# TECHNICAL SPECIFICATIONS

# M2RL Series High Efficiency / Direct Vent

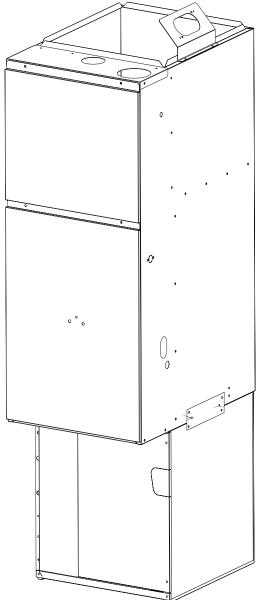
Condensing Downflow Gas Furnace Induced Draft - 90+ AFUE Input

60,000 80,000 & 100,000 Btuh

The high efficiency downflow gas furnace is especially designed for Manufactured Housing. It may be installed in a utility room, or enclosed in a closet. ETL design certified for use in the United States and Canada.

#### **Features and Benefits**

- 100% fired and tested All units and each component (both mechanical and electrical) are tested on the manufacturing line.
- Clean and quiet operation Due to the unique design of in-shot burners, location of inducer and use of insulation.
- Fixed 30 second blower delay at burner start-up assures a warm outlet air temperature at furnace start-up.
  Adjustable blower off settings (60, 90, 120 and 180 seconds).
- Fixed 30-second post purge increases life of heat exchanger.
- Dependable, hot surface ignitor Innovative application of an appliance type ignitor with a 20-year history of reliability.
- Tubular primary heat exchanger Heavy gauge aluminized steel heat exchanger assures a long life.
- Stainless steel secondary heat exchanger assures a long life.
- 90-second fixed cooling cycle blower-off delay (TDR) increases cooling performance when matched with a NORDYNE coil.
- Approved for direct vent furnace, category IV venting system – May be vertically or horizontally vented using a two-pipe system for maximum flexibility in installation.
- Multi-speed direct drive blower Designed to give a wide range of cooling capacities. 40VA transformer included.
- LP convertible Simple burner orifice and gas valve regulator change for ease of convertibility.



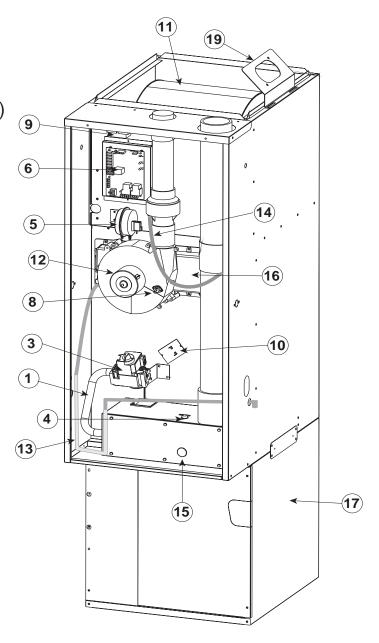
- Diagnostic light flashes identify limit failure, pressure switch failure and improper ground and polarization — for easy troubleshooting.
- 3 amp fuse protection against low voltage shorts; protects transformer and control board.
- Low voltage terminal board for easy field wiring.

#### **FEATURES**

# High Efficiency Downflow 90+ Gas Furnace

### **Downflow Furnace**

- 1 Manifold
- 2 Flame Sensor / Ignitor (Not Shown)
- 3 Gas Valve
- 4 Flame Roll-out Switch
- 5 Pressure Switch
- 6 Control Board
- 7 Blower Door Switch (Not Shown)
- 8 Vent Safety Switch
- 9 Transformer
- 10 Supply Air Limit Switch
- 11 Circulating Air Blower Assembly
- 12 Induced Draft Blower
- 13 J Trap, Hard Tube
- 14 In-Line Drain Assembly
- 15 Burner Box Assembly
- 16 Front Header Box
- 17 A/C Coil Box (Optional Accessory)
- 18 Filter (Not Shown)
- 19 VentilAire Bracket



## **SPECIFICATIONS**

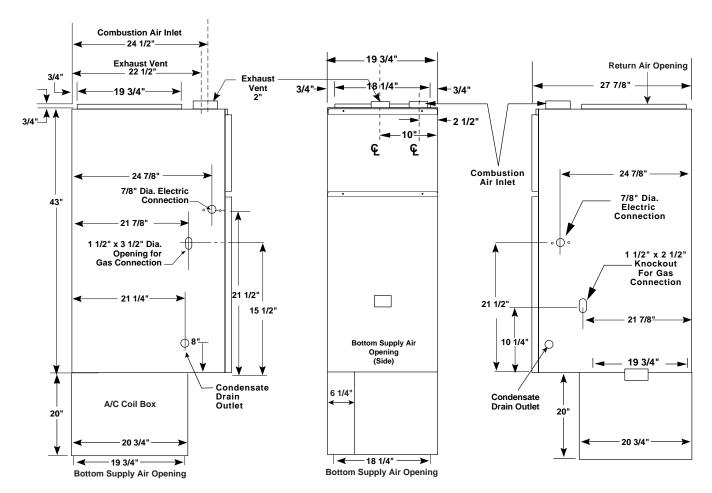
M2RL MODEL NUMBERS:	-060C-16	-080C-16	-100C-16
Input-Btuh (a)	60,000	80,000	100,000
Heating Capacity - Btuh	54,000	72,000	90,000
AFUE	90+	90+	90+
Blower D x W	10 x 10	10 x 10	10 x 10
Motor H.PSpeed -Type	1/2 - 4 -PSC	1/2 - 4 -PSC	1/2 - 4 -PSC
Motor FLA	9.0	9.0	9.0
Maximum Ext. SP - In. W.C.	0.5	0.5	0.5
Temperature Rise Range - °F	35 - 65	35 - 65	35 - 65

#### STANDARD EQUIPMENT

Direct vent; draft inducer; pressure switch; redundant main gas control; hot-surface ignition; timed ON/OFF blower controls (TDR); 40VA transformer for air conditioner application; limit controls; direct drive motor; all models can be converted to use LP (propane) gas.

Note: All models are 115V, 60 Hz. Gas Connections are 1/2" N.P.T. AFUE = Annual Fuel Utilization Efficiency (a) Ratings to 2,000 ft. Over 2,000 ft. reduce 4% for each 1,000 ft. above sea level.

# **DIMENSIONS**



Model	Shipping Weight (lbs)
M2RL - 060A - 16 - BN	170
M2RL - 080A - 16 - BN	170
M2RL - 100A - 16 - BN	175
A/C Coil Box	20

**Table 2. Shipping Weights** 

# **BLOWER PERFORMANCE**

Furnace	Furnace			External Static Pressure (Inches Water Column)									
Model No. Input M2RL Btuh	Motor Motor Speed HP		0.1		0.2		0.3		0.4		0.5		
			CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	CFM	Rise	
	High * Med-High	High *	1/2	1620	32	1560	33	1490	35	1430	36	1365	38
060C-16		Med-High		1450	36	1400	37	1350	38	1295	40	1240	42
0600-16	60,000	Med-Low **	1/2	1255	42	1225	43	1180	44	1145	45	1105	47
		Low		1080	48	1055	49	1030	61	1000	52	960	54
	High *		1635	42	1585	44	1525	45	1460	47	1400	49	
080C-16	0000 40	Med-High	1/2	1435	48	1395	50	1350	51	1300	53	1255	55
0600-16	80,000	Med-Low **		1230	56	1200	58	1165	59	1130	61	1090	64
	Low	Low		1050	-	1035	-	1010	-	980	-	950	-
100C-16 100,000	High *	1/2	1600	54	1555	56	1500	58	1445	60	1380	63	
	Med-High **		1475	59	1435	60	1385	63	1335	65	1290	-	
	Med-Low		1320	-	1290	-	1250	-	1215	-	1170	-	
	Low		1150	-	1130	-	1110	-	1075	-	1040	-	

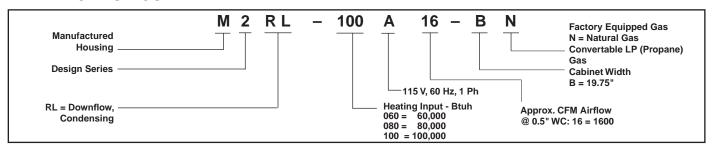
<sup>\*</sup> Factory wired cooling speed tap.

- Not Recommended

NOTE: Data is for operation with filters

<sup>\*\*</sup> Factory wired heating speed tap.

#### **IDENTIFICATION CODE**



#### **VENTING**

All models are approved for both vertical and horizontal direct (2 pipe) venting applications. See Vent Table below for specified sizes and allowable lengths.

#### **VENT TABLE**

APPLICATION	DIRECT VENT, DUAL PIPE LENGTH (ft.) with 1 long radius elbows on each pipe.*			
PVC,CPVC or ABS	Inlet/Outlet			
SCH. 40 Pipe Size	3"	3"		
Model M2RL 060	50	50		
Model M2RL/L 080	90	90		
Model M2RC/L 100	90	90		

#### \* NOTE:

- 1. Subtract 3.5 ft. for each additional 3" elbow.
- 2. Two 45 degree elbows are equivalent to one 90 degree elbow.
- 3. One short radius elbow is equivalent to two long radius elbows.
- 4. Do not include termination elbows in calculation of vent length.
- 5. This table is applicable for elevations from sea level to 2000 ft. For higher elevations decrease vent pipe lengths by 8% per 1000 ft. of altitude.
- 6. Only the above pipe materials are approved for use with M2 Condensing Furnaces.

#### **ACCESSORY VENT KITS**

3" PVC Horizontal Exterior Vent Mounting Kit	9023750		
Neutralizer Kit - All Models	9023770		

Accessories				
Kit	Order Number			
Fossil Fuel Kit	914762			
A/C Coil Box	914958			
Sloped Roof VentilAire III Kit	914098			
Sloped Roof VentilAire IV Kit	914229			
Soffit VentilAire Kit	917201			
Concentric Vent Termination Kit (for horizontal and vertical venting)	903578			
Variable Speed Kit	904075			









Nortek Global HVAC LLC will furnish a replacement for any part of this product which fails in normal use and service within the terms and conditions of the warranty.

712A-0408 (Replaces 712A-0501)