

102, 120 & 150 Models

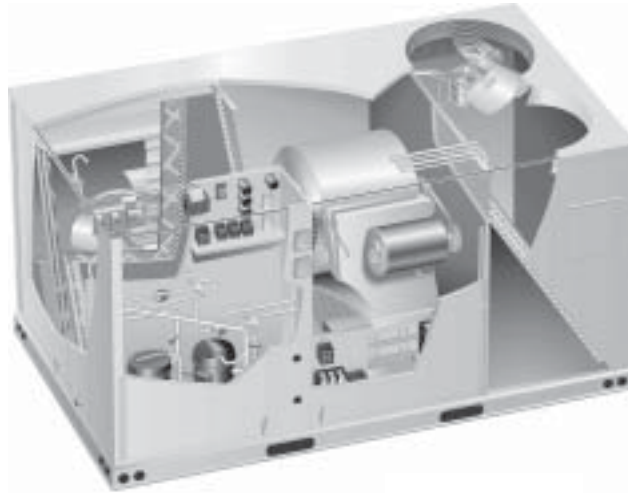
LCA/LGA 8.5, 10 & 12 Tons Cooling Capacity

LHA 10 Ton Cooling Capacity

130,000-235,000 Btuh Gas Input Heating Cap.

119,000 Btuh Heat Pump Heating Cap.

25,600-204,800 Btuh Opt. Electric Heat Cap.



FEATURES

- ◆ Down flow or horizontal supply and return air configuration
- ◆ E.T.L. and C.G.A. listed, efficiency rating verified by C.S.A., components bonded for grounding to meet safety standards for servicing required by U.L., C.S.A. and National and Canadian Electrical Codes
- ◆ ARI Standard 210/240-94 certified
- ◆ ARI Standard 340/360-93 certified (LCA/LGA150 models)
- ◆ Bottom power entry for electric and gas
- ◆ Heavy gauge galvanized steel cabinet, fully insulated, powdered enamel paint finish, large removable access panels, electrical inlets in cabinet base and electric heat end panel (LCA/LHA models), easy access control area with factory installed controls, low voltage terminal strip, unit lifting holes in full perimeter base rail
- ◆ Coil constructed of ripple-edged enhanced aluminum fins on copper tubing, flared shoulder tubing connections, silver soldered construction, factory tested, evaporator coil face split with separate circuits, indoor coil drain connection extends outside of unit cabinet
- ◆ Tubular constructed heat exchanger of aluminized steel, life cycle tested
- ◆ Heating System includes aluminized steel inshot burners, direct spark ignition, electronic flame sensor, redundant automatic dual gas valve with manual shut-off, induced draft blower, flame rollout switch
- ◆ Compressor crankcase heaters
- ◆ Copeland® Compliant Scroll® compressor for high efficiency, resiliently mounted
- ◆ Reciprocating compressor resiliently mounted with rubber grommets (LCA/LGA 102,120 models)
- ◆ Integrated Modular Control (IMC) - solid state board contains all controls and control relays to operate unit with unit diagnostics
- ◆ Color coded and labeled wiring
- ◆ Outdoor coil fans - PVC coated fan guard furnished
- ◆ Outdoor coil fan motors overload protected, permanently lubricated, equipped with ball bearings, shaft up, wire basket mount
- ◆ Disposable 2" pleated filters furnished
- ◆ Refrigeration system consists of compressors, outdoor coil and direct drive fan, indoor coil and belt drive blower, check and expansion valves (indoor and outdoor), high capacity drier, high pressure switches, low pressure switches, reversing valve (LHA model), defrost control (LHA model), full refrigerant charge, crankcase heaters, freezestats (prevent coil freeze-up during low ambient operation or loss of air), and accumulator
- ◆ Supply air blower - belt drive, forward curved blades, blower wheel statically and dynamically balanced, ball bearings, adjustable pulley (allows speed change), blower assembly slides out of unit for servicing
- ◆ Supply air motor overload protected, equipped with ball bearings
- ◆ 70VA transformer with built-in circuit breaker
- ◆ 1 Year warranty on parts
- ◆ 5 Year warranty on compressor
- ◆ 10 Year warranty on heat exchanger

Model Number Guide

	L	C	A	102	S	1	Y	
Commercial Package Unit	■	■	■	■	■	■	■	Voltage
C - Cooling Only (w/opt. Electric Heat)	■	■	■	■	■	■	■	Y = 208/230v-3 ph-60 hz
G - Cooling w/Gas Heat	■	■	■	■	■	■	■	G = 460v-3 ph-60hz
H - Heat Pump	■	■	■	■	■	■	■	J = 575v-3ph-60hz
Major Design Sequence	■	■	■	■	■	■	■	Revision Level
Cooling Capacity	■	■	■	■	■	■	■	Heat Type (S or H)
102 = 8.5	■	■	■	■	■	■	■	Cooling Efficiency
120 = 10.0	■	■	■	■	■	■	■	S = Standard
150 = 12.0	■	■	■	■	■	■	■	

Required Options - Items Must be Ordered and Factory Installed

Air Flow Configuration - specify horizontal or down-flow when ordering base unit
Supply Air Motor - (See Blower Data Table for Specifications)
Drive Kit - Order one, see Drive Kit Specifications Table
Gas Input (LGA Models only) - order one
84,500/130,000 Btuh (24.7/38.1 kW) Standard Heat Gas Input
152,000/235,000 Btuh (44.5/68.9 kW) High Heat Gas Input
Voltage - specify when ordering base unit

Optional Accessories - Items Must be Ordered and Factory Installed

Item	LCA/LGA102	LCA/LGA/LHA120	LCA/LGA150
Disconnect Switch - Accessible from outside of unit, spring loaded weatherproof cover furnished		Factory	
Service Outlets (2) - 115v ground fault circuit interrupter (GFCI) type, field wired		Factory	

¹Not available for LCA 208/230 volt models with 30 or 45 kW electric heat, LCA models with field installed electric heat, LHA 208/230 volt models with 15, 30 or 45 kW electric heat or LHA 460 volt models with 45 kW electric heat

Optional Accessories Field Installed

Item	LCA/LGA102	LCA/LGA/ LHA120	LCA/LGA150
Blower Proving Switch - Monitors blower operation, shuts down unit if blower fails	18L89		
Dirty Filter Switch - Senses static pressure increase indicating a dirty filter condition	30K48		
Down-Flow Gravity Exhaust Dampers - Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle, bird screen furnished - Net weight Note: See below for damper hood	LAGED10/15 - 8 lbs. (4 kg) (53K03)		
Down-Flow Gravity Exhaust Damper Hood - for down-flow gravity exhaust dampers	LAGEH09/15 (88K79)		
Economizer - Opposing gear driven recirculated 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, damper assembly slides in unit Note: Outdoor airhood must be ordered separately (see below), optional down-flow gravity exhaust dampers available (see above), choice of economizer controls (see below) - Net weight	LAREMD10/15 - 47 lbs. (21 kg) (53K51)		
Economizer Control Choice	(16K96) Outdoor (16K97) Differential		
Sensible Control - Furnished in IMC board in unit, uses outdoor air sensor furnished with unit to measure outdoor air temperature and control damper position (Furnished)			
Global Control - Furnished on IMC board in unit, used with Direct Digital Control (DDC) systems, uses global air sensor to control damper position, determines when to use outdoor air for cooling or set damper at minimum position. (Furnished)			
Outdoor Enthalpy Control - Adjustable enthalpy sensor, senses outdoor air enthalpy for economizer control, 0 to 100% outdoor air, adjustable minimum position.			
Differential Enthalpy Control - Two solid-state enthalpy sensors allow selection between outdoor air and return air (whichever has lowest enthalpy)			
Outdoor Air Damper Section - Linked mechanical dampers, 0 to 25% outdoor air adjustable, installs in unit for down-flow applications Note: Outdoor air hood must be ordered separately (see below) - Net Weight	Automatic - fully modulating spring return damper motor, plug-in connection	LAOADM10/15 - 31 lbs. (14 kg) (53K53)	
	Manual	LAOAD10/15 - 26 lbs. (12 kg) (66K69)	
Outdoor Air Hood - Required with LAREMD10/15 Economizer, LAOAD10/15 and LAOADM10/15 Outdoor Air Damper Sections, two cleanable aluminum mesh fresh air filters furnished - Net Weight	LAOAH10/15 - 11 lbs. (5 kg) Filter Size: 16 x 25 x 1 in. (406 x 635 x 25 mm) (53K05)		
Horizontal Conversion Kit - Two piece duct cover in kit blocks off unit down-flow supply air opening, horizontal return air opening panel (on unit) is moved to block off down-flow return air opening for horizontal applications	56K53		
Horizontal Gravity Exhaust Dampers - Aluminum blade dampers prevent blow back and outdoor air infiltration during off cycle, field installed in return air duct, bird screen furnished - Net Weight	LAGEDH03/15 - 8 lbs. (4 kg) (53K04)		
Power Exhaust Fans - Install in unit for down-flow applications only with economizer option, provide exhaust air pressure relief, interlocked to run when return air dampers are closed and supply air blower is operating, fan runs when outdoor air dampers are 50% open (adjustable), overload protected, requires optional down-flow gravity exhaust dampers (see above)	Model No. (Net Weight)	LAPEF10/15 - 28 lbs. (13 kg) 208/230v (53K06) 460v (53K07) 575v (53K08)	
	Diameter - in. (mm) & No. of Blades	(1) 20 (508) - 5	
	Total air volume - cfm (L/s)	4200 (1980) @ 0 in. w.g. (0 Pa)	
	Motor Horsepower (W)	(1) 1/3 (249)	
	Total Watts Input	300	
Smoke Detector - Photoelectric type, installed in supply air section or return air section or both sections	16M24 - Supply 16M23 - Return		

Optional Accessories

Item		LCA/LGA102	LCA/LGA/LHA120	LCA/LGA150
Aspiration Box - for duct mounting of Indoor Air Quality Sensor		47N18		
Indoor Air Quality (CO2) Sensor - Monitors CO2 levels, reports to Integrated Modular Control (IMC) board which adjust economizer dampers as needed		93J69		
Electric Heat - Field installed, helix wound nichrome elements, time delay for element staging individual element limit controls, wiring harness, may be two-stage controlled, requires Fuse Block and Terminal Block		See Electric Heat Data Tables		
Electric Heat Fuse Block - Required with electric heat, mounting screws furnished		See Optional Electric Heat Accessoreis Table		
Electric Heat LTB2 Terminal Block - Required with electric heat		See Optional Electric Heat Accessoreis Table		
Coil Guards - Galvanized steel wire guards to protect outdoor coil. Not used with Hail Guards.	LCA/LGA Models	88K51		
	LHA Model	88K54		
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 - Net Weight	Step-Down - double deflection louvers	RTD11-135 - (29G05) 205 lbs. (93 kg)	RTD11-185 - (29G06) 392 lbs. (178 kg)	
	Flush - Fixed blade louvers	FD11-135 - (29G09) 174 lbs. (79 kg)	FD11-185 - (29G10) 289 lbs. (131 kg)	
Transitions (Supply and Return) - Used with diffusers, installs in roof mounting frame, galvanized steel construction, flanges furnished for duct connection, fully insulated - Net Weight		LASRT10/12 - (49K55) 32 lbs. (15 kg)	LASRT15 - (49K56) 36 lbs. (16 kg)	
Down-Flow Roof Mounting Frames - Nailer strip furnished, mates to unit, U.S. National Roofing Contractors Approved, shipped knocked down - Net Weight	14 inch (356 mm) height	LARMF10/15-14 - (53K50) 126 lbs. (57 kg)		
	24 inch (610 m) height	LARMF10/15-24 - (49K54) 174 lbs. (79kg)		
Grille Guards - Protects space between outdoor coils and main cabinet		86K29		
Hail Guards - Constructed of heavy gauge steel, painted to match cabinet, helps protect outdoor coils from hail damage. Not used with Coil Guards	LCA/LGA Models	88K24		
	LHA Model	88K27		
Vertical Vent Extension Kit - to exhaust flue gases vertically above unit (LGA models only)		40L80		
LPG/Propane Kits - LGA models only		41L15		

Specifications - LCA/LGA Models

Model No.		LCA/LGA102S	LCA/LGA120S	LCA/LGA150S			
Cooling Ratings	Gross Cooling Capacity - Btuh (kW)	106,000 (31.1)	126,000 (36.9)	145,000 (42.5)			
	¹ Net Cooling Capacity - Btuh (kW)	102,000 (29.9)	120,000 (35.2)	138,000 (40.4)			
	Total Unit Power (kW)	11.3	13.3	15.3			
	¹ EER (Btuh/Watt)	9	9	9			
	² Integrated Part Load Value (Btuh/Watt)	9.5	9.5	9.5			
³ Sound Rating Number (db)		88					
Refrigerant Charge Furnished (HCFC-22)	Circuit 1	7 lbs. 4 oz. (3.28 kg)	9 lbs. 8 oz. (4.31 kg)	12 lbs 0 oz. (5.44 kg)			
	Circuit 2	7 lbs. 4 oz. (3.28 kg)	9 lbs. 8 oz. (4.31 kg)	12 lbs 0 oz. (5.44 kg)			
LGA Models Only Two Stage Heating Capacity (Natural or LPG/Propane Gas at Sea Level)	Heat Input Type	Standard (S)	High (H)	Standard (S)	High (H)	Standard (S)	High (H)
	Input (low) - Btuh (kW)	84,500 (24.8)	152,500 (44.7)	84,500 (24.8)	152,500 (44.7)	84,500 (24.8)	152,500 (44.7)
	Output (low) - Btuh (kW)	67,500 (19.8)	122,000 (35.8)	67,500 (19.8)	122,000 (35.8)	67,500 (19.8)	122,000 (35.8)
	Input (high) - Btuh (kW)	130,000 (38.1)	235,000 (68.9)	130,000 (38.1)	235,000 (68.9)	130,000 (38.1)	235,000 (68.9)
	Output (high) - Btuh (kW)	104,000 (30.5)	188,000 (55.1)	104,000 (30.5)	188,000 (55.1)	104,000 (30.5)	188,000 (55.1)
	A.G.A./C.G.A. Thermal Efficiency		80%				
Gas Supply Connections npt - in. Natural or LPG/Propane		3/4					
Recommended Gas Supply Pressure wc. In. (kPa) - LGA Models only	Natural	7 (1.7)					
	LPG/Propane	11 (2.7)					
Evaporator Blower and Drive Selection	Blower wheel nominal dia. x width - in. (mm)	(1) 15 X 15 (381 X 381)					
	2 hp (1.5 kW) - ⁴ Motor & Drives	Motor Output - hp (kW)	Nominal	2 (1.5)			
			Max. usable	2.30 (1.7)			
		Voltage & Phase	208/230v, 460v or 575v - 3 ph				
		(Drive kit #) RPM range	(1) 680-940 (3) 850-1130				
	3 hp (2.2 kW) - ⁴ Motor & Drives	Motor Output - hp (kW)	Nominal	3 (2.2)			
			Max. usable	3.45 (2.6)			
		Voltage & Phase	208/230v, 460v or 575v - 3 ph				
		(Drive kit #) RPM range	(1) 680-940 (3) 850-1130 (5) 1105-1410				
	5 hp (3.7 kW) - ⁴ Motor & Drives	Motor Output - hp (kW)	Nominal	5 (3.7)			
		Max. usable	5.75 (4.3)				
Voltage & Phase		208/230v, 460v or 575v - 3 ph					
	(Drive kit #) RPM range	(4) 895-1120 (6) 1110-1395					

¹Rated in accordance with ARI Standard 210/240 and certified to ARI; 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.

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

²Integrated Part Load Value rated at 80°F (27°C) outdoor air temperature.

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

⁴Using 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. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

Specifications - LCA/LGA Models

Model No.		LCA/LGA102S	LCA/LGA120S	LCA/LGA150S
Evaporator Coil	Net face area - sq. ft. (m ²)	10.5 (0.98) total		
	Tube diameter - in. (mm) & No. of rows	3/8 (9.5) - 3		
	Fins per inch (m)	14 (551)		
	Drain connection no. & size - in. (mm) fpt	(1) 1 (25.4)		
	Expansion device type	Balanced Port Thermostatic Expansion Valve, removeable power head		
Condenser Coil	Net face area - sq. ft. (m ²)	29.3 (2.72) total		
	Tube diameter - in. (mm) & No. of rows	3/8 (9.5) - 1	3/8 (9.5) - 2	
	Fins per inch (m)	20 (787)	15 (591)	20 (787)
Condenser Fans	Diameter - in. (mm) & No. of blades	(2) 24 (610) - 3		
	Total Air Volume - cfm (L/s)	8,000 (3775)		
	Motor horsepower (W)	(2) 1/3 (249)		
	Motor rpm	1075		
	Total Motor watts	700		
Filters (furnished)	Type of filter	Disposable, commercial grade, pleated		
	No. and size - in (mm)	(4) 18 x 24 x 2 (457 x 610 x 51)		
Electrical Characteristics		208/230v, 460v or 575v - 60 hertz - 3 phase		

Specifications - LHA Model

Model No.		LHA120H	
Cooling Ratings	Gross Cooling Capacity - Btuh (kW)	124,000 (36.3)	
	¹ Net Cooling Capacity - Btuh (kW)	118,000 (34.6)	
	Total Unit Power (kW)	11.5	
	¹ EER (Btuh/Watt)	10.3	
	² Integrated Part Load Value (Btuh/Watt)	11.3	
High Temperature Heating Ratings	¹ Total Heating Capacity - Btuh (kW)	119,000 (34.9)	
	Total Unit Power (kW)	10.7	
	¹ C.O.P.	3.3	
Low Temperature Heating Ratings	¹ Total Heating Capacity - Btuh (kW)	72,000 (21.1)	
	Total Unit Power (kW)	10.1	
	¹ C.O.P.	2.1	
³ Sound Rating Number (db)		88	
Refrigerant Charge Furnished (HCFC-22)	Circuit 1	12 lbs. 8 oz. (5.7 kg)	
	Circuit 2	12 lbs. 8 oz. (5.7 kg)	
Evaporator Blower and Drive Selection	Blower wheel nominal dia. x width - in. (mm)		(1) 15 x 15 (381 x 381)
	2 hp (1.5 kW) ⁴ Motor & Drives	Nominal motor output - hp (kW)	2 (1.5)
		Max. usable motor output - hp (kW)	2.30 (1.7)
		Voltage & phase	208/230v, 460v or 575v-3ph
		(Drive Kit #) RPM range	(1) 680-940, (3) 850-1130
	3 hp (2.2 kW) ⁴ Motor & Drives	Nominal motor output - hp (kW)	3 (2.2)
		Max. usable motor output - hp (kW)	3.45 (2.6)
		Voltage & phase	208/230v, 460v or 575v-3ph
		(Drive Kit #) RPM range	(1) 680-940, (3) 850-1130, (5) 1105-1410
	5 hp (3.7 kW) ⁴ Motor & Drives	Nominal motor output - hp (kW)	5 (3.7)
		Max. usable motor output - hp (kW)	5.75 (4.3)
		Voltage & phase	208/230v, 460v or 575v-3ph
		(Drive Kit #) RPM range	(4) 895-1120, (6) 1110-1395

¹Rated in accordance with ARI Standard 210/240 and certified to ARI.

Cooling Ratings - 95°F (35°C) outdoor air temperature and 80°F (27°C) db/67°F (19°C) wb entering indoor coil air.

High Temperature Heating Ratings - 47°F (8°C) db/43°F (6°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.

Low Temperature Heating Ratings - 17°F (-8°C) db/15°F (-9°C) wb outdoor air temperature and 70°F (21°C) entering indoor coil air.

NOTE - ARI capacity is net and includes indoor blower motor heat deduction. Gross capacity does not include indoor blower motor heat deduction.

²Integrated Part Load Value rated at 80°F (27°C) outdoor air temperature.

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

⁴Using 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. If motors of comparable output are used, be sure to keep within the service factor limitations outlined on the motor nameplate.

Specifications - LHA Model

Model No.		LHA120H
Indoor Coil	Net face area - sq. ft. (m ²)	10.5 (0.98) total
	Tube diameter - in. (mm) & No. of rows	3/8 (9.5) - 4
	Fins per inch (m)	14 (551)
	Drain connection no. & size - in. (mm) fpt	(1) 1 (25.4)
	Expansion device type	Balanced Port Thermostatic Expansion Valve, removeable power head
Outdoor Coil	Net face area - sq. ft. (m ²)	28.6 (2.66) total
	Tube diameter - in. (mm) & No. of rows	3/8 (9.5) - 2
	Fins per inch (m)	20 (787)
	Expansion device type	Balanced Port Thermostatic Expansion Valve, removeable power head
Outdoor Fans	Diameter - in. (mm) & No. of blades	(2) 24 (610) - 3
	Total Air volume - cfm (L/s)	8000 (3775)
	Motor horsepower (W)	(2) 1/3 (249)
	Motor rpm	1075
	Total Motor watts	700
Filters (furnished)	Type of filter	Disposable, commercial grade, pleated
	No. and size - in. (mm)	(4) 18 x 24 x 2 (457 x 610 x 51)
Electrical Characteristics		208/230v, 460v or 575v - 60 hertz - 3 phase

Weight Data

Model No.	Description	Weight	
		lbs.	kg
Net Weight			
LCA102S	Net weight (Base Unit)	1120	508
LCA120S	Net weight (Base unit)	1130	513
LCA150S	Net weight (Base unit)	1170	531
LGA102S	Net weight (Base unit with low fire heat exchanger)	1200	544
LGA120S	Net weight (Base unit with low fire heat exchanger)	1210	549
LGA150S	Net weight (Base unit with low fire heat exchanger)	1250	567
LHA120H	Net weight (Base Unit)	1230	558
Shipping Weights			
LCA102S	Base unit	1205	547
LCA120S	Base unit	1215	551
LHA120H	Base unit	1315	596
LCA150S	Base unit	1255	569
LGA102S	Base unit with low fire heat exchanger	1285	583
LGA120S	Base unit with low fire heat exchanger	1295	587
LGA150S	Base unit with low fire heat exchanger	1335	606
LGA Models Only	High Fire Heat Exchanger (add to Base unit)	40	18

High Altitude Derate (LGA Models)

Units may be installed at altitudes up to 2000 feet (610 m) above sea level without any modification. At altitudes above 2000 feet (610 m) units must be derated to match gas manifold pressures shown in table below.

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

Altitude - ft. (m)	Gas Manifold Pressure - in. w.g. (kPa)
2001 - 3000 (610 - 915)	3.6 (.90)
3001 - 4000 (915 - 1220)	3.5 (.87)
4001 - 5000 (1220 - 1525)	3.4 (.85)
5001 - 6000 (1525 - 1830)	3.3 (.82)
6001 - 7000 (1830 - 2135)	3.2 (.80)
7001 - 8000 (2135 - 2440)	3.1 (.77)

Optional Electric Heat Accessories - LCA/LHA Models

Unit Model No.		LCA102S	LCA120S	LCA150S	LHA120H		
Electric Heat		EHA (see Electric Heat Data tables for additional information)					
Model No.		7.5-15-22.5-30-45-60					
kW Input Range		7.5-15-22.5-30-45-60					
Unit Fuse Block (3phase)	Without Power Exhaust Fans	208/230v - 2hp (1.5 kW)		56K94			
		460v - 2 hp (1.5 kW)		25K08	25K09		
		575v - 2 hp (1.5 kW)		56K52		25K08	56K52
		208/230v - 3hp (2.2 kW)		56K94		56K95	
		460v - 3 hp (2.2 kW)		25K08		25K09	
		575v - 3 hp (2.2 kW)		56K52		25K08	
		208/230v - 5 hp (3.7 kW)		56K95		56K96	
		460v - 5 hp (3.7 kW)		25K09		25K10	
	575v - 5 hp (3.7 kW)		56K52		25K08		
	With Power Exhaust Fans	208/230v - 2hp (1.5 kW)		56K93	56K94	56K95	56K94
		460v - 2 hp (1.5 kW)		25K08		25K09	
		575v - 2 hp (1.5 kW)		56K51		56K52	
		208/230v - 3hp (2.2 kW)		56K94		56K95	
		460v - 3 hp (2.2 kW)		25K08		25K09	
		575v - 3 hp (2.2 kW)		56K52		25K08	56K52
		208/230v - 5 hp (3.7 kW)		56K95		56K96	56K95
460v - 5 hp (3.7 kW)		25K09		25K10	25K09		
575v - 5 hp (3.7 kW)		56K52		25K08			

LTB2 Electric Heat Terminal Block - LTB2-175 (30K75) 175 amps.

LTB2-335 (30K76) 335 amps

(Required for Units Without Disconnect/Circuit Breaker but With Single Point Power Source)

Unit Model No.		LCA102S	LCA120S	LCA150S	LHA120H
LTB2 Terminal Block (3 phase)	7.5 kW *208/230v-3ph	2 hp (1.5 kW)	30K75	---	
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			
	15 kW *208/230v-3ph	2 hp (1.5 kW)	30K75	30K75	
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			
	22.5 kW *208/230v-3h	2 hp (1.5 kW)	30K75	30K75	
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			
	30 kW *208/230v-3h	2 hp (1.5 kW)	30K75	30K75	
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			
	45 kW *208/230v-3ph	2 hp (1.5 kW)	---	30K75	30K76
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			
	60 kW *208/230V-3ph	2 hp (1.5 kW)	---	30K75	30K76
		3 hp (2.2 kW)			
		5 hp (3.7 kW)			

*NOTE - All 460v and 575v unit voltages use LTB2-175 (30K75) terminal block.

Electric Data - LCA/LGA102

Model No.		LCA/LGA102S									
Line voltage data - 60 hz - 3 ph		208/230v			460v			575v			
Compressors (2)	Rated load amps each (total)	14.1 (28.2)			7.7 (15.4)			6.0 (12.0)			
	Locked rotor amps each (total)	105 (210)			53 (106)			42 (84)			
Condenser Fan Motors (2)	Full load amps (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2)			
	Locked rotor amps (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)			
Evaporator Blower Motor	Motor Output	hp	2	3	5	2	3	5	2	3	5
		kW	1.5	2.2	3.7	1.5	2.2	3.7	1.5	2.2	3.7
	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	
Rec. max. fuse size (amps)	With Exhaust Fan	60	60	70	30	30	35	25	25	25	
	Less Exhaust Fan	50	60	70	30	30	35	20	25	25	
*Minimum Circuit Ampacity	With Exhaust Fan	46	50	56	25	26	29	19	20	23	
	Less Exhaust Fan	44	47	54	23	25	28	18	19	22	
Optional Power Exhaust Fan	(No.) Horsepower (W)	(1) 1/3 (249)									
	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									

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

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

NOTE - Where current does not exceed 100 amp, HACR type circuit breaker may be used in place of fuse (U.S. only).

Electric Data - LCA/LGA120

Model No.		LCA/LGA120S									
Line voltage data - 60 hz - 3 ph		208/230v			460v			575v			
Compressors (2)	Rated load amps each (total)	16.7 (33.4)			8.6 (17.2)			6.0 (12.0)			
	Locked rotor amps each (total)	110 (220)			55 (110)			44 (88)			
Condenser Fan Motors (2)	Full load amps (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2)			
	Locked rotor amps (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)			
Evaporator Blower Motor	Motor Output	hp	2	3	5	2	3	5	2	3	5
		kW	1.5	2.2	3.7	1.5	2.2	3.7	1.5	2.2	3.7
	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	
Rec. max. fuse size (amps)	With Exhaust Fan	60	70	70	35	35	35	25	25	25	
	Less Exhaust Fan	60	70	70	30	35	35	20	25	25	
*Minimum Circuit Ampacity	With Exhaust Fan	52	55	61	27	28	31	19	20	23	
	Less Exhaust Fan	50	53	59	25	27	30	18	19	22	
Optional Power Exhaust Fan	(No.) Horsepower (W)	(1) 1/3 (249)									
	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									

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

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

NOTE - Where current does not exceed 100 amp, HACR type circuit breaker may be used in place of fuse (U.S. only).

Electric Data - LCA/LGA150

Model No.		LCA/LGA150S									
Line voltage data - 60 hz - 3 ph		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)			70 (140)			54 (108)			
Condenser Fan Motors (2)	Full load amps (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2)			
	Locked rotor amps (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)			
Evaporator Blower Motor	Motor Output	hp	2	3	5	2	3	5	2	3	5
		kW	1.5	2.2	3.7	1.5	2.2	3.7	1.5	2.2	3.7
	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	
Rec. max. fuse size (amps)	With Exhaust Fan	70	70	80	35	35	40	30	30	30	
	Less Exhaust Fan	70	70	80	35	35	40	25	30	30	
*Minimum Circuit Ampacity	With Exhaust Fan	57	60	66	28	29	32	23	24	26	
	Less Exhaust Fan	55	58	64	27	28	31	22	23	25	
Optional Power Exhaust Fan	(No.) Horsepower (W)	(1) 1/3 (249)									
	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									

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

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

NOTE - Where current does not exceed 100 amp, HACR type circuit breaker may be used in place of fuse (U.S. only).

Electric Data - LHA120

Model No.		LHA120H									
Line voltage data - 60 hz - 3 ph		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 (total)	2.4 (4.8)			1.3 (2.6)			1.0 (2.0)			
	Locked rotor amps (total)	4.7 (9.4)			2.4 (4.8)			1.9 (3.8)			
Evaporator Blower Motor	Motor Output	hp	2	3	5	2	3	5	2	3	5
		kW	1.5	2.2	3.7	1.5	2.2	3.7	1.5	2.2	3.7
	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	
Rec. max. fuse size (amps)	With Exhaust Fan	70	70	80	35	35	40	25	30	30	
	Less Exhaust Fan	60	70	70	35	35	35	25	25	30	
*Minimum Circuit Ampacity	With Exhaust Fan	54	57	63	27	29	32	22	23	25	
	Less Exhaust Fan	51	54	60	26	28	30	21	22	24	
Optional Power Exhaust Fan	(No.) Horsepower (W)	(1) 1/3 (249)									
	Full load amps	2.4			1.3			1			
	Locked rotor amps	4.7			2.4			1.9			
Service Outlet (2) 115 volt GFCI (amp rating)		15									

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

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

NOTE - Where current does not exceed 100 amp, HACR type circuit breaker may be used in place of fuse (U.S. only).

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA102S										
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity				
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)		
7.5 kW	EHA102-7.5 208/230v (99J01) 460v (99J02) 575v (99J03) 31 lbs. (14 kg)	1	208	5.6	19.1	46	50	56		
		1	220	6.3	21.5					
		1	230	6.9	23.6					
				1	240	7.5	25.6	25	26	29
				1	440	6.9	21.5			
				1	460	6.9	23.6			
				1	480	7.5	25.6	19	20	23
				1	550	6.3	21.5			
				1	575	6.9	23.6			
		1	600	7.5	25.6	51	55	63		
15 kW	EHA150-15 208/230v (99J04) 460v (99J05) 575v (99J06) 31 lbs. (14 kg)	1	208	11.3	38.6					
		1	220	12.6	43.0					
		1	230	13.8	47.1					
		1	240	15.0	51.2					
		1	440	12.6	43.0					
		1	460	13.8	47.1					
		1	480	15.0	51.2					
		1	550	12.6	43.0					
		1	575	13.8	47.1					
		1	600	15.0	51.2	28	30	34		
		**2	208	16.9	57.7					
		**2	220	18.9	64.5					
		**2	230	20.7	70.7					
		**2	240	22.5	76.8					
		**2	440	18.9	64.5					
		**2	460	20.7	70.7					
		**2	480	22.5	76.8					
		**2	550	18.9	64.5					
		**2	575	20.7	70.7					
		**2	600	22.5	76.8	41	43	46		
22.5 kW	EHA360-22.5 208/230v (99J28) 460v (99J29) 575v (99J30) 38 lbs. (17 kg)	**2	208	16.9	57.7					
		**2	220	18.9	64.5					
		**2	230	20.7	70.7					
		**2	240	22.5	76.8					
		**2	440	18.9	64.5					
		**2	460	20.7	70.7					
		**2	480	22.5	76.8					
		**2	550	18.9	64.5					
		**2	575	20.7	70.7					
**2	600	22.5	76.8							
		**2	208	16.9	57.7	82	86	94		
		**2	220	18.9	64.5					
		**2	230	20.7	70.7					
		**2	240	22.5	76.8					
		**2	440	18.9	64.5					
		**2	460	20.7	70.7					
		**2	480	22.5	76.8					
		**2	550	18.9	64.5					
		**2	575	20.7	70.7					
		**2	600	22.5	76.8	33	34	37		
		**2	208	16.9	57.7					
		**2	220	18.9	64.5					
		**2	230	20.7	70.7					
		**2	240	22.5	76.8					
		**2	440	18.9	64.5					
		**2	460	20.7	70.7					
		**2	480	22.5	76.8					
		**2	550	18.9	64.5					
		**2	575	20.7	70.7					
		**2	600	22.5	76.8					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE-Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA102 S								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
30 kW	EHA150-30 208/230v (99J07) 460v (99J08) 575v (99J09) 38 lbs. (17 kg)	**2	208	22.5	76.8	91	94	102
		**2	220	25.2	86.0	103	106	114
		**2	230	27.5	93.9			
		**2	240	30.0	102.4			
		**2	440	25.2	86.0	51	53	56
		**2	460	27.5	93.9			
		**2	480	30.0	102.4			
		**2	550	25.2	86.0	41	42	45
		**2	575	27.5	93.9			
**2	600	30.0	102.4					
45 kW	EHA150-45 208/230v (99J10) 460v (99J11) 575v (99J12) 42 lbs. (19 kg)	**2	208	33.8	115.3	130	134	141
		**2	220	37.8	129.0	148	151	159
		**2	230	41.3	141.0			
		**2	240	45.0	153.6			
		**2	440	37.8	129.0	74	75	79
		**2	460	41.3	141.0			
		**2	480	45.0	153.6			
		**2	550	37.8	129.0	59	60	63
		**2	575	41.3	141.0			
**2	600	45.0	153.6					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE-Fuse block ordered extra. Factory installed heaters will have the fuse block factory installed. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA120S								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
15 kW	EHA150-15 208/230v (99J04) 460v (99J05) 575v (99J06) 31 lbs. (14 kg)	1	208	11.3	38.6	52	55	63
		1	220	12.6	43.0			
		1	230	13.8	47.1			
		1	240	15.0	51.2			
		1	440	12.6	43.0	28	30	34
		1	460	13.8	47.1			
		1	480	15.0	51.2			
		1	550	12.6	43.0	23	24	27
		1	575	13.8	47.1			
		1	600	15.0	51.2			
22.5 kW	EHA360-22.5 208/230v (99J28) 460v (99J29) 575v (99J30) 38 lbs. (17 kg)	**2	208	16.9	57.7	73	77	85
		**2	220	18.9	64.5	82	86	94
		**2	230	20.7	70.7			
		**2	240	22.5	76.8			
		**2	440	18.9	64.5	41	43	46
		**2	460	20.7	70.7			
		**2	480	22.5	76.8			
		**2	550	18.9	64.5	33	34	37
		**2	575	20.7	70.7			
		**2	600	22.5	76.8			
30 kW	EHA150-30 208/230v (99J07) 460v (99J08) 575v (99J09) 38 lbs. (17 kg)	**2	208	22.5	76.8	91	94	102
		**2	220	25.2	86.0	103	106	114
		**2	230	27.5	93.9			
		**2	240	30.0	102.4			
		**2	440	25.2	86.0	51	53	56
		**2	460	27.5	93.9			
		**2	480	30.0	102.4			
		**2	550	25.2	86.0	41	42	45
		**2	575	27.5	93.9			
		**2	600	30.0	102.4			

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA120S								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
45 kW	EHA 150-45 208/230v (99J10) 460v (99J11) 575v (99J12) 42 lbs. (19 kg)	**2	208	33.8	115.3	130	134	141
		**2	220	37.8	129.0	148	151	159
		**2	230	41.3	141.0			
		**2	240	45.0	153.6	74	75	79
		**2	440	37.8	129.0			
		**2	460	41.3	141.0			
		**2	480	45.0	153.6	59	60	63
		**2	550	37.8	129.0			
		**2	575	41.3	141.0			
		**2	600	45.0	153.6			
60 kW	EHA 150-60 208/230v (99J13) 460v (99J14) 575v (99J15) 49 lbs. (22 kg)	**2	208	45.0	153.6	138	141	149
		**2	220	50.4	172.0	157	160	168
		**2	230	55.1	188.0			
		**2	240	60.0	204.8	78	80	83
		**2	440	50.4	172.0			
		**2	460	55.1	188.0			
		**2	480	60.0	204.8	62	64	67
		**2	550	50.4	172.0			
		**2	575	55.1	188.0			
		**2	600	60.0	204.8			

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA150S										
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity				
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)		
15 kW	EHA 150-15 208/230v (99J04) 460v (99J05) 575v (99J06) 31 lbs. (14 kg)	1	208	11.3	38.6	57	60	66		
		1	220	12.6	43.0					
		1	230	13.8	47.1					
				1	240	15.0	51.2	28	29	32
				1	440	12.6	43.0			
				1	460	13.8	47.1			
				1	480	15.0	51.2	23	24	26
				1	550	12.6	43.0			
				1	575	13.8	47.1			
		1	600	15.0	51.2	73	77	85		
22.5 kW	EHA360-22.5 208/230v (99J28) 460v (99J29) 575v (99J30) 38 lbs. (17 kg)	**2	208	16.9	57.7					
		**2	220	18.9	64.5					
		**2	230	20.7	70.7					
		**2	240	22.5	76.8					
		**2	440	18.9	64.5					
		**2	460	20.7	70.7					
		**2	480	22.5	76.8					
		**2	550	18.9	64.5					
		**2	575	20.7	70.7					
		**2	600	22.5	76.8	41	43	46		
30 kW	EHA 150-30 208/230v (99J07) 460v (99J08) 575v (99J09) 38 lbs. (17 kg)	**2	208	22.5	76.8					
		**2	220	25.2	86.0					
		**2	230	27.5	93.9					
		**2	240	30.0	102.4					
		**2	440	25.2	86.0					
		**2	460	27.5	93.9					
		**2	480	30.0	102.4					
		**2	550	25.2	86.0					
		**2	575	27.5	93.9					
		**2	600	30.0	102.4	91	95	102		
		**2	208	22.5	76.8					
		**2	220	25.2	86.0					
		**2	230	27.5	93.9					
		**2	240	30.0	102.4					
		**2	440	25.2	86.0					
		**2	460	27.5	93.9					
		**2	480	30.0	102.4					
		**2	550	25.2	86.0					
		**2	575	27.5	93.9					
		**2	600	30.0	102.4	51	53	56		
		**2	208	22.5	76.8					
		**2	220	25.2	86.0					
		**2	230	27.5	93.9					
		**2	240	30.0	102.4					
		**2	440	25.2	86.0					
		**2	460	27.5	93.9					
		**2	480	30.0	102.4					
		**2	550	25.2	86.0					
		**2	575	27.5	93.9					
		**2	600	30.0	102.4	41	42	45		
		**2	208	22.5	76.8					
		**2	220	25.2	86.0					
		**2	230	27.5	93.9					
		**2	240	30.0	102.4					
		**2	440	25.2	86.0					
		**2	460	27.5	93.9					
		**2	480	30.0	102.4					
		**2	550	25.2	86.0					
		**2	575	27.5	93.9					
		**2	600	30.0	102.4					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LCA150S								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
45 kW	EHA 150-45 208/230v (99J10) 460v (99J11) 575v (99J12) 42 lbs. (19 kg)	**2	208	33.8	115.3	130	133	141
		**2	220	37.8	129.0	148	151	159
		**2	230	41.3	141.0			
		**2	240	45.0	153.6			
		**2	440	37.8	129.0	74	75	78
		**2	460	41.3	141.0			
		**2	480	45.0	153.6			
		**2	550	37.8	129.0	59	61	63
		**2	575	41.3	141.0			
**2	600	45.0	153.6					
60 kW	EHA 150-60 208/230v (99J13) 460v (99J14) 575v (99J15) 49 lbs. (22 kg)	**2	208	45.0	153.6	138	141	149
		**2	220	50.4	172.0	157	161	168
		**2	230	55.1	188.0			
		**2	240	60.0	204.8			
		**2	440	50.4	172.0	78	80	83
		**2	460	55.1	188.0			
		**2	480	60.0	204.8			
		**2	550	50.4	172.0	62	64	67
		**2	575	55.1	188.0			
**2	600	60.0	204.8					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LHA120H								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
15 kW	EHA150-15 208/230v (99J04) 460v (99J05) 575v (99J06) 31 lbs. (14 kg)	1	208	11.3	38.6	93	96	102
		1	220	12.6	43.0	99	102	108
		1	230	13.8	47.1			
		1	240	15.0	51.2			
		1	440	12.6	43.0	50	51	54
		1	460	13.8	47.1			
		1	480	15.0	51.2			
		1	550	12.6	43.0	40	41	43
		1	575	13.8	47.1			
1	600	15.0	51.2					
22.5 kW	EHA360-22.5 208/230v (99J28) 460v (99J29) 575v (99J30) 38 lbs. (17 kg)	**2	208	16.9	57.7	113	116	122
		**2	220	18.9	64.5	122	125	131
		**2	230	20.7	70.7			
		**2	240	22.5	76.8			
		**2	440	18.9	64.5	61	63	65
		**2	460	20.7	70.7			
		**2	480	22.5	76.8			
		**2	550	18.9	64.5	50	51	53
		**2	575	20.7	70.7			
**2	600	22.5	76.8					
30 kW	EHA150-30 208/230v (99J07) 460v (99J08) 575v (99J09) 38 lbs. (17 kg)	**2	208	22.5	76.8	132	135	141
		**2	220	25.2	86.0	144	147	153
		**2	230	27.5	93.9			
		**2	240	30.0	102.4			
		**2	440	25.2	86.0	72	74	77
		**2	460	27.5	93.9			
		**2	480	30.0	102.4			
		**2	550	25.2	86.0	58	59	61
		**2	575	27.5	93.9			
**2	600	30.0	102.4					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Optional Electric Heat Data (Requires Unit Fuse Block and Terminal Block)

LHA120H								
kW Size Required	Electric Heat Model No. & Net Weight	No. of Steps	Volts Input	kW Input	kBtuh Output	*Total Unit (with Power Exhaust Fan) & Electric Heat Minimum Circuit Ampacity		
						2 hp (1.5 kW)	3 hp (2.2 kW)	5 hp (3.7 kW)
45 kW	EHA 150-45 208/230v (99J10) 460v (99J11) 575v (99J12) 42 lbs. (19 kg)	**2	208	33.8	115.3	171	174	180
		**2	220	37.8	129.0	189	192	198
		**2	230	41.3	141.0			
		**2	240	45.0	153.6			
		**2	440	37.8	129.0	95	97	99
		**2	460	41.3	141.0			
		**2	480	45.0	153.6			
		**2	550	37.8	129.0	76	77	79
		**2	575	41.3	141.0			
**2	600	45.0	153.6					
60 kW	EHA 150-60 208/230v (99J13) 460v (99J14) 575v (99J15) 49 lbs. (22 kg)	**2	208	45.0	153.6	179	182	188
		**2	220	50.4	172.0	198	201	207
		**2	230	55.1	188.0			
		**2	240	60.0	204.8			
		**2	440	50.4	172.0	100	101	104
		**2	460	55.1	188.0			
		**2	480	60.0	204.8			
		**2	550	50.4	172.0	79	81	83
		**2	575	55.1	188.0			
**2	600	60.0	204.8					

*Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

**May be used with two stage control.

NOTE - Fuse block must be ordered extra. Fuse block must be installed in unit with field installed heaters. Also requires LTB2 Terminal Block.

Cooling Ratings

LCA/LGA102 - One Compressor Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°C)					
			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)		
	Dry Bulb					Dry Bulb						Dry Bulb						Dry Bulb								
	cfm	L/s	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	2720	1285	55.8	16.4	3.37	.63	.78	.93	53.4	15.6	3.65	.64	.80	.95	51.0	14.9	3.93	.65	.82	.98	48.5	14.2	4.21	.66	.85	.99
	3400	1605	58.0	17.0	3.42	.67	.86	1.00	55.5	16.3	3.71	.69	.88	1.00	53.0	15.5	4.00	.71	.91	1.00	50.4	14.8	4.29	.73	.94	1.00
	4080	1925	59.8	17.5	3.47	.73	.93	1.00	57.2	16.8	3.76	.75	.96	1.00	54.7	16.0	4.06	.78	.98	1.00	52.2	15.3	4.36	.81	1.00	1.00
67°F (19°C)	2720	1285	59.5	17.4	3.46	.50	.61	.73	56.9	16.7	3.75	.50	.61	.75	54.3	15.9	4.05	.51	.63	.77	51.6	15.1	4.34	.52	.64	.80
	3400	1605	61.4	18.0	3.51	.52	.65	.82	58.7	17.2	3.81	.53	.66	.84	56.0	16.4	4.11	.53	.68	.87	53.2	15.6	4.40	.54	.71	.90
	4080	1925	62.8	18.4	3.54	.54	.70	.89	60.0	17.6	3.85	.55	.72	.92	57.3	16.8	4.15	.57	.75	.95	54.4	15.9	4.45	.58	.78	.97
71°F (22°C)	2720	1285	63.4	18.6	3.55	.38	.48	.58	60.7	17.8	3.87	.38	.48	.59	58.0	17.0	4.18	.38	.49	.60	55.2	16.2	4.49	.38	.50	.62
	3400	1605	65.4	19.2	3.60	.38	.50	.63	62.5	18.3	3.92	.39	.51	.64	59.6	17.5	4.23	.39	.52	.66	56.7	16.6	4.54	.39	.53	.68
	4080	1925	66.7	19.5	3.63	.39	.53	.68	63.7	18.7	3.95	.40	.54	.70	60.8	17.8	4.27	.40	.55	.72	57.8	16.9	4.59	.41	.57	.75

LCA/LGA102 - All Compressors Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)		
	Dry Bulb					Dry Bulb						Dry Bulb						Dry Bulb								
	cfm	L/s	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtuh	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C
63°F (17°C)	2720	1285	100.9	29.6	7.85	.67	.82	.97	96.0	28.1	8.40	.68	.85	.99	91.0	26.7	8.94	.70	.88	1.00	85.8	25.1	9.49	.72	.91	1.00
	3400	1605	104.9	30.7	8.00	.72	.90	1.00	99.8	29.2	8.56	.74	.93	1.00	94.8	27.8	9.14	.77	.96	1.00	89.4	26.2	9.71	.80	.99	1.00
	4080	1925	108.2	31.7	8.11	.78	.97	1.00	103.2	30.2	8.70	.81	.99	1.00	98.2	28.8	9.31	.84	1.00	1.00	93.2	27.3	9.92	.87	1.00	1.00
67°F (19°C)	2720	1285	107.5	31.5	8.09	.53	.65	.78	102.2	30.0	8.67	.53	.66	.80	96.9	28.4	9.24	.54	.68	.83	91.2	26.7	9.81	.55	.70	.87
	3400	1605	111.0	32.5	8.22	.55	.70	.87	105.5	30.9	8.80	.56	.71	.90	99.9	29.3	9.39	.58	.74	.93	93.9	27.5	9.96	.59	.77	.96
	4080	1925	113.4	33.2	8.31	.58	.75	.94	107.8	31.6	8.90	.60	.78	.97	101.9	29.9	9.49	.61	.81	.99	95.8	28.1	10.08	.63	.85	1.00
71°F (22°C)	2720	1285	114.9	33.7	8.36	.39	.51	.62	109.4	32.1	8.97	.40	.52	.64	103.6	30.4	9.57	.40	.53	.65	97.6	28.6	10.18	.40	.54	.67
	3400	1605	118.2	34.6	8.47	.40	.54	.67	112.4	32.9	9.09	.41	.55	.69	106.4	31.2	9.71	.41	.56	.71	100.1	29.3	10.33	.42	.58	.74
	4080	1925	120.5	35.3	8.56	.42	.57	.73	114.6	33.6	9.18	.42	.58	.75	108.3	31.7	9.80	.43	.60	.78	101.8	29.8	10.42	.43	.62	.82

Cooling Ratings LCA/LGA120 - One Compressor Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°C)					
			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)		
						Dry Bulb						Dry Bulb						Dry Bulb						Dry Bulb		
			cfm	L/s	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C
63°F (17°C)	3200	1510	66.0	19.3	4.12	.62	.77	.91	63.7	18.7	4.38	.63	.78	.93	61.0	17.9	4.71	.64	.80	.95	58.1	17.0	5.09	.66	.83	.98
	4000	1890	68.6	20.1	4.16	.66	.84	.99	66.1	19.4	4.44	.68	.86	1.00	63.3	18.6	4.78	.70	.89	1.00	60.3	17.7	5.17	.72	.91	1.00
	4800	2265	70.6	20.7	4.18	.72	.91	1.00	68.0	19.9	4.48	.74	.93	1.00	65.2	19.1	4.84	.76	.96	1.00	62.2	18.2	5.24	.79	.98	1.00
67°F (19°C)	3200	1510	70.4	20.6	4.18	.49	.60	.72	67.8	19.9	4.47	.50	.61	.74	64.9	19.0	4.83	.50	.62	.76	61.7	18.1	5.23	.51	.63	.79
	4000	1890	72.7	21.3	4.21	.52	.64	.80	69.9	20.5	4.52	.52	.65	.82	66.8	19.6	4.89	.53	.67	.85	63.5	18.6	5.30	.54	.69	.88
	4800	2265	74.3	21.8	4.23	.54	.69	.88	71.5	21.0	4.55	.55	.71	.90	68.3	20.0	4.93	.56	.73	.93	64.8	19.0	5.35	.57	.76	.95
71°F (22°C)	3200	1510	75.0	22.0	4.24	.38	.48	.58	72.2	21.2	4.57	.38	.48	.59	69.1	20.3	4.95	.38	.49	.60	65.8	19.3	5.38	.38	.50	.61
	4000	1890	77.3	22.7	4.27	.38	.50	.62	74.4	21.8	4.61	.39	.51	.63	71.1	20.8	5.01	.39	.52	.64	67.5	19.8	5.44	.39	.53	.66
	4800	2265	78.9	23.1	4.29	.39	.53	.66	75.8	22.2	4.64	.39	.54	.68	72.4	21.2	5.04	.40	.55	.71	68.7	20.1	5.49	.40	.56	.73

LCA/LGA120 - All Compressors Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts Input	Sensible to Total Ratio (S/T)		
						Dry Bulb						Dry Bulb						Dry Bulb						Dry Bulb		
			cfm	L/s	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C
63°F (17°C)	3200	1510	120.9	35.4	9.44	.66	.80	.95	115.1	33.7	10.18	.67	.83	.97	109	31.9	10.97	.68	.85	.99	102.9	30.2	11.77	.70	.88	1.00
	4000	1890	125.5	36.8	9.58	.70	.88	1.00	119.4	35.0	10.36	.72	.91	1.00	113.2	33.2	11.17	.75	.94	1.00	107.0	31.4	12.01	.77	.97	1.00
	4800	2265	129.2	37.9	9.70	.76	.95	1.00	123.1	36.1	10.50	.78	.97	1.00	117	34.3	11.35	.81	.99	1.00	110.8	32.5	12.24	.85	1.00	1.00
67°F (19°C)	3200	1510	128.6	37.7	9.68	.52	.63	.76	122.3	35.8	10.47	.52	.64	.79	115.7	33.9	11.31	.53	.66	.81	109.1	32.0	12.15	.54	.68	.85
	4000	1890	132.5	38.8	9.81	.54	.68	.84	126.0	36.9	10.62	.55	.69	.87	119.2	34.9	11.47	.56	.72	.90	112.4	32.9	12.32	.58	.75	.94
	4800	2265	135.5	39.7	9.89	.57	.73	.92	128.6	37.7	10.73	.58	.76	.94	121.6	35.6	11.59	.59	.79	.97	114.6	33.6	12.46	.61	.82	.99
71°F (22°C)	3200	1510	137.0	40.2	9.93	.39	.50	.61	130.4	38.2	10.79	.39	.51	.62	123.5	36.2	11.68	.39	.52	.64	116.5	34.1	12.58	.40	.53	.66
	4000	1890	141.0	41.3	10.06	.40	.53	.66	133.9	39.2	10.92	.40	.54	.67	126.7	37.1	11.84	.41	.55	.69	119.5	35.0	12.75	.41	.56	.72
	4800	2265	143.7	42.1	10.13	.41	.56	.71	136.4	40.0	11.02	.41	.57	.73	129	37.8	11.94	.42	.58	.76	121.5	35.6	12.87	.42	.60	.79

Cooling Ratings

LCA/LGA150 - One Compressor Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			65°F (18°C)						75°F (24°C)						85°F (29°C)						95°F (35°C)					
			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)		
	Dry Bulb					Dry Bulb						Dry Bulb						Dry Bulb								
cfm	L/s	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	
63°F (17°C)	3800	1795	75.6	22.2	4.37	.64	.79	.93	73.5	21.5	4.89	.64	.80	.94	71.3	20.9	5.48	.65	.81	.96	68.9	20.2	6.15	.66	.83	.97
	4400	2075	77.3	22.7	4.41	.66	.83	.97	75.2	22.0	4.93	.67	.85	.98	72.9	21.4	5.52	.69	.86	.99	70.5	20.7	6.19	.70	.88	1.00
	5000	2360	78.8	23.1	4.45	.70	.88	1.00	76.6	22.4	4.97	.71	.89	1.00	74.3	21.8	5.55	.72	.91	1.00	71.8	21.0	6.23	.74	.93	1.00
67°F (19°C)	3800	1795	80.1	23.5	4.47	.50	.61	.75	77.8	22.8	4.99	.51	.62	.76	75.5	22.1	5.58	.51	.63	.77	72.9	21.4	6.25	.51	.64	.79
	4400	2075	81.6	23.9	4.51	.52	.64	.80	79.3	23.2	5.03	.52	.65	.81	76.8	22.5	5.61	.53	.66	.83	74.2	21.7	6.28	.53	.67	.85
	5000	2360	82.9	24.3	4.54	.53	.67	.84	80.5	23.6	5.05	.54	.68	.86	78.0	22.9	5.64	.54	.70	.88	75.3	22.1	6.31	.55	.71	.90
71°F (22°C)	3800	1795	84.9	24.9	4.59	.38	.49	.59	82.6	24.2	5.11	.38	.49	.60	80.1	23.5	5.70	.38	.49	.61	77.4	22.7	6.37	.38	.50	.62
	4400	2075	86.5	25.4	4.63	.39	.50	.62	84.1	24.6	5.14	.39	.51	.63	81.5	23.9	5.73	.39	.51	.64	78.7	23.1	6.40	.39	.52	.65
	5000	2360	87.8	25.7	4.66	.39	.52	.65	85.2	25.0	5.17	.39	.53	.66	82.6	24.2	5.77	.40	.53	.67	79.8	23.4	6.44	.40	.54	.69

LCA/LGA150 - All Compressors Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			85°F (29°C)						95°F (35°C)						105°F (41°C)						115°F (46°C)					
			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)		
	Dry Bulb					Dry Bulb						Dry Bulb						Dry Bulb								
cfm	L/s	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	kBtu-h	kW	Input	75°F 24°C	80°F 27°C	85°F 29°C	
63°F (17°C)	3800	1795	139.4	40.9	11.02	.66	.81	.95	134.7	39.5	12.36	.67	.83	.96	129.6	38.0	13.90	.68	.85	.98	124.3	36.4	15.62	.70	.87	.99
	4400	2075	142.6	41.8	11.09	.69	.86	.99	137.8	40.4	12.45	.71	.88	1.00	132.7	38.9	13.98	.72	.90	1.00	127.1	37.2	15.71	.74	.92	1.00
	5000	2360	145.3	42.6	11.16	.73	.91	1.00	140.4	41.1	12.52	.74	.92	1.00	135.3	39.7	14.06	.76	.94	1.00	129.8	38.0	15.79	.78	.96	1.00
67°F (19°C)	3800	1795	147.7	43.3	11.22	.52	.64	.78	142.6	41.8	12.57	.53	.65	.79	137.2	40.2	14.10	.53	.66	.81	131.4	38.5	15.83	.54	.67	.83
	4400	2075	150.3	44.0	11.28	.54	.67	.83	145.2	42.6	12.64	.54	.68	.84	139.7	40.9	14.17	.55	.70	.86	133.8	39.2	15.91	.56	.71	.89
	5000	2360	152.6	44.7	11.34	.55	.70	.87	147.3	43.2	12.70	.56	.72	.89	141.7	41.5	14.23	.57	.74	.91	135.6	39.7	15.99	.58	.76	.93
71°F (22°C)	3800	1795	156.6	45.9	11.46	.39	.51	.62	151.4	44.4	12.81	.39	.51	.63	145.7	42.7	14.35	.40	.52	.64	139.6	40.9	16.10	.40	.53	.65
	4400	2075	159.5	46.7	11.53	.40	.52	.65	154.0	45.1	12.88	.40	.53	.66	148.2	43.4	14.43	.40	.54	.67	142.0	41.6	16.18	.41	.55	.69
	5000	2360	161.7	47.4	11.60	.41	.54	.68	156.1	45.7	12.96	.41	.55	.69	150.1	44.0	14.50	.41	.56	.71	143.8	42.1	16.25	.42	.57	.73

Cooling Ratings

LHA120 - One Compressor Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			65°F (18°C)					75°F (24°C)					85°F (29°C)					95°F (35°C)								
			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)		
	kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb				
				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C	75°F 24°C	80°F 27°C
63°F (17°C)	3200	1510	63.4	18.6	3.10	.66	.81	.96	61.6	18.1	3.48	.67	.83	.97	59.6	17.5	3.93	.68	.84	.99	57.5	16.9	4.44	.69	.86	1.00
	4000	1890	66.0	19.3	3.12	.72	.90	1.00	64.0	18.8	3.50	.73	.91	1.00	61.9	18.1	3.95	.74	.93	1.00	59.8	17.5	4.47	.76	.95	1.00
	4800	2265	68.0	19.9	3.14	.78	.97	1.00	66.1	19.4	3.52	.79	.98	1.00	64.1	18.8	3.97	.81	.99	1.00	62.0	18.2	4.49	.83	1.00	1.00
67°F (19°C)	3200	1510	67.4	19.8	3.13	.52	.64	.77	65.4	19.2	3.52	.53	.65	.79	63.2	18.5	3.97	.53	.66	.80	61.0	17.9	4.48	.54	.67	.82
	4000	1890	69.6	20.4	3.16	.55	.69	.86	67.5	19.8	3.54	.56	.70	.88	65.2	19.1	3.99	.56	.72	.90	62.9	18.4	4.50	.57	.73	.92
	4800	2265	71.2	20.9	3.17	.58	.75	.94	69.0	20.2	3.55	.59	.77	.95	66.7	19.5	4.00	.60	.79	.97	64.2	18.8	4.52	.61	.81	.99
71°F (22°C)	3200	1510	71.9	21.1	3.18	.39	.51	.62	69.7	20.4	3.56	.40	.51	.63	67.4	19.8	4.01	.40	.52	.64	65.0	19.0	4.53	.40	.52	.65
	4000	1890	74.1	21.7	3.20	.40	.54	.67	71.7	21.0	3.58	.41	.54	.68	69.3	20.3	4.03	.41	.55	.69	66.8	19.6	4.55	.41	.56	.71
	4800	2265	75.5	22.1	3.21	.41	.57	.73	73.1	21.4	3.60	.42	.58	.74	70.6	20.7	4.04	.42	.59	.76	68.0	19.9	4.57	.43	.60	.78

LHA120 -All Compressors Operating

Entering Wet Bulb Temp.	Total Air Volume		Outdoor Air Temperature Entering Condenser Coil																							
			85°F (29°C)					95°F (35°C)					105°F (41°C)					115°F (46°C)								
			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)			Total Cooling Capacity		Comp. Motor Watts	Sensible to Total Ratio (S/T)		
	kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb			kBtu/h	kW	Input	Dry Bulb				
				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C				75°F 24°C	80°F 27°C	85°F 29°C	75°F 24°C	80°F 27°C
63°F (17°C)	3200	1510	117.4	34.4	7.76	.70	.85	.98	113.2	33.2	8.78	.71	.86	.99	108.9	31.9	9.94	.72	.88	1.00	104.1	30.5	11.26	.74	.91	1.00
	4000	1890	122.0	35.8	7.80	.75	.93	1.00	117.8	34.5	8.83	.77	.95	1.00	113.2	33.2	10.00	.79	.97	1.00	108.4	31.8	11.32	.81	.99	1.00
	4800	2265	126.1	37.0	7.85	.81	.99	1.00	121.9	35.7	8.87	.83	1.00	1.00	117.5	34.4	10.05	.85	1.00	1.00	112.9	33.1	11.38	.88	1.00	1.00
67°F (19°C)	3200	1510	124.6	36.5	7.84	.55	.68	.81	120.2	35.2	8.85	.55	.69	.83	115.4	33.8	10.03	.56	.70	.85	110.3	32.3	11.35	.57	.71	.87
	4000	1890	128.6	37.7	7.88	.58	.73	.89	124.0	36.3	8.90	.59	.74	.91	118.9	34.8	10.08	.60	.76	.94	113.6	33.3	11.41	.61	.45	.96
	4800	2265	131.5	38.5	7.91	.61	.79	.96	126.6	37.1	8.94	.62	.81	.98	121.5	35.6	10.12	.63	.83	.99	116.1	34.0	11.44	.65	.85	1.00
71°F (22°C)	3200	1510	132.9	38.9	7.92	.41	.53	.65	128.1	37.5	8.95	.41	.54	.66	123.1	36.1	10.13	.41	.54	.67	117.8	34.5	11.45	.42	.55	.69
	4000	1890	136.7	40.1	7.97	.42	.57	.71	131.7	38.6	9.00	.42	.57	.72	126.4	37.0	10.18	.43	.58	.74	120.8	35.4	11.51	.43	.59	.76
	4800	2265	139.3	40.8	7.99	.43	.60	.77	134.1	39.3	9.04	.44	.61	.79	128.6	37.7	10.22	.44	.62	.81	122.8	36.0	11.54	.45	.64	.83

Heating Ratings

LHA120 - Heating Capacity

Indoor Coil Air Volume 70°F db (21°C db)		Air Temperature Entering Outdoor Coil														
		65°F (18°C)		45°F (7°C)		25°F (-4°C)		5°F (-15°C)		-15°F (-28°C)						
		Total Heating Capacity		Comp. Motor Watts Input	Total Heating Capacity		Comp. Motor Watts Input	Total Heating Capacity		Comp. Motor Watts Input	Total Heating Capacity		Comp. Motor Watts Input	Total Heating Capacity		Comp. Motor Watts Input
L/s	cfm	kW	Btuh		kW	Btuh		kW	Btuh		kW	Btuh		kW	Btuh	
1510	3200	42.7	145,700	9430	32.9	112,200	8840	22.6	77,200	8225	15.5	53,000	7450	7.8	26,700	5630
1890	4000	43.1	147,200	8650	33.3	113,700	8060	23.1	78,700	7445	16.0	54,500	6670	8.3	28,200	4850
2265	4800	44.2	150,700	8230	34.3	117,200	7640	24.1	82,200	7025	17.0	58,000	6250	9.3	31,700	4430

Note - Heating capacities include the effect of defrost cycles in the temperature range where they occur.

LHA120 - Heating Performance

*Outdoor Temperature		Compressor Motor Watts Input	Total Output	
°F	°C		Btuh	kW
65	18	8650	147,200	43.1
60	16	8510	139,400	40.9
55	13	8370	131,500	38.5
50	10	8235	123,700	36.3
47	8	8150	119,000	34.9
45	7	8060	113,700	33.3
40	4	7830	100,300	29.4
35	2	7600	87,000	25.5
30	-1	7520	82,800	24.3
25	-4	7445	78,700	23.1
20	-7	7365	74,500	21.8
17	-8	7320	72,000	21.1
15	-9	7265	68,900	20.2
10	-12	7125	61,000	17.9
5	-15	6670	54,500	16.0
0	-18	6215	47,900	14.0
-5	-21	5760	41,300	12.1
-10	-23	5305	34,700	10.2
-15	-26	4850	28,200	8.3
-20	-29	4390	21,600	6.3

*Outdoor temperature at 70% relative humidity. Indoor temperature at 70°F (21°C).

Blower Data - Base Unit

Blower table includes resistance for LCA102 Base Unit only with dry indoor coil and air filters in place.

FOR ALL UNITS ADD:

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

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

See page 27 for wet coil and option/accessory air resistance data and blower motors and drives.

MINIMUM AIR VOLUME REQUIRED FOR USE WITH OPTIONAL ELECTRIC HEAT

LCA102 models require 3000 cfm (1415 L/s) minimum air with electric heat.

LCA120 & 150 models require 4000 cfm (1225 L/s) minimum air with electric heat.

**Bold Italics indicate 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)		2.45 (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)	RPM
2250 (1060)	455	.30 (22)	555	.45 (34)	640	.60 (45)	720	.80 (.60)	790	1.00 (.75)	855	1.20 (.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	.40 (30)	575	.55 (41)	660	.70 (52)	735	.90 (.67)	805	1.10 (.82)	870	1.30 (.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	.45 (34)	595	.65 (48)	675	.85 (63)	750	1.05 (.78)	820	1.25 (.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	.55 (41)	615	.75 (56)	695	.95 (.71)	770	1.20 (.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	.65 (48)	640	.90 (67)	715	1.10 (.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	.80 (60)	665	1.05 (78)	740	1.25 (.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	.95 (71)	690	1.20 (.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 (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 (3.21)	
4250 (2005)	665	1.30 (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)	950	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 Outputs				RPM Range					
Nominal hp	Maximum hp	Nominal kW	Maximum kW	Drive 1	Drive 2	Drive 3	Drive 4	Drive 5	Drive 6
2	2.3	1.5	1.7	680 - 940	--	850 - 1130	--	--	--
*3	3.45	2.2	2.6	680 - 940	--	*850 - 1130	--	1105 - 1410	--
5	5.75	3.7	4.3	--	--	--	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.

*Base Unit

Field/Factory Installed Accessory Air Resistance

Air Volume		Total Resistance - Inches water gauge (Pa)					
		Wet Indoor Coil		Gas Heat Exchanger (LGA Models)		Electric Heat	Economizer
cfm	L/s	102S, 120S, 150S	120H	Low Fire	High Fire		
2250	1060	.06 (15)	.10 (25)	.05 (12)	.09 (22)	.01 (2)	.035 (9)
2500	1180	.08 (20)	.12 (30)	.05 (12)	.11 (27)	.01 (2)	.04 (10)
2750	1300	.09 (22)	.14 (35)	.06 (15)	.13 (32)	.01 (2)	.045 (11)
3000	1415	.10 (25)	.16 (40)	.08 (17)	.16 (40)	.02 (5)	.05 (12)
3250	1535	.11 (27)	.19 (47)	.08 (20)	.19 (47)	.02 (5)	.06 (15)
3500	1650	.13 (32)	.21 (52)	.09 (22)	.22 (55)	.03 (7)	.07 (17)
3750	1770	.14 (35)	.23 (57)	.10 (25)	.26 (65)	.03 (7)	.075 (19)
4000	1890	.16 (40)	.26 (65)	.11 (27)	.30 (75)	.04 (10)	.08 (20)
4250	2005	.17 (42)	.28 (70)	.12 (30)	.34 (85)	.04 (10)	.09 (22)
4500	2125	.18 (45)	.31 (77)	.13 (32)	.38 (94)	.05 (12)	.10 (25)
4750	2240	.20 (50)	.33 (82)	.14 (35)	.42 (104)	.05 (12)	.11 (27)
5000	2360	.22 (55)	.36 (90)	.16 (40)	.47 (117)	.06 (15)	.12 (30)
5250	2475	.24 (60)	.39 (97)	.18 (45)	.52 (129)	.06 (15)	.13 (32)
5500	2595	.26 (65)	.42 (104)	.20 (50)	.57 (142)	.07 (18)	.14 (35)
5750	2715	.28 (70)	.45 (112)	.22 (55)	.62 (154)	.07 (17)	.15 (37)
6000	2830	.30 (75)	.48 (119)	.24 (60)	.68 (169)	.08 (20)	.16 (40)

Ceiling Diffuser Air Resistance

Unit Size	Air Volume		Total Resistance - inches water gauge (Pa)			
			RTD11 Step-Down Diffuser			FD11 Flush Diffuser
	cfm	L/s	2 Ends Open	1 Side, 2 Ends Open	All Ends & Sides Open	
102 & 120 Models	3600	1700	.36 (90)	.28 (70)	.23 (57)	.15 (37)
	3800	1795	.40 (99)	.32 (80)	.26 (65)	.18 (45)
	4000	1890	.44 (109)	.36 (90)	.29 (72)	.21 (52)
	4200	1980	.49 (122)	.40 (99)	.33 (82)	.24 (60)
	4400	2075	.54 (134)	.44 (109)	.37 (92)	.27 (67)
	4600	2170	.60 (149)	.49 (122)	.42 (104)	.31 (77)
	4800	2265	.65 (162)	.53 (132)	.46 (114)	.35 (87)
	5000	2360	.69 (172)	.58 (144)	.50 (124)	.39 (97)
	5200	2455	.75 (186)	.62 (154)	.54 (134)	.43 (107)
150 Model	4200	1980	.22 (55)	.19 (47)	.16 (40)	.10 (25)
	4400	2075	.28 (70)	.24 (60)	.20 (50)	.12 (30)
	4600	2170	.34 (85)	.29 (72)	.24 (60)	.15 (37)
	4800	2265	.40 (99)	.34 (85)	.29 (72)	.19 (47)
	5000	2360	.46 (114)	.39 (97)	.34 (85)	.23 (57)
	5200	2455	.52 (129)	.44 (109)	.39 (97)	.27 (67)
	5400	2550	.58 (144)	.49 (122)	.43 (107)	.31 (77)
	5600	2645	.64 (159)	.54 (134)	.47 (117)	.35 (87)
	5800	2735	.70 (174)	.59 (147)	.51 (127)	.39 (97)

Power Exhaust Fans Performance

Return Air System Static Pressure		Air Volume Exhausted	
in. w.g.	Pa	cfm	L/s
.00	0	4200	1980
.05	12	3970	1875
.10	25	3750	1770
.15	37	3520	1660
.20	50	3300	1560
.25	62	3080	1455
.30	75	2860	1350
.35	87	2640	1245

Ceiling Diffuser Air Throw Data

Model No.	Air Volume		*Effective Throw Range			
			RTD11 Step-Down		FD11 Flush	
	cfm	L/s	ft.	m	ft.	m
102 & 120	4400	2075	34 - 42	10 - 13	32 - 40	10 - 12
	4950	2335	38 - 47	12 - 14	36 - 45	11 - 14
	5500	2595	43 - 52	13 - 16	40 - 50	12 - 15
150	4200	1980	39 - 46	12 - 14	40 - 48	12 - 15
	5000	2360	41 - 50	12 - 15	43 - 52	13 - 16
	5800	2735	43 - 52	13 - 16	45 - 54	14 - 16

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

Guide Specifications

General - Furnish and install single package air to air DX mechanical cooling system or cooling and gas fired heating system, complete with automatic controls. The single package unit shall be a standard product of a firm regularly engaged in the manufacture of heating-cooling equipment. The manufacturer shall have parts and service available throughout the U.S. and Canada. The equipment shall be shipped completely factory assembled, precharged, piped and wired internally ready for field connections. The manufacturer shall test operate system at the factory before shipment.

Air Distribution - Equipment shall be capable of bottom (down-flow) or side (horizontal) handling of conditioned air. Horizontal air shall require optional horizontal conversion kit.

Approvals - All electrical components shall have E.T.L. and CGA listing. All wiring shall be in compliance with NEC and CEC.

Equipment Warranty - Aluminized steel heat exchangers shall have a limited warranty for a full ten years. Compressors have a limited warranty for a full five years. All other components have a limited warranty for one year.

Heating System (LGA Models) - Tubular heat exchanger and inshot type gas burners shall be constructed of aluminized steel. Controls shall consist of direct spark ignition, electronic flame sensor controls, flame rollout switch, limit controls and automatic redundant dual gas valve with staging control and combustion air proving switch on induced draft blower. Unit shall be available for use with LPG/propane as an option. Heat exchanger shall be removable for servicing. Complete service access shall be provided for controls and wiring. Shall be E.T.L./CGA design certified for outdoor installation.

Cooling System - The coils shall be nonferrous construction with aluminum fins mechanically bonded to durable copper tubes. Coils shall be pressure leak tested. Compressor shall be resiliently mounted, have overload protection and crankcase heater(s). The refrigeration system shall have discharge, suction and liquid line service gauge ports, high pressure switch(es), low pressure switch(es) driers, freezestats, and full refrigerant charge. All models shall have low ambient operation down to 0°F (-17.7°C). All models shall be rated in accordance with ARI Standard 210/240-94 or 340/360-93 (LCA/LGA) and ARI Standard 240-96 (LHA).

Cabinet - Shall be galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal. Cabinet panels where conditioned air is handled shall be fully insulated to prevent sweating and minimize sound. Openings shall be provided for power connection entry. Indoor coil condensate drain extended outside cabinet shall be provided. Lifting holes shall be provided for rigging. Bottom power and gas (LGA) entry shall be provided.

Service Access - Cabinet panels shall be hinged with tool-less access for compressor/heating/controls, blower and air filter/economizer compartments.

Supply Air Blowers - Centrifugal supply air blower shall be driven by a belt drive motor with ball bearings and adjustable drive. Blower assembly shall be accessible for servicing. Belt drive motor mount base shall permit ease of motor changeover and belt tension adjustment. Blower wheel shall be statically and dynamically balanced.

Outdoor Coil Fan - Direct drive propeller type outdoor coil fan shall discharge vertically and be direct driven by a ½ hp (W) motor. Fan motor shall have ball bearings and be permanently lubricated and inherently protected. Fan shall have a safety guard.

Air Filters - Disposable 2 inch (51 mm) thick pleated filters shall be furnished.

Optional Accessories

Additive Electric Heaters - (LCA/LHA Models) Electric heaters shall be available for field installation. Heating elements shall be nichrome

bare wire exposed directly to the air stream. Time delays shall bring the elements on and off in sequence with a time delay between each element. Limit controls shall provide overload and short circuit protection.

Ceiling Diffusers - Furnish and install a (flush or stepdown) optional combination ceiling supply and return air diffuser. Supply and return transitions shall be available, for field installation in the roof mounting frame, to provide duct connections to the diffuser.

Coil Guards - Furnish and install galvanized steel coil guards.

Dirty Filter Switch - Furnish and install pressure switch that indicates dirty filter.

Disconnect - Furnish and factory install unit disconnect switch.

Economizer Section - Furnish and install economizer complete with recirculated air dampers, outside air dampers and controls. Low leakage dampers shall ride in nylon bearings. The economizer section shall provide for the introduction of outdoor air for minimum ventilation and free cooling. Integrated economizer control shall allow compressors to cycle for additional cooling, as needed. Damper actuator shall be opposing gear driven, 24 volt, fully modulating design. Plug-in control board (IMC) shall consist of adjustable minimum positioner, enthalpy setpoint and DIP switches for setting type of control log used. Economizer control options shall consist of sensible temperature, global, outdoor enthalpy and differential enthalpy (outdoor and return air). Optional outdoor air hood (required) with filters shall be galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal. Economizer shall be available for field installation.

Gravity Exhaust Dampers - Pressure operated dampers shall be available for field installation. Extruded aluminum dampers shall prevent blow-back and outdoor air infiltration during off cycle.

Hail Guards - Furnish and install heavy gauge, painted steel hail guards.

Horizontal Gravity Exhaust Dampers - Pressure operated dampers shall be available for field installation in the return air duct. Extruded aluminum dampers shall prevent blow-back and outdoor air infiltration during off cycle.

Indoor Air Quality Sensor - Furnish and field install sensor to monitor CO2 levels, relays information to Integrated Module Control (IMC) which adjusts economizer dampers proportionately to the pollutant level.

Outdoor Air Damper Section - Optional outdoor dampers shall be available to provide outdoor air requirements of up to 25%. Models shall be available for manual or automatic operation. Dampers shall be opposing gear driven design. Motorized damper section shall install internal to the unit. Optional outdoor air hood (required) with filters shall be galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal. Dampers shall be available for field installation.

Power Exhaust Fan - Shall be available for all models with economizer (down-flow applications only). Direct drive propeller type fan shall exhaust air through optional gravity exhaust damper (required). Motor shall be overload protected. Fan shall be field installed between economizer and gravity exhaust dampers.

Guide Specifications

Roof Mounting Frame - Furnish and install a steel roof mounting frame for bottom discharge and return air duct connection. It shall mate to the bottom perimeter of the equipment. When flashed into the roof it shall make a unit mounting curb and provide weatherproof duct connection and entry into the conditioned air. Flashing shall be the responsibility of the roofing contractor. Frame shall be approved by U.S. National Roofing Contractors Association.

Service Outlets - Furnish and factory install dual 115 volt, 15 amp GFCI type service outlets. Wiring shall be field provided.

Smoke Detectors - Furnish and field install photoelectric type smoke detector in either or both return air section and supply air section.

Terminal Block (LCA/LHA Models) - Shall be required for units without disconnect switch but with single point power supply and electric heat.

Unit Fuse Block (LCA/LHA Models) - Shall be required for units with single point power supply and electric heat.

Dimensions - LCA Models - inches (mm)

Shown with Optional Economizer Dampers, Power Exhaust Fans, Convenience Outlet, Unit Disconnect
Center of Gravity - inches (mm)

Model No.	AA		BB		CC		DD	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
LCA102 Base Unit	270	122	250	113	280	127	320	145
LCA102 Max. Unit	340	154	300	136	330	150	380	172
LCA120 Base Unit	270	122	250	113	290	132	320	145
LCA120 Max. Unit	350	159	310	141	340	154	390	177
LCA150 Base Unit	280	127	260	118	290	132	340	154
LCA150 Max. Unit	350	159	300	136	340	154	400	181

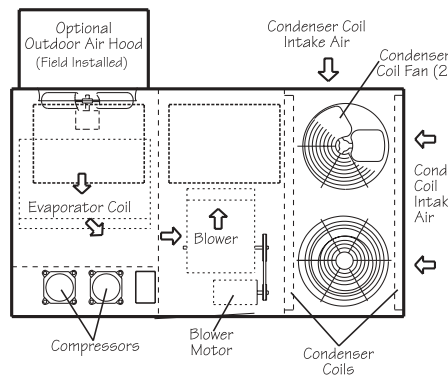
Base Unit - The standard unit with NO OPTIONS.

Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)

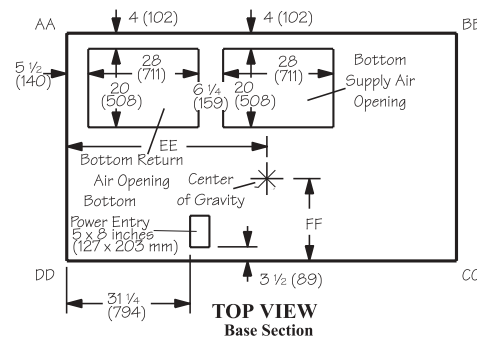
Model No.	EE		FF	
	in.	mm	in.	mm
LCA102 Base Unit	47	1194	21 1/2	546
LCA102 Max. Unit	45 1/2	1156	23 1/2	597
LCA120 Base Unit	47	1194	21 1/2	546
LCA120 Max. Unit	45 1/2	1156	23 1/2	597
LCA150 Base Unit	46	1168	21	533
LCA150 Max. Unit	45	1143	23	584

Base Unit - The standard unit with NO OPTIONS.

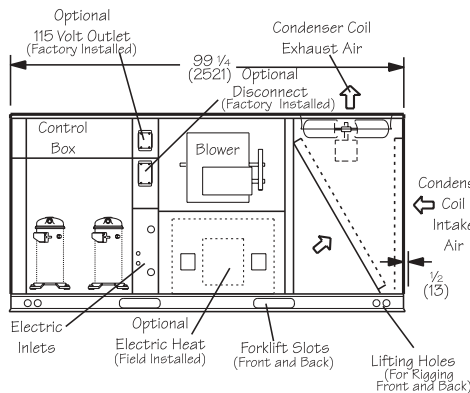
Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)



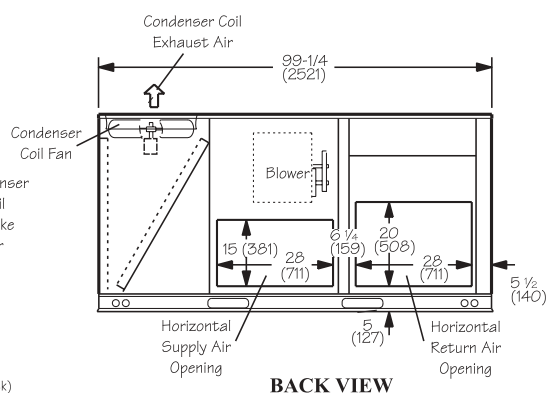
TOP VIEW



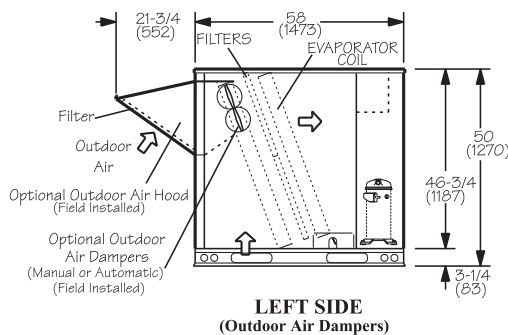
**TOP VIEW
Base Section**



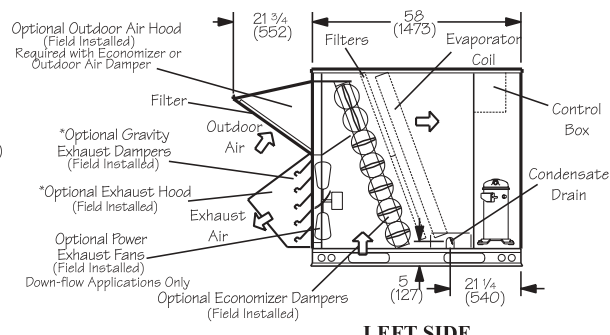
FRONT VIEW



BACK VIEW



**LEFT SIDE
(Outdoor Air Dampers)**



**LEFT SIDE
(Economizer)**

*NOTE * Field Installed in Return Air Duct for Horizontal Applications.

Dimensions - LGA Models - inches (mm)

Shown with Optional Economizer Dampers, Power Exhaust Fans, Convenience Outlet, Unit Disconnect
Corner Weights - lbs. (kg)

Model No.	AA		BB		CC		DD	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
LGA102 Base Unit	280	127	260	118	300	136	330	150
LGA102 Max. Unit	350	159	320	145	350	159	400	181
LGA120 Base Unit	290	132	260	118	300	136	330	150
LGA120 Max. Unit	360	163	330	150	360	163	410	186
LGA150 Base Unit	300	136	270	122	300	136	350	159
LGA150 Max. Unit	370	168	320	145	350	159	420	191

Base Unit - The standard unit with NO OPTIONS.

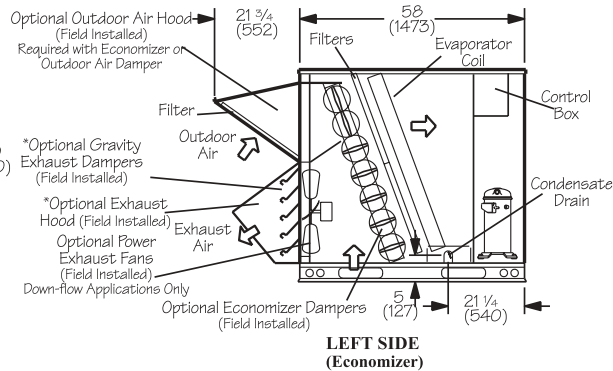
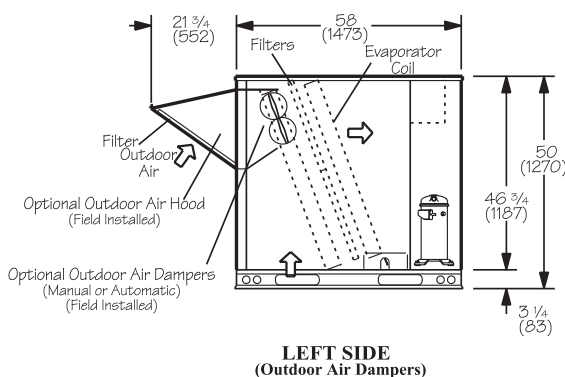
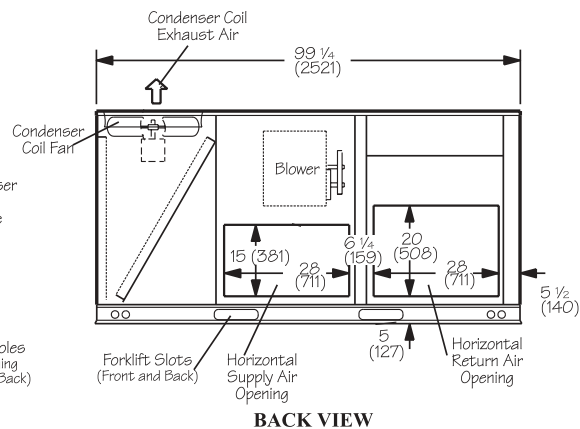
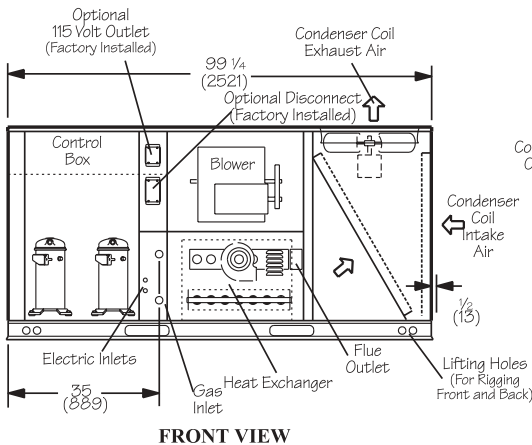
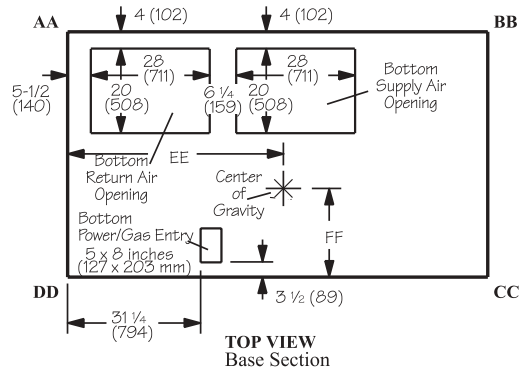
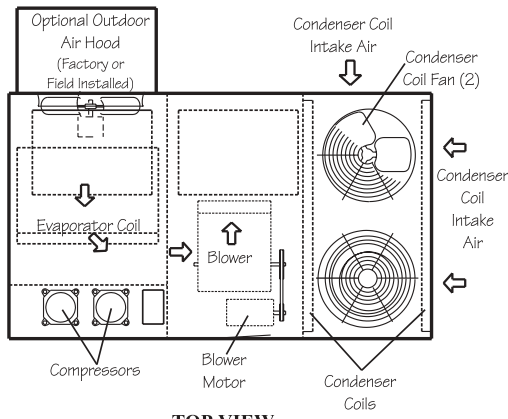
Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)

Center of Gravity - inches (mm)

Model No.	EE		FF	
	in.	mm	in.	mm
LGA102 Base Unit	47	1194	21 1/2	546
LGA102 Max. Unit	46	1168	23 1/2	597
LGA120 Base Unit	47	1194	21 1/2	546
LGA120 Max. Unit	46	1168	23 1/2	597
LGA150 Base Unit	46	1168	21	533
LGA150 Max. Unit	45	1143	23	584

Base Unit - The standard unit with NO OPTIONS.

Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)



*NOTE * Field Installed in Return Air Duct for Horizontal Applications.

Dimensions - LHA Model - inches (mm)

Shown with Optional Economizer Dampers, Power Exhaust Fans, Convenience Outlet, Unit Disconnect
Center of Gravity - inches (mm)

Model No.	AA		BB		CC		DD	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
LHA120 Base Unit	300	136	270	122	310	141	350	159
LHA120 Max. Unit	360	163	320	145	350	159	410	186

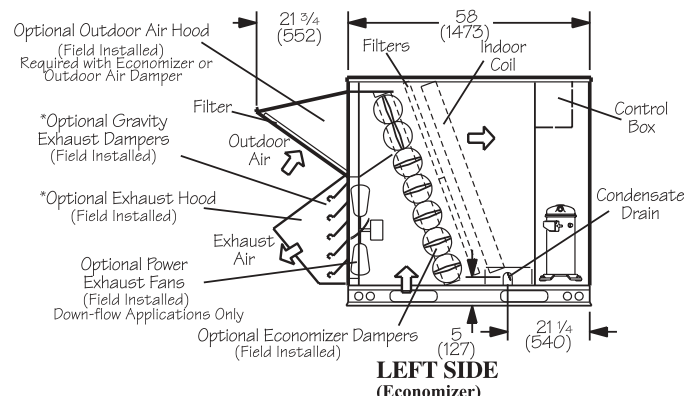
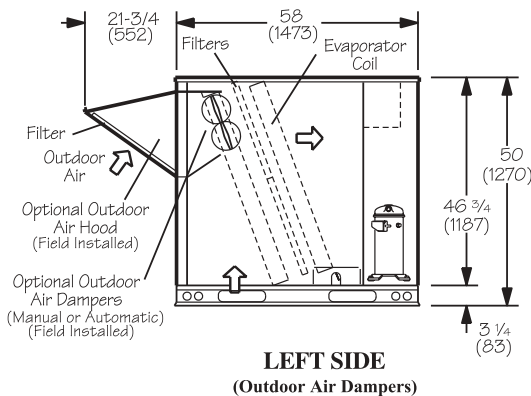
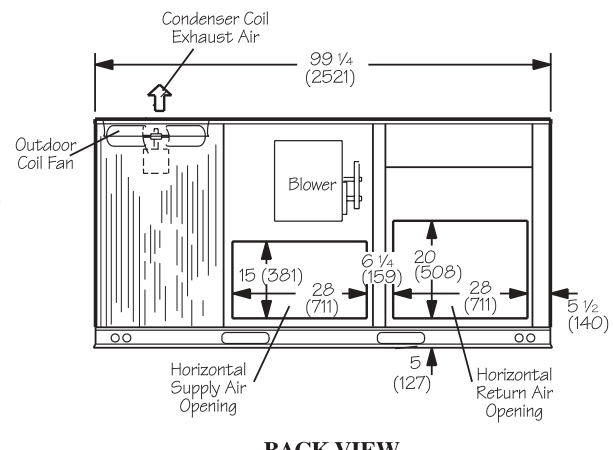
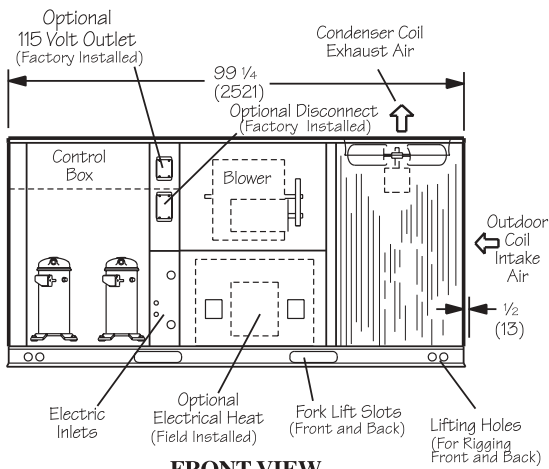
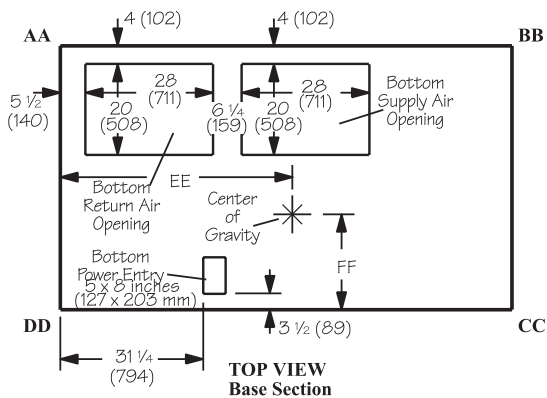
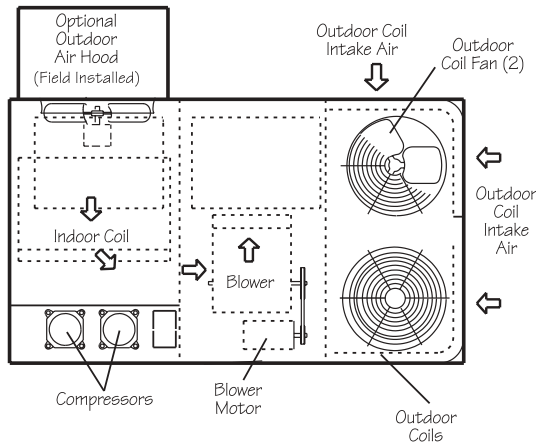
Base Unit - The standard unit with NO OPTIONS.

Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)

Model No.	EE		FF	
	in.	mm	in.	mm
LHA120 Base Unit	46	1168	21 1/2	546
LHA120 Max. Unit	45	1143	24 1/2	622

Base Unit - The standard unit with NO OPTIONS.

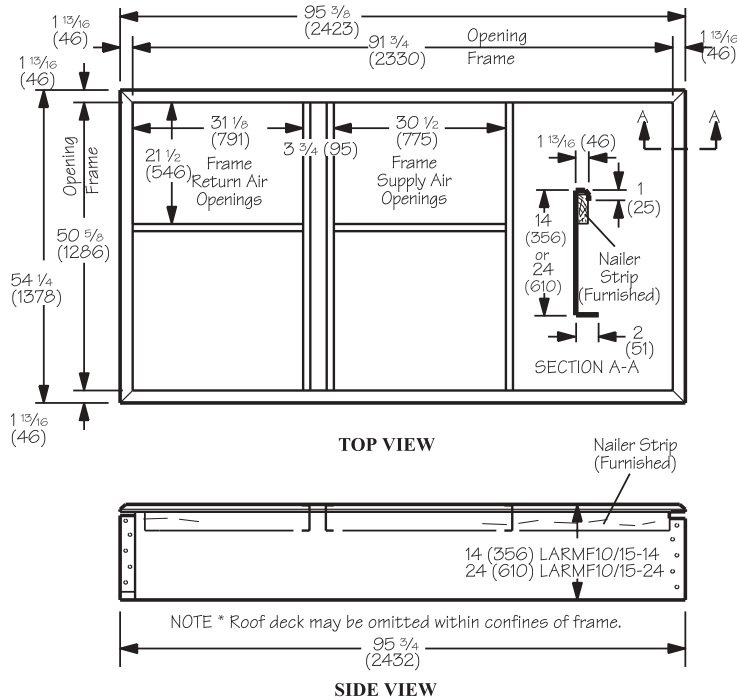
Max. Unit - The standard unit with ALL OPTIONS installed. (Economizer, Power Exhaust Fans, High Input Heating and Controls)



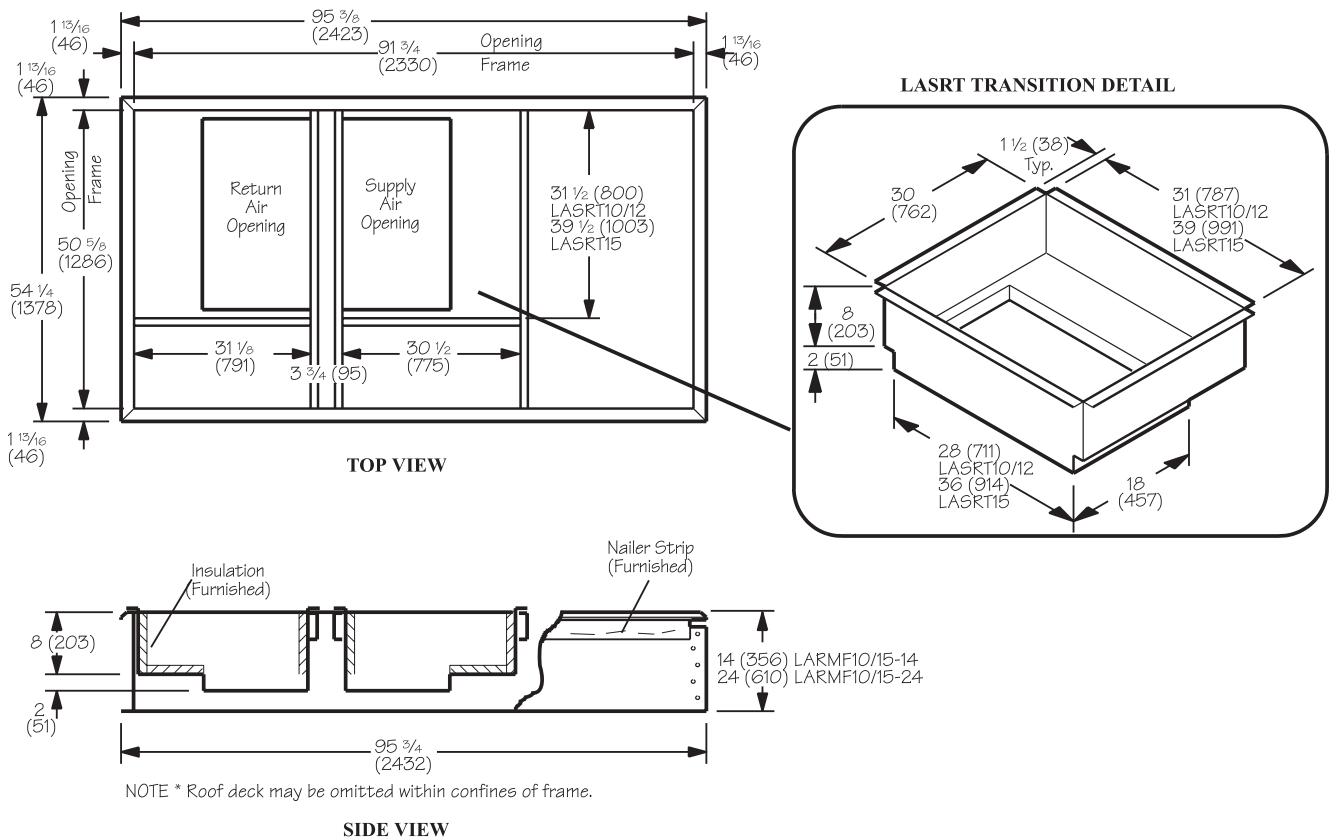
*NOTE * Field Installed in Return Air Duct for Horizontal Applications.

Accessory Dimensions - inches (mm)

LARMF10/15-14 and LARMF10/15-24 - Roof Mounting Frame (Double Duct Opening)



LARMF10/15-14 and LARMF10/15-24 - Roof Mounting Frame With LASRT Supply & Return Air Transitions for FD11 & RTD11 Ceiling Diffusers



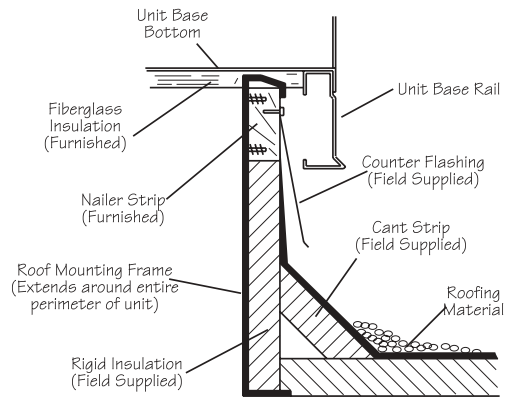
Roof Mounting Frame Specifications

Roof Mounting frame is rigid enough to be spanned over its entire length or cantilevered if supported on both sides of center of gravity

Roof Mounting Frame	LARMF10/15-14	LARMF10/15-24
*Moment of inertia I (in. ⁴) (cm ⁴)	39 (1634)	160 (6639)
*Section modulus I/C (in. ³) (cm ³)	5.5 (90)	13.1 (512)
Frame weight (lb/ft) (kg/m) of length	5.5 (8.2)	8.5 (12.7)
Design strength (psi) (kPa)	20,000 (137,900)	

*Includes both sides of frame

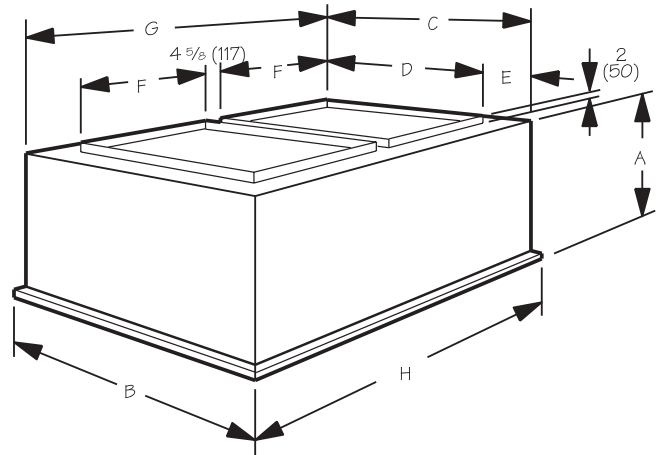
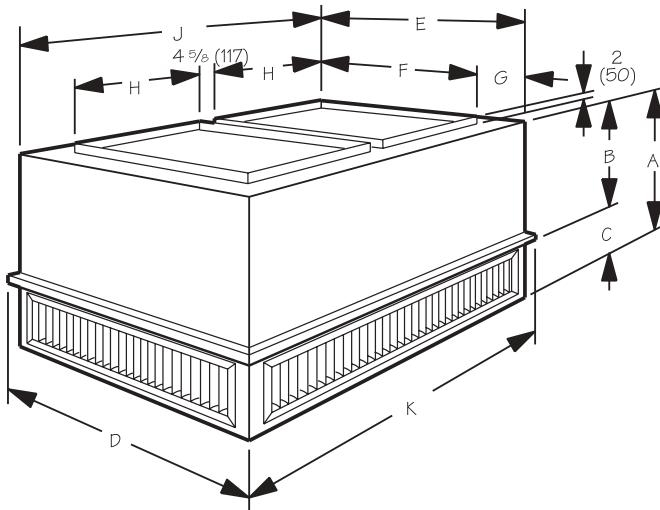
TYPICAL FLASHING DETAIL



Accessory Dimensions - inches (mm)

RTD11-135 & RTD11-185
Step-Down Ceiling Diffusers

FD11-135 & FD11-185
Flush Ceiling Diffusers



Model No.	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	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

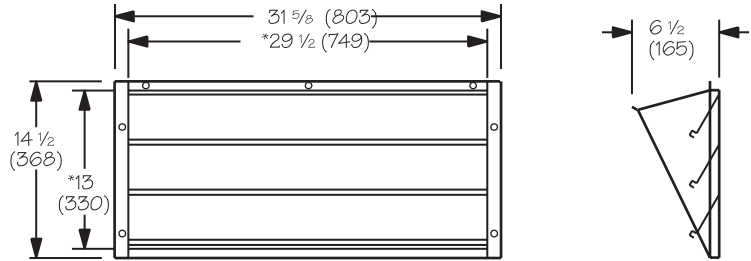
Model No.	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
FD11-135	24 1/8	613	35 5/8	905	33 5/8	854	28	711
FD11-185	30 1/8	765	47 5/8	1210	45 5/8	1159	36	914

Model No.	F		G		H		J		K	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RTD11-135	28	711	2 13/16	71	18 457	45 5/8	1159	47 5/8	1210	
RTD11-185	36	915	4 13/16	122	18 457	45 5/8	1159	47 5/8	1210	

Model No.	E		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	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	

LAGEDH03/15 Horizontal Gravity Exhaust Dampers

(Field installed in return air duct)

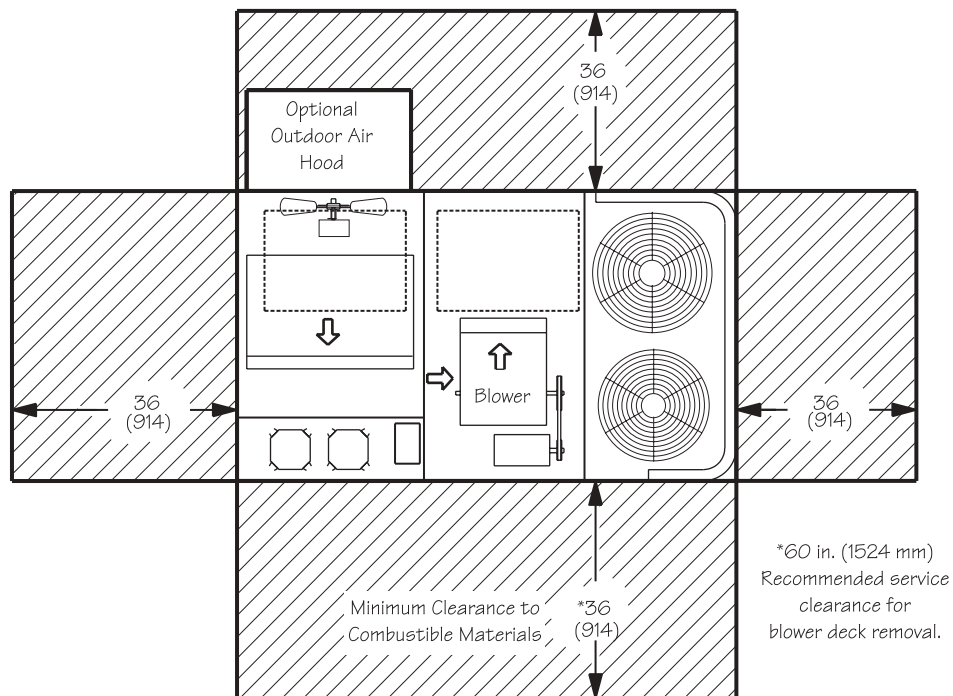


FRONT VIEW

SIDE VIEW

*NOTE - Opening size required in return air duct.

Installation Clearances - inches (mm)



NOTE - Top Clearance Unobstructed.

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

All specifications are subject to change without notice.



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