

QUICK REFERENCE GUIDE

96% TWO STAGE ECM MULTI-POSITION RESIDENTIAL GAS FURNACES (33" TALL)

NOTES:

1. Refer to the condensate management and drain hose plumbing for different configurations in this document. No hose clamps are needed for the condensate pan hook up.
2. Drip leg in the gas line must be installed.
3. The furnace controls require correct polarity on the power supply and a proper ground.
4. Y & G must be connected to the control board for cooling operation.
5. To measure total static pressure add supply duct pressure to the return duct pressure, add pressure drop across the 'A' coil, and add pressure drop across the filter. Ignore negative signs on the readings.
6. Inlet gas pressure for natural gas should be 7" and that for propane should be 11" w.c. Nominal manifold gas pressure is 3.5" for natural gas and 10" w.c. for propane at high fire and 1.6" for Natural gas and 4.0" for Propane on low fire.
7. If thermoplastic evaporator 'A' coil drain pans are to be installed in the up-flow/horizontal configuration, then extra 2" minimum spacing may be needed to ensure against drain pan distortion.
8. External filters required on all configurations.
9. Electrical entry is available on both sides of the casing.
10. All 33", 95% furnaces are approved for single-pipe and 2-pipe systems. For single pipe systems it is recommended to install the combustion air coupling provided and install approximately 18" of PVC pipe on the furnace.
11. Do not install an external condensate trap on these furnaces, as it will prevent the unit from operating correctly.

Models	Airflow CFM (Bottom Return without Filters)				Minimum Wire Size awg @ 75' One-Way	Maximum Over Current Protection
	0.5" ESP (Nominal) [†]					
	*D-A**	*C-A**	*B-A**	*A-B**		
TM9V060B12MP11	712	814	1026	1343	14	15
TM9V080B12MP11	738	836	1000	1320	14	15
TM9V080C16MP11	850	1091	1405	1787	14	15
TM9V100C16MP11	884	1116	1427	1818	14	15
TM9V100C20MP11	986	1169	1630	2019	12	20
TM9V120D20MP11	1232	1364	1552	2006	12	20

Models	Input Rate		Total Unit Amps	Air Temp. Rise Max Input °F	Air Temp. Rise Min Input °F	Time For 1 t ³ Natural Gas (1030 Btu/Ft ³) Seconds (On Max. Rate)
	Max	Min				
TM9V060B12MP11	60,000	39,000	9	35 - 65	35 - 65	62
TM9V080B12MP11	80,000	52,000	9	35 - 65	30 - 60	46
TM9V080C16MP11	80,000	52,000	12	35 - 65	35 - 65	46
TM9V100C16MP11	100,000	65,000	12	35 - 65	30 - 60	37
TM9V100C20MP11	100,000	65,000	14	35 - 65	35 - 65	37
TM9V120D20MP11	120,000	78,000	14	35 - 65	35 - 65	31

[†] Other airflows are available. see Tech Guide for all CFM options.

* Cool Tap.

** Adjustment Tap.

LED INDICATOR

Slow Green Flash - Normal operation in standby mode.

Slow Amber Flash - Normal operation with call for cooling.

Two Amber Flashes - Normal operation with call for heat.

Three Amber Flashes - Normal operation, burner is on at end of thermostat cycle.

Six Amber Flashes - Normal operation with call for heat pump heating.

Any Red Flash - Fault condition. **NOTE:** 4 or 5 flashes may indicate a blown fuse on the circuit board.

Subject to change without notice. Printed in U.S.A.

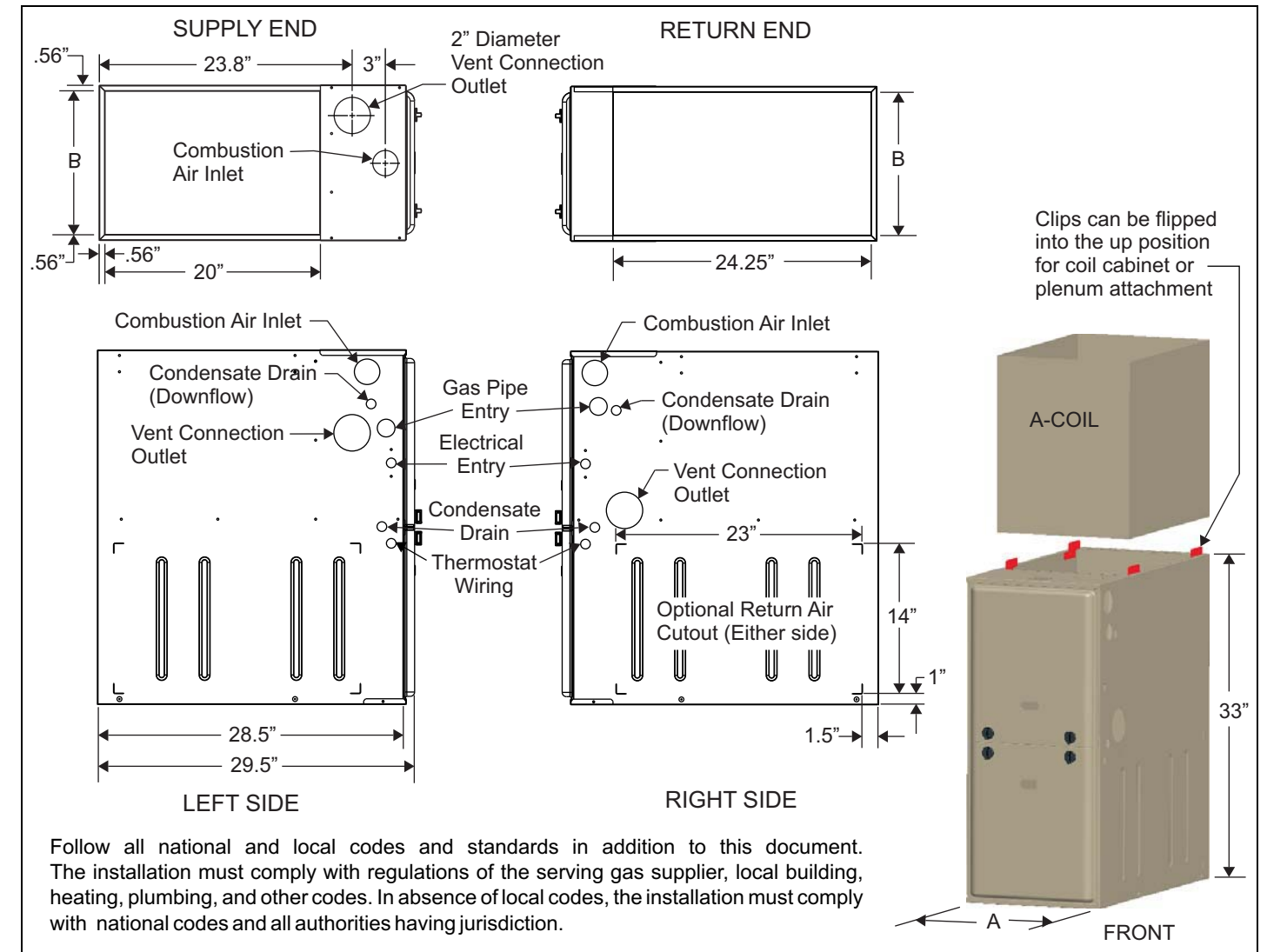
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438336-URG-C-0509
Supersedes: 438336-URG-B-0309

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This document does not replace the installation instructions, which must be referred to for detailed information.



Follow all national and local codes and standards in addition to this document. The installation must comply with regulations of the serving gas supplier, local building, heating, plumbing, and other codes. In absence of local codes, the installation must comply with national codes and all authorities having jurisdiction.

CLEARANCES

Application	Upflow	Downflow	Horizontal
Top	1"	0"	0"
Vent	0"	0"	0"
Rear	0"	0"	0"
Side	0"	0"	1"
Front*	0"	0"	0"
Floor	Combustible	Combustible ¹	Combustible
Closet	Yes	Yes	Yes
Line Contact	No	No	Yes

1. For combustible floors only when used with special sub-base.
- * 24" clearance in front and 18" on side recommended for service access.
- All furnaces approved for alcove and attic installation.

DIMENSIONS

Cabinet Size	A (in)	B (in)
All 'B' Cabinet Furnaces	17-1/2"	16-3/8"
All 'C' Cabinet Furnaces	21"	19-7/8"
All 'D' Cabinet Furnaces	24-1/2"	23-3/8"

MOST COMMON INSTALLATION CONFIGURATIONS (MORE OPTIONS AVAILABLE WITH INDUCER ROTATION, WHICH IS COVERED IN THE INSTALLATION MANUAL)

MULTI-POSITION CONFIGURATION INFORMATION:

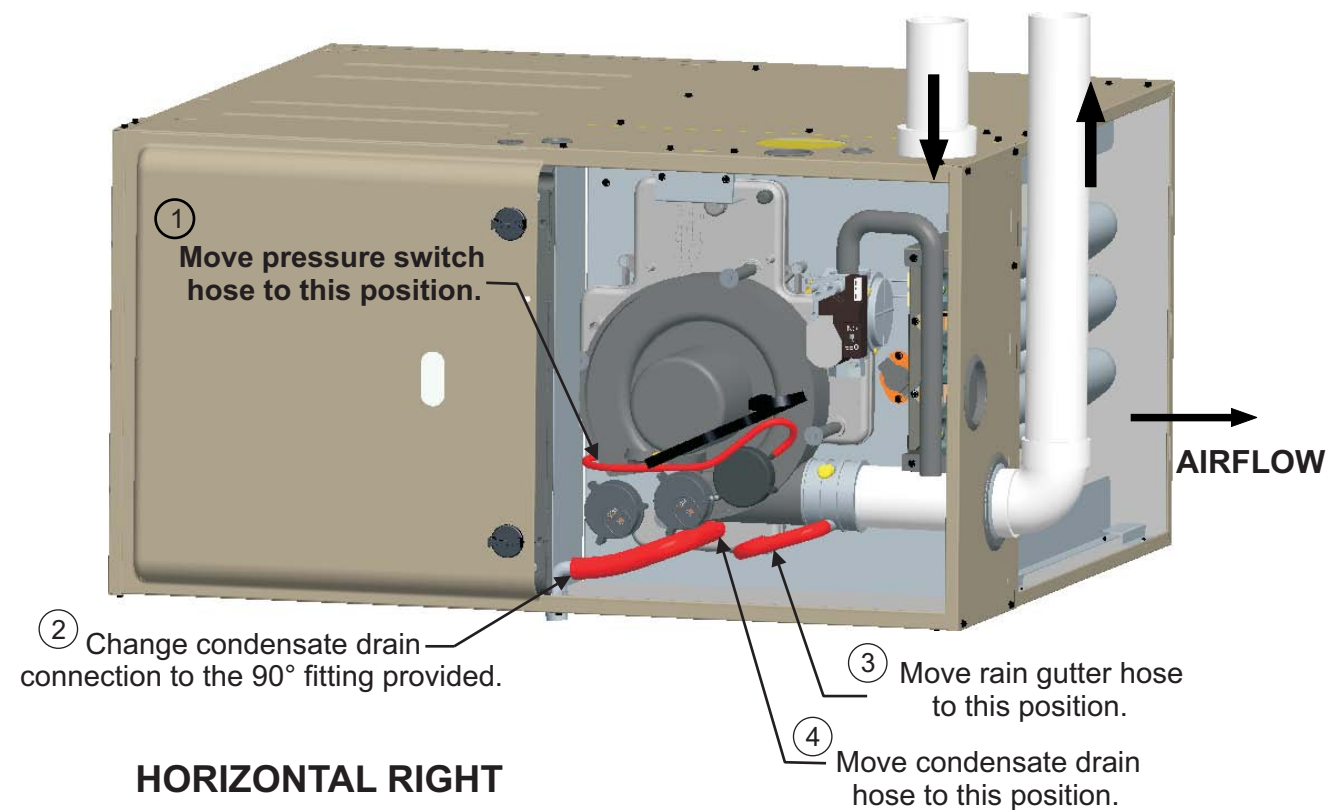
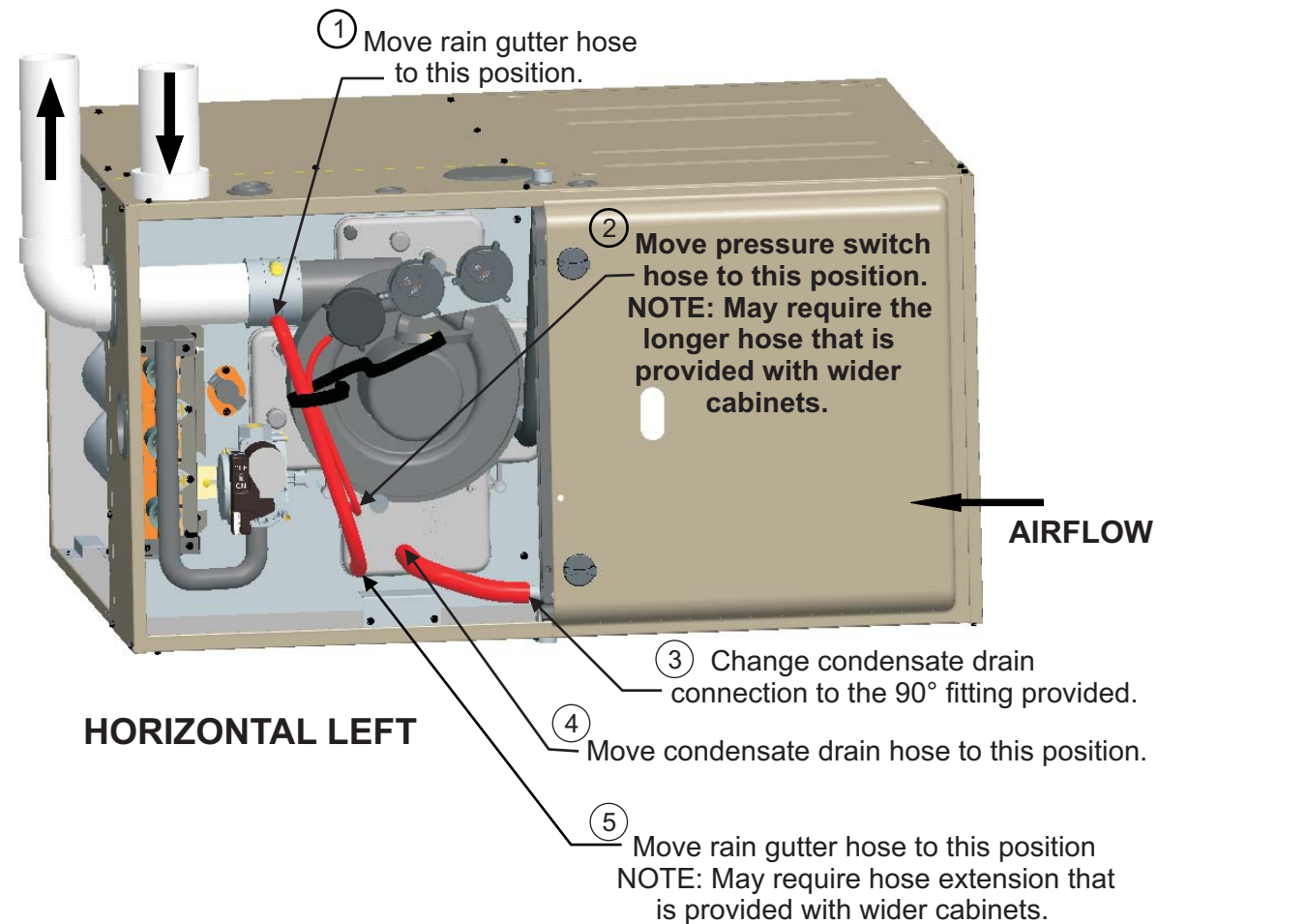
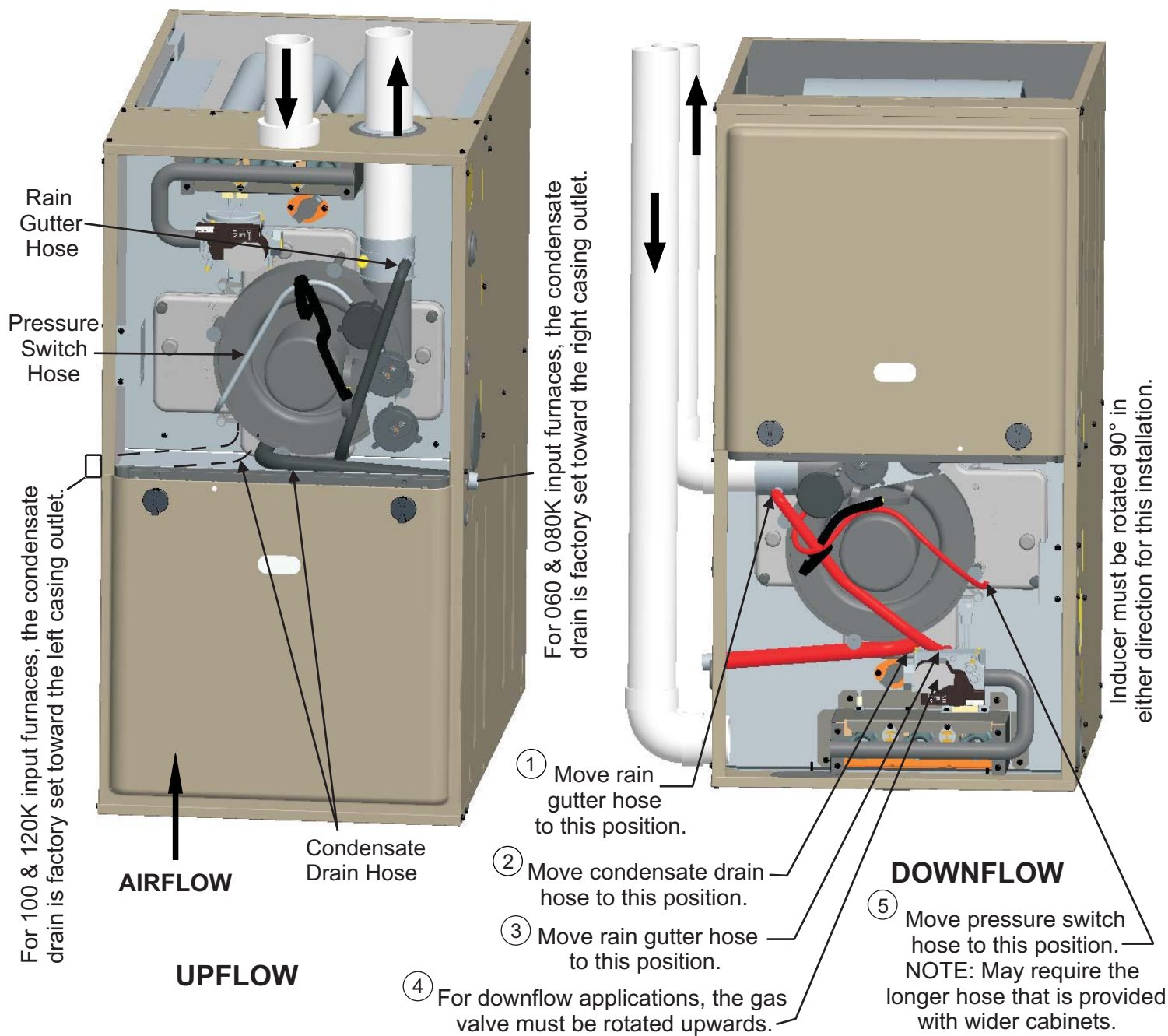
Ensure that all PVC venting has at least 1/4" per foot slope towards the furnace. Furnace is multi-position and may be installed in any of the configurations shown.

The furnace condensate pan is self priming and contains an internal trap.

Do not install an external condensate trap.

When drain hose routing changes are required (shown in red), be sure to cap all unused openings.

If rerouting hoses - excess length should be cut off so that no sagging loops will collect and hold condensate, which will cause the furnace to not operate.



In upflow and downflow installation - Condensate drain hose may go out either side.