Oil & Gas | Downstream Applications
Filtration products for Hydrotreating
Filtration for process efficiency
From crude to final production

When refining presents complex challenges, Parker domnick hunter filtration systems present solutions which respond to today’s demanding worldwide market. We offer innovative and application-specific filtration to help ensure integrity and purity throughout the downstream process.

**Downstream demands**
After upstream drilling and transport, crude oil must be processed in a 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 domnick hunter meets these needs with filtration systems that get the job done with minimal maintenance and downtime.

**Hydrotreating process**
Refineries use the hydrotreating process to desulfurize petrochemical feed stock through a catalytic conversion. Downstream of the refinery distillation process, petrochemical feed stocks and hydrogen are combined and fed to the fixed-bed catalyst hydrotreater at high temperatures and pressures.

Contaminant sources include sulfide from the catalytic reaction and feedstock impurities which would significantly reduce productivity.

**Filtration in refineries**
Filtration plays a significant role in improving the fluid quality of the hydrotreating process fluids and final desulfurized product by protecting the downstream pump, heat exchanger, heater, compressors, and the fixed-bed catalyst reactor.

This protection of catalyst, critical downstream equipment, and improvement of process fluids effectively minimize costs through:

- Reduction of process upsets and downtime
- Extension of catalyst life
- Improvement in production and operation efficiency
- Protection of processing equipment
- Lowering of maintenance costs

**Committed to process optimization**
Parker domnick hunter recognizes that due to the hazards associated with petroleum production maintenance along with high disposal costs, minimizing both change out frequency and process downtime are of utmost importance. Our filtration systems are optimized to ensure that the total cost of ownership for contaminant control is balanced, without compromising process efficiency.

**Global support with local perspective**
Wherever you are in the world and whatever the process requirements, Parker domnick hunter’s dedicated support team is there to help you get the most out of your filtration systems. We have a presence in all of the major petroleum processing regions offering local and technical support for refinery applications.

**PROCESS APPLICATIONS**
- Hydrotreater feed
- Lube oil
- Make-up hydrogen
- Desulfurized hydrocarbon
- Sour water
Hydrotreating
Process Overview

Lube Oil
Filtration of lube oil extends compressor life and ensures that the equipment maintains functionality by avoiding damage caused by particulate.

Make-up hydrogen
Filtration protects system performance by removing particulate from the hydrogen stream prior to entering the petrochemical feed stock.

Sour Water
Due to corrosion caused by the hydrogen sulfide (H2S) and ammonia (NH3) constituents in sour water, filtration is important for capturing the resulting particulates that foul downstream piping and waste water treatment equipment.

Desulfurized Product
Filtration systems safeguard downstream equipment, such as distillation columns, reactors, heat exchangers, and pumps, to maximize refinery efficiency and limit process downtime.

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Filter Products for Hydrotreating

**PLEATED**

**Poly-Mate & Poly-Mate Plus**
A cartridge offering a unique combination of polypropylene melt blown and spun-bonded media with high surface area and efficiency.

**Flo-Pac & Flo-Pac +**
Pleated cartridge containing premium grade, phenolic impregnated cellulosic filter media. for critical filtration applications to provide long service life, high flow rate and low pressure drop.

**ParMax & ParMax Select**
Large diameter, high capacity cartridges with polypropylene pleated depth and microfiber glass media. The unique layered construction provides excellent retention across a range of flux rates.

**MaxGuard**
Cellulosic / Polypropylene / Nomex high capacity cartridge product line provides a cost effective alternative to bag media or standard 2-½ inch cartridges for high flow applications.

**Deep Media**

**Melt blown**

**Stringwound**

**MegaBond Nominal**
High purity melt blown filter cartridges featuring a graded density matrix of uniform polypropylene fibers for consistent filtration. No fiber finish or surfactants are present to generate extractables leading to foaming or other undesirable effects.

**Honeycomb**
Offer superior quality for effective particulate removal from 0.5 to 150 μm in a wide variety of materials for process compatibility.

**FILTER VESSELS**

**Fulflo® cartridge filter vessels**
304 or 316 SS filter vessels designed for filtration in downstream applications
- Single and multi-cartridge housings
- GMP Industrial design with coded options (ASME, CRN, PED-CE)
- Vessels available as standard or custom design

Fulflo 1401
Absolute rated cartridge available in cellulosic or polypropylene media designed to offer maximized surface area which retelts compatible housings using 1401 style cartridges.

Glass-Mate
Microfiber glass cartridge offering better temperature resistance than standard polypropylene cartridges and absolute rated efficiency for 0.45 - 40 μm.

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Worldwide Filtration Manufacturing Locations

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

Finite Airekt Filtration
Airekt/domnick hunter/Zander
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716 686 6400
www.parker.com/faf

Finite Airekt Filtration/Finite
Oxford, MI
248 628 6400
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Engine Filtration & Water Purification
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Holly Springs, NC
843 846 3200
www.parker.com/racor

Village Marine, Sea Recovery,
Horizon Reverse Osmosis
Carson, CA
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