Oil & Gas Filtration and Separation Solutions
Engineered Systems for Upstream, Midstream & Downstream Applications
Oil & Gas Filtration and Separation Solutions

When the energy production environment presents complex challenges, filtration and separation systems from Parker present the solution.

In today’s demanding energy market, keeping the pipelines full is not just an objective – it’s an absolute necessity. Parker offers innovative and site-specific filtration and separation solutions that help ensure integrity and purity all along the entire production continuum: upstream, midstream and downstream.

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Partner with Parker
Together, We Can Fuel Progress

In the constantly evolving oil and gas industry, you need a partner with acute technical insight, proven experience, a customer-first approach and worldwide accessibility. That’s the formula for success – and the portfolio of advantages you receive when you team with Parker.

Collaborative Engineering
Parker engineers work together with your engineers from project inception to project completion. At each step along the way, Parker provides thousands of online product configurators and 3D CAD drawings along with supporting technical expertise. Our deep understanding of your system helps ensure that it will be safer, smarter and more reliable, bolstering productivity – and championing profits.

Global Availability and Support
Parker understands that the systems you create don’t always stay local. Work with us and you’ll have access to more than 13,000 sales companies and distributors throughout 65-plus countries as well as the ParkerStore™ network of over 17,000 retail outlets. So, whether you need a filter replacement, product service or require one-on-one discussion with a knowledgeable representative, you’ll find Parker locally, no matter where you are globally.

Project-Site Service
Not only is Parker ready to respond when and where you need us, but Parker is always prepared to diagnose problems and help resolve your system’s technical challenges to keep you at peak production. In addition to critical on-site services, Parker also offers lab services and training at our manufacturing locations worldwide.
Land-Based

Filters for the Life of the Field

From exploration, drilling and formation assessments to well construction and completion, Parker filters enhance productivity throughout the life of the field. Parker solutions are engineered to keep your equipment running optimally, safely and in an environmentally considerate manner.

Parker brings filtration innovation to equipment used in planning, drilling, completion, production and abandonment of an oil well.

**Exploration**
- Condition Monitoring
- Sample/Analyzer Equipment
- Seismic Exploration Vehicles

**Drilling Services**
- Air Leak Detection
- Blenders
- Chemical Vans
- Condition Monitoring
- Flair Off Trucks
- Frac Pumpers
- Mobile Drill Rigs
- Picker Cranes
- Pumper Trucks
- Sand Kings
- Service Rigs
- Shakers
- Top Drive Systems
- Vacuum Trucks
- Water Injection
- Water Haulers
- Wireline Trucks
- Workover Rigs

Our Dispensing Fuel Filtration Solutions ensure pristine fuel quality at the point-of-use.

Racor Filtration Systems keep your vehicles, gensets, and mobile power generators up and running.

The Cross Flow Hydraulic Reservoir System is an all-aluminum reservoir system that provides a high exchange rate with reduced fluid volume.

Condition Monitoring Solutions monitor fuels, lubricants, hydraulic fluids and machinery health to ensure a smooth operation.

Compressed Air Filters provide clean air, leaving your equipment to run trouble-free.
**Hydraulic Fracturing**
Effective hydraulic fracturing relies on a combination of frac trucks, pumper trucks and water haulers. Before recovered water can be used or returned to the ground, it must be treated. Parker water filters and water purification equipment assist in that treatment, while hydraulic and fuel filters play a key role in the performance of the trucks, themselves.

**Oil Well Completion**
Clean completion fluids and brines are required for effective completion and maximum oil and gas production. They contribute to overall productivity. Cleaning of completion fluids can be carried out with either a Filter Press or a Vertical Pressure Leaf Filter, both in combination with Duplex Cartridge Filters, are used for the final polishing of the fluid.
Offshore Drilling

With offshore drilling, key functions include drilling, preparing water or gas for injection into the reservoir, processing the oil and gas before sending it ashore and cleaning the produced water for disposal at sea. Parker filtration products ensure that these important functions are ongoing, even under harsh conditions. Parker also protects the most important asset – your crew members – by providing a constant supply of clean drinking water when they are working on offshore platforms for weeks at a time.

From jack-up barges to deepwater mobile offshore drilling units – semi-submersibles and drillships – Parker filters protect your equipment, your processes, and your crew.

Exploration
- Air Compressors
- Condition Monitoring
- Hydraulic Power Units
- Hydraulic Winches
- Sample/Analysis Equipment
- Seismic Systems
- Watermakers

Drilling Services
- Blenders
- Frac Pumpers
- Mobile Drill Rigs
- Picker Cranes
- Sand Kings
- Service Rigs
- Shakers
- Top Drive Systems
- Sea Water Injection
- Watermakers
- Water Haulers
- Workover Rigs

Process Filters & Filter Vessels are used in completion fluids to prevent premature blockage of the formation.

This Automatic, Self-Cleaning Process Filter Unit uses a unique suction scanner which cleans 100% of the total filter area.

The Offshore Vertical Pressure Leaf fluid filtration system offers a new wash down system, which saves time and minimizes downtime.

Fuel Handling Filtration Products protect engines and components downstream from damaging contamination.

Fresh Water – in Challenging Environments

From offshore MODU, FSO, FPSO and drillships to offshore drilling rigs, reverse-osmosis watermakers from Parker are always ready to produce fresh water, even when they’re situated in the middle of the ocean, hundreds of feet away from shore, on an offshore rig. Parker’s watermakers are engineered for 24/7, continuous-duty use and function via remote control.

Nitrogen Generation

Nitrogen is used on offshore platforms, FPSOs and FLNGs for purging, blanketing, flaring and drilling. Introducing nitrogen into these processes reduces the maximum oxygen content, reducing the risk that hydrocarbon vapors will ignite, burn or explode. Parker has the right technologies to serve your needs: nitrogen generators based on PSA and membrane technology, membrane modules, compressed air filters and compressed air dryers that are suited specifically for integration into your system.
Downstream

Downstream Processing

After upstream drilling and transport, crude oil must be processed for use in an oil or petroleum refinery. Efficient processing of several hundred thousand barrels of crude oil a day – essentially a non-stop operation – demands filtration solutions that perform reliably, even under extreme conditions. Parker meets the need with filtering systems that get the job done, and get finished product to customers on time.

Whether crude oil is being prepared for gasoline and diesel fuel or for olefins and aromatics, Parker filters are engineered to control, improve and stabilize your processes.

Oil Refinery

Whether crude oil is being prepared for gasoline and diesel fuel or for olefins and aromatics, Parker filters are engineered to control, improve and stabilize your processes.

Distillation
- Cooling Water/Treatment
- Cracking Unit
- Gasoline Blending
- Process Controls
- Sour Water Stripper
- Sulfur Recovery

Process Analysis
- Analytical Systems
- Sample Conditioning

Oil Refineries Storage
- Bulk Tanks
- Fluid Analysis
- Pipeline Pigging
- Pipeline Stripping and Purging
- Tank/Reservoir Inertization
- Terminal

Process Filters & Filter Vessels play a vital role in critical downstream applications by protecting processing equipment.

Analyzer Filters protect sensitive process analyzers from sample impurities.

Compressed Air Desiccant Dryers provide dry air to your processes, instruments, and equipment.

The Portable Purification System removes contamination from your contaminated hydraulic fluid.
**Feature Applications**

**Filtration in the Hydrotreating Process**
Downstream of the refinery distillation process, gas/oil and hydrogen are combined and fed to the fixed bed catalyst hydrotreater at high temperatures and pressures. Hydrogen sulfide contaminants are generated in the process. The gas/oil stream entering the hydrotreater contains high contaminant levels which, if allowed to enter the hydrotreater, would significantly reduce production and operation efficiency. Filter cartridges at the gas/oil stream, ahead of the hydrogen feed, protect the hydrotreater while increasing productivity, and reducing downtime. Filters also need to be applied in the recirculated hydrogen stream and the cycle oil stream for protection.

**Hydrocarbon Storage**
After processing and refining, fuels and fluids are transferred through pipelines and storage systems for delivery to application. Through this network of fluid storage and transfer, water, dirt and other forms of contamination get into the system and need to be removed. High quality microfiltration and filter water separators systems help ensure fluids are clean, dry and ready for application. Whether fuels are destined for aviation, industrial or other applications, these filtration solutions will help keep fluids in specification.
Natural Gas Processing

Throughout the world, homes and businesses rely on natural gas for heat, power, food preparation and more. Before natural gas can be used for these purposes, however, it must be extracted from underground wells, moved through pipelines, processed and refined. Parker products filter, dry and prepare the gas, removing impurities that could foul equipment used in the production, treatment, transport and distribution of this very clean-burning, efficient fuel. Parker filtration solutions can be found on the labeled applications in the illustration below.

Natural gas now accounts for 23% of the world’s energy consumption and its demand is predicted to grow by 44% through 2035.
Efficient Filtering for an Efficient Fuel

Natural gas goes through many stages before it can be used as energy. Typically, the process begins with production – locating and extracting the natural gas from beneath the ground – and then moves to treatment, pipeline transport and distribution. Along the way, Parker filters are used to remove impurities in the gas, protecting the integrity and performance of processing equipment. Specifically, Parker filters are used in processes such as amine sweetening, desiccant dehydration and glycol dehydration.

Biogas

Biogas, made mostly of methane, is produced when bacteria decomposes biological matter in an anaerobic environment typical of landfills, waste treatment plants and coal mines, among other areas. Treatment filters from Parker are designed to help treat captured biogas so it can be used in the natural gas grid. In addition, Parker biogas treatment filters also protect costly equipment used in downstream applications.

Bioenergy Coolers/Separators remove free water from landfill or digester biogas.

Compressed Natural Gas Filter Vessels remove contamination from CNG during the production, treatment, and pipeline delivery stages.

High Pressure CNG Filters offer high, medium, and low pressure filtration options.

On-Board CNG Coalescing Filters protect your CNG vehicles’ fuel injector and regulator.
## Worldwide Filtration Manufacturing Locations

### North America
**Compressed Air Treatment Filtration & Separation/Balston**
Haverhill, MA 978 858 0505 www.parker.com/balston

**Finite Airtek Filtration**
Airtek/dominick hunter/Zander
Lancaster, NY 716 896 6400 www.parker.com/faf

**Finite Airtek Filtration/Finite**
Oxford, MI 248 628 6400 www.parker.com/finitefilter

**Engine Filtration & Water Purification**
Racor
Moisteno, CA 209 521 7860 www.parker.com/racor

Holly Springs, MS 662 252 2656 www.parker.com/racor

Beaufort, SC 843 846 6420 www.parker.com/racor

Racor – Village Marine Tec.
Gardena, CA 310 637 3400 www.parker.com/vmt

desalination.parker.com

**Parker Sea Recovery**
Carson, CA 310 637 3400 www.searecovery.com

**Hydraulic Filtration**
Hydraulic Filter
Metamora, OH 419 644 4311 www.parker.com/hydraulicfilter

Laval, QC Canada 450 629 9594 www.parkerfarr.com

**Process Filtration**
dominick hunter Process Filtration
Oxnard, CA 805 604 3400 www.parker.com/processfiltration

Madison, WI 608 824 0500 www.scilog.com

Phoenixville, PA 610 903 1680 www.parker.com/processfiltration

**Aerospace Filtration**
Velcon Filtration
Colorado Springs, CO 719 531 5855 www.velcon.com

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**Finite Airtek Filtration/Finite**
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Holly Springs, MS 662 252 2656 www.parker.com/racor

Beaufort, SC 843 846 6420 www.parker.com/racor

Racor – Village Marine Tec.
Gardena, CA 310 637 3400 www.parker.com/vmt

desalination.parker.com

**Parker Sea Recovery**
Carson, CA 310 637 3400 www.searecovery.com

**Hydraulic Filtration**
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Metamora, OH 419 644 4311 www.parker.com/hydraulicfilter

Laval, QC Canada 450 629 9594 www.parkerfarr.com

**Process Filtration**
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