

# Flame arresters and low pressure venting equipment



# In-Line Flame Arresters & Detonation Arresters

Elmac Technologies® is renowned for bringing enhanced levels of safety protection to the worlds most challenging industrial environments.

In this brief guide, we outline our range of ATEX-accredited flame arresters and low pressure venting equipment.

Elmac's range of products are designed for various applications and conditions, please visit our website

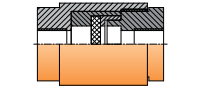
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for specific advice.

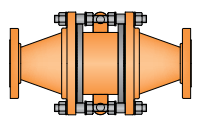
## In-Line Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
LCA 	ATEX (IEC) IIA	15mm - 300mm	-20°C to +160°C	Concentric Reducers Extended Operating Limits Short Time Burn Removable Elements
	US (NEC) Group D (MESG > 0.9mm)	1/2" - 12"	-4°F to +320°F	
LEA 	ATEX (IEC) IIA	40mm - 300mm	-20°C to +160°C	Eccentric Reducers Extended Operating Limits Short Time Burn Removable Elements
	US (NEC) Group D (MESG > 0.9mm)	1 1/2" - 12"	-4°F to +320°F	
DFB 	ATEX (IEC) IIA, IIB3	25mm - 150mm	-20°C to +150°C	Extended Operating Limits Removable Elements
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1" - 6"	-4°F to +302°F	
SGE-IB 	ATEX (IEC) IIA, IIB3	15mm - 400mm	-20°C to +150°C	Extended Operating Limits Removable Elements
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 16"	-4°F to +302°F	
DFC 	ATEX (IEC) IIA, IIB3, IIB, IIC	25mm - 150mm	-20°C to +60°C	Removable Elements
	US (NEC) Group D, Group C, Group B	1" - 6"	-4°F to +140°F	

## In-Line Microbore Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
MB-IB 	ATEX (IEC) IIA, IIB3	15mm - 20mm	-20°C to +60°C	Fixed Elements
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 3/4"	-4°F to +140°F	

## In-Line Unstable Detonation Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
CE-IB 	ATEX (IEC) IIA, IIB3	15mm - 200mm	-20°C to +60°C	Removable Elements
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 8"	-4°F to +140°F	

# End of Line Flame Arresters

## End of Line Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
EVA	ATEX (IEC) IIA	15mm - 600mm	-20°C to +60°C	E-Flow Technology™ Removable Elements Extensive Options List
	US (NEC) Group D (MESG > 0.9mm)	1/2" - 24"	-4°F to +140°F	
EVB	ATEX (IEC) IIA, IIB3	15mm - 600mm	-20°C to +60°C	E-Flow Technology™ Removable Elements Extensive Options List
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 24"	-4°F to +140°F	
AVC	ATEX (IEC) IIA, IIB3, IIB, IIC	25mm - 150mm	-20°C to +60°C	Removable Elements Extensive Options List
	US (NEC) Group D, Group C, Group B	1" - 6"	-4°F to +140°F	

## Light Duty End of Line Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
SV	ATEX (IEC) IIA, IIB3	15mm - 50mm	-20°C to +60°C	Light Alloy Models Fixed Elements Threaded Connections
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 2"	-4°F to +140°F	
SVE	ATEX (IEC) IIA, IIB3	10mm - 50mm	-20°C to +60°C	Stainless Steel Models Fixed Elements Threaded Connections
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	3/8" - 2"	-4°F to +140°F	

## High Temperature End of Line Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
EHB	ATEX (IEC) IIA, IIB3	15mm - 600mm	-20°C to +150°C	Extended Operating Limits E-Flow Technology™ Removable Elements
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 24"	-4°F to +302°F	

## Short Time Burn End of Line Flame Arresters

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
ESA	ATEX (IEC) IIA	15mm - 600mm	-20°C to +150°C	Short Time Burn Extended Operating Limits E-Flow Technology™
	US (NEC) Group D (MESG > 0.9mm)	1/2" - 24"	-4°F to +302°F	

## End of Line Flame Arresters for use with Pressure/Vacuum Relief Valves

Series	Explosion Group Suitability	Size Range Nominal Bore	Operating Limits	Features
FE-IE	ATEX (IEC) IIA, IIB3	15mm - 300mm	-20°C to +60°C	Removable Element
	US (NEC) Group D, Group C (MESG ≥ 0.65mm)	1/2" - 12"	-4°F to +140°F	

# Low Pressure Venting Equipment

## Storage Tank and Vessel Protection

Elmac tank fittings are designed to protect tanks from rupture or implosion during filling and/or emptying cycles. They limit product loss and environmental discharges whilst also protecting tanks during thermal changes.



### Pressure/Vacuum Relief Valves

- Pressure-only, vacuum-only or combined
- Weight or spring loaded
- 50 - 300mm NB



### Tank Blanketing Valves

- Prevent ingress of air / moisture
- Reduce evaporation of stored product to negligible amount
- 25 - 50mm NB



### Bursting Discs

- Wide choice of materials and designs
- Forward and reverse acting
- 50 - 400mm NB



### Emergency Relief Vents

- Pressure relief emergency manways
- Suitable for emergency foaming relief
- 250 - 600mm NB



### Gauge Hatches

- For measurement and sampling
- Safety pedal for 'hands-free' operation
- Pressure relief option available



### Vents

- Free vents for tank breathing
- Wide range of sizes/materials
- Customised designs for individual applications

## Ancillary Equipment



### Thermocouples

- For use with deflagration and detonation arresters
- Temperature measurement of process flow
- Tailored to customer requirements



### Pressure Transducers

- For inclusion in Elmac in-line deflagration and detonation arresters
- Enable valuable process monitoring / creation of data streams



### Flashback Guards & Spark Arresting Panels

- 304L and 316L stainless steel
- Knitted mesh panels
- Customised design for individual applications
- Tailored frames and mountings

## Customer Support Elmac Technologies Limited

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