

Elmac Technologies Limited - Operating Instructions Requirements to EN ISO 16852, ATEX Directive 2014/34/EU	
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INSTALLATION AND MAINTENANCE INSTRUCTIONS

INTRODUCTION

Flame arresters and their replaceable elements are fitted with nameplates (refer to figure 1), stating the following information: -

- Full name, address, telephone and fax numbers of manufacturer.
- Burn rating group (BC).
- The specific marking of explosion protection.
- Notified body number.
- Nominal bore size of arrester/element.
- Maximum operating pressure.
- Maximum run-up distance (Lu/D) – Not applicable to this product.
- Model number of flame arrester/element.
- Maximum operating temperature.
- Explosion group for which the arrester/element may safely be used.
- Year of construction.
- Elmac serial number of flame arrester/element (quote when requesting spare parts).
- The ATEX certificate number.

	Elmac Technologies Coast Road, Greenfield, Flintshire, CH8 9DP, UK. Tel: +44 (0) 1352 717555 Fax: +44 (0) 1352 717542	WARNING Flame arresters have installation and application limits. Type designation in accordance with EN ISO 16852.		Nominal Bore: Max. Opr. Temp. To:	Max. Opr. Pressure: Explosion Group:	Lu/D: Year Made:	Model No.: Serial No.:	Cert. No.:
	Burn Rating - BC:	NB No.:						

Figure 1 – Nameplate General Layout

Caution! Always ensure that the system is at atmospheric pressure and there is no hazardous gas present including any flammable gas or vapor that could flash when either installing or maintaining a unit.

Elmac AVC end-of-line deflagration flame arresters are not suitable for situations where continuous burning of a flame could stabilize on or near to the surface of the element.

INSTALLATION

Warning: Flame arresters have installation and application limits.

Flame arresters must be installed in accordance with this IOM. If there is any doubt, please contact Elmac Technologies Limited.

Caution!

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2	Format updated, and additional cautions added relating to installation.	D. Greenough	28.09.2017
1	First Issue.	O. Tuncer	08.03.2016
Rev.	Description	Issued By	Date

Description: Installation & Maintenance Instructions for AVC Series End-Of-Line Deflagration Flame Arresters (ATEX)		 Elmac Technologies Elmac Technologies Limited, Coast Road, Greenfield, Flintshire, CH8 9DP United Kingdom	
Drawn By: Ozkan Tuncer Checked By: D. Greenough Tel: +44 (0) 1352 717 555 Fax: +44 (0) 1352 717 642 E-Mail : sales@elmactech.com Web: http://www.elmactechnologies.com	Date: 08.03.2016 Date: 29.06.2021		
The information contained herein is confidential and is the property of Elmac Technologies Ltd. The information is issued on the understanding that no part thereof be disclosed to a third party without written consent of Elmac Technologies Ltd.		Document No. ELN-00216 Page 1 of 3	Revision 3

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1. Please inspect the equipment when it is received and report any damage (if any).

2. Connection flanges are generally protected where possible. The customer must check and remove any 'Transport Protection' and 'Flange Protectors' prior to installation.

3. Inspect the equipment for physical damage or internal contamination before installation and use of the equipment.

1. It is essential that Elmac end of line deflagration flame arresters are only used in the application and with the explosion group for which they were supplied (as stated within our written quotation). Materials of construction must be compatible with the gas mixture and the environment in which the unit is to operate. This is particularly important if the flame arrester is to be used in corrosive applications. Contact the Elmac technical sales department for advice.
2. Always ensure that the fixings available on the pipe work (e.g. flange type, screw thread) are compatible with that on the flame arrester. For flange fixings, use the correct fasteners and gaskets for the flange size and type. Always use the correct washers as this prevents damage caused by bolt heads and nuts on tightening up. Gaskets should be capable of withstanding the same temperatures and pressures as the flame arresters being installed.
3. End-of-line deflagration flame arresters should be positioned so that the element is accessible for removal.
4. **SPECIAL CONDITIONS FOR SAFE USE:**
The user/installer shall be cognisant of the critical parameters which will be detailed on the fitted nameplates (refer to figure 1 - Nameplate General Layout).

MAINTENANCE

1. **Maintenance and inspection are the responsibility of the end user and not of Elmac Technologies Limited.**
2. Flame arresters shall be inspected on a regular basis to ensure that no build-up of solids or liquids occurs in the element as this will adversely affect the performance of the unit during process flow conditions. The maintenance interval must be determined by the user and is governed by the amount and type of particulates in the system in which the unit is installed. The user should check the element in the first few months of operation to find out how quickly particulates accumulate. After cleaning, the element should be thoroughly inspected for damage. Flame arrester

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shall also be inspected if a flashback is known or suspected to have occurred. If it is damaged, flame arrester element must be replaced.

- Depending upon the particular installation, it may be possible to inspect the element with the flame arrester in situ. However, if this is not possible, then the element will have to be removed from the flame arrester for inspection in the case of flame arresters with replaceable elements. Should the flame arrester have a fixed element, then the whole flame arrester will need to be removed from the pipe work for inspection. **Element assemblies can be heavy and will require adequate equipment and manpower to prevent injury when handling.**
- Elements may be cleaned with any suitable solvent followed by a blow through with compressed air. Steam cleaning may also be effective. If the arrester element cannot be cleaned satisfactorily, it shall be replaced. If any deformation is observed, then the element shall be replaced. It is advisable to hold spares in stock in site stores. Always use Elmac replacement parts and quote the flame arrester serial number when ordering spare elements or other parts.
- Removal and replacement of elements (and/or weather hoods when fitted) should be undertaken with care and all washers, spacers and fasteners must be replaced exactly as originally fitted. **Element gaskets shall be replaced every time the flame arrester body is loosened or dismantled for element maintenance and inspection and must be replaced exactly as originally fitted.**

Always use the new gaskets supplied with spare elements and ensure that mating faces are clean. Fasteners should be well lubricated with general purpose grease and tightened to a suitable degree until element is secure with no movement.

Excessive torquing can cause permanent damage to gaskets and housings.

- For installations that require frequent maintenance and minimum downtime, it is recommended that the user purchases a spare element and several spare element gaskets. This spare element can be installed immediately, and the dirty element can then be cleaned and stored as a spare ready for the next maintenance interval.

IN THE EVENT OF ANY QUERY PLEASE CONTACT OUR TECHNICAL SALES DEPARTMENT

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