



Heating and Air Conditioning

TECHNICAL GUIDE

R-410A

AFFINITY™ SERIES

DNX, DNY, DNZ MODELS

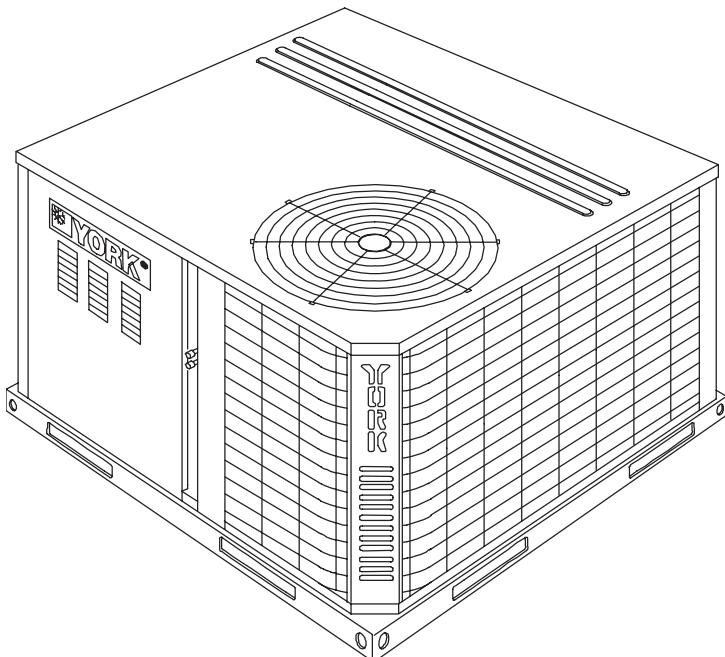
2 - 5 TON

60 Hertz

Description

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

The single or two stage gas-fired heaters have aluminized steel tubular heat exchangers and spark to pilot ignition. They are available in natural gas with field conversion to propane.



Tested in accordance with:



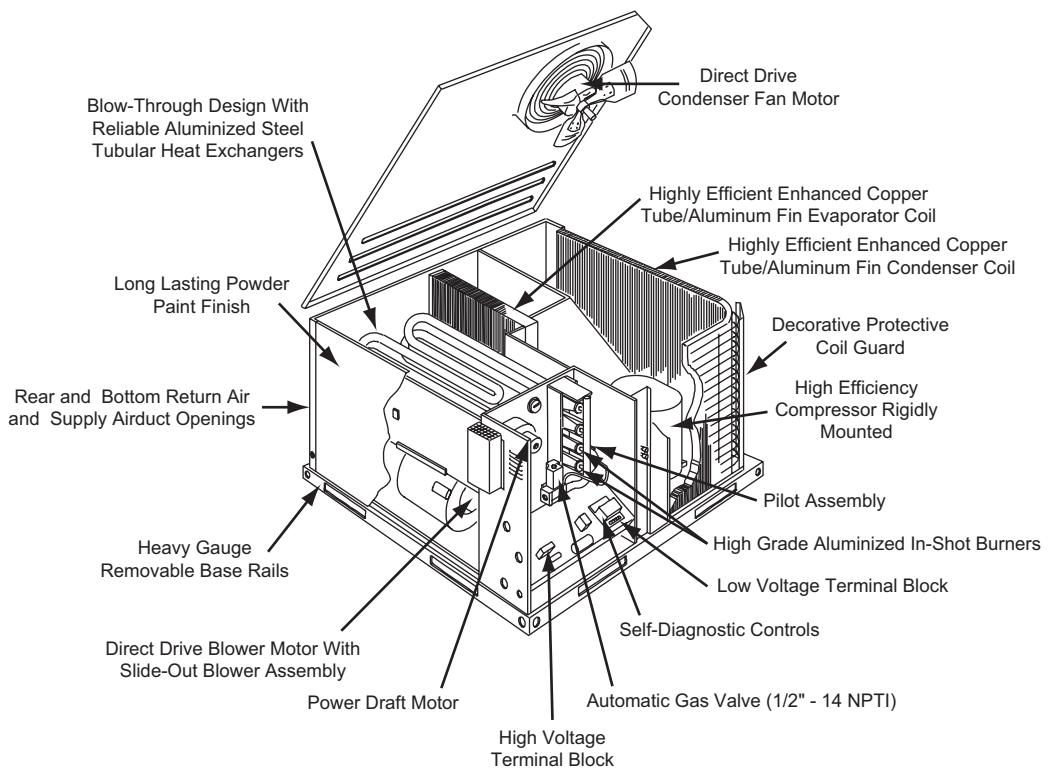
ISO 9001
Certified Quality
Management System

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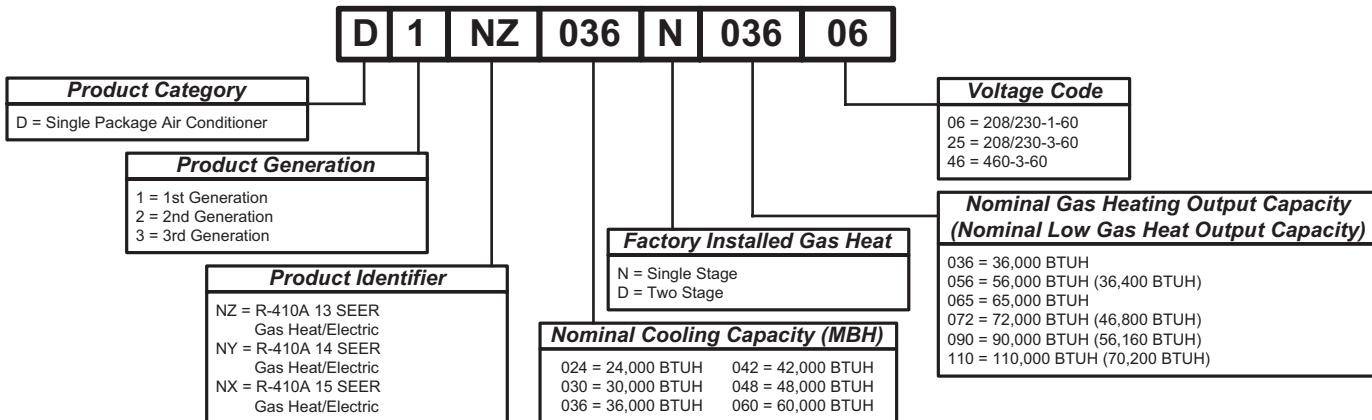
Component Location

Cooling/Gas Unit



Nomenclature

Cooling/Gas Unit



Features and Benefits

Standard Features

- Operating Efficiency** - All gas units provide a minimum AFUE of 80% and SEERS of 13.0 to 16.5. 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 units are completely wired, charged with R-410A 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 its 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 an electrically commutated fan motor. These units easily match all types of applications and provide greater on site flexibility to match comfort requirement. 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, but can be field adjusted. This allows maximum comfort conditions.
- **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.
- **Pressure Switches** - High pressure and low pressure/loss of charge switches standard in all units. When abnormal conditions are sensed through the pressure switches, the unit will lock out preventing any further operation until reset or problem is corrected.
- **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.
- **Spark To Pilot Ignition** - Provides faster heat delivery. This ignition is highly reliable, durable and eliminates nuisance lockouts.
- **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.
- **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 (DNZ Units Only)** - Automatically prevents the compressor from restarting for 5 minutes after cycled off. Not required if Thermostat 2ET07700224 and 2ET04700224 are used. Standard in all DNX and DNY units.
- **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.)

Guide Specifications

General

Units shall be manufactured by York International Unitary Products Group in an ISO 9001 certified facility. YORK's Affinity™ package units give 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 single or two stage gas fired heaters have aluminized steel tubular heat exchangers and spark 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-410A 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 design. 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 +/- 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 shall include:

- a. Shall include independent fixed orifice expansion devices.
- b. Shall include filter,strainer to eliminate any foreign matter.

Gas Heating Section (If Equipped)

Heat exchanger and exhaust system shall be constructed of aluminized steel and shall be designed with induced draft combustion with post purge logic and redundant main gas valve. The heat exchanger shall be of the tubular type, constructed of T1-40 aluminized steel for corrosion resistance and allowing minimum mixed air entering temperature of 40 °F. Burners shall be of the in-shot type, constructed of aluminum-coated steel. All gas piping shall enter the unit cabinet at a single location through either the side or bottom, without any field modifications. An integrated control board shall provide timed control of evaporator fan functioning and burner ignition. Heating section shall be provided with the following minimum protection:

- a. Primary and auxiliary high-temperature limit switches.
- b. Induced draft pressure sensor.
- c. Flame roll out switch (manual reset).
- d. Flame proving controls.

Physical Data

DNZ024-060 Single Stage Gas Heat

Component	Models											
	DNZ024	DNZ030	DNZ036	DNZ042	DNZ048	DNZ060						
Nominal Tonnage	2.0	2.5	3.0	3.5	4.0	5.0						
ARI COOLING PERFORMANCE												
Gross Capacity @ ARI A point (Btu)	26.1	30.4	37.3	42.6	50.3	58.2						
ARI net capacity (Btu)	22.8	29.8	35.6	41.5	47.5	56.0						
EER	11.2	11.5	11.1	11.75	11.4	11.1						
SEER	13.2	13.2	13.0	13.25	13.5	13.0						
Nominal CFM	800	950	1200	1150	1550	1550						
System power (KW)	2.1	2.4	3.2	3.5	4.2	5.0						
Refrigerant type	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A						
Refrigerant charge (lb-oz)	4-8	7-5	7-0	9-0	9-0	9-0						
ARI HEATING PERFORMANCE												
Heating model	36	56	36	56	36	56	72	65	90	65	90	110
Heat input (K Btu)	45	70	45	70	45	70	90	80	108	80	108	135
Heat output (K Btu)	36	56	36	56	36	56	72	64	87	64	87	107
AFUE %	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0	80.0
Steady state efficiency (%)	80	80	80	80	80	80	80	80	80	80	80	80
No. burners	2	3	2	3	2	3	4	3	4	3	4	5
No. stages	1	1	1	1	1	1	1	1	1	1	1	1
Temperature Rise Range (°F)	25-55	30-60	25-55	30-60	25-55	25-55	30-60	25-55	45-75	25-55	35-65	45-75
Gas Limit Setting (°F)	140	160	140	160	140	160	160	140	160	150	175	160
Gas piping connection (in.)	1/2	1/2	1/2	1/2	1/2	1/2						
DIMENSIONS (inches)												
Length	49 1/8	49 1/8	49 1/8	49 1/8	49 1/8	49 1/8						
Width	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4						
Height	33 1/2	33 1/2	33 1/2	41 1/2	41 1/2	41 1/2						
OPERATING WT. (lbs.)	360	395	395	470	470	540						
COMPRESSORS												
Type	Scroll 1-spd											
Quantity	1	1	1	1	1	1						
CONDENSER COIL DATA												
Face area (Sq. Ft.)	11.7	11.7	11.7	14.7	14.7	14.7						
Rows	1	2	2	2	2	2						
Fins per inch	20	16	16	20	20	20						
Tube diameter (in.)	3/8	3/8	3/8	3/8	3/8	3/8						
Circuitry Type	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced						
EVAPORATOR COIL DATA												
Face area (Sq. Ft.)	3.4	3.4	3.4	4.4	4.4	4.4						
Rows	2	3	3	3	3	3						
Fins per inch	15	13	13	16	16	16						
Tube diameter	3/8	3/8	3/8	3/8	3/8	3/8						
Circuitry Type	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced						
Refrigerant control	Orifice	Orifice	Orifice	Orifice	Orifice	TXV						
CONDENSER FAN DATA												
Quantity	1	1	1	1	1	1						
Fan diameter (Inch)	22	22	22	22	22	22						
Type	Prop	Prop	Prop	Prop	Prop	Prop						
Drive type	Direct	Direct	Direct	Direct	Direct	Direct						
No. speeds	1	1	1	1	1	1						
Number of motors	1	1	1	1	1	1						
Motor HP each	1/4	1/4	1/4	1/3	1/3	1/3						
RPM	850	850	850	1100	1100	1100						
Nominal total CFM	2200	2400	2400	3000	3000	3000						
DIRECT DRIVE EVAP FAN DATA												
Quantity	1	1	1	1	1	1						
Fan Size (Inch)	10 x 8	10 x 8	11 x 10	11 x 10	11 x 10	11 x 10						
Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal						
Motor HP each	1/2	3/4	3/4	1	1	1						
RPM	Variable	Variable	Variable	Variable	Variable	Variable						
Frame size	48	48	48	48	48	48						
FILTERS												
Quantity - Size	1 - 20 x 20 x 1	1 - 20 x 20 x 1	1 - 20 x 20 x 1	2 - 20 x 12 x 1	2 - 20 x 12 x 1	2 - 20 x 12 x 1						

DNZ024-060 Two Stage Gas Heat

Component	Models					
	DNZ024	DNZ030	DNZ036	DNZ042	DNZ048	DNZ060
Nominal Tonnage	2.0	2.5	3.0	3.5	4.0	5.0
ARI COOLING PERFORMANCE						
Gross Capacity @ ARI A point (Btu)	26.1	30.4	37.3	42.6	50.3	58.2
ARI net capacity (Btu)	22.8	29.8	35.6	41.5	47.5	56.0
EER	11.2	11.5	11.1	11.75	11.4	11.1
SEER	13.2	13.2	13.0	13.25	13.5	13.0
Nominal CFM	800	950	1200	1150	1550	1550
System power (KW)	2.1	2.4	3.2	3.5	4.2	5.0
Refrigerant type	R-410A	R-410A	R-410A	R-410A	R-410A	R-410A
Refrigerant charge (lb-oz)	4-8	7-5	7-0	9-0	9-0	9-0
ARI HEATING PERFORMANCE						
Heating model	56	56	56	72	90	90
Heat input (K Btu)	70/45.5	70/45.5	70/45.5	90/58.5	108/70.2	108/70.2
Heat output (K Btu)	56/36.4	56/36.4	56/36.4	72/46.8	87/56.2	87/56.2
AFUE %	80.0	80.0	80.0	80.0	80.0	80.0
Steady state efficiency (%)	80	80	80	80	80	80
No. burners	3	3	3	4	4	5
No. stages	2	2	2	2	2	2
Temperature Rise Range (°F)	30-60	30-60	25-55	30-60	45-75	35-65
Gas Limit Setting (°F)	160	160	160	160	175	170
Gas piping connection (in.)	1/2	1/2	1/2	1/2	1/2	1/2
DIMENSIONS (inches)						
Length	49 1/8	49 1/8	49 1/8	49 1/8	49 1/8	49 1/8
Width	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4	47 1/4
Height	33 1/2	33 1/2	33 1/2	41 1/2	41 1/2	41 1/2
OPERATING WT. (lbs.)	360	395	395	470	470	540
COMPRESSORS						
Type	Scroll 1-spd					
Quantity	1	1	1	1	1	1
CONDENSER COIL DATA						
Face area (Sq. Ft.)	11.7	11.7	11.7	14.7	14.7	14.7
Rows	1	2	2	2	2	2
Fins per inch	20	16	16	20	20	20
Tube diameter (in.)	3/8	3/8	3/8	3/8	3/8	3/8
Circuitry Type	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced
EVAPORATOR COIL DATA						
Face area (Sq. Ft.)	3.4	3.4	3.4	4.4	4.4	4.4
Rows	2	3	3	3	3	3
Fins per inch	15	13	13	16	16	16
Tube diameter	3/8	3/8	3/8	3/8	3/8	3/8
Circuitry Type	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced	Interlaced
Refrigerant control	Orifice	Orifice	Orifice	Orifice	TXV	TXV
CONDENSER FAN DATA						
Quantity	1	1	1	1	1	1
Fan diameter (Inch)	22	22	22	22	22	22
Type	Prop	Prop	Prop	Prop	Prop	Prop
Drive type	Direct	Direct	Direct	Direct	Direct	Direct
No. speeds	1	1	1	1	1	1
Number of motors	1	1	1	1	1	1
Motor HP each	1/4	1/4	1/4	1/3	1/3	1/3
RPM	850	850	850	1100	1100	1100
Nominal total CFM	2200	2400	2400	3000	3000	3000
DIRECT DRIVE EVAP FAN DATA						
Quantity	1	1	1	1	1	1
Fan Size (Inch)	10 x 8	10 x 8	11 x 10	11 x 10	11 x 10	11 x 10
Type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Motor HP each	1/2	3/4	3/4	1	1	1
RPM	Variable	Variable	Variable	Variable	Variable	Variable
Frame size	48	48	48	48	48	48
FILTERS						
Quantity - Size	1 - 20 x 20 x 1	1 - 20 x 20 x 1	1 - 20 x 20 x 1	2 - 20 x 12 x 1	2 - 20 x 12 x 1	2 - 20 x 12 x 1

DNZ, DNY and DNX Unit Limitations

Size (Tons)	Model	Unit Voltage	Unit Limitations		
			Applied Voltage		Outdoor DB Temp
			Min	Max	
024 (2.0)	DNZ	208/230-1-60	187	252	125
	DNY DNX	208/230-1-60	187	252	115
030 (2.5)	DNZ	208/230-1-60	187	252	125
		208/230-3-60	187	252	125
		460-3-60	432	504	125
036 (3.0)	DNZ	208/230-1-60	187	252	125
		208/230-3-60	187	252	125
		460-3-60	432	504	125
	DNY DNX	208/230-1-60	187	252	115
		208/230-3-60	187	252	115
		460-3-60	432	504	115
042 (3.5)	DNZ	208/230-1-60	187	252	125
		208/230-3-60	187	252	125
		460-3-60	432	504	125
048 (4.0)	DNZ	208/230-1-60	187	252	125
		208/230-3-60	187	252	125
		460-3-60	432	504	125
	DNY DNX	208/230-1-60	187	252	115
		208/230-3-60	187	252	115
		460-3-60	432	504	115
060 (5.0)	DNZ	208/230-1-60	187	252	125
		208/230-3-60	187	252	125
		460-3-60	432	504	125
	DNY	208/230-1-60	187	252	115
		208/230-3-60	187	252	115
		460-3-60	432	504	115

DNZ024 (2.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
600	77	22.3	2.3	10.3	8.2	6.1	-	-	-	20.7	2.5	9.3	7.3	5.3	-	-	-
	72	19.9	2.2	13.0	10.9	8.8	6.7	-	-	18.0	2.5	11.8	9.8	7.7	5.7	-	-
	67	17.5	2.2	15.8	13.7	11.6	9.5	7.4	-	15.2	2.4	14.2	12.2	10.2	8.1	6.1	-
	62	15.7	2.2	15.7	15.5	13.4	11.4	9.3	7.2	13.4	2.4	13.4	13.3	11.2	9.2	7.2	5.2
	57	16.5	2.2	16.5	16.2	14.1	12.0	9.9	7.8	14.9	2.4	14.9	14.4	12.1	10.1	8.1	6.0
700	77	22.9	2.4	13.8	9.6	6.8	-	-	-	21.5	2.6	13.8	8.9	6.1	-	-	-
	72	20.5	2.4	15.5	12.7	9.9	7.1	-	-	18.6	2.6	14.6	11.7	8.9	6.1	-	-
	67	18.0	2.4	17.1	15.8	13.0	10.2	7.4	-	15.8	2.6	15.3	14.6	11.8	9.0	6.1	-
	62	16.2	2.4	16.2	16.1	15.0	12.2	9.4	6.6	13.9	2.6	13.9	13.9	13.1	10.3	7.4	4.6
	57	17.0	2.3	17.0	16.8	15.7	12.9	10.1	7.3	15.4	2.6	15.4	15.2	14.0	11.3	8.4	5.6
800	77	23.6	2.6	17.4	11.0	7.5	-	-	-	22.3	2.8	18.3	10.5	6.9	-	-	-
	72	21.0	2.5	17.9	14.4	10.9	7.4	-	-	19.3	2.8	17.3	13.7	10.1	6.6	-	-
	67	18.5	2.5	18.5	17.8	14.3	10.8	7.3	-	16.4	2.8	16.4	16.4	13.3	9.8	6.2	-
	62	16.6	2.5	16.6	16.6	16.6	13.1	9.6	6.1	14.4	2.7	14.4	14.4	14.4	11.4	7.7	4.1
	57	17.4	2.5	17.4	17.4	17.4	13.9	10.4	6.9	16.0	2.7	16.0	16.0	15.9	12.4	8.8	5.2
900	72	21.4	2.6	19.5	15.7	11.9	8.0	-	-	19.8	2.9	18.9	15.1	11.2	7.4	-	-
	67	18.9	2.6	18.9	18.5	15.6	11.7	7.9	-	16.7	2.8	16.7	16.7	14.8	10.9	7.0	-
	62	16.9	2.6	16.9	16.9	16.9	13.1	9.3	5.4	14.8	2.8	14.8	14.8	14.8	11.2	7.3	3.4
	57	17.8	2.5	17.8	17.8	17.7	13.9	10.1	6.3	16.3	2.8	16.3	16.3	16.3	12.5	8.6	4.8
	72	21.9	2.7	21.1	17.0	12.8	8.7	-	-	20.2	2.9	20.2	16.4	12.3	8.2	-	-
1000	67	19.2	2.6	19.2	19.2	16.8	12.6	8.5	-	17.1	2.9	17.1	17.1	16.2	12.0	7.9	-
	62	17.3	2.6	17.3	17.3	17.3	13.1	9.0	4.8	15.1	2.9	15.1	15.1	15.1	11.0	6.9	2.8
	57	18.1	2.6	18.1	18.1	18.1	13.9	9.8	5.6	16.7	2.9	16.7	16.7	16.7	12.6	8.5	4.3

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

DNZ030 (2.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
750	77	29.0	3.2	13.1	10.5	7.9	-	-	-	27.0	3.5	12.3	9.7	7.2	-	-	-
	72	26.4	3.2	17.5	14.9	12.2	9.6	-	-	24.2	3.5	16.4	13.8	11.3	8.8	-	-
	67	23.9	3.2	21.9	19.2	16.6	14.0	11.4	-	21.4	3.5	20.5	17.9	15.4	12.9	10.3	-
	62	22.5	3.1	22.5	21.9	19.3	16.7	14.1	11.5	20.5	3.5	20.5	19.8	17.3	14.8	12.2	9.7
	57	22.8	3.1	22.8	22.2	19.6	17.0	14.4	11.7	20.9	3.5	20.9	20.1	17.5	15.0	12.4	9.9
875	77	29.4	3.2	16.5	11.9	8.7	-	-	-	27.5	3.6	16.6	11.2	8.1	-	-	-
	72	26.9	3.2	19.9	16.7	13.5	10.3	-	-	24.6	3.6	19.0	15.8	12.6	9.5	-	-
	67	24.3	3.2	23.3	21.5	18.3	15.1	11.9	-	21.8	3.6	21.4	20.4	17.2	14.0	10.9	-
	62	22.8	3.2	22.8	22.6	21.3	18.1	14.9	11.6	20.9	3.5	20.9	20.5	19.3	16.2	13.0	9.8
	57	23.2	3.2	23.2	22.9	21.6	18.4	15.2	12.0	21.3	3.5	21.3	20.8	19.6	16.5	13.2	10.1
1000	77	29.9	3.3	19.9	13.3	9.5	-	-	-	27.9	3.6	20.8	12.7	8.9	-	-	-
	72	27.3	3.3	22.3	18.5	14.7	10.9	-	-	25.0	3.6	21.5	17.7	13.9	10.1	-	-
	67	24.7	3.3	24.7	23.8	20.0	16.2	12.4	-	22.1	3.6	22.1	22.1	19.0	15.2	11.4	-
	62	23.2	3.2	23.2	23.2	23.2	19.4	15.6	11.8	21.2	3.6	21.2	21.2	21.2	17.7	13.8	10.0
	57	23.6	3.2	23.6	23.6	23.6	19.8	16.0	12.2	21.6	3.6	21.6	21.6	18.0	14.0	10.2	-
1125	72	27.5	3.4	24.6	20.2	15.8	11.5	-	-	25.2	3.7	24.0	19.6	15.1	10.7	-	-
	67	24.9	3.4	24.9	24.4	21.5	17.1	12.7	-	22.3	3.7	22.3	22.3	20.6	16.2	11.7	-
	62	23.4	3.3	23.4	23.4	23.4	19.0	14.7	10.3	21.4	3.7	21.4	21.4	21.4	17.1	12.6	8.1
	57	23.8	3.3	23.8	23.8	23.8	19.4	15.0	10.7	21.8	3.7	21.8	21.8	17.5	12.9	8.5	-
1250	72	27.8	3.5	26.8	21.9	16.9	12.0	-	-	25.4	3.8	25.4	21.4	16.3	11.2	-	-
	67	25.1	3.5	25.1	25.1	23.0	18.0	13.1	-	22.5	3.8	22.5	22.5	22.2	17.1	12.1	-
	62	23.6	3.4	23.6	23.6	23.6	18.7	13.7	8.8	21.5	3.8	21.5	21.5	21.5	16.5	11.4	6.3
	57	24.0	3.4	24.0	24.0	24.0	19.0	14.1	9.1	22.0	3.8	22.0	22.0	22.0	16.9	11.8	6.8

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

DNZ036 (3.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
900	77	36.4	3.8	17.9	14.8	11.7	-	-	-	34.7	4.2	17.4	14.3	11.3	-	-	-
	72	32.2	3.8	22.8	19.7	16.6	13.4	-	-	29.7	4.2	21.6	18.6	15.5	12.5	-	-
	67	27.9	3.8	27.8	24.6	21.5	18.3	15.2	-	24.6	4.2	24.6	22.8	19.8	16.8	13.7	-
	62	26.9	3.7	26.9	26.9	25.3	22.1	19.0	15.9	24.6	4.2	24.6	24.6	22.9	19.9	16.9	13.8
	57	27.3	3.7	27.3	27.3	25.8	22.7	19.6	16.4	24.9	4.2	24.9	24.9	23.2	20.1	17.1	14.1
1050	77	37.4	3.8	21.8	16.2	12.3	-	-	-	35.8	4.2	22.4	15.9	12.1	-	-	-
	72	33.0	3.8	25.2	21.4	17.5	13.7	-	-	30.7	4.2	24.3	20.5	16.7	12.9	-	-
	67	28.7	3.8	28.6	26.5	22.7	18.8	15.0	-	25.5	4.2	25.5	25.0	21.2	17.4	13.6	-
	62	27.7	3.8	27.7	27.7	26.7	22.9	19.0	15.2	25.4	4.2	25.4	25.4	24.6	20.9	17.0	13.2
	57	28.0	3.8	28.0	28.0	27.3	23.5	19.6	15.8	25.7	4.2	25.7	25.7	24.9	21.2	17.3	13.5
1200	77	38.5	3.9	25.7	17.5	13.0	-	-	-	37.0	4.2	27.4	17.5	12.9	-	-	-
	72	33.9	3.9	27.6	23.0	18.5	13.9	-	-	31.7	4.2	26.9	22.3	17.8	13.2	-	-
	67	29.4	3.9	29.4	28.5	23.9	19.4	14.8	-	26.3	4.3	26.3	26.3	22.7	18.1	13.5	-
	62	28.4	3.9	28.4	28.4	28.1	23.6	19.0	14.5	26.2	4.2	26.2	26.2	21.9	17.2	12.6	-
	57	28.8	3.9	28.8	28.8	28.8	24.2	19.7	15.1	26.6	4.2	26.6	26.6	22.3	17.5	12.9	-
1350	72	34.5	4.0	30.4	25.1	19.9	14.6	-	-	32.4	4.3	30.1	24.8	19.5	14.1	-	-
	67	29.9	4.0	29.9	29.5	25.8	20.5	15.3	-	26.9	4.3	26.9	26.9	24.9	19.5	14.2	-
	62	28.9	4.0	28.9	28.9	28.8	23.5	18.3	13.0	26.8	4.3	26.8	26.8	21.6	16.2	10.9	-
	57	29.3	4.0	29.3	29.3	29.3	24.0	18.8	13.5	27.2	4.3	27.2	27.2	22.0	16.5	11.2	-
1500	72	35.1	4.2	33.2	27.2	21.3	15.4	-	-	33.1	4.4	33.1	27.3	21.2	15.1	-	-
	67	30.4	4.2	30.4	30.4	27.6	21.7	15.7	-	27.5	4.4	27.5	27.5	20.9	14.9	-	-
	62	29.4	4.1	29.4	29.4	29.4	23.5	17.5	11.6	27.4	4.4	27.4	27.4	21.3	15.2	9.1	-
	57	29.8	4.1	29.8	29.8	29.8	23.8	17.9	12.0	27.8	4.4	27.8	27.8	21.7	15.6	9.5	-

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

DNZ042 (3.5 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
1150	77	41.0	4.2	19.4	15.4	11.3	-	-	-	38.2	4.5	18.8	14.9	11.0	-	-	-
	72	37.4	4.1	26.5	22.5	18.5	14.5	-	-	34.2	4.5	25.4	21.5	17.6	13.7	-	-
	67	33.7	4.1	33.6	29.6	25.6	21.6	17.6	-	30.1	4.4	30.1	28.1	24.2	20.4	16.5	-
	62	32.3	3.9	32.3	32.3	29.3	25.3	21.3	17.3	29.5	4.2	29.5	29.5	26.8	22.9	19.1	15.2
	57	32.6	4.0	32.6	32.6	29.6	25.6	21.6	17.6	29.8	4.4	29.8	29.8	27.1	23.2	19.4	15.5
1175	77	41.5	4.3	22.3	16.3	12.1	-	-	-	38.8	4.6	22.7	16.0	11.7	-	-	-
	72	37.8	4.2	28.2	23.9	19.6	15.3	-	-	34.7	4.6	27.2	23.0	18.8	14.6	-	-
	67	34.1	4.2	34.1	31.5	27.2	22.9	18.6	-	30.6	4.5	30.6	30.0	25.8	21.6	17.4	-
	62	32.7	4.0	32.7	32.7	31.2	26.9	22.6	18.3	29.9	4.3	29.9	29.9	28.6	24.4	20.1	15.9
	57	33.0	4.1	33.0	33.0	31.5	27.2	22.9	18.6	30.3	4.5	30.3	30.3	28.9	24.8	20.4	16.2
1200	77	42.0	4.4	25.2	17.3	12.8	-	-	-	39.3	4.7	26.6	17.0	12.4	-	-	-
	72	38.3	4.3	29.9	25.3	20.8	16.2	-	-	35.2	4.7	29.1	24.5	19.9	15.4	-	-
	67	34.5	4.3	34.5	33.3	28.8	24.2	19.7	-	31.1	4.6	31.1	31.1	27.4	22.8	18.3	-
	62	33.1	4.1	33.1	33.1	33.0	28.5	23.9	19.4	30.4	4.4	30.4	30.4	30.3	25.9	21.2	16.6
	57	33.4	4.2	33.4	33.4	33.3	28.8	24.2	19.7	30.7	4.6	30.7	30.7	30.7	26.4	21.5	17.0
1475	72	39.0	4.4	33.9	28.2	22.5	16.7	-	-	36.0	4.8	33.3	27.4	21.6	15.8	-	-
	67	35.2	4.4	35.2	34.6	31.1	25.4	19.6	-	31.8	4.8	31.8	31.8	29.7	23.9	18.0	-
	62	33.7	4.2	33.7	33.7	33.7	27.9	22.2	16.4	31.1	4.5	31.1	31.1	25.3	19.4	13.6	-
	57	34.0	4.3	34.0	34.0	34.0	28.2	22.5	16.7	31.4	4.7	31.4	31.4	25.7	19.8	13.9	-
1750	72	39.7	4.6	38.0	31.1	24.1	17.2	-	-	36.9	4.9	36.9	30.4	23.3	16.2	-	-
	67	35.8	4.5	35.8	35.8	33.5	26.5	19.6	-	32.6	4.9	32.6	32.6	32.0	24.9	17.8	-
	62	34.3	4.4	34.3	34.3	34.3	27.4	20.4	13.5	31.8	4.7	31.8	31.8	31.8	24.7	17.6	10.5
	57	34.6	4.5	34.6	34.6	34.6	27.7	20.7	13.8	32.2	4.8	32.2	32.2	32.2	25.1	18.0	10.9

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

DNZ048 (4.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
1200	77	45.1	5.0	24.8	19.5	14.3	-	-	-	40.9	5.4	24.0	18.7	13.4	-	-	-
	72	42.0	4.9	31.6	26.3	21.1	15.8	-	-	38.2	5.4	30.5	25.3	20.0	14.7	-	-
	67	38.9	4.8	38.4	33.1	27.8	22.6	17.3	-	35.6	5.3	35.6	31.8	26.6	21.3	16.0	-
	62	36.5	4.8	36.5	36.5	32.1	26.8	21.6	16.3	34.3	5.2	34.3	34.3	30.2	24.9	19.6	14.3
	57	37.4	4.7	37.4	36.9	31.6	26.4	21.1	15.8	35.5	5.0	35.5	35.2	30.0	24.7	19.4	14.1
1400	77	46.1	5.1	30.3	21.5	15.5	-	-	-	41.8	5.5	30.6	20.6	14.6	-	-	-
	72	42.9	5.0	34.9	28.9	22.9	16.9	-	-	39.1	5.5	33.9	27.8	21.8	15.7	-	-
	67	39.8	4.9	39.5	36.3	30.2	24.2	18.2	-	36.4	5.4	36.4	35.0	29.0	22.9	16.9	-
	62	37.3	4.9	37.3	37.3	34.9	28.9	22.8	16.8	35.1	5.3	35.1	35.1	32.9	26.9	20.8	14.8
	57	38.2	4.8	38.2	38.0	34.3	28.3	22.3	16.3	36.3	5.1	36.3	36.2	32.7	26.7	20.6	14.5
1600	77	47.1	5.2	35.8	23.5	16.7	-	-	-	42.7	5.6	37.2	22.6	15.8	-	-	-
	72	43.8	5.1	38.2	31.4	24.7	17.9	-	-	39.9	5.6	37.2	30.4	23.6	16.8	-	-
	67	40.6	5.0	40.6	39.4	32.6	25.9	19.1	-	37.2	5.5	37.2	37.2	31.4	24.6	17.7	-
	62	38.0	5.0	38.0	38.0	37.6	30.9	24.1	17.4	35.8	5.4	35.8	35.8	35.6	28.9	22.0	15.2
	57	39.0	4.9	39.0	37.1	30.3	23.6	16.8	-	37.1	5.1	37.1	37.1	35.4	28.7	21.8	15.0
1750	72	43.8	5.2	40.6	33.2	25.9	18.5	-	-	39.7	5.7	39.5	32.1	24.7	17.2	-	-
	67	40.6	5.2	40.6	40.0	34.2	26.9	19.5	-	37.0	5.6	37.0	37.0	32.8	25.4	17.9	-
	62	38.0	5.2	38.0	38.0	37.8	30.5	23.1	15.8	35.7	5.5	35.7	35.7	35.6	28.2	20.7	13.3
	57	39.0	5.1	39.0	39.0	38.0	30.7	23.3	16.0	36.9	5.3	36.9	36.9	36.1	28.7	21.2	13.8
	72	43.8	5.4	42.9	35.0	27.0	19.1	-	-	39.5	5.8	39.5	33.8	25.7	17.7	-	-
1900	67	40.6	5.3	40.6	40.6	35.8	27.8	19.9	-	36.8	5.7	36.8	36.8	34.2	26.2	18.1	-
	62	38.0	5.3	38.0	38.0	38.0	30.1	22.1	14.2	35.5	5.6	35.5	35.5	35.5	27.5	19.4	11.4
	57	39.0	5.2	39.0	39.0	39.0	31.1	23.1	15.2	36.8	5.4	36.8	36.8	36.8	28.7	20.7	12.6

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

DNZ060 (5.0 Ton) (Continued)

Air on Evaporator Coil		Temperature of Air on Condenser Coil															
		Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)						Net Capacity ¹ (MBh)	Total Input (kW) ²	Sensible Capacity (MBh)					
				Return Dry Bulb (°F)									Return Dry Bulb (°F)				
		115°F														125°F	
1550	77	56.4	6.3	30.2	23.6	17.0	-	-	-	51.2	6.8	28.9	22.2	15.5	-	-	-
	72	51.9	6.2	39.6	33.0	26.3	19.7	-	-	47.1	6.7	38.2	31.4	24.7	18.0	-	-
	67	47.4	6.1	47.4	42.3	35.7	29.1	22.4	-	43.1	6.6	43.1	40.7	34.0	27.3	20.5	-
	62	44.4	5.9	44.4	44.4	42.2	35.6	29.0	22.3	40.8	6.4	40.8	40.8	39.7	33.0	26.2	19.5
	57	44.5	5.9	44.5	44.5	42.0	35.3	28.7	22.1	41.1	6.4	41.1	41.1	38.8	32.1	25.3	18.6
1650	77	56.7	6.3	33.9	24.5	17.4	-	-	-	51.5	6.9	33.8	23.1	15.9	-	-	-
	72	52.2	6.3	41.2	34.1	27.1	20.0	-	-	47.5	6.8	39.8	32.6	25.5	18.3	-	-
	67	47.7	6.2	47.7	43.8	36.7	29.6	22.6	-	43.4	6.7	43.4	42.2	35.0	27.9	20.7	-
	62	44.7	6.0	44.7	44.7	43.4	36.3	29.3	22.2	41.1	6.5	41.1	41.1	40.9	33.8	26.6	19.4
	57	44.8	5.9	44.8	44.8	43.2	36.1	29.0	22.0	41.4	6.5	41.4	41.4	40.0	32.9	25.6	18.5
1750	77	57.0	6.4	37.6	25.4	17.9	-	-	-	51.9	7.0	38.7	24.0	16.4	-	-	-
	72	52.5	6.3	42.8	35.3	27.8	20.3	-	-	47.8	6.9	41.4	33.8	26.2	18.6	-	-
	67	47.9	6.3	47.9	45.2	37.7	30.2	22.7	-	43.7	6.8	43.7	43.7	36.1	28.5	20.8	-
	62	44.9	6.0	44.9	44.9	44.6	37.1	29.6	22.1	41.4	6.5	41.4	41.4	34.6	26.9	19.3	-
	57	45.0	6.0	45.0	45.0	44.3	36.8	29.4	21.9	41.7	6.6	41.7	41.7	41.2	33.8	26.0	18.3
1925	72	53.1	6.5	46.0	37.8	29.7	21.6	-	-	48.4	7.1	44.6	36.4	28.1	19.9	-	-
	67	48.5	6.4	48.5	47.1	40.3	32.1	24.0	-	44.3	7.0	44.3	44.3	38.7	30.4	22.2	-
	62	45.4	6.2	45.4	45.4	45.3	37.1	29.0	20.9	41.9	6.7	41.9	41.9	41.9	34.1	25.8	17.5
	57	45.5	6.2	45.5	45.5	45.2	37.1	28.9	20.8	42.3	6.7	42.3	42.3	42.0	33.9	25.5	17.2
2100	72	53.6	6.7	49.2	40.4	31.6	22.8	-	-	49.1	7.2	47.8	38.9	30.0	21.1	-	-
	67	49.0	6.6	49.0	49.0	42.8	34.1	25.3	-	44.9	7.2	44.9	44.9	41.3	32.4	23.5	-
	62	45.9	6.4	45.9	45.9	45.9	37.1	28.4	19.6	42.4	6.9	42.4	42.4	42.4	33.5	24.7	15.8
	57	46.0	6.4	46.0	46.0	46.0	37.3	28.5	19.7	42.8	6.9	42.8	42.8	42.8	33.9	25.0	16.1

1. These capacities are Net Capacities.

2. These ratings include the compressor, condenser fan and supply air blower motors.

Additional Static Resistance

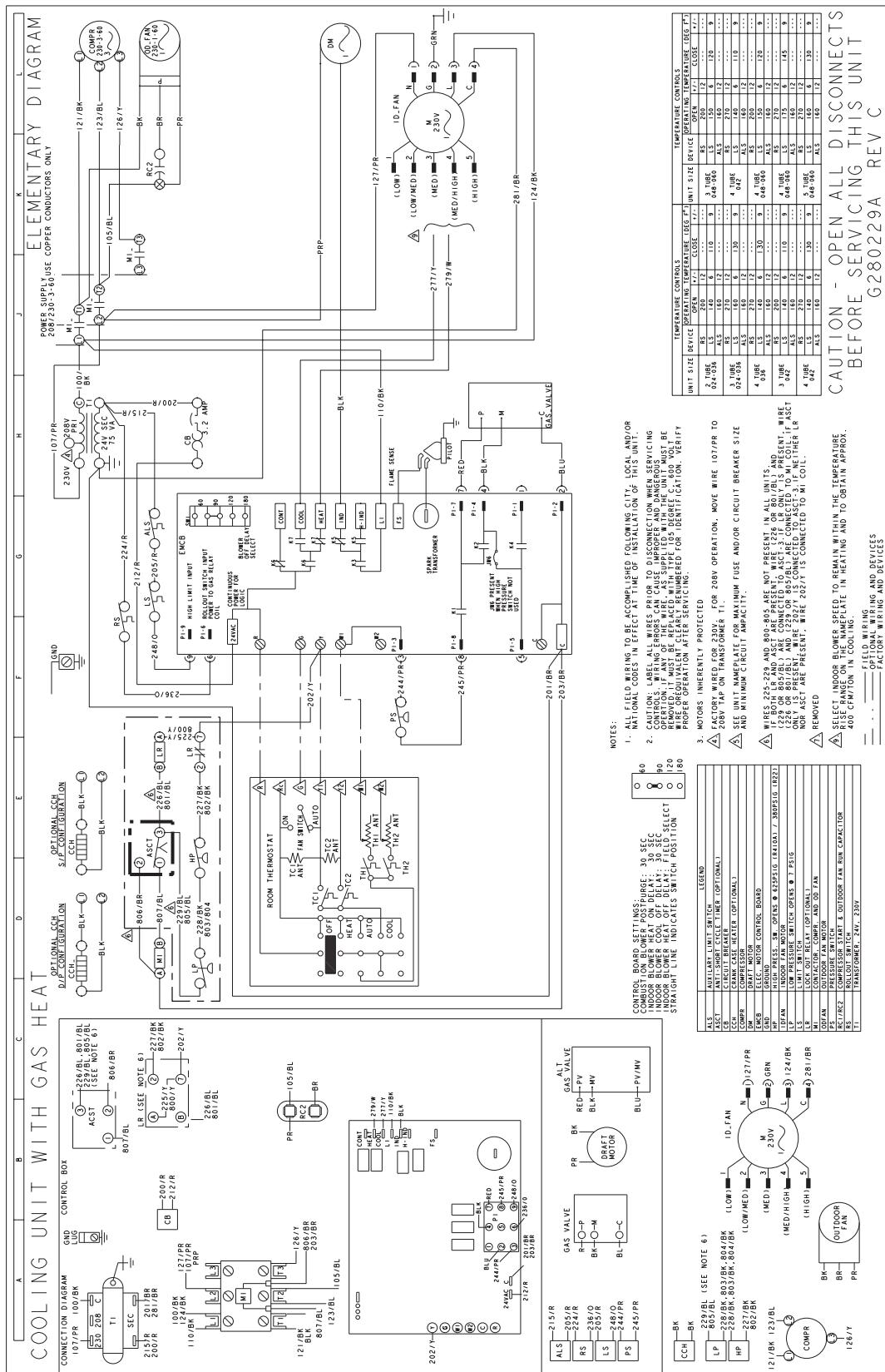
Size (Tons)	Model	CFM	Wet Indoor Coil	Economizer¹	Filter/Frame Kit	Electric Heat
024 (2.0)	DNZ DNY DNX	500	0.01	0.00	0.01	-
		600	0.01	0.00	0.02	-
		700	0.01	0.00	0.04	-
		800	0.02	0.01	0.06	-
		900	0.03	0.01	0.08	-
		1000	0.04	0.01	0.10	-
		1100	0.05	0.01	0.13	-
		1200	0.06	0.02	0.16	-
030 (2.5)	DNZ	700	0.01	0.00	0.04	-
		800	0.02	0.01	0.06	-
		900	0.03	0.01	0.08	-
		1000	0.04	0.01	0.10	-
		1100	0.05	0.01	0.13	-
		1200	0.06	0.02	0.16	-
		1300	0.07	0.03	0.17	-
		700	0.01	0.00	0.04	-
036 (3.0)	DNZ DNY DNX	800	0.02	0.01	0.06	-
		900	0.03	0.01	0.08	-
		1000	0.04	0.01	0.10	-
		1100	0.05	0.01	0.13	-
		1200	0.06	0.02	0.16	-
		1300	0.07	0.03	0.17	-
		1400	0.08	0.04	0.18	-
		1100	0.02	0.02	0.04	-
042 (3.5)	DNZ	1200	0.03	0.02	0.04	-
		1300	0.04	0.02	0.05	-
		1400	0.05	0.03	0.05	-
		1500	0.06	0.04	0.06	-
		1600	0.07	0.04	0.07	-
		1700	0.07	0.04	0.08	-
		1800	0.08	0.04	0.09	-
		1900	0.09	0.05	0.10	-
		2000	0.09	0.05	0.11	-
		1100	0.02	0.02	0.04	-
		1200	0.03	0.02	0.04	-
		1300	0.04	0.02	0.05	-
048 (4.0)	DNZ DNY DNX	1400	0.05	0.03	0.05	-
		1500	0.06	0.04	0.06	-
		1600	0.07	0.04	0.07	-
		1700	0.07	0.04	0.08	-
		1800	0.08	0.04	0.09	-
		1900	0.09	0.05	0.10	-
		2000	0.09	0.05	0.11	-
		1100	0.02	0.02	0.04	-
		1200	0.03	0.02	0.04	-
		1300	0.04	0.02	0.05	-
		1400	0.05	0.03	0.05	-
		1500	0.06	0.04	0.06	-
		1600	0.07	0.04	0.07	-
060 (5.0)	DNZ DNY	1700	0.07	0.04	0.08	-
		1800	0.08	0.04	0.09	-
		1900	0.09	0.05	0.10	-
		2000	0.09	0.05	0.11	-
		1100	0.02	0.02	0.04	-
		1200	0.03	0.02	0.04	-
		1300	0.04	0.02	0.05	-
		1400	0.05	0.03	0.05	-
		1500	0.06	0.04	0.06	-
		1600	0.07	0.04	0.07	-

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

Gas Heat Minimum Supply Air

Size (Tons)	Model	Heat Size	Supply Air (CFM)			
			Cooling		Heating	
			Min	Max	Min	Max
024 (2.0)	DNZ	N036	600	1000	610	1330
		D056	600	1000	860	1730
	DNY	N036	450	900	610	1330
		N056	450	900	860	1730
		D056	450	900	860	1730
	DNX	N036	450	900	610	1330
		N056	450	900	860	1730
		D056	450	900	860	1730
030 (2.5)	DNZ	N036	750	1250	610	1330
		N056	750	1250	860	1730
		D056	750	1250	860	1730
036 (3.0)	DNZ	N036	1200	1500	610	1330
		N056	1200	1500	940	2070
		D056	1200	1500	940	2070
		N072	1200	1500	1110	2220
		D072	1200	1500	1110	2220
	DNY	N036	700	1350	610	1330
		N056	700	1350	940	2070
		D056	700	1350	940	2070
		N072	700	1350	1110	2220
		D072	700	1350	1110	2220
	DNX	N065	685	1350	1080	2370
		N090	685	1350	1070	1780
		D090	685	1350	1070	1780
042 (3.5)	DNZ	N065	1050	1750	1080	2370
		N090	1050	1750	1070	1780
		D090	1050	1750	1070	1780
048 (4.0)	DNZ	N065	1200	2000	1080	2370
		N090	1200	2000	1230	2290
		D090	1200	2000	1230	2290
		N110	1200	2000	1330	2220
		D110	1200	2000	1330	2220
	DNY	N065	930	1700	1080	2370
		N090	930	1700	1230	2290
		D090	930	1700	1230	2290
		N110	930	1700	1330	2220
		D110	930	1700	1330	2220
	DNX	N065	930	1700	1080	2370
		N090	930	1700	1230	2290
		D090	930	1700	1230	2290
		N110	930	1700	1330	2220
		D110	930	1700	1330	2220
060 (5.0)	DNZ	N065	1500	2100	1080	2370
		N090	1500	2100	1230	2290
		D090	1500	2100	1230	2290
		N110	1500	2100	1330	2220
		D110	1500	2100	1330	2220
	DNY	N065	1060	1800	1080	2370
		N090	1060	1800	1230	2290
		D090	1060	1800	1230	2290
		N110	1060	1800	1330	2220
		D110	1060	1800	1330	2220

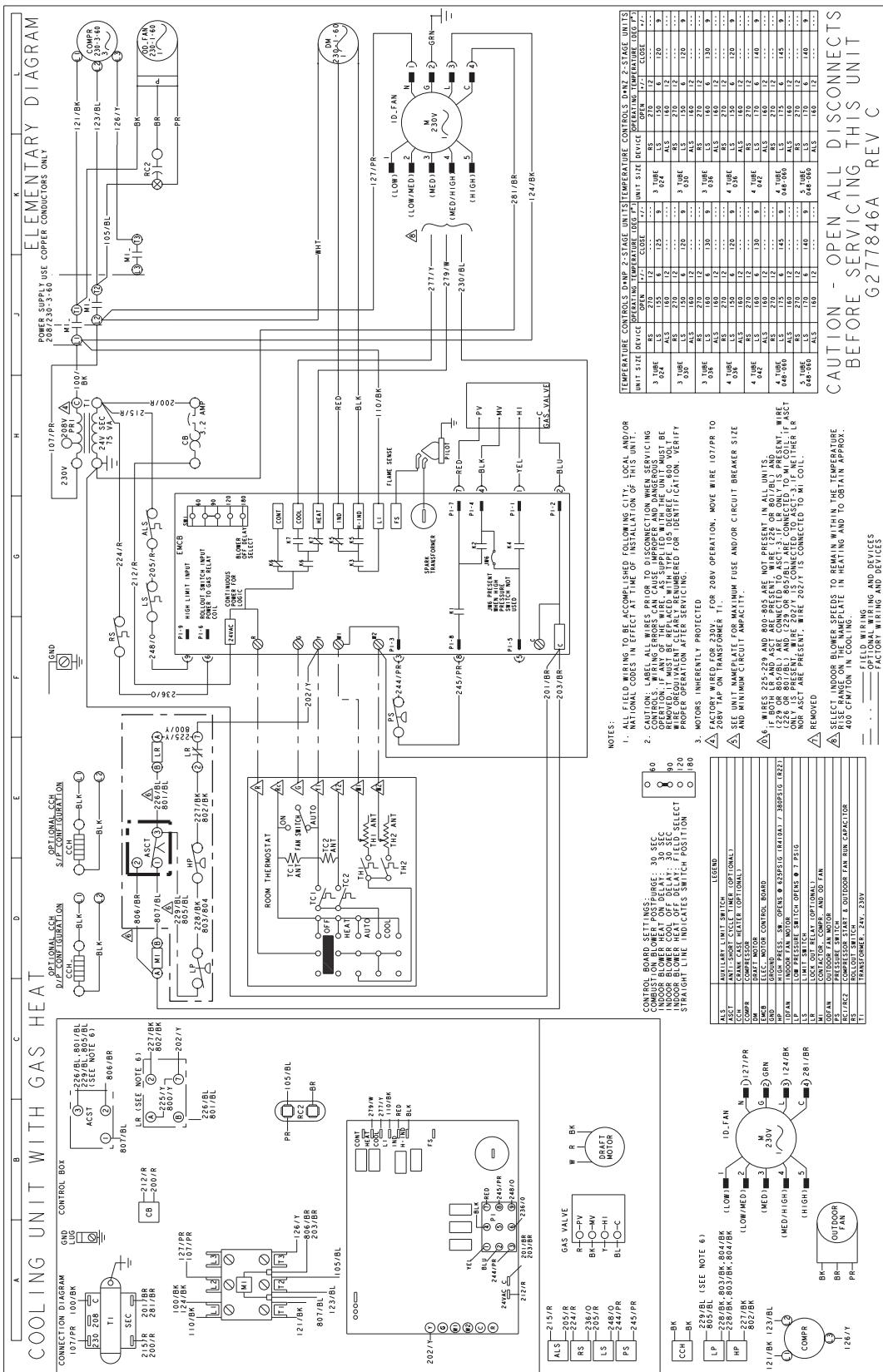
Typical DNZ030-060 Cooling Unit with Single Stage Gas Heat 208/230-3-60 volt Wiring Diagram



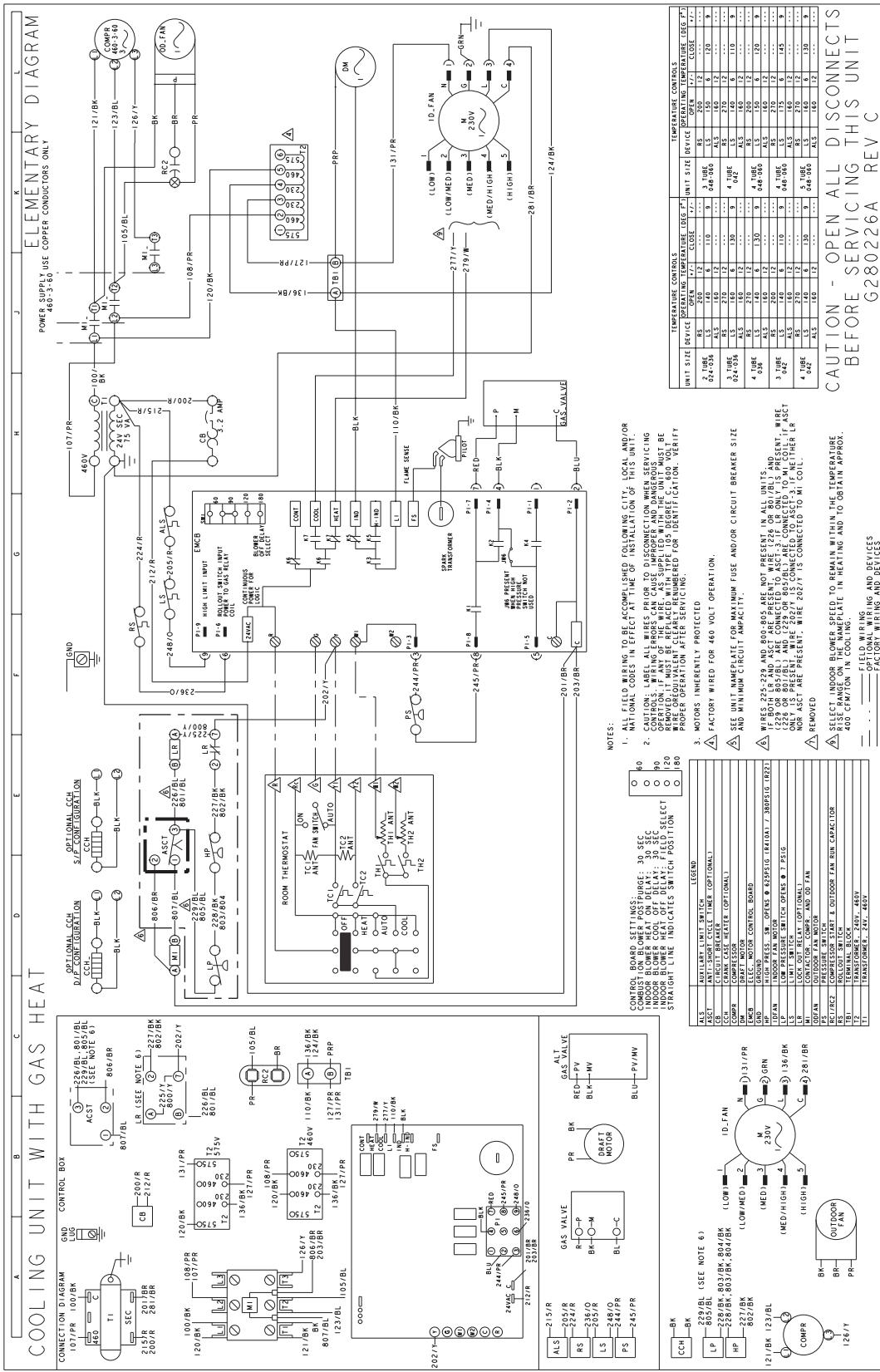
CAUTION - OPEN ALL DISCONNECTS BEFORE SERVICING THIS UNIT

G 280229A REV C

Typical DNZ030-060 Cooling Unit with Two Stage Gas Heat 208/230-3-60 volt Wiring Diagram



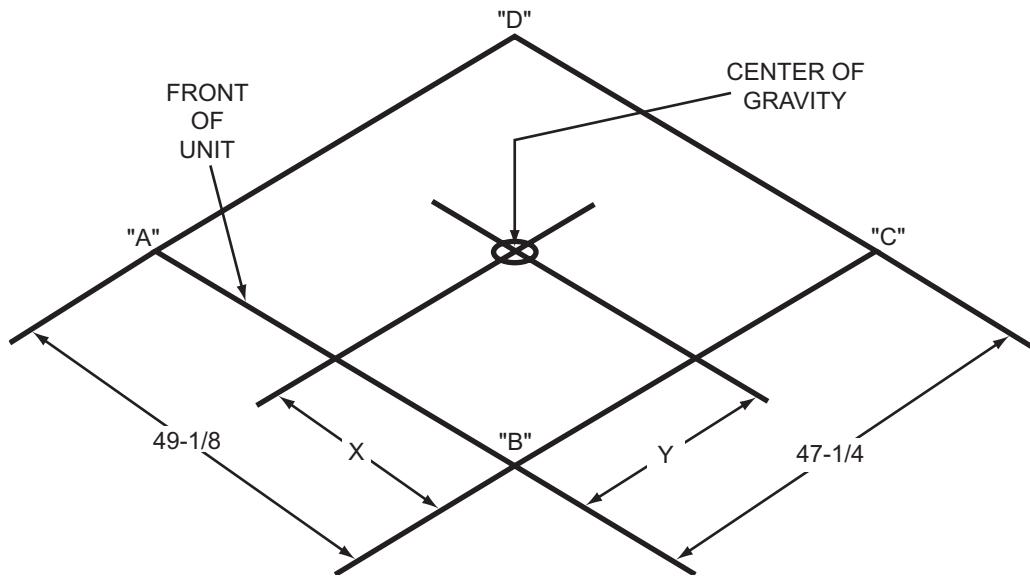
Typical DNZ030-060 Cooling Unit with Single Stage Gas Heat 460-3-60 volt Wiring Diagram



Weights and Dimensions

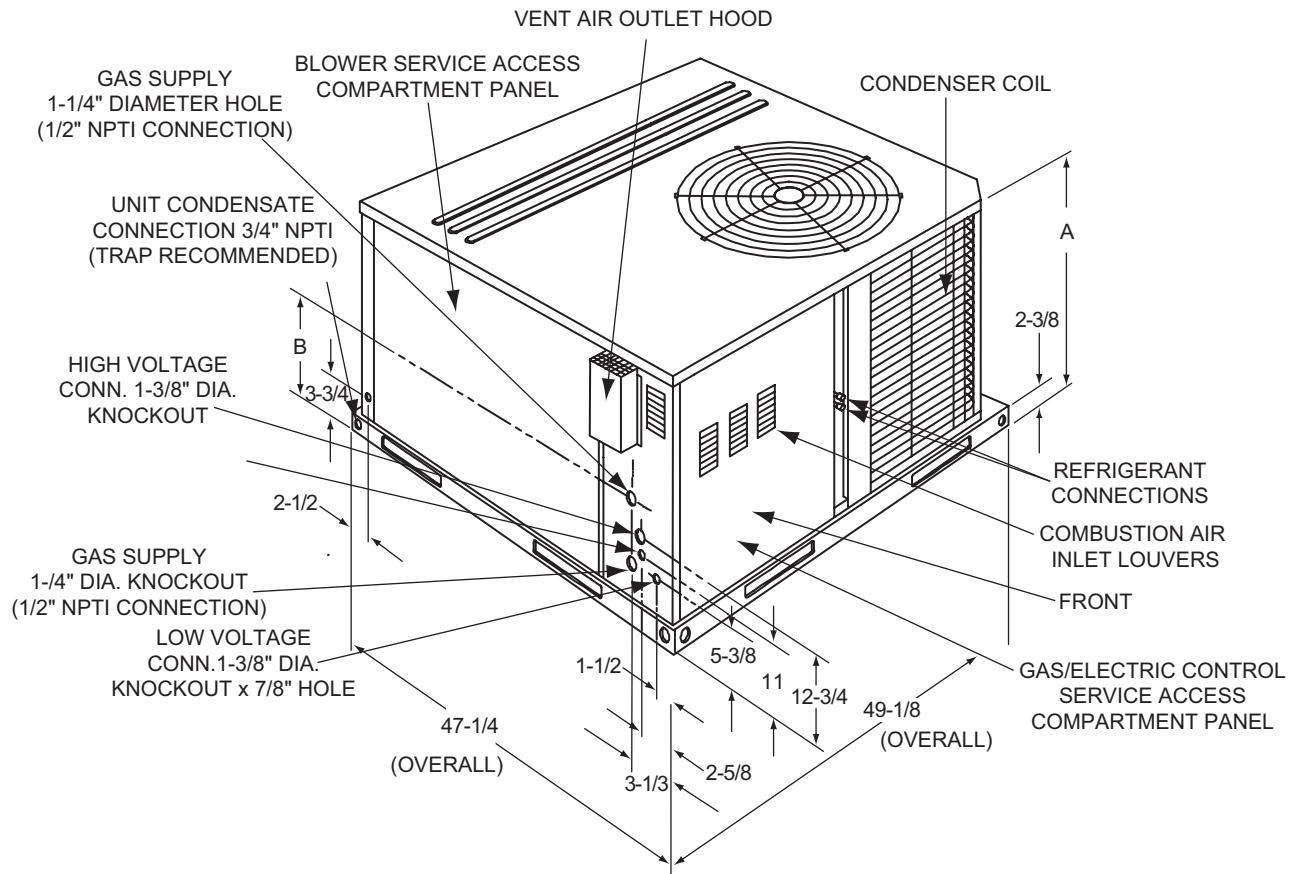
DNX, DNY and DNZ Unit Weights

Unit 4 Point Load Weight



Size (Tons)	Model	Weight (lbs.)		Center of Gravity		4 Point Load Location (lbs.)			
		Shipping	Operating	X	Y	A	B	C	D
024 (2.0)	DNZ	365	360	24	25	91	92	89	88
	DNY	405	400	20	24.5	116	84	84	117
	DNX	445	440	20	24.5	127	93	93	127
030 (2.5)	DNZ	395	390	24	24.75	98	99	97	96
036 (3.0)	DNZ	400	395	24	25	100	101	98	96
	DNY	445	440	20	24.25	126	91	93	129
	DNX	485	480	20	24	136	98	103	143
042 (3.5)	DNZ	470	465	21	24.8	131	103	101	129
048 (4.0)	DNZ	475	470	21	24.8	133	104	102	130
	DNY	505	500	20	24	142	102	107	149
	DNX	505	500	20	24	142	102	107	149
060 (5.0)	DNZ	545	540	20	24	153	110	116	161
	DNY	545	540	20	24	153	110	116	161

Gas Unit Dimensions



Gas Unit Dimensions

Unit Size	Dimensions	
	"A"	"B"
024, 030, 036 ¹	33-1/2	18-1/4
036 ² , 042, 048, 060	41-1/2	23-1/8

1. DNY, DNZ Models.
2. DNX Models.

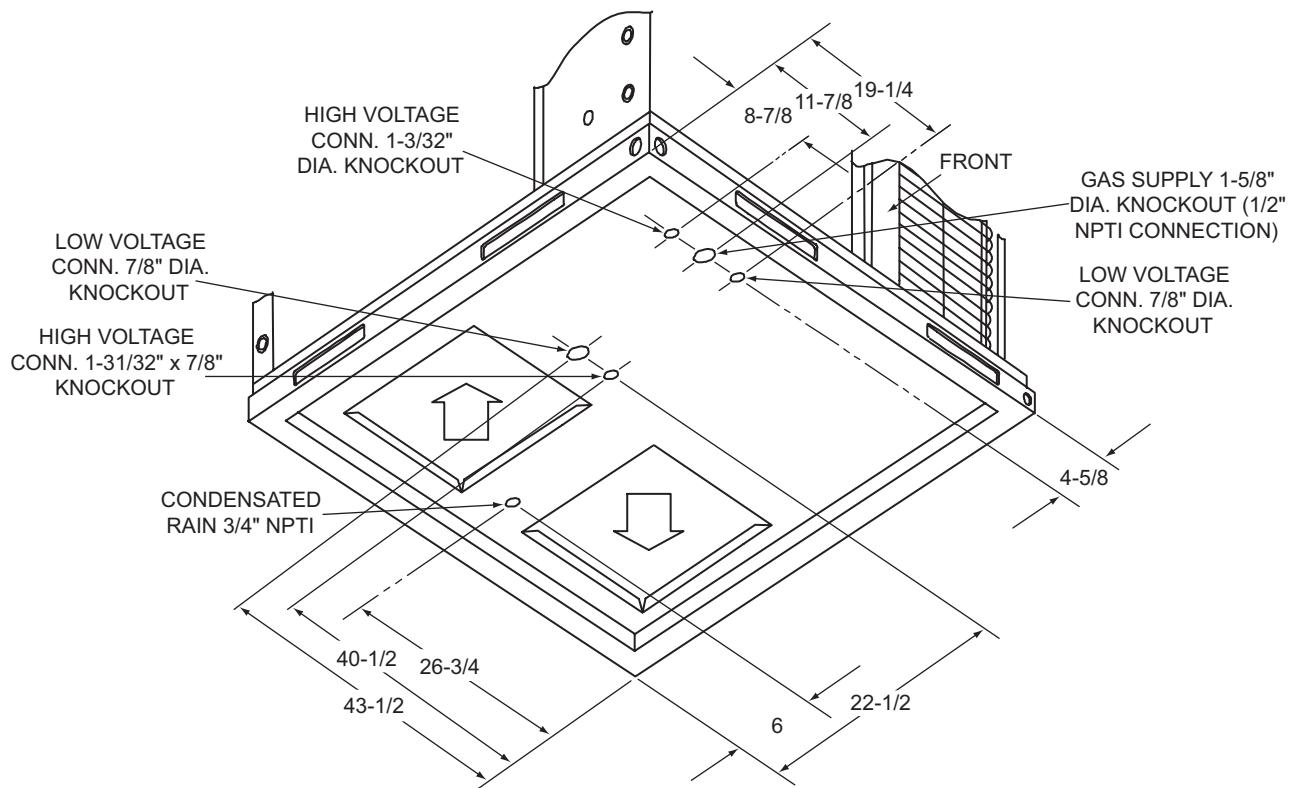
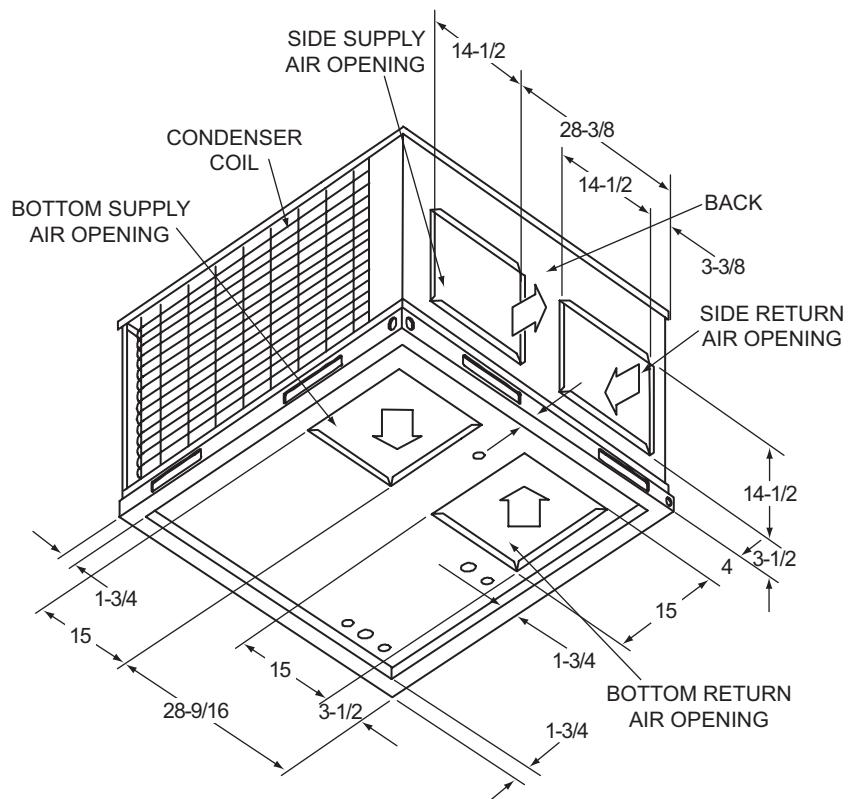
Gas Unit Clearances^{1,2}

Direction	Distance (in.)	Direction	Distance (in.)
Top ³	36	Right	12
Front	36	Left	24
Rear	0	Bottom ⁴	0

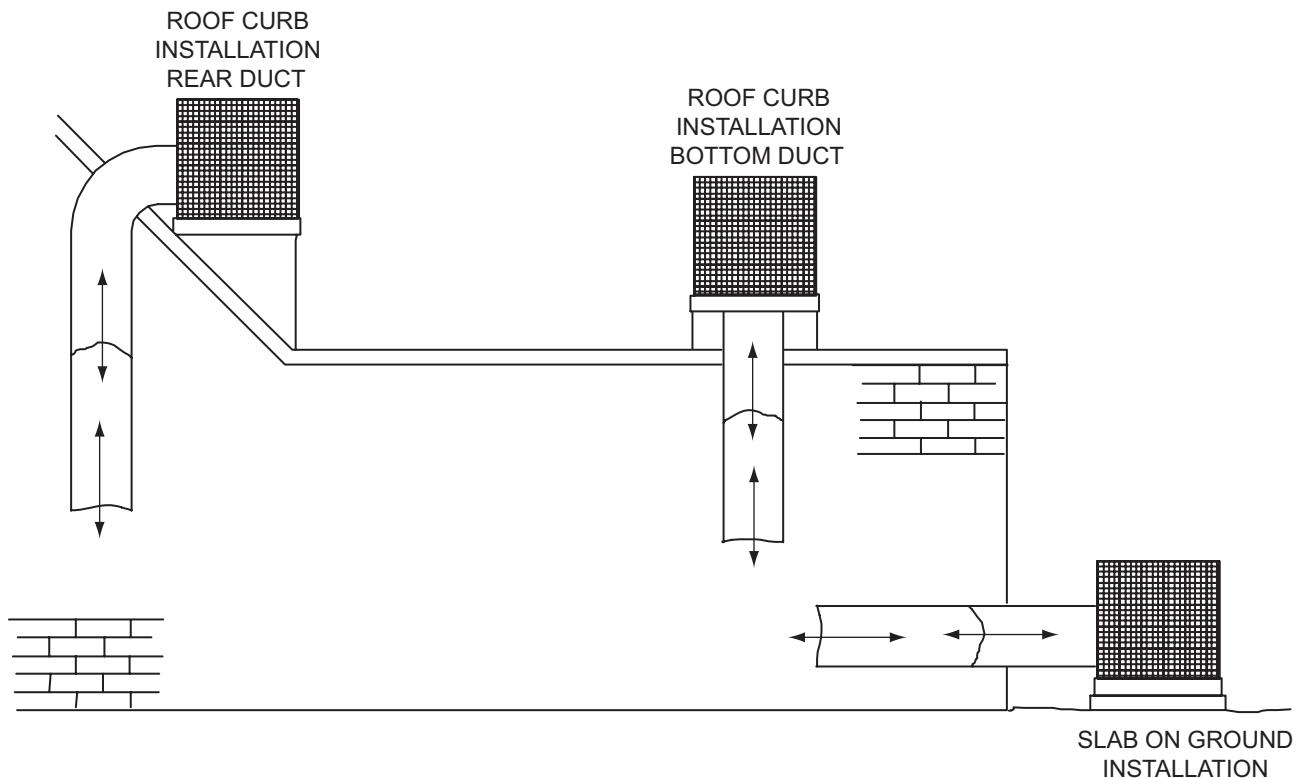
1. A 1" clearance must be provided between any combustible material and the supply air duct work.
2. The products of combustion must not be allowed to accumulate within a confined space and recirculate.
3. Units must be installed outdoors. Over hanging structure or shrubs should not obscure condenser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

Unit Accessory Weights

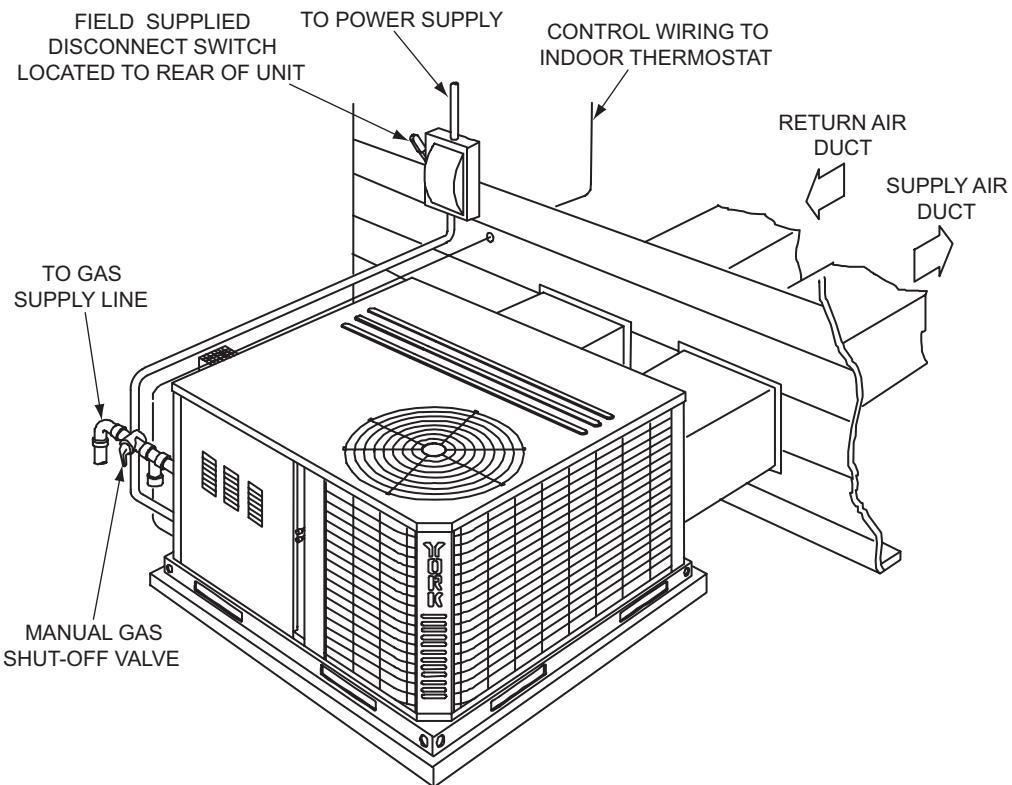
Unit Accessory	Model	Weight (lbs.)	
		Shipping	Operating
Add Economizer	All	45	40

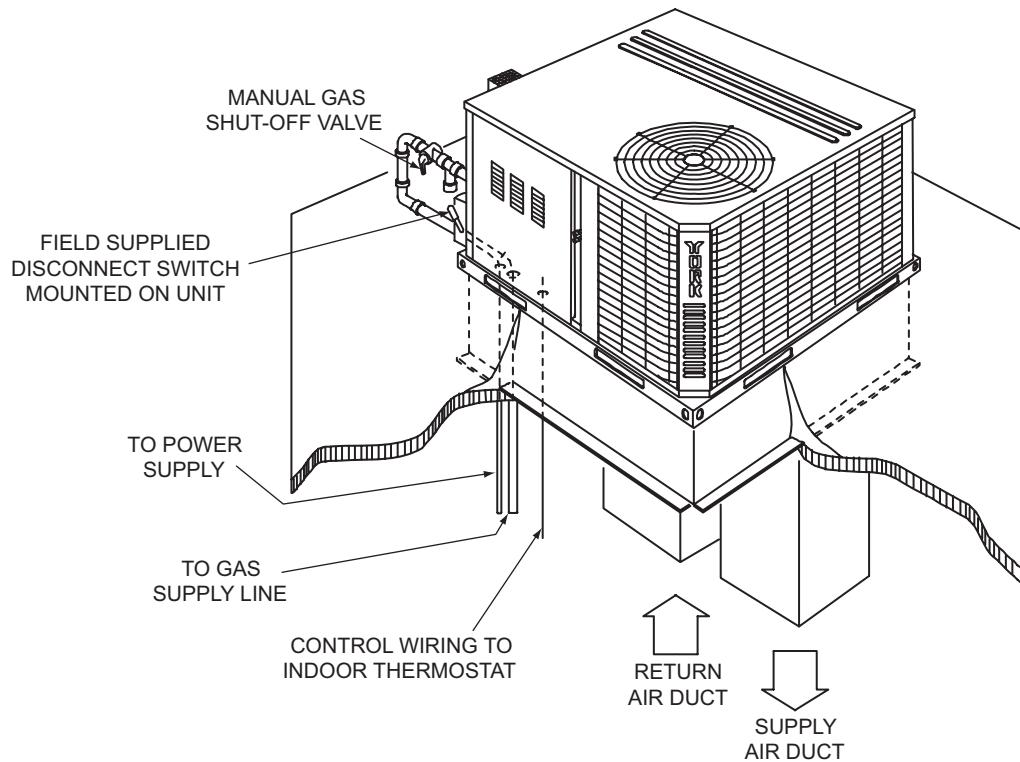
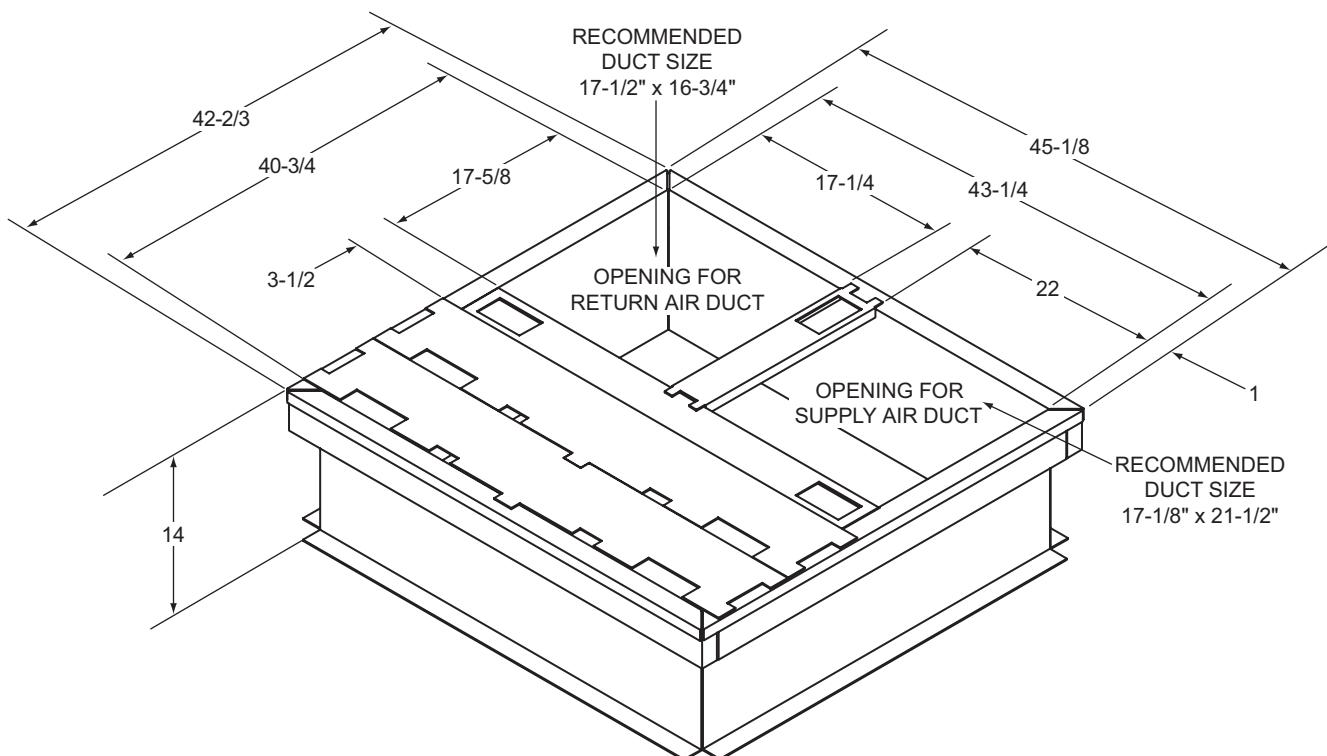
Unit Dimensions Front and Bottom**Unit Dimensions Back and Bottom**

Unit Typical Duct Applications



Unit Typical Slab on Ground Installation (Gas Model Shown)



Unit Typical Roof Curb Installation (Gas Model Shown)**Unit Accessory Dimensions****Roof Curb¹**

1. 8" Roof Curb also available.

Roof Curb Cross Section