

Product Overview | Limiting Orifice Valve

An 1807 Limiting Orifice Valve is used to set air/gas ratio on a nozzle-mix burner. It has a V-port plug that can be adjusted sensitively and accurately with an Allen wrench. Turning the screw counterclockwise increases flow. A cap conceals the adjustment and discourages tampering with the setting. After adjustment always replace top cap on valve body to reduce air or gas leaks.

The V-port adjustment is in a removable gas cartridge assembly, simplifying inspection or replacement. 1807 Valves have brass internals; 1807- -K Valves have iron internals for coke gas and others corrosive to brass; 1807- -TK Valves are for hot gases. Valves with the pre-fix "M" have ISO 7 Rp threaded end connections.

1807- -C valves are cleaned for oxygen service standard.

1807- -H limiting orifice valves for high pressure service have cast iron bodies, O-ring seals, spring loaded plug for vibration resistance, socket head adjustment, and screw-on cap.

For high pressure oxygen valves for 125 psig see Bulletin 1807B.

Limiting Orifice Valves are not designed for shutting off gas. Use an approved ball valve, plug valve or cock.

SPECIFICATIONS

Operating Pressure: 1807- -C, -K, -TK, 25 psig (1.7 bar)
1807- -H, 125 psig (8.6 bar)

Maximum Design Temperature: 1807- -TK, 600°F (316°C)
All other 1807's, 225°F (107°C)

Minimum Design Temperature: -20°F (-28°C)

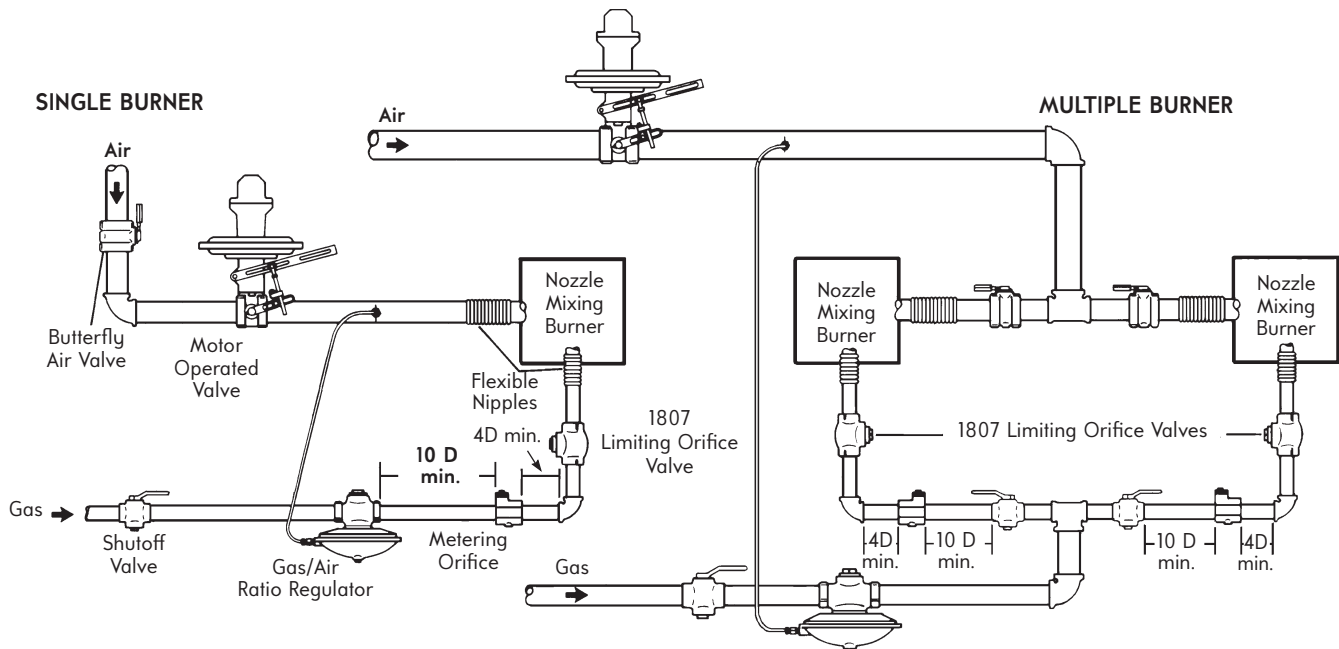
Body Materials: cast iron

Gas Cartridge Assembly Material:
1807- -K SST and Zinc plated steel
All other 1807's brass

Stuffing Box Cap Material: 1807- -K 303 SST
All other 1807's brass

O-rings: Viton

TWO TYPICAL PIPING ARRANGEMENTS FOR LIMITING ORIFICE VALVES



Install 1807 Valve as close as possible to burner. Normal practice is to select limiting orifice valve pipe size same as ratio regulator (North American #7218 or #7216), or as burner gas connection if several burners are fed by one regulator. There is no performance advantage in using the smallest possible 1807 for the flow and pressure drop available.