BGT Series
Low Pressure Filters
BGT Series
Applications and Features

- Mobile Equipment
- Construction, Refuse
- Machine Tool
- Oil Field

BGT Tank Mounted Return Flow Filters

BGT Filters feature Parker’s exclusive Magnetic Prefiltration core which collects ferromagnetic particles from fluid upstream of the filter element. This feature alone could save hundreds of dollars a year by protecting costly equipment from increased wear and malfunction by assuring that the fluid is as pure as possible when it leaves the filter. Even during bypass due to cold start up, ferris contaminant is collected by the magnetic core, a feature of importance on any fluid power system.

1. Fluid flows through the inlet port into an enlarged area which reduces fluid velocity. Inlet flow does not impinge on the element.

2. Filtration begins with magnetic prefiltration of ferromagnetic particles in the full fluid flow upstream of the element, not downstream or in the reservoir. Built-in or system generated ferromagnetic wear debris (even particles smaller than the element rating) are collected by the high strength (3.0K Gauss) magnetic column. This results in extended element and oil life and reduced maintenance and downtime, which reduces overall operating cost.

3. Fluid passes through the element in an inside-to-outside direction, collecting particles inside the filter cartridge. This eliminates reinjection of contaminant during element change. Clean fluid then returns to the reservoir through the diffusor which prevents fluid aeration.

4. Simplified bypass design and location prevents flushing previously collected contaminant back into the system. Since the element serves as the valve there is no troublesome separate valve to remove when changing elements. Magnetic filtration occurs even during bypass. All potential leakage paths are o-ring sealed to eliminate bypass leakage that occurs in loose fitting valve assemblies.

BGT Filters are available with disposable elements of several contamination class levels for use in all common fluids.

Optional accessories include visual and electric warning indicators that assure proper element service.

Specifications

Housing Data:
Material:
- Head – Aluminum Alloy
- Diffusor – Steel
- Internals – Carbon Steel and Aluminum
- Seals – Nitrile (Standard), Fluorocarbon

Pressure Rating:
- Static – 150 psi (10.3 bar)

Temperature Range:
- Operating -40°F to 250°F (-40°C to 120°C)

Take a close look and compare Parker features with any other filter.

- Flows to 640 GPM
- 3 Micron to 120 Micron Absolute
- Disposable or Recleanable Elements
- Visual and Electrical Indicators
- Microglass elements
- Magnetic prefiltration
- Full flow bypass valve
- No internal leakage paths
- Inside-to-out flow thru element
- Complete contaminant removal during element service
- LEIF® element (600 and 1000 Series only)
BGT Series

How To Size Tank Top Filters

Element Pressure Drop Factor: Multiply the actual flow rate times the applicable ΔP factor to determine the pressure drop with a fluid viscosity of 140 SSU. Correct for other viscosities by applying the following formula: Flow rate (GPM) x filter factor x (new viscosity in SSU/140 SSU).

Flow/Pressure Drop Data
Fluid Conditions: Viscosity - 140 SSU Sp. Gr. - 0.88

Example:
Element Size Code = 600
Element Media Code = 10
Filter Factor = .022 (From chart)
Flow = 160 GPM
Viscosity = 160 SSU

Formula:
160 GPM x .022 x (160 SSU/140 SSU) = 4.0 PSID

Element Data

<table>
<thead>
<tr>
<th>Media Code</th>
<th>600</th>
<th>Size Code 1000</th>
<th>2000</th>
</tr>
</thead>
<tbody>
<tr>
<td>02QL</td>
<td>.082</td>
<td>.0493</td>
<td>.0246</td>
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<tr>
<td>05QL</td>
<td>.031</td>
<td>.0187</td>
<td>.0091</td>
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<td>.022</td>
<td>.0129</td>
<td>.0066</td>
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<td>20QL</td>
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Multipass Test Results To ISO 4572 (Time Weighted Averages)

<table>
<thead>
<tr>
<th>Media Type</th>
<th>Absolute Rating</th>
<th>B₃</th>
<th>B₆</th>
<th>B₆</th>
<th>B₁₀</th>
<th>B₁₂</th>
<th>B₂₀</th>
<th>B₂₅</th>
<th>B₅₀</th>
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<tbody>
<tr>
<td>Microglass 3</td>
<td>≥100</td>
<td>800</td>
<td>2000</td>
<td>&gt;5000</td>
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<td>∞</td>
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<tr>
<td>Microglass 6</td>
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<td>≥100</td>
<td>1000</td>
<td>2000</td>
<td>&gt;5000</td>
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<td>∞</td>
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<tr>
<td>Microglass 10</td>
<td>6</td>
<td>22</td>
<td>≥100</td>
<td>≥200</td>
<td>&gt;5000</td>
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<td>∞</td>
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<tr>
<td>Microglass 20</td>
<td>–</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>≥100</td>
<td>≥200</td>
<td>&gt;5000</td>
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Dimensions

BGT-13, BGT-15, BGT-17

Return Line Filter - Series 4

<table>
<thead>
<tr>
<th>Dimensions inches (mm)</th>
<th>BGT Filter Model</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13</td>
</tr>
<tr>
<td>C</td>
<td>18.0 (457)</td>
</tr>
<tr>
<td>L</td>
<td>16.75 (425)</td>
</tr>
<tr>
<td>D</td>
<td>9.49/9.47 (241/240.5)</td>
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<tr>
<td>E</td>
<td>10.25/9.70 (260/246)</td>
</tr>
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</table>
Operating And Maintenance Instructions

A. Mounting
1. Standard mounting.
   a. Cut proper size hole in the top of the reservoir.
   b. Drill holes for studs within the proper bolt circle.
   c. Set the filter into the cutout hole and secure with proper size bolts, nuts and lock washers.
2. Utilize proper fittings.

B. Start-Up
1. Check for and eliminate leaks upon system start-up.
2. Check differential pressure indicator, if installed, to monitor element condition.

C. Service
1. An element must be serviced when the indicator indicates service is required. NOTE: If the filter is not equipped with an indicator, the element should be serviced according to machine manufacturer's instructions.

D. Servicing Dirty Elements
1. Shut system down to assure that there is NO PRESSURE OR FLOW into the filter housing.
2. Remove the filter cover.
3. Remove the filter insert (bridge which holds the element in place).
4. Remove the bypass spring assembly or non-bypass plate from the stud.
5. Remove the contaminated cartridge with a twisting motion.
   a. Discard the disposable element cartridge.
   b. Wash cleanable or mesh elements in a non-caustic solvent. Compressed air can be used to facilitate cleaning. Use care to prevent damage to the element during cleaning. NOTE: Elements finer than 150 microns (100 mesh) may require special ultrasonic cleaning. Consult factory for recommendations.

E. Before Installing A New Element Cartridge
1. Clean the magnetic core with a lint-free cloth.
2. Check all seals and replace if necessary.

F. To Install A New Or Cleaned Element Cartridge
1. Lubricate all seals.
2. Mount new or cleaned Parker filter cartridge. NOTE: For ease of mounting, hold the cartridge away from the magnetic core until the stud is through the hole in the bottom of the element. Then slide it up to securely seat it to the top of the bridge.
3. Install the bypass spring assembly or non-bypass plate, and tighten until snug. NOTE: Older versions may have a cotter pin/castellated nut retained bypass spring. In these cases, the nut should be turned down the shaft until the cross drilled hole is visible in the base of a castellation and the cotter pin inserted and ends flared to lock the bypass assembly in place.
4. Re-install the insert into the filter housing, making sure that the top spring is secure.
5. Re-install the cover. Torque the cover nuts to 22 ft./lbs.

Follow procedures B.1 and B.2.
BGT Series
Low pressure 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>
<th>BOX 8</th>
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<tbody>
<tr>
<td>BGT</td>
<td>13</td>
<td>10QL</td>
<td>B</td>
<td>V</td>
<td>E</td>
<td>F48</td>
<td>1</td>
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</tbody>
</table>

BOX 1: Filter Series
Symbol   Description
BGT      Return Filter

BOX 2: Filter Series
Symbol    Description
13        600 lpm (160 gpm)
15        1000 lpm (265 gpm)
17        2000 lpm (530 gpm)

BOX 3: Media Code
Symbol Description
BGT13/BGT15
02QL  Leif® Microglass
05QL  Leif® Microglass
10QL  Leif® Microglass
20QL  Leif® Microglass
BGT17
02QL  Microglass
05QL  Microglass
10QL  Microglass
20QL  Microglass

BOX 4: SEALS
Symbol Description
B   Nitrile

BOX 5: Indicator
Symbol Description
P   Plugged Port
V   Visual Differential Indicator
E   Electrical Differential Indicator

BOX 6: Bypass
Symbol Description
E   22 psid (1.5 bar)

BOX 7: Ports
Symbol Description
F48  3” SAE Flange, Code 61

Replacement Elements

BGT13 (old BGT600)

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
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<tr>
<td>937834Q</td>
<td>Element Leif® IN-13-02QL</td>
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<td>937841Q</td>
<td>Element Leif® IN-13-05QL</td>
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<tr>
<td>937860Q</td>
<td>Element Leif® IN-13-10QL</td>
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<td>937867Q</td>
<td>Element Leif® IN-13-20QL</td>
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BGT15 (old BGT1000)

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<th>Description</th>
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<td>937836Q</td>
<td>Element Leif® IN-15-02QL</td>
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<td>937865Q</td>
<td>Element Leif® IN-15-20QL</td>
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BGT17 (old BGT2000)

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<td>937769Q</td>
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<td>937772Q</td>
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<td>937805Q</td>
<td>Element IN-17-20Q-B</td>
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Please note the bolded options reflect standard options with a reduced lead time.