



- 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

The Shand & Jurs 97311 Enclosed Flare

The S&J 97311 Enclosed Flare removes harmful emissions from waste gas streams. Typical applications include fermentation off gas piping systems such as anaerobic digesters. This unit is specifically designed to bring emissions levels to within allowable limits as dictated by customer requirements or governmental bodies such as the EPA.

Every unit is designed for maximum destruction efficiency for each application's process parameters. Provides very low NOX and CO emissions. 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. Components of construction include carbon steel or stainless steel for stack, pedestal, base, pilot piping and manifold as specified.

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 withstands the severest of process environments including high wind loading and seismic conditions as specified.

Applications

Anaerobic digester gas train

Fermentation off gas piping systems

Low pressure vent lines

Processes requiring EPA Emissions Control

TYPICAL CONFIGURATION

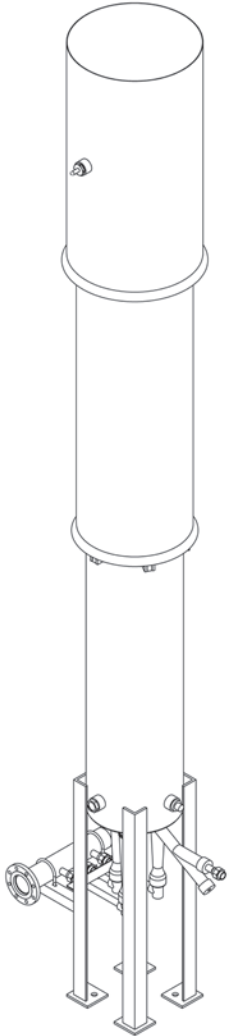
DESIGN FEATURES

- Controlled combustion environment
- Natural draft design
- No visible flame
- Low noise
- Wide turndown ration
- Smokeless operation
- Fully automated controls
- High destruction efficiency
- Low NOX emissions
- Low CO emissions

BURNER MATERIAL:	Stainless Steel
PILOT MATERIALS:	Stainless Steel
STACK MATERIALS:	Carbon Steel
PROCESS CONNECTION:	150 lb. ANSI Flange

HOW TO ORDER

*See Approval Drawings for Details

<p>Emission:</p> <p>Stack Exit Temperature _____ .F or .C</p> <p>*Destruction Removal Efficiency(DRE) _____ (99.0% Standard)</p> <p>Residence Time _____ Seconds</p> <p>NO_x Emission _____ Lbs/MMBtu (kg/CJ)</p> <p>SO₂ Emission _____ Lbs/MMBtu (kg/CJ)</p> <p>CO Emission _____ Lbs/MMBtu (kg/CJ)</p> <p>Waste Gas Composition:</p> <p>Methane CH₄ _____ %</p> <p>Carbon Dioxide CO₂ _____ %</p> <p>Hydrogen Sulfide H₂S _____ %</p> <p>Saturated Vapor _____ % or ppm</p> <p>Other _____ % or ppm</p> <p>Other _____ % or ppm</p> <p>Operating Conditions:</p> <p>Gas Flow Rate: _____</p> <p>Gas Pressure: _____</p> <p>Pilot Gas:</p> <p>Flow Rate: _____</p> <p>Pressure: _____</p> <p style="text-align: center; margin-top: 20px;">DRE Greater than 99% Available upon request.</p> <p style="text-align: right; font-size: small;">Design subject to change without notice</p>	 <p style="text-align: center; font-size: x-small;">ISO VIEW</p>
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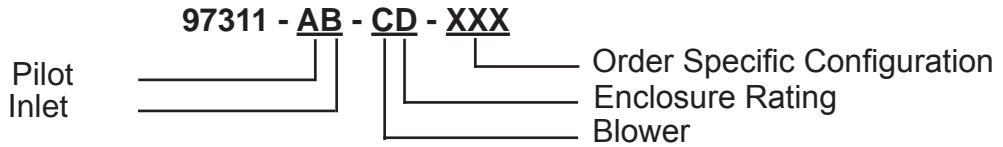


TABLE (A) PILOT GAS

OPTION	DESCRIPTION
0	Natural
1	Propane

TABLE (B) BIOGAS CONNECTION

OPTION	DESCRIPTION
2	2" ANSI RF
3	3" ANSI RF
4	4" ANSI RF
5	6" ANSI RF
7	8" ANSI RF
8	10" ANSI RF
9	12" ANSI RF

TABLE (C) BLOWER

OPTION	DESCRIPTION
0	No Blower - Standard
1	Blower - General Purpose Motor
2	Blower - NEMA 7 Motor

TABLE (D) ENCLOSURE RATING

OPTION	DESCRIPTION
0	NEMA 4 - CS
1	NEMA 7/4X - CAST AL
2	NEMA 4X- SS

Table (XXX)

OPTION	DESCRIPTION
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XXX is converted to a three digit sequence of numbers. A unique number is assigned to each site. The unique number defines the site specifications which are incorporated into the approval drawings.

Note: An electrically or pneumatically operated shut-off valve is required in the main Bio-gas feed line (by others).