

97150 Single Port Regulator

The S&J 97150 Single Port Back Pressure Regulator is a back pressure regulator with solenoid or thermally operated shut-off capabilities. The back pressure regulator function maintains a preset upstream pressure in low pressure (typically 2" - 8" w.c.) biogas lines such as those leading to flares and waste gas burners. Its normal operating position is closed until the set point is exceeded.

A large spring-loaded diameter diaphragm reduces line bounce for smoother gas flow. Field adjustment of set point is easily done by changing position of the spring with visual pointer indicator. The components are easy to access providing for simplified cleaning and maintenance. The 1/2" NPT connection is provided on the lower diaphragm housing for external sense and should be connected a minimum of 10 pipe diameter upstream from the regulator. The diaphragm-direct regulator can be ordered in two setting ranges: standard and high, which are defined for a given line size. The back pressure regulator's second function is to positively shutoff gas flow in emergency flame conditions when combined with a solenoid controlled sense line or fusible element.

This unit can be used alone or combined with a Flame Trap Assembly. If installed indoors, the vent connection should be piped outdoors. A 97200 Flame Check should be installed by the end of the vent line for flashback protection.

Standard materials of construction include an aluminum body with an aluminum pallet and stainless steel internals. The diaphragm is Nylon Reinforce Buna-N.

Its aluminum and stainless steel components withstand the severest of process environments. The S&J 97150 is especially designed for hot and wet methane which are the main components of digester gas streams in municipal waste water treatment facilities.



Features

- External Sense Connection
- Large Diaphragm Operated/Spring Loaded for Sensitivity
- Maintain Upstream Pressure
- Simplified Cleaning and Maintenance
- Sizes 2" Through 12"
- 3-Way Solenoid Option Available
- 3-Way Solenoid with Manual Bypass Option Available
- Horizontal Configuration Only

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Standard Materials of Construction:

Body:
Cast Aluminum

Diaphragm:
Nylon Reinforced Buna-N

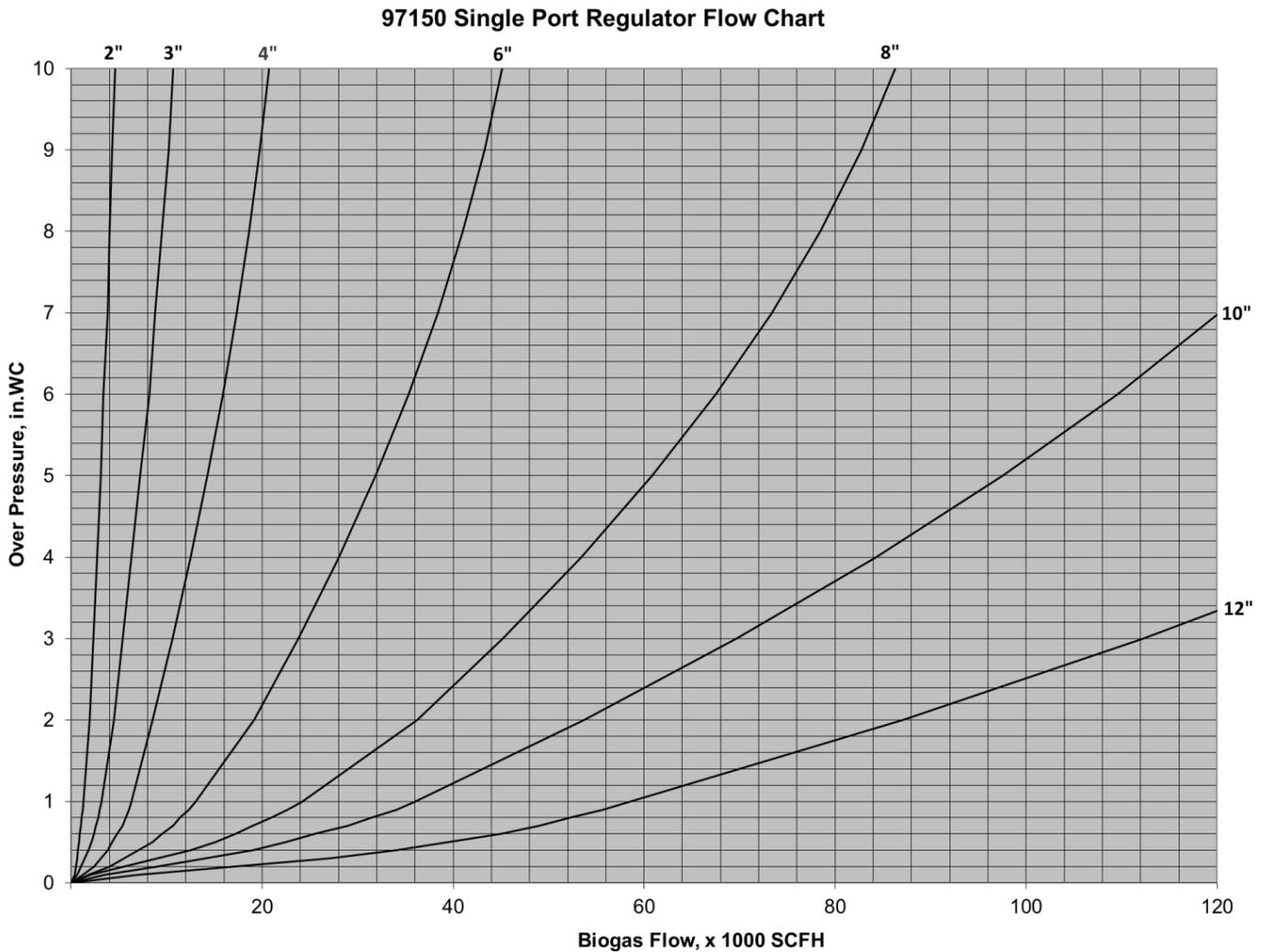
Pallet:
Low Copper Aluminum, 316 Stainless Steel

Spring:
Stainless Steel

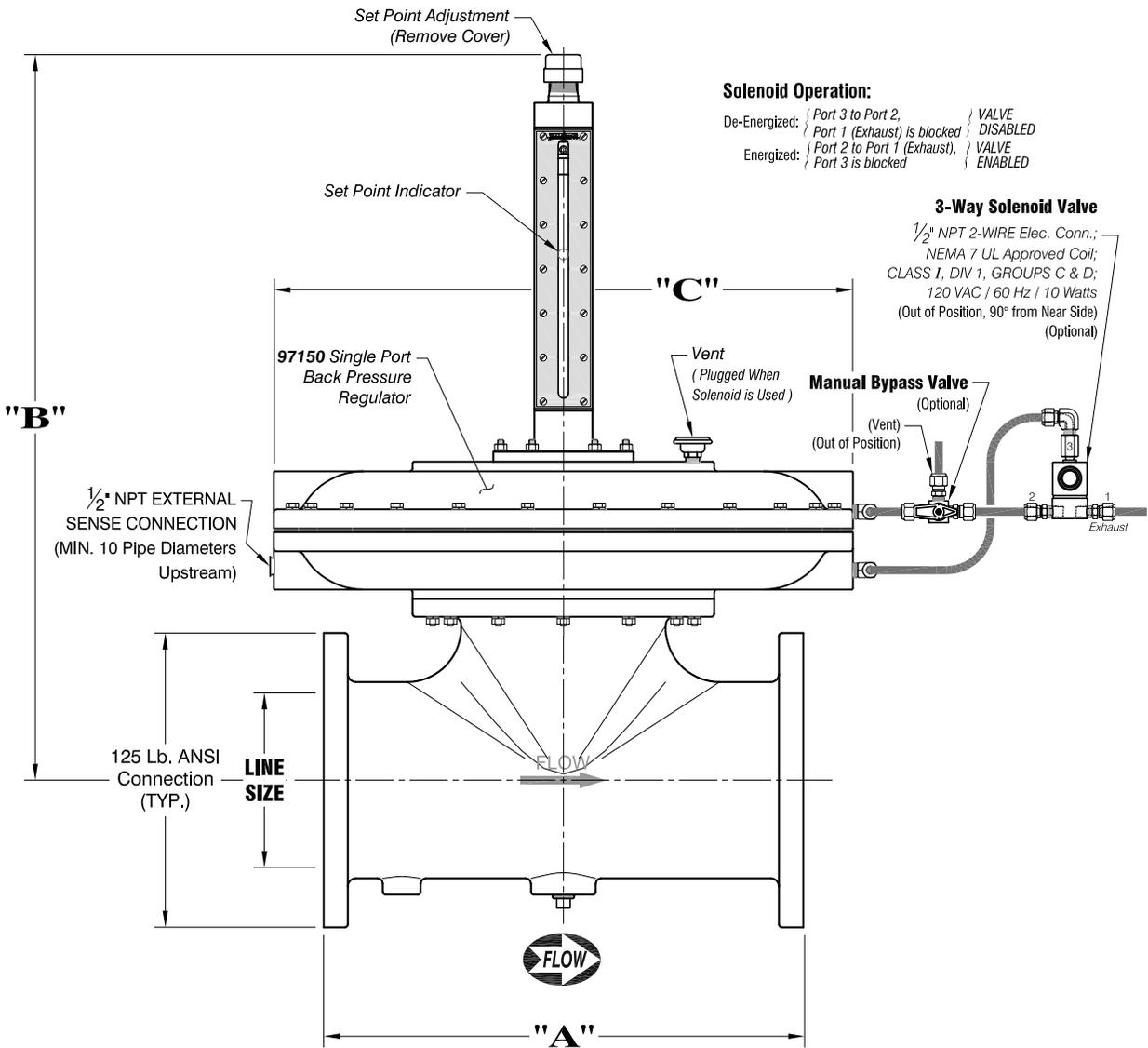
Specifications:

Flanged Connections:
150 lb. ANSI FF Flange

Maximum Operating Pressure:
20" W.C. (Sizes 2"-8")
15" W.C. (Sizes 10" and 12")
Consult Factory for other options.



Dimensions



Line Diameter (Inches [mm])	A (Inches [mm])	B (Inches [mm])	C (Inches [mm])
2 [50]	8 3/4 [222]	27 7/8 [708]	21 [533]
3 [75]	10 [250]	28 1/2 [724]	21 [533]
4 [100]	11 3/8 [289]	29 [736]	21 [533]
6 [150]	15 [381]	31 3/8 [797]	26 7/8 [683]
8 [200]	22 1/4 [565]	33 3/8 [847]	26 7/8 [683]
10 [250]	27 13/16 [706]	37 7/8 [962]	36 1/2 [927]
12 [300]	33 [838]	41 1/4 [1047]	36 1/2 [927]

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

97150 Ordering Guide

Model Number Selection

The model number will have a base number **97150** followed by 6 (9) digit numbers. These digits will represent 5 sets of option tables.

97162 - AB - CD - E - F - GHI

Table AB - Line Size / Body Material

Option AB	Size
02	2" ANSI / Aluminum
03	3" ANSI / Aluminum
04	4" ANSI / Aluminum
06	6" ANSI / Aluminum
08	8" ANSI / Aluminum
10	10" ANSI / Aluminum
12	12" ANSI / Aluminum

Table F - Hardware Material

Option F	Description
0	None
1	2" Insulation Jacket
2	3" Insulation Jacket
3	4" Insulation Jacket
4	6" Insulation Jacket
5	8" Insulation Jacket
6	10" Insulation Jacket
7	12" Insulation Jacket

Table CD - Setting Range & Size

Option CD	Setting Range & Size
00	Standard 2"-8" W.C. (All Sizes)
2A	2" High Within +/- 3" of Set Point
2B	3" High Within +/- 3" of Set Point
2C	4" High Within +/- 3" of Set Point
2D	6" High Within +/- 3" of Set Point
2E	8" High Within +/- 3" of Set Point
2F	10" High Within +/- 3" of Set Point
2G	12" High Within +/- 3" of Set Point

Table GHI - Set Point Range Specify on order

Option GHI	Description
None	For standard set point range
XXX	Suffix is used for sequence numbering for different set point ranges: 001, 002, etc

316SS Hardware is standard

set point is within +/-3"W.C. for sizes 2" thru 8" and within +/-2 for sizes 10" & 12"

min. set point is 2" all sizes

max. set point range is 14-20" for sizes 2-8"

max. set point range is 11-15" for sizes 10 & 12"

Table E - Configuration / Sense Line

Option E	Configuration / Sense Line
1	External
3	External w/ Solenoid
5	External w/ Solenoid with Manual Bypass