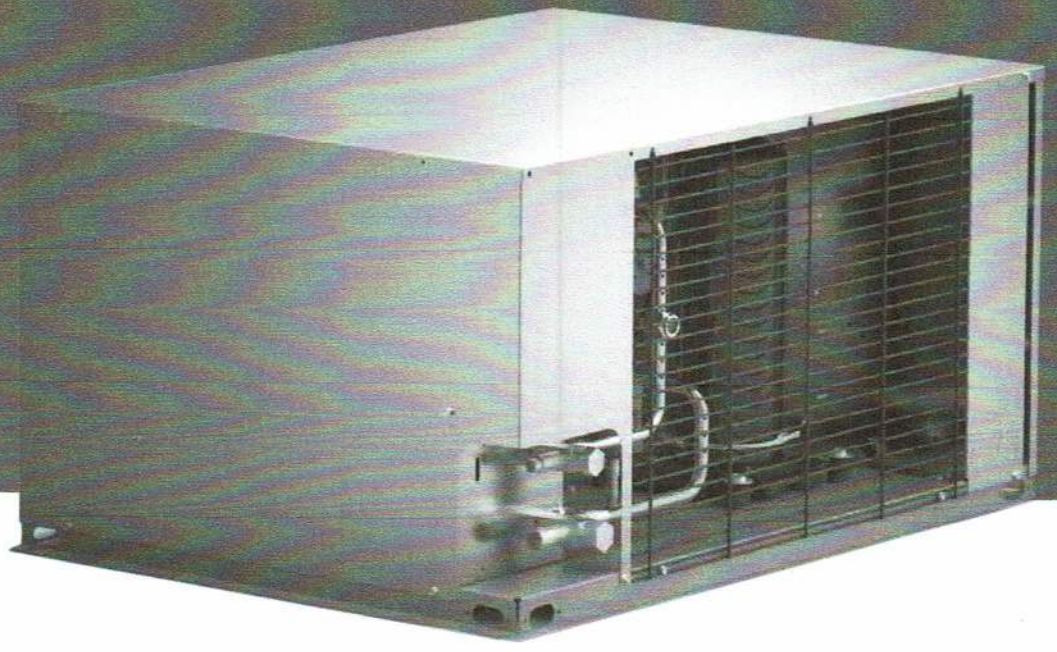
BC 0045M AZ 208-230-1

60 Amp Max

1/2 - 6 HP AIR-COOLED CONDENSING UNITS

Technical Guide

Now including DOE compliant models



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FEATURES & BENEFITS

CABINET AND CONSTRUCTION

- Microchannel coil technology standard on all units
- Painted steel cabinets for superior strength and corrosion protection
- Heavy duty, steel, 1-1/2" tall base

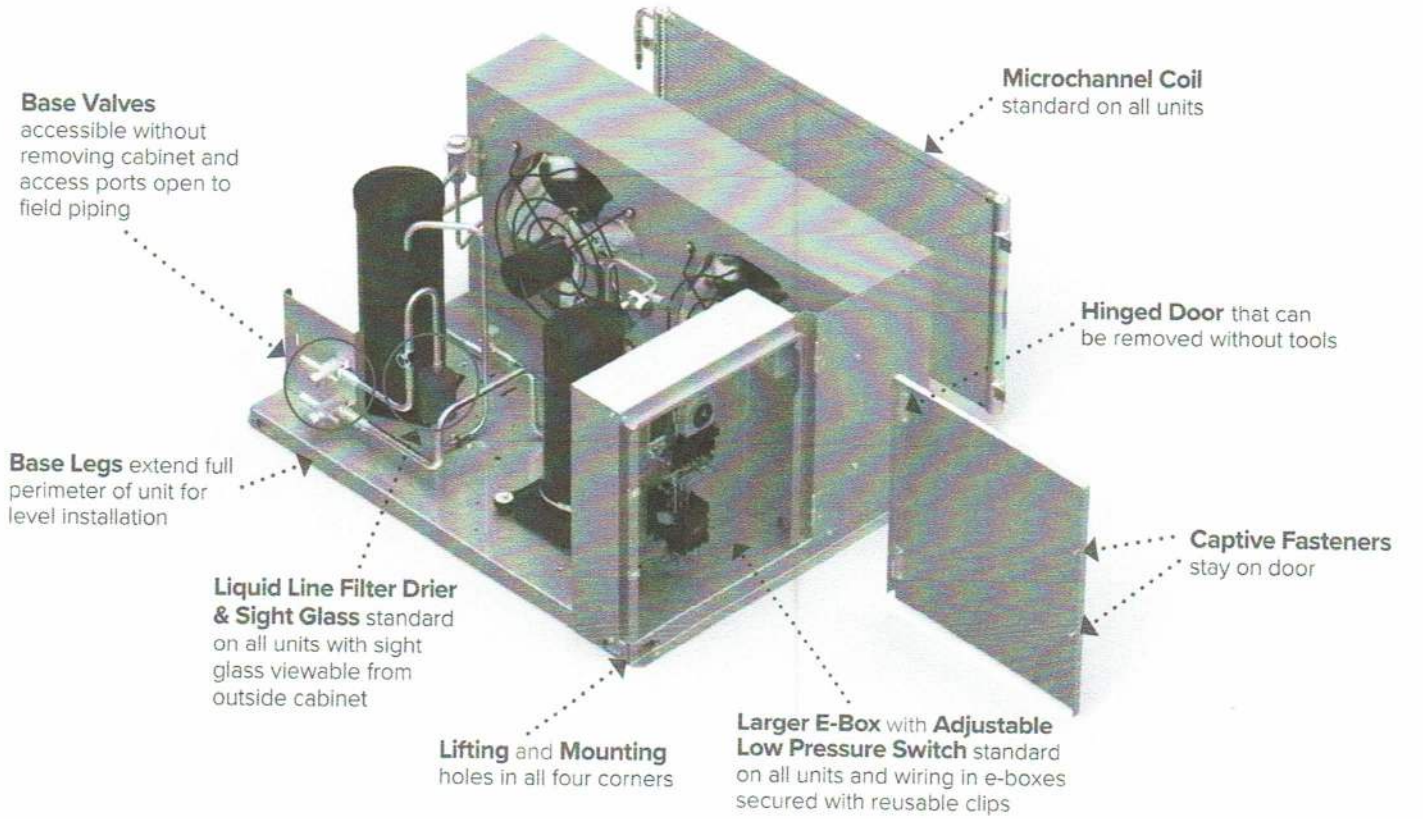
SERVICEABILITY

- Suction service valves for hermetic and scroll compressors located outside the cabinet for quick installations.
- Receiver with fusible plug, liquid shutoff valve and charging port is standard
- Large electrical panel for ease of access
- Prefabricated wiring harnesses for tight crimp connections and consistent labeling
- Unit stays on if the hood is removed for servicing
- Sight glass is easily viewable

QUALITY

- All units are completely leak tested in a helium environment, bump tested and allowed to cycle off on the high and low pressure control. Each unit has a copy of the run data shipped inside the electrical panel
- Electrical circuits are completely checked for continuity
- Piping is laid out to minimize stress and vibration and is pre-bent to eliminate leaks
- Encapsulated, auto-reset, high and low pressure controls to eliminate leaks (adjustable low pressure control standard on all models)

OUTSTANDING FEATURES



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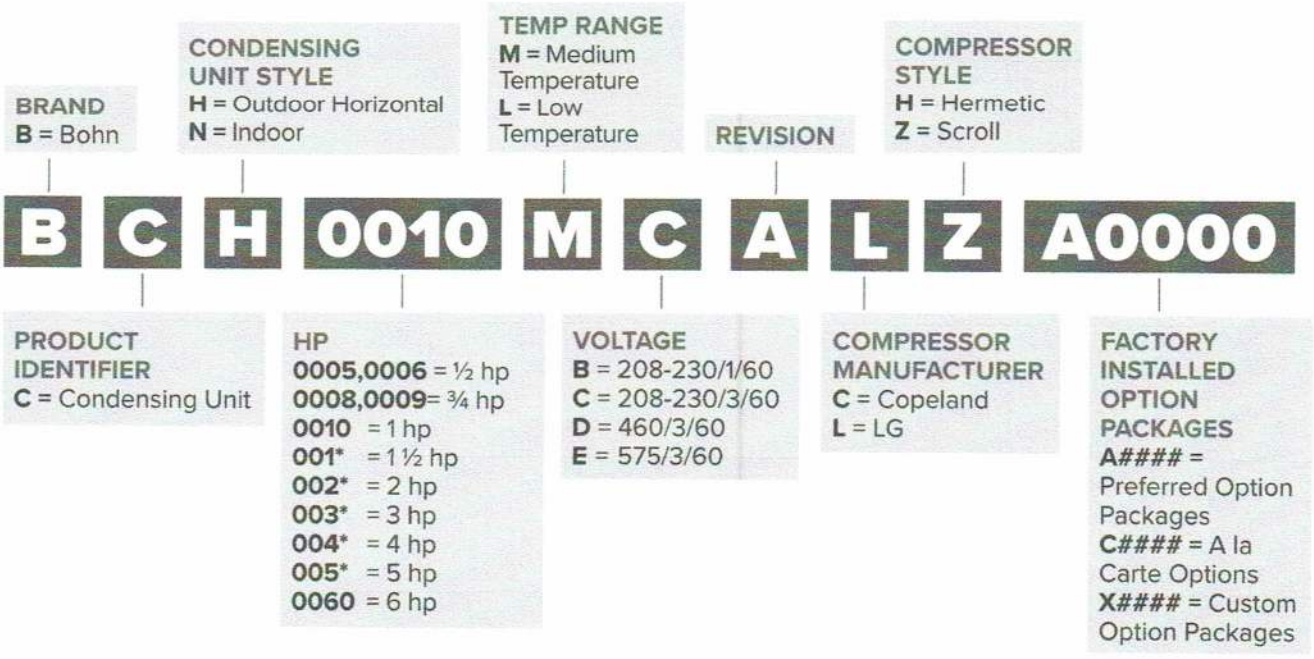


PREFERRED OPTION PACKAGES:

Please see Price Book or The HUB for availability

Package	Description (standard base model features + indicated option below)
A0000	Standard Base
A0100	Timer-Air
A0200	Timer-Elec
A0300	Timer Contactor
A0400	intelliGen™/Beacon II™
A0800	Timer-Air-Paragon + Aluminum Fin/CopperTube Coil
A0900	intelliGen™/Beacon II™ + Suction Filter
A1000	Accumulator
A1200	R-404A Precharge
A1204	R-448A Precharge

STANDARD FEATURES

- Microchannel Coil
- Head Pressure Control Valve
  - 150 psi standard - except Low Temperature Scroll models which are 100 psi
- Crankcase Heater (optional for indoor models)
- Adjustable Low Pressure Control
- Fixed High Pressure Control
- Sealed Liquid Line Drier (new)
- Liquid Line Sight Glass (new)
- Liquid Line and Suction Line Base Valves
- Painted Steel Cabinet (outdoor and indoor models)
- Removable & Hinged E-box Door with Captive Fasteners

ELECTRICAL OPTIONS

Option	Outdoor	Indoor
Fixed low pressure control	Option	Option
Air or Electric defrost timer only	Option	Option
intelliGen™/Beacon II™	Option	N/A
Crankcase Heater	Standard	Option
Dual pressure control (not available with intelliGen™/Beacon II™ or Low Ambient Kit)	Option	Option
Electric defrost with timer & contactors (C3 cabinet)	Option	Option
Fused disconnect	Option	Option
Phase loss / low voltage monitor (not available with intelliGen™/Beacon II™ or Low Ambient Kit)	Option	Option
Smart Defrost Kit™ (Factory-Installed)	Option	Option
Variable speed EC (VSEC) motors with Orbus controller	Option	Option

MECHANICAL OPTIONS

Option	Outdoor	Indoor
Adjustable Head Pressure Valve	Option	Option
12" Extended legs	Option	Option
Head pressure control flooding valve	Standard	N/A
Liquid line drier, sight glass	Standard	Standard
Liquid line solenoid valve and pumpdown switch (not available with intelliGen™/Beacon II™)	Option	Option
Low ambient kit with heated and insulated receiver, Time Delay relay	Option	N/A
Oil separator with discharge line check valve (C3 cabinet)	Option	Option
Oversize receiver (C2 & C3 cabinets)	Option	Option
Precharged refrigerant with quick connect fittings	Option	Option
Replaceable core liquid line filter (C3 cabinet)	Option	Option
Replaceable core suction line filter (C3 cabinet)	Option	Option

PERFORMANCE DATA – R-404A/R-507A

Medium Temperature Models - Scroll Compressors

Please consult AWEF table on pages 27-29 to confirm DOE compliance per model

R-404A/R-507A		Capacity BTUH @ 90°F Ambient by SST							
Model	Compressor	+40°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+0°F
BC*0005M^ACZ	ZB06KAE	10,480	9,630	8,790	7,980	7,220	6,500	5,830	4,660
BC*0008M^ACZ	ZB07KAE	12,370	11,280	10,280	9,350	8,520	7,740	7,020	5,710
BC*0009M^ACZ	ZB08KAE	13,590	12,390	11,300	10,320	9,430	8,630	7,890	6,540
BC*0010M^A‡Z	ZS09KAE / MPA010	16,680	15,270	13,930	12,690	11,520	10,440	9,440	7,670
BC*0015M^A‡Z	ZS13KAE / MPA013	24,210	22,090	20,090	18,230	16,490	14,910	13,440	10,860
BC*0020M^A‡Z	ZS15KAE / MPA015	28,390	26,020	23,670	21,520	19,510	17,650	15,930	12,920
BC*0025M^A‡Z	ZS19KAE / MPA019	31,330	28,660	26,160	23,780	21,570	19,540	17,650	14,330
BC*0030M^A‡Z	ZS21KAE / MBA021	43,740	40,010	36,480	33,150	30,080	27,190	24,510	19,780
BC*0035M^A‡Z	ZS26KAE / MBA026	48,200	44,100	40,210	36,550	33,130	29,970	27,050	21,850
BC*0045M^A‡Z	ZS29KAE / MBA029	54,280	49,600	45,210	41,090	37,250	33,690	30,400	24,620
BC*0050M^A‡Z	ZS33KAE / MBA033	58,310	53,440	48,880	44,540	40,470	36,690	33,160	26,890
BC*0055M^A‡Z	ZS38K4E / MRA038	59,360	54,860	50,510	46,560	42,650	39,050	35,670	29,580
BC*0060M^A‡Z	ZS45K4E / MRA045	68,420	63,390	58,660	53,990	49,520	45,550	41,660	34,740

R-404A/R-507A		Capacity BTUH @ 95°F Ambient by SST							
Model	Compressor	+40°F	+35°F	+30°F	+25°F	+20°F	+15°F	+10°F	+0°F
BC*0005M^ACZ	ZB06KAE	10,060	9,240	8,430	7,660	6,930	6,240	5,600	4,480
BC*0008M^ACZ	ZB07KAE	11,860	10,820	9,860	8,980	8,180	7,440	6,750	5,490
BC*0009M^ACZ	ZB08KAE	13,000	11,870	10,830	9,900	9,050	8,290	7,580	6,270
BC*0010M^A‡Z	ZS09KAE / MPA010	16,020	14,670	13,380	12,200	11,080	10,040	9,080	7,390
BC*0015M^A‡Z	ZS13KAE / MPA013	23,300	21,260	19,340	17,540	15,900	14,360	12,950	10,470
BC*0020M^A‡Z	ZS15KAE / MPA015	27,300	24,980	22,770	20,700	18,770	16,990	15,340	12,450
BC*0025M^A‡Z	ZS19KAE / MPA019	30,100	27,510	25,170	22,860	20,740	18,790	16,990	13,800
BC*0030M^A‡Z	ZS21KAE / MBA021	42,040	38,470	35,080	31,930	28,950	26,180	23,610	19,080
BC*0035M^A‡Z	ZS26KAE / MBA026	46,320	42,390	38,660	35,160	31,880	28,870	26,050	21,070
BC*0045M^A‡Z	ZS29KAE / MBA029	52,140	47,650	43,440	39,500	35,820	32,410	29,260	23,720
BC*0050M^A‡Z	ZS33KAE / MBA033	55,960	51,360	46,940	42,790	38,900	35,270	31,900	25,900
BC*0055M^A‡Z	ZS38K4E / MRA038	56,980	52,660	48,570	44,620	40,930	37,470	34,230	28,380
BC*0060M^A‡Z	ZS45K4E / MRA045	65,650	60,830	56,280	51,800	47,550	43,730	39,970	33,350

Notes:
* H = Outdoor, N = Indoor
^ B = 208-230/1/60, C = 208-230/3/60, D = 460/3/60, E = 575/3/60
‡ C = Copeland, L = LG

BOHN

BN-LOP | **JANUARY 2022**
Replaces May 2021

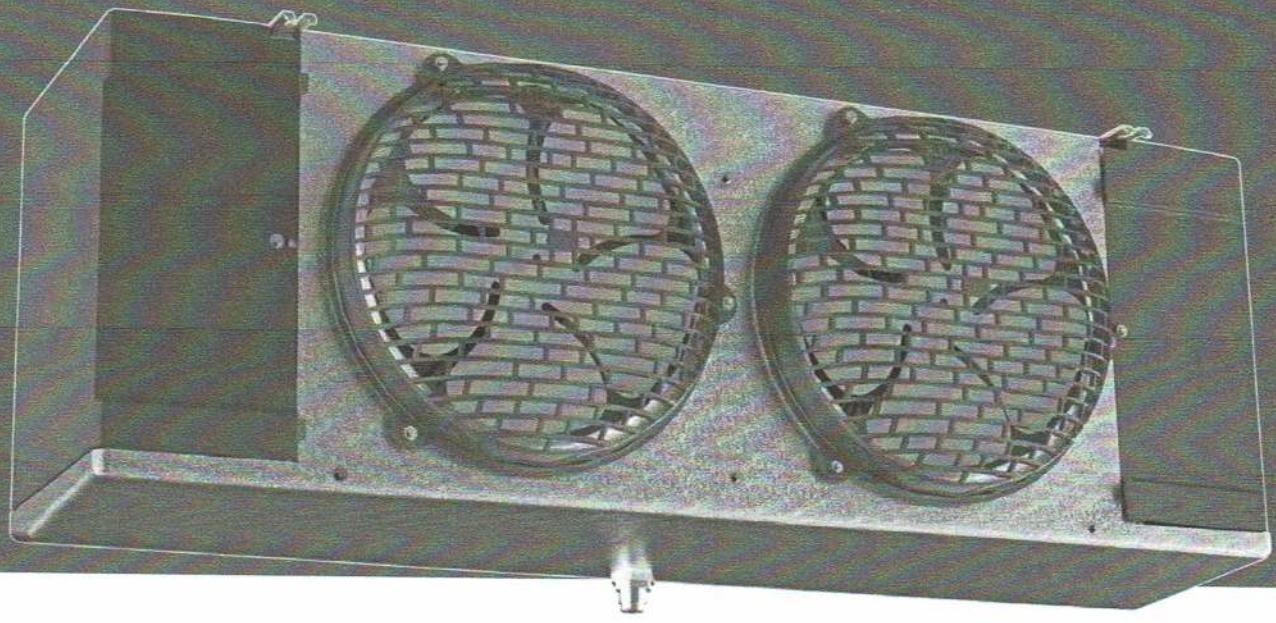
2 Evaporators BEL 0095 S6A 115V

1 Evaporator BEL 0055 S6A 115V

LOW PROFILE UNIT COOLERS

Technical Guide

Including models meeting DOE minimum AWEF



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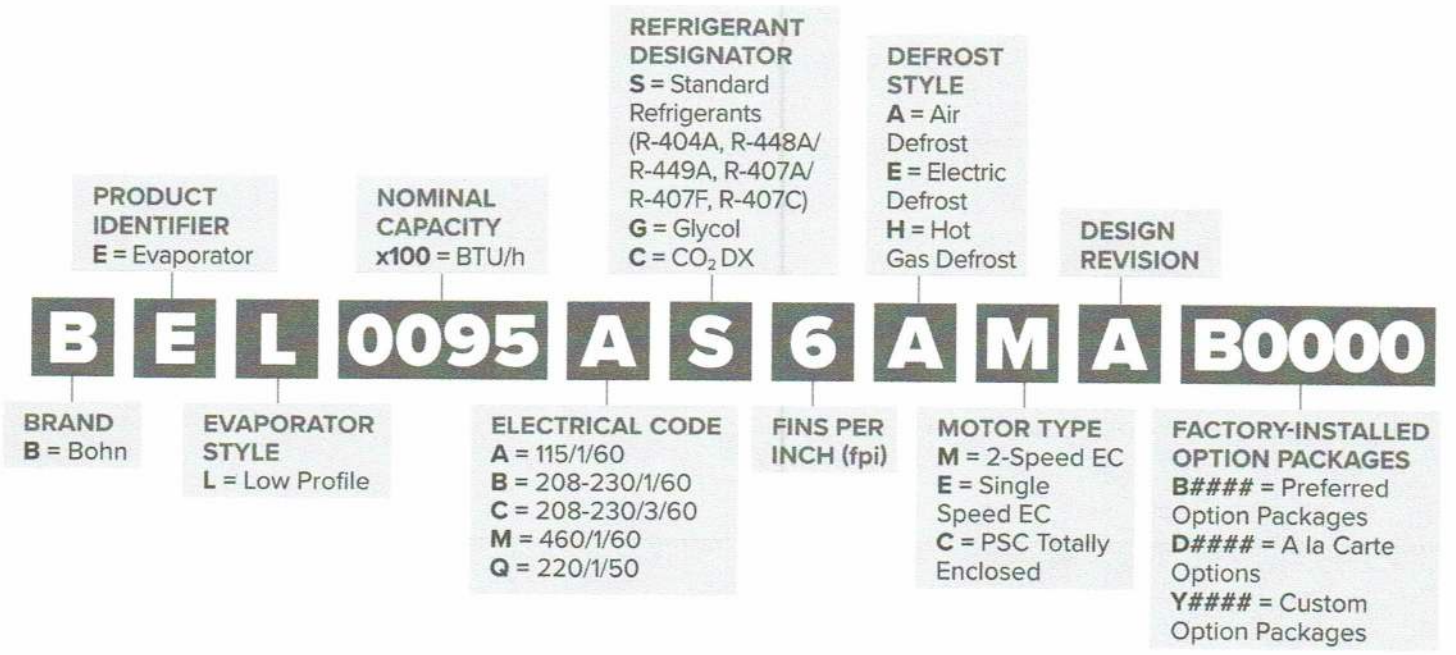


FEATURES & BENEFITS

CABINET

- Cabinet design features hinged, removable front access panels on each side for easy access to electrical and refrigeration components.
- Molded fan guard and access panels are made of strong, durable, NSF and UL Sanitation rated lightweight and damage-resistant molded plastic material.
- Quick-removal fan guard/motor assembly for easier servicing of air mover parts.
- Sweat connections to reduce potential for leaks.
- Liquid line solenoid wire harness is factory-installed for quick installation.

COIL

- Internally enhanced tubing and fin design for higher efficiency.
- Coil heater slots have been enlarged for easier installation and replacement.
- Hot gas loop on bottom of coil for easier access is standard on hot gas defrost models.
- Fixed defrost termination for electric, adjustable defrost termination for hot gas.

CONTROLS OPTIONS

- **intelliGen™ Refrigeration Controller (iRC)**
  - Factory mounted, tested and calibrated with an electronic expansion valve, pressure transducer, temperature sensors, control board and User Interface. Standard features include Door Sensor, Product Load Input and Alarm Output.
  - Optional Field installable intelliGen™ Webserver Card (iWC) enables local and remote monitoring on any smart phone, tablet or PC.
  - Optional Field installable intelliGen™ Integration Card (iIC) enables connectivity to BACnet and Modbus.
- **Quick Response Controller** units include factory mounted electronic expansion valve, pressure transducer, temperature sensors and control board.
- **Beacon II™** units include factory mounted electronic expansion valve, pressure transducer, temperature sensors and control board.

MOTORS

- Motors plug into wiring harness for easier servicing.
- 2-Speed EC motors standard on Air Defrost models.
- Single Speed EC motors standard on Electric Defrost & Hot Gas Defrost models.

DRAIN PAN

- Large diameter drain hole (3/4" ID) is located towards the back of the unit.
- Extended drain pan heaters for more uniform defrost throughout the drain pan and additional heat in end compartments.
- Hinged, removable drain pans allow for easy and safe access (3-6 fan units only).

OTHER OPTIONS

- Units available with factory installed mounted components: Expansion Valve, Mechanical Room Thermostat, Solenoid Valve with Dual Voltage Coil.
- Units available with mounted TXV and mounted TXV with solenoid valve.
  - Pre-assembled units come with mounted TXV, liquid line solenoid valve and room thermostat.
  - Available in a master liquid line configuration.
  - Pre-charged units come with mounted TXV, liquid line solenoid valve, room thermostat and quick connect fittings.
- Units available with stainless steel housing and drain pan.
- All units come standard with aluminum fin, copper tube coils. Units available with various coil material / coating options including polyester fin coating, black electrostatic fin coating, copper fins and Bronz-Glow coil coating. Please review our price book for availability.
- Units available with insulated drain pan.

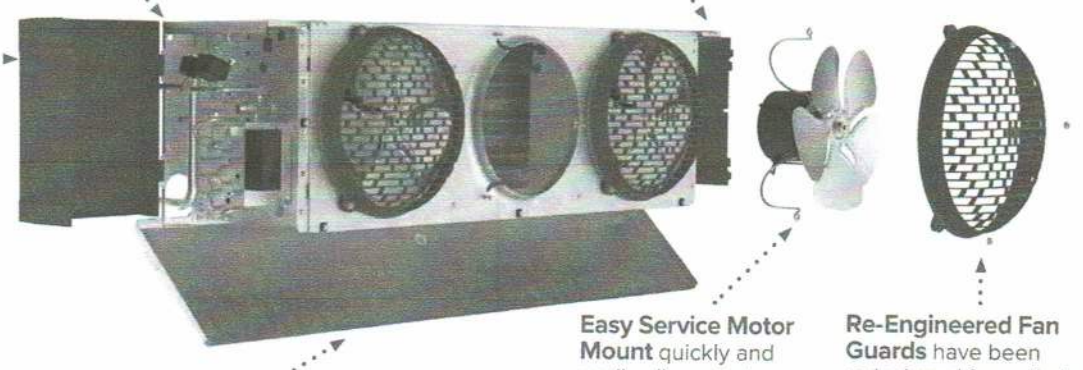
FEATURES & BENEFITS

OUTSTANDING FEATURES

Optional Factory Mounted Components
Choose from Heatcraft's industry-leading intelliGen™ Refrigeration Controller, Quick Response Controller, Beacon II Control or traditional mechanical components.

Composite Molded Access Panels have undergone extensive engineering and laboratory testing to ensure they are damage resistant from drops, dents, and bangs.

Hinged & Removeable Access Panels allow for easy access to both refrigeration and electrical end of Low Profile units.



Hinged Drain Pan improves access to service and clean the drain pan and coil. (3-6 fan models only)

Easy Service Motor Mount quickly and easily allows motor to be removed for service or replacement.

Re-Engineered Fan Guards have been redesigned for optimized air circulation and comply to new UL60335 safety standard.

Table 1: Capacity Correction Factors

Electric and Hot Gas Defrost Units				
Saturated Suction Temperature °F	+20	-10	-20	-30
Saturated Suction Temperature °C	-7	-23	-29	-34
Multiply Capacity By	1.15	1.04	1.00	0.90

PERFORMANCE DATA

Application Capacity: Air Defrost- 60 Hz

Please consult AWEF table on page 43 to confirm model meets DOE minimum AWEF

New Model	Legacy Model	R-404A/R-507A Application Capacity[1]		R-448A/R-449A Application Capacity[1]		Fan Data		
		10°F TD/25°F SST	6°C TD/-4°C SST	10°F TD/25°F SST	6°C TD/-4°C SST			
		BTUH	Watts	BTUH	Watts	No. of Fans	CFM	m^3H
BEL0045*S6A^A	ADT040	4,000	1,200	4,600	1,300	1	653	1,109
BEL0055*S6A^A	ADT052	5,200	1,500	6,100	1,800	1	610	1,036
BEL0060*S6A^A	ADT065 ADT070	6,500	1,900	7,800	2,300	1	610	1,036
BEL0095*S6A^A	ADT070 ADT090	8,000	2,300	10,000	2,900	2	1,305	2,217
BEL0105*S6A^A	ADT090 ADT104	9,200	2,650	12,500	3,600	2	1,305	2,217
BEL0115*S6A^A	ADT120	11,700	3,370	14,500	4,180	2	1,220	2,073
BEL0125*S6A^A	ADT130	13,000	3,800	15,500	4,500	2	1,220	2,073
BEL0155*S6A^A	ADT140	14,000	4,100	16,800	4,900	3	1,958	3,327
BEL0190*S6A^A	ADT156 ADT180	18,000	5,300	21,200	6,200	3	1,830	3,109
BEL0250*S6A^A	ADT208	20,800	6,100	24,600	7,200	4	2,440	4,146
BEL0295*S6A^A	ADT260	26,000	7,600	30,700	9,000	5	3,050	5,182
BEL0350*S6A^A	ADT312	31,200	9,100	36,800	10,800	6	3,660	6,218
BEL0380*S6A^A	ADT370	37,000	10,800	44,400	13,000	6	3,660	6,218

New Model	Legacy Model	R-407A/R-407F Application Capacity[1]		R-407C Application Capacity[1]		Fan Data		
		10°F TD/25°F SST	6°C TD/-4°C SST	10°F TD/25°F SST	6°C TD/-4°C SST			
		BTUH	Watts	BTUH	Watts	No. of Fans	CFM	m^3H
BEL0045*S6A^A	ADT040	4,600	1,300	4,600	1,300	1	653	1,109
BEL0055*S6A^A	ADT052	6,100	1,800	6,100	1,800	1	610	1,036
BEL0060*S6A^A	ADT065 ADT070	7,800	2,300	7,800	2,300	1	610	1,036
BEL0095*S6A^A	ADT070 ADT090	10,000	2,900	10,000	2,900	2	1,305	2,217
BEL0105*S6A^A	ADT090 ADT104	12,500	3,600	12,500	3,600	2	1,305	2,217
BEL0115*S6A^A	ADT120	14,500	4,180	14,500	4,180	2	1,220	2,073
BEL0125*S6A^A	ADT130	15,500	4,500	15,500	4,500	2	1,220	2,073
BEL0155*S6A^A	ADT140	16,800	4,900	16,800	4,900	3	1,958	3,327
BEL0190*S6A^A	ADT156 ADT180	21,200	6,200	21,200	6,200	3	1,830	3,109
BEL0250*S6A^A	ADT208	24,600	7,200	24,600	7,200	4	2,440	4,146
BEL0295*S6A^A	ADT260	30,700	9,000	30,700	9,000	5	3,050	5,182
BEL0350*S6A^A	ADT312	36,800	10,800	36,800	10,800	6	3,660	6,218
BEL0380*S6A^A	ADT370	44,400	13,000	44,400	13,000	6	3,660	6,218

Notes:

[1] = Capacities shown are Application Capacities reflecting nominal operation at 10°F TD. For models within the scope of the DOE AWEF (Annual Walk-in Energy Factor) standard, the Net Capacity is determined by the AHRI 1250 test method. DOE will publish this compliance data at www.regulations.doe.gov

* = Electrical Code Designator (see Nomenclature details)

^ = Motor Code Designator (see Nomenclature details)

Net Capacity is available upon request