

97180

Foam Separator

The Shand & Jurs Biogas Model 97180 Foam Separator removes entrained foam from low-pressure gas streams before downstream treatment and utilization equipment. Agitated biological processes generate stable foam that is not readily separated by gravity and can pass through conventional separators, leading to fouling, corrosion, and blockages in the downstream line including regulators, burners, and instrumentation.

Gas enters the vessel and is subjected to a continuous internal water spray and vertical rise path past an internal baffle. The combined washing action and velocity reduction collapse foam bubbles and separate solids and liquid from the gas stream, directing them to the bottom drain while clean gas exits the outlet. High- and low-level switches maintain a proper water seal and prevent gas discharge through the drain.

Units are available in flange sizes from 2" to 16", with a maximum working pressure of 1 PSIG and optional control panels and flow indicators.

For upstream bulk liquid and sediment removal, see Model 97120 Sediment Trap.



Key Features

Continuous wash spray system

Collapses stable foam that cannot be separated by gravity alone.

Internal vertical rise with baffle

Forces the disengagement of entrained foam and solids from the gas stream.

Maintained water seal

Prevents gas release through the drain connection.

High/low-level switches

Automatically control spray water and protect containment.

Visual drain flow indicator (optional)

Confirms proper operation and wash flow.

Optional NEMA 7 control panel

Supports classified area installations and monitoring.

Benefits



ELIMINATES FOAM CARRYOVER

Prevents plugging of flame arresters and regulators.



PROTECTS DOWNSTREAM EQUIPMENT

Reduces corrosion and fouling failures.



STABILIZES GAS QUALITY

Improves combustion reliability and measurement accuracy.



CONTROLLED DISCHARGE OF CONTAMINANTS

Maintains sealed operation and plant safety.



PREVENTS NUISANCE SHUTDOWNS

Reduces maintenance intervention frequency.



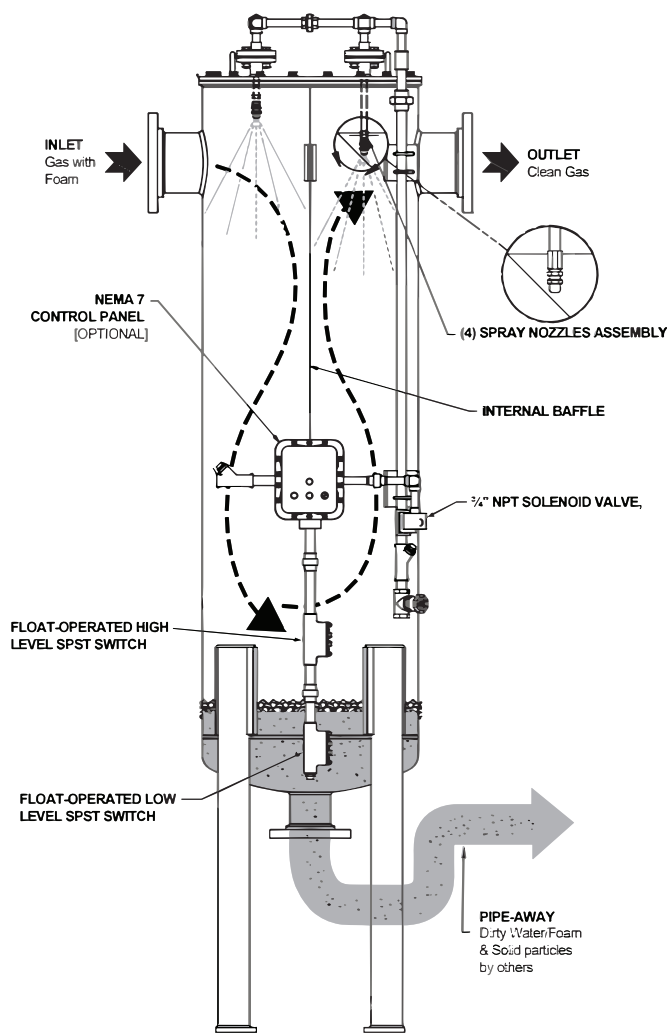
SUPPORTS WET BIOLOGICAL GAS SERVICE

Improves the uptime of the full gas handling system.

Key Performance Data

Parameter	Value
Function	Foam removal and gas washing
Maximum Working Pressure	1 PSIG (27" W.C.)
Flange Connection Sizes	2" – 16"
Separation Method	Spray wash + baffle disengagement
Utility Water Pressure	40 PSIG typical
Level Switches	NEMA 4 or 7
Solenoid	3/4" NPT, NEMA 7
Vessel Materials	316/316L Stainless Steel Tank and Legs
Spray Nozzles	316 Stainless Steel
Drain Connection	4" ANSI or DN100
Optional Panel	Monitor and Transmit Data to Main SCADA System.

Dimensions



Model Number Selection

The model number will have a base number 97180 followed by 6 digit numbers. These digits will represent 6 sets of option tables.

97180 - AB - CD - EF

Table AB - Tank Size and Material

Option AB	Description
02	2" 316/316L
03	3" 316/316L
04	4" 316/316L
06	6" 316/316L
08	8" 316/316L
10	10" 316/316L
12	12" 316/316L
16	16" 316/316L

Table C - Flange Connection

Option C	Flange Description
0	ANSI 150 lb. FF
1	ANSI 150 lb. RF
2	EN1092-1 10 FF
3	EN1092-1 10 RF
4	EN1092-1 16 FF
5	EN1092-1 16 RF

Table D - Water Piping & Nozzle Material

Option D	Description
0	316 Stainless Steel

Other Materials available upon request.

Table F - Accessory Options

Option F	Description
0	None
1	Visual Drain Flow Indicator
2	Visual Water Level Indicator (Sight Glass)
3	Observation Port
4	Options 1 and 2
5	Options 1 and 3
6	Options 2 and 3
7	Options 1, 2 and 3

NOTE: NEMA 7 Equipment for use in NEC Class I, Division I, Group D Environment.

Table E - Control Option

Option E	Description
0	No Alarm or Solenoid
2	Alarm, Hi/Low, NEMA 7*
4	Alarm, Hi/Low with Solenoid, NEMA 7*
6	Alarm, Hi/Low with Solenoid, NEMA 7, LCP

* NEMA 7 Condulet only.
NOTE: Standard Solenoid is Brass

Summary

The 97180 addresses foam carryover that conventional separators cannot remove. By collapsing foam before it reaches control or combustion equipment, it prevents fouling and instability and serves as the dedicated biological gas-conditioning stage within the S&J gas-handling system.

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This document is for information purposes only. All designs subject to change. Certified dimensions, specifications, and performance data available upon request