

97140 Flame Trap Assembly

The S&J 97140 Flame Trap Assembly combines the 97130 thermal operated valve with the 94306 vertical or the 94307 horizontal flame arrester, to 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 ignition point, thus quenching the flame. The offset design of the horizontal flame arrester prevents condensate from accumulating.

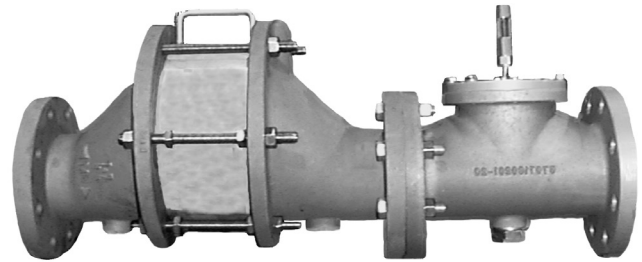
The spring loaded thermal valve quickly closes when the fusible link, rated at 255°F, melts. This shuts off the flow of gas to prevent the propagation of the ignited gas.

The fusible element is easily replaced without disassembling the valve. Other valve elements are also easy to replace which simplifies maintenance.

Standard materials of construction include low copper cast aluminum body, pyrex for the sight glass indicator and aluminum pallet with stainless steel spring and stem.

An optional proximity switch is available that can be mounted to the visual indicator and will send a signal once the pallet has closed.

Its aluminum and stainless steel components withstand the severest of process environments. The S&J 97140 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

- Positive Emergency Shutoff
- Inhibits Flame Propagation
- 255°F Fusible Link
- Sizes 2" Through 12"
- Horizontal or Vertical Mounting Options
- Optional Proximity Switch and Insulation Jackets available

97140 Flame Trap Assembly



Standard Materials of Construction:

Valve Body, Arrester Housing & Pallet:

Low Copper Aluminum or Stainless Steel

Isolated Sight Glass:

Heat Resistant Pyrex with Buna-N Gaskets

Valve Internals :

Stainless Steel

Fusible Element:

Lead; 255°F Standard

Flame Arrester Bank:

Aluminum or Stainless Steel

Specifications:

Flanged Connections:

125 lb. ANSI FF Flange

Gas Application:

NEC Group D

Drain Connection:

1/2" NPT Connection

Installation:

Locate 97140 within 10 pipe diameters of a potential atmospheric ignition source

Pressure Rating:

5 psi Standard

10 psi Optional

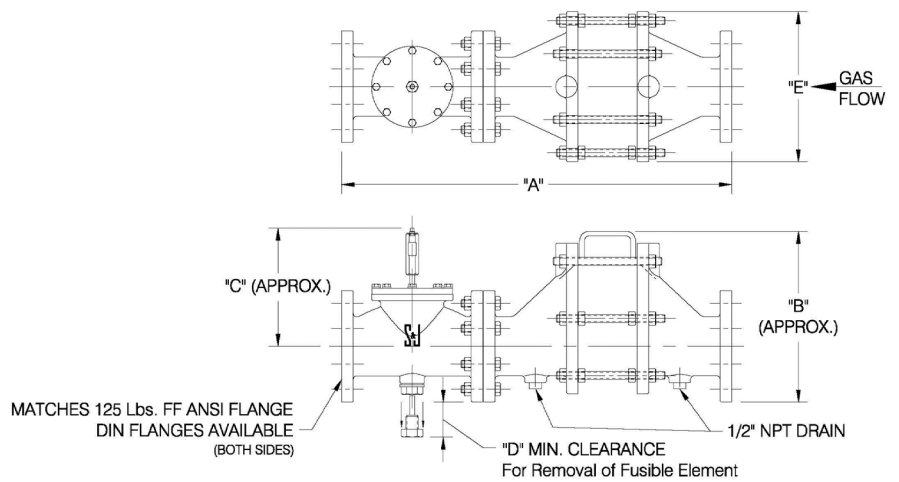
Air Flow Capacity in Standard Cubic Feet per Hour x 1000 @ 60°F

Pressure Inches W.C.	Line Diameter						
	2"	3"	4"	6"	8"	10"	12"
1	1.1	2.7	5.0	11.3	20.1	28.0	46.0
2	1.6	4.0	7.6	16.5	29.9	47.0	66.4
3	2.0	4.9	9.3	20.8	37.6	60.0	89.6
4	2.5	5.9	10.9	24.1	44.3	70.0	103
5	2.9	6.8	12.2	27.1	50.2	80.0	120
6	3.2	7.3	13.6	30.0	55.4	89.0	132
7	3.6	8.0	14.8	32.6	60.5	96.0	145
8	3.9	8.5	15.9	35.1	65.0	104	158
9	4.1	9.1	17.0	37.3	68.9	110	167
10	4.3	9.6	17.7	39.6	73.0	117	179
11	4.5	10.1	18.8	41.6	77.4	123	189
12	4.7	10.7	19.7	43.5	81.0	130	198
13	5.0	11.2	20.6	45.4	86.0	135	206
14	5.2	11.6	21.2	47.1	90.0	142	215
15	5.4	12.0	22.0	48.6	94.1	147	222
16	5.6	12.4	22.9	50.5	96.8	153	229
17	5.7	12.8	23.8	52.1	100	157	235
18	5.9	13.1	24.3	53.7	104	163	240
19	6.2	13.6	25.0	55.5	108	167	245
20	6.4	14.0	25.6	56.9	112	174	250

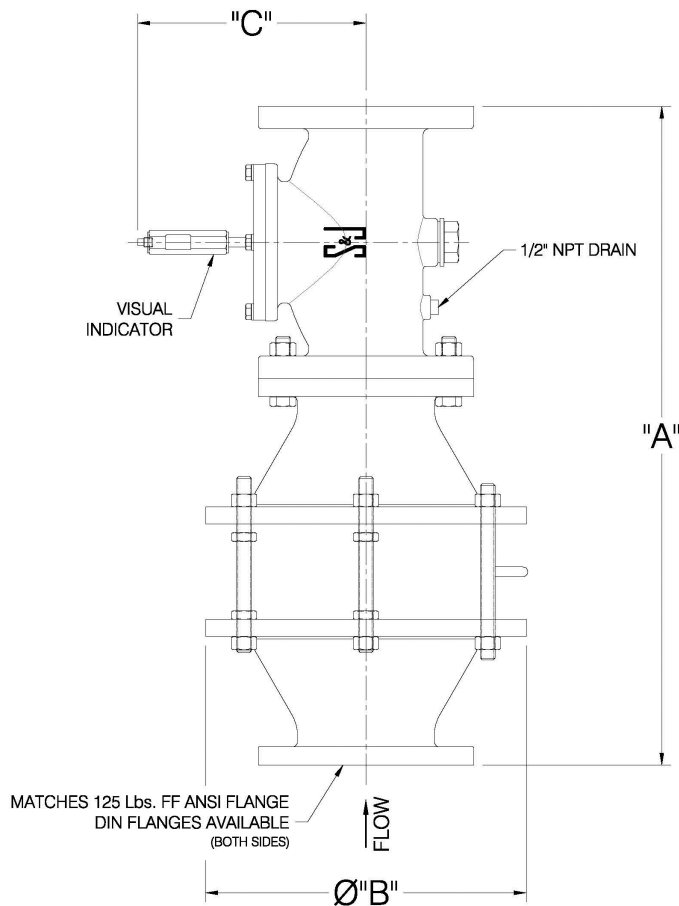


Horizontal Dimensions

Dimensions (Inches [mm])					
Line Diameter	"A"	"B"	"C"	"D"	"E"
2 [50]	23 5/16 [592]	11 19/32 [295]	8 7/8 [225]	2 [50]	7 3/4 [197]
3 [75]	26 1/16 [662]	13 7/8 [352]	9 1/2 [241]	2 [50]	10 1/4 [260]
4 [100]	31 7/16 [799]	12 3/16 [310]	9 1/2 [241]	2 [50]	12 1/8 [308]
6 [150]	39 7/16 [1002]	16 3/16 [411]	11 7/8 [302]	4 [100]	15 3/4 [400]
8 [200]	54 7/16 [1383]	20 7/16 [519]	13 7/8 [352]	5 1/2 [140]	20 1/2 [521]
10 [250]	63 3/8 [1610]	24 3/4 [629]	14 7/8 [378]	5 1/2 [140]	24 [610]
12 [300]	67 7/16 [1713]	29 5/16 [745]	20 1/2 [521]	8 [200]	28 1/2 [724]



Vertical Dimensions



Line Diameter	"A"	"B"	"C"
2 [50]	22 5/8 [575]	8 1/2 [216]	8 7/8 [225]
3 [75]	25 5/8 [651]	10 1/2 [267]	9 1/2 [241]
4 [100]	29 1/4 [743]	12 3/8 [314]	9 1/2 [241]
6 [150]	34 7/8 [886]	16 3/8 [416]	11 7/8 [302]
8 [200]	46 3/4 [1188]	20 1/2 [521]	13 7/8 [352]
10 [250]	56 1/16 [1440]	24 1/2 [622]	14 7/8 [378]
12 [300]	70 7/8 [1800]	28 3/4 [730]	20 1/2 [521]

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