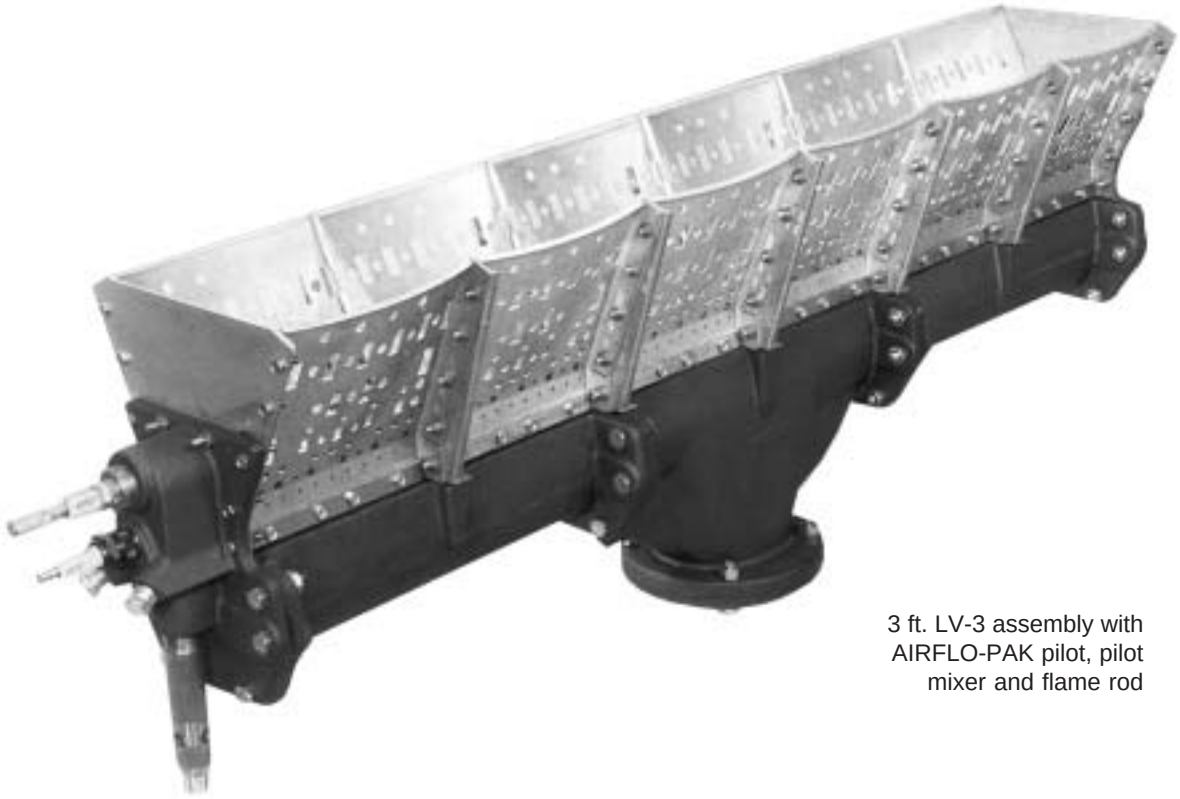
Series “LV” AIRFLO® Line Burners



3 ft. LV-3 assembly with AIRFLO-PAK pilot, pilot mixer and flame rod

- **Series “LV” AIRFLO® Burners provide stable, efficient, raw-gas operations** in air streams with relatively low duct velocities. Duct static pressure drops may be as low as 0.2" wc.
- **Produces clean and odor-free combustion** with natural or propane gases
- **Air stream temperatures** approaching a Series “LV” AIRFLO® Burner can be up to 1050°F (566°C)
- **Air stream oxygen levels** (as low as 12% by volume) can be tolerated without a need to add primary combustion air to the system
- **Modular burner design** provides burner assembly configurations and total heat release for maximum application flexibility
- **17 varieties of Series “LV” AIRFLO® Burners** available, each optimized in materials and/or performance factors to match your specific application requirements

Covered by U.S. Patents #25,626, #3,297,259 and #4,573,907; Canada #786,136 and #786,137; Great Britain #943,733

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Design and Application Details

Principle of Operation

Series "LV" AIRFLO® Burners are designed for heating process air in motion and consist of a rust-resistant gray iron, ductile iron, or aluminum bronze body (which serves as the raw gas or air/fuel manifold), drilled to discharge the fuel gas/mixture between diverging stainless steel or Hastelloy-X mixing plates.

The entire burner assembly is mounted inside your duct directly in the air stream being heated. The air stream passes across the burner and through the mixing plates and is used as additional combustion air, particularly at the higher firing rates. Carefully controlled mixing plate aeration patterns give progressive mixing, superior cross-ignition and flame retention across the entire burner assembly length. The Series "LV" AIRFLO® Burner burns clean and odor-free with low levels of NOx production.

Air velocities and the resulting duct static pressure drop are the key to successful operation. They are established by the use of a customer-installed profile within the duct.

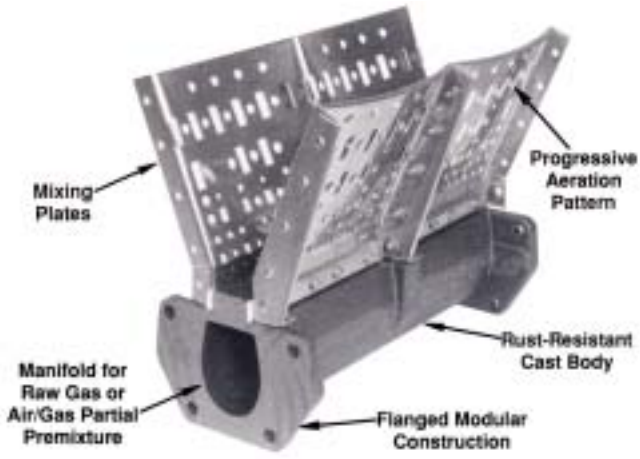
A minimum profile plate width of 6" is required surrounding all Series "LV" AIRFLO® Burner assemblies.

Optimum burner performance and maximum service life demands that air stream velocities be uniform across the entire burner assembly.

Normal capacities vary widely with application and duct pressures. Fuel used and design velocities affect turndown. Modular design permits shape and total heat release to match application needs.

Performance data varies depending upon temperature of air upstream and downstream of burner assembly, the percent of oxygen (by volume) in the passing air stream, and the allowable duct static pressure drop (which relates to velocity of air) across the Series "LV" AIRFLO® Burner.

Several varieties of Series "LV" AIRFLO® Burners are offered. Each type is optimized for a specific type of application. All varieties can be used as raw gas type systems or partial air/gas premixture is used for heating process air-in-motion where higher upstream temperatures and/or lower oxygen levels are involved.



- **LV-NP-1 AIRFLO® Burner** with its gray iron body and #321 stainless steel mixing plates is the most economical choice for a raw gas burner system for fresh air heating with low heat release per lineal foot.
- **LV-3G AIRFLO® Burners** also have gray iron bodies and #321 stainless steel mixing plates. Four different versions are available, either for raw gas burner applications or those requiring a partial air/gas premixture system and/or outlet temperatures up to **1000°F (538°C)**.
- **LV-4D AIRFLO® Burner** has a ductile iron body and #310 stainless steel mixing plates as above for applications with outlet temperatures up to **1500°F (816°C)**.
- **LV-5D AIRFLO® Burners** compliment their ductile iron bodies with Hastelloy-X mixing plates for use in applications with up to **1700°F (927°C)** outlet temperature requirements.
- **LV-5B AIRFLO® Burners** have an aluminum bronze body casting with Hastelloy-X mixing plates for use with applications requiring up to **1700°F (927°C)** outlet temperatures.

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