

97162 Pressure Relief/Flame Trap Assembly

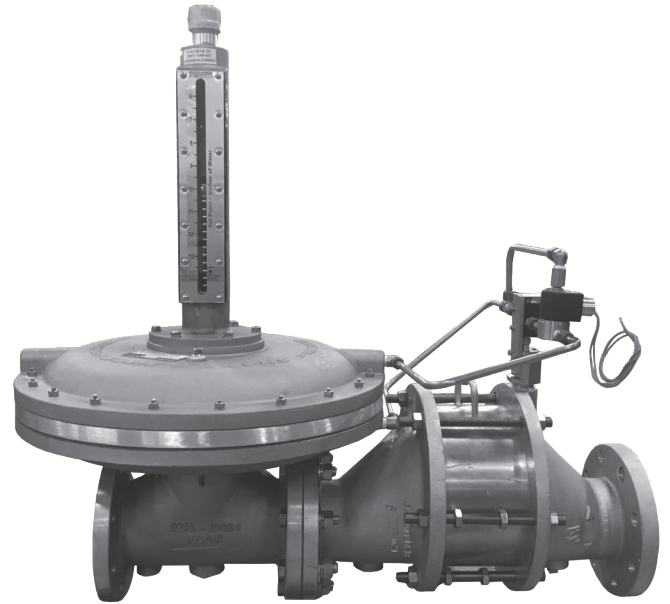
The Shand & Jurs 97162 Pressure Relief and Flame Trap Assembly combines a 97150 Back Pressure Regulator, a Thermally Deflagration Operated Shut Off Valve, and a 94407 Horizontal Flame Arrester to maintain upstream pressure and effectively inhibit flame propagation in low-pressure gas lines.

The Flame Arrester tube bank assembly absorbs heat faster than the ignited gas can produce it. This lowers the gas temperature to below the ignition point, thus quenching the flame. The back pressure regulator maintains an adjustable preset upstream pressure. When upstream pressure exceeds set point, the diaphragm will open the valve. After relieving gas to flare the pressure in the line will drop below set point closing the valve. The Pilot Valve Assembly contains a fusible material that melts at 255°F and closes the regulator valve effectively shutting off flow during emergency thermal event conditions.

The Flame Trap Assembly should be installed upstream of a waste gas flare or burner. If external sense line is provided, it should be connected at least 10 pipe diameters upstream of the pressure relief section.

Standard materials of construction include an Aluminum Body and Buna-N diaphragm. Its aluminum and stainless steel components withstand the severest of process environments.

The Shand & Jurs 97162 is especially designed for hydrogen sulfide and hot, wet methane which are the main components of digester gas streams in municipal waste water treatment facilities.



Features

- External or Internal Sense Tap
- Positive Emergency Shutoff
- Maintain Upstream Pressure
- 255°F Fusible Link
- Sizes 2" Through 12"
- 3-Way Solenoid Shut-off Option for Flare System
- Large Diaphragm for Sensitivity
- Manual Bypass for Solenoid Option Available
- Horizontal Configuration Only

97162**Pressure Relief/Flame Trap Assembly****Standard Materials of Construction:****Body:**

Cast Aluminum

Flame Arrester Housing:

Cast Aluminum

Pallet:

Low Copper Aluminum

Tube Bank:

316 Stainless Steel

Diaphragm:

Buna-N

Specifications:**Flanged Connections:**

125 lb. ANSI FF Flange

Installation:

Locate 97162 per deflagration arrester approval

Drain Connection:

1/2" NPT Connection

Maximum Operating Pressure:

20" W.C. (Sizes 2"-8")

15" W.C. (Sizes 10" and 12")

Consult Factory for other options.

Pressure Rating:

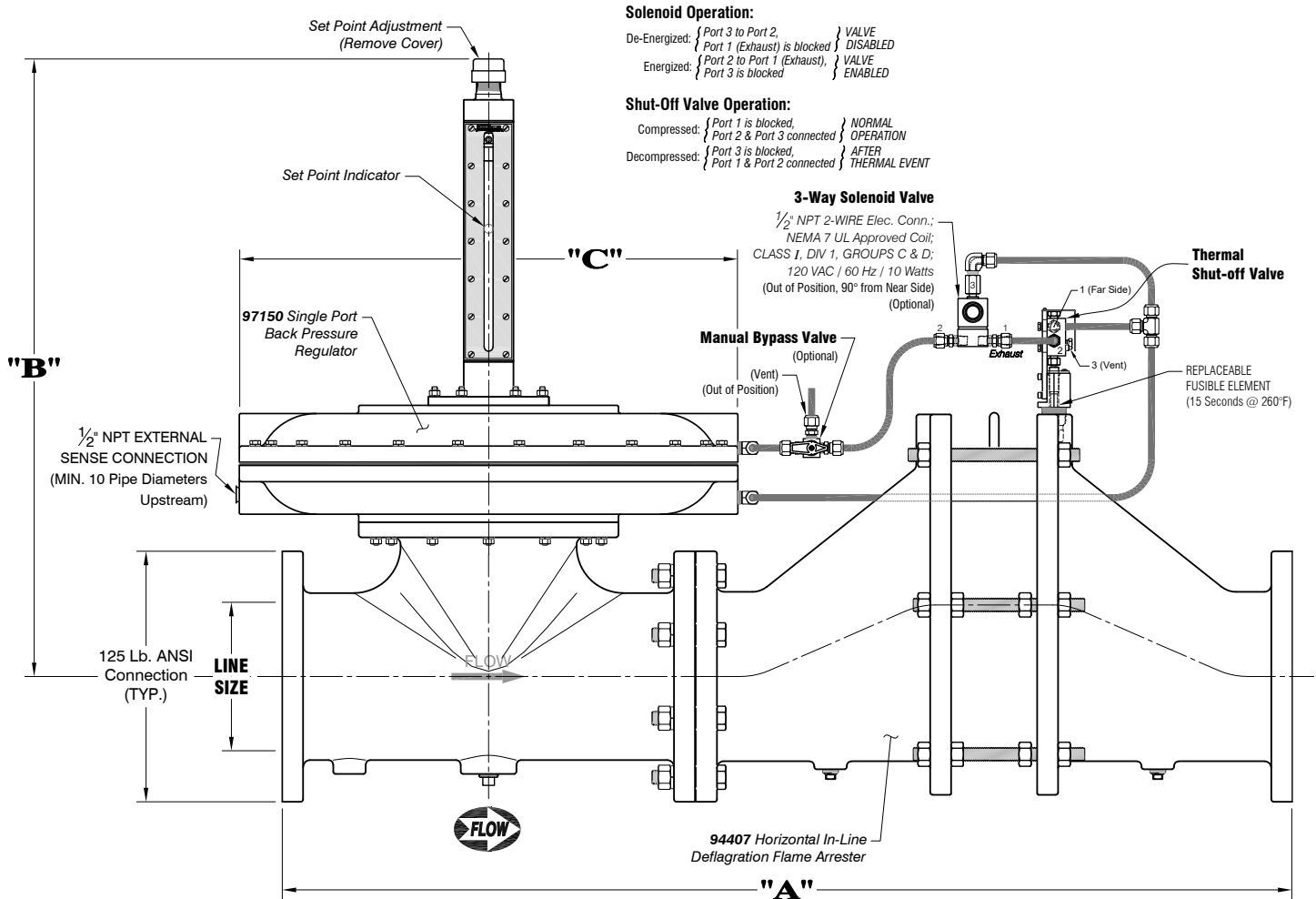
5 psi Standard

Air Flow Capacity in Standard Cubic Feet per Hour x 1000 @ 60°F

Over Pressure Inches W.C.	Line Diameter						
	2"	3"	4"	6"	8"	10"	12"
1	0.9	2.1	4.2	9.0	12.8	21.0	34.2
2	1.4	3.4	6.4	13.1	19.0	34.8	53.4
3	1.8	4.2	8.0	16.6	24.3	45.4	69.8
4	2.0	4.8	9.3	19.4	28.5	54.6	83.2
5	2.4	5.4	10.4	21.9	32.4	62.6	96.0
6	2.6	6.1	11.6	24.3	44.5	69.8	107.2
7	2.9	6.7	12.5	26.3	48.2	76.4	115.2
8	3.1	7.2	13.5	28.2	51.8	82.4	125.6
9	3.3	7.7	14.3	30.1	55.3	88.8	133.6
10	3.5	8.2	15.3	31.7	58.6	94.4	140.8
11	3.7	8.7	16.2	33.5	61.6	100.0	148.0
12	3.9	9.0	16.8	35.1	64.5	104.8	155.2
13	4.1	9.4	17.7	36.4	67.2	109.6	161.6
14	4.3	9.7	18.3	37.9	69.9	114.4	168.0
15	4.4	10.1	19.0	39.2	72.8	118.4	173.6
16	4.6	10.5	19.6	40.6	75.0	122.4	179.2
17	4.8	10.8	20.2	41.7	77.4	126.4	184.8
18	4.9	11.1	20.8	43.0	80.0	129.6	190.4
19	5.1	11.6	21.3	44.2	81.6	132.8	195.2
20	5.2	11.9	21.9	45.4	84.0	136.0	200.0



Dimensions



Line Diameter (Inches [mm])	A (Inches [mm])	B (Inches [mm])	C (Inches [mm])
2 [50]	23 3/8 [594]	27 7/8 [708]	21 [533]
3 [75]	26 1/16 [661]	28 1/2 [724]	21 [533]
4 [100]	31 7/16 [799]	29 [736]	21 [533]
6 [150]	39 7/16 [1002]	31 3/8 [797]	26 7/8 [683]
8 [200]	54 7/16 [1383]	33 3/8 [847]	26 7/8 [683]
10 [250]	63 5/16 [1608]	37 7/8 [962]	36 1/2 [927]
12 [300]	67 3/8 [1711]	41 1/4 [1047]	36 1/2 [927]

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

97162 Ordering Guide

Model Number Selection

The model number will have a base number **97162** followed by 7 digit numbers. These digits will represent 6 sets of option tables.

97162 - AB - CD - EF - G

Table AB - Line Size

Table C - Setting Range

Option AB	Line Size*	Option C	Setting Range
02	2"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 20" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 20" W.C.
03	3"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 20" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 20" W.C.
04	4"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 20" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 20" W.C.
06	6"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 20" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 20" W.C.
08	8"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 20" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 20" W.C.
10	10"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 15" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 15" W.C.
12	12"	1 - Standard / Internal	2" - 8" W.C.
		2 - High / Internal	>8" - 15" W.C.
		3 - Standard / External	2" - 8" W.C.
		4 - High / External	>8" - 15" W.C.

Specify operating set point. Valve range will be +/- 3" W.C. of set point. Range will not exceed listed setting range (i.e. set point of 3" will have a range of 2"-8", set point of 19" will have a range of 14"-20"). For other ranges, please Consult Factory.

Table D - Tube Bank Material

Option D	Tube Bank Material
2	Stainless Steel

Table F - Hardware Material

Option F	Hardware
0	Stainless Steel
1	316 Stainless Steel

Table E - Configuration

Option E	Configuration
0	Horizontal
1	Horizontal with Solenoid
2	Horizontal with Solenoid and Manual Bypass

Table G - Accessories

Option G	Accessories
0	None
1	Insulation Jacket