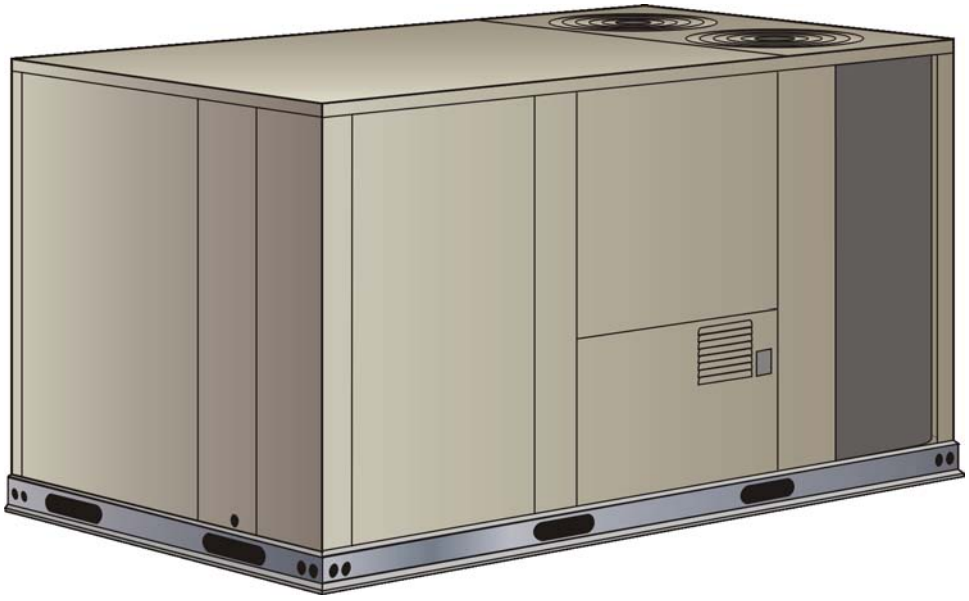
ALLIED Commercial

TG
ROOFTOP UNITS
60 HZ

ENGINEERING DATA

Bulletin No. TGA090-102-120-150 (08/09)



ASHRAE 90.1 COMPLIANT

ENERGY STAR

7.5 to 12.5 Tons
Net Cooling Capacity - 90,000 to 138,000 Btuh
Gas Input Heat Capacity - 84,500 to 240,000 Btuh

MODEL NUMBER IDENTIFICATION

T G A 090 H 2 B S 1 Y

Brand/Family
T = Product Line

Unit Type
G = Packaged Gas Heat w/ Electric Cooling

Major Design Sequence
A = 1st Generation
B = 2nd Generation
C = 3rd Generation
E = 4th Generation

Nominal Cooling Capacity - Tons
090 = 7.5 Tons
102 = 8.5 Tons
120 = 10 Tons
150 = 12.5 Tons

Cooling Efficiency
S = Standard Efficiency
H = High Efficiency

Refrigerant Type
2 = R-22

Blower Type
B = Belt Drive

Heating Type
S = Standard Gas Heat, 2 Stage
M = Medium Gas Heat, 2 Stage
H = High Gas Heat, 2 Stage

Minor Design Sequence
1 = 1st Revision
2 = 2nd Revision
3 = 3rd Revision

Voltage
Y = 208/230V-3 phase-60hz
G = 460V-3 phase-60hz
J = 575V-3 phase-60hz

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FEATURES AND BENEFITS

APPROVALS

ETL and CSA listed. Components bonded for grounding to meet safety standards for servicing required by UL, CSA and National and Canadian Electrical Codes. Gas efficiency ratings verified by CSA. Cooling performance certified in accordance with the ULE certification program, which is based on ARI Standard 340/360-2000.

ENERGY STAR® certified units are designed to use less energy, help save money on utility bills, and help protect the environment.

ISO 9001 Registered Manufacturing Quality System.

WARRANTY

Limited ten years on aluminized steel heat exchanger.

Limited five years on compressors.

Limited one year all other covered components.

HEATING SYSTEM

1 Aluminized steel inshot burners, direct spark ignition, electronic flame sensor, combustion air inducer, redundant automatic dual-stage gas valve with manual shut-off.

Heat Exchanger

Tubular construction, aluminized steel, life cycle tested.

Stainless Steel Heat Exchanger is required if mixed air temperature is less than 45°F.

Fan & Limit Controls

Factory installed with fixed temperature setting.

Heat limit controls protect against overheating.

Safety Switches

Flame roll-out switches, flame sensors and combustion air inducer proving switches protect system operation. All safety switches are monitored by the ignition control board.

Electronic Ignition

Solid-state electronic spark igniter provides positive direct ignition of burners on each operating cycle. The system permits main gas valve to stay open only when the burners are proven to be lit. Should a loss of flame occur, the gas valve closes, shutting off the gas to the burners. Ignition module has LED to indicate status and aid in troubleshooting.

Watchguard circuit on module automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance service calls. Ignition control is factory installed in the controls section.

REQUIRED SELECTIONS

Gas Input - Order one (see Specification table for available sizes):

84,500/130,000 Btuh Standard Heat Gas Input.

117,000/180,000 Btuh Medium Heat Gas Input

156,000/240,000 Btuh High Heat Gas Input.

OPTIONS/ACCESSORIES

Factory Installed

Stainless Steel Heat Exchanger

Required if mixed air temperature is below 45°F.

Optional Heat Size

Extends heat input beyond standard offering.

Cold Weather Kit

Electric heater automatically controls minimum temperature in gas burner compartment when temperature is below -40°F CSA certified to allow operation of unit down to -60°F.

Field Installed

Combustion Air Intake Extensions

Recommended for use with existing flue extension kits in areas where high snow drifts can block intake air.

LPG/Propane Kits

Conversion kit to field change over units from Natural Gas to LPG/Propane.

Vertical Vent Extension Kit

Exhausts flue gases vertically above unit.

Through Mullion Gas Piping Kit

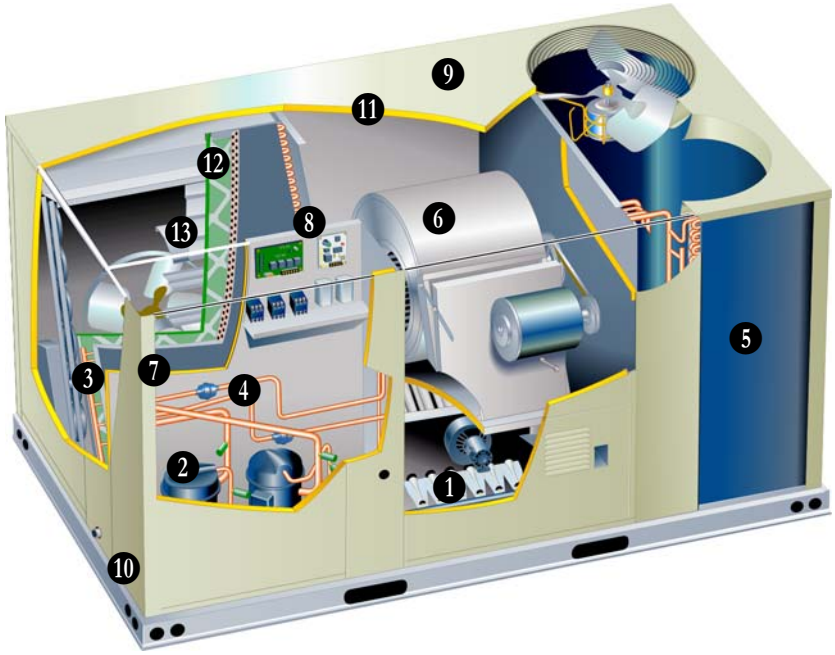
The gas piping kit is used to make gas piping connections from the unit mullion to the gas valve.

Unit Base Gas Piping Kit

The gas piping kit is used to make gas piping connections through the unit base up to the mullion.

NOTE - For gas piping from the unit base to the gas valve, both kits are required and must be ordered separately.

FEATURES AND BENEFITS



COOLING SYSTEM

Designed to maximize sensible and latent cooling performance at design conditions. Two efficiency levels provide flexibility. System can operate from 30°F to 125°F without any additional controls.

2 Compressors

Resiliently mounted on rubber grommets for quiet operation.

Scroll compressors on all models for high performance, reliability and quiet operation.

3 Thermal Expansion Valves

Assures optimal performance throughout the application range.

Removable element head.

4 Filter/Driers

High capacity filter/driers protect the system from dirt and moisture.

Freezestats

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

5 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

Face split with separate circuits. Each circuit has its separate expansion valve, compressor and refrigerant charge. Enhanced aluminum fins and copper tube coils with cross row circuiting optimizes both sensible and latent cooling capacity.

Condenser Coil

Formed type on all models. Ripple-edged, enhanced aluminum fin and copper tube construction maximizes heat transfer capability.

Condensate Drain Pan

Painted, galvanized pan with positive slope.

Drain connection extends outside unit.

Outdoor Coil Fan Motors

Thermal overload protected, totally enclosed, permanently lubricated ball bearings, shaft up, independent motor mount.

Outdoor Coil Fan

PVC coated fan guard furnished.

REQUIRED SELECTIONS

Cooling Capacity

Specify the nominal cooling capacity of the unit.

Cooling Efficiency

Specify either standard or high efficiency.

OPTIONS/ACCESSORIES

Field Installed

Condensate Drain Trap

Available in copper or PVC.

Compressor Crankcase Heaters

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

High Pressure Switches

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

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.

6 BLOWER

Supply air fan provides a wide range of air flow capability. Special order high and low static motor and drive options are available offering an even wider range of capability.

Supply Air Motor

Overload protected with permanently lubricated ball bearings ensures durable operation. Belt drive motors that meet EPACT efficiency requirements maximize air performance and save energy. Special order high and low static motors provide a higher level of air performance for demanding applications.

Supply Air Blower

A double inlet wheel with forward curve blades provide maximum air performance and quiet operation. Dynamically balanced with permanently lubricated ball bearings assure long, reliable operation. Adjustable pulleys allow air to be precisely tuned to the needs of the application.

REQUIRED SELECTIONS

Supply Air Blower

Specify Blower motor and drive kit (See Blower Data Table for specifications).

OPTIONS/ACCESSORIES

Factory Installed

High and Low Static Supply Fan

Extends air flow external static range.

FEATURES AND BENEFITS

ELECTRICAL

REQUIRED SELECTIONS

Voltage Choice
Specify 208/230V, 460V or 575V 3-phase-60hz when ordering base unit.

OPTIONS/ACCESSORIES

Field Installed

7 Circuit Breakers up to 175 Amp
HACR circuit breaker without power distribution lugs. Accessible from outside of unit, spring-loaded weatherproof cover furnished. Main power to the unit is field connected to the circuit breaker which allows all power to be shutoff for service. Circuit breaker is sized to the unit maximum overcurrent protection (MOCP) size.

Disconnect Switch up to 250 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.

GFI Service Outlets (2)
115v ground fault circuit interrupter (GFCI) type, field wired.

CONTROLS

8 Unit Controller
Microprocessor-based control board provides flexible control of cooling functions. All control voltage is provided via a 24V (secondary) transformer with built-in circuit breaker protection. Built-in functions include:

Blower On/Off Delay - Time delay between blower on and off cycles provides a more even supply air temperature during heating.

Built-in Control Parameters - Saves installation time as no programming is required.

Minimum Compressor Run Time - Ensures proper oil return to the compressor.

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

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

Thermostat Bounce Delay - Protects compressor from short cycling when a mechanical thermostat is used.

OPTIONS/ACCESSORIES

Field Installed

Blower Proving Switch
Uses a static pressure sensor to monitors blower operation and shuts down unit if blower fails.

Dirty Filter Switch
Senses static pressure increase indicating dirty filter condition.

Smoke Detector
Photoelectric type, installed in supply air section or return air section or both sections

CABINET

9 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 available in down-flow (vertical) or horizontal air flow configuration with optional field installed Horizontal Conversion Kit.

Duct Flanges
Horizontal supply duct flange is standard on all units.

10 Power/Gas Entry
Electrical and gas lines can be brought through the unit base or through horizontal access knock-outs.

Exterior Panels
Constructed of heavy-gauge, galvanized steel with a two-layer enamel paint finish. Large removable panels provide service access.

11 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, blower section, heating section and the compressor/controls section.

REQUIRED SELECTIONS

Air Flow Configuration
Specify horizontal or down-flow (vertical).

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.

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.

Horizontal Return Air Panel Kit
Required for horizontal applications with Horizontal Roof Curb, contains panel with return air opening for field replacement of existing unit panel and panel to cover bottom return air opening in unit, see dimension drawings.

FEATURES AND BENEFITS

INDOOR AIR QUALITY

12 Air Filters
Disposable 2 inch filters furnished as standard.

OPTIONS/ACCESSORIES

Field Installed

Indoor Air Quality (CO_2) Sensor
Monitors CO_2 levels.

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.

Access Panels
Large access panels are provided for quick and easy access to maintenance areas.

Blower Access
Blower assembly slides out of the unit for easy access.

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

Thermal Expansion Valves
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.

Standard Components
A large number of common maintenance parts are standard throughout the entire range of sizes (7.5 - 12.5 tons), reducing the need to carry a lot of different parts to the job or in inventory.

Compressor Access
Compressors are located near the perimeter of the unit for easier access.

Compressor Compartment
Compressors are isolated from the condenser air flow allowing system operation checks to be done without changing the air flow across the outdoor coils.

OPTIONS / ACCESSORIES

ECONOMIZER/OUTDOOR AIR/EXHAUST ACCESSORIES

Factory or Field Installed

13 Economizer
Parallel, gear-driven action return air and outdoor air dampers, plug-in connections to unit, nylon bearings, neoprene seals, 24 volt, spring return motor, adjustable minimum damper position, damper assembly slides in unit, outdoor air hood must be ordered separately, choice of economizer controls. Economizer modulates dampers to maintain a 55°F discharge air temperature.

Economizer Enthalpy Control
Senses outdoor air enthalpy and enables economizer if the enthalpy is less than the setpoint of the control.

Down-Flow Barometric Relief Dampers
Allows relief of excess return air static when economizer is near full open. Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle. Bird screen furnished.

Outdoor Air Damper Section
25% Manual Outdoor Air Dampers - Parallel blade dampers are manually adjustable to a fixed position.
25% Automatic Outdoor Air Damper - Parallel blade, gear-driven dampers are automatically adjusted with a two-position damper motor.
Economizer and Outdoor Air Damper Application Note - Minimum mixed air temperature in heating mode 30°F
Maximum mixed air temperature in cooling mode: 90°F

Power Exhaust Fans
Installs internal to unit for down-flow applications 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. Galvanized steel cabinet and hood painted to match unit. Total air volume is 4200 cfm at 0 in. wg. 1/3 hp motor. 300 Watts total input.
See Power Exhaust Blower Tables.

Field Installed

Economizer Control
Sensible Temperature Control - Senses outdoor air temperature and enables the economizer if the temperature is less than the set point of the control. Order two kits for differential control.
Single Outdoor Enthalpy Control - Senses outdoor air enthalpy and enables economizer if the enthalpy is less than the setpoint of the control.
Differential Enthalpy (Dual) Control - Two solid-state enthalpy sensors allow the control to select between outdoor air or return air, whichever has lower enthalpy.

Outdoor Air Hood
Required with Economizer, Outdoor Air Damper Sections, cleanable aluminum mesh fresh air filters furnished.

Down-Flow Barometric Relief Damper Hood
Protects exhaust air from recirculating into outdoor air stream.

Horizontal Barometric Relief Dampers
Allows relief of excess air when economizer is near full open. Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle. Field installed in return air duct. Bird screen furnished.

CEILING DIFFUSERS

OPTIONS/ACCESSORIES

Field Installed

Ceiling Diffusers
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 CURBS

OPTIONS/ACCESSORIES

Field Installed
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.
Standard roof curb corners fasten together with furnished hardware.

OPTIONS / ACCESSORIES

Item		Catalog No.	090	102	120	150
COOLING SYSTEM						
Compressor Crankcase Heater	208/230V - TACHK10/15-Y	**76M34**	x	x	x	x
	460V - TACHK10/15-G	**76M35**	x	x	x	x
	575V - TACHK10/15-J	**76M36**	x	x	x	x
Condensate Drain Trap	PVC - LTACDKP09/36	**37K90**	x	x	x	x
	Copper - LTACDKC09/36	**48K14**	x	x	x	x
Efficiency	Standard		○	○	○	○
	High		○	○	○	
High Pressure Switch	T1SNSR11B-2	**42W97**	x	x	x	x
Low Ambient Kit	T1SNSR12B-2	**42W98**	x	x	x	x
Refrigerant Type	R-22		○	○	○	○
HEATING SYSTEM						
Cold Weather Kit	Factory		○	○	○	○
Combustion Air Intake Extensions	LTACAIK10/15	**89L97**	x	x	x	x
Gas Heat Input	Standard - 130 kBtuh input		○	○	○	○
	Medium - 180 kBtuh input		○	○	○	○
	High - 240 kBtuh input		○	○	○	○
Gas Piping Kit [1] Order one of each	Through Mullion - LTAGPSK10/15	**76M16**	x	x	x	x
	Through Unit Base - LTAGPB10/15	**76M17**	x	x	x	x
LPG/Propane Kit	130 kBtuh input - LTALPGK-130	**72M94**	x	x	x	x
	180 kBtuh input - LTALPGK-180	**72M95**	x	x	x	x
	240 kBtuh input - LTALPGK-240	**72M96**	x	x	x	x
Stainless Steel Heat Exchanger			○	○	○	○
Vertical Vent Extension	LTAWEK10/15	**73M72**	x	x	x	x
BLOWER - SUPPLY AIR						
Constant Air Volume	2 hp Standard or High Efficiency		○	○	○	
	3 hp Standard Efficiency		○	○	○	○
	3 hp High Efficiency		○	○	○	○
	5 hp Standard or High Efficiency				○	○
CABINET						
Coil Guards	TACGKC10/15	**69M44**	x	x	x	x
Corrosion Protection			○	○	○	○
Hail Guards	TAHGKGC10/15	**69M45**	x	x	x	x
Hinged Access Panels			○	○	○	○
Horizontal Discharge Conversion Kit	LTHSDKGC10/15	**56K53**	x	x	x	x

NOTE - The catalog and part numbers that appear here are for ordering field installed accessories only.
○ - Configure to Order (Factory Installed)
X - Field Installed.
[1] For gas piping from the unit base to the gas valve, both kits are required and must be ordered separately.

OPTIONS / ACCESSORIES

Item		Catalog No.	090	102	120	150
CONTROLS						
Blower Proving Switch	C0SWCH01AE1-	**30K49**	x	x	x	x
Dirty Filter Switch	C0SWCH00AE1-	**30K48**	x	x	x	x
Smoke Detector - Supply	L1SNSR41BD1	**53W26**	x	x	x	x
Smoke Detector - Return	L1SNSR42BD1	**53W25**	x	x	x	x
ELECTRICAL						
Voltage 60 hz	208/230V - 3 phase		○	○	○	○
	460V - 3 phase		○	○	○	○
	575V - 3 phase		○	○	○	○
HACR Circuit Breakers	25 to 80 Amp size available		x	x	x	x
Disconnect Switch	T1DISC080-1 (80 Amp)	**80M00**	x	x	x	x
GFI Service Outlets	LTAGFIK10/15	**74M70**	⊗	⊗	⊗	⊗
ECONOMIZER						
Economizer						
Economizer - Order LAOAH Hood Separately	TAREMD10/15	**94M02**	⊗	⊗	⊗	⊗
Economizer Controls						
Differential Enthalpy (dual)	C1SNSR07AE	**86M33**	x	x	x	x
Sensible (order two kits for Differential)	TASEK10/15	**76M37**	⊗	⊗	⊗	⊗
Single Outdoor Enthalpy	C1SNSR06AE	**86M32**	x	x	x	x
Barometric Relief						
Down-Flow Barometric Relief Dampers - Order Hood Separately	LAGED10/15	**53K03**	⊗	⊗	⊗	⊗
Hood for Down-Flow LAGED	LAGEH09/15	**88K79**	x	x	x	x
Horizontal Barometric Relief Dampers - Hood Furnished	LAGEDH03/15	**53K04**	x	x	x	x
OUTDOOR AIR						
Outdoor Air Dampers						
Damper Section - Order Hood Separately	Motorized - TAOADM10/15	**73M74**	⊗	⊗	⊗	⊗
	Manual - LAOAD10/15	**66K69**	⊗	⊗	⊗	⊗
Outdoor Air Hoods for Economizers and Outdoor Air Dampers						
Outdoor Air Hood (No. of Filters) - 16 x 25 x 1 in.	LAOAH10/15 (2)	**53K05**	⊗	⊗	⊗	⊗
POWER EXHAUST FANS						
Standard Static	208/230V - LAPEF10/15	**73M32**	⊗	⊗	⊗	⊗
	460V - LAPEF10/15	**73M33**	⊗	⊗	⊗	⊗
	575V - LAPEF10/15	**73M35**	⊗	⊗	⊗	⊗
INDOOR AIR QUALITY						
Indoor Air Quality (Co_2) Sensors						
CO_2 Sensor Duct Mounting Kit	C0MISC19AE1-	**85L43**	x	x	x	x
Sensor - off- white case CO_2 display	C0SNSR50AS1L	**77N39**	x	x	x	x
Sensor - off-white case no display	C0SNSR52AS1L	**87N53**	x	x	x	x
Sensor - black case CO_2 display	C0SNSR51AS1L	**87N52**	x	x	x	x
Sensor - black case, no display	C0SNSR53AS1L	**87N54**	x	x	x	x
Aspiration Box for duct mounting	C0MISC16AE1-	**90N43**	x	x	x	x
Handheld CO_2 Monitor	LTAIAQSHM03/36	**70N93**	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.	090	102	120	150
CEILING DIFFUSERS						
Step-Down Order one	RTD11-95	**29G04**	x			
	RTD11-135	**29G05**		x	x	
	RTD11-185	**29G06**				x
	(Canada Only) RTD11-150/180S	**13K63**				x
Flush Order one	FD11-95	**29G08**	x			
	FD11-135	**29G09**		x	x	
	FD11-185	**29G10**				x
	(Canada Only) FD11-150/180S	**13K58**				x
Transitions - (Supply and Return) Order one	LASRT10/12	**49K55**	x	x	x	
	LASRT15	**49K56**				x
ROOF CURBS - CLIPLOCK 1000						
Down-Flow						
8 in. height	C1CURB40B	**26W31**	x	x	x	x
14 in. height	LARMF10/15S-14	**65K34**	x	x	x	x
18 in. height	LARMF10/15S-18	**65K35**	x	x	x	x
24 in. height	LARMF10/15S-24	**65K36**	x	x	x	x
ROOF CURBS - STANDARD						
Down-Flow						
14 in. height	LARMF10/15-14	**53K50**	x	x	x	x
24 in. height	LARMF10/15-24	**49K54**	x	x	x	x

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SPECIFICATIONS — 7.5 AND 8.5 TON

General Data			7.5 Ton		8.5 Ton	
		Model No.	TGA090S2B	TGA090H2B	TGA102S2B	TGA102H2B
		Efficiency Type	Standard	High	Standard	High
Cooling Performance		Gross Cooling Capacity - Btuh	93,000	93,000	104,000	106,000
		[1]Net Cooling Capacity - Btuh	90,000	90,000	100,000	102,000
		ARI Rated Airflow - cfm	3000	3000	3400	3400
		Total Unit Power	8.9	8.0	9.9	9.2
		[1] EER (Btuh/Watt)	10.1	11.0	10.1	11.0
		[2] Integrated Part Load Value (Btuh/Watt)	10.5	11.4	10.5	11.4
	Refrigerant Charge Furnished (R-22)	Circuit 1	7 lbs. 0 oz.	8 lbs. 8 oz.	7 lbs. 8 oz.	8 lbs. 8 oz.
		Circuit 2	6 lbs. 8 oz.	8 lbs. 8 oz.	7 lbs. 0 oz.	8 lbs. 8 oz.
[3] Sound Rating Number (dB)			88	88	88	88
Gas Heating Options Available - See Page 11			**Standard (S), Medium (M) or High (H)**			
Compressor - Number & Type			(2) Scroll	(2) Scroll	(2) Scroll	(2) Scroll
Condenser Coil		Net face area - sq. ft.	29.3 total	29.3 total	29.3 (2.72) total	29.3 total
		Tube diameter - in.	3/8	3/8	3/8	3/8
		Number of rows	1	2	1	2
		Fins per inch	20	20	20	20
Condenser Fans		Motor horsepower	(2) 1/3	(2) 1/3	(2) 1/3	(2) 1/3
		Motor rpm	1075	1075	1075	1075
		Total Motor watts	700	700	700	700
		Diameter - in. - no. of blades	(2) 24 - 3	(2) 24 - 3	(2) 24 - 3	(2) 24 - 3
		Total air volume - cfm	8000	8000	8000	8000
Evaporator Coil		Net face area - sq. ft.	10.5 total	10.5 total	10.5 total	10.5 total
		Tube diameter - in.	3/8	3/8	3/8	3/8
		Number of rows	3	3	3	3
		Fins per inch	14	14	14	14
		Drain Connection - no. & size	(1) 1 in. NPT cplg	(1) 1 in. NPT cplg	(1) 1 in. NPT cplg	(1) 1 in. NPT cplg
		Expansion device type	Balanced Port Thermostatic Expansion Valve, removeable power head			
Standard Indoor Blower and Drive		[4] Belt Drive - Nominal motor output	2 hp	2 hp	2 hp	2 hp
		Maximum usable output (US Only)	2.3 hp	2.3 hp	2.3 hp	2.3 hp
		Drive kit	kit #1 680 - 925 rpm	kit #1 680 - 925 rpm	kit #1 680 - 925 rpm	kit #1 680 - 925 rpm
		Wheel nom. diameter x width - in. (mm)	(1) 15 x 15	(1) 15 x 15	(1) 15 x 15	(1) 15 x 15
Filters		Type of filter	Disposable, pleated MERV 7 (standard) or MERV 11 (optional)			
		Number and size - in. (mm)	(4) 18 x 24 x 2	(4) 18 x 24 x 2	(4) 18 x 24 x 2	(4) 18 x 24 x 2
Electrical characteristics			208/230V, 460V or 575V - 60 hertz - 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 ULE certification program, which is based on ARI Standard 340/360, 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

2 Integrated Part Load Value rated at 80°F outdoor air temperature, 80°F db/67°F wb indoor air temperature.

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

4 Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

SPECIFICATIONS — 10 AND 12.5 TON

General Data	Nominal Tonnage	**10 Ton**	**10 Ton**	**12.5 Ton**
	Model No.	**TGA120S2B**	**TGA120H2B**	**TGA150S2B**
	Efficiency Type	**Standard**	**High**	**Standard**
Cooling Performance	Gross Cooling Capacity - Btuh	126,000	126,000	145,000
	[1]Net Cooling Capacity - Btuh	120,000	120,000	138,000
	ARI Rated Airflow - cfm	3800	3800	4250
	Total Unit Power	11.8	10.9	14.5
	[1]EER (Btuh/Watt)	10.1	11.0	9.5
	[2] Integrated Part Load Value (Btuh/Watt)	10.5	11.4	9.2
	Refrigerant Charge Furnished (R-22) Circuit 1	10 lbs. 0 oz.	10 lbs. 0 oz.	13 lbs. 0 oz.
	Refrigerant Charge Furnished (R-22) Circuit 2	10 lbs. 0 oz.	10 lbs. 0 oz.	12 lbs. 0 oz.
[3] Sound Rating Number (dB)		88	88	88
Gas Heating Options Available - See Page 11			**Medium (M) or High (H)**	
Compressor - Number and Type		(2) Scroll	(2) Scroll	(2) Scroll
Condenser Coil	Net face area - sq. ft.	29.3 total	29.3 total	29.3 total
	Tube diameter - in.	3/8	3/8	3/8
	Number of rows	2	2	3
	Fins per inch	20	20	20
Condenser Fans	Motor horsepower	(2) 1/3	(2) 1/3	(2) 1/2
	Motor rpm	1075	1075	1075
	Total Motor watts	700	700	1150
	Diameter - in. - no. of blades	(2) 24 - 3	(2) 24 - 3	(2) 24 - 3
	Total air volume - cfm	8000	8000	9000
Evaporator Coil	Net face area - sq. ft.	10.5 total	10.5 total	10.5 total
	Tube diameter - in.	3/8	3/8	3/8
	Number of rows	4	4	4
	Fins per inch	14	14	14
	Drain Connection - no. & size	(1) 1 in. NPT coupling	(1) 1 in. NPT coupling	(1) 1 in. NPT coupling
	Expansion device type	Balanced Port Thermostatic Expansion Valve, removeable power head		
Standard Indoor Blower and Drive	[4] Belt Drive - Nominal motor output	3 hp	3 hp	5 hp
	Maximum usable output (US Only)	3.45 hp	3.45 hp	5.75 hp
	Motor - Drive kit	kit #3 - 895 - 1120 rpm	kit #3 - 895 - 1120 rpm	kit #6 - 1100 - 1395 rpm
	Wheel nominal diameter x width - in.	(1) 15 x 15	(1) 15 x 15	(1) 15 x 15
Filters	Type of filter	Disposable, pleated MERV 7 (standard) or MERV 11 (optional)		
	Number and size - in.	(4) 18 x 24 x 2	(4) 18 x 24 x 2	(4) 18 x 24 x 2
Electrical characteristics		208/230V, 460V or 575V - 60 hertz - 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 ULE certification program, which is based on ARI Standard 340/360, 95°F outdoor air temperature and 80°F db/67°F wb entering evaporator air; minimum external duct static pressure.

2 Integrated Part Load Value rated at 80°F outdoor air temperature, 80°F db/67°F wb indoor air temperature.

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

4 Maximum usable output of motors furnished are shown. In Canada, nominal motor output is also maximum usable motor output. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

SPECIFICATIONS - GAS HEAT — 7.5 - 12.5 TON

Usage Data	Used on Model No.	TGA090 TGA102	TGA090 TGA102 TGA120 TGA150	TGA090 TGA102 TGA120 TGA150
Gas Heating Performance	Heat Input Type	**Standard (S)**	**Medium (M)**	**High (H)**
	Input - Btuh First Stage	84,500	117,000	156,000
	Input - Btuh Second Stage	130,000	180,000	240,000
	Output - Btuh Second Stage	104,000	144,000	192,000
	Temperature Rise Range - °F	15 - 45	30 - 60	40 - 70
	Thermal Efficiency	80%		
	Gas Supply Connections	3/4 in. npt		
	Gas Supply Pressure	7 in. w.c. Natural Gas / 11 in. w.c. LPG/Propane		

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 2000 ft. above sea level without any modifications.
At altitudes above 2000 ft. units must be derated to match information in the table shown.
At altitudes above 4500 ft. unit must be derated 2% for each 1000 ft. above sea level.

NOTE - This is the only permissible derate for these units.

Heat Input Type	Altitude Feet	Gas Manifold Pressure in. w.g. Natural Gas	Gas Manifold Pressure in. w.g. LPG/ Propane	Input Rate (Btuh)
Standard (2 stage)	2001 - 4500	3.4/1.6	9.6/5.5	84,500/ 124,000
Medium (2 stage)	2001 - 4500	3.4/1.6	9.6/5.5	117,000/ 172,000/
High (2 stage)	2001 - 4500	3.4/1.6	9.6/5.5	156,000/ 230,000/

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.

7.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA090S

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil: 65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	2400	1135	48.5	14.2	2.49	.63	.77	.91	47.0	13.8	2.77	.64	.78	.93	45.5	13.3	3.10	.64	.80	.95	43.9	12.9	3.47	.65	.81	.97
	3000	1415	50.3	14.7	2.53	.67	.85	.99	48.8	14.3	2.81	.68	.86	1.00	47.2	13.8	3.13	.70	.88	1.00	45.6	13.4	3.51	.71	.90	1.00
	3600	1700	51.8	15.2	2.55	.73	.92	1.00	50.3	14.7	2.84	.74	.94	1.00	48.6	14.2	3.17	.76	.96	1.00	46.9	13.7	3.54	.77	.97	1.00
67°F (19°C)	2400	1135	51.5	15.1	2.55	.50	.61	.73	50.0	14.7	2.83	.50	.61	.74	48.4	14.2	3.16	.51	.62	.76	46.6	13.7	3.53	.51	.63	.77
	3000	1415	53.2	15.6	2.58	.52	.65	.81	51.6	15.1	2.87	.53	.66	.83	49.8	14.6	3.20	.53	.67	.84	48.1	14.1	3.57	.54	.68	.87
	3600	1700	54.4	15.9	2.61	.54	.70	.88	52.7	15.4	2.90	.55	.72	.90	50.9	14.9	3.22	.56	.73	.92	49.1	14.4	3.60	.57	.75	.94
71°F (22°C)	2400	1135	54.8	16.1	2.62	.38	.48	.58	53.1	15.6	2.90	.38	.49	.59	51.4	15.1	3.23	.38	.49	.60	49.6	14.5	3.61	.38	.50	.61
	3000	1415	56.5	16.6	2.65	.39	.51	.63	54.8	16.1	2.94	.39	.51	.64	52.9	15.5	3.27	.39	.52	.65	51.0	14.9	3.65	.39	.53	.66
	3600	1700	57.7	16.9	2.68	.40	.53	.68	55.8	16.4	2.97	.40	.54	.69	53.9	15.8	3.30	.40	.55	.71	52.0	15.2	3.67	.41	.56	.73

7.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA090S

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		
	cfm	L/s	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)	2400	1135	88.0	25.8	6.29	.65	.79	.94	84.9	24.9	7.04	.65	.81	.96	81.7	23.9	7.92	.66	.83	.98	78.2	22.9	8.93	.67	.85	.99
	3000	1415	91.3	26.8	6.36	.69	.87	1.00	88.1	25.8	7.13	.71	.89	1.00	84.7	24.8	8.00	.72	.92	1.00	81.2	23.8	9.02	.75	.94	1.00
	3600	1700	94.0	27.5	6.43	.75	.94	1.00	90.7	26.6	7.18	.77	.96	1.00	87.4	25.6	8.07	.79	.98	1.00	83.9	24.6	9.10	.81	1.00	1.00
67°F (19°C)	2400	1135	93.5	27.4	6.41	.51	.62	.75	90.2	26.4	7.17	.51	.63	.77	86.7	25.4	8.06	.52	.64	.79	83.0	24.3	9.07	.53	.65	.81
	3000	1415	96.4	28.3	6.49	.53	.67	.83	93.0	27.3	7.25	.54	.68	.86	89.3	26.2	8.13	.55	.70	.88	85.4	25.0	9.16	.56	.72	.90
	3600	1700	98.5	28.9	6.54	.56	.73	.91	95.0	27.8	7.31	.57	.74	.93	91.2	26.7	8.19	.58	.76	.96	87.2	25.6	9.23	.59	.79	.98
71°F (22°C)	2400	1135	99.4	29.1	6.55	.39	.49	.60	95.9	28.1	7.33	.39	.50	.61	92.2	27.0	8.22	.39	.50	.62	88.3	25.9	9.25	.39	.51	.63
	3000	1415	102.3	30.0	6.63	.39	.52	.65	98.7	28.9	7.41	.40	.53	.66	94.7	27.8	8.30	.40	.54	.67	90.6	26.6	9.33	.40	.55	.69
	3600	1700	104.3	30.6	6.70	.40	.55	.70	100.6	29.5	7.46	.41	.56	.72	96.5	28.3	8.36	.41	.57	.74	92.1	27.0	9.39	.42	.58	.76

7.5 TON HIGH EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA090H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil: 65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	2400	1135	47.3	13.9	2.01	.71	.84	.95	45.9	13.5	2.29	.72	.85	.96	44.4	13.0	2.60	.72	.86	.98	42.8	12.5	2.95	.73	.87	.99
	3000	1415	49.1	14.4	2.02	.75	.90	1.00	47.7	14.0	2.30	.76	.91	1.00	46.1	13.5	2.61	.77	.93	1.00	44.5	13.0	2.95	.79	.94	1.00
	3600	1700	50.6	14.8	2.03	.80	.95	1.00	49.1	14.4	2.30	.81	.97	1.00	47.6	14.0	2.62	.83	.98	1.00	46.0	13.5	2.96	.84	.99	1.00
67°F (19°C)	2400	1135	50.4	14.8	2.03	.56	.68	.80	48.9	14.3	2.30	.56	.69	.81	47.3	13.9	2.61	.57	.70	.82	45.6	13.4	2.96	.57	.71	.84
	3000	1415	52.0	15.2	2.04	.58	.73	.87	50.4	14.8	2.32	.59	.74	.88	48.8	14.3	2.62	.60	.75	.89	47.0	13.8	2.97	.60	.77	.91
	3600	1700	53.3	15.6	2.05	.61	.78	.93	51.6	15.1	2.32	.62	.79	.94	49.9	14.6	2.63	.63	.80	.96	48.0	14.1	2.98	.64	.82	.97
71°F (22°C)	2400	1135	53.7	15.7	2.05	.42	.54	.66	52.1	15.3	2.32	.42	.54	.66	50.4	14.8	2.63	.43	.55	.67	48.7	14.3	2.98	.43	.55	.68
	3000	1415	55.4	16.2	2.06	.43	.57	.71	53.7	15.7	2.34	.43	.58	.72	51.9	15.2	2.64	.44	.58	.73	50.1	14.7	2.99	.44	.59	.74
	3600	1700	56.6	16.6	2.07	.44	.60	.76	54.8	16.1	2.34	.45	.61	.77	53.0	15.5	2.65	.45	.62	.78	51.0	14.9	3.00	.45	.63	.80

7.5 TON HIGH EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA090H

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		
	cfm	L/s	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)	2400	1135	87.7	25.7	5.46	.67	.82	.96	84.7	24.8	6.20	.68	.84	.98	81.5	23.9	7.03	.69	.85	.99	78.0	22.9	7.97	.71	.88	1.00
	3000	1415	91.2	26.7	5.49	.72	.90	1.00	88.0	25.8	6.21	.74	.92	1.00	84.7	24.8	7.05	.76	.94	1.00	81.2	23.8	7.99	.78	.96	1.00
	3600	1700	94.0	27.5	5.51	.78	.97	1.00	90.9	26.6	6.23	.80	.98	1.00	87.6	25.7	7.07	.82	.99	1.00	84.2	24.7	8.02	.84	1.00	1.00
67°F (19°C)	2400	1135	93.5	27.4	5.49	.53	.65	.78	90.2	26.4	6.23	.53	.66	.80	86.7	25.4	7.07	.54	.67	.82	83.0	24.3	8.02	.55	.68	.84
	3000	1415	96.5	28.3	5.52	.56	.70	.86	93.0	27.3	6.25	.56	.71	.88	89.5	26.2	7.09	.57	.73	.90	85.5	25.1	8.04	.58	.75	.93
	3600	1700	98.7	28.9	5.54	.59	.76	.93	95.1	27.9	6.27	.59	.77	.95	91.4	26.8	7.11	.61	.79	.97	87.4	25.6	8.05	.62	.82	.99
71°F (22°C)	2400	1135	99.7	29.2	5.53	.40	.51	.63	96.3	28.2	6.27	.40	.52	.64	92.6	27.1	7.11	.40	.52	.65	88.7	26.0	8.06	.41	.53	.66
	3000	1415	102.7	30.1	5.56	.41	.54	.68	99.1	29.0	6.30	.41	.55	.69	95.3	27.9	7.14	.41	.56	.70	91.2	26.7	8.08	.42	.57	.72
	3600	1700	104.9	30.7	5.58	.42	.57	.73	101.0	29.6	6.31	.42	.58	.75	97.1	28.5	7.15	.43	.59	.77	92.8	27.2	8.09	.43	.61	.79

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.

8.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA102S

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil: 65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	2720	1285	51.6	15.1	2.71	.57	.73	.92	49.9	14.6	3.01	.58	.76	.94	48.2	14.1	3.35	.58	.78	.97	46.4	13.6	3.73	.59	.80	.99
	3400	1605	53.5	15.7	2.75	.61	.84	1.00	51.8	15.2	3.05	.63	.86	1.00	50.0	14.7	3.39	.65	.89	1.00	48.2	14.1	3.77	.67	.91	1.00
	4080	1925	55.1	16.1	2.78	.69	.93	1.00	53.3	15.6	3.08	.70	.95	1.00	51.5	15.1	3.42	.73	.98	1.00	49.7	14.6	3.81	.75	.99	1.00
67°F (19°C)	2720	1285	54.8	16.1	2.78	.45	.55	.69	53.0	15.5	3.07	.45	.56	.70	51.2	15.0	3.41	.46	.56	.72	49.2	14.4	3.80	.46	.57	.75
	3400	1605	56.5	16.6	2.81	.47	.59	.79	54.6	16.0	3.11	.48	.60	.81	52.7	15.4	3.45	.48	.62	.84	50.7	14.9	3.84	.49	.64	.87
	4080	1925	57.7	16.9	2.84	.49	.65	.89	55.8	16.4	3.14	.50	.67	.91	53.8	15.8	3.48	.51	.70	.94	51.7	15.2	3.87	.52	.72	.96
71°F (22°C)	2720	1285	58.3	17.1	2.85	.34	.43	.53	56.4	16.5	3.15	.34	.44	.54	54.5	16.0	3.49	.34	.44	.54	52.4	15.4	3.88	.34	.45	.55
	3400	1605	60.0	17.6	2.88	.35	.46	.57	58.0	17.0	3.18	.35	.46	.58	55.9	16.4	3.53	.35	.47	.59	53.8	15.8	3.92	.35	.48	.61
	4080	1925	61.1	17.9	2.91	.36	.49	.62	59.1	17.3	3.21	.36	.49	.64	57.0	16.7	3.55	.36	.50	.67	54.7	16.0	3.94	.36	.51	.69

8.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA102S

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		
	cfm	L/s	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)	2720	1285	98.8	29.0	6.86	.67	.83	.99	95.2	27.9	7.64	.68	.85	1.00	91.2	26.7	8.56	.69	.87	1.00	87.1	25.5	9.58	.71	.90	1.00
	3400	1605	102.5	30.0	6.94	.72	.92	1.00	98.8	29.0	7.73	.74	.94	1.00	94.7	27.8	8.64	.76	.97	1.00	90.4	26.5	9.68	.78	.99	1.00
	4080	1925	105.6	30.9	7.00	.78	.99	1.00	101.8	29.8	7.80	.81	1.00	1.00	97.9	28.7	8.72	.83	1.00	1.00	93.7	27.5	9.78	.86	1.00	1.00
67°F (19°C)	2720	1285	105.0	30.8	6.99	.52	.64	.78	101.0	29.6	7.78	.53	.66	.80	96.7	28.3	8.69	.54	.67	.83	92.2	27.0	9.74	.54	.68	.86
	3400	1605	108.1	31.7	7.06	.55	.70	.88	104.0	30.5	7.87	.56	.71	.90	99.6	29.2	8.78	.57	.73	.93	94.8	27.8	9.82	.58	.75	.96
	4080	1925	110.4	32.4	7.13	.58	.76	.96	106.1	31.1	7.92	.59	.78	.98	101.6	29.8	8.83	.60	.80	1.00	96.7	28.3	9.88	.61	.83	1.00
71°F (22°C)	2720	1285	111.7	32.7	7.15	.39	.51	.62	107.5	31.5	7.95	.39	.51	.63	103.1	30.2	8.87	.40	.52	.64	98.2	28.8	9.91	.40	.53	.66
	3400	1605	114.8	33.6	7.23	.40	.54	.67	110.4	32.4	8.03	.41	.55	.69	105.8	31.0	8.95	.41	.56	.70	100.6	29.5	9.99	.41	.57	.73
	4080	1925	117.0	34.3	7.28	.41	.57	.73	112.4	32.9	8.08	.42	.58	.75	107.5	31.5	9.00	.42	.59	.78	102.2	30.0	10.05	.43	.61	.81

8.5 TON HIGH EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA102H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil: 65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	2720	1285	51.6	15.1	2.31	.64	.79	.94	50.1	14.7	2.61	.65	.81	.96	48.5	14.2	2.94	.66	.82	.97	46.8	13.7	3.33	.67	.84	.99
	3400	1605	53.5	15.7	2.34	.69	.88	1.00	51.9	15.2	2.63	.70	.89	1.00	50.2	14.7	2.97	.72	.91	1.00	48.5	14.2	3.35	.74	.93	1.00
	4080	1925	55.1	16.1	2.35	.75	.95	1.00	53.5	15.7	2.65	.76	.96	1.00	51.8	15.2	2.99	.78	.98	1.00	50.1	14.7	3.37	.80	.99	1.00
67°F (19°C)	2720	1285	54.8	16.1	2.35	.51	.62	.75	53.2	15.6	2.65	.51	.63	.77	51.4	15.1	2.98	.51	.64	.78	49.6	14.5	3.37	.52	.64	.80
	3400	1605	56.6	16.6	2.37	.53	.66	.84	54.8	16.1	2.67	.54	.68	.85	52.9	15.5	3.01	.54	.69	.87	51.0	14.9	3.38	.55	.71	.90
	4080	1925	57.8	16.9	2.39	.56	.72	.91	56.0	16.4	2.69	.56	.74	.93	54.1	15.9	3.02	.57	.75	.95	52.1	15.3	3.40	.58	.78	.97
71°F (22°C)	2720	1285	58.4	17.1	2.39	.38	.49	.60	56.6	16.6	2.69	.38	.49	.60	54.8	16.1	3.03	.38	.50	.61	52.8	15.5	3.41	.39	.50	.62
	3400	1605	60.1	17.6	2.41	.39	.52	.64	58.2	17.1	2.71	.39	.52	.65	56.3	16.5	3.05	.39	.53	.67	54.2	15.9	3.43	.40	.54	.68
	4080	1925	61.3	18.0	2.43	.40	.55	.70	59.3	17.4	2.73	.40	.55	.71	57.3	16.8	3.06	.41	.56	.73	55.2	16.2	3.44	.41	.57	.75

8.5 TON HIGH EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA102H

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		
	cfm	L/s	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)	2720	1285	100.7	29.5	6.39	.67	.82	.97	97.2	28.5	7.23	.68	.84	.99	93.4	27.4	8.18	.69	.86	1.00	89.4	26.2	9.27	.71	.89	1.00
	3400	1605	104.3	30.6	6.45	.72	.91	1.00	100.7	29.5	7.28	.74	.93	1.00	97.0	28.4	8.22	.76	.95	1.00	92.9	27.2	9.31	.78	.97	1.00
	4080	1925	107.5	31.5	6.49	.78	.97	1.00	104.0	30.5	7.32	.80	.99	1.00	100.2	29.4	8.27	.82	1.00	1.00	96.3	28.2	9.37	.85	1.00	1.00
67°F (19°C)	2720	1285	106.8	31.3	6.48	.53	.65	.78	103.1	30.2	7.31	.53	.66	.80	99.0	29.0	8.26	.54	.67	.82	94.6	27.7	9.35	.55	.69	.85
	3400	1605	110.0	32.2	6.53	.55	.70	.87	106.0	31.1	7.35	.56	.71	.89	101.9	29.9	8.31	.57	.73	.91	97.3	28.5	9.39	.58	.75	.94
	4080	1925	112.4	32.9	6.56	.58	.76	.95	108.3	31.7	7.39	.59	.78	.96	103.9	30.5	8.34	.60	.80	.98	99.2	29.1	9.43	.62	.83	1.00
71°F (22°C)	2720	1285	113.8	33.4	6.58	.39	.51	.63	109.7	32.1	7.41	.40	.52	.64	105.4	30.9	8.37	.40	.52	.65	100.8	29.5	9.44	.40	.53	.66
	3400	1605	116.9	34.3	6.62	.41	.54	.68	112.6	33.0	7.46	.41	.55	.69	108.1	31.7	8.41	.41	.56	.71	103.3	30.3	9.49	.42	.57	.73
	4080	1925	119.1	34.9	6.65	.42	.57	.73	114.7	33.6	7.48	.42	.58	.75	110.0	32.2	8.44	.43	.60	.78	105.1	30.8	9.52	.43	.61	.80

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.

10 TON STANDARD EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA120S

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	3200	1510	62.7	18.4	3.27	.65	.80	.95	61.2	17.9	3.58	.65	.81	.97	59.3	17.4	3.94	.66	.82	.98	57.2	16.8	4.35	.67	.85	1.00
	4000	1890	65.0	19.0	3.32	.70	.89	1.00	63.5	18.6	3.62	.71	.90	1.00	61.6	18.1	3.98	.72	.92	1.00	59.4	17.4	4.40	.74	.94	1.00
	4800	2265	67.0	19.6	3.35	.76	.96	1.00	65.5	19.2	3.66	.77	.98	1.00	63.6	18.6	4.01	.79	.99	1.00	61.5	18.0	4.44	.81	1.00	1.00
67°F (19°C)	3200	1510	66.4	19.5	3.34	.51	.62	.76	64.8	19.0	3.65	.51	.63	.77	62.8	18.4	4.01	.52	.64	.78	60.6	17.8	4.42	.52	.65	.80
	4000	1890	68.4	20.0	3.39	.54	.67	.85	66.8	19.6	3.68	.54	.68	.86	64.8	19.0	4.04	.55	.69	.88	62.4	18.3	4.46	.55	.71	.91
	4800	2265	69.9	20.5	3.41	.57	.74	.94	68.2	20.0	3.71	.57	.75	.95	66.1	19.4	4.07	.58	.77	.96	63.7	18.7	4.49	.59	.79	.98
71°F (22°C)	3200	1510	70.5	20.7	3.43	.38	.49	.60	68.9	20.2	3.72	.38	.50	.61	66.8	19.6	4.08	.38	.50	.61	64.5	18.9	4.50	.39	.51	.63
	4000	1890	72.4	21.2	3.47	.39	.52	.65	70.8	20.7	3.76	.39	.53	.66	68.7	20.1	4.12	.40	.53	.67	66.2	19.4	4.53	.40	.54	.68
	4800	2265	73.7	21.6	3.49	.40	.56	.71	72.0	21.1	3.79	.41	.56	.73	69.8	20.5	4.14	.41	.57	.74	67.4	19.8	4.56	.41	.58	.76

10 TON STANDARD EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA120S

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		
	cfm	L/s	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)	3200	1510	120.4	35.3	8.29	.68	.83	.98	116.1	34.0	9.16	.69	.85	.99	111.5	32.7	10.16	.70	.87	1.00	106.7	31.3	11.28	.71	.89	1.00
	4000	1890	125.1	36.7	8.37	.73	.92	1.00	120.6	35.3	9.26	.75	.94	1.00	115.8	33.9	10.25	.77	.96	1.00	111.1	32.6	11.40	.79	.98	1.00
	4800	2265	129.0	37.8	8.44	.80	.99	1.00	124.7	36.5	9.33	.81	1.00	1.00	120.1	35.2	10.35	.84	1.00	1.00	115.5	33.8	11.50	.86	1.00	1.00
67°F (19°C)	3200	1510	127.6	37.4	8.43	.53	.65	.79	123.1	36.1	9.31	.54	.66	.81	118.2	34.6	10.31	.54	.68	.83	113.0	33.1	11.45	.55	.69	.85
	4000	1890	131.6	38.6	8.50	.56	.71	.88	126.8	37.2	9.38	.57	.72	.90	121.7	35.7	10.39	.58	.74	.92	116.3	34.1	11.55	.59	.76	.95
	4800	2265	134.4	39.4	8.56	.59	.77	.96	129.5	38.0	9.45	.60	.79	.98	124.2	36.4	10.45	.61	.81	.99	118.8	34.8	11.61	.63	.84	1.00
71°F (22°C)	3200	1510	135.7	39.8	8.58	.40	.51	.63	131.0	38.4	9.47	.40	.52	.64	125.8	36.9	10.48	.40	.53	.65	120.4	35.3	11.64	.40	.54	.67
	4000	1890	139.6	40.9	8.67	.41	.55	.69	134.6	39.4	9.54	.41	.56	.70	129.1	37.8	10.57	.42	.57	.72	123.5	36.2	11.72	.42	.58	.74
	4800	2265	142.0	41.6	8.71	.42	.58	.75	137.0	40.2	9.60	.42	.59	.77	131.3	38.5	10.62	.43	.61	.79	125.5	36.8	11.77	.44	.62	.81

10 TON HIGH EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA120H

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	3200	1510	64.1	18.8	2.90	.64	.79	.94	62.3	18.3	3.25	.65	.80	.96	60.3	17.7	3.66	.66	.82	.97	58.1	17.0	4.12	.67	.84	.99
	4000	1890	66.7	19.5	2.92	.69	.87	1.00	64.7	19.0	3.27	.70	.89	1.00	62.6	18.3	3.68	.72	.91	1.00	60.3	17.7	4.15	.73	.93	1.00
	4800	2265	68.7	20.1	2.94	.75	.95	1.00	66.7	19.5	3.29	.77	.97	1.00	64.6	18.9	3.70	.78	.98	1.00	62.3	18.3	4.17	.80	1.00	1.00
67°F (19°C)	3200	1510	68.1	20.0	2.93	.50	.62	.75	66.1	19.4	3.28	.51	.62	.76	63.8	18.7	3.70	.51	.63	.78	61.5	18.0	4.16	.52	.64	.80
	4000	1890	70.3	20.6	2.95	.53	.66	.83	68.2	20.0	3.31	.54	.67	.85	65.9	19.3	3.71	.54	.69	.87	63.4	18.6	4.19	.55	.71	.90
	4800	2265	71.9	21.1	2.97	.56	.73	.92	69.7	20.4	3.32	.57	.74	.94	67.3	19.7	3.73	.57	.76	.96	64.8	19.0	4.20	.58	.78	.98
71°F (22°C)	3200	1510	72.5	21.2	2.97	.38	.49	.59	70.3	20.6	3.32	.38	.49	.60	68.0	19.9	3.74	.38	.50	.61	65.5	19.2	4.21	.39	.50	.62
	4000	1890	74.7	21.9	2.99	.39	.52	.64	72.4	21.2	3.35	.39	.52	.65	69.9	20.5	3.76	.40	.53	.67	67.3	19.7	4.23	.40	.54	.68
	4800	2265	76.1	22.3	3.01	.40	.55	.70	73.8	21.6	3.36	.40	.56	.71	71.2	20.9	3.78	.41	.57	.73	68.5	20.1	4.25	.41	.58	.75

10 TON HIGH EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA120H

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		
	cfm	L/s	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)	3200	1510	120.5	35.3	7.39	.67	.82	.97	116.1	34.0	8.34	.68	.84	.98	111.6	32.7	9.42	.69	.86	1.00	106.8	31.3	10.66	.70	.88	1.00
	4000	1890	125.1	36.7	7.44	.72	.91	1.00	120.6	35.3	8.39	.74	.93	1.00	115.9	34.0	9.48	.76	.95	1.00	111.0	32.5	10.72	.78	.97	1.00
	4800	2265	129.0	37.8	7.48	.79	.98	1.00	124.5	36.5	8.43	.81	.99	1.00	120.0	35.2	9.53	.83	1.00	1.00	115.3	33.8	10.78	.85	1.00	1.00
67°F (19°C)	3200	1510	127.6	37.4	7.47	.52	.65	.78	123.0	36.0	8.42	.53	.66	.80	118.2	34.6	9.51	.54	.67	.82	113.0	33.1	10.74	.54	.68	.84
	4000	1890	131.7	38.6	7.51	.55	.70	.87	126.8	37.2	8.47	.56	.71	.89	121.7	35.7	9.56	.57	.73	.92	116.3	34.1	10.80	.58	.75	.94
	4800	2265	134.6	39.4	7.54	.59	.76	.95	129.6	38.0	8.50	.60	.78	.97	124.2	36.4	9.60	.61	.80	.99	118.7	34.8	10.85	.62	.83	1.00
71°F (22°C)	3200	1510	135.9	39.8	7.56	.39	.51	.62	131.0	38.4	8.51	.40	.52	.63	125.8	36.9	9.61	.40	.52	.65	120.3	35.3	10.84	.40	.53	.66
	4000	1890	139.7	40.9	7.60	.41	.54	.68	134.6	39.4	8.56	.41	.55	.69	129.1	37.8	9.66	.41	.56	.71	123.3	36.1	10.91	.42	.57	.73
	4800	2265	142.4	41.7	7.64	.42	.58	.74	137.0	40.2	8.59	.42	.59	.76	131.3	38.5	9.70	.43	.60	.78	125.4	36.8	10.93	.43	.61	.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.

12.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ONE COMPRESSOR OPERATING — TGA150S

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°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		
	cfm	L/s	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)	3800	1795	71.7	21.0	3.91	.60	.76	.92	69.5	20.4	4.40	.61	.77	.94	67.3	19.7	4.93	.61	.79	.95	65.0	19.0	5.51	.63	.81	.97
	4400	2075	73.5	21.5	3.93	.63	.81	.98	71.2	20.9	4.44	.64	.83	.99	68.9	20.2	4.97	.66	.85	1.00	66.6	19.5	5.55	.67	.87	1.00
	5000	2360	75.1	22.0	3.96	.67	.87	1.00	72.8	21.3	4.46	.68	.89	1.00	70.4	20.6	4.99	.70	.91	1.00	68.0	19.9	5.58	.71	.93	1.00
67°F (19°C)	3800	1795	76.1	22.3	3.97	.47	.58	.71	73.7	21.6	4.47	.48	.58	.73	71.3	20.9	5.01	.48	.59	.74	68.8	20.2	5.59	.49	.60	.76
	4400	2075	77.8	22.8	3.99	.49	.60	.77	75.3	22.1	4.50	.49	.61	.79	72.8	21.3	5.04	.50	.63	.81	70.2	20.6	5.63	.50	.64	.83
	5000	2360	79.1	23.2	4.01	.50	.64	.82	76.6	22.4	4.52	.51	.65	.84	74.0	21.7	5.06	.51	.67	.87	71.3	20.9	5.66	.52	.69	.89
71°F (22°C)	3800	1795	81.0	23.7	4.04	.36	.46	.56	78.5	23.0	4.56	.36	.46	.56	75.9	22.2	5.10	.36	.47	.57	73.2	21.5	5.69	.36	.47	.58
	4400	2075	82.7	24.2	4.06	.36	.47	.58	80.0	23.4	4.58	.37	.48	.59	77.3	22.7	5.13	.37	.48	.60	74.5	21.8	5.73	.37	.49	.61
	5000	2360	84.0	24.6	4.08	.37	.49	.61	81.2	23.8	4.60	.37	.50	.63	78.5	23.0	5.15	.37	.50	.64	75.6	22.2	5.76	.38	.51	.66

12.5 TON STANDARD EFFICIENCY - COOLING CAPACITY - ALL COMPRESSORS OPERATING — TGA150S

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		
	cfm	L/s	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)	3800	1795	139.4	40.9	9.95	.66	.81	.95	134.8	39.5	11.12	.67	.83	.97	129.7	38.0	12.43	.68	.85	.99	124.3	36.4	13.92	.70	.87	1.00
	4400	2075	142.8	41.9	10.02	.70	.87	.99	138.1	40.5	11.20	.71	.88	1.00	132.9	38.9	12.51	.72	.90	1.00	127.5	37.4	13.99	.74	.93	1.00
	5000	2360	145.9	42.8	10.08	.73	.91	1.00	141.0	41.3	11.26	.75	.93	1.00	135.9	39.8	12.58	.77	.95	1.00	130.2	38.2	14.07	.79	.97	1.00
67°F (19°C)	3800	1795	147.8	43.3	10.11	.52	.64	.77	142.7	41.8	11.29	.53	.65	.79	137.3	40.2	12.62	.53	.66	.81	131.5	38.5	14.12	.54	.67	.83
	4400	2075	150.9	44.2	10.17	.54	.67	.83	145.7	42.7	11.36	.55	.68	.85	140.0	41.0	12.69	.55	.70	.87	134.0	39.3	14.20	.56	.72	.89
	5000	2360	153.4	45.0	10.22	.56	.71	.88	148.0	43.4	11.42	.56	.72	.90	142.3	41.7	12.75	.57	.74	.92	136.2	39.9	14.24	.58	.76	.94
71°F (22°C)	3800	1795	157.3	46.1	10.29	.39	.51	.62	151.9	44.5	11.49	.40	.51	.63	146.1	42.8	12.84	.40	.52	.64	139.9	41.0	14.35	.40	.53	.65
	4400	2075	160.3	47.0	10.36	.40	.53	.65	154.6	45.3	11.56	.40	.53	.66	148.7	43.6	12.90	.40	.54	.67	142.3	41.7	14.42	.41	.55	.69
	5000	2360	162.7	47.7	10.40	.41	.55	.68	156.9	46.0	11.62	.41	.55	.70	150.7	44.2	12.96	.41	.56	.72	144.2	42.3	14.47	.42	.57	.74

OUTDOOR SOUND DATA

Unit Model No.	Octave Band Sound Power Levels dBA, re 10^{-12} Watts Center Frequency - HZ							[1]Sound Rating Number (dB)
	125	250	500	1000	2000	4000	8000	
090, 102, and 120S	76	79	84	83	79	73	66	88
120H and 150	77	80	85	84	79	74	66	88

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

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

BLOWER DATA

BELT DRIVE BLOWER - BASE UNIT

BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY (NO HEAT SECTION) WITH DRY INDOOR COIL AND AIR FILTERS IN PLACE. FOR ALL UNITS ADD:

1 - Wet indoor coil air resistance of selected unit.
2 - Any factory installed options air resistance (heat section, economizer, etc.)
3 - Any field installed accessories air resistance (duct resistance, diffuser, etc.)

Then determine from blower table blower motor output and drive required.
See below for blower motors and drives. See page 17 for wet coil and option/accessory air resistance data.

BOLD INDICATES FIELD FURNISHED DRIVE.

Air Volume cfm (L/s)	Total Static Pressure - in. w.g. (Pa)											
	.20 (50)	.40 (100)	.60 (150)	.80 (200)	1.00 (250)	1.20 (300)	1.40 (350)	1.60 (400)	1.80 (450)	2.00 (495)	2.20 (545)	2.40 (595)	2.60 (645)
	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)	RPM BHP (kW)
2250 (1060)	**455 0.30 (0.22)**	**555 0.45 (0.34)**	**640 0.60 (0.45)**	720 0.80 (0.60)	790 1.00 (0.75)	855 1.20 (0.90)	915 1.40 (1.04)	975 1.60 (1.19)	1030 1.85 (1.38)	1080 2.05 (1.53)	1130 2.30 (1.72)	1175 2.55 (1.90)	1220 2.80 (2.09)
2500 (1180)	**475 0.40 (0.30)**	**575 0.55 (0.41)**	**660 0.70 (0.52)**	735 0.90 (0.67)	805 1.10 (0.82)	870 1.30 (0.97)	930 1.55 (1.16)	985 1.75 (1.31)	1040 2.00 (1.49)	1090 2.25 (1.68)	1140 2.50 (1.87)	1185 2.75 (2.05)	1230 3.00 (2.24)
2750 (1300)	**495 0.45 (0.34)**	**595 0.65 (0.48)**	**675 0.85 (0.63)**	750 1.05 (0.78)	820 1.25 (0.93)	885 1.45 (1.08)	940 1.70 (1.27)	995 1.90 (1.42)	1050 2.20 (1.64)	1100 2.45 (1.83)	1145 2.65 (1.98)	1195 2.95 (2.20)	1240 3.25 (2.42)
3000 (1415)	**525 0.55 (0.41)**	**615 0.75 (0.56)**	695 0.95 (0.71)	770 1.20 (0.90)	835 1.40 (1.04)	895 1.60 (1.19)	955 1.85 (1.38)	1010 2.10 (1.57)	1060 2.35 (1.75)	1110 2.65 (1.98)	1160 2.90 (2.16)	1205 3.20 (2.39)	1250 3.45 (2.57)
3250 (1535)	**550 0.65 (0.48)**	**640 0.90 (0.67)**	715 1.10 (0.82)	790 1.35 (1.01)	855 1.60 (1.19)	915 1.80 (1.34)	970 2.05 (1.53)	1025 2.35 (1.75)	1075 2.60 (1.94)	1125 2.85 (2.13)	1170 3.15 (2.35)	1215 3.40 (2.54)	1260 3.70 (2.76)
3500 (1650)	**580 0.80 (0.60)**	**665 1.05 (0.78)**	740 1.25 (0.93)	810 1.50 (1.12)	870 1.75 (1.31)	930 2.00 (1.49)	985 2.25 (1.68)	1040 2.55 (1.90)	1090 2.85 (2.13)	1135 3.10 (2.31)	1185 3.40 (2.54)	1230 3.70 (2.76)	1270 4.00 (2.98)
3750 (1770)	**605 0.95 (0.71)**	690 1.20 (0.90)	760 1.45 (1.08)	830 1.70 (1.27)	890 1.95 (1.45)	950 2.25 (1.68)	1005 2.50 (1.87)	1055 2.80 (2.09)	1105 3.10 (2.31)	1150 3.35 (2.50)	1195 3.65 (2.72)	1240 3.95 (2.95)	1285 4.30 (3.21)
4000 (1890)	**635 1.10 (0.82)**	715 1.40 (1.04)	785 1.65 (1.23)	850 1.90 (1.42)	910 2.20 (1.64)	965 2.45 (1.83)	1020 2.75 (2.05)	1070 3.05 (2.28)	1120 3.35 (2.50)	1165 3.65 (2.72)	1210 3.95 (2.95)	1255 4.30 (3.21)	1295 4.60 (3.43)
4250 (2005)	**665 1.30 (0.97)**	740 1.60 (1.19)	810 1.85 (1.38)	870 2.15 (1.60)	930 2.45 (1.83)	985 2.75 (2.05)	1040 3.05 (2.28)	1090 3.35 (2.50)	1135 3.65 (2.72)	1185 4.00 (2.98)	1225 4.30 (3.21)	1270 4.65 (3.47)	1310 4.95 (3.69)
4500 (2125)	695 1.50 (1.12)	770 1.80 (1.34)	835 2.10 (1.57)	895 2.40 (1.79)	955 2.70 (2.01)	1005 3.00 (2.24)	1060 3.35 (2.50)	1105 3.65 (2.72)	1155 4.00 (2.98)	1200 4.30 (3.21)	1245 4.65 (3.47)	1285 5.00 (3.73)	1325 5.30 (3.95)
4750 (2240)	725 1.75 (1.31)	795 2.05 (1.53)	860 2.40 (1.79)	920 2.70 (2.01)	975 3.00 (2.24)	1030 3.35 (2.50)	1080 3.65 (2.72)	1125 3.95 (2.95)	1175 4.35 (3.25)	1215 4.65 (3.47)	1260 5.00 (3.73)	1300 5.35 (3.99)	1340 5.70 (4.25)
5000 (2360)	760 2.05 (1.53)	825 2.35 (1.75)	885 2.65 (1.98)	945 3.00 (2.24)	1000 3.35 (2.50)	1050 3.65 (2.72)	1100 4.00 (2.98)	1145 4.35 (3.25)	1190 4.70 (3.51)	1235 5.05 (3.77)	1280 5.45 (4.07)	- - -	- - -
5250 (2475)	790 2.30 (1.72)	855 2.65 (1.98)	910 2.95 (2.20)	970 3.35 (2.50)	1020 3.65 (2.72)	1070 4.00 (2.98)	1120 4.35 (3.25)	1165 4.70 (3.51)	1210 5.10 (3.80)	1255 5.45 (4.07)	- - -	- - -	- - -
5500 (2595)	820 2.60 (1.94)	880 2.95 (2.20)	940 3.30 (2.46)	995 3.70 (2.76)	1045 4.05 (3.02)	1095 4.40 (3.28)	1145 4.80 (3.58)	1190 5.15 (3.84)	1230 5.50 (4.10)	- - -	- - -	- - -	- - -
5750 (2715)	850 2.95 (2.20)	910 3.30 (2.46)	965 3.70 (2.76)	1020 4.05 (3.02)	1070 4.45 (3.32)	1120 4.80 (3.58)	1165 5.20 (3.88)	1210 5.60 (4.18)	- - -	- - -	- - -	- - -	- - -
6000 (2830)	885 3.35 (2.50)	940 3.70 (2.76)	995 4.10 (3.06)	1045 4.45 (3.32)	1095 4.85 (3.62)	1145 5.25 (3.92)	1190 5.65 (4.21)	- - -	- - -	- - -	- - -	- - -	- - -

FACTORY INSTALLED DRIVE KIT SPECIFICATIONS

Motor Horsepower		RPM Range				
Nominal	Maximum	Drive 1	Drive 3	Drive 4	Drive 5	Drive 6
2	2.3	680 - 925	895 - 1120	- - -	- - -	- - -
3	3.45	680 - 925	895 - 1120	- - -	1110 - 1395	- - -
5	5.75	- - -	- - -	895 - 1120	- - -	1110 - 1395

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

BLOWER DATA

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

Air Volume cfm	Wet Indoor Coil		Gas Heat Exchanger			Economizer
	090, 102	120S, 120H,150S	Standard Heat	Medium Heat	High Heat	
2250	0.06	0.10	0.05	0.07	0.09	0.035
2500	0.08	0.12	0.05	0.09	0.11	0.04
2750	0.09	0.14	0.06	0.10	0.13	0.045
3000	0.10	0.16	0.07	0.12	0.16	0.05
3250	0.11	0.19	0.08	0.15	0.19	0.06
3500	0.13	0.21	0.09	0.17	0.22	0.07
3750	0.14	0.23	0.10	0.20	0.26	0.075
4000	0.16	0.26	0.11	0.22	0.30	0.08
4250	0.17	0.28	0.12	0.25	0.34	0.09
4500	0.18	0.31	0.13	0.28	0.38	0.10
4750	0.20	0.33	0.14	0.31	0.42	0.11
5000	0.22	0.36	0.16	0.35	0.47	0.12
5250	0.24	0.39	0.18	0.38	0.52	0.13
5500	0.26	0.42	0.20	0.42	0.57	0.14
5750	0.28	0.45	0.22	0.46	0.62	0.15
6000	0.30	0.48	0.24	0.50	0.68	0.16

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

Unit Size	Air Volume cfm	RTD11 Step-Down Diffuser			FD11 Flush Diffuser
		2 Ends Open	1 Side, 2 Ends Open	All Ends & Sides Open	
090 Models	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
	3200	0.41	0.37	0.32	0.31
	3400	0.50	0.45	0.39	0.37
	3600	0.61	0.54	0.48	0.44
	3800	0.73	0.63	0.57	0.51
102 & 120 Models	3600	0.36	0.28	0.23	0.15
	3800	0.40	0.32	0.26	0.18
	4000	0.44	0.36	0.29	0.21
	4200	0.49	0.40	0.33	0.24
	4400	0.54	0.44	0.37	0.27
	4600	0.60	0.49	0.42	0.31
	4800	0.65	0.53	0.46	0.35
	5000	0.69	0.58	0.50	0.39
	5200	0.75	0.62	0.54	0.43
150 Models	4200	0.22	0.19	0.16	0.10
	4400	0.28	0.24	0.20	0.12
	4600	0.34	0.29	0.24	0.15
	4800	0.40	0.34	0.29	0.19
	5000	0.46	0.39	0.34	0.23
	5200	0.52	0.44	0.39	0.27
	5400	0.58	0.49	0.43	0.31
	5600	0.64	0.54	0.47	0.35
	5800	0.70	0.59	0.51	0.39

BLOWER DATA

CEILING DIFFUSER AIR THROW DATA

Model No.	Air Volume cfm	[1]Effective Throw Range - ft. RTD11 Step-Down	FD11 Flush
090	2600	24 - 29	19 - 24
	2800	25 - 30	20 - 28
	3000	27 - 33	21 - 29
	3200	28 - 35	22 - 29
	3400	30 - 37	22 - 30
102 120	3600	25 - 33	22 - 29
	3800	27 - 35	22 - 30
	4000	29 - 37	24 - 33
	4200	32 - 40	26 - 35
	4400	34 - 42	28 - 37
150	5600	39 - 49	28 - 37
	5800	42 - 51	29 - 38
	6000	44 - 54	40 - 50
	6200	45 - 55	42 - 51
	6400	46 - 55	43 - 52
	6600	47 - 56	45 - 56

[1] Throw is the horizontal or vertical distance an air stream travels on leaving the outlet or diffuser before the maximum velocity is reduced to 50 ft. (15 m) per minute. Four sides open.

POWER EXHAUST FANS PERFORMANCE

Return Air System Static Pressure - in. w.g.	Air Volume Exhausted - cfm
0	4200
0.05	3970
0.10	3750
0.15	3520
0.20	3300
0.25	3080
0.30	2860
0.35	2640

ELECTRICAL DATA

7.5 TON STANDARD / HIGH EFFICIENCY (R-22) TGA090

Model No.		TGA090S						TGA090H					
Line voltage data - 60 Hz - 3 phase		208/230V		460V		575V		208/230V		460V		575V	
Compressors (2)	Rated load amps - each (total)	12.8 (25.6)		6.4 (12.8)		5.1 (10.2)		12.4 (24.9)		6.4 (12.8)		4.8 (9.6)	
	Locked rotor amps - each (total)	91 (182)		46 (92)		37 (74)		88 (176)		44 (88)		34 (68)	
Condenser Fan Motor	Number of motors	2		2		2		2		2		2	
	Full load amps - each (total)	2.4 (4.8)		1.3 (2.6)		1.0 (2.0)		2.4 (4.8)		1.3 (2.6)		1.0 (2.0)	
	Locked rotor amps - each (total)	4.7 (9.4)		2.4 (4.8)		1.9 (3.8)		4.7 (9.4)		2.4 (4.8)		1.9 (3.8)	
Evaporator Blower Motor	Horsepower	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**
	Full load amps	7.5	10.6	3.4	4.8	2.7	3.9	7.5	10.6	3.4	4.8	2.7	3.9
	Locked rotor amps	46.9	66	20.4	26.8	16.2	23.4	46.9	66	20.4	26.8	16.2	23.4
[1] Maximum Overcurrent Protection (amps)	Unit Only	50	50	25	25	20	20	50	50	25	25	20	20
	With Exhaust Fan	50	50	25	25	20	20	50	50	25	25	20	20
[2] Minimum Circuit Ampacity	Unit Only	42	45	21	22	17	18	41	44	21	22	16	17
	With Exhaust Fan	44	47	22	24	18	19	43	46	22	24	17	18
Optional Power Exhaust Fan	(Number) Horsepower	(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3	
	Full load amps	2.4		1.3		1.0		2.4		1.3		1.0	
	Locked rotor amps	4.7		2.4		1.9		4.7		2.4		1.9	
Service Outlet (2) 115 volt GFCI (amp rating)		15		15		15		15		15		15	

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 DATA

8.5 TON STANDARD / HIGH EFFICIENCY (R-22) — TGA102

Model No.		TGA102S						TGA102H					
Line voltage data - 60 Hz - 3 phase		208/230V		460V		575V		208/230V		460V		575V	
Compressors (2)	Rated load amps - each (total)	14.7 (29.4)		7.1 (14.2)		5.8 (11.6)		14.7 (29.4)		7.1 (14.2)		5.1 (10.2)	
	Locked rotor amps - each (total)	91 (182)		50 (100)		37 (74)		91 (182)		46 (92)		37 (74)	
Condenser Fan Motors (2)	Full load amps - each (total)	2.4 (4.8)		1.3 (2.6)		1.0 (2.0)		2.4 (4.8)		1.3 (2.6)		1.0 (2.0)	
	Locked rotor amps - each (total)	4.7 (9.4)		2.4 (4.8)		1.9 (3.8)		4.7 (9.4)		2.4 (4.8)		1.9 (3.8)	
Evaporator Blower Motor	Horsepower	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**	**2**	**3**
	Full load amps	7.5	10.6	3.4	4.8	2.7	3.9	7.5	10.6	3.4	4.8	2.7	3.9
	Locked rotor amps	46.9	66	20.4	26.8	16.2	23.4	46.9	66	20.4	26.8	16.2	23.4
[1] Maximum Overcurrent Protection (amps)	Unit Only	60	60	25	30	20	20	60	60	25	30	20	20
	With Exhaust Fan	60	60	30	30	20	25	60	60	30	30	20	20
[2] Minimum Circuit Ampacity	Unit Only	46	49	22	24	18	19	46	49	22	24	17	18
	With Exhaust Fan	48	51	24	25	19	20	48	51	24	25	18	19
Optional Power Exhaust Fan	(Number) Horsepower	(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3		(1) 1/3	
	Full load amps	2.4		1.3		1.0		2.4		1.3		1.0	
	Locked rotor amps	4.7		2.4		1.9		4.7		2.4		1.9	
Service Outlet (2) 115 volt GFCI (amp rating)		15		15		15		15		15		15	

10 TON STANDARD EFFICIENCY — TGA120

Model No.		TGA120S								
Line voltage data - 60 Hz - 3 phase		208/230V			460V			575V		
Compressors (2)	Rated load amps - each (total)	15.4 (30.8)			7.4 (14.8)			5.9 (11.8)		
	Locked rotor amps - each (total)	124 (248)			59.6 (119.2)			49.4 (98.8)		
Condenser Fan Motors (2)	Full load amps - each (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2.0)		
	Locked rotor amps - each (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)		
Evaporator Blower Motor	Horsepower	**2**	**3**	**5**	**2**	**3**	**5**	**2**	**3**	**5**
	Full load amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1
	Locked rotor amps	46.9	66	105	20.4	26.8	45.6	16.2	23.4	36.6
[1] Maximum Overcurrent Protection (amps)	Unit Only	60	60	70	30	30	30	20	25	25
	With Exhaust Fan	60	60	70	30	30	35	20	25	25
[2] Minimum Circuit Ampacity	Unit Only	47	51	57	23	25	27	18	20	22
	With Exhaust Fan	50	53	59	24	26	29	19	21	23
Optional Power Exhaust Fan	(Number) Horsepower	(1) 1/3			(1) 1/3			(1) 1/3		
	Full load amps	2.4			1.3			1.0		
	Locked rotor amps	4.7			2.4			1.9		
Service Outlet (2) 115 volt GFCI (amp rating)		15			15			15		

10 TON HIGH EFFICIENCY — TGA120

Model No.		TGA120H								
Line voltage data - 60 Hz - 3 phase		208/230V			460V			575V		
Compressors (2)	Rated load amps - each (total)	17.3 (34.6)			9.0 (18.0)			7.1 (14.2)		
	Locked rotor amps - each (total)	123 (246)			62 (124)			50 (100)		
Condenser Fan Motors (2)	Full load amps - each (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2.0)		
	Locked rotor amps - each (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)		
Evaporator Blower Motor	Horsepower	**2**	**3**	**5**	**2**	**3**	**5**	**2**	**3**	**5**
	Full load amps	7.5	10.6	16.7	3.4	4.8	7.6	2.7	3.9	6.1
	Locked rotor amps	46.9	66	105	20.4	26.8	45.6	16.2	23.4	36.6
[1] Maximum Overcurrent Protection (amps)	Unit Only	60	70	70	35	35	35	25	25	30
	With Exhaust Fan	70	70	80	35	35	40	25	30	30
[2] Minimum Circuit Ampacity	Unit Only	52	55	61	27	28	31	21	22	25
	With Exhaust Fan	54	57	63	28	29	32	22	23	26
Optional Power Exhaust Fan	(Number) Horsepower	(1) 1/3			(1) 1/3			(1) 1/3		
	Full load amps	2.4			1.3			1.0		
	Locked rotor amps	4.7			2.4			1.9		
Service Outlet (2) 115 volt GFCI (amp rating)		15			15			15		

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.

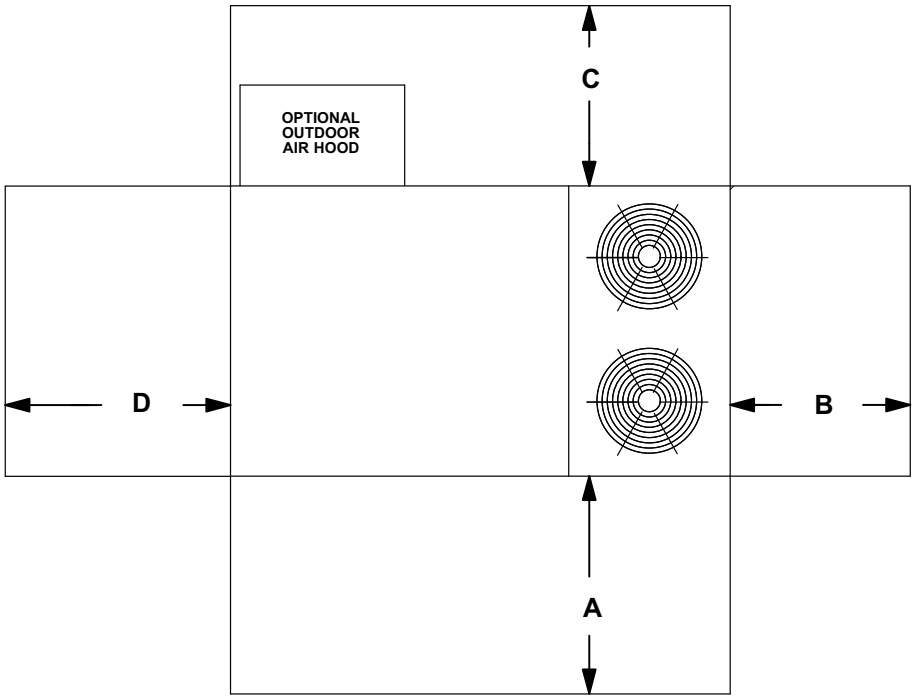
ELECTRICAL DATA

12.5 TON STANDARD EFFICIENCY — TGA150

Model No.		TGA150S					
Line voltage data - 60 Hz - 3 phase		208/230V		460V		575V	
Compressors (2)	Rated load amps - each (total)	18.6 (37.2)		9 (18)		7.4 (14.8)	
	Locked rotor amps - each (total)	156 (312)		75 (150)		54 (108)	
Condenser Fan Motors (2)	Full load amps - each (total)	3.0 (6.0)		1.5 (3.0)		1.2 (2.4)	
	Locked rotor amps - each (total)	6.0 (12.0)		3.0 (6.0)		2.9 (5.8)	
Evaporator Blower Motor	Horsepower	**3**	**5**	**3**	**5**	**3**	**5**
	Full load amps	10.6	16.7	4.8	7.6	3.9	6.1
	Locked rotor amps	66	105	26.8	45.6	23.4	36.6
[1] Maximum Overcurrent Protection (amps)	Unit Only	70	80	35	35	30	30
	With Exhaust Fan	70	80	35	40	30	30
[2] Minimum Circuit Ampacity	Unit Only	59	65	29	31	23	26
	With Exhaust Fan	61	67	30	33	24	27
Optional Power Exhaust Fan	(Number) Horsepower	(1) 1/3		(1) 1/3		(1) 1/3	
	Full load amps	2.4		1.3		1.0	
	Locked rotor amps	4.7		2.4		1.9	
Service Outlet (2) 115 volt GFCI (amp rating)		15		15		15	

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.

UNIT CLEARANCES - INCHES (MM)



[1] Unit Clearance	A		B		C		D		Top Clearance
	in.	mm	in.	mm	in.	mm	in.	mm	
Service Clearance	60	1524	36	914	36	914	36	914	**Unobstructed**
Clearance to Combustibles	36	914	1	25	1	25	1	25	
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.
Clearance to Combustibles - Required clearance to combustible material.
Minimum Operation Clearance - Required clearance for proper unit operation.

WEIGHT DATA

Model Number	Net				Shipping			
	Base		Max.		Base		Max.	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
090/102	1300	590	1525	692	1385	628	1610	730
120	1355	615	1580	717	1440	653	1665	755
150	1390	630	1615	733	1475	669	1700	771

Base Unit - The unit with NO OPTIONS.
Max. Unit - The unit with ALL OPTIONS installed (Economizer, etc.).

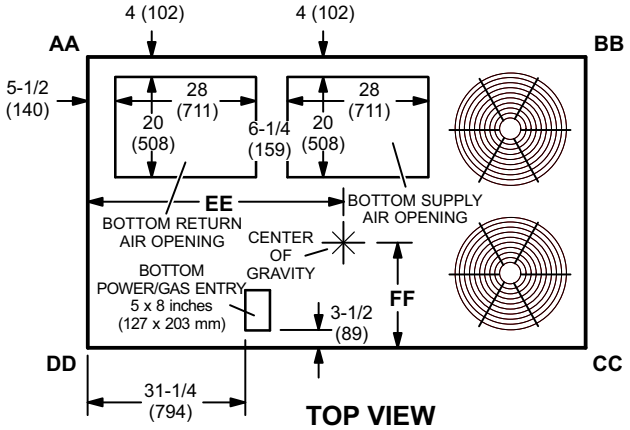
OPTIONS / ACCESSORIES

		Shipping Weights	
		lbs.	kg
ECONOMIZER / OUTDOOR AIR			
Economizer			
Economizer	TAREMD10/15	131	59
Outdoor Air Hood			
Outdoor Air Hood	LAOAH10/15	30	14
OUTDOOR AIR			
Outdoor Air Dampers			
Outdoor Air Damper Motorized Kit	TAOADM10/15	117	53
	LAOAD10/15	11	5
Power Exhaust			
Standard Static	LAPEF10/15	82	37
ROOF CURBS - STANDARD			
Down-Flow			
14 in. height	LARMF10/15-14	126	57
24 in. height	LARMF10/15-24	174	79
ROOF CURBS - CLIPLOCK 1000			
Down-Flow			
14 in. height	LARMF10/15S-14	115	52
18 in. height	LARMF10/15S-28	156	71
24 in. height	LARMF10/15S-24	189	86
CEILING DIFFUSERS			
Step-Down	RTD11-95	88	40
	RTD11-135	205	93
	RTD11-185	392	178
Flush	FD11-95	75	34
	FD11-135	174	79
	FD11-185	289	131
Transitions	LASRT08/10	30	14
	LASRT10/12	32	15
	LASRT15	36	16
PACKAGING			
LTL Packaging (less than truck load)		105	48

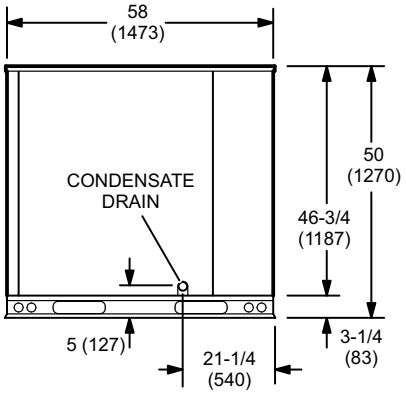
DIMENSIONS - INCHES (MM)

Model Number	WEIGHTS				CORNER WEIGHTS								CENTER OF GRAVITY			
	Net		Shipping		AA		BB		CC		DD		EE		FF	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg	inch	mm	inch	mm
090/102 Base Unit	1300	590	1385	628	314	142	289	131	329	149	368	167	47	1194	21-1/2	546
090/102 Max. Unit	1525	692	1610	730	381	173	339	154	374	170	431	195	46	1168	23-1/2	597
120 Base Unit	1355	615	1440	653	328	149	300	136	343	156	384	174	47	1194	21-1/2	546
120 Max. Unit	1580	717	1665	755	394	179	352	160	387	176	447	203	46	1168	23-1/2	597
150 Base Unit	1390	630	1475	669	336	152	312	152	353	160	389	176	47-1/2	1207	22	559
150 Max. Unit	1615	733	1700	771	403	183	364	165	398	181	450	204	46-1/2	1181	24	610

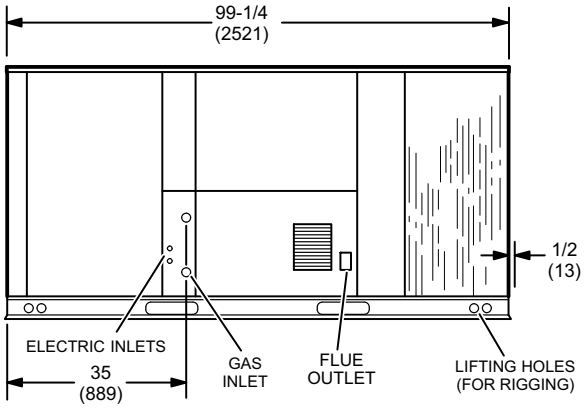
Base Unit - The unit with low fire heat exchanger NO OPTIONS.
Max. Unit - The unit with ALL OPTIONS Installed. (Economizer, High Input Heating and Controls)



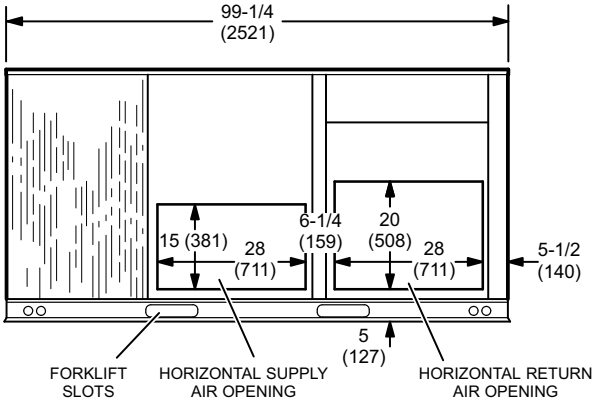
TOP VIEW
Base Section



END VIEW



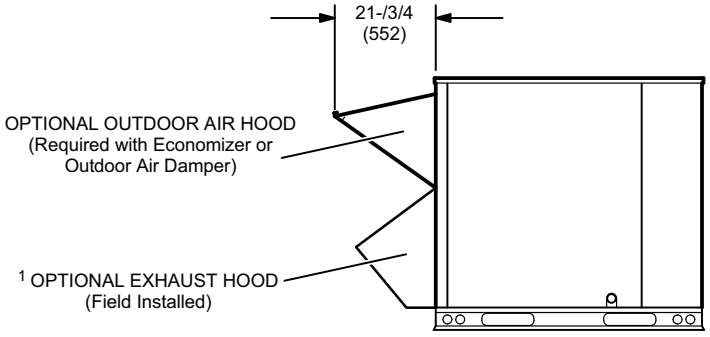
SIDE VIEW



SIDE VIEW
(Horizontal Openings)

ACCESSORY DIMENSIONS - INCHES (MM)

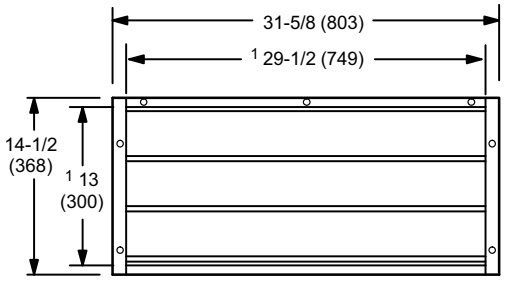
OPTIONAL OUTDOOR AIR HOOD DETAIL



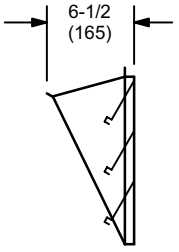
[1] NOTE — Field Installed in Return Air Duct for Horizontal Applications.

HORIZONTAL BAROMETRIC RELIEF DAMPERS

(Field installed in horizontal return air duct adjacent to unit)



FRONT VIEW

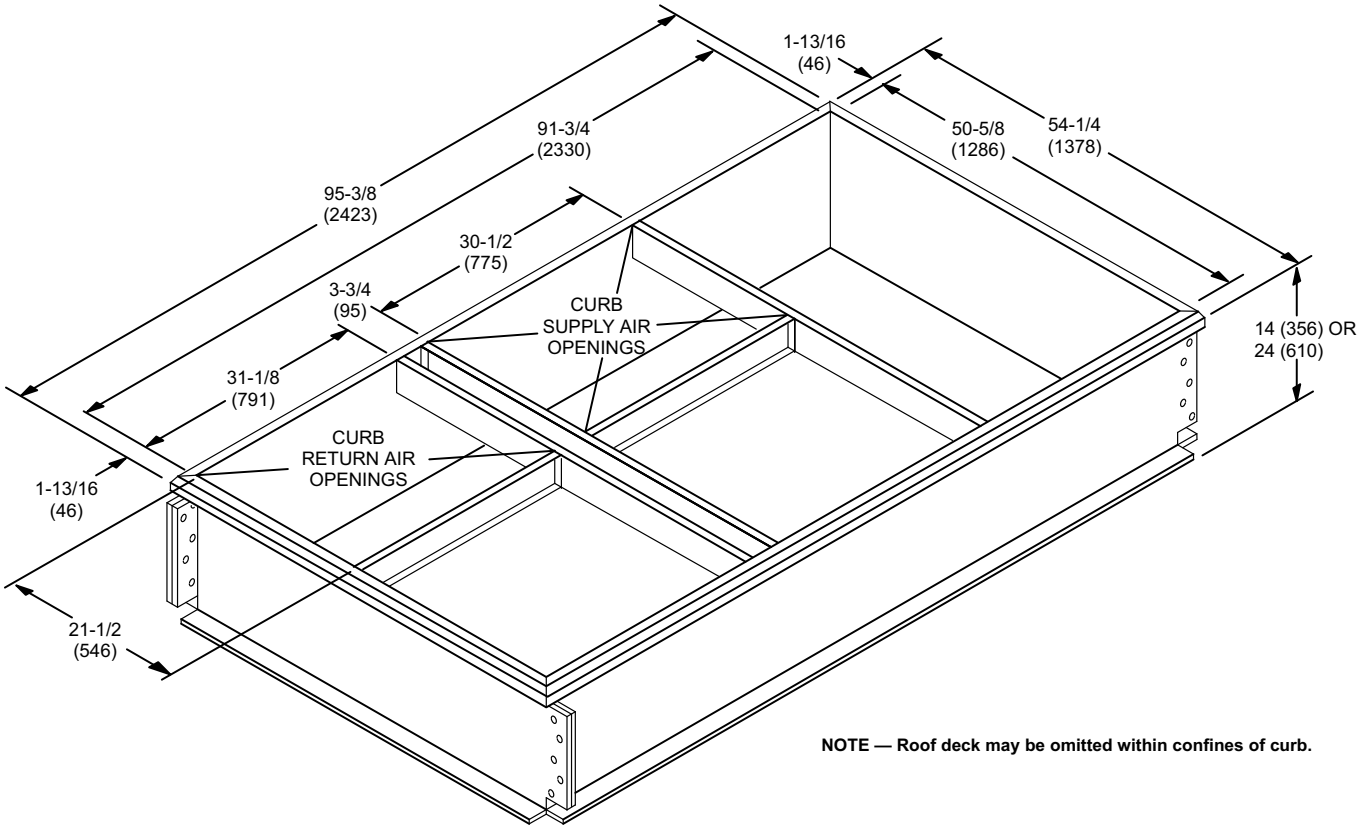


SIDE VIEW

[1] NOTE - Opening size required in return air duct.

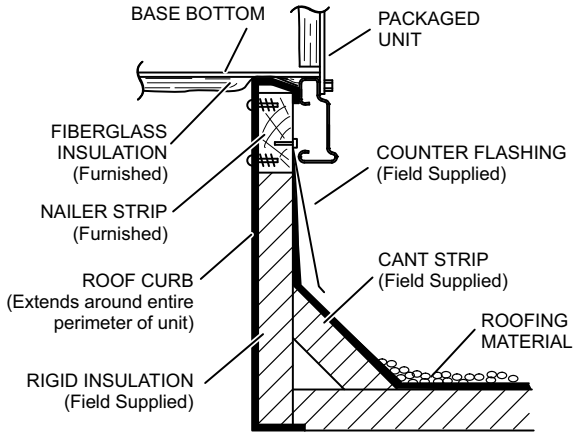
ACCESSORY DIMENSIONS - INCHES (MM)

STANDARD ROOF CURBS - DOUBLE DUCT OPENING

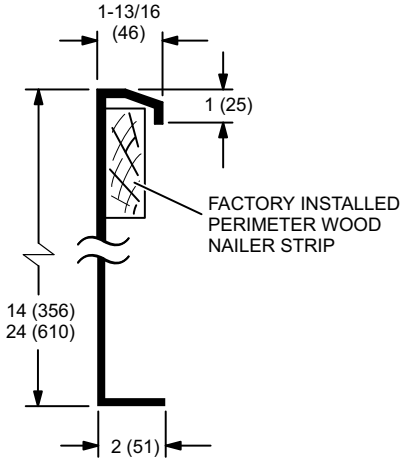


NOTE — Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB

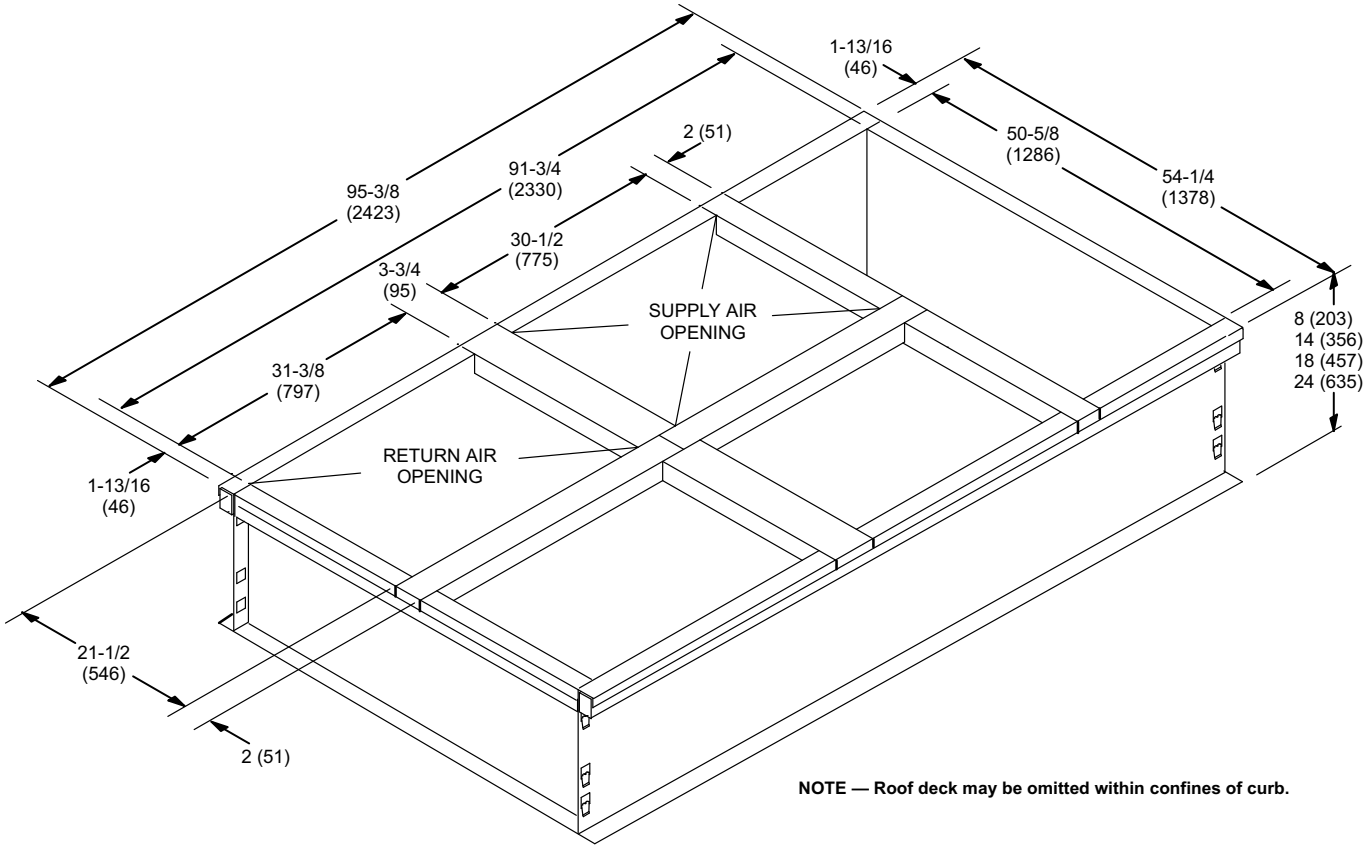


DETAIL ROOF CURB



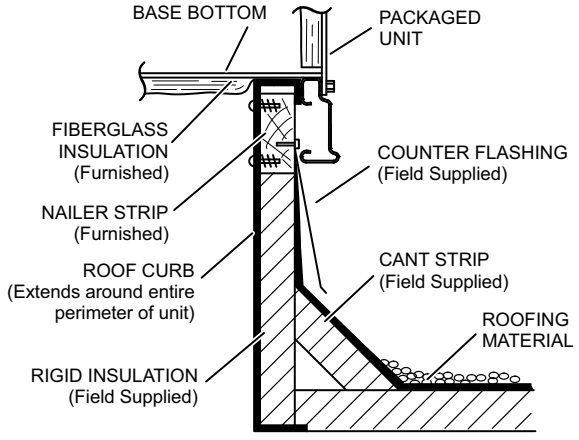
ACCESSORY DIMENSIONS - INCHES (MM)

CLIPLOCK 1000 ROOF CURBS - DOUBLE DUCT OPENING

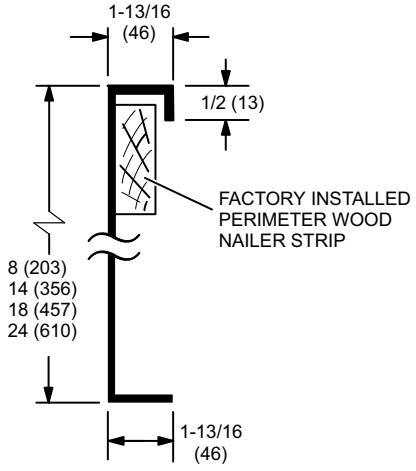


NOTE — Roof deck may be omitted within confines of curb.

TYPICAL FLASHING DETAIL FOR ROOF CURB

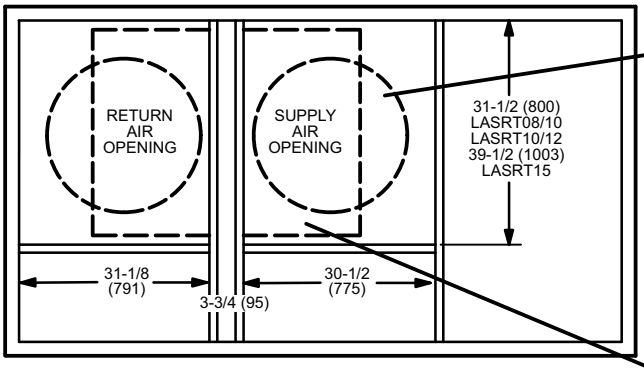


DETAIL ROOF CURB



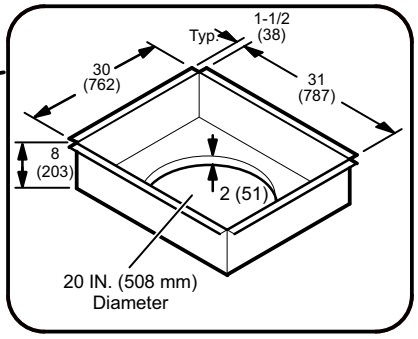
ACCESSORY DIMENSIONS - INCHES (MM)

ROOF CURBS WITH SUPPLY & RETURN AIR TRANSITIONS FOR CEILING DIFFUSERS

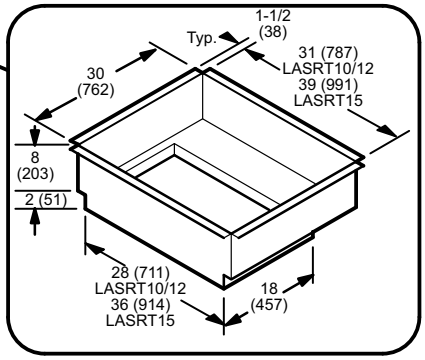


TOP VIEW

LASRT08/10 ROUND TRANSITIONS
(for 090 models with FD11-95, RTD11-95 Diffusers)



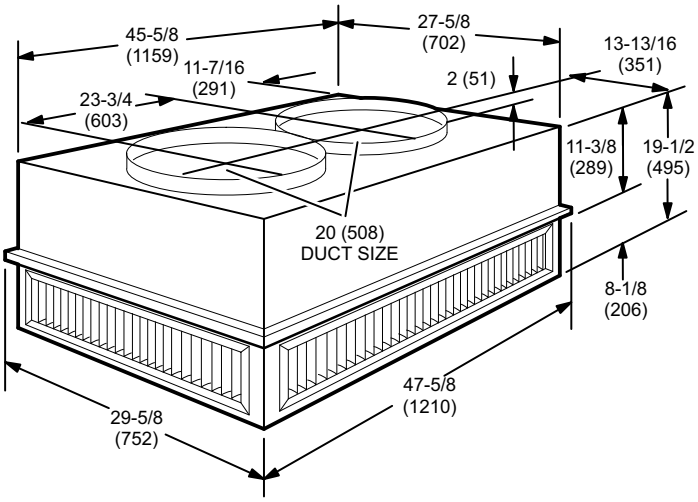
LASRT10/12 & LASRT15 RECTANGULAR TRANSITIONS
(for 102 thru 150 models with FD11-135-185, RTD11-135-185 Diffusers)



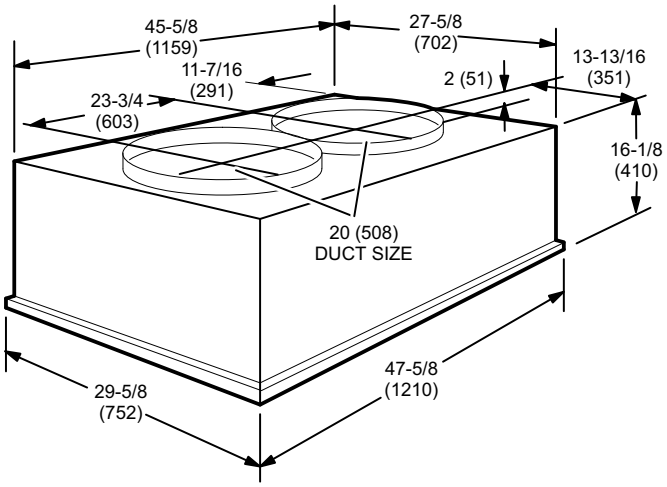
ACCESSORY DIMENSIONS - INCHES (MM)

COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

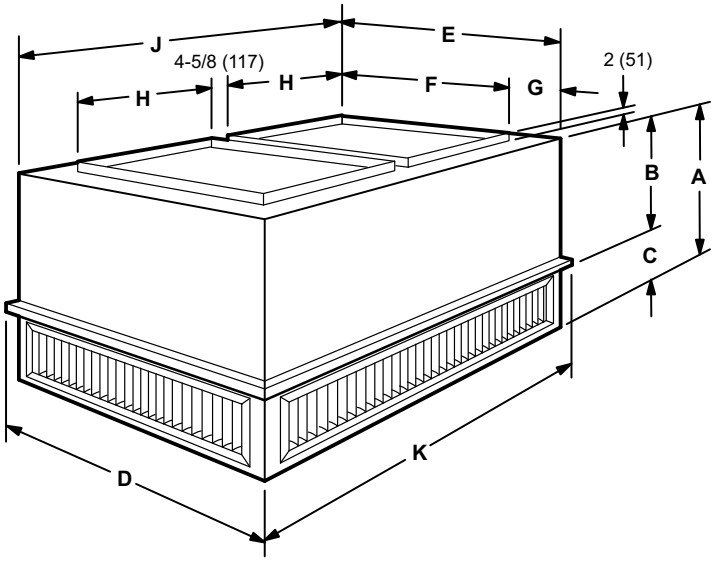
RTD11-95 STEP-DOWN CEILING DIFFUSER



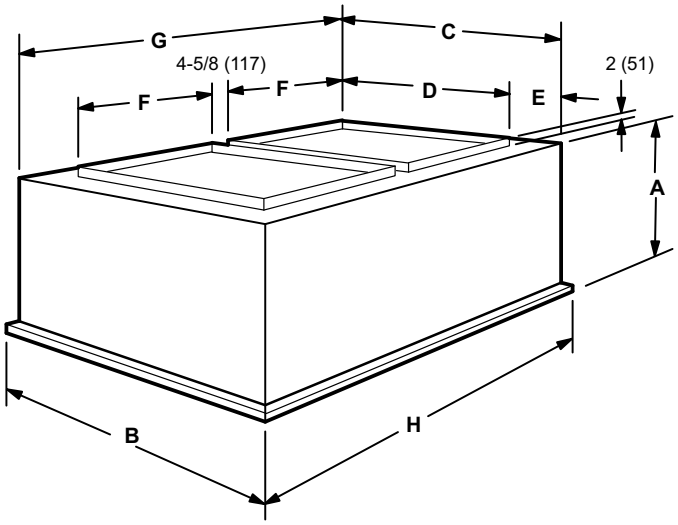
FD11-95 FLUSH CEILING DIFFUSER



RTD11-135 & RTD11-185
STEP-DOWN CEILING DIFFUSER



FD11-135 & FD11-185
FLUSH CEILING DIFFUSER



Model Number	A		B		C		D		E	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
RTD11-135	28	711	18-7/8	479	9-1/8	232	35-5/8	905	33-5/8	854
RTD11-185	34	864	23-7/8	606	10-1/8	257	47-5/8	1210	45-5/8	1159

Model Number	F		G		H		J		K	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
RTD11-135	28	711	2-13/16	71	18	457	45-5/8	1159	47-5/8	1210
RTD11-185	36	914	4-13/16	122	18	457	45-5/8	1159	47-5/8	1210

Model Number	A		B		C		D	
	inch	mm	inch	mm	inch	mm	inch	mm
FD11-135	24-1/8	613	35-5/8	905	33-5/8	854	28	711
FD11-185	30-1/8	613	47-5/8	1210	45-5/8	1159	36	914

Model Number	E		F		G		H	
	inch	mm	inch	mm	inch	mm	inch	mm
FD11-135	2-13/16	71	18	457	45-5/8	1159	47-5/8	1210
FD11-185	4-13/16	122	18	457	45-5/8	1159	47-5/8	1210

REVISIONS

Sections	Description of Change
Optional Accessories	Updated Information - Smoke Detectors.

ALLIED Commercial

NOTE - Due to our ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.