Oil & Gas | Downstream Applications
Filtration products for Hydrocracking
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.

Hydrocracking process
Refineries use hydrocracking to break down heavy hydrocarbon molecules into light, shorter chain, hydrocarbons to produce valuable fuel products. Hydrocracking is done with heat, catalyst and hydrogen. Hydrogen is used to purify the hydrocarbon stream from sulfur and nitrogen.

Filtration in refineries
Filtration and coalescing plays a significant role in improving the fluid quality of the hydrocracking process fluids by removing contaminants from sour water, reactor feeds, and hydrocracker feeds.

Filtration and Coalescer products are designed to:
- Reduce process upsets and downtime
- Extend catalyst life
- Improve production and operation efficiency
- Protect processing equipment
- Lower maintenance costs
- Minimize product impurities,
- Remove haze caused by water

Committed to process optimization
Parker domnick hunter recognizes that due to the hazards associated with maintenance in petroleum production facilities along with high disposal costs, minimizing both change out frequency and process downtime are of utmost importance. That’s why we optimize filtration systems to ensure that the total cost of ownership for contaminant control is balanced, without compromising processing 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
- Hydrocracking feedstock
- Diesel fuel
- Jet fuel
- Naphtha
**Hydrocracking**

**Process Overview**

---

**Filter**
- Diesel Fuel
- Jet Fuel
- Heavy Naphtha
- Light Naphtha
- Reflux Off Gas
- Reactor 1
- Reactor 2
- Reactor 3
- Hydrocracker Feedstock
- Fractionator Feedstock

**Filtration**
- Reduces scale build-up in heat exchanger and heater for optimal heat transfer and protects the reactor catalyst to reduce energy and maintenance costs.
- Prevents contamination on separator plates within the fractionator leading to accurate and efficient separation within the column.

**Final Product**
- Protection of final products can be achieved with proper filtration to yield product quality prior to storage and transport.

---

**Oil & Gas**

(Downstream)
Filter Products for Hydrocracking

**PLEATED**

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

**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.

**DEPTH MEDIA**

**Stringwound**

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

**LIQUID/LIQUID COALESCERS**

**Fulflo® LC Coalescers**
High performance microfiberglass media designed to remove dispersed and free water from hydrocarbons.

**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