



GLF Series

Low Pressure Tank Top Return Line Filters



ENGINEERING YOUR SUCCESS.



Preventive

- fights costly equipment maintenance
- reduces system downtime
- controls solid contaminants
- protects fluid & system components

GLF Series

The Parker GLF low pressure return line filter is engineered to deliver efficient contamination control and performance in today's demanding hydraulic circuits. The Parker GLF is designed to maximize capacity and element life while maintaining low pressure drop, even in cold start conditions. The versatile two port design provides the user installation flexibility and reduces installed cost. The inside-to-outside flow path confines contaminant during element service and minimizes contaminant exposure to the reservoir. The GLF offers pressure gauge and pressure switch ports for visual or electrical switch monitoring of the installed element.



GLF Series

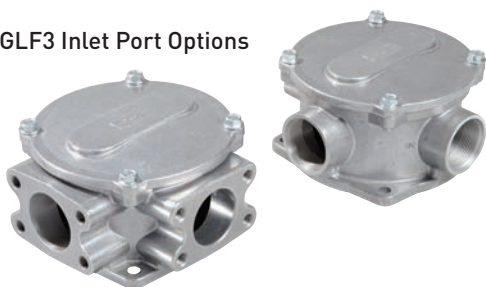
Typical Applications

- Deck and Mobile cranes
- Fire fighting equipment
- Forwarders
- Hydraulic presses
- Marine steering units
- Power packs
- Excavators
- Harvesters
- Waste balers
- Reachstackers
- Wheel loaders
- Drilling equipment
- Industrial Power units
- Telehandlers
- Aerial Equipment
- Waste management, dump and fork lift trucks

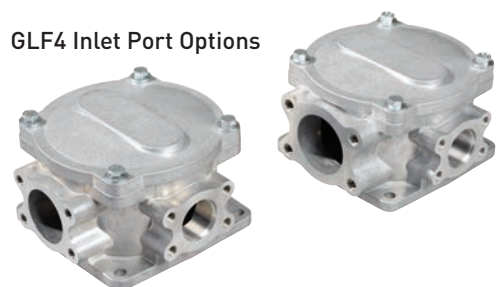
Features and Benefits

| Feature | Advantage | Benefit |
|------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Filter design and element construction with perforated metal outer wrap | <ul style="list-style-type: none"> • Provides excellent flow diffusing, controlling aeration • No bowl required | <ul style="list-style-type: none"> • Reduced cost and assembly weight • Optimized performance |
| High efficiency Microglass media maximizing filtration area | <ul style="list-style-type: none"> • Combines high particle capture efficiency with high dirt holding capacity and lower ΔP | <ul style="list-style-type: none"> • Cleaner fluids, longer lasting with fewer service intervals • Continuous filtration in cold start conditions • Lower operating costs |
| Element design includes integral soft seat bypass valve with closed bottom end cap | <ul style="list-style-type: none"> • New bypass with each element change • Ensures captured contaminants are removed with each element change | <ul style="list-style-type: none"> • Ensures reliable bypass performance • No leakage • Reduced risk for contamination during service |
| Optional Magnetic prefiltration | <ul style="list-style-type: none"> • Removes large ferrous contaminants | <ul style="list-style-type: none"> • Extends element life • Visual indication of component wear |
| Patented filter element | <ul style="list-style-type: none"> • Promotes genuine service parts | <ul style="list-style-type: none"> • Guaranteed quality of filtration |
| Inside-to-Outside filtration | <ul style="list-style-type: none"> • All captured contamination retained inside the element | <ul style="list-style-type: none"> • No recontamination of system during the change of the element |
| Service friendly product design | <ul style="list-style-type: none"> • Easy servicing by simple element change • End cap Bridge grip for easy element removal | <ul style="list-style-type: none"> • Reduces service time for filter |
| Visual or Electrical indicators | <ul style="list-style-type: none"> • Know exactly when to service the element | <ul style="list-style-type: none"> • Reduces downtime with scheduled service |
| Top access element service | <ul style="list-style-type: none"> • Oil remains in housing • Quicker element change | <ul style="list-style-type: none"> • No spills • Reduced maintenance costs |
| Head with 2 Inlet Ports | <ul style="list-style-type: none"> • Can be used as a fill port • Offers installation flexibility | <ul style="list-style-type: none"> • All added oil is filtered • Reduced connections |

GLF3 Inlet Port Options



GLF4 Inlet Port Options

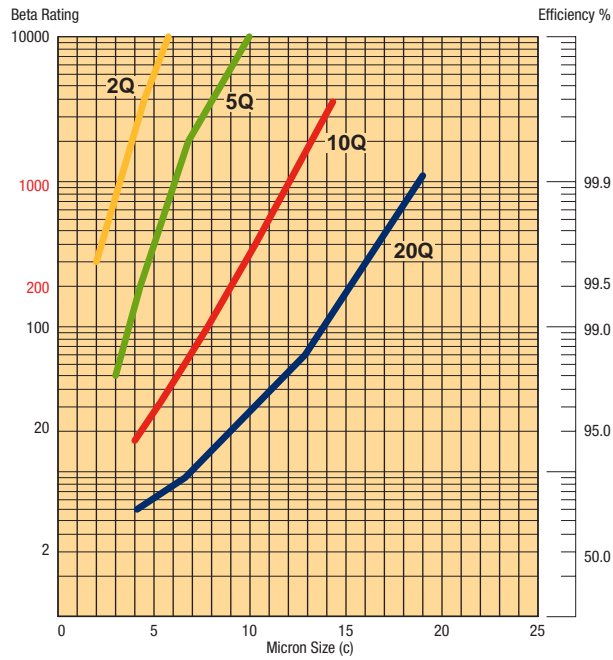


GLF3 Series

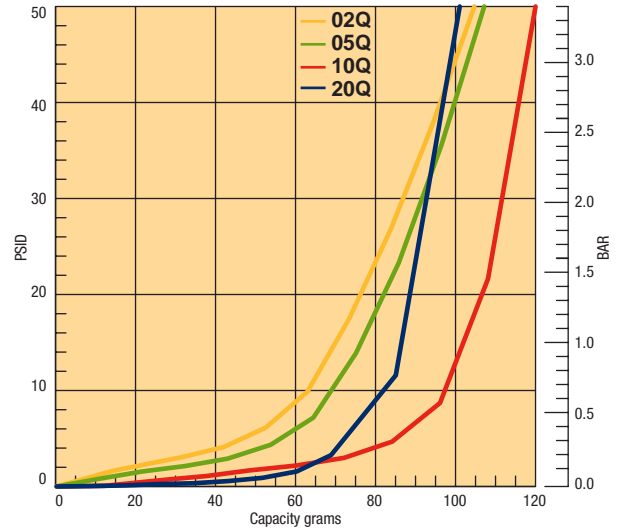
GLF3-1 Element Performance



Efficiency

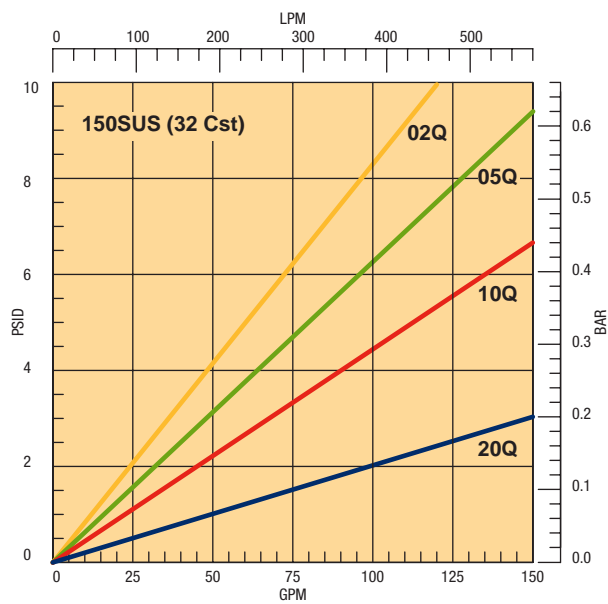


Capacity



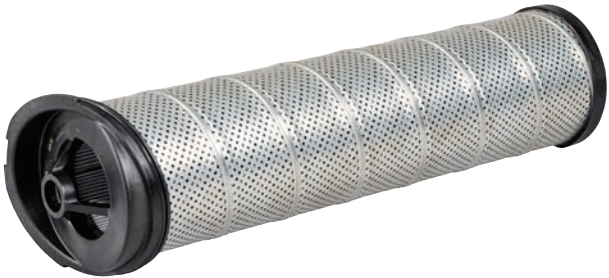
Results typical from Multi-pass tests run per test standard ISO 16889 @ 50 gpm to 50 psid terminal - 10 mg/L BUGL

Flow vs. Pressure Loss

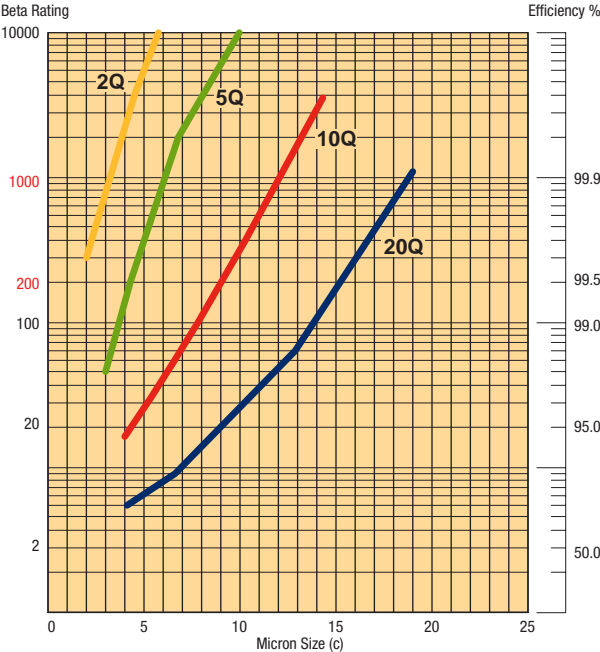


GLF3 Series

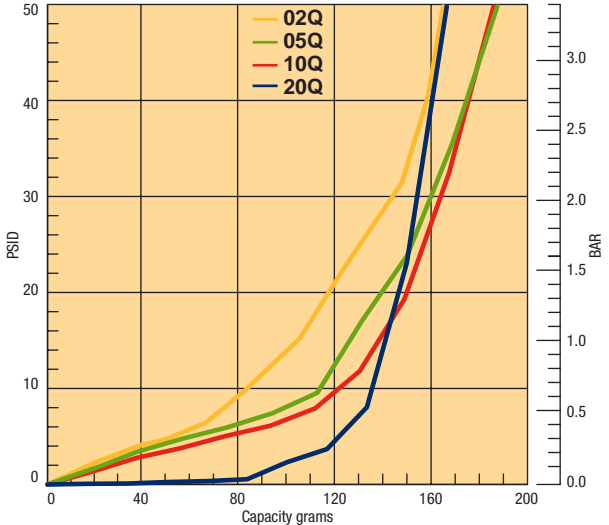
GLF3-2 Element Performance



Efficiency

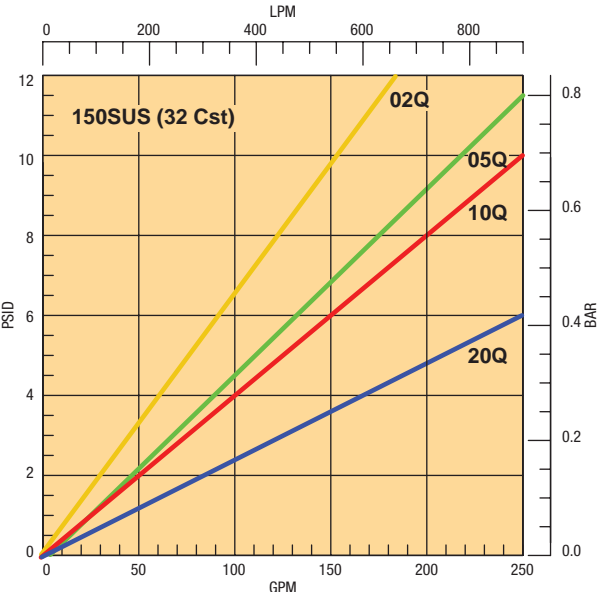


Capacity



Results typical from Multi-pass tests run per test standard ISO 16889 @ 70 gpm to 50 psid terminal - 10 mg/L BUGL

Flow vs. Pressure Loss

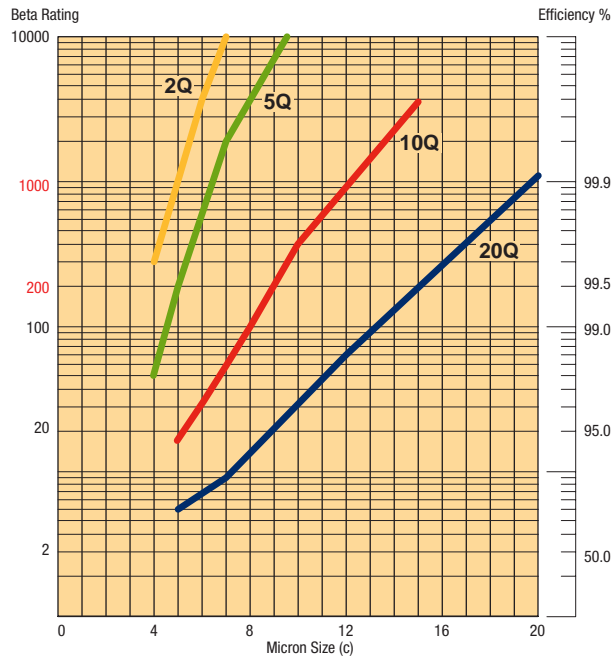


GLF4 Series

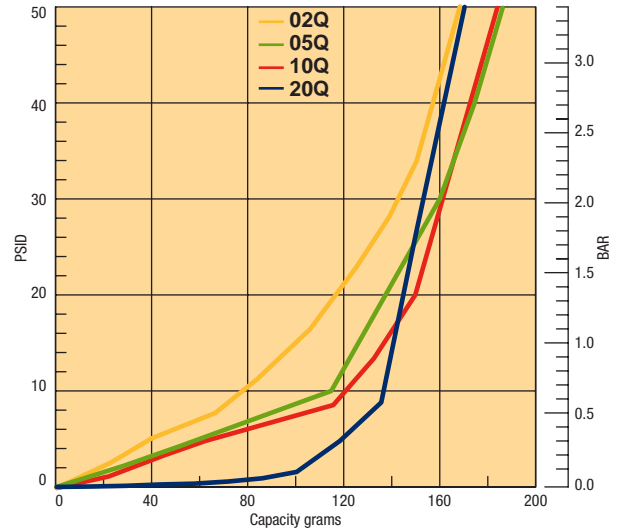
GLF4-1 Element Performance



Efficiency

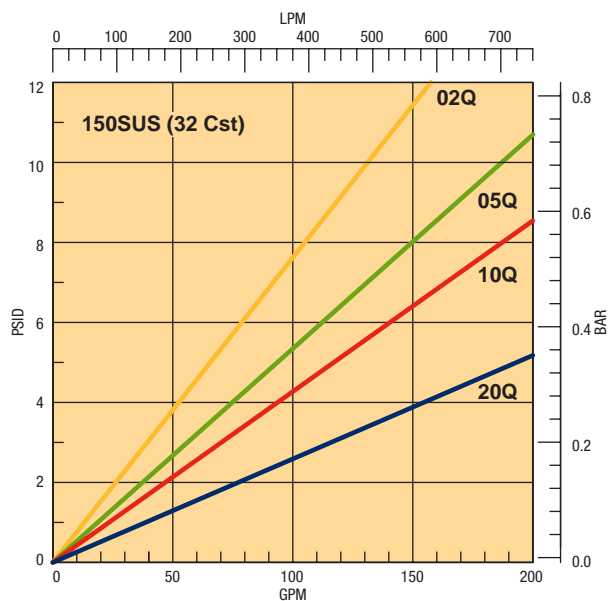


Capacity



Results typical from Multi-pass tests run per test standard ISO 16889 @ 70 gpm to 50 psid terminal - 10 mg/L BUGL

Flow vs. Pressure Loss

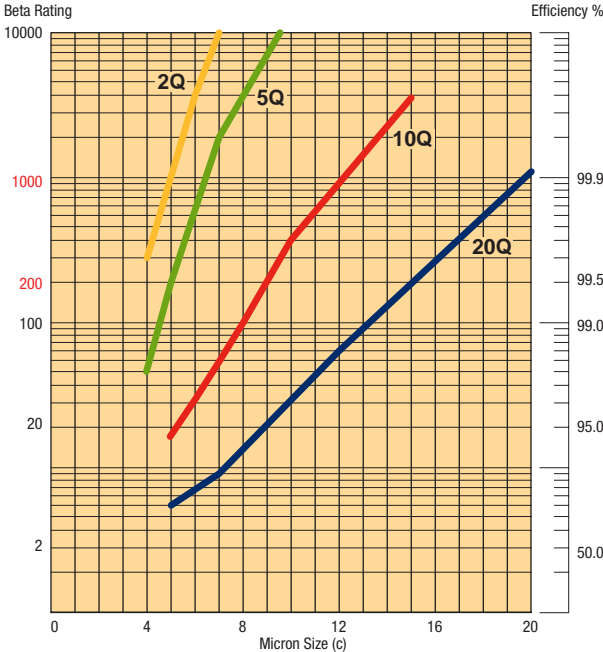


GLF4 Series

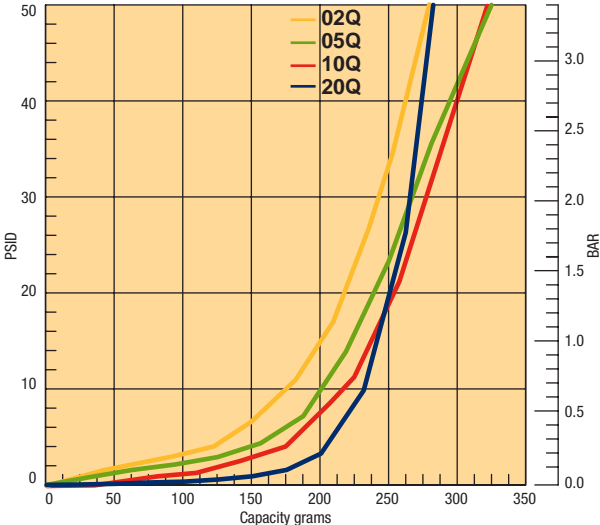
GLF4-2 Element Performance



Efficiency

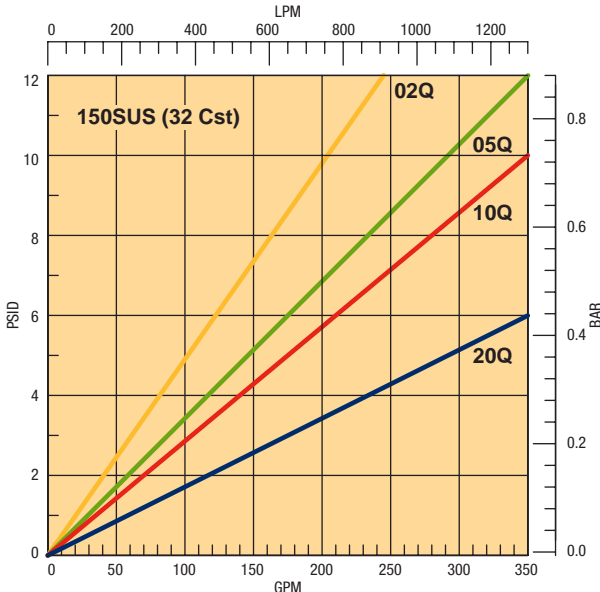


Capacity



Results typical from Multi-pass tests run per test standard ISO 16889 @ 70 gpm to 50 psid terminal - 10 mg/L BUGL

Flow vs. Pressure Loss



GLF3 Series

Specifications & Dimensions

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP):

150 psi (10.3 bar)

Operating Temperatures:

Nitrile: -40°F (-40°C) to 225°F (107°C)

Fluorocarbon: -15°F (-26°C) to 275°F (135°C)

Element Burst Rating:

150 psid (10.3 bar)

Filtration Media Grade:

2, 5, 10 & 20Q

Element Condition Indicators:

Gauge: 0-60 psi color coded

Switch: 30 psi SPDT 5A, 12/24

VDC and 125/250 VAC, 3-pin

Deutsch DT04-3P

Materials:

Head & Cover: Cast Aluminum Alloy

Bypass Valve: GF Nylon, Music wire

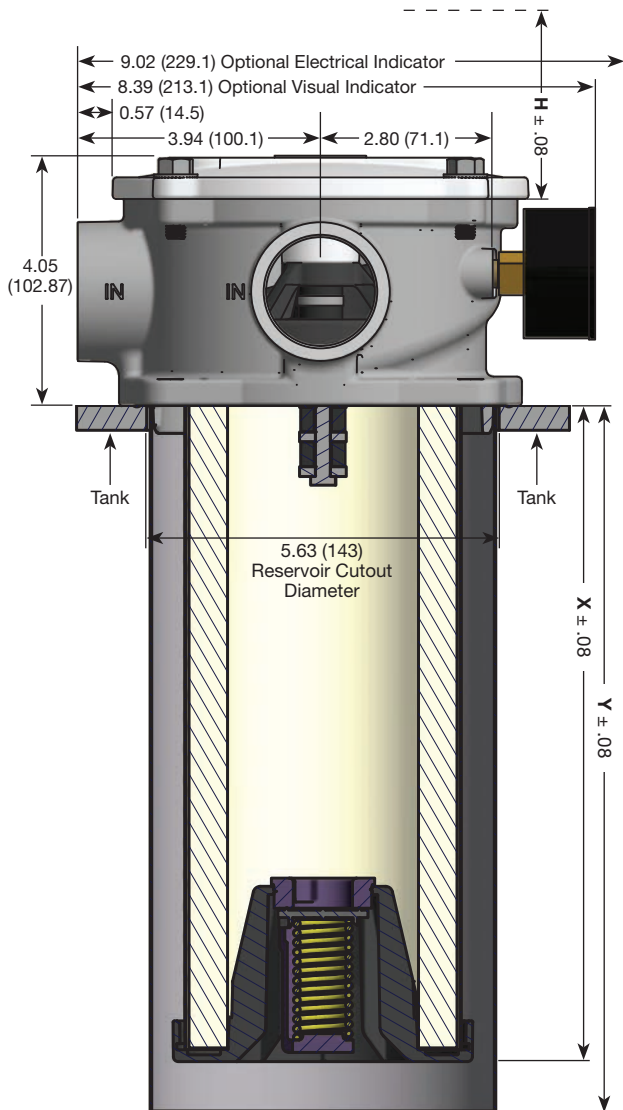
Filter Media: Microglass composite

Element End Caps: GF Nylon

Weights (approximate):

GLF3-17 lbs. (3.18 kg)

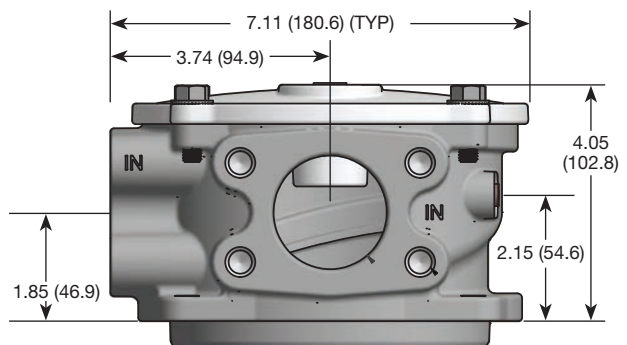
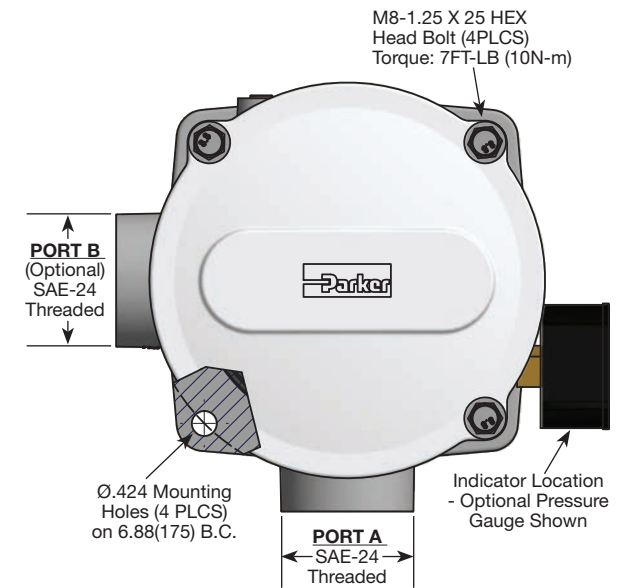
GLF3-28 lbs. (3.63 kg)



| Model | X Element Depth | Y Drop Tube | H Element Removal Clearance |
|--------|-----------------------|----------------|-----------------------------------|
| GLF3-1 | 10.48 (266.2) | 11.65 (295.9) | 12.8 (325.1) |
| GLF3-2 | 16.68 (423.7) | 17.48 (443.9) | 19.00 (482.6) |

Linear Measure: inch (mm)

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



Dual 2" SAE Code 61 Flange Face Option

See Typical Flange Dimensions pg 9

GLF4 Series

Specifications & Dimensions

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP):

150 psi (10.3 bar)

Operating Temperatures:

Nitrile: -40°F (-40°C) to 225°F (107°C)

Fluorocarbon: -15°F (-26°C) to 275°F (135°C)

Element Burst Rating:

150 psid (10.3 bar)

Filtration Media Grade:

2, 5, 10 & 20Q

Element Condition Indicators:

Gauge: 0-60 psi color coded

Switch: 30 psi SPDT 5A, 12/24

VDC and 125/250 VAC, 3-pin

Deutsch DT04-3P

Materials:

Head & Cover: Cast Aluminum Alloy

Bypass Valve: GF Nylon, Music wire

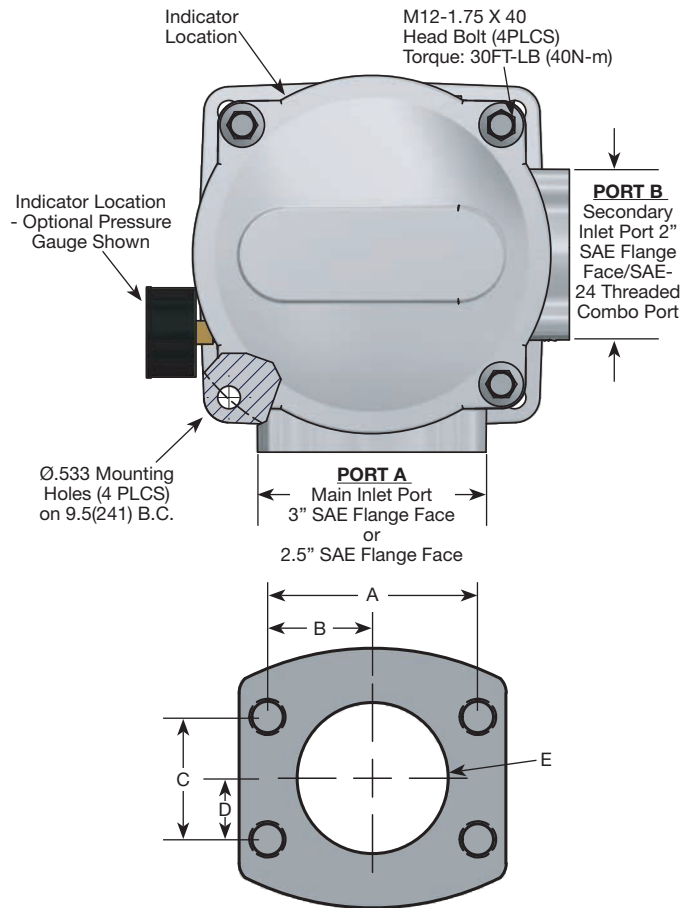
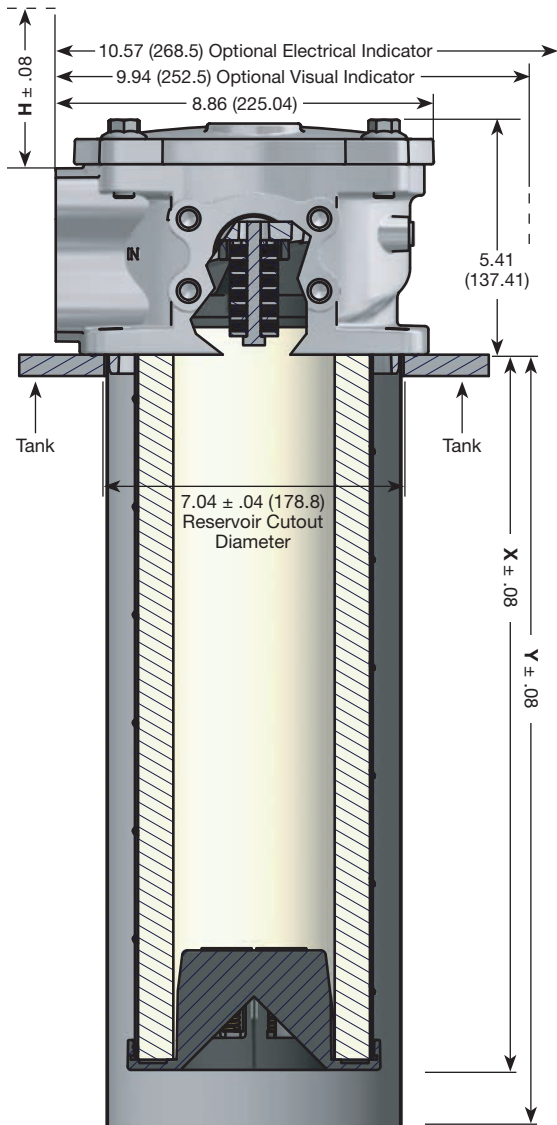
Filter Media: Microglass composite

Element End Caps: GF Nylon

Weights (approximate):

GLF4-19 lbs. (4.08 kg)

GLF4-210 lbs. (4.54 kg)



Linear Measure: inch (mm)

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

Typical Flange Dimensions Reference SAE J518

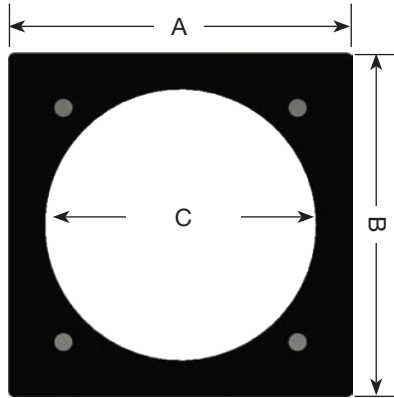
| Model | X Element Depth | Y Drop Tube | H Element Removal Clearance |
|--------|-----------------------|----------------|-----------------------------------|
| GLF4-1 | 10.56 (268) | 11.83 (300.5) | 12.8 (325.1) |
| GLF4-2 | 16.78 (426) | 18.04 (458.2) | 19.00 (482.6) |

| Port | A | B | C | D | E (Ø) | Thread |
|------|-----------------|-----------------|-----------------|-----------------|---------------|------------|
| 2" | 3.06 (77.7) | 1.53 (38.86) | 1.69 (42.93) | .84 (21.33) | 2 (50.8) | 1/2-13 UNC |
| 2.5" | 3.50 (88.9) | 1.75 (44.45) | 2.00 (50.8) | 1.0 (25.4) | 2.5 (63.5) | 1/2-13 UNC |
| 3" | 4.19 (106.7) | 2.09 (53.09) | 2.44 (61.97) | 1.22 (30.99) | 3 (76.2) | 5/8-11 |

GLF Series

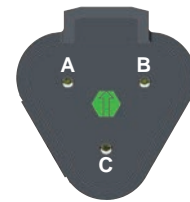
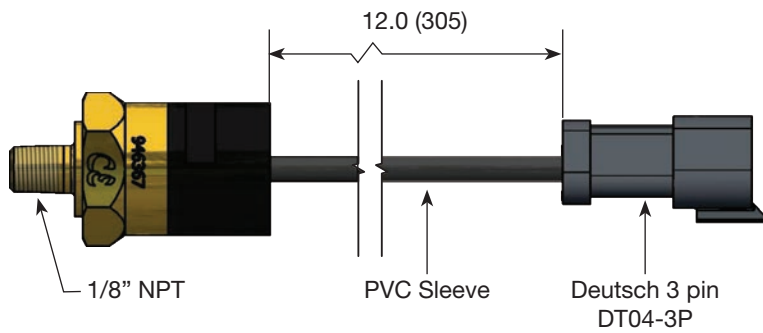
Options and Accessories

Weld Plate - PN 946567



| Model | A | B | C | D | Thread | Hole in Reservoir |
|-------|---------------|---------------|---------------|-----------|------------------|------------------------|
| GLF3 | 7.15 (182) | 7.15 (182) | 5.63 (143) | 1 (25) | 3/8-16 UNC-2A | 5.75-6.25 (146-159) |

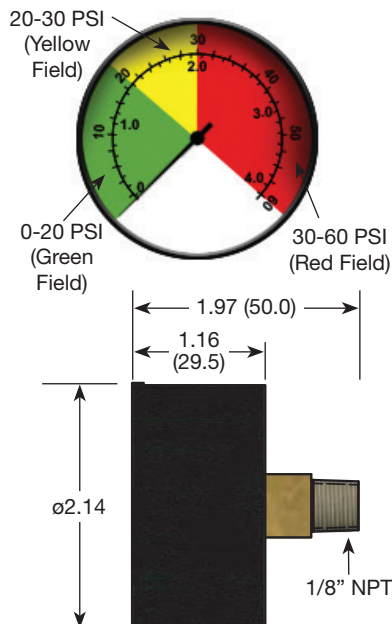
Electrical Switch (30 psi) - PN 946367



Wiring Code

| Switch Contact | Receptacle |
|-----------------|------------|
| Common | Socket A |
| Normally Closed | Socket B |
| Normally Open | Socket C |

Pressure Gauge - PN 946326



2 inch Flange Kits (flange, 4 bolts, o-ring)

| Size | Part Number | |
|-----------------|-------------|--------------|
| | Nitrile | Fluorocarbon |
| 3/4 inch NPTF | 924788 | 926013 |
| 1 inch NPTF | 924787 | 926012 |
| 1 1/4 inch NPTF | 924912 | 926004 |
| 1 1/2 inch NPTF | 924786 | 926011 |
| 2 inch NPTF | 924785 | 926010 |
| SAE - 12 | 924784 | 926009 |
| SAE - 16 | 924783 | 926008 |
| SAE - 20 | 924913 | 926005 |
| SAE - 24 | 924782 | 926007 |
| Flange blank | 924781 | 926006 |

Linear Measure: inch (mm)

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

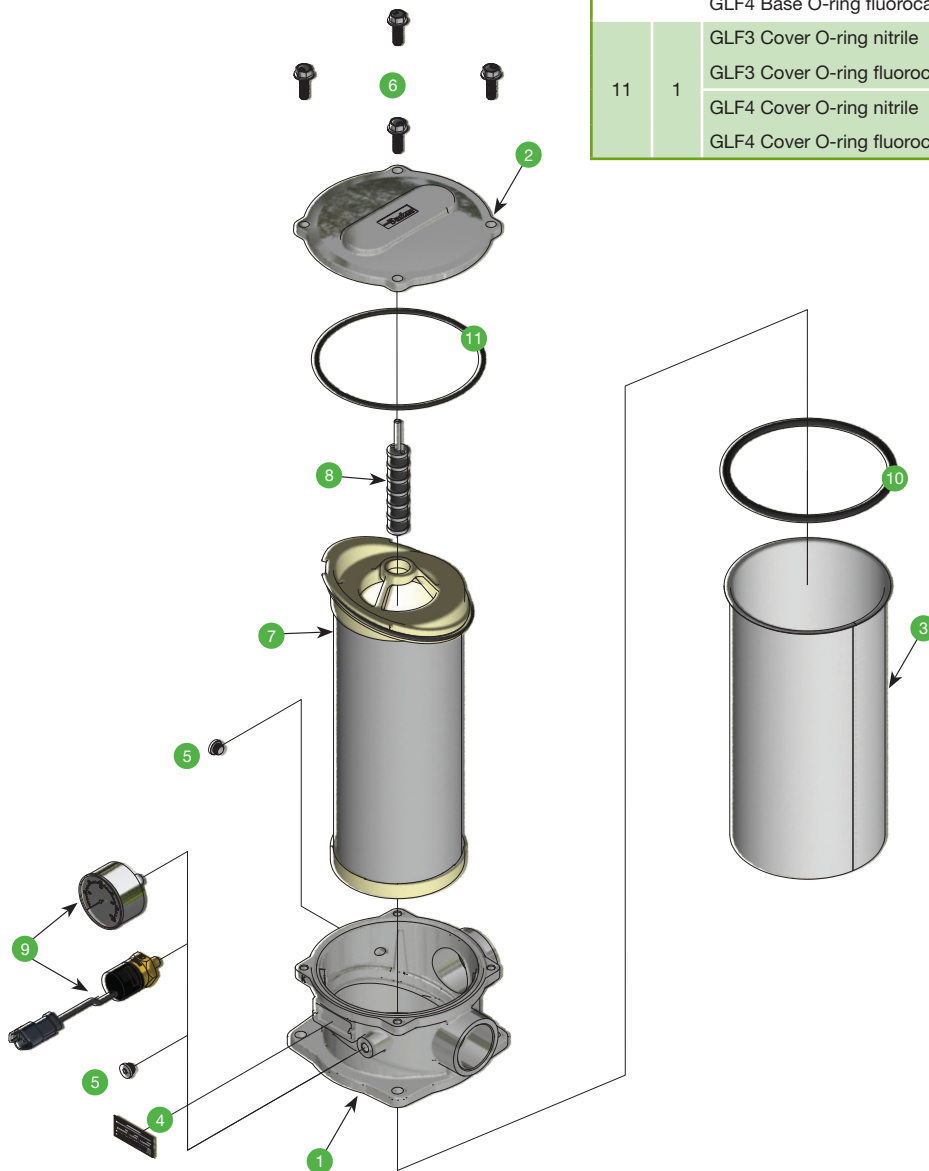
GLF Series

Parts List

| Item | Qty | Description | Part Number |
|------|-----|-------------------------------------------------------------|----------------|
| 1 | 1 | Head GLF3, 2 x SAE-24 inlet ports | 945852 |
| | | Head GLF3, SAE-24 inlet port | 945848 |
| | | Head GLF3, 2x2" SAE Code 61 Flange Face Inlet Ports | 946317 |
| | | Head GLF4, 1x2.5", 1x2" SAE Code 61 flange face inlet ports | 946270 |
| | | Head GLF4, 1x3", 1x2" SAE Code 61 flange face inlet ports | 946285 |
| 2 | 1 | GLF3 cover (no fill port) | 945858 |
| | | GLF4 cover (no fill port) | 946289 |
| 3 | 1 | Drop tube GLF3-1 | 85.01.016.132* |
| | | Drop tube GLF3-2 | 945891* |
| | | Drop tube GLF4-1 | 946564* |
| | | Drop tube GLF4-2 | 946565* |

| Item | Qty | Description | Part Number |
|------|-----|----------------------------------------------|--------------------|
| 4 | 1 | Name plate | 920928 |
| 5 | 2 | 1/8 - 27 pipe plug | 900782 |
| 6 | 4 | GLF3 M8 - 1.25 x 25 grade 8.8 bolt SERR FLG | 946559 |
| | | GLF4 M12 - 1.75 x 40 grade 8.8 bolt SERR FLG | 946581 |
| 7 | 1 | Replacement elements | See table on pg 13 |
| 8 | 1 | GLF3 Magnet assembly | 90.14.086.33* |
| | | GLF4 Magnet assembly | 946455* |
| 9 | 1 | Pressure gauge | 946326* |
| | | Pressure switch | 946367* |
| 10 | 1 | GLF3 Base O-ring nitrile | N72360 |
| | | GLF3 Base O-ring fluorocarbon | V72360* |
| | | GLF4 Base O-ring nitrile | N72366 |
| | | GLF4 Base O-ring fluorocarbon | V72366* |
| 11 | 1 | GLF3 Cover O-ring nitrile | N72256 |
| | | GLF3 Cover O-ring fluorocarbon | V72256* |
| | | GLF4 Cover O-ring nitrile | N72264 |
| | | GLF4 Cover O-ring fluorocarbon | V72264* |

* options



GLF Series

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.
 - d. Torque nuts in accordance with drawing.
2. Mounting procedure using weld plate.
 - a. Rough cut proper size hole in the top of reservoir.
 - b. Weld the weld plate concentric to the rough cut hole.
 - c. Mount the filter onto the studs and secure with nuts and lock washers.
 - d. Torque nuts in accordance with drawing.
3. 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 Element

1. Shut system down to assure that there is **NO PRESSURE OR FLOW** into the filter housing.
2. Remove the filter cover.
3. Remove and discard the contaminated element cartridge.

E. Before Installing a New Element Cartridge

1. Clean the magnetic core, if fitted, with a lint-free cloth.
2. Check all seals and replace if necessary.

F. To Install a New Element Cartridge

1. Lubricate all seals.
2. Align filter element end cap with guide posts located in head.
3. Mount new filter cartridge.
4. Re-install the cover.
5. Torque the cover bolts per drawing.

Perform procedures B1 and B2 to ensure no leaks are present.



Hydraulic & Fuel Filtration Division

Your prescription for total system health.



Dedicated to the long term health and reliability of mission critical assets, Parker Hydraulic & Fuel Filtration Division offers you innovative products that cover your diagnostic, therapeutic and preventive needs.

Total System Health Management

Diagnostic
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Preventive
Long Term Defense
Long Term Value
Reduced Cost of Ownership

Your Trusted Partner in Total System Health Management

GLF Series

Low pressure filters

How To Order

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

Example:

| BOX 1 | BOX 2 | BOX 3 | BOX 4 | BOX 5 | BOX 6 | BOX 7 | BOX 8 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| GLF3 | 1 | 10Q | B | P | I | S24 | 1 |

| BOX 1: Basic Assembly ¹ | |
|------------------------------------|-----------------------------|
| Symbol | Description |
| GLF3 | Tank Top Return Line Filter |
| GLF4 | Tank Top Return Line Filter |

| BOX 2: Length | |
|---------------|-------------|
| Symbol | Description |
| 1 | Single |
| 2 | Double |

| BOX 3: Media Code | |
|-------------------|-----------------------|
| Symbol | Description |
| 02Q | Microglass, 2 micron |
| 05Q | Microglass, 5 micron |
| 10Q | Microglass, 10 micron |
| 20Q | Microglass, 20 micron |

| BOX 4: Seals | |
|--------------|--------------------|
| Symbol | Description |
| B | Nitrile (NBR) |
| V | Fluorocarbon (FKM) |

| BOX 5: Indicator(s) | |
|---------------------|---------------------------|
| Symbol | Description |
| P | Plugged Ports |
| G | Pressure Gauge, tri-color |
| S | Pressure Switch |

| BOX 6: Bypass | |
|---------------|-------------------|
| Symbol | Description |
| I | 35 psid (2.4 bar) |

| BOX 7: Ports | |
|-------------------------|---------------------------------------------------------------|
| Symbol | Description |
| GLF3² | |
| S24 | SAE-24 port |
| 2S24 | Dual SAE-24 ports |
| 2Y32 | Dual SAE 2" Code 61 Flange Face Inlet Ports (1/2" - 13 UNC) |
| GLF4³ | |
| 2Y40 | Dual SAE Code 61 Flange Face Ports (1x2 1/2" port, 1x2" port) |
| 2Y48 | Dual SAE Code 61 Flange Face Ports (1x3" port, 1x2" port) |

| BOX 8: Options | |
|----------------|-----------------------|
| Symbol | Description |
| 1 | None |
| M | Magnets |
| D | Drop Tube |
| MD | Magnets and Drop Tube |

Notes:

- The filter includes the element you select already installed.
- A single SAE flange port connection can be achieved by selecting "2Y32" in Box 7 and installing a separately purchased flange blank kit (924781 for nitrile, 926006 for fluorocarbon).
- A single SAE flange port connection can be achieved by selecting "2Y40" or "2Y48" in Box 7 and installing a separately purchased flange blank kit (924781 for nitrile, 926006 for fluorocarbon).

Replacement Elements

| Media | GLF3 | | | | GLF4 | | | |
|-------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|
| | Single Length | | Double Length | | Single Length | | Double Length | |
| | Nitrile | Fluorocarbon | Nitrile | Fluorocarbon | Nitrile | Fluorocarbon | Nitrile | Fluorocarbon |
| 02Q | 945894Q | 945906Q | 945898Q | 945910Q | 946431Q | 946456Q | 946435Q | 946460Q |
| 05Q | 945895Q | 945907Q | 945899Q | 945911Q | 946432Q | 946457Q | 946436Q | 946461Q |
| 10Q | 945896Q | 945908Q | 945900Q | 945912Q | 946433Q | 946458Q | 946437Q | 946462Q |
| 20Q | 945897Q | 945909Q | 945901Q | 945913Q | 946434Q | 946459Q | 946438Q | 946463Q |

Worldwide Filtration Manufacturing Locations

North America

Compressed Air Treatment

Gas Separation & Filtration Division

Airtek/Finite/domnick hunter/Zander
Lancaster, NY
716 686 6400
www.parker.com/faf

Balston
Haverhill, MA
978 858 0505
www.parker.com/balston

Engine Filtration

Racor

Modesto, CA
209 521 7860
www.parker.com/racor

Holly Springs, MS
662 252 2656
www.parker.com/racor

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Metamora, OH
419 644 4311
www.parker.com/hydraulicfilter

Laval, QC Canada
450 629 9594
www.parker.com/hydraulicfilter

Clark Filter
Lancaster, PA
717 285 5941
www.clarkfilter.com

Process Filtration

domnick hunter Process Filtration

SciLog
Oxnard, CA
805 604 3400
www.parker.com/processfiltration

Water Purification

Village Marine, Sea Recovery, Horizon Reverse Osmosis

Carson, CA
310 637 3400
www.parker.com/watermakers

Europe

Compressed Air Treatment

domnick hunter Filtration & Separation

Gateshead, England
+44 (0) 191 402 9000
www.parker.com/dhfn

Parker Gas Separations

Etten-Leur, Netherlands
+31 76 508 5300
www.parker.com/dhfn

Hiross Zander

Essen, Germany
+49 2054 9340
www.parker.com/hzfd

Padova, Italy
+39 049 9712 111
www.parker.com/hzfd

Engine Filtration & Water Purification

Racor

Dewsbury, England
+44 (0) 1924 487 000
www.parker.com/rfde

Racor Research & Development

Stuttgart, Germany
+49 (0)711 7071 290-10

Hydraulic & Fuel Filtration

Hydraulic & Fuel Filtration

Arnhem, Holland
+31 26 3760376
www.parker.com/hfde

Urdala, Finland
+358 20 753 2500

Condition Monitoring

Parker Kittiwake
West Sussex, England
+44 (0) 1903 731 470
www.kittiwake.com

Process Filtration

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Parker Twin Filter BV
Birtley, England
+44 (0) 191 410 5121
www.parker.com/processfiltration

Asia Pacific

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www.parker.com/australia

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www.parker.com/thailand

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www.parker.com/br

Pan American Division

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www.parker.com/panam

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