



- **Methane Biogas Waste Streams**
- **Circle-Flame Pilot with Stainless Steel Ports**
- **Sizes 2” Through 8”**
- **Burns Low Flow, Low BTU, “Wet”**
- **Manual or Electronic Ignition**
- **Auto Re-Start with Continuous or Intermittent Pilot**
- **Audible Alarm Option**

The Shand & Jurs 97330 Waste Gas Burner

The S&J 97330 Waste Gas Burner is specifically designed to burn low volumes of biogas waste streams which are primarily methane and have low BTU values around 500. Typical applications include anaerobic digesters, lagoons, landfills and methane offgas from other fermentation processes.

A complete ring of flame, or circle-flame, from the pilot surrounds the waste gas stream as it enters the burn zone. Internal baffles ensure proper mixing and incineration of the biogas before its release into the atmosphere. An air inlet baffle at the bottom of the burn zone provides additional

control of the burning during fluctuating waste gas flow rate. Air volume can be adjusted manually by a shutter located at the bottom of the burner stack.

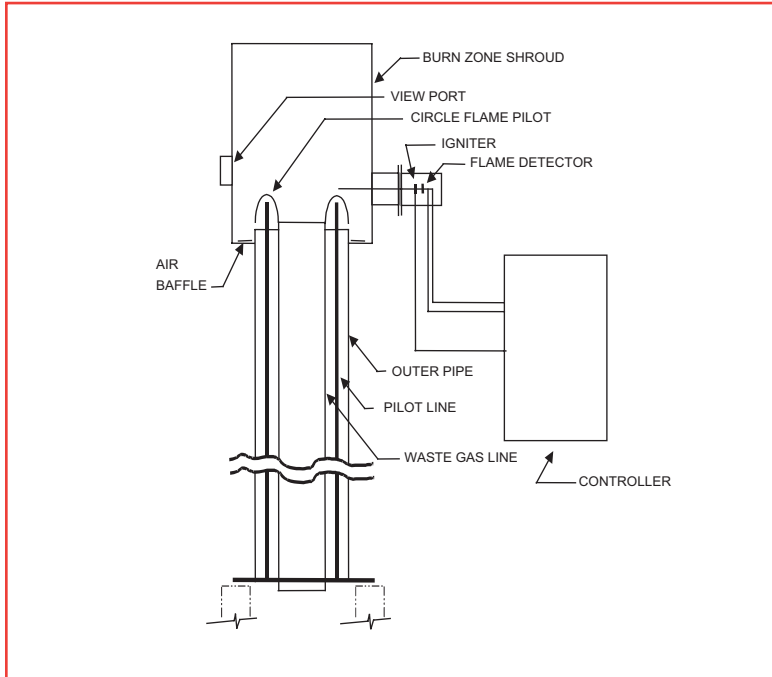
Both manual and electronic ignition systems are available. The pilot ignition has four different configurations from which to choose from: manual ignition/no control/continuous pilot, electronic ignition/manual start with intermittent restart control/continuous pilot, electronic ignition/manual start with auto restart control/continuous pilot, electronic ignition/auto start with auto restart control/intermittent pilot.

Applications

- Anaerobic digester gas train**
- Fermentation off gas piping systems**
- Low pressure vent lines**

SPECIFICATIONS

Sizes:	2", 3", 4", 6", and 8"
Stack Burner Connection:	
Waste Gas:	Welded Nominal Pipe
Pilot:	1/2" NPT
	Sizes 2", 3", and 4" - single line
	Sizes 6" and 8" - dual line
Pilot Ignition:	Manual or Electronic
Controller:	
Temperature Range:	-20 to 150 degrees F
Enclosure:	Wall Mount NEMA 4 (Optional Nema 4X or 7)
Enclosure Material:	Carbon Steel
Options:	Electronic Ignition/Manual control
	Electronic Ignition/Manual Start with Auto Restart
	Electronic Ignition/Auto Start with Auto Restart
	Audible Restart Alarm
	Heater and Thermostat
Contact Outputs:	
Flame Out:	SPDT, 120 VAC 2 Amp
Re-Start Alarm:	SPDT, 120 VAC 2 Amp
Power Requirements:	120 VAC 5Amp 60 Hz
	240 VAC (option)
Materials:	
Burner:	Carbon Steel, SS (option)
Circle Flame Pilot:	Cast Iron, SS (option)
Pilot Orifice Opening:	Stainless Steel
Observation Port:	Cast Iron, SS (option)
Ignition Port:	Cast Iron, SS (option)
Pilot Gas:	Natural Gas, Propane
	Waste Gas (500 BTU/ Cubic foot Minimum)
Pilot Gas Pressure:	9" WC to 10 PSIG (std)
	Lower Operating Pressures Available

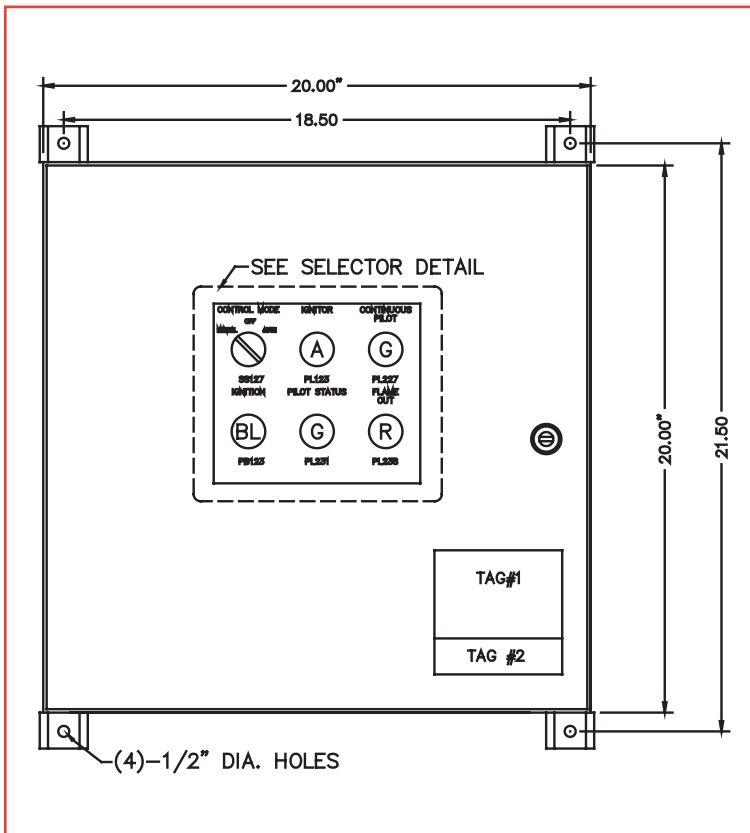


TYPICAL CONFIGURATION

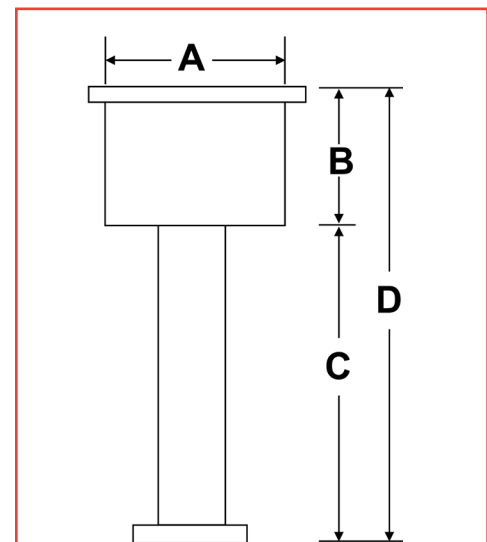
CAPACITY (FT ³ /Hr.)	
Size	Capacity
2"	1870
3"	4040
4"	7900
6"	20150
8"	33500

CAPACITY

Flow specified in air at: 60° F,
14.7 PSIA, .5"WC pressure drop
Max Inlet Pressure: .75PSIG (20.7"
WC)



PANEL DIMENSIONS



Stack Dimensions

Size	A	B	C	D
2"	15"	15"	70"	85"
3"	18"	20"	70"	90"
4"	20"	20"	70"	90"
6"	22"	30"	95"	125"
8"	24"	35"	107"	142"

STACK DIMENSIONS

CONTROL OPTIONS

Manual Ignition/No control/Continuous pilot

Only the burner is provided with no control box. The pilot is manually lit.

Electronic Ignition/Manual Start with Intermittent Re-restart Control/Continuous Pilot

The controller is manually switched into the start mode which energizes the transformer and initiates sparking. Upon ignition of the pilot, the controller is manually switched to either the off position or to the intermittent re-start mode. The intermittent re-start mode provides a timer for each of two parameters: interval of the re-start sparking sessions and the duration of the sparking sessions.

Electronic Ignition/Manual Start with Auto Re-start Control/Continuous Pilot

The controller is manually switched into the start mode which energizes the transformer and initiates sparking. Upon ignition of the pilot, a flame detector sends a signal to the controller and the controller switches into the run mode which terminates the sparking. Upon loss of the pilot flame, the flame detector sends a signal to the controller and the controller switches back into the start mode and repeats the pilot ignition procedure. If the pilot does not ignite after 10 seconds, the controller switches into shut-down mode and must be manually reset. Alarm options available.

Electronic Ignition/Auto Start with Auto Re-start Control/Intermittent Pilot

Upon exceeding its set point, a pressure switch sends a signal to the controller and the controller automatically switches into the start mode which begins the pilot gas flow, energizes the transformer and initiates sparking. Upon ignition of the pilot, a flame detector sends a signal to the controller and the controller switches into the run mode which terminates the sparking. Upon loss of the pilot flame, the flame detector sends a signal to the controller and the controller switches back into the start mode and repeats the pilot ignition procedure. If the pilot does not ignite after 10 seconds, the controller switches into shut-down mode and must be manually reset. Upon dropping below its set point, the same pressure switch sends a signal to the controller and the controller extinguishes the flame, terminates the pilot gas flow, and automatically switches into the ready mode. Alarm options available.

Accessories:

A pressure (explosion) relief vent and flame trap should be installed directly at the flare inlet. The pilot gas line should be protected with a flame check.

HOW TO ORDER

97330 - AB-CD-EF

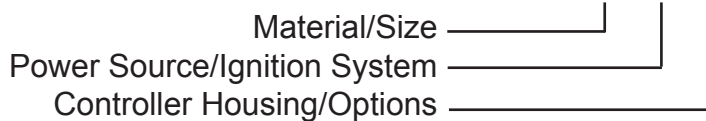


TABLE Ia (A) MATERIAL

OPTION #	MATERIAL
1	STACK CONSTRUCTION: STANDARD MATERIALS
2	STACK CONSTRUCTION: SS

TABLE Ib (B) SIZE

OPTION #	SIZE
1	2"
2	3"
3	4"
4	6"
5	8"

TABLE IIa (C) POWER SOURCE

OPTION #	POWER SOURCE
0	110/120 VAC
1	220/240 VAC

TABLE IIIa (E) CONTROLLER HOUSING

Controller Housing (E)
0--No Controller
1--Nema 4 Rating
2--Nema 4X Rating
3--Nema 7

TABLE IIIb (F) OPTIONS

Options (F)
0--None
1--Audible Alarm
2--Enclosure Heater & Thermostat
6-- Pressure Switch, Nema 7 Rating

TABLE IIb (D) IGNITION SYSTEM

OPTION #	IGNITION SYSTEM
1	Manual Ignition/No Control/ Continuous Pilot
2	Electronic Ignition/ Manual Start with Intermittent/Restart Control/Continuous Pilot
3	Electronic Ignition/Manual Start with Auto Re-start Control/Continuous Pilot/Flame Sensor
4	Electronic Ignition/Auto Start with Auto Re-start Control/Intermittent Pilot/Flame Sensor

NOTE: 4", 6", 8" Burners require secondary stack by others for proper operation. Consult Factory

Design subject to change without notice