

- 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
- FM Approval, 2" to 12" inclusive, NEC Group D

## The Shand & Jurs Model 94306 Vertical Flame Arrester

The Shand & Jurs Flame Arresters are designed to provide a positive flame stop on low pressure tanks containing flammable liquids or solvents having a low flash point. Model 94306 not only provides exceptional protection against fire from external ignition, but also offers maximum flow capacity.

Shand & Jurs Flame Arresters are generally installed with pressure-vacuum vents, or in-line free vent to atmosphere. The tube bank design consisting of a spiral-wound crimped ribbon around a solid core, maximize flow capacity with minimum pressure drop. This unique design meets FM Factory Mutual approval for all sizes and material options.

Standard construction includes light weight cast aluminum, cast iron, cast steel, 304 stainless steel and 316 stainless steel body materials suitable for most environments. Tube bank is available in aluminum, 304 stainless steel and 316 stainless steel as standard. For highly corrosive and severe conditions, special materials and coatings are available. A complete range of sizes from 2" through 12" are available with flat face or raised face flanges to match ANSI 150# connections.

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

## Specifications:

Sizes:.....2", 3", 4", 6", 8", 10" and 12"

Max. Static

Pressure: ..... 5 PSI

Consult factory for higher static pressures.

Flange Rating: ..... To match drilling of ANSI  
150 lb. flat face or 150 lb.  
raised face (cast aluminum  
body option available with  
flat face only).

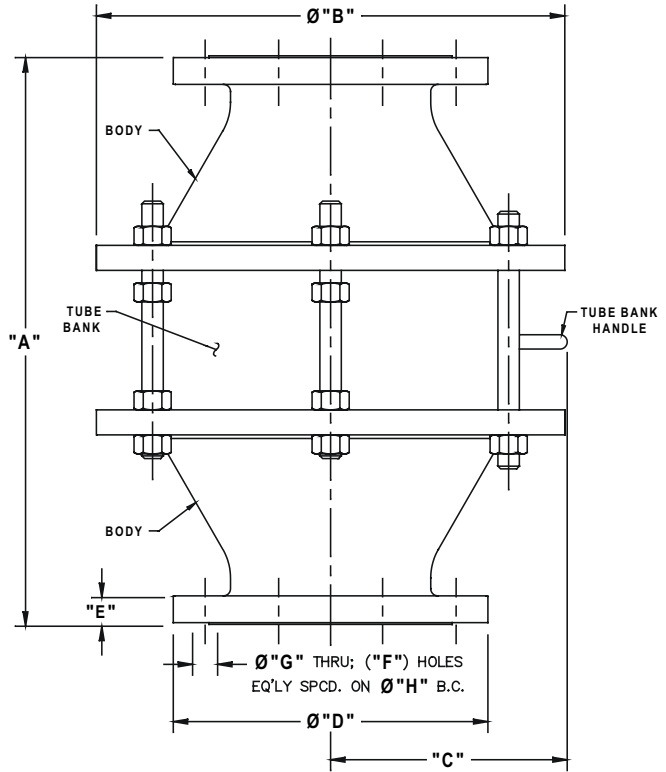
Approval: ..... FM (Factory Mutual)  
NEC Group D

## Materials of Construction:

Body: .....Cast Iron, Cast Steel,  
Cast Aluminum, 304  
Stainless Steel or 316 SS

Tube Bank: .....Aluminum w/ Aluminum  
Shell, 304SS w/ Steel  
Shell, 316 SS w/ 316SS  
Shell

Hardware: .....Zinc-plated Steel



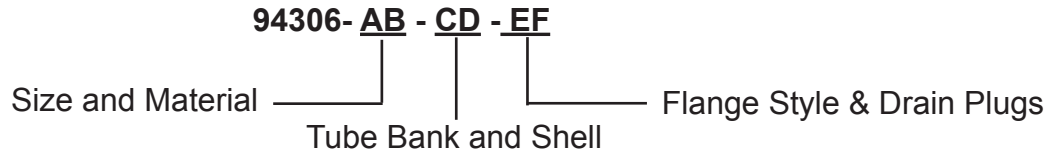
| Dimensions in Inches |        |              |        |              |        |           |              |              | Approximate Shipping Wt. (lbs.) |      |
|----------------------|--------|--------------|--------|--------------|--------|-----------|--------------|--------------|---------------------------------|------|
| Valve Size           | "A"    | Diameter "B" | "C"    | Diameter "D" | "E"    | "F" Holes | Diameter "G" | Diameter "H" | Alum.                           | Iron |
| 2"                   | 13 3/8 | 8 1/2        | 7 7/16 | 6            | 5/8    | 4         | 3/4          | 4 3/4        | 15                              | 43   |
| 3"                   | 15 5/8 | 10 1/2       | 8 5/16 | 7 1/2        | 3/4    | 4         | 3/4          | 6            | 25                              | 65   |
| 4"                   | 17 7/8 | 12 3/8       | 6 1/2  | 9            | 15/16  | 8         | 3/4          | 7 1/2        | 45                              | 120  |
| 6"                   | 19 7/8 | 16 3/8       | 8 1/4  | 11           | 1      | 8         | 7/8          | 9 1/2        | 69                              | 207  |
| 8"                   | 24 1/2 | 20 1/2       | 10 3/8 | 13 1/2       | 1 1/8  | 8         | 7/8          | 11 3/4       | 93                              | 280  |
| 10"                  | 28 7/8 | 24 1/2       | 12 1/4 | 16           | 1 3/16 | 12        | 1            | 14 1/4       | 165                             | 480  |
| 12"                  | 32 7/8 | 28 3/4       | 14 3/8 | 19           | 1 1/4  | 12        | 1            | 17           | 200                             | 610  |

Installation Note: Locate flame arrester within 10 pipe diameters of potential atmospheric ignition source.

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

**MODEL NUMBER SELECTION:**

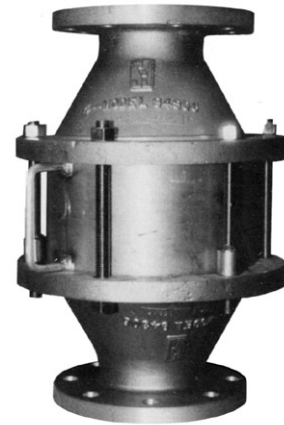
The model number will consist of a base number 94306 followed by three 2 digit numbers which represent the options listed in the following tables.



**ORDERING INFORMATION**

Specify:

1. Model 94306 Vertical Flame Arrester
2. Size and Body Material
3. Tube Bank and Shell Material
4. Type of Flange Option
5. Special Materials or Coatings, If Required



**TABLES I & II**

**TABLE I - (AB) SIZE AND BODY      TABLE II - (CD) TUBE BANK AND SHELL**

| OPTION # | SIZE (INCHES) | BODY MATERIAL | OPTION # | TUBE BANK MATERIAL | SHELL MATERIAL |
|----------|---------------|---------------|----------|--------------------|----------------|
| 12       | 2             | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 12       | 2             | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 12       | 2             | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 14       | 3             | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 14       | 3             | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 14       | 3             | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 15       | 4             | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 15       | 4             | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 15       | 4             | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 16       | 6             | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 16       | 6             | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 16       | 6             | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 17       | 8             | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 17       | 8             | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 17       | 8             | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 18       | 10            | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 18       | 10            | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 18       | 10            | ALUMINUM      | 22       | 316 SS             | 316 SS         |
| 19       | 12            | ALUMINUM      | 11       | ALUMINUM           | ALUMINUM       |
| 19       | 12            | ALUMINUM      | 66       | 304 SS             | CS STEEL       |
| 19       | 12            | ALUMINUM      | 22       | 316 SS             | 316 SS         |

ABOVE IS FOR 150# FLAT FACE FLANGE CONNECTION

**TABLE I & II (Continued)**

**TABLE I - (AB) SIZE AND BODY      TABLE II- (CD) TUBE BANK AND SHELL**

| OPTION # | SIZE (INCHES) | BODY MATERIAL | OPTION # | TUBE BANK MATERIAL | SHELL MATERIAL |
|----------|---------------|---------------|----------|--------------------|----------------|
| 32,62    | 2             | CI,DI         | 66       | 304 SS             | CS             |
| 32,62    | 2             | CI,DI         | 22       | 316 SS             | 316 SS         |
| 52       | 2             | CS            | 66       | 304 SS             | CS             |
| 52       | 2             | CS            | 22       | 316 SS             | 316 SS         |
| 42       | 2             | 316 SS        | 22       | 316 SS             | 316 SS         |
| 34,64    | 3             | CI,DI         | 66       | 304 SS             | CS             |
| 34,64    | 3             | CI,DI         | 22       | 316 SS             | 316 SS         |
| 54       | 3             | CS            | 66       | 304 SS             | CS             |
| 54       | 3             | CS            | 22       | 316 SS             | 316 SS         |
| 44       | 3             | 316 SS        | 22       | 316 SS             | 316 SS         |
| 35,65    | 4             | CI,DI         | 66       | 304 SS             | CS             |
| 35,65    | 4             | CI,DI         | 22       | 316 SS             | 316 SS         |
| 55       | 4             | CS            | 66       | 304 SS             | CS             |
| 55       | 4             | CS            | 22       | 316 SS             | 316 SS         |
| 45       | 4             | 316 SS        | 22       | 316 SS             | 316 SS         |
| 36,66    | 6             | CI,DI         | 66       | 304 SS             | CS             |
| 36,66    | 6             | CI,DI         | 22       | 316 SS             | 316 SS         |
| 56       | 6             | CS            | 66       | 304 SS             | CS             |
| 56       | 6             | CS            | 22       | 316 SS             | 316 SS         |
| 46       | 6             | 316 SS        | 22       | 316 SS             | 316 SS         |
| 37,67    | 8             | CI,DI         | 66       | 304 SS             | CS             |
| 37,67    | 8             | CI,DI         | 22       | 316 SS             | 316 SS         |
| 57       | 8             | CS            | 66       | 304 SS             | CS             |
| 57       | 8             | CS            | 22       | 316 SS             | 316 SS         |
| 47       | 8             | 316 SS        | 22       | 316 SS             | 316 SS         |
| 38,68    | 10            | CI,DI         | 66       | 304 SS             | CS             |
| 38,68    | 10            | CI,DI         | 22       | 316 SS             | 316 SS         |
| 58       | 10            | CS            | 66       | 304 SS             | CS             |
| 58       | 10            | CS            | 22       | 316 SS             | 316 SS         |
| 48       | 10            | 316 SS        | 22       | 316 SS             | 316 SS         |
| 39,69    | 12            | CI,DI         | 66       | 304 SS             | CS             |
| 39,69    | 12            | CI,DI         | 22       | 316 SS             | 316 SS         |
| 59       | 12            | CS            | 66       | 304 SS             | CS             |
| 59       | 12            | CS            | 22       | 316 SS             | 316 SS         |
| 49       | 12            | 316 SS        | 22       | 316 SS             | 316 SS         |

Raised Face Flanges Available

RAISED FACE FLANGES NOT AVAILABLE WITH ALUMINUM BODIES

CI = Cast Iron

CS= Cast Steel

304 SS= Cast 304 Stainless Steel

316 SS= Cast 316 Stainless Steel

DI= Ductile Iron

**TABLE III (EF) FLANGE TYPE AND DRAIN PLUGS**

| FLANGE STYLE | NO DRAIN PLUGS OPTION # | WITH DRAIN PLUGS OPTION # |
|--------------|-------------------------|---------------------------|
| ANSI FF      | 77                      | 71                        |
| ANSI RF      | 87                      | 81                        |
| DIN 2633 FF  | 27                      | 21                        |
| DIN 2633 RF  | 37                      | 31                        |
| JIS 10K FF   | 47                      | 41                        |
| JIS 10K RF   | 57                      | 51                        |

**TABLE IV - TUBE BANKS ONLY**

| PARTS #    | SIZE (INCHES) | MATERIALS BANK | SHELL  | SHIPPING WT. (LBS) |
|------------|---------------|----------------|--------|--------------------|
| 9430-10150 | 2             | ALUM.          | ALUM.  | 9                  |
| 091211     | 2             | 304 SS         | CS     | 22                 |
| 9430-11120 | 2             | 304 SS         | 304 SS | 25                 |
| 9430-11110 | 2             | 316 SS         | 316 SS | 25                 |
| 9430-10151 | 3             | ALUM.          | ALUM.  | 14                 |
| 091212     | 3             | 304 SS         | CS     | 30                 |
| 9430-11121 | 3             | 304 SS         | 304 SS | 35                 |
| 9430-11111 | 3             | 316 SS         | 316 SS | 35                 |
| 9430-10152 | 4             | ALUM.          | ALUM.  | 20                 |
| 091213     | 4             | 304 SS         | CS     | 55                 |
| 9430-11122 | 4             | 304 SS         | 304 SS | 60                 |
| 9430-11112 | 4             | 316 SS         | 316 SS | 60                 |
| 9430-10153 | 6             | ALUM.          | ALUM.  | 35                 |
| 9430-11070 | 6             | 304 SS         | CS     | 90                 |
| 9430-11123 | 6             | 304 SS         | 304 SS | 100                |
| 9430-11113 | 6             | 316 SS         | 316 SS | 100                |
| 9430-10154 | 8             | ALUM.          | ALUM.  | 55                 |
| 9430-11071 | 8             | 304 SS         | CS     | 145                |
| 9430-11124 | 8             | 304 SS         | 304 SS | 160                |
| 9430-11114 | 8             | 316 SS         | 316 SS | 160                |
| 9430-10155 | 10            | ALUM.          | ALUM.  | 85                 |
| 9430-11072 | 10            | 304 SS         | CS     | 225                |
| 9430-11125 | 10            | 304 SS         | 304 SS | 240                |
| 9430-11115 | 10            | 316 SS         | 316 SS | 240                |
| 9430-10156 | 12            | ALUM.          | ALUM.  | 120                |
| 9430-11073 | 12            | 304 SS         | CS     | 310                |
| 9430-11126 | 12            | 304 SS         | 304 SS | 320                |
| 9430-11116 | 12            | 316 SS         | 316 SS | 320                |

ALUM= Aluminum  
 CI = Cast Iron  
 CS= Cast Steel  
 304 SS= Cast 304 Stainless Steel  
 316 SS= Cast 316 Stainless Steel