

94309 Flame Arrester (Plate Element)

Operation

The Shand & Jurs 94309 quenches the flame front by cooling the flame to below its ignition temperature. The flame front enters the arrester and the flame is intercepted by the arrester element which is specifically designed to provide a precision path for the flame to follow. The flame front temperature is reduced to below the ignition point of the protected vapors. This is achieved by dissipating the heat of the flame through the arrester elements and body.

Design Features

The Shand & Jurs 94309 Flame Arrester is designed to provide maximum flow of vapor or gas with minimal pressure drop. The extensive arrester element surface area also provides for superior continuous burn capability. The 94309 incorporates an advanced design, which ensures precise manufacturing of the arrester components that are critical to providing superior safety products for industry.

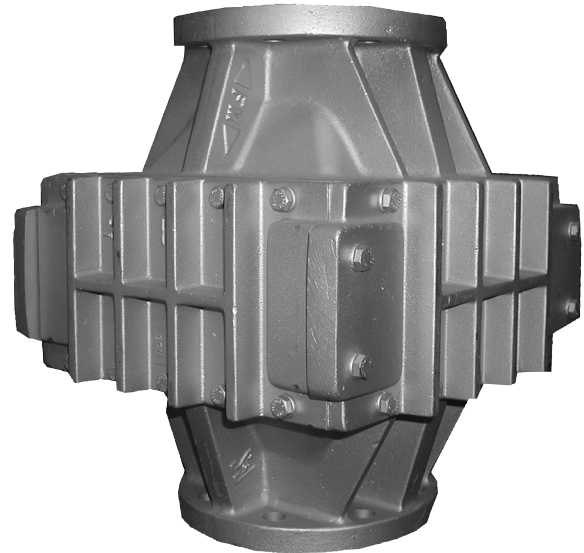
The 94309 design is completely passive which allows for flame quenching capabilities without any operational interfaces typical of active safety devices or systems. Model 94309 Flame Arresters are designed with ease of field maintenance, as proven by the unique extensible arrester element. The element may be inspected and cleaned in place without disruptive piping. No jacking bolts or piping separations are necessary. The element is easily removed from the flame arrester housing in place, facilitating cleaning or replacement with a spare element.

The 94309 can be fitted with low point drains for removal of any condensate accumulation. A drip trap is recommended for the safe removal of the condensate.

Application

The S&J 94309 Flame Arrester (Plate Element) is designed to stop flame propagation when applied properly in low pressure gas or vapor piping systems, or on storage tanks and digester covers. When NEC Group D vapors or gases are generated from product movement in storage tank or digester operations, the flame arrester effectively quenches a flame front that may develop from external ignition of flammable vapors.

The 94309 offers both vertical or horizontal configurations, dependent on specifications. Either configuration can be mounted without affect to flame arresting performance or capability.



Features

- Easy access to element/frame without affecting piping configuration
- Inspect on site
- High flow rates
- Vertical or horizontal configuration
- Industry standard dimensions
- FM Approved
- Insulation Jackets available

Specifications

Sizes:

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

Max Static Pressure:

10 PSIG

Pressure Drop:

Should not exceed 1 psi

Housing Materials:

Aluminum, Steel, 316 Stainless Steel

Bank Assembly Material:

Extensible: Aluminum with Aluminum or 316 Stainless Steel Plates

Fixed: 316 Stainless Steel Construction

Bank Net Free Area:

3 to 4 times the unit pipe size

Gas Application:

NEC Group D

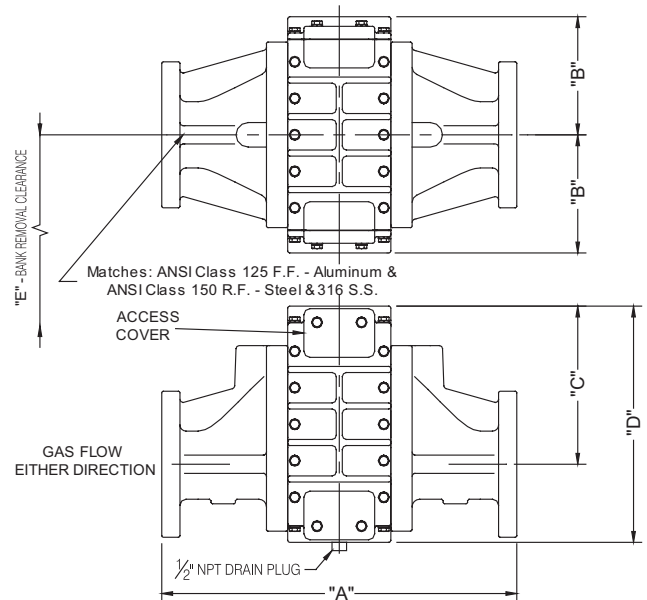
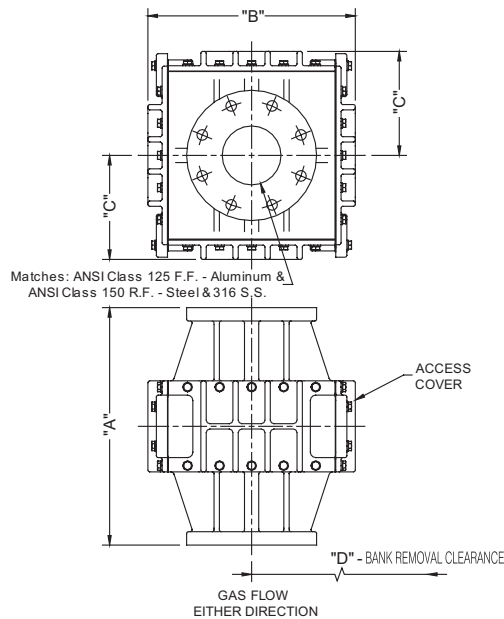
Approval:

Factory Mutual:

Vertical Configuration: 2" thru 12" all Aluminum Construction

Horizontal Configuration: Consult Factory

Outline Dimensions



Dimensions (in Inches)				
Size	"A"	"B"	"C"	"D"
2"	12 5/8	9	5 1/16	19
3"	13 7/8	11 3/4	6	23 1/4
4"	16 5/8	14 1/2	7 1/4	28 1/8
6"	21 1/2	16 1/2	9 3/8	31 1/8
8"	27 1/4	21 5/8	11 1/8	38 5/8
10"	28 3/8	24	13	41 5/8
12"	34 3/8	31	14 11/16	50

Dimensions (in Inches)					
Size	"A"	"B"	"C"	"D"	"E"
2"	14 1/2	5 1/16	6 1/8	10 1/8	18 3/4
3"	16	6	7 5/8	12	22 7/8
4"	20	7 1/4	9 1/16	14 1/2	27
6"	24 3/8	9 3/8	11 7/8	18 3/4	30 3/4
8"	32 1/8	11 1/8	14 1/4	22 1/4	38 1/4
10"	35 1/2	13	16 7/8	26	41 5/8
12"	34 3/8	14 11/16	19 3/16	29 3/8	49 1/2

Installation Note: Locate this equipment within 10 pipe diameters of a potential atmospheric ignition source.

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

94309 Ordering Guide

Model Number Selection

The model number will consist of a base number **94309** followed by 8 digit numbers. These digits will represent 4 option tables.

94309 - AB - CD - EF - GH

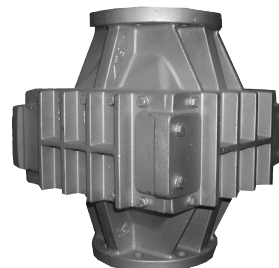


Table AB - Configuration

Option AB	Configuration
00	Vertical
10	Horizontal
11	Horizontal with Drain

Table C - Flange Type

Option C	Type
0	ANSI FF
1	ANSI RF
2	DIN 2633 FF
3	DIN 2633 RF

Tube Banks Only

Raised Face Flanges available at no charge, not available with Aluminum Bodies.

Parts Number	Size (Inches)	Materials		Shipping Weight (lbs.)
		Bank	Frame	
9430-16390	2	Aluminum	Aluminum	9
9430-16391	2	316 Stainless Steel	Aluminum	22
9430-16392	2	316 Stainless Steel	316 Stainless Steel	25
9430-16450	3	Aluminum	Aluminum	14
9430-16451	3	316 Stainless Steel	Aluminum	30
9430-16452	3	316 Stainless Steel	316 Stainless Steel	35
9430-16510	4	Aluminum	Aluminum	20
9430-16511	4	316 Stainless Steel	Aluminum	55
9430-16512	4	316 Stainless Steel	316 Stainless Steel	60
9430-16560	6	Aluminum	Aluminum	35
9430-16561	6	316 Stainless Steel	Aluminum	90
9430-16562	6	316 Stainless Steel	316 Stainless Steel	100
9430-16660	8	Aluminum	Aluminum	55
9430-16661	8	316 Stainless Steel	Aluminum	145
9430-16662	8	316 Stainless Steel	316 Stainless Steel	160
9430-16730	10	Aluminum	Aluminum	85
9430-16731	10	316 Stainless Steel	Aluminum	225
9430-16732	10	316 Stainless Steel	316 Stainless Steel	240
9430-16800	12	Aluminum	Aluminum	120
9430-16801	12	316 Stainless Steel	Aluminum	310
9430-16802	12	316 Stainless Steel	316 Stainless Steel	320

Table D - Size

Table EF - Housing, Bank Assembly Frame and Sheet Metal

Option "D"	Size (Inches)	Option "EF"	Body Material	Sheet Material	Frame Material
2	2	01	Aluminum	Aluminum	Aluminum
2	2	02	Aluminum	316 Stainless Steel	Aluminum
2	2	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
2	2	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
3	3	01	Aluminum	Aluminum	Aluminum
3	3	02	Aluminum	316 Stainless Steel	Aluminum
3	3	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
3	3	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
4	4	01	Aluminum	Aluminum	Aluminum
4	4	02	Aluminum	316 Stainless Steel	Aluminum
4	4	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
4	4	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
6	6	01	Aluminum	Aluminum	Aluminum
6	6	02	Aluminum	316 Stainless Steel	Aluminum
6	6	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
6	6	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
8	8	01	Aluminum	Aluminum	Aluminum
8	8	02	Aluminum	316 Stainless Steel	Aluminum
8	8	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
8	8	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
0	10	01	Aluminum	Aluminum	Aluminum
0	10	02	Aluminum	316 Stainless Steel	Aluminum
0	10	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
0	10	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel
1	12	01	Aluminum	Aluminum	Aluminum
1	12	02	Aluminum	316 Stainless Steel	Aluminum
1	12	03	Cast Steel	316 Stainless Steel	316 Stainless Steel
1	12	04	316 Stainless Steel	316 Stainless Steel	316 Stainless Steel

Table GH - Hardware Material

Option GH	Material
00	18-8 Stainless Steel
01	316 Stainless Steel
02	316L Stainless Steel