

GAS CONDITIONING



The TRITON™ gas conditioning element system represents the Best Available Commercial Technology (BACT) for removing liquid aerosols and particulate from gas streams commonly found in applications such as:

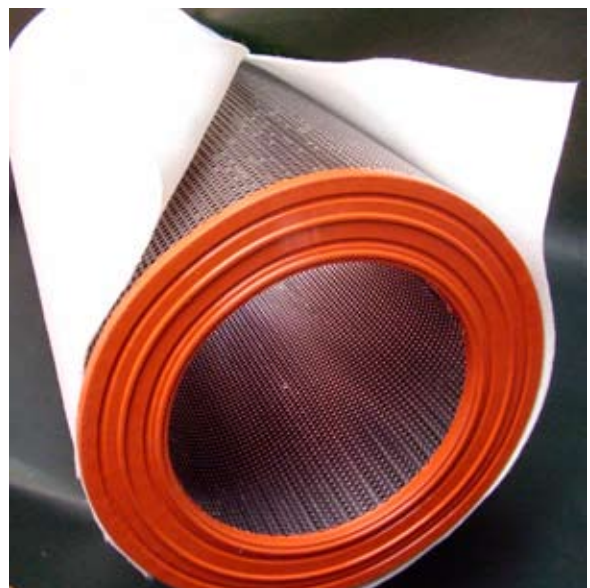
- Gas Compression and Transmission
- Gas Turbine Fuel Systems
- Boiler, Heater and Furnace Burners
- Gas Separation Membranes
- Catalyst Bed Protection (Mole Sieve, etc.)
- Liquid Scavenger Applications (Glycol, Amines, etc.)

The TRITON™ gas conditioning element system brings several innovations to industry that raise the standard of performance and utility. The result is improved performance in a smaller package.

The coalescing stages of the TRITON™ gas conditioning element system remove aerosols of oil and water using a combination of proprietary filtration media. The result is a coalescing process capable of removing aerosols as small as 0.1 micron (μm) with 99.98% efficiency at 0.3 micron (μm). The TRITON™ gas conditioning element system has recently been enhanced with the addition of an oleophobic/hydrophobic media modification. This modification causes the captured liquids to drain out of the element system at an accelerated rate. This feature dramatically increases the amount of liquid the element system can remove during high flow system upsets. A high temperature process bonds this treatment to the media to withstand exposure to hydrocarbon liquids over the life of the element.

By combining state-of-the-art coalescing technology with an integral upstream pre-filter, the TRITON™ gas conditioning element system eliminates the need for upstream filtration systems and the associated piping, valves and instrumentation. The addition of this high loft pre-filter media adds significant dirt holding capacity, allowing the element system to go long periods between required change-outs.

The TRITON™ gas conditioning element system uses only one element in the pressure vessel. This means that the time, effort and expertise required for maintenance is much less than traditional systems. The vessel itself is simpler to manufacture. In addition, the element system uses integrally molded seals so there are no o-rings or loose gaskets to complicate getting a good seal.





Performance Specifications

Filtration Efficiency	.01 micron nominal with coalescing efficiency of 99.98% at 0.3 micron (um) per ANSI/CAGI ADF 400
Flow Rate (air @ < 1 psi Δ)	Flow Per Single Element .05 – 1.8 mmscd @ 2 psig operating pressure 0.5 – 29.2 mmscd @ 50 psig operating pressure 2.1 – 73.2 mmscd @ 1000 psig operating pressure
Temperature	Standard Element to 275° F (continuous) High Temp Element to 400° F (continuous)



FEATURE	TRITON™ ADVANTAGE	BENEFIT
High efficiency element system	BACT approach to gas conditioning	Better equipment performance and reduced downtime due to maintenance.
Integral pre-filtration layer	Reduces need for separate pre-filtration vessel to protect coalescing section	Reduces cost of additional vessels, valves, associated instrumentation and more complicated maintenance procedures. Reduces the total footprint.
Low pressure drop	Less resistance to flow	Lower energy costs – more throughput.
Oleophobic / hydrophobic media modification	Improved drainage of captured liquids	Less pressure drop under all flow conditions (100% turndown) and improved performance during high liquid system upsets.
Single element design	Reduces the number of elements in pressure vessel to one	Short maintenance cycle – single bolt installation. Simpler vessel design, smaller footprint.
Element has integrally molded end-caps	Elimination of o-rings and gaskets	No possibility of parts coming loose during installation process. No need to clean seats or grooves. No need to go into housing for maintenance or clean-up.
High temperature materials	Increased operating temperatures	Standard element can be used under working conditions of 275° F (continuous) with an option to go to 400° F (continuous).

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