

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



Moduflow™ *Plus* Series

Low Pressure Filters



ENGINEERING YOUR SUCCESS.

Moduflow™ *Plus* Series

Applications

- Power Unit Fabrication
- Off-line Filter Loops
- Mobile Equipment

The Moduflow filter is widely considered the most versatile filter available on the market.

The patented end cap minimizes turbulence and pressure loss through the filter, improving system performance.

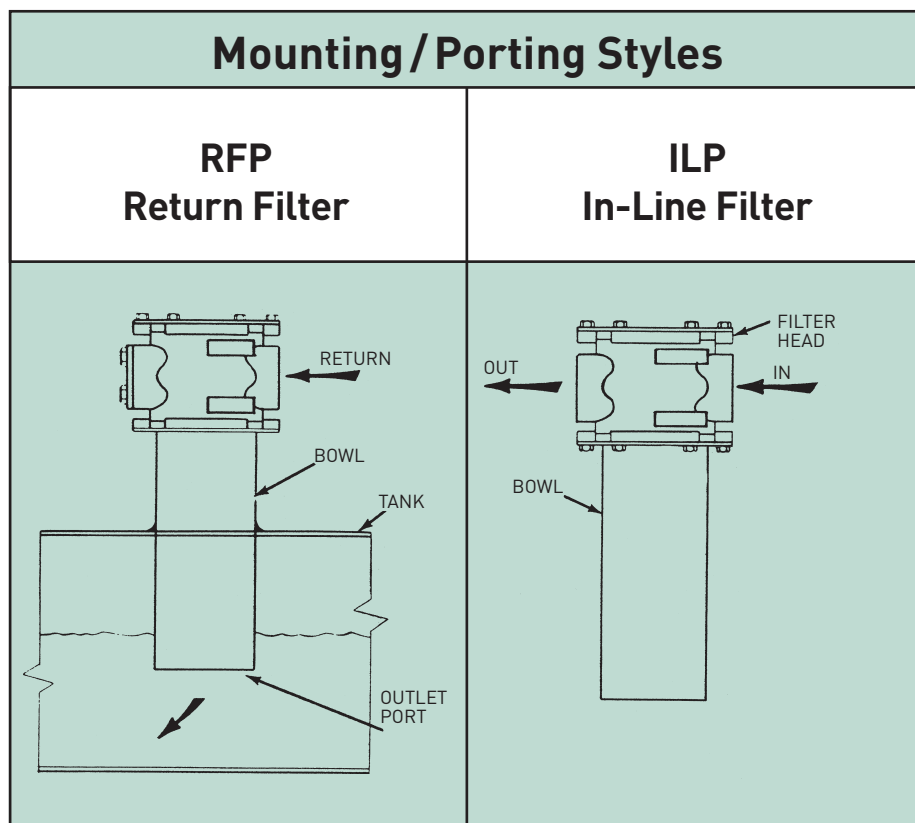
The newly designed closed bottom elements for the RFP and ILP models insures all contamination remains trapped within the element as the filter is serviced.

A wide variety of visual and electrical indicators allows you to know exactly when the element needs to be serviced. There is even a “no element” indicator that can sense when there is not an element installed in the filter.

From top to bottom, the Moduflow filter series provides the high level of filtration and long term dependability so vital to today's hydraulic systems.



Parker's new patented Moduflow element was designed with built-in diverter and bypass valve, to meet your application needs.



Moduflow™ *Plus* Series

Features

Flanges

- NPT or SAE 3/4" to 2"
- Lightweight aluminum

Cover

- Slotted for quick release
- Lightweight aluminum

Indicators

- Visual or electrical
- Mounted on either side
- Standard "no element" indication

Bowl

- Single or double length
- Durable steel construction

Bypass

(not visible)

- Integral 35 psi bypass replaced with every element change

Element

(not visible)

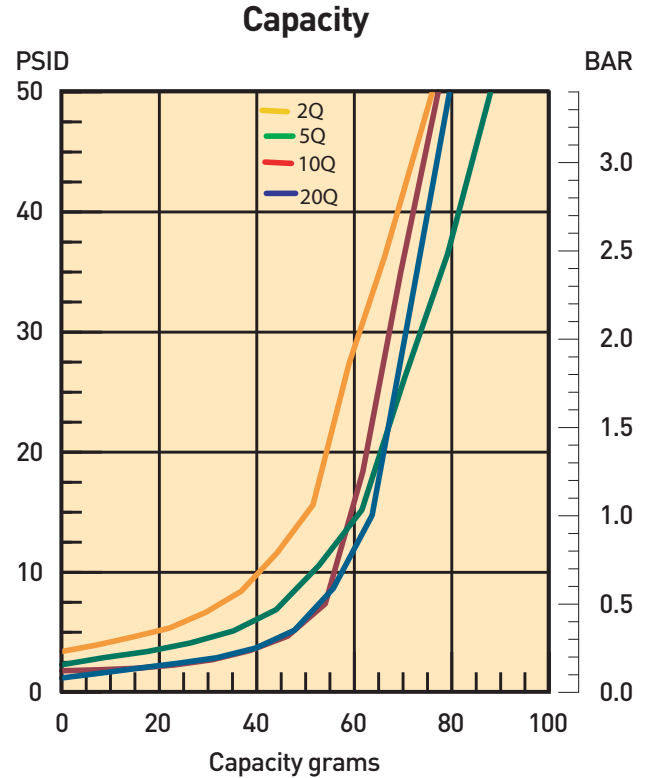
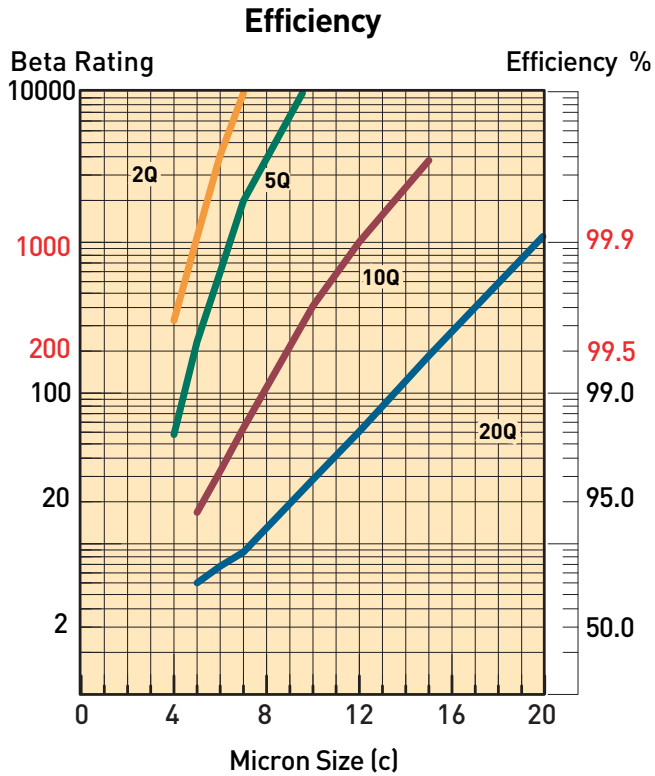
- Available in high performance Microglass III media
- Single or double length



| Feature | Advantage | Benefit |
|-----------------------------------|---|---|
| • Top access element service | <ul style="list-style-type: none"> • Oil remains in housing • Quicker elements change | <ul style="list-style-type: none"> • No Spills • Reduced maintenance costs |
| • Slotted cover | <ul style="list-style-type: none"> • Quick release cover • Cap screws remain in housing | <ul style="list-style-type: none"> • Reduced maintenance costs • No loose parts to lose |
| • Closed bottom elements | <ul style="list-style-type: none"> • Removes all contaminant during element service | <ul style="list-style-type: none"> • No downtime contamination from servicing |
| • Visual or electrical indicators | <ul style="list-style-type: none"> • Know exactly when to service elements | <ul style="list-style-type: none"> • Helps prevent bypass condition • No premature disposal |
| • Flange face ports | <ul style="list-style-type: none"> • Flexible mounting (3/4" to 2") | <ul style="list-style-type: none"> • Easy plumbing to your system |

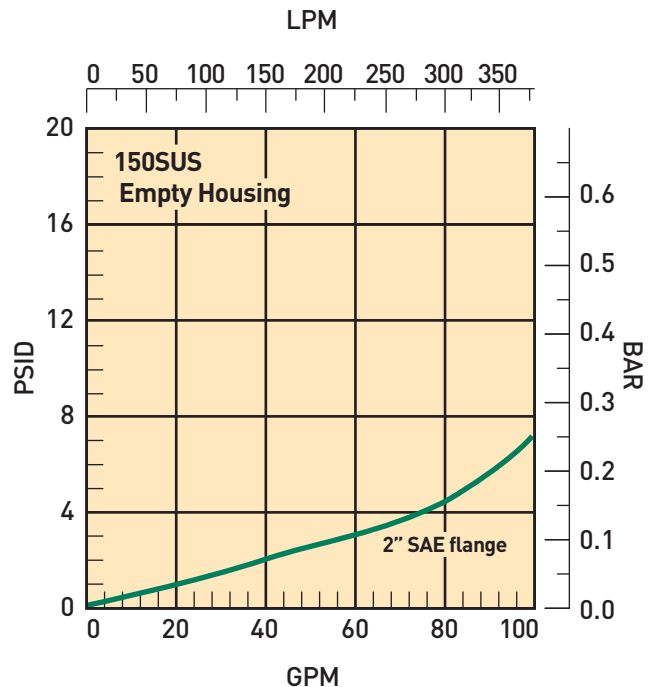
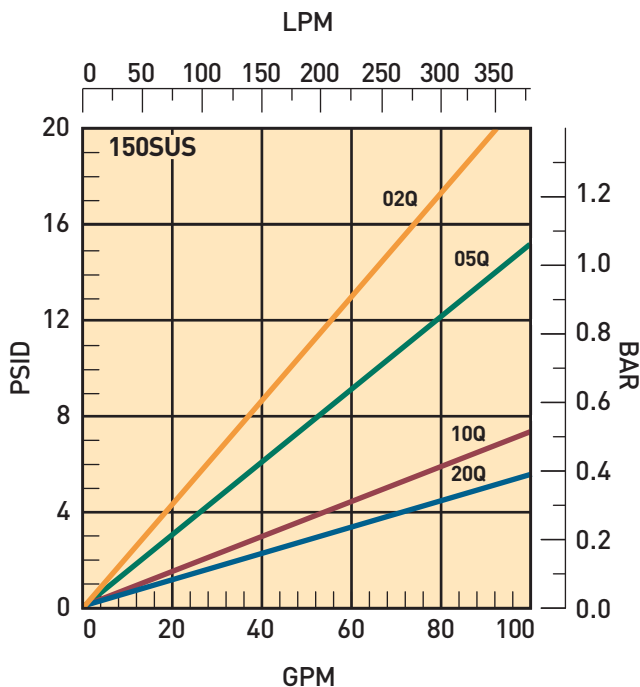
Moduflow™ *Plus* Series

RFP-1 and ILP-1 Element Performance



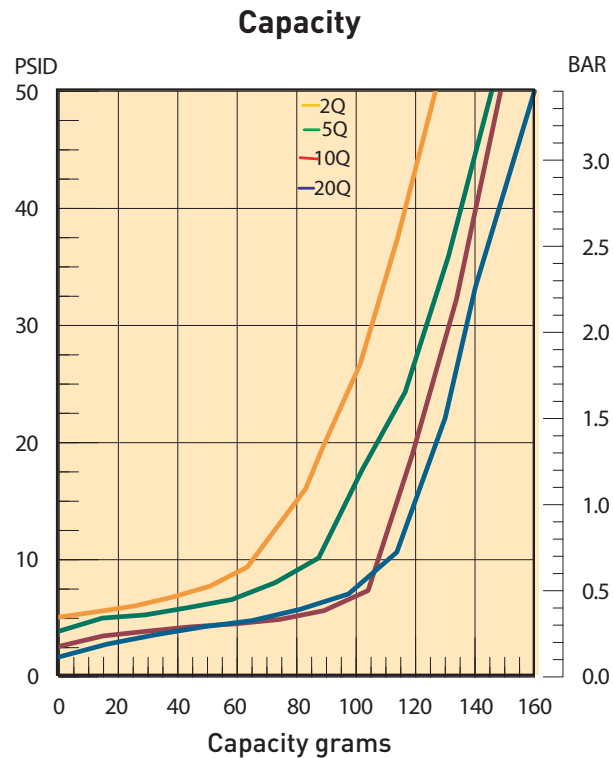
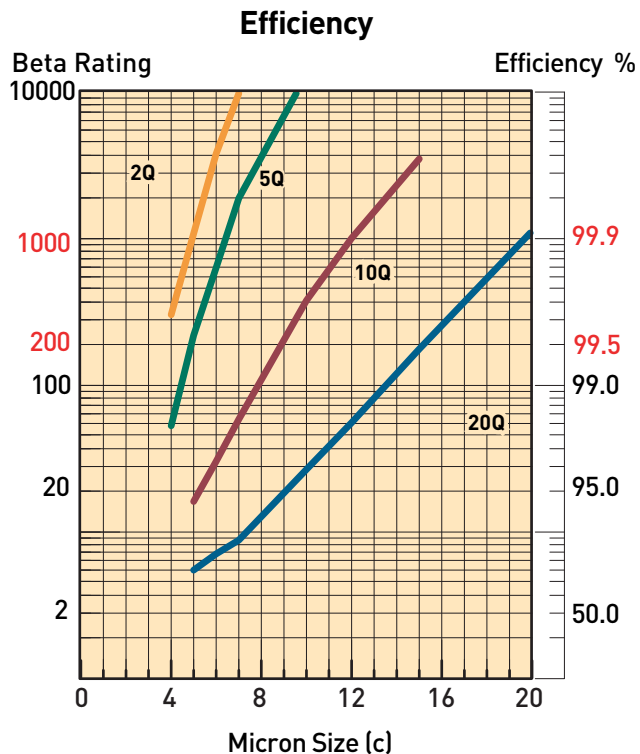
Multipass tests run @ 40 gpm to 50 psid terminal - 5mg/L BUGL

Flow vs. Pressure Loss

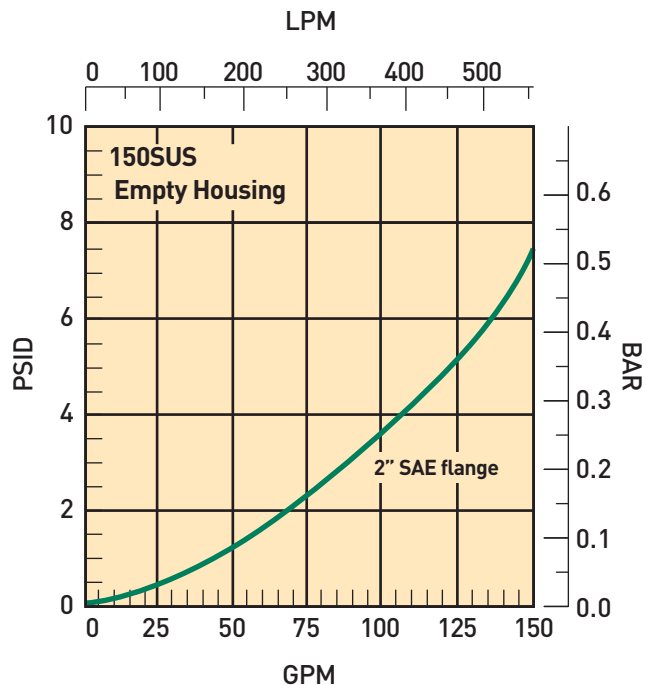
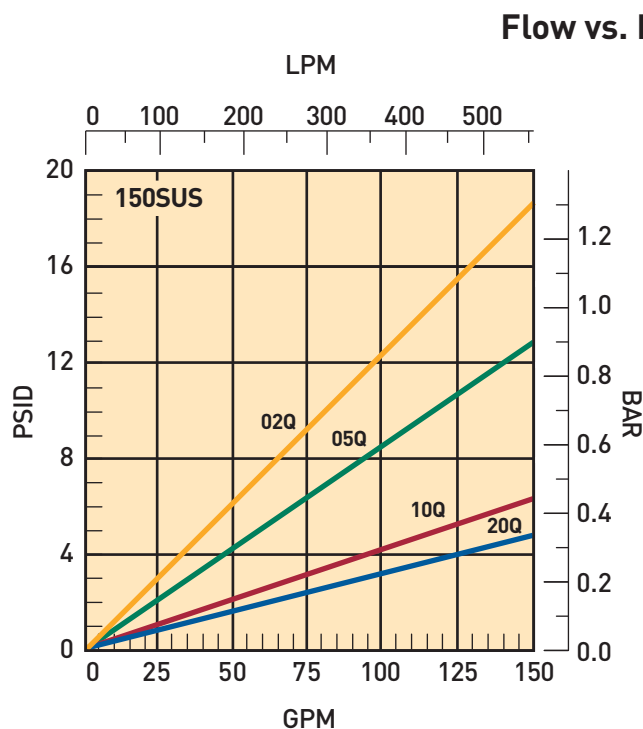


Moduflow™ *Plus* Series

RFP-2 and ILP-2 Element Performance



Multipass tests run @ 80 gpm to 50 psid terminal - 5mg/L BUGL



Moduflow™ Plus Series

Specifications: RFP, ILP

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 200 psi (13.8 bar)
Design Safety Factor: 2:1
Rated Fatigue Pressure: 150 psi (10.3 bar)

Element Burst Rating: 70 psid (4.8 bar)

Filter Materials:

Head, Cover, Flanges: die cast aluminum
Bowl: steel

Operating Temperatures:

Nitrile: -40°F to 225°F (-40°C to 107°C)
Fluorocarbon: -15°F to 275°F (-26°C to 135°C)

Weight (approximate):

Single: 20 lbs. (9.1 kg)
Double: 25 lbs. (11.3 kg)

Indicators:

Visual (optional)
Electrical (optional) 15A @ 250VAC / .5A @ 125 VDC
Electrical ("D" option) 5A @ 250VAC / 3A @ 28 VDC

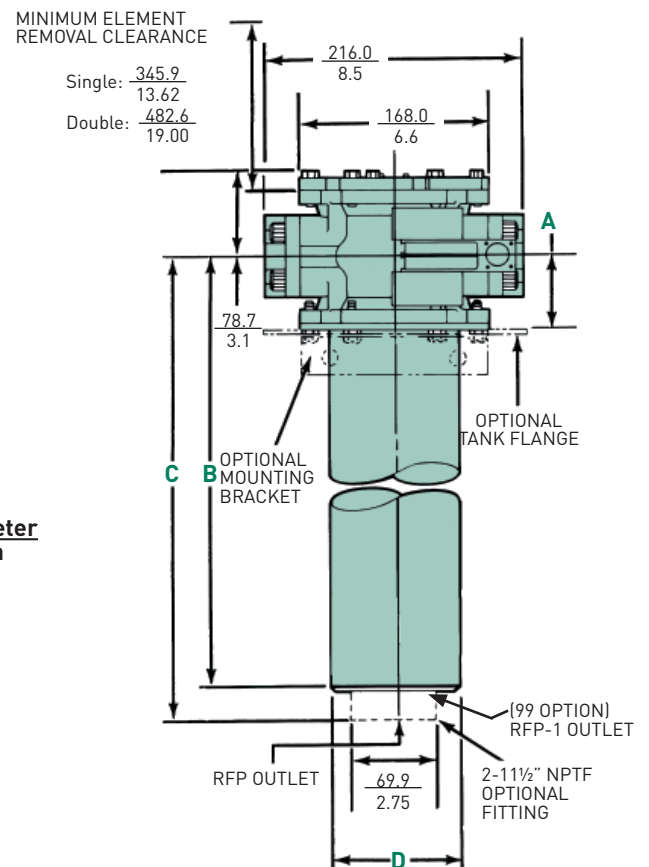
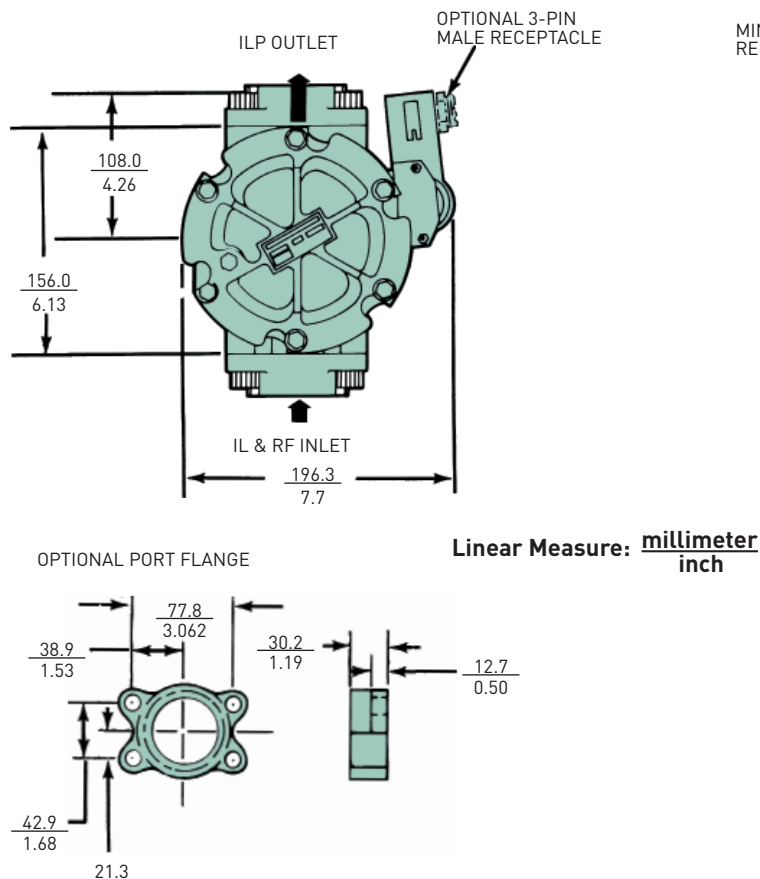
Color Coding:

White (normally closed)
Red (normally open)
Black (common)

Dimensions: $\frac{\text{mm}}{\text{inch}}$

| Model | A | B | C | D |
|-----------------------------------|---------------------|-----------------------|-----------------------|----------------------|
| RFP-1 with optional 2" fitting | $\frac{68.3}{2.69}$ | — | $\frac{390.0}{15.37}$ | $\frac{117.1}{4.61}$ |
| RFP-1 without optional 2" fitting | $\frac{65.0}{2.56}$ | $\frac{378.0}{14.87}$ | — | $\frac{114.0}{4.50}$ |
| RFP-2 with optional 2" fitting | $\frac{68.3}{2.69}$ | — | $\frac{625.0}{24.61}$ | $\frac{117.1}{4.61}$ |
| RFP-2 without optional 2" fitting | $\frac{68.3}{2.69}$ | $\frac{612.0}{24.11}$ | — | $\frac{114.0}{4.50}$ |
| ILP-1 | $\frac{65.0}{2.56}$ | $\frac{336.0}{13.24}$ | N/A | $\frac{117.1}{4.61}$ |
| ILP-2 | $\frac{68.3}{2.69}$ | $\frac{618.0}{24.32}$ | N/A | $\frac{117.1}{4.61}$ |

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



Moduflow™ Plus Series

Specifications: DILP

Pressure Ratings:

Maximum Allowable Operating Pressure (MAOP): 200 psi (13.8 bar)

Design Safety Factor: 2:1

Rated Fatigue Pressure: 150 psi (10.3 bar)

Element Burst Rating: 70 psid (4.8 bar)

Filter Materials:

Diverter Valve Assembly: die cast aluminum

Check Valve Assembly: die cast aluminum

Filter Assembly: see IL2 specifications

Operating Temperatures:

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

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

Weight (approximate):

Single: 55 lbs. (24.9 kg) / Double: 65 lbs. (29.5 kg)

Indicators:

Visual (optional)

Electrical (optional) 15A @ 250VAC / .5A @ 125 VDC

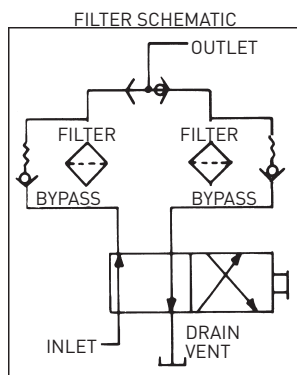
Electrical ("D" option) 5A @ 250VAC / 3A @ 28 VDC

Color Coding:

White (normally closed)

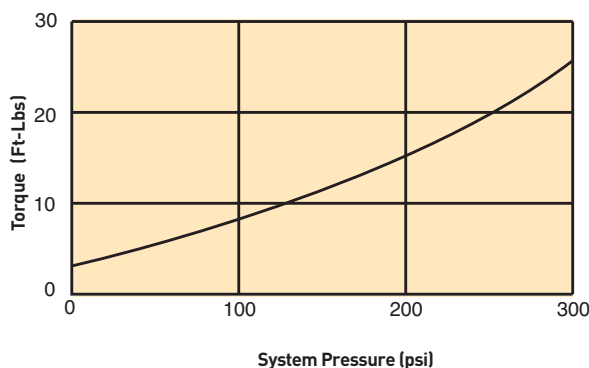
Red (normally open)

Black (common)

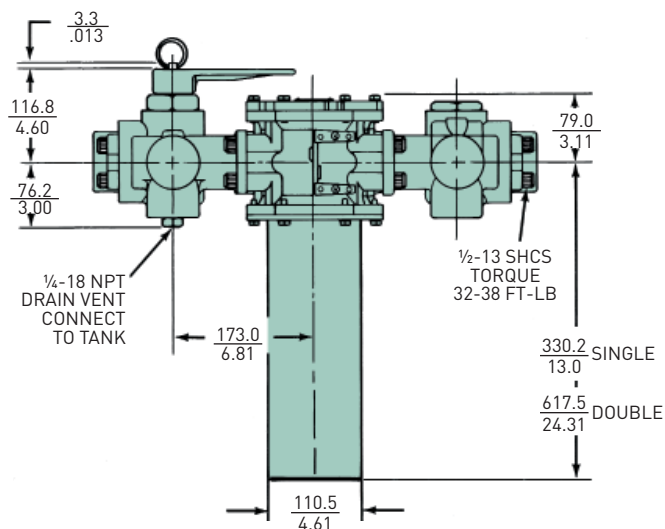


BOTH CHECK VALVES
MOVE SAME DIRECTION

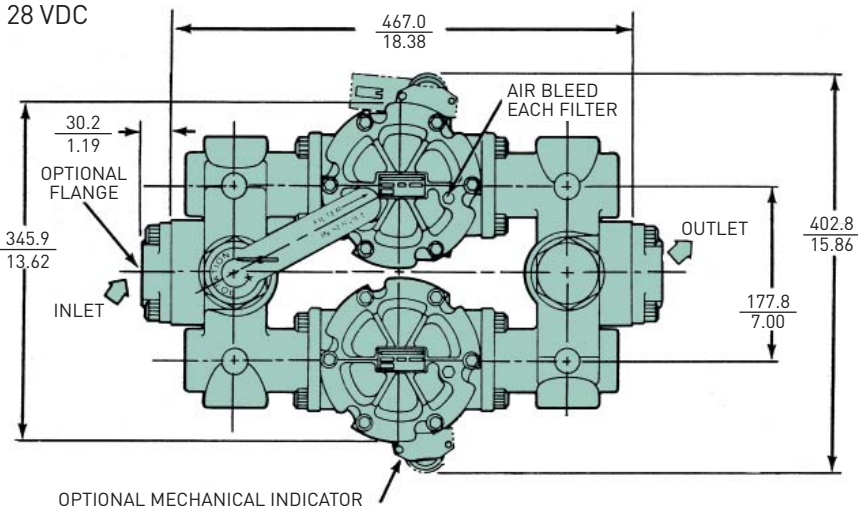
Approximate handle torque required for changeover.



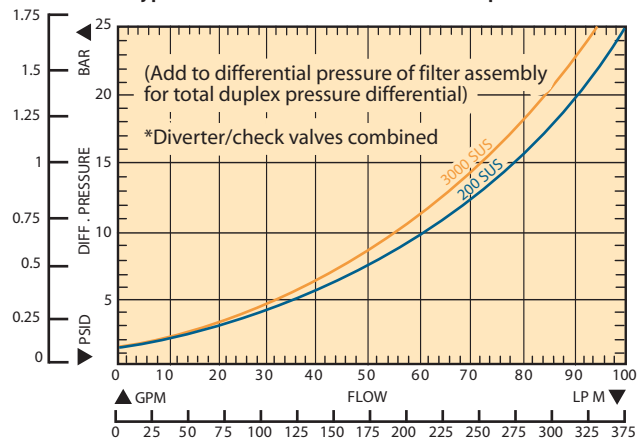
Drawings are for reference only.
Contact factory for current version.



Linear Measure: millimeter
inch



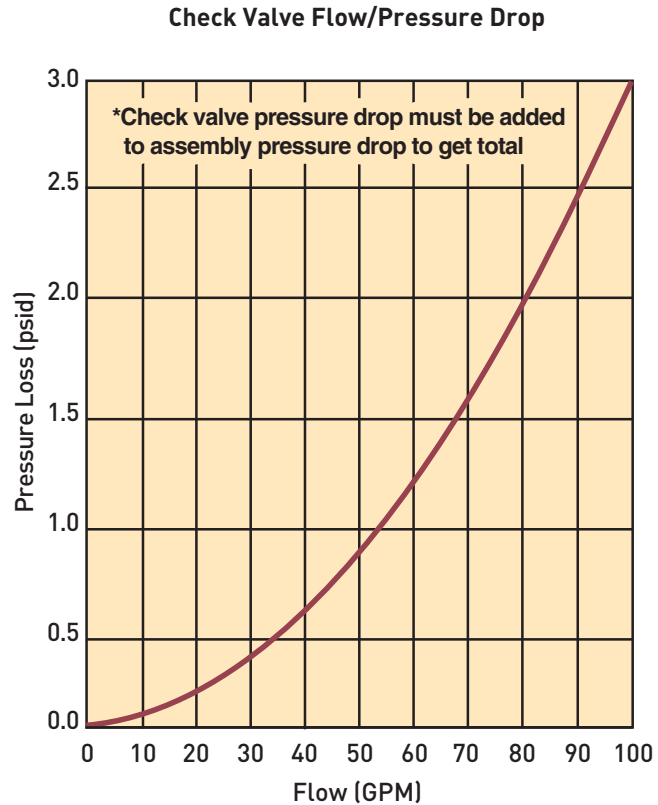
Typical Flow/Pressure Curves For Duplex Valves



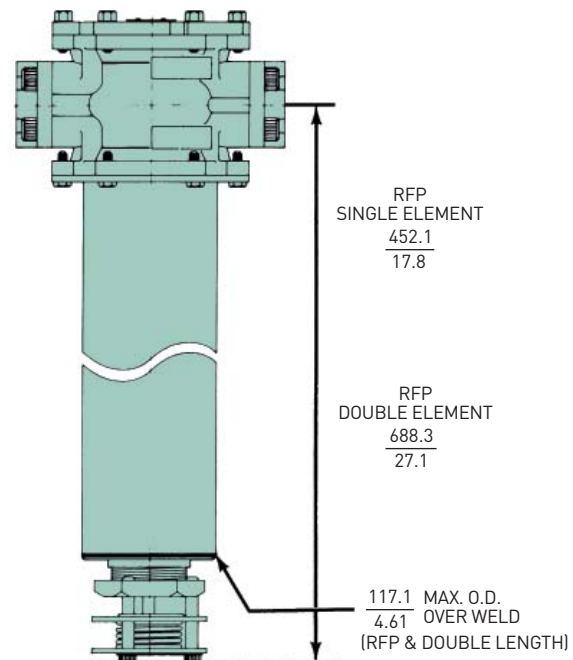
Moduflow™ *Plus* Series

Specifications

For return line applications (RFP), the fluid returning to the reservoir holds the check valve open. When the system is shut down, the check valve closes automatically.



Linear Measure: millimeter
inch



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

Moduflow™ *Plus* Series

Specifications

Lower Cost than many single unit filters.

Moduflow™ Manifold Extended Filter Range

Use Model MM Manifold to handle return line flows up to 130 gpm.

- Rated static pressure: 300 psi
- Typical burst pressure: 900 psi
- Easily mounted on ModuFlow™

High Flows At Low Cost

The model MM manifold is designed to extend the flow range of ModuFlow™ Filters when operating with 10 Micron and finer filter media. When mounted to a pair of RFP-2 or ILP-2 filters, this manifold will allow flows up to 130 gpm in return lines (15 fps velocity).

Note: The Model MM manifold is not applicable to suction lines due to its pressure drop characteristics.

When used with two ModuFlow™ filters, the total cost is often less than a single unit filter rated for 130 gpm flow. Tank-top mounted (Model RFP) filters will require only one manifold on the filter inlet pports. In-line mounted (Model ILPav) filters will require two manifolds, one on the inlet and one on the outlet ports.

Multiple Uses

Although designed for manifold ModuFlow™ filters, the Model MM can be used in a variety of applications which require:

- Splitting flow between components

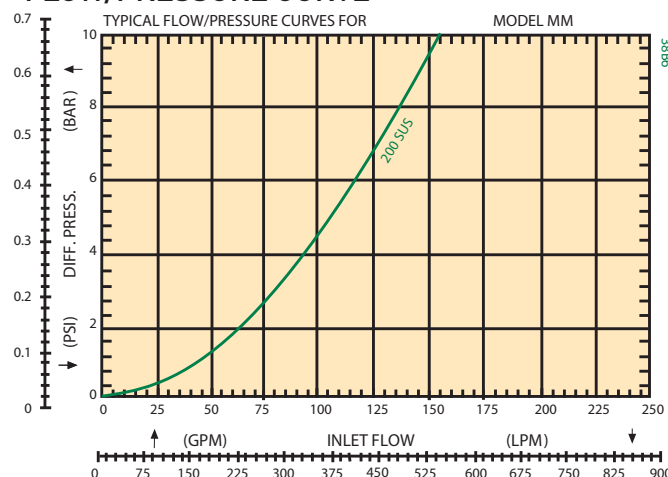
Such applications are frequently encountered on mobile equipment, machine tools, and large lubricating systems. In such applications, use of a manifold can often reduce total piping and installation costs.

Proven Reliability

The rugged design of the Model MM manifold has been proven in demanding mobil equipment applications. At the factory, we have cycle tested the Model MM through the full range of rated flow and pressure to insure reliable service.

Parker Filter Division maintains the same high standards in delivery, quality, and service. Considering this, plus features, flexibility, price, and performance, the Model MM manifold is a valuable addition to your fluid power component list.

FLOW/PRESSURE CURVE



Moduflow™ *Plus* Series

Specifications

MANIFOLD SPECIFICATIONS

Rated Static Pressure, maximum:
20.7 bar (300 psi)

Typical Burst Pressure:
62.1 bar (900 psi)

Operating Temperature (Buna seals):
+121°C to -40°C (+250°F to 40°F)

Housing Material:

ANSI 356-T6 cast aluminum

Approximate Shipping Weight:
3.6 kg (8 lbs)

Porting: See Options Below

Order Screws and O-Rings Separately:

Inlet & outlet screws (12 required):

Order P/N 900228

Outlet port o-rings (2 required):

Nitrite: Order P/N N72228

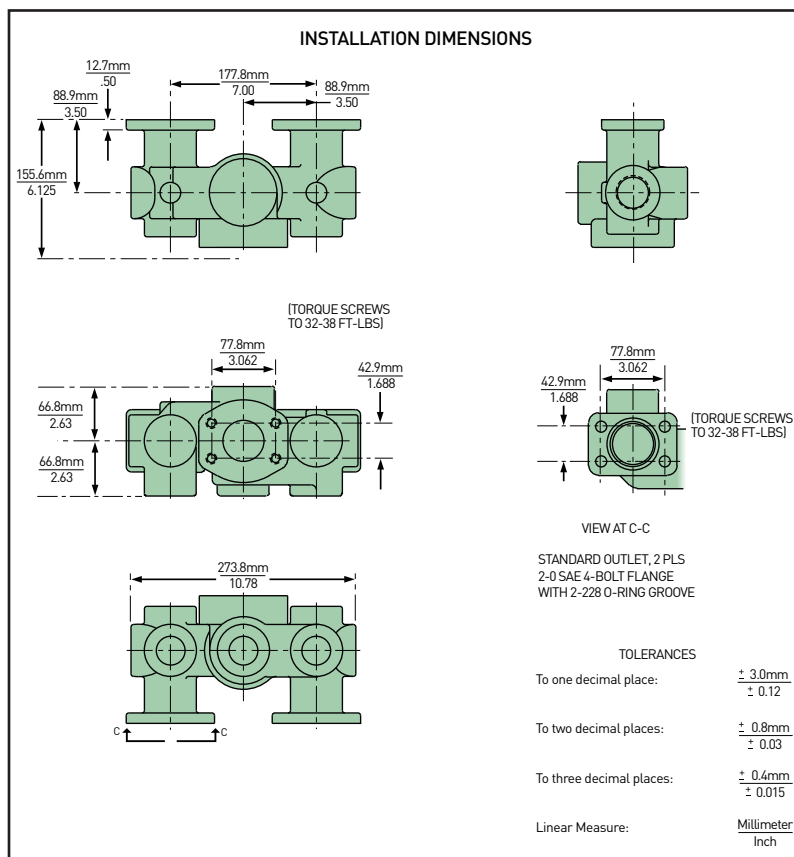
Fluorocarbon: Order P/N V92228

HOW TO ORDER MANIFOLDS:

| Part Number | Description |
|-------------|-------------------|
| 926466 | Moduflow Manifold |

- * Tank-top mounted RFP filters will require one manifold on filter inlets: in-line mounted ILP filters will require two manifolds on both inlets and outlets.

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

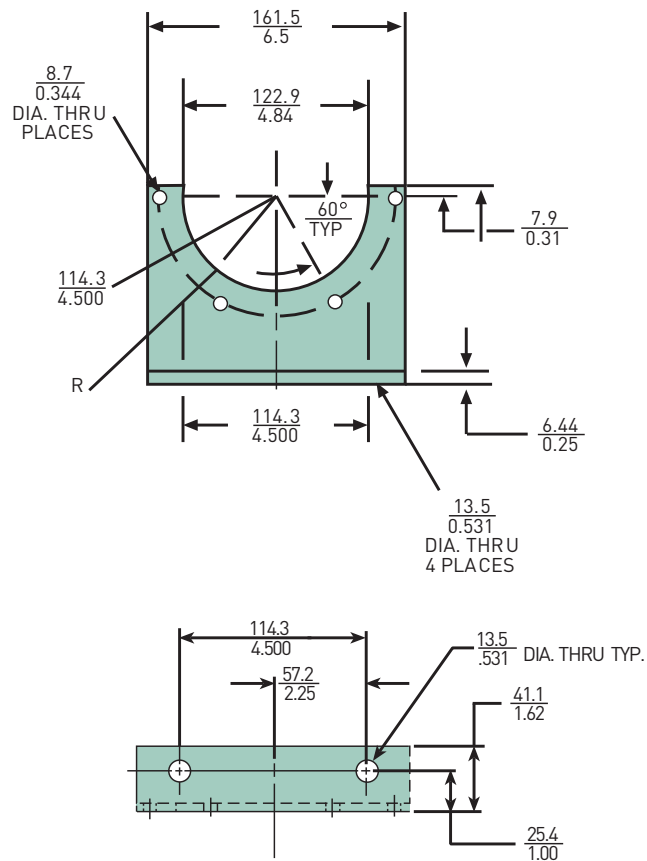


Moduflow™ *Plus* Series

Accessories

Linear Measure: millimeter
inch

OPTIONAL MOUNTING BRACKET (924904)

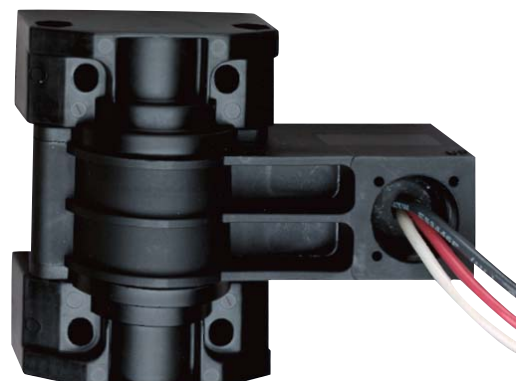


"M" OPTION-VISUAL INDICATOR,
NO ELEMENT WARNING



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

"E" OPTION-ELECTRICAL INDICATOR



Moduflow™ *Plus* Series

Parts List

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

| Size | Code | Part Number | |
|--------------|------|-------------|--------------|
| | | Buna | Fluorocarbon |
| ¾ inch NPTF | YB | 924788 | 926013 |
| 1 inch NPTF | YC | 924787 | 926012 |
| 1¼ inch NPTF | YD | 924912 | 926004 |
| 1½ inch NPTF | YE | 924786 | 926011 |
| 2 inch NPTF | YF | 924785 | 926010 |
| SAE - 12 | YM | 924784 | 926009 |
| SAE - 16 | YN | 924783 | 926008 |
| SAE - 20 | YO | 924913 | 926005 |
| SAE - 24 | YP | 924782 | 926007 |
| BLANK FLANGE | — | 924781 | 926006 |

RFP/ILP/ DILP Replacement Elements

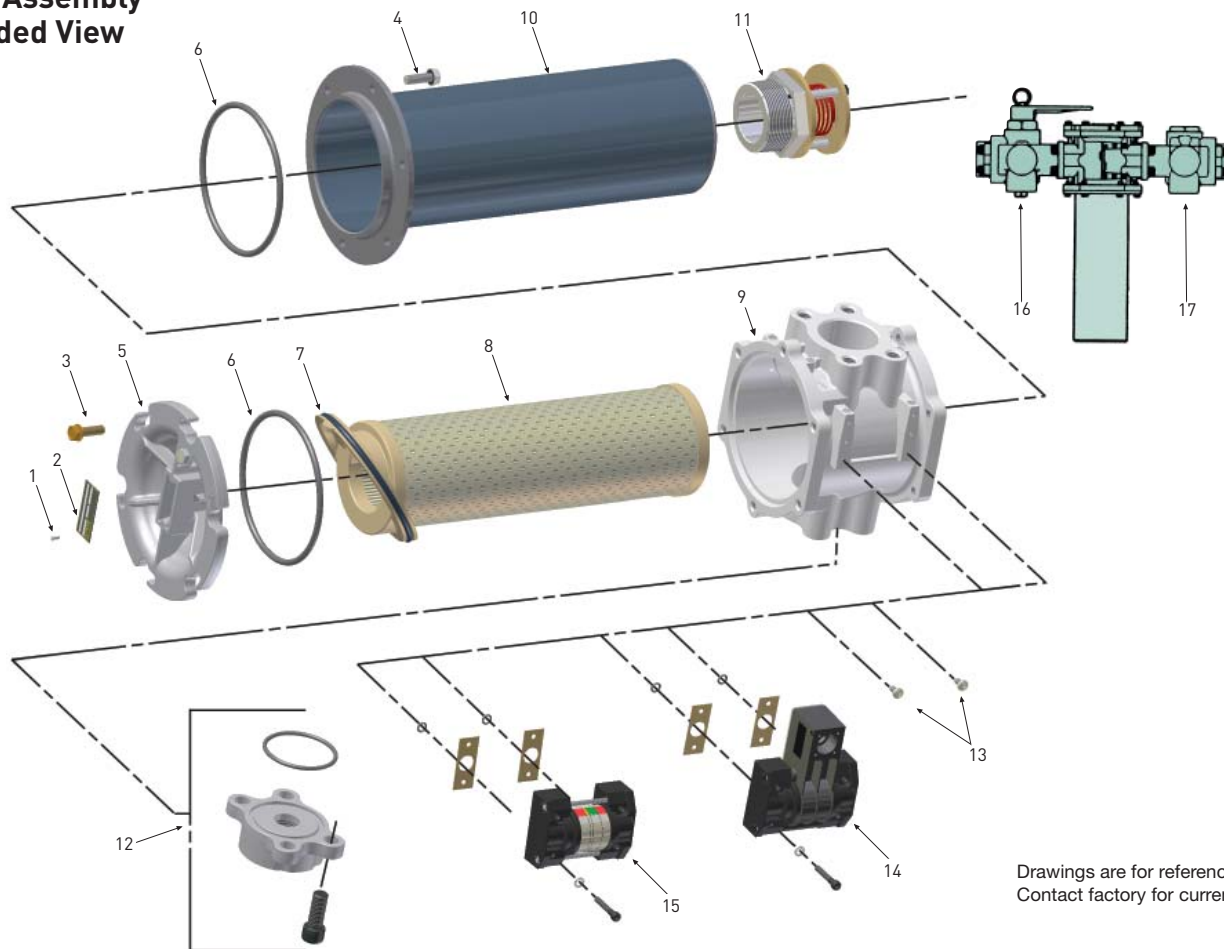
| Media | Nitrile Seals | | | | Fluorocarbon Seals | | | |
|-------|---------------|---------------------|------------|---------------------|--------------------|---------------------|------------|---------------------|
| | New Single | Replaces Old Single | New Double | Replaces Old Double | New Single | Replaces Old Single | New Double | Replaces Old Double |
| 02Q | 937393Q | 932686Q | 937397Q | 932692Q | 937401Q | 932689Q | 937405Q | 932695Q |
| 05Q | 937394Q | 932687Q | 937398Q | 932693Q | 937402Q | 932690Q | 937406Q | 932696Q |
| 10Q | 937395Q | 932688Q | 937399Q | 932694Q | 937403Q | 932691Q | 937407Q | 932697Q |
| 20Q | 937396Q | 933116Q | 937400Q | 933117Q | 937404Q | 933118Q | 937408Q | 933119Q |
| WR | 940733 | | 940734 | | 940735 | | 940736 | |

Moduflow™ Plus Series

Parts List

| Index | Description | Part No. | Quantity | Index | Description | Part No. | Quantity |
|-------|-----------------------------------|----------------|----------|--------------|---|----------------|----------|
| 1 | Screws, Nameplate..... | 900028 | 2 | 11 | Check Valve Assy. | 925120 | 1 |
| 2 | Name Plate, Unstamped..... | 920928 | 1 | 12 | Flange Kits..... | Refer to Table | 1 |
| 3 | Cover Screws, 5/16-18 UNC x 1"... | 926633 | 6 | | O-Ring | V72228 | 1 |
| 4 | Bowl Screws, 5/16-18 UNC x 1"... | 926633 | 6 | 13 | Plug Kit, Fastener, self-sealing, o-ring seal included with fastener | 925974 | 2 |
| 5 | Cover, Without nameplate | 924634 | 1 | 14 | Indicator Electrical | | Optional |
| 6 | O-Ring, cover | | | | 35 psid..... | 926643 | |
| | Nitrile..... | N72350 | 2 | | 35 psid, 3-pin male receptacle | 926753 | |
| | Fluorocarbon..... | V72350 | 2 | | Gasket | 926126 | 2 |
| | | | | | O-Ring | V72010 | 2 |
| 7 | Element Seal | | | 15 | Indicator Visual | | Optional |
| | Nitrile..... | 937410 | 1 | | 35 psid 4-band..... | 926748 | |
| | Fluorocarbon..... | 937411 | 1 | | Bracket, Inline mounting..... | 924904 | Optional |
| 8 | Element..... | Refer to Table | 1 | | Indicator Kit, Remote mount.... | 924894 | Optional |
| 9 | Head, Machined only..... | | 1 | 16 | Changeover Valve Assy., Duplex | 926758 | Optional |
| | 2" SAE Flange | 925972 | 1 | 17 | Check Valve Assy., Duplex..... | 926757 | Optional |
| | 1½" SAE Flange | 926146 | 1 | | | | |
| | 1½" NPTF | 925949 | 1 | Not Shown | Drain Plug, SAE-24 for RFP model | | |
| 10 | Bowl, Select desired model | | 1 | | Nitrile..... | 909992 | 1 |
| | ILP-1..... | 925916 | | | Fluorocarbon..... | 928363 | 1 |
| | ILP-2..... | 924816 | | Not Shown | O-Ring between tank and bowl | N72265 | 1 |
| | RFP-1..... | 937626 | | | | | |
| | RFP-1 with 2 inch NPTF fitting... | 924676 | | | | | |
| | RFP-2..... | 937627 | | | | | |
| | RFP-2 with 2 inch NPTF fitting... | 924818 | | | | | |

Filter Assembly Exploded View



Moduflow™ Plus Series

How to Order

| BOX 1 | BOX 2 | BOX 3 | BOX 4 | BOX 5 | BOX 6 | BOX 7 | BOX 8 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| ILP | 1 | 10Q | B | MP | 35 | Y9Y9 | 1 |

| BOX 1: Filter Series Symbol | | Description |
|-----------------------------|--|--|
| RFP | | Return-line filter, inlet on side outlet on bottom |
| ILP | | In-line filter |
| DILP | | In-line duplex |

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

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

| BOX 4: Seals Symbol | | Description |
|---------------------|--|--------------|
| B | | Nitrile |
| E | | EPR |
| V | | Fluorocarbon |

| BOX 5: Indicator Symbol | | Description |
|-------------------------|--|---|
| P | | Pressure ports drilled & plugged only; no indicator |
| M | | Visual indicator w/"no element" warning |
| E | | Electrical indicator only |
| D | | Electrical indicator only, 3-pin male receptacle |

Note: First letter of indicator code = left side of filter head when looking into inlet with bowl down; second letter = right side of filter head when looking into inlet with bowl down.

| BOX 6: Bypass Setting Symbol | | Description |
|------------------------------|--|-------------|
| 35 | | 35 psid |

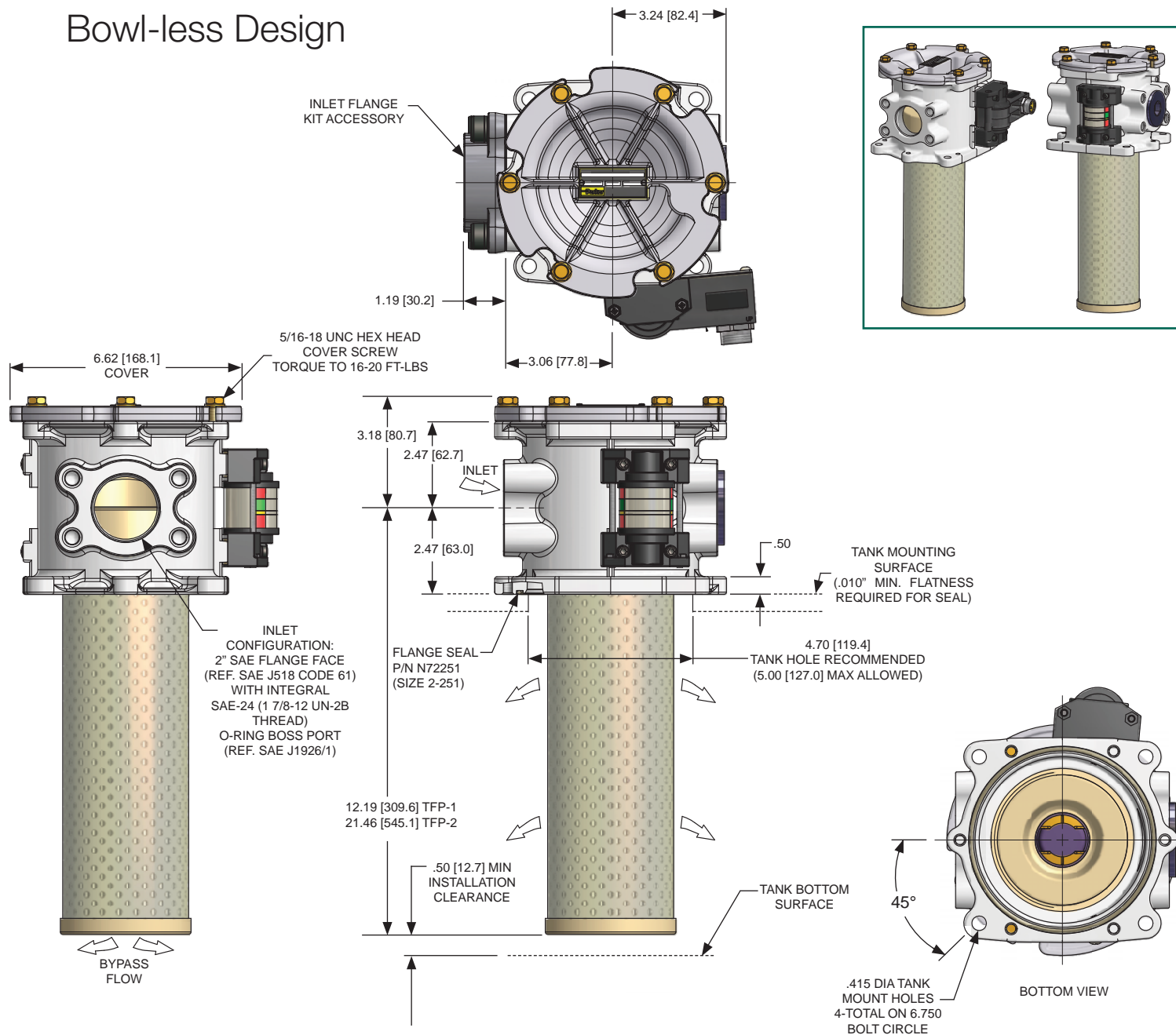
| BOX 7: Port Options | | | |
|---------------------|--------------------------|-------------------------|-----------------------------|
| Filter Model | Inlet Symbol/Description | | Outlet Symbol/Description |
| RFP | Y9 | 2" flange face | 99 No fitting |
| | P9 | SAE-24 integral threads | F9 2" NPTF |
| | | | F8 External check valve |
| ILP | Y9 | 2" flange face | Y9 2" flange face |
| | P9 | SAE-24 integral threads | P9 SAE-24 integral threads |
| | | | E9 1½ NPTF integral threads |
| DILP | Y9 | 2" flange face | Y9 2" flange face |

- 1) First pair of symbols denotes inlet for all filter styles; second pair of symbols denotes outlet.
- 2) Four symbols required: two for inlet, two for outlet.
- 3) Unused ports in filters come plugged with a blank flange.
- 4) See Flange Kits table for port flange options. Flange Kits are ordered separately.

| BOX 8: Options Symbol | | Description |
|-----------------------|--|-------------|
| 1 | | None |

Moduflow™ *Plus* TFP Series

Bowl-less Design



Features

- Shorter port-to-port distance.
- Direct tank mount capability eliminates need for adaptor flanges and bowl.
- Standard head incorporates 2" SAE flange face with integral SAE-24 port configuration.
- Filter head and element 2-piece construction requires no filter bowl.
- Patented element design with integral bypass valve and inside to out flow path.

Advantages

- Provides a smaller footprint and reduced weight.
- Aluminum die cast head reduces weight and direct tank mount flange reduces installation time and cost.
- Enables one common head to be used.
- Simplifies ordering model code.
- Reduces assembly cost by 25%.
- Ensures all contaminants remain captured during service.
- New bypass valve with each element ensures operation reliability.

Moduflow™ *Plus* TFP Series

How to Order

| BOX 1 | BOX 2 | BOX 3 | BOX 4 | BOX 5 | BOX 6 | BOX 7 | BOX 8 |
|-------|-------|-------|-------|-------|-------|-------|-------|
| TFP | 1 | 10Q | B | MP | 35 | C32 | 1 |

| BOX 1: Series | |
|---------------|--|
| Symbol | Description |
| TFP | Return-line filter |
| TFPW | Return-line filter anodized for HWHC fluid |

| Box 2: Element Length | |
|-----------------------|-------------|
| Symbol | Description |
| 1 | Single |
| 2 | Double |

| Box 3: Media Code | |
|-------------------|---------------------------|
| Symbol | Description |
| 02Q | Microglass III, 2 micron |
| 05Q | Microglass III, 5 micron |
| 10Q | Microglass III, 10 micron |
| 20Q | Microglass III, 20 micron |
| WR | Water Removal |

| BOX 4: Seals | |
|--------------|--------------|
| Symbol | Description |
| B | Nitrile |
| E | EPR |
| V | Fluorocarbon |

| BOX 5: Indicator | |
|--|---|
| Symbol | Description |
| P | Pressure ports drilled & plugged only; no indicator |
| M | Visual indicator w/"no element" warning |
| E | Electrical indicator only |
| D | Electrical indicator only, 3-pin male receptacle |
| Note: Two letters are required for the indicator code (e.g. "MP") | |

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

| BOX 8: Ports | |
|--------------|--|
| Symbol | Description |
| C32 | 2" SAE flange face/SAE-24 combination inlet port |

| BOX 8: Options | |
|----------------|-------------|
| Symbol | Description |
| 1 | None |

Replacement Elements

| Media | TFP-1 | | | Media | TFP-2 | | |
|-------|---------|--------------|--------------------|-------|---------|--------------|--------------------|
| | Nitrile | Fluorocarbon | Ethylene Propylene | | Nitrile | Fluorocarbon | Ethylene Propylene |
| 02Q | 937393Q | 937401Q | 937671Q | 02Q | 937397Q | 937405Q | 937675Q |
| 05Q | 937394Q | 937402Q | 937672Q | 05Q | 937398Q | 937406Q | 937676Q |
| 10Q | 937395Q | 937403Q | 937673Q | 10Q | 937399Q | 937407Q | 937677Q |
| 20Q | 937396Q | 937404Q | 937674Q | 20Q | 937400Q | 937408Q | 937678Q |
| WR | 940733 | 940735 | N/A | WR | 940734 | 940736 | N/A |