

ML180UHV(K)

MERIT® SERIES

Upflow / Horizontal | Variable Speed Blower | Refrigerant Detection | 60Hz

RESIDENTIAL
PRODUCT SPECIFICATIONS (EHB)

AFUE - 80%

Input - 30,000 to 110,000 Btuh

Nominal Add-on Cooling - 1.5 to 5 Tons



MODEL NUMBER IDENTIFICATION

ML 1 80 UH 070 V 36 A K

Unit Type
ML = Merit Series®

Stages
1 = Single-Stage

AFUE
80 = 80%

Configuration
UH = Upflow/Horizontal

Nominal Gas Heat Input

030 = 30,000 Btuh
045 = 44,000 Btuh
070 = 66,000 Btuh
090 = 88,000 Btuh
110 = 110,000 Btuh

Refrigerant Detection
K = Refrigerant Detection-Ready

¹ Cabinet Width
A = 14-1/2 in.
B = 17-1/2 in.
C = 21 in.

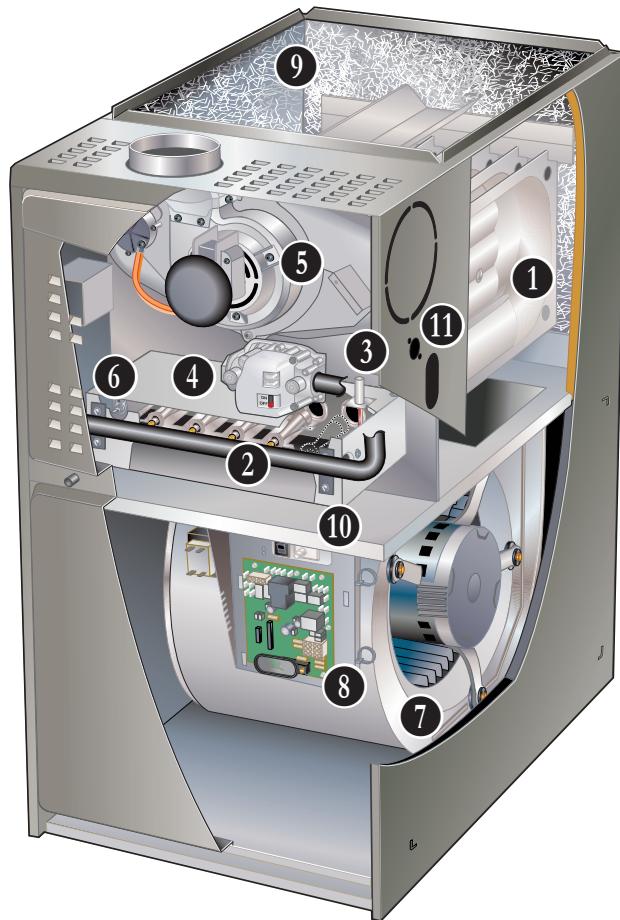
Nominal Add-On Cooling Capacity
36 = 1.5 - 3 tons
48 = 2.5 - 4 tons
60 = 3 - 5 tons

Blower
V = Variable Speed Blower Motor

¹ 1 Indoor coils with the same letter designation physically matches the furnace.

FEATURE HIGHLIGHTS

1. Lennox Duralok™ Heat Exchanger Assembly
2. Inshot Burners
3. SureLight® Hot Surface Ignitor
4. Gas Control Valve
5. Combustion Air Inducer
6. Flame Rollout Switches
7. Variable Speed Direct Drive Blower
8. SureLight® Integrated Furnace Control With RDS
9. Insulated Cabinet
10. Safety Interlock Switch
11. Gas Piping And Electrical Inlets



NOTE - ML180UHV(K) FURNACES ARE NOT AVAILABLE IN CANADA!

NOTE - ML180UHV(K) FURNACES CANNOT BE TWINNED!

NOTE - ML180UHV(K) FURNACES ARE NOT AVAILABLE WITH LOW NOX!

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APPROVALS AND WARRANTY

APPROVALS

- AHRI Certified
- Tested and rated according to US DOE test procedures and FTC labeling regulations
- ISO 9001 Registered Manufacturing Quality System
- Blower data from unit tests conducted in Lennox Laboratory air test chamber
- All models meet UL 60335-2-40 Refrigerant Detector Requirements

NOTE - This furnace has not been CSA International design certified for installation in mobile homes, recreational vehicles, or outdoors.

California Only

- These furnaces **do not meet** the South Coast Air Quality Management District (SCAQMD) Rule 1111 and San Joaquin Valley Air Pollution Control District (SJVAPCD) Rule 4905 NOx emission limit (14 ng/J) and cannot be installed within the SCAQMD, SJVAPCD and Bay Area
- All "X" model furnaces are approved by the California Energy Commission and meets California Nitrogen Oxides Standard (NOx) limits of 40 ng/J

WARRANTY

- Heat Exchanger:
 - Limited twenty years in residential applications
 - Limited ten years in non-residential applications
- All other covered components:
 - Limited five years in residential installations
 - Limited one year in non-residential installations

NOTE - Refer to Lennox® Basic Limited Warranty at www.Lennox.com for additional details.

FEATURES

APPLICATIONS

- Input capacities - 30,000, 44,000, 66,000 88,000 and 110,000 Btuh
- Energy efficiency (AFUE) - 80%
- Compact cabinet
- Upflow, horizontal-left or horizontal-right applications
- Lennox add-on indoor coils, high-efficiency air cleaners and humidifiers can easily be added to furnace
- Shipped factory assembled with all controls installed and wired
- Ready for installation in upflow or horizontal right-hand position without any modifications

NOTE - Horizontal left-hand position requires repositioning of pressure switch.

- Removable bottom seal panel shipped in place for side return air is easily removed for bottom/end return air applications
- Each unit factory tested operated to ensure proper operation

ZONING APPLICATIONS

- Units may be used with certain zoning systems
- Zone control panel must be able to interface and communicate with the variable speed blower motor in the unit
- Lennox® LZSV Variable Zoning System has this capability

HEATING SYSTEM

- 1 **Lennox Duralok™ Heat Exchanger Assembly**
 - Heavy gauge aluminized steel heat exchanger
 - Crimped seam clamshell design
 - Designed for normal expansion and contraction
 - Minimum resistance to air flow
 - Laboratory life cycle tested in excess of industry standards
 - Compact size permits low overall design of furnace cabinet
- 2 **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
- 3 **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

FEATURES

HEATING SYSTEM (continued)

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

5 Combustion Air Inducer

- Shaded pole heavy duty blower prepurges heat exchanger and safely vents flue products
- Pressure switch proves blower operation before allowing gas valve to open
- Operates only during heating cycle
- Direct access allows inducer assembly to be rotated 90° clockwise or counterclockwise to facilitate easy vent attachment from either side of the cabinet in upflow applications and from the top in horizontal applications

6 Flame Rollout Switches (2)

- Factory installed on the front of the burner box
- Switches provides protection from abnormal operating conditions
- Manual reset

Limit Control

- Primary limit is accurately located on vestibule panel on all units
- Automatic reset

Optional Accessories

High Altitude Pressure Switch Kit

- Required on most units for proper unit operation at altitudes from 4,501 to 7500 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

Vent Adaptor (Upflow Applications Only)

- Allows venting through a masonry chimney without the need of a flue liner
- Manual reset temperature sensor protects against abnormal operating conditions
- Sensor wiring may be routed from either side of adaptor
- Minimum winter design temperatures:
 - -10°F when used with interior masonry chimneys
 - +5°F when used with exterior masonry chimneys



NOTE - Refer to Winter Design Temperatures Map on page 8 for application information. Also refer to the installation instructions for detailed information.

BLOWER

7 Variable Speed Direct Drive Blower

- Each blower assembly statically and dynamically balanced
- Blower assembly easily removed for servicing

Variable Speed Blower Motor

- Variable speed motor maintains specified air volume from 0 through 0.80 in. w.g. (heating) and 0 through 1.0 in. w.g. (Cooling) static range
- Variable speed operation is achieved by the use of an ECM (Electronically Commutated Motor) motor
- Motor is controlled by furnace control
- Change in blower speed is easily accomplished by simple DIP switch change on the furnace control
- During start-up the blower motor slowly ramps up to normal operating speed to minimize noise and increases comfort
- At the end of a cooling or heating cycle, the motor slowly ramps down after a short blower "off" delay
- If continuous blower operation has been selected, the variable speed motor will slowly ramp down until it reaches the airflow for that condition
- Motor is resiliently mounted
- See Blower Data tables

NOTE - When furnaces are used with the Harmony III™ Zoning System, blower motor operates from predetermined minimum - maximum air volumes to satisfy zone requirements.

FEATURES

CONTROLS

8 SureLight® Integrated Furnace Control

- Contains all necessary controls and relays to operate furnace
- Combustion air inducer is operated by the integrated furnace control.
- Prior to ignition, a low speed 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 utilizes flame rectification for safe and reliable operation
- Should flame fail to ignite, control will initiate 5 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
- Display LED - Seven segment LED displays numeric information related to diagnostics as well as system operation and status
 - Diagnostic codes are held in non-volatile memory, immune from power interruptions
 - Holds up to ten diagnostic codes in order of occurrence for recall on demand
 - Port on blower door allows for easy viewing
- Two terminals are furnished for additional power supply requirements for 120 volt (less than 1 amp) powered IAQ accessories
- Blower speed - for second stage cool four air volume selections are selected by DIP switches on control
- Cool speed can be adjusted to correct optional cooling capacity
- See Blower Performance tables
- First stage blower speed is a percentage of second stage speed
- ADJUST DIP switches allows normal (NORM), 10% higher (+ plus) or 10% lower (- minus) motor speed selection within the HEAT and COOL speeds selected for fine tuning air volume
- Controls humidity by controlling blower and compressor speed on two-stage outdoor units when used with Lennox® M30 Smart Wi-Fi Thermostat or separate humidity control

Passive Dehumidification

- For situations where humidity control is a desired, a passive dehumidification feature is built into the variable speed motor
- Motor runs at 82% for 7-1/2 minutes and then at 100% (if needed) until demand is satisfied. Once demand is met, motor ramps down to 82% for one minute before shut off

Active or Humiditrol® Dehumidification

- A jumper on the control must be clipped to enable active dehumidification and/or operation with a Humiditrol® Whole-Home Dehumidification System
- A humidity controlling thermostat or separate humidity control is also required
 - During a call for cooling, air volume is automatically reduced, forcing humidity removal by the air conditioner or heat pump system
 - After the humidity has reached the desired set-point the cooling air volume returns to its designed rate
 - A dehumidification signal from the thermostat reduces the cooling cfm to 70% of the requested cooling cfm
- In heat mode, blower on time is fixed at 30 seconds (non-adjustable), blower off time (90, **120**, 180, 210 seconds) is adjustable via DIP switches on the furnace control
- For air-conditioning applications, blower on time is 2 seconds (non-adjustable) following thermostat demand for cooling
- Control is factory installed in the unit control box.

Twinning

- Terminal furnished on furnace control for twinning two furnaces together

24 Volt Transformer (40VA)

- Furnished and factory installed on outside of control box
- Circuit breaker (furnished) is 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 on right side of furnace

Refrigeration Detection System (RDS)

(Part of the SureLight® Integrated Furnace Control)

- Complies with UL 60335-2-40 approved standard
- Required for all systems using R-454B refrigerant
- Plug-in connection to the RDS Coil Sensor
- Supports up to two RDS Coil Sensors (factory setting)
- Used as an interface between indoor unit and thermostat to control system
- Ensures safe operation for systems equipped with R-454B refrigerant
- If R-454B refrigerant is detected, the refrigerant detection system will stop compressor and/or heating operation and operate the blower to reduce concentrations in the conditioned space
- Once safe levels are reached the HVAC system will resume normal operation
- Low GWP test button for troubleshooting
- Alarm/Zone relay interface can trigger an external alarm if R-454B refrigerant is detected and open all zone dampers (if part of a zoning system) if R-454B refrigerant is detected
- Power is disabled to non-communicating thermostats to prevent demand if R-454B refrigerant is detected
- On system start-up blower will run for five minutes and any thermostat demands are disabled

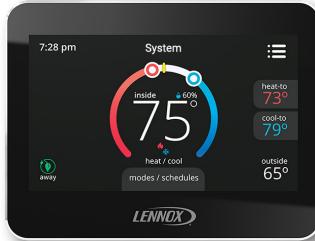
FEATURES

CONTROLS (continued)

Optional Accessories

M30 Smart Wi-Fi Thermostat

- Wi-Fi-enabled, electronic 7-day, universal, multi-stage, programmable, touchscreen thermostat
- 4 Heat/2 Cool
- Auto-changeover
- Dual-fuel control with optional outdoor sensor
- 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 4.3 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
- Wi-Fi remote monitoring and adjustment through a home wireless network for desktop PCs, laptops and apps for smartphones or tablets
- Smart home automation compatible with Amazon Alexa® and Google Assistant



NOTE - See the Lennox® M30 Smart Wi-Fi Thermostat Product Specifications bulletin in the Controls section for more information.

Remote Outdoor Temperature Sensor

- Used with the Lennox® M30 Smart Thermostat
- Outdoor sensor allows thermostat to display outdoor temperature

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



Thermostat

- Thermostat is not furnished with unit
- Lennox Price Book for selection

Transformer (75VA)

- Recommended when furnace is used with zoning or defrost thermostats and other 24V accessories requiring a higher VA rating
- Circuit breaker (furnished) is wired in series
- Replaces the standard 40VA transformer

FILTER (not furnished)

- Filter and provisions for external mounting must be field provided

Optional Accessories

Air Filter and Rack Kit for Horizontal Return Air (End Applications)

- Washable or vacuum cleanable polyurethane frame type filter and external end return air rack
- Rack has filter door for servicing
- Flanges on rack for duct connection
- Field installed
- See dimension drawing

Air Filter and Rack Kit for Upflow Side Return Air

NOTE - Not for use with Return Air Base

- Washable or vacuum cleanable polyurethane frame type filter and external side return air rack available for field installation
- Available in single and ten pack kits
- Rack has filter door for servicing
- Flanges on rack for duct connection
- Field installs on either side of unit cabinet
- See dimension drawing

FEATURES

CABINET

- Low-profile, narrow width allows easy installation
- Heavy-gauge, cold rolled steel construction
- Pre-painted finish
- Flue outlet on top for upflow applications
- Flue outlet can be relocated to either side of cabinet for horizontal applications
- Flanges provided on supply air opening for ease of plenum connection or alignment with indoor coil
- ⑨ • Insulated with foil faced insulation on sides and back of heating compartment and mat faced insulation in blower compartment
- Complete service access
- ⑩ • Safety interlock switch automatically shuts off power to unit if blower compartment access panel is removed
- ⑪ • Gas piping and electrical inlets are provided on both sides

Bottom/Side Return Air Entry:

- Upflow/horizontal with bottom return air entry:
 - Remove furnished bottom seal panel from cabinet
 - Upflow only with side return-air entry:
 - Corners are marked on either side of cabinet for return air cut-out
 - See dimension drawings
- NOTE** - 60C size units that require air volumes over 1800 cfm must have one of the following:
- Single side return air and Optional Return Air Base with transition that must accommodate required 20 x 25 x 1 inch air filter to maintain proper velocity
 - Bottom return air
 - Return air from both sides
 - Bottom and one side return air
 - See Blower Performance Tables for additional information.

Coil Match-Up

- All furnaces exactly match Lennox cased upflow indoor coils and horizontal indoor coils with same letter designation (A, B, C, D) in model number
- No adaptor required
- Engaging holes furnished on cabinet for alignment
- Lennox uncased coils match furnaces without any overhang but require an optional adaptor base or field fabricated transition to match furnace opening
- See coil bulletin for additional information

Low Leakage Cabinet

- All models have less than 2% air leakage
- Meets ANSI/ASHRAE Standard 193-2010 "Method of Test for Determining the Air Tightness of HVAC Equipment"

Optional Accessories

Horizontal Suspension Kit

- Provides suspension of unit and indoor coil in horizontal applications
- Allows complete service access
- Consists of corner mounted hanging brackets with vibration isolators, return air end support rail and hardware for assembly
- Metal hanging straps must be field provided

Return Air Base

NOTE - On furnaces with side return air, a field fabricated transition or Return Air Base is required when using an IAQ product higher than 14-3/16 in. installed next to the unit and serviced from the front. IAQ products higher than 20 in. require a field fabricated transition.

NOTE - Must be used for 60C size models with air volumes over 1800 cfm in upflow applications when only one side return is required.

- Cabinet is shipped flat for easy field assembly
- Pre-painted steel to match the furnace
- See Dimension Drawing

High Performance Economizer (Commercial Applications Only)

- Designed for applications requiring outdoor air to be utilized in a commercial HVAC system
- Allows the entry of fresh outdoor air for free cooling, reducing the requirement for mechanical cooling
- Heavy gauge galvanized steel cabinet
- Lined with thick fiberglass insulation
- Mixed air sensor, outdoor air sensor and 24VAC transformer furnished
- Approved for California Title 24 building standards
- ASHRAE 90.1-2010 compliant

NOTE - See separate Product Specifications bulletin for additional information and available control and sensor options.

99% WINTER DESIGN TEMPERATURES FOR THE CONTIGUOUS UNITED STATES



This map is a necessarily generalized guide to temperatures in the contiguous United States. Temperatures shown for areas such as mountainous regions and large urban centers may not be accurate. The data used to develop this map was taken from the 1993 ASHRAE Fundamentals Handbook (Chapter 24, Table 1: Climate Conditions for the United States).

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INDOOR AIR QUALITY PRODUCTS

Healthy Climate® PureAir® Air Purification System

- Filtration - The Carbon Clean 16® (MERV 16) media filter captures more than 95% of particles 0.3 microns and larger and more than 90% of particles 0.01 microns and larger
- Highest airflow performance and lowest pressure drop when compared to a leading brand.
- Long life filters up to 1 year



Healthy Climate® Media Air Cleaner

- High performance in a narrow 7 in. cabinet
- Available with MERV 11, 13, or 16 rated filters
- Multi-position heavy gauge steel cabinet will support furnace/coil or air handler and associated duct work
- Tool-less entry
- Tool-less assembly for quick installation



Healthy Climate® Whole Home In Duct Air Purifiers

- Compact Duct Mounted Design
- Effective against odors and VOC's
- Certified Ozone free
- UVC lamp and carbon cells



Healthy Climate® Ultraviolet Germicidal Lights

- Compact duct mounted design
- Single or dual applications
- Certified ozone free
- Effective against odors to help keep the system clean
- Safety Interlocks
(Additional UVC Compliance Kit for UL 60335-2-40 is available for A2L applications)
- Low power consumption
- Available for 24V or 110/230V
- Up to 1340 microwatts /cm² output (dual lamp model)



NOTE - Please refer to the individual Product Specifications for these products for full information.

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INDOOR AIR QUALITY PRODUCTS - ORDERING

NOTE - Refer to the individual Product Specifications documents for additional accessories and maintenance items.

Description	Dimensions	Order Number
Healthy Climate® PureAir® Air Purification System		
PCO3-14-16	21.125 x 8.75 x 23.75	Y6601
PCO3-16-16	17.5 x 8.75 x 26.5	Y6598
PCO3-20-16	21.125 x 8.75 x 26.5	Y6595
Healthy Climate® Media Air Cleaner		
HCC14-23 (Cabinet)	21.25 x 23 x 7	X7930
HCF14-16 (Filter) MERV 16	20 x 20 x 5	X7935
HCXF14-16 (Expandable Filter) MERV 16	20 x 20 x 5	X8308
HCF14-13 MERV 13	20 x 20 x 5	19L14
HCF14-11 (Filter) MERV 11	20 x 20 x 5	X0585
HCXF14-11 (Expandable Filter) MERV 11	20 x 20 x 5	X8305
HCC16-28 (Cabinet)	17.5 x 28.5 x 7	Y2920
HCC16-28 (Cabinet) 4-pack	17.5 x 28.5 x 7	Y2921
HCF16-16 (Filter) MERV 16	16 x 25 x 5	X6672
HCXF16-16 (Expandable Filter) MERV 16	16 x 25 x 5	X8306
HCF16-13 MERV 13	16 x 25 x 5	19L16
HCF16-11 (Filter) MERV 11	16 x 25 x 5	X6670
HCXF16-11 (Expandable Filter) MERV 11	16 x 25 x 5	X8303
HCC20-28 (Cabinet)	21 x 28.5 x 7	X6661
HCC20-28 (Cabinet) 4-pack	21 x 28.5 x 7	X7751
HCF20-16 (Filter) MERV 16	20 x 25 x 5	X6675
HCXF20-16 (Expandable Filter) MERV 16	20 x 25 x 5	X8307
HCF20-13 MERV 13	20 x 25 x 5	19L17
HCF20-11 (Filter) MERV 11	20 x 25 x 5	X6673
HCXF20-11 (Expandable Filter) MERV 11	20 x 25 x 5	X8304
Healthy Climate® Whole Home In Duct Air Purifiers		
HCWHAP1	8 x 7 x 16.5	23V99
Healthy Climate® Ultraviolet Germicidal Lights		
UVC-24V (24V) 17.5 in.	Ballast 4.75 x 2.25 x 2	X9423
UVC-41W-S (110/230V) 17.5 in.	Ballast 11.75 x 2.75 x 1.625	X9424
UVC-41W-D (110/230V) 17.5 in.	Ballast 11.75 x 2.75 x 1.625	X9425

SPECIFICATIONS

Gas Heating Performance	Model	ML180UH 030V36AK	ML180UH 045V36AK	ML180UH 070V36AK	ML180UH 070V36BK
1 AFUE	80%	80%	80%	80%	80%
Input - Btuh	30,000	44,000	66,000	66,000	66,000
Output - Btuh	24,000	36,000	53,000	53,000	53,000
Temperature rise range - °F	25 - 55	15 - 45	30 - 60	30 - 60	30 - 60
Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0
High Static - in. w.g.	0.80	0.80	0.80	0.80	0.80
Connections	Flue connection - in. round	4	4	4	4
	Gas pipe size IPS	1/2	1/2	1/2	1/2
Indoor Blower	Wheel diameter x width - in.	10 x 7	10 x 7	10 x 7	10 x 8
	Motor output - hp	1/2	1/2	1/2	1/2
	Tons of add-on cooling	1.5 - 3	1.5 - 3	1.5 - 3	1.5 - 3
	Air Volume Range - cfm	380 - 1320	380 - 1320	400 - 1345	370 - 1290
Electrical Data	Voltage	120 volts - 60 hertz - 1 phase			
	Blower motor full load amps	6.2	6.2	6.2	6.2
	Maximum overcurrent protection	15	15	15	15
Shipping Data	lbs. - 1 package	111	111	126	127

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.

SPECIFICATIONS

Gas Heating Performance	Model	ML180UH 070V48BK	ML180UH 090V48BK	ML180UH 110V60CK
1 AFUE	80%	80%	80%	80%
Input - Btuh	66,000	88,000	110,000	110,000
Output - Btuh	53,000	72,000	90,000	90,000
Temperature rise range - °F	30 - 60	35 - 65	35 - 65	35 - 65
Gas Manifold Pressure (in. w.g.) Nat. Gas / LPG/Propane	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0	3.5 / 10.0
High Static - in. w.g.	0.50	0.50	0.50	0.50
Connections	Flue connection - in. round	4	4	4
	Gas pipe size IPS	1/2	1/2	1/2
Indoor Blower	Wheel diameter x width - in.	11-1/2 x 9	11-1/2 x 9	11-1/2 x 10
	Motor output - hp	3/4	3/4	1
	Tons of add-on cooling	2.5 - 4	2.5 - 4	3 - 5
	Air Volume Range - cfm	430 - 1850	650 - 1740	930 - 2180
Electrical Data	Voltage	120 volts - 60 hertz - 1 phase		
	Blower motor full load amps	8.5	8.5	11.5
	Maximum overcurrent protection	15	15	20
Shipping Data	lbs. - 1 package	129	141	160

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.

OPTIONAL ACCESSORIES - ORDER SEPARATELY

	"A" Width Models	"B" Width Models	"C" Width Models	
CABINET ACCESSORIES				
Horizontal Suspension Kit - Horizontal only	51W10	51W10	51W10	
Return Air Base - Upflow only	65W75	50W98	50W99	
High Performance Economizer (Commercial Only)	10U53	10U53	10U53	
CONTROLS				
M30 Smart Wi-Fi Thermostat	15Z69	15Z69	15Z69	
Outdoor Temperature Sensor	X2658	X2658	X2658	
Transformer (75VA)	27J32	27J32	27J32	
FILTERS				
¹ Air Filter and Rack Kit	Horizontal (end)	87L95	87L96	87L97
	Size of filter - in.	14 x 25 x 1	18 x 25 x 1	20 x 25 x 1
	Side Return	Single	44J22	44J22
		Ten Pack	66K63	66K63
	Size of filter - in.	16 x 25 x 1	16 x 25 x 1	16 x 25 x 1
VENTING				
Vent Adaptor – 6 in. conn. size upflow applications only		18M79	18M79	18M79

¹ 1 Cleanable polyurethane, frame-type filter.

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
	0 - 4500 ft.	4501 - 7500 ft.	7501 - 10,000 ft.	0 - 7500 ft.	7501 - 10,000 ft.	0 - 7500 ft.	7501 - 10,000 ft.
030	No Change	80W52	80W51	19D59	19H30	N/A	14C90
045	No Change	80W52	80W51	19D58	19H29	77W09	73W37
070	No Change	80W52	80W51	19D58	19H29	77W09	73W37
090	No Change	80W52	80W51	19D58	19H29	77W09	73W37
110	No Change	80W57	80W52	19D58	19H29	77W09	73W37

HIGH ALTITUDE DERATE

NOTE - Units may be installed at altitudes up to 2000 ft. above sea level without any modifications.

At altitudes above 2000 ft. units must be derated to match information in the shaded areas shown below.

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

Input	Gas Manifold Pressure (Outlet) in. w.g.							Line Pressure - in. w.g.			
	0 - 2000 Feet		2001 - 4500 Feet		4501 - 7500 Feet		7501 - 10,000 ft.		Minimum		
	Natural Gas	LPG/Propane	Natural Gas	LPG/Propane	Natural Gas	LPG/Propane	¹ Natural Gas	LPG/Propane	Natural Gas	LPG/Propane	
030	3.5	10	3.2	10	3	10	3.5	10	4.5	11	13
045	3.5	10	3.2	10	3	10	3.5	10	4.5	11	13
070	3.5	10	3.2	10	2.8	10	3.5	10	4.5	11	13
090	3.5	10	3.2	10	2.7	9.6	3.5	10	4.5	11	13
110	3.5	10	3.2	10	2.7	9.6	3.5	10	4.5	11	13

¹ Natural Gas High Altitude Orifice Kit required.

INSTALLATION CLEARANCES

UPFLOW POSITION

Vent Type	Type B1	Type C
Sides	0 (0)	¹ 0 (0)
Rear	0 (0)	0 (0)
Top	1 (25)	1 (25)
Front	2-1/4 (57)	2-1/4 (57)
Front (service/alcove)	24 (610)	24 (610)
Floor	Combustible	Combustible
Flue	1 (25)	6 (152)

NOTE - Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1).

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.

¹ Left side requires 4 in. if single wall vent is used on 14-1/2 in. cabinets, 2 in. on 17-1/2 in. cabinets.

HORIZONTAL POSITION

Vent Type	Type B1	Type C
End	¹ 2	¹ 2
Rear	0 (0)	0 (0)
Top	¹ 0 (0)	¹ 0 (0)
Front	2-1/4 (57)	2-1/4 (57)
Front (service)	24 (610)	24 (610)
Floor	Combustible	Combustible
Flue	1 (25)	6 (152)

NOTE - Air for combustion must conform to the methods outlined in the National Fuel Gas Code (NFPA 54/ANSI-Z223.1).

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.

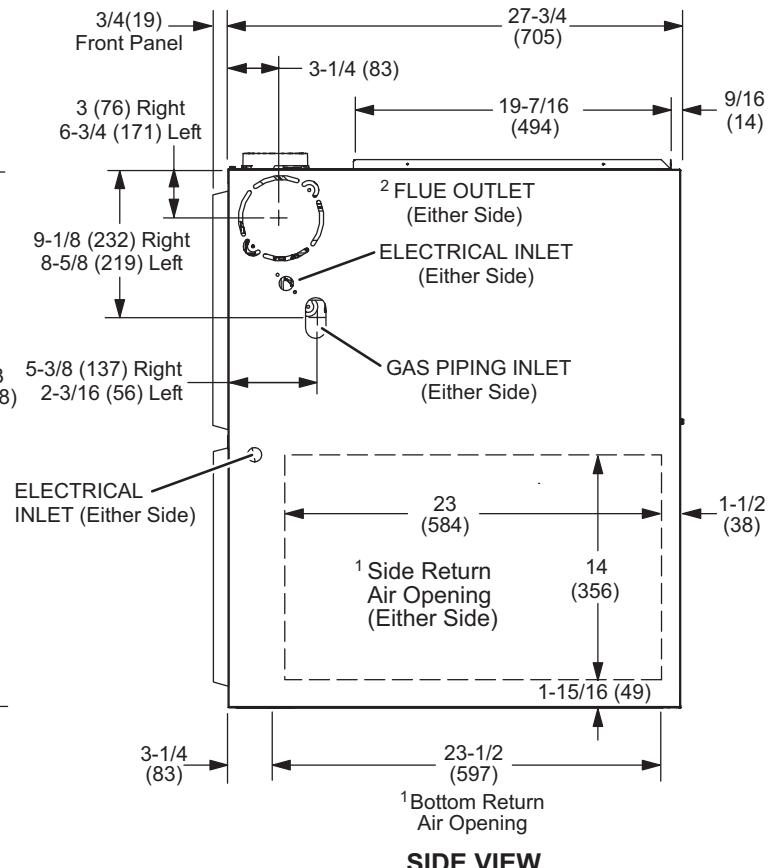
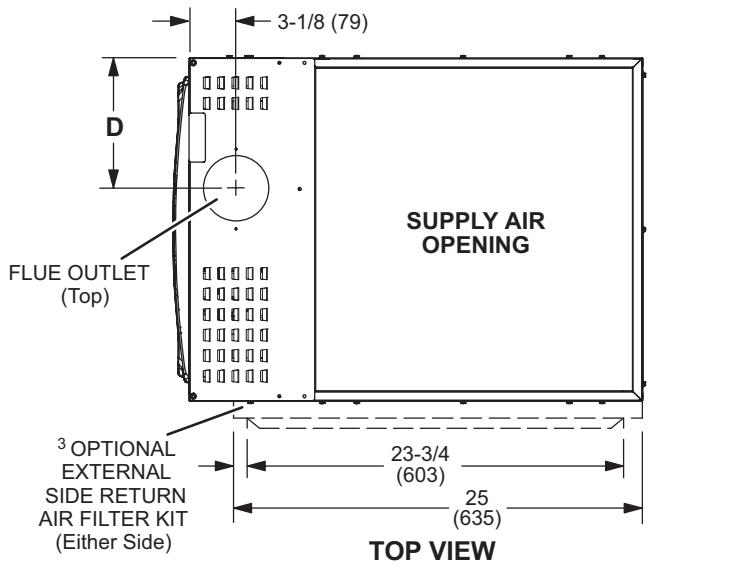
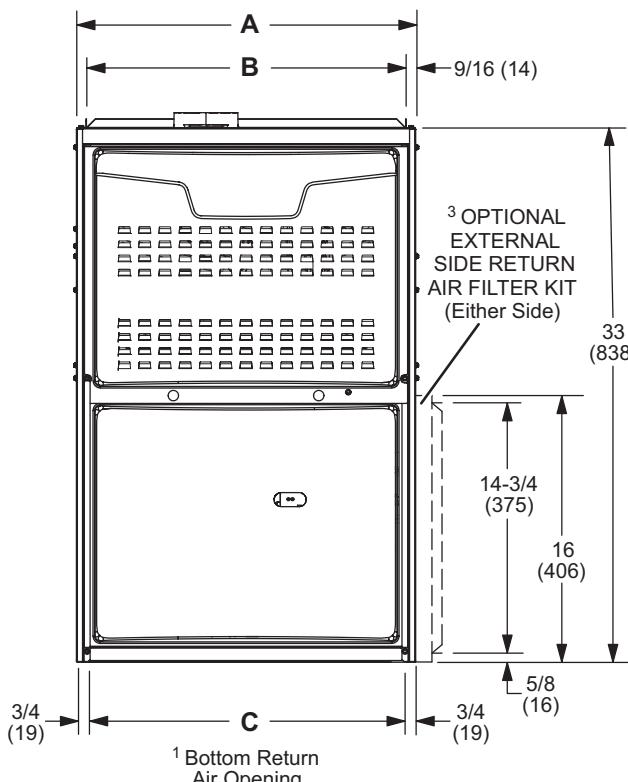
¹ 1 Line contact installation permissible between jacket top or sides and building joists.

DIMENSIONS

UNIT - UPFLOW POSITION

- ¹ NOTE - 60C size units that require air volumes over 1800 cfm must have one of the following:
 1. Single side return air and Optional Return Air Base with transition that must accommodate required 20 x 25 x 1 inch (508 x 635 x 25 mm) air filter to maintain proper velocity.
 2. Bottom return air.
 3. Return air from both sides.
 4. Bottom and one side return air.
 See Blower Performance Tables for additional information.

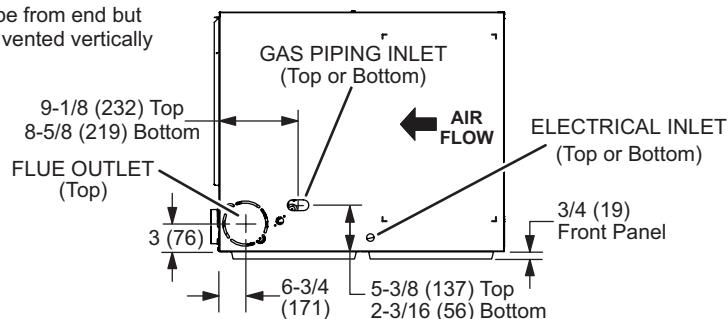
- ² Flue outlet may be horizontal but furnace must be vented vertically
³ Optional External Side Return Air Filter Kit is not for use with the optional Return Air Base.



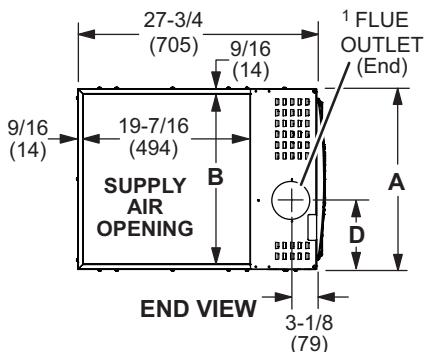
Model	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
ML180UH030V36AK								
ML180UH045V36AK	14-1/2	368	13-3/8	340	13	330	4-3/4	121
ML180UH070V36AK								
ML180UH070V36BK								
ML180UH070V48BK	17-1/2	446	16-3/8	416	16	406	6-1/4	159
ML180UH090V48BK								
ML180UH110V60CK	21	533	19-7/8	504	19-1/2	495	8	203

LEFT-HAND AIR DISCHARGE

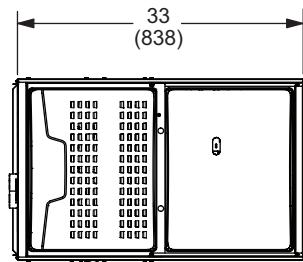
¹ Flue outlet may be from end but furnace must be vented vertically



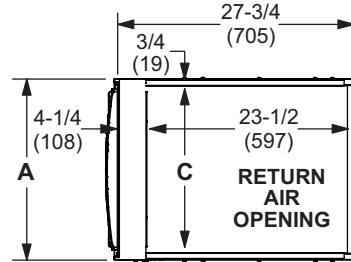
TOP VIEW



END VIEW



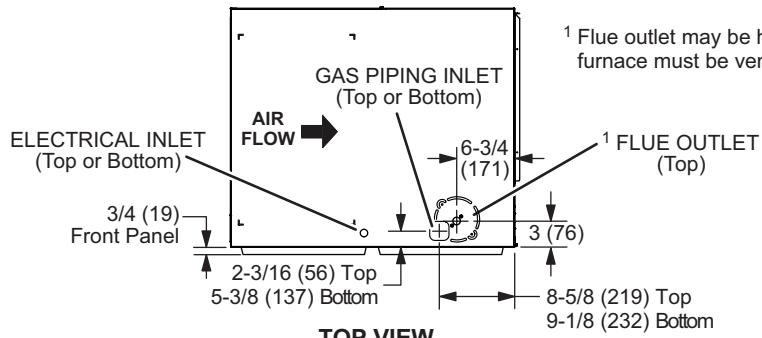
FRONT VIEW



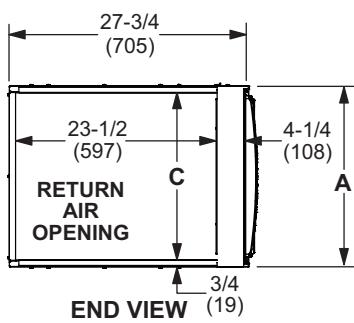
END VIEW

RIGHT-HAND AIR DISCHARGE

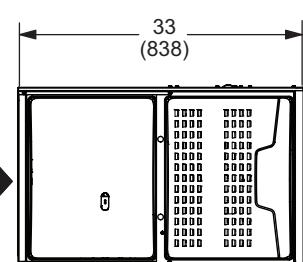
¹ Flue outlet may be horizontal but furnace must be vented vertically



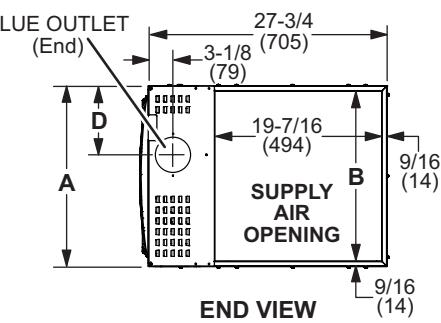
TOP VIEW



END VIEW



FRONT VIEW



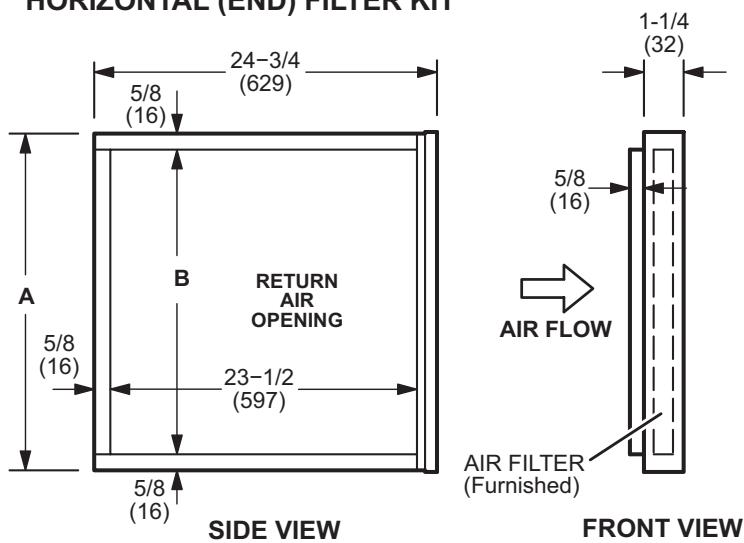
END VIEW

Model	A		B		C		D	
	in.	mm	in.	mm	in.	mm	in.	mm
ML180UH030V36AK								
ML180UH045V36AK	14-1/2	368	13-3/8	340	13	330	4-3/4	121
ML180UH070V36AK								
ML180UH070V36BK								
ML180UH070V48BK	17-1/2	446	16-3/8	416	16	406	6-1/4	159
ML180UH090V48BK								
ML180UH110V60CK	21	533	19-7/8	504	19-1/2	495	8	203

DIMENSIONS

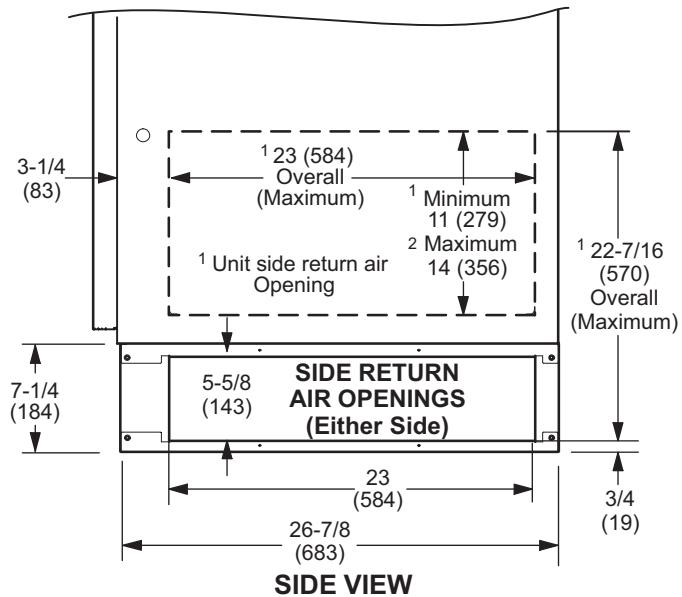
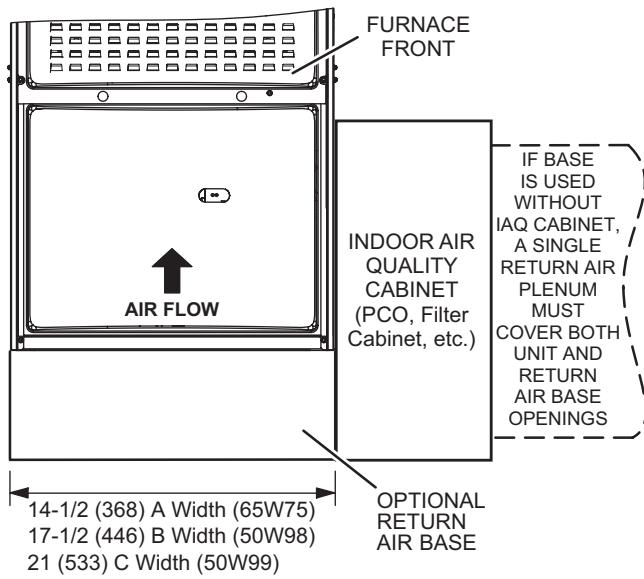
OPTIONAL ACCESSORIES

HORIZONTAL (END) FILTER KIT



Furnace Cabinet Width	Catalog Number	A		B	
		in.	mm	in.	mm
A	87L95	14	356	12-3/4	324
B	87L96	18	457	16-3/4	425
C	87L97	21	533	18-3/4	476

OPTIONAL RETURN AIR BASE (Upflow Applications Only - For use with A, B and C cabinets)



NOTE- Optional Side Return Air Filter Kits are not for use with Optional Return Air Base.

- 1** Both the unit return air opening and the base return air opening must be covered by a single plenum or IAQ cabinet. Minimum unit side return air opening dimensions for units requiring 1800 cfm or more of air (W x H): 23 x 11 in. (584 x 279 mm). The opening can be cut as needed to accommodate plenum or IAQ cabinet while maintaining dimensions shown.
- 2** Side return air openings must be cut in the field. There are cutting guides stenciled on the cabinet for the side return air opening. The size of the opening must not extend beyond the markings on the furnace cabinet.
- 2** To minimize pressure drop, the largest opening height possible, up to 14 in. (356 mm), is preferred.

REVISIONS

Sections	Description of Change
New Section	IAQ Products added.



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NOTE - Due to Lennox' ongoing commitment to quality, Specifications, Ratings and Dimensions subject to change without notice and without incurring liability.
Improper installation, adjustment, alteration, service or maintenance can cause property damage or personal injury.
Installation and service must be performed by a qualified installer and servicing agency.

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