

9431X Detonation Flame Arresters

The Shand & Jurs Detonation Flame Arresters provide protection against flame propagation through piping runs and vapor recovery systems, while allowing maximum flow efficiencies. This design quenches a flame front approaching from either direction, even if it has transitioned to a detonation. The Arresters contain a detonation while retaining the integrity of both the arresting element and the housing. This is ensured by the design of the passages in the tube bank and the detonation resistant construction.

Standard construction of the housing is available in Carbon Steel or 316 Stainless Steel. The tube bank is Stainless Steel throughout. Special construction materials to withstand the corrosive actions of some vapors and atmospheric conditions are available upon request.

Because of the severe service conditions that the Detonation Flame Arrester encounters, all construction welding is performed in accordance with ASME Boiler and Pressure Vessel Code Section VIII and IX. Class 150lb. hydrostatically tested at 425 psig. Class 300lb. hydrostatically tested at 750 psig.

These models are available in a range of sizes from 2" through 24". Additional sizes available upon request. Standard connections are ANSI 150lb. or 300lb. Class raised face flanges.

Model Number	Service / Approval*	Size
94311	NEC Group D / Factory Mutual	2" - 12"
94312	NEC Group D Marine / Factory Mutual, U.S. Coast Guard	2" - 12"
94313	NEC Group C & D / Factory Mutual	2" - 6"
94314	NEC Group C & D Marine / Factory Mutual	2" - 6"

*STEEL, 316, DUPLEX Stainless Steel



Features

- Withstands instantaneous pressure at the Flame front in excess of 500 psig
- Tube bank design ensures consistent functioning
- Carbon steel or 316 S.S. housing construction, 316 S.S. tube bank
- Optional fittings for pressure taps or temperature probes
- Designed & tested in accordance with appendix A, 33 U.S. Code of Federal Regulations part 154
- Standard drain plug
- Pressure and temperature taps optional

Specifications

Sizes:

2", 3", 4", 6", 8", 10", 12", 14", 16", 18", 20", 22", 24"
 DIN Sizes Available

Flange Rating:

ANSI 150 lb. or 300 lb.

Materials of Construction

Carbon Steel, 316 Stainless Steel, Carpenter 20, Hastelloy-C, or Duplex Stainless Steel. (Other Material Available)

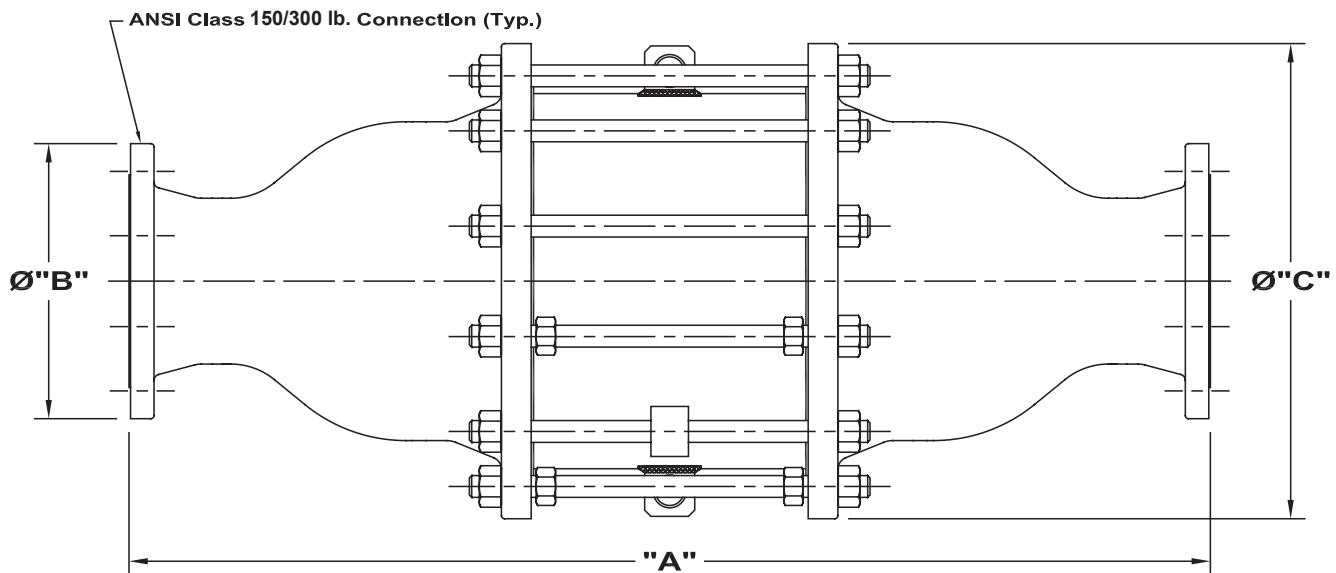
Class 300 lb.

Size	2"	3"	4"	6"	8"	10"	12"	18"
"A"	30 5/16	35 1/16	37 5/16	45 1/16	60 5/16	74 5/16	76 1/16	69 13/16
"B"	6 1/2	8 1/4	10	12 1/2	15	17 1/2	20 1/2	28
"C"	10	12 1/2	15	20 1/2	25 1/2	30 1/2	36	47 1/2

Class 150 lb.

Size	2"	3"	4"	6"	8"	10"	12"	14"	16"	18"
"A"	29 1/16	33 5/16	36 1/16	43 1/16	58 1/16	71 15/16	73 5/16	59 5/16	59 5/16	61 13/16
"B"	6	7 1/2	9	11	13 1/2	16	19	21	23 1/2	25
"C"	9	11	13 1/2	19	23 1/2	27 1/2	32	38 3/4	38 3/4	43 3/4

Dimensions



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

9431X Ordering Guide

Model Number Selection

The model number will consist of a base number **9431X** followed by 8 digit numbers. These digits will represent 5 option tables.

9431X - AB - CD - EF - GH

Ordering Information

Specify:

1. Model 9431X Detonation Flame Arrester
2. Size, Body Material, and Service
3. Optional Body Taps (for pressure or temperature sensing or additional drains)
4. Optional Materials of Construction as Required



Model Numbers & Options

Base Number	Specifications
94311	NEC Group 'D' Vapor
94312	NEC Group 'D' Vapor -Marine/Offshore Applications (US Coast Guard)
94313	NEC Group 'C' & 'D' Vapor
94314	NEC Group 'C' & 'D' Vapor - Marine/Offshore

NOTE: Tube Bank Material on all models is 316 SS, except on Table II - Option 05 for which the Tube Bank material is Hastelloy-C.

Table AB - Inlet & Outlet Size for All Models

Option AB	Size
02	2 Inch
03	3 Inch
04	4 Inch
06	6 Inch
08	8 Inch
10	10 Inch
12	12 Inch

Table EF - Flange Size

Option EF	Description
01	150 lb. Flange RF
02	300 lb. Flange RF
03	PN 10 DIN 2632 RF
04	PN 16 DIN 2633 RF

Table G - Body Taps

Option G	Tap Type
1	NPT
2	Socket Weld
3	Flange

Table H - Body Taps

Option H	Number of Taps (On Each End)
1	1
2	2
3	3

Taps are 3/4" size with NPT, Socket Weld or Flange Termination. Taps are located on both the inlet and outlet body sides. Flange class matches Table EF connection. Material same as body in Table CD.

Table CD - 94311

Option CD	Body & Shell	Hardware
01	Steel	Steel
02	316 Stainless Steel	Steel
03	Steel	316 Stainless Steel
04	316 Stainless Steel	316 Stainless Steel
05	Hastelloy-C	316 Stainless Steel
06	Carp-20	316 Stainless Steel
07	316L Stainless Steel	316L Stainless Steel
08	Duplex Stainless Steel	Steel
09	Duplex Stainless Steel	316 Stainless Steel

Table CD - 94312

Option CD	Body & Shell	Hardware
01	Painted Steel	316 Stainless Steel
02	316 Stainless Steel	316 Stainless Steel
05	Hastelloy-C	316 Stainless Steel
06	Carp-20	316 Stainless Steel
07	316L Stainless Steel	316L Stainless Steel
09	Duplex Stainless Steel	316 Stainless Steel

Table CD - 94313

Option CD	Body & Shell	Hardware
01	Steel	Steel
02	316 Stainless Steel	Steel
03	Steel	316 Stainless Steel
04	316 Stainless Steel	316 Stainless Steel
05	Hastelloy-C	316 Stainless Steel
06	Carp-20	316 Stainless Steel
07	316L Stainless Steel	316L Stainless Steel
08	Duplex Stainless Steel	Steel
09	Duplex Stainless Steel	316 Stainless Steel

Table CD - 94314

Option CD	Body & Shell	Hardware
01	Painted Steel	316 Stainless Steel
02	316 Stainless Steel	316 Stainless Steel
05	Hastelloy-C	316 Stainless Steel
06	Carp-20	316 Stainless Steel
07	316L Stainless Steel	316L Stainless Steel
09	Duplex Stainless Steel	316 Stainless Steel