**Capacity Range:** 120,000 to 9,300,000 BTU/hr



## **Atmospheric Gas Burners**

Atmospheric Hi-Lo Torch gas burners designed for high turndown ranges on all types of combustion chambers or furnaces operating under a negative pressure.

## **Applications:**

- Air heaters
- Boilers
- Chemical stills
- Heat exchangers
- Ovens
- Draft furnaces
- Dryers
- Kilns

## **How It Works**

Hi-Lo Torches are atmospheric gas burners designed for high turndown ranges on all types of combustion chambers or furnaces operating under a negative pressure.

Combustion chamber draft induces all combustion air. No air blower or mixer is required. Atmospheric type venturi correctly proportions air and gas flows and delivers uniform mixture to burner nozzle.

Exclusive pressure actuator controls burner nozzle stabilizer disc with changes in gas flow to maintain stable flame. A single modulating gas valve controls fuel pressure automatically.



## **Operating Principles**

Hi-Lo Torches use a diaphragm and spring coupled by an operating rod to the port disc. With the modulating valve open, full gas pressure is applied to the diaphragm and gas orifice. The gas pressure force on the diaphragm overrides the spring force and moves the diaphragm assembly towards the nozzle. The operating rod moves the disc to an open position providing full nozzle capacity. The gas orifice size sets the maximum gas flow and the air shutter adjustments control the desired primary air flow. On turndown both the gas flow through the orifice and the pressure on the diaphragm are reduced. Spring force retracts the nozzle disc closing the burner port area reducing induced draft flow in proportion to gas flow. Air-Gas mixture ratios remain within stable limits at all input rates.

Features	Benefits
16 to 1 turndown with 10 PSIG gas	Not affected by variations in draft
10 to 1 turndown with standard pressure gas	High heat releases
No air blower needed	Simple, inexpensive operation
One valve automatic control	Use with pneumatic, electric or direct actuator
Simple rugged construction	Minimum maintenance



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