



# Hydraulic Filtration & Contamination Monitoring Products

Brochure: FDHB131UK





- Consistent quality
- Technical innovation
- Premier customer service

Parker's technical resources provide the correct filtration technologies that conform to your requirements. That's why thousands of manufacturers and equipment users around the world rely on Parker Filtration products and people.

## Worldwide Sales and Service

Parker Filtration's global reputation as a reliable supplier of superior filtration products is the result of a focused and integrated development and manufacturing system.

Parker Filtration consolidates quality filtration products, manufactured by process filtration, air and gas filtration and separation, fuel conditioning and filtration, hydraulic and lubrication filtration, fluid power products and fluid condition monitoring equipment into one broad-based range that covers many markets and most applications, as detailed here.

### Hydraulic, Lubrication & Coolant Filtration

High-performance filtration systems for production machinery in industrial, mobile and military/marine applications.



### Compressed Air & Gas Filtration

Complete line of compressed air/gas filtration products; coalescing, particulate and adsorption filters in many applications in many industries.



Photo courtesy of GLASBAU HAHN.

### Process & Chemical Fluid Filtration

Liquid filtration systems for beverage, chemical and food processing; cosmetic, paint, water treatment; photo-processing; and micro-chip fabrication.



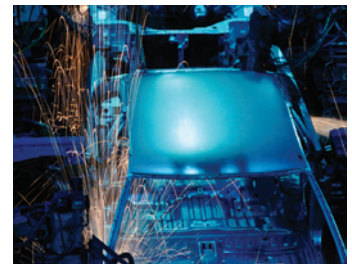
### Racor Fuel Conditioning & Filtration

Parker air, fuel and oil filtration systems provide quality protection for engines operating in any environment, anywhere in the world.



### System Contamination Monitoring

On-line dynamic particle analysis, off-line bottle sampling and fluid analysis and measurement of water content polluting the oil in a system. All important and achievable, cost-effective solutions available to equipment manufacturers and end users alike.



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For a copy of the latest Hydraulic Filtration and Contamination Control Products Catalogue  
Email [filtrationinfo@parker.com](mailto:filtrationinfo@parker.com)

# 1. Low Pressure Filters



## ETF Series



For tanktop mounted, low cost solutions. Reinforced composite head, two return port options and quick release cover offer both strength and cost effective hydraulic system filtration. Several element lengths for flows up to 140 l/min.

### Operating Pressure:

Max 6 bar (composite)

### Filtration Media:

#### Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

### Connections:

2 x Thread G1

### Flow Rate:

Max 140 l/min

### Indicator:

1.0 bar  
Visual or electrical

ETF Series



## TTF Series



TTF tanktop mounted return line filters feature prefiltration by means of a magnet column and a full flow bypass with low hysteresis. Thanks to the 'in-to-out' filter principle, contaminated oil cannot leak back into the system. TTF filters are available in versions capable of handling flow rates up to 500 l/min. They can operate with a maximum working pressure of 10 bar. Optional filling port in filter cover, second return port and customised diffusers. Manifold type filter head with four return ports available.

### Operating Pressure:

Max 10 bar

### Filtration Media:

#### Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

#### Ecoglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

### Connections:

Port sizes from G<sup>3</sup>/<sub>4</sub> up to G2, SAE type connections are available.

### Flow Rate:

Max 500 l/min

### Indicator:

1.2 bar. Several pressure gauges and switches can be applied.

TTF Series



## BGT Series



BGT tanktop mounted return line filters feature prefiltration by means of a magnet column and a full flow bypass with low hysteresis. Thanks to the 'in-to-out' filter principle, contaminated oil cannot leak back into the system. BGT filters are available in versions capable of handling flow rates up to 2400 l/min. They can operate with a maximum working pressure of 10 bar. LEIF® elements are available for flow rates up to 1500 l/min.

Optional filling port in filter cover, multiple connections and customised diffusers.

### Operating Pressure:

Max 10 bar

### Filtration Media:

#### Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

#### Ecoglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

### Connections:

Flanges 2"SAE, 3"SAE

### Flow Rate:

Max 2400 l/min

### Indicator:

1.2 bar. Several pressure gauges and switches can be applied.

BGT-S Series

# 1. Low Pressure Filters



**IN-AGB Series**



The low-cost, high performance, tank in-built return line IN-AGB filtration product features Microglass III filter materials, a bypass construction with low hysteresis, magnetic pre-filtration and a high dirt-holding capacity. The range is capable of handling flow rates from 30 l/min up to 2400 l/min. LEIF® elements are available for flow rates up to 1500 l/min, meeting the most stringent demands for environmentally friendly filtration and offering protection against pirate elements.

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

Also available 10µ cellulose and 40µ stainless steel

**Ecoglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Flow Rate:**

Max 2400 l/min

IN-AGB Series



**Tanktopper Series I, II, & III**



The TPR series I, II & III offer a total filtration package, featuring a 10-micron Abs air breather that is integrated into the filter housing. A magnet column for pre-filtration, 'in-to-out' filtration, a highly effective labyrinth design avoids oil leakage through the air breather, a full-flow bypass with low hysteresis, and the high performance filter element materials are proven success factors in efficient return-line filtration. LEIF® elements are supplied with TPR I, II and III.

**Operating Pressure:**

Max 10 bar

Note: TPR II extended flow rate now 250 l/min

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

Also available 10µ cellulose and 40µ stainless steel

**Ecoglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Connections:**

TPR I: Threads G<sup>3</sup>/<sub>4</sub> (ISO228), SAE12  
 TPR II: Threads G1<sup>1</sup>/<sub>4</sub> or G1<sup>1</sup>/<sub>2</sub> (ISO228), SAE20, SAE24,  
 TPR III: Threads G1<sup>1</sup>/<sub>2</sub> (ISO228)

**Flow Rates:**

TPR I: 80 l/min  
 TPR II: 250 l/min  
 TPR III: 650 l/min

**Indicator:**

1.2 bar. Several pressure gauges and switches can be applied. Other settings on request.

Tanktopper Series I, II & III



**Suction & Return Series**



A tank mounted return filter capable of feeding filtered oil under positive pressure to the suction side of the boost pump, thereby filtering both open and closed loop oil systems through one filter. The SR2 uses the patented LEIF® elements for environmentally friendly filtration and disposal in accordance with ISO14001.

**Operating Pressure:**

Max 10 bar

**Filtration Media:**

LEIF® elements are supplied with Parker Suction and Return Series filters.

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Ecoglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Connections:**

**SR1:**

Return Port G1  
 Suction Port G<sup>3</sup>/<sub>4</sub>

**SR2:**

Return Port G1<sup>1</sup>/<sub>4</sub>  
 Suction Port G1  
 For SR2 second ports available for return and suction line connections.

**Construction:**

Filter housing: cast aluminium filter head.  
 Filter cover made from glass reinforced nylon (high impact and temperature resistant). Now specified on SR1 and SR2.  
 Bowl: aluminium  
 Separator plate: glass reinforced nylon (high impact and temperature resistant)  
 Regulator assembly: cast aluminium and high strength composite material

**Flow Rate:**

Max 130 l/min for Size 1  
 Max 250 l/min for Size 2

Suction & Return Series

# 1. Low Pressure Filters



**Maxiflow Filter**



Size 1 and 2 Maxiflow filters feature two integral red/green indicators incorporated into the head casting design. Fitted as standard, they ensure maximum indicator visibility and early warning of filter condition. Size 3 Maxiflow features one integral indicator.

**Operating Pressure:**

Max 10 bar

**Flow Rate:**

Max 360 l/min

**Filtration Media:**

3 and 10 micron abs, 10 micron nom.

**Connections:**

G<sup>3</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>2</sub>

**Indicator:**

Integrated or external

Maxiflow Filter



**ATZ Series**



ATZ filters are located under the tank's oil level, offering maximum protection of the hydraulic system components. When removing the element, the manual operated check valve prevents oil leakage. Pre-filtration takes place by means of a magnet column. Thanks to the "in-to-out" filter principle, contaminated oil cannot leak back into the system. ATZ filters are capable of handling flow rates up to 300 l/min.

**Operating Pressure:**

Filter should be placed in the suction line.

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

Also available 10µ cellulose and 40µ stainless steel

**Connections:**

ATZ120: G1<sup>1</sup>/<sub>2</sub>" (ISO228)  
ATZ3000: 2<sup>1</sup>/<sub>2</sub>" SAE-3000 psi flange

**Flow Rate:**

Max 300 l/min

**Indicator:**

0.15 bar or 0.30 bar (vacuum gauge)

ATZ Series



**Multiflow Filter**



A green filter using the patented LEIF<sup>®</sup> element and a re-usable chimney for a guaranteed quality of filtration and lower disposal costs for Multiflow users. Only the element requires replacement during element change. For existing Multiflow filters the conversion kit type can be applied to utilise this unique green LEIF<sup>®</sup> element for standard Multiflow return line filters.

Both versions are available with high performance Microglass III filter media.

**Operating Pressure:**

Max 8 bar

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Connections:**

G<sup>1</sup>/<sub>2</sub>, G<sup>3</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>4</sub>

**Construction:**

Bowl: steel  
Head: aluminium

**Flow Rate:**

Max 600 l/min

Multiflow Filter

# 1. Reservoir Solutions



## Steel Reservoirs

### Hydraulic steel reservoirs

Designed and built for mobile applications, Parker Filtration's range of quality steel reservoirs offer OEM customers and hydraulic system designers a cost-effective reservoir solution.

Today, Parker's steel reservoirs are typically applied to the waste management construction and transportation markets.

### Designing a reservoir system not just a quality reservoir

The concept of purchasing a steel reservoir from Parker Filtration is more about specifying a system rather than simply a well designed, well manufactured reservoir.

Typical system equipment specified pre-fitted could include:

- Suction connections at the back and bottom of the reservoir
- Tank mounted filter options available including green filter media options
- Support frame and fasteners included as standard
- 2mm steel plate as standard
- Stainless steel options

Metal Reservoirs

## Copolymer Reservoirs

### A system solution where a tailor made design is the answer

OEM customers are continuously looking to cut costs and increase efficiency. Parker Filtration offers complete solutions. Beside steel reservoirs, made by Parker, we offer a revolutionary lightweight Copolymer reservoir with tank top mounted or integrated filter and breather.

A more frequent use of Copolymer reservoirs can be seen in materials handling, agriculture and construction equipment manufacturing. Typical applications are warehouse trucks, smaller sized wheeled loaders, telescopic handlers, dumpers, mini excavators and agriculture machinery.

Each reservoir is unique in terms of shape, dimensions and integrated functions. It is equipped with tank top mounted or integrated return line filter and an air breather. All filters and air breathers are standard supplied with the patented environmental friendly LEIF® element.

Reliable leak-proof connections have always been a critical aspect for Copolymer reservoirs. Parker has developed a technology using metal attachment components. All metal attachment components are moulded in with the Copolymer reservoir wall, ensuring the reliable leak-proof connection between the reservoir and the components that are attached to it. These connections (e.g. a suction connection for pumps, drains, vents, or a filler opening) are readily possible, as well as markings on the side to indicate the minimum and maximum oil levels. The metal attachment connections can be made available for hose couplings, a flange attachment or thread attachment.

Advantages for customers who specify a Copolymer reservoir include:

- Lightweight
- Flexibility with respect to reservoir shapes making almost anything possible
- Characteristic of material can be customised meeting stringent requirements with respect to low or high temperatures
- Integration of several functions reduces the use of loose parts
- The reservoir can be purchased as a complete unit

Copolymer Reservoirs

## Media

### Microglass III

Microglass III is Parker Filtration's latest filtration media for hydraulic applications.

Tested to the latest ISO standards Q3 is a graded multi-layer glass fibre media, designed to offer maximum service life and maximum efficiency. Q3 is the definitive media development. By utilising multiple media layers, designed to capture contaminants of differing sizes, Q3 ensures that the full depth of the media pack is utilised, by effectively eliminating the 'blinding' of the upstream layers.

The result is that particle retention capacity is multiplied. With a significant reduction in initial delta p.

### E Series

The development of new filter products is an ongoing process, driven by the needs of the customer. It was apparent that, in order to preserve our environment, we would have to meet the demands of industry for filters & filter elements that are effective, efficient and do not damage our environment.

From this broad requirement, Parker Filtration have developed their E Series environmentally friendly range of filters under our ISO14001 approval. LEIF® for low pressure filters and Ecoglass III for medium and high pressure filters.

### Ecoglass III

E Series elements (designated Ecoglass III) are manufactured with no metallic content, allowing the total disposal of the element by incineration. They can be shredded & baled, offering the advantage of reduced volume for disposal.

With no metal components, these elements weight less than the equivalent standard elements with integrated metal support.

Ecoglass III elements utilise Parker Filtration's latest media development; Microglass III (Q3) and is designed to be used exclusively in Parker Filtration's 'E Series' fluid filter products.

### Low Environmental Impact Filters (LEIF®)

The standard element for many of our low pressure filters, LEIF® elements are accepted around the world. LEIF® elements retain the metal mesh media support, but have no center support tube and no metal end caps. Offering high efficiency and improved dirt holding capability, this design allows for the effective disposal of the contaminated media pack and reclamation of the mesh support using magnetic separation.

Media

## 2. Medium Pressure Filters



15/40/80CN Series - Eco 

An economical, medium pressure range filter with excellent fatigue pressure ratings and now available with Ecoglass environmentally friendly elements. Prior to the availability of the "CN" filter, applications were restricted by limitations of a spin-on can, or forced into the higher-cost range of high pressure filters. The "CN" series fills this gap, and now with the newly increased fatigue rating from 40 to 56 bar and a maximum operating pressure of 70 bar the applications are expanded.

**Operating Pressure:**  
Max 70 bar

**Filtration Media:**  
Ecoglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly elements

**Connections:**  
BSP(G) metric and SAE threads  
80CN also with flange SAE 2" 3000-M

**Construction:**  
Bowl: hard anodised aluminium  
Head: aluminium

**Flow Rate:**  
Max 600 l/min

**Indicator:**  
1.2 bar or 2.5 bar visual, electrical or electronic

15/40/80CN Series - Eco



45M/45M Eco 

The 45M/45M Eco Series of medium pressure filters offer an ideal solution to the problem of protecting system components at lower pressures. These filters are a realistic, high quality alternative to low specification spin-on filters. The 45M/45M Eco Series offers high dirt holding capacity, 40 bar capability and rapid element replacement. Now also available with environmentally friendly Ecoglass III elements.

**Operating Pressure:**  
Max 40 bar

**Filtration Media:**  
Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Ecoglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Connections:**  
Threads G1, G1<sup>1</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>2</sub> (ISO228/1) or flange SAE 1<sup>1</sup>/<sub>2</sub>" 3000-M

**Construction:**  
Bowl: steel  
Head: cast iron

**Flow Rate:**  
Max 260 l/min

**Indicator Options:**  
2.5 bar visual, electrical or electronic

45 Series



130 Series - Eco 

These high flow return filters are ideal for industrial applications on hydraulic or lubrication systems with pressures up to 30 bar and flows up to 1000 l/min. The ability to bank multiple filters together in a "Duplex" format enables continuous filtration during element changes.

**Operating Pressure:**  
Single filters 30 bar  
Filter systems 16 bar

**Filtration Media:**  
Ecoglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Connections:**  
**Single Units**  
SAE 2" or SAE 2<sup>1</sup>/<sub>2</sub>" 3000-M, 210 bar or with adaptor threads G1<sup>1</sup>/<sub>2</sub> or G2.

**Dual Units**  
Flange SAE 3" 3000-M, 210 bar or with adaptor threads G1<sup>1</sup>/<sub>2</sub> or G2

**Parallel Units and Filter**  
Systems: DN80/PN16 or DN100/PN16

**Construction:**  
Filter housing: aluminium  
Internal centre tube: steel.

**Flow Rate:**  
Max 1000 l/min

**Indicator Options:**  
Includes 2.5 bar visual indicator. Electrical and electronic indicators available as options.

130 Series - Eco



## 3. High Pressure Filters



15P/30P Series



These high pressure filters meet the need for clean hydraulic fluid.

Modern high pressure hydraulic systems are demanding better controls and long component life. They are expected to deliver high standards of performance. The hydraulic components within these systems are built with tighter tolerances which increases their sensitivity to contamination.

**Operating Pressure:**  
Max 207 bar

**Filtration Media:**  
Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Connections:**

15P: G<sup>3</sup>/<sub>4</sub> or M27 threads  
30P: G1 or M33 threads

**Construction:**

Bowl: impacted aluminium  
Head: extruded aluminium

**Flow Rate:**

Max 200 l/min

**Indicators:**

2.5 bar visual, electrical or electronic

15P/30P Series



100P Series



The 100P series is designed to meet the growing demand for high flow capacity pressure filters. For systems where reverse flow can be expected, an optional integrated reverse valve avoids back wash of contamination. The elements and filter media used include high-quality materials such as HPTE glass fibre and stainless steel mesh as well as high strength mesh cleanable elements and high strength fibre disposable elements. When changing the element, only the end cap of the bowl has to be removed. The filter is ideal for applications where cost saving and space is at a premium.

**Operating Pressure:**  
Max 414 bar

**Filtration Media:**  
Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Connections:**

Threads: G1<sup>1</sup>/<sub>2</sub>, G2, SAE 24 or SAE 32,  
Flanges: 1<sup>1</sup>/<sub>2</sub>" or 2" SAE 6000  
1<sup>1</sup>/<sub>2</sub>" or 2" SAE 6000-M

**Construction:**

Head: cast iron (GSI)  
Bowl: extruded steel

**Flow Rate:**

Max 1000 l/min

**Indicators:**

5.0 bar visual or electrical

100P Series



18/28/38P Series



Parker Filtration engineered the 18/28/38P series of high pressure filters to satisfy demanding applications in the mobile and industrial markets throughout the world. With metric mounting and optional ISO6149 ports, this series is a truly global design. Installed downstream from the pump, with their wide range of high capacity Microglass III elements, they offer excellent system protection. For critical applications such as servo or proportional controls, no bypass with a high-strength element ensures maximum protection.

**Operating Pressure:**  
414 bar

**Filtration Media:**  
Microglass III

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Connections:**

BSP(G) metric G<sup>3</sup>/<sub>4</sub>, G1, G1<sup>1</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>2</sub>  
SAE threads or SAE 6000 flanges

**Construction:**

Head: cast iron (GSI)  
Bowl: steel

**Flow Rate:**

Max 700 l/min

**Indicator:**

2.5 bar or 5.0 bar visual, electrical or electronic

18/28/38P Series

## 3. High Pressure Filters



70/70 Eco Series



High quality 420 bar in-line pressure filters designed to offer high levels of protection at flows up to 450 l/min. Dirt sensitive systems can be protected with confidence using the 70/70 Eco series high pressure filters.

**Operating Pressure:**

Max 420 bar

**Connections:**

Threads G1, G1<sup>1</sup>/<sub>4</sub>, G1<sup>1</sup>/<sub>2</sub>, (ISO228/1) or Flanges SAE 1<sup>1</sup>/<sub>2</sub>" or SAE 1<sup>1</sup>/<sub>4</sub>" either with 3000-M or 6000-M config.

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Ecoglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life
- Reduced element weight
- Element totally disposable
- Environmentally friendly

**Construction:**

Head: cast iron (GSI)  
Bowl: steel

**Flow Rate:**

Max 450 l/min

**Indicators:**

2.5 bar visual, electrical or electronic  
7.0 bar indicators to be used with no-bypass option

70 Series



22PD/32PD Series



Specially designed to offer continuous operation, even during element change. A change over valve operates on the upstream side of the filter, ensuring a contamination free system.

**Operating Pressure:**

210 bar.

**Filtration Media:**

**Microglass III**

- High dirt holding capacity
- Low pressure drop
- Extended service life

**Connections:**

22PD: G1 or flange SAE 1<sup>1</sup>/<sub>4</sub>" 3000-M  
32PD: G1<sup>1</sup>/<sub>4</sub> or flange SAE 1<sup>1</sup>/<sub>2</sub>" 3000-M

**Construction:**

Head: cast iron (GSI)  
Bowl: steel

**Flow Rate:**

Max 250 l/min

**Indicator:**

2.5 bar visual, electrical or electronic

Models 22PD, 32PD

## 4. Filter Indicators



FMU Indicators



The FMU range of filter condition indicators, are designed for use on a wide range of Parker filters and suitable for competitive interchange (consult Parker Filtration for details). Ideal for giving accurate visual, electronic or electrical feedback of filter element condition, in order to facilitate effective maintenance and ensuring hydraulic systems, marine, mobile or industrial are protected from particulate contamination.

**Pressure Indicators:**

- For low pressure filters
- Thread G1<sup>1</sup>/<sub>8</sub>" + M10x1
- Indication at 1,2 and 2.0 bar
- Visual (gauge)
- Electrical up to 42Vac/dc
- Electrical with up to 250 Vac with DIN 43650 plug

**Differential Pressure Indicators:**

- For in-line filters
- Max pressure 420 bar
- Materials: aluminium, brass, stainless or steel
- Wide range of indication settings available
- Visual (pop-up)
- Electrical up to 250 Vac
- Electronic with LED interface (10 ... 36 Vac)
- Programmable featuring easy settings and log memory

FPC Indicators

## 5. Portable Filtration Systems



Guardian®



Guardian® is a portable filtration system with two main functions: to ensure that the new 'dirty' fluid often contaminated during handling, is delivered to the system at a specific cleanliness; and to permit periodic clean up of existing fluid to original condition.

### Guardian Features:

- Lightweight compact unit
- Easy single switch operation
- Uses standard Parker elements
- Bypass flow returned to inlet port
- Water removal option available

### Filtration Media:

#### Microglass III

- High dirt holding capacity
  - Low pressure drop
  - Extended service life
- Also available 10µ cellulose and 40µ stainless steel

### Operating Pressure:

2 bar

### Flow Rate:

15 l/min

### Motor Rating:

220/240Vac  
110Vac  
24Vdc

Guardian®



10MF Filtration Cart



Parker's 10MF Series portable filtration cart is designed for on-site preventative maintenance of fluid systems.

An internal pump draws fluid through a primary clean-up filter and through a high quality polishing filter to remove particulate contamination down to 4µm (c) absolute. Parker Filtration Carts are the ideal way to prefilter and transfer fluids into reservoirs or to clean up existing systems.

Contamination, both particulate and water, may be added to a new fluid during processing, mixing, handling and storage. Water is removed by installing Par-Gel™ elements in the outer filter. Par-Gel™ elements are made from a polymer which has an extremely high affinity for free water. Once water comes into contact with this material, it is removed from the system. The Parker Filtration cart uses two high capacity Parker filters for long element life and better systems protection. The first stage (inlet) filter captures larger particles, while the second stage (outlet) filter controls finer particles or removes water. A rugged industrial quality gear pump gets the job done fast.

### Filtration Media:

#### Microglass III

- High dirt holding capacity
  - Low pressure drop
  - Extended service life
- Also available 10µ cellulose and 40µ stainless steel

### Flow Rate:

38 l/min

### Pump:

Pressure balanced gear pump

### Pump Drive Options:

240Vac  
110Vac

10MF Series



PVS 185, 600, 1200, 1800, 2700



Contaminated oil is drawn into the Parker portable purification system by a vacuum of 846.5 millibars (25 In/Hg). The oil passes through the in-line low watt density heater where the oil is heated to an optimum temperature of 66°C (150°F).

The oil then enters the distillation column where it is exposed to the vacuum through the use of special dispersal elements. This increases the exposed surface of the oil and converts the water to vapour form, which is then drawn through the condenser by the vacuum pump.

The water-free oil falls to the bottom of the column and is removed by a heavy duty lube oil pump. This pump forces the dry oil through a final particulate removal filter. Clean oil passes out of the unit, back to the reservoir – and into the system.

### PVS 185

**Flow Rate:** 19 l/min (5USGM)

Ports 3/4" JIC (male) inlet  
Ports 3/4" JIC (male) outlet

### PVS 600

**Flow Rate:** 37.9 l/min (10USGM)

Ports 1" JIC (male) inlet  
Ports 1" JIC (male) outlet

### PVS 1200

**Flow Rate:** 75.7 l/min (20USGM)

Ports 1 1/2" NPTF inlet  
Ports 1" JIC (male) outlet

### PVS 1800

**Flow Rate:** 113.6 l/min (30USGM)

Ports 2" NPTF inlet  
Ports 1/2" JIC (male) outlet

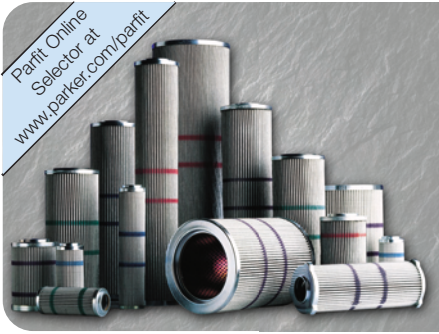
### PVS 2700

**Flow Rate:** 170.3 l/min (45USGM)

Ports 3" NPTF inlet  
Ports 2" NPTF outlet

PVS 185, 600, 1200, 1800, 2700

## 6. ParFit/ParGel 7. Reservoir Equipment



ParFit Online  
Selector at  
[www.parker.com/parfit](http://www.parker.com/parfit)

### ParFit Elements

In the past, users of hydraulically powered machinery have been forced to buy replacement filter elements from either the machinery OEM or the filter manufacturer. Customer options have been extremely limited – either rely on the uncertain quality and service on offer from spurious manufacturers or pay top prices for recognised names.

Now you have the opportunity to source all replacement elements from one major supplier at the right price. The Parker name is known throughout the hydraulic industry for quality and service. Parker Filtration have undertaken a substantial investment programme and can now offer a comprehensive range of filter elements, carefully designed to be interchangeable with leading manufacturer's products. Parker Filtration engineers, using the latest technology, have designed and tested the new range of elements to meet stringent performance criteria and dimensional tolerances to ensure that PAR-FIT elements can now be specified with absolute confidence.

For a copy of the current Parker Par-Fit reference book Email [Filtrationinfo@parker.com](mailto:Filtrationinfo@parker.com) and quote FDHB170 UK/DE/FR

### ParGel

Par-Gel filter elements are an effective tool in controlling water related problems in hydraulic power and lubrication systems. There is more to proper fluid maintenance than just removing particulate matter. You need to remove water as well. Parker has developed Par-Gel water removal elements to be used in combination with particulate filters to provide significant benefits.

### Environmental Air Filters, Breathers & Filler Breathers

IP65 rated glass-filled, nylon filler breather filters, traditional metal air breathers and filter breathers and now, environmentally friendly solutions. Fitted with condition indicators and replaceable elements, the EAB and ABL reservoir air breathers offer system designers and end users unique solutions.



### Level Measurement

Direct and remote monitoring of the fluid level is possible with the Parker range of level measurement products. The FL range of float switches offer top access remote monitoring with CLS46 being mounted into the side of the tank. The established range of Fluid Level and Temperature gauges for direct monitoring remain available.



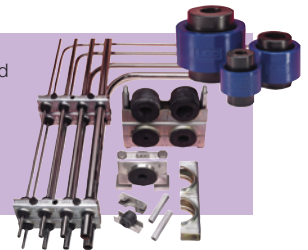
### Strainers

Suction Strainers and in line filters offer 1st point protection for the system pump from very large particles. Diffusers should be used to reduce or prevent fluid aeration in the reservoir, caused by returning fluid.



### Drive Couplings and Clamping

Drive couplings for a wide range of applications offer reliable long term service and worry free operation. The Multiclamp system is an internationally recognised pipe clamping system, that offers flexibility in both application and installation.



### Pressure Gauges

The 63mm and 100mm diameter, glycerine filled gauges for use at pressures up to 1000 bar (panel mounted) are available as both panel and bottom mounting.



### Customer Added Value

The Parker Filtration range of fluid power products and reservoir equipment offers hydraulic system designers, OEM specifiers, and users and service managers alike a unique level of value added service, technical product support and quality assurance.

## 8. Fluid Condition Monitoring



LCM20 Particle Counter 

There are many reasons why the LaserCM, portable particle counter, is a world-leader. Users are attracted to its proven performance in the field, on the production line or in the laboratory. Others recognise the manufacturing quality, reliability and the potential for reducing machine downtime and effective predictive maintenance programmes. Then there are those who find originality and innovation irresistible qualities that when combined provide a fluid condition monitor that will out-perform the rest.

### Features:

- Instant, accurate results achieved with a 2-minute test cycle
- Data entry allowing individual equipment footprint record
- Data graphing selectable via the integral printer
- Auto 300-test cycle logging via LCD handset input
- RS232 serial [computer port] interface allowing Datum data download
- Limit on level output to control peripheral equipment such as offline filtration via internal relay limit switches
- Optional bar code swipe wand to allow handset data loading
- Worldwide service and technical support

The NEW improved portable particle counters hand set now includes:

- 50mm back light selection LCD display with contrast control
- Highly re-programmed and engineered design
- Colour coded
- IP 65 rated
- Special features accessed through one touch key operations

LCM20



MCM 20 

### Autoremote Particle Counter

Proven as a portable particle counter able to operate in any condition, MCM20 and its principles are available to users where continuous, permanent installed monitoring is required. The MCM20 utilises the latest laser diode method of particle counting as per our LCM20. The unit is enclosed in a metal casing with access to the hydraulic connection, DC power input, fuse holder and PC/PLC connection ports located on the front panel. The internal workings are manufactured onto a removable chassis for ease of service and calibration.

### Typical Applications Include:

- Test Rigs
- Construction Machinery
- Industrial Plant
- Hydraulic Equipment & System Manufacturers

### Benefits Include:

- Continuous on-line particle counting with MCM20 ensures constant system monitoring within defined parameters
- MCM20 can be pre-set to carry out contamination tests at specific intervals

### Features:

#### Test cycle time:

Variable between 30 seconds and 3 minutes

#### Repeat test time:

Continuous mode or between 30 seconds and 1440 minutes (24 Hours)

#### Particle counts:

6 channels either ACFTD or MTD calibrated

#### International codes:

ISO4406, NAS 1638

#### Max. working pressure:

420 bar (6,000 PSI)

#### Minimum working pressure:

2 bar (30 PSI)

#### Fluid compatibility:

Mineral oil or petroleum based fluids

#### Phosphate-ester:

Skydrol option available

#### Working conditions:

MCM20 will operate with the system working normally

#### Computer compatibility:

Interface via D Type 15 way socket RS 232 connection@ 9600 baud rate (not supplied)

#### Power requirement:

Regulated 12 Vdc input. (1.25 amp quick blow fuse)

MCM 20



Universal Bottle Sampler 

### Simple to Use, the Universal Bottle Sampler (UBS)

Parker's UBS provides the dynamic link to all portable particle/water counters.

The UBS off-line, already the proven, efficient answer to oil bottle sampling via a CM monitor has been upgraded with the incorporation of microprocessor technology to recognise and adjust to the connecting monitor including the LaserCM and Water in Oil Monitor.

The oil sampler is drawn into the UBS Off-line where it is secured, free from further contamination, in a bottle together with a clean waste bottle by a peristaltic, self-priming pump. Simple operation and efficient testing are assured once the UBS Off-line is connected to any of the CM monitors, and powered up using its own power source. The oil sample requires agitation and degassing before carrying out the contamination test. Vacuum chamber and pump options are available.

### Typical Applications Include:

- Batch sampling
- Aircraft rig certification
- Oil research
- Laboratory testing
- Transfer line monitoring

Universal Bottle Sampler

## 8. Fluid Condition Monitoring



System 20



### Inline Dynamic Connection into a System.

Three industrial System 20 sensors have been developed by Parker for simultaneous measurement of flow, pressure and temperature, using hand-held monitors.

Covering a wide range of flow rates, fluid types and applications, System 20 sensors are designed to be used with both types of System 20 Monitors, all Contamination Monitors and the water in oil monitor.

Specially developed System 20 sensors are available for use with the 'Aggressive Fluids' contamination monitor.

- An operator can monitor a system without having to shut it down first.
- Predictive maintenance by connecting to an analogue or electronic monitor.
- Electronic monitors memory can be downloaded to a computer to support reports.

### 2 Types of Analogue Monitor:

The System 20 Analogue Monitor features 3 dayglo dial gauges to monitor flow, pressure and temperature of oil or water systems up to 420 bar and 380l/min.

The System 20 Electronic Monitor (EM20) is also available to provide effective system condition monitoring up to 420 bar and 380l/min with test data storage and data management download features.

System 20



MS100/MS150 Moisture Sensor



### Cost-effective Moisture Detection

Water enters hydraulic and lubricating systems from a variety of sources. Atmospheric ingressions of water vapour, as well as internal heat exchanger leaks, create unfavourable operating conditions. The Parker MS100/MS150 Moisture Sensors eliminate the guesswork by providing real time dynamic condition monitoring. It is designed to work well in petroleum/synthetic hydraulic and lubricating oil applications.

### In-Line Moisture Measurement of Hydraulic & Lubricating Oils.

Parker's MS100/MS150 Moisture Sensors offer fast, reliable and accurate in-line detection of moisture in fluids. The MS100/MS150 transducer type technology has been especially designed with the preventative maintenance programme environment in mind.

The industry accepted sensing cell device will monitor and report relative humidity (RH), moisture content in oils. The water content measurement technique offers the end user benefits over the current standard form of water content reporting (PPM).

The MS100/MS150 will provide the user with reliable data on the rate of water take up, as the fluid absorbs water. The device can report % RH water content as increases are detected giving the user information on how close to the fluids real saturation point has been reached.

This allows for real time preventative maintenance to be undertaken and corrective actions to be made. By knowing that the water contamination is still within the oils absorbing range, less than 100%, reclaiming fluid properties before additive damage occurs can initiate calculable cost savings. An optional electronic readout device is also available.

### Typical Applications Include:

- Pulp and Paper Plants
- Marine Hydraulics
- Power Transmission & Distribution
- Oil Reclamation
- Industrial Hydraulics

MS100/MS150 Moisture Sensor



H2Oil



Water in oil monitoring from one on-line monitor H2Oil is a 2 channel non-dispersive absorption spectrometer, designed to measure the level of absorbed water content polluting the oil in a sample bottle or by dynamically connecting to an inline System 20 Sensor or Single Point Sampler. The H2Oil features a re-chargeable 12 Vdc power-pack, on board diagnostic computer and printer for effective logging and data retrieval.

- Accurate measurement of 0-3000ppm absorbed water contamination in oil
- On-line operation up to 420 bar
- Results displayed as percentage water content or parts per million
- RS 232 download facility
- Optional oil delivery kit for customer offline oil sampling

H<sub>2</sub>Oil

### Contact Information



For more information on the products on this and the following page, please contact Parker Hannifin's Conditioning Monitoring Centre on: +44 (0) 1842 763299 or email [commoninfo@parker.com](mailto:commoninfo@parker.com) or [www.parker.com/cmcc](http://www.parker.com/cmcc)

Contact Information

## 9. Transducers & Transmitters



### Transducers & Transmitters

To overcome the historical problems caused by “gauge creep” of thick film sensors and the fragility of piezo-electric/ceramic based sensors, the new ‘Performer’ range uses a high-grade stainless steel element, which is coated with layers of both insulative and alloy materials. These are trimmed to a very close tolerance using state of the art, semiconductor grade, laser and ion beam methods. This extremely accurate “front end” is then coupled with Application Specific Integrated Circuitry (ASIC) to produce a sensor that is both accurate and repeatable over a wide temperature range, -40°C to +125°C. The “Performer” is now available in a variety of thread-forms and connector options. This new design offers a high stability, very low drift device, which can operate over a wide thermal range. Powered from an extended working supply range 11-30Vdc (PTD) and 11-30Vdc (PTX).

#### Applications for The ASIC Performer

- Fork lift trucks
- Earth moving machinery
- Water usage systems
- Paper mills
- Truck mounted cranes
- Racing car
- Forest Machinery
- Load weighing system

#### Specification

**Pressure ranges:** 20, 60, 100, 250, 400, 700 bar.

Maximum over pressure: Rated pressure x2  
Maximum burst pressure: Rated pressure x6

#### Vibration:

>50g

#### Installation:

Spanner size 22A/F  
Max. (recommended) tightening torque = 30Nm

#### Electrical

| Supply voltage                | Output   |
|-------------------------------|----------|
| 11- 30Vdc                     | 0 - 5V   |
| 11- 30Vdc                     | 4 - 20mA |
| Transducer current draw = 8mA |          |

#### Thread Form Options

G<sup>1</sup>/<sub>4</sub> (1<sup>1</sup>/<sub>4</sub>BSP) with bonded seal  
Consult Parker for alternate thread forms, and output voltages.  
All thread forms and sensor interface are made from 17- 4PH stainless steel.

## 10. Flowmeters and Monitors



### Flowmeters and Monitors

A range of quality flowmeters that extend from low cost, simple to use Loflow or Dataflow's inline flow indication and precision monitoring to brass or stainless steel Flowline flowmeters and flowswitches.

#### Easiflow Flowmeters and Switches

- Oil and water calibrated
- Works in any plane
- Pressures up to 10 bar
- Flows 1-150 l/min
- Switches - fully adjustable flow rate signalling
- AC/DC dual voltage compatible switch

#### The Dataflow Range

- Indicator gives flow visibility
- Indicates flow from 2-150 l/min
- One monitor connects to many indicators
- Pressures up to 10 bar
- 4-20 mA and pulse output flow transmitters
- Dataflow Compact is a lightweight, inline flow transmitter for flows up to 25 l/min and 20 bar (clear fluids only)

#### Flowline Flowmeters and Flowswitches

- Oil and water calibrated in brass or stainless steel
- Pressures up to 350 bar
- 1<sup>1</sup>/<sub>4</sub> brass design pressures up to 210 bar
- 4 sizes to select from
- Strap-on, 'boxed' two switch types safe version
- Flows from 0.2 upto 360 l/min

Suction & Return Series

# Parker Hannifin Corporation

## Aerospace Group

A leader in the development, design, manufacture and service of control systems and components for aerospace and related high technology markets, achieving profitable growth through premier customer service.



## Climate & Industrial Controls Group

Designs, manufactures and markets system control and fluid handling components and systems to refrigeration, air conditioning and industrial customers worldwide.



## Fluid Connectors Group

Designs, manufactures and markets rigid and flexible connectors and associated products used in pneumatic and fluid systems.



## Instrumentation Group

A global leader in the design, manufacture and distribution of high quality critical flow components for worldwide process instrumentation, ultra high purity, medical and analytical applications.



## Automation Group

A leading supplier of pneumatic and electro mechanical components and systems to automation customers worldwide.



## Filtration Group

Designs, manufactures and markets quality filtration and clarification products, providing customers with the best value, quality, technical support and global availability.



## Hydraulics Group

Designs, produces and markets a full spectrum of hydraulic components and systems to builders and users of industrial and mobile machinery and equipment.



## Seal Group

Designs, manufactures and distributes industrial and commercial sealing devices and related products by providing superior quality and total customer satisfaction.

# The Choice is Perfectly Clear

## UK Sales & Filtration

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Email: [filtration.netherlands@parker.com](mailto:filtration.netherlands@parker.com)

**Parker Sales UK**  
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Fax: +44 (0) 1926 317 855  
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|                                   |                      |
|-----------------------------------|----------------------|
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| Austria                           | +43 2622 23501-0     |
| Belgium                           | +32 (67) 280900      |
| Brazil                            | +55 12 3955 1000     |
| Canada                            | +1 800 272 7537      |
| Central & South America/Caribbean | +1 305 470 8800      |
| China                             | +86 (21) 6445 9339   |
| Czech Republic                    | +42 (0) 2 830 85 221 |
| Denmark                           | +45 (0) 43 56 04 00  |
| Finland                           | +358 20 7532 500     |
| France                            | +33 (0) 254 741403   |
| Germany                           | +49 (0) 2131 40160   |
| Hong Kong                         | +852 (2) 428 8008    |
| Hungary                           | +36 (1) 252 8137     |
| India                             | +91 55907081 85      |
| Indonesia                         | +60 3 5638 1476      |
| Italy                             | +39 02 451921        |
| Japan                             | +81 3 6408 3900      |
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| Korea                             | +82 31 379 2200      |
| Malaysia                          | +62 811 179135       |
| Mexico                            | +1 800 272 7537      |
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| New Zealand                       | +64 (9) 573 1523     |
| Norway                            | +47 64 91 1000       |
| Philippines                       | +63 34 4323 779      |
| Poland                            | +48 2257 32400       |
| Singapore                         | +65 688 76300        |
| South Africa                      | +27 (11) 961 0700    |
| Spain                             | +34 (91) 675 7300    |
| Sweden                            | +46 8 5979 5000      |
| Switzerland                       | +41 31 917 1850      |
| Taiwan                            | +886 (2) 2298 8987   |
| Thailand                          | +662 693 3304        |
| United Arab Emirates              | +971 2 6788587       |
| United Kingdom                    | +44 (0) 1926 317878  |
| USA                               | +1 800 272 7537      |
| Venezuela                         | +58 212 238 54 22    |

## Distributor

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For all other countries please contact: European Product Information Centre (24 Hr.): **00800 27 27 5374**  
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