

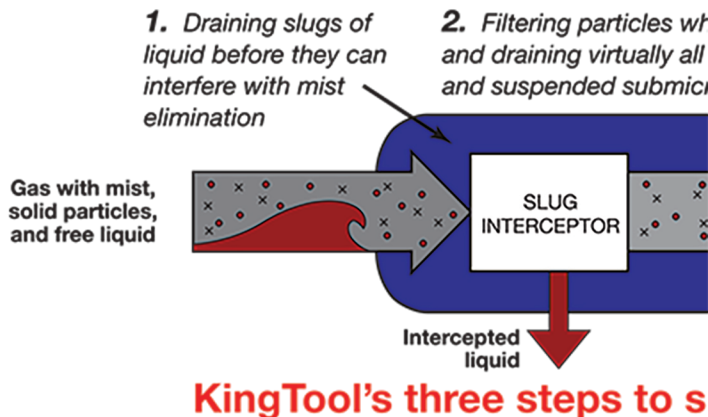
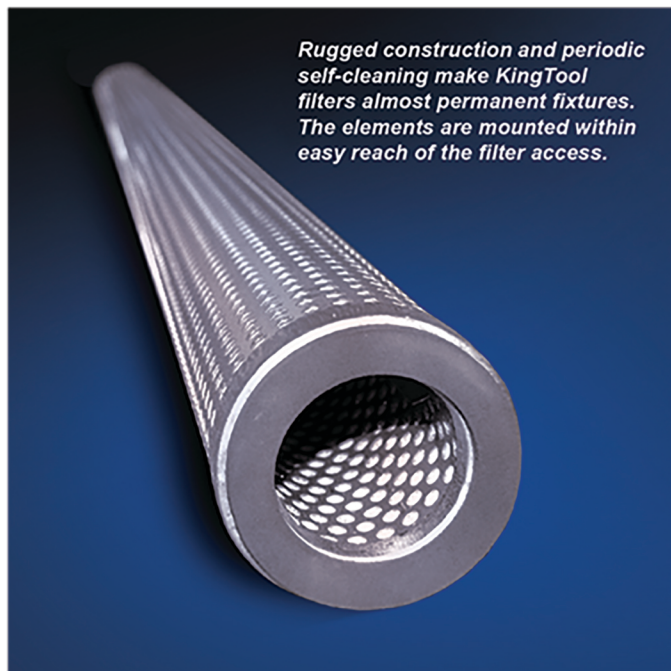
Automatic Self-Cleaning Reverse Flow Mist Coalescer with Integral Slug Interceptor



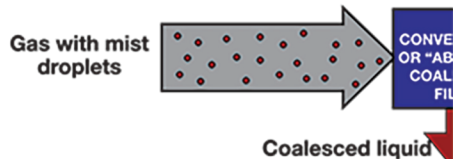
KingTool
COMPANY

DESIGNED FOR EFFICIENCY...ENGINEERED FOR PERFORMANCE.

The only separator that will pro salt mist, slugs, and the — and it cleans



Uncompromising design and sizing avoid generating fugitive aerosol mist.



Much more than a filter or separator unit

Until you realize what a KingTool Automatic Self-Cleaning Reverse Flow Mist Coalescer with Integral Slug Interceptor can do, you might mistake it for something less. Like a conventional filter separator, it contains an array of coalescing filter elements. Fibers catch and hold solid particles while coalescing and draining fine mist particles, but the resemblance ends there.

"Reverse flow" means gas travels from the inside of the elements to the outside. This hydrodynamic pattern, combined with proprietary internal features and scientific sizing based on all properties of the flowing materials, completely eliminates re-entrainment of coalesced liquid including any dissolved solids and suspended sub-micron particles (see diagrams above). The KingTool Reverse Flow Coalescer also includes an integral slug interceptor that replaces the need for the "two vessel approach" of a knockout vessel followed by a filter separator. The self-cleaning feature allows a blow down in the backflow line of selected elements while the unit remains 100% in service.

Effective self-cleaning and slug interception

A self-cleaning cycle is performed by use of a hand crank or an electric motor. The motor may be started manually or by a timer or differential pressure switch. In less than one minute, every filter element is connected to a backflow line leading through a regulator to suitable disposal. Only a few elements at a time are out of service during the one minute, self-cleaning cycle. Filter life is typically extended by a factor of 20 to 50 times the normal run time.

This feature is more than just a perfunctory blow-down. Numerous details have been carefully engineered – including pressure drops, patterns of liquid and gas flow, and specifically designed filter elements – to dislodge and flush out virtually all solids.

The integral slug interceptor is sized to keep free liquid and slugs away from the filter elements. Liquid drains to an appropriately sized lower liquid barrel for discharge.

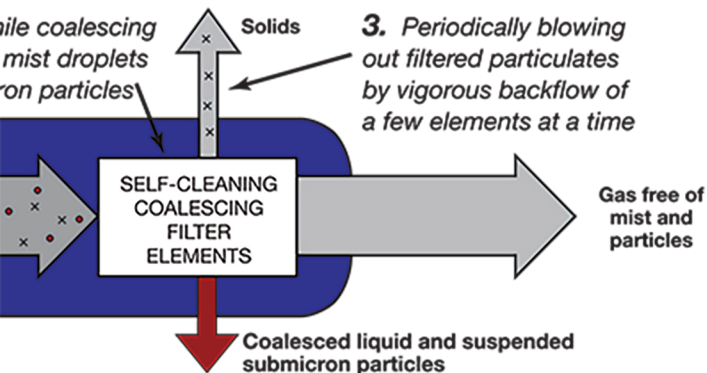
Use it where nothing else can handle the problem

These units are custom engineered and sized for each application to take care of the most difficult gas contaminants, such as the following:

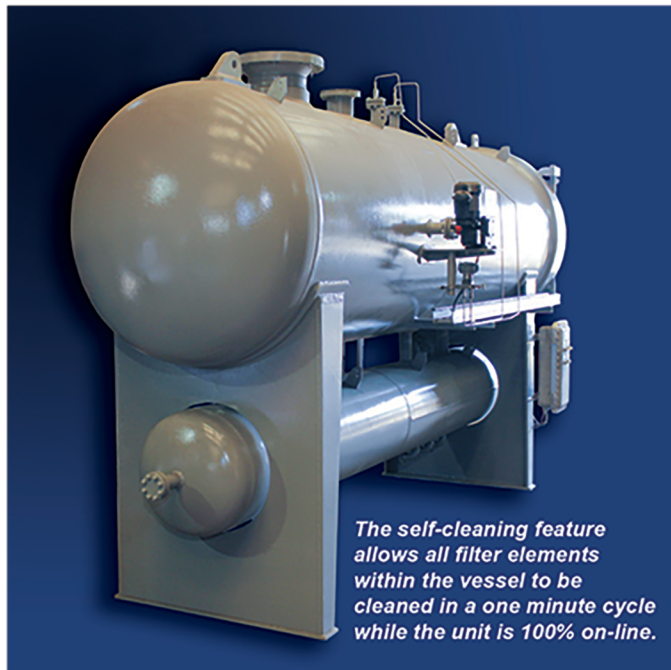
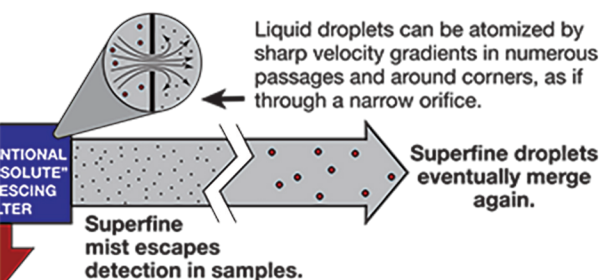
- Asphaltene & diamondoid particles
- Hydrocarbon & chemical mist
- Compressor oil mist
- Sour gas residues
- Salt water mist

You may not need a KingTool Reverse Flow Coalescer for every job, but there are cases which cannot be handled by any other type of separation equipment. For instance, iron sulfide particles from sour gas pipelines break up into aerosols that penetrate the finest filters. In a KingTool Reverse Flow Coalescer, such particles are flushed out in the liquid, with virtually zero re-entrainment.

Protect your equipment against finest iron sulfide dust *itself on-line!*



Solving your worst problems



The self-cleaning feature allows all filter elements within the vessel to be cleaned in a one minute cycle while the unit is 100% on-line.

Proven in real-world field tests since 1969

For over 45 years, thousands of these units have been protecting critical equipment in gas pipelines, refineries, chemical plants, power plants, and offshore facilities:

- Dehydrators, Amine Contactors & Molecular sieve beds
- Engine fuel & low NOx burners
- Injection wells
- Compressors

No KingTool Reverse Flow Coalescer has ever failed in the service for which it was designed. Users are happy to tell about their experiences. Long-term field success is a more reliable witness than performance tests using inlet and outlet samples, subject to gross errors. Our success is based on proprietary design principles and data derived from laboratory and field research. All physical properties of your liquids and solids are considered.

Greatly reduce maintenance and down time

Periodic self-cleaning lets you keep running on the same coalescing filter elements at peak efficiency for several years in typical cases. Sudden plugging by a particle storm never results in an emergency shutdown. Filter replacement can always be deferred until a conveniently scheduled time.

Exclusive computer design methods and special internal features handle overloads and wet restart surges. The custom interceptor swallows slugs that would disrupt mist elimination or even destroy filter elements. Downstream equipment maintenance stays low.

Although a vertical configuration can be furnished for tighter spots, the standard horizontal arrangement allows exceptionally convenient access. Filter elements lie within arm's reach, and replacement is a comparatively quick and clean job for one person.

A cost-effective investment over the long term

With a KingTool Reverse Flow Coalescer, you know you have bought the best guaranteed protection for your equipment and your operation. It pays for itself the first time you eliminate the cost of overhauling a compressor or replacing a contaminated glycol or amine contactor due to carryover during a sudden upset. The KingTool Reverse Flow Coalescer offers non-interruptible service by avoiding shutdowns for filter replacement, as well as, eliminates routine maintenance expenses.

KingTool keeps its own costs low and quality high with an integrated engineering and manufacturing facility that handles all work in-house including the manufacture of all internals (KingTool Company vane mist extractors, filter elements and quick opening yoke type closures), plate rolling, all NDE testing, stress relieving, hydrotesting, sandblasting and painting.

Let KingTool engineers show you the economics and explain the technical details of the Reverse Flow Coalescer. Call us for a free seminar at your location or ours along with a tour of our Plant.

Solving the most difficult problems in removing liquids and solids from gas streams



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