Flame Arrester

End-of-line,deflagration
(Desert Model with Extended Weatherhood)

Product Description

Storagetech™'s End of Line Deflagration Type Flame arresters are static devices that prevent the propagation of a flame or fire from entering into an opening in a vessel discharging flammable vapour.

The product specified in this document has been developed with a Desert Upgrade applied to the standard Model 310 to adapt to harsh desert conditions. The specially designed weather hood used in this desert-type version is extended to the flange level, providing maximum protection in environments with high temperatures and dense dust. The Sectioned baffle design within the weather hood minimises dust particle movement.

The desert-type product upgrade is a version adapted to the 310 model and, thanks to its perpendicular baffles, prevents atmospheric carryovers while ensuring no loss in pressure drop.

StorageTech provides the high quality and reliable solutions for your needs with 40 years of experience.

Your investments will be much safer with Storagetech ™ Flame Arrester solutions, which are completely produced in accordance with international norms.

Standard Sizes	2" to 12", larger sizes are available upon request.
Body / Flanges	1- Carbon steel 2- Stainless steel AISI 316 –L or 304-L 3- Aluminium 4- Customer Specification
Flange Drilling	ANSI #150, PN16, and Special
Flame Element	Stainless steel 316-L
Gasket	Nitrile, Viton, PTFE, Special
Screen	SS 304
Paint Finish	1- Powder Coating, Colour RAL 9006 2- Epoxy Paint, Colour RAL 9006 3- Customer Specification
ATEX Cert	Ex II 1/2 G IIA , G IIB

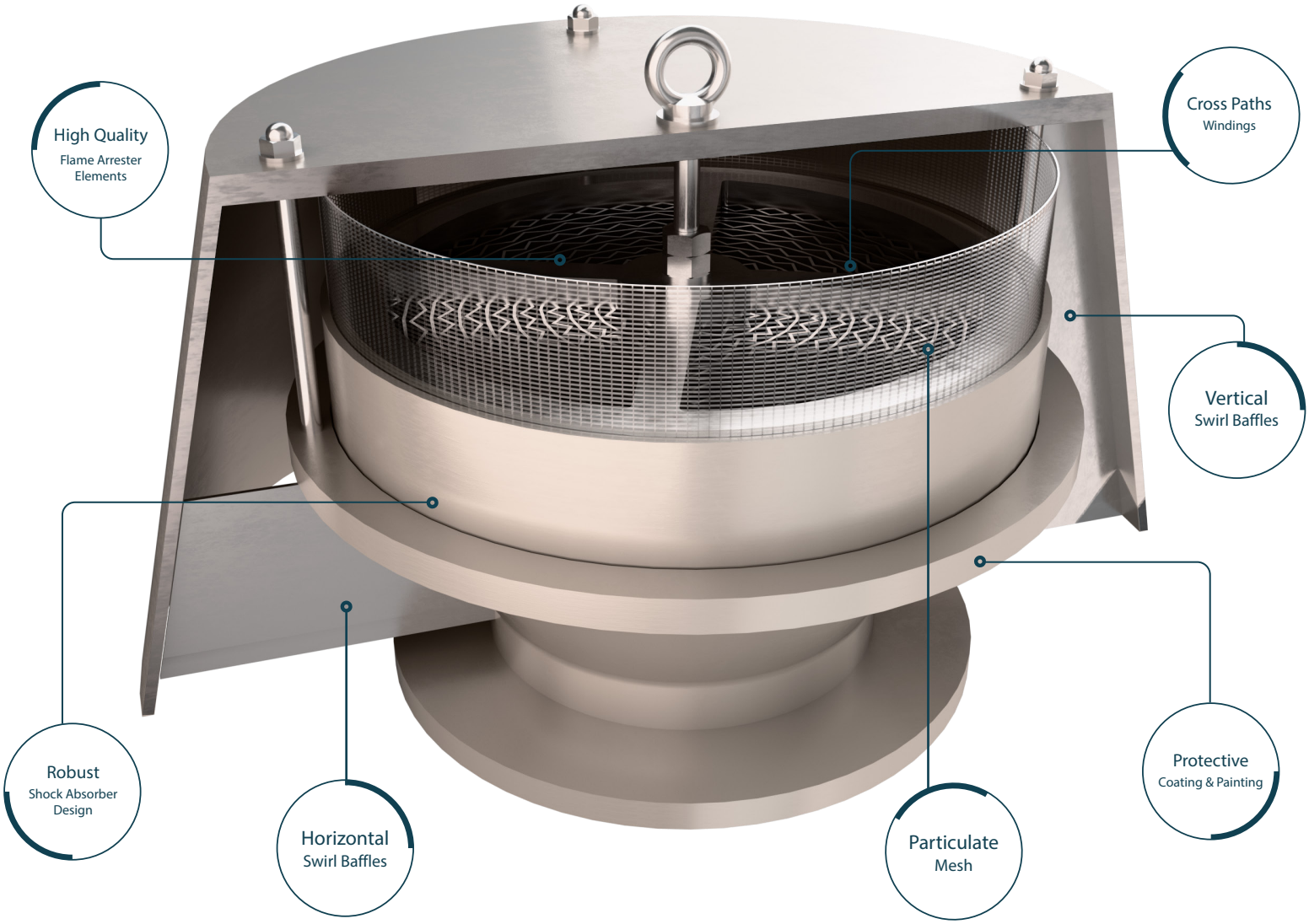
Key Features & Compliance

Standard Compliance

In-Line Deflagration Flame Arresters has been type-tested to ISO/IEC 80079-49:2024 and approved according to ATEX Directive 2014/34/EU.

Design & Manufacturing Specifications

The size of the vent will be calculated in accordance with API Standard 2000 - Venting Atmospheric and Low Pressure Storage Tanks considering international standards.



Key Features

- Desert Upgrade: Extended weather hood down to the flange level with internally supported baffled areas for high rigidity and dust protection.
- StorageTech™ Model 310 trim materials are 316 stainless steel. Dual Certificated.
- Easy to maintenance
- Easy to install without special tools.
- Standard manufacturing comes with ANSI 150# flange; other flange types are available on request.

Product Benefits

Unconfined Deflagration

Unconfined deflagration is caused by the ignition of a flammable gas outside a container or equipment. For example, vent gas from a gasoline tank can create a cloud of flammable vapor around it. A lit cigarette, static electricity or lightning can ignite this vapor and the resulting flame can return to the tank.

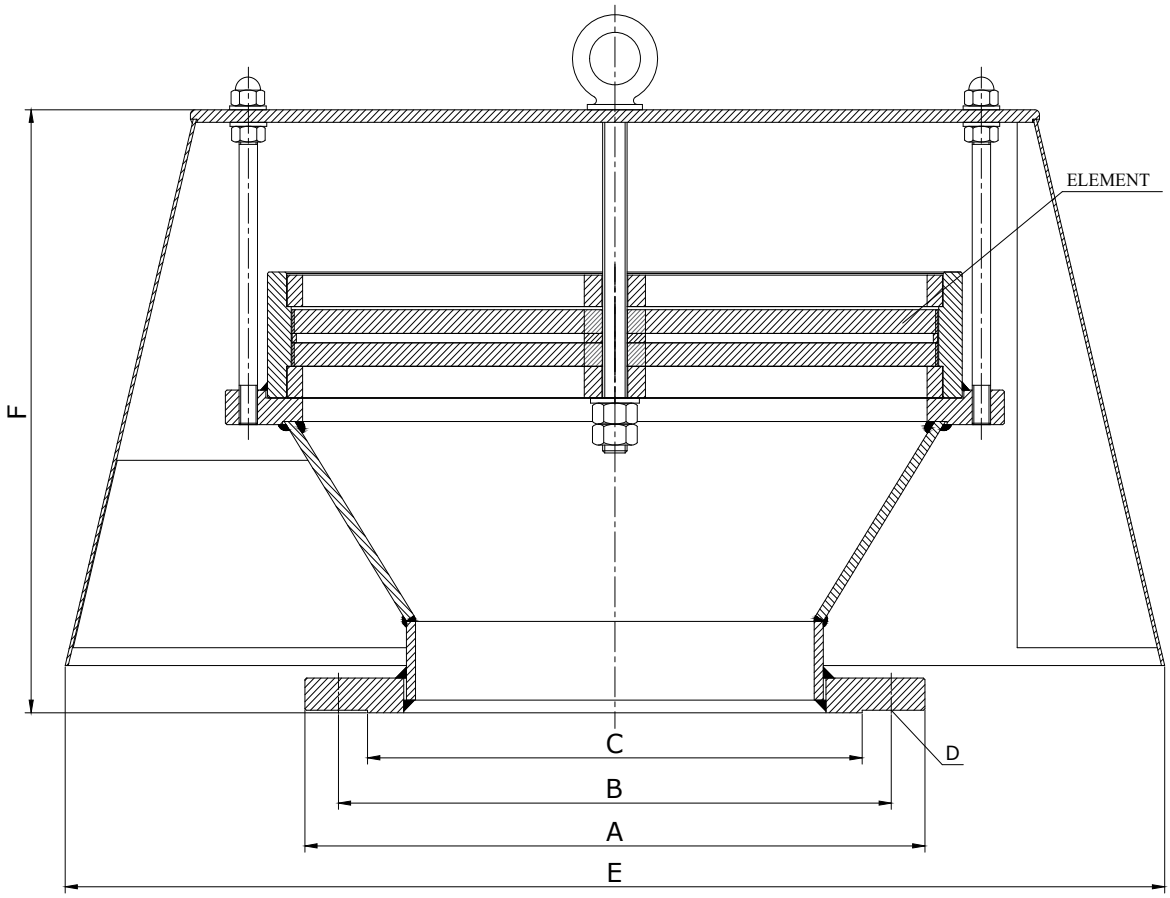
The area of each passage determines the level of protection that the element provides. Storagetech™ Model 310 Deflagration Flame Arrester has a Maximum Experimental Safe Gap as per standard, and is suitable for gas groups IIA and IIB.

Maintenance & Field Operations

Regular inspection and maintenance of flame arresters is essential. Small cells or components of the flame arrester are prone to dirt collection and clogging, leading to increased pressure drop. Damaged or dirty elements should be replaced, though it is usually possible to clean the element for reuse.

The Desert Model specifically reduces these maintenance requirements and extends service life, preventing the rapid clogging typically associated with harsh, dusty field conditions.

Technical Drawing



SIZE		A		B		C		D		E	F
NPS	DN	150#	PN16	150#	PN16	150#	PN16	150#	PN16		
2"	50	Ø152	Ø165	Ø120,6	Ø125	Ø92,1	Ø102	Ø19X4	Ø18X4	Ø350	250
3"	80	Ø190	Ø200	Ø152,4	Ø160	Ø127	Ø138	Ø19X4	Ø18X8	Ø375	275
4"	100	Ø229	Ø220	Ø190,5	Ø180	Ø157,2	Ø158	Ø19X8	Ø18X8	Ø400	300
6"	150	Ø279	Ø285	Ø241,3	Ø240	Ø215,9	Ø212	Ø22,2X8	Ø22X8	Ø450	300
8"	200	Ø343	Ø340	Ø298,4	Ø295	Ø269,9	Ø268	Ø22,2X8	Ø22X12	Ø500	325
10"	250	Ø406	Ø405	Ø362	Ø355	Ø323,8	Ø320	Ø25,4X12	Ø26X12	Ø720	380
12"	300	Ø483	Ø460	Ø431,8	Ø410	Ø381	Ø378	Ø25,4X12	Ø26X12	Ø820	380

NPS	DN	A (150#)	A (PN16)	B (150#)	B (PN16)	C (150#)	C (PN16)	D (150#)	D (PN16)	E	F
2"	50	Ø152	Ø165	Ø120.6	Ø125	Ø92.1	Ø102	Ø19x4	Ø18x4	Ø350	250
3"	80	Ø190	Ø200	Ø152.4	Ø160	Ø127	Ø138	Ø19x4	Ø18x8	Ø375	275
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Gas Group	Pipe Size	1000	2000	3000	4000	5000	6000	8000	10000	12000	16000	18000
IIA/IIB	DN200 (8")	1,1	4,9	10,8	17,3	29,4	38	86,6	149,8	173,1	192,2	-
IIA/IIB	DN250 (10")	-	4	8,3	14,8	23	33,2	58,7	91,15	130,5	171,3	210,2
IIA/IIB	DN300 (12")	-	1,8	4	7,1	11,1	15,9	44,1	74,2	108,9	138,4	178,6

Product Recommendations

Storagetech™ manufactures storage tank equipment, such as flame arresters, breather valves, gauge hatches, floating roofs, and floating suction pipe.

Biogas Safety Selector Valve (SSV)

Model: 250

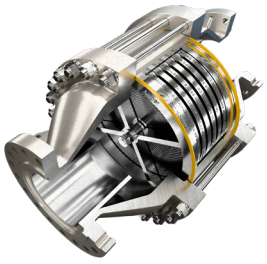
The Storagetech Biogas Safety Selector Valve (SSV) is an advanced, cost-effective alternative to traditional three-way plug valves, designed for seamless operation in biogas systems. It enables smooth switching between Pressure and Vacuum Relief Valves (PVRs) with Flame Arresters, ensuring uninterrupted operation during maintenance.

Pressure Vacuum Relief Valve With Flame Arrestor

End-Of-Line, Weight Loaded, Combination, Atmospheric Deflagration Proof

Model: 300

Storagetech™'s Model 300 Pressure Vacuum Relief Valve with Flame Arrestor provides protection to bulk storage tanks and vessels from over and under pressurization.



Flame Arrestor

Vertical, In-Line, Detonation

Model: 320

Storagetech™'s Model 320 In-line Detonation Flame Arrestor (also called flame arrestor or fire arrestor) is designed for installation in gas pipelines. Detonation occurs when a flame travelling through the pipeline reaches supersonic velocities, usually as a result of the pipeline configuration or pipeline surface roughness. Changes in gas density and pressure causes the flame velocity to metamorphose from subsonic to supersonic.

Flame Arrestor

Horizontal, In-Line, Detonation

Model: 321

Storagetech™'s Model 321 In-line Detonation Flame Arrestor (also called flame arrestor or fire arrestor) is designed for installation in gas pipelines. Detonation occurs when a flame travelling through the pipeline reaches supersonic velocities, usually as a result of the pipeline configuration or pipeline surface roughness. Changes in gas density and pressure causes the flame velocity to metamorphose from subsonic to supersonic.

Storagetech
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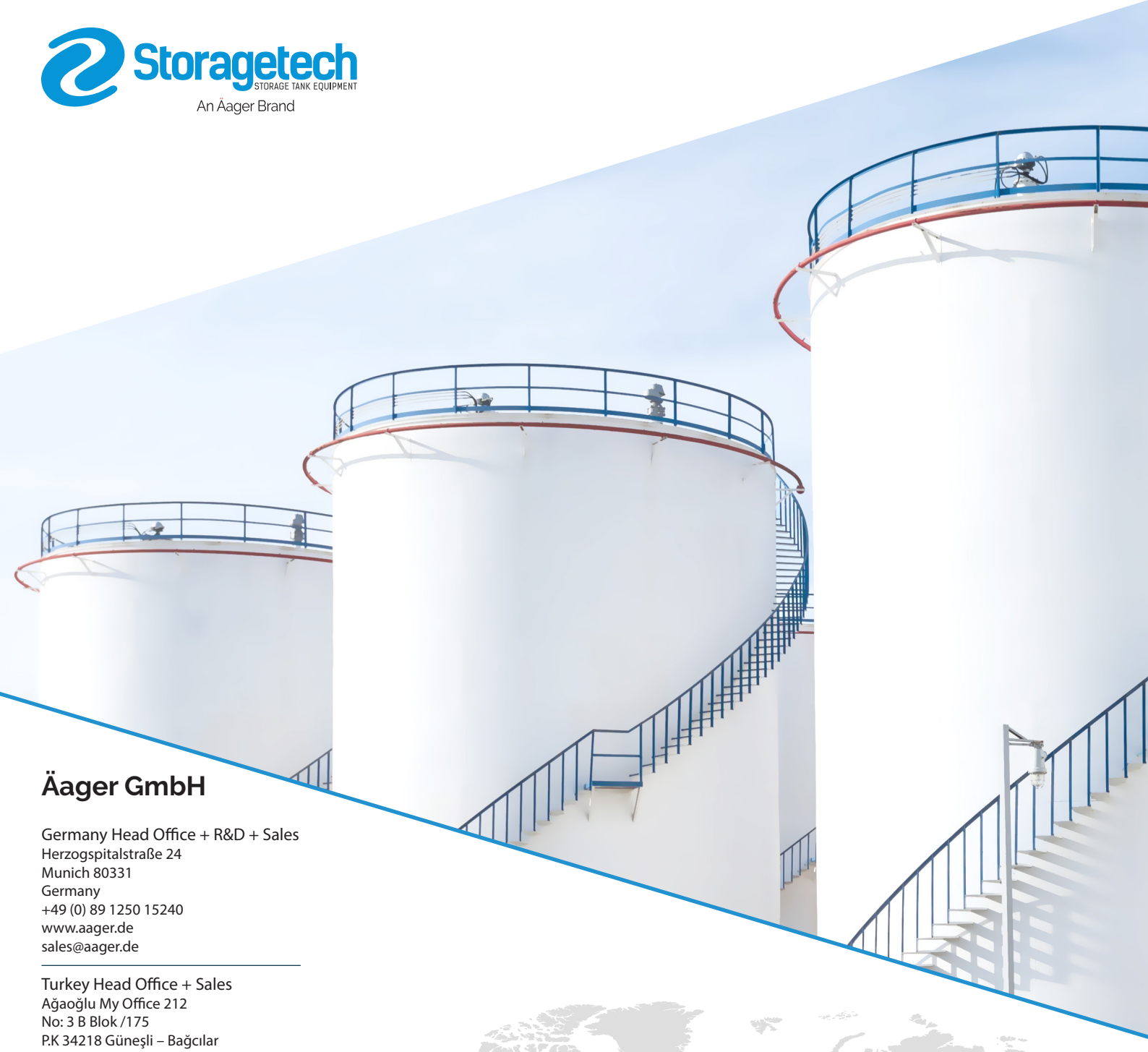
An Äager Brand



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Data Sheet Series

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YouTube Video
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