

ELITE 90-S™ SERIES UP-FLOW GAS FURNACES

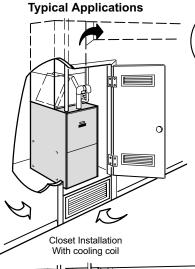
Bulletin #210171

May 1998

*90.0% A.F.U.E.

50,000 to 125,000 Btuh (14.7 to 36.6 kW) Gas Heating Input Supersedes April 1997

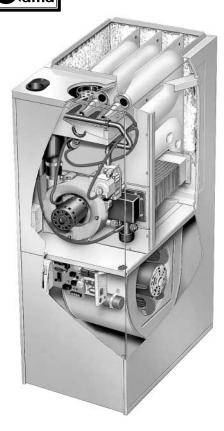
1 thru 5 Tons (3.5 thru 17.6 kW) Nominal Add-on Cooling







Lennox DuralokPlus™ Heat Exchanger Assembly



FEATURES

Applications

- Five models (natural gas or LPG/propane)
- Input capacities of 50,000, 75,000, 100,000 and 125,000 Btuh (14.7, 22.0, 29.3 and 36.6 kW).

Utility Room Installation With cooling coil, electronic air cleaner and humidifier

- Energy efficiencies (AFUE) of 90.0%.
- Compact cabinet with either side or bottom return air entry.
- Add-on evaporator coils, electronic air cleaners and power humidifiers available.
- Shipped factory assembled with all controls installed and wired.
- Factory test operated to insure proper operation.

Approvals

- Certified by A.G.A./C.G.A. Laboratories.
- Ratings are certified by GAMA.
- Tested and rated according to U.S. DOE test procedures and FTC labeling regulations.
- •90UGF models are approved by the California Energy Commission and meet California Seasonal Efficiency requirements and California Nitrogen Oxides (NO_x) Standards.
- Blower data from unit tests conducted in Lennox Laboratory air test chamber.
- Approved for vertical or horizontal (sidewall) venting.

Equipment Warranty

- DuralokPlus[™] Aluminized Steel Heat Exchanger Limited ten vear warranty.
- •All other covered components one year.
- •Refer to Lennox Equipment Limited Warranty certificate included with equipment for details.

Lennox DuralokPlus™ Heat Exchanger Assembly

- Lennox developed heat exchanger assembly consists of primary heat exchanger and secondary condenser coil assembly.
- Main 3-pass clamshell type heat exchanger constructed of heavy gauge aluminized steel
- Designed for normal expansion and contraction without metal fatique.
- Crimped seam design and construction provides long service life, maximum efficiency and minimum resistance to airflow.
- Secondary heat exchanger condenser coil constructed of aluminum fins fitted to stainless steel tubes.
- Coil is factory tested for leaks.
- · Combined flue vent and condensate drain header box assembly located on front of coil.
- Compact size of complete heat exchanger assembly permits low overall design of furnace cabinet.
- •All components mounted in a heavy gauge steel frame.
- Heat exchanger assembly has been laboratory life cycle tested.

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FEATURES

Lennox Designed Flue Condensate Trap Assembly

- Flue assembly connects to flue pipe with one piece no hub connector (furnished) and to induced draft blower.
- Vents combustion products and collects condensate.
- Assembly contains built-in internal trap and removable boot on bottom for easy cleaning and servicing.
- Flue trap drain hose runs from assembly to header box condensate trap.

Lennox Designed Header Box Condensate Trap

- Header box on end of condenser coil contains built-in internal trap and removable boot on bottom for easy cleaning and servicing of header and trap.
- Header box trap also collects flue condensate from flue trap for disposal through one single drain pipe.
- Also furnished for field installation is 1/2 inch (12.7 mm) mpt adaptor and nipple that extends condensate drain out either side of unit cabinet for easy connection.

Inshot Burners

- Aluminized steel inshot burners provide efficient trouble free operation.
- Burner venturi mixes air and gas in correct proportion for proper combustion.
- •Burners completely enclosed in heavy gauge steel burner box.
- Sight glass is furnished on burner box for flame observation.
- Burner assembly is removable from the unit as a single component for ease of service.

SureLight™ Hot Surface Ignition

- Tough, reliable, long-life, trouble-free performance.
- •Tungsten heater element sandwiched between two plates of silicon nitride.
- Cemented to steatite block for protection against current leakage.
- Ignition leads constructed of nickel plated copper enclosed in high temperature Teflon insulation for dependable operation.
- No electrical noise.

SureLight[™] Integrated Control Board

- •Solid-state board contains all necessary controls and relays to operate furnace.
- Induced draft blower is controlled by board. Prior to ignition, a pre-purge cycle for 15 seconds is initiated. After the main burners are turned off, a post-purge cycle for 5 seconds is run.
- Adaptive technology of ignition control board continuously monitors and adjusts the ignitor voltage to operate at minimum igniter temperature required for ignition, prolonging ignitor life.
- Electronic flame sensor control assures safe and reliable operation.
- Should loss of flame occur, flame sensor controls will initiate 5 attempts at re-ignition before locking out unit operation for 60 minutes.
- Watchguard type circuit automatically resets ignition controls after one hour of continuous thermostat demand after unit lockout, eliminating nuisance calls for service.
- Fan control consists of adjustable blower timed-off delay (60 to 180 seconds) and fixed blower timed-on delay (45 seconds).
- For air-conditioning applications, blower is automatically energized on thermostat demand for cooling.
- Provisions for additional power supply requirements for 120 volt (less than 4 amps) power humidifiers and electronic air cleaners.
- Ignition control has two LED's to indicate status and as an aid in troubleshooting.

Induced Draft Blower

- Factory installed induced draft blower prepurges heat exchanger and safely vents combustion products.
- •Shaded pole motor thermally protected.
- Operates only during heat demand cycle.
- Pressure switch prevents unit operation in case of blockage of combustion air, flue outlet or condensate drain.

Automatic Gas Control

- •Silent operating gas controls provide 100% safety shut off.
- •24 volt redundant combination gas control valve combines automatic safety pilot, manual shut off option (On-Off), pilot filtration, automatic electric valve (dual) and gas pressure regulation into a compact combination control.
- •Dual valve design provides double assurance of 100% close off of gas to the pilot and main burners on each off cycle.
- Gas valve automatically regulated with pressure switch to maintain even gas flow regardless of type of venting installation.
- Design also compensates for variations in altitude.

Cabinet

- Constructed of heavy gauge cold rolled steel.
- Five station metal wash process results in a perfect paint bonding surface.
- Baked-on enamel paint finish.
- •Cabinet insulated with foil faced fiberglass insulation on vestibule panel, side panels and back panel.
- Complete service access accomplished by removing heating section and blower compartment access panels.
- Blower assembly may be completely removed from unit for service.
- Rails on blower deck angle down for easy blower removal.
- Safety interlock switch in control box automatically shuts off power to unit when blower compartment access door is removed.
- Intake and exhaust air openings are furnished on top of furnace. See dimension drawing.
- Gas piping and electrical inlets are provided in both sides of cabinet.
- •Return air entry possible on either side or bottom of cabinet.
- •For bottom return air, cabinet has a perforated knockout pattern for easy removal.

Limit Control

- Factory installed and accurately located.
- Provides protection against abnormal operating conditions.

Field Wiring Make-up Box

- Furnished for line voltage wiring.
- Box may be installed on either side of furnace, internally or externally.
- Box contains plug-in connection for power supply wiring, wire for 120 volt accessory connection and all necessary hardware for installation.

Control Box

- •Thermostat connections are made at control box which is located in blower compartment.
- •Box contains safety interlock switch, blower/ignition control board, control transformer and circuit breaker.

Transformer

- •24 volt control transformer is furnished as standard.
- Factory installed in control box.
- •Transformer has circuit breaker wired in series for added protection.

Blower

- Multi-speed direct drive blowers.
- Each blower assembly statically and dynamically balanced.
- Multiple-speed motor resiliently mounted.
- •Blower speeds are easily changed on the blower motor.
- See blower performance tables.

OPTIONAL ACCESSORIES • MUST BE ORDERED EXTRA

Thermostat (Optional)

- Heating thermostat is not furnished and must be ordered extra.
- See Thermostats bulletin in Thermostats and Controls section and Lennox Price Book.
- For all-season applications, heating and cooling thermostat is available with the condensing unit.

LPG/Propane Conversion Kit (Optional)

- Conversion kit required for field changeover from natural gas.
- See specifications table for order number.

Filter and Rack Kit (Optional)

- Washable or vacuum cleanable polyurethane frame type air filter and external rack available for field installation.
- Available in single and ten pack kits.
- See Specifications table for order no.

Bottom Return Air Applications

- Filter installs in furnace cabinet bottom.
- Secured by one fixed rear filter clip and two field installed side filter clips.

Side Return Air Applications

- External filter rack field installs on either side of unit cabinet.
- Rack has filter door for easy filter servicing.
- Flanges on rack allow easy duct connection.
- •See dimension drawing.

Roof Vent Termination Kit (Optional)

- •2 inch kit (15F75) for installation of flue exhaust pipe.
- •NOTE Kit contains enough parts for two installations.
- Contains two neoprene rubber roof flashings, two 18 inch (457mm) insulation sleeves for sealing and isolating exhaust pipe penetration in roof.
- •See Specifications table and dimension drawings.
- Refer to venting table in this bulletin to determine pipe size.

Wall Vent Termination Kit (Optional)

- Facilitates installation of flue exhaust pipe.
- NOTE Kit contains enough parts for two installations.
- Refer to venting table in this bulletin to determine pipe size needed and proper termination kit required.
- •2 inch (51 mm) kit (15F74)contains 2 stainless steel outside seal caps, 2 galvanized steel inside seal caps, 4 seal rings for caps and 18 inch (457 mm) insulation sleeve for sealing and isolating exhaust pipe penetration in wall.
- See dimension drawing.

Condensate Drain Heat Cable Kits (Optional)

- Self-limiting wattage heat cable prevents condensate drain from freezing in unconditioned areas.
- •Kit LB-88643C (26K70) has 50 ft. (15.2 m) of heat cable.
- •Kit LB-88643B (26K69) contains 24 ft. (7.3 m) of heat cable.
- •Kit LB-88643A (26K68) contains 6 ft. (1.8 m) of heat cable.
- Heat Cable Tape 66 ft. (20 m) length, 1/2 in. (13 mm) wide fiberglass (39G04) or 60 ft. (18 m) length, 2 in. (51 mm) wide aluminum foil (39G03).

HIGH ALTITUDE INFORMATION

No gas pressure adjustment is needed when operating from 0 to 7500 ft. (0 to 2248 m). See below for correct manifold pressures for natural gas and LPG/propane.

3000 0000	
FUEL	Manifold Absolute Pressure (outlet) 0 to 7500 ft. (0 to 2248 m) above sea level
Natural Gas	3.5 in. w.g. (0.87 kPa)
LPG/Propane	7.5 in. w.g. (1.86 kPa)

INSTALLATION CLEARANCE	ES • INCHES (MM)
Sides	0 inches (0 mm)
Rear	0 inches (0 mm)
Тор	1 inch (25 mm)
1 Front	13 inches (76 mm)
Floor	Combustible
Exhaust Pipe	0 inches (0 mm)
Exhaust Pipe (service)	6 inches (152 mm)
Service Clearance (front)	36 inches (914 mm)
Service Clearance (condensate side)	3 inches (76 mm)

Front clearance for alcove installations is 24 inches (610 mm).

NOTE—Air for combustion and supply air ventilation must conform to the methods outlined in American National Standard (ANSI-Z223.1) National Fuel Gas Code or National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2 "Installation Code for Gas Burning Appliances". NOTE—In the U.S. flue sizing must conform to the methods outlined in current GAMA/A.G.A. venting tables, American National Standard (ANSI-Z223.1) National Fuel Gas Code or applicable provisions of local building codes. In Canada flue sizing must conform to the methods outlined in National Standard of Canada CAN/CGA-149.1 and CAN/CGA-149.2.

SPECIFICATIONS										
Model No.		90UGFA2-50	90UGFA3-50	90UGFA3-75	90UGFA3/4-100	90UGFA4/5-125				
Input Btuh (kW)		50,000	(14.7)	75,000 (22.0)	100,000 (29.3)	125,000 (36.6)				
Output Btuh (kW)		46,000 (13.5)	47,000 (13.8)	69,000 (20.2)	91,000 (26.7)	115,000 (33.7)				
☆A.F.U.E.		90.0%								
□Exhaust pipe connection (PVC) diamet	er— in. (mm)	2 (51)								
□Intake pipe connection (PVC) diameter	-— in. (mm)	2 (51) 3 (76)								
Condensate drain connection (PVC)— in	. (mm)	1/2 (12.7)								
Temperature rise range — °F (°C)		40-70 (22-39) 30-60 (17-33) 40-70 (22-39) 50-80 (28-44) 50-80 (28-44)								
High static certified by (A.G.A./C.G.A.) —	· in. wg. (Pa)	.50 (125)								
Gas Piping Size I.P.S. — in. (mm)		1/2 (12.7)								
Blower wheel nominal	in.	10 x 7	10	x 8	10 x 10	11-1/2 x 9				
diameter x width	mm	254 x 178	254 x 203		254 x 254	292 x 229				
Blower motor output — hp (W)		1/5 (149)	1/3 (249)	1/2 (373)	3/4 (560)				
Nominal cooling	Tons	1 to 2	1 to 3		2 to 4	3-1/2 to 5				
that can be added	kW	3.5 to 7.0	3.5 to	10.6	7.0 to 14.1	12.3 to 17.6				
Shipping weight — lbs. (kg) 1 package		150 (68)	157 (71)	157 (71)	186 (84)	218 (99)				
Electrical characteristics		120 volts — 60 hertz — 1 phase (less than 12 amps)								
	Optional in the control of the co	II Accessories (Must Be Ordered Extra) ▼								
LPG/Propane kit				65K27 (all mod	els)					
Filter and Filter Rack Kits ‡No. & size of filters - in. (mm)			14J20) Ten Pack < 25 x 1 (356 x 63			en Pack (66K62) (508 x 635 x 25)				
	2 inch (51 mm)			15F75						
☐Roof Vent Termination Kit - vent size	3 inch (76 mm)	44J41								
	nm)	15F74 (ring kit)								
Condensate Drain Heat Cable Tape		26K68 6 ft. (1.8 m) - 26K69 24 ft. (7.3 M) - 26K70 50 ft. (15.2 m)								
Heat Cable Tape (1 roll)		39G04 - 66 ft. (20 m) length, 1/2 in. (38 mm) wide fiberglass or 39G03 - 60 ft. (18 m), 2 in. (52 mm) wide aluminum foil								

LOWER/W	VATTS DAT	A													
		,	90UGFA2	-50 BLOWE	R PERFO	RMANCE									
Externa	l Static		Air Volume and Motor Watts at Specific Blower Taps												
Pres	sure		High			Medium			Low						
in. w.g.	Pa	cfm	L/s	Watts	cfm	cfm L/s Watts			cfm L/s Watts						
0	0	1115	525	495	885	415	360	720	340	280					
.10	25	1095	515	475	880	415	350	700	330	265					
.20	50	1065	505	465	855	405	340	680	320	260					
.30	75	1035	490	445	830	390	325	660	310	250					
.40	100	995	470	425	755	355	315	645	305	235					
.50	125	950	450	405	755	355	300	625	295	225					
.60	150	900	425	390	740	350	280	540	255	215					
.70	175	815	385	365	660	310	255	530	250	205					
.80	200	610	290	340	585	275	240	360	170	180					
.90	225	590	280	315	390	185	215								

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable foam filter (not furnished) in place. Also see Filter Air Resistance table.

				90UGFA	3-50 BL	OWER F	PERFORM	IANCE							
Externa	al Static	I	Air Volume and Motor Watts at Specific Blower Taps												
Pres	sure	Ì	High		Medium-High			Medium-Low			Low				
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts		
0	0	1485	700	590	1275	600	485	1045	495	390	840	395	310		
.10	25	1445	680	565	1250	590	460	1030	485	375	830	390	300		
.20	50	1390	655	545	1225	580	445	1010	475	365	815	385	290		
.30	75	1345	635	520	1190	560	425	985	465	345	790	375	285		
.40	100	1290	610	500	1150	545	405	955	450	335	780	370	275		
.50	125	1225	580	480	1095	515	385	920	435	315	735	345	255		
.60	150	1160	545	460	1030	485	365	875	415	300	700	330	240		
.70	175	1075	505	440	950	450	345	855	405	280	600	285	220		
.80	200	975	460	415	865	410	315	645	305	250	510	240	195		
.90	225	845	400	385	615	290	265	545	255	225	375	175	180		

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable foam filter (not furnished) in place. Also see Filter Air Resistance table.

Externa	l Static	Air Volume and Motor Watts at Specific Blower Taps												
Pres	sure	High			М	edium-H	igh	N	ledium-L	ow		Low		
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	
0	0	1490	705	650	1340	630	540	1060	500	440	870	410	360	
.10	25	1435	675	625	1305	615	515	1050	495	425	865	410	350	
.20	50	1385	655	605	1260	595	490	1025	485	405	850	400	335	
.30	75	1330	630	580	1215	575	470	1000	470	385	835	395	325	
.40	100	1260	595	560	1160	545	445	965	455	365	810	380	310	
.50	125	1200	565	540	1100	520	420	920	435	345	770	365	290	
.60	150	1125	530	515	1035	490	400	870	410	325	735	345	280	
.70	175	1035	490	495	960	455	375	780	370	305	685	325	265	
.80	200	935	440	475	865	410	345	725	340	285				
.90	225	805	380	445	630	295	295	540	255	240				

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable foam filter (not furnished) in place. Also see Filter Air Resistance table.

Externa	l Static	Air Volume and Motor Watts at Specific Blower Taps												
Pres	sure		High		М	Medium-High Medium-Lov			ow	Low				
in. w.g.	Pa	cfm	L/s	Watts	cfm L/s Wa			cfm	L/s	Watts	cfm	L/s	Watts	
0	0	2065	975	920	1760	830	735	1570	740	655	1245	590	520	
.10	25	2000	945	875	1730	815	705	1550	730	625	1240	585	490	
.20	50	1925	910	845	1685	795	675	1515	715	590	1225	580	470	
.30	75	1840	870	800	1625	765	630	1475	695	565	1210	570	455	
.40	100	1740	820	760	1550	730	595	1415	670	535	1165	550	430	
.50	125	1650	780	730	1460	690	560	1335	630	500	1110	525	405	
.60	150	1545	730	700	1370	645	530	1260	595	475	1045	495	385	
.70	175	1420	670	660	1250	590	495	1170	550	445	950	450	355	
.80	200	1270	600	620	1110	525	445	1025	485	395	825	390	325	
.90	225	1045	495	560	965	455	405	885	420	360	700	330	290	

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable foam filter (not furnished) in place. Also see Filter Air Resistance table.

BLOWE	R/WAT	TS DA	ATA													
				9	0UGFA	4/5-12	5 BLOW	ER PE	RFOR	MANCE						
Externa						Air Vo	lume an	d Motor	Watts	at Specif	ic Blow	er Taps	3			
Pres	sure		High Medium-High Medium								Me	edium-l	Low		Low	
in. w.g.	Pa	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts	cfm	L/s	Watts
0	0	2400	1135	1210	2175	1025	1040	1965	925	895	1790	845	780	1610	760	670
.10	25	2315	1090	1175	2125	1005	1025	1930	910	875	1760	830	770	1580	745	660
.20	50	2255	1065	1150	2080	980	1000	1880	885	860	1740	820	755	1550	730	645
.30	75	2195	1035	1130	2030	960	975	1840	870	835	1710	805	750	1520	715	635
.40	100	2120	1000	1100	1970	930	960	1790	845	815	1665	785	730	1495	705	630
.50	125	2050	965	1080	1910	900	934	1745	825	800	1620	765	715	1460	690	620
.60	150	1985	935	1050	1840	870	905	1685	795	785	1565	740	705	1415	670	610
.70	175	1885	890	1020	1770	835	890	1635	765	775	1515	715	685	1370	645	595
.80	200	1815	855	1005	1690	800	860	1570	740	750	1450	685	670	1315	620	580
.90	225	1735	820	980	1615	760	835	1485	700	725	1385	655	655	1245	590	565

NOTE — All air data is measured external to unit with 1 in. (25 mm) cleanable foam filter (not furnished) in place. Also see Filter Air Resistance table.

FILTER AIR RESISTA	NCE
cfm (L/s)	in. w.g. (Pa)
0 (0)	0.00 (0)
200 (95)	0.01 (0)
400 (190)	0.03 (5)
600 (285)	0.04 (10)
800 (380)	0.06 (15)
1000 (470)	0.09 (20)
1200 (565)	0.12 (30)

cfm (L/s)	in. w.g. (Pa)
1400 (660)	0.15 (35)
1600 (755)	0.19 (45)
1800 (850)	0.23 (55)
2000 (945)	0.27 (65)
2200 (1040)	0.33 (80)
2400 (1130)	0.38 (95)
2600 (1225)	0.44 (110)

EXHAU	ST PIPE V	ENTING '	TABLE							
	t Pipe imum			Mini	mum Vent Pipe	Diameter Rec	quired			
	ent Length	50,000 Btu	ıh (14.7 kW)	75,000 Bt	uh (22.0 kW)	100,000 Btu	ıh (29.3 kW)	125,000 Btuh (36.6 kW)		
Feet	Meters	in.	mm	in.	mm	in.	mm	in.	mm	
15	4.6	1-1/2	38	2	51	2	51	2	51	
20	6.1	2	51	2	51	2	51	3	76	
25	7.6	2	51	2	51	2	51	3	76	
30	9.1	2	51	2	51	3	51	3	76	
40	12.2	2	51	2	51	3	51	3	76	
50	15.2	2	51	2	51	3	51	3	76	
55	16.8	2	51	2	51	3	76	3	76	
60	18.3	3	76	3	76	3	76	3	76	
70	21.3	3	76	3	76	3	76	3	76	
80	24.4	3	76	3	76	3	76	3	76	
90	27.4	3	76	3	76	3	76	3	76	
100	30.5	3	76	3	76	3	76	3	76	
110	33.5	3	76	3	76	3	76	3	76	
120	36.6	3	76	3	76	3	76	3	76	
130	39.6	3	76	3	76	3	76			

MINIMUM PIPE LENGTHS FOR FURNACES — 90UGFA-50 — 5 feet (1.5 m) with two 90° elbows of 1-1/2 inch (38 mm) diameter pipe. (15 equivalent feet (4.6 m) total).
90UGFA-75 — 5 feet (1.5 m) with two 90° elbows of 2 inch (51 mm) diameter pipe. (15 equivalent feet (4.6 m) total).
90UGFA-100 — 5 feet (1.5 m) with two 90° elbows of 2 inch (51 mm) diameter pipe. (15 equivalent feet (4.6 m) total).
90UGFA-125 — 5 feet (1.5 m) with two 90° elbows of 2 inch (51 mm) diameter pipe. (15 equivalent feet (4.6 m) total).

VENTING NOTES — One 90° elbow is equivalent to 5 feet (1.5 m) of straight vent pipe.

Two 45° elbows are equal to one 90° elbow.

One 45° elbow is equivalent to 2.5 feet (.75 m) of straight vent pipe.

One foot (305 mm) length of 2 in. (51 mm) diameter pipe is equivalent to 8 feet (2.4 m) of 3 in. (76 mm) diameter pipe.

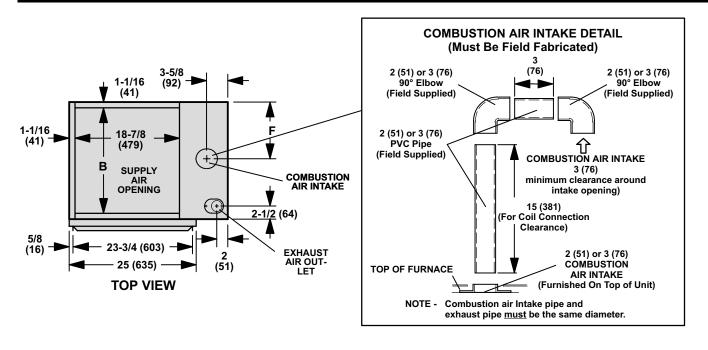
2 inch x 3 inch (51 mm x 76 mm) adaptor is furnished with -100 and -125 furnaces for exhaust pipe connection.

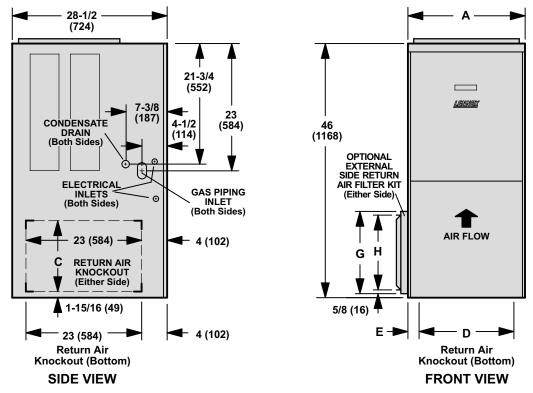
Exhaust pipe must terminate with 1-1/2 inch (38 mm) diameter pipe for furnaces using 1-1/2 (38 mm) or 2 inch (51 mm) diameter pipe runs.

Exhaust pipe must terminate with 2 inch (51 mm) diameter pipe for furnaces using 3 inch (76 mm) diameter pipe runs.

See page 8 for Termination Kits available.

Combustion air intake pipe and exhaust pipe must be the same diameter.





Model No	Α		В		С		D		E		F		G		Н	
Model No.	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm	in.	mm
90UGFA2-50 90UGFA3-50 90UGFA3-75	16-1/4	413	14-1/8	359	12	305	12	305	2-1/8	54	7-5/8	194	14	356	12-3/4	324
90UGFA3/4-100	21-1/4	540	19-1/8	486	18	457	18	457	1-5/8	41	10-1/8	257	20	508	18-3/4	476
90UGFA4/5-125	26-1/4	667	24-1/8	613	18	457	18	457	4-1/8	105	12-5/8	321	20	508	18-3/4	476

