

97300M Waste Gas Burner

The S&J 97300M is a low cost, basic, Waste Gas Burner designed to combust biogases generated in fermentation processes. It efficiently incinerates low BTU gases from anaerobic digesters, lagoons, and municipal landfills, minimizing odors and VOC's. The stoichiometric pilot ensures that a proper air to fuel mixture is maintained throughout the wide range of pressure and BTU fluctuations. A continuous burning pilot in the flame area provides stable, controlled, nonsmoking, combustion.

The 97300M is designed to withstand wind speeds up to 150mph as well as seismic zone 4 loads. Its stainless steel components endure the severest of process environments. The burner tip is designed with swirl inducers that create a cyclonic effect producing an efficient air/fuel mixture and maximizes flame retention. The wind shroud induces sufficient air to the flare tip for proper mixing and combustion throughout the operating range.

The Pilot Control Box includes a selector switch for continuous spark, off, or intermittent spark. Pilot controls are enclosed in a NEMA 4, carbon steel, electrical enclosure (NEMA 4X, 304 or 316 optional).



Features

- High Performance Stoichiometric Pilot
- No Flame Front Burn-out of Pilot Gas During Ignition
- Sizes 2" Through 12"
- Burns High Flow, Low BTU "Wet" Methane
- No Venturi Maintenance

Specifications:

Sizes:

2", 3", 4", 6", 8", 10" & 12"

Stack Burner Connection:

ANSI 150 lb. Raised Face Flange

Power Requirements:

120 VAC 4 Amp, 240 VAC 2 Amp (Optional)

Controller:

Temperature Range: -20 to 150 degrees F
Enclosure: Steel; NEMA 4X,
Stainless Steel; NEMA 7,
Aluminum
Functions: Continuous Spark
Intermittent Spark

Stack Materials:

Stack with Shroud: 304L Stainless Steel
316L Stainless Steel (Optional)
Piping: 304L Stainless Steel
316L Stainless Steel (Optional)

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
Propane (LPG)
Waste Gas (500 BTU/ Cubic Foot Minimum)

Pilot Gas Pressure:

12" W.C. - 10 PSIG

Functions:

Continuous Spark:

The operator puts selector to "Continuous" and the spark generator will always run.

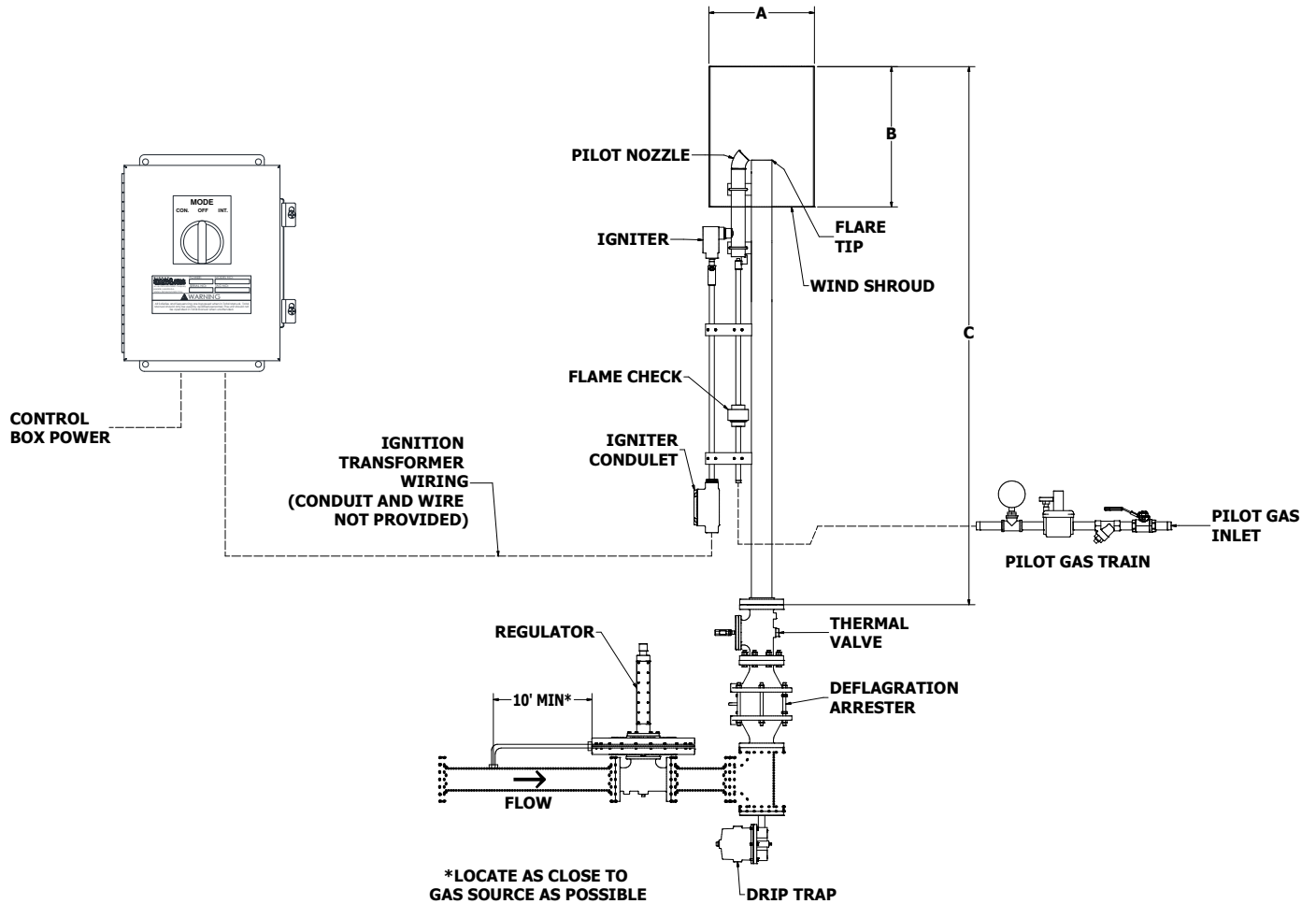
Intermittent Spark:

The operator puts the selector to "Intermittent" and the spark generator runs for the duration of the time set on the timer.

Accessories:

A back pressure regulator / deflagration arrester should be installed in the digester line just upstream of the flare.

Dimensions:



Stack Dimensions

Dimensions (Inches [mm])			
Size	A	B	C
2 [50]	16 [406]	24 [610]	88 [2235]
3 [75]	18 [457]	24 [610]	92 [2337]
4 [100]	20 [508]	24 [610]	92 [2337]
6 [150]	24 [610]	36 [914]	128 [3251]
8 [200]	24 [610]	48 [1219]	144 [3658]
10 [250]	30 [762]	48 [1219]	176 [4470]
12 [300]	36 [914]	60 [1524]	188 [4775]

Flow specified for gas with 0.8 specific gravity, air at 60°F, and .5" WC pressure drop

Capacity

Size (Inches mm)	Capacity (FT ³ /Hr.)
2 [50]	4000
3 [75]	9970
4 [100]	19150
6 [150]	44200
8 [200]	76800
10 [250]	129000
12 [300]	218600

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

97300M Ordering Guide

Model Number Selection

The model number will have a base number **97300M** followed by 8 digit numbers. These digits will represent 8 sets of option tables.

97300M - AB - CD - EF - GH

Table A - Pilot Gas

Option A	Pilot Gas
0	Natural
1	Propane

Table B - Unit Size

Option B	Unit Size
2	2"
3	3"
4	4"
5	6"
7	8"
8	10"
9	12"
A	2" Beveled Shroud
B	3" Beveled Shroud
C	4" Beveled Shroud
D	6" Beveled Shroud
E	8" Beveled Shroud
F	10" Beveled Shroud
G	12" Beveled Shroud

Table C - Power Source

Option C	Description
1	120 VAC, 60HZ
2	220/240 VAC, 50/60HZ

Table D - Enclosure Rating

Option D	Description
0	NEMA 4X - Carbon Steel
1	NEMA 7 - Cast Aluminum
2	NEMA 4X - 304 Stainless Steel
3	NEMA 4X - 316 Stainless Steel

Table E - Control

Option E	Description
1	Low Pressure Local Manual Start
2	High Pressure Local Manual Start

Table F - Gas Train

Option F	Description
0	Standard

Table G - Materials of Construction

Option G	Stack / Piping
2	304(L) Stainless Steel / 304(L) Stainless Steel
4	316(L) Stainless Steel / 316(L) Stainless Steel
5	304(L) Stainless Steel / 316(L) Stainless Steel
6	316(L) Stainless Steel / 304(L) Stainless Steel

NOTE: Pilot Material 316 Stainless Steel

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