World Pressure Filters
The Standard in 7,000 psi Pressure Filters
Parker engineers have developed what soon will be the industry standard in high pressure hydraulic filtration. The new 7,000 psi WPF series incorporates many advanced features designed for one reason: to improve your bottom line.

There is no better high pressure filter available today for durability and performance. The reduction of your operating costs is our primary concern, and we are committed to contributing towards your success.

Typical Applications
- Aircraft Ground Support
- Injection Molding
- Mining
- Mobile Ag
- Mobile Construction
- Oil & Gas Exploration
- Power Generation
- Primary Metals
- Refuse Trucks
WPF Series

Features

1. High strength ductile iron filter head with integral indicator port
2. Steel bowl with standard drain port
3. Proprietary element endcap assembly includes bypass and reverse flow valves
4. Patented deformable tangs secure element in bowl
5. Coreless element assembly
6. Re-usable element support core
WPF Series
SurgeGuard Elements

Proprietary
SurgeGuard protection
System protection from back-flow
Component performance integrity with improved flow fatigue resistance

Integrated bypass & reverse flow valve technology
Every element serviced provides new bypass & reverse flow valve assembly
Reliable, high performance, quick response design

Low mass, low ΔP reverse flow valve
Ideal for closed-loop applications
Greater design and service flexibility

Patented deformable tangs
Automatic element locate and removal
Easy, fast, safe, clean

Element removal clearance
Benchmarked best-in-class against major competitors
Ease-of-service, Machine design flexibility

Patented valves with low hysteresis
Zero leakage and low friction
Optimum performance
WPF Series
WPF1 Element Performance

*High Collapse Correction Factor:
“QH” Elements (2000 psid) = 1.4 times reported loss

Results typical from Multi-pass tests run per test standard ISO 16889 @ 10 gpm to 50 psid terminal - 10 mg/L BUGL.

Note: During reverse flow, ΔP is 20 psid at max. flow.
WPF Series
WPF2 Element Performance

High Collapse Correction Factor:
“QH” Elements (2000 psid) = 1.4 times reported loss

Note: During reverse flow, ΔP is 20 psid at max. flow.

Results typical from Multi-pass tests run per test standard ISO 16889 @ 25 gpm to 50 psid terminal - 10 mg/L BUGL.

Note: During reverse flow, ΔP is 20 psid at max. flow.
WPF Series
WPF3 Element Performance

Results typical from Multi-pass tests run per test standard ISO 16889 @ 45 gpm to 50 psid terminal - 10 mg/L BUGL.

Note: During reverse flow, ΔP is 20 psid at max. flow.
WPF Series
WPF4 Element Performance

![Graphs showing efficiency, capacity, flow vs. pressure drop, and manifold pressure drop for different media types and flow rates.]

*High Collapse Correction Factor:
*QH* Elements (2000 psid) = 1.4 times reported loss

Results typical from Multi-pass tests run per test standard ISO 16889 @ 90 gpm to 50 psid terminal - 10 mg/L BUGL.

Note: During reverse flow, ΔP is 20 psid at max. flow.
**WPF Series**

**WPF5 Element Performance**

*High Collapse Correction Factor:*

“QH” Elements (2000 psid) = 1.4 times reported loss

Note: During reverse flow, ΔP is 20 psid at max. flow.

Results typical from Multi-pass tests run per test standard ISO 16889 @ 100 gpm to 50 psid terminal - 10 mg/L BUGL.

Note: During reverse flow, ΔP is 20 psid at max. flow.
**WPF Series**

Specifications

**Maximum Allowable Operating Pressure (MAOP):**  
7000 psi (483 bar)

**Rated Fatigue Pressure:**  
6000 psi (414 bar)

**Design Safety Factor:** 3:1

**Operating Temperatures:**  
-15°F (-26°C) to 250°F (135°C)

**Element Collapse Rating:**  
Standard: 300 psi (21 bar)  
High Collapse: 2000 psi (138 bar)

**Materials:**  
Head: SG Iron  
Bowl: Steel  
Indicator: Stainless Steel with Plastic Connectors

**Weights:**  
WPF1  9 lbs. (4.1 kg)  
WPF2  13 lbs. (5.9 kg)  
WPF3  21 lbs. (9.5 kg)  
WPF4  45 lbs. (20.4 kg)  
WPF5  67 lbs. (30.4 kg)

Drawings are for reference only.  
Contact factory for current version.

**T-Port Dimensions (mm/inch)**

<table>
<thead>
<tr>
<th>Filter Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
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<td>140</td>
<td>80</td>
<td>160</td>
<td>183</td>
<td>91.5</td>
</tr>
</tbody>
</table>

**Flange Size**

- 3/4”  
- 1”  
- 1-1/4”  
- 1-1/2”

---

**T-Port Dimensions (mm/inch)**

- **Thread & Depth**: D, E, F
- **N**: Head Size
- **O**: Bowl Size
- **P**: Indicator Port Size
- **Q**: SAE-8 Indicator Port Plug Size
- **R**: Bowl Torque
- **S**: Element Service Clearance

---

**Materials:**  
Head: SG Iron  
Bowl: Steel  
Indicator: Stainless Steel with Plastic Connectors

**Weights:**  
WPF1  9 lbs. (4.1 kg)  
WPF2  13 lbs. (5.9 kg)  
WPF3  21 lbs. (9.5 kg)  
WPF4  45 lbs. (20.4 kg)  
WPF5  67 lbs. (30.4 kg)
**WPF Series**

**Specifications**

**Maximum Allowable Operating Pressure (MAOP):**
7000 psi (483 bar)

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**Operating Temperatures:**
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**Element Collapse Rating:**
- Standard: 300 psi (21 bar)
- High Collapse: 2000 psi (138 bar)

**Materials:**
- Head: SG Iron
- Bowl: Steel
- Indicator: Stainless Steel with Plastic Connectors

**Weights:**
- WPF2: 18 lbs. (8.2 kg)
- WPF4: 63 lbs. (28.6 kg)
- WPF5: 70 lbs. (31.7 kg)

Drawings are for reference only.
Contact factory for current version.

**Manifold Dimensions (mm/inch)**

<table>
<thead>
<tr>
<th>Filter Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
<th>I</th>
<th>J</th>
<th>K</th>
<th>L</th>
<th>M</th>
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<th>O</th>
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<td>4.33</td>
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<td>1.57</td>
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<td>1.97</td>
<td>6.56</td>
<td>6.34</td>
<td>.83</td>
<td>1.25</td>
</tr>
</tbody>
</table>
WPF Series
Indicator Specifications

Torque: 30-33 ft-lb (40-45 N-m)
Indicator setting: 50 psid

Indicator Dimensions (mm/inch)

<table>
<thead>
<tr>
<th>Option</th>
<th>Description</th>
<th>Connection/Power</th>
<th>Wiring</th>
<th>“A”</th>
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<tr>
<td>M2</td>
<td>Visual auto reset</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>WPF5</td>
<td>Electrical/visual</td>
<td>DIN 43650 3 pole + Earth 5A@125/250 VAC, 3A@28VDC</td>
<td>Pin 1 - Common Pin 2 - Normally closed Pin 3 - Normally open</td>
<td>73.7 2.90</td>
</tr>
</tbody>
</table>
WPF Series
Service & Maintenance Instructions

1. Stop system power and vent captive pressure.
2. Drain filter assembly.
3. Remove bowl and element assembly.
4. Push down to squeeze tangs and lift element.
5. Twist to remove core.
6. Retain reusable core.
7. Discard used element.
8. Insert reusable core into new element until it snaps.
10. Inspect o-ring and anti-extrusion ring.
11. Install bowl with new element.
12. Torque bowl, vent and drain plugs.
13. Power up and inspect.
## WPF Series
### Parts List

#### T-port

<table>
<thead>
<tr>
<th>Index</th>
<th>Part Description</th>
<th>Part Number</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>WPF1 Head SAE-8</td>
<td>940966</td>
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<tr>
<td></td>
<td>WPF2 Head 3/4” Flange</td>
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<tr>
<td></td>
<td>WPF3 Head SAE-12</td>
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<tr>
<td></td>
<td>WPF4 Head 1-1/4” Flange</td>
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<td>WPF5 Head SAE-16</td>
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<td>WPF4 Reusable Core</td>
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<tr>
<td>11</td>
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<tr>
<td>Not Shown</td>
<td>Drive Screw (2 required)</td>
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</table>
## WPF Series

### Parts List

#### Manifold

<table>
<thead>
<tr>
<th>Index</th>
<th>Part Description</th>
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<tbody>
<tr>
<td>1</td>
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<td>WPF5 Manifold Mount Head</td>
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<td>WPF4 Bowl O-ring</td>
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<td>WPF4 Anti-extrusion Ring</td>
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<td>Drive Screw (2 required)</td>
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*Not Shown*
WPF Series
High Pressure Duplex Filters

How To Order
Select the desired symbol (in the correct position) to construct a model code.

Example:

<table>
<thead>
<tr>
<th>BOX 1</th>
<th>BOX 2</th>
<th>BOX 3</th>
<th>BOX 4</th>
<th>BOX 5</th>
<th>BOX 6</th>
<th>BOX 7</th>
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<tr>
<td>WPF</td>
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<td>V</td>
<td>M2</td>
<td>K</td>
<td>S12</td>
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</tbody>
</table>

**BOX 1: Filter Series**
Symbol Description
- **WPF** High Pressure Filter

**BOX 2: Element Length**
Symbol Description
- 1 1/2” Nominal ports
- 2 3/4” Nominal ports
- 3 1” Nominal ports
- 4 1 1/4” Nominal ports
- 5 1 1/2” Nominal ports

**BOX 3: Media Code**
Symbol Description
- **Standard Element** (bypass only)
  - **02QE** Microglass, 2 micron
  - **05QE** Microglass, 5 micron
  - **10QE** Microglass, 10 micron
  - **High Collapse** (no-bypass only)
  - **02QH** Microglass, 2 micron
  - **10QH** Microglass, 10 micron

**BOX 4: Seals**
Symbol Description
- **B** Nitrile
- **E** Ethylene Propylene
- **V** Fluorocarbon

**BOX 5: Indicators**
Symbol Description
- **P** Plugged indicator port
- **M2** Visual automatic reset
- **E2** Electrical/Visual (DIN 43650 style connection)

Note: When the “M2” or “E2” option is selected, the indicator port is plugged and the indicator is shipped as a loose part.

**BOX 6: Bypass & Indicator Setting**
Symbol Description
- **K** 50 psid (3.5 bar)
- **X** No bypass & No indicator (port plugged)

Note: When an indicator and no bypass (“2” in Box 8) is selected, the indicator setting is 50 psid (3.5 bar).

**BOX 7: Ports**
Symbol Description
- **WPF1**
- **S08** SAE-8
- **WPF2**
- **S12** SAE-12
- **Y12** 3/4” SAE code 62 flange face
- **X12** Manifold
- **WPF3**
- **S16** SAE-16
- **Y16** 1” SAE code 62 flange face
- **WPF4**
- **S20** SAE-20
- **Y20** 1 1/4” SAE code 62 flange face
- **X20** Manifold
- **WPF5**
- **S24** SAE-24
- **Y24** 1 1/2” SAE code 62 flange face
- **X24** Manifold

**BOX 8: Options**
Symbol Description
- 1 Bypass (standard element only)
- 2 No bypass (high collapse element only)

Please note the bolded options reflect standard options with a reduced lead time.

Replacement Elements

<table>
<thead>
<tr>
<th>Media</th>
<th>WPF1</th>
<th>WPF2</th>
<th>WPF3</th>
<th>WPF4</th>
<th>WPF5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Standard Collapse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>300 psid (21 bar)</td>
<td>Microglass, 02QE</td>
<td>941029Q</td>
<td>941032Q</td>
<td>941035Q</td>
<td>941038Q</td>
</tr>
<tr>
<td></td>
<td>Microglass, 05QE</td>
<td>941030Q</td>
<td>941033Q</td>
<td>941036Q</td>
<td>941039Q</td>
</tr>
<tr>
<td></td>
<td>Microglass, 10QE</td>
<td>941031Q</td>
<td>941034Q</td>
<td>941037Q</td>
<td>941040Q</td>
</tr>
<tr>
<td><strong>High Collapse</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2000 psid (138 bar)</td>
<td>Microglass, 02QH</td>
<td>941044Q</td>
<td>941046Q</td>
<td>941048Q</td>
<td>941050Q</td>
</tr>
<tr>
<td></td>
<td>Microglass, 10QH</td>
<td>941045Q</td>
<td>941047Q</td>
<td>941049Q</td>
<td>941051Q</td>
</tr>
</tbody>
</table>