

94406 Vertical Inline Deflagration Flame Arrester

The Shand & Jurs 94406 Vertical Inline Deflagration Flame Arresters are designed to provide a positive flame stop on low pressure tanks or piping systems containing flammable liquids or solvents having a low flash point. The 94406 not only provides exceptional protection against fire from external ignition, but also offers maximum flow capacity.

Shand & Jurs Vertical Inline Deflagration Flame Arresters are generally installed with pressure-vacuum vents, or in-line low pressure piping systems. The tube bank design consisting of a spiral-wound crimped ribbon around a solid core, maximizes flow capacity with minimum pressure drop. The standard flame arrester is Factory Mutual (FM) approved to meet the ATEX application requirements per EN 12874 and ISO 16852.

Periodic inspection, maintenance and replacement of the tube bank is easily accomplished by simply removing tie-bolts and minimally expanding the remaining jack screws. Once the upper and lower body sections are expanded, the tube bank is easily removed with the aid of a handle.

Standard body construction includes light weight cast aluminum, cast iron, ductile iron, cast steel, 304 stainless steel and 316 stainless steel body materials suitable for most environments. Tube bank is available in 304 stainless steel or 316 stainless steel as standard. A complete range of sizes from 2" [50 mm] through 12" [300 mm] are available with flat face or raised face flanges to match ANSI, EN1092 or JIS connections.

For highly corrosive applications, body and tube bank construction of Duplex Stainless Steel, Hastelloy C, or Alloy 20 are available.

Temperature monitor device to be installed on unprotected side of Tube Bank.

Temperature monitor device available. Consult Factory.



Features

- ISO 16852 Approved
- ATEX EN 12874 Approved
- Unitized tube bank design
- Maximum protection and efficiency with minimum pressure drop
- Wide range of standard construction materials
- Easy inspection and maintenance, due to simple removal of tube bank
- Complete range of flange sizes from 2" (50 mm) to 12" (300 mm) ANSI, EN1092, JIS. Consult factory for larger sizes

Specifications

Sizes:

2", 3", 4", 6", 8", 10" and 12"

Max. Static Pressure:

3.45 BARG (50 PSIG)

Max. Operating Pressure:

Sizes 2"-6" 1.1 BARA (16.20 PSIA)
8"-12" 1.09 BARA (15.95 PSIA)

Max. Operating Temperature:

60°C (140°F)

Materials of Construction

Body:

Carbon Steel, 304 Stainless Steel, 316 Stainless Steel, Aluminum, Cast Iron, Ductile Iron, Duplex Stainless Steel, Hastelloy C or Alloy 20

Tube Bank:

Carbon Steel, 304 Stainless Steel, 316 Stainless Steel, Duplex Stainless Steel, Hastelloy C or Alloy 20

Flange Rating:

To match drilling of ANSI 125/150 lb. flat face, raised face, EN1092 PN10/16, and JIS 10K options.

Approval:

ATEX 94/4/EC and EN 12874, ISO 16852 (Short Term Burn)
NOTE: Aluminum and Cast Iron bodies are only approved for ISO 16852.

Gas Application:

IIA (NEC Group D)

Hardware:

18-8 Stainless Steel, 304 Stainless Steel, 316 Stainless Steel, Duplex Stainless Steel, Hastelloy C or Alloy 20

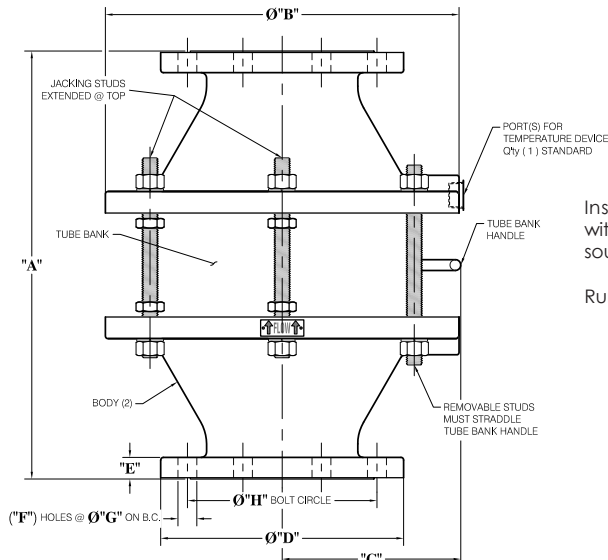
Gaskets:

High Temperature Synthetic Composition

Outline Dimensions

Dimensions in Inches								
Vent Size	"A"	Diameter "B"	"C"	Diameter "D"	"E"	Holes "F"	Diameter "G"	Diameter "H"
2"	13 3/8	8 1/2	7 9/32	6	5/8	4	3/4	4 3/4
3"	15 3/8	10 1/2	8 5/16	7 1/2	3/4	4	3/4	6
4"	17 7/8	12 3/8	6 21/32	9	15/16	8	3/4	7 1/2
6"	19 7/8	16 3/8	8 9/32	11	1	8	7/8	9 1/2
8"	24 1/2	20 1/2	10 13/32	13 1/2	1 1/8	8	7/8	11 3/4
10"	28 7/8	24 1/2	12 11/32	16	1 3/16	12	1	14 1/4
12"	32 7/8	28 3/4	14 9/32	19	1 1/4	12	1	17

ANSI Connection Dimensions shown. Other Flange Types available.



Installation Note: Locate flame arrester within "x" pipe diameters of potential ignition source.

Run up length "x" =
 2"-4" size- 50 pipe diameters.
 6" size- 20 pipe diameters.
 8"-12" size- 10 pipe diameters.

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

94406 Ordering Guide

Model Number Selection

The model number will consist of a base number **94406** followed by 6 digit numbers. These digits will represent 3 option tables.

94406 - AB - CD - EF

Ordering Information

Specify:

1. Model 94406 Vertical Inline Deflagration Flame Arrester
2. Size and Body Material
3. Tube Bank and Hardware Material
4. Type of Flange and Auxiliary Connection
5. Special Materials or Coatings, If Required



Table AB - Size & Body* Table CD - Tube Bank and Hardware*

Option AB	Size (Inches)	Body Material	Option CD	Tube Bank Material Shell/Element	Hardware Material	Shipping Wt. (lbs)
23	2	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	15
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
33	3	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	25
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
43	4	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	45
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
63	6	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	69
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
83	8	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	93
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
03	10	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	165
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	
13	12	Cast Aluminum	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	200
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel	
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel	

NOTE: Aluminum and Cast Iron bodies are only ISO 16852 approved.

* Other material combinations available. Raised Face not available in Aluminum body.

94406**Vertical Inline Deflagration Flame Arrester****Table AB - Size & Body* Table CD - Tube Bank and Hardware***

Option AB	Size (Inches)	Body Material	Option CD	Tube Bank Material Shell/Element	Hardware Material	Shipping Wt. (lbs)	
25, 24	2	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	43	
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
20	2	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
22	2	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
35, 34	3	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		65
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 SS / 316 SS	316 Stainless Steel		
30	3	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
32	3	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
45, 44	4	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	120	
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
40	4	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
42	4	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
65, 64	6	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		207
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
60	6	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
62	6	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
85, 84	8	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	280	
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
80	8	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
82	8	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		

* Other material combinations available.



Table AB - Size & Body* Table CD - Tube Bank and Hardware*

Option AB	Size (Inches)	Body Material	Option CD	Tube Bank Material Shell/Element	Hardware Material	Shipping Wt. (lbs)	
05, 04	10	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel	480	
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
00	10	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
02	10	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
15, 14	12	Cast Iron, Ductile Iron	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		610
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
10	12	Cast Steel	00	Carbon Steel / 304 Stainless Steel	18-8 Stainless Steel		
			01	Carbon Steel / 304 Stainless Steel	304 Stainless Steel		
			22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		
12	12	Cast 316 SS	22	316 Stainless Steel / 316 Stainless Steel	316 Stainless Steel		

* Other Material Combinations Available

Table E - Flange Type*

Option E	Description
0	ANSI 125/150 lb. FF
1	ANSI 125/150 lb. RF*
2	EN1092 PN10 FF
3	EN1092 PN10 RF*
4	EN1092 PN16 FF
5	EN1092 PN16 RF*
6	JIS 10K FF
7	JIS 10K RF*
8	Special Drilling

*Raised Face Flanges Not Available with Aluminum.

Table F - Auxillary Connections

Option F	Description	Quantity
0 ⁽¹⁾	¾" NPT (Uni-Directional)	1
1	¾" NPT (Bi-Directional)	2
2	¾" NPT (Bi-Directional)	4

⁽¹⁾ Flow Direction Label Affixed to Cast Body.

Tube Banks Only*

Part Number	Size (In.)	Tube Bank Material Shell/Element	Shipping Wt. (lbs.)
9440-10000	2	Steel / 304 SS	22
9440-10010		316 SS./ 316 SS	25
9440-10001	3	Steel / 304 SS	30
9440-10011		316 SS / 316 SS	35
9440-10002	4	Steel / 304 SS	55
9440-10012		316 SS / 316 SS	60
9440-10003	6	Steel / 304 SS	90
9440-10013		316 SS / 316 SS	100
9440-10004	8	Steel / 304 SS	145
9440-10014		316 SS / 316 SS	160
9440-10005	10	Steel / 304 SS	225
9440-10015		316 SS / 316 SS	240
9440-10006	12	Steel / 304 SS	310
9440-10016		316 SS / 316 SS	325

*NOTE: Other Material Combinations Available.