MAINLINE®
Reliably Comfortable.™

# Gas Furnaces

EcoNet®

## ML801V Ultra Low NOx

80% A.F.U.E.†
EcoNet® Enabled
Heating Stages: Single Stage
Motor Type: Constant CFM
Input Rates: 50-100 kBTU [14.65-29.3 kW]
Configuration Options: Upflow/Horizontal

Manufactured for
**Mainline®**
HVACmainline.com

† A.F.U.E. (Annual Fuel Utilization Efficiency) calculated in accordance with Department of Energy test procedures.

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# Features and Benefits

- **Ultra Low Greenhouse Gas Emissions:** Certified unit meets 14ng/j NOx emission standard – reducing NOx emissions by 65%
- **Diagnostics:** With the BluArch™ Contractor & EcoNet® Apps, built-in EcoNet® & Bluetooth®[1] technology makes monitoring, troubleshooting and repairing the product easier than ever before
- **Dip Switch Free Installation Commissioning via Bluetooth® Technology:** Seamless final install step without DIP switch configuration using the BluArch™ Contractor App
- **Ignition System:** Proven Direct Spark Ignition (DSI) for reliability and longevity
- **Constant CFM Motor:** Truly variable speed technology allows for ultimate humidity control, quieter sound levels and year-round energy savings
- **Quieter Operation[2]:** A fully insulated blower cabinet, solid bottom and truly variable speed airflow technology makes this furnace one of the quieter options available
- **EcoNet® Enabled Furnace:** The latest in sensor technology and the EcoNet® monitoring system provides a new level of protection, control and energy savings
- **Allows on-the-go control** and receipt of system alerts by the homeowner via the EcoNet® Smart Thermostat and EcoNet® App[3]

[1]The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks is under license. Other trademarks and trade names are those of their respective owners.

[2]Based on manufacturer's furnace offering, and the product's heating stages, motor type and cabinet insulation. Sound levels are also dependent on furnace location and installation.

[3]Wifi broadband internet connection required. Download the EcoNet® App from the App Store® or Google Play® to set up your EcoNet® Smart Thermostat. Receipt of notifications depend on home WiFi set up. Amazon, Alexa and all related logos are trademarks of Amazon.com, Inc. or its affiliates.

Model Number Identification
**ML801V UH ULN**

# Gas Furnaces

| ML | 80 | 1 | V | 050 | 4 | A | 17 | UH | U | B | A | P |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Brand** | **Furnace Efficiency** | **Stages of Heating** | **Motor Type** | **Heating Input (BTUH)** | **AC Max. Capacity** | **Major Series** | **Width** | **Position** | **NOx** | **Controls** | **Minor Series** | **Option Code** |
| ML - Mainline | 80 - 80% AFUE | 1 - Single-Stage | V - ECM Variable Speed | 050 - 50,000 [14.7 kW]<br>070 - 70,000 [20.5 kW]<br>100 - 100,000 [29.3 kW] | 4 - 4 ton drive<br>5 - 5 ton drive | A - 1st Design Series | 17 - 17.5" Width<br>21 - 21" Width | UH - Upflow Horizontal | U - Ultra Low NOx | B - Communicating, EcoNet®, Bluetooth® | A - 1st Series | P - Premium Grade |

**[ ] Designates Metric Conversions**

| AVAILABLE MODELS |
|---|
| ML801V0504A17UHUBAP |
| ML801V0704A17UHUBAP |
| ML801V1005A21UHUBAP |

| STANDARD EQUIPMENT | |
|---|---|
| 100% Safety Lock Out | Low Speed Continuous Fan Option |
| 2 Stage Cooling | Manual Shut-Off Valve |
| 3 way multi poise design Upflow/Horizontal | On Demand Dehumidification |
| Blower Compartment Door Safety Switch | One-Hour Automatic Retry |
| Bluetooth® enabled diagnostics and app setup | Outdoor Air Temperature Connection |
| Bluetooth® Set Up, Diagnostics & marked hoses for ease of installation | Power and Self-Test Diagnostics |
| Complete assembly and wiring | Pressure Switches |
| Condensate Switch Connection | Primary aluminized steel heat exchanger |
| Constant CFM Variable Speed Motor | Solid bottom |
| Cool Fan Off Delay | Blower Insulation |
| Direct Drive | Redundant Main Gas Control |
| Electronic Air Cleaner Connections | Return Air Temp Sensor Connection |
| EXV Connection | Suction Pressure/Evap. Temperature Connection |
| Flame Sense Current Diagnostics | Suction Temperature Connection |
| Fully Insulated Heat Exchanger Cabinet | Supply Air Temperature Connection |
| Furnace Diagnostics- 7 Segment LED All Units | Transformer |
| Humidifier Connections | Variable Speed 3 Phase Induced Draft Motor |
| Limit Controls | |

NOTE: A thermostat is not included as standard equipment

**WARNING**
THIS FURNACE IS NOT APPROVED
OR RECOMMENDED
FOR USE IN MOBILE HOMES

# Physical Data and Specifications – Upflow Models

| **MODEL NUMBERS ML801V 1stg VS-CT UP/HZ SERIES** | **ML801V 0504A17UHUBAP** | **ML801V 0704A17UHUBAP** | **ML801V 1005A21UHUBAP** |
|---|---|---|---|
| Input-BTU/Hr [kW] | 50,000 [15] | 70,000 [20.5] | 100,000 [29] |
| Heating Capacity BTU/Hr [kW] ① | 40,000 [12] | 56,000 [16.4] | 80,000 [23] |
| Heat Ext. Static Pressure [kPa] | .18 [.05] | .20 [.05] | .28 [.07] |
| Blower (D x W) [mm] | 11 x 6 [279 x 152] | 11 x 7 [279 x 178] | 11 x 10 [279 x 254] |
| Motor H.P. [W] Type | 3/4 [373] VS-CT(ECM) | 3/4 [560] VS-CT(ECM) | 1 [746] VS-CT(ECM) |
| Min. Circuit Ampacity | 13 | 13 | 15 |
| Min. Overload Protection Device | 15 | 15 | 20 |
| Max. Overload Protection Device | 20 | 20 | 20 |
| Motor Full Load Amps | 9.6 | 9.6 | 12.4 |
| Heating CFM [L/s] | 735 [334] | 1020 [464] | 1525 [693] |
| MAX Cooling CFM [L/s] | 1650 [779] | 1650 [779] | 1980 [934] |
| MIN Cooling CFM [L/s] | 300 [142] | 300 [142] | 500 [236] |
| Fan CFM [L/s] | 800 [378] | 800 [378] | 1000 [472] |
| Max. E.S.P. (In. W.C.) [kPa] | 1.0 [0.25] | 1.0 [0.25] | 1.0 [0.25] |
| Temperature Rise Range °F [°C] | 35-65 [19.4-36.1] | 35-65 [19.4-36.1] | 35-65 [19.4-36.1] |
| Approx. Shipping Weight (Lbs.) [kg] | 127 [58] | 132.5 [60] | 147.5 [60] |
| AFUE ② | 80.0% | 80.0% | 80.0% |

NOTES: All models are 115V, 60HZ, 1 Ph. Gas connection size for all models is 1/2" [13 mm] N.P.T.

① This model does not require any component changes at elevations 0-5,500 ft. above sea level. At elevations higher than 2,000 ft. these models do require a 2% de-rate for every 1,000 ft. of elevation above sea level.

② In accordance with D.O.E test procedures.

This furnace meets air district requirements of 14 ng/J NOx emissions limit.

**[ ] Designates Metric Conversions**

# Upflow Application

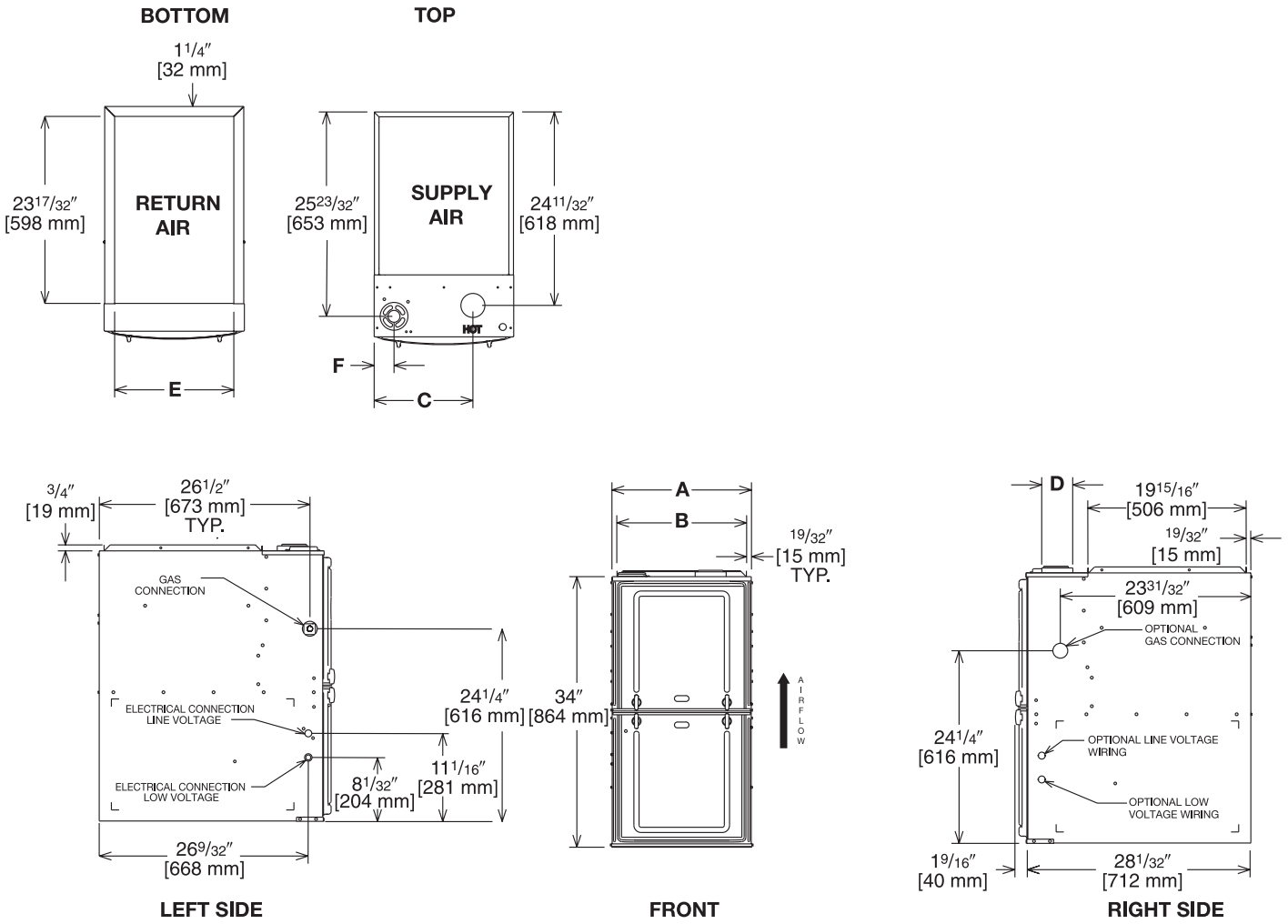



Illustration
ST-A1220-04-00
FIGURE 1

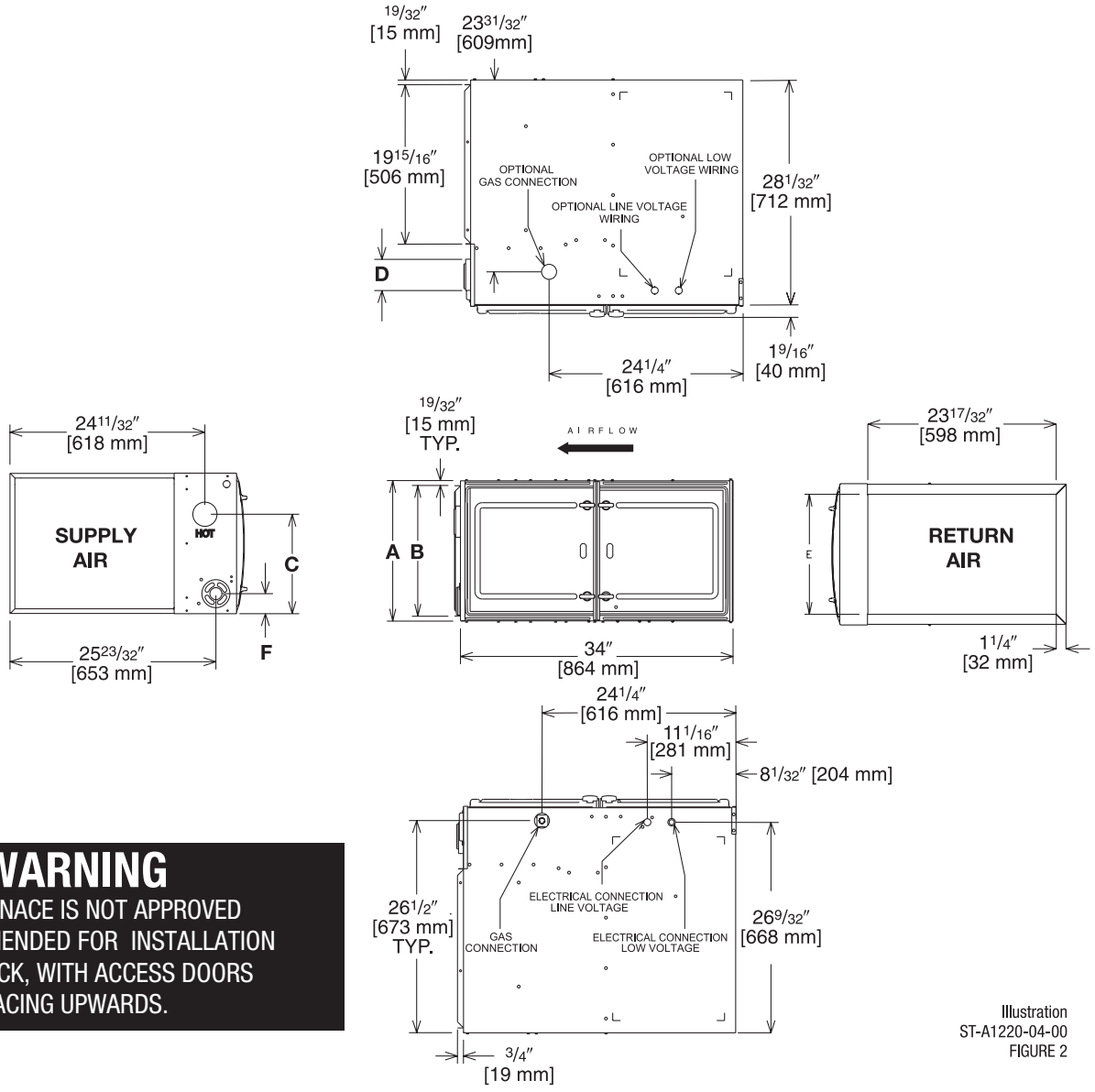
# Dimensional Data – Upflow Model

| MODEL ML801V | A | B | C | D | E | F | MINIMUM CLEARANCE (IN.) [mm] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | LEFT SIDE | RIGHT SIDE | BACK | TOP | FRONT | VENT |
| 050/070 | 17 1/2 [445] | 16 11/32 [415] | 12 3/8 [314] | ① | 15 [381] | 2 1/2 [64] | 0 | 3 [76] ② | 0 | 1 [25] | 3 [76] | 6 [152] ③ |
| 100 | 21 [533] | 19 27/32 [504] | 14 1/8 [359] | ① | 18 1/2 [470] | 2 1/2 [64] | 0 | 0 | 0 | 1 [25] | 3 [76] | 6 [152] ③ |

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.
② May be 0" [0 mm] with type B vent.
③ May be 1" [25 mm] with type B vent.
**Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.**

**[ ] Designates Metric Conversions**

## Horizontal Application




**WARNING**

THIS FURNACE IS NOT APPROVED
OR RECOMMENDED FOR INSTALLATION
ON ITS BACK, WITH ACCESS DOORS
FACING UPWARDS.

Illustration
ST-A1220-04-00
FIGURE 2

## Dimensional Data – Horizontal Model

| MODEL ML801V | A | B | C | D | E | F | MINIMUM CLEARANCE (IN.) [mm] | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | SUPPLY AIR SIDE | RETURN AIR SIDE | BACK | TOP | FRONT | VENT |
| 050/070 | 171/2 [445] | 1611/32 [415] | 123/8 [314] | ① | 15 [381] | 21/2 [64] | 3 [76] ② | 3 [76] ② | 0 | 1 [25] | 3 [76] | 6 [152] ③ |
| 100 | 21 [533] | 1927/32 [504] | 141/8 [359] | ① | 181/2 [470] | 21/2 [64] | 0 | 0 | 0 | 1 [25] | 3 [76] | 6 [152] ③ |

NOTES: ① May require a 3" [76 mm] to 4" [102 mm] or 3" [76 mm] to 5" [127 mm] adapter.
② May be 0" [0 mm] with type B vent.
③ May be 1" [25 mm] with type B vent.
**Furnaces must be vented in accordance with the National Fuel Gas Code, ANSI Z223.1 and in accordance with local codes.**

**[ ] Designates Metric Conversions**

# Blower Performance Data

| TARGET GAS HEATING AIRFLOWS | | | |
|---|---|---|---|
| | **ML801V0504A17UHUBAP** | **ML801V0704A17UHUBAP** | **ML801V1005A21UHUBAP** |
| Factory High Heating CFM [L/s] | 735 [334] | 1020 [464] | 1525 [693] |
| High Heat Side Return CFM [L/s] | 794 [361] | 1100 [500] | 1647 [749] |
| High Heat Approx. ±7°F CFM | 662 [301] | 918 [417] | 1373 [624] |
| High Heat Approx. ±12°F CFM | 611 [278] | 847 [385] | 1266 [575] |

**[ ] Designates Metric Conversions**

**BOTTOM RETURN FILTER RACK FOR UPFLOW APPLICATION:** RXGF-CB

**SIDE RETURN FILTER RACK:** RXGF-CD

| FILTER RACK FILTER SIZES* INCHES [mm] | | |
|---|---|---|
| **MODEL** | **RXGF-CB (UPFLOW/ HORIZONTAL)** | **RXGF-CD (UPFLOW) SIDE RETURN** |
| ML801VA050/ ML801VA070 | 15 3/4 x 25 [400 x 635] | 15 3/4 x 25 [400 x 635] |
| ML801VA100 | 19 1/4 x 25 [489 x 635] | 15 3/4 x 25 [400 x 635] |

**WARNING** - Taking return air from back of the furnace is NOT permitted.

## Indoor Coil Casings

| MODEL NUMBER |
|---|
| RXBC-D17AI |
| RXBC-D21AI |
| RXBC-D21BI |
| RXBC-D24AI |

**[ ] Designates Metric Conversions**

**WARNING: IMPORTANT NOTICE**

A SOLID METAL BASE PLATE (SEE TABLE) MUST BE IN PLACE WHEN THE FURNACE IS INSTALLED WITH SIDE AIR RETURN DUCTS. FAILURE TO INSTALL A BASE PLATE COULD CAUSE PRODUCTS OF COMBUSTION TO BE CIRCULATED INTO THE LIVING SPACE AND CREATE POTENTIALLY HAZARDOUS CONDITIONS.

| FURNACE WIDTH IN. [mm] | SOLID BOTTOM KIT NO. | BASE PLATE NO. | BASE PLATE SIZE IN. [mm] |
|---|---|---|---|
| 17 1/2 [445] | RXGB-D17 | AE-61874-02 | 15 1/8 x 23 9/16 [384 x 598] |
| 21 [533] | RXGB-D21 | AE-61874-03 | 18 5/8 x 23 9/16 [473 x 598] |

## For High Altitudes:

**OPTION CODE FOR HIGH ALTITUDE:** U.S.
None required for high altitudes.

**HIGH ALTITUDE CONVERSION KITS:** U.S.
None required for high altitudes.

**80+ HIGH ALTITUDE INSTRUCTIONS**
**CAUTION:** Always follow National Fuel Gas Code (NFGC) guidelines when converting for high altitudes.

High altitude option codes are not required for these models. However, the burner orifice size needs to be recalculated and verified at elevations above 2000 ft. See Installation Instructions for more information.

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## GENERAL TERMS OF LIMITED WARRANTY*

*Mainline*® will furnish a replacement for any part of this product which fails in normal use and service within the applicable period stated, in accordance with the terms of the limited warranty.

***For complete details of the Limited and Conditional Warranties, including applicable terms and conditions, contact your local contractor or the Manufacturer for a copy of the product warranty certificate.**

Conditional Parts
(Registration Required).....Ten (10) Years
Heat Exchanger .....Twenty (20) Years

**Before proceeding with installation, refer to installation instructions packaged with each model, as well as complying with all Federal, State, Provincial, and Local codes, regulations, and practices.**

*"In keeping with its policy of continuous progress and product improvement, Mainline reserves the right to make changes without notice."*

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