

EVA Series

End-of-line Deflagration Flame Arresters



Protecting People, Property and our Planet.

With Replaceable Element for Explosion Groups IIA1 & IIA

The Elmac Technologies® EVA Series End-of-line Deflagration Flame Arresters are designed to be installed at the end of a pipeline or exit vent from a vessel, to provide protection against atmospheric deflagration, where the ignition source is external.



Principle of Operation

The EVA Series incorporates Elmac's E-Flow™ enhanced crimped-ribbon technology in the flame arresting element, the matrix of which has been optimised using Computational Fluid Dynamics (CFD) to ensure industry leading flow and pressure drop characteristics.

During a deflagration, the combustion products are cooled at the element surface by heat dissipation, which prevents continuation of the combustion process through the flame arrester and into the protected vent line.

Operating Conditions

The Elmac EVA Series Flame Arresters are ATEX certified for a maximum operating temperature of +60°C.

Explosion Groups

The Elmac EVA Series Flame Arresters are ATEX approved for gases in Explosion Groups IIA1 & IIA.

Features and Benefits

- Exceptional flow capacities with minimal pressure drop
- Easy-clean, replaceable, crimped-ribbon elements
- Unique element design is less susceptible to fouling/clogging
- Sizes and materials to suit a wide range of applications

Standards Compliance

Elmac Technologies® Flame Arresters have been type-tested to EN ISO 16852 and certified according to ATEX Directive 2014/34/EU.

Actual device performance is verified in the Elmac Technologies® state-of-the-art in-house test facility.



Elmac Expertise

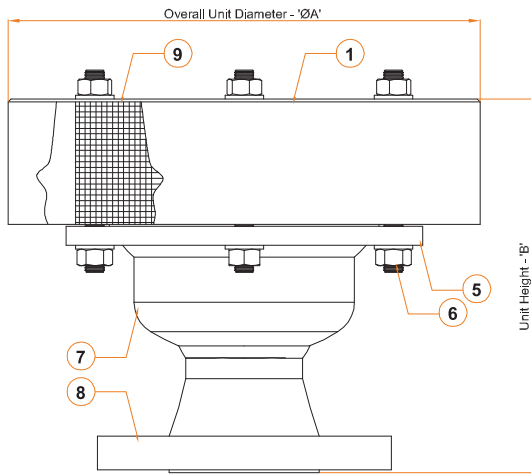
Elmac Technologies® has been manufacturing protection equipment since 1948 and brings enhanced levels of flame and explosion protection to a diverse range of applications.

Elmac offers considerable technical leadership and, using test facilities along with Computational Fluid Dynamics (CFD) capabilities, employs research teams renowned for developing solutions for the most challenging of industrial applications.

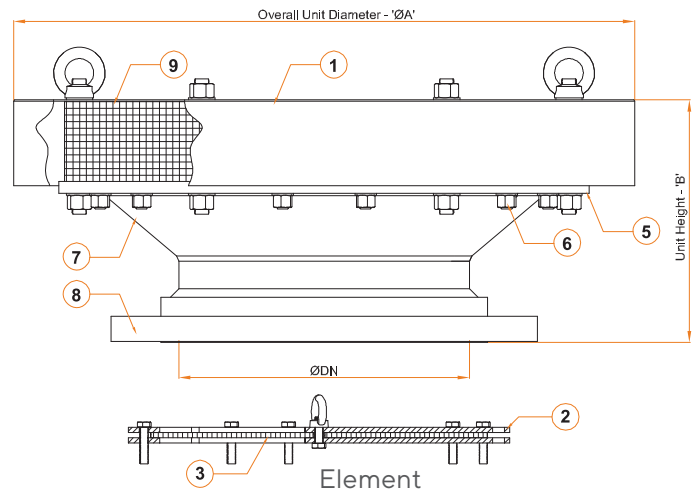
- End connections include flanged or threaded options
- Lightweight for ease of installation
- Bird screen fitted as standard

General Arrangements:

EVA Flame Arresters: DN 15-40mm



EVA Flame Arresters: DN 50-600mm



Standard Material Specifications

Ref	Description	Carbon Steel Models	Stainless Steel Models
1	Weatherhood	Stainless Steel	Stainless Steel
2	Element Housing	Carbon Steel	Stainless Steel
3	Element Core	Stainless Steel	Stainless Steel
4*	Gasket	PTFE	PTFE
5	Element Flange	Carbon Steel	Stainless Steel
6	Fasteners	Stainless Steel	Stainless Steel
7	Reducer	Carbon Steel	Stainless Steel
8	Fixing Flange	Carbon Steel	Stainless Steel
9	Bird Screen	Stainless Steel	Stainless Steel

*Not shown in general arrangement drawings above

Dimensions*

DN (mm)	15	20	25	32	40	50	65	80	100	
$\varnothing A$ (mm)	245	245	245	245	245	245	300	300	360	
B (mm)	182	187	189	190	195	185	220	220	343	
Approx Wt (kg)	6	6	7	7	7	8	13	14	19	
DN(mm)	125	150	200	250	300	350	400	450	500	600
$\varnothing A$ (mm)	420	500	500	600	660	790	870	950	1030	1200
B (mm)	269	315	315	482	518	332	340	380	393	451
Approx Wt (kg)	25	39	44	76	99	108	128	150	173	219

*Larger element configurations are available for higher flow applications. Please contact Customer Support for details.

Variations

Feature	Standard Fitting	Options*
Arrester Materials	Carbon Steel or Stainless Steel	Low Temperature Carbon Steel, Duplex Steel, Hastelloy
Element Material	Stainless Steel	Hastelloy
Connections	ANSI 150 Flange	PN16 Flange, Female BSP/NPT, Male BSP/NPT
Arrester Finish	Painted (Carbon Steel Arresters)	Offshore Paint, PTFE Coated, Others on Request
Bird Screen	Stainless Steel	304 Stainless Steel, PTFE Coated

*Depending on flame arrester size

Customer Support

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