• 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.

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.
Marine & Power Generation Filters

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Security at sea starts with

**Deck Machinery**
- Lifeboat handling systems
- Cargo winch hydraulics
- Control hydraulics for anchors

**Parker typical solutions**
- Alternative winch system hydraulics eg. fishing nets, cable laying and offshore applications

**Lifting Systems**
- Lifeboat handling systems
- Cargo winch hydraulics
- Control hydraulics for anchors

**Parker typical solutions**
- Passenger lift hydraulics
- Goods lifting hydraulics
- Restaurant/theatre stage hydraulics

**Manoeuvring Systems**
- Steering gear hydraulics and lube
- Rudder control hydraulics

**Parker typical solutions**
- Thruster hydraulics and lubrication
- CP propeller control hydraulics

**Propulsion Systems**
- Diesel engine lubrication systems
- Diesel engine fuel oil systems
- Diesel engine crankcase breathers

**Parker typical solutions**
- Reduction gear lubrication and control oil systems
- Engine room control hydraulics

**With the courtesy of Silja Oyj Abp**

70 Series high pressure filters

BGT-L 2000 high-flow return filter

SH100 stainless steel filter

CM20 & Single Point Sampling connection

Parker reservoir products, such as filler breathers...

LEIF® (Low Environmental Impact Filter)

ParTrap fuel 200 automatic filter

F72000 lubrication filter

32PD Duplex filter

Racor crankcase ventilation unit (CCV) section
Handling Systems

- Ferry door hydraulic control systems
- Hydraulic power packs
- Winch hydraulics
- Ramp control hydraulics
- Refrigeration lube oil systems
- Oil separation
- Compressed air oil separation

Thruster systems

- Tunnel thruster control hydraulics
- Refrigeration lube oil systems
- Compressed air water separation

Parker typical solutions

- Multiflow tank mounted filters
- High pressure filters 18, 28 and 38P Series
- Tunnel thruster control hydraulics
- Refrigeration lube oil systems
- Compressed air water separation

Handling Systems

- Winch hydraulics
- Ramp control hydraulics
- Hatch door hydraulic control systems
- Refrigeration lube oil systems
- Oil separation
- Compressed air oil separation

Parker typical solutions

- Multiflow tank mounted filters
- High pressure filters 18, 28 and 38P Series
- Tunnel thruster control hydraulics
- Refrigeration lube oil systems
- Compressed air water separation

Thruster systems

- Tunnel thruster control hydraulics
- Refrigeration lube oil systems
- Compressed air water separation

Parker typical solutions

- Multiflow tank mounted filters
- High pressure filters 18, 28 and 38P Series
- Tunnel thruster control hydraulics
- Refrigeration lube oil systems
- Compressed air water separation
Automatic Back Flushing Fuel Oil Filters
ParTrap fuel Series
No more oil leaks
On-board waste oil and fuel, if it cannot be burned at sea, must be brought safely and securely to harbour to be destroyed. Parker Filtration has designed an automatic fuel oil filter – ParTrap fuel – which not only reduces the amount of fuel oil waste but also increases the efficiency of filtration and backflushing.

Integration means less leakages
ParTrap is a compact product, complete with patented construction saving always so critical engine room space. All major components are integrated into the same housing: multi-functional valve, by-pass filter and most of the piping. The function of ParTrap is reliable and without leakages – the leakage oil pan might rust, but that will then be your only concern.

A new way to protect the environment
Efficient filtration and flushing means less waste, which in turn makes the investment very positive – even for the environment. ParTrap is designed for all existing fuels as well as fuels of the future.

This is what you have been waiting for
Thanks to its’ robust and modular construction ParTrap fuel is very easy to maintain – and it very seldom needs repairing. The draining and refilling as well as de-aeration are taken care of automatically. The control unit is also available which makes the updating of existing fuel systems very easy.

Parker Filtration – the knowledge of fuel filtration
Parker Filtration, a globally known brand in marine and power generation market for fuel and lube oil filtration, is part of Parker Hannifin Corporation – an $8 billion world-wide leader in the production of motion control, instrumentation and fluid power components and systems.

<table>
<thead>
<tr>
<th></th>
<th>ParTrap fuel 50</th>
<th>ParTrap fuel 200</th>
<th>ParTrap fuel 600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow rate [m³/h]</td>
<td>maximum</td>
<td>4</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DN32</td>
<td>DN40</td>
</tr>
<tr>
<td>Connection size</td>
<td>minimum</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>20</td>
<td>20</td>
</tr>
<tr>
<td>Operating pressure [bar]</td>
<td>minimum</td>
<td>4/3</td>
<td>16/8</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>55</td>
<td>160</td>
</tr>
<tr>
<td>Number of filter candles total/in use</td>
<td>minimum</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>Weight (approx.) [kg]</td>
<td>maximum</td>
<td>10-500</td>
<td>10-500</td>
</tr>
<tr>
<td>Air pressure [bar]</td>
<td>minimum</td>
<td>10-500</td>
<td>10-500</td>
</tr>
<tr>
<td></td>
<td>maximum</td>
<td>10-500</td>
<td>10-500</td>
</tr>
</tbody>
</table>
Automatic Back Flushing Fuel Oil Filters
ParTrap fuel 50
**Specification**

**Flow rate:**
- HOT SIDE: 4 m³/h (30 cSt)
- COLD SIDE: 2.5 m³/h (90 cSt)

**Filter fineness:**
- 10-500 µm

**Maximum operating pressure:**
- 20 bar

**Maximum temperature:**
- 160 °C

**Differential pressure:**
- 0.2 bar (clean element)
- 0.8 bar (charged element)
- 1.5 bar alarm

**Air feed pressure:**
- 6...10 bar

---

**Product Description**

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
<th>Table 4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>PTF50-</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Element type</td>
<td>CODE</td>
</tr>
<tr>
<td>10 µm</td>
<td>10</td>
</tr>
<tr>
<td>25 µm</td>
<td>25</td>
</tr>
<tr>
<td>34 µm</td>
<td>34</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>CONNECTION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type</td>
<td>CODE</td>
</tr>
<tr>
<td>DN32</td>
<td>DN32</td>
</tr>
</tbody>
</table>

**Table 3**

<table>
<thead>
<tr>
<th>BY-PASS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td>CODE</td>
</tr>
<tr>
<td>With by-pass filter</td>
<td>BF</td>
</tr>
<tr>
<td>Without by-pass</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 4**

<table>
<thead>
<tr>
<th>CONTROL UNIT</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td>CODE</td>
</tr>
<tr>
<td>With control unit</td>
<td>CU</td>
</tr>
<tr>
<td>Without control unit</td>
<td>-</td>
</tr>
</tbody>
</table>
Automatic Back Flushing Fuel Oil Filters
ParTrap fuel 200
## Specification

**Flow rate:**
- **HOT SIDE**: 9 m³/h (30 cSt)
- **COLD SIDE**: 4,2 m³/h (90 cSt)

**Filter fineness:**
- 10-500 µm

**Maximum operating pressure:**
- 20 bar

**Maximum temperature:**
- 160 °C

**Differential pressure:**
- 0,2 bar (clean element)
- 0,8 bar (charged element)
- 1,5 bar alarm

**Air feed pressure:**
- 6...10 bar

## Product Description

### Table 1: Degree of Filtration

<table>
<thead>
<tr>
<th>Element type</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 µm</td>
<td>10</td>
</tr>
<tr>
<td>25 µm</td>
<td>25</td>
</tr>
<tr>
<td>34 µm</td>
<td>34</td>
</tr>
</tbody>
</table>

### Table 2: Connection

<table>
<thead>
<tr>
<th>Connection type</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>DN40</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3: Control Unit

<table>
<thead>
<tr>
<th>Options</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>With control unit</td>
<td>CU</td>
</tr>
<tr>
<td>Without control unit</td>
<td>-</td>
</tr>
</tbody>
</table>
Automatic Back Flushing Fuel Oil Filters
ParTrap fuel 600 Series
Automatic Back Flushing Fuel Oil Filters

ParTrap\textsuperscript{fuel 600} Series

**Specification**

- **Filter fineness:** 10-500 µm
- **Maximum operating pressure:** 20 bar
- **Maximum temperature:** 160 °C
- **Differential pressure:**
  - 0.2 bar (clean element)
  - 0.8 bar (charged element)
  - 1.5 bar alarm
- **Air feed pressure:** 6...10 bar

**Product Description**

**FLOW RATE**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>HOT SIDE</th>
<th>COLD SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>400</td>
<td>18</td>
<td>8</td>
</tr>
<tr>
<td>500</td>
<td>27</td>
<td>12</td>
</tr>
<tr>
<td>600</td>
<td>36</td>
<td>16</td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>NUMBER OF CHAMBERS</th>
<th>OPTIONS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 chambers</td>
<td>400</td>
<td></td>
</tr>
<tr>
<td>4 chambers</td>
<td>500</td>
<td></td>
</tr>
<tr>
<td>5 chambers</td>
<td>600</td>
<td></td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>ELEMENT TYPE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 µm</td>
<td>10</td>
<td></td>
</tr>
<tr>
<td>25 µm</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>34 µm</td>
<td>34</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3**

<table>
<thead>
<tr>
<th>CONNECTION</th>
<th>CONNECTION TYPE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DN80</td>
<td>80</td>
</tr>
</tbody>
</table>

**Table 4**

<table>
<thead>
<tr>
<th>BY-PASS</th>
<th>OPTIONS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With by-pass filter</td>
<td>BF</td>
</tr>
<tr>
<td></td>
<td>Without by-pass</td>
<td>-</td>
</tr>
</tbody>
</table>

**Table 5**

<table>
<thead>
<tr>
<th>CONTROL UNIT</th>
<th>OPTIONS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With control unit</td>
<td>CU</td>
</tr>
<tr>
<td></td>
<td>Without control unit</td>
<td>-</td>
</tr>
</tbody>
</table>
Automatic Back Flushing Filter for Water Treatment
ParTrap W
ParTrap W

Specification

Flow rate: 200 l/min (5 cSt)
Filter fineness: 10-500 µm
Maximum operating pressure: 20 bar
Maximum temperature: 80 °C

Minimum operating pressure: 2 bar
Differential pressure:
- 0.2 bar (clean element)
- 0.8 bar (charged element)
- 1.5 bar alarm
Power supply: 24 VDC

Product Description

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>25 µm</td>
<td>25</td>
</tr>
<tr>
<td>34 µm</td>
<td>34</td>
</tr>
<tr>
<td>50 µm</td>
<td>50</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTROL UNIT</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td></td>
</tr>
<tr>
<td>With control unit</td>
<td>CU</td>
</tr>
<tr>
<td>Without control unit</td>
<td>-</td>
</tr>
</tbody>
</table>
FMU Differential Pressure Indicators
FMU Δp-Indicators

Indicator Series

**Specification**

Maximum operating pressure:  
420 bar  

Maximum differential pressure:  
210 bar  

Working temperature range:  
-20°C to +85°C, note FMUF thermal lock at +20°C

Material of housing:  
Brass or stainless steel

Seals:  
Fluoroelastomer as standard (code V).  
For other seal material options, please contact Parker Filtration.

The differential pressure values of standard indicator models:
- 1.0 bar ± 0.1
- 1.5 bar ± 0.2
- 2.5 bar ± 0.2

(Indicators for other differential pressure values are optional).

**FMUM3 Visual Auto Reset/FMUM1 Visual Manual Reset**

![Operation Diagram](image)

- Red colour visible when indicator on
- M1-type push here for reset
- High pressure
- Low pressure
- Ø 16,2 ± 0,05
- 3/8-16 UNF-2A
**FMU Δp-Indicators**

**Indicator Series**

**FMUT1 Electrical**

Contact configuration

<table>
<thead>
<tr>
<th>Rated voltage</th>
<th>Non-inductive load (A)</th>
<th>Inductive load (A)</th>
<th>Inrush current (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resistive load</td>
<td>Lamp load</td>
<td>Inductive load</td>
</tr>
<tr>
<td></td>
<td>N.C.</td>
<td>N.O.</td>
<td>N.C.</td>
</tr>
<tr>
<td>125VAC</td>
<td>5</td>
<td>1,5</td>
<td>0,7</td>
</tr>
<tr>
<td>250VAC</td>
<td>3</td>
<td>1,0</td>
<td>0,5</td>
</tr>
<tr>
<td>8VDC</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>14VDC</td>
<td>5</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>30VDC</td>
<td>4</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>125VDC</td>
<td>0,4</td>
<td>0,05</td>
<td>0,4</td>
</tr>
<tr>
<td>250VDC</td>
<td>0,2</td>
<td>0,03</td>
<td>0,2</td>
</tr>
</tbody>
</table>

Dimensions: see FMUF electronic Δp-indicator (page 19)

**FMUL1 Programmable**

**Programmable Δp-indicator**

All settings adjustable (settings made via PC)

- Connections cable and software available from Parker
- 4 LEDs giving visual indication:
  - Green (G): Power ON
  - Yellow 1 (Y1): Pre-alarm 1 (presetting 50%)
  - Yellow 2 (Y2): Pre-alarm 2 (presetting 75%)
  - Red (R): Indication (presetting 100%)
- Two independently programmable indication outputs
- Can be set independently from each other and LED setting
- Output type: NPN or PNP
- Switching type: N.O. or N.C.
- Setting range: 0,5 ... 10 bar
- Thermal lock-out range: 0 ... 100°C
- Includes a microchip with memory logs
  - Number of alarms: max 65535
  - Time indication on (output 1): maximum 1092 hours
  - Time power on (running hours): maximum 7 ½ years
- Upload and reset via PC

Enclosure class: IP65
Electrical connector: DIN 43650
Overvoltage category: II (EN61010-1)
Note: Do not connect output terminals 1 or 2 directly (without load) to power supply terminals, because this will damage the equipment.

**Thermal lock-out setting +20°C**
- Indicator operates only when temperature is above setting.

**Ind. press. setting**

<table>
<thead>
<tr>
<th>Setting</th>
<th>LED status</th>
<th>Output</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 50 %</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>50 %</td>
<td></td>
<td>-</td>
</tr>
<tr>
<td>75 %</td>
<td></td>
<td>2 active</td>
</tr>
<tr>
<td>100 %</td>
<td></td>
<td>1 active</td>
</tr>
</tbody>
</table>

**Enclosure class**
- IP65

**Electrical connector**
- DIN 43650, cable connection PG9

**Input supply voltage**
- +10 to 36 VDC

**Output type**
- N.O., NPN or PNP

**Contact configuration**

![Contact configuration diagram]

**FMU Δp-Indicators**

Rotating part 360°
- Green LED, Yellow LED’s, Red LED

High pressure
- Fixed part
- ø 16.2 ± 0.05
- 3/4 - 16 UNF-2A

Low pressure

- FPC.F
- NPN
- Normally open (N.O.)
- Load
- *max 300 mA
**FMU Δp-Indicators**

**Indicator Series**

**Product Description**

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
<th>Table 4</th>
<th>Table 5</th>
<th>Table 6</th>
<th>Table 7</th>
<th>Table 8</th>
</tr>
</thead>
<tbody>
<tr>
<td>FMU</td>
<td></td>
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<td></td>
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<td></td>
<td></td>
<td></td>
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</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>INDICATOR TYPE</th>
<th>Indicator options</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visual Δp indicator (auto reset)</td>
<td>M3</td>
<td></td>
</tr>
<tr>
<td>Visual Δp indicator (manual reset)</td>
<td>M1</td>
<td></td>
</tr>
<tr>
<td>Electrical Δp indicator</td>
<td>T1</td>
<td></td>
</tr>
<tr>
<td>Electronic, 4 LED, PNP, N.O.</td>
<td>F1</td>
<td></td>
</tr>
<tr>
<td>Electronic, 4 LED, NPN, N.O.</td>
<td>F2</td>
<td></td>
</tr>
<tr>
<td>Programmable Δp indicator</td>
<td>L1</td>
<td></td>
</tr>
</tbody>
</table>

**Table 3**

<table>
<thead>
<tr>
<th>INDICATING PRESSURE</th>
<th>Indicating pressure options</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,0 bar</td>
<td>F</td>
<td></td>
</tr>
<tr>
<td>1,5 bar</td>
<td>H</td>
<td></td>
</tr>
<tr>
<td>2,5 bar</td>
<td>K</td>
<td></td>
</tr>
</tbody>
</table>

Other indicating pressures available.

**Table 4**

<table>
<thead>
<tr>
<th>SEAL TYPE</th>
<th>Seal material</th>
<th>CODE</th>
</tr>
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<tbody>
<tr>
<td>Fluoroelastomer</td>
<td>V</td>
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</tr>
</tbody>
</table>

**Table 5**

<table>
<thead>
<tr>
<th>BODY MATERIAL</th>
<th>Standard body material</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Brass</td>
<td>M</td>
<td></td>
</tr>
<tr>
<td>Optional body material</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stainless steel</td>
<td>R</td>
<td></td>
</tr>
</tbody>
</table>

**Table 8**

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>Setting for F1, F2, L1 types</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thermal lock-out standard +20°</td>
<td>omit</td>
<td></td>
</tr>
<tr>
<td>Other options by request</td>
<td>factory supplied</td>
<td></td>
</tr>
</tbody>
</table>

Connection cable + software for programmable L1 type FMU Δp indicator
Connection cable for PC serial connection and software for setting indicator adjustments and utilising memory logs.

ORDERING CODE: 905075030

SEAL KIT ORDERING CODE:
Fluoroelastomer: 911045078
**Specification**

- **Maximum operating pressure:** 40 bar
- **Test pressure:** 60 bar
- **Seal material:** Fluoroelastomer*
- **Operating temperature:** 0°C...+100°C
- **Housing material:** Cast iron (GJS)
- **Weight:** ~15 kg
- **Maximum flow rate:** 80 l/min (10cSt)
- **By-pass valve opening pressure:** 3.5 bar

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M)

**Element:**
- FC7006 filter element
- Filtration materials
  - Glass fiber Microglass III B2 = 200
  - Cleanable wire mesh

**Operation:**
One side or both sides in use

Environmentally friendly Ecoglass III elements also available.

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils & light fuel oils (diesel). For other fluids consult Parker Filtration.
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 10cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2146.VS.

Filter Element: FC7006.BK

\(\Delta p\) Indicator: For ordering indicators, see page 20.

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Table 2</th>
<th>Table 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Table 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Table 3</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 1**

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Glass fiber 10 µm</td>
<td>Q010</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
<tr>
<td>Ecoglass 20 µm</td>
<td>QE20</td>
</tr>
<tr>
<td>Ecoglass 10 µm</td>
<td>QE10</td>
</tr>
</tbody>
</table>

**Table 3**

<table>
<thead>
<tr>
<th>FILTER CONNECTION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td></td>
</tr>
<tr>
<td>G 3/4” thread</td>
<td>GC12</td>
</tr>
<tr>
<td>M26x1,5</td>
<td>ML26</td>
</tr>
</tbody>
</table>

**Table 2**

<table>
<thead>
<tr>
<th>BY-PASS VALVE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening pressure</td>
<td></td>
</tr>
<tr>
<td>3,5 bar</td>
<td>35</td>
</tr>
<tr>
<td>No by-pass</td>
<td>00</td>
</tr>
</tbody>
</table>
Fuel Oil Filters
FF2520
**Filter cartridges** can be replaced by steering the flow through another filter reservoirs by means of a three-way valve.

**Maximum operating pressure:**
10 bar

**Test pressure:**
15 bar

**Seal material:**
Fluoroelastomer*

**Operating temperature:**
-20°C...+100°C

**Housing material:**
Aluminium

**Weight:**
- 15.5 kg (FF2520)
- 18.5 kg (FF2521)

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).

---

**FF2520:**
- One filter cartridges per side
- Filtration materials
  - Cellulose paper 15 µm nominal
  - Felt 7 µm nominal
  - Glass fiber Microglass III Bp=200
- Nominal flow for diesel fuel 30 l/min

**FF2521:**
- Two filter cartridges per side
- Filtration material, see FF2520 above
- Nominal flow for diesel fuel 60 l/min

**Fluid compatibility:**
Suitable for use with light fuel oils (diesel). For other fluids consult Parker Filtration.
Fuel Oil Filters

FF2520

Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0,5 bar.

If the medium used has a viscosity different from 10cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2520. VA00.

Filter Element: FC2520. BS

Δp Indicator: For ordering indicators, see page 20.

Table 1

<table>
<thead>
<tr>
<th>ELEMENTS PER RESERVOIR</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 element per reservoir</td>
<td>2520</td>
</tr>
<tr>
<td>2 elements per reservoir</td>
<td>2521</td>
</tr>
</tbody>
</table>

Table 2

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cellulose paper 15 µm</td>
<td>N015</td>
</tr>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Felt 7 µm</td>
<td>L007</td>
</tr>
</tbody>
</table>

Table 3

<table>
<thead>
<tr>
<th>CONNECTION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Options</td>
<td></td>
</tr>
<tr>
<td>Metric thread M26x1,5</td>
<td>MC26</td>
</tr>
<tr>
<td>G1” thread</td>
<td>GC16</td>
</tr>
<tr>
<td>Flange connection</td>
<td>XC25</td>
</tr>
</tbody>
</table>
Medium Pressure Filters

Series FF1087

<table>
<thead>
<tr>
<th>Type</th>
<th>Weight</th>
<th>A</th>
<th>D</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
<th>N</th>
<th>P</th>
<th>R</th>
<th>S</th>
<th>T</th>
<th>U</th>
</tr>
</thead>
<tbody>
<tr>
<td>1087</td>
<td>5.5 kg</td>
<td>150</td>
<td>G1</td>
<td>170</td>
<td>27</td>
<td>83</td>
<td>125</td>
<td>45</td>
<td>275</td>
<td>11</td>
<td>108</td>
<td>71</td>
<td>118</td>
<td>71</td>
<td>32</td>
<td>200</td>
</tr>
<tr>
<td>1088</td>
<td>12 kg</td>
<td>190</td>
<td>G1.1/2</td>
<td>230</td>
<td>38</td>
<td>112</td>
<td>170</td>
<td>64</td>
<td>350</td>
<td>13</td>
<td>148</td>
<td>106</td>
<td>139</td>
<td>180</td>
<td>55</td>
<td>210</td>
</tr>
<tr>
<td>1089</td>
<td>15 kg</td>
<td>260</td>
<td>G1.1/2</td>
<td>230</td>
<td>38</td>
<td>112</td>
<td>170</td>
<td>64</td>
<td>420</td>
<td>13</td>
<td>148</td>
<td>106</td>
<td>139</td>
<td>180</td>
<td>55</td>
<td>210</td>
</tr>
</tbody>
</table>

**Specification**

**Assembly:**
As in-line filter

**Operating pressure:**
Maximum 40 bar

**Connections:**
Threads G1 for 1087, G1.1/2 for 1088/1089 (ISO 228/1) or flanges DN80/PN10 for 1089 (for details contact Parker Filtration)

**Seal material:**
Nitrile (NBR) or fluoroelastomer* (FPM)

**Operating temperature:**
-20°C…+100°C

**Filter housing and holder material:**
Cast iron (GJS), holder aluminium

**Magnet pack:**
Available as option

**By-pass valve:**
Opening pressure 1.6 bar.
For other settings, please contact Parker Filtration.

**Indicator options:**
This filter type requires FPC-adapter 1050910003 (order separately)
Indicating pressure 1.0±0.2 bar
- Visual indicator FPC.V10.BM
- Electrical indicator FPC.T10.VM (max 250 VAC)
- Electronic indicator FPC.F10.BM (10...36 VDC)

**Indicator body:**
Material brass, maximum torque 15 Nm

**Filter element:**
Degree of filtration
Determined by Multi-pass-test according to ISO16889, see Table 2

**Filtration material**
Microglass III, supported with epoxy coated metal wire mesh, end cap material steel

**Flow fatigue characteristics**
Filter media is supported so that the optimal fatigue life is achieved (ISO 3724)

**Element collapse rating**
8 bar (ISO 2941)

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

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* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).
$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}}$

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, pressure drop over the element can be estimated as follows:

$\Delta p_{\text{total}} = \Delta p_{\text{housing}} + \Delta p_{\text{element}} \times \text{working viscosity} / 30 \text{cSt}$. 
## Medium Pressure Filters
### Series FF1087

#### Product Description

**Filter Assembly:** FF . . S  .  .  .

**Filter Element:** FC . . S

**Δp Indicator:** For ordering indicators, see page 20. Requires also FPC-adapter, ordering code 1050910003.

**Seal Kit:** FD1087- . .

FD1088/1089- . .

### Table 1

<table>
<thead>
<tr>
<th>FILTER TYPE</th>
<th>CODE 1a</th>
<th>CODE 1b</th>
</tr>
</thead>
<tbody>
<tr>
<td>Housing/element options</td>
<td>FILTER housing for type 1087</td>
<td>1087</td>
</tr>
<tr>
<td>Element for type 1087, 150mm</td>
<td>1087</td>
<td></td>
</tr>
<tr>
<td>Filter housing for type 1088</td>
<td>1088</td>
<td></td>
</tr>
<tr>
<td>Element for type 1088, 190mm</td>
<td>1091</td>
<td></td>
</tr>
<tr>
<td>Filter housing for type 1089</td>
<td>1089</td>
<td></td>
</tr>
<tr>
<td>Element for type 1089, 260mm</td>
<td>1092</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>Average filtration ratio ( \beta ) (ISO 16889)/particle size ( \mu m ) (c)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>N/A</td>
<td>6</td>
</tr>
<tr>
<td>6</td>
<td>11</td>
</tr>
</tbody>
</table>

* Also metal mesh elements available.

### Table 3

<table>
<thead>
<tr>
<th>SEAL TYPE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nitrile</td>
<td>B</td>
</tr>
<tr>
<td>Fluorooelastomer</td>
<td>V</td>
</tr>
</tbody>
</table>

### Table 4

<table>
<thead>
<tr>
<th>BY-PASS VALVE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opening pressure</td>
<td>16</td>
</tr>
</tbody>
</table>

### Table 5

<table>
<thead>
<tr>
<th>FILTER CONNECTION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection type options, filter housing T-model</td>
<td></td>
</tr>
<tr>
<td>G1 thread for model 1087</td>
<td>GT16</td>
</tr>
<tr>
<td>G1.1/2 thread for model 1088 and 1089</td>
<td>GT24</td>
</tr>
<tr>
<td>DN80/PN16 flange, 1089</td>
<td>DT80</td>
</tr>
</tbody>
</table>

### Table 6

<table>
<thead>
<tr>
<th>MAGNET PACK</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnet pack</td>
<td>M</td>
</tr>
</tbody>
</table>

### Filter Capacity

**NOMINAL FLOW (l/min) FOR FILTER ASSEMBLY AT VISCOSITY 30 cSt**

<table>
<thead>
<tr>
<th>Filter type</th>
<th>Filter connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>GT16</td>
<td>GT24</td>
</tr>
<tr>
<td>FF1087 Q002</td>
<td>40</td>
</tr>
<tr>
<td>Q005</td>
<td>60</td>
</tr>
<tr>
<td>Q010</td>
<td>80</td>
</tr>
<tr>
<td>Q020</td>
<td>130</td>
</tr>
<tr>
<td>FF1088 Q002</td>
<td>140</td>
</tr>
<tr>
<td>Q005</td>
<td>180</td>
</tr>
<tr>
<td>Q010</td>
<td>220</td>
</tr>
<tr>
<td>Q020</td>
<td>250</td>
</tr>
<tr>
<td>FF1089 Q002</td>
<td>200</td>
</tr>
<tr>
<td>Q005</td>
<td>250</td>
</tr>
<tr>
<td>Q010</td>
<td>300</td>
</tr>
<tr>
<td>Q020</td>
<td>350</td>
</tr>
</tbody>
</table>
**Duplex Filters**

**FF2089**

**Specification**

Maximum operating pressure: 40 bar  
Test pressure: 60 bar  
Seal material: Fluoroelastomer*  
Operating temperature: -20°C...+100°C  
Housing material: Cast iron (GJS)  
Weight: ~65 kg  

Maximum flow rate: 350 l/min (30sCt)  
By-pass valve: Opening pressure 2.0 bar

**Element:**  
- FC1092 filter element  
- Filtration materials  
  - Glass fiber Microglass III β20=200  
  - Cleanable wire mesh

**Fluid compatibility:**  
Suitable for use with regular hydraulic and lubrication & light fuel oils (diesel). For other fluids consult Parker Filtration.

**DIMENSION A**

<table>
<thead>
<tr>
<th>Connection type</th>
<th>mm</th>
</tr>
</thead>
<tbody>
<tr>
<td>W/O flange/adapter</td>
<td>215</td>
</tr>
<tr>
<td>With XC56 flange</td>
<td>232</td>
</tr>
<tr>
<td>With SC32 adapter</td>
<td>245</td>
</tr>
</tbody>
</table>

* Fluoroelastomers are available under various registered
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2089.VS20.

Filter Element: FC1092.VS

\(\Delta p\) Indicator: For ordering indicators, see page 20.

<table>
<thead>
<tr>
<th>Degree of Filtration</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Glass fiber 10 µm</td>
<td>Q010</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Filter Connection</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Square flanges*</td>
<td>XC56</td>
</tr>
<tr>
<td>SAE 2&quot; 3000 psi</td>
<td>SC32</td>
</tr>
</tbody>
</table>

* Blind counter flanges with seals included in delivery.

<table>
<thead>
<tr>
<th>Magnet Option</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Magnet pack</td>
<td>M</td>
</tr>
<tr>
<td>Without magnet pack</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Indicator Block</th>
<th>Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>With indicator block</td>
<td>INB</td>
</tr>
<tr>
<td>Without indicator block</td>
<td></td>
</tr>
</tbody>
</table>
Parker

Lubrication Oil Filters
Series FF2035
Specifi cation

**Duplex fi lter:**
One reservoir can be closed for service, vertical installation.

**Maximum operating pressure:**
8 bar
**Test pressure:**
12 bar
**Seal material:**
Fluoroelastomer*
**Operating temperature:**
-20°C...+100°C
**Housing material:**
Aluminium
**Weight:**
49,0 kg (FF2035)
62,5 kg (FF2036)

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).

**Primary fi lter:**
- FF2035: two fi lter elements per reservoir
- FF2036: three fi lter elements per reservoir
- Filtration materials
  - Resin impregnated heavy duty cellulose paper
  - 15µm nominal
- Glass fi ber Microglass III β20=200
- Cleanable wire mesh

**Secondary fi lter:**
- Filtration material cleanable wire mesh
- Filtration degree 60µm

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

<table>
<thead>
<tr>
<th>TYPE</th>
<th>A</th>
</tr>
</thead>
<tbody>
<tr>
<td>FF2035</td>
<td>590</td>
</tr>
<tr>
<td>FF2036</td>
<td>775</td>
</tr>
</tbody>
</table>
Lubrication Oil Filters

Series FF2035

Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description


Filter Element:  FC2035. .BS

Δp Indicator: For ordering indicators, see page 20.

### Table 1

<table>
<thead>
<tr>
<th>Number of elements per side</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two elements per side</td>
<td>2035</td>
</tr>
<tr>
<td>Three elements per side</td>
<td>2036</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Degree of Filtration</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforced cellulose paper 15 µm</td>
<td>N015</td>
</tr>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th>Indicator Block</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>With indicator block</td>
<td>INB</td>
</tr>
<tr>
<td>Without indicator block</td>
<td></td>
</tr>
</tbody>
</table>
Lubrication Oil Filters
Series FF2110
**Specification**

**Maximum operating pressure:**
25 bar

**Test pressure:**
37.5 bar

**Seal material:**
Fluoroelastomer*

**Operating temperature:**
-20°C...+100°C

**Housing material:**
Cast iron (GJS)

**Weight:**
~200 kg

**Maximum flow rate:**
1200 l/min (30sCt)

**By-pass valve:**
Opening pressure 2.0 bar

**Element:**
- FC1110 filter element
- Filtration materials
  - Glass fiber Microglass III \( \beta_{20}=200 \)
  - Cleanable wire mesh

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication & light fuel oils (diesel). For other fluids consult Parker Filtration.

---

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2110. VS20.DC80-

Filter Element: FC1110. VS

Δp Indicator: For ordering indicators, see page 20.

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glass fiber 10 µm</td>
<td>Q010</td>
</tr>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
</tbody>
</table>

| INDICATOR BLOCK |
|-----------------|------|
| Indicator block options | CODE |
| With indicator block | INB |
| Without indicator block | |
Lubrication Oil Filters
Series FF2040
Lubrication Oil Filters

Series FF2040

Specifiation

**Duplex filter:**
One reservoir can be closed for service, vertical installation. Filter available with four, three or two filter reservoirs connected to a multi-way valve.

**Maximum operating pressure:**
8 bar

**Test pressure:**
15 bar

**Seal material:**
Fluoroelastomer*

**Operating temperature:**
-20°C...+100°C

**Housing material:**
Steel/cast iron (GJS)

**Weight:**
240 kg (FF2042)
350 kg (FF2043)
418 kg (FF2044)

**Nominal flow engine lubricant oil:**
- FF2042: 1200 l/min
- FF2043: 1500 l/min
- FF2044: 2000 l/min

**By-pass valve:**
For the primary filter only, opening pressure 2,0 bar

**Primary filter:**
- Two filter elements per reservoir
- Filtration materials
  - Resin impregnated heavy duty cellulose paper 15µm nominal
  - Glass fiber Microglass III βu=200
  - Cleanable wire mesh

**Secondary filter:**
- One filter element per reservoir
- Filtration material cleanable wire mesh
- Filtration degree 60µm

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

---

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).
Lubrication Oil Filters

Series FF2040

Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF________.VS20.XL110-

Filter Element: FC2040.________.BS

Δp Indicator: For ordering indicators, see page 20.

---

### Table 1

<table>
<thead>
<tr>
<th>NUMBER OF RESERVOIRS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two reservoirs</td>
<td>2042</td>
</tr>
<tr>
<td>Three reservoirs</td>
<td>2043</td>
</tr>
<tr>
<td>Four reservoirs</td>
<td>2044</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reinforced cellulose 15 µm</td>
<td>N015</td>
</tr>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
</tbody>
</table>

### Table 3

<table>
<thead>
<tr>
<th>INDICATOR BLOCK</th>
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</thead>
<tbody>
<tr>
<td>With indicator block</td>
<td>INB</td>
</tr>
<tr>
<td>Without indicator block</td>
<td></td>
</tr>
</tbody>
</table>
Lubrication Oil Filters
Series FF2045
**Duplex filter:**
One reservoir can be closed for service, horizontal installation.

**Maximum operating pressure:**
10 bar

**Test pressure:**
15 bar

**Seal material:**
Fluoroelastomer*

**Operating temperature:**
-20°C...+100°C

**Housing material:**
Cast iron (GJS)

**Weight:**
- 115 kg (FF2045)
- 145 kg (FF2046)

**Nominal flow engine lubricant oil:**
- FF2045: 750 l/min
- FF2046: 900 l/min

**By-pass valve:**
For the primary filter only, opening pressure 2,0 bar

---

**Primary filter:**
- FF2045: one filter element per reservoir
- FF2046: two filter elements per reservoir

**Filtration materials**
- Resin impregnated heavy duty cellulose paper 15µm nominal
- Glass fiber Microglass III β_{20}=200
- Cleanable wire mesh

**Secondary filter:**
- One filter element per reservoir
- Filtration material cleanable wire mesh
- Filtration degree 60µm

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

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* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont)
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF VS20.XC82
Filter Element: FC2045.XS

Δp Indicator: For ordering indicators, see page 20.

<table>
<thead>
<tr>
<th>ELEMENTS PER RESERVOIR</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of elements</td>
<td></td>
</tr>
<tr>
<td>One element per reservoir</td>
<td>2045</td>
</tr>
<tr>
<td>Two elements per reservoir</td>
<td>2046</td>
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<table>
<thead>
<tr>
<th>DEGREE OF FILTRATION</th>
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<tbody>
<tr>
<td>Element type</td>
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<tr>
<td>Reinforced cellulose paper 15 µm</td>
<td>N015</td>
</tr>
<tr>
<td>Glass fiber 20 µm</td>
<td>Q020</td>
</tr>
<tr>
<td>Cleanable wire mesh 35 µm</td>
<td>M035</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>INDICATOR BLOCK</th>
<th>CODE</th>
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</thead>
<tbody>
<tr>
<td>Options</td>
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<tr>
<td>With indicator block</td>
<td>INB</td>
</tr>
<tr>
<td>Without indicator block</td>
<td></td>
</tr>
</tbody>
</table>
Lubrication Oil Filters
FF2060
**Primary filter:**
- Three filter elements per reservoir
- Filtration materials
  - Resin impregnated heavy duty cellulose paper 15µm nominal
  - Glass fiber Microglass III β20=200
  - Cleanable wire mesh

**Secondary filter:**
- One filter element per reservoir
- Filtration material cleanable wire mesh
- Filtration degree 60µm

**Fluid compatibility:**
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).

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**Specification**

**Duplex filter:**
One reservoir can be closed for service, horizontal installation. 1300 mm (1,3 m) free space must be reserved in front of the filter for filter element removal.

- **Maximum operating pressure:**
  - 10 bar
- **Test pressure:**
  - 15 bar
- **Seal material:**
  - Fluoroelastomer*
- **Operating temperature:**
  - -20°C...+100°C
- **Housing material:**
  - Steel/cast iron (GJS)
- **Weight:**
  - 390 kg

**Nominal flow engine lubricant oil:**
2200 l/min.

**By-pass valve:**
For the primary filter only, opening pressure 2,0 bar

**FF2060**

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* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0.5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

**Complete Filter:** FF2060.VS20.XC160-

**Filter Element:** FC2040.BS

**Δp Indicator:** For ordering indicators, see page 20.

<table>
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</thead>
<tbody>
<tr>
<td>Reinforced cellulose paper 15 µm</td>
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</tr>
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<td>Without indicator block</td>
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</tbody>
</table>
Lubrication Oil Filters

FF2065

Primary filter:
- Two filter elements per reservoir
- Filtration material resin impregnated heavy duty cellulose paper
- Filtration degree 15 µm nominal

Secondary filter:
- One filter element per reservoir
- Filtration material cleanable wire mesh
- Filtration degree 60µm

Fluid compatibility:
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).

Specification

Duplex filter:
One reservoir can be closed for service, vertical installation.

Maximum operating pressure:
10 bar
Test pressure:
15 bar
Seal material:
Fluoroelastomer*
Operating temperature:
-20°C...+100°C
Housing material:
Steel/cast iron (GJS)
Weight:
~350 kg

Nominal flow engine lubricant oil:
1500 l/min.
By-pass valve:
For the primary filter only, opening pressure 2,0 bar
Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0,5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2065.VS20.XC160-

Filter Element: FC2045.XS

Δp Indicator: For ordering indicators, see page 20.

Table 1

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<tr>
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</tbody>
</table>
Primary filter:
- Two filter elements per reservoir
- Filtration materials
  - Resin impregnated heavy duty cellulose paper 15µm nominal
  - Glass fiber Microglass III β20=200
  - Cleanable wire mesh

Secondary filter:
- One element per reservoir
- Filtration material cleanable wire mesh
- Filtration degree 60 µm

Fluid compatibility:
Suitable for use with regular hydraulic and lubrication oils. For other fluids consult Parker Filtration.

* Fluoroelastomers are available under various registered trademarks, including Viton (a registered trademark of DuPont) and Fluorel (a registered trademark of 3M).
Lubrication Oil Filters

FF2070

Pressure Drop Curves

The recommended level of the initial pressure drop for this filter is maximum 0,5 bar.

If the medium used has a viscosity different from 30cSt, please contact Parker Filtration for correct pressure drop values.

Product Description

Complete Filter: FF2070.VS20.XC160-

Filter Element: FC2045.XS

Δp Indicator: For ordering indicators, see page 20.

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</table>
Parker Hannifin Filter Division Europe, herewith declares that Parker Hydraulic Filtration products are intended to be incorporated into machinery covered by Directive 97/23/EC, as amended and that the following harmonised standards have been applied;

EN982
EN292-1
EN292-2

We furthermore declare that, machinery incorporating Parker Hydraulic Filtration products is not allowed to be put into service until the machinery has been found and declared to be in conformity with, the provisions of Directive 97/23/EC and with national implementing legislation.

In line with our policy of continuous product improvement, Parker Hannifin reserve the right to alter product data and specification without notice. This does not affect your statutory rights.

Within this catalogue, each product has been allocated an operating temperature range and fluid compatibility. The range listed for each filter is dictated by the materials of construction and the capability of the seals specified. Consideration should also be given to the characteristics of the system fluid when specifying filters for extreme temperature applications.

The use of non Parker replacement elements and spares may invalidate your warranty.

**WARNING!**

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Instrumentation Group
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Seal Group
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+44 (0)1442 368 428 (Deutsch)
+44 (0)1442 368 427 (Français)

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