

97311 Enclosed Burner

The S&J 97311 Enclosed burner incinerates harmful emissions from waste gas streams. Typical applications include fermentation off gas piping systems such as anaerobic digesters or landfill gas. This unit has no visible flame which makes it ideal for residential areas.

The 97311 was specifically designed to completely combust gas in digester and landfill systems. The 97311 uses maximum destruction efficiency (99%) and provides low NOX and CO emissions. This burner works is ideal for environments that have strict emission requirements and regulations (such as the EPA) and keeps emissions within the allowable limit. The 97311 draws in the proper amount of air to gas ratio to achieve the optimum operating temperature in order for complete combustion to occur. Key data, such as gas stream composition and flow rates, are used to determine the appropriate residence time of the waste gas inside the stack. This is critical to both the reliability of the emissions removal as well as the efficiency of operation.

The Automatic Ignition System accepts a remote contact or signal from a pressure sensor to initiate ignition sequences. Advanced pilot design include UV sensor for positive flame proofing. Pilot System includes pilot pressure regulators and shut-off valves as specified.

The S&J 97311 can be configured with any combination of measuring instruments for complete recording and reporting. Flexible operation is achieved through innovative hardware design.

The design of the 97311 flare eliminates the need for refractory lining in the combustion chamber.

The S&J 97311 accommodates fluctuating gas stream composed of low BTU "wet" methane. It can withstand the severest of process environments including high wind loading and seismic conditions as specified.



Features

- No visible flame
- Controlled Combustion environment with natural draft design
- Meets emission standards of EPA & local regulations
- High Destruction removal efficiency
- High turn down ratios
- Ground Level inspirating venturi pilot/ignition lines
- Operates with low input pressures
- Advanced ground level automatic ignition system

Specifications:

Sizes:

3", 4", 6", 8", 10" & 12"

Manifold Connection:

ANSI 150 lb. Raised Face Flange

Contact Outputs:

Alarm	SPDT, 120 VAC 1 Amp
Flame Proven	SPDT, 120 VAC 1 Amp
Pilot Failure (Optional)	SPDT, 120 VAC 1 Amp
Main Gas Open (Optional)	SPDT, 120 VAC 1 Amp

Power Requirements:

120 VAC 8 Amp 60 Hz (NEMA 7: 15 Amp);
220 VAC (optional)

Controller:

Temperature Range:	-20 to 150 degrees F
Enclosure:	Panel Mounted NEMA 4 (Optional NEMA 4X or 7); Carbon Steel Optional: Stainless Steel
Enclosure Material:	
Functions:	Manual Start Remote Start Automatic Sequencing Continuous Pilot or Intermittent Pilot

Stack Materials:

Top Stack Assembly:	Stainless Steel
Bottom Burner Assembly:	Carbon Steel (Optional Stainless Steel)
Manifold/Pilot Assembly:	Stainless Steel *Other materials available

Biogas Criteria Composition:

50%-70% CH₄, 50%-30% CO₂, with trace amounts of H₂S, Inert Gases and Air

Moisture Content:

Saturated (100% Humidity)

Pilot Gas:

Natural Gas
LPG (Propane)
Waste Gas (500 BTU/ Cubic foot Minimum)

Pilot/Ignition Gas Pressure:

4"-30" W.C. Low Pressure - Standard
1-100 PSIG High Pressures

Functions:

Manual Start:

The operator puts selector to manual and initiates ignition by depressing the start push-button on the control panel.

Remote Start:

Remote ignition is performed by placing selector switch in the auto position and closing the remote location dry contact to initiate the operation of the waste gas burner.

Auto Start:

Automatic Start is performed by the sensing of a pressure permissive in the system. The pilot control panel must be set to "Auto" position for this to be controlled by the pressure switch. When the pressure switch contacts close, the auto flaring sequence will begin. Once the pressure drops below the pressure switch set point the contacts will open, halting operation.

Accessories:

A pressure regulator / flame arrester should be installed in the digester line just upstream of the flare. For automatic operation, a solenoid option must be included.

Dimensions:

Additional Options

- Weatherhood for Control Panel
- Stand
- Pressure Switch (Remote/Automatic Control)
- 316 Stainless Steel Piping and Fittings
- NEMA 7, Explosion Proof Configuration

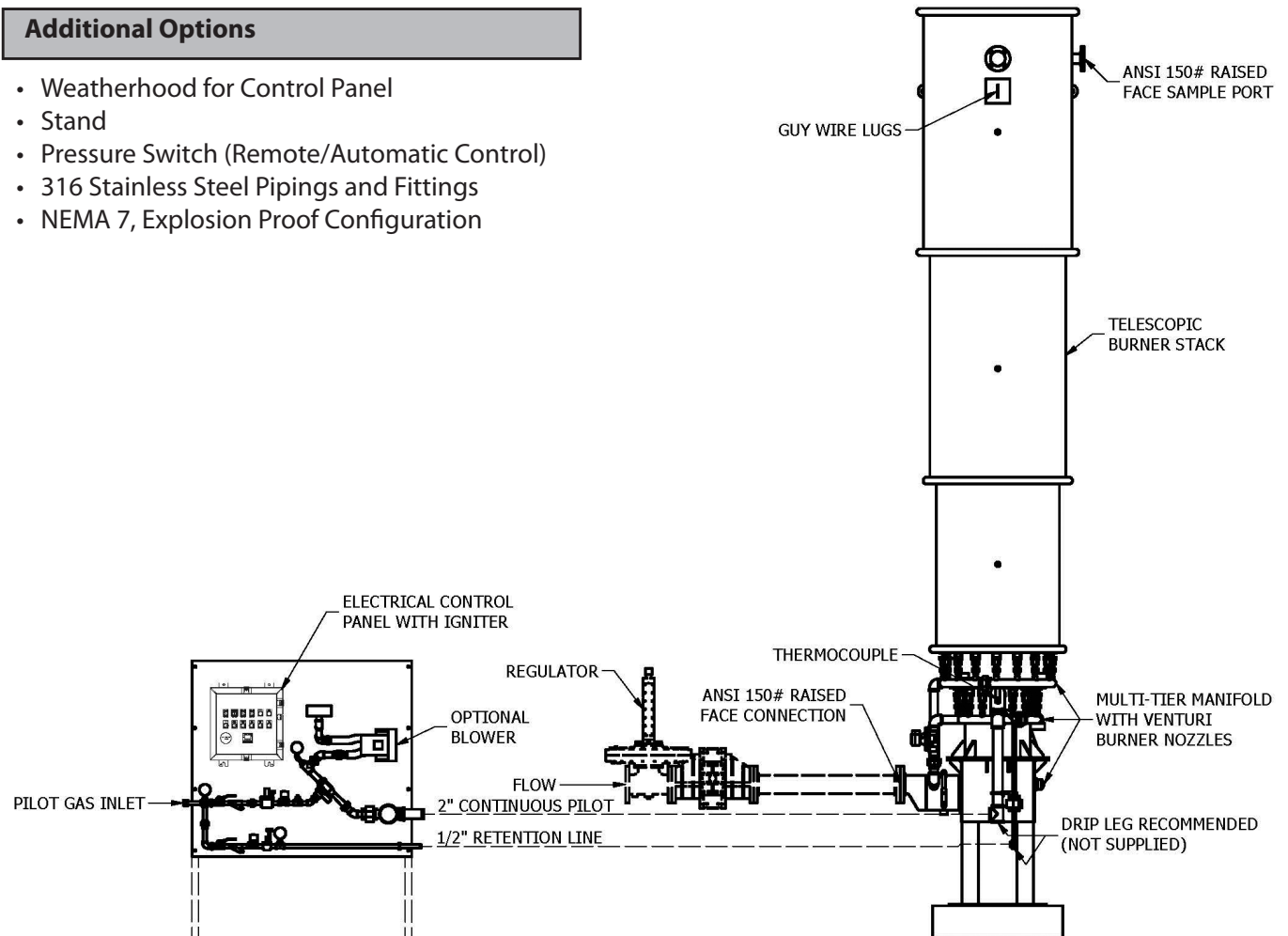


FIGURE 1

All designs subject to change. Certified dimensions and specifications available upon request.