

Model B- HP Deflagration Flame Arrestor

HP Deflagration Flame Arrestor



The Paradox Deflagration Flame Arrestor, is designed to stop the propagation of a deflagration beyond the capabilities of a conventional end of line flame arrester. They are ideal for **short flare stacks** (<60ft.) with a ninety degree elbow at the bottom. The deflagration arrester is bi-directional and will stop both low and high pressure deflagrations.

Like our detonation arresters, they have crimped ribbon with screen sections that allow for much larger cells than that of competitive crimped ribbon arresters, allowing maximum flow with maximum protection and requires less frequent maintenance due to clogging and greater ease in cleaning when service is required. This translates to less down time. Our element offers maximum flow to pressure drop characteristics enhancing the value of our product in any system.

European flame arrester companies sell similar products that they misleadingly call Detonation arresters with the footnote “Stable Detonation”. These products will not stop an Unstable (overdriven detonation) and should clearly market that way.

Ours unit should only be used for high pressure deflagrations as directed. They are designed with flanged connections, this Arrestor provides the option of the removal of the flame cell (element) for easy cleaning and replacement without disconnection of the pipe connection flanges. Standard housing construction is carbon steel and/or stainless steel.

The element is available in 304 S.S and 316 S.S. Drains, pressure taps & Temperature ports are optional. Special material and protective coatings are available on request.

“Standard burn rating is 15 minutes”

- Available in sizes 2” to 12”
- All sizes have been thoroughly tested with 50 feet of run up pipe and a 90 degree bend.
- Initial Pressure 19.7 Pisa.
- Tested to API-2028 Sect 5 paragraph b.

Features and Benefits

- **All Paradox Deflagration Flame Arrestors** are designed for low & high Pressure deflagrations and are Bi-Directional.
- **Removable Element** design allows for easy replacement.
- Available in “Stubby” Style (pic below) or Standard Reducers End Section Styles. (pic above)
- **Outstanding corrosion** and chemical resistance.
- **Optional Drain, temperature & Pressure ports.**
- Available in Eccentric & Concentric end sections.



Paradox’s Large Crimp Opening Provide:

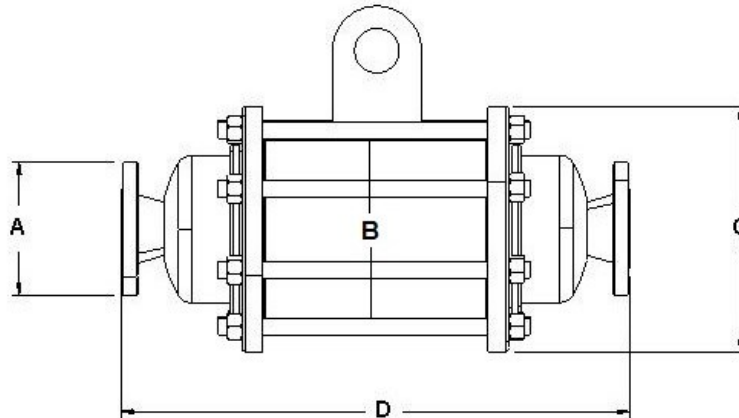
- Maximum flow
- Less Pressure Drop
- Easy Cleaning
- Less Clogging
- Less Maintenance
- Bi-directional Design
- Available in ANSI, DIN and JIS flanges.



Material Specifications

Housing	Cell	Gas Group
Carbon Steel	304 SS	NEC Group “D” IEC “IIA”
304 SS	316 SS	
316L SS	Hastelloy	
Hastelloy		

Deflagration Flame Arresters, Series-B



Detonation Flame Specifications

arrester

Model	A 150# ANSI Conn. Size in. (mm)	B Housing Size In. (mm)	C Outside Diameter In. (mm)	D Overall Length In. (mm)	Approx. Weight Lb.(Kg.) Grp D +/-10%
B-2C	2 (50)	8 (200)	11 (279)	22.5(571.5)	135 (61)
B-3C	3 (75)	8 (200)	11 (279)	22.5(571.5)	145(65)
B-4C	4 (100)	8 (200)	11 (279)	24 (609)	160 (72)
B-6C	6 (150)	12 (300)	16.00 (406)	30.39 (771.9)	355 (161)
B-8C	8 (200)	18.5 (470)	23.5 (597)	38 (965)	645 (292)
B-10C	10 (250)	22.5 (571.5)	27.5 (698)	42 (1067)	960 (435)
B-12C	12 (300)	26.5(673)	32.0 (813)	43.34 (1101)	1200 (544)



Model B- HP Deflagration Flame Arrester for Group D, Gas

Flame Arrester Type	In-line, Bi- Directional, High Pressure, Deflagration Flame Arrester
Recommended installation /use	Vertically or Horizontally in a Piping systems with up to 60' plus 1, 90° Elbow. (For example; a 60 foot flare stack with 90° Elbow at the base and the flame arrester immediately before the elbow).
Design/Test Standard/Test Gas	Propane/Tested to API-2028 Sect 5 paragraph b.
Connection sizes	2" through 12" Pipe sizes.
Type of connection	Flanged connection.
Flange ratings	Available in ASME 150# Raised Faced Flange
Housing Materials	Standard Model; Carbon Steel, also available in 304, 316L & most other Austenitic metal or hastelloy.
Element Type/Material	The element is crimped metal ribbon made from 304 Stainless Steel and is also available in 316L or hastelloy.
Maximum Initial pressure	Initial Pressure 19.7 Pisa.
Operating temperature range	-17°C to +60°C
Hydrostatic Test Pressure	350 Psig.
Gas Group Application Rating	NEC Group D,(IEC Group IIA)
BURN RATING	15 minutes Stabilized Burn, as per Type II USCG rating. Test per 33 CFR



Figure 1. Flame Arrestor Available Constructions and Model Numbering System

The flame arrester below describes an 18", 150# RF concentric detonation arrester with a carbon steel housing and 304ss element matrix and includes 3/4" NPT drains, pressure and temp taps.

C	18	C	D	-	C	S	R	-	D	P	T	3/4
Flame Arrester Type	Connection Size 0.5" through 48in.	C= Concentric E= Eccentric	NEC Gas Group		Housing Material	Element Material	Connection Type		Options			
A = FA			D		C = Carbon steel	S = 304 SST	F = Flat face flange		D = Drain Tap & Plug			
B = HPFA			C		S = 304 SST	S1 = 316 SST	R = Raised face flange		P = Pressure Tap			
C = DFA			B		S1 = 316 SST	H = Hastelloy®			T = Temperature Probe Tap			
D = H2 DFA					H = Hastelloy®				1/2, 3/4, 1 = NPT tap size			
									Or			
									1/2F, 3/4F, 1F, etc; =			
									150# ANSI Flange			
									size.			