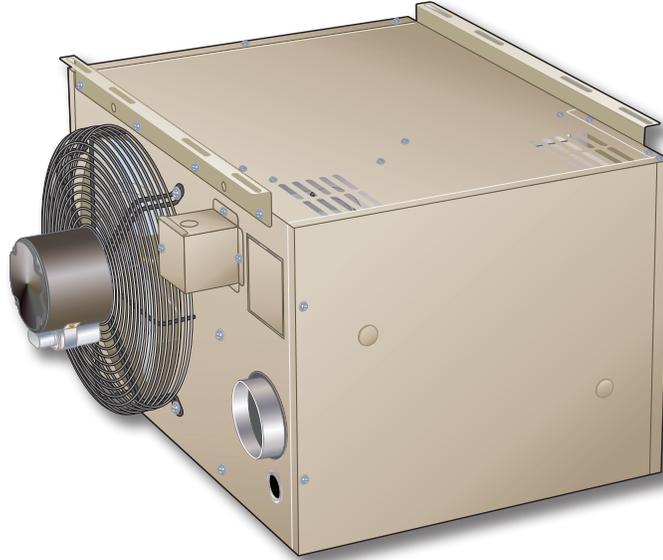


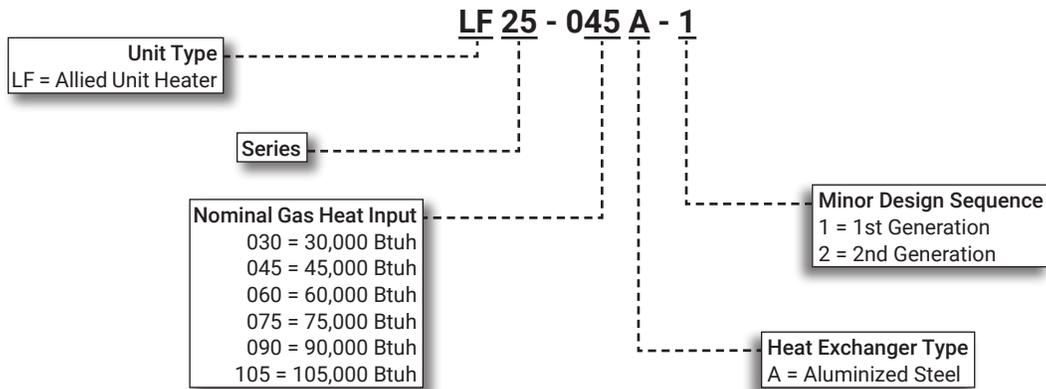


**RESIDENTIAL / COMMERCIAL  
 PRODUCT SPECIFICATIONS**



**Steady-State Efficiency - up to 83.8%**  
**Input - 30,000 to 105,000 Btuh**

**MODEL NUMBER IDENTIFICATION**



**CONTENTS**

Electrical Data . . . . .	5
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**WARRANTY AND APPROVALS**

**WARRANTY**

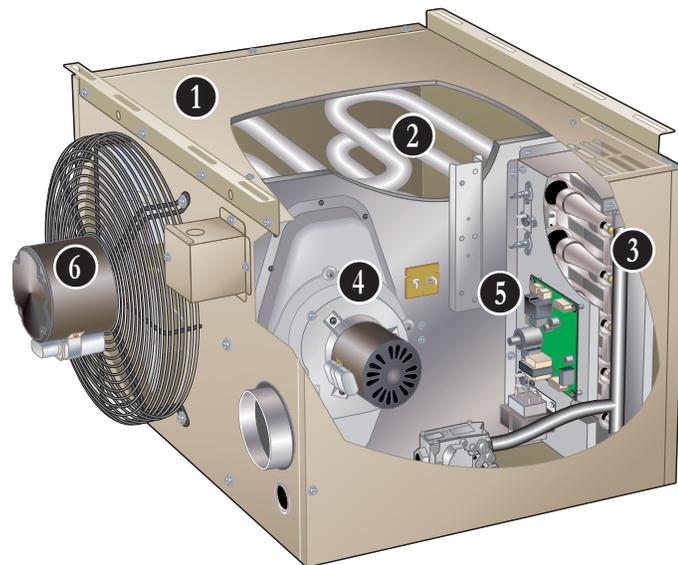
- Heat Exchanger - Aluminized steel - ten year limited
- All other covered components:
  - Five year limited - Residential installations
  - One year limited - Non-residential installations

**APPROVALS**

- CSA International certified
- Certified for natural or LPG/Propane gas.
- Units are approved for vertical or horizontal venting

## FEATURE HIGHLIGHTS

1. Heavy Gauge Steel Cabinet
2. Tubular Heat Exchanger
3. Inshot Burners
4. Combustion Air Inducer
5. Combination Ignition Control
6. Direct Drive fan



## FEATURES AND BENEFITS

### APPLICATIONS

- Horizontal unit heaters are low profile, compact in design and easy to install
- Steady State Efficiencies - Up to 83.8%
- Ideal for economical heating systems in garages and non-confined living spaces
- Shipped completely assembled with controls factory installed and wired
- Hanging brackets are shipped loose for field installation
- Test operated at the factory to ensure proper operation and dependability

**NOTE** - Installer must locate unit, make unit gas supply, flue, electrical connections and mount thermostat to complete job.

### 1 CABINET

- Constructed of pre-painted heavy gauge cold rolled steel
- Hinged, reversible door for easy access
- Adjustable louvers are furnished on cabinet for control of air flow direction
- Wiring junction box is conveniently located outside unit cabinet for easy field wiring connections
- Hanging brackets for suspending unit are furnished for field installation
- Unit may be rotated 180 degrees (top for bottom) for ease of installation of gas, electrical and flue locations

### HEATING SYSTEM

### 2 Tubular Aluminized Steel Heat Exchanger

- Tubular heat exchanger is constructed of aluminized steel for superior resistance to corrosion and oxidation
- Curving design of heat exchanger allows complete exposure of heating surfaces to supply air stream
- Dimpled tubes with wrinkle bends allow for maximum heat transfer

### 3 Inshot Burner Assembly

- 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

### Gas Control Valve

- 24 volt redundant combination gas control valve combines manual shut off switch (On-Off), automatic electric valve (dual) and gas pressure regulation into a compact combination control

### 4 Combustion Air Inducer

- Prepurges heat exchanger and safely vents combustion products
- Operates only during heating cycle
- Blower motor has ball bearings and is thermally protected

### Pressure Switch

- Pressure switch prevents unit operation in case of blocked flue outlet

### Limit Control(s)

- Factory installed and accurately located
- Limit control has fixed temperature setting and protects heating system from abnormal operating conditions

### Flame Rollout Switch

- Automatic reset switch is factory installed on the top of the burner box

## FEATURES AND BENEFITS

### HEATING SYSTEM (continued)

#### Optional Accessories

##### High Altitude Orifice Kits

- Required on all units for proper unit operation at altitudes from 5001 to 10,000 ft. (US) and 7501 to 10,000 ft. (Canada)
- Kits are available for natural gas and LPG/propane

##### High Altitude Pressure Switch Kit

- Required for proper unit operation at various elevations

##### Natural Gas to LPG/Propane Conversion Kit

- Required for field changeover from natural gas to LPG/Propane

### CONTROLS

#### **5** Combination Direct Spark Ignition/Fan Timer Control Ignition Control

- 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, flame sensor controls will initiate 5 attempts at re-ignition before locking out unit operation.
- Control board contains all necessary controls and relays to operate unit.
- Includes: Fan timer control - fan on 30 seconds (fixed), fan off 150 seconds (fixed), terminal strip for thermostat connections, diagnostic LED for troubleshooting.
- Direct plug-in wiring harness.

##### Transformer

- 120V/24V transformer furnished as standard

### VENTING

- Units may be vented horizontally or vertically
  - **Residential Vertical Venting** - Units are approved for installation with single wall vent pipe or Type B double wall vent pipe
  - **Residential Horizontal Venting** - Units are approved for residential installation only with Allied-approved stainless steel vent kits
  - **Commercial Vertical Venting** - Units are approved for installation with single wall vent pipe only
  - **Commercial Horizontal Venting** - Units are approved for single-wall vent pipe or optional Allied-approved, UL listed, Cat III stainless steel vent kits

#### Optional Accessories

##### Horizontal Vent Kits

- UL listed, Cat III stainless steel vent kits are required for horizontal venting.
- Available for upward or downward slope
- Vent kits snap together
- Kits include unit transition, vent termination and wall thimble
- Upward slope vent kits have a drain connection
- Provisions for hanging must be field supplied
- Optional 45° or 90° elbow available for ease of vent connection
- Straight pipe sections in various lengths are available

**NOTE** - See Horizontal Vent Kits / Elbow table for Allied-approved Horizontal Vent Kits and accessories on Page 6.

**NOTE** - See drawings for additional information.

**NOTE** - See installation instructions for detailed venting requirements.

#### **6** DIRECT DRIVE FAN

- Efficient and quiet operating direct drive propeller type fan
- Permanently lubricated fan motor

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## SPECIFICATIONS

Gas Heating Performance		Model No.	LF25-030A	LF25-045A	LF25-060A	LF25-075A	LF25-090A	LF25-105A
Heating Capacity Input Btuh			30,000	45,000	60,000	75,000	90,000	105,000
Heating Capacity Output Btuh - Natural			25,020	37,665	50,220	62,550	75,420	87,675
Steady State Efficiency - Natural			83.4%	83.7%	83.7%	83.4%	83.8%	83.5%
Temperature rise - °F			37	52	47	65	43	59
Connections in.	Flue size (round)		4	4	4	4	4	4
	Gas Piping Size - in.		1/2	1/2	1/2	1/2	1/2	1/2
Fan Data	Number of fans		1	1	1	1	1	1
	Fan Diameter - in.		10	10	14	14	16	16
	Number of blades		4	4	4	4	4	4
	Motor Output - hp		1/25	1/25	1/15	1/15	1/10	1/10
	rpm		1550	1550	1075	1075	1075	1075
	Air Volume - cfm		625	665	1000	1200	1600	1500
Air throw at 8 ft. mounting height - ft.			27	29	34	41	46	43
Weight Data	Net Weight - lbs. (kg)		55 (25)	60 (27)	85 (39)	90 (41)	115 (52)	120 (54)
	Shipping Weight - lbs. (kg)		60 (27)	65 (29)	90 (41)	95 (43)	120 (54)	125 (57)

## ELECTRICAL DATA

Voltage		115 volts - 60 hertz - 1 phase					
Fan motor full load amps		2.0	2.0	2.0	2.0	2.0	3.0
Maximum overcurrent protection		15	15	15	15	15	15

## GAS HEAT ACCESSORIES

US

Natural Gas to LPG/Propane Kit	LPG/Propane High Altitude Orifice Kit		Natural Gas High Altitude Orifice Kit	
0 - 5000 ft.	5001 - 8000 ft.	8001 - 10,000 ft.	5001 - 7000 ft.	7001 - 10,000 ft.
18L11	19A10	19A11	19A17	19A18

Canada

Natural Gas to LPG/Propane Kit	LPG/Propane High Altitude Orifice Kit	Natural Gas High Altitude Orifice Kit
0 - 7500 ft.	7501 - 9500 ft.	7501 - 9500 ft.
18L11	19A12	19A17

## GAS HEAT ACCESSORIES

## HIGH ALTITUDE PRESSURE SWITCH KITS

Altitude - ft.	0-3000	3000-5000	5001-6000	6001-7000	7001-9000	9001-10,000
LF25-030A	Factory	Factory	Factory	18L35	18L35	18L35
LF25-045A	Factory	Factory	Factory	18L35	18L35	18L35
LF25-060A	Factory	Factory	18L19	18L19	18L19	18L50
LF25-075A	Factory	18L20	18L20	18L35	18L35	18L35
Altitude - ft.	0-2000	2001-4000	4001-6000	6001-7000	7001-9000	9001-10,000
LF25-090A	Factory	18L20	18L19	18L35	18L35	18L35
LF25-105A	Factory	Factory	18L47	18L47	18L35	18L35

## HORIZONTAL VENT KITS AND ELBOW

REQUIRED FOR RESIDENTIAL HORIZONTAL VENTING APPLICATIONS

Unit Heater Model No.	Vent Diameter (in.)	Upslope Vent Kit	Catalog No.	Downslope Vent Kit	Catalog No.	45° Elbow	Catalog No.	90° Elbow	Catalog No.	<sup>1</sup> Minimum Vent Length (ft.)
LF25-030A LF25-045A LF25-060A LF25-075A LF25-090A LF25-105A	4	C5VENT4KU	75W63	C5VENT4KD	75W67	C5VENT4E45 (Optional)	87W80	C5VENT4E (Optional)	75W71	5

<sup>1</sup> Length does not include termination (or elbow if used).

## STRAIGHT VENT PIPE - FOR HORIZONTAL VENTING

Unit Heater	Model No.	Vent Diameter (in.)	Length (in.)	Catalog No.
LF25-030A	C5VENT4P6	4	6	75W77
LF25-045A	C5VENT4P12	4	12	75W78
LF25-060A LF25-075A LF25-090A LF25-105A	C5VENT4P36	4	36	75W79

## INSTALLATION CLEARANCES

	in.	mm
Top	1	25
Side opposite control box/access panel	1	25
Control Box/Access Panel Side	24	610
Back	18	457
Bottom	1	1
<sup>1</sup> Flue	6	152

See Installation Instructions for further installation considerations.

<sup>1</sup> Single-Wall vent clearance. Type B Double-Wall vent clearance is in accordance with the manufacturer's listing.

## MAXIMUM VENT CONNECTOR LENGTHS

No. of Elbows	Maximum Length (feet) of Straight Vent Pipe
1	25
2	20
3	15
4	10
5	5

NOTES - Minimum horizontal vent length is 5 ft.

Horizontal venting requires the use of a Allied-approved Cat III Horizontal Vent Kit and Vent Pipe.

Horizontal venting must terminate in a tee.

Maximum total length of vent pipe must not exceed 30 ft.

One elbow is equivalent to 5 ft. of vent pipe.

**Residential Vertical Venting** - Units are approved for installation with single wall vent pipe or Type B double wall vent pipe.

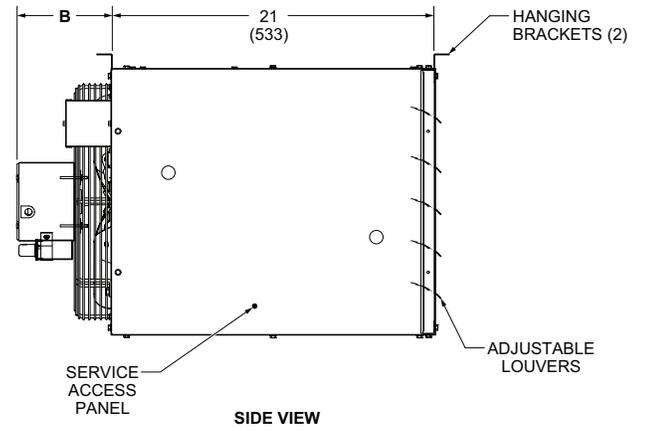
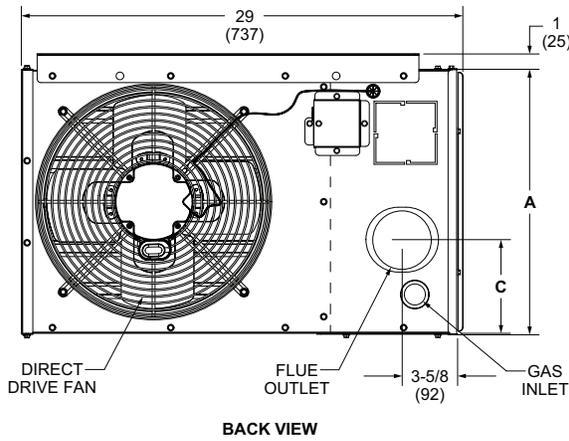
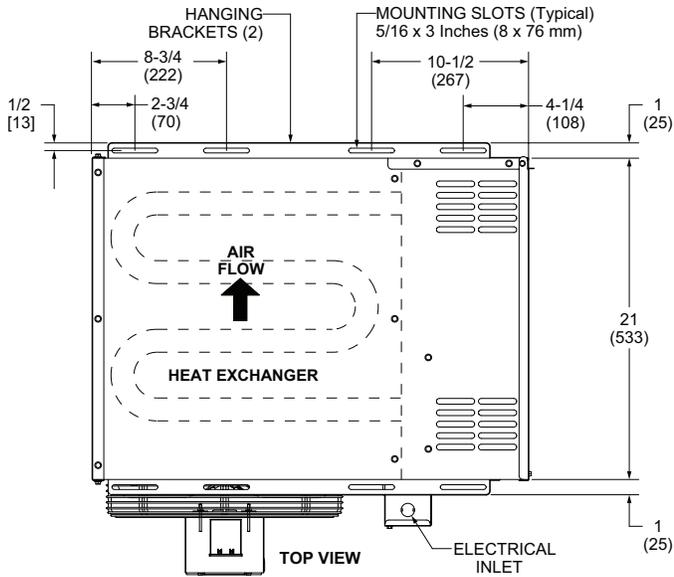
**Residential Horizontal Venting** - Units are approved for residential installation only with Allied-approved stainless steel vent kits.

**Commercial Vertical Venting** - Units are approved for installation with single wall vent pipe only.

**Commercial Horizontal Venting** - Units are approved for single-wall vent pipe or optional Allied-approved, UL listed, Cat III stainless steel vent kits.

Minimum clearance to combustible material is 6 in. with single wall vent pipe.

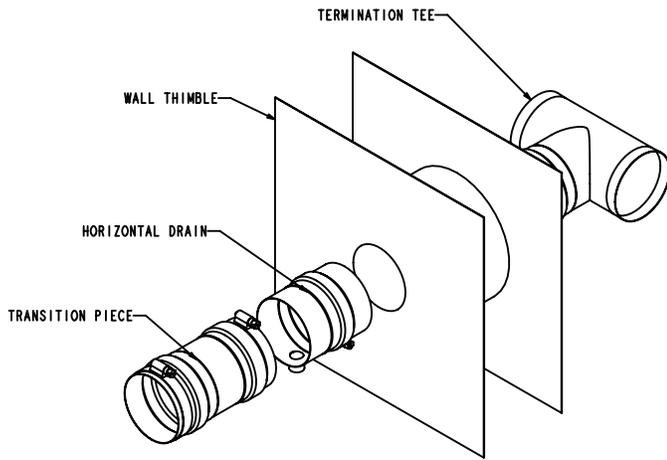
# DIMENSIONS



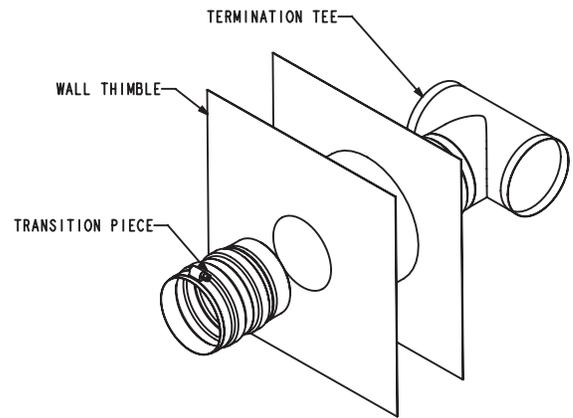
Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
LF25-030A LF25-045A	12-3/8	314	6-1/2	165	3-7/8	98
LF25-060A LF25-075A	17-1/2	445	6-1/4	159	6-1/8	156
LF25-090A LF25-105A	23	584	7-7/8	200	9-1/8	232

# VENT KITS AND ACCESSORIES

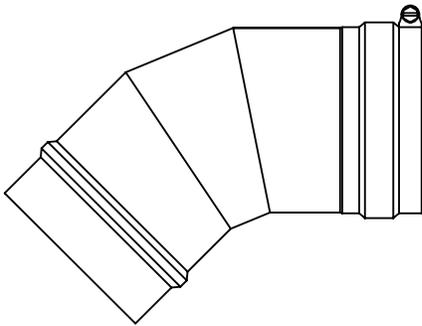
## HORIZONTAL VENT KITS (UPSLOPE)



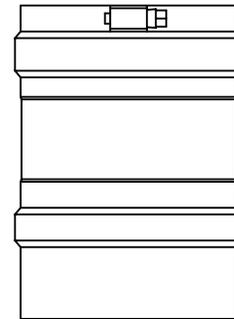
## HORIZONTAL VENT KITS (DOWNSLOPE)



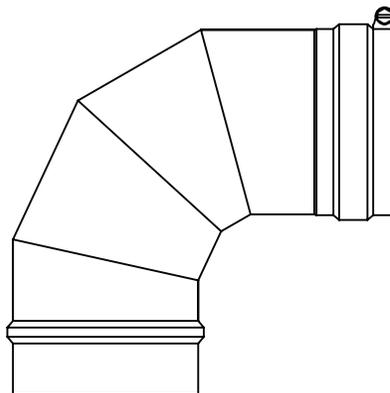
## 45° ELBOW (Typical)



## STRAIGHT PIPE (Typical)



## 90° ELBOW (Typical)









## REVISIONS

Sections	Description of Change
Specifications	Outputs and efficiencies updated.



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