

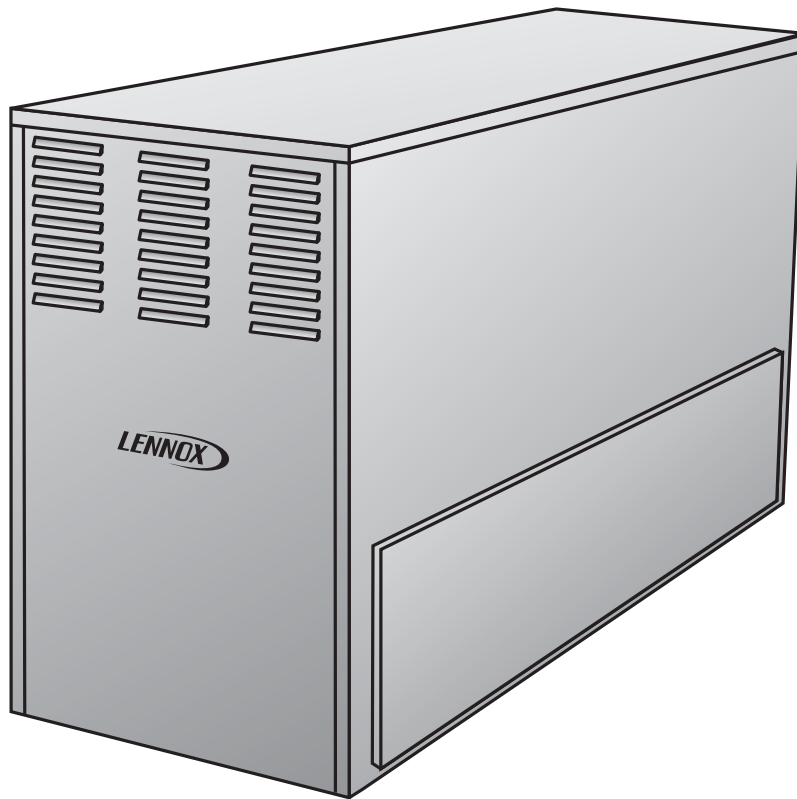


## G61E SERIES EXTERNAL GAS FURNACE

## G61EVT

Issue: July 2005

17.0 to 36.3 kW Output, 63.30 to 139.26 Mj Input  
12.7 to 17.5 kW Nominal Add-on Cooling



**LENNOX HEATING & AIR CONDITIONING - DIVISION OF HEATCRAFT AUSTRALIA PTY LTD**

Note: Due to an ongoing commitment to quality and design improvements, specifications, ratings and dimensions are subject to change without notice and without liability - Heatcraft Australia Pty Ltd, 2005.



## APPLICATIONS

- G61E series gas fired furnaces include three models with high/low fire input capacities of 63.30/92.84, 79.13/116.05, 94.95/139.26 Mj.
- Two-stage heating operation, controlled by two stage or single stage manual thermostat.
- Lennox add-on evaporator coils, electronic air cleaners and power humidifiers can be easily added to the furnace.
- Units shipped factory assembled with all controls installed and wired.
- Factory run tested to insure dependable operation in the field.

## FEATURES

### Duralok Plus® Heat Exchanger

- Aluminized steel construction of 3 pass heat exchanger ensures superior resistance to corrosion and oxidation.
- Secondary heat exchanger constructed of aluminium fins fitted to stainless steel tubing.
- Crimped seam surfaces create minimum air resistance and allow air to flow around all surfaces for excellent heat transfer.
- Condensate drain header box located on front of coil.
- Compact design reduces space requirements inside cabinet.
- Heat exchangers have been laboratory life cycle tested.

### In-shot Burners

- Aluminized steel inshot burners provide efficient trouble free operation.
- Burner venturi mixes air and gas in correct proportion for proper combustion.
- Burner assembly is removable from the unit as a single component for ease of service.

### Two Stage Gas Control Valve

- 24 volt redundant combination two stage gas control valve combines a manual main shutoff valve, pressure regulation and automatic electric valve (dual) into one compact combination control.

### Direct Spark Ignition

- Solid state electronic direct spark ignition control provides positive and safe main burner ignition.
- Spark is intermittent and occurs only when required.
- Separate electronic flame sensor control assures safe and reliable operation.
- Should loss of flame occur during ignition or heating operation, the control will initiate 5 tries at re-ignition trial before defaulting to "lock-out" mode. "Lock-out" can be reset manually by setting the thermostat to the lowest setting then by powering the heater off, then on.
- Ignition control has light emitting diode (LED) to indicate status and as an aid in troubleshooting.

### Cabinet

- Constructed of heavy gauge, cold rolled steel with a primed and pre-painted topcoat finish.
- Cabinet surface temperatures are low due to foil faced fibreglass insulation on side and back panels of heat section.
- Blower section is completely insulated with foil faced fibreglass insulation.
- Complete service access is accomplished by removing one piece front panel and interior blower access door.
- Blower assembly may be completely removed from unit for service.
- Safety interlock switch located on blower access door automatically shuts off power to the unit when door is removed.
- Gas piping inlets are provided on either side of the cabinet.
- Electrical knockouts are provided in both sides of cabinet.
- Return air entry possible on either side of cabinet.

### Limit Controls

- Factory installed and accurately located limit controls provide protection from abnormal operating conditions.
- Primary limit is located on heating compartment vestibule panel.
- Two secondary limits are located on either side of the blower housing.
- If the limits fail 5 times during an unsatisfied thermostat demand, the control will default to the 60 minute "Watchguard" mode.
- The Watchguard circuit automatically resets ignition control after one hour of continuous thermostat demand, eliminating nuisance service calls.

### Direct Drive Blower

- Quiet multi-speed direct drive blower.
- Blower assembly statically and dynamically balanced.
- Multiple speed motor resiliently mounted.
- See blower performance tables.

### Furnace Control Centre Board

- Furnished and factory installed on interior blower access door.
- Solid state board contains all necessary controls and relays to operate blower, gas valve, combustion air blower and ignition.
- Board also monitors flame, limit and gas valve operation.
- Fan control consists of blower timed-off delay and non-adjustable blower timed-on delay (45 seconds).
- For air conditioning applications, blower is automatically energized on thermostat demand for cooling.
- Continuous low speed blower operation is furnished on board.
- Also included is a low voltage terminal strip for thermostat connections.
- Diagnostic LED's are furnished on board as an aid in servicing the system.
- Two 240 volt accessory terminals are provided on control board for operation of accessories during unit operation.

### Flame Rollout Switches

- Dual manual reset switches are furnished as standard and are factory installed on either side of the burner box.
- Switches prevent unit operation in the event combustion products passage through the flueway is reduced or blocked.

### Transformer

- 24 volt (40VA) control transformer is furnished as standard equipment and is factory installed on control panel.

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**OPTIONAL ACCESSORIES - MUST BE ORDERED SEPARATELY**

**LPG/Propane Conversion Kit (Optional)**

For propane models a conversion kit is required for field changeover from natural gas.

Kit is not furnished and must be ordered extra. See specifications table for part number.

**Thermostat (Optional)**

Heating thermostat is not furnished and must be ordered extra. See Lennox Price Book for options.

For all season applications, heating and cooling thermostat is available with automatic programming and two stage features.

**Evaporator Coils (Optional)**

Coils are available for field insertion in space provided in unit cabinet.

**Attic mounting kit (optional)**

For applications where installation within an enclosed space is required.

**SPECIFICATIONS**

Model Number	G61EVT-090	G61EVT-110	G61EVT-135
Input - Mj - Hi Fire	92.8	116.0	139.3
Input - Mj - Lo Fire	63.3	79.1	95.0
Output - kW - Hi Fire	24.6	30.5	36.3
Output - kW - Lo Fire	17.0	21.1	25.2
Flue size connector diameter-mm / in-round	50mm / 2"		
Temperature rise range - °C	9-31	14-39	18-42
Maximum external static pressure - Pa	200		
Gas connection iron pipe size - in.	1/2		
Blower wheel nom. diameter x width - mm	292 x 229		
Blower motor - Watts - HP	750 - 1.0		
Max Nominal cooling add-on - kW	17.5		
Shipping weight - kg	82	85	94
Electrical characteristics	240V-50Hz-1Ph (less than 10 Amps)		

**OPTIONAL ACCESSORIES (MUST BE ORDERED SEPARATELY)**

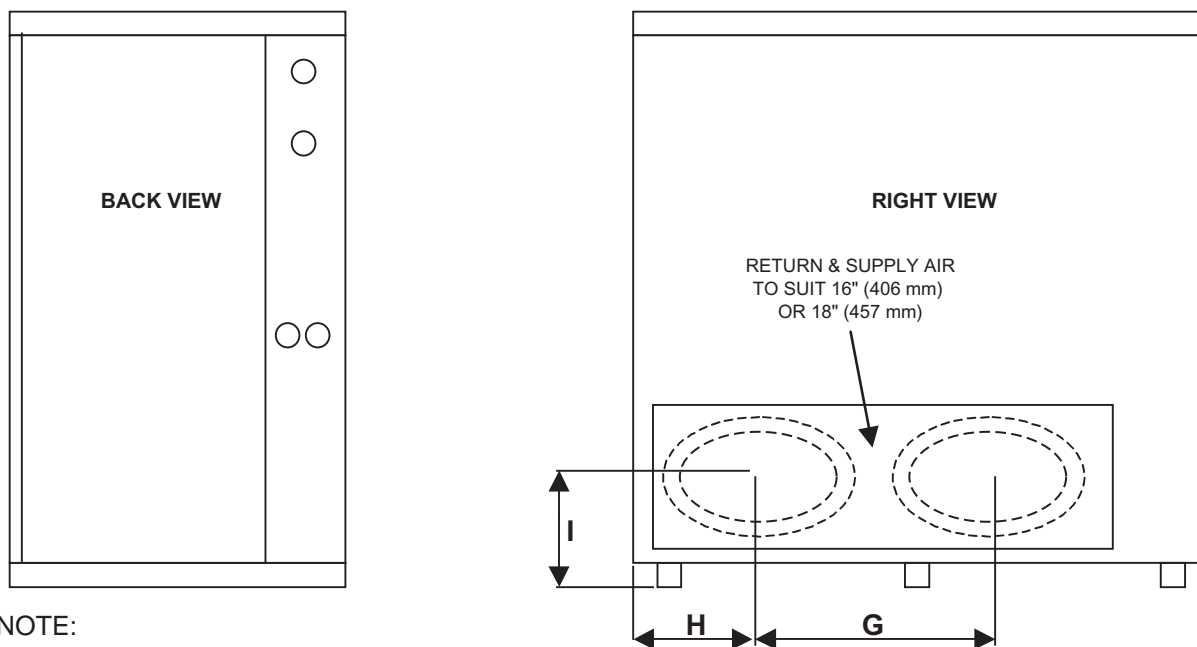
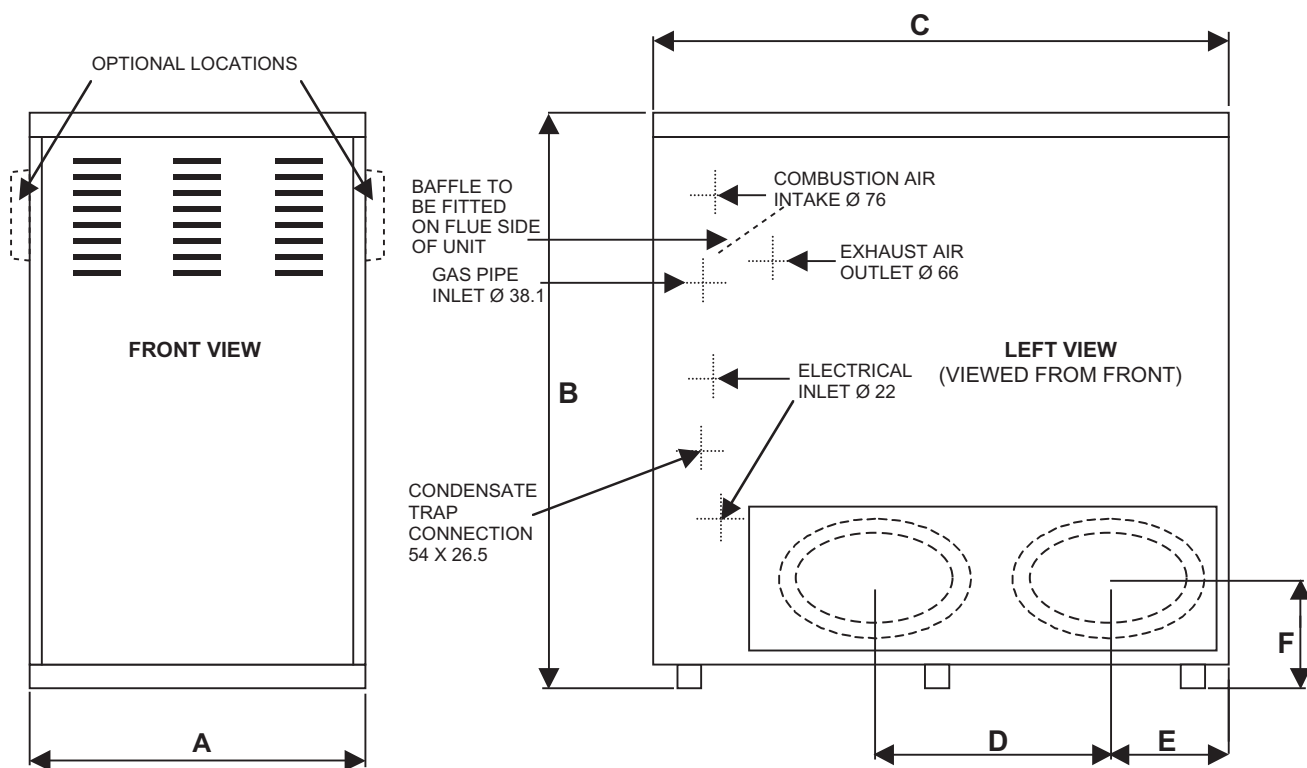
Signaturestat - 2 Heat / 2 Cool Temp/Humidity	81M27
Propane kit	59M13

**ADD ON COOLING NOTES.**

The cooling kW shown in this document are rated at 35°C DB out door ambient and indoor entering air temperatures of 27°C DB and 19°C WB. All values are nominal gross capacities and do not include evaporator coil blower motor heat deduction. Refer to HS29 Engineering data for cooling coil to condenser rating tables for variations due to differing ambient, entering air and air flow volumes.

## G61E SERIES GAS FURNACE SPECIFICATIONS

MODEL	DIMENSIONS mm								
	A	B	C	D	E	F	G	H	I
G61EVT-60C-090	543	1132	1387	642	313	282	642	313	282
G61EVT-60C-110	543	1132	1387	642	313	282	642	313	282
G61EVT-60D-135	632	1132	1387	642	313	282	642	313	282



**NOTE:**  
DUCT CONNECTIONS AND ACCESS HATCHES ARE INTERCHANGEABLE FROM SIDE TO SIDE

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**G61EVT BLOWER DATA****G61EVT - 60C - 090**

EXTERNAL STATIC PRESSURE (Pa)	AIR VOLUME AT VARIOUS BLOWER SPEEDS (L/s)		
	HIGH	MEDIUM	LOW
50	1068	865	711
75	1035	846	695
100	1011	829	674
125	988	807	658
150	963	785	637
175	931	764	608
200	908	737	568

**G61EVT - 60C - 110**

EXTERNAL STATIC PRESSURE (Pa)	AIR VOLUME AT VARIOUS BLOWER SPEEDS (L/s)		
	HIGH	MEDIUM	LOW
50	1068	865	711
75	1035	846	695
100	1011	829	674
125	988	807	658
150	963	785	637
175	931	764	608
200	908	737	568

**G61EVT - 60D - 135**

EXTERNAL STATIC PRESSURE (Pa)	AIR VOLUME AT VARIOUS BLOWER SPEEDS (L/s)		
	HIGH	MEDIUM	LOW
50	1068	865	711
75	1035	846	695
100	1011	829	674
125	988	807	658
150	963	785	637
175	931	764	608
200	908	737	568

NOTE: All air data is measured external to unit.

**HIGH ALTITUDE DERATE**

Units must be derated when installed at an elevation of more than 610 m (2000 feet) above sea level. If unit is installed at an altitude higher than 610 m (2000 feet), the unit must be derated 4% for every 305 m (1000 feet) above sea level. Thus, at an altitude of 1210 m (4000 feet), the unit would require a derate of 16%.

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

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