

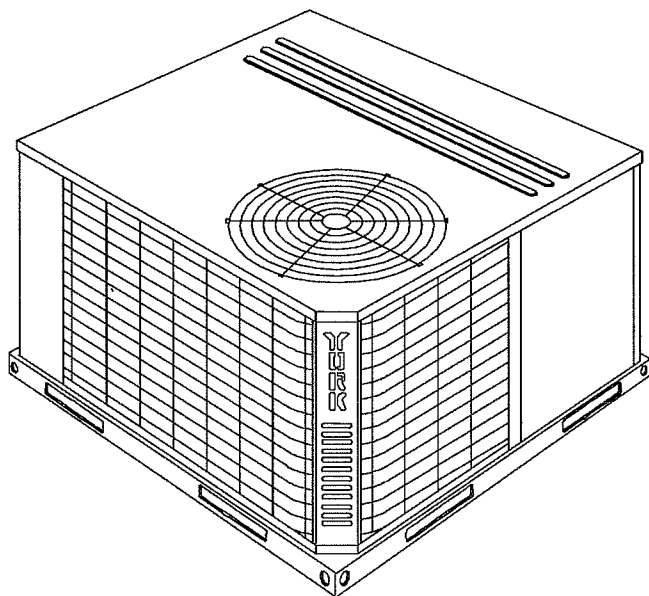


TECHNICAL GUIDE

Affinity™ Series

SINGLE PACKAGE COOLING UNITS

**D1EB036 THRU 060
3 THRU 5 NOMINAL TONS
10 SEER**



DESCRIPTION

These packaged cooling air conditioners are designed for outdoor installation. Only utility and duct connections are required at the point of installation.

Field-installed electric heater accessories are available to provide electric heat combined with electric cooling.

STANDARD FEATURES / BENEFITS

OPERATING EFFICIENCY - All units provide high operating efficiencies and have a minimum SEER of 10 or above. All efficiencies well exceed legislated minimum levels.

ON SITE FLEXIBILITY - All model sizes share a common, compact design cabinet with a single footprint. The installer has the flexibility of setting one curb and placing the proper tonnage unit on that curb after the internal load has been determined. Field convertible duct connections from side shot to down shot allows the installer to have greater flexibility and needs to carry less inventory.

LOWER INSTALLATION COST - Installation time and costs are reduced by easy power and control wiring connections. The small base dimension means less space is required on the ground or roof, plus, the installer can fit this unit between the wheel wells of full size pick-up truck. All models are well under 400 pounds.

All units are completely wired, charged with R-22 and tested prior to shipment. Unique test stations using a new state of the art computerized process system are used to insure product quality. Refrigerant charge, and component part numbers are verified via computers at installation. Vital run test statistics such as system

pressure, motor currents, air velocity and temperature and unit vibration are monitored and recorded by the system to insure unit performance.

Equal size, side supply and return duct connections allows easy hook-up of ducts to match low crawl spaces without transition pieces.

UTILITY CONNECTIONS MADE EASY - Electrical utility knockouts are provided through the bottom as well as the side of the unit. Utility connections can be made quickly and with a minimum amount of field labor. A field supplied and field installed electrical disconnect switch must be installed.

CONVERTIBLE AIRFLOW DESIGN - The bottom duct openings are covered when they leave the factory ready to be used for a side supply / side return application. If a bottom supply / bottom return application is desired, you simply remove the two panels from the bottom of the unit and place them in the side supply / side return duct openings. No panel cutting is required and no accessory panel is necessary. Convertible airflow design allows maximum field flexibility and minimum inventory.

CONDENSATE PAN - A non-corrosive, long-lasting, water-tight pan is positioned below the evaporator coil to collect and drain all condensate. Less collection of stagnate condensate will build-up. The condensate pan conforms to ASHRAE 62-89 standards (Ventilation for Acceptable Indoor Air Quality).

CONDENSATE DRAIN - The heavy duty, 3/4 inch NPTI copper connection is more tolerable during installation and is more durable over time. The connection is rigidly mounted to assure proper fit and leak tight seal.

STANDARD FEATURES and BENEFITS - continued

DURABLE FINISH - With a heavy duty cabinet made of powder-painted, galvanized steel the neutral color blends into surrounding areas. The powder paint, provides a better paint to steel bond, which resists corrosion and rust creep. The special primer formulas and glossy earth tone finish insure less fading when exposed to sunlight and offers a more attractive on site appearance. This paint finish exceeds ASTM-B117 standards for 750 hours salt spray rating, the highest in the industry.

FULL PERIMETER BASE RAILS - The easily removable base rails provide a solid foundation for the entire unit and protects the unit during shipment. The rails provide fork lift access from all sides, and rigging holes are also provided so that an overhead crane can be used to place the units on a roof. On applications when the unit is placed on a pad, the base will keep the unit off the pad to deter corrosion. On applications where height is limited, the 2 3/8 inch high base rails may be removed on location.

MORE ATTRACTIVE APPEARANCE - A single piece "Water Shed" top cover containing a top discharge condenser fan arrangement requires less square footage on installation and provides a wider variety of installations. The one piece design adds greater water integrity. Rounded corners with water drip edges add to the attractive appearance. The cabinet panels have a non-fibrous insulation that does not add insulation fibers into conditioned area.

TOP DISCHARGE - The top discharge condenser fan does not disrupt neighboring areas and does not dry-out vegetation surrounding the unit. The warm air from the top mounted fan is blown up away from the structure and any landscaping. This allows compact location on multi-unit applications.

CONDENSER COIL GRILLE - A multi-piece totally enclosed, rigidly mounted condenser coil grille provides protection from objects and personal after installation and provides protection during transit and installation.

LOW OPERATING SOUND LEVEL - The upward air flow carries the normal operating noise up and away from the living area. The rigid top panel effectively isolates any motor sound. Isolator mounted compressor and the rippled fins of the condenser coil muffle the normal fan motor and compressor operating sounds. The unique formed base pan also aids in

sound alterations with it's "Super-Structure" design. This design strategically places embossments in the pan for optimum strength and rigidity.

FAN SYSTEM - All models operate over a wide range of design conditions with a 3-speed direct-drive fan motor. These units easily match all types of applications and provides greater on site flexibility to match comfort requirement.

SIMPLE CONTROL CIRCUIT - A low voltage printed circuit board contains a low voltage terminal strip. The electrical control box is not located in the compressor compartment. All wiring internal to the unit is color/number coded.

PROTECTED COMPRESSOR - The compressor is internally protected against high pressure and temperature. This is accomplished by the simultaneous operation of high pressure relief valve and a temperature sensor which protect the compressor if undesirable operating conditions occur.

EXCLUSIVE COIL DESIGN - Grooved copper tubes and enhanced aluminum fin construction improves heat transfer for maximum efficiency and durability.

LOW MAINTENANCE - Long life, permanently lubricated condenser and evaporator fan motor bearings need no annual maintenance adding greater reliability to the unit. Blower assembly can be easily removed for cleaning by the unique "Slip- Track" slide-out blower assembly.

SECURED SERVICE ACCESS PORTS - Protected, externally mounted, re-usable service access ports are provided on both the high and low lines for ease of evacuating and charging the system. No final field mounting required.

EASY SERVICE ACCESS - A large, single panel covers the electrical controls and makes servicing easy. The blower compartment has an additional large panel with a built-in handle tab. Removing this panel will allow the blower assembly to slide-out for easy removal for maintenance and ease of trouble shooting.

REPLACEMENT PARTS - The installer has no need to carry an inventory of unique parts or needs special training to replace any of the components parts for these units. All are easily obtained from Source 1 or other part houses.

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FIELD-INSTALLED ACCESSORIES

ECONOMIZER DOWN DISCHARGE / SUPPLY KIT - Modulating integrated economizer provides simultaneous operation between the mechanical cooling and economizer operation. Independent blade design insures proper control and less than 1% leak rate. Includes hood and mesh bird screen filter integrated into the hood, dry bulb sensor and relief damper. Separate field accessories of single enthalpy and dual enthalpy are also available.

SINGLE ENTHALPY SENSOR - Sensor replaces dry bulb sensor standard in economizer kit. Provides improved economizer operation by sensing the dry bulb temperature from outdoors plus the enthalpy content of the outdoor air.

DUAL ENTHALPY SENSOR - Additional sensor to single enthalpy sensor. Sensor senses both the return air temperature dry bulb and humidity in conjunction with the single enthalpy to determine the most economical mix. *Single Enthalpy sensor also required.*

UPGRADE SAFETY PACKAGE - Contains screw-in type High pressure, Low Pressure/Loss of Charge switch, freeze protection switch and lockout relay. Switches are placed onto existing schrader ports located in the unit by furnished adapters. When abnormal conditions are sensed through the pressure switches, the unit will lock out preventing any further operation until reset or problem is corrected. Package agency approved.

HAIL GUARD KIT - Kit contains protected grilles made of expanded aluminum grilles with full perimeter 1½ inch frame. Sloped hoods are also included to assure maximum protection.

ANTI SHORT CYCLE TIMER - Automatically prevents the compressor from restarting for 5 minutes after cycled off. Not required if Thermostat **2ET07700224** and **2ET04700224** are used.

FILTER / FRAME KIT (Single Phase only) - Kit contains the necessary hardware to field install return air filters into the base unit. Pre-cut filter racks and appropriate cleanable standard size filters are shipped in one kit. (1" filter is supplied) This kit is

available for single phase horizontal or vertical duct application only. Standard in all 3 Phase models.

MOTORIZED FRESH AIR DAMPER - Designed for duct mounted side return and unit mounted down shot return applications. Damper capable of providing 0% thru 50% of outdoor air (field supplied). Closes on power loss, includes hood and screen assembly.

RECTANGLE TO ROUND ADAPTERS - Kit includes one supply and one return air rectangle to round duct adapter. Adapters are preformed and designed to fit over current duct openings on the base unit. Transition is from 15" square to 14" round.

ROOF CURBS - NRCA approved curbs provide proper fit to base unit for rooftop installations. Curbs are designed to be assembled through hinge pins in each corner. Kit also provides seal strip to assure a water tight seal. Eight and 14 inch high roof curbs are available.

MANUAL OUTDOOR DAMPER - Provides 0% thru 50% outdoor air capability (field adjustable). Designed for duct mounted side return and unit mounted down shot return applications. Includes hood and screen assembly.

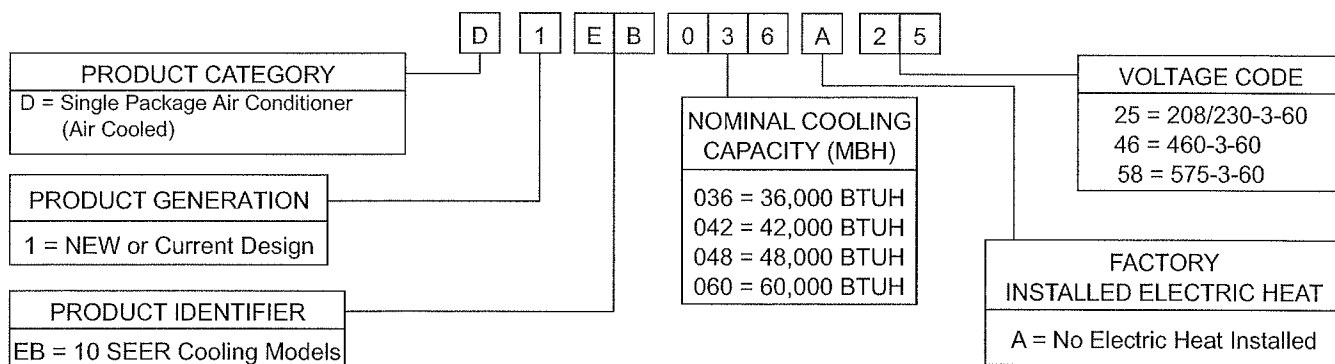
WALL THERMOSTAT - The units are designed to operate with 24-volt electronic and electro-mechanical thermostats. All units can operate with single stage heat / single stage cool thermostats - with or without the economizer.

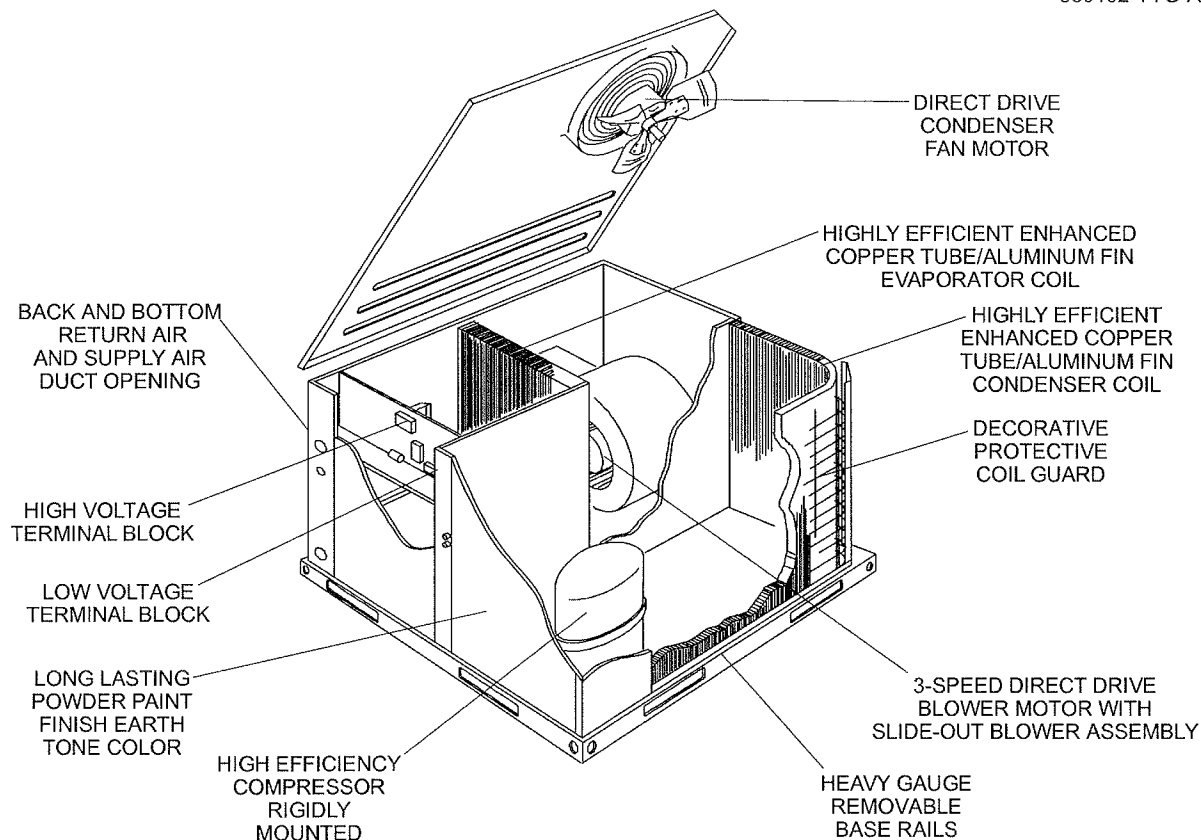
LOW AMBIENT KIT - Kit provides necessary hardware to convert unit to operate in cooling cycle down to 0° F. Standard unit operation 45° F.

TRANSFORMER KIT - Kit provides necessary hardware to provide single phase models from factory furnished 40 VA transformer capability to 75 VA transformer capability.

ELECTRIC HEATERS - Each heater package provides easy installation of electric heat strips. Slide in design with plug in harness and agency approved. Heaters are available from 5.0 KW sizes and are designed for single point connection.

NOMENCLATURE





RATINGS

MODEL DEB	COOLING CAPACITY ¹ 80 / 67-95°F		SOUND RATING ² (decibels)	ELECTRIC HEAT NOM. CAPACITY KW (three phase)
	MBH	SEER		
036	35.2	10.15	81	10.0, 15.0
042	40.5	10.50	83	10.0, 15.0
048	46.5	10.00	81	10.0, 15.0, 20.0, 25.0
060	59.0	10.35	79	10.0, 15.0, 20.0, 25.0

SEER = Seasonal Energy Efficiency Ratio - the total cooling output in BTU's during a normal annual usage period for cooling divided by the total electric power input in watt-hours during the same period.
 N/A = Not Available. ¹ Certified in accordance with the Unitary Small Equipment certification program, which is based on ARI Standard 210/240.
² Rated in accordance with ARI Standard 270.

PHYSICAL DATA

MODELS		DEB			
		036	042	048	060
EVAPORATOR BLOWER	CENTRIFUGAL BLOWER (Dia. x Wd. in.)	10 x 8	11 X 10	11 x 10	11 x 10
	FAN MOTOR HP (Three Speed)	$\frac{3}{4}$	$\frac{3}{4}$	$\frac{3}{4}$	1
EVAPORATOR COIL	ROWS DEEP	2	2	2	3
	FINS PER INCH	15	15	13	16
	FACE AREA (Sq. Ft.)	4.38	4.38	5.62	5.26
CONDENSER FAN	PROPELLER DIA. (in.)	22	22	22	22
	FAN MOTOR HP	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$
	NOM. CFM TOTAL	2,400	2,400	2,800	2,800
CONDENSER COIL	ROWS DEEP	1	1	1	1
	FINS PER INCH	18	16	13	20
	FACE AREA (Sq. Ft.)	8.3	11.7	16.4	16.4
CHARGE	REFRIGERANT 22 (lbs./oz.)	3 / 10	4 / 8	5 / 15	5 / 15
FILTER	FACE AREA (Sq. Ft. / Qty. / Size)	2.14 / 2 / 14" x 22"			
COMPRESSOR	HERMETIC Type, (Qty. = 1)	Recip	Recip	Scroll	Scroll

COOLING CAPACITIES - 3 TON (DEB036)

Temperature of Air on Condenser Coil					Air On Evaporator Coil																			
					900 CFM				1,050 CFM				1,200 CFM				1,350 CFM				1,500 CFM			
					WB°F				WB°F				WB°F				WB°F				WB°F			
					72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57
85 °F	Net Cap MBH		34.7	32.3	28.5	28.4	36.9	34.3	30.3	30.1	39.0	36.4	32.1	31.9	39.9	37.1	32.7	32.6	40.7	37.9	33.4	33.2		
	Total Power Input KW		3.61	3.52	3.46	3.46	3.62	3.53	3.47	3.47	3.63	3.55	3.48	3.48	3.70	3.61	3.55	3.55	3.77	3.68	3.61	3.61		
	Sensible Capacity MBH¹	Entering Dry Bulb °F	86	19.7	25.4	28.5	28.4	22.2	28.5	30.3	30.1	24.6	31.5	32.1	31.9	26.3	33.5	32.7	32.6	28.0	35.5	33.4	33.2	
			83	17.2	22.9	26.7	28.4	19.2	25.5	29.4	30.1	21.1	28.0	32.1	31.9	22.4	29.5	32.7	32.6	23.6	31.0	33.4	33.2	
			80	14.6	20.3	24.2	26.0	16.1	22.4	26.7	28.7	17.6	24.5	29.2	31.4	18.4	25.6	30.4	32.3	19.1	26.6	31.6	33.2	
			77	12.0	17.7	21.6	23.4	13.1	19.4	23.7	25.6	14.1	21.0	25.7	27.9	14.4	21.6	26.4	28.3	14.6	22.1	27.2	28.8	
			74	9.5	15.2	19.1	20.8	10.1	16.4	20.6	22.6	10.6	17.5	22.2	24.4	10.4	17.6	22.5	24.3	10.2	17.6	22.7	24.3	
			71	-	12.6	16.5	18.3	-	13.3	17.6	19.6	-	14.1	18.7	20.9	-	13.6	18.5	20.4	-	13.2	18.2	19.8	
68	-	10.0	13.9	15.7	-	10.3	14.6	16.5	-	10.6	15.2	17.4	-	9.6	14.5	16.4	-	8.7	13.7	15.4				
95 °F	Net Cap MBH		32.5	30.4	27.8	26.8	34.4	32.2	29.4	28.4	36.3	34.0	31.0	29.9	37.2	34.8	31.8	30.7	38.1	35.7	32.6	31.5		
	Total Power Input KW		3.85	3.74	3.70	3.68	3.85	3.75	3.71	3.68	3.86	3.75	3.71	3.69	3.93	3.82	3.78	3.76	4.01	3.90	3.86	3.83		
	Sensible Capacity MBH¹	Entering Dry Bulb °F	86	18.5	24.3	27.8	26.8	21.0	27.4	29.4	28.4	23.4	30.5	31.0	29.9	24.8	32.0	31.8	30.7	26.1	33.4	32.6	31.5	
			83	16.0	21.7	25.7	26.6	18.0	24.4	28.4	28.2	19.9	27.0	31.0	29.9	20.8	28.0	31.8	30.7	21.6	29.0	32.6	31.5	
			80	13.4	19.2	23.2	24.0	14.9	21.3	25.8	26.7	16.4	23.5	28.4	29.4	16.8	24.0	29.0	30.0	17.1	24.5	29.6	30.7	
			77	10.8	16.6	20.6	21.4	11.9	18.3	22.8	23.7	12.9	20.0	24.9	25.9	12.8	20.0	25.0	26.1	12.7	20.0	25.1	26.2	
			74	8.3	14.0	18.0	18.9	8.9	15.3	19.7	20.6	9.4	16.5	21.4	22.4	8.8	16.0	21.0	22.1	8.2	15.5	20.7	21.7	
			71	-	11.5	15.5	16.3	-	12.2	16.7	17.6	-	13.0	17.9	18.9	-	12.0	17.1	18.1	-	11.1	16.2	17.3	
68	-	8.9	12.9	13.7	-	9.2	13.7	14.6	-	9.5	14.4	15.4	-	8.1	13.1	14.1	-	6.6	11.7	12.8				
105 °F	Net Cap MBH		29.5	27.4	25.0	24.4	31.4	29.2	26.6	26.0	33.3	31.0	28.2	27.6	34.1	31.7	28.9	28.3	35.0	32.5	29.6	29.0		
	Total Power Input KW		4.05	3.92	3.93	3.85	4.07	3.94	3.95	3.87	4.09	3.96	3.97	3.89	4.15	4.02	4.02	3.95	4.21	4.08	4.08	4.00		
	Sensible Capacity MBH¹	Entering Dry Bulb °F	86	17.5	23.3	25.0	24.4	19.9	26.3	26.6	26.0	22.3	29.2	28.2	27.6	23.6	30.3	28.9	28.3	24.8	31.4	29.6	29.0	
			83	15.0	20.7	24.0	24.3	16.9	23.3	26.1	25.9	18.8	25.9	28.2	27.6	19.6	26.8	28.9	28.3	20.3	27.6	29.6	29.0	
			80	12.4	18.1	21.4	21.7	13.9	20.3	23.9	24.3	15.3	22.4	26.5	26.8	15.6	22.8	26.9	27.3	15.8	23.1	27.3	27.7	
			77	9.8	15.6	18.8	19.1	10.8	17.3	20.9	21.2	11.8	18.9	23.0	23.3	11.6	18.8	22.9	23.3	11.4	18.7	22.8	23.2	
			74	7.3	13.0	16.3	16.6	7.8	14.2	17.9	18.2	8.3	15.4	19.5	19.8	7.6	14.8	18.9	19.3	6.9	14.2	18.4	18.8	
			71	-	10.4	13.7	14.0	-	11.2	14.8	15.2	-	11.9	16.0	16.3	-	10.8	14.9	15.3	-	9.7	13.9	14.3	
68	-	7.9	11.1	11.4	-	8.2	11.8	12.1	-	8.4	12.5	12.8	-	6.9	10.9	11.3	-	5.3	9.4	9.8				
115 °F	Net Cap MBH		26.5	24.4	22.2	22.0	28.4	26.2	23.8	23.6	30.4	28.0	25.5	25.2	31.1	28.6	26.1	25.8	31.8	29.3	26.7	26.4		
	Total Power Input KW		4.25	4.11	4.16	4.03	4.28	4.14	4.19	4.06	4.31	4.17	4.22	4.09	4.36	4.21	4.27	4.13	4.40	4.25	4.31	4.17		
	Sensible Capacity MBH¹	Entering Dry Bulb °F	86	16.5	22.2	22.2	22.0	18.9	25.1	23.8	23.6	21.2	28.0	25.5	25.2	22.4	28.6	26.1	25.8	23.5	29.3	26.7	26.4	
			83	14.0	19.7	22.2	22.0	15.9	22.3	23.8	23.6	17.7	24.9	25.5	25.2	18.4	25.6	26.1	25.8	19.0	26.3	26.7	26.4	
			80	11.4	17.1	19.6	19.4	12.8	19.2	22.1	21.8	14.2	21.4	24.5	24.3	14.4	21.6	24.8	24.5	14.5	21.8	25.0	24.7	
			77	8.8	14.5	17.1	16.9	9.8	16.2	19.0	18.8	10.7	17.9	21.0	20.8	10.4	17.6	20.8	20.5	10.1	17.3	20.5	20.3	
			74	6.3	12.0	14.5	14.3	6.8	13.2	16.0	15.8	7.2	14.4	17.5	17.3	6.4	13.6	16.8	16.5	5.6	12.9	16.1	15.8	
			71	-	9.4	11.9	11.7	-	10.1	13.0	12.7	-	10.9	14.0	13.8	-	9.6	12.8	12.5	-	8.4	11.6	11.3	
68	-	6.8	9.4	9.2	-	7.1	9.9	9.7	-	7.4	10.5	10.3	-	5.6	8.8	8.6	-	3.9	7.1	6.9				
125 °F	Net Cap MBH		23.5	21.4	19.4	19.6	25.4	23.2	21.1	21.3	27.4	25.0	22.7	22.9	28.0	25.5	23.2	23.4	28.6	26.1	23.7	23.9		
	Total Power Input KW		4.5	4.3	4.4	4.2	4.5	4.3	4.4	4.2	4.5	4.4	4.5	4.3	4.6	4.4	4.5	4.3	4.6	4.4	4.5	4.3		
	Sensible Capacity MBH¹	Entering Dry Bulb °F	86	15.5	21.2	19.4	19.6	17.8	24.0	21.1	21.3	20.1	26.7	22.7	22.9	21.2	27.0	23.2	23.4	22.2	27.2	23.7	23.9	
			83	13.0	18.6	20.4	19.7	14.8	21.2	21.6	21.3	16.6	23.8	22.7	22.9	17.2	24.4	23.2	23.4	17.7	24.9	23.7	23.9	
			80	10.4	16.1	17.9	17.1	11.8	18.2	20.2	19.4	13.1	20.3	22.6	21.7	13.2	20.4	22.6	21.7	13.2	20.4	22.7	21.8	
			77	7.8	13.5	15.3	14.6	8.7	15.2	17.2	16.4	9.6	16.8	19.1	18.2	9.2	16.4	18.7	17.7	8.8	16.0	18.2	17.3	
			74	5.3	10.9	12.7	12.0	5.7	12.1	14.2	13.3	6.1	13.3	15.6	14.7	5.2	12.4	14.7	13.8	4.3	11.5	13.8	12.8	
			71	-	8.4	10.2	9.4	-	9.1	11.1	10.3	-	9.8	12.1	11.2	-	8.4	10.7	9.8	-	7.0	9.3	8.4	
68	-	5.8	7.6	6.9	-	6.1	8.1	7.3	-	6.3	8.6	7.7	-	4.4	6.7	5.8	-	2.6	4.8	3.9				

¹ = These capacities are net capacities - indoor fan heat deducted.

ALL SENSIBLE CAPACITY

COOLING CAPACITIES - 3-1/2 TON (DEB042)

Temperature of Air on Condenser Coil				Air On Evaporator Coil																				
				1,050 CFM				1,225 CFM				1,400 CFM				1,575 CFM				1,750 CFM				
				WB°F				WB°F				WB°F				WB°F				WB°F				
				72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	
85 °F	Net Cap MBH				40.7	39.0	36.5	34.1	42.0	40.3	37.7	35.2	43.3	41.6	38.8	36.3	43.9	42.1	39.3	36.8	44.4	42.6	39.8	37.2
	Total Power Input KW				4.09	3.82	3.77	3.75	4.16	3.89	3.83	3.81	4.23	3.95	3.90	3.88	4.38	4.10	4.04	4.02	4.54	4.25	4.18	4.16
	Sensible Capacity MBH	Entering Dry Bulb, °F	86	23.8	31.3	36.5	34.1	26.1	34.2	37.7	35.2	28.5	37.0	38.8	36.3	30.5	39.4	39.3	36.8	32.6	41.9	39.8	37.2	
			83	20.8	28.3	34.6	34.1	22.6	30.6	36.7	35.2	24.4	32.9	38.8	36.3	25.9	34.8	39.3	36.8	27.3	36.6	39.8	37.2	
			80	17.8	25.4	31.6	31.9	19.1	27.1	33.8	34.1	20.3	28.8	36.0	36.3	21.2	30.1	37.6	36.8	22.1	31.4	39.2	37.2	
			77	14.9	22.4	28.6	28.9	15.5	23.6	30.3	30.6	16.2	24.7	31.9	32.2	16.6	25.5	32.9	32.1	16.9	26.2	34.0	32.0	
			74	11.9	19.4	25.6	26.0	12.0	20.0	26.7	27.0	12.1	20.7	27.8	28.1	11.9	20.8	28.3	27.5	11.7	21.0	28.8	26.8	
			71	-	16.4	22.7	23.0	-	16.5	23.2	23.5	-	16.6	23.7	24.1	-	16.2	23.6	22.8	-	15.8	23.6	21.6	
68	-	13.4	19.7	20.0	-	12.9	19.6	20.0	-	12.5	19.6	20.0	-	11.5	19.0	18.2	-	10.6	18.3	16.4				
95 °F	Net Cap MBH				38.7	36.7	34.0	32.7	40.1	38.1	35.2	33.9	41.6	39.4	36.5	35.2	42.1	39.9	36.9	35.6	42.6	40.3	37.4	36.0
	Total Power Input KW				4.16	4.06	3.96	3.98	4.23	4.13	4.03	4.05	4.30	4.19	4.10	4.11	4.44	4.33	4.23	4.25	4.59	4.47	4.37	4.39
	Sensible Capacity MBH	Entering Dry Bulb, °F	86	23.0	30.4	34.0	32.7	25.4	33.3	35.2	33.9	27.8	36.3	36.5	35.2	29.9	38.3	36.9	35.6	32.0	40.3	37.4	36.0	
			83	20.0	27.4	33.2	32.7	21.9	29.8	34.9	33.9	23.7	32.2	36.5	35.2	25.2	34.1	36.9	35.6	26.7	36.0	37.4	36.0	
			80	17.0	24.4	30.3	30.4	18.3	26.3	32.6	32.8	19.7	28.2	35.0	35.2	20.6	29.5	36.2	35.6	21.5	30.8	37.4	36.0	
			77	14.0	21.4	27.3	27.5	14.8	22.7	29.1	29.3	15.6	24.1	30.9	31.1	15.9	24.8	31.5	30.9	16.3	25.6	32.1	30.8	
			74	11.0	18.4	24.3	24.5	11.3	19.2	25.5	25.7	11.5	20.0	26.8	27.0	11.3	20.2	26.9	26.3	11.1	20.4	26.9	25.5	
			71	-	15.4	21.3	21.5	-	15.6	22.0	22.2	-	15.9	22.7	22.9	-	15.5	22.2	21.6	-	15.2	21.7	20.3	
68	-	12.4	18.3	18.5	-	12.1	18.4	18.7	-	11.8	18.6	18.8	-	10.9	17.6	17.0	-	10.0	16.5	15.1				
105 °F	Net Cap MBH				36.2	33.9	30.8	31.2	37.6	35.1	32.0	32.4	38.9	36.4	33.1	33.6	39.4	36.8	33.5	34.0	39.9	37.3	33.9	34.4
	Total Power Input KW				4.40	4.28	4.20	4.22	4.47	4.35	4.27	4.29	4.54	4.42	4.34	4.35	4.69	4.57	4.48	4.50	4.84	4.71	4.63	4.64
	Sensible Capacity MBH	Entering Dry Bulb, °F	86	22.4	29.3	30.8	31.2	24.8	32.1	32.0	32.4	27.3	34.9	33.1	33.6	29.3	36.1	33.5	34.0	31.4	37.3	33.9	34.4	
			83	19.4	26.3	30.5	31.2	21.3	28.8	31.8	32.4	23.2	31.3	33.1	33.6	24.7	33.2	33.5	34.0	26.2	35.1	33.9	34.4	
			80	16.4	23.3	27.8	28.8	17.7	25.3	30.1	31.2	19.1	27.2	32.4	33.6	20.0	28.6	33.1	34.0	21.0	29.9	33.9	34.4	
			77	13.4	20.3	24.8	25.8	14.2	21.7	26.5	27.6	15.0	23.1	28.3	29.5	15.4	23.9	28.5	29.3	15.8	24.7	28.7	29.1	
			74	10.4	17.3	21.8	22.8	10.7	18.2	23.0	24.1	10.9	19.0	24.2	25.4	10.7	19.3	23.8	24.7	10.6	19.5	23.5	23.9	
			71	-	14.3	18.8	19.8	-	14.7	19.4	20.6	-	15.0	20.1	21.3	-	14.6	19.2	20.0	-	14.3	18.3	18.7	
68	-	11.4	15.8	16.8	-	11.1	15.9	17.0	-	10.9	16.0	17.2	-	10.0	14.5	15.4	-	9.1	13.1	13.5				
115 °F	Net Cap MBH				33.8	31.1	27.7	29.8	35.0	32.2	28.8	30.9	36.3	33.4	29.8	32.0	36.7	33.8	30.1	32.3	37.2	34.2	30.5	32.7
	Total Power Input KW				4.64	4.51	4.44	4.46	4.71	4.58	4.51	4.53	4.78	4.65	4.58	4.59	4.94	4.80	4.73	4.75	5.09	4.96	4.88	4.90
	Sensible Capacity MBH	Entering Dry Bulb, °F	86	21.7	28.3	27.7	29.8	24.2	30.8	28.8	30.9	26.7	33.4	29.8	32.0	28.8	33.8	30.1	32.3	30.9	34.2	30.5	32.7	
			83	18.7	25.3	27.7	29.8	20.7	27.8	28.8	30.9	22.6	30.3	29.8	32.0	24.2	32.3	30.1	32.3	25.7	34.2	30.5	32.7	
			80	15.7	22.3	25.3	27.1	17.1	24.3	27.5	29.5	18.5	26.3	29.8	32.0	19.5	27.7	30.1	32.3	20.5	29.1	30.5	32.7	
			77	12.7	19.3	22.3	24.1	13.6	20.7	24.0	26.0	14.4	22.2	25.7	27.9	14.9	23.0	25.5	27.7	15.3	23.8	25.3	27.5	
			74	9.7	16.3	19.3	21.1	10.0	17.2	20.4	22.5	10.3	18.1	21.6	23.8	10.2	18.4	20.8	23.0	10.1	18.6	20.1	22.3	
			71	-	13.3	16.3	18.1	-	13.7	16.9	18.9	-	14.0	17.5	19.7	-	13.7	16.2	18.4	-	13.4	14.8	17.1	
68	-	10.3	13.3	15.2	-	10.1	13.4	15.4	-	9.9	13.4	15.6	-	9.1	11.5	13.7	-	8.2	9.6	11.9				
125 °F	Net Cap MBH				31.4	28.3	24.6	28.3	32.5	29.3	25.5	29.3	33.6	30.4	26.4	30.3	34.0	30.7	26.7	30.7	34.5	31.1	27.1	31.1
	Total Power Input KW				4.9	4.7	4.7	4.7	4.9	4.8	4.7	4.8	5.0	4.9	4.8	4.8	5.2	5.0	5.0	5.0	5.3	5.2	5.1	5.2
	Sensible Capacity MBH	Entering Dry Bulb, °F	86	21.1	27.2	24.6	28.3	23.6	29.6	25.5	29.3	26.1	31.9	26.4	30.3	28.3	31.5	26.7	30.7	30.4	31.1	27.1	31.1	
			83	18.1	24.2	25.0	28.3	20.0	26.8	25.7	29.3	22.0	29.4	26.4	30.3	23.6	31.3	26.7	30.7	25.2	33.3	27.1	31.1	
			80	15.1	21.3	22.8	25.5	16.5	23.3	25.0	27.9	17.9	25.3	27.2	30.3	19.0	26.7	27.1	30.7	20.0	28.2	27.1	31.1	
			77	12.1	18.3	19.8	22.5	13.0	19.7	21.4	24.4	13.9	21.2	23.1	26.3	14.3	22.1	22.5	26.1	14.8	23.0	21.9	25.9	
			74	9.1	15.3	16.8	19.5	9.4	16.2	17.9	20.8	9.8	17.1	19.0	22.2	9.7	17.4	17.8	21.4	9.5	17.7	16.6	20.7	
			71	-	12.3	13.8	16.5	-	12.7	14.4	17.3	-	13.1	14.9	18.1	-	12.8	13.2	16.8	-	12.5	11.4	15.5	
68	-	9.3	10.8	13.5	-	9.1	10.8	13.8	-	9.0	10.8	14.0	-	8.1	8.5	12.1	-	7.3	6.2	10.2				

¹ = These capacities are net capacities - indoor fan heat deducted.

ALL SENSIBLE CAPACITY

COOLING CAPACITIES - 4 TON (DEB048)

Temperature of Air on Outdoor Coil				Air On Indoor Coil																				
				1200 CFM				1400 CFM				1600 CFM				1800 CFM				2000 CFM				
				WB°F				WB°F				WB°F				WB°F				WB°F				
				72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	
85 °F	Net Cap MBH				49.2	46.1	41.6	41.3	50.6	47.4	42.9	42.5	52.1	48.8	44.1	43.7	52.8	49.4	44.7	44.2	53.4	50.1	45.2	44.8
	Total Power Input KW				4.47	4.44	4.35	4.33	4.59	4.57	4.47	4.45	4.72	4.69	4.59	4.57	4.78	4.76	4.66	4.63	4.85	4.83	4.72	4.70
	Sensible Capacity MBH¹	Entering Dry Bulb, °F	86	28.3	35.7	41.3	41.3	31.5	39.6	42.7	42.5	34.7	43.5	44.1	43.7	37.1	46.3	44.7	44.2	39.5	49.1	45.2	44.8	
			83	24.9	32.3	37.8	39.5	27.4	35.6	41.0	41.6	30.0	38.9	44.1	43.7	31.8	41.0	44.7	44.2	33.5	43.2	45.2	44.8	
			80	21.4	28.9	34.4	36.1	23.4	31.6	37.6	39.4	25.4	34.2	40.7	42.7	26.5	35.7	42.5	43.8	27.6	37.2	44.3	44.8	
			77	18.0	25.5	31.0	32.7	19.4	27.5	33.5	35.4	20.7	29.5	36.1	38.1	21.2	30.4	37.2	38.5	21.6	31.2	38.3	38.9	
			74	14.6	22.1	27.6	29.3	15.3	23.5	29.5	31.3	16.0	24.9	31.4	33.4	15.8	25.1	31.9	33.1	15.7	25.3	32.4	32.9	
			71	-	18.6	24.2	25.8	-	19.4	25.4	27.3	-	20.2	26.7	28.7	-	19.8	26.6	27.8	-	19.3	26.4	26.9	
			68	-	15.2	20.7	22.4	-	15.4	21.4	23.2	-	15.5	22.1	24.1	-	14.4	21.3	22.5	-	13.4	20.4	21.0	
95 °F	Net Cap MBH				47.2	43.4	39.3	38.8	48.6	44.7	40.5	40.0	50.0	46.0	41.7	41.1	48.9	45.0	40.8	40.2	47.8	44.0	39.9	39.3
	Total Power Input KW				4.88	4.85	4.74	4.74	5.00	4.97	4.86	4.86	5.13	5.09	4.98	4.98	5.23	5.20	5.09	5.08	5.34	5.31	5.19	5.19
	Sensible Capacity MBH¹	Entering Dry Bulb, °F	86	27.7	34.7	39.3	38.8	30.6	38.3	40.5	40.0	33.6	41.9	41.7	41.1	35.3	42.9	40.8	40.2	37.0	44.0	39.9	39.3	
			83	24.2	31.3	36.5	37.9	26.6	34.2	39.1	39.5	28.9	37.2	41.7	41.1	30.0	38.3	40.8	40.2	31.0	39.5	39.9	39.3	
			80	20.8	27.9	33.0	34.5	22.5	30.2	35.8	37.4	24.3	32.5	38.5	40.2	24.7	33.0	39.1	39.8	25.0	33.5	39.7	39.3	
			77	17.4	24.5	29.6	31.1	18.5	26.2	31.7	33.3	19.6	27.9	33.9	35.6	19.3	27.7	33.8	34.5	19.1	27.6	33.8	33.3	
			74	14.0	21.0	26.2	27.7	14.5	22.1	27.7	29.3	14.9	23.2	29.2	30.9	14.0	22.4	28.5	29.1	13.1	21.6	27.8	27.4	
			71	-	17.6	22.8	24.2	-	18.1	23.7	25.2	-	18.5	24.5	26.2	-	17.1	23.2	23.8	-	15.7	21.9	21.4	
			68	-	14.2	19.4	20.8	-	14.0	19.6	21.2	-	13.9	19.9	21.6	-	11.8	17.9	18.5	-	9.7	15.9	15.5	
105 °F	Net Cap MBH				45.5	40.1	37.8	37.4	46.1	40.6	38.3	37.9	46.7	41.1	38.8	38.3	46.3	40.8	38.5	38.0	46.0	40.4	38.2	37.7
	Total Power Input KW				5.37	5.30	5.21	5.21	5.49	5.43	5.34	5.33	5.62	5.55	5.46	5.45	5.72	5.66	5.56	5.55	5.83	5.76	5.66	5.65
	Sensible Capacity MBH¹	Entering Dry Bulb, °F	86	27.0	33.2	37.8	37.4	29.6	36.1	38.3	37.9	32.3	39.1	38.8	38.3	34.3	39.7	38.5	38.0	36.4	40.4	38.2	37.7	
			83	23.6	29.8	35.7	36.3	25.6	32.2	37.3	37.3	27.6	34.7	38.8	38.3	29.0	36.3	38.5	38.0	30.4	38.0	38.2	37.7	
			80	20.1	26.4	32.3	32.9	21.5	28.2	34.6	35.2	22.9	30.0	36.8	37.5	23.7	31.0	37.5	37.6	24.5	32.0	38.1	37.7	
			77	16.7	22.9	28.9	29.5	17.5	24.2	30.5	31.2	18.3	25.4	32.1	32.8	18.4	25.7	32.1	32.3	18.5	26.0	32.1	31.8	
			74	13.3	19.5	25.5	26.1	13.5	20.1	26.5	27.1	13.6	20.7	27.5	28.2	13.1	20.4	26.8	27.0	12.5	20.1	26.2	25.8	
			71	-	16.1	22.0	22.7	-	16.1	22.4	23.1	-	16.0	22.8	23.5	-	15.1	21.5	21.7	-	14.1	20.2	19.8	
			68	-	12.7	18.6	19.2	-	12.0	18.4	19.0	-	11.6	18.1	18.8	-	9.8	16.2	16.4	-	8.1	14.3	13.9	
115 °F	Net Cap MBH				43.9	36.7	36.3	36.0	43.6	36.5	36.1	35.8	43.3	36.3	35.8	35.5	43.7	36.6	36.2	35.8	44.1	36.9	36.5	36.2
	Total Power Input KW				5.86	5.76	5.69	5.67	5.98	5.88	5.81	5.80	6.11	6.01	5.94	5.92	6.22	6.11	6.04	6.02	6.32	6.21	6.14	6.12
	Sensible Capacity MBH¹	Entering Dry Bulb, °F	86	26.3	31.7	36.3	36.0	28.6	34.0	36.1	35.8	30.9	36.3	35.8	35.5	33.4	36.6	36.2	35.8	35.8	36.9	36.5	36.2	
			83	22.9	28.3	35.0	34.8	24.6	30.2	35.4	35.1	26.3	32.2	35.8	35.5	28.1	34.3	36.2	35.8	29.8	36.4	36.5	36.2	
			80	19.5	24.8	31.6	31.3	20.5	26.2	33.3	33.1	21.6	27.6	35.1	34.8	22.7	29.0	35.8	35.5	23.9	30.5	36.5	36.2	
			77	16.1	21.4	28.2	27.9	16.5	22.2	29.3	29.0	17.0	22.9	30.4	30.1	17.4	23.7	30.4	30.2	17.9	24.5	30.5	30.2	
			74	12.6	18.0	24.7	24.5	12.5	18.1	25.2	25.0	12.3	18.2	25.7	25.4	12.1	18.4	25.1	24.8	12.0	18.5	24.5	24.2	
			71	-	14.6	21.3	21.1	-	14.1	21.2	20.9	-	13.6	21.1	20.8	-	13.1	19.8	19.5	-	12.6	18.6	18.3	
			68	-	11.1	17.9	17.6	-	10.0	17.1	16.9	-	8.9	16.4	16.1	-	7.8	14.5	14.2	-	6.6	12.6	12.3	
125 °F	Net Cap MBH				42.2	33.4	34.8	34.6	41.1	32.4	33.8	33.7	40.0	31.4	32.9	32.7	41.1	32.4	33.8	33.7	42.2	33.4	34.8	34.6
	Total Power Input KW				6.3	6.2	6.2	6.1	6.5	6.3	6.3	6.3	6.6	6.5	6.4	6.4	6.7	6.6	6.5	6.5	6.8	6.7	6.6	6.6
	Sensible Capacity MBH¹	Entering Dry Bulb, °F	86	25.6	30.1	34.8	34.6	27.6	31.8	33.8	33.7	29.6	31.4	32.9	32.7	32.4	32.4	33.8	33.7	35.2	33.4	34.8	34.6	
			83	22.2	26.7	34.3	33.2	23.6	28.2	33.6	32.9	25.0	29.8	32.9	32.7	27.1	32.3	33.8	33.7	29.3	33.4	34.8	34.6	
			80	18.8	23.3	30.8	29.8	19.5	24.2	32.1	30.9	20.3	25.1	32.9	32.1	21.8	27.0	33.8	33.3	23.3	28.9	34.8	34.6	
			77	15.4	19.9	27.4	26.3	15.5	20.2	28.0	26.9	15.6	20.4	28.6	27.4	16.5	21.7	28.8	28.0	17.3	22.9	28.9	28.6	
			74	12.0	16.5	24.0	22.9	11.5	16.1	24.0	22.8	11.0	15.8	24.0	22.7	11.2	16.4	23.4	22.7	11.4	17.0	22.9	22.7	
			71	-	13.0	20.6	19.5	-	12.1	19.9	18.8	-	11.1	19.3	18.1	-	11.1	18.1	17.4	-	11.0	17.0	16.7	
			68	-	9.6	17.2	16.1	-	8.0	15.9	14.7	-	6.4	14.6	13.4	-	5.7	12.8	12.1	-	5.1	11.0	10.7	

¹ = These capacities are net capacities - indoor fan heat deducted.

ALL SENSIBLE CAPACITY

COOLING CAPACITIES - 5 TON (DEB060)

Temperature of Air on Outdoor Coil				Air On Indoor Coil																				
				1200 CFM				1400 CFM				1600 CFM				1800 CFM				2000 CFM				
				WB°F				WB°F				WB°F				WB°F				WB°F				
				72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	72	67	62	57	
85 °F	Net Cap MBH				65.2	59.2	52.9	53.4	67.2	61.1	54.5	55.1	69.2	62.9	56.2	56.7	70.3	63.9	57.1	57.6	71.4	64.9	58.0	58.6
	Total Power Input KW				5.68	5.60	4.45	5.41	5.87	5.79	5.63	5.59	6.06	5.98	5.82	5.77	6.25	6.16	6.00	5.95	6.43	6.35	6.18	6.13
	Sensible Capacity MBH	Entering Dry Bulb °F	86	37.9	46.9	52.9	53.4	41.7	51.4	54.5	55.1	45.6	56.0	56.2	56.7	49.1	60.1	57.1	57.6	52.6	64.2	58.0	58.6	
			83	33.6	42.6	50.2	51.9	36.7	46.4	53.2	54.3	39.8	50.1	56.2	56.7	42.5	53.4	57.1	57.6	45.2	56.7	58.0	58.6	
			80	29.3	38.3	45.9	47.6	31.6	41.3	49.5	51.3	33.9	44.3	53.1	55.0	35.8	46.8	55.6	56.8	37.7	49.3	58.0	58.6	
			77	25.1	34.0	41.7	43.3	26.6	36.3	44.5	46.2	28.1	38.5	47.3	49.2	29.2	40.2	48.9	50.2	30.3	41.8	50.6	51.1	
			74	20.8	29.8	37.4	39.0	21.5	31.2	39.4	41.2	22.3	32.7	41.5	43.4	22.5	33.5	42.3	43.5	22.8	34.4	43.1	43.7	
			71	-	25.5	33.1	34.7	-	26.2	34.4	36.1	-	26.8	35.6	37.5	-	26.9	35.6	36.9	-	26.9	35.7	36.2	
68	-	21.2	28.8	30.5	-	21.1	29.3	31.1	-	21.0	29.8	31.7	-	20.2	29.0	30.2	-	19.5	28.2	28.8				
95 °F	Net Cap MBH				60.1	54.7	48.7	49.4	62.5	56.9	50.7	51.3	64.9	59.1	52.6	53.3	65.7	59.9	53.3	54.0	66.5	60.6	53.9	54.6
	Total Power Input KW				6.25	6.13	6.02	5.97	6.42	6.30	6.19	6.13	6.59	6.47	6.35	6.30	6.78	6.66	6.54	6.48	6.97	6.84	6.72	6.66
	Sensible Capacity MBH	Entering Dry Bulb °F	86	35.5	44.5	48.7	49.4	39.4	49.2	50.7	51.3	43.3	53.9	52.6	53.3	47.0	57.2	53.3	54.0	50.8	60.6	53.9	54.6	
			83	31.2	40.2	47.6	48.7	34.4	44.1	50.1	51.0	37.5	48.0	52.6	53.3	40.4	51.7	53.3	54.0	43.3	55.3	53.9	54.6	
			80	27.0	35.9	43.3	44.4	39.3	39.1	47.1	48.2	31.7	42.2	50.9	52.1	33.8	45.0	52.4	53.4	35.9	47.8	53.9	54.6	
			77	22.7	31.7	39.0	40.1	24.3	34.0	42.0	43.2	25.8	36.4	45.0	46.3	27.1	38.4	45.7	46.7	28.4	40.4	46.4	47.2	
			74	18.4	27.4	34.8	35.8	19.2	29.0	37.0	38.1	20.0	30.5	39.2	40.4	20.5	31.7	39.1	40.1	21.0	32.9	39.0	39.7	
			71	-	23.1	30.5	31.5	-	23.9	31.9	33.1	-	24.7	33.4	34.6	-	25.1	32.5	33.4	-	25.5	31.5	32.3	
68	-	18.8	26.2	27.3	-	18.9	26.9	28.0	-	18.9	27.5	28.8	-	18.4	25.8	26.8	-	18.0	24.1	24.8				
105 °F	Net Cap MBH				55.5	50.2	45.0	45.3	57.9	52.3	46.9	47.2	60.2	54.4	48.8	49.1	60.9	55.0	49.3	49.7	61.6	55.6	49.9	50.2
	Total Power Input KW				6.90	6.73	6.63	6.58	7.07	6.90	6.79	6.75	7.25	7.06	6.96	6.91	7.47	7.28	7.17	7.12	7.69	7.50	7.38	7.33
	Sensible Capacity MBH	Entering Dry Bulb °F	86	33.5	42.4	45.0	45.3	37.5	47.1	46.9	47.2	41.4	51.8	48.8	49.1	44.9	53.7	49.3	49.7	48.3	55.6	49.9	50.2	
			83	29.2	38.1	44.0	44.5	32.4	42.2	46.4	46.8	35.6	46.3	48.8	49.1	38.2	49.5	49.3	49.7	40.8	52.8	49.9	50.2	
			80	24.9	33.8	39.8	40.2	27.4	37.1	43.6	44.2	29.8	40.5	47.5	48.1	31.6	42.9	48.7	49.2	33.4	45.3	49.9	50.2	
			77	20.6	29.6	35.5	36.0	22.3	32.1	38.6	39.1	24.0	34.6	41.7	42.3	24.9	36.3	42.1	42.5	25.9	37.9	42.4	42.8	
			74	16.4	25.3	31.2	31.7	17.2	27.0	33.5	34.1	18.1	28.8	35.9	36.4	18.3	29.6	35.4	35.9	18.5	30.4	35.0	35.3	
			71	-	21.0	26.9	27.4	-	22.0	28.5	29.0	-	23.0	30.0	30.6	-	23.0	28.8	29.2	-	23.0	27.5	27.9	
68	-	16.7	22.7	23.1	-	16.9	23.4	23.9	-	17.1	24.2	24.8	-	16.3	22.1	22.6	-	15.5	20.1	20.4				
115 °F	Net Cap MBH				51.0	45.7	41.3	41.3	53.2	47.6	43.1	43.1	55.5	49.6	45.0	44.9	56.0	50.2	45.4	45.4	56.6	50.7	45.9	45.8
	Total Power Input KW				7.56	7.33	7.23	7.20	7.73	7.50	7.39	7.36	7.90	7.66	7.56	7.52	8.15	7.90	7.80	7.76	8.40	8.15	8.04	8.00
	Sensible Capacity MBH	Entering Dry Bulb °F	86	31.4	40.3	41.3	41.3	35.5	45.0	43.1	43.1	39.6	49.6	45.0	44.9	42.7	50.2	45.4	45.4	45.8	50.7	45.9	45.8	
			83	27.2	36.0	40.5	40.4	30.5	40.3	42.7	42.7	33.7	44.5	45.0	44.9	36.1	47.4	45.4	45.4	38.4	50.3	45.9	45.8	
			80	22.9	31.7	36.2	36.1	25.4	35.2	40.2	40.1	27.9	38.7	44.2	44.1	29.4	40.8	45.0	45.0	30.9	42.9	45.9	45.8	
			77	18.6	27.5	32.0	31.8	20.3	30.2	35.2	35.0	22.1	32.9	38.4	38.2	22.8	34.1	38.4	38.3	23.5	35.4	38.4	38.4	
			74	14.3	23.2	27.7	27.6	15.3	25.1	30.1	30.0	16.2	27.0	32.5	32.4	16.1	27.5	31.8	31.7	16.0	27.9	31.0	30.9	
			71	-	18.9	23.4	23.3	-	20.1	25.0	24.9	-	21.2	26.7	26.6	-	20.9	25.1	25.0	-	20.5	23.5	23.5	
68	-	14.6	19.1	19.0	-	15.0	20.0	19.9	-	15.4	20.9	20.7	-	14.2	18.5	18.4	-	13.0	16.1	16.0				
125 °F	Net Cap MBH				46.5	41.1	37.7	37.3	48.6	43.0	39.4	39.0	50.7	44.9	41.1	40.7	51.2	45.3	41.5	41.1	51.7	45.7	41.9	41.5
	Total Power Input KW				8.2	7.9	7.8	7.8	8.4	8.1	8.0	8.0	8.5	8.3	8.2	8.1	8.8	8.5	8.4	8.4	9.1	8.8	8.7	8.7
	Sensible Capacity MBH	Entering Dry Bulb °F	86	29.4	38.2	37.7	37.3	33.6	42.9	39.4	39.0	37.7	44.9	41.1	40.7	40.5	45.3	41.5	41.1	43.3	45.7	41.9	41.5	
			83	25.1	33.9	37.0	36.3	28.5	38.3	39.0	38.5	31.9	42.8	41.1	40.7	33.9	45.3	41.5	41.1	35.9	45.7	41.9	41.5	
			80	20.8	29.6	32.7	32.0	23.4	33.3	36.8	36.0	26.0	36.9	40.9	40.0	27.2	38.7	41.4	40.7	28.4	40.4	41.9	41.5	
			77	16.6	25.3	28.4	27.7	18.4	28.2	31.7	31.0	20.2	31.1	35.0	34.2	20.6	32.0	34.7	34.1	21.0	32.9	34.4	34.0	
			74	12.3	21.1	24.1	23.4	13.3	23.2	26.7	25.9	14.4	25.3	29.2	28.4	14.0	25.4	28.1	27.5	13.5	25.5	27.0	26.6	
			71	-	16.8	19.9	19.2	-	18.1	21.6	20.8	-	19.5	23.4	22.5	-	18.7	21.5	20.8	-	18.0	19.5	19.1	
68	-	12.5	15.6	14.9	-	13.1	16.6	15.8	-	13.6	17.5	16.7	-	12.1	14.8	14.2	-	10.6	12.1	11.7				

¹ = These capacities are net capacities - indoor fan heat deducted.

ALL SENSIBLE CAPACITY

SIDE AND BOTTOM SUPPLY AIR BLOWER PERFORMANCE

230/460/575 volts

MODEL NO. DEB	MOTOR SPEED	EXTERNAL STATIC PRESSURE - IWG																							
		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00		1.10			
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
036	HI	-	-	-	-	-	-	-	-	1414	617	1317	588	1219	560	1116	533	1013	507	910	480	-	-	-	-
	MED	-	-	-	-	1472	547	1394	526	1297	495	1199	465	1102	435	985	397	-	-	-	-	-	-	-	-
	LOW	1462	525	1400	506	1337	486	1275	467	1187	440	1100	414	1012	387	-	-	-	-	-	-	-	-	-	-
042	HI	-	-	-	-	-	-	-	-	1697	740	1580	706	1463	672	1339	640	1216	608	1092	576	-	-	-	-
	MED	-	-	-	-	-	-	1673	630	1556	594	1439	558	1322	522	1182	476	-	-	-	-	-	-	-	-
	LOW	-	-	1680	607	1605	584	1530	560	1425	528	1320	496	1214	464	1050	420	-	-	-	-	-	-	-	-
048	HI	-	-	-	-	-	-	1847	882	1867	857	1786	832	1706	807	1637	782	1569	757	1500	732	-	-	-	-
	MED	1876	792	1829	772	1783	753	1736	733	1668	706	1599	680	1531	653	1434	622	1337	591	1240	560	-	-	-	-
	LOW	1544	620	1508	610	1472	600	1436	590	1375	573	1313	557	1252	540	-	-	-	-	-	-	-	-	-	-
060	HI	-	-	-	-	-	-	2499	1290	2391	1233	2283	1177	2175	1120	2067	1080	1958	1040	1850	1000	-	-	-	-
	MED	-	-	2454	1163	2387	1117	2320	1070	2229	1023	2137	977	2046	930	1950	887	1854	843	1758	800	-	-	-	-
	LOW	2242	1090	2201	1053	2161	1017	2120	980	2041	927	1962	873	1883	820	1797	787	1711	753	1625	720	-	-	-	-

NOTE: Above data includes allowances for a dry evaporator coil and no filters. For additional pressure drops, refer to the "Additional Static Pressure Resistance" table.

208 volts

MODEL NO. DEB	MOTOR SPEED	EXTERNAL STATIC PRESSURE - IWG																							
		.10		.20		.30		.40		.50		.60		.70		.80		.90		1.00		1.10			
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
036	HI	-	-	-	-	1440	605	1361	581	1273	555	1185	530	1097	504	1004	480	912	456	-	-	-	-	-	-
	MED	1465	531	1395	512	1325	492	1255	473	1167	446	1079	419	992	392	-	-	-	-	-	-	-	-	-	-
	LOW	1316	473	1260	455	1204	438	1148	420	1069	396	990	372	911	348	-	-	-	-	-	-	-	-	-	-
042	HI	-	-	-	-	1728	725	1633	697	1527	666	1422	635	1317	605	1205	576	1094	547	-	-	-	-	-	-
	MED	-	-	1674	614	1590	590	1506	567	1400	535	1295	502	1190	470	1063	428	-	-	-	-	-	-	-	-
	LOW	1579	567	1512	546	1444	525	1377	504	1282	476	1188	447	1093	418	-	-	-	-	-	-	-	-	-	-
048	HI	-	-	1985	870	1939	850	1897	830	1813	800	1728	770	1644	740	1559	707	1474	673	1389	640	-	-	-	-
	MED	1694	690	1662	673	1629	657	1597	640	1542	623	1486	607	1431	590	1336	563	1240	537	-	-	-	-	-	-
	LOW	1385	520	1349	510	1312	500	1276	490	1235	480	-	-	-	-	-	-	-	-	-	-	-	-	-	-
060	HI	-	-	-	-	2450	1213	2366	1165	2282	1117	2198	1068	2114	1020	1989	993	1864	967	1739	940	-	-	-	-
	MED	2339	1170	2275	1118	2211	1067	2147	1015	2083	963	2019	912	1955	860	1854	824	1753	788	1652	752	-	-	-	-
	LOW	1929	940	1877	903	1824	867	1772	830	1720	793	1667	757	1615	720	1586	706	1557	691	1528	677	-	-	-	-

NOTE: Above data includes allowances for a dry evaporator coil and no filters. For additional pressure drops, refer to the "Additional Static Pressure Resistance" table.

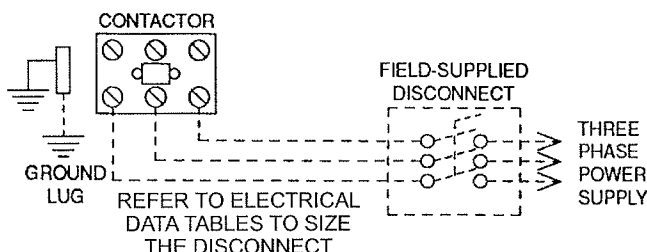
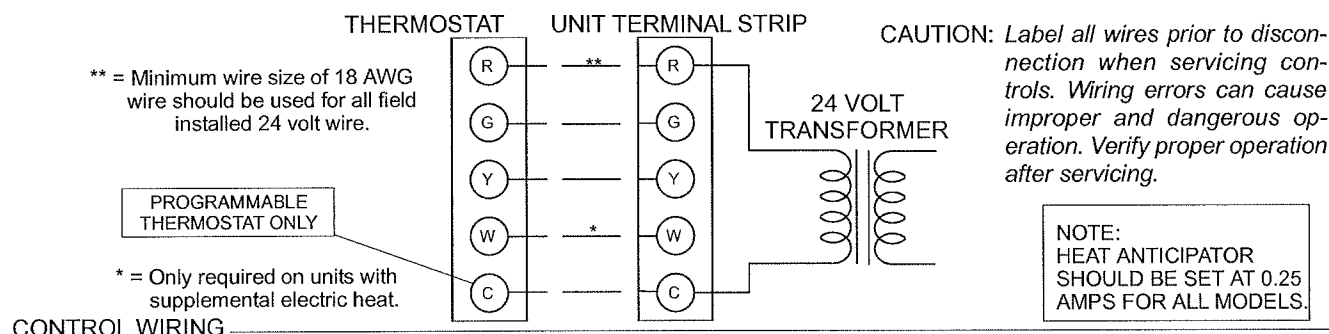
ADDITIONAL STATIC PRESSURE RESISTANCE

DESCRIPTION	RESISTANCE, IWG											
	CFM											
	500	600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500	1,600
Wet Evaporator coil	.01	.01	.01	.02	.03	.04	.05	.06	.07	.08	.09	.09
Economizer	.00	.00	.00	.01	.01	.01	.01	.02	.03	.04	.05	.06
Filter/Frame Kit	.01	.02	.02	.02	.02	.02	.03	.03	.03	.03	.04	.05
Electric Heat	.02	.03	.03	.03	.04	.04	.05	.06	.07	.08	.09	.10

NOTE: 1. Deduct these resistance values from the available external static pressure shown in the respective Blower Performance Table.

2. The pressure thru the economizer is greater for 100% outdoor air then for 100% return air. If the resistance of the return air duct system is less then 0.25 IWG, the unit will deliver less CFM during full economizer operation.

TYPICAL FIELD WIRING DIAGRAM



POWER WIRING

ELECTRICAL DATA (BASIC UNIT)

MODEL DEB	POWER SUPPLY	VOLTAGE LIMITATIONS ¹		COMPRESSOR		COND. FAN MOTOR, FLA	SUPPLY AIR BLOWER MOTOR, FLA	MINIMUM CIRCUIT AMPACITY	MAX. FUSE SIZE, AMPS ²	MAX. HACR BREAKER SIZE, AMPS	UNIT POWER FACTOR	TRANSFORMER SIZE (VA)
		MIN.	MAX.	RLA	LRA							
036	208/230-3-60	187	253	10.9	78.0	1.1	3.5	18.2	25	25	.96	75
042	208/230-3-60	187	253	11.5	88.0	1.1	3.5	19.0	25	25	.96	75
048	208/230-3-60	187	253	14.1	105.0	0.7	4.0	22.3	30	30	.96	75
060	208/230-3-60	187	253	16.0	125.0	1.3	7.0	28.3	40	40	.96	75
036	460-3-60	414	504	5.8	40.0	0.6	1.8	9.6	15	15	.96	75
042	460-3-60	414	504	5.8	42.0	0.6	1.8	9.7	15	15	.96	75
048	460-3-60	414	504	7.1	55.0	0.6	2.0	11.5	15	15	.96	75
060	460-3-60	414	504	8.0	67.0	0.7	3.5	14.2	20	20	.96	75
036	575-3-60	518	630	4.5	32.0	0.4	1.5	7.6	15	15	.96	75
042	575-3-60	518	630	5.8	44.0	0.4	1.5	9.1	15	15	.96	75
048	575-3-60	518	630	5.6	44.0	0.6	1.6	9.3	15	15	.96	75
060	575-3-60	518	630	6.4	50.0	0.6	2.8	11.4	15	15	.96	75

¹ = Rated in accordance with ARI Standard 110, utilization range "A".

² = Dual element, time delay type.

ELECTRICAL DATA (COOLING / ELECTRIC HEAT)

MODEL	DEB	POWER SUPPLY	COMPRESSOR		COND. FAN MOTOR FLA	SUPPLY AIR BLOWER MOTOR, FLA	ELECTRIC HEAT ACCESSORY				MINIMUM CIRCUIT AMPACITY	MAX. FUSE SIZE, ¹ AMPS	MAX. HACR ² BREAKER SIZE
			RLA	LRA			MODEL NO.	STAGE	KW	TOTAL AMPS			
036	208/230-3-60	10.9	78.0	1.1	3.5		2NH04501025	1	7.5/10.0 *	20.8/24.1	30.4/34.4	35/35	35/35
							2NH04501525	1	11.3/15.0 *	31.3/36.1	43.5/49.5	45/50	45/50
042	208/230-3-60	11.5	88.0	1.1	3.5		2NH04501025	1	7.5/10.0 *	20.8/24.1	30.4/34.4	35/35	35/35
							2NH04501525	1	11.3/15.0 *	31.3/36.1	43.5/49.5	45/50	45/50
048	208/230-3-60	14.1	105.0	0.7	4.0		2NH04501025	1	7.5/10.0 *	20.8/24.1	31.1/35.1	35/40	35/40
							2NH04501525	1	11.3/15.0 *	31.3/36.1	44.1/50.1	45/60	45/60
							2NH04502025	2	15.0/20.0 *	41.7/48.1	57.1/65.1	60/70	60/70
							2NH04502525	2	18.8/25.0 *	52.1/60.1	70.2/80.2	80/90	80/90
060	208/230-3-60	16.0	125.0	1.3	7.0		2NH04501025	1	7.5/10.0 *	20.8/24.1	34.8/38.8	40/40	40/40
							2NH04501525	1	11.3/15.0 *	31.3/36.1	47.8/53.9	50/60	50/60
							2NH04502025	2	15.0/20.0 *	41.7/48.1	60.9/68.9	70/70	70/70
							2NH04502525	2	18.8/25.0 *	52.1/60.1	73.9/83.9	80/90	80/90
036	460-3-60	5.8	40.0	0.6	1.8		2NH04501046	1	10.0 **	12.0	17.3	20	20
							2NH04501546	1	15.0 **	18.0	24.8	25	25
042	460-3-60	5.8	42.0	0.6	1.8		2NH04501046	1	10.0 **	12.0	17.3	20	20
							2NH04501546	1	15.0 **	18.0	24.8	25	25
048	460-3-60	7.1	55.0	0.6	2.0		2NH04501046	1	10.0 **	12.0	17.5	20	20
							2NH04501546	1	15.0 **	18.0	25.1	30	30
							2NH04502046	2	20.0 **	24.1	32.6	35	35
							2NH04502546	2	25.0 **	30.1	40.1	45	45
060	460-3-60	8.0	67.0	0.7	3.5		2NH04501046	1	10.0 **	12.0	19.4	20	20
							2NH04501546	1	15.0 **	18.0	26.9	30	30
							2NH04502046	2	20.0 **	24.1	34.4	35	35
							2NH04502546	2	25.0 **	30.1	42.0	45	45
036	575-3-60	4.5	32.0	0.4	1.5		2NH04501058	1	10.0 ***	9.6	13.9	15	15
							2NH04501558	1	15.0 ***	14.4	19.9	20	20
042	575-3-60	5.8	44.0	0.4	1.5		2NH04501058	1	10.0 ***	9.6	13.9	15	15
							2NH04501558	1	15.0 ***	14.4	19.9	20	20
048	575-3-60	5.6	44.0	0.6	1.6		2NH04501058	1	10.0 ***	9.6	14.0	15	15
							2NH04501558	1	15.0 ***	14.4	20.0	25	25
							2NH04502058	2	20.0 ***	19.2	26.1	30	30
							2NH04502558	2	25.0 ***	24.1	32.1	35	35
060	575-3-60	6.4	50.0	0.6	2.8		2NH04501058	1	10.0 ***	9.6	15.5	20	20
							2NH04501558	1	15.0 ***	14.4	21.5	25	25
							2NH04502058	2	20.0 ***	19.2	27.6	30	30
							2NH04502558	2	25.0 ***	24.1	33.6	35	35

¹ = Dual element, time delay type.² = Standard circuit breakers may be used in Canada and on applications over 60 amps where the heaters are separately fused.

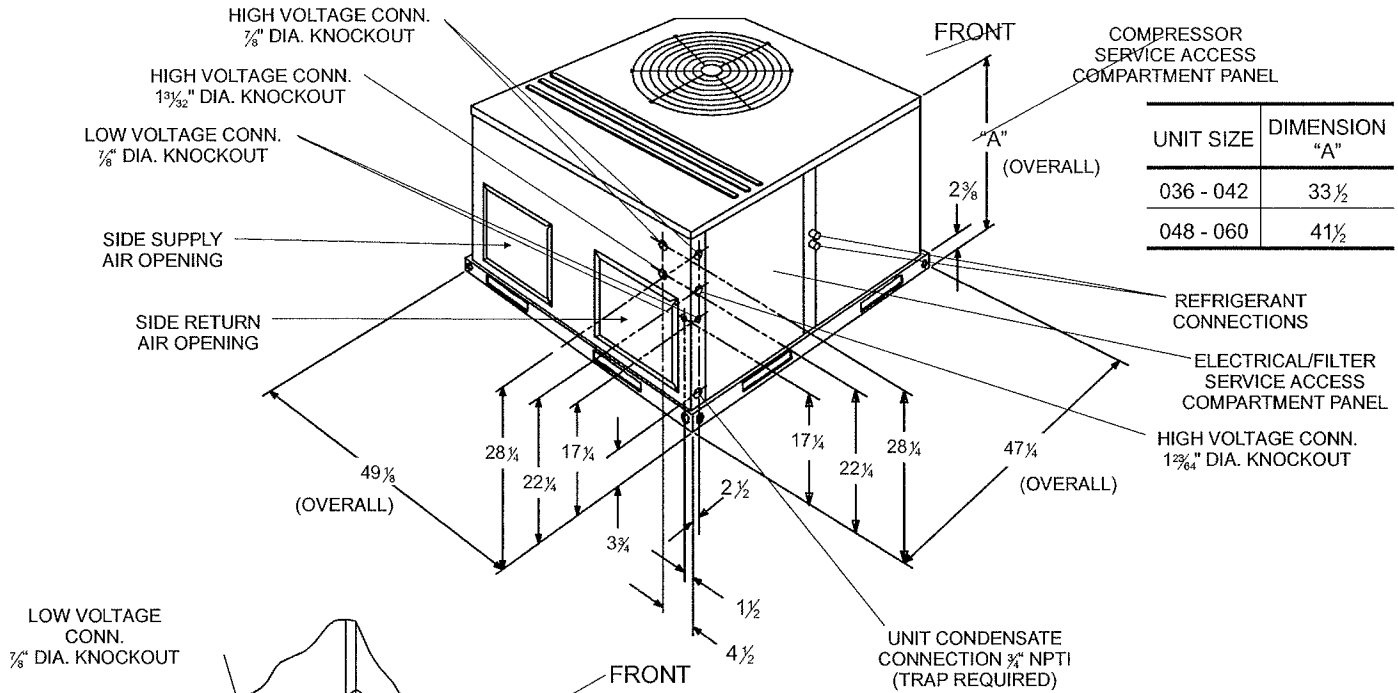
* = KW listed is for 240 volts, use table at top of page for 208 or 230 volts.

** = KW listed is for 480 volts, use table at top of page for 460 volts.

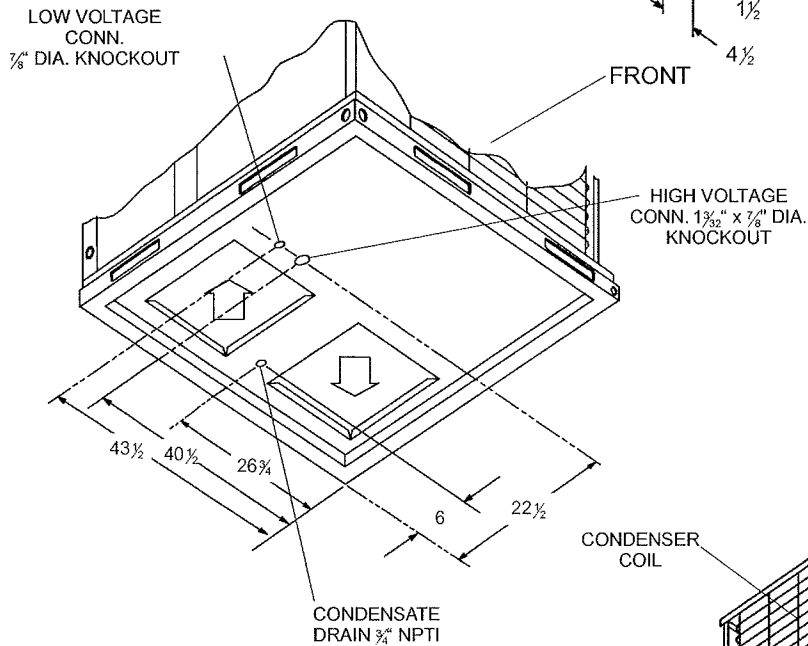
*** = KW listed is for 600 volts, use table at top of page for 575 volts.

ELECTRIC HEAT CORRECTION FACTORS	NOMINAL VOLTAGE	VOLTAGE	KW CAP. MULTI-PLIER
	240	208	.75
		230	.92
	480	460	.92
	600	575	.92

UNIT DIMENSIONS



UNIT SIZE	DIMENSION "A"
036 - 042	33 $\frac{1}{2}$
048 - 060	41 $\frac{1}{2}$

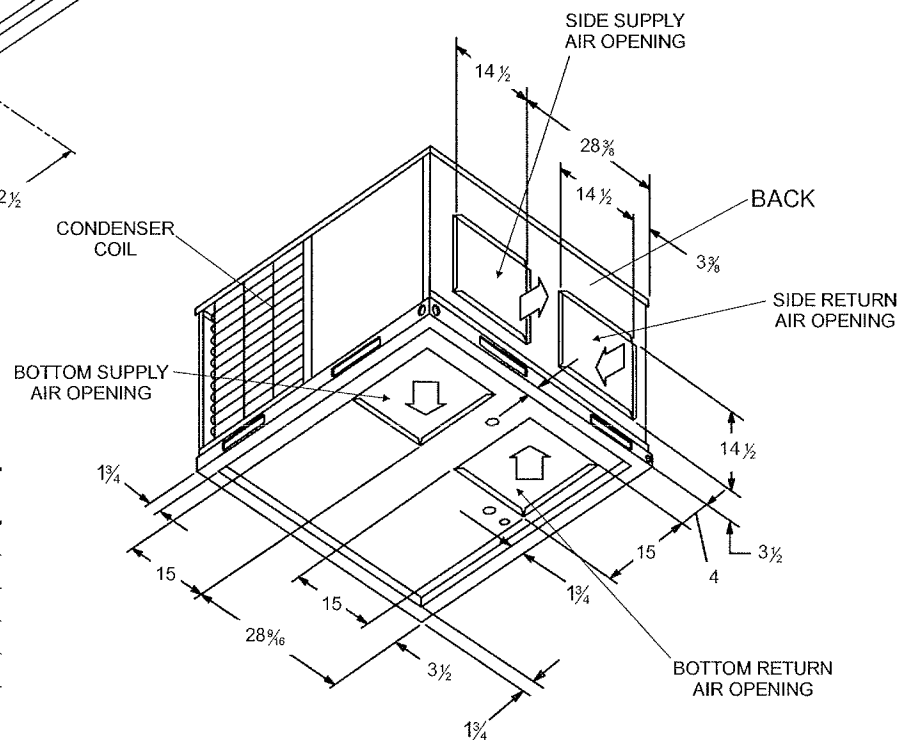


All dimensions are in inches. They are subject to change without notice. Certified dimensions will be provided upon request.

CLEARANCES (Minimum)	
Front	12"
Back	0"
Left Side (Filter Access)	24"
Right Side	24"
Below Unit ¹	0"
Above Unit ²	36" (For Condenser Air Discharge)

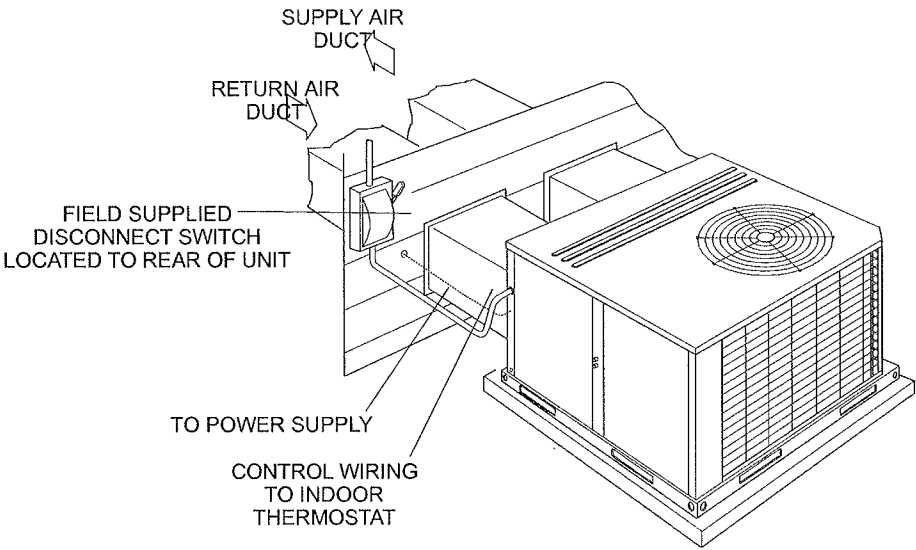
¹ Units may be installed on combustible floors made from wood or class A, B or C roof covering material.

² Units must be installed outdoors. Overhanging structures or shrubs should not obstruct condenser air discharge outlet.

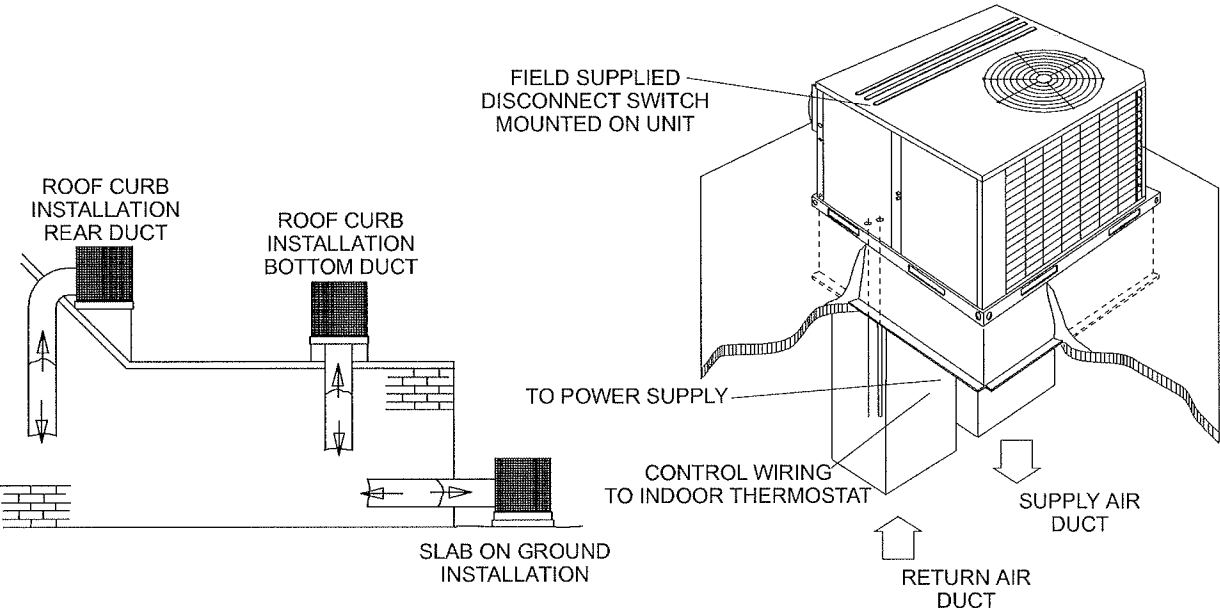


TYPICAL APPLICATIONS

TYPICAL SLAB ON GROUND INSTALLATION

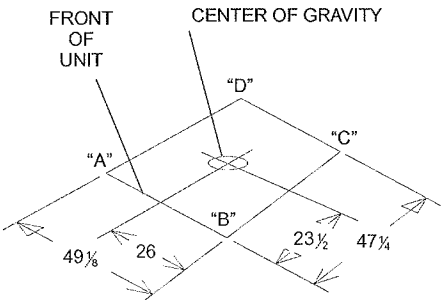


TYPICAL ROOF CURB INSTALLATION



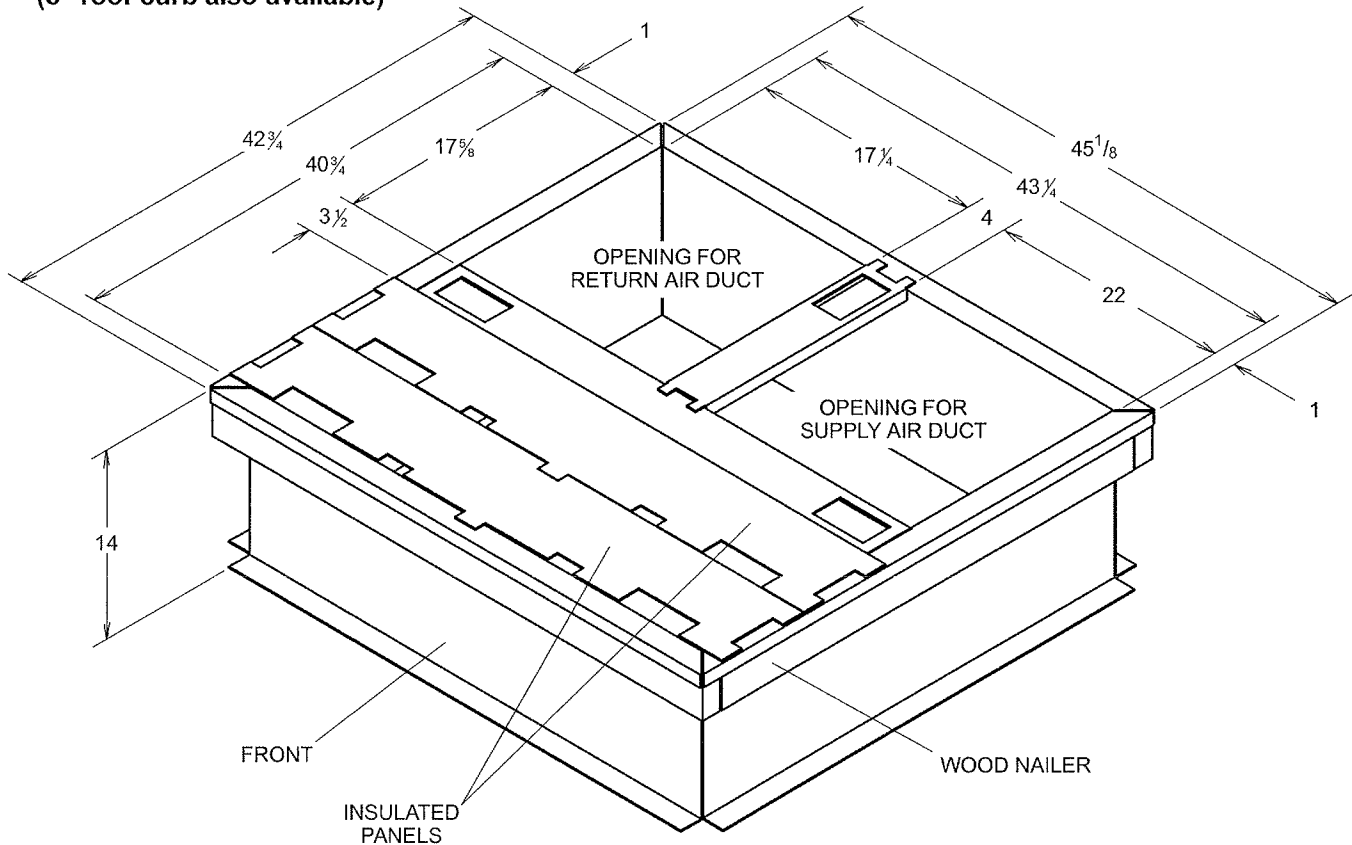
UNIT WEIGHTS AND CENTER OF GRAVITY

UNIT SIZE	UNIT SHIPPING WEIGHT (lbs.)	UNIT OPERATING WEIGHT (lbs.)	CORNER OPERATING WEIGHTS (location, lbs.)				ECONOMIZER (lbs.)	ROOF CURB (lbs.)
			"A"	"B"	"C"	"D"		
036	338	333	91	80	78	88	40	8" - 70 14" - 75
042	347	342	94	83	80	91		
048	368	363	92	88	92	97		
060	376	371	105	100	84	87		



ROOF CURB DIMENSIONS

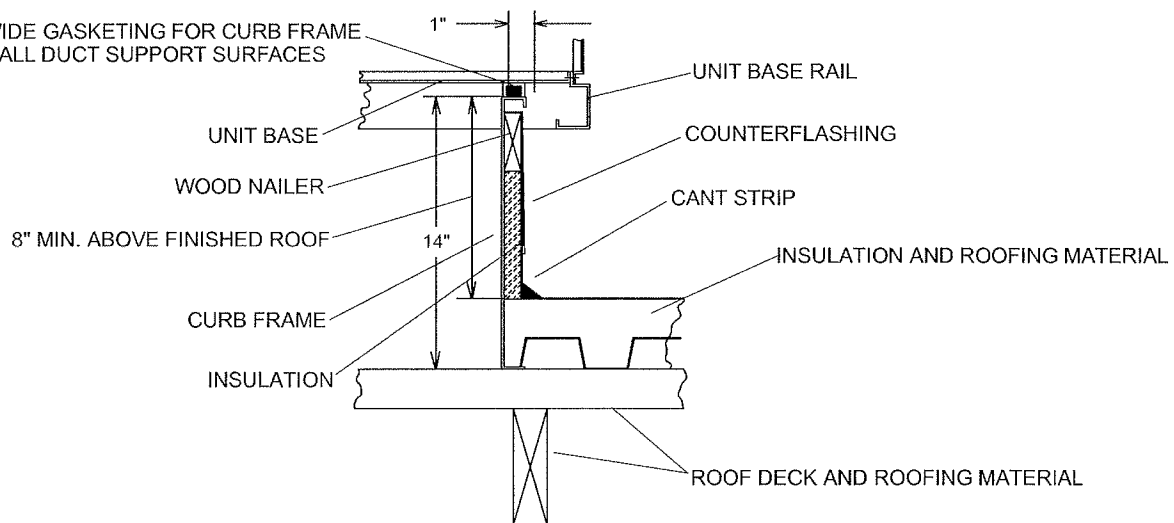
(8" roof curb also available)



RECOMMENDED DUCT SIZE	
SUPPLY AIR DUCT	17 1/8" x 21 1/2"
RETURN AIR DUCT	17 1/8" x 16 3/4"

ROOF CURB APPLICATION

3/4" x 1" WIDE GASKETING FOR CURB FRAME AND ALL DUCT SUPPORT SURFACES



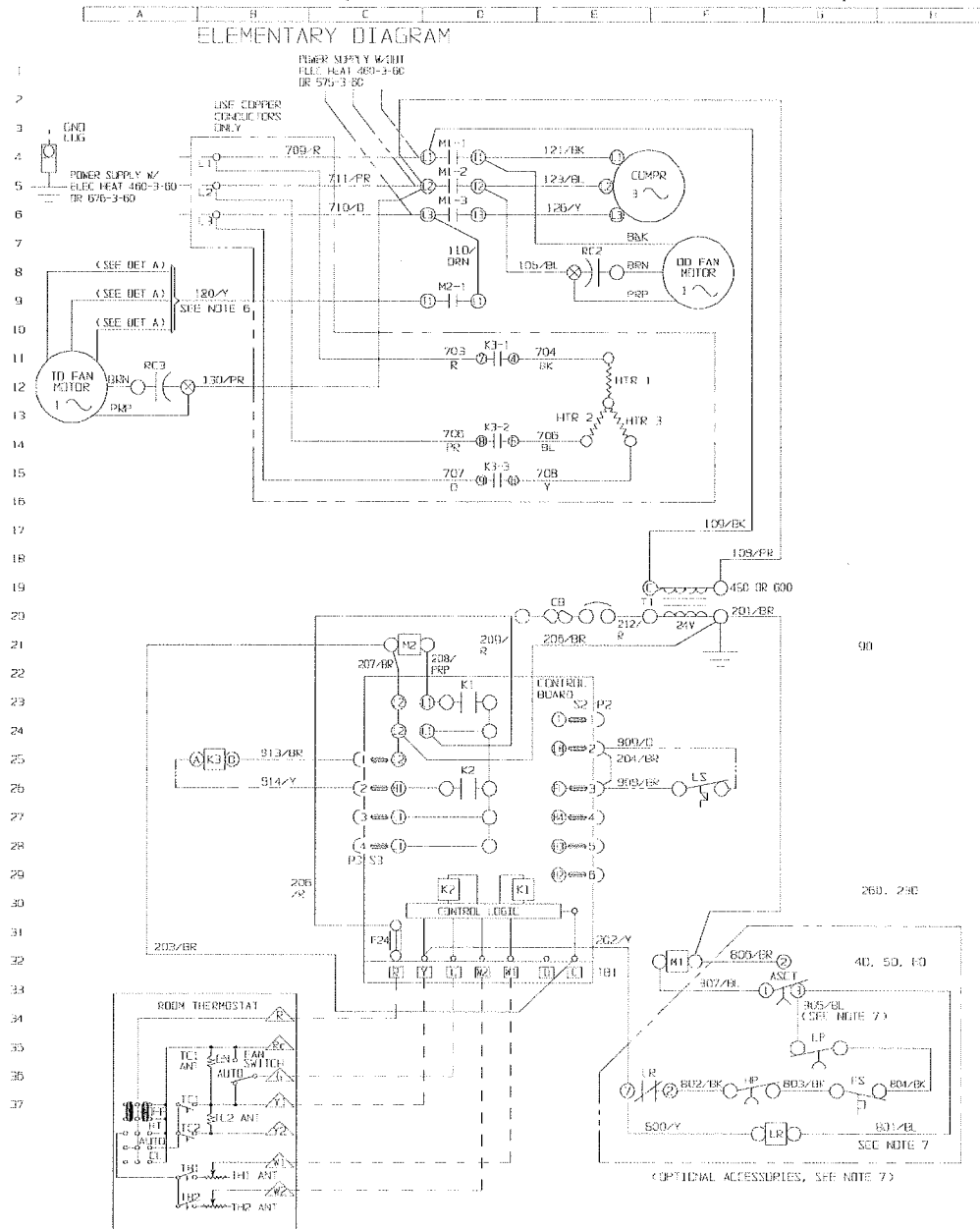


- CAUTION - OPEN ALL DISCONNECTS
BEFORE SERVICING THIS UNIT

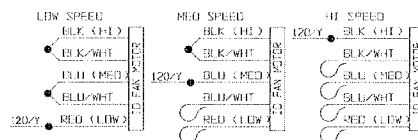
TYPICAL WIRING DIAGRAM LEGEND

- 15

TYPICAL WIRING DIAGRAM (460-3-60 AND 575-3-60 POWER SUPPLY)



DETAIL "A"



MECHANICAL SPECIFICATIONS

GENERAL DESCRIPTION

Units shall be factory-assembled, single packaged, Electric Cooling units, designed for outdoor mounted installation. Units shall have minimum SEER ratings of 10.0. They shall have built in, equal size, field convertible duct connections for down discharge supply/return or horizontal discharge supply/return.

The units shall be factory wired, piped, charged with R-22 refrigerant and factory tested prior to shipment. All unit wiring shall be both numbered and color coded.

All units shall be manufactured in a facility certified to ISO 9001 standards, and the cooling performance shall be rated in accordance with DOE and ARI test procedures. Units shall be certified to UL 1995/CAN/CSA C22.2 No. 236 standards.

UNIT CABINET

1. Unit cabinet shall be constructed of G60 and G90 galvanized steel, with exterior surfaces coated with a non-chalking, powered paint finish, certified at 750 hours salt spray test per ASTM-B117 standards.
2. The unit top shall be a single piece "Water Shed" design, with drip edges and no-seam corners to provide optimum water integrity.
3. Unit shall have a rigidly mounted condenser coil guard to provide protection from objects and personnel after installation.
4. Indoor blower section shall be insulated with up to 3/4" thick, aluminum, foil faced insulation, fastened to prevent insulation from entering the air stream.
5. Cabinet panels shall be "large" size, easily removable for servicing and maintenance, with built-in lift handles.
6. Unit shall be built on a formed, "Super-Structure" design base pan, with embossments at critical points to add strength, rigidity and aid in minimizing sound.
7. Full perimeter base rails shall be provided to assure reliable transit of equipment, overhead rigging, fork truck access and proper sealing on roof curb applications. Base rails shall be removable, when required, to lower unit height.
8. Filters shall be furnished and be accessible through a removable access door, sealed air tight. (Single phase models - accessory kit available. Three phase models - standard from factory.)
9. Units vertical discharge and return duct configuration shall be designed to fit between standard 24" O.C. beams without modification to building structure, duct work and base unit.
10. Condensate pan shall be internally sloped and conform to ASHRAE 62-89 self-draining standards, with 3/4" NPTI copper, ridged mount connection.

INDOOR (EVAPORATOR) FAN ASSEMBLY

1. Fan shall be direct drive, multi-speed design. Job site selected (BHP) brake horse power shall not exceed the motors nameplate horse power rating.
2. Fan wheel shall be double-inlet type with forward-curved blades, dynamically balanced to operate smoothly throughout the entire range of operation. Airflow design shall be constant air volume.
3. Bearings shall be sealed and permanently lubricated for longer life and no maintenance.
4. Fan assembly shall be "Slip Track" (slide-out) design for easy removal and cleaning.

OUTDOOR (CONDENSER) FAN ASSEMBLY

1. The outdoor fan shall be of the direct-driven propeller type, discharge air vertically, have aluminum blades riveted to corrosion resistant steel spider bracket and shall be statically balanced for smooth operation.
2. The outdoor fan motor shall be totally enclosed with permanently lubricated bearings and internally protected against overload conditions.

REFRIGERANT COMPONENTS

1. Compressors:
 - A. Shall be fully hermetic reciprocating type, direct drive, internally protected with internal high-pressure relief and over temperature protection. The hermetic motor shall be suction gas cooled and have a voltage range of + or - 10% of the unit nameplate voltage.
 - B. Shall have internal isolation and sound muffling to minimize vibration and noise, and be externally isolated on a dedicated, independent mounting.
2. Coils:
 - A. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless internally-enhanced copper tubes with all joints brazed.
 - B. Evaporator and Condenser coils shall be of the direct expansion, draw-thru design.
3. Refrigerant Circuit and Refrigerant Safety Components shall include:
 - A. Independent fixed-orifice expansion devices.
 - B. Filter/strainer to eliminate any foreign matter.
 - C. Accessible service gage connections on both suction and discharge lines to charge, evacuate, and measure refrigerant pressure during any necessary servicing or troubleshooting, without losing charge and without disrupting condenser or evaporator air flow.
 - D. The refrigeration system shall provide at least 10° F of liquid sub-cooling at design conditions.

4. Unit Controls:

- A. Unit shall contain a large, low voltage Terminal Board for easy connection of field low voltage wiring.
- B. Controls shall be mounted in a large control box with tilt-out, hinged access door, allowing easy access for trouble shooting and maintenance without affecting the normal system operation pressures.
- C. Unit shall have large, easily removable panels, covering electrical controls and compressor, allowing easy access for any necessary maintenance or servicing.

ELECTRIC HEATING SECTION

- 1. An electric heating section, with nickel chromium elements, shall be provided in a range of 5 thru 25 KW, offering two stages of capacity - 7 KW and above on single phase heaters, and 20 KW and above on three phase heaters.
- 2. The heating section shall have a primary limit control(s) and automatic reset, to prevent the heating element system from operating at an excessive temperature.

- 3. The heating section assembly shall slide out of the unit for easy maintenance and service.

- 4. Units with electric heating sections shall be wired for a single point power supply, with branch circuit fusing (where required).

UNIT OPERATING CHARACTERISTICS

- 1. Unit shall be capable of starting and running at 125° F outdoor temperature, exceeding maximum load criteria of ARI Standard 210/240.
- 2. The compressor, with standard controls, shall be capable of operation down to 45° F outdoor temperature. Accessory low ambient kit shall be available for operation to 0° F.

ELECTRICAL REQUIREMENTS

All unit power wiring shall enter unit cabinet at a single factory provided location and be capable of side or bottom entry, to minimize roof penetrations and avoid unit field modifications. Separate side and bottom openings shall be provided for the control wiring.

