



GAS FURNACES

EL195DFE

ELITE® SERIES

Downflow - High Efficiency Blower Motor

PRODUCT SPECIFICATIONS

Bulletin No. 210616

March 2019

Supersedes September 2018



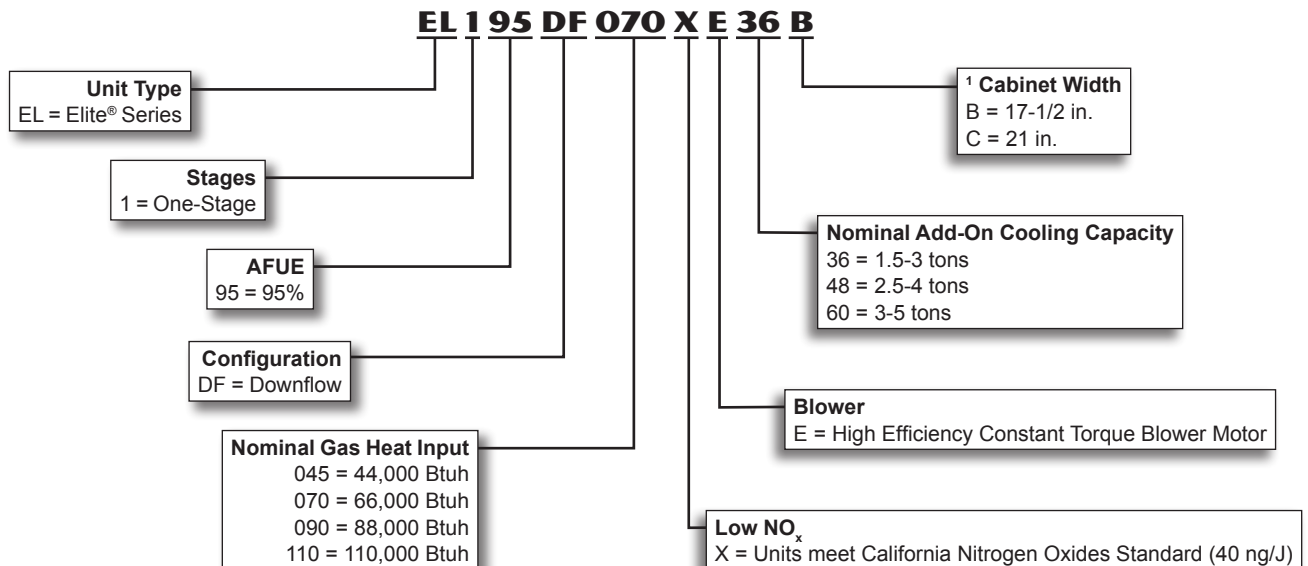
**ELITE®
SERIES**

AFUE - 95%

Input - 44,000 to 110,000 Btuh

Nominal Add-on Cooling - 1.5 to 5 Tons

MODEL NUMBER IDENTIFICATION



¹ Downflow indoor coils with the same letter designation will physically match the furnace supply air opening.

FEATURES

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WARRANTY

Duralok Plus™ Aluminized Steel Heat Exchanger - Limited Lifetime warranty in residential applications (twenty-year transferable), ten years in non-residential applications.

All other covered components - Limited Five-Year warranty in residential applications, one year in non-residential applications.

Refer to Lennox Equipment Limited Warranty certificate included with equipment for details.

APPROVALS

Units are Certified by AHRI.

Units tested and rated according to US DOE test procedures and FTC labeling regulations.

Blower data from unit tests conducted in Lennox Laboratory air test chamber.

Approved by the California Energy Commission and meets California Nitrogen Oxides Standard (NO_x) limits of 40 ng/J.

ISO 9001 Registered Manufacturing Quality System.

California Only

If installed in South Coast Air Quality Management District (SCAQMD) only:

This furnace does not meet the SCAQMD Rule 1111 NO_x emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450. This furnace is not eligible for the Clean Air Furnace Rebate Program: www.CleanAirFurnaceRebate.com.

If installed in San Joaquin Valley Air Pollution Control District (SJVAPCD) only:

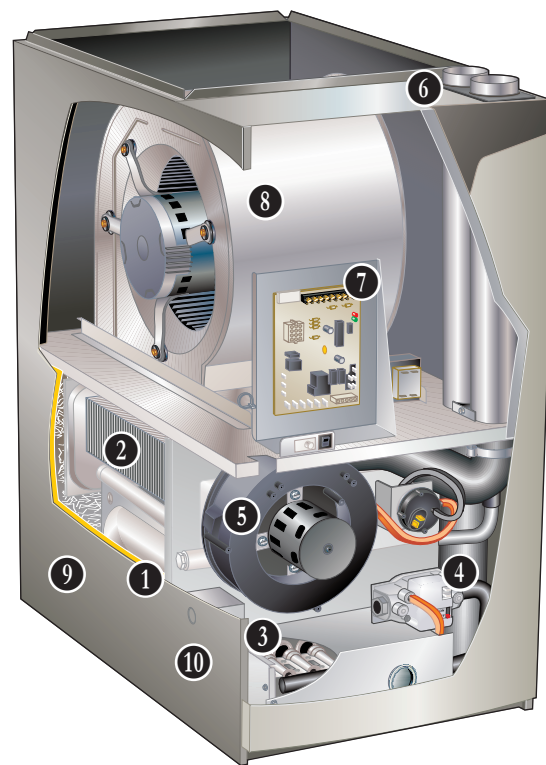
This furnace does not meet the SJVAPCD Rule 4905 NO_x emission limit (14 ng/J), and thus is subject to a mitigation fee of up to \$450.

APPLICATIONS

Input capacities of 44,000, 66,000, 88,000 and 110,000 Btuh.

Energy efficiency (AFUE) of 95%.

Compact cabinet for downflow applications without any internal modifications to the unit.



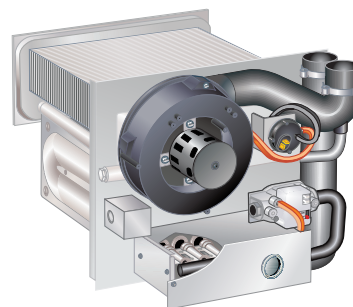
Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace.

Shipped factory assembled with controls installed and wired.

Each unit factory test operated to ensure proper operation.

HEATING SYSTEM

1 Lennox Duralok Plus™ Heat Exchanger Assembly



Lennox developed heat exchanger assembly consists of primary heat exchanger and secondary condenser coil assembly.

Main multi-pass crimped seam design clamshell type heat exchanger.

Constructed of heavy-gauge, aluminized steel.

Designed for normal expansion and contraction with maximum efficiency and minimum resistance to air flow.

2 Secondary heat exchanger condenser coil constructed of aluminum fins fitted to stainless steel tubes.

Coil is factory tested for leaks.

Condensate drain header box assembly located on front of coil.

Compact size of complete heat exchanger assembly permits low overall design of furnace cabinet.

Heat exchanger assembly has been laboratory life cycle tested in excess of industry standards.

FEATURES

HEATING SYSTEM (continued)

Lennox Designed Header Box

Header box on end of condenser coil collects flue condensate for disposal through condensate drains.

The drains are located on each side of the cabinet for easy field installation of condensate drain trap.

Only one drain is used, the other drain is sealed.

Condensate drain trap is included with unit for field installation.

Lennox Designed Flue Condensate Trap Assembly

Condensate trap assembly is mounted outside the conditioned air stream.

Assembly can be mounted on either side of cabinet. See Installation Instructions.

90° street elbow furnished for ease of drain trap installation.

Drain connection can be made with field provided PVC pipe, PVC coupling, or vinyl tubing with hose clamp.

Drain cap on trap allows easy cleaning and winterizing.

3 Inshot 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.

SureLight® Hot Surface Ignitor

Tough, reliable, long-life, trouble-free performance.

Silicon nitride ignitor.

Cemented to steatite block for protection against current leakage.

Ignition leads are constructed of nickel plated copper and are enclosed in high temperature Teflon® insulation for dependable operation.

4 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.

Flame Rollout Switches (2)

Manual reset switches are factory installed in burner box.

Switch provides protection from abnormal operating conditions.

Limit Control

Automatic reset, primary limit is accurately located on vestibule panel on all units.

5 Combustion Air Inducer

Shaded pole heavy duty blower prepurges heat exchanger and safely vents flue products.

Operates only during heating cycle.

Pressure Switch

Proves Combustion Air Inducer operation before allowing gas valve to open.

Optional Accessories

High Altitude Orifice Kits

Required on all units for proper unit operation at altitudes from 7501 to 10,000 ft.

Kits are available for natural gas and LPG/propane.

High Altitude Pressure Switch Kit

Required for proper unit operation on installations above 4500 ft.

Natural Gas to LPG/Propane Conversion Kit

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

LPG/Propane to Natural Gas Conversion Kit

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

Muffler (US Only)

Significantly reduces outdoor operating sound levels.

Two-inch diameter muffler is optional for 045 through 110 input models.

NOTE - Two-inch muffler is optional for the 110 input model with a maximum vent pipe length of up to 29 ft.

Three-inch diameter muffler is optional for 110 input models.

NOTE - Three-inch muffler is optional for the 110 input model with a minimum vent pipe length of 30 ft.

Installed vertically in the exhaust piping.

See Optional Accessory Dimension Drawing.

DIRECT VENT / NON-DIRECT VENT SEALED COMBUSTION SYSTEM

- 6 Furnace features a “sealed combustion” system and can be installed in either Direct Vent or Non-Direct applications.

In Direct Vent applications, combustion air is supplied from outdoors and flue gases are discharged outdoors.

In Non-Direct Vent applications, combustion air is supplied from indoors and flue gases are discharged outdoors.

NOTE - Lennox has approved the use of DuraVent® PolyPro® and Centrotherm InnoFlue® manufactured vent pipe and terminations as an alternative to PVC vent pipe. Must be ordered separately.

Tested and listed to the ULC S636 standard in Canada.

The polypropylene venting system must follow the uninsulated and unconditioned space vent lengths listed in the table on Page 11.

Refer to the Installation Instructions for additional details.

FEATURES

DIRECT VENT / NON-DIRECT VENT SEALED COMBUSTION SYSTEM (continued)

Optional Accessories

Flue Coupling

Assists with exhaust flue piping connection and servicing.

Includes flexible one 2 inch rubber coupling and two adjustable bands.

Approved for all Lennox 90% furnaces.

Termination Kits

Facilitates installation of combustion air intake pipe and flue exhaust pipe.

Refer to venting table in this bulletin to determine pipe size needed and proper termination kit required.

See Optional Accessories table and dimension drawings.

Termination Kit - Concentric - Direct Vent Applications

2 or 3 inch kit contains concentric termination assembly, reducer bushing and 45 degree elbow.

2 inch kit for -045-070 models contains an outdoor exhaust accelerator.

Kit requires single hole penetration of roof or wall for installation.

Roof Termination Flashing Kit is available for use with 2 inch Kits.

CSA certified.

Termination Kit - Flush-Mount

Kit contains flush-mount termination, accelerator, mounting template and hardware.

Kit may be used with 2, 2-1/2 or 3 in. pipe.

Termination Kits - Wall Assembly

Close Couple (US Only) - Direct Vent Applications

2 or 3 inch kit consists of close-couple, side-by-side PVC piping with galvanized steel wall cover plate for sealing and isolating piping penetration of the wall.

Piping spacing and length is sized for proper wall installations.

CSA certified.

Close Couple WTK (Canada Only) - Direct Vent Applications

2 or 3 inch kit contains one insulated faceplate, one insulated exhaust pipe, elbow and fittings.

Wall Ring - Direct Vent or Non-Direct Vent Applications

2 inch kit contains 2 stainless steel outside seal caps, 2 galvanized steel inside seal caps, 4 seal rings for the caps and 18 inch insulation sleeve for sealing and isolating intake and exhaust piping penetration of wall.

Maintain a maximum of 6 inches between the inlet and outlet openings in the installation of the pipes.

Roof Termination Flashing Kit - Direct Vent or Non-Direct Vent Applications

3 inch kit contains two neoprene rubber roof flashings for vertical venting through a roof.

Vent pipe and insulation not furnished.

Flashing Kit can also be used with 2 inch Concentric Vent Termination Kits used in vertical venting rooftop applications.

7 CONTROLS

SureLight® Integrated Furnace Control

Contains all necessary controls and relays to operate furnace.

Combustion air inducer is controlled by integrated furnace control. 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.

Flame sensor assures safe and reliable operation.

Should loss of flame occur the integrated furnace control will initiate 4 re-attempts at 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, 90, 120, 180 seconds - factory setting 90 seconds) and fixed blower timed-on delay (45 seconds).

For air-conditioning applications, blower is automatically energized on thermostat demand for cooling.

Two accessory terminals furnished for additional power supply requirements for 120 volt (less than 1 amp) power humidifiers and powered air cleaners. One additional terminal is furnished for power supply requirements for 24V (less than 0.5 amp) low voltage accessories.

Ignition control has a single red LED to indicate status and as an aid in troubleshooting.

Last ten codes are stored in non-volatile memory (accessible by recall button on control) for servicing.

24 Volt Transformer

Furnished and factory installed in control box. 40VA transformer has circuit breaker wired in series.

Field Wiring Make-Up Box

Furnished for line voltage wiring.

Factory installed internally on left side of furnace.

Box may be installed internally or externally on either side of furnace.

FEATURES

CONTROLS (continued)

Optional Accessories

Blower Relay Kit (For Use With Two-Stage Outdoor Units)

Allows furnace blower speed changes when matched with two-stage air conditioners or heat pumps.

iComfort® E30 Smart Wi-Fi Thermostat

Wi-Fi enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat.

3 Heat/2 Cool.

Auto-changeover.

Controls dehumidification during cooling mode and humidification during heating mode.

Offers enhanced capabilities including humidification / dehumidification / dewpoint measurement and control, *Humiditrol*® control, and equipment maintenance reminders.

Easy to read 7 in. color touchscreen (measured diagonally).

LCD display with backlight shows the current and set temperature, time, inside relative humidity, system status (operating mode and schedules) and outside temperature (optional outdoor sensor required).

Smooth Setback Recovery starts system early to achieve setpoint at start of program period.

Compressor short-cycle protection (5 minutes).

Up to four separate schedules are available plus Schedule IQ™.

One-Touch Away Mode - A quick and easy way to set the cooling and heating setpoints while away.

Smart Away™ - Uses geo-fencing technology to determine when the homeowner is within a predetermined distance from the home to operate the system when leaving, away and arriving.

Apple HomeKit™ enabled, making it easy to control the E30 thermostat from an iPhone, iPad or iPod device. Use Siri® voice commands to control the E30 thermostat.

Amazon® Alexa-enabled, smart-home compatible. It works with Amazon Echo, Echo Dot and Tap devices.

Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets.

High Definition Color Display, Mag-Mount, Smart Hub Controller, wallplate (for retrofit installations) furnished for easy installation.



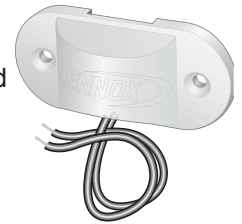
Additional indoor air quality comfort products (PureAir™ Air Purification System, *Healthy Climate*® Humidifiers, *Humiditrol*® Enhanced Dehumidification Accessory, *Healthy Climate*® Energy/Heat Recovery Ventilators, *Healthy Climate*® Germicidal Lights) can be added to the system for a complete total-comfort system.

See the iComfort® E30 Smart Wi-Fi Thermostat Product Specifications bulletin in the Controls section for more information.

Remote Outdoor Temperature Sensor

Used with the iComfort® E30 Smart Thermostat.

When installed outdoors, sensor allows thermostat to display outdoor temperature. Sensor is auto-detected when connected to thermostat.



NOTE - Sensor is required for the Enhanced Dehumidification Accessory (EDA).

Thermostat

Thermostat (programmable/non-programmable) is not furnished with unit.

See Thermostat bulletins in Controls Section and Lennox Price Book for selection.

Furnace Twinning Kit

Required to operate two furnaces simultaneously.

Kit consists of twinning relays, quick connect terminals and mounting hardware.

Used for single-stage heating/single-stage cooling with a single-stage thermostat.

Night Service Kit

Contains most commonly used service parts:

- Furnace control
- Igniter
- Flame sensor
- Gas valve
- Transformer
- Service Manual

FEATURES

8 **BLOWER**

Direct drive blower.
Statically and dynamically balanced.
Resiliently mounted.
Blower assembly easily removed for servicing.

Power Saver™ Constant Torque Blower Motor

DC Brushless Motor
High Efficiency Constant Torque.
ECM (Electronically Commutated Motor).
Motor is programmed to provide constant torque at each of the selectable speeds.
Motor is controlled by the Integrated Furnace Control.
Blower speeds are easily changed on the integrated furnace control. See Blower Data tables.

9 **CABINET**

Low-profile, narrow width cabinet allows easy installation in downflow applications.
Heavy-gauge, cold rolled steel construction.
Pre-painted cabinet finish.
Flanges provided on supply air opening for ease of plenum connection or alignment with indoor coil.
Cabinet is insulated with foil-faced insulation on sides and back of heating compartment and mat-faced insulation in blower compartment.
Sealed blower compartment.
Inner blower compartment access panel seals blower compartment from air leakage.
Complete service access.
Safety interlock switch automatically shuts off power to unit when blower compartment access door is removed.
Gas piping and electrical inlets are provided in both sides of cabinet.

Coil Match-Up

All Lennox downflow indoor coils will physically match the furnace **supply air opening** with the same letter designation (A, B, C, D) as in the furnace model number.

Low Leakage Cabinet

All models have less than 2% air leakage and meet ANSI/ASHRAE Standard 193-2010 *“Method of Test for Determining the Air Tightness of HVAC Equipment”*.

Optional Accessories

Condensate Drain Heat Cable Kits

Self-limiting wattage heat cable prevents condensate drain from freezing in unconditioned areas.
Available in 6 or 24 ft. lengths.

Crawl Space Vent Drain Kit

Allows venting through a crawl space for downflow applications.
Includes 2 or 3 in. sanitary tee, 2 in. PVC assembly, PVC boot and clamp.
Kit for Canada is certified to ULC S636.

Downflow Combustible Flooring Base

Required for heating only units installed on combustible floors.

Not required in add-on cooling applications.

See Dimension Drawing.

FILTER (not furnished)

Optional Accessories

Downflow Filter Cabinet

Filter cabinet mounts directly on top of furnace.
“B and “C” width cabinets have two filters.
Filter rails are furnished.
Front access for servicing.
Cleanable filter(s) are furnished.

SPECIFICATIONS

		Model No.	EL195DF045XE36B	EL195DF070XE48B	EL195DF090XE48C	EL195DF110XE60C
Gas Heating Performance	AHRI Ref. No		4675053	4675081	4675087	4675073
	¹ AFUE		95%	95%	95%	95%
	Input - Btuh		44,000	66,000	88,000	110,000
	Output - Btuh		42,000	64,000	85,000	106,000
	Temperature rise range - °F		25 - 55	25 - 55	40 - 70	40 - 70
	Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane		3.5 / 10	3.5 / 10	3.5 / 10	3.5 / 10
	High static - in. w.g.		0.5	0.5	0.5	0.5
	Connections in.	Intake / Exhaust Pipe (PVC)		2 / 2	2 / 2	2 / 2
Gas pipe size IPS			1/2	1/2	1/2	1/2
Condensate Drain Trap (PVC pipe) - i.d.			3/4	3/4	3/4	3/4
with furnished 90° street elbow			3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt	3/4 slip x 3/4 Mipt
with field supplied (PVC coupling) - o.d.			3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT	3/4 slip x 3/4 MPT
Indoor Blower	Wheel nom. diameter x width - in.		10 x 8	11-1/2 x 10	10 x 10	11 x 11
	Motor Type		DC Brushless	DC Brushless	DC Brushless	DC Brushless
	Motor output - hp		1/2	3/4	3/4	1
	Tons of add-on cooling		1.5 - 3	2 - 4	2 - 4	3 - 5
	Air Volume Range - cfm		485 - 1395	520 - 1770	760 - 1765	1045 - 2285
Electrical Data	Voltage	120 volts - 60 hertz - 1 phase				
	Blower motor full load amps		6.8	8.4	8.4	10.9
	Maximum overcurrent protection		15	15	15	15
Shipping Data	lbs. - 1 package		131	144	160	174

NOTE - Filters and provisions for mounting are not furnished and must be field provided.

¹ Annual Fuel Utilization Efficiency based on DOE test procedures and according to FTC labeling regulations. Isolated combustion system rating for non-weatherized furnaces.

INSTALLATION CLEARANCES

Sides	¹ 0 inches (0 mm)
Rear	0 inches (0 mm)
Top/Plenum	1 inch (25 mm)
Front	0 inches (0 mm)
Front (service/alcove)	24 inches (610 mm)
Floor	² Combustible

NOTE - Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or the National Standard of Canada CAN/CSA-B149.1 "Natural Gas and Propane Installation Code".

NOTE - In the U.S. flue sizing must conform to the methods outlined in the current National Fuel Gas Code (NFPA 54/ANSI-Z223.1) or applicable provisions of local building codes. In Canada flue sizing must conform to the methods outlined in National Standard of Canada CAN/CSA-B149.1.

¹ Allow proper clearances to accommodate condensate trap and vent pipe installation.

² Clearance for installation on combustible floor if Optional Downflow Combustible Flooring Base is installed between furnace and combustible floor. Not required in add-on cooling applications if installed in accordance with local codes or National Fuel Gas Code ANSI-Z223.1 or CAN/CGA-149.1,.2. Do not install the furnace directly on carpeting, tile, or other combustible materials other than wood flooring.

OPTIONAL ACCESSORIES - ORDER SEPARATELY

			"B" Width Models	"C" Width Models
CABINET ACCESSORIES				
Downflow Combustible Flooring Base			11M60	11M61
CONDENSATE DRAIN KITS				
Condensate Drain Heat Cable	6 ft.		26K68	26K68
	24 ft.		26K69	26K69
Crawl Space Vent Drain Kit	US		51W18	51W18
	Canada		15Z70	15Z70
CONTROLS				
Blower Relay Kit (for two-stage outdoor units)			85W66	85W66
Furnace Twinning Kit			16W72	16W72
iComfort® E30 Smart Thermostat			15S63	15S63
Remote Outdoor Temperature Sensor			X2658	X2658
Night Service Kit			84W48	84W48
DOWNFLOW FILTER KITS				
1 Downflow Filter Cabinet			51W07	51W08
	No. and Size of filter - in.		(2) 16 x 20 x 1	(2) 16 x 20 x 1
TERMINATION KITS				
See Installation Instructions for specific venting information.				
Termination Kits - Direct Vent Applications Only	Concentric	US - 2 in.	71M80	69M29
		3 in.	- - -	60L46
		Canada - 2 in.	44W92	44W92
		3 in.	- - -	44W93
	Flush-Mount	US - 2, 2-1/2 or 3 in.	51W11	51W11
		Canada - 2, 2-1/2 or 3 in.	51W12	51W12
	Wall - Close Couple	US - 2 in.	22G44	- - -
		3 in.	44J40	44J40
	Wall - Close Couple WTK	Canada - 2 in.	30G28	- - -
		3 in.	81J20	81J20
Termination Kits - Direct or Non-Direct Vent	Roof	2 in.	15F75	15F75
	Wall Ring Kit	2 in.	15F74	³ 15F74
Roof Termination Flashing Kit - Direct or Non-Direct Vent (2 flashings)		3 in.	44J41	44J41
VENTING				
Flue Coupling		2 in.	17H92	17H92

¹ Cleanable polyurethane frame type filter.

² Kits contain enough parts for two, non-direct vent installations.

³ Non-direct vent only.

NOTE - Termination Kits (44W92, 44W93, 30G28, 51W12, 51W19, 81J20) and Crawl Space Vent Drain Kit (15Z70) are certified to ULC S636 standard for use in Canada only.

GAS HEAT ACCESSORIES

Input	High Altitude Pressure Switch Kit		Natural Gas to LPG/Propane Kit	LPG/Propane to Natural Gas Kit	Natural Gas High Altitude Orifice Kit	LPG/Propane High Altitude Orifice Kit	Muffler (US Only)
	4501 - 7500 ft.	7501 - 10,000 ft.	0 - 7500 ft.	0 - 7500 ft.	7501 - 10,000 ft.	7501 - 10,000 ft.	
045	No Change	11U65	11K49	73W81	73W37	11K44	15Y66 (2-inch)
070	11U71	11U64	11K49	73W81	73W37	11K44	15Y66 (2-inch)
090	11U70	11U64	11K49	73W81	73W37	11K44	15Y66 (2-inch)
110	11U71	11U64	11K49	73W81	73W37	11K44	¹ 15Y66 (2-inch) 16A56 (3-inch)

¹ Two-inch diameter muffler (15Y66) is optional for 110 input model with a maximum vent pipe length of up to 29 ft.
Three-inch diameter muffler (16A56) is optional for 110 input model with a minimum vent pipe length of 30 ft.

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 10,000 ft.

At altitudes above 4501 ft. the unit must be derated to match the manifold pressure information shown below.

Units installed at altitudes of 4501 to 10,000 ft. require a pressure switch change.

Units installed at altitudes of 7501 to 10,000 ft. require an orifice change.

See the Gas Heat Accessories table for ordering information.

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

NOTE - In Canada, certification for installations at elevations over 4500 feet is the jurisdiction of local authorities.

Input	Gas	Manifold Pressure in. w.g.					Supply Line Pressure in. w.g. 0 - 10,000 ft.	
		0 - 4500 ft.	4501 - 5500 ft.	5501 - 6500 ft.	6501 - 7500 ft.	7501 - 10,000 ft.	Min.	Max.
		All Sizes	Natural	3.5	3.3	3.2	3.1	3.5
	LPG/Propane	10.0	9.4	9.1	8.9	10.0	11.0	13.0

OUTDOOR TERMINATION KIT USAGE

Input Size	Vent Pipe Diameter (in.)	Standard Terminations					Concentric Terminations		
		Flush Mount Kit	Wall Kit		Wall Ring Kit	Field Fabricated Exhaust Accelerator Size Required	Concentric Kit		
			2 inch	3 inch			1-1/2 inch	2 inch	3 inch
			51W11 (US) ⁴ 51W12 (CA)	22G44 (US) ⁴ 30G28 (CA)	44J40 (US) ⁴ 81J20 (CA)		15F74	⁴ 71M80 (US) ⁴ 44W92 (CA)	⁴ 69M29 (US) ⁴ 44W92 (CA)
045	2	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
	2-1/2	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
	3	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
070	2	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
	2-1/2	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
	3	³ YES	YES	¹ YES	YES	1-1/2 in.	² YES	---	---
090	2	³ YES	---	YES	¹ YES	2 in.	---	YES	YES
	2-1/2	³ YES	---	YES	¹ YES	2 in.	---	YES	YES
	3	³ YES	---	YES	¹ YES	2 in.	---	YES	YES
110	2	YES	---	YES	YES	2 in.	---	YES	YES
	2-1/2	YES	---	YES	---	2 in.	---	YES	YES
	3	YES	---	YES	---	2 in.	---	YES	YES

NOTE - Standard Terminations do not include any vent pipe or elbows external to the structure.

Any vent pipe or elbows external to the structure must be included in total vent length calculations. See Vent Length Tables.

¹ Requires field provided 1-1/2 in. outdoor exhaust accelerator.

² Concentric Kits 71M80 and 44W92 include 1-1/2 in. outdoor exhaust accelerator, required when used with 045 and 070 input models. Accelerator is not used with 090, 110, 135 input models.

³ Flush Mount Kit 51W11 and 51W12 includes 1-1/2 in. outdoor exhaust accelerator, required when used with 045, 070 and 090 input models. Accelerator is not used with 110 or 135 input models.

⁴ Termination Kits 30G28, 44W92, 44W93, 51W12 and 81J20 are certified to ULC S636 standard for use in Canada only.

VENT LENGTHS

STANDARD TERMINATION AT ELEVATION 0 - 4500 ft.

Pipe Size		2 in.				2-1/2 in.				3 in.			
Input		045	070	090	110	045	070	090	110	045	070	090	110
No. of 90 ELL	1	81	66	44	24	115	115	93	58	138	137	118	118
	2	76	61	39	19	110	110	88	53	133	132	113	113
	3	71	56	34	14	105	105	83	48	128	127	108	108
	4	66	51	29	N/A	100	100	78	43	123	122	103	103
	5	61	46	24	N/A	95	95	73	38	118	117	98	98
	6	56	41	19	N/A	90	90	68	33	113	112	93	93
	7	51	36	14	N/A	85	85	63	28	108	107	88	88
	8	46	31	N/A	N/A	80	80	58	23	103	102	83	83
	9	41	26	N/A	N/A	75	75	53	18	98	97	78	78
	10	36	21	N/A	N/A	70	70	48	13	93	92	73	73

STANDARD TERMINATION ELEVATION 4501 - 10,000 ft.

Pipe Size		2 in.				2-1/2 in.				3 in.			
Input		045	070	090	110	045	070	090	110	045	070	090	110
No. of 90 ELL	1	81	66	44	N/A	115	115	93	58	138	137	118	118
	2	76	61	39	N/A	110	110	88	53	133	132	113	113
	3	71	56	34	N/A	105	105	83	48	128	127	108	108
	4	66	51	29	N/A	100	100	78	43	123	122	103	103
	5	61	46	24	N/A	95	95	73	38	118	117	98	98
	6	56	41	19	N/A	90	90	68	33	113	112	93	93
	7	51	36	14	N/A	85	85	63	28	108	107	88	88
	8	46	31	N/A	N/A	80	80	58	23	103	102	83	83
	9	41	26	N/A	N/A	75	75	53	18	98	97	78	78
	10	36	21	N/A	N/A	70	70	48	13	93	92	73	73

CONCENTRIC TERMINATION AT ELEVATION 0 - 4500 ft.

Pipe Size		2 in.				2-1/2 in.				3 in.			
Input		045	070	090	110	045	070	090	110	045	070	090	110
No. of 90 ELL	1	73	58	42	22	105	105	89	54	121	121	114	114
	2	68	53	37	17	100	100	84	49	116	116	109	109
	3	63	48	32	12	95	95	79	44	111	111	104	104
	4	58	43	27	N/A	90	90	74	39	106	106	99	99
	5	53	38	22	N/A	85	85	69	34	101	101	94	94
	6	48	33	17	N/A	80	80	64	29	96	96	89	89
	7	43	28	12	N/A	75	75	59	24	91	91	84	84
	8	38	23	N/A	N/A	70	70	54	19	86	86	79	79
	9	33	18	N/A	N/A	65	65	49	14	81	81	74	74
	10	28	13	N/A	N/A	60	60	44	N/A	76	76	69	69

CONCENTRIC TERMINATION ELEVATION 4501 - 10,000 ft.

Pipe Size		2 in.				2-1/2 in.				3 in.			
Input		045	070	090	110	045	070	090	110	045	070	090	110
No. of 90 ELL	1	73	58	42	N/A	105	105	89	54	121	121	114	114
	2	68	53	37	N/A	100	100	84	49	116	116	109	109
	3	63	48	32	N/A	95	95	79	44	111	111	104	104
	4	58	43	27	N/A	90	90	74	39	106	106	99	99
	5	53	38	22	N/A	85	85	69	34	101	101	94	94
	6	48	33	17	N/A	80	80	64	29	96	96	89	89
	7	43	28	12	N/A	75	75	59	24	91	91	84	84
	8	38	23	N/A	N/A	70	70	54	19	86	86	79	79
	9	33	18	N/A	N/A	65	65	49	14	81	81	74	74
	10	28	13	N/A	N/A	60	60	44	N/A	76	76	69	69

VENT LENGTHS - UNINSULATED EXHAUST PIPE IN UNCONDITIONED SPACE

¹ Winter Design Temperatures	Vent Pipe Diameter	Unit Input Size							
		045		070		090		110	
		Maximum Un-Insulated Exhaust Vent Length (ft.)							
		PVC	PolyPro InnoFlue	PVC	PolyPro InnoFlue	PVC	PolyPro InnoFlue	PVC	PolyPro InnoFlue
32 to 21°F	2 in.	18	16	31	28	50	48	30	30
	2-1/2 in.	13	N/A	24	N/A	42	N/A	56	N/A
	3 in.	9	9	18	18	35	35	47	47
20 to 1°F	2 in.	9	8	18	16	32	29	30	30
	2-1/2 in.	5	N/A	13	N/A	24	N/A	34	N/A
	3 in.	N/A	N/A	8	8	19	19	26	26
0 to -20°F	2 in.	5	N/A	12	10	22	19	30	27
	2-1/2 in.	N/A	N/A	7	N/A	15	N/A	22	N/A
	3 in.	N/A	N/A	N/A	N/A	10	10	16	16

NOTE - Concentric terminations are equivalent to 5 ft. of straight pipe and should be included when measuring total pipe length.

¹ Refer to 99% Minimum Design Temperature table provided in the current edition of the ASHRAE Handbook-Fundamentals.

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BLOWER DATA

EL195DF045XE36B PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1395	335	1290	250	1190	195	910	105	865	95
0.10	1375	350	1245	260	1140	205	875	110	815	100
0.20	1320	360	1215	265	1090	215	825	120	785	110
0.30	1285	365	1165	270	1065	225	795	130	735	115
0.40	1275	375	1150	285	1025	230	750	135	705	120
0.50	1230	385	1095	295	985	240	705	145	650	125
0.60	1185	380	1060	300	935	245	655	150	605	135
0.70	N/A	N/A	1020	310	915	250	590	150	545	140
0.80	N/A	N/A	980	315	860	255	555	160	485	140

EL195DF070XE48B PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1770	510	1550	340	1355	220	1255	180	1035	115
0.10	1720	520	1510	355	1315	230	1200	185	980	105
0.20	1705	535	1470	365	1265	245	1165	195	895	110
0.30	1665	540	1430	380	1235	250	1120	205	835	120
0.40	1605	555	1390	395	1185	260	1070	210	775	130
0.50	1585	565	1335	400	1155	275	1015	225	690	140
0.60	1540	565	1300	410	1100	290	970	235	625	145
0.70	N/A	N/A	1260	420	1050	295	915	245	570	150
0.80	N/A	N/A	1220	430	1015	305	865	255	520	155

EL195DF090XE48C PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	1765	395	1565	265	1410	210	1290	175	1180	135
0.10	1745	410	1510	280	1365	220	1265	185	1120	140
0.20	1685	425	1455	295	1310	235	1220	200	1080	150
0.30	1630	440	1415	310	1285	250	1165	210	1035	160
0.40	1620	450	1370	320	1245	255	1125	220	985	175
0.50	1570	465	1335	330	1185	265	1080	230	925	180
0.60	1540	470	1295	345	1145	280	1045	240	875	190
0.70	N/A	N/A	1260	355	1110	295	990	255	825	200
0.80	N/A	N/A	1210	370	1060	305	940	260	760	205

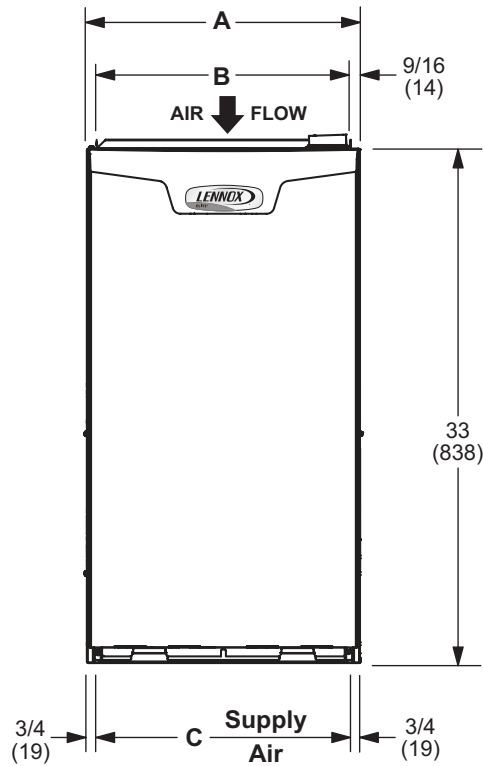
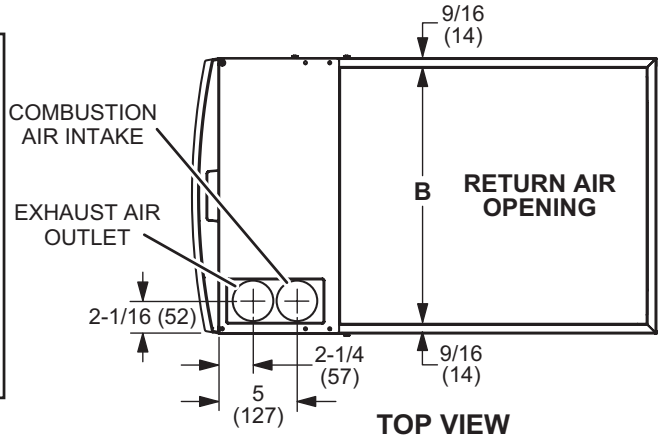
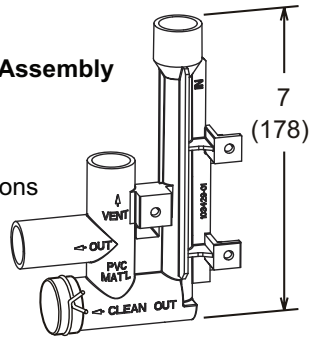
EL195DF110XE60C PERFORMANCE (Less Filter)

External Static Pressure in. w.g.	Air Volume / Watts at Various Blower Speeds									
	High		Medium-High		Medium		Medium-Low		Low	
	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts	cfm	Watts
0.00	2285	640	1990	435	1805	330	1685	265	1480	195
0.10	2250	660	1965	450	1775	345	1630	280	1430	205
0.20	2185	675	1910	465	1720	360	1575	295	1360	215
0.30	2150	690	1850	485	1670	375	1525	310	1290	235
0.40	2085	710	1810	495	1605	395	1465	325	1255	245
0.50	2060	725	1765	515	1565	400	1420	335	1190	255
0.60	2005	745	1700	535	1510	420	1370	355	1160	270
0.70	1970	760	1665	550	1460	440	1325	370	1100	280
0.80	1910	775	1620	560	1420	450	1275	380	1045	295

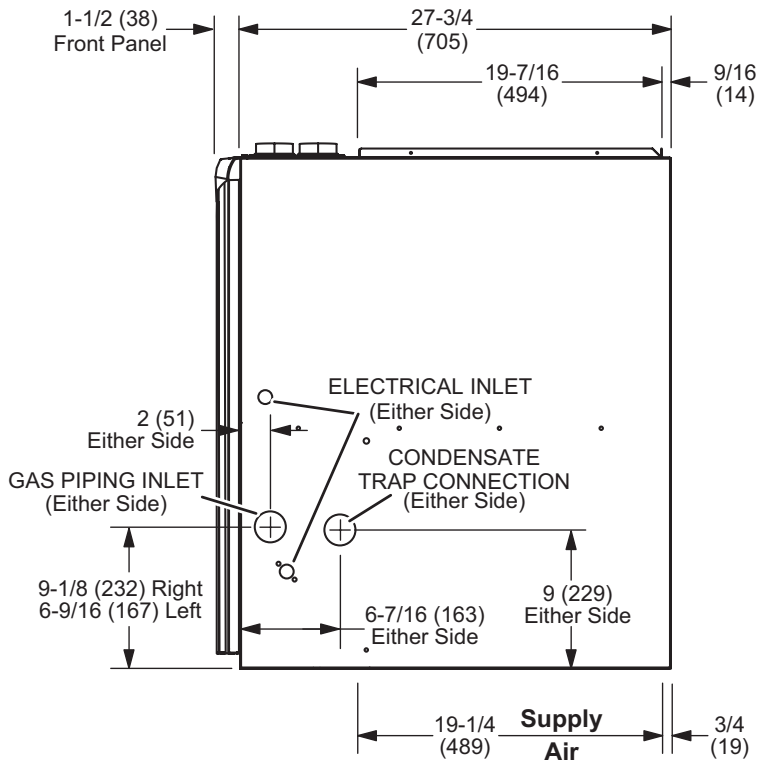
DIMENSIONS

Flue Condensate Trap Assembly

Furnished for external field installation on either side of unit. (See installation instructions for additional information.)



FRONT VIEW

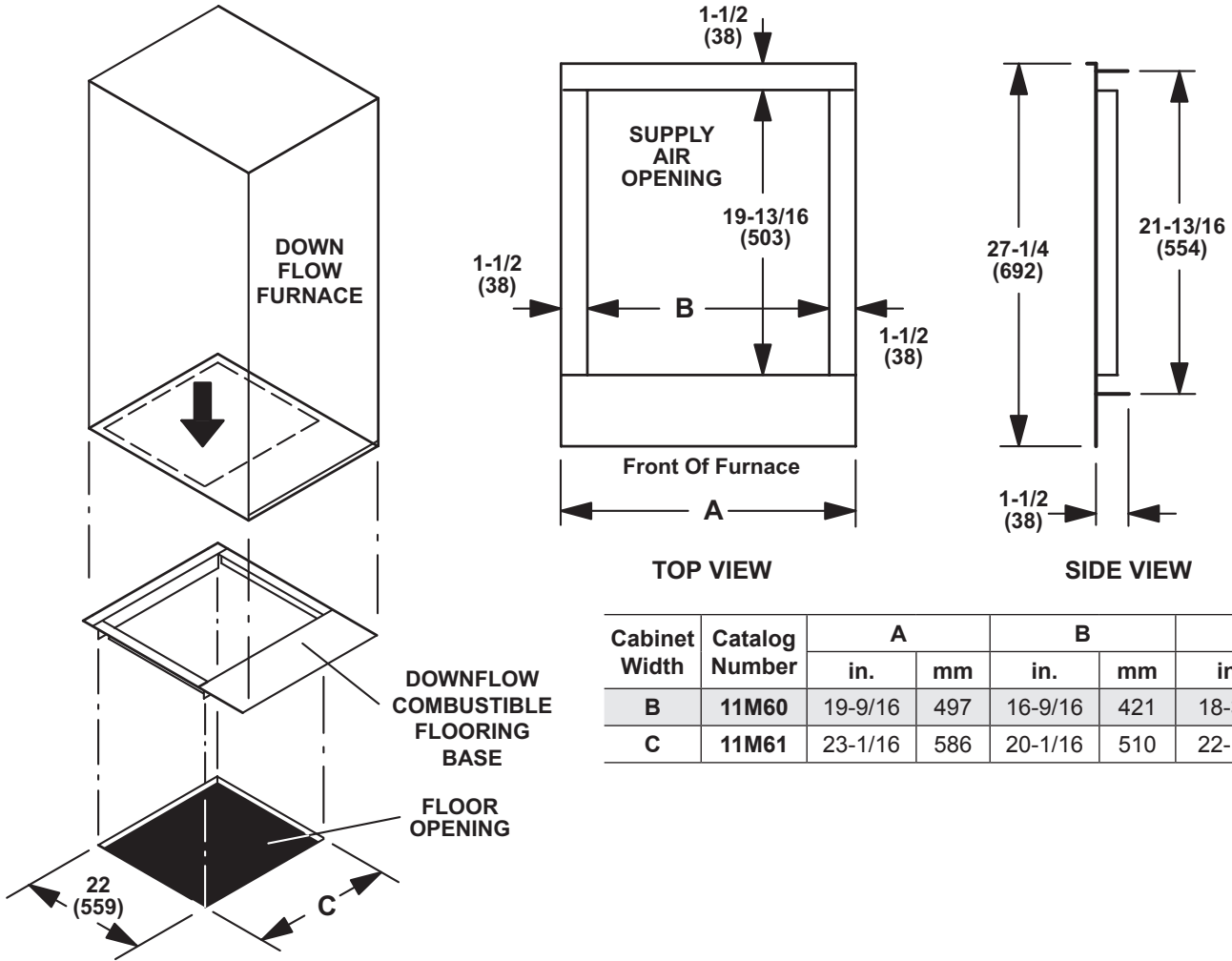


SIDE VIEW

Model No.	A		B		C	
	in.	mm	in.	mm	in.	mm
EL195DF045XE36B EL195DF070XE48B	17-1/2	446	16-3/8	416	16	406
EL195DF090XE48C EL195DF110XE60C	21	533	19-7/8	505	19-1/2	495

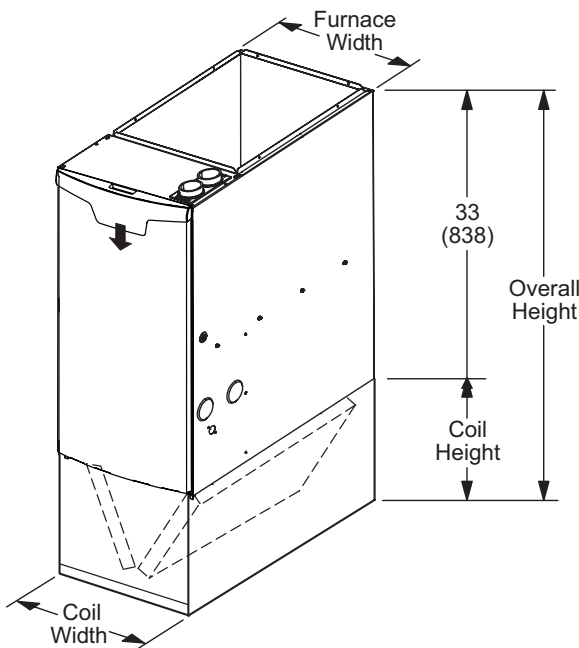
OPTIONAL ACCESSORY DIMENSIONS

DOWNFLOW COMBUSTIBLE FLOORING BASE



Cabinet Width	Catalog Number	A		B		C	
		in.	mm	in.	mm	in.	mm
B	11M60	19-9/16	497	16-9/16	421	18-3/4	476
C	11M61	23-1/16	586	20-1/16	510	22-1/4	565

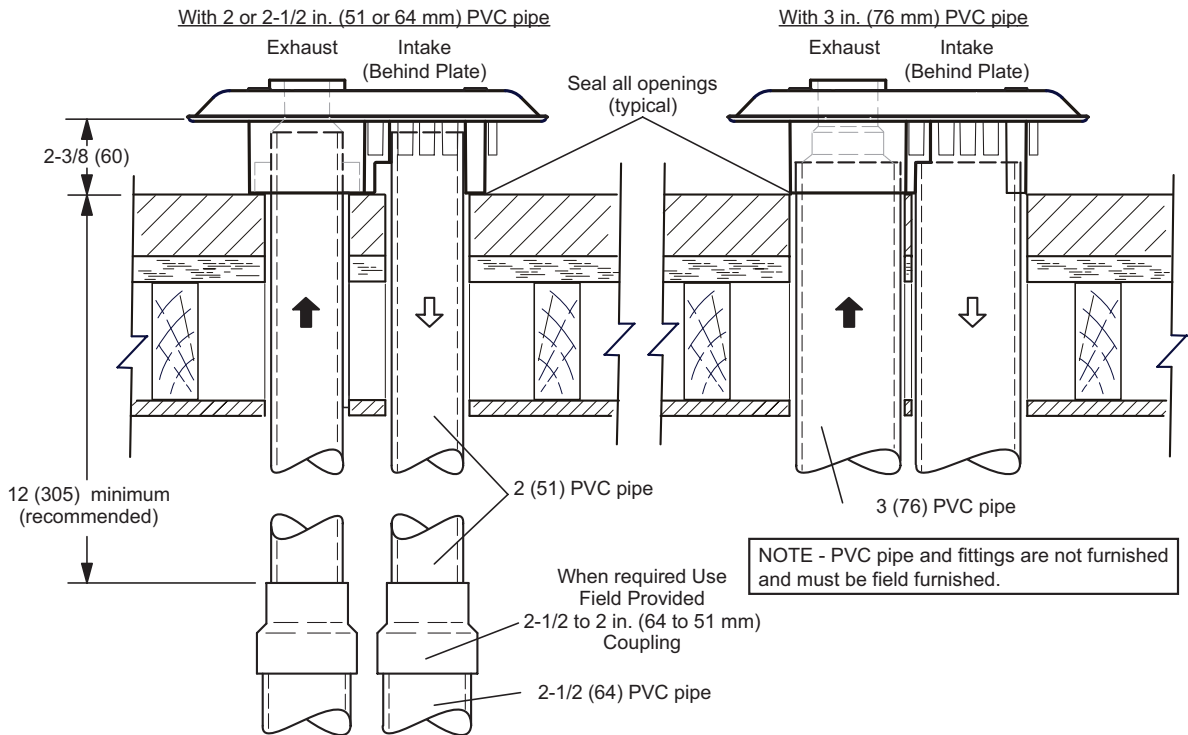
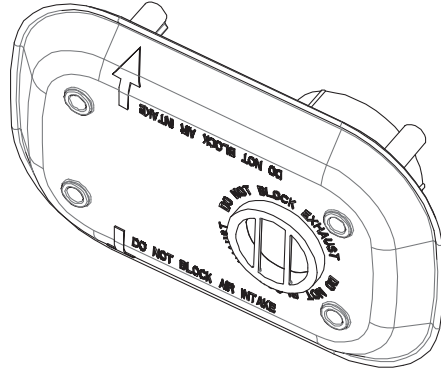
DIMENSIONS - FURNACE/COIL COMBINED DIMENSIONS



Model Number	Coil Width		Furnace Width		Coil Height		Overall Height	
	in.	mm	in.	mm	in.	mm	in.	mm
CR33-24B-F	17-1/2	446	17-1/2	446	13-1/4	337	46-1/4	1175
CR33-30/36B-F	17-1/2	446	17-1/2	446	16-1/8	410	49-1/8	1248
CR33-30/36C-F	21	533	21	533	16-1/8	410	49-1/8	1248
CR33-48B-F	21	533	17-1/2	446	20	508	53	1346
CR33-48C-F	21	533	21	533	20	508	53	1346
CR33-50/60C-F	24-1/2	622	21	533	23-5/8	600	56-5/8	2276

OPTIONAL ACCESSORY DIMENSIONS

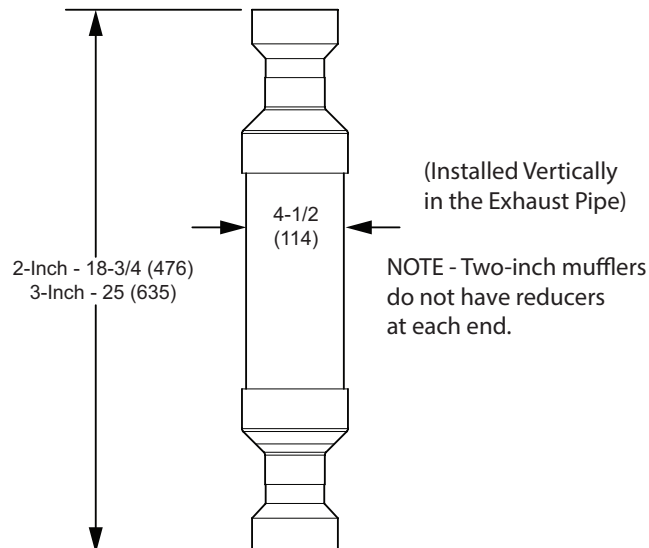
FLUSH-MOUNT VENT TERMINATION KIT 51W11 (US) or 51W12 (CANADA)



MUFFLERS

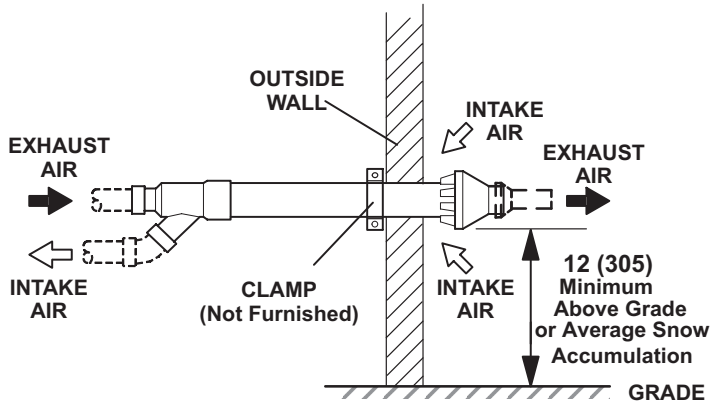
15Y66 - 2-inch

16A56 - 3-inch

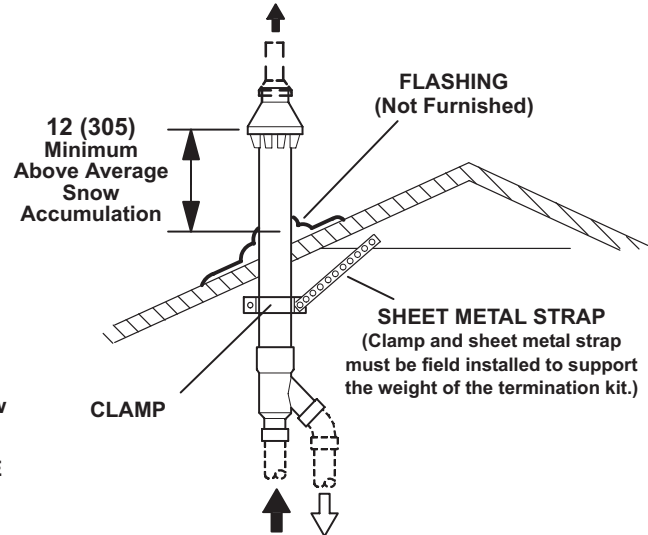


OPTIONAL ACCESSORY DIMENSIONS

CONCENTRIC WALL TERMINATION APPLICATIONS



CONCENTRIC ROOF TERMINATION APPLICATIONS

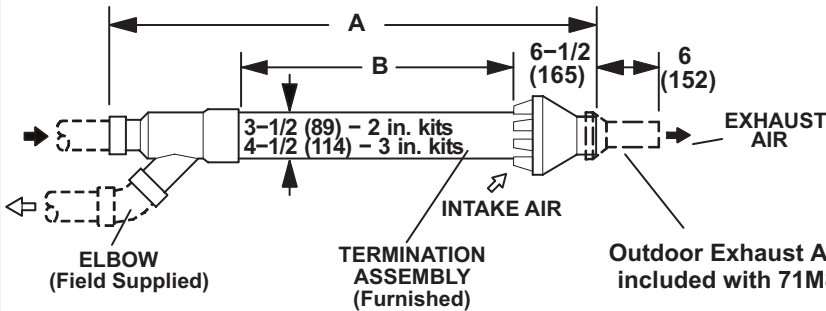


71M80 / 69M29 / 44W92 – 2 inch kits

60L46 / 44W93 – 3 inch kits

See Installation Instructions for additional information.

Note - Field provided reducer may be required to adapt larger vent pipe size to termination.



Cat. No.	A		B	
	in.	mm	in.	mm
71M80 69M29	33-3/8	848	16-3/4	425
44W92 (Canada)	29	737	15-1/2	394
60L46	38-7/8	987	21-3/16	538
44W93 (Canada)	36-1/8	918	19-1/2	495

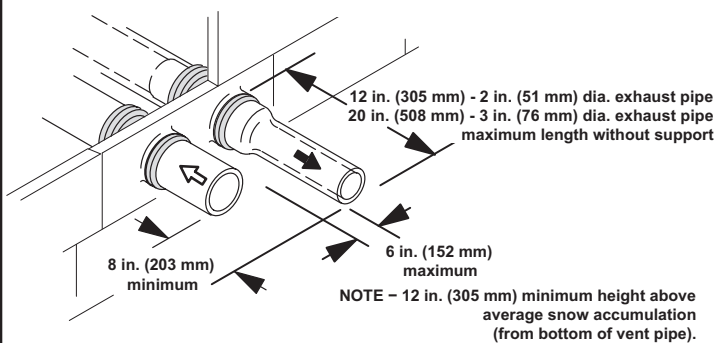
NOTE - Typical illustration for dimensions only. Design may vary depending on kit ordered.

WALL ASSEMBLY TERMINATION KIT - RING KIT 15F74 - 2 inch (51 mm)

See Installation Instructions for additional information.

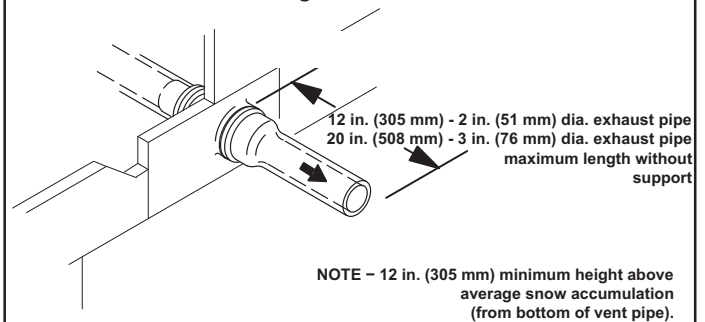
Note - Field provided reducer may be required to adapt larger vent pipe size to termination.

DIRECT VENT APPLICATION



NON-DIRECT VENT APPLICATION

NOTE - EXHAUST PIPE SHOWN
Kit Contains Enough Parts For Two Installations



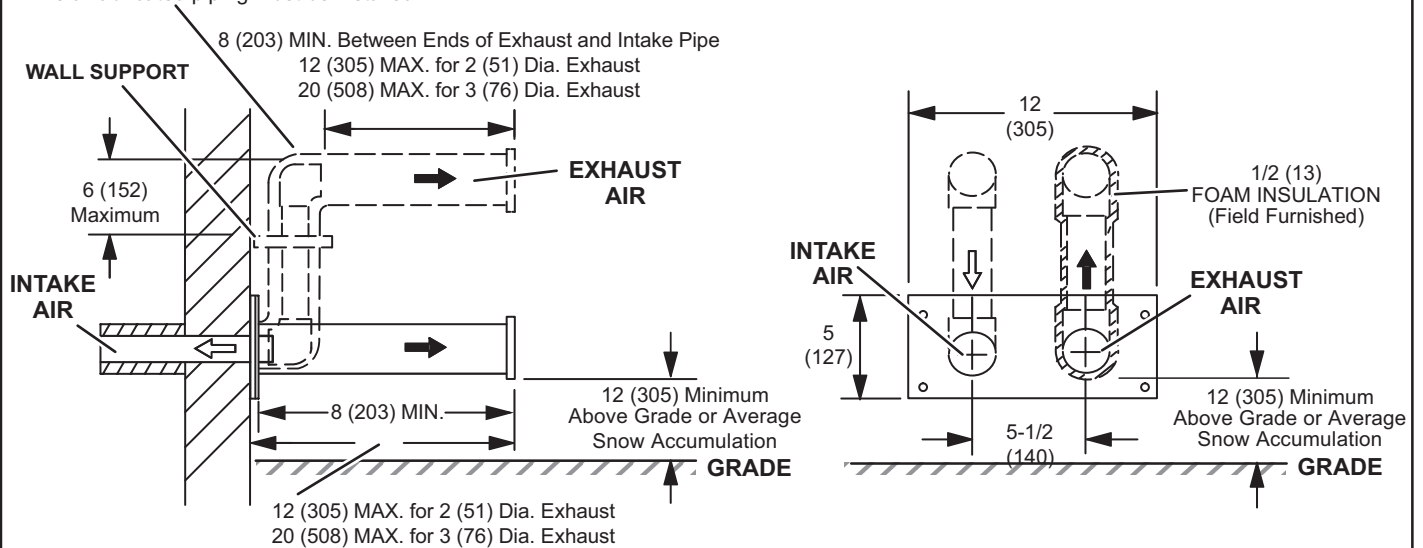
OPTIONAL ACCESSORY DIMENSIONS

WALL TERMINATION KITS (CLOSE-COUPLE) EXTENDED VENT FOR GRADE CLEARANCE 2 inch (51 mm) 22G44 (US) 3 inch (76 mm) 44J40 (US)

See Installation Instructions for additional information.

Note - Field provided reducer may be required to adapt larger vent pipe size to termination.

If Intake and Exhaust Pipe is less than 12 in. (305 mm) above snow accumulation or other obstructions, field fabricated piping must be installed.

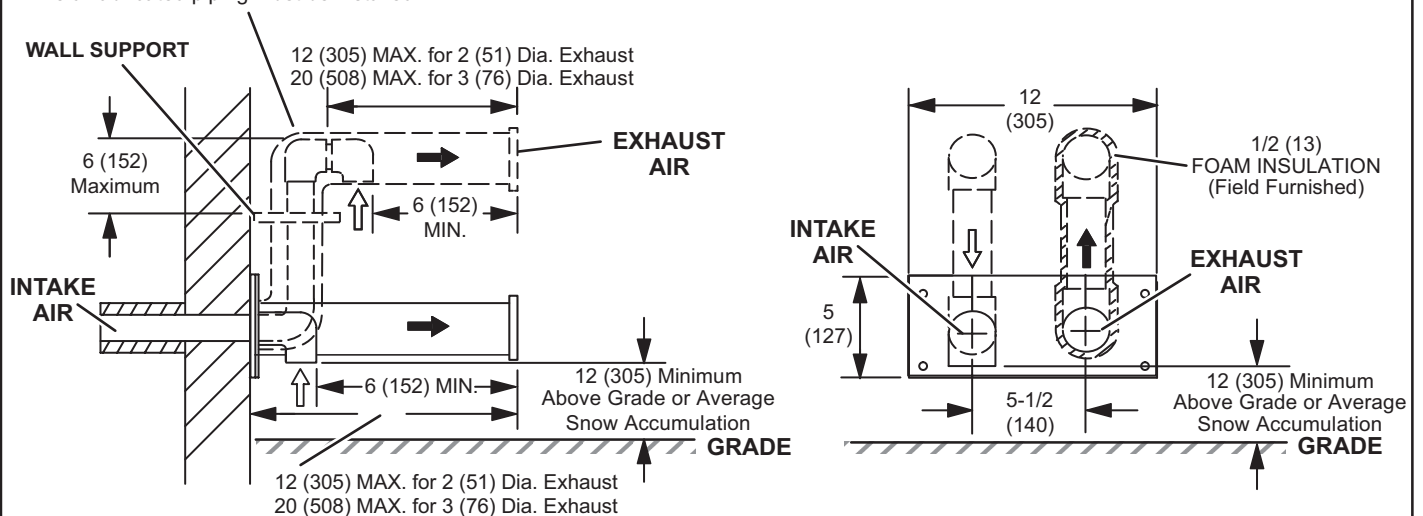


WALL TERMINATION KITS (CLOSE-COUPLE) EXTENDED VENT FOR GRADE CLEARANCE 2 inch (51 mm) 30G28 (WTK Canada) 3 inch (76 mm) 81J20 (WTK Canada)

See Installation Instructions for additional information.

Note - Field provided reducer may be required to adapt larger vent pipe size to termination.

If Intake and Exhaust Pipe is less than 12 in. (305 mm) above snow accumulation or other obstructions, field fabricated piping must be installed.



REVISIONS

Sections	Description of Change
Controls	Added iComfort® E30 Smart Thermostat and Remote Outdoor Temperature Sensor.
Optional Accessories	Added Flue Coupling.



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