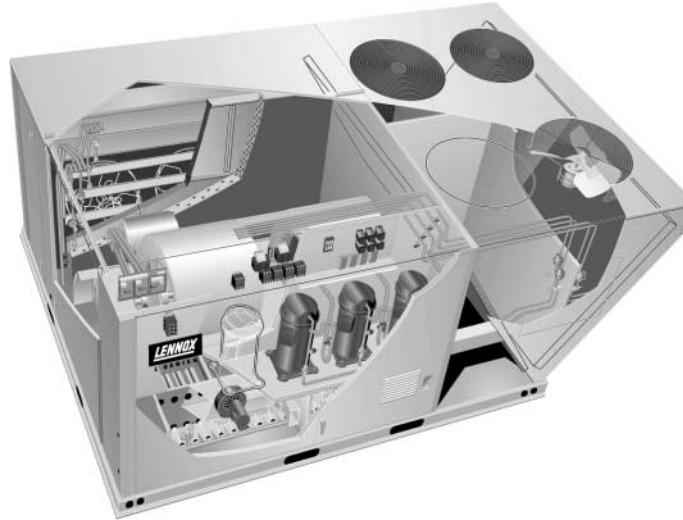


LGA300S

L SERIES™ PACKAGED GAS HEAT/COOLING UNITS

25 Ton (87.9 kW)

December 2000



MODEL NUMBER IDENTIFICATION

LGA300S 1M

Unit Type
L = Commercial Package Unit

Unit Type
G = Cooling w/ Gas Heat
C = Cooling Only (w/ opt. Electric Heat)
H = Heat Pump (w/ opt. Electric Heat)

Major Design Sequence
A = First Generation

Cooling Capacity Tons (kW)
300 = 25 (87.9)

Voltage
M = 380/420v-3 phase-50hz

Minor Revision Number

Heat Type
NOTE — This space is intentionally left blank, it will be filled in on unit nameplate depending on type of heat ordered.

Cooling Efficiency
S = Standard Efficiency



SPECIFICATIONS - LGA300S

Model Number		LGA300S			
Efficiency Type		Standard (S)			
Cooling Ratings	Gross Cooling Capacity — Btuh (kW)	274 200 (80.4)			
	★Net Cooling Capacity — Btuh (kW)	260 000 (76.2)			
	Total Unit Power (kW)	28.9			
	Coefficient of performance - Output/Input	2.6			
	★EER (Btuh/Watt)	9.0			
	★Integrated Part Load Value (Btuh/Watt)	9.5			
Refrigerant Charge Furnished (HCFC-22)	Circuit 1	11 lbs. 4 oz. (5.1 kg)			
	Circuit 2	11 lbs. 4 oz. (5.1 kg)			
	Circuit 3	11 lbs. 4 oz. (5.1 kg)			
	Circuit 4	11 lbs. 4 oz. (5.1 kg)			
Two Stage Heating Capacity (Natural or LPG/Propane Gas) (at sea level)	Heat Input Type		Standard (S)	High (H)	
	Input (low) — Btuh (kW)		152 000 (44.5)	274 500 (80.4)	
	Output (low) — Btuh (kW)		121 500 (35.6)	219 500 (64.3)	
	Input (High) — Btuh (kW)		234 000 (68.6)	423 000 (123.9)	
	Output (High) — Btuh (kW)		187 000 (54.8)	338 500 (99.2)	
	Thermal Efficiency		80.0%		
Gas Supply Connections nominal pipe thread - in.		1 in.			
Recommended Gas Supply Pressure — in. w.g. (kPa)	Natural	7 (1.7)			
	*LPG/Propane	11 (2.7)			
Evaporator Blower and Drive Selection	Blower wheel nominal dia. x width — in. (mm)		(2) 15 x 15 (381 x 381)		
	5 hp (3.7 kW) Motor & Drives	Nominal motor output — hp (kW)		5 (3.7)	
		Voltage & phase		380/420v - 3 phase with neutral	
		Rev/Min range		570 - 755, 710 - 870, 790 - 990	
	7.5 hp (5.6 kW) Motor & Drives	Nominal motor output — hp (kW)		7.5 (5.6)	
		Voltage & phase		380/420v - 3 phase with neutral	
		Rev/Min range		790 - 990, 870 - 1070	
	10 hp (8.6 kW) Motor & Drive	Nominal motor horsepower (kW)		10 (7.5)	
		Voltage & phase		380/420v - 3 phase with neutral	
		Rev/Min range		870 - 1070, 945 - 1140	
Evaporator Coil	Net face area — sq. ft. (m ²)		22.3 (2.07) total		
	Tube diameter — in. (mm) & Number of rows		3/8 (9.5) — 4		
	Fins per inch (m)		14 (551)		
	Drain connection Number & size — in. (mm) fpt		(1) 1 (25)		
	Expansion device type		Balanced Port Thermostatic Expansion Valve, removeable power head		
Condenser Coil	Net face area — sq. ft. (m ²)		56.5 (5.25) total		
	Tube diameter — in. (mm) & Number of rows		3/8 (9.5) — 2		
	Fins per inch (m)		20 (787)		
Condenser Fans	Diameter — in. (mm) & Number of blades		(4) 24 (610) — 3		
	Total Air volume — cfm (L/s)		13 300 (6275)		
	Motor horsepower (W)		(4) 1/2 (373)		
	Motor Rev/Min		895		
	Total Motor watts		1375		
Filters (furnished)	Type of filter		Disposable, commercial grade, pleated		
	Number and size — in. (mm)		(6) 24 x 24 x 2 (610 x 610 x 51)		
Electrical characteristics		380/420v - 3 phase with neutral			

★Rated test conditions are those included in Air Conditioning and Refrigeration (ARI) Standard 340/360 while operating at rated voltages and air volumes; 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. Integrated Part Load Value tested at 80°F (27°C) outdoor air temperature.

* For LPG/Propane units a field conversion kit is required and must be ordered extra.

NOTE — Capacity is net and includes evaporator blower motor heat deduction. Gross capacity does not include evaporator blower motor heat deduction.

ELECTRICAL DATA - LGA300S				
Line voltage data — 60 Hz — 3 phase			380/420v	
Compressors (2)	Rated load (A) each (total)		9 (36)	
	Locked rotor (A) each (total)		70 (280)	
Outdoor Coil Fan Motors (4)	Full load (A) (total)		6	
	Locked rotor (A) (total)		12	
Indoor Coil Blower Motor	Motor Output	hp	5	10
		kW	3.7	7.5
	Full load (A)		7.8	15.2
	Locked rotor (A)		46	84
Optional Power Exhaust Fans	(No.) Horsepower (W)		(2) 1/3 (249)	
	Full load (A) (total)		2.6	
	Locked rotor (A) (total)		4.8	
Electric Heat — Per Element (A)			15.7	

*Refer to local electrical codes to determine wire, fuse and disconnect size requirements. Use wires suitable for at least 167°F (75°C).

WEIGHT DATA			
Model Number	Description	Weight	
		lbs.	kg
Net Weights			
LGA300S	Net weight (Base unit)	2480	1125
	Net weight (Base unit with standard fire heat exchanger)	2535	1150
Shipping Weights (Add Factory Installed Options Weights To Base Unit Weights For Total Shipping Weight)			
LGA300S	Base unit with standard fire heat exchanger	2735	1241
LGA300S	High Fire Heat Exchanger (add to Base unit)	30	14
	Economizer (add to Base unit)	73	33
	Outdoor Air Damper (add to Base unit)	45	20
	Power Exhaust (add to Base unit)	62	19
LTL Packaging (less than truck load) (add to Base unit)		280	127

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.

LGA300S — PART LOAD COOLING CAPACITY - 50HZ

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			18°C (65°F)					24°C (75°F)					29°C (85°F)					35°C (95°F)								
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)		
			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb		
m³/s	cfm	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F				
17°C (63°F)	4.25	9000	41.1	140.2	7.72	.68	.88	1.00	39.9	136.0	8.58	.69	.90	1.00	38.5	131.4	9.58	.70	.92	1.00	37.2	126.8	10.70	.72	.94	1.00
	4.72	10000	41.8	142.6	7.76	.71	.93	1.00	40.6	138.4	8.64	.73	.94	1.00	39.3	134.0	9.64	.75	.97	1.00	37.9	129.2	10.76	.77	.99	1.00
	5.19	11000	42.4	144.8	7.82	.75	.97	1.00	41.2	140.6	8.70	.77	.98	1.00	40.0	136.4	9.70	.79	1.00	1.00	38.6	131.8	10.84	.81	1.00	1.00
19°C (67°F)	4.25	9000	43.3	147.6	7.90	.53	.66	.84	41.9	143.0	8.76	.53	.67	.86	40.5	138.2	9.76	.54	.68	.88	39.0	133.2	10.88	.55	.70	.91
	4.72	10000	43.8	149.4	7.94	.54	.69	.89	42.4	144.8	8.80	.55	.70	.91	41.0	140.0	9.80	.56	.72	.93	39.5	134.8	10.94	.57	.74	.96
	5.19	11000	44.3	151.2	7.98	.56	.72	.93	42.9	146.4	8.84	.57	.74	.95	41.4	141.4	9.86	.57	.76	.97	39.9	136.2	10.98	.58	.78	.99
22°C (71°F)	4.25	9000	45.9	156.6	8.12	.39	.51	.64	44.4	151.6	9.00	.39	.52	.65	42.9	146.4	9.98	.39	.53	.66	41.3	141.0	11.12	.39	.54	.68
	4.72	10000	46.4	158.4	8.16	.39	.53	.67	44.9	153.2	9.04	.40	.54	.68	43.4	148.0	10.04	.40	.55	.69	41.8	142.6	11.16	.40	.56	.71
	5.19	11000	46.8	159.8	8.20	.40	.55	.70	45.3	154.6	9.08	.40	.56	.71	43.8	149.4	10.06	.41	.57	.74	42.1	143.6	11.22	.41	.58	.76

LGA300S — FULL LOAD COOLING CAPACITY - 50HZ

Entering Wet Bulb Temperature	Total Air Volume		Outdoor Air Temperature Entering Outdoor Coil																							
			27°C (80°F)					35°C (95°F)					43°C (110°F)					52°C (125°F)								
			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)			Total Cooling Capacity		Comp Motor kW Input	Sensible To Total Ratio (S/T)		
			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb			kW	kBtuh		Dry Bulb		
m³/s	cfm	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F	24°C 75°F	27°C 80°F	29°C 85°F				
17°C (63°F)	4.25	9000	79.8	272.4	18.12	.76	.94	1.00	75.6	258.0	21.40	.78	.98	1.00	71.2	243.0	25.40	.81	1.00	1.00	66.5	226.8	30.18	.85	1.00	1.00
	4.72	10000	81.2	277.2	18.24	.79	.99	1.00	77.1	263.0	21.52	.82	1.00	1.00	72.7	248.2	25.56	.85	1.00	1.00	68.1	232.2	30.40	.90	1.00	1.00
	5.19	11000	82.6	282.0	18.36	.83	1.00	1.00	78.6	268.2	21.68	.86	1.00	1.00	74.3	253.6	25.72	.90	1.00	1.00	69.5	237.0	30.56	.94	1.00	1.00
19°C (67°F)	4.25	9000	83.9	286.2	18.48	.59	.74	.91	79.4	271.0	21.76	.60	.76	.94	74.4	254.0	25.78	.62	.79	.98	68.9	235.2	30.56	.64	.83	1.00
	4.72	10000	84.9	289.8	18.56	.61	.77	.96	80.4	274.2	21.88	.62	.80	.99	75.3	256.8	25.90	.64	.83	1.00	69.8	238.0	30.66	.66	.87	1.00
	5.19	11000	85.9	293.0	18.66	.62	.80	.99	81.2	277.2	21.96	.64	.84	1.00	76.1	259.6	25.96	.66	.87	1.00	70.5	240.6	30.76	.68	.92	1.00
22°C (71°F)	4.25	9000	88.9	303.4	18.94	.43	.57	.72	84.1	287.0	22.24	.43	.59	.74	78.8	269.0	26.28	.44	.60	.77	73.0	249.2	31.08	.48	.63	.80
	4.72	10000	89.9	306.8	19.02	.43	.59	.75	85.0	290.2	22.32	.44	.61	.78	79.6	271.6	26.34	.45	.63	.81	73.7	251.6	31.18	.46	.65	.85
	5.19	11000	90.7	309.4	19.10	.44	.62	.78	85.7	292.4	22.44	.45	.63	.81	80.3	274.0	26.42	.46	.65	.85	74.3	253.6	31.24	.47	.68	.90

BELT DRIVE BLOWER DATA - LGA300S

**BLOWER TABLE INCLUDES RESISTANCE FOR BASE UNIT ONLY WITH DRY INDOOR COIL & 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 Pages 23-24 for wet coil and option/accessory air resistance data.

Air Volume cfm (L/s)	TOTAL STATIC PRESSURE — Inches Water Gauge (Pa)																								
	.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)		
	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN	BHP (kW)	REV/ MIN
4000 (1890)	545	0.85 (0.63)	635	1.10 (0.82)	715	1.40 (1.04)	785	1.70 (1.27)	850	2.00 (1.49)	910	2.30 (1.72)	965	2.60 (1.94)	1020	2.90 (2.16)	1070	3.25 (2.42)	1115	3.55 (2.65)	1160	3.85 (2.87)	1205	4.15 (3.10)	
4250 (2005)	555	0.90 (0.67)	645	1.25 (0.93)	725	1.55 (1.16)	795	1.85 (1.38)	855	2.15 (1.60)	915	2.45 (1.83)	970	2.80 (2.09)	1025	3.10 (2.31)	1075	3.45 (2.57)	1120	3.75 (2.80)	1165	4.10 (3.06)	1210	4.45 (3.32)	
4500 (2125)	565	1.00 (0.75)	655	1.35 (1.01)	730	1.65 (1.23)	800	2.00 (1.49)	865	2.35 (1.75)	925	2.65 (1.98)	980	3.00 (2.24)	1030	3.30 (2.46)	1080	3.65 (2.72)	1130	4.05 (3.02)	1175	4.35 (3.25)	1215	4.70 (3.51)	
4750 (2240)	575	1.10 (0.82)	660	1.45 (1.08)	740	1.80 (1.34)	810	2.15 (1.60)	870	2.50 (1.87)	930	2.85 (2.13)	985	3.20 (2.39)	1040	3.55 (2.65)	1085	3.90 (2.91)	1135	4.25 (3.17)	1180	4.65 (3.47)	1225	5.00 (3.73)	
5000 (2360)	585	1.25 (0.93)	670	1.60 (1.19)	750	1.95 (1.45)	815	2.30 (1.72)	880	2.70 (2.01)	940	3.05 (2.28)	995	3.40 (2.54)	1045	3.80 (2.83)	1095	4.15 (3.10)	1140	4.50 (3.36)	1185	4.90 (3.66)	1230	5.30 (3.95)	
5250 (2475)	595	1.35 (1.01)	680	1.70 (1.27)	755	2.10 (1.57)	825	2.50 (1.87)	890	2.90 (2.16)	945	3.25 (2.42)	1000	3.65 (2.72)	1050	4.00 (2.98)	1100	4.40 (3.28)	1150	4.80 (3.58)	1195	5.20 (3.88)	1235	5.60 (4.18)	
5500 (2595)	605	1.45 (1.08)	690	1.85 (1.38)	765	2.25 (1.68)	835	2.65 (1.98)	895	3.05 (2.28)	955	3.45 (2.57)	1010	3.85 (2.87)	1060	4.25 (3.17)	1110	4.70 (3.51)	1155	5.10 (3.80)	1200	5.50 (4.10)	1240	5.90 (4.40)	
5750 (2715)	615	1.60 (1.19)	700	2.00 (1.49)	775	2.45 (1.83)	840	2.85 (2.13)	905	3.25 (2.42)	960	3.65 (2.72)	1015	4.10 (3.06)	1065	4.50 (3.36)	1115	4.95 (3.69)	1160	5.35 (3.99)	1205	5.80 (4.33)	1250	6.25 (4.66)	
6000 (2830)	630	1.75 (1.31)	710	2.15 (1.60)	785	2.60 (1.94)	850	3.05 (2.28)	910	3.45 (2.57)	970	3.90 (2.91)	1025	4.35 (3.25)	1075	4.80 (3.58)	1120	5.20 (3.88)	1170	5.65 (4.21)	1215	6.10 (4.55)	1255	6.55 (4.89)	
6250 (2950)	640	1.90 (1.42)	720	2.35 (1.75)	795	2.80 (2.09)	860	3.25 (2.42)	920	3.70 (2.76)	975	4.15 (3.10)	1030	4.60 (3.43)	1080	5.05 (3.77)	1130	5.50 (4.10)	1175	5.95 (4.44)	1220	6.45 (4.81)	1265	6.90 (5.15)	
6500 (3065)	650	2.05 (1.53)	730	2.50 (1.87)	805	3.00 (2.24)	870	3.45 (2.57)	930	3.95 (2.95)	985	4.40 (3.28)	1040	4.85 (3.62)	1090	5.35 (3.99)	1140	5.85 (4.36)	1185	6.30 (4.70)	1225	6.75 (5.04)	1270	7.25 (5.41)	
6750 (3185)	665	2.20 (1.64)	745	2.70 (2.01)	815	3.20 (2.39)	880	3.70 (2.76)	940	4.20 (3.13)	995	4.65 (3.47)	1045	5.10 (3.80)	1095	5.60 (4.18)	1145	6.10 (4.55)	1190	6.60 (4.92)	1235	7.10 (5.30)	1275	7.60 (5.67)	
7000 (3305)	675	2.35 (1.75)	755	2.90 (2.16)	825	3.40 (2.54)	890	3.95 (2.95)	950	4.45 (3.32)	1005	4.95 (3.69)	1055	5.40 (4.03)	1105	5.95 (4.44)	1155	6.45 (4.81)	1200	6.95 (5.18)	1240	7.45 (5.56)	1285	8.00 (5.97)	
7250 (3420)	690	2.60 (1.94)	765	3.10 (2.31)	835	3.65 (2.72)	900	4.15 (3.10)	955	4.65 (3.47)	1015	5.25 (3.92)	1065	5.75 (4.29)	1115	6.25 (4.66)	1160	6.75 (5.04)	1205	7.30 (5.45)	1250	7.85 (5.86)	1290	8.35 (6.23)	
7500 (3540)	700	2.75 (2.05)	775	3.30 (2.46)	845	3.85 (2.87)	910	4.45 (3.32)	965	4.95 (3.69)	1020	5.50 (4.10)	1075	6.05 (4.51)	1125	6.60 (4.92)	1170	7.15 (5.33)	1215	7.65 (5.71)	1260	8.25 (6.15)	1300	8.75 (6.53)	
7750 (3655)	715	3.00 (2.24)	790	3.55 (2.65)	855	4.10 (3.06)	920	4.70 (3.51)	975	5.25 (3.92)	1030	5.80 (4.33)	1080	6.35 (4.74)	1130	6.90 (5.15)	1180	7.50 (5.60)	1225	8.05 (6.01)	1265	8.60 (6.42)	1305	9.15 (6.83)	
8000 (3775)	725	3.20 (2.39)	800	3.80 (2.83)	865	4.35 (3.25)	930	4.95 (3.69)	985	5.50 (4.10)	1040	6.10 (4.55)	1090	6.70 (5.00)	1140	7.25 (5.41)	1185	7.85 (5.86)	1230	8.40 (6.27)	1275	9.00 (6.71)	1315	9.60 (7.16)	
8250 (3895)	740	3.40 (2.54)	810	4.00 (2.98)	880	4.65 (3.47)	940	5.25 (3.92)	995	5.85 (4.36)	1050	6.45 (4.81)	1100	7.05 (5.26)	1150	7.65 (5.71)	1195	8.25 (6.15)	1240	8.85 (6.60)	1280	9.40 (7.01)	1325	10.05 (7.50)	
8500 (4010)	750	3.65 (2.72)	825	4.30 (3.21)	890	4.90 (3.66)	950	5.55 (4.14)	1005	6.15 (4.59)	1060	6.80 (5.07)	1110	7.40 (5.52)	1160	8.05 (6.01)	1205	8.65 (6.45)	1250	9.25 (6.90)	1290	9.85 (7.35)	1330	10.45 (7.80)	
8750 (4130)	765	3.90 (2.91)	835	4.55 (3.39)	900	5.20 (3.88)	960	5.85 (4.36)	1015	6.45 (4.81)	1070	7.15 (5.33)	1120	7.75 (5.78)	1165	8.35 (6.23)	1215	9.05 (6.75)	1255	9.65 (7.20)	1300	10.30 (7.68)	1340	10.90 (8.13)	
9000 (4245)	780	4.20 (3.13)	850	4.85 (3.62)	910	5.50 (4.10)	970	6.15 (4.59)	1025	6.80 (5.07)	1080	7.50 (5.60)	1130	8.15 (6.08)	1175	8.75 (6.53)	1220	9.40 (7.01)	1265	10.10 (7.53)	1310	10.80 (8.06)	1350	11.40 (8.50)	
9250 (4365)	790	4.45 (3.32)	860	5.15 (3.84)	925	5.85 (4.36)	985	6.55 (4.89)	1040	7.20 (5.37)	1090	7.85 (5.86)	1140	8.55 (6.38)	1185	9.20 (6.86)	1230	9.85 (7.35)	1275	10.55 (7.87)	1315	11.20 (8.36)	-----	-----	
9500 (4485)	805	4.75 (3.54)	875	5.45 (4.07)	935	6.15 (4.59)	995	6.90 (5.15)	1050	7.60 (5.67)	1100	8.25 (6.15)	1150	8.95 (6.68)	1195	9.60 (7.16)	1240	10.30 (7.68)	1285	11.05 (8.24)	-----	-----	-----	-----	
9750 (4600)	820	5.05 (3.77)	885	5.75 (4.29)	950	6.55 (4.89)	1005	7.20 (5.37)	1060	7.95 (5.93)	1110	8.65 (6.45)	1160	9.40 (7.01)	1205	10.05 (7.50)	1250	10.80 (8.06)	1295	11.50 (8.58)	-----	-----	-----	-----	
10000 (4720)	835	5.40 (4.03)	900	6.15 (4.59)	960	6.85 (5.11)	1015	7.60 (5.67)	1070	8.35 (6.23)	1120	9.05 (6.75)	1170	9.80 (7.31)	1215	10.50 (7.83)	1260	11.25 (8.39)	-----	-----	-----	-----	-----	-----	
10250 (4835)	845	5.65 (4.21)	910	6.45 (4.81)	970	7.20 (5.37)	1030	8.00 (5.97)	1080	8.75 (6.53)	1135	9.55 (7.12)	1180	10.25 (7.65)	1225	11.00 (8.21)	-----	-----	-----	-----	-----	-----	-----	-----	
10500 (4955)	860	6.00 (4.48)	925	6.85 (5.11)	985	7.65 (5.71)	1040	8.40 (6.27)	1095	9.20 (6.86)	1145	10.00 (7.46)	1190	10.70 (7.98)	1235	11.45 (8.54)	-----	-----	-----	-----	-----	-----	-----	-----	
10750 (5075)	875	6.40 (4.77)	940	7.25 (5.41)	1000	8.05 (6.01)	1055	8.85 (6.60)	1105	9.65 (7.20)	1155	10.45 (7.80)	1200	11.20 (8.36)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	
11000 (5190)	890	6.80 (5.07)	950	7.60 (5.67)	1010	8.45 (6.30)	1065	9.30 (6.94)	1115	10.05 (7.50)	1165	10.90 (8.13)	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	

BLOWER DATA - DRIVE KIT SPECIFICATIONS

Blower Motor Outputs				Rev/Min Range						
Nominal hp	Maximum hp	Nominal kW	Maximum kW	Drive 2	Drive 3	Drive 4	Drive 5	Drive 6	Drive 7	Drive 8
5	5.75	3.7	4.3	570-755	710-870	790-990	---	---	---	---
7.5	8.63	5.6	6.4	---	---	---	790-990	870-1070	710-870	---
10	11.5	7.5	8.6	---	---	---	---	870-1070	---	945-1140

BLOWER DATA - ACCESSORY AIR RESISTANCE

Air Volume		Total Resistance - inches water gauge (Pa)				
		Wet Indoor Coil	Gas Heat Exchanger		Economizer	Horizontal Roof Mounting Frame
cfm	L/s		Low/Standard Heat	High Heat		
4000	1890	.04 (10)	.01 (2)	----	----	----
4250	2005	.04 (10)	.01 (2)	----	----	----
4500	2125	.05 (12)	.01 (2)	.09 (22)	----	.02 (5)
4750	2240	.05 (12)	.02 (5)	.10 (25)	----	.03 (7)
5000	2360	.05 (12)	.02 (5)	.11 (27)	----	.03 (7)
5250	2475	.06 (15)	.02 (5)	.12 (30)	----	.04 (10)
5500	2595	.07 (17)	.02 (5)	.13 (32)	----	.04 (10)
5750	2715	.07 (17)	.02 (5)	.14 (35)	----	.05 (12)
6000	2830	.08 (20)	.02 (5)	.15 (37)	----	.06 (15)
6250	2950	.08 (20)	.02 (5)	.16 (40)	.01 (2)	.07 (17)
6500	3065	.09 (22)	.03 (7)	.17 (42)	.02 (5)	.08 (20)
6750	3185	.10 (25)	.03 (7)	.18 (45)	.03 (7)	.08 (20)
7000	3305	.10 (25)	.04 (10)	.19 (47)	.04 (10)	.09 (22)
7250	3420	.11 (27)	.04 (10)	.20 (50)	.05 (12)	.10 (25)
7500	3540	.12 (30)	.04 (10)	.21 (52)	.06 (15)	.11 (27)
7750	3655	.12 (30)	.04 (10)	----	.07 (17)	.12 (30)
8000	3775	.13 (32)	.05 (12)	.24 (60)	.09 (22)	.13 (32)
8250	3895	.14 (35)	.06 (15)	----	.10 (25)	.14 (35)
8500	4010	.15 (37)	.07 (17)	.26 (65)	.11 (27)	.15 (37)
8750	4130	.16 (40)	.07 (17)	----	.12 (30)	.16 (40)
9000	4245	.16 (40)	.08 (20)	.29 (72)	.14 (35)	.17 (42)
9250	4365	.17 (42)	.09 (22)	----	.16 (40)	.18 (45)
9500	4485	.18 (45)	.10 (25)	.32 (80)	.16 (40)	.19 (47)
9750	4600	.19 (47)	.11 (27)	----	.18 (45)	.20 (50)
10,000	4720	.20 (50)	.12 (30)	.35 (87)	.19 (47)	.21 (52)
10,250	4840	.21 (52)	.13 (32)	----	.21 (52)	.23 (57)
10,500	4955	.22 (55)	.14 (35)	.38 (94)	.22 (55)	.24 (60)
10,750	5075	.23 (57)	.16 (40)	----	.24 (60)	.26 (65)
11,000	5190	.24 (60)	.18 (45)	.40 (99)	.25 (62)	.27 (67)

BLOWER DATA - CEILING DIFFUSER AIR RESISTANCE

Unit Size	Air Volume		Total Resistance - inches water gauge (Pa)			
			RTD11-185 - Step-Down Diffuser			FD11-185 Flush Diffuser
	cfm	L/s	2 Ends Open	1 Side and 2 Ends Open	All Ends and Sides Open	
300S Models	6000	2830	.36 (90)	.31 (77)	.27 (67)	.29 (72)
	6500	3065	.42 (104)	.36 (90)	.31 (77)	.34 (85)
	7000	3305	.49 (122)	.41 (102)	.36 (90)	.40 (99)
	7500	3540	.51 (127)	.46 (114)	.41 (102)	.45 (112)
	8000	3775	.59 (147)	.49 (122)	.43 (107)	.50 (124)
	8500	4010	.69 (172)	.58 (144)	.50 (124)	.57 (142)
	9000	4245	.79 (196)	.67 (167)	.58 (144)	.66 (164)
	9500	4485	.89 (221)	.75 (186)	.65 (162)	.74 (184)
	10,000	4720	1.00 (249)	.84 (209)	.73 (182)	.81 (201)
	10,500	4955	1.10 (273)	.92 (229)	.80 (199)	.89 (221)
	11,000	5190	1.21 (301)	1.01 (251)	.88 (219)	.96 (239)

CEILING DIFFUSER AIR THROW DATA

Model Number	Air Volume		Effective Throw Range			
			Step-Down		Flush	
	cfm	L/s	ft.	m	ft.	m
300S Models	7200	3400	33 - 38	10 - 12	26 - 35	8 - 11
	7400	3490	35 - 40	11 - 12	28 - 37	9 - 11
	7600	3585	36 - 41	11 - 13	29 - 38	9 - 12
	7800	3680	38 - 43	11 - 13	40 - 50	12 - 15
	8000	3775	39 - 44	12 - 13	42 - 51	13 - 16
	8200	3870	41 - 46	12 - 14	43 - 52	13 - 16
	8400	3965	43 - 49	13 - 15	44 - 54	13 - 17
	8600	4060	44 - 50	13 - 15	46 - 57	14 - 17
	8800	4155	47 - 55	14 - 17	48 - 59	15 - 18

☐ Throw is the 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.

POWER EXHAUST FANS PERFORMANCE

Model Number	Return Air System Static Pressure		Air Volume Exhausted	
	in. w.g.	Pa	cfm	L/s
LGA300S	0	0	8630	4070
	0.05	12	8210	3875
	0.10	25	7725	3645
	0.15	37	7110	3355
	0.20	50	6470	3055
	0.25	62	5790	2730
	0.30	75	5060	2390
	0.35	87	4300	2030
	0.40	100	3510	1655
	0.45	112	2690	1270
	0.50	125	1840	870

GUIDE SPECIFICATIONS

General

- Furnish and install a single package air to air direct expansion mechanical cooling and gas fired heating system complete with automatic controls.
- Unit shall be a standard product of a firm regularly engaged in the manufacture of heating-cooling equipment.
- Manufacturer shall test operate system at the factory prior to shipment.

Air Distribution

- Shall be capable of bottom (down-flow) handling of conditioned air.
- Shall be capable of side (horizontal) handling of conditioned air with optional conversion kit.

Cooling System

- The coils shall be non-ferrous construction with aluminum fins mechanically bonded to durable copper tubes. Coils shall be pressure leak tested.
Condenser coil shall be slab construction.
- Compressors shall be resiliently mounted and have overload protection and crankcase heaters.
- The refrigeration system shall have discharge, suction and liquid line service gauge ports, high and low pressure switches, driers, freezestats and full refrigerant charge.
- Optional low ambient controls and service valves shall be available.

Heating System

- 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 (optional kit required).
- Complete service access shall be provided for controls and wiring.

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. Bottom power and gas entry shall be furnished.
- Evaporator coil condensate drain extended outside cabinet shall be provided.
- Lifting holes in full perimeter base rails shall be furnished
Large removeable panels shall allow complete service access to compressor/heating/controls, blower and air filter/economizer compartments.

Supply Air Blower

- Centrifugal supply air blower shall have permanently lubricated sleeve bearings and adjustable belt drive.
- Blower assembly shall slide out of unit for servicing.
- Motor mount base shall permit ease of motor changeover and belt tension adjustment.
- Blower wheel shall be statically and dynamically balanced.

Condenser Fans

- Direct drive propeller type condenser fans shall discharge vertically.
- Fan motor shall have ball bearings and be permanently lubricated and inherently protected.
- Fans shall have a safety guard.

Integrated Modular Control

- Solid state control board shall be provided to operate unit.
- Built-in functions shall include: blower on/off delay, built-in control parameter defaults, service relay output, dirty filter switch input, dehumidistat input, economizer control, electric heat staging, ETM compatible, unit diagnosis, diagnostics code storage, gas valve delay between stages, indoor air quality input, low ambient controls, minimum run time, night setback mode, smoke alarm mode, low pressure control, thermostat bounce delay, three digit display, °F or °C display, 2 stage heat/3 stage cool thermostat compatible and warm up mode.

Air Filters

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

GUIDE SPECIFICATIONS CONTINUED - OPTIONAL ACCESSORIES

Blower Proving Switch

-Furnish and factory install air pressure switch to monitor blower operation.

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 connection to the diffuser.

Coil Guards

-Furnish and install painted, galvanized steel coil guards.

Control Systems

-Shall provide a selection of control systems to automatically operate the equipment through heating, cooling and ventilating cycles as required.

Corrosion Protection

-Furnish and factory apply phenolic epoxy coating to either or both of the following:

Outdoor coils with painted outdoor base section. Indoor coil with painted indoor base section and painted blower housings.

Dirty Filter Switch

-Furnish and install pressure switch that indicates dirty filter, relays information to Integrated Modular Control.

Dehumidistat

-Furnish and install dehumidistat, relays information to Integrated Modular Control.

Disconnect

-Furnish and factory install unit disconnect switch

Economizer Section

-Furnish and install economizer complete with recirculated air dampers, outside air dampers and controls. Shall be available for factory or field installation.

-Low leakage dampers shall ride in nylon bearings.

-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 (on unit IMC) shall consist of adjustable minimum positioner, enthalpy setpoint and DIP switches for setting type of control logic used.

-Economizer control options shall consist of sensible temperature, global, outdoor enthalpy and differential enthalpy (outdoor and return air).

-The economizer section shall provide for the introduction of outdoor air for minimum ventilation and free cooling.

-Optional outdoor air hood (required) with filters shall be galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal.

Gravity Exhaust Dampers

-Pressure operated dampers shall be available for factory or 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.

High Efficiency Blower Motor

-Furnish and factory install high efficiency blower motor.

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 IMC which adjusts economizer dampers proportionately to the pollutant level.

Outdoor Air Damper Section

-Shall be available for to provide manual or automatic operation of outdoor air requirements of up to 25%.

-Motorized dampers shall be opposing gear driven design.

-Dampers shall be available for factory or field installation, internal to unit.

-Optional outdoor air hood (required) with filters shall be galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal.

Power Exhaust Fan(down-flow applications only)

-Shall be available for units with economizer.

-Direct drive propeller type fan shall exhaust air through gravity exhaust damper.

-Motor shall be overload protected.

-Fan shall be field installed between economizer and gravity exhaust dampers.

Roof Mounting Frame

-Furnish and install a steel roof mounting frame for bottom discharge and return air duct connection.

-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 area.

-Flashing shall be the responsibility of the roofing contractor.

Service Outlets

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

Service Valves

-Furnish and factory install fully serviceable brass service valves in discharge and liquid lines.

-Shall allow refrigerant pump down to high side of system for servicing of low side.

Smoke Detectors

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

DIMENSIONS - INCHES (MM)

Shown With Optional Economizer Dampers, Power Exhaust Fans, Convenience Outlets, Unit Disconnect

CORNER WEIGHTS - lbs. (kg)

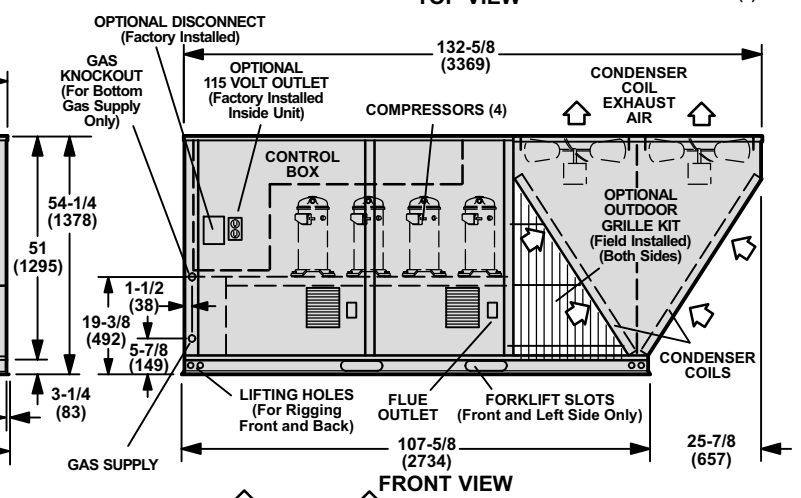
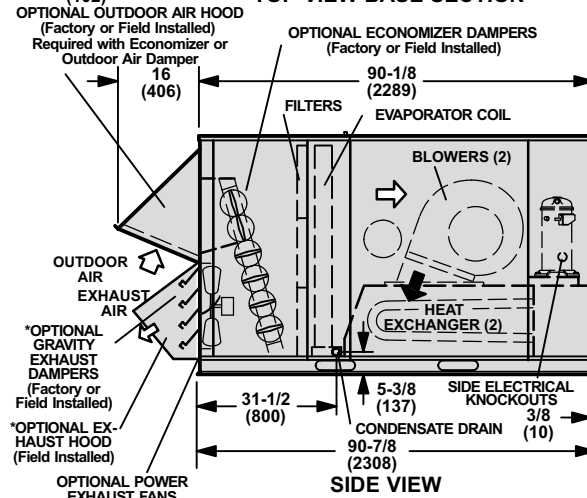
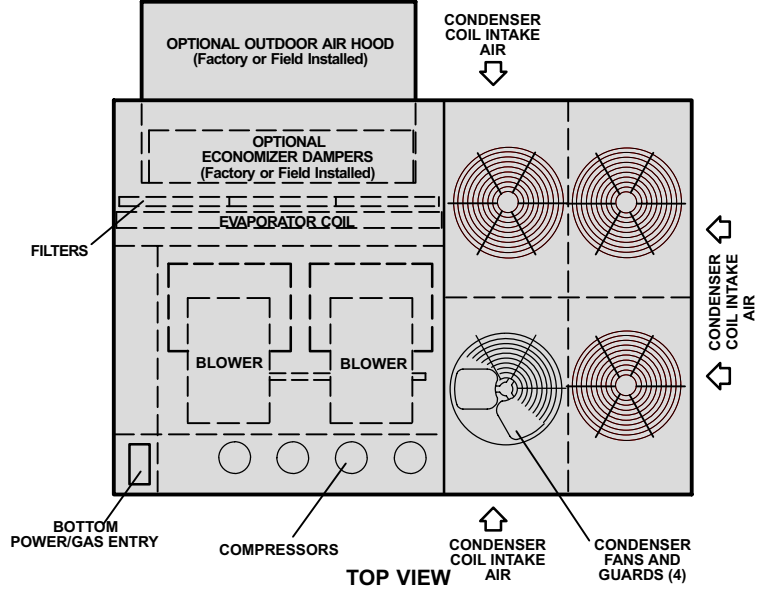
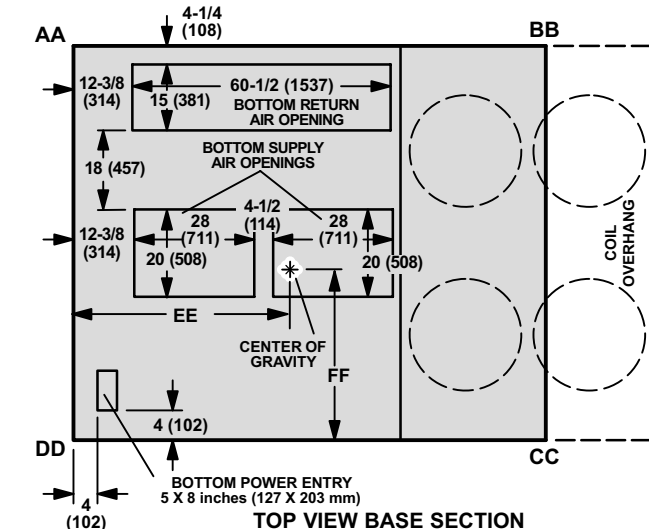
Model Number	AA		BB		CC		DD	
	lbs.	kg	lbs.	kg	lbs.	kg	lbs.	kg
LGA240/300S Base Unit	490	222	520	236	740	336	710	322
LGA240/300S Max. Unit	610	277	610	277	750	304	770	349

Base Unit — The standard unit with NO OPTIONS.
 Max. Unit — The standard unit with ALL OPTIONS Installed. (Economizer, Power Exhaust Fans, High Input Heating, Controls)

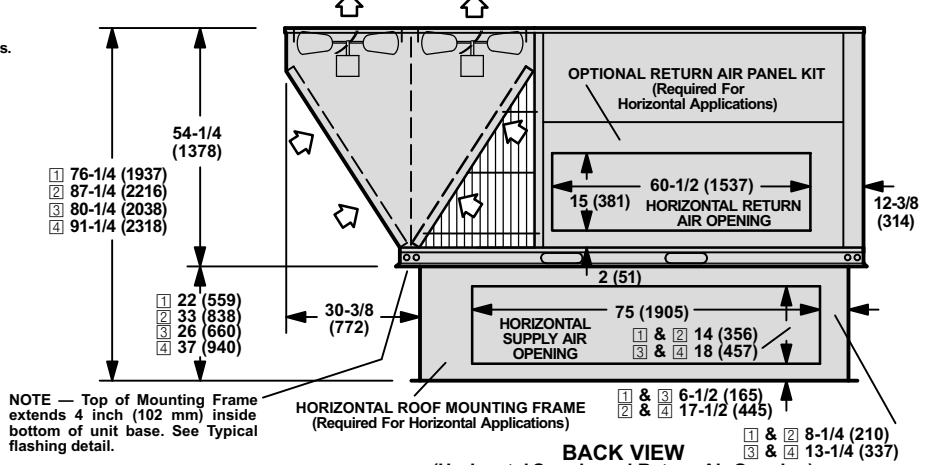
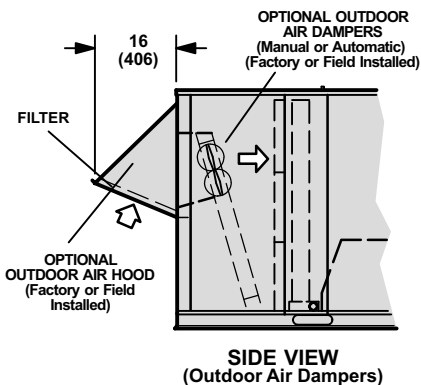
CENTER OF GRAVITY - inches (mm)

Model Number	EE		FF	
	inch	mm	inch	mm
LGA240/300S Base Unit	54-1/2	1384	37-1/2	953
LGA240/300S Max. Unit	53	1346	40-1/2	1029

Base Unit — The standard unit with NO OPTIONS.
 Max. Unit — The standard unit with ALL OPTIONS Installed. (Economizer, Power Exhaust Fans, High Input Heating, Controls)



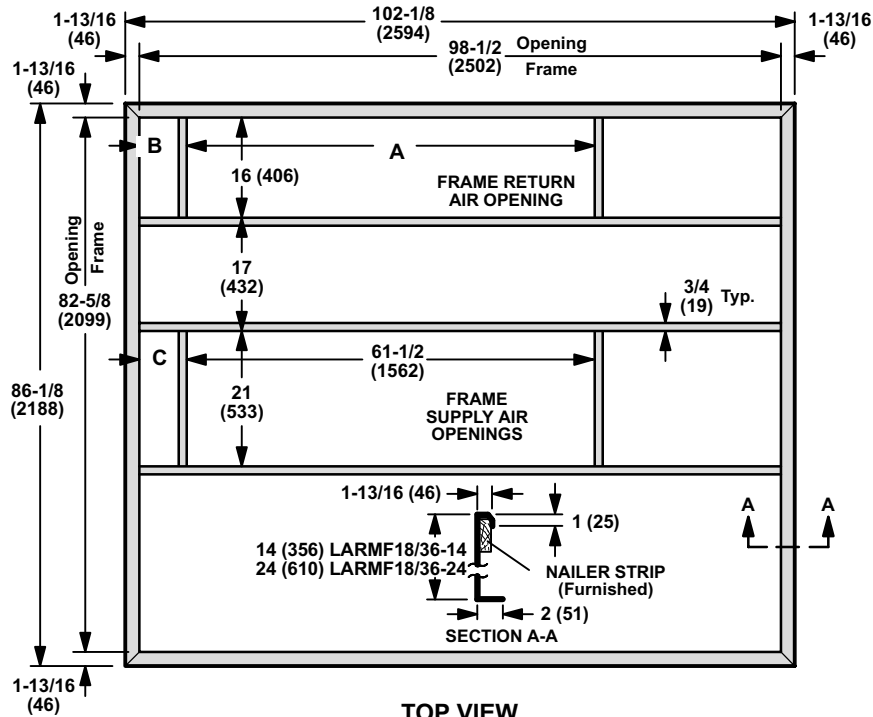
*OPTIONAL GRAVITY EXHAUST DAMPERS (Factory or Field Installed)
 *OPTIONAL EXHAUST HOOD (Field Installed)
 *NOTE — Field Installed in Return Air Duct for Horizontal Applications.



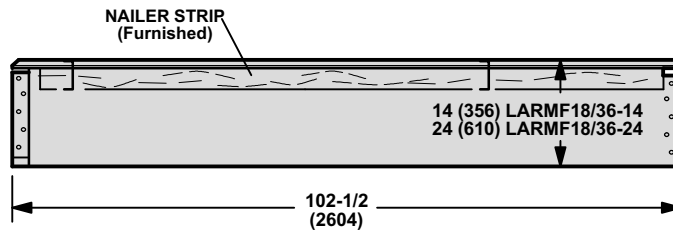
- 1 LARMFH18/24-26
- 2 LARMFH18/24-37
- 3 LARMFH30/36-30 (used with 300S Models Only)
- 4 LARMFH30/36-40 (used with 300S Models Only)

ACCESSORY DIMENSIONS - INCHES (MM)

LARMF18/36-14 AND LARMF18/36-24 ROOF MOUNTING FRAMES With Double Duct Opening



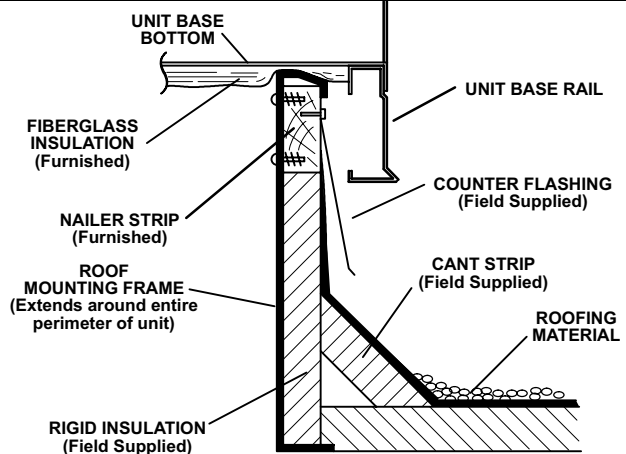
TOP VIEW



SIDE VIEW

Unit Model Number	A		B		C	
	in.	mm	in.	mm	in.	mm
LGA300S	61-1/2	1562	8-1/4	210	8-1/4	210

TYPICAL FLASHING DETAIL FOR LARMF18/36 ROOF MOUNTING FRAMES



ROOF MOUNTING FRAME SPECIFICATIONS

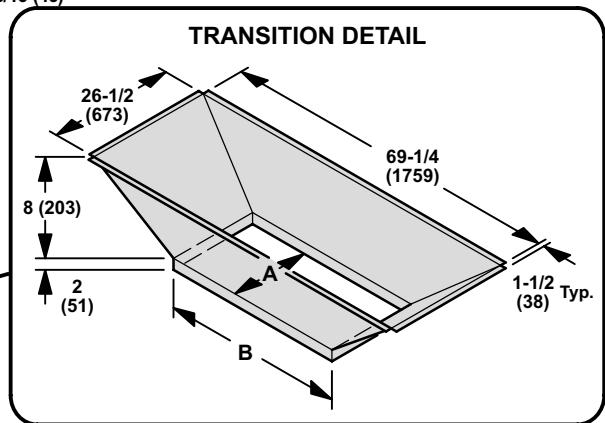
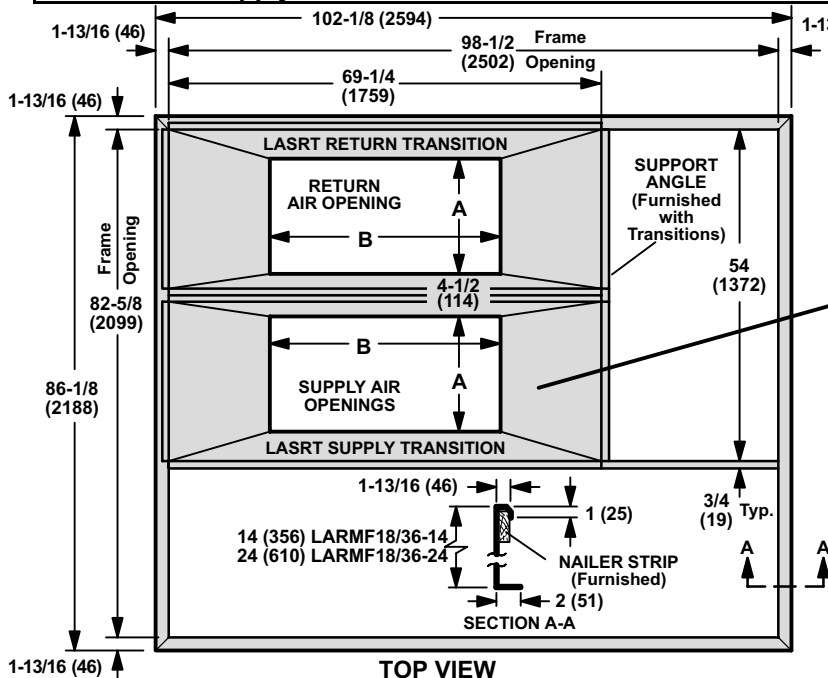
Roof Mounting frame is rigid enough to be spanned over its entire length or cantilevered if supported on both sides of center of gravity.

Roof Mounting Frame	LARMF18/36-14	LARMF18/36-24
*Moment of inertia (I) (in. ⁴) (cm ⁴)	39 (1634)	160 (6639)
*Section modulus $\frac{I}{C}$ (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.

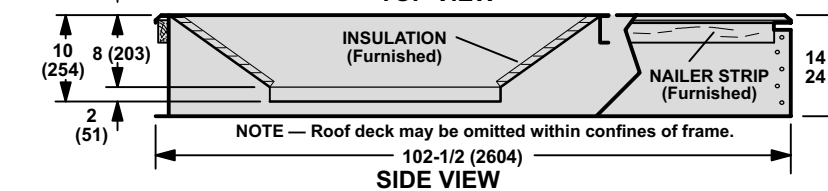
ACCESSORY DIMENSIONS - INCHES (MM)

**LARMF18/36-14 AND LARMF18/36-24 ROOF MOUNTING FRAMES
With LASRT Supply & Return Air Transitions For FD11 & RTD11 Ceiling Diffusers**



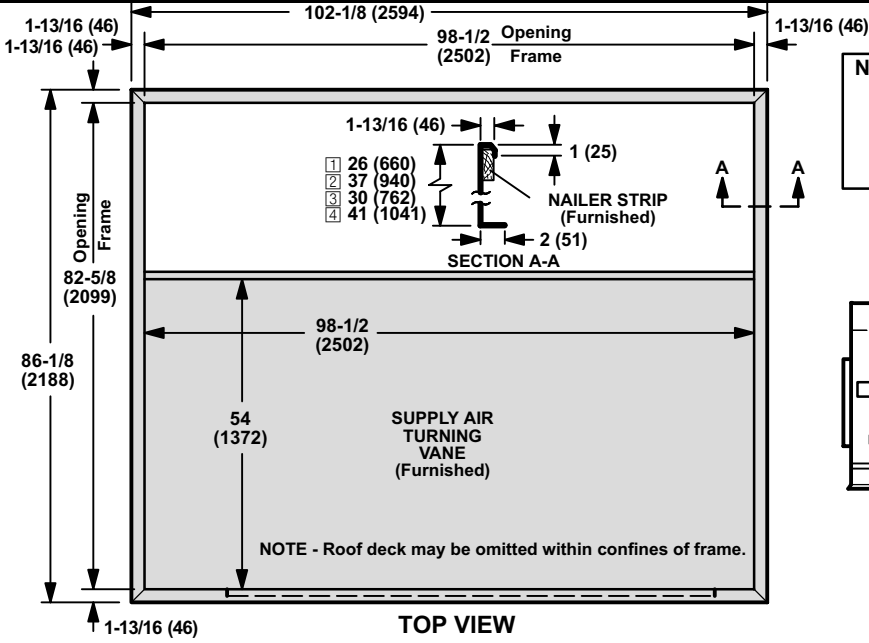
TRANSITION OPENING SIZES

Model Number	A		B	
	inch	mm	inch	mm
LASRT21/24	24	610	48	1219

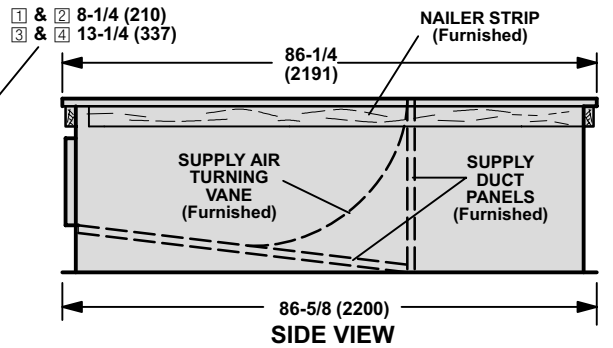
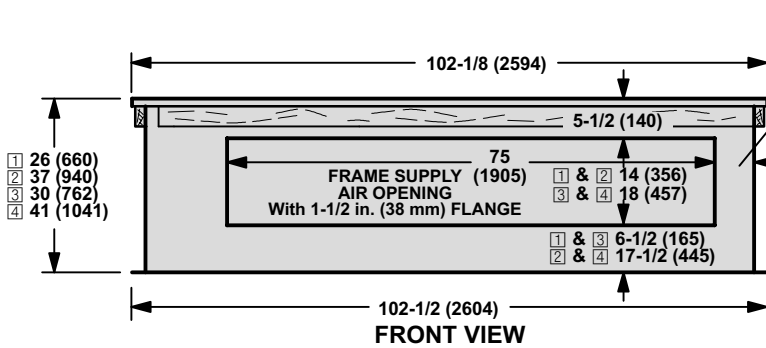
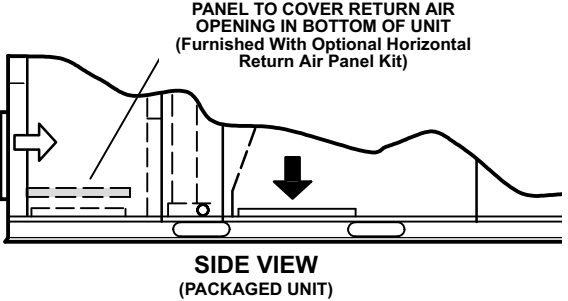


ACCESSORY DIMENSIONS - INCHES (MM)

LARMFH18/24 & LARMF30/36 ROOF MOUNTING FRAMES - Requires Optional Horizontal Return Air Panel Kit

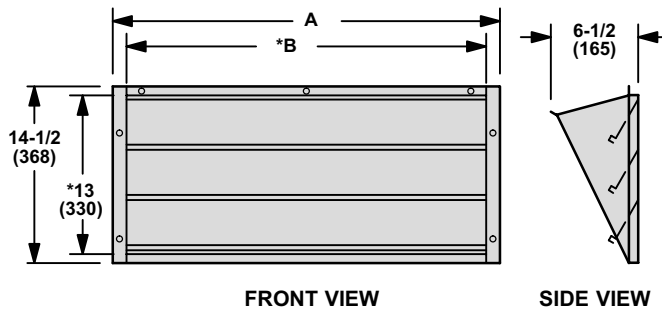


NOTE - LARMFH18/24-26 and LARMFH30/36-30 are designed for horizontal discharge when unit is mounted on a slab. LARMFH18/24-37 and LARMFH30/36-41 are designed for horizontal discharge when unit is mounted on a rooftop.



- 1 LARMFH18/24-26 2 LARMFH18/24-37 3 LARMFH30/36-30 (used with 300S Models) 4 LARMFH30/36-40 (used with 300S Models)

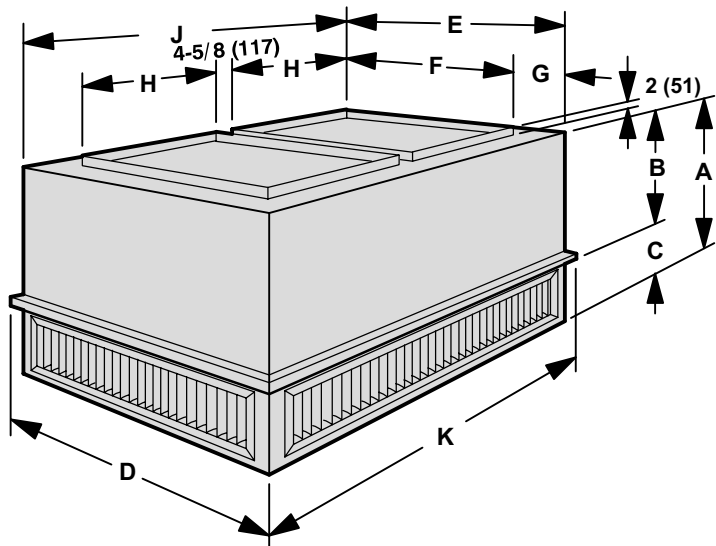
LAGEDH - HORIZONTAL GRAVITY EXHAUST DAMPERS
Field Installed In Return Air Duct (two furnished per order Number)



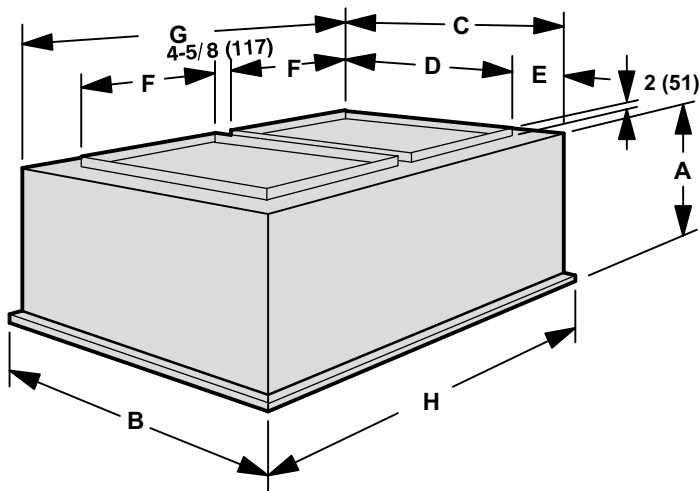
Model Number	A		B	
	in.	mm	in.	mm
LAGEDH18/24	31-5/8	803	29-1/2	749

ACCESSORY DIMENSIONS - INCHES (MM)
COMBINATION CEILING SUPPLY AND RETURN DIFFUSERS

STEP-DOWN CEILING DIFFUSER



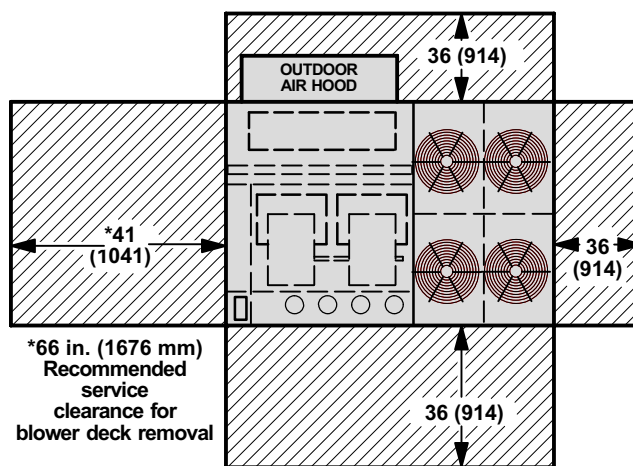
FLUSH CEILING DIFFUSER



Model Number	A		B		C		D		E	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RTD11-275	40	1016	28-7/8	225	11-1/8	283	59-5/8	1514	57-7/8	1470
Model Number	F		G		H		J		K	
	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
RTD11-275	48	1219	4-13/16	122	24	610	57-5/8	1464	59-5/8	1521

Model Number	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
FD11-275	36-1/8	918	59-5/8	1514	57-5/8	1464	48	1219
Model Number	E		F		G		H	
	in.	mm	in.	mm	in.	mm	in.	mm
FD11-275	4-13/16	122	24	610	57-5/8	1464	59-5/8	1521

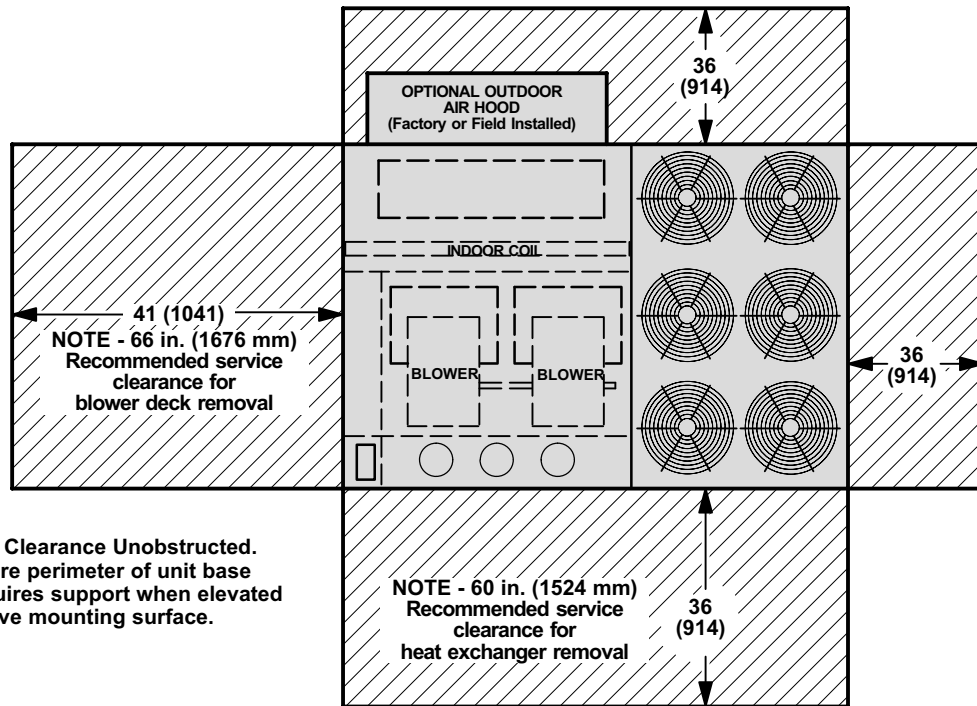
INSTALLATION CLEARANCES - INCHES (MM)



NOTE — Top Clearance Unobstructed.
 NOTE — Entire perimeter of unit base requires support when elevated above mounting surface.

INSTALLATION CLEARANCES - LGA300H & LGA360 - INCHES (MM)

Unit With Economizer



Unit With Horizontal Gravity Exhaust Dampers

