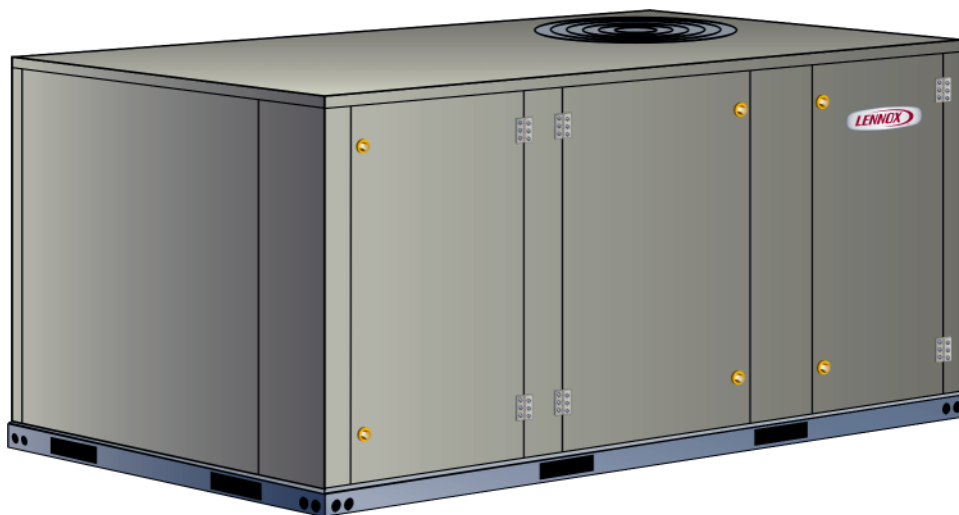




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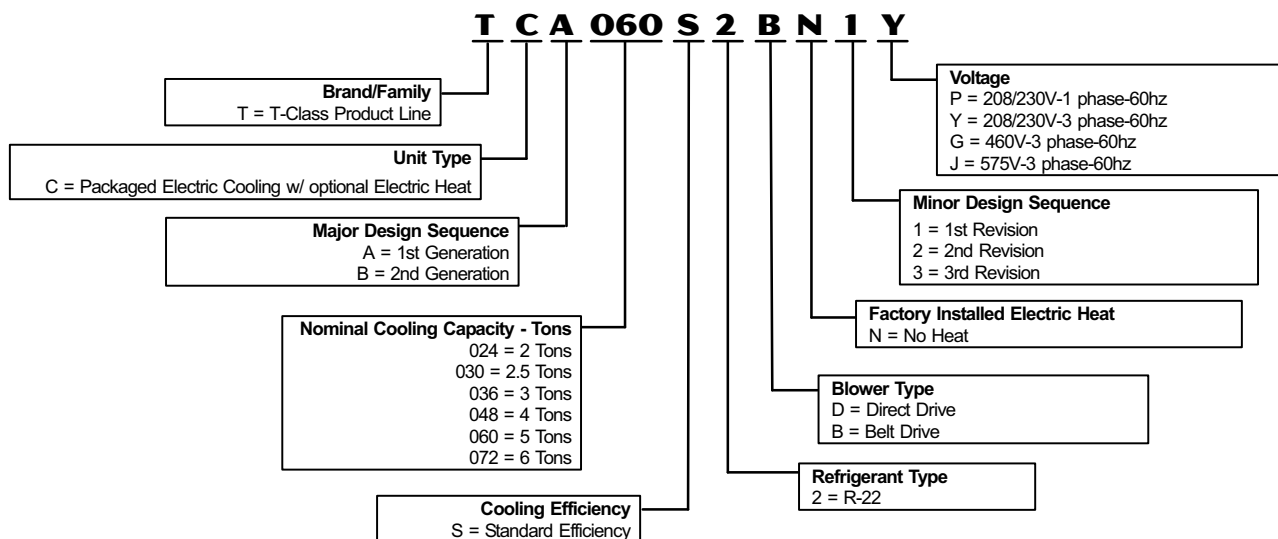


ASHRAE 90.1
 COMPLIANT



2 to 6 Tons
Net Cooling Capacity - 23,400 to 72,000 Btuh
Optional Electric Heat - 7.5 to 30 kW

MODEL NUMBER IDENTIFICATION



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FEATURES AND BENEFITS

APPROVALS

ETL and CSA listed.

Efficiency ratings verified by CSA.

Components bonded for grounding to meet safety standards for servicing required by UL, ULC and National and Canadian Electrical Codes.

2 thru 5 ton models are certified in accordance with the USE certification program, which is based on ARI Standard 210/240-2005.

6 ton models are certified in accordance with the ULE certification program, which is based on ARI Standard 340/360-2004.

All models are ASHRAE 90.1 compliant. ENERGY STAR® certified units are designed to use less energy, help save money on utility bills, and help protect the environment. Standard efficiency models are ENERGY STAR® certified (all models except TCA072S2B).

The ENERGY STAR® Partner of the Year Award signifies that Lennox has made outstanding contributions to design energy efficient units that will lower energy bills, while meeting industry standards for comfort and indoor air quality. Lennox was the first HVAC manufacturer to win this award and has been a four-time recipient since 2003.

ISO 9001 Registered Manufacturing Quality System.

WARRANTY

Limited five years on compressors.

Limited one year all other covered components.

CABINET

1 Construction

Heavy-gauge steel panels and full perimeter heavy-gauge galvanized steel base rail provides structural integrity for transportation, handling, and installation.

Base rails have rigging holes. Three sides of the base rail have fork slots.

Raised edges around duct and power entry openings in the bottom of the unit provide additional protection against water entering the building.

Air-Flow Choice

Units are shipped in down-flow (vertical) configuration, can be field converted to horizontal air flow configuration without the need of a kit.

2 Power Entry

Electrical lines can be brought through the unit base or through horizontal access knock-outs.

3 Exterior Panels

Constructed of heavy-gauge, galvanized steel with a two-layer enamel paint finish.

4 Insulation

All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation.

Unit base is fully insulated. The insulation also serves as an air seal to the roof curb, eliminating the need to add a seal during installation.

Access Panels

Access panels are provided for the economizer/filter section, heating/blower section, and the compressor/controls section.

OPTIONS/ACCESSORIES

Factory Installed

Corrosion Protection

A completely flexible immersed coating with an electrodeposited dry film process. (AST ElectroFin E-Coat) Meets Mil Spec MIL-P-53084, ASTM B117 Standard Method Salt Spray Testing, ASTM 1153 Standard Specification for Methyl Isobutyl Ketone.

5 Hinged Access Panels

Large access panels are hinged and have quarter-turn latches for quick and easy access to maintenance areas (economizer / filter, compressor / controls, heating / blower).

Field Installed

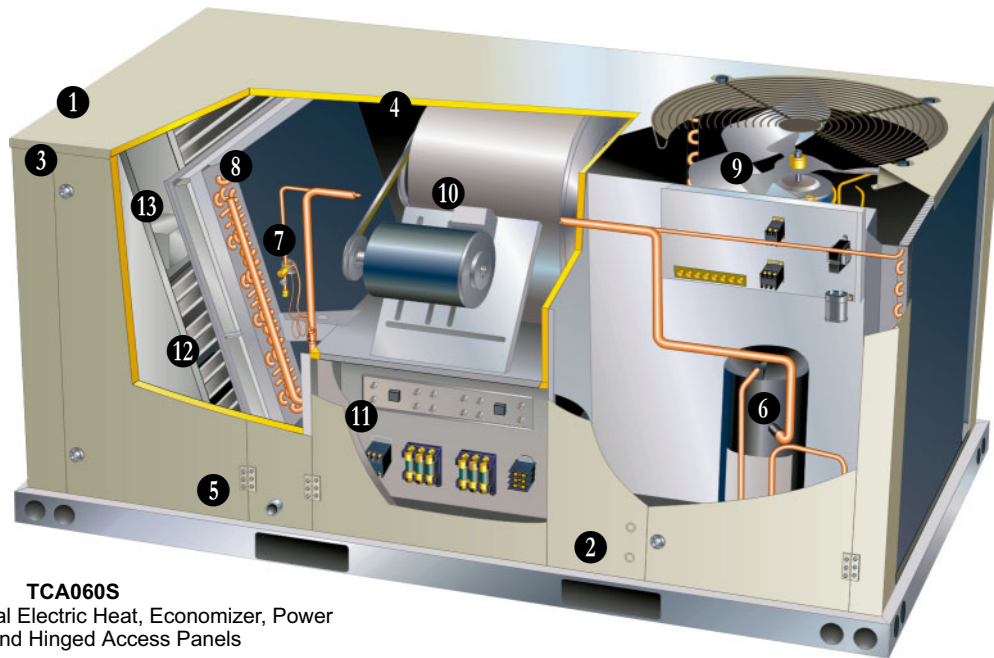
Coil Guards

Painted, galvanized steel wire guards to protect outdoor coil. Not used with Hail Guards.

Hail Guards

Constructed of heavy gauge steel, painted to match cabinet, helps protect outdoor coils from hail damage. Not used with Coil Guards.

FEATURES AND BENEFITS



TCA060S

Shown With Optional Electric Heat, Economizer, Power Exhaust and Hinged Access Panels

COOLING SYSTEM

Designed to maximize sensible and latent cooling performance at design conditions.

System can operate from 30°F to 125°F without any additional controls.

6 Compressor

Resiliently mounted on rubber grommets for quiet operation. Scroll compressors for high performance, reliability and quiet operation.

7 Thermal Expansion Valve

Assures optimal performance throughout the application range. Removable element head.

Filter/Drier

High capacity filter/drier protects the system from dirt and moisture.

Freezestat

Protects the evaporator coil from damaging ice build-up due to conditions such as low/no air flow, or low refrigerant charge.

8 Coil Construction

Copper tube construction, enhanced rippled-edge aluminum fins, flared shoulder tubing connections, silver soldered construction for improved heat transfer. Factory leak tested.

Evaporator Coil

Cross row circuiting with rifled copper tubing optimizes both sensible and latent cooling capacity.

Condenser Coil

Two independent formed coils allow separation for cleaning.

Condensate Drain Pan

Plastic pan, sloped to meet drainage requirements of ASHRAE 62.1.

Side or bottom drain connections. Reversible to allow connection at back of unit.

9 Outdoor Coil Fan Motor

Thermal overload protected, totally enclosed, permanently lubricated sleeve (024, 030, 036 and 048 models) or ball bearings (060 and 072 models), shaft up, wire basket mount.

Outdoor Coil Fan

PVC coated fan guard furnished.

REQUIRED SELECTIONS

Cooling Capacity

Specify nominal cooling capacity of the unit.

OPTIONS/ACCESSORIES

Field Installed

Condensate Drain Trap

Field installed only. Available in copper or PVC.

Compressor Crankcase Heater

Protects against refrigerant migration that can occur during low ambient operation.

High Pressure Switch

Protects the compressor from overload conditions such as dirty condenser coils, blocked refrigerant flow, or loss of outdoor fan operation.

Low Ambient Kit

Cycles the outdoor fan while allowing compressor operation in the cooling cycle. This intermittent fan operation allows the system to operate without icing the evaporator coil and losing capacity. Designed for use in ambient temperatures no lower than 0°F. A crankcase heater must be installed on the compressor.

FEATURES AND BENEFITS

CONTROLS

UNIT CONTROL

All control voltage is provided via a 24V (secondary) transformer with built-in circuit breaker protection.

Heat/Cool Staging - Capable of up to 2 heat / 2 cool staging with a third party DDC control system or thermostat.

Low Voltage Terminal Block - Provides screw terminal connections for thermostat or controller wiring.

Night Setback Mode - Saves energy by closing outdoor air dampers and operating supply fan on thermostat demand only.

OPTIONS / ACCESSORIES

Field Installed

Dirty Filter Switch

Senses static pressure increase indicating dirty filter condition.

Smoke Detector

Photoelectric type, installed in supply or return air section

Commercial Control Systems

L Connection® Network

Complete building automation control system for single or multi-zone applications. Options include local interface, software for local or remote communication, and hardware for networking other control functions. See L Connection Network Engineering Handbook Bulletin for details.

Thermostats

Control system and thermostat options. Aftermarket unit controller options. See See Page 27.

10 BLOWER

A wide selection of supply air blower options are available to meet a variety of air flow requirements.

Motor

Overload protected, equipped with ball bearings (belt drive) or sleeve bearings (direct drive).

Direct drive motors are offered on 024, 030, 036, 048 and 060 models.

Belt drive motors are offered on 036, 048, 060 and 072 models and are available in several different sizes to maximize air performance.

Supply Air Blower

Forward curved blades, blower wheel is statically and dynamically balanced.

All belt drive motors have adjustable pulley for speed change.

Ordering Information

Specify direct drive or belt drive motor
For belt drive, specify motor horsepower and drive kit number when base unit is ordered.

REQUIRED SELECTIONS

Supply Air Blower

Order one, belt drive or direct drive (See Blower Data Table for specifications).

Order one drive kit, belt drive only, see Drive Kit Specifications Table.

INDOOR AIR QUALITY

Air Filters

Disposable 2 inch filters furnished as standard.

OPTIONS/ACCESSORIES

Field Installed

Indoor Air Quality (CO₂) Sensor

Monitors CO₂ levels adjusts economizer dampers as needed for Demand Control Ventilation.

ELECTRICAL

REQUIRED SELECTIONS

Voltage Choice

Specify when ordering base unit.

OPTIONS/ACCESSORIES

Factory or Field Installed

GFI Service Outlets (2)

115v ground fault circuit interrupter (GFCI) type.

Field Installed

Disconnect Switch up to 150 Amp

Accessible from outside of unit, spring loaded weatherproof cover furnished. Main power to the unit is field connected to the disconnect which allows all power to be shut off for service. See Electrical/Electric Heat tables for ordering information, Pages 23-25.

11 Electric Heat

Helix wound nichrome elements, individual element limit controls, wiring harness. Unit Fuse Block must be ordered extra. See Electrical/Electric Heat tables for ordering information, Pages 23-25.

SERVICEABILITY

Designed to streamline general maintenance and decrease troubleshooting time.

Marked & Color-Coded Wiring

All electrical wiring is color-coded and marked to identify which components it is connecting.

Electrical Plugs

Positive connection electrical plugs are used to connect common accessories or maintenance parts for easy removal or installation.

Blower Access

Supply air blower parts are located near the access door for easy servicing and adjustment.

Thermal Expansion Valves

Thermal expansion valves are located near the perimeter of the unit for easier access.

Removable element head allows change out of element and bulb without removing the TXV.

Coil Cleaning

Independently formed condenser coils allow separation for easier cleaning.

Compressor Compartment

Compressor is located near the perimeter of the unit for easier access. Compressor is isolated from the condenser air flow allowing system operation checks to be done without changing the air flow across the outdoor coils.

ECONOMIZER/OUTDOOR AIR/EXHAUST OPTIONS

Factory or Field Installed

12 Economizer, Down-Flow

Parallel gear-driven action return air and outdoor air dampers, plug-in connections to unit, nylon bearings, neoprene seals, 24-volt, fully-modulating, spring return motor, adjustable minimum damper position. Economizer includes barometric relief dampers.

Barometric Relief Dampers allow relief of excess air, aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle, bird screen furnished. Hood furnished

Outdoor Air Hoods are included when economizer is factory installed and are furnished with economizer when ordered for field installation.

Choice of single (factory installed) or differential (optional) enthalpy or temperature economizer control is available.

Horizontal conversion kit available for field installation.

Single Enthalpy Control

Outdoor air enthalpy sensor enables economizer if the outdoor enthalpy is less than the setpoint of the board. Furnished with Economizer.

Field Installed

Outdoor Air Damper - Manual

Two sliding dampers provide 0 to 35% outdoor air, installs internal to unit. Includes Outdoor Air Hood.

Outdoor Air Damper Motorized Kit

Used to convert Manual Outdoor Air Dampers to motorized dampers. Kit includes linked mechanical dampers and spring return damper motor with plug-in connection.

Differential Enthalpy Control

An optional, return air, solid-state enthalpy sensor can be ordered extra for field installation. Allows the economizer control board to select between outdoor air or return air, whichever has lower enthalpy. Field installed.

Economizer Temperature Control - Single

An optional, solid-state temperature sensor can be ordered extra for field installation. Enables the economizer when the outdoor air temperature is below the configured setpoint.

Economizer Temperature Control - Differential

Order two single, temperature control kits. One is field installed in the return air section, the other in the outdoor air section. Allows the economizer control board to select between outdoor air or return air, whichever has lower temperature.

Horizontal Conversion Kit

Insulated panel covers the bottom return air opening on the unit base to convert down-flow economizer to horizontal air flow.

13 Power Exhaust Fan

Installs internal to unit for down-flow applications only with economizer option. Provides exhaust air pressure relief. Interlocked to run when supply air blower is operating, fan runs when outdoor air dampers are 50% open (adjustable), motor is overload protected. Requires Economizer with Outdoor Air Hood. Fan is 16 in. diameter with 4 fan blades (T1PWRE10A) or 20 in. diameter with 5 blades (T1PWRE10N). Both include a 3/4 hp motor.

NOTE - Not available for 024 and 030 models.

CEILING DIFFUSERS

Ceiling Diffusers (Flush and Step-Down)

Aluminum grilles, large center grille, insulated diffuser box with flanges, hanging rings furnished, interior transition (even air flow), internally sealed (prevents recirculation), adapts to T-bar ceiling grids or plaster ceilings.

Transitions (Supply and Return)

Used with diffusers, installs in roof curb, galvanized steel construction, flanges furnished for duct connection to diffusers, fully insulated.

ROOF CURB

Roof Curb, Down-Flow

Nailer strip furnished, mates to unit, US National Roofing Contractors Approved, shipped knocked down. Available in 8, 14, 18, and 24 inch heights.

Cliplock curbs use interlocking tabs to fasten together. No tools required.

Hinged curb corners fasten together with furnished hinge pins.

Standard roof curb corners fasten together with furnished hardware.

OPTIONS / ACCESSORIES

Item	Catalog No.	024	030	036	048	060	072
COOLING SYSTEM							
Condensate Drain Trap	PVC - LTACDKP03/07	37K69	x	x	x	x	x
	Copper - LTACDKC03/07	45K67	x	x	x	x	x
Corrosion Protection			○	○	○	○	○
Compressor Crankcase Heater	208/230V-1 or 3 ph - K1CCHT02A-1P	39W04	x	x	x		
	208/230V-1 or 3 ph - T1CCHT01AN1P	95M07				x	x
	460V-3ph - K1CCHT012A-1G	39W05			x		
	460V-3ph - T1CCHT01AN1G	95M08				x	x
	575V-3ph - T1CCHT01AN1J	95M09				x	x
Low Ambient Kit	T1SNSR12AN2	43W08	x	x	x	x	x
Efficiency	Standard		○	○	○	○	○
High Pressure Switch	T1SNSR11A-2	43W02	x	x	x	x	x
Refrigerant Type	R-22		○	○	○	○	○
BLOWER - SUPPLY AIR							
Motors	Direct Drive - 0.25 hp		○	○			
	Direct Drive - 0.5 hp				○	○	
	Direct Drive - 0.75 hp						○
	Belt Drive - 1.5 hp Standard Efficiency				○	○	○
	Belt Drive - ¹ 2 hp Standard Efficiency				○	○	○
Drive Kits See Blower Data Tables for selection	Drive Kit # 1 - T1DRKT001-1 - 673-1010 rpm	20W81			⊗		
	Drive Kit # 2 - T1DRKT002-1 - 745-1117 rpm	20W82				⊗	
	Drive Kit # 3 - T1DRKT003-1 - 833-1250 rpm	20W83					⊗
	Drive Kit # 4 - T1DRKT004-1 - 968-1340 rpm	20W84					
	Drive Kit # 5 - T1DRKT005-1 - 897-1346 rpm	20W85			⊗		
	Drive Kit # 6 - T1DRKT006-1 - 1071-1429 rpm	20W86				⊗	
	Drive Kit # 7 - T1DRKT007-1 - 1212-1548 rpm	20W87					⊗
	Drive Kit # 8 - T1DRKT008-1 - 1193-1591 rpm	20W88					
CABINET							
Coil Guards	T1GARD20A-1	17W87	x	x	x	x	
	T1GARD20N-1	17W88					x
Hail Guards	T1GARD10A-1	17W89	x	x	x	x	
	T1GARD10N-1	17W90					x
Hinged Access Panels			○	○	○	○	○
CONTROLS							
Dirty Filter Switch	COSWCH00AE-1	30K48	x	x	x	x	x
Smoke Detector - Supply and Return (order 2)	T1SNSR41AN1	39W16	x	x	x	x	x
ECONOMIZER							
Economizer, Single Enthalpy Control Includes Outdoor Air Hood and Barometric Relief Dampers with Hood	T1ECON30A-1	36W96	⊗	⊗	⊗	⊗	⊗
	T1ECON30N-1	36W97					⊗
Horizontal Economizer Conversion Kit	T1HECK00AN1	17W45	x	x	x	x	x
Economizer Controls							
Differential Enthalpy Sensor	T1SNSR60AN1	17W71	x	x	x	x	x
Single Temperature Control	TASEK10/15	76M37	x	x	x	x	x
Differential Temperature Control	Order 2 - TASEK10/15	76M37	x	x	x	x	x

NOTE - The model numbers that appear here are for ordering field installed accessories only.

⊗ - Field Installed or Configure to Order (factory installed)

○ - Configure to Order (Factory Installed)

x - Field Installed

¹ 2 hp blower motor is not available for 208/230V-1ph applications.

OPTIONS / ACCESSORIES

Item	Catalog No.	024	030	036	048	060	072
OUTDOOR AIR							
Outdoor Air Dampers							
Damper Section - Manual, Includes Outdoor Air Hood	T1DAMP11A-1	16W88	x	x	x	x	
	T1DAMP11N-1	16W91					x
Damper Motorized Kit - Order Manual Outdoor Air Damper Separately	T1DAMP21AN1	16W92	x	x	x	x	x
POWER EXHAUST FAN							
Standard Static	208/230V-1 or 3ph - T1PWRE10A-1P	17W39			x	x	x
	460V-3ph - T1PWRE10A-1G	17W40			x	x	x
	575V-3ph - T1PWRE10A-1J	17W41			x	x	x
	208/230V-1 or 3ph - T1PWRE10N-1P	17W42					x
	460V-3ph - T1PWRE10N-1G	17W43					x
	575V-3ph - T1PWRE10N-1J	17W44					x
	ELECTRICAL						
Voltage 60 hz	208/230V - 1 phase		○	○	○	○	○
	208/230V - 3 phase				○	○	○
	460V - 3 phase				○	○	○
	575V - 3 phase				○	○	○
Disconnect	See Electrical/Electric Heat Tables for selection		x	x	x	x	x
GFI Service Outlets	LTAGFIK10/15	74M70	x	x	x	x	x
ELECTRIC HEAT							
7.5 kW	208/240V-1ph - T1EH0075AN1P	14W32	x	x	x	x	x
	208/240V-3ph - T1EH0075AN1Y	14W35			x	x	x
	460V-3ph - T1EH0075AN1G	14W39			x	x	x
	575V-3ph - T1EH0075AN1J	14W43			x	x	x
10 kW	208/240V-1ph - T1EH0100A1P	30W26	x	x			
15 kW	208/240V-1ph - T1EH0150AN1P	14W33			x	x	x
	208/240V-3ph - T1EH0150AN1Y	14W36			x	x	x
	460V-3ph - T1EH0150AN1G	14W40			x	x	x
	575V-3ph - T1EH0150AN1J	14W44			x	x	x
22.5 kW	208/240V-1ph - T1EH0225AN1P	14W34				x	
	208/240V-3ph - T1EH0225AN1Y	14W37				x	x
	460V-3ph - T1EH0225AN1G	14W41				x	x
	575V-3ph - T1EH0225AN1J	14W45				x	x
30 kW	208/240V-3ph - T1EH0300N-1Y	14W38					x
	460V-3ph - T1EH0300N-1G	14W42					x
	575V-3ph - T1EH0300N-1J	14W46					x
ELECTRIC HEAT ACCESSORIES/OPTIONS - See Electrical/Electric Heat Tables for selection							
	Unit Fuse Block		x	x	x	x	x

NOTE - The catalog and part numbers that appear here are for ordering field installed accessories only.

⊗ - Field Installed or Configure to Order (factory installed)

○ - Configure to Order (Factory Installed)

X - Field Installed.

OPTIONS / ACCESSORIES

Item	Catalog No.	024	030	036	048	060	072
INDOOR AIR QUALITY							
Indoor Air Quality (CO₂) Sensors							
Sensor - white case CO ₂ display	C0SNSR50AE1L	77N39	x	x	x	x	x
Sensor - duct mount, black case, no display	C0SNSR53AE1L	87N54	x	x	x	x	x
CO ₂ Sensor Duct Mounting Kit	C0MISC19AE1-	85L43	x	x	x	x	x
CEILING DIFFUSERS							
Step-Down - Order one	RTD9-65-R	27G87	x	x	x	x	
	RTD11-95	29G04					x
	(Canada Only) RTD11-95S	13K61					x
Flush - Order one	FD9-65-R	27G86	x	x	x	x	
	FD11-95	29G08					x
	(Canada Only) FD11-95S	13K56					x
Transitions (Supply and Return) - Order one	T1TRAN10AN1	17W53	x	x	x	x	
	T1TRAN20N-1	17W54					x
ROOF CURBS - DOWN-FLOW							
Cliplock							
8 in. height	T1CURB23AN1	16W93	x	x	x	x	x
14 in. height	T1CURB20AN1	16W94	x	x	x	x	x
18 in. height	T1CURB21AN1	16W95	x	x	x	x	x
24 in. height	T1CURB22AN1	16W96	x	x	x	x	x
Hinged							
8 in. height	T1CURB30AN1	17W46	x	x	x	x	x
18 in. height	T1CURB32AN1	17W47	x	x	x	x	x
24 in. height	T1CURB33AN1	17W48	x	x	x	x	x
Standard							
14 in. height	T1CURB10AN1	13W27	x	x	x	x	x

NOTE - The model numbers that appear here are for ordering field installed accessories only.

⊗ - Field Installed or Configure to Order (factory installed)

○ - Configure to Order (Factory Installed)

✕ - Field Installed.

SPECIFICATIONS - DIRECT DRIVE BLOWER
2 - 2.5 TON

General Data		Nominal Tonnage	2 Ton	2.5 Ton
		Model No.	TCA024S2D	TCA030S2D
		Efficiency Type	Standard	Standard
Cooling Performance	Gross Cooling Capacity - Btuh		24,000	30,000
	¹ Net Cooling Capacity - Btuh		23,400	29,400
	ARI Rated Air Flow - cfm		840	1000
	² Sound Rating Number (dB)		75	75
	Total Unit Power - kW		2	2.5
		¹ SEER (Btuh/Watt)		13.5
	¹ EER (Btuh/Watt)		12	11.8
Refrigerant	Type		R-22	R-22
	Charge Furnished		7 lbs. 0 oz.	7 lbs. 0 oz.
Compressor Type (one per unit)			Scroll	Scroll
Outdoor Coil	Net face area - sq. ft.		15.6	15.6
	Tube diameter - in.		3/8	3/8
	Number of rows		1	1
	Fins per inch		20	20
Outdoor Coil Fan	Motor HP		1/4	1/4
	Motor rpm		825	825
	Total motor watts		250	250
	Diameter - in. / No. of blades		24 - 3	24 - 3
	Total air volume - cfm		3700	3700
Indoor Coil	Net face area - sq. ft.		7.78	7.78
	Tube diameter - in.		3/8	3/8
	Number of rows		3	3
	Fins per inch		14	14
	Drain Connection (no. and size) - in.		(1) 3/4 npt	(1) 3/4 npt
	Expansion device type		Balanced Port Thermostatic Expansion Valve, removeable power head	
Indoor Blower	Nominal Motor HP		.25	.25
	Wheel nominal diameter x width - in.		10 x 10	10 x 10
Filters	Type		Disposable	
	Number and size - in.		(4) 16 x 20 x 2	
Electrical Characteristics - 60 Hz			208/230V 1 phase	208/230V 1 phase

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ Certified in accordance with the USE certification program, which is based on ARI Standard 210/240; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Sound Rating Number rated in accordance with test conditions included in ARI Standard 270.

SPECIFICATIONS - DIRECT DRIVE BLOWER
3 - 5 TON

General Data		Nominal Tonnage	3 Ton	4 Ton	5 Ton
		Model No.	TCA036S2D	TCA048S2D	TCA060S2D
		Efficiency Type	Standard	Standard	Standard
Cooling Performance	Gross Cooling Capacity - Btuh		38,000	50,000	62,000
	¹ Net Cooling Capacity - Btuh		36,600	48,000	59,000
	ARI Rated Air Flow - cfm		1200	1600	1800
	² Sound Rating Number (dB)		75	75	82
	Total Unit Power - kW		3.2	4.4	5.4
		¹ SEER (Btuh/Watt)		13.0	13.0
	¹ EER (Btuh/Watt)		11.6	11.5	11.0
Refrigerant	Type		R-22	R-22	R-22
	Charge Furnished		7 lbs. 12 oz.	9 lbs. 12 oz.	11 lbs. 5 oz.
Compressor Type (one per unit)			Scroll	Scroll	Scroll
Outdoor Coil	Net face area - sq. ft.		15.6	15.6	15.6
	Tube diameter - in.		3/8	3/8	3/8
	Number of rows		1.5	2.0	2.0
	Fins per inch		20	20	20
Outdoor Coil Fan	Motor HP		1/4	1/4	1/3
	Motor rpm		825	825	1075
	Total motor watts		250	250	370
	Diameter - in. / No. of blades		24 - 3	24 - 3	24 - 3
	Total air volume - cfm		3500	3300	4300
Indoor Coil	Net face area - sq. ft.		7.78	7.78	7.78
	Tube diameter - in.		3/8	3/8	3/8
	Number of rows		3	3	4
	Fins per inch		14	14	14
	Drain Connection (no. and size) - in.		(1) 3/4 npt	(1) 3/4 npt	(1) 3/4 npt
	Expansion device type		Balanced Port Thermostatic Expansion Valve, removeable power head		
Indoor Blower	Nominal Motor HP		.5	.5	.75
	Wheel nominal diameter x width - in.		10 x 10	10 x 10	11 x 10
Filters	Type		Disposable		
	Number and size - in.		(4) 16 x 20 x 2		
Electrical Characteristics - 60 Hz			208/230V 1 phase	208/230V 1 phase	208/230V 1 phase
			208/230V, 460V & 575V 3 phase	208/230V, 460V & 575V 3 phase	208/230V, 460V & 575V 3 phase

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ Certified in accordance with the USE certification program, which is based on ARI Standard 210/240; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Sound Rating Number rated in accordance with test conditions included in ARI Standard 270.

SPECIFICATIONS - BELT DRIVE BLOWER
3 - 6 TON

General Data		Nominal Tonnage	3 Ton	4 Ton	5 Ton	6 Ton
	Model No.		TCA036S2B	TCA048S2B	TCA060S2B	TCA072S2B
	Efficiency Type		Standard	Standard	Standard	Standard
Cooling Performance	Gross Cooling Capacity - Btuh		38,000	50,000	62,000	75,000
	Net Cooling Capacity - Btuh		¹ 36,600	¹ 48,000	¹ 59,000	² 72,000
	ARI Rated Air Flow - cfm		1200	1600	2000	2250
	³ Sound Rating Number (dB)		75	75	82	82
	Total Unit Power - kW		3.2	4.4	5.4	7.0
	SEER (Btuh/Watt)		¹ 13.0	¹ 13.0	¹ 13.0	- - -
	EER (Btuh/Watt)		¹ 11.6	¹ 11.5	¹ 11.0	² 10.3
Refrigerant	Type		R-22	R-22	R-22	R-22
	Charge Furnished		7 lbs. 12 oz.	9 lbs. 12 oz.	11 lbs. 5 oz.	11 lbs. 4 oz.
Compressor Type (one per unit)			Scroll	Scroll	Scroll	Scroll
Outdoor Coil	Net face area - sq. ft.		15.6	15.6	15.6	19.27
	Tube diameter - in.		3/8	3/8	3/8	3/8
	Number of rows		1.5	2.0	2.0	1.4
	Fins / inch		20	20	20	20
Outdoor Coil Fan	Motor HP		1/4	1/4	1/3	1/3
	Motor rpm		825	825	1075	1075
	Total motor watts		250	250	370	405
	Diameter - in. / No. of blades		24 - 3	24 - 3	24 - 3	24 - 3
	Total air volume - cfm		3500	3300	4300	4800
Indoor Coil	Net face area - sq. ft.		7.78	7.78	7.78	9.7
	Tube diameter - in.		3/8	3/8	3/8	3/8
	Number of rows		3	3	4	3
	Fins per inch		14	14	14	14
	Drain Connection (no. and size) - in.		(1) 3/4 NPT	(1) 3/4 NPT	(1) 3/4 NPT	(1) 3/4 NPT
Expansion device type			Balanced Port Thermostatic Expansion Valve, removable power head			
⁴ Indoor Blower & Drive Selection	Nominal Motor HP		1.5 hp, ⁵ 2 hp	1.5 hp, ⁵ 2 hp	1.5 hp, ⁵ 2 hp	1.5 hp, 2 hp
	Maximum Usable Motor HP		1.72 hp, 2.3 hp	1.72 hp, 2.3 hp	1.72 hp, 2.3 hp	1.72 hp, 2.3 hp
	Wheel nominal diameter x width - in.		10 x 10	10 x 10	10 x 10	10 x 10
	Available Drive Kits		Drive Kit #1 673 - 1010 rpm Drive Kit #5 897 - 1346 rpm	Drive Kit #2 745 - 1117 rpm Drive Kit #6 1071 - 1429 rpm	Drive Kit #3 833 - 1250 rpm Drive Kit #7 1212 - 1548 rpm	Drive Kit #4 968 - 1340 rpm Drive Kit #8 1193 - 1591 rpm
Filters	Type		Disposable		Disposable	Disposable
	Number and size - in.		(4) 16 x 20 x 2		(4) 16 x 20 x 2	(4) 20 x 20 x 2
Electrical Characteristics - 60 Hz			208/230V 1 phase	208/230V, 1 phase	208/230V 1 phase	208/230V, 460V & 575V 3 phase
			208/230V, 460V & 575V 3 phase	208/230V 460V & 575V 3 phase	208/230V, 460V & 575V 3 phase	

NOTE - Net capacity includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

¹ Certified in accordance with the USE certification program, which is based on ARI Standard 210/240; 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

² Certified in accordance with the ULE certification program, which is based on ARI Standard 340/360; 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19°C) wb entering evaporator air; minimum external duct static pressure.

³ Sound Rating Number rated in accordance with test conditions included in ARI Standard 270.

⁴ Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor hp required. Maximum usable hp of motors furnished are shown. In Canada, nominal motor hp is also maximum usable motor hp output. If motors of comparable hp are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

⁵ 2 hp blower motor is not available for 208/230V-1ph applications.

COOLING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

2 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA024S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	640	300	22.4	6.6	1.29	.71	.85	.99	21.6	6.3	1.46	.72	.87	1.00	20.8	6.1	1.65	.73	.88	1.00	19.8	5.8	1.88	.75	.91	1.00
	800	380	23.4	6.9	1.29	.77	.93	1.00	22.5	6.6	1.46	.78	.96	1.00	21.7	6.4	1.65	.80	.98	1.00	20.7	6.1	1.88	.82	.99	1.00
	960	455	24.2	7.1	1.29	.83	1.00	1.00	23.5	6.9	1.46	.85	1.00	1.00	22.7	6.7	1.66	.87	1.00	1.00	21.7	6.4	1.88	.89	1.00	1.00
67°F (19°C)	640	300	24.0	7.0	1.29	.56	.69	.81	23.2	6.8	1.46	.56	.69	.83	22.2	6.5	1.65	.57	.71	.85	21.2	6.2	1.88	.58	.73	.87
	800	380	25.0	7.3	1.29	.59	.74	.90	24.0	7.0	1.46	.60	.76	.92	23.0	6.7	1.66	.61	.77	.94	22.0	6.4	1.88	.62	.79	.97
	960	455	25.6	7.5	1.29	.62	.80	.98	24.6	7.2	1.46	.63	.82	.99	23.6	6.9	1.66	.65	.84	1.00	22.5	6.6	1.88	.66	.86	1.00
71°F (22°C)	640	300	25.8	7.6	1.29	.42	.54	.66	24.9	7.3	1.46	.42	.54	.67	23.9	7.0	1.66	.42	.55	.68	22.8	6.7	1.88	.42	.56	.70
	800	380	26.7	7.8	1.29	.43	.58	.71	25.7	7.5	1.46	.43	.58	.73	24.6	7.2	1.66	.44	.59	.75	23.5	6.9	1.88	.44	.60	.77
	960	455	27.4	8.0	1.29	.44	.61	.78	26.3	7.7	1.46	.45	.62	.80	25.2	7.4	1.66	.45	.63	.82	24.0	7.0	1.88	.46	.65	.84

2.5 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA030S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	800	380	28.0	8.2	1.71	.71	.85	.99	26.9	7.9	1.93	.72	.87	1.00	25.8	7.6	2.18	.73	.89	1.00	24.6	7.2	2.46	.74	.91	1.00
	1000	470	29.3	8.6	1.72	.76	.93	1.00	28.1	8.2	1.94	.78	.96	1.00	27.0	7.9	2.19	.80	.98	1.00	25.7	7.5	2.46	.81	1.00	1.00
	1200	565	30.4	8.9	1.72	.82	1.00	1.00	29.3	8.6	1.95	.84	1.00	1.00	28.2	8.3	2.19	.86	1.00	1.00	27.1	7.9	2.47	.89	1.00	1.00
67°F (19°C)	800	380	30.1	8.8	1.72	.55	.68	.81	28.9	8.5	1.94	.56	.69	.83	27.7	8.1	2.19	.57	.70	.85	26.4	7.7	2.47	.57	.72	.87
	1000	470	31.3	9.2	1.72	.58	.73	.89	30.0	8.8	1.95	.59	.75	.92	28.7	8.4	2.20	.60	.77	.94	27.3	8.0	2.48	.61	.79	.97
	1200	565	32.1	9.4	1.73	.62	.80	.97	30.8	9.0	1.95	.63	.82	.99	29.4	8.6	2.20	.64	.84	1.00	28.0	8.2	2.48	.65	.86	1.00
71°F (22°C)	800	380	32.4	9.5	1.73	.41	.53	.65	31.1	9.1	1.95	.42	.54	.66	29.8	8.7	2.20	.42	.55	.68	28.4	8.3	2.48	.42	.56	.69
	1000	470	33.5	9.8	1.73	.42	.57	.71	32.2	9.4	1.96	.43	.58	.73	30.8	9.0	2.21	.43	.59	.74	29.3	8.6	2.49	.44	.60	.76
	1200	565	34.3	10.1	1.73	.44	.60	.77	32.9	9.6	1.96	.44	.62	.79	31.5	9.2	2.21	.45	.63	.81	29.9	8.8	2.49	.45	.64	.84

3 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA036S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	960	455	35.6	10.4	2.17	.69	.83	.97	34.1	10.0	2.44	.70	.85	.99	32.7	9.6	2.74	.71	.87	1.00	31.1	9.1	3.08	.73	.90	1.00
	1200	565	37.1	10.9	2.18	.74	.92	1.00	35.6	10.4	2.45	.76	.94	1.00	34.1	10.0	2.75	.78	.96	1.00	32.6	9.6	3.09	.80	.99	1.00
	1440	680	38.5	11.3	2.19	.80	.98	1.00	37.0	10.8	2.46	.82	1.00	1.00	35.6	10.4	2.76	.84	1.00	1.00	34.2	10.0	3.10	.87	1.00	1.00
67°F (19°C)	960	455	38.2	11.2	2.19	.54	.66	.79	36.6	10.7	2.45	.55	.67	.81	35.0	10.3	2.76	.55	.69	.83	33.4	9.8	3.09	.56	.70	.85
	1200	565	39.6	11.6	2.20	.57	.72	.88	38.0	11.1	2.47	.58	.73	.90	36.3	10.6	2.77	.59	.75	.92	34.6	10.1	3.10	.60	.77	.95
	1440	680	40.7	11.9	2.21	.60	.77	.95	39.0	11.4	2.47	.61	.79	.97	37.2	10.9	2.78	.62	.82	.99	35.4	10.4	3.11	.64	.84	1.00
71°F (22°C)	960	455	41.0	12.0	2.21	.41	.52	.64	39.4	11.5	2.48	.41	.53	.65	37.7	11.0	2.78	.41	.54	.66	36.0	10.6	3.12	.41	.54	.67
	1200	565	42.5	12.5	2.22	.42	.55	.69	40.8	12.0	2.49	.42	.56	.71	39.0	11.4	2.79	.42	.57	.72	37.1	10.9	3.13	.43	.58	.74
	1440	680	43.5	12.7	2.23	.43	.59	.75	41.7	12.2	2.50	.43	.60	.77	39.8	11.7	2.80	.44	.61	.79	37.9	11.1	3.13	.44	.63	.81

4 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA048S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1280	605	47.1	13.8	2.95	.68	.82	.98	45.4	13.3	3.31	.69	.84	.99	43.5	12.7	3.71	.70	.86	1.00	41.5	12.2	4.17	.71	.89	1.00
	1600	755	48.9	14.3	2.97	.73	.91	1.00	47.2	13.8	3.33	.74	.94	1.00	45.3	13.3	3.73	.76	.96	1.00	43.3	12.7	4.19	.79	.98	1.00
	1920	905	50.6	14.8	2.99	.79	.98	1.00	48.9	14.3	3.34	.81	1.00	1.00	47.1	13.8	3.74	.83	1.00	1.00	45.2	13.2	4.21	.86	1.00	1.00
67°F (19°C)	1280	605	50.2	14.7	2.98	.53	.65	.78	48.4	14.2	3.34	.54	.66	.80	46.4	13.6	3.74	.54	.67	.82	44.3	13.0	4.20	.55	.69	.85
	1600	755	51.9	15.2	3.00	.56	.70	.88	50.0	14.7	3.36	.57	.72	.90	47.9	14.0	3.76	.58	.74	.92	45.7	13.4	4.22	.59	.76	.95
	1920	905	53.1	15.6	3.02	.59	.77	.96	51.1	15.0	3.37	.60	.79	.97	49.0	14.4	3.77	.61	.81	.99	46.7	13.7	4.23	.63	.83	1.00
71°F (22°C)	1280	605	53.6	15.7	3.02	.40	.51	.63	51.7	15.2	3.38	.40	.52	.64	49.6	14.5	3.78	.40	.53	.65	47.4	13.9	4.24	.40	.53	.66
	1600	755	55.3	16.2	3.04	.41	.55	.68	53.3	15.6	3.40	.41	.55	.70	51.1	15.0	3.80	.42	.56	.71	48.7	14.3	4.26	.42	.58	.73
	1920	905	56.4	16.5	3.06	.42	.58	.74	54.3	15.9	3.41	.43	.59	.76	52.1	15.3	3.82	.43	.60	.78	49.6	14.5	4.28	.43	.62	.81

COOLING RATINGS

NOTE - For Temperatures and Capacities not shown in tables, see bulletin - Cooling Unit Rating Table Correction Factor Data in Miscellaneous Engineering Data section.

5 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA060S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1600	755	59.7	17.5	3.65	.70	.84	.99	57.4	16.8	4.10	.71	.86	1.00	55.0	16.1	4.63	.72	.89	1.00	52.4	15.4	5.26	.74	.91	1.00
	2000	945	62.1	18.2	3.68	.76	.93	1.00	59.7	17.5	4.13	.77	.96	1.00	57.3	16.8	4.66	.79	.98	1.00	54.8	16.1	5.29	.81	1.00	1.00
	2400	1135	64.3	18.8	3.70	.82	1.00	1.00	62.1	18.2	4.15	.84	1.00	1.00	59.7	17.5	4.68	.86	1.00	1.00	57.3	16.8	5.31	.89	1.00	1.00
67°F (19°C)	1600	755	63.5	18.6	3.70	.55	.67	.81	61.1	17.9	4.15	.55	.69	.83	58.5	17.1	4.68	.56	.70	.85	55.7	16.3	5.30	.57	.72	.87
	2000	945	65.6	19.2	3.72	.58	.73	.90	63.0	18.5	4.16	.59	.75	.92	60.3	17.7	4.69	.60	.77	.94	57.4	16.8	5.32	.61	.79	.97
	2400	1135	67.0	19.6	3.73	.62	.80	.98	64.3	18.8	4.18	.63	.82	.99	61.6	18.1	4.71	.64	.84	1.00	58.7	17.2	5.33	.65	.87	1.00
71°F (22°C)	1600	755	67.7	19.8	3.74	.61	.53	.65	65.0	19.0	4.18	.41	.54	.66	62.3	18.3	4.72	.41	.55	.68	59.4	17.4	5.34	.42	.56	.69
	2000	945	69.6	20.4	3.75	.42	.57	.71	66.8	19.6	4.20	.43	.58	.73	64.0	18.8	4.72	.43	.59	.74	60.9	17.8	5.35	.43	.60	.77
	2400	1135	70.9	20.8	3.77	.44	.61	.77	68.0	19.9	4.21	.44	.62	.80	65.1	19.1	4.73	.45	.63	.82	61.9	18.1	5.36	.45	.65	.85

6 TON STANDARD EFFICIENCY - COOLING CAPACITY

TCA072S2

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T) Dry Bulb		
			kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW		75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	1920	905	71.5	21.0	4.98	.65	.80	.97	68.9	20.2	5.57	.66	.82	.98	66.2	19.4	6.26	.67	.85	1.00	63.1	18.5	7.07	.68	.87	1.00
	2400	1135	74.4	21.8	5.05	.70	.90	1.00	71.7	21.0	5.64	.72	.92	1.00	68.8	20.2	6.33	.73	.95	1.00	65.7	19.3	7.14	.76	.97	1.00
	2880	1360	76.8	22.5	5.10	.76	.97	1.00	74.1	21.7	5.69	.79	.99	1.00	71.4	20.9	6.39	.81	1.00	1.00	68.4	20.0	7.21	.84	1.00	1.00
67°F (19°C)	1920	905	76.1	22.3	5.09	.51	.62	.76	73.4	21.5	5.68	.51	.63	.78	70.4	20.6	6.37	.52	.65	.80	67.1	19.7	7.17	.53	.66	.83
	2400	1135	78.7	23.1	5.14	.54	.67	.86	75.7	22.2	5.74	.54	.69	.88	72.5	21.2	6.44	.55	.71	.91	69.1	20.3	7.24	.56	.73	.94
	2880	1360	80.4	23.6	5.19	.56	.74	.94	77.4	22.7	5.78	.57	.76	.96	74.2	21.7	6.47	.58	.78	.98	70.6	20.7	7.28	.60	.81	1.00
71°F (22°C)	1920	905	81.2	23.8	5.21	.38	.49	.60	78.3	22.9	5.80	.38	.50	.61	75.2	22.0	6.50	.38	.50	.62	71.7	21.0	7.30	.39	.51	.64
	2400	1135	83.7	24.5	5.27	.39	.52	.65	80.6	23.6	5.87	.39	.53	.67	77.3	22.7	6.56	.40	.54	.68	73.6	21.6	7.37	.40	.55	.70
	2880	1360	85.4	25.0	5.31	.40	.56	.71	82.2	24.1	5.90	.41	.56	.73	78.7	23.1	6.60	.41	.57	.75	74.8	21.9	7.41	.42	.59	.79

BLOWER DATA - DIRECT DRIVE

2 - 2.5 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

1 - Any factory installed options air resistance (economizer, etc.) See page 21.

2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds					
	208 VOLTS			230 VOLTS		
	High	Medium	Low	High	Medium	Low
2 and 2.5 Ton Standard Efficiency (Down-Flow)				TCA024S and TCA030S		
0.0	1230	975	845	1425	1125	910
0.1	1220	940	815	1395	1110	875
0.2	1205	910	775	1375	1085	845
0.3	1185	880	730	1350	1055	815
0.4	1155	845	680	1320	1010	780
0.5	1115	800	---	1280	955	740
0.6	1060	750	---	1225	895	690
0.7	985	685	---	1150	830	---
0.8	890	---	---	1050	755	---
0.9	770	---	---	920	680	---
1.0	---	---	---	760	---	---
2 and 2.5 Ton Standard Efficiency (Horizontal)				TCA024S and TCA030S		
0.0	1165	925	800	1350	1065	865
0.1	1155	895	770	1325	1055	830
0.2	1140	865	735	1300	1030	800
0.3	1125	835	695	1280	1000	770
0.4	1095	800	645	1250	955	740
0.5	1055	760	---	1215	905	700
0.6	1005	710	---	1160	850	655
0.7	935	650	---	1090	785	---
0.8	845	---	---	995	720	---
0.9	730	---	---	875	645	---
1.0	---	---	---	720	---	---

BLOWER DATA - DIRECT DRIVE

3 - 5 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

- 1 - Any factory installed options air resistance (economizer, etc.) See page 21.
- 2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds								
	208 VOLTS			230 VOLTS			460/575 VOLTS		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
3 and 4 Ton Standard Efficiency (Down-Flow)					TCA036S and TCA048S				
0.0	1990	1625	1145	2175	1825	1330	2100	1735	1220
0.1	1935	1595	1145	2100	1790	1320	2050	1705	1215
0.2	1885	1565	1130	2040	1755	1300	2000	1665	1205
0.3	1830	1530	1095	1980	1710	1265	1945	1625	1180
0.4	1775	1485	1050	1915	1660	1215	1885	1575	1145
0.5	1710	1425	980	1850	1595	1150	1815	1520	1095
0.6	1630	1350	900	1765	1510	1070	1735	1450	1025
0.7	1540	1255	800	1660	1405	975	1640	1375	940
0.8	1425	1140	---	1535	1280	---	1530	1285	---
0.9	1285	1000	---	1375	1120	---	1405	1185	---
1.0	1125	---	---	1180	---	---	1260	---	---

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds								
	208 VOLTS			230 VOLTS			460/575 VOLTS		
	High	Medium	Low	High	Medium	Low	High	Medium	Low
3 and 4 Ton Standard Efficiency (Horizontal)					TCA036S and TCA048S				
0.0	1890	1545	1090	2060	1740	1265	2085	1745	1260
0.1	1830	1515	1090	1990	1700	1255	2020	1700	1240
0.2	1780	1480	1070	1930	1660	1230	1960	1660	1225
0.3	1730	1445	1040	1870	1615	1200	1900	1620	1205
0.4	1675	1400	995	1810	1565	1150	1835	1575	1170
0.5	1610	1340	930	1740	1500	1090	1760	1515	1115
0.6	1530	1260	845	1650	1410	1010	1680	1440	1035
0.7	1420	1160	745	1535	1295	905	1580	1340	915
0.8	1290	1025	---	1385	1150	---	1460	1210	---
0.9	1120	865	---	1195	965	---	1320	1045	---
1.0	910	---	---	960	---	---	1155	---	---

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds					
	208 VOLTS		230 VOLTS		460/575 VOLTS	
	High	Low	High	Low	High	Low
5 Ton Standard Efficiency (Down-Flow)				TCA060S		
0.0	2140	1655	2315	1935	2155	1715
0.1	2110	1650	2280	1910	2085	1695
0.2	2080	1645	2245	1885	2035	1685
0.3	2045	1635	2205	1860	2000	1675
0.4	2005	1615	2160	1830	1970	1660
0.5	1965	1590	2105	1790	1940	1640
0.6	1910	1555	2045	1745	1905	1610
0.7	1845	1500	1970	1685	1855	1565
0.8	1765	1435	1885	1615	1790	1495
0.9	1675	1350	1785	1525	1700	1405
1.0	1565	---	1665	---	1580	---

External Static Pressure (in. w.g.)	Air Volume (cfm) at Various Blower Speeds					
	208 VOLTS		230 VOLTS		460/575 VOLTS	
	High	Low	High	Low	High	Low
5 Ton Standard Efficiency (Horizontal)				TCA060S		
0.0	2030	1600	2190	1870	2215	1800
0.1	1990	1595	2150	1850	2165	1796
0.2	1950	1585	2105	1820	2120	1780
0.3	1905	1565	2055	1780	2070	1750
0.4	1860	1535	2000	1735	2020	1715
0.5	1805	1495	1935	1685	1965	1670
0.6	1740	1450	1865	1625	1900	1615
0.7	1670	1390	1785	1560	1830	1550
0.8	1590	1320	1695	1485	1750	1475
0.9	1500	1240	1600	1400	1650	1385
1.0	1395	---	1485	---	1535	---

BLOWER DATA - BELT DRIVE

3 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

- 1 - Any factory installed options air resistance (economizer, etc.) See page 21.
- 2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

Then determine from table the blower motor output and drive required.

0.10 to 0.80 in. w.g. 3 Ton Standard Efficiency (Down-Flow) TCA036S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished				Low Static - Drive Kit #1										Drive Kit #5	
900	485	0.10	595	0.15	690	0.20	780	0.30	860	0.40	930	0.50	1000	0.60	1065	0.75
1000	520	0.10	615	0.20	705	0.25	790	0.35	870	0.45	945	0.55	1010	0.65	1075	0.75
1100	550	0.15	640	0.20	725	0.30	805	0.35	885	0.45	955	0.55	1020	0.70	1085	0.80
1200	585	0.20	665	0.25	745	0.30	825	0.40	900	0.50	965	0.60	1030	0.70	1095	0.85
1300	620	0.20	695	0.30	770	0.35	845	0.45	915	0.55	980	0.65	1045	0.75	1105	0.90
1400	660	0.25	730	0.35	795	0.40	865	0.50	935	0.60	995	0.70	1060	0.80	1120	0.95
1500	695	0.30	760	0.40	825	0.45	890	0.55	955	0.65	1015	0.75	1075	0.85	1135	1.00

0.90 to 1.60 in. w.g. 3 Ton Standard Efficiency (Down-Flow) TCA036S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	High Static - Drive Kit #5										Field Furnished					
900	1125	0.85	1180	1.00	1230	1.10	1285	1.25	1330	1.35	1380	1.50	1425	1.65	1465	1.80
1000	1130	0.90	1190	1.00	1240	1.15	1295	1.30	1340	1.40	1390	1.60	1435	1.75	1475	1.85
1100	1140	0.90	1200	1.05	1250	1.20	1300	1.35	1350	1.50	1400	1.65	1445	1.80	1485	1.95
1200	1150	0.95	1210	1.10	1260	1.25	1310	1.40	1360	1.55	1410	1.70	1455	1.85	1495	2.00
1300	1165	1.00	1220	1.15	1270	1.30	1320	1.45	1370	1.60	1415	1.75	1465	1.90	1505	2.05
1400	1175	1.05	1230	1.20	1280	1.35	1330	1.50	1380	1.65	1425	1.80	1470	1.95	1515	2.15
1500	1190	1.15	1240	1.25	1295	1.40	1345	1.55	1390	1.70	1435	1.90	1480	2.05	1525	2.20

0.10 to 0.80 in. w.g. 3 Ton Standard Efficiency (Horizontal) TCA036S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished				Low Static - Drive Kit #1											
900	480	0.10	570	0.15	655	0.20	735	0.30	810	0.35	875	0.45	940	0.55	1000	0.65
1000	520	0.15	595	0.15	675	0.25	750	0.30	820	0.40	890	0.50	950	0.60	1010	0.70
1100	555	0.15	625	0.20	695	0.25	765	0.35	835	0.45	900	0.50	960	0.60	1020	0.75
1200	595	0.20	660	0.25	725	0.30	790	0.40	850	0.45	915	0.55	975	0.65	1030	0.75
1300	635	0.25	690	0.30	750	0.35	810	0.40	870	0.50	930	0.60	990	0.70	1045	0.80
1400	675	0.30	730	0.35	785	0.40	840	0.50	895	0.55	950	0.65	1005	0.75	1060	0.85
1500	720	0.35	765	0.40	815	0.45	870	0.55	920	0.60	970	0.70	1025	0.80	1075	0.95

0.90 to 1.60 in. w.g. 3 Ton Standard Efficiency (Horizontal) TCA036S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	High Static - Drive Kit #5										Field					
900	1055	0.75	1105	0.90	1155	1.00	1200	1.10	1245	1.25	1285	1.35	1325	1.50	1365	1.60
1000	1065	0.80	1115	0.90	1165	1.05	1210	1.15	1255	1.30	1300	1.40	1340	1.55	1380	1.70
1100	1075	0.85	1125	0.95	1175	1.10	1220	1.20	1265	1.35	1310	1.50	1350	1.60	1395	1.75
1200	1085	0.90	1135	1.00	1185	1.15	1235	1.25	1280	1.40	1320	1.55	1365	1.70	1405	1.85
1300	1095	0.95	1145	1.05	1195	1.20	1245	1.30	1290	1.45	1330	1.60	1375	1.75	1415	1.90
1400	1110	1.00	1160	1.10	1210	1.25	1255	1.40	1300	1.50	1340	1.65	1385	1.80	1425	1.95
1500	1125	1.05	1175	1.15	1220	1.30	1265	1.45	1310	1.60	1355	1.75	1395	1.85	1435	2.05

BLOWER DATA - BELT DRIVE

4 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

1 - Any factory installed options air resistance (economizer, etc.) See page 21.

2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

Then determine from table the blower motor output and drive required.

0.10 to 0.80 in. w.g. 4 Ton Standard Efficiency (Down-Flow) TCA048S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished						Low Static - Drive Kit #2									
1200	580	0.15	660	0.20	740	0.30	815	0.35	885	0.45	955	0.55	1015	0.60	1075	0.70
1300	620	0.20	690	0.25	765	0.30	835	0.40	905	0.50	970	0.55	1030	0.65	1090	0.75
1400	655	0.25	720	0.30	790	0.35	855	0.45	925	0.55	985	0.60	1045	0.70	1105	0.85
1500	690	0.30	755	0.35	820	0.40	880	0.50	945	0.60	1005	0.65	1060	0.75	1120	0.90
1600	730	0.35	790	0.40	850	0.45	910	0.55	965	0.65	1025	0.75	1080	0.85	1135	0.95
1700	770	0.40	825	0.45	880	0.55	935	0.60	990	0.70	1045	0.80	1100	0.90	1155	1.00
1800	810	0.45	860	0.55	910	0.60	965	0.70	1020	0.80	1070	0.85	1125	1.00	1175	1.10
1900	845	0.55	895	0.60	945	0.70	995	0.75	1045	0.85	1095	0.95	1145	1.05	1195	1.15
2000	885	0.65	935	0.70	980	0.80	1030	0.85	1075	0.95	1125	1.05	1170	1.15	1220	1.25

0.90 to 1.60 in. w.g. 4 Ton Standard Efficiency (Down-Flow) TCA048S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	High Static - Drive Kit #6										Field					
1200	1135	0.85	1185	0.95	1240	1.05	1285	1.15	1335	1.30	1380	1.45	1425	1.55	1465	1.70
1300	1145	0.90	1200	1.00	1250	1.10	1300	1.25	1345	1.35	1390	1.50	1435	1.60	1475	1.75
1400	1160	0.95	1210	1.05	1260	1.15	1310	1.30	1355	1.40	1400	1.55	1445	1.70	1490	1.85
1500	1170	1.00	1225	1.10	1275	1.25	1320	1.35	1370	1.50	1415	1.60	1455	1.75	1500	1.90
1600	1185	1.05	1240	1.20	1285	1.30	1335	1.40	1380	1.55	1425	1.70	1470	1.85	1510	1.95
1700	1205	1.10	1255	1.25	1300	1.35	1350	1.50	1395	1.65	1440	1.80	1480	1.90	1520	2.05
1800	1220	1.20	1270	1.30	1320	1.45	1365	1.60	1410	1.70	1450	1.85	1495	2.00	1535	2.15
1900	1240	1.30	1290	1.40	1335	1.55	1380	1.65	1425	1.80	1465	1.95	1510	2.10	1550	2.25
2000	1265	1.40	1310	1.50	1355	1.65	1395	1.75	1440	1.90	1480	2.05	1525	2.20	1565	2.35

0.10 to 0.80 in. w.g. 4 Ton Standard Efficiency (Horizontal) TCA048S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished						Low Static - Drive Kit #2									
1200	590	0.15	655	0.20	715	0.25	780	0.35	840	0.40	900	0.50	960	0.55	1015	0.65
1300	630	0.20	685	0.25	745	0.30	805	0.35	860	0.45	920	0.50	975	0.60	1030	0.70
1400	675	0.25	725	0.30	775	0.35	830	0.40	885	0.50	940	0.55	990	0.65	1045	0.75
1500	715	0.30	760	0.35	810	0.40	860	0.50	910	0.55	960	0.60	1010	0.70	1060	0.80
1600	755	0.40	800	0.45	845	0.50	890	0.55	940	0.60	985	0.70	1035	0.80	1080	0.85
1700	800	0.45	840	0.50	880	0.55	925	0.60	970	0.70	1015	0.75	1060	0.85	1100	0.95
1800	840	0.55	880	0.60	920	0.65	960	0.70	1000	0.75	1040	0.85	1085	0.95	1125	1.00
1900	885	0.60	920	0.65	955	0.75	995	0.80	1030	0.85	1070	0.95	1110	1.00	1150	1.10
2000	925	0.70	960	0.75	995	0.85	1030	0.90	1065	0.95	1105	1.05	1140	1.10	1180	1.20

0.90 to 1.60 in. w.g. 4 Ton Standard Efficiency (Horizontal) TCA048S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Drive Kit #2						High Static - Drive Kit #6									
1200	1065	0.75	1115	0.85	1165	0.95	1210	1.05	1255	1.20	1295	1.30	1335	1.40	1375	1.50
1300	1080	0.80	1130	0.90	1175	1.00	1220	1.10	1265	1.25	1305	1.35	1345	1.45	1385	1.60
1400	1095	0.85	1140	0.95	1190	1.05	1235	1.15	1275	1.30	1320	1.40	1360	1.50	1400	1.65
1500	1110	0.90	1155	1.00	1200	1.10	1245	1.20	1290	1.35	1330	1.45	1370	1.60	1410	1.70
1600	1125	0.95	1170	1.05	1215	1.15	1260	1.30	1300	1.40	1345	1.55	1385	1.65	1420	1.80
1700	1145	1.05	1190	1.15	1235	1.25	1275	1.35	1315	1.45	1355	1.60	1395	1.70	1435	1.85
1800	1170	1.10	1210	1.20	1250	1.30	1290	1.45	1335	1.55	1370	1.70	1410	1.80	1450	1.95
1900	1190	1.20	1230	1.30	1270	1.40	1310	1.55	1350	1.65	1390	1.80	1425	1.90	1465	2.05
2000	1220	1.30	1255	1.40	1295	1.50	1330	1.65	1370	1.75	1405	1.85	1445	2.00	1480	2.15

BLOWER DATA - BELT DRIVE

5 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

1 - Any factory installed options air resistance (economizer, etc.) See page 21.

2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

Then determine from table the blower motor output and drive required.

0.10 to 0.80 in. w.g.

5 Ton Standard Efficiency (Down-Flow)

TCA060S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished				Low Static - Drive Kit #3											
1600	740	0.35	790	0.35	845	0.40	895	0.45	945	0.50	995	0.55	1040	0.65	1090	0.70
1700	780	0.40	830	0.45	880	0.50	925	0.55	975	0.60	1020	0.65	1065	0.70	1110	0.75
1800	820	0.45	865	0.50	915	0.55	960	0.60	1005	0.65	1050	0.70	1090	0.75	1135	0.85
1900	860	0.55	905	0.60	950	0.65	990	0.70	1035	0.75	1075	0.80	1120	0.85	1160	0.95
2000	905	0.60	945	0.65	985	0.70	1025	0.75	1065	0.85	1110	0.90	1150	0.95	1190	1.05
2100	945	0.70	985	0.75	1020	0.80	1060	0.85	1100	0.95	1140	1.00	1180	1.05	1215	1.10
2200	985	0.80	1025	0.85	1060	0.90	1100	1.00	1135	1.05	1170	1.10	1210	1.15	1245	1.25
2300	1025	0.90	1065	1.00	1100	1.05	1135	1.10	1170	1.15	1205	1.20	1240	1.30	1275	1.35
2400	1070	1.05	1105	1.10	1135	1.15	1170	1.20	1205	1.30	1240	1.35	1275	1.45	1310	1.50

0.90 to 1.60 in. w.g.

5 Ton Standard Efficiency (Down-Flow)

TCA060S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Low Static - Drive Kit #3				High Static - Drive Kit #7											
1600	1135	0.75	1180	0.85	1220	0.90	1265	0.95	1305	1.05	1345	1.15	1385	1.20	1425	1.30
1700	1155	0.85	1200	0.90	1240	0.95	1280	1.05	1320	1.10	1360	1.20	1400	1.30	1440	1.40
1800	1180	0.90	1220	1.00	1260	1.05	1300	1.10	1340	1.20	1380	1.30	1415	1.35	1455	1.45
1900	1200	1.00	1240	1.05	1280	1.15	1320	1.20	1360	1.30	1395	1.35	1435	1.45	1470	1.55
2000	1225	1.10	1265	1.15	1305	1.25	1340	1.30	1380	1.40	1415	1.45	1450	1.55	1485	1.65
2100	1255	1.20	1290	1.25	1330	1.35	1365	1.40	1400	1.50	1435	1.60	1470	1.65	1505	1.75
2200	1280	1.30	1320	1.40	1355	1.45	1390	1.55	1425	1.60	1460	1.70	1495	1.80	1525	1.85
2300	1310	1.45	1345	1.50	1380	1.60	1415	1.65	1450	1.75	1480	1.85	1515	1.90	1550	2.00
2400	1340	1.55	1375	1.65	1410	1.75	1440	1.80	1475	1.90	1505	1.95	1540	2.05	1570	2.15

0.10 to 0.80 in. w.g.

5 Ton Standard Efficiency (Horizontal)

TCA060S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished				Low Static - Drive Kit #3											
1600	760	0.35	805	0.40	850	0.45	900	0.50	950	0.55	1000	0.65	1050	0.70	1100	0.80
1700	805	0.45	845	0.50	885	0.50	930	0.55	980	0.65	1025	0.70	1075	0.80	1120	0.85
1800	845	0.50	885	0.55	925	0.60	965	0.65	1010	0.70	1055	0.80	1100	0.85	1145	0.95
1900	890	0.60	925	0.65	965	0.70	1000	0.75	1040	0.80	1085	0.90	1125	0.95	1170	1.05
2000	935	0.70	965	0.75	1000	0.80	1040	0.85	1075	0.90	1115	0.95	1155	1.05	1195	1.15
2100	975	0.80	1010	0.85	1040	0.90	1075	0.95	1110	1.00	1145	1.05	1185	1.15	1225	1.25
2200	1020	0.90	1050	0.95	1080	1.00	1115	1.05	1145	1.15	1180	1.20	1215	1.25	1250	1.35
2300	1065	1.05	1095	1.10	1120	1.15	1155	1.20	1185	1.25	1215	1.30	1250	1.40	1285	1.50
2400	1110	1.20	1135	1.25	1165	1.30	1190	1.35	1220	1.40	1255	1.45	1285	1.55	1315	1.60

0.90 to 1.60 in. w.g.

5 Ton Standard Efficiency (Horizontal)

TCA060S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Low Static - Drive Kit #3				High Static - Drive Kit #7											
1600	1150	0.90	1195	1.00	1240	1.10	1285	1.20	1330	1.30	1370	1.40	1410	1.50	1445	1.60
1700	1170	0.95	1215	1.05	1260	1.15	1300	1.25	1345	1.35	1385	1.50	1425	1.60	1460	1.70
1800	1190	1.05	1230	1.15	1275	1.25	1320	1.35	1360	1.45	1400	1.55	1440	1.65	1475	1.80
1900	1210	1.10	1255	1.20	1295	1.30	1335	1.40	1375	1.55	1415	1.65	1455	1.75	1495	1.90
2000	1235	1.20	1275	1.30	1315	1.40	1355	1.50	1395	1.60	1435	1.75	1470	1.85	1510	2.00
2100	1260	1.30	1300	1.40	1340	1.50	1375	1.60	1415	1.75	1450	1.85	1490	1.95	1525	2.10
2200	1290	1.45	1325	1.55	1360	1.60	1400	1.75	1435	1.85	1470	1.95	1510	2.10	1545	2.20
2300	1320	1.55	1355	1.65	1390	1.75	1425	1.85	1460	1.95	1495	2.10	1530	2.20	1565	2.30
2400	1350	1.70	1380	1.80	1415	1.90	1450	2.00	1485	2.10	1515	2.20	1550	2.35	1585	2.45

BLOWER DATA - BELT DRIVE

6 TON

Blower tables include resistance for base unit with wet indoor coil & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

- 1 - Any factory installed options air resistance (economizer, etc.) See page 21.
- 2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

Then determine from table the blower motor output and drive required.

0.10 to 0.80 in. w.g.		6 Ton Standard Efficiency (Down-Flow)												TCA072S		
Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished									Low Static - Drive Kit #4						
1900	760	0.45	810	0.50	860	0.55	905	0.60	955	0.70	1000	0.75	1050	0.85	1095	0.90
2000	795	0.50	845	0.60	890	0.65	935	0.70	980	0.75	1025	0.85	1070	0.90	1115	1.00
2100	835	0.60	875	0.65	920	0.70	965	0.80	1005	0.85	1050	0.90	1095	1.00	1135	1.10
2200	870	0.70	910	0.75	950	0.80	995	0.90	1035	0.95	1075	1.00	1115	1.10	1160	1.20
2300	905	0.80	945	0.85	985	0.90	1025	0.95	1065	1.05	1105	1.10	1145	1.20	1180	1.30
2400	940	0.90	980	0.95	1015	1.00	1055	1.10	1090	1.15	1130	1.25	1170	1.30	1205	1.40
2500	975	1.00	1010	1.05	1050	1.10	1085	1.20	1120	1.25	1160	1.35	1195	1.45	1230	1.50
2600	1010	1.10	1045	1.15	1080	1.25	1115	1.30	1155	1.40	1190	1.50	1225	1.55	1260	1.65
2700	1050	1.25	1080	1.30	1115	1.35	1150	1.45	1185	1.55	1220	1.60	1250	1.70	1285	1.80
2800	1085	1.35	1115	1.45	1150	1.50	1180	1.60	1215	1.65	1250	1.75	1280	1.85	1315	1.95
2900	1120	1.50	1155	1.60	1185	1.65	1215	1.75	1245	1.80	1280	1.90	1310	2.00	1340	2.10

0.90 to 1.60 in. w.g.		6 Ton Standard Efficiency (Down-Flow)												TCA072S		
Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Low Static - Drive Kit #4						High Static - Drive Kit #8									
1900	1140	1.00	1180	1.10	1225	1.20	1265	1.25	1305	1.35	1345	1.45	1385	1.55	1420	1.65
2000	1155	1.10	1200	1.15	1240	1.25	1280	1.35	1320	1.45	1360	1.55	1395	1.65	1435	1.75
2100	1175	1.15	1220	1.25	1260	1.35	1300	1.45	1335	1.55	1375	1.65	1410	1.75	1450	1.85
2200	1200	1.25	1240	1.35	1275	1.45	1315	1.55	1355	1.65	1390	1.75	1425	1.85	1460	1.95
2300	1220	1.35	1260	1.45	1295	1.55	1335	1.65	1370	1.75	1405	1.85	1445	2.00	1480	2.10
2400	1245	1.50	1280	1.55	1320	1.70	1355	1.80	1390	1.90	1425	2.00	1460	2.10	1495	2.20
2500	1270	1.60	1305	1.70	1340	1.80	1375	1.90	1410	2.00	1445	2.10	1480	2.20	1510	2.30
2600	1295	1.75	1330	1.85	1365	1.95	1395	2.05	1430	2.15	1465	2.25	1495	2.35	1530	2.45
2700	1320	1.90	1355	2.00	1385	2.05	1420	2.20	1455	2.30	1485	2.40	1520	2.50	1550	2.60
2800	1345	2.00	1380	2.15	1410	2.20	1445	2.35	1475	2.45	1505	2.55	1540	2.65	1570	2.80
2900	1375	2.20	1405	2.30	1435	2.40	1470	2.50	1500	2.60	1530	2.70	1560	2.85	1590	2.95

BLOWER DATA - BELT DRIVE

6 TON

Blower tables include resistance for base unit with wet indoor coil, & 2 in. disposable air filters in place.

FOR ALL UNITS ADD:

1 - Any factory installed options air resistance (economizer, etc.) See page 21.

2 - Any field installed accessories air resistance (electric heat, duct resistance, diffuser, etc.) See page 21.

Then determine from table the blower motor output and drive required.

0.10 to 0.80 in. w.g.

6 Ton Standard Efficiency (Horizontal)

TCA072S

Air Volume (cfm)	External Static (in.w.g.)															
	0.10		0.20		0.30		0.40		0.50		0.60		0.70		0.80	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	Field Furnished				Low Static - Drive Kit #4											
1900	890	0.55	940	0.60	990	0.70	1035	0.75	1080	0.80	1125	0.90	1165	0.95	1205	1.00
2000	930	0.65	980	0.70	1025	0.80	1070	0.85	1115	0.90	1155	1.00	1195	1.05	1235	1.10
2100	975	0.75	1020	0.80	1065	0.90	1110	0.95	1150	1.00	1190	1.10	1230	1.15	1265	1.25
2200	1015	0.85	1060	0.90	1105	1.00	1145	1.05	1185	1.15	1225	1.20	1260	1.30	1300	1.35
2300	1060	0.95	1100	1.05	1140	1.10	1180	1.20	1220	1.25	1260	1.35	1295	1.40	1330	1.50
2400	1100	1.10	1140	1.15	1180	1.25	1220	1.30	1260	1.40	1295	1.50	1330	1.55	1365	1.65
2500	1140	1.20	1180	1.30	1220	1.40	1260	1.45	1295	1.55	1330	1.65	1365	1.70	1400	1.80
2600	1185	1.35	1225	1.45	1260	1.55	1295	1.60	1335	1.70	1365	1.80	1400	1.90	1435	1.95
2700	1225	1.50	1265	1.60	1300	1.70	1335	1.80	1370	1.90	1405	1.95	1435	2.05	1470	2.15
2800	1270	1.70	1305	1.80	1340	1.85	1375	1.95	1410	2.05	1440	2.15	1475	2.25	1505	2.35
2900	1315	1.90	1350	1.95	1380	2.05	1415	2.15	1450	2.25	1480	2.35	1510	2.45	1540	2.55

0.90 to 1.60 in. w.g.

6 Ton Standard Efficiency (Horizontal)

TCA072S

Air Volume (cfm)	External Static (in.w.g.)															
	0.90		1.0		1.10		1.20		1.30		1.40		1.50		1.60	
	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
	High Static - Drive Kit #8															
1900	1245	1.10	1285	1.15	1320	1.20	1355	1.30	1395	1.35	1430	1.45	1465	1.55	1495	1.60
2000	1275	1.20	1310	1.25	1345	1.35	1385	1.40	1420	1.50	1455	1.55	1485	1.65	1520	1.70
2100	1305	1.30	1340	1.40	1375	1.45	1410	1.55	1445	1.60	1480	1.70	1510	1.75	1545	1.85
2200	1335	1.45	1370	1.50	1405	1.60	1440	1.65	1470	1.75	1505	1.85	1535	1.90	1570	2.00
2300	1365	1.55	1400	1.65	1435	1.75	1470	1.80	1500	1.90	1530	1.95	1565	2.05	1595	2.15
2400	1400	1.70	1435	1.80	1465	1.90	1500	1.95	1530	2.05	1560	2.15	1590	2.20	1620	2.30
2500	1435	1.90	1465	1.95	1495	2.05	1530	2.15	1560	2.20	1590	2.30	1620	2.40	1650	2.50
2600	1465	2.05	1500	2.15	1530	2.25	1560	2.30	1590	2.40	1620	2.50	1650	2.60	1680	2.70
2700	1500	2.25	1530	2.30	1565	2.40	1595	2.50	1620	2.60	1650	2.70	1680	2.80	1710	2.90
2800	1535	2.45	1565	2.50	1595	2.60	1625	2.70	1655	2.80	1685	2.90	1710	3.00	1740	3.10
2900	1570	2.65	1600	2.75	1630	2.85	1660	2.95	1685	3.00	1715	3.10	1745	3.25	1770	3.30

BLOWER DATA

FACTORY INSTALLED BELT DRIVE KIT SPECIFICATIONS

Motor hp		RPM Range							
Nominal	Maximum	Drive 1	Drive 2	Drive 3	Drive 4	Drive 5	Drive 6	Drive 7	Drive 8
1.5	1.7	673 - 1010	745 - 1117	833 - 1250	968 - 1340	897 - 1346	1071 - 1429	1212 - 1548	1193 - 1591
2	2.3								

*Using total air volume and system static pressure requirements determine from blower performance tables rpm and motor hp required. Maximum usable hp of motors furnished by Lennox are shown. In Canada, nominal motor hp is also maximum usable motor hp. If motors of comparable hp are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

BLOWER DATA

POWER EXHAUST FANS PERFORMANCE

Return Air System Static Pressure in. w.g.	Air Volume Exhausted - cfm											
	T1PWRE10A						T1PWRE10N					
	208V			230V, 460V and 575V			208V			230V, 460V and 575V		
	Low	Medium	High	Low	Medium	High	Low	Medium	High	Low	Medium	High
0	1290	1300	1320	1300	1305	1295	3545	3915	4230	3880	4135	4340
0.1	1045	1055	1055	1040	1050	1055	2880	3215	3580	3255	3550	3755
0.2	805	805	815	805	810	810	2290	2665	3055	2710	3010	3240
0.3	580	580	600	595	590	585	1735	2175	2605	2200	2500	2770
0.4	390	405	400	405	400	410	1165	1660	2175	1685	2010	2325
0.5	245	315	215	240	255	300	530	1045	1710	1120	1510	1885
0.6	155	340	35	90	165	290	---	250	1160	470	990	1420
0.7	145	515	---	---	140	400	---	---	470	---	430	915

OPTIONS / ACCESSORIES AIR RESISTANCE - in. w.g.

Air Volume cfm	Economizer	Electric Heat
800	0.04	0.01
1000	0.04	0.03
1200	0.04	0.06
1400	0.04	0.09
1600	0.04	0.12
1800	0.05	0.15
2000	0.05	0.18
2200	0.05	0.20
2400	0.05	0.22
2600	0.06	0.24
2800	0.06	0.26
3000	0.06	0.28

CEILING DIFFUSERS AIR RESISTANCE (in. w.g.)

Air Volume cfm	RTD9-65 Step-Down Diffuser			FD9-65 Flush Diffuser	RTD11-95 Step-Down Diffuser			FD11-95 Flush Diffuser
	2 Ends Open	1 Side & 2 Ends Open	All Ends & Sides Open		2 Ends Open	1 Side & 2 Ends Open	All Ends & Sides Open	
800	0.15	0.13	0.11	0.11	---	---	---	---
1000	0.19	0.16	0.14	0.14	---	---	---	---
1200	0.25	0.20	0.17	0.17	---	---	---	---
1400	0.33	0.26	0.20	0.20	---	---	---	---
1600	0.43	0.32	0.20	0.24	---	---	---	---
1800	0.56	0.40	0.30	0.30	0.13	0.11	0.09	0.09
2000	0.73	0.50	0.36	0.36	0.15	0.13	0.11	0.10
2200	0.95	0.63	0.44	0.44	0.18	0.15	0.12	0.12
2400	---	----	---	---	0.21	0.18	0.15	0.14
2600	---	----	---	---	0.24	0.21	0.18	0.17
2800	---	----	---	---	0.27	0.24	0.21	0.20
3000	---	----	---	---	0.32	0.29	0.25	0.25

CEILING DIFFUSER AIR THROW DATA

Air Volume - cfm	¹ Effective Throw - ft.	
	RTD9-65	FD9-65
800	10 - 17	14 - 18
1000	10 - 17	15 - 20
1200	11 - 18	16 - 22
1400	12 - 19	17 - 24
1600	12 - 20	18 - 25
1800	13 - 21	20 - 28
2000	14 - 23	21 - 29
2200	16 - 25	22 - 30
Model No.	RTD11-95	FD11-95
2600	24 - 29	19 - 24
2800	25 - 30	20 - 28
3000	27 - 33	21 - 29

¹ Effective throw based on terminal velocities of 75 ft. per minute.

OUTDOOR SOUND DATA

1 Unit Model No.	Octave Band Sound Power Levels dBA, re 10 ⁻¹² Watts - Center Frequency - HZ							Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
024, 030, 036 and 048	63	66	70	71	68	62	53	75
060 and 072	67	72	77	76	73	68	61	82

NOTE - The octave sound power data shown does not include tonal correction.

¹ Tested according to ARI Standard 270-95 test conditions.

ELECTRICAL/ELECTRIC HEAT DATA

2 - 2.5 TON

2 AND 2.5 TON STANDARD EFFICIENCY		TCA024S	TCA030S
Voltage - 60hz		208/230V-1ph	208/230V-1ph
Compressor	Rated Load Amps	10.4	14.1
	Locked Rotor Amps	54	68
Outdoor Fan Motor	Full Load Amps	1.7	1.7
	Locked Rotor Amps	3.1	3.1
Service Outlet 115V GFI		15	15
Indoor Blower Motor	Horsepower	.25	.25
	Rated Load Amps	1.7	1.7
	Locked Rotor Amps	2.2	2.2
1 Maximum Overcurrent Protection	Unit Only	25	35
	7.5 kW	45	45
	10 kW	60	60
2 Minimum Circuit Ampacity	Unit Only	17	22
	7.5 kW	42	42
	10 kW	55	55
Unit Fuse Block		28W68	17W94
Disconnect Kit	Hinged - 0-10 kW	20W21	20W21
	Standard Access - 0-10 kW	20W15	20W15

ELECTRICAL/ELECTRIC HEAT DATA

3 - 4 TON

3 TON STANDARD EFFICIENCY

TCA036S

Voltage - 60hz		208/230V-1ph			208/230V-3ph			460V-3ph			575V-3ph		
Compressor	Rated Load Amps	14.4			9.6			5.8			4.0		
	Locked Rotor Amps	77.0			73.0			38.0			28.0		
Outdoor Fan Motor	Full Load Amps	1.7			1.7			1.1			0.7		
	Locked Rotor Amps	3.1			3.1			2.2			1.3		
Power Exhaust Fan	Horsepower	.75			.75			.75			.75		
	Full Load Amps	5.0			5.0			2.2			1.5		
	Locked Rotor Amps	7.8			7.8			3.4			2.9		
Service Outlet 115V GFI (amp rating)		15			15			15			15		
Indoor Blower Motor	Horsepower	.5	1.5	.5	1.5	2	.5	1.5	2	.5	1.5	2	
	Rated Load Amps	3.1	11.5	3.1	5.7	7.5	1.5	2.8	3.4	1.5	2.4	2.7	
	Locked Rotor Amps	6.8	55	6.8	40	46.9	3.8	20	20.4	3.8	15	16.2	
1 Maximum Overcurrent Protection	Unit Only	35	45	25	25	30	15	15	15	15	15	15	
	with power exhaust	0 kW	40	50	30	30	35	15	15	15	15	15	
	7.5 kW	50	60	35	40	40	20	20	20	15	15	15	
	15 kW	90	100	60	60	70	30	30	30	25	25	25	
2 Minimum Circuit Ampacity	Unit Only	23	32	17	20	22	10	12	12	8	8	9	
	with power exhaust	0 kW	28	37	22	25	27	13	14	14	9	10	
	7.5 kW	50	60	33	36	39	16	18	19	13	14	15	
	15 kW	89	99	56	59	61	28	29	30	22	23	24	
Unit Fuse Block	Unit Only	17W94	17W96	18W00	18W00	18W01	18W06	18W06	18W06	18W06	18W06	18W06	
	with power exhaust	17W95	17W97	18W01	18W01	18W02	18W06	18W06	18W06	18W06	18W06	18W06	
Disconnect	Hinged - 0-7.5 kW	15 kW	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	
		15 kW	20W22	20W22	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	
	Standard Access - 0-7.5 kW	15 kW	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	
		15 kW	20W16	20W16	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	

4 TON STANDARD EFFICIENCY

TCA048S

Voltage - 60hz		208/230V-1ph			208/230V-3ph			460V-3ph			575V-3ph		
Compressor	Rated Load Amps	20.2			12.2			6.1			4.2		
	Locked Rotor Amps	137.0			83.1			41.0			33.0		
Outdoor Fan Motor	Full Load Amps	1.7			1.7			1.1			0.7		
	Locked Rotor Amps	3.1			3.1			2.2			1.3		
Power Exhaust Fan	Horsepower	.75			.75			.75			.75		
	Full Load Amps	5.0			5.0			2.2			1.5		
	Locked Rotor Amps	7.8			7.8			3.4			2.9		
Service Outlet 115V GFI (amp rating)		15			15			15			15		
Indoor Blower Motor	Horsepower	.5	1.5	.5	1.5	2	.5	1.5	2	.5	1.5	2	
	Rated Load Amps	3.1	11.5	3.1	5.7	7.5	1.5	2.8	3.4	1.5	2.4	2.7	
	Locked Rotor Amps	6.8	55	6.8	40	46.9	3.8	20	20.4	3.8	15	16.2	
1 Maximum Overcurrent Protection	Unit Only	50	50	30	30	35	15	15	15	15	15	15	
	with power exhaust	0 kW	50	60	35	35	40	15	15	20	15	15	
	7.5 kW	50	60	35	40	40	20	20	20	15	15	15	
	15 kW	90	100	60	60	70	30	30	30	25	25	25	
2 Minimum Circuit Ampacity	Unit Only	31	39	21	23	25	11	12	13	8	9	9	
	with power exhaust	0 kW	36	44	26	28	30	13	14	15	9	10	
	7.5 kW	50	60	33	36	39	16	18	19	13	14	15	
	15 kW	89	99	56	59	66	28	29	30	22	23	24	
Unit Fuse Block	Unit Only	17W97	17W97	18W01	18W01	18W02	18W06	18W06	18W06	18W06	18W06	18W06	
	with power exhaust	17W97	17W98	18W02	18W02	18W03	18W06	18W06	18W07	18W06	18W06	18W06	
Disconnect	Standard Access	0-7.5 kW	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	
		15 kW	20W16	20W16	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	
	Hinged	0-7.5 kW	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	
		15 kW	20W22	20W22	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

1 HACR type breaker or fuse.

2 Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

ELECTRICAL/ELECTRIC HEAT DATA

5 TON

5 TON STANDARD EFFICIENCY

TCA060S

Voltage - 60hz		208/230V-1ph			208/230V-3ph			460V-3ph			575V-3ph		
Compressor	Rated Load Amps	25.3			15.4			7.1			5.3		
	Locked Rotor Amps	141.0			110.0			52.0			38.9		
Outdoor Fan Motor	Full Load Amps	2.4			2.4			1.3			1.0		
	Locked Rotor Amps	4.7			4.7			2.4			1.9		
Power Exhaust Fan	Horsepower	.75			.75			.75			.75		
	Full Load Amps	5.0			5.0			2.2			1.5		
	Locked Rotor Amps	7.8			7.8			3.4			2.9		
Service Outlet 115V GFI (amp rating)		15			15			15			15		
Indoor Blower Motor	Horsepower	.75	1.5	.75	1.5	2	.75	1.5	2	.75	1.5	2	
	Rated Load Amps	4.2	11.5	4.2	5.7	7.5	2.2	2.8	3.4	2.2	2.4	2.7	
	Locked Rotor Amps	9.6	55	9.6	40	46.9	5.2	20	20.4	5.2	15	16.2	
¹ Maximum Overcurrent Protection	Unit Only	60	70	40	40	40	15	20	20	15	15	15	
	with power exhaust	0 kW	60	70	45	45	45	20	20	20	15	15	
	7.5 kW	60	70	45	45	45	20	20	20	15	15	15	
	15 kW	90	100	60	60	70	30	30	30	25	25	25	
	22.5 kW	150	150	80	90	90	40	45	45	35	35	35	
² Minimum Circuit Ampacity	Unit Only	44	51	31	33	35	15	16	16	12	12	12	
	with power exhaust	0 kW	44	51	31	35	37	15	15	16	12	13	
	7.5 kW	51	60	34	36	39	17	18	19	14	14	15	
	15 kW	90	99	57	59	61	28	29	30	23	23	24	
	22.5 kW	129	138	80	81	84	40	41	41	32	32	33	
Unit Fuse Block	Unit Only	17W98	17W99	18W03	18W03	18W03	18W06	18W07	18W07	18W06	18W06	18W06	
	with power exhaust	17W98	17W99	18W04	18W04	18W04	18W07	18W07	18W07	18W06	18W06	18W06	
Disconnect	Standard Access	0-7.5 kW	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	
		15-22.5 kW	20W16	20W16	20W15	20W15	20W15	20W15	20W15	20W15	20W15	20W15	
	Hinged Access	0-7.5 kW	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	
		15-22.5 kW	20W22	20W22	20W21	20W21	20W21	20W21	20W21	20W21	20W21	20W21	

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

¹ HACR type breaker or fuse.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

ELECTRICAL/ELECTRIC HEAT DATA

6 TON

6 TON STANDARD EFFICIENCY

TCA072S

Voltage - 60hz		208/230V-3ph		460V-3ph		575V-3ph	
Compressor	Rated Load Amps	18.6		9.0		7.4	
	Locked Rotor Amps	156.0		75.0		54.0	
Outdoor Fan Motor	Full Load Amps	2.4		1.3		1.0	
	Locked Rotor Amps	4.7		2.4		1.9	
Power Exhaust Fan	Horsepower	.75		.75		.75	
	Full Load Amps	5.0		2.2		1.5	
	Locked Rotor Amps	7.8		3.4		2.9	
Service Outlet 115V GFI (amp rating)		15		15		15	
Indoor Blower Motor	Horsepower	1.5	2	1.5	2	1.5	2
	Rated Load Amps	5.7	7.5	2.8	3.4	2.4	2.7
	Locked Rotor Amps	40	46.9	20	20.4	15	16.2
¹ Maximum Overcurrent Protection	Unit Only	50	50	20	25	20	20
	with power exhaust						
	0 kW	50	50	25	25	20	20
	7.5 kW	50	50	25	25	20	20
	15 kW	60	60	30	30	25	25
	22.5 kW	80	90	40	45	35	35
² Minimum Circuit Ampacity	Unit Only	32	34	16	16	13	13
	with power exhaust						
	0 kW	37	39	18	19	15	15
	7.5 kW	37	39	18	19	15	15
	15 kW	58	60	29	29	23	23
	22.5 kW	80	82	40	41	32	32
Unit Fuse Block	Unit Only	18W05	18W05	18W07	18W08	18W07	18W07
	with power exhaust	18W05	18W05	18W08	18W08	18W07	18W07
Disconnect	Standard Access Panel	0-22.5 kW	20W18	20W18	20W18	20W18	20W18
		30 kW	20W19	20W19	20W18	20W18	20W18
	Hinged Access	0-22.5 kW	20W24	20W24	20W24	20W24	20W24
		30 kW	20W25	20W25	20W24	20W24	20W24

NOTE - Extremes of operating range are plus and minus 10% of line voltage.

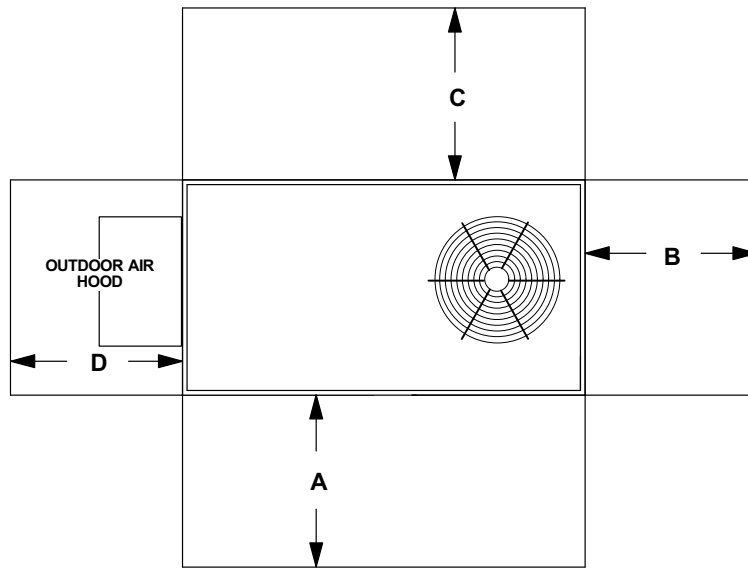
¹ HACR type breaker or fuse.

² Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

ELECTRIC HEAT CAPACITIES

Input Voltage	7.5 kW			10 kW			15 kW			22.5 kW			30 kW		
	No of Steps	kW input	Btuh Output	No of Steps	kW input	Btuh Output	No of Steps	kW input	Btuh Output	No of Steps	kW input	Btuh Output	No of Steps	kW input	Btuh Output
208	1	5.6	19,200	1	7.5	25,600	1	11.2	38,200	1	16.9	57,700	1	22.5	76,800
220	1	6.3	21,500	1	8.4	28,700	1	12.6	43,000	1	18.9	64,500	1	25.2	86,000
230	1	6.9	23,500	1	9.2	31,400	1	13.8	47,000	1	20.7	70,700	1	27.5	93,900
240	1	7.5	25,600	1	10.0	34,200	1	15.0	51,200	1	22.5	76,800	1	30.0	102,400
440	1	6.3	21,500	---	---	---	1	12.6	43,000	1	18.9	64,500	1	25.2	86,000
460	1	6.9	23,500	---	---	---	1	13.8	47,000	1	20.7	70,700	1	27.5	93,900
480	1	7.5	25,600	---	---	---	1	15.0	51,200	1	22.5	76,800	1	30.0	102,400
550	1	6.3	21,500	---	---	---	1	12.6	43,000	1	18.9	64,500	1	25.2	86,000
575	1	6.9	23,500	---	---	---	1	13.8	47,000	1	20.7	70,700	1	27.5	93,900
600	1	7.5	25,600	---	---	---	1	15.0	51,200	1	22.5	76,800	1	30.0	102,400

UNIT CLEARANCES - INCHES (MM)



¹ Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	36	914	36	914	36	934	36	914	Unobstructed
Minimum Operation Clearance	36	914	36	914	36	914	36	914	

NOTE - Entire perimeter of unit base requires support when elevated above the mounting surface.

¹ **Service Clearance** - Required for removal of serviceable parts.

Minimum Operation Clearance - Required clearance for proper unit operation.

OPTIONAL CONVENTIONAL TEMPERATURE CONTROL SYSTEMS - FIELD INSTALLED

COMMERCIAL TOUCHSCREEN THERMOSTAT



Intuitive Touchscreen Interface - **Two Stage Heating / Two Stage Cooling Conventional or Heat Pump** - Seven Day Programmable - Four Time Periods/Day - Economizer Output - Title 24 Compliant - ENERGY STAR® Qualified - Backlit Display - Automatic Changeover

C0STAT02AE1L

Sensors For Touchscreen Thermostat

1 Remote non-adjustable wall mount 20k temperature sensor	C0SNZN01AE1-
1 Remote non-adjustable wall mount 10k averaging temperature sensor	C0SNZN73AE1-
1 Remote non-adjustable duct mount temperature sensor	C0SNDC00AE1-
Outdoor temperature sensor	C0SNSR03AE1-

Accessories For Touchscreen Thermostat

Locking cover (clear)	C0MISC15AE1-
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¹ Remote sensors for C0STAT02AE1L can be applied in the following combinations: (1) C0SNZN01AE1-, (2) C0SNZN73AE1-, (2) C0SNZN01AE1- and (1) C0SNZN73AE1-, (4) C0SNZN01AE1-, (3) C0SNZN01AE1- and (2) C0SNZN73AE1.

DIGITAL NON-PROGRAMMABLE THERMOSTATS



Intuitive Interface - Automatic Changeover - Simple Up and Down Temperature Control

Two-stage heating / cooling conventional systems	C0STAT10AE1L
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Sensor For Digital Non-Programmable Thermostats Above

Remote wall mounted temperature sensor	C0SNZN00AE1-
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Intuitive Interface - Automatic Changeover - Backlit Display - Simple Up and Down Temperature Control

One-stage heating / cooling conventional systems	C0STAT12AE1L
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Sensor For Digital Non-Programmable Thermostats Above

Outdoor temperature sensor	C0SNSR04AE1-
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Accessories For Digital Non-Programmable Thermostats Above

Optional wall mounting plate	C0MISC17AE1-
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WEIGHT DATA

Model Number	Net				Shipping			
	Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
024	494	224	606	275	554	251	675	306
030	497	225	609	276	557	253	678	308
036	511	232	623	283	571	259	692	314
048	547	248	659	299	607	275	728	330
060	564	256	680	308	624	283	749	340
072	631	286	734	333	691	313	806	366

Base Unit - The unit with NO OPTIONS.

Max. Unit - The unit with ALL OPTIONS installed (Economizer, etc.).

OPTIONS / ACCESSORIES

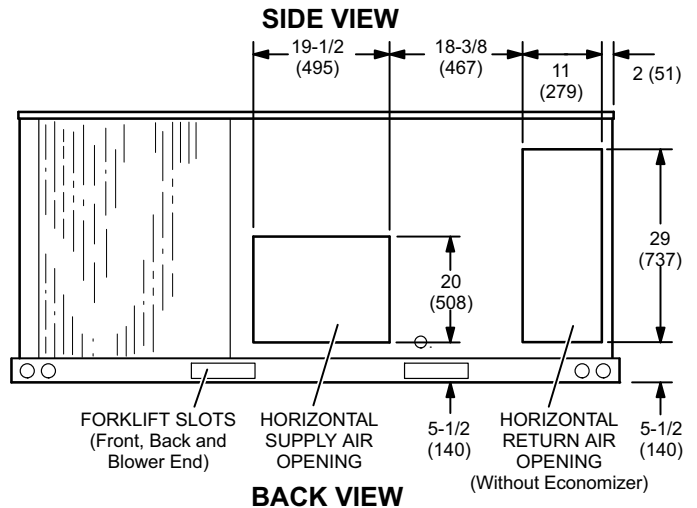
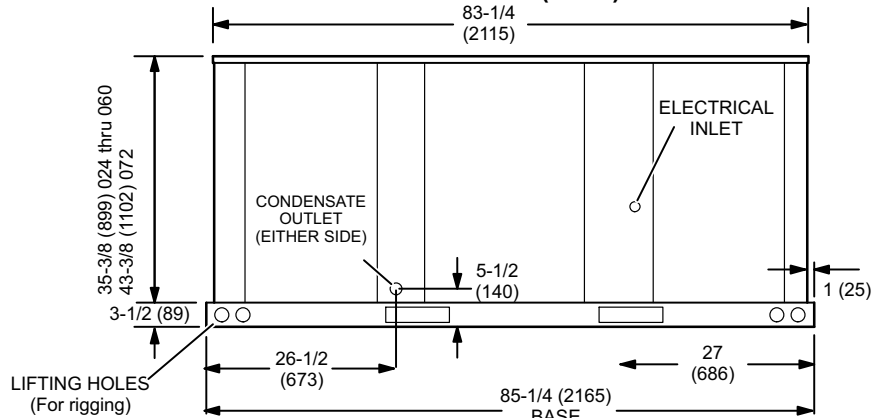
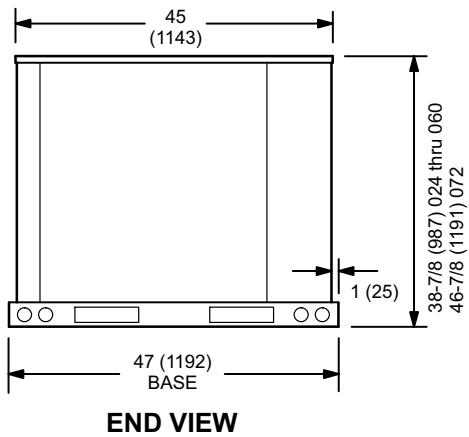
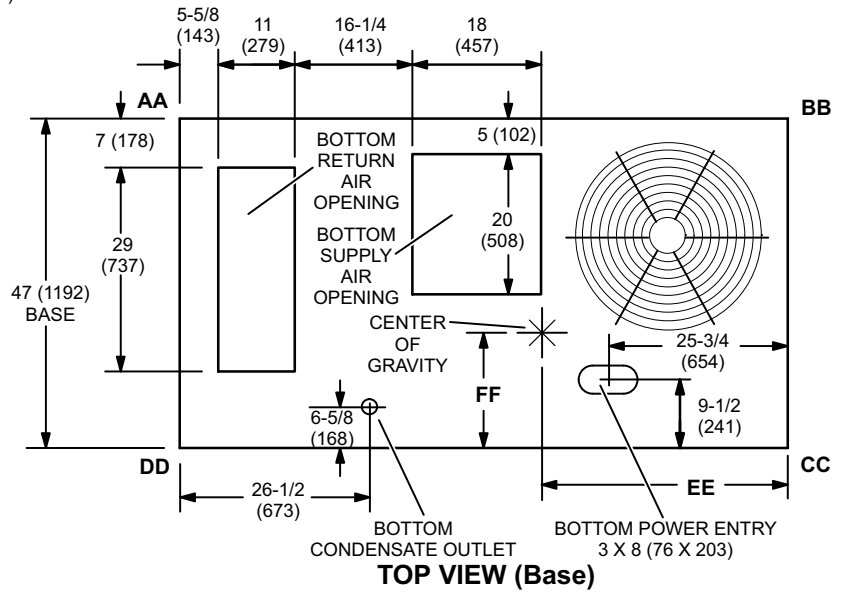
		Shipping Weights	
		lbs.	kg
ECONOMIZER / OUTDOOR AIR			
Economizer			
Economizer, Includes Outdoor Air Hood and Barometric Relief Dampers with Hood	T1ECON30A-1	123	56
	T1ECON30N-1	142	65
OUTDOOR AIR			
Outdoor Air Dampers			
Outdoor Air Damper Motorized Kit	T1DAMP11A-1	25	12
	T1DAMP11N-1	29	14
Damper Section Manual	T1DAMP21AN1	18	9
Power Exhaust			
Standard Static	T1PWRE10A-1	35	17
	T1PWRE10N-1	39	19
ELECTRIC HEAT			
Electric Heat	7.5 kW - T1EH0075AN1	31	14
	10 kW - T1EH0100AN1	31	14
	15 kW - T1EH0150AN1	31	14
	22.5 kW - T1EH0225AN1	35	16
	30 kW - T1EH0300N-1	35	16
CEILING DIFFUSERS			
Step-Down	RTD9-65	67	30
	RTD11-95	88	40
Flush	FD9-65	37	17
	FD11-95	75	34
Transitions (Supply and Return)	T1TRAN10AN1	22	10
	T1TRAN20N-1	21	10
ROOF CURBS - DOWN-FLOW			
Cliplock 1000			
8 in. height	T1CURB23AN1	78	35
14 in. height	T1CURB20AN1	96	44
18 in. height	T1CURB21AN1	108	49
24 in. height	T1CURB22AN1	126	57
Hinged			
8 in. height	T1CURB30AN1	78	35
18 in. height	T1CURB32AN1	108	49
24 in. height	T1CURB33AN1	126	57
Standard			
14 in. height	T1CURB10AN1	96	44

DIMENSIONS - INCHES (MM)

Model No.	CORNER WEIGHTS								CENTER OF GRAVITY															
	AA		BB		CC		DD		EE		FF		FF											
	Base lbs.	Max. kg	Base lbs.	Max. kg	Base lbs.	Max. kg	Base lbs.	Max. kg	Base in.	Max. mm	Base in.	Max. mm	Base in.	Max. mm										
024	84	38	110	50	105	48	122	55	169	77	196	89	136	62	178	81	38	965	40-1/2	1029	18	457	18	457
030	85	38	111	50	105	48	122	55	170	77	197	89	137	62	179	81	38	965	40-1/2	1029	18	457	18	457
036	88	40	113	51	108	49	125	57	174	79	202	92	141	64	183	83	38	965	40-1/2	1029	18	457	18	457
048	94	43	120	54	116	53	133	60	186	84	214	97	152	69	192	87	38	965	40-1/2	1029	18	457	18	457
060	97	44	124	56	119	54	137	62	192	87	220	100	156	71	199	90	38	965	40-1/2	1029	18	457	18	457
072	109	49	135	61	132	60	146	66	213	97	235	107	176	80	218	99	38-1/2	978	41	1041	18	457	18	457

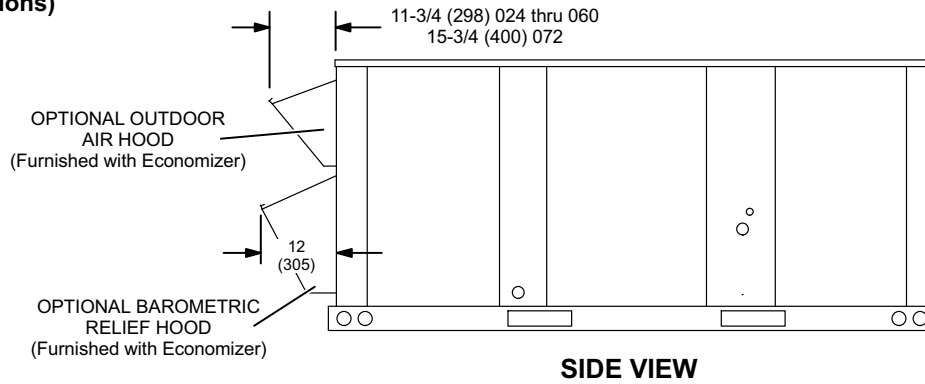
Base Unit - The unit with NO OPTIONS.

Max. Unit - The unit with ALL OPTIONS Installed. (Economizer, etc.)

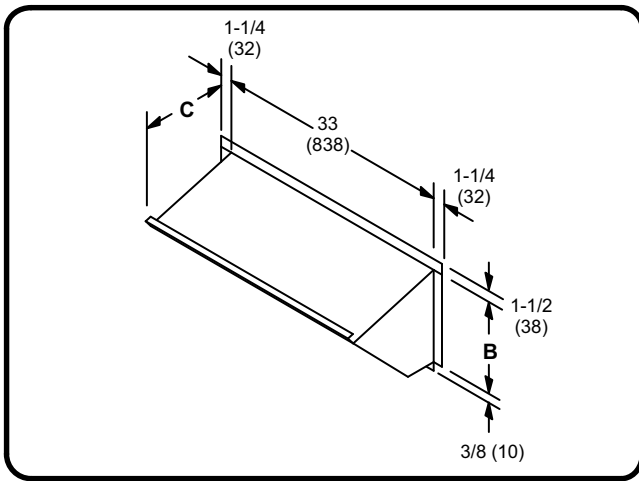


ACCESSORY DIMENSIONS - INCHES (MM)

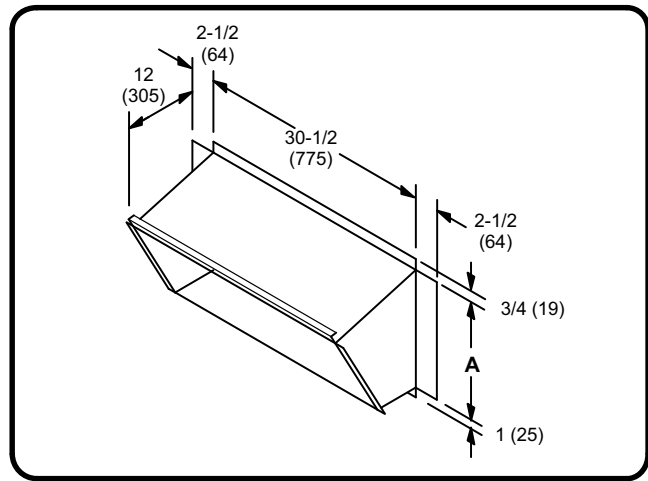
OUTDOOR AIR HOOD DETAIL FOR OPTIONAL ECONOMIZER AND BAROMETRIC RELIEF DAMPERS (Down-Flow Applications)



OUTDOOR AIR HOOD FOR ECONOMIZER (Furnished)

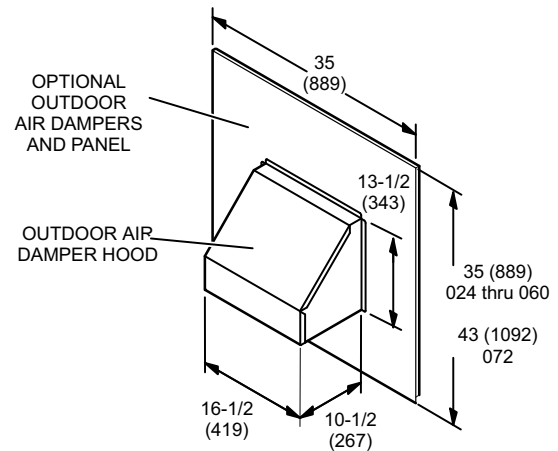
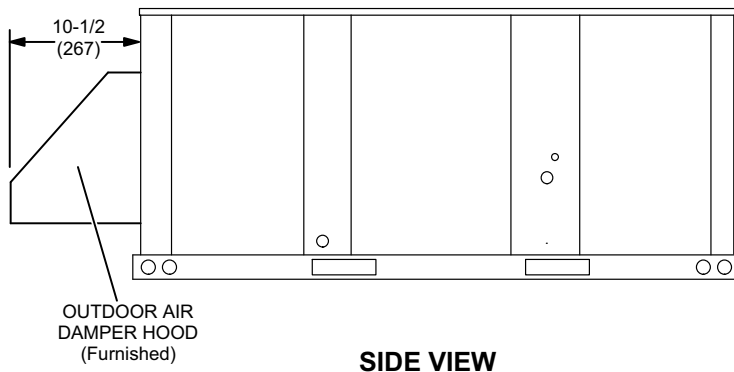


BAROMETRIC RELIEF HOOD FOR ECONOMIZER (Furnished)



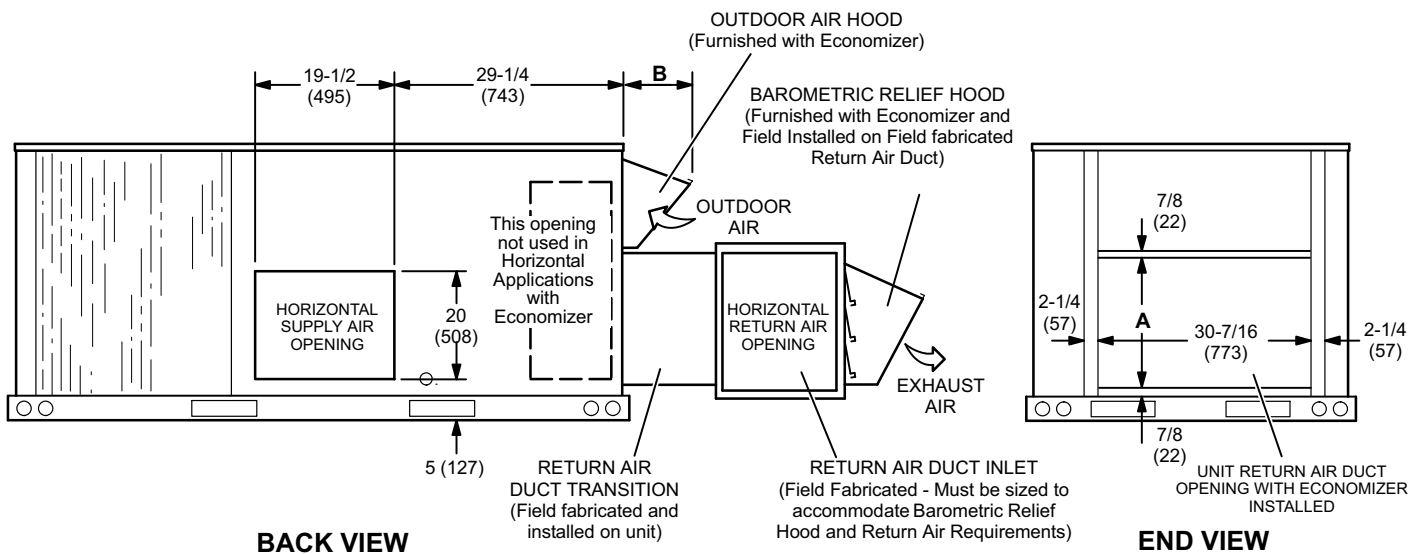
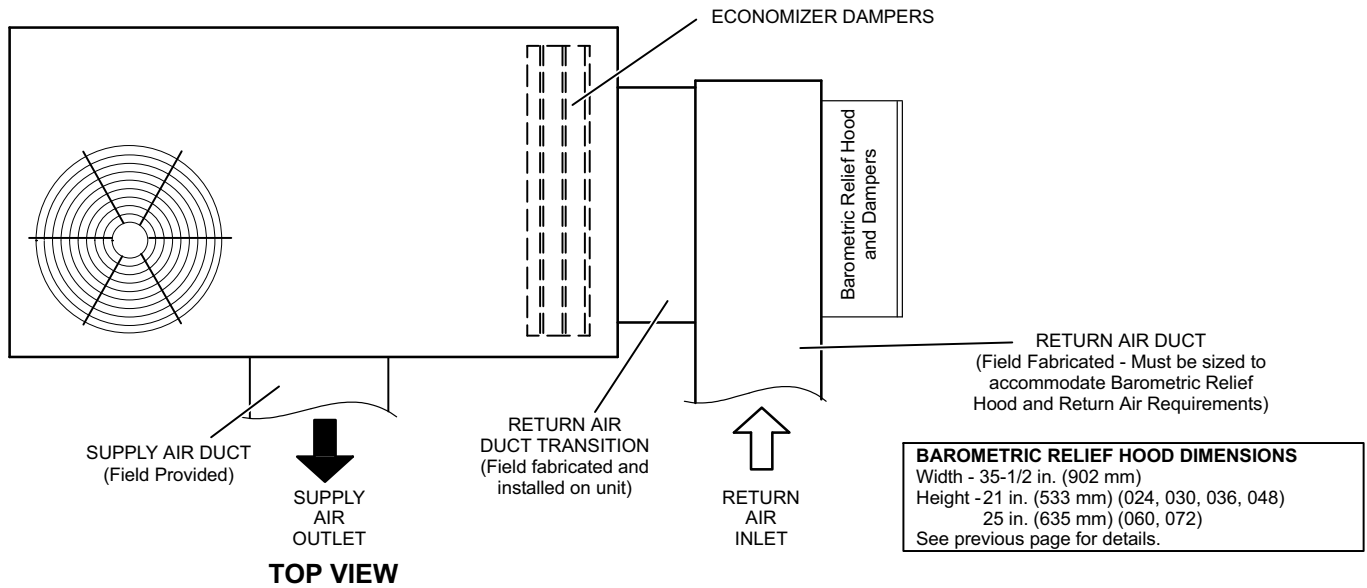
Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
024, 030, 036, 048, 060	19-1/4	489	13	330	11-3/4	298
072	23-1/4	591	17	432	15-3/4	400

OUTDOOR AIR DAMPER HOOD DETAIL FOR OPTIONAL MANUAL OR MOTORIZED OUTDOOR AIR DAMPERS (Down-Flow or Horizontal Applications)



ACCESSORY DIMENSIONS - INCHES (MM)

OUTDOOR AIR HOOD DETAIL WITH OPTIONAL ECONOMIZER AND BAROMETRIC RELIEF DAMPERS (Horizontal Applications)

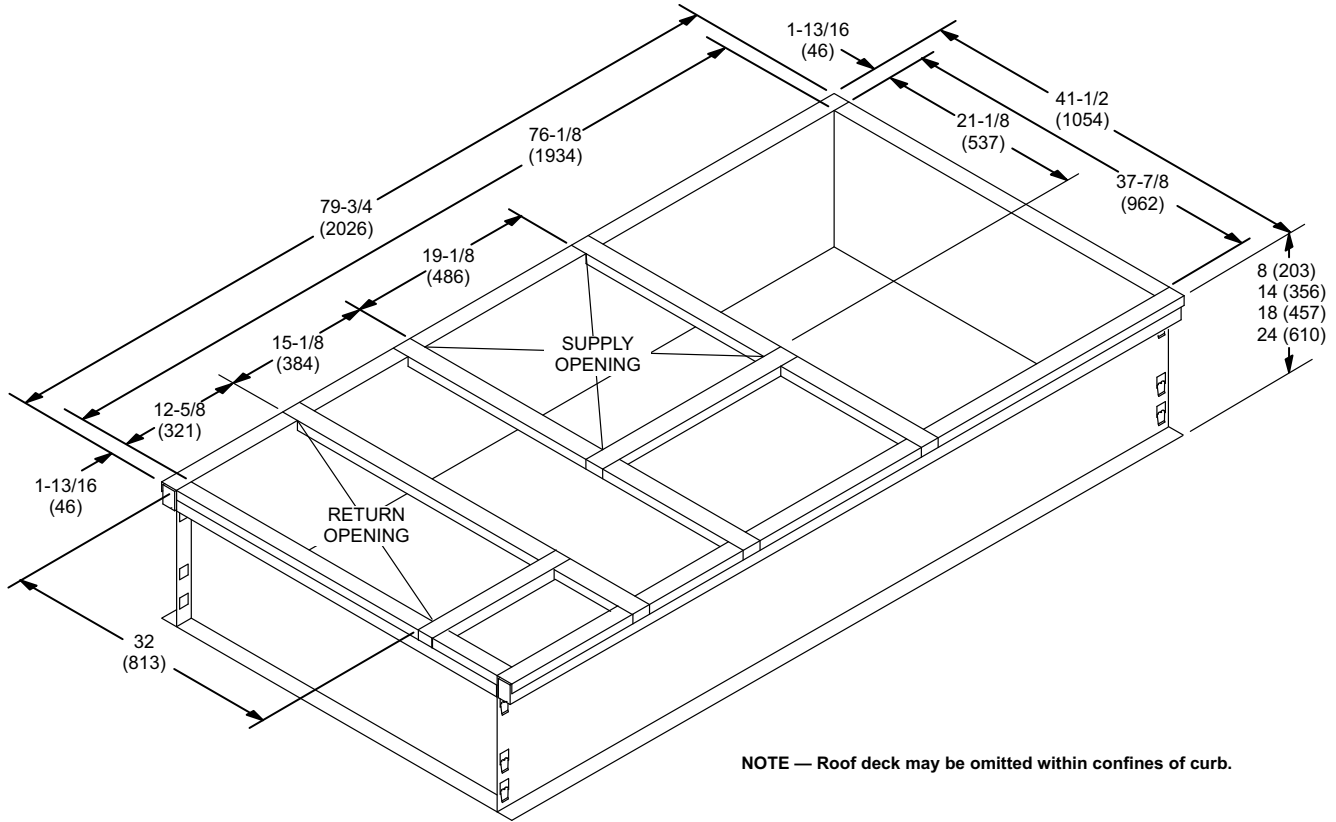


NOTE - Return Air Duct and Transition must be supported.

Model No.	A		B	
	in.	mm	in.	mm
024, 030, 036, 048, 060	18-3/4	476	11-3/4	298
072	22-1/2	572	15-3/4	400

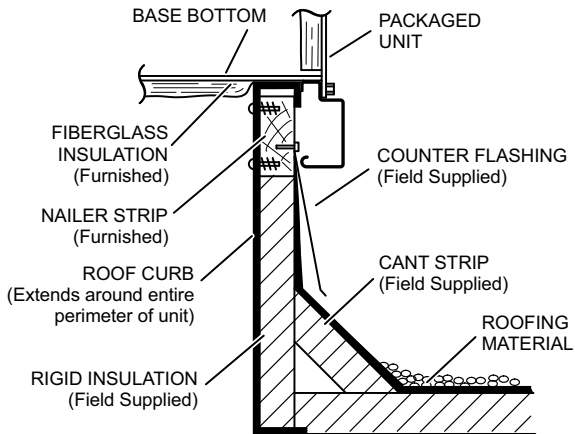
ACCESSORY DIMENSIONS - INCHES (MM)

CLIPLOCK 1000 ROOF CURBS - DOUBLE DUCT OPENING

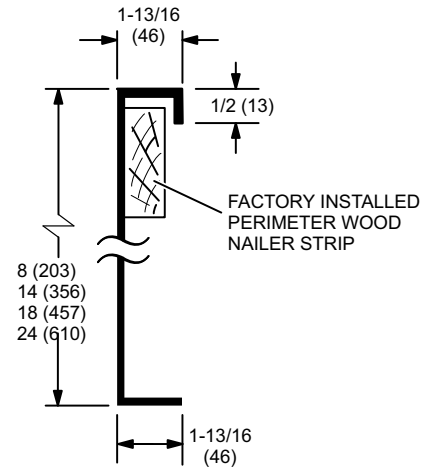


NOTE — Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB

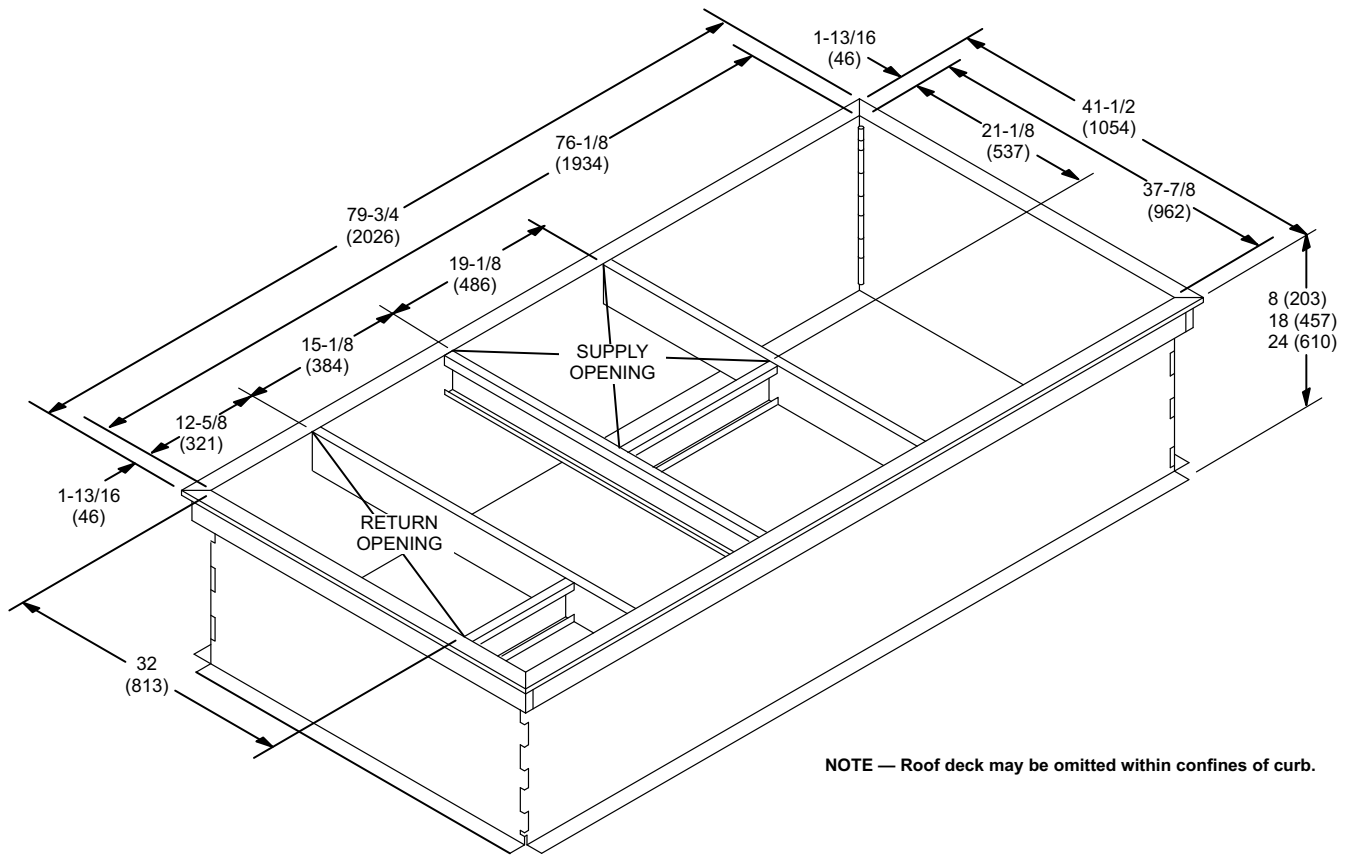


DETAIL ROOF CURB

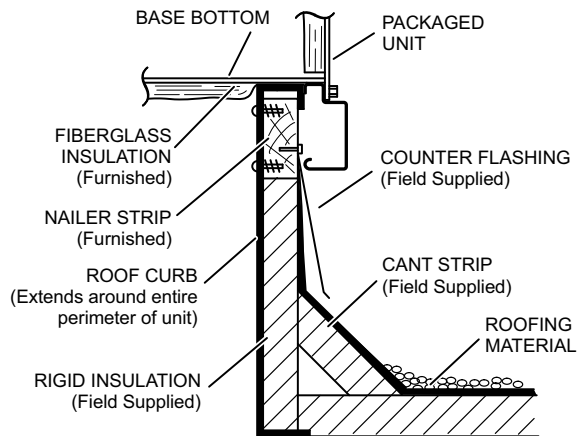


ACCESSORY DIMENSIONS - INCHES (MM)

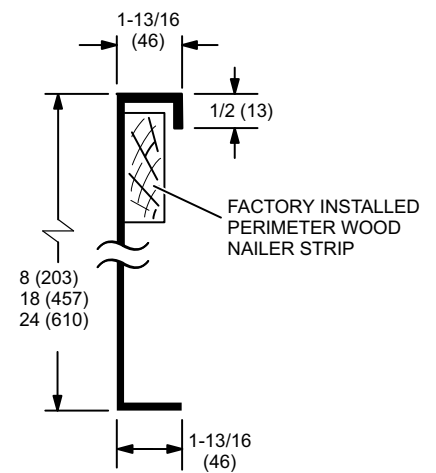
HINGED ROOF CURBS - DOUBLE DUCT OPENING



TYPICAL FLASHING DETAIL FOR ROOF CURB

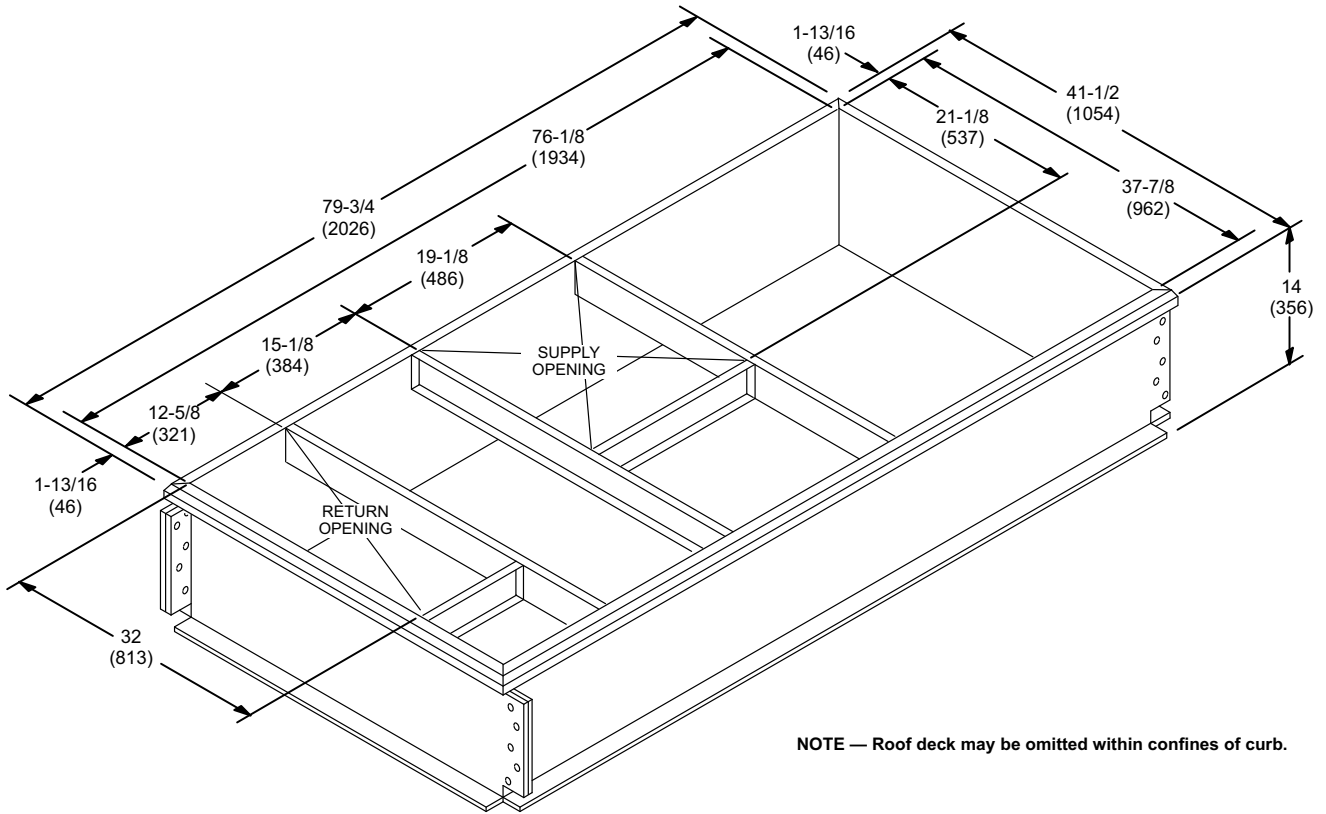


DETAIL ROOF CURB



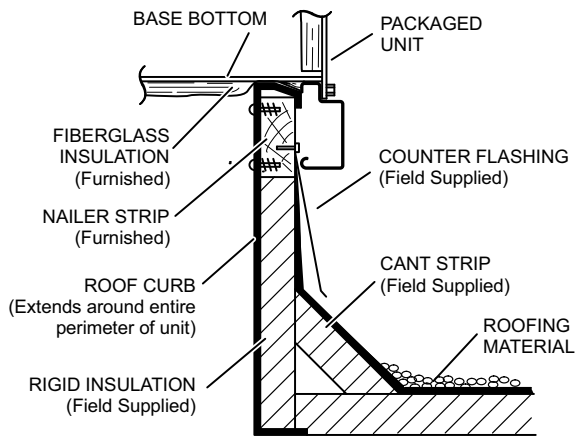
ACCESSORY DIMENSIONS - INCHES (MM)

STANDARD ROOF CURBS - DOUBLE DUCT OPENING

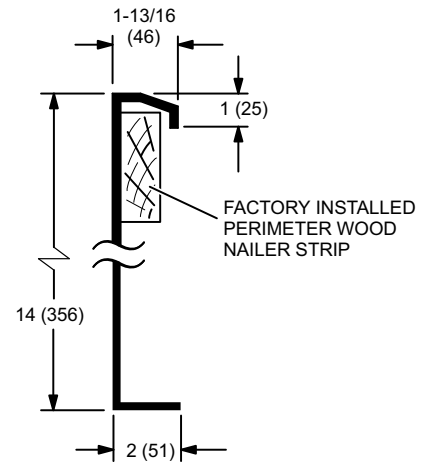


NOTE — Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB

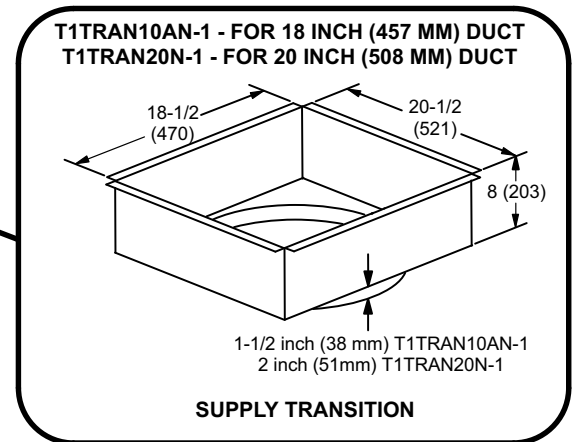
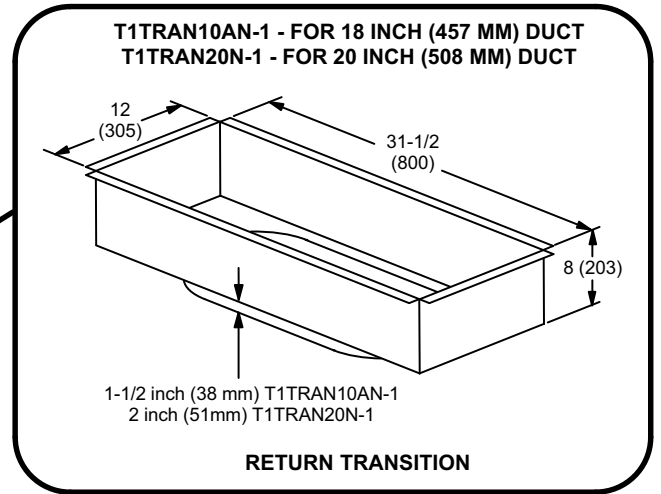
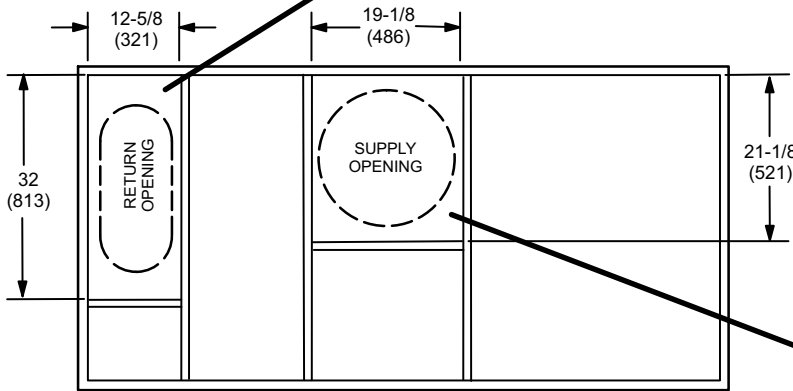


DETAIL ROOF CURB



ACCESSORY DIMENSIONS - INCHES (MM)

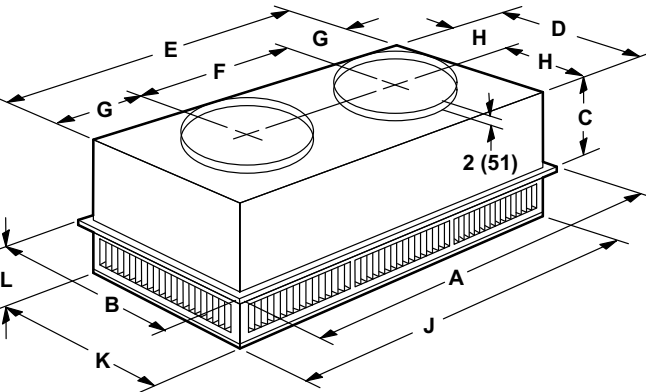
TRANSITIONS



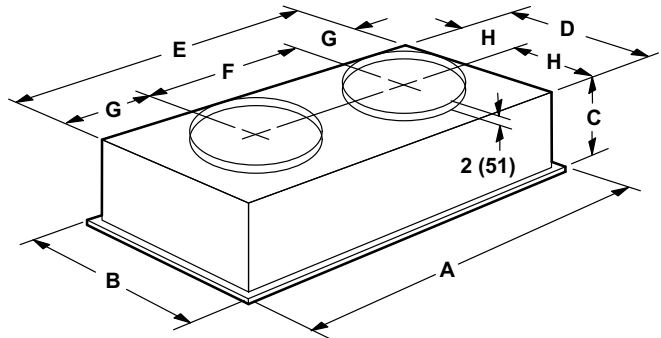
ACCESSORY DIMENSIONS - INCHES (MM)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



FLUSH CEILING DIFFUSER



Model Number		RTD9-65	RTD11-95
A	in.	47-5/8	47-5/8
	mm	1159	1159
B	in.	23-5/8	29-5/8
	mm	600	752
C	in.	11-3/8	14-3/8
	mm	289	365
D	in.	21-1/2	27-1/2
	mm	546	699
E	in.	45-1/2	45-1/2
	mm	1156	1158
F	in.	22-1/2	22-1/2
	mm	572	572
G	in.	11-1/2	11-1/2
	mm	292	292
H	in.	10-3/4	13-3/4
	mm	273	349
J	in.	45-1/2	45-1/2
	mm	1156	1156
K	in.	21-1/2	27-1/2
	mm	546	699
L	in.	7-1/8	8-1/8
	mm	181	206
Duct Size	in.	18 round	20 round
	mm	457 round	508 round

Model Number		FD9-65	FD11-95
A	in.	47-5/8	47-5/8
	mm	1159	1159
B	in.	23-5/8	29-5/8
	mm	600	752
C	in.	13-1/2	16-5/8
	mm	343	422
D	in.	21	27
	mm	533	686
E	in.	45	45
	mm	1143	1143
F	in.	22-1/2	22-1/2
	mm	572	572
G	in.	11-1/4	11-1/4
	mm	286	286
H	in.	10-1/2	13-1/2
	mm	267	343
Duct Size	in.	18 round	20 round
	mm	457 round	508 round

GUIDE SPECIFICATIONS

This specification is for [**Lennox Industries T-Class™**] rooftop units. Revise specification section number and title below to suit project requirements, specification practices and section content. Refer to CSI *MasterFormat* for other section numbers and titles.

Optional text and text that requires a decision are indicated by **bold brackets []** and proprietary information is indicated by **bold italic brackets []**; delete text that is not needed in final copy of specification. Specifier Notes typically precede specification text; delete notes in final copy of specification. Trade/brand names with appropriate symbols typically are used in Specifier Notes; symbols are not used in specification text. Metric conversion, where used, is soft metric conversion.

SECTION 237433

UNITARY AIR CONDITIONING EQUIPMENT

PART 1 GENERAL

PART 1.01 SUMMARY

- A. Section Includes: Packaged rooftop units and commercial packaged, gas/electric, electric/electric and electric/heat pumps.

Specifier Note: Revise paragraph below to suit project requirements. Add section numbers and titles per CSI *MasterFormat* and specifier's practice.

- B. Related Sections:

Specifier Note: Article below may be omitted when specifying manufacturer's proprietary products and recommended installation. Retain Reference Article when specifying products and installation by an industry reference standard. If retained, list standard(s) referenced in this section. Indicate issuing authority name, acronym, standard designation and title. Establish policy for indicating edition date of standard referenced. Conditions of the Contract or Division 1 References Section may establish the edition date of standards. This article does not require compliance with standard, but is merely a listing of references used. Article below should list only those industry standards referenced in this section. Retain only those reference standards to be used within the text of this Section. Add and delete as required for specific project.

PART 1.02 REFERENCES

- A. Agency Listings:
 - 1. Intertek ETL.
 - 2. Canadian Standards Association (CSA).
- B. Safety Standards:
 - 1. Underwriters Laboratories (UL).
 - 2. Underwriters Laboratories of Canada (ULC).
 - 3. National Electric Code (NEC).
 - 4. Canadian Electric Code (CEC).
- C. Air-Conditioning and Refrigerating Institute (ARI):
 - 1. ARI 340/360 Commercial and Industrial Unitary Air-Conditioning and Heat Pump Equipment.
 - 2. ARI 370 Sound Rating of Large Outdoor Refrigerating and Air Conditioning Equipment.
 - 3. ARI 210/240 Performance Rating of Unitary Air Conditioning and Air-Source Heat Pump Equipment.
- D. American Society for Testing and Materials (ASTM):
 - 1. ASTM B117 – Standard Practice for Operating Salt Spray.
 - 2. ASTM 1153 – Standard Method for Methyl Isobutyl Ketone.
- E. ISO 9001, Quality Management Systems.
- F. Meet Military Specification MIL-P-53084

Specifier Note: Article below should be restricted to statements describing design or performance requirements and functional (not dimensional) tolerances of a complete system. Limit descriptions to composite and operational properties required to link components of a system together and to interface with other systems.

PART 1.03 SYSTEM DESCRIPTION

- A. Performance Requirements:

Specifier Note: Article below should be restricted to T-Class (TH), heat pumps packaged roof top units only.

- 1. [2, 2.5, 3, 4, 5, 6, 7.5, 8.5, 10, 12.5, 15 and 20 ton capacity.]

Specifier Note: Article below should be restricted to T-Class (TG) gas/electric packaged roof top units or T-Class (TC) electric/electric packaged roof top units.

- 2. [2, 2.5, 3, 4, 5, 6, 7.5, 8.5, 10, 12.5, 15, 17.5, 20 and 25 ton capacity.]
- 3. Electrical Characteristics:
 - a. 60 Hz

Specifier Note: 208/230 volt 1 phase is only available on 2, 2.5, 3, 4 and 5 ton standard efficiency models. All other voltages are available on 3-25 ton T-Class RTU's.

- b. [208/230 v – 1 Phase] [208/230 v – 3 Phase] [460 v – 3 Phase] [575 v – 3 Phase]

GUIDE SPECIFICATIONS

Specifier Note: Article below includes submittal of relevant data to be furnished by Contractor before, during or after construction. Coordinate this article with Architect's and Contractor's duties and responsibilities in Conditions of the Contract and Division 1 Submittal Procedures Section.

PART 1.04 SUBMITTALS

- A. General: Submit listed submittals in accordance with Conditions of the Contract and Division 1 Submittal Procedures.
- B. Product Data: Submit product data for specified products.
- C. Shop Drawings:
 - 1. Submit shop drawings in accordance with Section 01330 - Submittal Procedures.
 - 2. Indicate:
 - a. Equipment, piping and connections, together with valves, strainers, control assemblies, thermostatic controls, auxiliaries and hardware, and recommended ancillaries which are mounted, wired and piped ready for final connection to building system, its size and recommended bypass connections.
 - b. Piping, valves and fittings shipped loose showing final location in assembly.
 - c. Control equipment shipped loose, showing final location in assembly.
 - d. Dimensions, internal and external construction details, recommended method of installation with proposed structural steel support, mounting curb details, sizes and location of mounting bolt holes; include mass distribution drawings showing point loads.
 - e. Detailed composite wiring diagrams for control systems showing factory installed wiring and equipment on packaged equipment or required for controlling devices or ancillaries, accessories and controllers.
 - f. Fan performance curves.
 - g. Details of vibration isolation.
 - h. Estimate of sound levels to be expected across individual octave bands in dB.
 - i. Type of refrigerant used.
 - j. Plan view, front view end view, back view and curb detail with dimensions.
- D. Quality Assurance:
 - 1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties.
 - 2. Certificates: Product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
 - 3. Manufacturer's Instructions: Manufacturer's installation instructions.

Specifier Note: Coordinate paragraph below with Part 3 Field Quality Requirements Article herein. Retain or delete as applicable.

- E. Manufacturer's Field Reports: Manufacturer's field reports specified.
- F. Closeout Submittals: Submit following:
 - 1. Warranty: Warranty documents specified.
 - 2. Operation and Maintenance Data: Operation and maintenance data for installed products in accordance with Division 1 Closeout Submittals (Maintenance Data and Operation Data) Section. Include methods for maintaining installed products and precautions against cleaning materials and methods detrimental to finishes and performance. Include names and addresses of spare part suppliers.
 - 3. Provide brief description of unit, with details of function, operation, control and component service.
 - 4. Provide equipment inspection report and equipment operation test report.
 - 5. Commissioning Report: Submit commissioning reports, report forms and schematics in accordance with Section 01810 - Commissioning.

PART 1.05 QUALITY ASSURANCE

- A. Qualifications:
 - 1. Installer experienced in performing work of this section who has specialized in installation of work similar to that required for this project.

PART 1.06 DELIVERY, STORAGE & HANDLING

- A. General: Comply with Division 1 Product Requirements.
- B. Ordering: Comply with manufacturer's ordering instructions and lead time requirements to avoid construction delays.
- C. Packing, Shipping, Handling and Delivery:
 - 1. Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
 - 2. Ship, handle and unload units according to manufacturer's instructions.
- D. Storage and Protection:
 - 1. Store materials protected from exposure to harmful weather conditions.
 - 2. Factory shipping covers to remain in place until installation.

GUIDE SPECIFICATIONS

PART 1.07 PROJECT CONDITIONS

- A. Installation Location: **[Confirm design conditions and temperature.]**

Specifier Note: Coordinate article below with Conditions of the Contract and with Division 1 Closeout Submittals (Warranty).

PART 1.08 WARRANTY

- A. Project Warranty: Refer to Conditions of the Contract for project warranty provisions.
- B. Manufacturer's Warranty: Submit, for Owner's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to, and not a limitation of, other rights Owner may have under Contract Documents.

Specifier Note: "Aluminized Heat Exchanger" and "Stainless steel Heat Exchanger" limited warranty is only available on T-Class (TG) Gas/Electric models. "Compressor" and "Other System Components" are covered on all T-Class units.

- C. Warranty: Commencing on Date of Installation.
1. Compressors: 5 years (limited).
 2. Other Covered System Components: 1 year (limited).
 3. **[Aluminized Heat Exchangers: 10 years (limited).] [Stainless Steel Heat Exchangers: 15 years (limited).]**

PART 2 PRODUCTS

Specifier Note: Retain article below for proprietary method specification. Add product attributes, performance characteristics, material standards and descriptions as applicable. Use of such phrases as "or equal" or "or approved equal" or similar phrases may cause ambiguity in specifications. Such phrases require verification (procedural, legal and regulatory) and assignment of responsibility for determining "or equal" products.

PART 2.01 ROOFTOP UNITS

- A. Manufacturer: Lennox Industries.
1. Contact: 2100 Lake Park Blvd., Richardson, TX 75080; Telephone: (800) 453-6669; website: www.lennox.com.
- B. Proprietary Products/Systems: Lennox T-Class Packaged Rooftop Units, including the following equipment:
1. Cabinet:
 - a. Heavy gauge steel panels.
 - b. Pre-painted steel panels.
 - c. Heavy Gauge galvanized steel base rail.
 - d. Rigging holes on all four corners.
 - e. Forklift slots (on three sides, not directly below condenser coil) on base rail.
 - f. Raised or flanged edges around duct and power entry openings.

Specifier Note: "Down Flow" is the standard configuration that all T-Class units are shipped as.

Specifier Note: "Horizontal Flow" is an option for all T-Class models. T-Class TH, TG and TC models of tonnages 2, 2.5, 3, 4, 5 and 6 can be converted, in the field, to horizontal flow without the need of a conversion kit. If applied horizontally with an economizer, a conversion kit is required.

Specifier Note: "Horizontal Flow" is an option for all T-Class models. T-Class TH, TG and TC models of tonnages 7.5, 8.5, 10 and 12.5 can be converted, in the field, with a separate to Horizontal Conversion Kit.

Specifier Note: "Horizontal Flow" is an option for all T-Class models. T-Class TH, TG and TC models of tonnages 15, 17.5, 20 and 25 require a roof curb that allows for horizontal air Flow. A Horizontal Air Panel Kit is also required if converting a down-flow configured unit to horizontal air flow.

- g. **[Down-Flow] [Horizontal] Air Flow configuration**

Specifier Note: add the "and gas lines" only if using a T-Class (TG) gas/electric model.

- h. Electrical lines **[and gas lines]** can be brought through the base of the unit or through horizontal knockouts.
- i. Insulation:
 - 1) All panels adjacent to conditioned air are fully insulated with non-hygroscopic fiberglass insulation.
 - 2) Unit base is fully insulated.
 - 3) Unit base insulation also serves as a roof curb seal.
- j. Access Panels:
 - 1) Provided for economizer/filter section.
 - 2) Provided for Heating/blower section.
- k. Condensate Drain Pan.

Specifier Note: "Factory Installed Options" are options that can be selected for the T-Class roof top units. The "Factory Installed Options" are installed at the Lennox manufacturing facility.

- l. **[Factory Installed Options:]**

GUIDE SPECIFICATIONS

- 1) [Corrosion Protection, meets standards:
 - a) Military Specification MIL-P-53084.
 - b) ASTM B117
 - c) ASTM 1153]
- 2) [Hinged Access panels]
- 3) [GFI Service Outlets (field wired)]

Specifier Note: "Field Installed Accessories" are options that can be selected for the T-Class roof top units. The "Field Installed Accessories" are shipped separately and installed in the field.

- m. [Field Installed Accessories:]

Specifier Note: Of the selections below, [Coil Guards] [Hail Guards], only one can be selected.

- 1) [Coil Guards] [Hail Guards].
- 2) [Horizontal Return Air Panel Kit].

Specifier Note: "Circuit Breakers(up to 175 amps)" is not available on 2-6 ton models.

- 3) [Circuit Breakers (up to 175 amps)]
- 4) [Disconnect Switch (up to 250 amps)]
- 5) [Condensate drain trap]

2. Cooling System:
 - a. Capable of operating from 30 - 125 degrees F (-1 - 52 degrees C) without installation of additional controls.
 - b. Compressors:
 - 1) Scroll Type.
 - 2) Resiliently mounted on rubber mounts for vibration isolation.
 - 3) Overload Protected
 - 4) Internal excessive current and temperature protection.
 - 5) Isolated from condenser fan air stream.
 - 6) Refrigerant cooled.
 - c. TXV
 - d. Freezestat
 - e. High capacity filter driers

Specifier Note: Include following 2 articles for T-Class (TH) packaged heat pumps models.

- f. Reversing Valves: Four-way interchange reversing valve.
- g. Defrost Control.

Specifier Note: 2-6 ton models are only available in Standard efficiency and 7.5-20 ton models are available in Standard or High efficiencies only.

Specifier Note: The 12.5 ton model is available in standard efficiency only.

- h. Efficiency: [Standard] [and]/[or] [High].
- i. [Low ambient kit: Field installed]

Specifier Note: High pressure switch is available to be field installed on all units except the T-Class model TH on tonnages 15-20.

- j. [High pressure switch: Field installed]

Specifier Note: Crankcase heater is available to be field installed on all units except the T-Class model TH on tonnages 2-6 and 15-20.

- k. [Crankcase heater: field installed]

3. Coil Construction:
 - a. Condensing/evaporator coil general construction:
 - 1) Aluminum Rippled and Lanced fins.
 - 2) Copper tube construction.
 - 3) Aluminum fins mechanically bonded to copper tubes.
 - 4) All coils are high pressure leak tested at manufacturing facility.
 - b. Evaporator Coils:
 - 1) With balanced port thermal expansion valves, freeze protection on each compressor circuit, pressure and leak tested to 500 psi, and maximum 14 fins per inch.
 - 2) Each compressor circuit on coil divided across face of coil and active through full depth of coil.

GUIDE SPECIFICATIONS

- 3) [With flexible immersed coating electrodeposited by dry film process].
- c. Condenser Coils:
 - 1) [With flexible immersed coating electrodeposited by dry film process] on corrosion hardened units only.
4. Wiring:
 - a. Color coded and continuously marked to identify point-to-point component connections.
 - b. Not in contact with hot-gas refrigerant lines or sharp metal edges.
5. Cooling Controls:
 - a. Provide minimum compressor on time of 4 minutes.

Specifier Note: “4 Stages of cooling from thermostat” is only available for models that have 4 independent refrigerant circuits. 2-6 ton models have 1 circuit, 7.5-12.5 ton models have 2 circuits, and 15-25 ton models have several models with 4 circuits.

- b. Support up to 4 stages of cooling from thermostat or external DDC controller. (4 independent refrigerant circuits required.)

Specifier Note: T-Class units with Gas Heating Systems are TG models.

6. Gas Heating System:
 - a. Induced draft
 - b. Natural gas fired system with direct spark ignition
 - c. Electronic flame sensors
 - d. Flame rollout switches
 - e. High heat limit switches
 - f. Induced draft failure switch and capable of operating to altitude of 2000 feet (610 m) with no derate to manifold pressure.
 - g. Service access for controls, burners and heat exchanger.
 - h. Heat Exchanger:
 - 1) Tubular Design
 - 2) [Aluminized steel] [Stainless steel].
 - i. Gas piping system tight and free of leaks when pressurized to maximum supply pressure.
 - j. Gas Valve: Two-stage, redundant type gas heat valve with manual shutoff.

Specifier Note: One Stage Gas valve only available on 2-6 ton models.

- k. Gas Valve: Single-stage.
- l. Gas Burners: Aluminized steel inshot-type gas burners.
- m. Direct spark pilot ignition.
- n. Fan and Limit Controls.
- o. Safety Switches.
- p. Gas piping system tight and free of leaks when.

Specifier Note: “Cold Weather Kit” is only available for field mounting on the T-Class (TG) Gas/Electric models of tonnages 15 – 25 or factory mounting on the T-Class (TG) Gas/Electric models of tonnages 7.5 – 12.

- q. [Cold Weather Kit:] [field] [factory]

Specifier Note: “Field Installed Accessories” are options that can be selected for the T-Class TG Gas/Electric models. The “Field Installed Accessories” are shipped separately and installed in the field.

- r. [Field Installed Accessories:]
 - 1) [Combustion Air Intake Extensions].
 - 2) [Vertical Vent Extension Kit].
 - 3) [LPG/Propane Kit].

Specifier Note: “Low Temperature Vestibule Heater” is only available for the T-Class (TG) Gas/Electric models of tonnages 2, 2.5, 3, 4, 5 and 6.

- 4) [Low Temperature Vestibule Heater].

Specifier Note: The “Electric Heating System” is an option for T-Class (TH), heat pump, and T-Class (TC), electric/electric models only. The “Electric Heating System” can be either factory or field installed. The “Electric Heating System” can only be field installed on T-Class (TC) Electric/Electric models of tonnages 2 - 6. The “Electric Heating System” can only be field installed on T-Class (TH) heat pumps models of tonnages 2 - 6.

7. Electric Heating System:
 - a. Electrical resistance heater.
 - b. [Factory] [Field] installed.

GUIDE SPECIFICATIONS

- c. **[Factory] [Field]** installed Fuse Block.
 - d. Reset thermal limit protection.
 - e. Single point power supply.
 - f. Heater Element:
 - 1) Nickel chromium wire.
 - 2) Individually fused.
 - g. Electric heater slides out of unit for service.
8. Heating Controls:

Specifier Note: 2 stages of heating control are only available on T-Class (TG) gas/electric models of tonnages 4-6, on two stage units.

- a. Support 2 stages of heating control from thermostat or DDC.
 - b. With delay time of 30 seconds between low and high heat stages.
9. Supply Air Fan Motor and Drives:
- a. Permanently lubricated ball bearings (for belt drive motors).
 - b. Thermal overload protected motors with automatic reset.

Specifier Note: Slide out accessibility is only available on T-Class models of tonnages 7.5-25.

- c. Adjustable sheaves on belt drive motors for blower speed adjustment.
 - d. Optional low and high static motor/drive combinations and optional drive kits.
10. Supply Air Fan:
- a. Double inlet type, G90 (Z275) galvanized steel with forward curved blades.
 - b. Statically and dynamically balanced.
 - c. Slide-out accessibility unit for servicing and belt tension adjustment.
 - d. Continuous or automatic control for occupied periods.
11. Supply Air Filters:
- a. Disposable 2 inch.

Specifier Note: Permanent metal frame filters with 2 inch polyester replaceable media are only available on T-Class models of tonnages 15-25 tons.

- b. **[Permanent metal frame filters with 2 inch polyester replaceable media].**
12. Condenser Fan Motor:

Specifier Note: T-Class 2-4 ton models have sleeve bearings.

- a. Direct drive with permanently lubricated ball bearings.
 - b. Watertight with thermal overload protection and automatic reset.
 - c. Motor mount isolated from fan safety guard.
13. Condenser Fans:
- a. Corrosion resistant propeller type with vertical discharge and finger safety guard.
14. Microprocessor Based Unit Controller System:
- a. Solid state, microprocessor based control board to control unit cooling operations.
 - b. Green blinking LED to indicate normal operation.
 - c. Pushbutton reset.
 - d. Four-position DIP switch to select unit operating mode/unit type.
 - e. Test mode for quick operation checks.
 - f. Up to 2-stage heat/4-stage cool thermostat or DDC capable thermostat operation.
 - g. Digital Inputs:
 - 1) Low cool demand
 - 2) High cool demand
 - 3) Low heat demand
 - 4) Supply fan demand
 - 5) Primary heat limit (2)
 - 6) Flame rollout switch (2)
 - 7) Induced draft motor switch (2)
 - 8) Gas valve sense switch (2)

Specifier Note: T-Class models of tonnages 15-25 have four Freeze protection switches. 7.5 - 12 ton models have two. 2-6 ton models have one.

- 9) Freeze protection switch (2), (4).
- h. Digital Outputs:

GUIDE SPECIFICATIONS

- 1) Supply air fan motor
- 2) compressor 1
- 3) compressor 2
- 4) condenser fans
- 5) inducer fan motor 1

Specifier Note: T-Class 7.5 - 25 ton models only.

- 6) heat 1
- 7) critical diagnostic fault code occurrence.

i. [Control Options:]

- 1) [Single Enthalpy Control] : [Field] [Factory]
- 2) [Differential Enthalpy Control : Field]

Specifier Note: The factory mounted CO2 sensor is only available T-Class models of tonnages 15 - 25. All other models can be field mounted only.

- 3) [CO2 Sensor:] [Field] [Factory]

Specifier Note: Economizer Control: Field is only available for T-Class models of tonnages 7.5 - 25.

- 4) [Economizer Control: Field]

15. [Accessories:]

a. [Economizer]: [Field] [Factory]

Specifier Note: Motorized outdoor air damper is only available in a field mounted version for the T-Class models of tonnages 2, 2.5, 3, 4, 5 and 6. All other models can be factory or field.

b. [Motorized outdoor air damper]: [Field] [Factory]

Specifier Note: Manual outdoor air damper is only available in a field mounted version for the T-Class models of tonnages 2, 2.5, 3, 4, 5 and 6. All other models can be factory or field.

c. [Manual outdoor air damper]: [Field] [Factory]

Specifier Note: Barometric relief damper and outdoor air hood is included with factory or field installed economizer on 2-6 ton models. All other models can be factory or field installed separately.

d. [Barometric relief damper]: [Field] [Factory]

Specifier Note: The factory mounted Power Exhaust Fan is only available on the versions of T-Class models of tonnages 15-25. All other models can be field mounted.

e. [Power exhaust fan]: [Field] [Factory]

f. [Dirty filter switch: Field]

Specifier Note: The field mounted Blower Proving Switch is only available on T-Class models of tonnages 7.5-25.

g. [Blower proving switch]: [Field] [Factory]

h. [Smoke detectors: Field]

i. [Roof curb: Field]

j. [Outdoor air hood: Field]

k. [Barometric relief damper hood: Field]

Specifier Note: Edit article below to suit project requirements. If substitutions are permitted, edit text below. Add text to refer to Division 1 Project Requirements (Product Substitutions Procedures) Section.

PART 2.02 PRODUCT SUBSTITUTIONS

- A. Substitutions: No substitutions permitted.**

PART 3 EXECUTION

PART 3.01 MANUFACTURER'S INSTRUCTIONS

Specifier Note: Revise article below to suit project requirements and specifier's practice.

- A. Compliance: Comply with manufacturer's written data, including product technical bulletins, product catalog installation instructions, product carton installation instructions and manufacturer's SPEC-DATA® sheets.**

PART 3.02 EXAMINATION

- A. Site Verification of Conditions: Verify substrate conditions, which have been previously installed under other sections, are acceptable for product installation in accordance with manufacturer's instructions**

PART 3.03 INSTALLATION

- A. Install [Packaged rooftop units] [And] [Commercial packaged, gas/electric, electric/electric and electric/heat pumps] in accordance with manufacturer's instructions [On roof curbs provided by manufacturer] [As indicated].**

END OF SECTION

REVISIONS

Sections	Description of Change
Document	Removed all Basic Efficiency model information.
Optional Accessories	Updated Information - High Pressure Switch, Low Ambient Kit and Smoke Detector.



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