



QUALITY FILTRATION MADE SIMPLE

TWIST-LOK™ Filter Series

Versatile Contaminant Control

**Making the World Safer,
Healthier and More Productive**



Twist-LOK™ Filter Series Versatile Contaminant Control

The Twist-LOK™ Filter's versatile separation system offers superior contaminant removal and coalescing efficiency with the added feature of our patented Twist-LOK™ locking mechanism. This feature gives the user the ability to customize cartridges, as needed, to suit specific operating conditions.

This innovative new design optimizes performance and reliability while processing high liquid loads with exceptional solid particulate handling. Designed to remove liquid and solid contaminants from natural and process gas, the assembled Twist-LOK™ cartridge provides both a first stage "outside to inside" flow direction filter coalescing element and a second stage "inside to outside" flow coalescing element. With traditional filtration/coalescing elements, both stages have to be replaced; often disposing of a still viable second stage element. The Twist-LOK™ Series allows the option to replace and optimize the first stage without having to replace the second stage.

Custom Filtration Approach

Our approach to dual stage coalescing is to first understand the application and the contaminant. With a specific issue to address, we will create an optimal media combination that best fits your process. By customizing the element solution specifically to your process it creates the ideal blend of filtration, coalescing and drainage.

Cost Savings

With separate filtration and coalescing stages of the element, the first stage filter can be changed multiple times without the need to change the 2nd stage coalescer. Twist-LOK™ elements are also half the length of traditional elements reducing both shipping cost and possible damage to elements during transport. Therefore, total cost of ownership is approximately half of the normal maintenance cost of similar industry solutions.

Process Optimization

The goal of process optimization is to minimize cost while maximizing throughput and/or efficiency. Those can be achieved by simply changing the first or second stage element to meet the contaminant requirement while never compromising the coalescing efficiency.

CUSTOM MEDIA OPTIONS

- Multiple media options for exact application optimization
- Innovative Tri-SHIELD™ Fibers provide greater contaminant holding than traditional depth media

EFFICIENCY & OPTIMIZATION

- Market standard efficiencies from 0.3 micron at 99.9%. (Other efficiencies available)
- Absolute and nominal micron efficiencies
- Extend life of coalescing elements

LOCKING MECHANISM

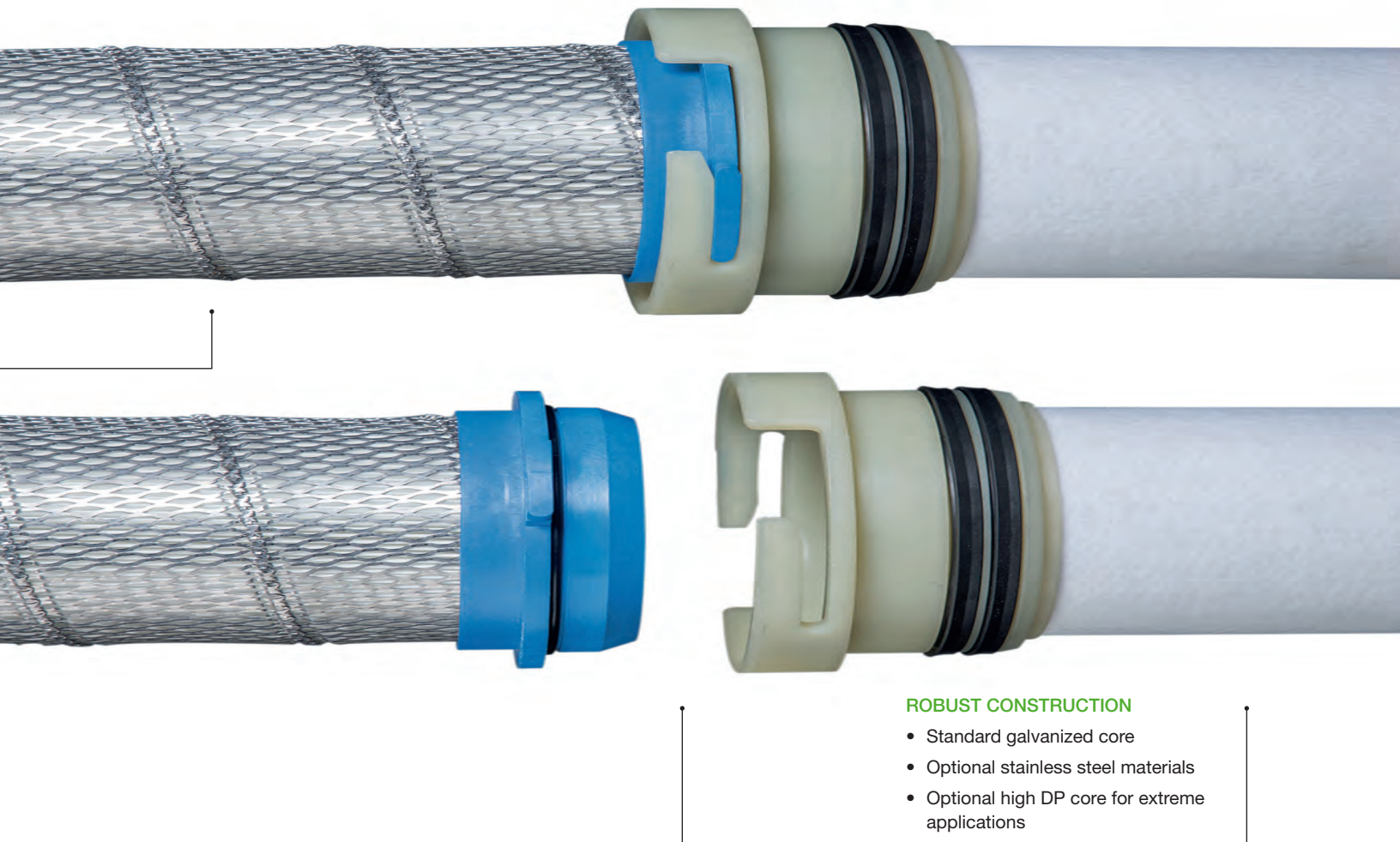
- Locking mechanism provides structural reinforcement
- Shields riser gasket from incoming contaminants
- Gradient fit provides multiple sealing surfaces at variable gasket heights

Tri-SHIELD™ Media

This unique engineered blend of multiple fibers sizes and shapes, including Tri-Lobal, are specifically layered in an advanced spiral gradient depth construction. This process gives TRI-SHIELD superior dirt loading and higher efficiency when compared to traditional depth filtration medias.

The media allows for targeted contaminant collection zones where particles lose velocity and collect, effectively maximizing total media and void utilization.

Each layer performs a specific contaminant management function which gives us the ability to engineer different layers of media even for the most challenging applications.



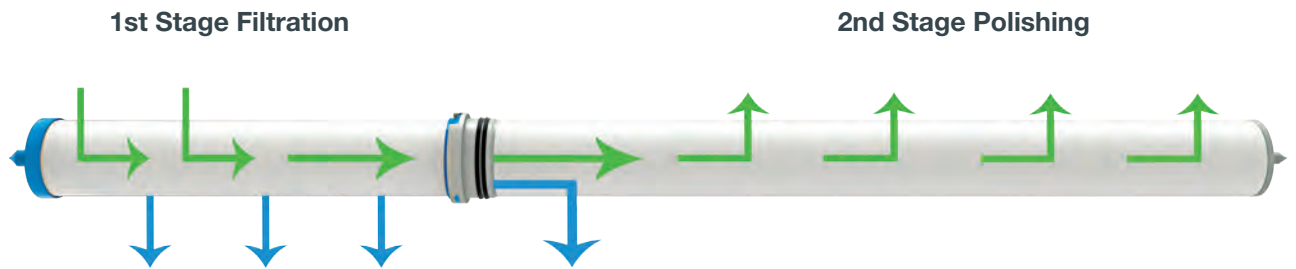
ROBUST CONSTRUCTION

- Standard galvanized core
- Optional stainless steel materials
- Optional high DP core for extreme applications

Features & Benefits

- Designed for the Jonell Systems SentinelTL™ horizontal coalescer
- Twist-LOK™ Series integrated solids shield helps prevent solids build up behind the gasket allowing for easier removal of elements
- Efficient removal of liquid aerosols and solid particulates to protect downstream equipment
- Permits replacement of first stage filter elements while the second stage coalescing elements remains in the vessel
- Twist-LOK™ Series uses the patent pending gradient fit sealing system resulting in multiple sealing points that have proven critical in the field in successfully reaching recommended change out differential pressure. The result is a much greater ability to seal and reach terminal pressure even in cases where risers are out of round or bent
- Twist-LOK™ Series locking mechanism provides structural re-enforcement and shielding of riser gasket from incoming solids
- Robust dust guard adds additional strength preventing premature element collapse
- Synthetic materials thermally bonded to resist erosion at high inlet velocities

How the Twist-LOK™ Operates Within Your Process



Product enters the filter from an outside to inside flow. The filter then removes solids, semi-solids and large liquid droplets. The second stage of removal is inside to outside flow, aiding in the coalescing of ultra-fine liquids into larger droplets which are then drained into the sump.

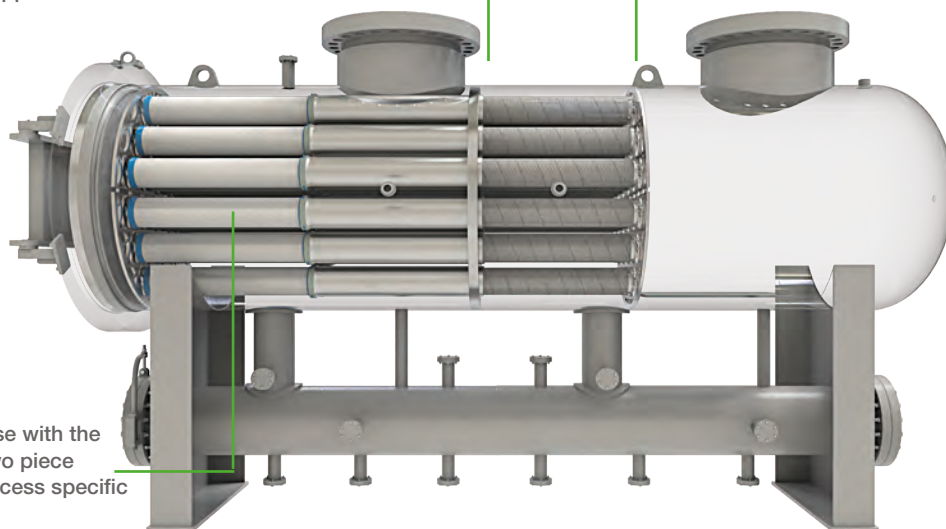
As our name implies the [SentinelTL™](#) is the Gate Keeper to your critical processes. Properly designed and implemented filtration equipment is paramount for the protection of your critical processes. The SentinelTL™ features the patented Twist-LOK™ Filter Series offering a multitude of customizable element configurations allowing the equipment owner the ability to optimize filtration efficiency based on the contaminants encountered in the process flow.

SentinelTL™ + Twist-LOK

Heavy duty ESP with double o-ring positive element sealing and machined element riser support

Reinforced downstream element support grid for higher differential pressures and easier element installation

Designed for use with the Twist-LOK™ two piece element for process specific customization





QUALITY FILTRATION MADE SIMPLE

Twist-LOK™ JGC Series

How These Medias Compare

Standard Media	1st Stage	2nd Stage
TRI-SHIELD™ POLYESTER	Ideal for applications with large liquid loading and large solid contaminant particle distributions	Ideal for applications involving semi-solids which may migrate past 1st stage pre-filter
MICRO-GLASS	Depth micro-glass for efficient solids capture and liquid separation	High surface area micro-glass for efficient coalescing
PLEATED MICRO-GLASS	High surface area pleated media known for very strong solids holding capability in relatively dry gas with strong compatibility	For use in challenging coalescing applications
PLEATED POLYESTER	High surface area pleated media known for very strong solids holding capability	Not recommended for use in second stage

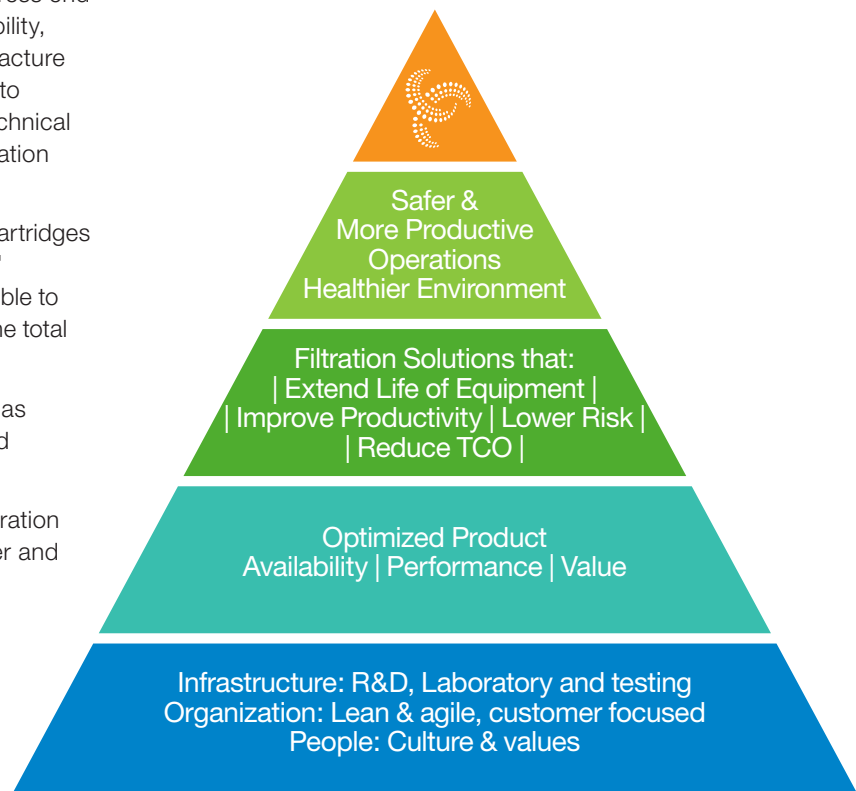
Jonell Systems, a Filtration Group brand, partners with oil, gas, refining, chemical and power companies worldwide to address end to end filtration challenges to improve process safety, reliability, productivity and ultimately business profitability. We manufacture complete systems, vessels and a wide range of cartridges to optimize your filtration processes. This coupled with our technical expertise, allows us to solve even the most challenging filtration applications.

Jonell Systems has a long history of developing innovative cartridges for the oil & gas industry including the two piece Twist-LOK™ cartridge for gas coalescing which allows customers to be able to change only half of the cartridge as needed thus reducing the total cost of ownership for the solution.

Jonell Systems also introduced SentinelTL™, a horizontal gas coalescer with 10X greater solid capacity, 35X greater liquid capacity to deliver up to 40% cost savings for customers.

As a part of Filtration Group, the world's fastest growing filtration company, it is our mission to make the world safer, healthier and more productive.

JONELL SYSTEMS ADVANTAGE



Filtration Group®
Process Technologies

We understand our customers rely on our knowledge, expertise and experience for innovative filtration solutions.
Customers depend on us – we deliver.

Our brands include:







JONELL SYSTEMS™
Filtration Group®