Free Vent Flame Arrestor

Enardo Free Vent Flame Arrestors (FVFA) are designed to allow free venting in combination with flame protection for vertical vent applications. This type product is installed at the top of an atmospheric vent line or storage tank. They prevent flame propagation by absorbing and dissipating heat using spiral wound crimped ribbon flame cells. These cells allow maximum flow with maximum protection. The FVFA is used to stop the propagation of confined and unconfined low pressure deflagrations. It prevents an ignited atmospheric vapor cloud from propagating beyond the Flame Arrestor into the vent line or tank.

FVFA's are typically used for the end of line applications when the system operating pressure is near atmospheric levels and when there is minimal probability of a flame stabilizing on the Flame Arrestor element for an extended period.

Free Vent Flame Arrestors allow free venting and flame protection for vertical vent applications. Designed with flanged connections, this arrestor allows removal of the flame cell element without their removal of the venting assembly. Standard housing construction is aluminum, carbon steel, and stainless steel. The element is available in aluminum or stainless steel. Special material and protective coatings are available on request.

EN 12874 Approved 2" -12" IIA (D) and IIB3 (C)

Features and Benefits

Enardo's large crimp opening provide:
- Maximum flow
- Less pressure Drop
- Easy Cleaning
- Less Clogging
- Less Maintenance

- Single Element Design.
- Fluoropolymer coated hardware provides outstanding corrosion and chemical resistance.
- Easy accessible and removable flame cell for easy inspection and service.
- Standard temperature probe on EN models.
- Flanged design available in ANSI, DIN and JIS flanges.

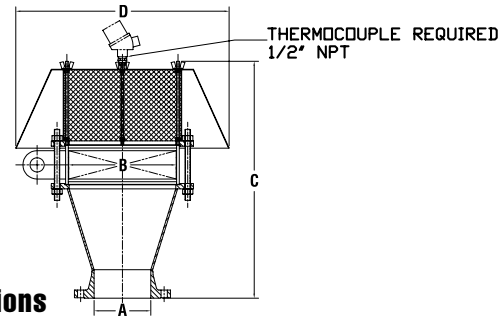
Flame Arrestor Specifications

Model	Sizes Available
Free Vent Flame Arrestor (FVFA) EN FVFA-EN 12874 Approved	3/4" (20 mm) through 900 36" (mm) 2" (50 mm) through 12" (300 mm)

Materials of Construction

Housing	Cell	Gas Group
Aluminum Carbon Steel 304 SS 316 SS Hastelloy	Aluminum 304 SS 316 SS Hastelloy	IIA (D) IIB3 (C) IIC (B)

EN Model
Free Vent Flame Arrestor



EN Model Free Vent Flame Arrestor Dimensions

Model	A Nominal Conn. Size In. (mm)	B Housing Size In. (mm)	C Height In. (mm)	D Outside Diameter In. (mm)	Approximate Weight Lb. (Kg)
0402	2 (50)	4 (100)	16.94 (430)	12 (305)	59.5 (27)
0602	2 (50)	6 (150)	18 (457)	16 (406)	62 (28.5)
0603	3 (75)	6 (150)	18 (457)	16 (406)	66 (30)
0803	3 (75)	8 (200)	17.13 (455)	16 (406)	80 (36.3)
0804	4 (100)	8 (200)	18.13 (460)	16 (406)	90 (41)
1204	4 (100)	12 (300)	24.5 (622)	22 (559)	142 (64.4)
1206	6 (150)	12 (300)	25 (635)	22 (559)	150 (68)
1606	6 (150)	16 (400)	32.88 (822)	30 (762)	287 (130)
1608	8 (200)	16 (400)	33.38 (848)	30 (762)	298 (135)
2008	8 (200)	20 (500)	35.75 (908)	36 (914)	434 (197)
2010	10 (250)	20 (500)	35.75 (908)	36 (914)	443 (201)
2410	10 (250)	24 (600)	39 (990)	44 (1118)	653 (296)
2412	12 (300)	24 (600)	39.5 (1005)	44 (1118)	675 (306)

Dimensions may vary somewhat from those given above. Allow for a tolerance of ± 1.00" (25 mm). Specific dimensions available on request.

Key to Enardo EN Model Free Vent Flame Arrestor Model Number

EN [ ][ ] [ ][ ] / [ ] — [ ] [ ] [ ] — [ ] [2] [ ] — FVFA

Housing Size
04 = 4" through 24 = 24"

Connection Size
02 = 2" through 12 = 12"

IEC Gas Group
IIA (D)
IIB3 (C)

Housing Material
C. Carbon Steel
4. 304 S.S.
6. 316 S.S.
H. Hastelloy

Cell Material
4. 304 S.S.
6. 316 S.S.
H. Hastelloy

Connection Type
F. Flat Faced Flange
R. Raised Face Flange

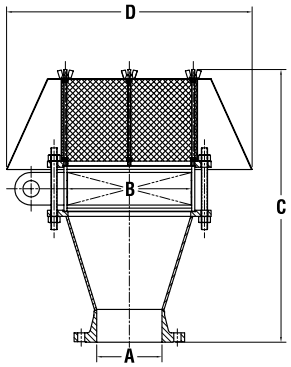
Options
1. Drain Plugs
2. Temp. Probe (Std.)
3. Pressure Taps
4. Misc. Fittings
5. Protective Coatings
6. Special Features

Example:

EN [2][0] [1][0] / [IIA] — [C] [4] [R] — [2][5][ ] — FVFA

Indicates a Free Vent Flame Arrestor with a 20" carbon steel housing and 10" raised faced flange connection and a 304 stainless steel IEC Group “IIA” flame cell element. It also has an additional option of a protective coating for corrosive service and standard temperature probe.

Standard Model
Free Vent Flame Arrestor



Standard Model Free Vent Flame Arrestor Dimensions

Model	A Nominal Conn. Size In. (mm)	B Housing Size In. (mm)	C Height In. (mm)	D Outside Diameter In. (mm)	Approx. Wt. Lb. (Kg) Carbon Steel Group D Models
401	1 (25)	4 (100)	16.63 (422)	12 (305)	50 (23)
402	2 (50)	4 (100)	17 (432)	12 (305)	52 (23.5)
602	2 (50)	6 (150)	18 (457)	16 (406)	54 (24.5)
802	2 (50)	8 (200)	18 (457)	16 (406)	77 (34.9)
803	3 (75)	8 (200)	18 (457)	16 (406)	81 (36.7)
804	4 (100)	8 (200)	18 (457)	16 (406)	86 (39.0)
1206	6 (150)	12 (300)	25.00 (635)	22 (559)	149 (67.6)
1608	8 (200)	16 (400)	33.38 (848)	30 (762)	243 (110.2)
2010	10 (250)	20 (500)	35.75 (908)	36 (914)	360 (163.3)
2412	12 (300)	24 (600)	39.50 (1003)	44 (1118)	549 (249.0)

14 in. - 36 in. and over – Dimensions available on request. Dimensions may vary somewhat from those given above. Allow for a tolerance of ± 1.00" (25 mm). Specific dimensions available on request.

Key to Enardo Free Vent Flame Arrestor Model Number

□□ □□ / □ — □ □ □□□ — FVFA

Housing Size
04 = 4" through 60 = 60"

Connection Size
01 = 1" through 36 = 36"

NEC Gas Group
B. Group "B" (IIC)
C. Group "C" (IIB3)
D. Group "D" (IIA)

Housing Material
A. Aluminum
C. Carbon Steel
4. 304 S.S.
6. 316 S.S.
H. Hastelloy

Cell Material
A. Aluminum
4. 304 S.S.
6. 316 S.S.
H. Hastelloy

Connection Type
F. Flat Faced Flange
R. Raised Face Flange

Options
1. Drain Plugs
2. Temp. Probe Taps
3. Pressure Taps
4. Misc. Fittings
5. Protective Coatings
6. Special Features

Example:

2 0 1 0 / D — A 4 F — 5 — FVFA

Indicates a Free Vent Flame Arrestor with a 20" aluminum housing and 10" flat faced flange connection and a 304 stainless steel NEC Group "D" flame cell element. It also has an additional option of a protective coating for corrosive service.