

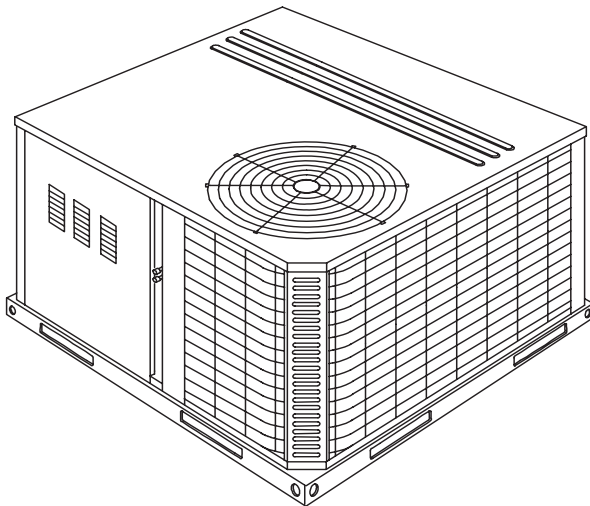


TECHNICAL GUIDE

ECHELON™ SERIES

SINGLE PACKAGE GAS/ELECTRIC AIR COOLED AIR CONDITIONERS 2 THRU 5 NOMINAL TON

DYP024, 030, 036, 042, 048 AND 060
13 SEER



DESCRIPTION

Coleman® Echelon™ Series packaged cooling/heating air conditioners are designed for outdoor installation. Only utility and duct connections are required at the point of installation.

The gas-fired heaters have aluminized steel tubular heat exchangers and hot surface to pilot ignition. They are available in natural gas with field conversion to propane.

FEATURING

- **FACTORY MOUNTED TXV**
- COOLING/GAS HEATING UNITS (NATURAL GAS OR PROPANE)
- LOW PROFILE
- QUIET OPERATION
- COMMON FOOTPRINT
- OPTIONAL SLIDE IN MOTORIZED DAMPERS
- OPTIONAL SLIDE IN ECONOMIZERS
- OPTIONAL PROPANE CONVERSION KIT
- OPTIONAL HIGH ALTITUDE CONVERSION KIT (NATURAL GAS/PROPANE)
- OPTIONAL LOW NOx KIT
- FULL PERIMETER BASE RAILS
- BOTTOM AND SIDE UTILITY CONNECTIONS
- 1" OR 2" CLEANABLE FILTERS STANDARD ON ALL 3 PHASE MODELS. OPTIONAL ON 1 PHASE MODELS
- **WARRANTY - 1 PHASE**
 - 10 year compressor
 - 20 year heat exchanger
 - 5 year other parts
- **WARRANTY - 3 PHASE**
 - 5 year compressor
 - 10 year heat exchanger
 - 1 year other parts



TABLE OF CONTENTS

STANDARD FEATURES/BENEFITS	3	19 TYPICAL WIRING DIAGRAM D*YP 030-048 (460-3-60 POWER SUPPLY)	30
FIELD-INSTALLED ACCESSORIES	4	20 TYPICAL WIRING DIAGRAM D*YP 060 (460-3-60 POWER SUPPLY)	31
TYPICAL WIRING DIAGRAM NOTES	32	21 TYPICAL WIRING DIAGRAM LEGEND	32
MECHANICAL SPECIFICATIONS	33		

LIST OF FIGURES

<u>Fig#</u>	<u>Pg#</u>	
1	PRODUCT NOMENCLATURE	2
2	UNIT COMPONENT LOCATION	6
3	FIELD WIRING DIAGRAM CONTROL WIRING	18
4	POWER WIRING FIELD DIAGRAM	19
5	UNIT DIMENSIONS - FRONT	20
6	UNIT DIMENSIONS - FRONT & BOTTOM	21
7	UNIT DIMENSIONS - BACK & BOTTOM	21
8	TYPICAL SLAB ON GROUND INSTALLATION	22
9	TYPICAL ROOF CURB INSTALLATION	22
10	TYPICAL DUCT APPLICATIONS	23
11	UNIT CENTER OF GRAVITY	23
12	ROOF CURB DIMENSIONS	24
13	ROOF CURB CROSS SECTION	24
14	TYPICAL WIRING DIAGRAM D*YP 024 (208/230-1-60 POWER SUPPLY)	25
15	TYPICAL WIRING DIAGRAM D*YP 030-048 (208/230-1-60 POWER SUPPLY)	26
16	TYPICAL WIRING DIAGRAM D*YP 060 (208/230-1-60 POWER SUPPLY)	27
17	TYPICAL WIRING DIAGRAM D*YP 030-048 (208/230-3-60 POWER SUPPLY)	28
18	TYPICAL WIRING DIAGRAM D*YP 060 (208/230-3-60 POWER SUPPLY)	29

LIST OF TABLES

<u>Tbl#</u>	<u>Pg#</u>	
1	PHYSICAL DATA	6
2	RATINGS COOLING/GAS HEATING	7
3	DYP024 COOLING CAPACITIES - 2 TON	8
4	DYP030 COOLING CAPACITIES - 2-1/2 TON	10
5	DYP036 COOLING CAPACITIES - 3 TON	11
6	DYP042 COOLING CAPACITIES - 3-1/2 TON	12
7	DYP048 COOLING CAPACITIES - 4 TON	13
8	DYP060 COOLING CAPACITIES - 5 TON	14
9	TWO TON AIR PERFORMANCE	15
10	SIDE SUPPLY AIR BLOWER PERFORMANCE - 208/230 VOLTS	16
11	BOTTOM SUPPLY AIR BLOWER PERFORMANCE - 208/230 VOLTS	17
12	ADDITIONAL STATIC PRESSURE RESISTANCE - 2, 2-1/2, 3 TON	18
13	ADDITIONAL STATIC PRESSURE RESISTANCE - 3-1/2, 4 AND 5 TON	18
14	ELECTRICAL DATA	19
15	UNIT DIMENSIONS FRONT	20
16	UNIT MINIMUM CLEARANCES	20
17	UNIT WEIGHTS AND CENTER OF GRAVITY	23

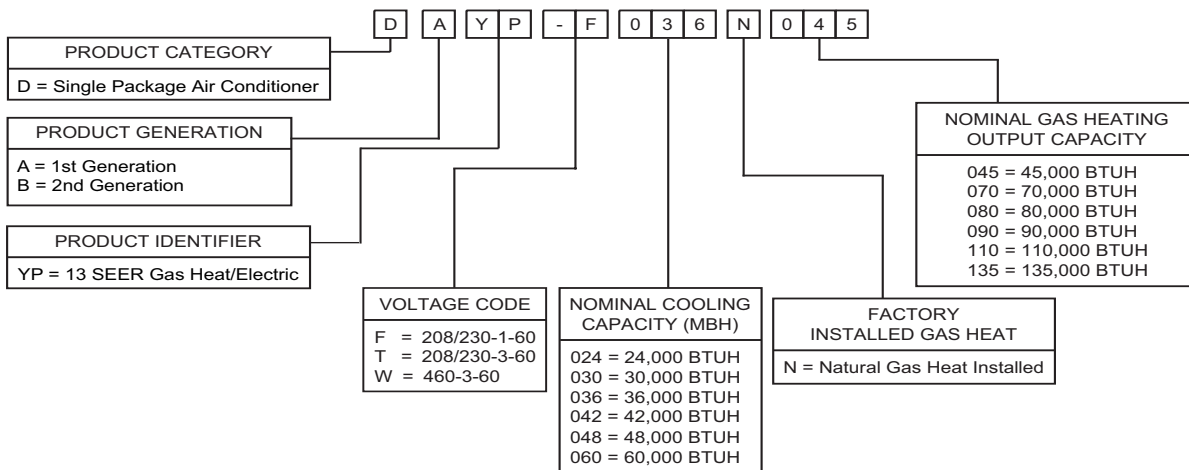


FIGURE 1 - PRODUCT NOMENCLATURE

STANDARD FEATURES/BENEFITS

OPERATING EFFICIENCY - All units provide high operating efficiencies and have a minimum AFUE of 80% and SEER of 13.0. All efficiencies exceed legislated minimum levels.

ON SITE FLEXIBILITY - All model sizes share a common, compact design cabinet in 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 with 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 500 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 assembly. Vital run test statistics such as system pressure, motor currents, air velocity and temperature, unit vibration, and gas system safeties 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 - Gas and electric 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 durable over time. The connection is rigidly mounted to assure proper fit and leak tight seal.

DURABLE FINISH - With a heavy duty cabinet made of powder-painted, galvanized steel the neutral color blends into surrounding areas. The powdered paint provides a better paint to steel bond, which resists corrosion and rust creep. The special primer formulas and glossy finish insures less fading when exposed to sunlight and offers a more attractive on site appearance. This paint finish meets ASTM-B117 standards for 1000 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 where 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 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 will not release insulation fibers into conditioned area.

TOP DISCHARGE - The top discharge condenser fan does not disrupt neighboring areas or 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 after installation and provides protection during transit.

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 2-1/2, 3, 3-1/2 and 4 ton models operate over a wide range of design conditions with a constant CFM, electrically commutated (ECM) fan motor. These units easily match all types of applications and provide greater on site flexibility to match comfort requirement. These models have 2 cooling speeds and a single heating speed. The cooling speed is factory set and can be field adjusted to a second speed. The heating speed is factory set to maintain mid point rise at the units heating input. It cannot be field adjusted. This allows maximum comfort conditions.

Two ton models operate over a wide range of design conditions with a 3-speed direct-drive fan motor. These single phase models have the Comfort-Match system that allows different speed taps for heating or cooling operations.

SIMPLE CONTROL CIRCUIT - A low voltage printed circuit board contains a diagnostic indicator light and a low voltage terminal strip. An additional set of pin connectors is also provided to simplify the field interface of external controls. Mate-n-lock plug connectors are used. The electrical control box is not located in the compressor compartment. The controls are mounted on a Control-Tilt control panel to allow the access cover to be removed for trouble shooting and maintenance without affecting the normal system operating pressures. 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.

HEAT EXCHANGERS - Are corrosion-resistant, aluminized-steel tubular construction to provide long-life, trouble-free operation. The unique blow-through design also assures that condensate does not collect in humid areas when in the cooling cycle. This adds to longer heat exchanger life and higher long term efficiencies.

POST PURGE INDUCED DRAFT COMBUSTION - Exhausts combustion products from the heat exchanger upon completion of the heating cycle to prolong the heat exchanger life.

SELF DIAGNOSTIC FAN CONTROL MODULE - Due to this self diagnostic control, less on site time is required to trouble shoot these units.

HOT SURFACE TO PILOT IGNITION - Provides faster heat delivery. This ignition is highly reliable, durable and eliminates nuisance lockouts. Also assures starts in damp conditions.

MULTI PORT IN-SHOT BURNERS - No field adjustment is required to mix the air and gas. These burners are constructed of high-grade corrosion-resistant, aluminized-steel.

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 cleaned 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 and gas controls 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 requires no special training to replace any of the components of these units and does not need to maintain an inventory of unique parts.

SYSTEM INTEGRATION - Each unit has the internal ability to integrate an electronic air cleaner or humidifier to work in conjunction with the base unit.

FIELD-INSTALLED ACCESSORIES

LOW NOx KIT - Kit includes all the necessary hardware and instructions to field convert units to reduce emissions to less than 40 nanogram per Joule. California requirement on single phase models only.

PROPANE CONVERSION KIT - Kit includes burner orifices, gas valve conversion and installation instructions necessary to field convert unit from natural gas to propane.

HIGH ALTITUDE CONVERSION KIT (Natural Gas/Propane) - Kit includes all necessary labels and instructions to field alter units with natural gas/propane for installations above 2000 feet. Burner orifices must be obtained from Source 1 Parts. Propane Conversion Kit must be obtained separately.

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. A built-in barometric relief of 25% is provided.

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.

PRESSURE SWITCH UPGRADE KIT - Contains screw in type High pressure, Low Pressure/Loss of Charge switch, freeze protection switch and lockout relay. Switches are placed onto existing scharder 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 protective grilles made of expanded aluminum with full perimeter 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. The filter rack is suitable for either 1" or 2" filters. (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 supply/return and unit mounted down supply/return applications. Damper capable of providing 0% through

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 side square duct opening to 14" round duct opening.

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. 8 and 14 inch high roof curbs are available.

MANUAL OUTDOOR DAMPER - Provides 0% through 50% outdoor air capability (field adjustable). Designed for duct mounted side supply/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. (Required on installations with economizer or motorized damper.)

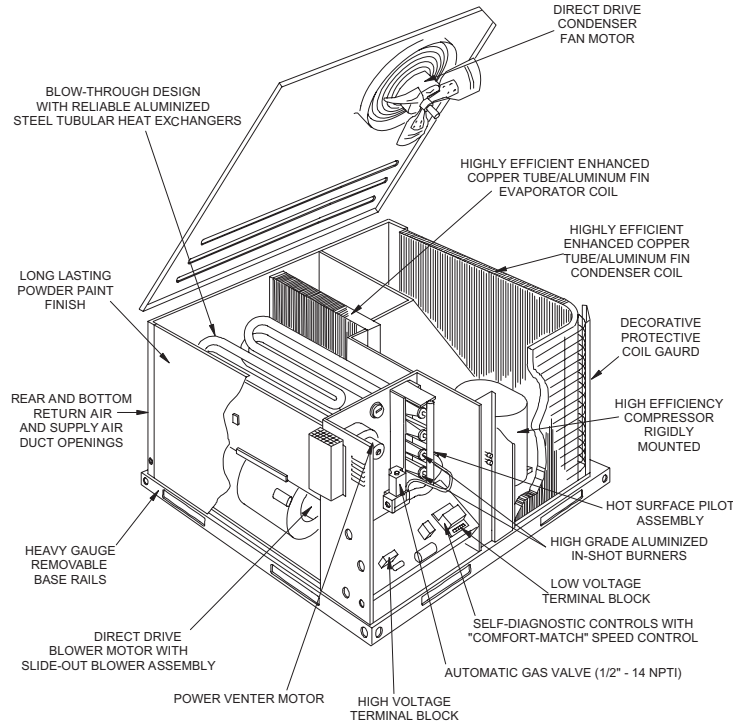


FIGURE 2 - UNIT COMPONENT LOCATION

TABLE 1: PHYSICAL DATA

MODEL		DYP					
		024	030	036	042	048	060
EVAPORATOR BLOWER	CENTRIFUGAL BLOWER (Dia. x W. in.)	10 x 8	10 x 8	11 x 10	12 x 11	12 x 11	12 x 11
	FAN MOTOR HP	1/2	3/4	3/4	1	1	1
EVAPORATOR COIL	ROWS DEEP	2	3	3	3	3	3
	FINS PER INCH	15	13	13	13	16	16
	FACE AREA (Sq. Ft.)	3.5	3.5	3.5	4.5	4.5	4.5
CONDENSER FAN	PROPELLER DIA. (in.)	22	22	22	22	22	22
	FAN MOTOR HP	1/4	1/4	1/4	1/4	1/3	1/3
	NOM. CFM TOTAL	2,200	2,400	2,400	2,400	3,000	3,500
CONDENSER COIL	ROWS DEEP	2	1	2	2	2	2
	FINS PER INCH	20	20	20	20	20	20
	FACE AREA (Sq. Ft.)	11.7	11.7	11.7	14.7	14.7	14.7
CHARGE	REFRIGERANT 22 (lbs./oz.)	6 / 4	4 / 9	6 / 12	9 / 6	8 / 4	8 / 8
FILTER	FACE AREA (Sq. Ft.) Size (Actual)	2.6 / 19 x 19.5	2.6 / 19 x 19.5	2.6 / 19 x 19.5	3.1 / 19.5 x 11.5 (2 Reqd.)	3.1 / 19.5 x 11.5 (2 Reqd.)	3.1 / 19.5 x 11.5 (2 Reqd.)
FURNACE SECTION	NATURAL GAS BURNER ORIFICE NO. (Drill Size)	43	43	43	40	40	40
	PROPANE BURNER ORIFICE NO. (Drill Size)	55	55	55	53	53	53
	GAS CONNECTION SIZE	1/2 NPTI	1/2 NPTI	1/2 NPTI	1/2 NPTI	1/2 NPTI	1/2 NPTI
COMPRESSOR	HERMETIC TYPE, (Qty. = 1)	Recip	Scroll	Scroll	Scroll	Scroll	Scroll

TABLE 2: RATINGS COOLING/GAS HEATING

MODEL DYP	NET COOLING CAPACITY ¹			SOUND RATING (dbels) ²	GAS HEAT CAPACITY / EFFICIENCIES				
	MBH	SEER ³	EER ⁴		INPUT (MBH)	OUTPUT (MBH)	AFUE ⁵ (%)	NUMBER OF BURNERS	TEMP. RISE (°F) RANGE
F024N045	23.7	13.0	11.0	81	45	36	80.2	2	25 - 55
F024N070	23.7	13.0	11.0	81	70	56	80.2	3	30 - 60
F030N045	30.6	13.4	11.75	80	45	36	80.2	2	25 - 55
T030N045	30.6	13.4	11.75	80	45	36	80.2	2	25 - 55
W030N045	30.6	13.4	11.75	80	45	36	80.2	2	25 - 55
F030N070	30.6	13.4	11.75	80	70	56	80.2	3	30 - 60
T030N070	30.6	13.4	11.75	80	70	56	80.2	3	30 - 60
W030N070	30.6	13.4	11.75	80	70	56	80.2	3	30 - 60
F036N045	37.4	13.65	11.75	81	45	36	80.4	2	25 - 55
T036N045	37.4	13.65	11.75	81	45	36	80.4	2	25 - 55
W036N045	37.4	13.65	11.75	81	45	36	80.4	2	25 - 55
F036N070	37.4	13.65	11.75	81	70	56	80.2	3	25 - 55
T036N070	37.4	13.65	11.75	81	70	56	80.2	3	25 - 55
W036N070	37.4	13.65	11.75	81	70	56	80.2	3	25 - 55
F036N090	37.4	13.65	11.75	81	90	72	80.1	4	30 - 60
T036N090	37.4	13.65	11.75	81	90	72	80.1	4	30 - 60
W036N090	37.4	13.65	11.75	81	90	72	80.1	4	30 - 60
F042N080	44	13.7	10.65	80	80	64	80.6	3	25 - 55
T042N080	44	13.7	10.65	80	80	64	80.6	3	25 - 55
W042N080	44	13.7	10.65	80	80	64	80.6	3	25 - 55
F042N110	44	13.7	10.65	80	108	86	80.8	4	45 - 75
T042N110	44	13.7	10.65	80	108	86	80.8	4	45 - 75
W042N110	44	13.7	10.65	80	108	86	80.8	4	45 - 75
F048N080	48	13.2	11.7	84	80	64	80.8	3	25 - 55
T048N080	48	13.2	11.7	84	80	64	80.8	3	25 - 55
W048N080	48	13.2	11.7	84	80	64	80.8	3	25 - 55
F048N110	48	13.2	11.7	84	108	86	80.6	4	35 - 65
T048N110	48	13.2	11.7	84	108	86	80.6	4	35 - 65
W048N110	48	13.2	11.7	84	108	86	80.6	4	35 - 65
F048N135	48	13.2	11.7	84	135	107	80.5	5	45 - 75
T048N135	48	13.2	11.7	84	135	107	80.5	5	45 - 75
W048N135	48	13.2	11.7	84	135	107	80.5	5	45 - 75
F060N080	55.5	13.0	11.2	84	80	64	80.8	3	25 - 55
T060N080	55.5	13.0	11.2	84	80	64	80.8	3	25 - 55
W060N080	55.5	13.0	11.2	84	80	64	80.8	3	25 - 55
F060N110	55.5	13.0	11.2	84	108	86	80.6	4	35 - 65
T060N110	55.5	13.0	11.2	84	108	86	80.6	4	35 - 65
W060N110	55.5	13.0	11.2	84	108	86	80.6	4	35 - 65
F060N135	55.5	13.0	11.2	84	135	107	80.5	5	45 - 75
T060N135	55.5	13.0	11.2	84	135	107	80.5	5	45 - 75
W060N135	55.5	13.0	11.2	84	135	107	80.5	5	45 - 75

1. Net Cooling Capacity = ARI 210 standard rating conditions.
2. (dbels) = ARI 270-95
3. 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.
4. Tested in accordance with ARI 210 Standard Rating Conditions.
5. AFUE = Annual Fuel Utilization Efficiency.

TABLE 3: DYP024 COOLING CAPACITIES - 2 TON

AIR ON EVAPORATOR COIL		TEMPERATURE OF AIR ON CONDENSER COIL									TEMPERATURE OF AIR ON CONDENSER COIL										
		85°F									95°F										
		NET CAP. MBH	POWER INPUT KW	SENSIBLE CAPACITY ¹								NET CAP. MBH	POWER INPUT KW	SENSIBLE CAPACITY ¹							
				ENTERING DRY BULB, °F										ENTERING DRY BULB, °F							
CFM	WB °F	86	83	80	77	74	71	68	86	83	80	77	74	71	68						
600	72	24.7	1.90	15.0	13.3	11.6	9.9	8.1	#N/A	#N/A	23.1	2.03	15.0	13.3	11.6	9.9	8.1	#N/A	#N/A		
	67	22.6	1.91	18.4	16.7	14.9	13.2	11.5	9.8	8.1	21.0	2.03	18.1	16.4	14.7	13.0	11.3	9.5	7.8		
	62	20.9	1.89	20.9	19.5	17.8	16.1	14.4	12.7	11.0	19.5	2.00	19.5	19.4	17.7	16.0	14.3	12.5	10.8		
	57	20.6	1.88	20.6	20.2	18.5	16.8	15.1	13.4	11.7	19.5	1.99	19.5	19.5	17.9	16.2	14.5	12.7	11.0		
700	72	26.4	1.94	17.0	14.9	12.9	10.9	8.9	#N/A	#N/A	24.6	2.08	16.7	14.7	12.7	10.7	8.6	#N/A	#N/A		
	67	24.1	1.94	20.7	18.7	16.7	14.7	12.7	10.6	8.6	22.3	2.08	20.1	18.1	16.1	14.1	12.1	10.0	8.0		
	62	22.3	1.93	22.3	21.6	19.9	17.9	15.9	13.9	11.8	20.7	2.05	20.7	20.7	19.4	17.4	15.3	13.3	11.3		
	57	22.0	1.92	22.0	21.8	20.7	18.7	16.7	14.6	12.6	20.7	2.04	20.7	20.7	19.6	17.6	15.6	13.5	11.5		
800	72	28.0	1.97	19.0	16.6	14.3	12.0	9.6	#N/A	#N/A	26.0	2.13	18.5	16.1	13.8	11.5	9.1	#N/A	#N/A		
	67	25.6	1.98	23.1	20.8	18.5	16.1	13.8	11.5	9.1	23.7	2.13	22.2	19.8	17.5	15.2	12.8	10.5	8.2		
	62	23.7	1.96	23.7	23.7	22.0	19.7	17.4	15.0	12.7	22.0	2.09	22.0	22.0	21.1	18.8	16.4	14.1	11.8		
	57	23.3	1.95	23.3	23.3	22.9	20.5	18.2	15.9	13.5	22.0	2.09	22.0	22.0	21.3	19.0	16.7	14.3	12.0		
900	72	28.2	2.01	20.4	17.7	15.1	12.4	9.8	#N/A	#N/A	26.2	2.15	19.9	17.2	14.6	11.9	9.3	#N/A	#N/A		
	67	25.8	2.01	24.5	22.1	19.5	16.8	14.2	11.5	8.8	23.9	2.15	23.1	21.2	18.5	15.8	13.2	10.5	7.9		
	62	23.8	1.99	23.8	23.8	23.0	20.3	17.7	15.0	12.4	22.1	2.12	22.1	22.1	21.7	19.1	16.4	13.7	11.1		
	57	23.5	1.98	23.5	23.5	23.2	20.6	17.9	15.3	12.6	22.2	2.11	22.2	22.2	21.8	19.2	16.5	13.9	11.2		
1000	72	28.3	2.04	21.8	18.8	15.9	12.9	9.9	#N/A	#N/A	26.5	2.18	21.3	18.3	15.4	12.4	9.4	#N/A	#N/A		
	67	25.9	2.04	25.9	23.5	20.5	17.5	14.5	11.5	8.6	24.1	2.18	24.1	22.5	19.5	16.5	13.5	10.5	7.6		
	62	24.0	2.02	24.0	24.0	24.0	21.0	18.0	15.0	12.0	22.3	2.14	22.3	22.3	22.3	19.3	16.4	13.4	10.4		
	57	23.6	2.01	23.6	23.6	23.6	20.6	17.6	14.7	11.7	22.3	2.14	22.3	22.3	22.3	19.4	16.4	13.4	10.4		

AIR ON EVAPORATOR COIL		TEMPERATURE OF AIR ON CONDENSER COIL									TEMPERATURE OF AIR ON CONDENSER COIL										
		105°F									115°F										
		NET CAP. MBH	POWER INPUT KW	SENSIBLE CAPACITY ¹								NET CAP. MBH	POWER INPUT KW	SENSIBLE CAPACITY ¹							
				ENTERING DRY BULB, °F										ENTERING DRY BULB, °F							
CFM	WB °F	86	83	80	77	74	71	68	86	83	80	77	74	71	68						
600	72	21.5	2.20	14.4	12.7	10.9	9.2	7.5	#N/A	#N/A	20.0	2.36	13.7	12.0	10.3	8.6	6.9	#N/A	#N/A		
	67	19.5	2.17	17.6	15.9	14.2	12.5	10.8	9.1	7.4	18.1	2.30	17.2	15.4	13.7	12.0	10.3	8.6	6.9		
	62	18.4	2.15	18.4	18.3	16.7	15.0	13.3	11.6	9.9	17.3	2.30	17.3	17.3	15.7	14.0	12.3	10.6	8.9		
	57	18.5	2.15	18.5	18.5	16.9	15.2	13.5	11.8	10.0	17.5	2.31	17.5	17.5	15.9	14.2	12.5	10.8	9.1		
700	72	22.8	2.24	16.0	14.0	12.0	9.9	7.9	#N/A	#N/A	21.0	2.40	15.3	13.3	11.2	9.2	7.2	#N/A	#N/A		
	67	20.7	2.21	19.4	17.6	15.5	13.5	11.5	9.5	7.4	19.0	2.34	18.6	17.0	15.0	12.9	10.9	8.9	6.9		
	62	19.5	2.19	19.5	19.4	18.3	16.2	14.2	12.2	10.2	18.2	2.34	18.2	18.2	17.2	15.1	13.1	11.1	9.1		
	57	19.6	2.19	19.6	19.6	18.5	16.4	14.4	12.4	10.4	18.4	2.35	18.4	18.4	17.3	15.3	13.3	11.3	9.2		
800	72	24.1	2.28	17.6	15.3	13.0	10.6	8.3	#N/A	#N/A	22.1	2.43	16.8	14.5	12.2	9.8	7.5	#N/A	#N/A		
	67	21.8	2.25	21.1	19.2	16.9	14.5	12.2	9.9	7.5	20.0	2.38	20.0	18.5	16.2	13.9	11.5	9.2	6.9		
	62	20.5	2.24	20.5	20.5	19.8	17.5	15.2	12.8	10.5	19.1	2.38	19.1	19.1	18.6	16.2	13.9	11.6	9.2		
	57	20.7	2.24	20.7	20.7	20.0	17.7	15.4	13.0	10.7	19.3	2.38	19.3	19.3	18.7	16.4	14.1	11.7	9.4		
900	72	24.3	2.32	19.0	16.3	13.7	11.0	8.3	#N/A	#N/A	22.3	2.48	18.1	15.4	12.7	10.1	7.4	#N/A	#N/A		
	67	22.0	2.29	21.6	20.3	17.7	15.1	12.4	9.8	7.1	20.2	2.43	20.2	19.5	17.0	14.3	11.6	9.0	6.3		
	62	20.7	2.27	20.7	20.7	20.4	17.7	15.1	12.4	9.7	19.3	2.43	19.3	19.3	19.0	16.4	13.7	11.1	8.4		
	57	20.8	2.27	20.8	20.8	20.5	17.9	15.2	12.6	9.9	19.5	2.43	19.5	19.5	19.2	16.6	13.9	11.3	8.6		
1000	72	24.5	2.36	20.3	17.3	14.3	11.4	8.4	#N/A	#N/A	22.5	2.53	19.3	16.3	13.3	10.3	7.4	#N/A	#N/A		
	67	22.2	2.33	22.2	21.4	18.6	15.6	12.6	9.7	6.7	20.4	2.47	20.4	20.4	17.7	14.8	11.8	8.8	5.8		
	62	20.9	2.31	20.9	20.9	20.9	17.9	15.0	12.0	9.0	19.5	2.47	19.5	19.5	19.5	16.5	13.5	10.6	7.6		
	57	21.0	2.31	21.0	21.0	21.0	18.0	15.1	12.1	9.1	19.7	2.48	19.7	19.7	19.7	16.7	13.7	10.8	7.8		

¹ These capacities are net capacities (the indoor fan heat is deducted).

ALL SENSIBLE CAPACITY

TABLE 3: DYP024 COOLING CAPACITIES - 2 TON (CONT'D)

AIR ON EVAPORATOR COIL		TEMPERATURE OF AIR ON CONDENSER COIL								
		125°F								
		NET CAP. MBH	POWER INPUT KW	SENSIBLE CAPACITY ¹						
ENTERING DRY BULB, °F										
CFM	WB °F			86	83	80	77	74	71	68
600	72	18.4	2.5	13.1	11.4	9.7	8.0	6.3	#N/A	#N/A
	67	16.6	2.4	16.7	15.0	13.3	11.5	9.8	8.1	6.4
	62	16.2	2.5	16.2	16.2	14.8	13.1	11.4	9.6	7.9
	57	16.5	2.5	16.5	16.5	14.9	13.2	11.5	9.8	8.1
700	72	19.3	2.6	14.6	12.5	10.5	8.5	6.5	#N/A	#N/A
	67	17.4	2.5	17.8	16.4	14.4	12.4	10.3	8.3	6.3
	62	17.0	2.5	17.0	17.0	16.0	14.0	12.0	10.0	7.9
	57	17.2	2.5	17.2	17.2	16.2	14.2	12.1	10.1	8.1
800	72	20.1	2.6	16.0	13.7	11.3	9.0	6.7	#N/A	#N/A
	67	18.1	2.5	18.9	17.9	15.5	13.2	10.9	8.5	6.2
	62	17.7	2.5	17.7	17.7	17.3	15.0	12.6	10.3	8.0
	57	18.0	2.5	18.0	18.0	17.5	15.1	12.8	10.5	8.1
900	72	20.4	2.6	17.1	14.5	11.8	9.2	6.5	#N/A	#N/A
	67	18.3	2.6	18.7	18.6	16.2	13.5	10.9	8.2	5.6
	62	17.9	2.6	17.9	17.9	17.7	15.0	12.4	9.7	7.1
	57	18.2	2.6	18.2	18.2	17.9	15.3	12.6	9.9	7.3
1000	72	20.6	2.7	18.3	15.3	12.3	9.3	6.3	#N/A	#N/A
	67	18.5	2.6	18.5	19.3	16.9	13.9	10.9	7.9	4.9
	62	18.1	2.6	18.1	18.1	18.1	15.1	12.1	9.2	6.2
	57	18.4	2.7	18.4	18.4	18.4	15.4	12.4	9.4	6.5

¹. These capacities are net capacities (the indoor fan heat is deducted).

ALL SENSIBLE CAPACITY

TABLE 4: DYP030 COOLING CAPACITIES - 2-1/2 TON

TEMPERATURE OF AIR ON CONDENSER COIL			AIR ON EVAPORATOR COIL								
			1,000 CFM				1,250 CFM				
			WB °F				WB °F				
			72	67	62	57	72	67	62	57	
85 °F	NET CAP.MBH		33.6	31.6	30.3	30.2	34.5	32.4	31.1	31.0	
	TOTAL POWER INPUT kW		2.4	2.4	2.3	2.3	2.6	2.6	2.5	2.5	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	23.6	29.2	30.3	30.2	27.2	32.4	31.1	31.0
			83	20.7	26.3	30.3	30.2	23.5	29.7	31.1	31.0
			80	17.8	23.4	28.4	29.6	19.7	25.9	31.1	31.0
			77	14.9	20.5	25.5	26.7	16.0	22.2	27.3	27.3
			74	12.0	17.5	22.6	23.8	12.3	18.5	23.6	23.5
			71	N/A	14.6	19.7	20.8	N/A	14.8	19.9	19.8
			68	N/A	11.7	16.8	17.9	N/A	11.0	16.2	16.1
95 °F	NET CAP. MBH		32.7	30.5	28.8	28.9	33.5	31.3	29.6	29.7	
	TOTAL POWER INPUT kW		2.6	2.6	2.6	2.5	2.8	2.8	2.8	2.7	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	23.1	29.0	28.8	28.9	26.9	31.3	29.6	29.7
			83	20.2	26.1	28.8	28.9	23.1	29.7	29.6	29.7
			80	17.3	23.2	27.9	28.4	19.4	26.0	29.6	29.7
			77	14.4	20.3	25.0	25.4	15.7	22.3	25.9	26.0
			74	11.5	17.3	22.1	22.5	12.0	18.5	22.1	22.2
			71	N/A	14.4	19.2	19.6	N/A	14.8	18.4	18.5
			68	N/A	11.5	16.3	16.7	N/A	11.1	14.7	14.8
105 °F	NET CAP.MBH		31.0	28.3	27.3	27.3	32.2	29.4	28.3	28.3	
	TOTAL POWER INPUT kW		2.9	2.9	2.9	2.9	3.1	3.1	3.0	3.0	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	22.6	27.6	27.3	27.3	26.4	29.4	28.3	28.3
			83	19.6	25.1	27.3	27.3	22.6	28.6	28.3	28.3
			80	16.7	22.2	26.4	26.8	18.9	25.1	28.3	28.3
			77	13.8	19.3	23.5	23.8	15.2	21.4	24.6	24.6
			74	10.9	16.4	20.6	20.9	11.5	17.6	20.8	20.9
			71	N/A	13.5	17.7	18.0	N/A	13.9	17.1	17.2
			68	N/A	10.5	14.8	15.1	N/A	10.2	13.4	13.4
115 °F	NET CAP.MBH		29.3	26.2	25.7	25.7	30.8	27.5	27.0	27.0	
	TOTAL POWER INPUT kW		3.2	3.3	3.2	3.2	3.4	3.4	3.3	3.3	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	22.0	26.2	25.7	25.7	25.8	27.5	27.0	27.0
			83	19.0	24.1	25.7	25.7	22.1	27.5	27.0	27.0
			80	16.1	21.2	24.9	25.2	18.4	24.2	27.0	27.0
			77	13.2	18.3	22.0	22.2	14.7	20.5	23.3	23.2
			74	10.3	15.4	19.1	19.3	10.9	16.8	19.5	19.5
			71	N/A	12.5	16.2	16.4	N/A	13.0	15.8	15.8
			68	N/A	9.6	13.3	13.5	N/A	9.3	12.1	12.1
125 °F	NET CAP. MBH		27.6	24.1	24.2	24.0	29.4	25.6	25.7	25.6	
	TOTAL POWER INPUT kW		3.5	3.6	3.5	3.5	3.6	3.7	3.6	3.6	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	21.4	24.8	24.2	24.0	25.3	25.6	25.7	25.6
			83	18.4	23.2	24.2	24.0	21.6	26.4	25.7	25.6
			80	15.5	20.2	23.4	23.6	17.9	23.3	25.7	25.6
			77	12.6	17.3	20.5	20.7	14.2	19.6	22.0	21.9
			74	9.7	14.4	17.6	17.7	10.4	15.9	18.3	18.1
			71	N/A	11.5	14.7	14.8	N/A	12.1	14.5	14.4
			68	N/A	8.6	11.8	11.9	N/A	8.4	10.8	10.7

¹. These capacities are net capacities (the indoor fan heat is deducted)

 ALL SENSIBLE CAPACITY

TABLE 5: DYP036 COOLING CAPACITIES - 3 TON

TEMPERATURE OF AIR ON CONDENSER COIL			AIR ON EVAPORATOR COIL								
			1,200 CFM				1,350 CFM				
			WB °F				WB °F				
			72	67	62	57	72	67	62	57	
85 °F	NET CAP. MBH		43.3	39.9	37.4	36.7	44	40.5	38	37.2	
	TOTAL POWER INPUT kW		2.93	2.89	2.9	2.88	3.08	3.05	3.06	3.04	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	29.5	35.8	37.4	36.7	31.8	38.4	38	37.2
			83	26	32.3	37.4	36.7	27.8	34.4	38	37.2
			80	22.5	28.8	34.8	35.6	23.8	30.4	36.7	36.7
			77	19	25.3	31.3	32.1	19.9	26.4	32.7	32.7
			74	15.5	21.8	27.8	28.6	15.9	22.5	28.7	28.7
			71	-	18.3	24.3	25.1	-	18.5	24.7	24.7
68	-	14.8	20.8	21.6	-	14.5	20.7	20.7			
95 °F	NET CAP. MBH		41.4	37.1	35.7	35.3	42.5	38	36.6	36.2	
	TOTAL POWER INPUT kW		3.22	3.27	3.18	3.15	3.32	3.37	3.28	3.25	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	28.5	34.8	35.7	35.3	31	36.9	36.6	36.2
			83	25	31.3	35.7	35.3	27	33.7	36.6	36.2
			80	21.5	27.8	33.5	33.9	23	29.7	25.5	35.5
			77	18	24.3	30	30.4	19	25.7	31.5	31.5
			74	14.5	20.8	26.5	26.9	15	21.7	17.6	27.5
			71	-	17.3	23	23.4	-	17.7	23.6	23.5
68	-	13.8	19.5	19.9	-	13.8	19.6	19.5			
105 °F	NET CAP. MBH		38.5	34.8	33.9	33.6	39.6	35.8	34.8	34.5	
	TOTAL POWER INPUT kW		3.61	3.61	3.5	3.48	3.73	3.72	3.61	3.59	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	27.6	33.6	33.9	33.6	29.9	35.1	34.8	34.5
			83	24.1	30.1	33.9	33.6	26	32.4	34.8	34.5
			80	20.6	26.6	32	32.2	22	28.4	33.9	33.8
			77	17.1	23.1	28.5	28.7	18	24.4	29.9	29.8
			74	13.6	19.6	25	25.2	14	20.5	25.9	25.8
			71	-	16.1	21.5	21.7	-	16.5	21.9	21.8
68	-	12.6	18	18.2	-	12.5	18	17.9			
115 °F	NET CAP. MBH		35.6	32.6	32.2	31.9	36.7	33.5	33.1	32.8	
	TOTAL POWER INPUT kW		4.01	3.95	3.82	3.8	4.14	4.07	3.93	3.92	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	26.6	32.4	32.2	31.9	28.9	33.4	33.1	32.8
			83	23.1	28.9	32.2	31.9	24.9	31.1	33.1	32.8
			80	19.6	25.4	30.6	30.6	21	27.1	32.3	32.1
			77	16.1	21.9	27.1	27.1	17	23.2	28.3	28.1
			74	12.6	18.4	23.6	23.6	13	19.2	24.3	24.1
			71	-	14.9	20.1	20.1	-	15.2	20.3	20.2
68	-	11.4	16.6	16.6	-	11.2	16.3	16.2			
125 °F	NET CAP. MBH		32.8	30.2	30.4	30.1	33.7	31.2	31.3	30	
	TOTAL POWER INPUT kW		4.4	4.3	4.1	4.1	4.5	4.4	4.3	4.2	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	25.6	31.2	30.4	30.1	27.9	31.6	31.3	31
			83	22.1	27.7	30.4	30.1	23.9	29.9	31.3	31
			80	18.6	24.2	19.1	28.9	19.9	25.9	30.6	30.4
			77	15.1	20.7	25.6	25.4	15.9	21.9	26.6	26.4
			74	11.6	17.2	22.1	21.9	12	17.9	22.7	22.5
			71	-	13.7	18.6	18.4	-	13.9	18.7	18.5
68	-	10.2	15.1	14.9	-	9.9	14.7	14.5			

¹ These capacities are net capacities (the indoor fan heat is deducted).

 ALL SENSIBLE CAPACITY

TABLE 6: DYP042 COOLING CAPACITIES - 3-1/2 TON

TEMPERATURE OF AIR ON CONDENSER COIL			AIR ON EVAPORATOR COIL								
			1,350 CFM				1,500 CFM				
			WB °F				WB °F				
			72	67	62	57	72	67	62	57	
85 °F	NET CAP.		48.4	44.5	40.9	41.2	54.0	49.6	45.6	46.0	
	TOTAL POWER		3.4	3.3	3.3	3.3	3.8	3.7	3.6	3.7	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	33.0	39.9	40.9	41.2	36.8	44.4	45.6	46.0
			83	29.1	36.0	40.9	41.2	32.4	40.1	45.6	46.0
			80	25.2	32.0	38.1	40.4	28.1	35.7	42.4	45.0
			77	21.3	28.1	34.2	36.5	23.7	31.3	38.1	40.7
			74	17.3	24.2	30.2	32.6	19.3	27.0	33.7	36.3
			71	N/A	20.3	26.3	28.7	N/A	22.6	29.3	31.9
68	N/A	16.4	22.4	24.7	N/A	18.2	25.0	27.6			
95 °F	NET CAP.		46.1	42.4	39.6	39.1	51.3	47.3	44.1	43.5	
	TOTAL POWER		3.8	3.6	3.8	3.6	4.2	4.0	4.2	4.0	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	32.2	38.8	39.6	39.1	35.9	43.3	44.1	43.5
			83	28.3	34.9	39.6	39.1	31.6	38.9	44.1	43.5
			80	24.4	31.0	37.6	38.7	27.2	34.5	41.9	43.1
			77	20.5	27.1	33.7	34.8	22.8	30.2	37.6	38.7
			74	16.6	23.1	29.8	30.8	18.5	25.8	33.2	34.4
			71	N/A	19.2	25.9	26.9	N/A	21.4	28.8	30.0
68	N/A	15.3	21.9	23.0	N/A	17.1	24.5	25.6			
105 °F	NET CAP.		43.5	40.0	37.2	37.2	48.5	44.6	41.4	41.5	
	TOTAL POWER		4.2	4.1	4.1	4.0	4.6	4.5	4.6	4.5	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	31.3	38.0	37.2	37.2	34.9	42.3	41.4	41.5
			83	27.4	34.1	37.2	37.2	30.6	38.0	41.4	41.5
			80	23.5	30.2	36.2	36.7	26.2	33.6	40.3	40.9
			77	19.6	26.2	32.3	32.8	21.8	29.2	36.0	36.5
			74	15.7	22.3	28.3	28.8	17.4	24.9	31.6	32.2
			71	N/A	18.4	24.4	24.9	N/A	20.5	27.2	27.8
68	N/A	14.5	20.5	21.0	N/A	16.1	22.8	23.4			
115 °F	NET CAP.		41.0	37.6	34.7	35.4	45.7	41.9	38.7	39.4	
	TOTAL POWER		4.6	4.5	4.5	4.5	5.1	5.0	5.1	5.0	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	30.4	37.2	34.7	35.4	33.9	41.4	38.7	39.4
			83	26.5	33.3	34.7	35.4	29.5	37.1	38.7	39.4
			80	22.6	29.3	34.7	34.7	25.2	32.7	38.7	38.7
			77	18.7	25.4	30.8	30.8	20.8	28.3	34.3	34.3
			74	14.7	21.5	26.9	26.8	16.4	24.0	30.0	29.9
			71	N/A	17.6	23.0	22.9	N/A	19.6	25.6	25.6
68	N/A	13.7	19.0	19.0	N/A	15.2	21.2	21.2			
125 °F	NET CAP.		38.5	35.2	32.3	33.6	43.0	39.2	36.0	37.4	
	TOTAL POWER		5.0	5.0	4.9	4.9	5.6	5.5	5.5	5.5	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	29.5	36.3	32.3	33.6	32.9	40.5	36.0	37.4
			83	25.6	32.4	32.3	33.6	28.5	36.1	36.0	37.4
			80	21.7	28.5	33.3	32.7	24.1	31.8	37.1	36.4
			77	17.7	24.6	29.4	28.8	19.8	27.4	32.7	32.1
			74	13.8	20.7	25.4	24.9	15.4	23.0	28.3	27.7
			71	N/A	16.7	21.5	20.9	N/A	18.7	24.0	23.3
68	N/A	12.8	17.6	17.0	N/A	14.3	19.6	19.0			

1. These capacities are net capacities (the indoor fan heat is deducted)

 ALL SENSIBLE CAPACITY

TABLE 7: DYP048 COOLING CAPACITIES - 4 TON

TEMPERATURE OF AIR ON CONDENSER COIL			AIR ON EVAPORATOR COIL								
			1,400 CFM				1,600 CFM				
			WB °F				WB °F				
			72	67	62	57	72	67	62	57	
85 °F	NET CAP. MBH		54.0	49.2	45.6	45.9	55.2	50.4	46.6	46.9	
	TOTAL POWER INPUT kW		3.69	3.66	3.62	3.57	3.85	3.83	3.79	3.73	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	35.8	43.7	45.6	45.9	39.1	47.7	46.6	46.9
			83	31.7	39.6	44.6	45.3	34.5	43	46.6	46.9
			80	27.7	35.6	42.4	43.6	29.8	38.3	45.7	46.9
			77	23.6	31.6	38.4	39.5	25.1	33.7	41	42.3
			74	19.6	27.5	34.3	35.5	20.5	29	36.3	37.6
			71	-	23.5	30.3	31.4	-	24.3	31.7	32.9
68	-	19.4	26.2	27.4	-	19.7	27	28.3			
95 °F	NET CAP. MBH		51.8	46.8	43.8	44.0	51.9	46.9	43.9	44.2	
	TOTAL POWER INPUT kW		4.07	4.04	4.01	3.99	4.21	4.18	4.15	4.12	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	35.4	42.9	43.8	44.0	38.4	46.4	43.9	44.2
			83	31.4	38.9	42.8	43.2	33.8	41.7	43.9	44.2
			80	27.4	34.9	40.9	41.5	29.1	37.1	43.5	44.2
			77	23.3	30.8	36.8	37.5	24.4	32.4	38.8	39.5
			74	19.3	26.8	32.8	33.4	19.8	27.7	34.1	34.8
			71	-	22.7	28.7	29.4	-	23.1	29.5	30.2
68	-	18.7	24.7	25.4	-	18.4	24.8	25.5			
105 °F	NET CAP. MBH		48.7	44.3	41.4	41.7	49.2	44.7	41.8	42.1	
	TOTAL POWER INPUT kW		4.49	4.45	4.38	4.34	4.63	4.59	4.51	4.48	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	34.1	41.3	41.4	41.7	37.1	44.4	41.8	42.1
			83	30.0	37.7	40.7	41.1	32.4	40.6	41.8	42.1
			80	26.0	33.6	38.9	39.4	27.8	35.9	41.6	42.1
			77	22.0	29.6	34.9	35.3	23.1	31.3	36.9	37.4
			74	17.8	25.6	30.8	31.3	18.4	26.6	32.3	32.7
			71	-	21.5	26.8	27.3	-	21.9	27.6	28.1
68	-	17.5	22.8	23.2	-	17.3	22.9	23.4			
115 °F	NET CAP. MBH		45.7	41.8	39.1	39.4	46.4	42.5	39.7	40	
	TOTAL POWER INPUT kW		4.91	4.86	4.74	4.70	5.05	5	4.87	4.83	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	32.7	39.7	39.1	39.4	35.8	42.5	39.7	40
			83	28.7	36.5	38.7	38.9	31.1	39.5	39.7	40
			80	24.6	32.4	37.0	37.2	26.4	34.8	39.7	40
			77	20.6	28.4	32.9	33.2	21.8	30.1	35	35.3
			74	16.6	24.4	28.9	29.1	17.1	25.5	30.4	30.6
			71	-	20.3	24.9	25.1	-	20.8	25.7	26
68	-	16.3	20.8	21.1	-	16.2	21	21.3			
125 °F	NET CAP. MBH		42.7	39.3	36.8	37.0	43.6	40.2	37.6	37.9	
	TOTAL POWER INPUT kW		4.3	5.3	5.1	5.0	5.5	5.4	5.2	5.2	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	31.4	38.0	36.8	37.0	34.5	40.5	37.6	37.9
			83	27.3	35.3	36.7	36.8	29.8	38.4	37.6	37.9
			80	23.3	31.2	35.1	35.1	25.1	33.7	37.6	37.9
			77	19.2	27.2	31.0	31.0	20.5	29	33.2	33.2
			74	15.2	23.1	27.0	27.0	15.8	24.4	28.5	28.5
			71	-	19.1	22.9	23.0	-	19.7	23.8	23.9
68	-	15.1	18.9	18.9	-	15	19.2	19.2			

¹ These capacities are net capacities (the indoor fan heat is deducted).

ALL SENSIBLE CAPACITY

TABLE 8: DYP060 COOLING CAPACITIES - 5 TON

TEMPERATURE OF AIR ON CONDENSER COIL			AIR ON EVAPORATOR COIL								
			1,500 CFM				1,800 CFM				
			WB °F				WB °F				
			72	67	62	57	72	67	62	57	
85 °F	NET CAP. MBH		63.5	57.6	52.7	53.1	64.3	58.3	53.3	53.7	
	TOTAL POWER INPUT KW		4.49	4.44	4.38	4.27	4.68	4.63	4.57	4.45	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	39.4	47.5	52.7	53.1	41.4	49.6	53.3	53.7
			83	35.0	43.2	50.9	53.1	36.1	44.3	52.0	53.7
			80	30.6	38.8	46.5	50.5	30.7	38.9	46.6	50.7
			77	26.3	34.4	42.1	46.2	25.4	33.5	41.2	45.3
			74	21.9	30.0	37.7	41.8	20.0	28.2	35.9	39.9
			71	--	25.7	33.4	37.4	--	22.8	30.5	34.6
68	--	21.3	29.0	33.1	--	17.4	25.1	29.2			
95 °F	NET CAP. MBH		60.6	56.0	52.1	51.5	61.2	56.6	52.6	52.0	
	TOTAL POWER INPUT KW		4.96	4.90	4.80	4.73	5.12	5.05	4.95	4.88	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	38.2	46.6	52.1	51.5	43.3	52.6	52.6	52.0
			83	33.9	42.2	49.8	51.5	38.0	47.2	52.6	52.0
			80	29.5	37.8	45.4	48.7	32.6	41.9	50.3	52.0
			77	25.1	33.5	41.1	44.4	27.3	36.5	44.9	46.7
			74	20.7	29.1	36.7	40.0	21.9	31.1	39.5	41.3
			71	--	24.7	32.3	35.6	--	25.8	34.2	35.9
68	--	20.3	27.9	31.2	--	20.4	28.8	30.6			
105 °F	NET CAP. MBH		57.6	53.3	49.5	49.3	58.4	54.1	50.2	50.0	
	TOTAL POWER INPUT KW		5.52	5.43	5.34	5.27	5.69	5.60	5.51	5.43	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	37.1	45.3	49.5	49.3	42.6	51.8	50.2	50.0
			83	32.7	40.9	48.4	49.3	37.2	46.4	50.2	50.0
			80	28.4	36.6	44.1	46.4	31.8	41.1	49.1	50.0
			77	24.0	32.2	39.8	42.1	26.5	35.7	43.7	44.7
			74	19.6	27.8	35.4	37.7	21.1	30.3	38.3	39.3
			71	--	23.4	31.0	33.3	--	25.0	33.0	33.9
68	--	19.1	26.6	29.0	--	19.6	27.6	28.6			
115 °F	NET CAP. MBH		54.6	50.6	46.9	47.1	55.7	51.6	47.9	48.0	
	TOTAL POWER INPUT KW		6.07	5.97	5.89	5.81	6.26	6.16	6.07	5.99	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	36.0	44.0	46.9	47.1	41.8	51.0	47.9	48.0
			83	31.6	39.7	46.9	47.1	36.4	45.6	47.9	48.0
			80	27.2	35.3	42.9	44.2	31.1	40.3	47.9	48.0
			77	22.8	30.9	38.5	39.8	25.7	34.9	42.5	42.7
			74	18.5	26.5	34.1	35.4	20.3	29.5	37.1	37.3
			71	--	22.2	29.7	31.0	--	24.2	31.8	31.9
68	--	17.8	25.4	26.7	--	18.8	26.4	26.6			
125 °F	NET CAP. MBH		51.6	47.9	44.4	44.9	52.9	49.1	45.5	46.0	
	TOTAL POWER INPUT KW		6.62	6.51	6.43	6.35	6.82	6.71	6.62	6.54	
	Sensible Capacity MBH ¹	Entering Dry Bulb °F	86	34.8	42.8	44.4	44.9	41.0	50.2	45.5	46.0
			83	30.5	38.4	45.5	44.9	35.6	44.8	45.5	46.0
			80	26.1	34.0	41.6	41.9	30.3	39.5	46.7	46.0
			77	21.7	29.6	37.2	37.5	24.9	34.1	41.3	40.7
			74	17.3	25.3	32.8	33.1	19.6	28.7	35.9	35.3
			71	--	20.9	28.4	28.7	--	23.4	30.6	29.9
68	--	16.5	24.1	24.4	--	18.0	25.2	24.6			

¹ These capacities are net capacities (the indoor fan heat is deducted).

 ALL SENSIBLE CAPACITY

TABLE 9: TWO TON AIR PERFORMANCE ¹

MODEL # DYP (Cooling/ Heating)	MTR SPD	EXTERNAL STAIC 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
SIDE SUPPLY AIR PERFORMANCE - 208 VOLT																							
024	HI	-	-	-	-	-	-	-	-	-	-	984	443	894	422	751	390	608	358	-	-	-	
	MED	994	333	947	321	901	309	854	297	774	280	695	263	615	246	-	-	-	-	-	-	-	
	LOW	743	243	700	235	657	226	614	218	-	-	-	-	-	-	-	-	-	-	-	-	-	
SIDE SUPPLY AIR BLOWER PERFORMANCE - 230 VOLT																							
024	HI	-	-	-	-	-	-	-	-	-	-	-	-	929	491	809	473	688	454	-	-	-	
	MED	-	-	-	-	999	353	944	338	865	319	785	299	706	280	-	-	-	-	-	-	-	
	LOW	998	372	906	333	813	294	721	255	651	241	-	-	-	-	-	-	-	-	-	-	-	
BOTTOM SUPPLY AIR BLOWER PERFORMANCE - 208 VOLT																							
024	HI	-	-	-	-	-	-	-	-	-	-	886	398	805	380	676	351	547	322	-	-	-	
	MED	895	300	853	289	811	278	769	267	697	252	625	237	554	221	-	-	-	-	-	-	-	
	LOW	669	219	630	211	591	204	553	196	-	-	-	-	-	-	-	-	-	-	-	-	-	
BOTTOM SUPPLY AIR BLOWER PERFORMANCE - 230 VOLTS																							
024	HI	-	-	-	-	-	-	-	-	-	-	-	-	836	442	728	425	620	409	-	-	-	
	MED	-	-	-	-	899	318	850	304	778	287	707	269	635	252	-	-	-	-	-	-	-	
	LOW	898	335	815	300	732	265	649	230	586	217	-	-	-	-	-	-	-	-	-	-	-	

¹. Above data includes allowances for a dry evaporator coil, gas heat exchanger and no filters. For additional pressure drops, refer to Table 12 and 13.

TABLE 10: SIDE SUPPLY AIR BLOWER PERFORMANCE - 208/230 VOLTS¹

MODEL # DYP	MODE (COOLING / HEATING)	CFM	EXTERNAL STATIC PRESSURE - IWG								
			.20	.30	.40	.50	.60	.70	.80	.90	1.0
			WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS
030	COOLING (FACTORY SETTING)	1000	248	298	325	365	385	411	470	498	500
030	COOLING (FIELD SETTING)	1250	342	385	431	474	510	562	614	657	694
030	HEATING (2 TUBE) (FACTORY SETTING)	850	169	217	237	278	302	334	374	401	431
030	HEATING (3 TUBE) (FACTORY SETTING)	1100	300	338	378	416	447	493	539	576	609
036	COOLING (FACTORY SETTING)	1200	354	396	436	511	548	599	641	677	721
036	COOLING (FIELD SETTING)	1350	442	503	563	606	648	685	721	774	826
036	HEATING (2 TUBE) (FACTORY SETTING)	700	207	231	254	298	320	349	-	-	-
036	HEATING (3 TUBE) (FACTORY SETTING)	1250	383	432	478	543	581	628	-	-	-
036	HEATING (4 TUBE) (FACTORY SETTING)	1350	442	503	563	606	648	685	-	-	-
042	COOLING (FACTORY SETTING)	1350	410	457	504	575	646	687	729	780	830
042	COOLING (FIELD SETTING)	1500	450	500	553	641	729	798	830	872	939
042	HEATING (3 TUBE) (FACTORY SETTING)	1500	450	500	553	641	729	798	830	872	939
042	HEATING (4 TUBE) (FACTORY SETTING)	1275	388	433	478	545	612	652	691	739	787
048	COOLING (FACTORY SETTING)	1400	427	476	525	599	673	716	759	812	865
048	COOLING (FIELD SETTING)	1600	476	532	587	687	786	872	958	994	1030
048	HEATING (3 TUBE) (FACTORY SETTING)	1525	458	511	564	654	744	814	-	-	-
048	HEATING (4 TUBE) (FACTORY SETTING)	1600	476	532	587	687	786	872	-	-	-
048	HEATING (5 TUBE) (FACTORY SETTING)	1600	476	532	587	687	786	872	-	-	-
060	COOLING (FACTORY SETTING)	1500	439	526	559	636	716	748	816	884	941
060	COOLING (FIELD SETTING)	1800	659	809	814	946	1001	1053	1124	1176	1180
060	HEATING (3 TUBE) (FACTORY SETTING)	1500	439	526	559	636	716	748	816	884	941
060	HEATING (4 TUBE) (FACTORY SETTING)	1700	576	757	788	872	929	979	1000	1121	1188
060	HEATING (5 TUBE) (FACTORY SETTING)	1700	576	757	788	872	929	979	1000	1121	1188

¹. Above data includes allowances for a dry coil, gas heat exchanger and no filters. For additional pressure drops, refer to Tables 11 and 12.

TABLE 11: BOTTOM SUPPLY AIR BLOWER PERFORMANCE - 208/230 VOLTS¹

MODEL # DYP	MODE (COOLING / HEATING)	CFM	EXTERNAL STATIC PRESSURE - IWG								
			.20	.30	.40	.50	.60	.70	.80	.90	1.0
			WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS	WATTS
030	COOLING (FACTORY SETTING)	1000	248	298	325	365	385	411	470	498	500
030	COOLING (FIELD SETTING)	1250	342	385	431	474	510	562	614	657	694
030	HEATING (2 TUBE) (FACTORY SETTING)	850	169	217	237	278	302	334	374	401	431
030	HEATING (3 TUBE) (FACTORY SETTING)	1100	300	338	378	416	447	493	539	576	609
036	COOLING (FACTORY SETTING)	1200	354	396	436	511	548	599	641	677	721
036	COOLING (FIELD SETTING)	1350	442	503	563	606	648	685	721	774	826
036	HEATING (2 TUBE) (FACTORY SETTING)	700	207	231	254	298	320	349	-	-	-
036	HEATING (3 TUBE) (FACTORY SETTING)	1250	383	432	478	543	581	628	-	-	-
036	HEATING (4 TUBE) (FACTORY SETTING)	1350	442	503	563	606	648	685	-	-	-
042	COOLING (FACTORY SETTING)	1350	410	457	504	575	646	687	729	780	830
042	COOLING (FIELD SETTING)	1500	450	500	553	641	729	798	830	872	939
042	HEATING (3 TUBE) (FACTORY SETTING)	1500	450	500	553	641	729	798	830	872	939
042	HEATING (4 TUBE) (FACTORY SETTING)	1275	388	433	478	545	612	652	691	739	787
048	COOLING (FACTORY SETTING)	1400	427	476	525	599	673	716	759	812	865
048	COOLING (FIELD SETTING)	1600	476	532	587	687	786	872	958	994	1030
048	HEATING (3 TUBE) (FACTORY SETTING)	1525	458	511	564	654	744	814	-	-	-
048	HEATING (4 TUBE) (FACTORY SETTING)	1600	476	532	587	687	786	872	-	-	-
048	HEATING (5 TUBE) (FACTORY SETTING)	1600	476	532	587	687	786	872	-	-	-
060	COOLING (FACTORY SETTING)	1500	345	487	554	569	654	745	784	835	896
060	COOLING (FIELD SETTING)	1800	567	663	794	917	948	1015	1048	1155	1175
060	HEATING (3 TUBE) (FACTORY SETTING)	1500	345	487	554	569	654	745	784	835	896
060	HEATING (4 TUBE) (FACTORY SETTING)	1700	504	603	698	771	831	1043	1102	1155	1202
060	HEATING (5 TUBE) (FACTORY SETTING)	1700	504	603	698	771	831	1043	1102	1155	1202

¹. Above data includes allowances for a dry coil, gas heat exchanger and no filters. For additional pressure drops, refer to Tables 11 and 12.

TABLE 12: ADDITIONAL STATIC PRESSURE RESISTANCE - 2, 2-1/2, 3 TON

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 ¹	.00	.00	.00	.01	.01	.01	.01	.02	.03	.04	.05	.06
FILTER FRAME KIT	.01	.02	.04	.06	.08	.10	.13	.16	.17	.18	.19	.20

¹ The pressure through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct system is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

TABLE 13: ADDITIONAL STATIC PRESSURE RESISTANCE - 3-1/2, 4 AND 5 TON

DESCRIPTION	RESISTANCE, IWG										
	CFM										
	1,100	1,200	1,300	1,400	1,500	1,600	1,700	1,800	1,900	2,000	
WET EVAPORATOR COIL	.02	.03	.04	.05	.06	.07	.07	.08	.09	.09	
ECONOMIZER ¹	.02	.02	.02	.03	.03	.04	.04	.04	.05	.05	
FILTER FRAME KIT	.04	.04	.05	.05	.06	.07	.08	.09	.10	.11	

¹ The pressure through the economizer is greater for 100% outdoor air than for 100% return air. If the resistance of the return air duct system is less than 0.25 IWG, the unit will deliver less CFM during full economizer operation.

NOTE:
HEAT ANTICIPATOR
SHOULD BE SET AT 0.35
AMPS FOR ALL MODELS.

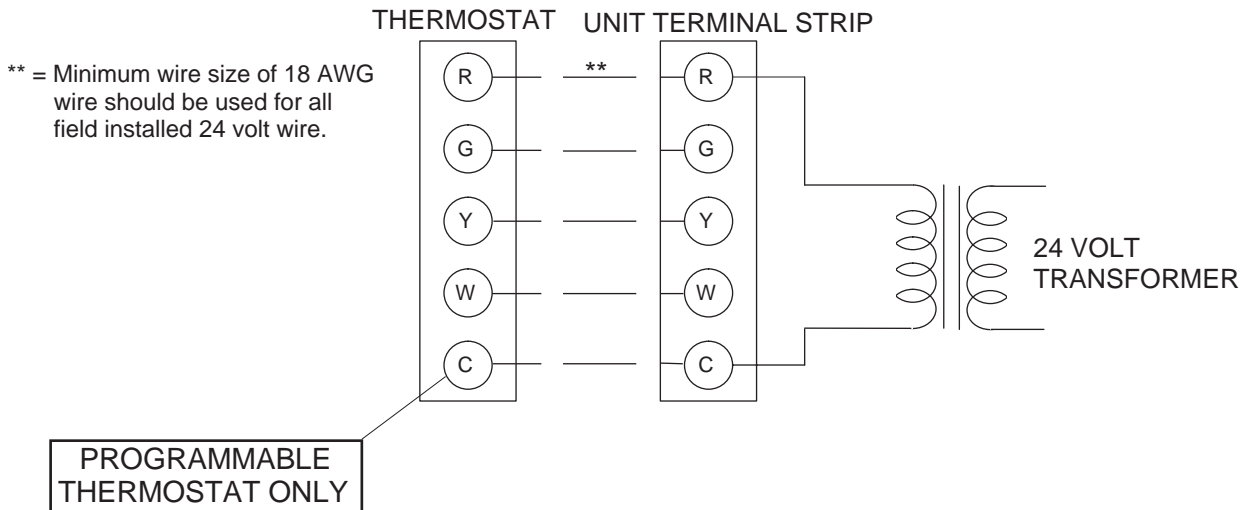


FIGURE 3 - FIELD WIRING DIAGRAM CONTROL WIRING

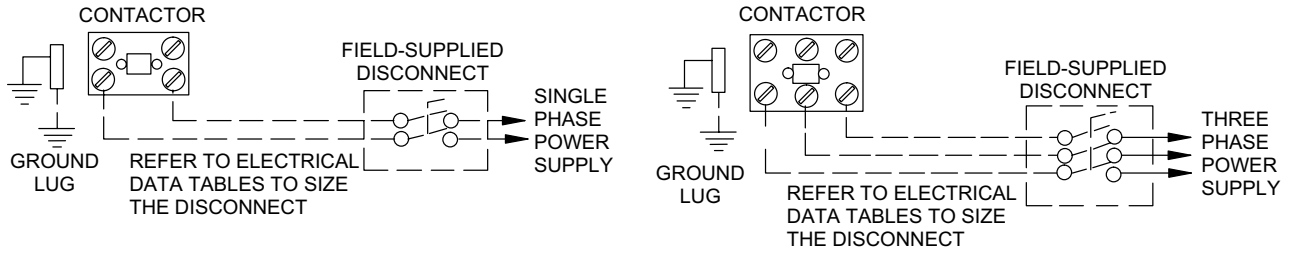


FIGURE 4 - POWER WIRING FIELD DIAGRAM

TABLE 14: ELECTRICAL DATA

MODEL DYP	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							
024	208/230-1-60	187	253	10.2	53.5	1.2	2.6	16.6	20	20	0.96	40
030	208/230-1-60	187	253	12.2	67	1.2	6.8	23.3	30	30	0.96	40
030	208/230-3-60	187	253	7.7	55	1.2	6.8	17.6	25	25	0.96	75
030	460-3-60	432	504	3.8	27	.75	6.8	8.9	15	15	0.96	75
036	208/230-1-60	187	253	15.4	88	1.2	6.8	27.3	35	35	0.96	40
036	208/230-3-60	187	253	10.2	77	1.2	6.8	20.8	25	25	0.96	75
036	460-3-60	432	504	5.1	39	.75	6.8	10.5	15	15	0.96	75
042	208/230-1-60	187	253	17.9	104	1.2	9.1	32.7	40	40	0.96	40
042	208/230-3-60	187	253	12.4	88	1.2	9.1	25.8	35	35	0.96	75
042	460-3-60	432	504	5.8	44	.75	9.1	12.6	15	15	0.96	75
048	208/230-1-60	187	253	23.4	126	1.7	9.1	40.1	50	50	0.96	40
048	208/230-3-60	187	253	12.9	93	1.7	9.1	26.9	35	35	0.96	75
048	460-3-60	432	504	6.4	46.5	1.0	9.1	13.6	15	15	0.96	75
060	208/230-1-60	187	253	25	150	2.8	9.1	43.2	60	60	0.96	40
060	208/230-3-60	187	253	17.3	123	2.8	9.1	33.5	45	45	0.96	75
060	460-3-60	432	504	8.4	70	2.8	9.1	16.5	20	20	0.96	75

1. Rated in accordance with ARI Standard 110, utilization range "A".
2. Dual element, time delay type.

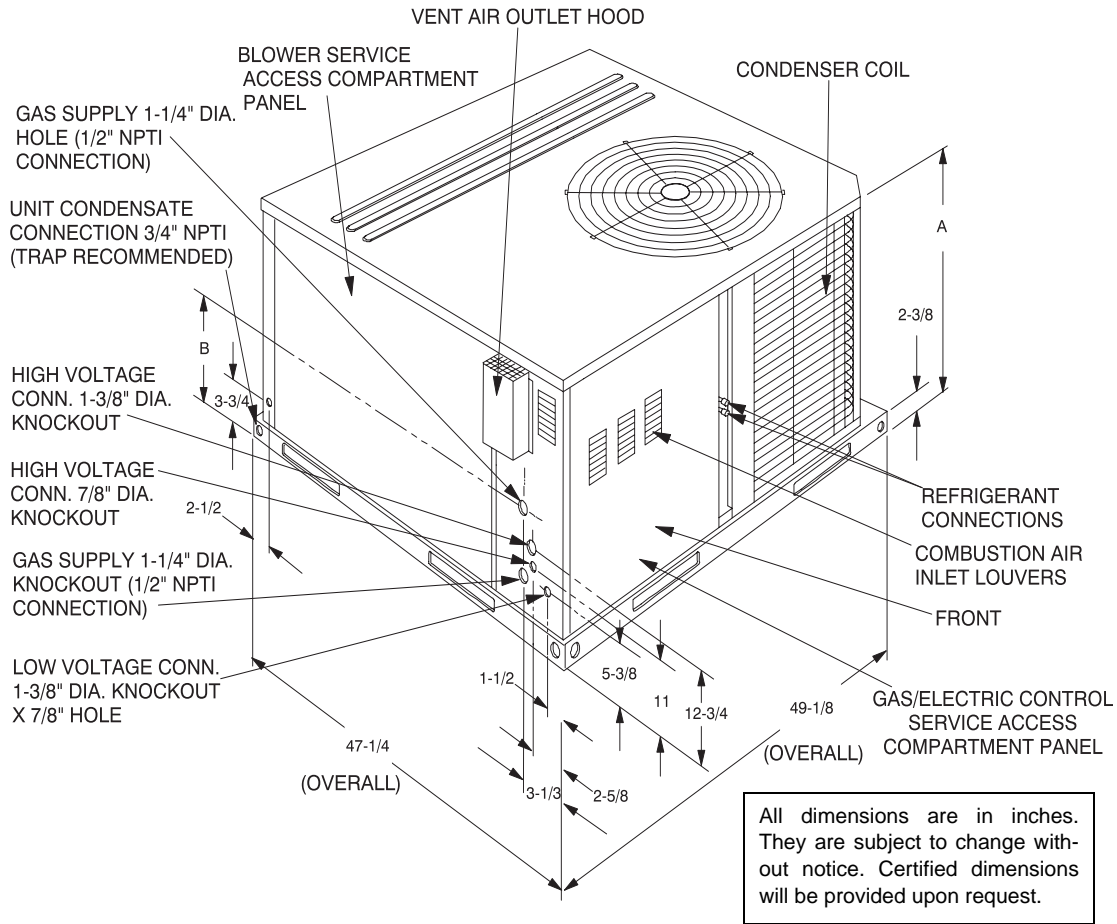


FIGURE 5 - UNIT DIMENSIONS - FRONT

TABLE 15: UNIT DIMENSIONS FRONT

UNIT SIZE	DIMENSION	
	"A"	"B"
024, 030, 036	33-1/2	18-1/4
042, 048, 060	41-1/2	23-1/8

TABLE 16: UNIT MINIMUM CLEARANCES^{1 2}

CLEARANCES	
FRONT	36"
BACK	0"
LEFT SIDE (Filter-Access)	24"
RIGHT SIDE	12"
BELOW UNIT ³	0"
ABOVE UNIT ⁴	36" (For Condenser Air Discharge)

1. A 1" clearance must be provided between any combustible material and the supply air ductwork.
2. The products of combustion must not be allowed to accumulate within a confined space and recirculate.
3. Units may be installed on combustible floors made from wood or class A, B, or C roof covering material.
4. Units must be installed outdoors. Overhanging structures or shrubs should not obstruct condenser air discharge outlet.

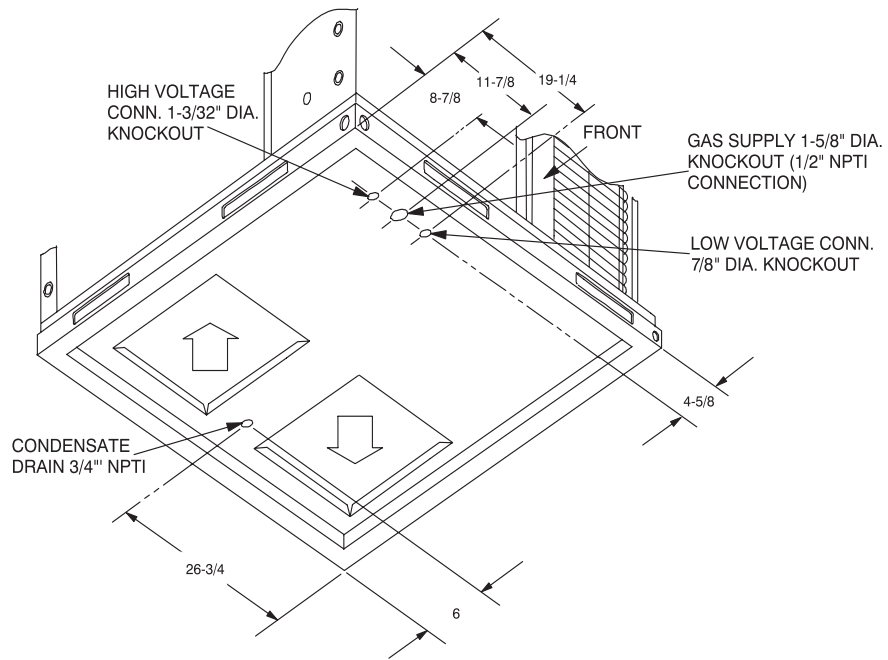


FIGURE 6 - UNIT DIMENSIONS - FRONT & BOTTOM

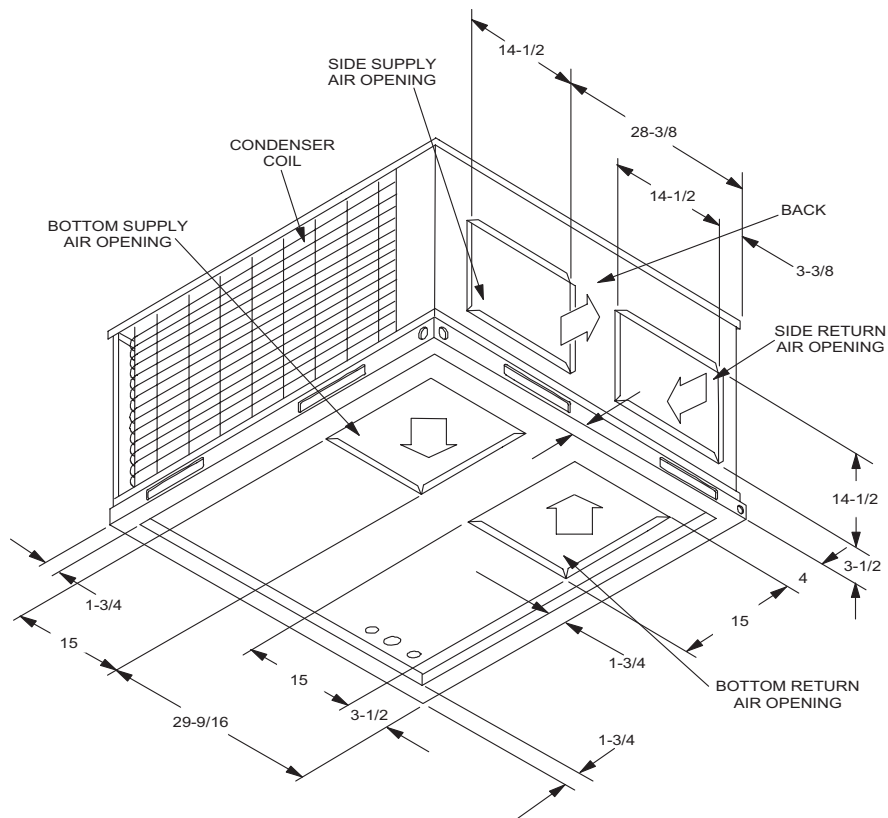


FIGURE 7 - UNIT DIMENSIONS - BACK & BOTTOM

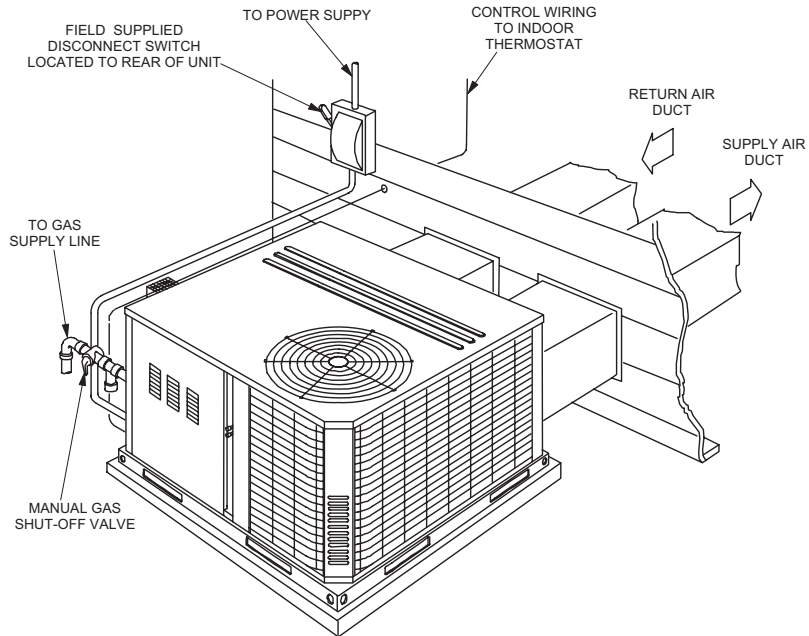


FIGURE 8 - TYPICAL SLAB ON GROUND INSTALLATION

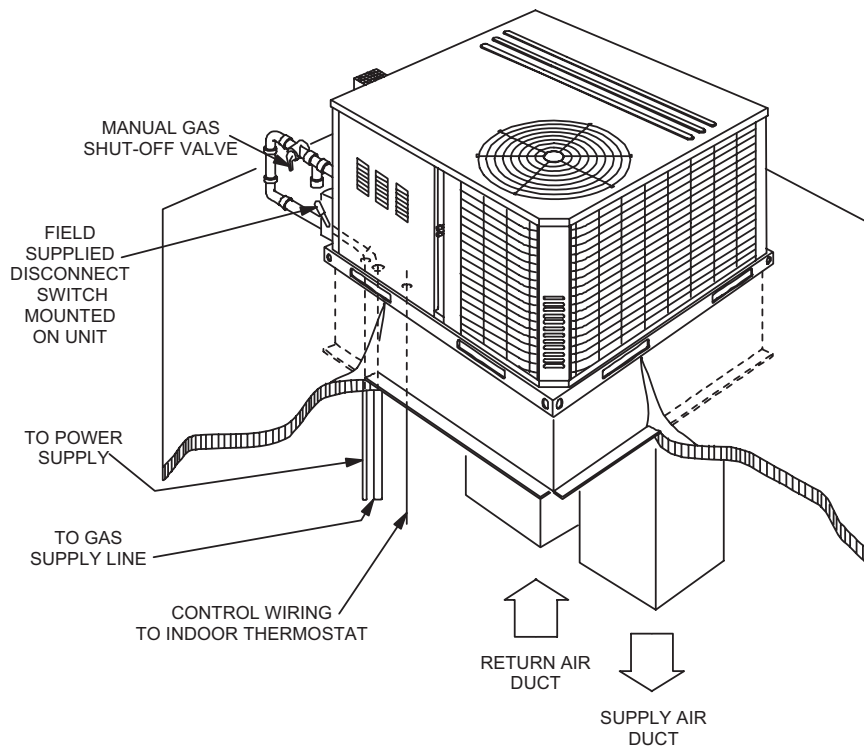


FIGURE 9 - TYPICAL ROOF CURB INSTALLATION

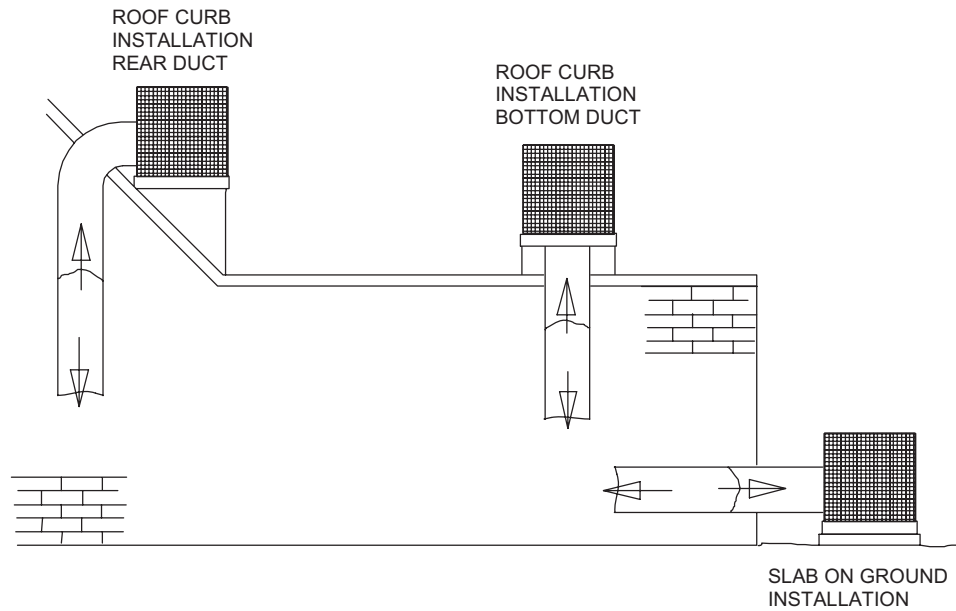


FIGURE 10 - TYPICAL DUCT APPLICATIONS

TABLE 17: UNIT WEIGHTS AND CENTER OF GRAVITY

UNIT SIZE	SHIPPING WEIGHT (lbs.)	OPERATING WEIGHT (lbs.)	CORNER WEIGHTS (location, lbs.)				ECONOMIZER (lbs.)	ROOF CURB (lbs.)
			"A"	"B"	"C"	"D"		
024, 030, 036	400	395	100	96	98	101	40	8" - 70 14" - 75
042, 048, 060	475	470	133	130	102	104		

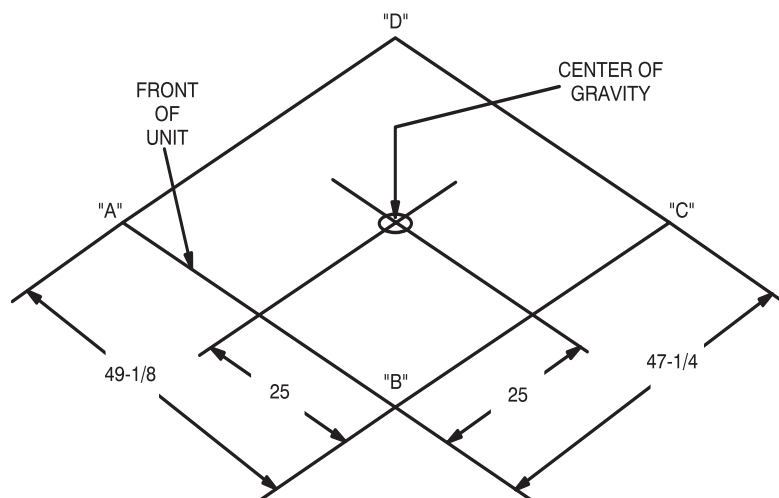


FIGURE 11 - UNIT CENTER OF GRAVITY

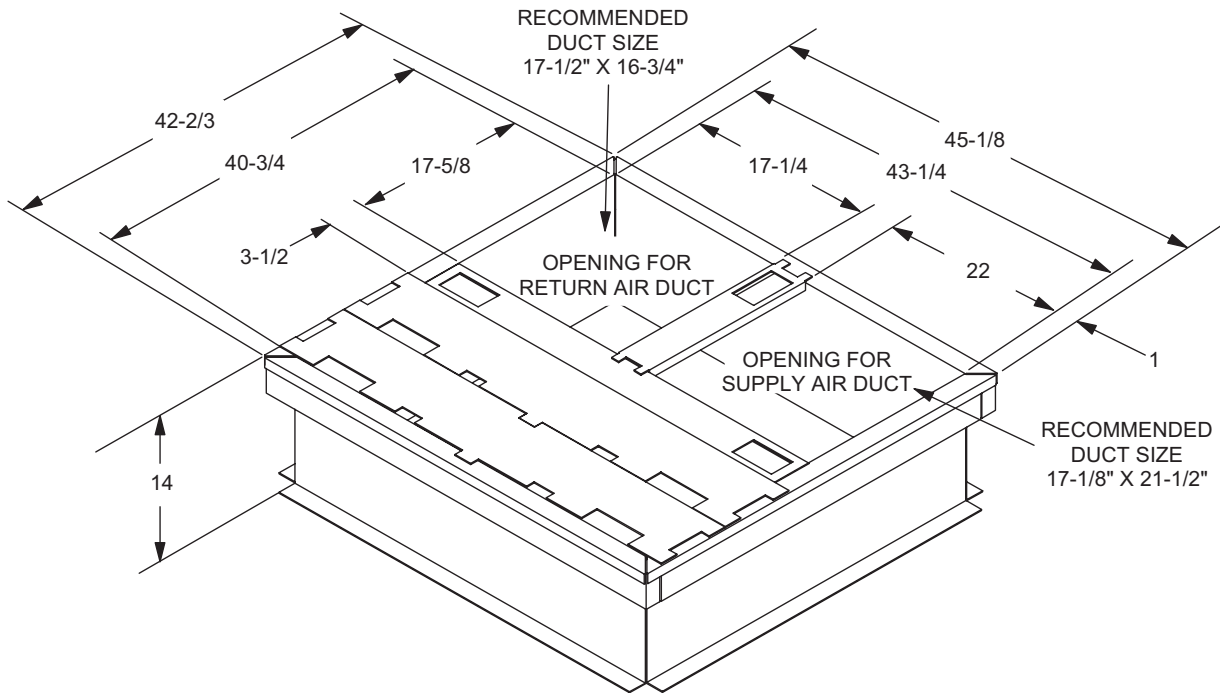


FIGURE 12 - ROOF CURB DIMENSIONS¹

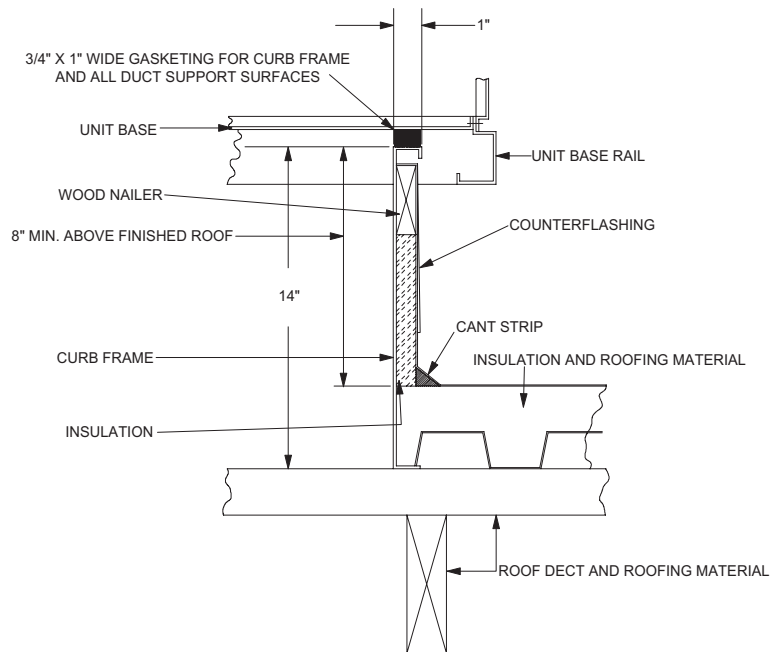


FIGURE 13 - ROOF CURB CROSS SECTION

1. 8" Roof curb also available

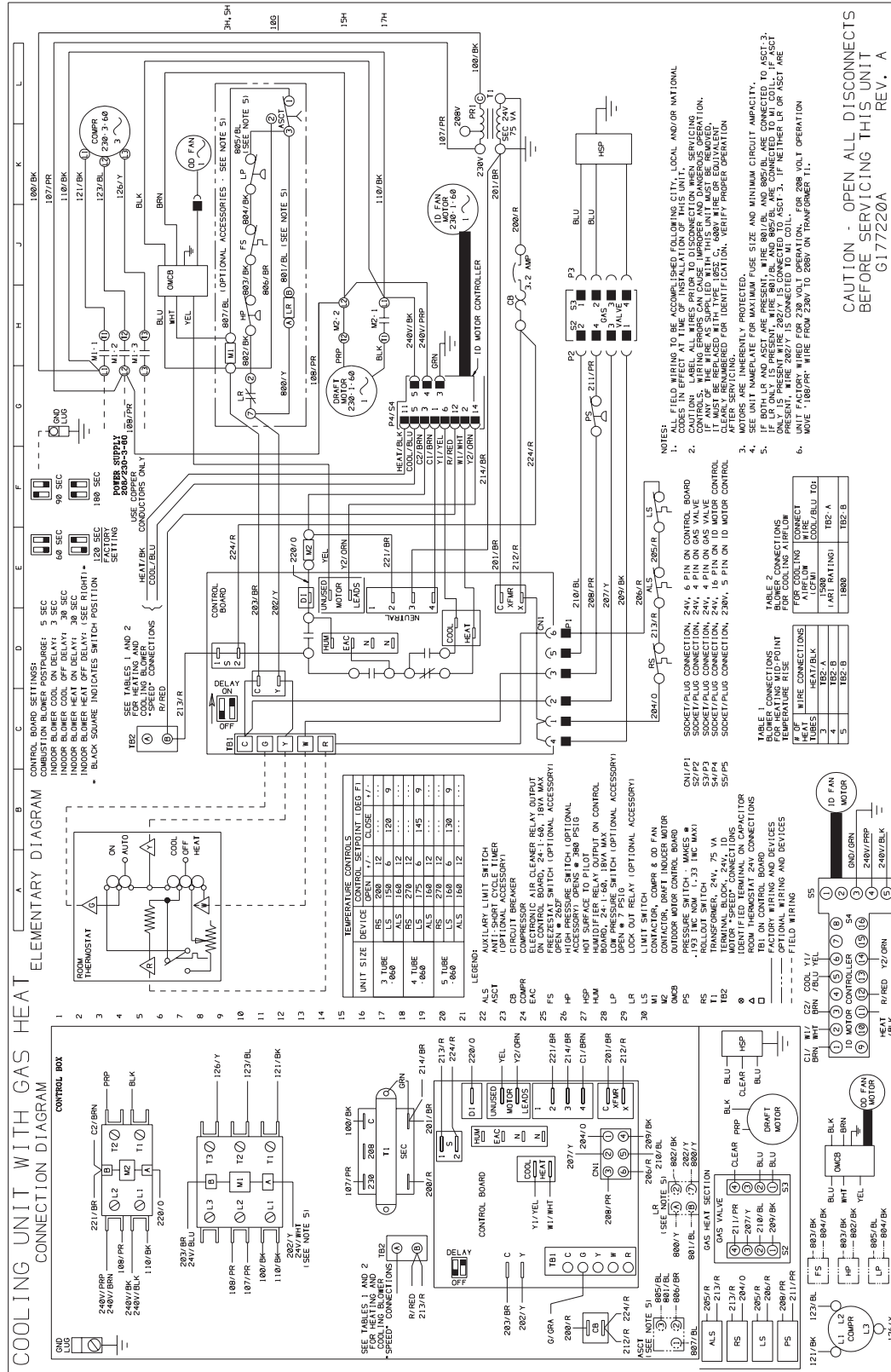



FIGURE 18 - TYPICAL WIRING DIAGRAM D*YP 060 (208/230-3-60 POWER SUPPLY)

TYPICAL WIRING DIAGRAM NOTES

1. All field wiring to be accomplished following city, local and/or national codes in effect at time of installation of this unit.
2. Caution: Label all wires prior to disconnection when servicing controls. Wiring errors can cause improper and dangerous operation if any of the wire as supplied with this unit must be removed it must be replaced with type 105°C, 600V wire or equivalent clearly renumbered for identification. Verify proper operation after servicing.
3. Motors are inherently protected.
4. See unit nameplate for maximum fuse size and minimum circuit ampacity.
5. Select indoor blower cooling speed from unit wiring diagram Table 1. Heating speed is preset at the factory.
6. If both LR and ASCT are present, wire 801/BL and 805/BL are connected to ASCT-3 if LR only is present wire 801/BL and 805/BL are connected to M1 coil. If ASCT only is present wire 202/Y is connected to ASCT-3. If neither LR or ASCT are present, Wire 202/Y is connect to M1 coil.
7. Shunt contact also used with crankcase heater. (Optional).


<p>Open all disconnects before servicing this unit.</p>






LEGEND :	
ALS	AUXILLARY LIMIT SWITCH
ASCT	ANTI-SHORT CYCLE TIMER (OPTIONAL ACCESSORY)
COMPR	COMPRESSOR
EAC	ELECTRIC AIR CLEANER RELAY OUTPUT ON CONTROL BOARD, 24-1-60, 18VA MAX.
FS	FREEZESTAT SWITCH (OPTIONAL ACCESSORY) OPEN @ 25° F
HP	HIGH PRESSURE SWITCH (OPTIONAL ACCESSORY) OPENS @ 380 PSIG
HSP	HOT SURFACE TO PILOT
HUM	HUMIDIFER RELAY OUTPUT ON CONTROL BOARD, 24-1-60, 18VA MAX.
LP	LOW PRESSURE SWITCH (OPTIONAL ACCESSORY) OPEN @ 7 PSIG
LR	LOCK OUT RELAY (OPTIONAL ACCESSORY)
LS	LIMIT SWITCH
M1	CONTACTOR, COMPR. & O.D.FAN
M2	CONTACTOR, DRAFT INDUCER MOTOR
PS	PRESSURE SWITCH MAKES @ .193 IWC NOM. (.33 IWC MAX.)
RC1/RC2	COMPR. START & OUTDOOR FAN RUN CAPACITOR
RS	ROLL OUT SWITCH
T1	TRANSFORMER, 24V, 40VA
T2	TRANSFORMER, 480/240 VOLT
TB2	TERMINAL BLOCK, 24V, I.D. MOTOR "SPEED" CONNECTION IDENTIFIED TERMINAL ON CAPACITOR
	ROOM THERMOSTAT 24V CONNECTIONS
	TB1 ON CONTROL BOARD
	FACTORY WIRING AND DEVICES
	OPTIONAL WIRING AND DEVICES
	FIELD WIRING
DNP LEGEND WIRING DIA.	

FIGURE 21 - TYPICAL WIRING DIAGRAM LEGEND

MECHANICAL SPECIFICATIONS

GENERAL

Units shall be manufactured by Unitary Products Group in an ISO 9001 certified facility. The DYP is a unit that gives you the flexibility and choices you need in today's market. These packaged cooling/heating air conditioners are designed for outdoor installation. Only utility and duct connections are required at the point of installation. The gas fired heaters have aluminized steel tubular heat exchangers and hot surface to pilot ignition. They are available in natural gas with field conversion to propane.

DESCRIPTION

Units shall be factory-assembled, single packaged, Electric Cooling/Gas Heating units, designed for outdoor mounted installation. For SEER ratings, refer to technical literature. 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. The heating performance shall be rated to DOE and GAMA test procedures. Units shall be CSA listed and classified to ANSI Z21.47/CAN/CSA 2.3 standards and UL 1995/CAN/CSA No. 236-M90 conditions.

UNIT CABINET

Unit cabinet shall be constructed of G90 galvanized steel, with exterior surfaces coated with a non-chalking, powdered paint finish, certified at 1000 hours salt spray test per ASTM-B117 standards. The unit top shall be a single piece "Water Shed" design, with drip edges and no-seam corners to provide optimum water integrity. Unit shall have a rigidly mounted condenser coil guard to provide protection from objects and personnel after installation. 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. Cabinet panels shall be "large" size, easily removable for servicing and maintenance, with built-in lift handles. 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. Full perimeter base rails shall be provided to assure reliable transit of equipment, overhead rigging, for truck access and proper sealing on roof curb applications. Base rails shall be removable, when required, to lower unit height. Filters shall be furnished and be accessible through a removable access door, sealed airtight. 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. 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

Fan shall be direct drive, multi-speed design. Job site selected (BHP) brake horsepower shall not exceed the motors nameplate horsepower rating. 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. Bearings shall be sealed and permanently lubricated for longer life and no maintenance. Fan assembly shall be "Slip Track" (slide-out) design for easy removal and cleaning.

OUTDOOR (CONDENSER) FAN ASSEMBLY

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. The outdoor fan motor shall be totally enclosed with permanently lubricated bearings and internally protected against overload conditions.

REFRIGERANT COMPONENTS

Compressors:

- a. Shall be fully hermetic 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.

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 coil shall be of the direct expansion, blow through design, while condenser coil shall be draw through design.

Refrigerant Circuit and Refrigerant Safety Components:

- a. Shall include independent thermal expansion devices (TXV).
- b. Shall include filter/strainer to eliminate any foreign matter.

UNIT OPERATING CHARACTERISTICS

Unit shall be capable of starting and running at 125° F outdoor temperature, exceeding maximum load criteria ARI Standard 210/240. 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.

Subject to change without notice. Printed in U.S.A.
Copyright © 2006 by Unitary Products Group. All rights reserved.

036-21700-002-A-0206
Supersedes: 036-21700-001-A-1005

**Unitary
Products
Group**

**5005
York
Drive**

**Norman
OK
73069**