

# Burner Installation Instructions

## Burner Installation Instructions UMLA/UMLVA Direct Vent

### Installation Procedure

1. Beckett NX and Riello 40BF3 burners are factory equipped for 0.65 USGPH firing rate. Riello 40BF5 burner is factory equipped for 0.75 USGPH firing rate. If that is desired firing rate then nozzle installation is complete. Go to step 3.
2. Install nozzle for desired firing rate per charts below. Insure burner electrodes remain aligned per burner manufacturer's specification.
3. Place burner mounting gasket on burner mounting studs on furnace.
4. Place burner on burner mounting studs on furnace. Insure burner is in upright position for installed flow configuration of furnace (i.e. upflow, downflow, horizontal left, horizontal right).
5. Install furnished 3/8"-16 flange nuts on studs.
6. Connect 6 pole line voltage burner wiring plug to 6 pole receptacle on front of furnace.
7. Confirm blocked vent safety switch (pressure switch) is correctly mounted and tubing connected per the Direct Vent Supplemental Instructions provide with the furnace.
8. Connect blue/yellow low voltage burner wiring harness as follows:
  - blue/yellow wires to 2 pole receptacle on front of furnace
  - yellow/yellow wires to blocked vent safety switch (pressure switch)
9. Highlight installed model/firing rate on Alternate Input chart on furnace rating plate.
10. Burner installation is complete.
11. Follow start up and adjustment procedures in Installation, Operation and Maintenance manual provided with furnace.

### Chart 1 - Beckett NX Oil Burner Setup

Beckett NX Series Oil Burners (For use with direct vent units using outdoor combustion air only)							
Furnace Model	Output BTU/Hr	Burner Model	Delavan Nozzle	Pump Pressure [PSIG]	Flow Rate [USGPH]	Low Firing Rate Baffle	Air Setting
UML65ANXU UMLV65ANXU	66,000	NX56LQ	0.50 / 60°W	140	0.55	Yes	3
UML80ANXU UMLV80ANXU	77,000	NX56LQ	0.50 / 60°W	175	0.65	Yes	3.25
UML90ANXU UMLV90ANXU	88,000	NX56LQ	0.60 / 60°W	175	0.75	No*	3.25
UML100ANXU UMLV100ANXU	99,000	NX56LQ	0.65 / 60°W	175	0.85	No*	3.75

\* Burner is factory equipped with low firing rate baffle. Remove for 0.75 and 0.85 USGPH firing rates.

### Chart 2 - Riello 40BF Burner Set-Up

Riello 40BF3/40BF5 Series Oil Burners (For use with direct vent units using outdoor combustion air only)							
Furnace Model	Output BTU/Hr	Burner Model	Delavan Nozzle	Pump Pressure [PSIG]	Flow Rate [USGPH]	Turbulator Setting	Air Setting
UML65ARBU UMLV65ARBU	66,000	40BF3	0.50 / 90°B	125	0.55	0.0	4.25
UML80ARBU UMLV80ARBU	77,000	40BF3	0.55 / 80°B	140	0.65	1.0	5.25
UML90ARBU UMLV90ARBU	88,000	40BF5	0.65 / 80°B	140	0.75	0.0	3.75
UML100ARBU UMLV100ARBU	99,000	40BF5	0.75 / 80°B	130	0.85	0.0	4.25

Note: Riello 40BF3 burner is required for 0.55 and 0.65 USGPH firing rates.  
 Riello 40BF5 burner is required for 0.75 and 0.85 USGPH firing rates.

Above settings are preliminary settings only. Final adjustments must be made using combustion test instruments as outlined in the Installation, Operation, and Maintenance manual provided with furnace.