

PRODUCT PROFILE

Introduction: Prime Flow Company WLL

Prime Flow Company WLL is a Bahrain based company that focuses on providing products and services to many industries, including:

- Oil & Gas
 - Upstream, midstream, and downstream
 - Onshore and offshore
- Power Generation
 - Turbines: flange-to-flange experience and expertise
 - Auxiliary equipment
- Heavy Industry Applications
 - Rotating machinery
 - Specialized process equipment
- Manufacturing Applications
 - Specialized equipment and spares



The main focus is to provide our customers with the highest quality products by collaborating with top manufacturers around the globe. These products range from everyday spares like gaskets to capital equipment spares like turbine blades, fuel nozzles, and many more products.

These are the product lines that Prime Flow covers:

1. Prime Flow Filters
2. Prime Flow Process Filters
3. Prime Flow Coalescers and Reclaimers
4. Prime Flow Dry Ion Exchange Filters
5. Prime Flow Vent Mist Eliminators
6. Prime Flow Cartridges
7. Prime Flow Valves
8. Prime Flow Turbine Spares
9. Prime Flow Oil & Gas Related Services

Prime Flow Filters

Prime Flow provides filter units for standard and special applications. The majority of these filter units would either be in a simplex (single vessel) configuration or a duplex (two identical vessels with a transfer valve between them) configuration.

These units can be designed for any flow rate and pressure rating needed. The majority of these units utilize one or two cartridges per vessel. The applications include:

1. Lube oil filtration
2. Oil and gas fuel filtration
3. Seawater filtration
4. Process water filtration
5. Glycol filtration
6. Amine filtration
7. Special filtration applications

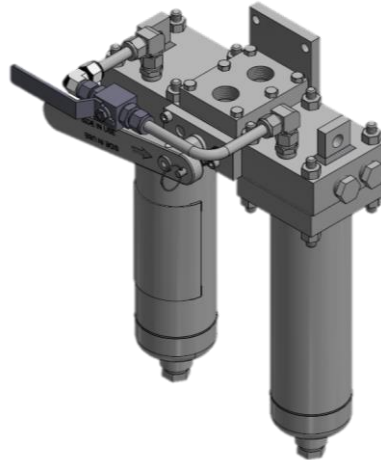


Figure 1 Prime Flow Integral Head Duplex Filter

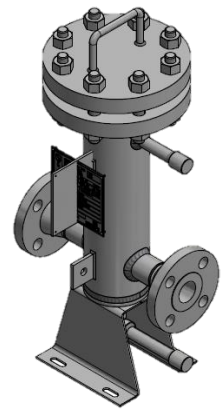


Figure 2 Prime Flow Simplex Filter

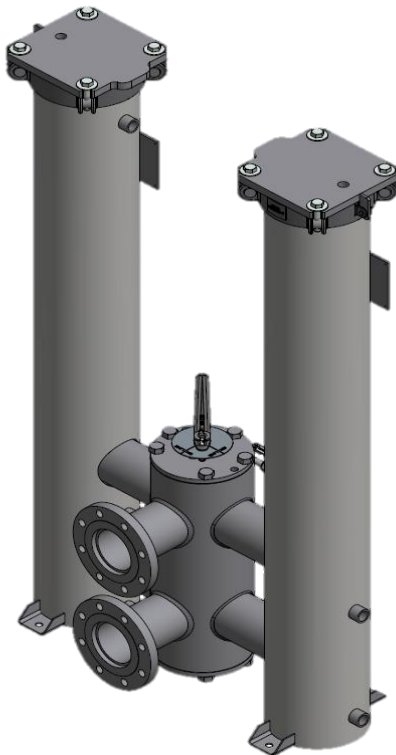


Figure 4 Prime Flow Duplex Filter

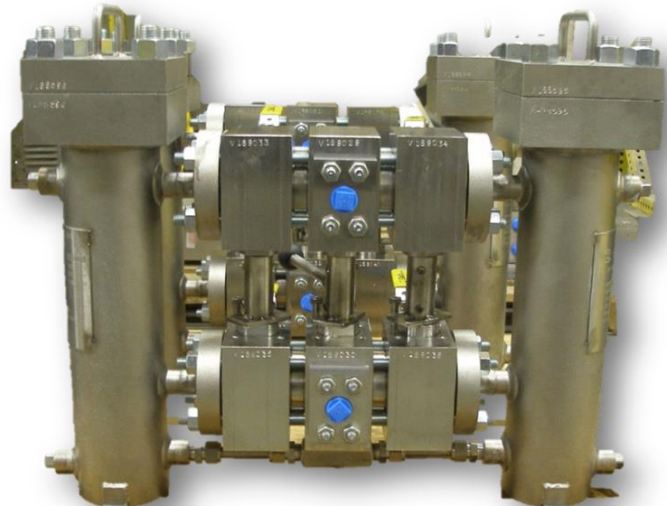


Figure 3 Prime Flow Duplex Gas Filter with Hilco® Ball Valve

Prime Flow Process Filters

Prime Flow process filters include larger units that can be designed to hold several hundreds of cartridges per vessel. In most cases, these units are custom designed to the client's needs and requirements. The majority of applications tend to require higher flow rates and pressure ratings than the standard filter units readily available.

The applications for process filters are very diverse, and include, but are not limited to:

1. Diesel fuel filtration
2. Diesel fuel coalescing and separating
3. Fuel gas conditioning
4. Amine processing and conditioning
5. Crude oil filtration
6. Heavy fuel filtration
7. Process water filtration

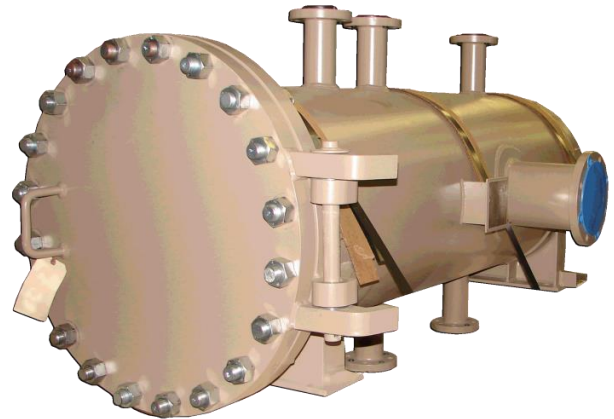


Figure 5 Prime Flow Process Filter (BP)



Figure 6 Prime Flow BASF filter



Figure 7 Prime Flow Diesel Feed Filter

Prime Flow Coalescers and Reclaimers

Prime Flow specializes in providing solutions for conditioning fuels and oils, especially in the realm of water removal and separation. This is achieved by utilizing either a coalescer or a reclaimer system.

Coalescer systems utilize mechanical separation of water from the medium, and are lower cost systems. The other side of the coin is that they are very effective in reducing the water content of the medium to 50 PPM with continued cycling, and 150 PPM in a single pass.

Relcaimer systems utilize thermal separation of water from the medium. They are more expensive systems, but can reduce the water content of the medium to 2 PPM with continuous cycling, and 30 PPM in a single pass.

These units tend to be utilized in two main applications:

1. Lubrication and hydraulic oil conditioning (generally in steam turbines)
2. Oil fuel dehydration

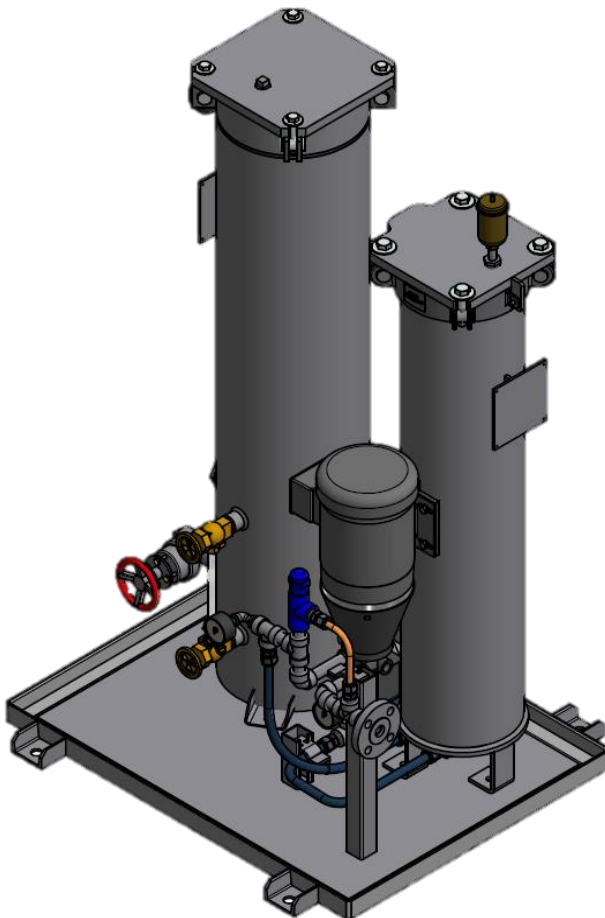


Figure 8 Prime Flow Reclaimer Unit

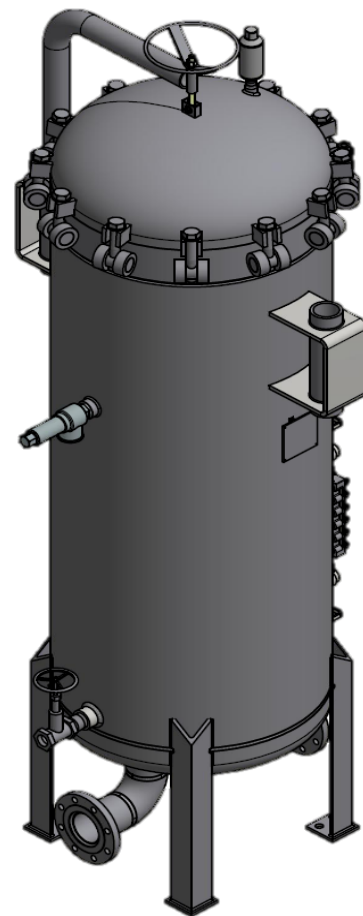


Figure 9 Prime Flow Coalescer Unit

Prime Flow Dry Ion Exchange Filters

Prime Flow offers a dry ionic exchange resin to tackle two issues that almost every company with rotating equipment faces:

1. Increased acidity and acid generation
2. Varnish

These two issues can be detrimental to most operations. They contribute to significant increases in downtime and maintenance costs.

The solution offered by Prime Flow can restore systems faster, and more reliably than most other existing solutions like Fuller's Earth filters, alumina filters, and similar technologies. It also has the unique advantage of being a low-cost prevention system once the medium is restored to an acceptable condition.



Figure 10 Prime Flow Dry Ion Exchange Resin



Figure 11 Prime Flow Dry Ion Exchange Cartridge

Prime Flow Vent Mist Eliminators

Prime Flow offers standard and custom designed vent mist eliminator units (VMEs). Many of these units are utilized in existing turbine installations across the globe, and they are designed to reduce the polluting impact of oil mist exiting through the exhaust of turbines and rotating equipment.

These units are also utilized in many applications where rotating equipment is involved like machine shops, compressor applications, and diesel engines.

There are two main types:

Static VME: not blower assisted, lower cost, but lower flow capacity

Blower-assisted VME: single or dual blower configuration, higher cost, higher flow capacity



Figure 13 Prime Flow Static VME



Figure 12 Prime Flow Blower-Assisted VME

Prime Flow Cartridges

Prime Flow has the expertise and capability to design cartridges for different applications and conditions. The selection is impressively large, and the engineering capabilities allow for new and special application considerations.

Every application listed, with the exception of some of the simpler reclaimer designs that do not utilize cartridges, utilize Prime Flow cartridges as the working part of the unit. There is also a very large selection of cartridges that are designed to replace competitor cartridges with a higher quality product at a lower cost.



Figure 14 Selection of Prime Flow Cartridges

Prime Flow Valves

Prime Flow manufactures most of the valves utilized in their filter assemblies, and that includes three main types of valves:

1. 6-Way Valves (also known as transfer valves within the industry)
2. Split Transfer Valves
3. Ball Valves

Prime Flow has a unique design concept utilized for their 6-way and split valves that allows for very fast and reliable maintenance, as well as a significant reduction in downtime and cost.

Prime Flow ball valves are custom designed based on client requirements.



Figure 15 Prime Flow 6-Way Valve



Figure 16 Prime Flow Ball Valve (split configuration)

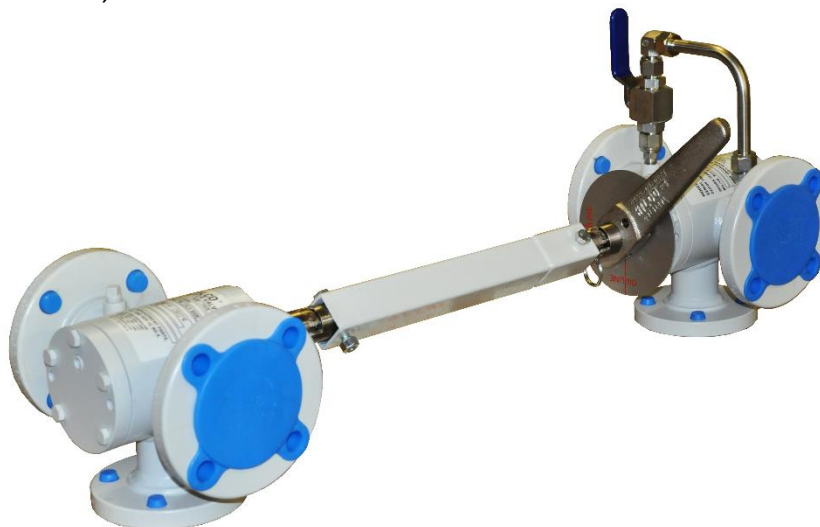
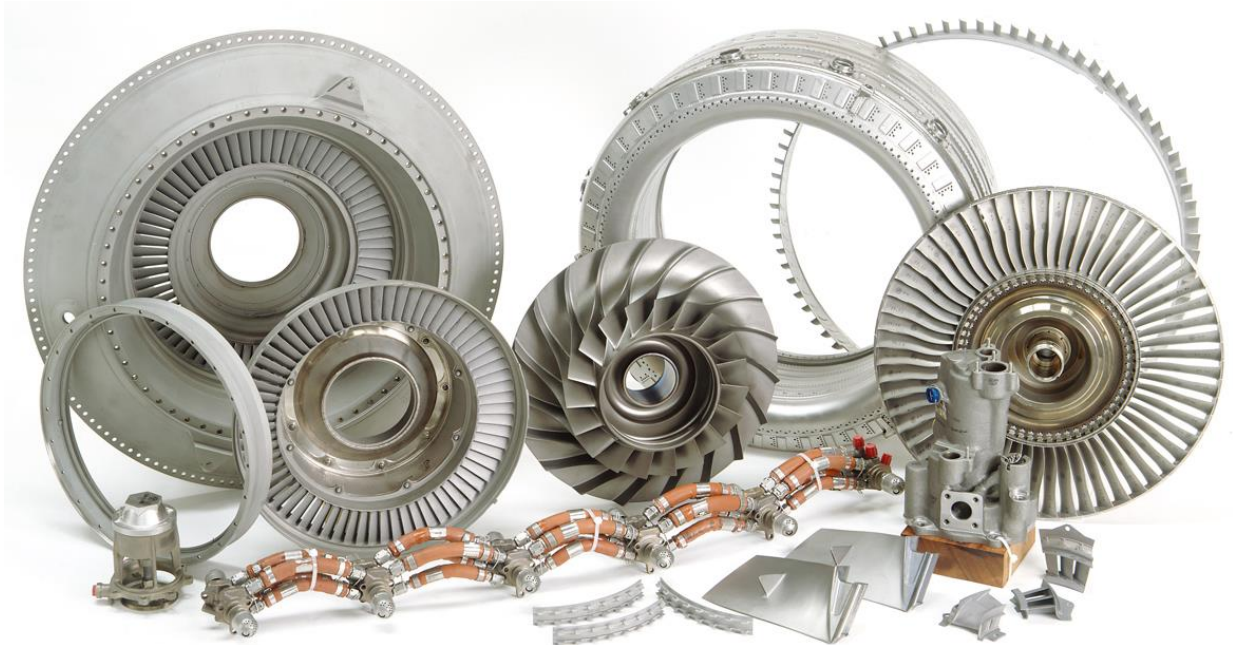


Figure 17 Prime Flow Split Valve

Prime Flow Turbine Spares

Prime Flow works closely with top manufacturers in the United States to supply the highest quality, original turbine spares for GE, Alstom, Westinghouse, Solar, and other turbine manufacturers and licensees.

The expertise covers most turbines, flange-to-flange. This includes capital spares, like buckets, nozzles, combustion chamber parts, fuel nozzles, as well as regular spares.



Prime Flow Oil & Gas Related Services

Prime Flow has several specialists in the fields related to Oil & Gas services. This covers the entire production stream starting from the wells required to extract gas and crude all the way through the final processing required to utilize the fuels and byproducts based on process requirements.

These services include, but are not limited to:

- Crude oil filtration
- Crude oil specialized processes
- Well management and maintenance
- Auxiliary well equipment supply and maintenance
- Well and pipeline upgrades and maintenance
- Upstream, mid-stream, and downstream filtration and specialized processing
- Sulfur recovery and H₂S remediation
- Catalyst supply and disposal
- Amine and glycol filtration and rehabilitation
- Tank, reservoir, and pressure vessel fabrication, supply, and upgrades
- Specialized valve supply, repair kits, and spares supply
- Custom engineered integrated solution packages



Prime Flow has a specialized team of engineers that are available at all times, as well as access to several highly specialized consultants with many years of experience and service in these fields.