

Cowhorn Arrangement

Twin Flame Arrester & Valve Arrangement



Protecting People, Property and our Planet

Twin Flame Arrester and Pressure/ Vacuum Relief Valve arrangement, designed specifically for Biogas applications

The Elmac Technologies® Cowhorn Arrangement attaches twin Flame Arresters and Pressure/Vacuum Relief Valves. These devices are fundamental in biogas production, providing superior explosion and pressure protection to Anaerobic Digestion Plants.



Principle of Operation

The increasing demand for renewable energy has intensified the need for products to protect people, process equipment, and the environment. Elmac recognises this need and has developed a unique range of safety products to protect commercial, industrial and on-farm Anaerobic Digestion Plants.

The Elmac Technologies® Cowhorn arrangement attaches a pair of Flame Arresters and Pressure/Vacuum Relief Valves to a 3-way valve, allowing the operator to switch between sets when operational or maintenance needs require.

Elmac's world-leading Flame Arresters protect the Anaerobic Digester against fire and explosion, whilst allowing gases or vapours to flow under normal operating conditions. Simultaneously, the Pressure/Vacuum Relief Valves protect the Digester against overpressure and limits product loss.

The practical duty plus standby arrangement of the Cowhorn allows continuous operation with zero downtime and minimum disruption to Biogas production.

The Cowhorn can also be combined with the Elmac Technologies® Foaming Relief Vent to relieve excessive pressure during a process critical Digester foaming event.

Explosion Groups

The Cowhorn Arrangement is ATEX certified for gases in Explosion Groups IIA & IIB3.

Standards Compliance

Elmac's Cowhorn Arrangement has been type-tested to EN ISO 16852 and approved according to ATEX Directive 2014/34/EU.



Elmac Expertise

Elmac has been manufacturing protection equipment since 1936 and brings 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 and Computational Fluid Dynamics (CFD) studies, employs a Research & Development team renowned for providing solutions engineered for use in the most challenging of industrial applications.

Dimensions

Item	Options
Sizes (DN)	2" to 12" (DN50 to DN300)
Process Connection	ANSI 150# PN10/PN16 Special (on request)
Material	Stainless Steel (standard) Other materials available on request
Ancillary Equipment	Proximity Switches Pipework Pressure Transducers Temperature Sensors (on request)

Features and Benefits

- Specified for Biogas applications (Anaerobic Digesters)
- Superior explosion & pressure protection
- High flow capacity with minimal pressure drop
- Continuous operation with zero downtime & minimum disruption
- Easy in-situ inspection & maintenance
- Integrates twin Flame Arresters & Pressure/Vacuum Relief Valves (Breather Valves)
- ATEX certified for gases in Explosion Groups IIA1 & IIB3
- Practical duty plus standby arrangement
- Can be utilised alongside Elmac's Foaming Relief Vents

Customer Support

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