

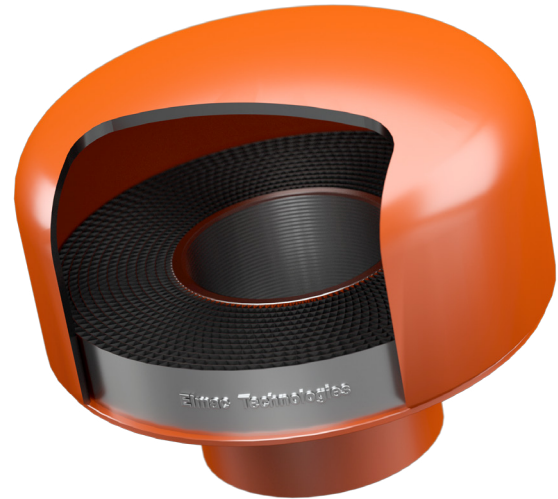
# ERB Series



Protecting People, Property and our Planet

## RE-Flow™ End-of-line Deflagration Flame Arresters

Elmac Technologies® ERB Series of End-of-line Deflagration Flame Arresters are designed to prevent atmospheric deflagrations from entering into a gas or vapour piping system, or a storage tank when installed at the end of a vent pipe.



### Principle of operation

Elmac ERB Flame Arresters (patent pending) incorporate Elmac's E-Flow™ enhanced crimped ribbon technology in the flame arresting element. The channel dimensions of the element are optimised for deflagration protection; whilst ensuring minimal maintenance requirements and maximising flow performance.

During a deflagration, the combustion products are cooled at the element surface by heat dissipation, which prevents continuation of the combustion process through the arrester and into the protected vent line. The ERB Series Flame Arresters' unique operating mode allows downward venting (RE-Flow™) and self-draining of the arrester element. This ensures minimal plugging or clogging of the element under normal operating conditions.

### Explosion Gas Groups

Elmac ERB Series Deflagration Flame Arresters are ATEX approved for gases in Explosion Gas Groups IIA, IIA1, IIB1, IIB2 & IIB3.

### Elmac expertise

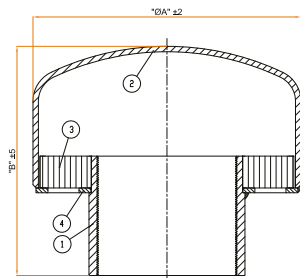
Elmac have been manufacturing protection equipment since 1948 and bring enhanced levels of flame and explosion protection to a diverse range of applications.

Elmac offers considerable technical leadership and, utilising a range of testing facilities along with Computational Fluid Dynamics studies, employs research teams renowned for developing solutions for the most challenging of industrial applications.

### Features and benefits

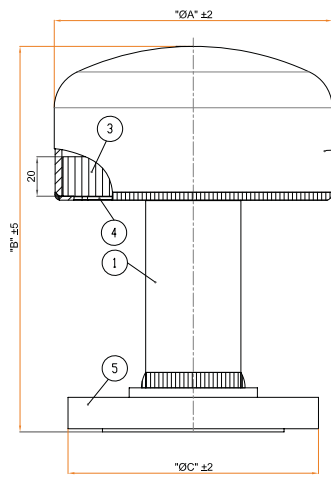
- Simple, compact, robust and light
- Up to 5 x lighter than standard flanged arresters
- Self-draining element prevents rain, dirt or other foreign matter entering the piping system
- Easy visual in-situ inspection of the element
- E-Flow™ element provides optimum flow performance with minimal maintenance
- Quick and easy to install and maintain
- Threaded and flanged connection options available

### General Arrangements:



Standard Material Specifications		
Ref	Description	Material
1	Female Socket	Stainless Steel
2	End Cap	Stainless Steel
3	Crimped Ribbon Element	Stainless Steel
4	Element Ring	Stainless Steel

Dimensions			
Nominal Bore (mm)	ØA (mm)	B (mm)	Approx Wt (kg)
10	89	69	0.7
15	89	79	0.7
20	89	82	0.7
25	89	77	0.7
32	141	107	1.8
40	141	107	1.9
50	141	116	1.9
65	168	138	2.9
80	168	144	3.0



Standard Material Specifications		
Ref	Description	Material
1	Pipe	Stainless Steel
2	End Cap	Stainless Steel
3	Crimped Ribbon Element	Stainless Steel
4	Element Ring	Stainless Steel
5	Connection Flange	Stainless Steel

Dimensions				
ØDN (Nominal)	ØA (mm) (±2)	B (mm) (±5)	ØC (mm) (±2)	Approx Wt (kg)
15	89	165	95	1.2
20	89	165	105	1.4
25	89	165	115	1.7
32	141	195	140	3.1
40	141	195	150	3.5
50	141	195	165	4.4
65	168	215	185	6.7
80	168	215	200	7.4

### Variations

Feature	Standard Fitting	Options*
Arrester Materials	Stainless Steel	On Request
Element Material	Stainless Steel	On Request
Connections	BSP/NPT Female/Flanged	Adapters for Other Connection Types

\*May be limited according to arrester size.

### Operating conditions

The operating temperature for ERB Flame Arresters is -20°C to +60°C.

### ERB flow curves

Pressure drop performance varies according to a particular arrester configuration. Further information is available on request from Elmac.

### Standards compliance

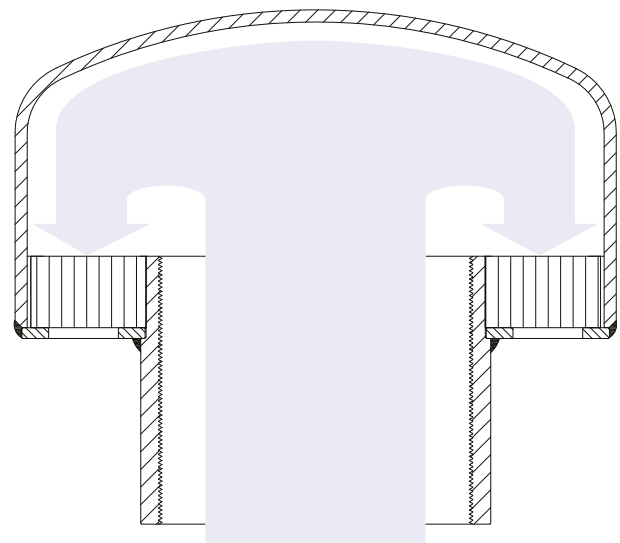
ERB Flame Arresters have been type-tested to EN ISO 16852 and approved according to ATEX Directive 2014/34/EU.

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



### RE-Flow™

The diagram below demonstrates the out-breathing of gases and/or vapours through the ERB housing and element to vent to atmosphere.



### Customer Support

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