

# Cowhorn Arrangement



## Twin Flame Arrester and Pressure and Vacuum Conservation Venting System

The Protectoseal Cowhorn Arrangement affixes a pair of Flame Arresters, as well as Pressure and Vacuum Conservation Vents. These devices are essential for biogas production, as they provide superior explosion and pressure protection to anaerobic digestion plants.



## Principle of Operation

The Cowhorn Arrangement attaches a pair of Flame Arresters and Pressure and Vacuum Conservation Vents to a 3-way valve, allowing the operator to switch between sets when operational or maintenance needs require.

Protectoseal's world-class Flame Arresters safeguard the anaerobic digester against fire and explosion while permitting normal gas or vapor flow. The Pressure and Vacuum Conservation Vents simultaneously protect the digester from overpressure and limit product loss.

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

The Cowhorn Arrangement is also compatible with the Protectoseal Foaming Relief Vent for relieving excessive pressure during a process-critical digester foaming event.

## Explosion Gas Groups

The Cowhorn Arrangement is certified for gases in **NEC Group D and C** and **ATEX Groups IIA1 & IIB3**.

## Standards Compliance

The Cowhorn Arrangement is approved in accordance with **Standard 33 CFR part 15** and certified per **ATEX Directive 2014/34/EU**.

Each Cowhorn Arrangement that passes through Protectoseal's facilities undergoes a rigorous inspection and verification of its safety and performance features.

## Protectoseal Expertise

Protectoseal offers industry leading technical leadership with its renowned flame and explosion protection for the most diverse and challenging of industrial applications. By utilizing a range of testing facilities, advanced algorithms and computational fluid dynamics (CFD), our research and development team is constantly looking for new ways to challenge the status quo, thus providing best-in-class innovation.

With over 95 years in the business, we have an established sales and service team to support clients with their initial specifications and throughout the product's life cycle.

## Features and Benefits

- Specified for biogas applications (anaerobic digesters)
- Superior explosion and pressure protection
- Practical duty plus standby arrangement
- Outstanding flow capacity with minimal pressure drop
- Continuous operation with zero downtime

Item	Options
Sizes	50.8mm (2") to 304.8mm (12")
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)

## Customer Support

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