

Refining
Petrochemicals



Filtration Applications for the Refining & Petrochemical Industries

Process Proven Performance



A Filtration Group Company

Quality Filtration Made Simple



Filtration Applications for the Refinery & Petrochemical Industry

In the Refinery and Petrochemical Industry, an efficient filtration/separation system is critical to the reliability and performance of the physical assets that process petroleum products. Optimizing the reliability of these filtration systems is essential in maximizing your operational performance.

Jonell™ has worked diligently to advance the economics of Petroleum Filtration, delivering a variety of filtration/separation solutions to meet your specific needs. Utilizing this experience, **Jonell** has developed thousands of different filter elements covering a wide variety of filtration applications.

BENEFITS of an Optimized Filtration/Separation System include:

- Increased Process Performance
- Decreased Downtime
- Lower Maintenance Costs
- Improved Operating Efficiencies

Jonell has focused on understanding the filtration/separation needs of each of our customers. Our custom-designed solutions have consistently proven to enhance maintenance operations while increasing operating efficiencies. To meet the most demanding petroleum applications, **Jonell's** filter elements are available in a wide variety of materials including: polyester, polypropylene, cotton, nylon, Teflon®, Nomex®, metals, micro-fiberglass, resin-bonded cellulose, etc.

Air & Gas Filter Elements

- Air Filters - Paneled / Round
- Gas Filters - Pleated / Depth
- Gas Coalescing Filters - Pleated / Depth

Liquid Filter Elements

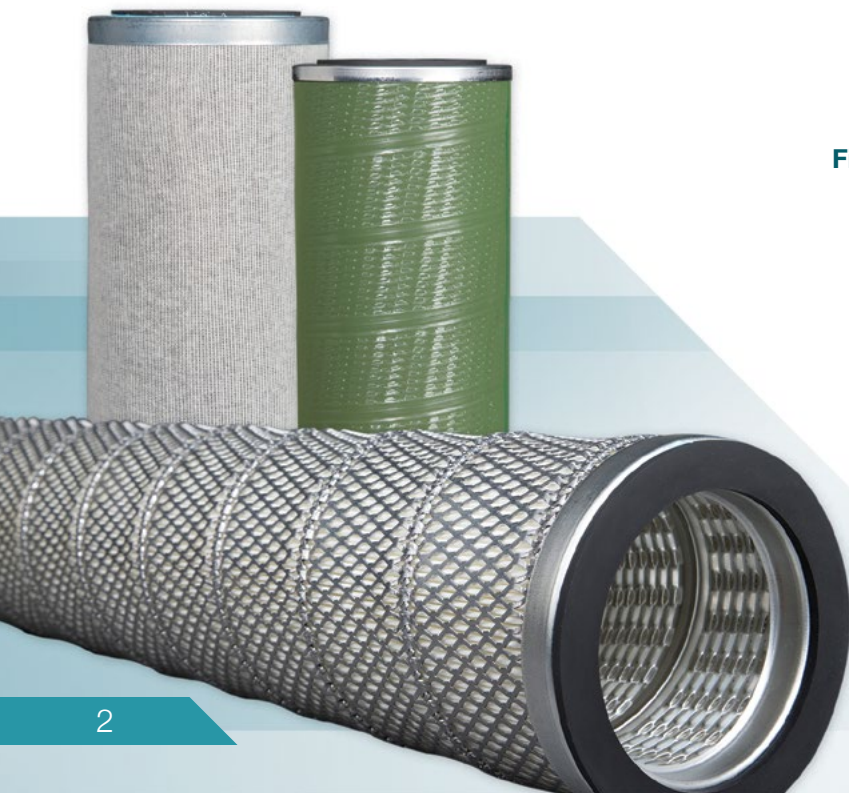
- Liquid Filters - Pleated / Depth
- Bag Style Filters
- Activated Carbon
- Two Phase Liquid Separation

Filter Vessel Internals

- Mist Eliminators
- Element Support Risers
- Cyclonic Separators
- Rapid-LOK™ Element Retention Plates

Filtration Support Services

- Process Optimization
- Product Customization
- Custom Product Stocking Program
- Filtration/Separation Cartridge Replacement





Jonell Filtration Research & Development for the Refinery & Petrochemical Industry

The Jonell™ commitment to improving our clients' process operations is demonstrated by our constant focus on new filtration technology. We have assembled a team of filtration specialists with extensive experience in developing creative and cost-effective solutions to difficult problems that span multiple applications.

Helping our customers create value includes a deep understanding of both filtration media and processes. Our R&D facility has extensive quality testing equipment to help ensure our products perform to the highest standard, even in the most extreme environments.

Jonell has accumulated a distinguished history of technological innovations and achievements in the filtration industry. Our goal is to ensure that our clients benefit from filtration solutions that are continuously improving. Jonell not only makes better filters; we are constantly striving to make our filters better – incorporating the latest in filtration and separation technology.

We provide a range of technical services focused on providing effective and efficient process solutions:

- Process Optimization
- Filtration Feasibility Studies
- Filtration Customization
- Solids Characterization
- Material Compatibility and Selection
- Element Dissection Analysis
- Problem Shooting Consultation
- Consultation in Feed Study Prior to Product Release





Refinery Applications

Jonell™ has extensive experience in integrated refinery solutions covering major critical process applications including:

Amine Sweetening & Tail Gas Treating Units

Liquid hydrocarbons and particulates from the amine system can cause contactor fouling and foaming.

Jonell Product Solutions

Micro-DEP™ and Micro-LOK™ Series vapor phase reverse flow coalescing elements to remove liquid hydrocarbons from feed gas, thus minimizing foaming.

PhasePUR™ Series two phase liquid coalescing elements for liquid separation after flash tank.

LiquiPleat™ Series elements to remove fine particulates from recirculating amine.

CarboPUR™ Series activated carbon adsorption elements for removal of hydrocarbons from recirculating amine stream.

Refinery Fuel Gas

Liquids and solids will foul and plug burners and combustors. Low NOx burners are very sensitive to plugging.

Jonell Product Solutions

Micro-DEP™ and Micro-LOK™ Series vapor phase coalescing elements to remove liquids and particulates from fuel gas and to assure minimal pollutant formation without sacrificing operational efficiency.

Catalyst Protection

Water and solid particulates can deactivate catalyst beds and plug stream nozzles reducing reactor efficiency.

Jonell Product Solutions

Micro-DEP™ and Micro-LOK™ Series coalescing elements for removal of liquids and solids from a gas stream.

GasPleat™ Series pleated liquid elements to capture solids downstream of catalyst bed.

LiquiPleat™ Series pleated liquid elements for removal of solid particulates.

PhasePUR™ Series two-phase liquid coalescing elements for removal of water.





Final Products Filtration

Contaminants such as rust, scales, solids, and suspended water can damage equipment and lower product specifications.

Jonell Products Solutions

LiquiPleat™ Series pleated synthetic liquid elements to remove particulates.

PhasePUR™ Series coalescing elements to remove entrained water.

Amine and Sulfur Recovery

Carryover amine can contaminate catalyst at the sulfur recovery unit, while carry over hydrocarbons and treating chemicals will cause foaming in amine contactors.

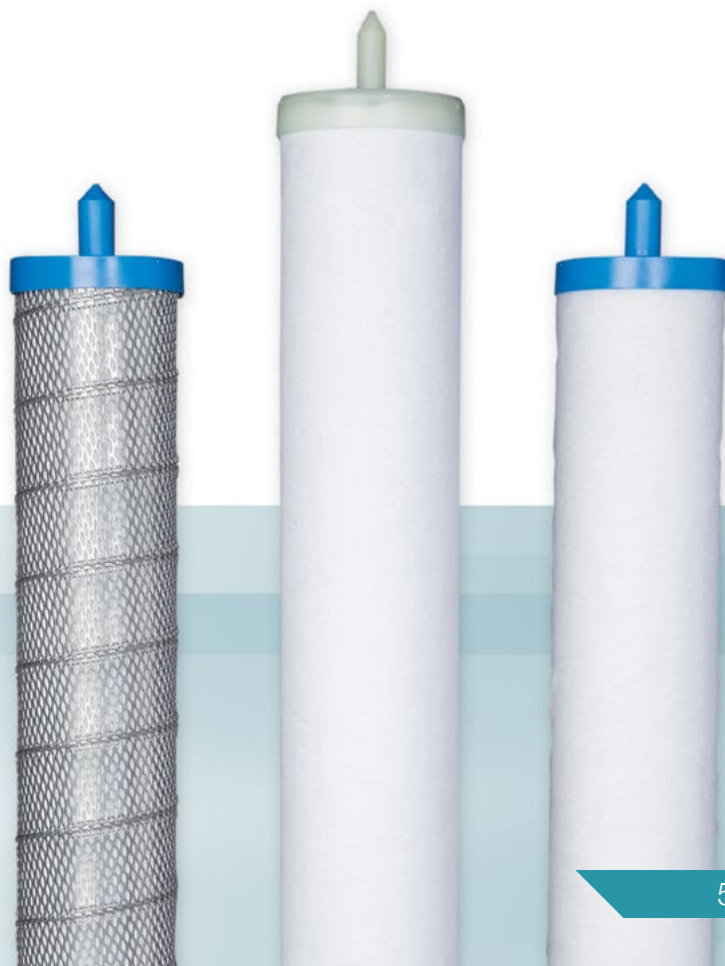
Jonell Product Solutions

Micro-DEP™ and Micro-LOK™ Series vapor phase coalescing elements to remove carryover amine and hydrocarbons.

CarboPUR™ Series activated carbon filter elements to reduce foaming.

Additional Refinery Applications

- Aromatics
- Boiler Feed Water
- Caustics / Amine Treatment
- Compressor Lube Oil Protection
- Desalter Debottlenecking
- Inlet Separation
- Mercury Guard Bed Protection
- Mol Sieve/PSA Dryer Bed Protection
- Recycle Gas Compressor Protection
- Slop Oil Treatment/Reprocessing
- Sour Water Stripper Protection
- Syngas Clean Up
- Water Purification





Petrochemical Filtration Applications

Jonell™ helps the Petrochemical Industry improve their bottom line by optimizing filtration operations, thereby minimizing downtime and increasing operating efficiencies. A few of our typical petrochemical filtration applications include:

Glycol Contactor Protection

Prevent hydrocarbons or amine aerosols and solids from contaminating the glycol system; which could result in foaming, solvent losses, and off-specification gas.

Jonell Product Solutions

Micro-DEP™ and Micro-LOK™ Series vapor phase coalescing elements to remove finely dispersed liquid droplets and solids from the gas before it enters the glycol system.

Compressor Protection

Condensable hydrocarbons, water, and solids can reduce the viscosity of lube oil and damage pistons due to increased friction.

Jonell Products Solutions

Micro-DEP™ and Micro-LOK™ Series vapor phase coalescing elements to remove finely dispersed liquid droplets and solids from the gas.

Molecular Sieve Drier Protection

Increase cycle time between regeneration of the molecular sieve drier and extend the bed life.

Jonell Products Solutions

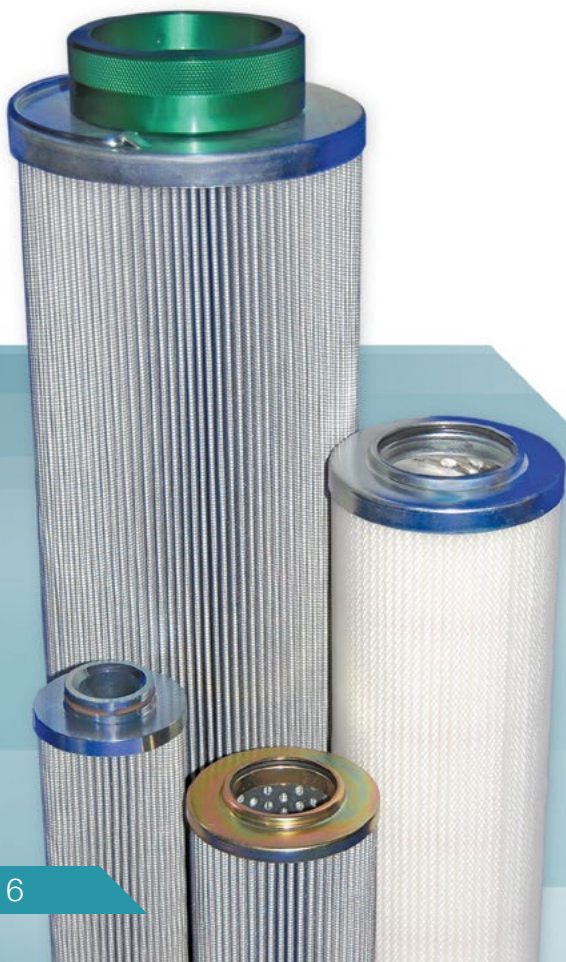
Micro-DEP™ and Micro-LOK™ Series vapor phase coalescing to remove finely dispersed liquid droplets before they foul the molecular sieve fines.

Condensate Dewatering

Provide hydrocarbon condensate with low water content to avoid corrosion problems in export pipelines and prevent off-specification final product.

Jonell Products Solutions

PhasePUR™ Series two phase liquid coalescing elements to remove free water from hydrocarbon condensate.





Rich Amine Treatment

Improve the reliability of the amine regenerator by removing liquid hydrocarbons and solids.

Jonell Products Solutions

PhasePUR™ Series two phase liquid coalescing elements to remove free liquid hydrocarbons from the rich amine solvent prior to regeneration.

Stabilization Plant Protection

Prevent free water and solids from entering the fractionation column, which could result in corrosion and salts and solids deposits.

Jonell Products Solution

PhasePUR™ Series two phase liquid coalescing elements to remove free water from the hydrocarbon condensate.

Additional Petrochemical Filtration Applications

- Amine Contactor Protection
- Boiler Feed Water
- Feedstock Filtration
- Hydraulic and Lubricating Fluids
- Oily Water Treatment
- Polymer Process Water Filtration
- Pre-filtration of Reactor Feed Streams
- Production Transfer Protection
- Quench Water Filtration
- Turbo Machinery Protection
- Wastewater Treatment



To answer more questions about filtration applications, replacement needs, or help troubleshooting process issues, contact an approved Jonell representative or Jonell direct.



Quality Filtration Made Simple



ISO 9001:2008 Certified

900 Industrial Parkway • Breckenridge, Texas 76424
P 254-559-7591 F 254-559-9863
www.jonellinc.com • sales@jonellinc.com

Jonell has a policy of continuous research and development and reserves the right to change specifications without notice.