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process control
sealing & shielding



Oil & Gas | Downstream Applications

Filtration products for Amine Sweetening
and Glycol Dehydration



ENGINEERING YOUR SUCCESS.

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.

Amine & Glycol process

Amine Sweetening is the process of removing toxic and corrosive components, primarily hydrogen sulfide (H_2S) and carbon dioxide (CO_2), from a hydrocarbon gas stream. Similarly, Glycol Dehydration removes water to prevent corrosion and freezing of processing equipment. Both processes share a common purpose which is to strip contaminants in the absorber/contacter then regenerate the process liquids in the regenerator/stripper.

In both cases, filtration of the Amine or Glycol liquid plays an important role because particulate contaminants reduce the operational efficiency of the processes. These filtration systems are commonly sized for partial flow on a slip-stream, but full-flow filtration is the best method of ensuring that the sweetening and dehydration processes run as efficiently as possible.

Filtration in refineries

Parker domnick hunter Process Filtration provides optimized engineered solutions to:

- Minimize foaming
- Decrease chemical usage
- Protect carbon beds
- Eliminate carbon carryover
- Protect processing equipment
- Improve production and operation efficiency
- Reduce process upsets and downtime
- Lower maintenance costs

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 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.



APPLICATIONS

Amine Sweetening

- Sour water
- Rich Amine
- Lean Amine
- Make-up Amine

Glycol Dehydration

- Sour water
- Rich Glycol
- Lean Glycol
- Make-up Glycol

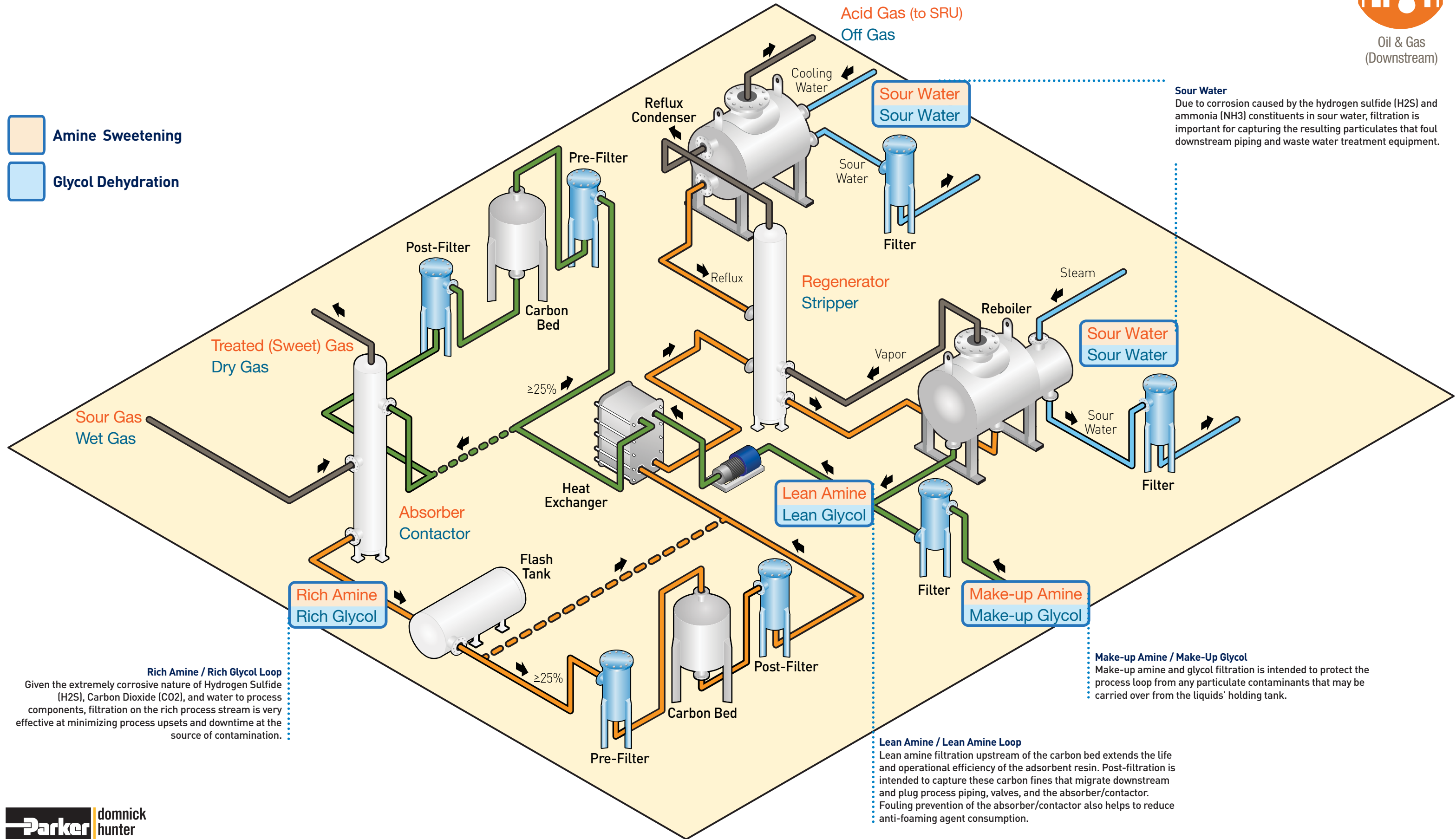


Amine Sweetening & Glycol Dehydration Process Overview



Amine Sweetening

Glycol Dehydration



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.

Rich Amine / Rich Glycol Loop
Given the extremely corrosive nature of Hydrogen Sulfide (H₂S), Carbon Dioxide (CO₂), and water to process components, filtration on the rich process stream is very effective at minimizing process upsets and downtime at the source of contamination.

Make-up Amine / Make-Up Glycol
Make-up amine and glycol filtration is intended to protect the process loop from any particulate contaminants that may be carried over from the liquids' holding tank.

Lean Amine / Lean Amine Loop
Lean amine filtration upstream of the carbon bed extends the life and operational efficiency of the adsorbent resin. Post-filtration is intended to capture these carbon fines that migrate downstream and plug process piping, valves, and the absorber/contactor. Fouling prevention of the absorber/contacter also helps to reduce anti-foaming agent consumption.

Filter Products for Amine/Glycol

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.



Fulflo 336

Cellulosic & Polypropylene pleated cartridge construction improves filtration efficiency, dirt holding capacity and flow rates



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.



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.



Glass-Mate

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

Large Diameter



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.

Large Diameter



MaxGuard

Cellulosic / Polypropylene / Nomex high capacity cartridge product line provides a cost effective alternative to bag media or standard 2-1/2 inch cartridges for high flow applications.

DEPTH MEDIA

Melt blown



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.

Stringwound



Honeycomb

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

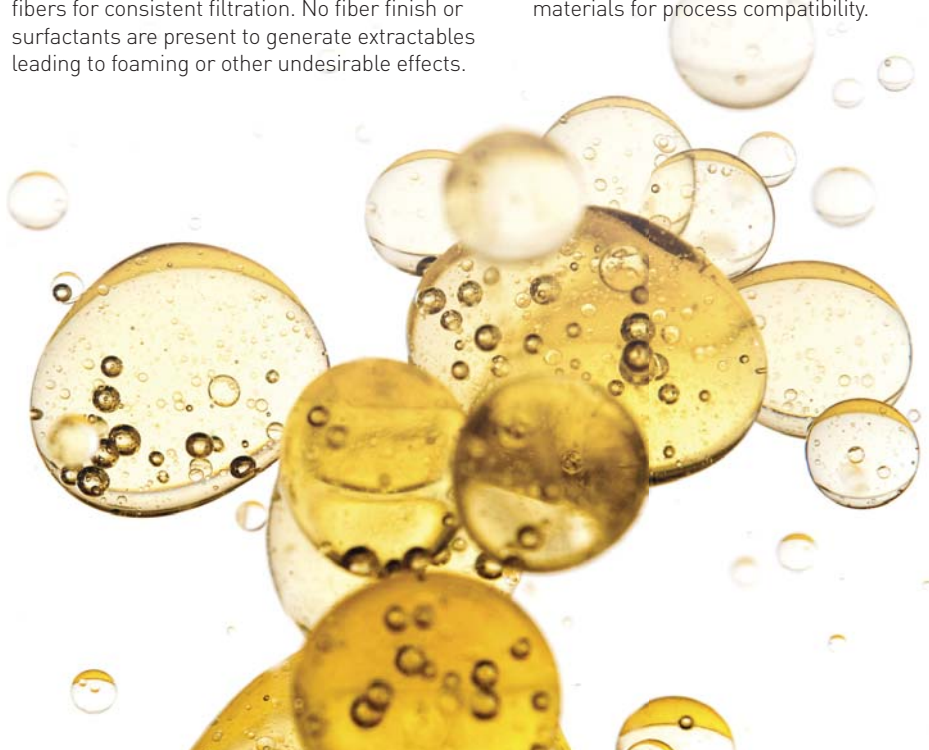
FILTER VESSELS



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



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GL_0G_Amine-Glycol_05/14 US Rev. 1A

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