



# 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.

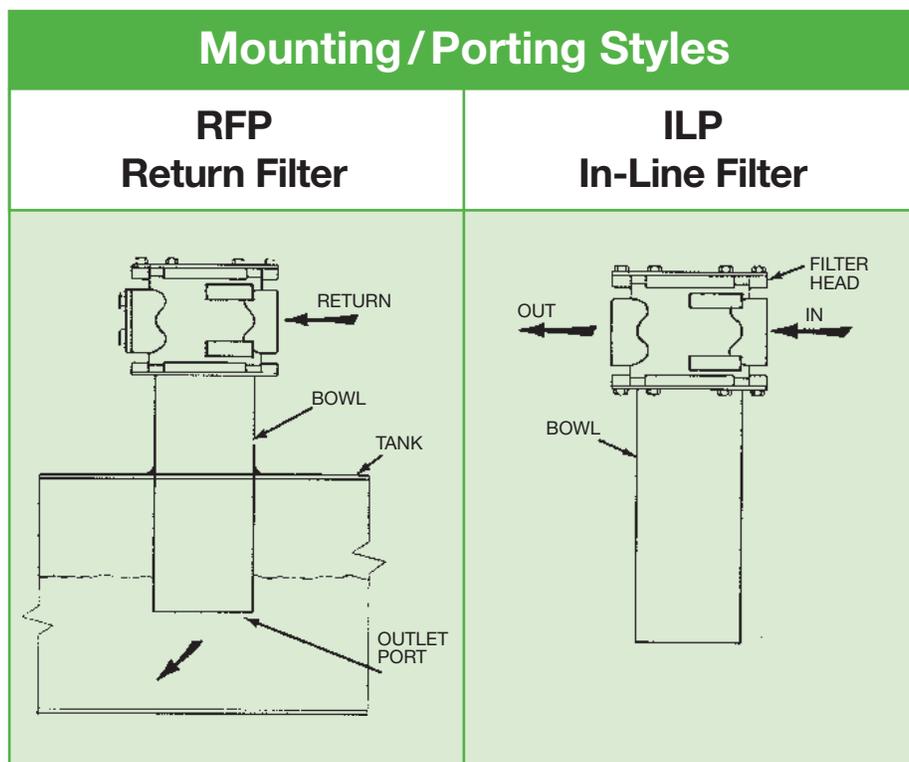
The newly designed closed bottom elements for the RFP and ILP models insures all contamination remains trapped within the element as the filter is serviced.

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.

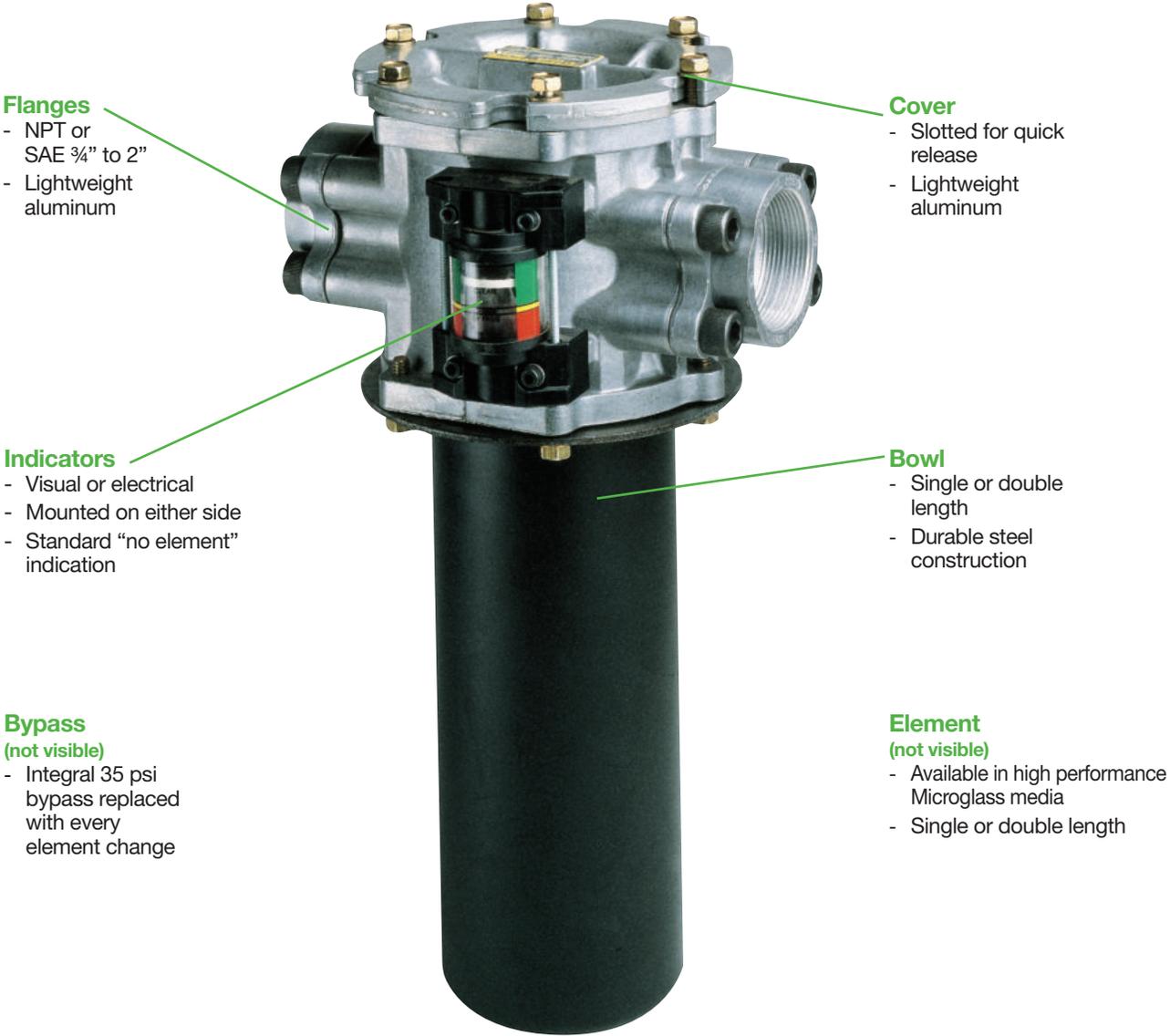


Parker’s new patented Moduflow element was designed with built-in diverter and bypass valve, to meet your application needs.



# Moduflow™ Plus Series

## Features



**Flanges**

- NPT or SAE ¼" 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

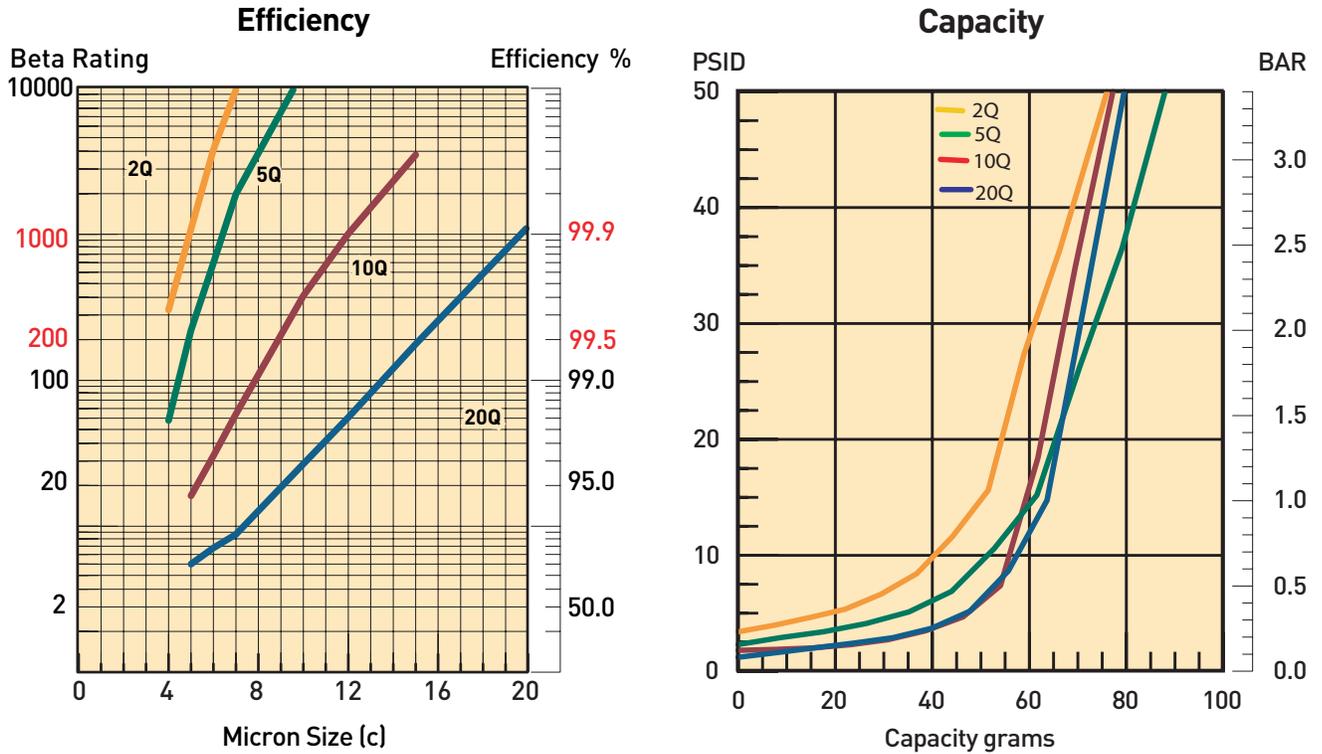
**Element (not visible)**

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

Feature	Advantage	Benefit
• Top access element service	• Oil remains in housing • Quicker elements change	• No Spills • Reduced maintenance costs
• Slotted cover	• Quick release cover • Cap screws remain in housing	• Reduced maintenance cost • No loose parts to lose
• Closed bottom elements	• Removes all contaminant during element service	• No downtime contamination from servicing
• Visual or electrical indicators	• Know exactly when to service elements	• Helps prevent bypass condition • No premature disposal
• Flange face ports	• Flexible mounting (¾" to 2")	• Easy plumbing to your system

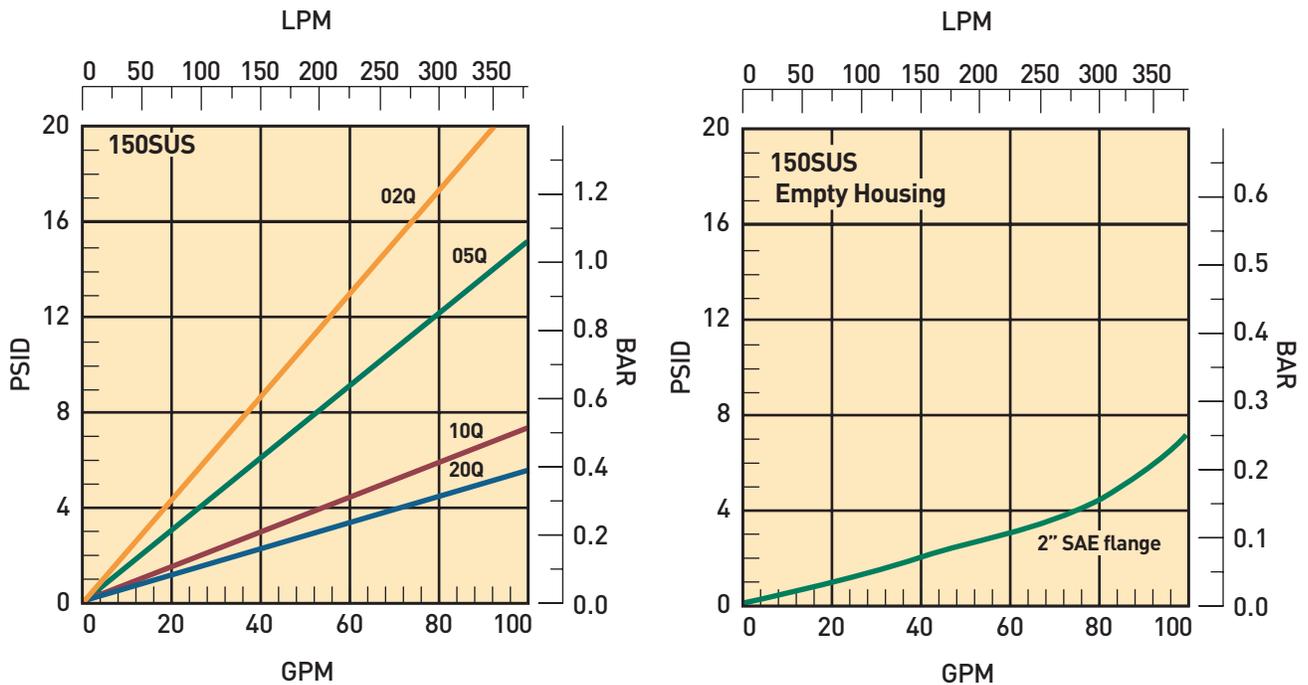
# Moduflow™ Plus Series

## RFP-1 and ILP-1 Element Performance



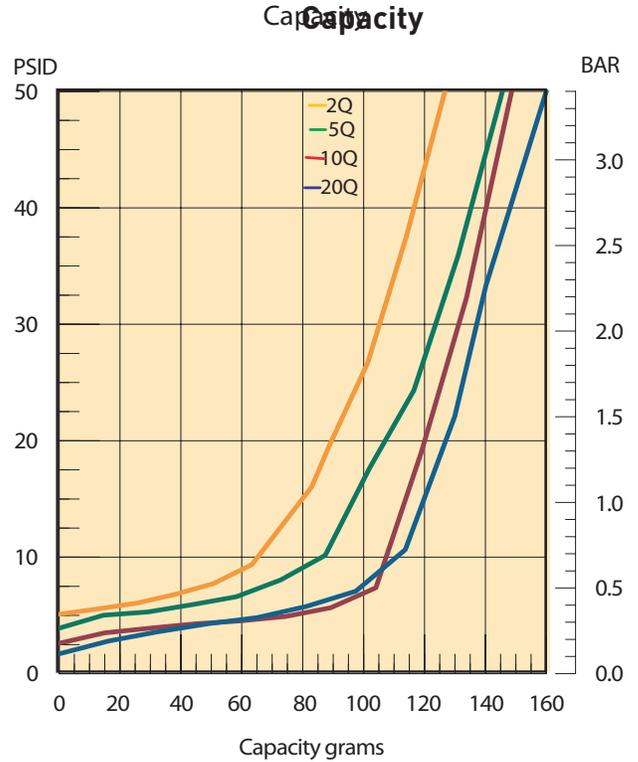
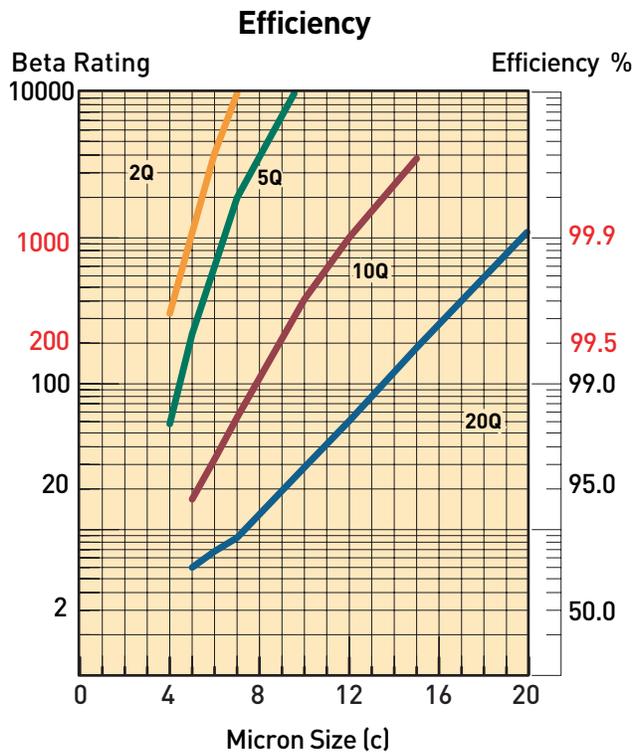
Multipass tests run @ 40 gpm to 50 psid terminal - 5mg/L BUGL

## Flow vs. Pressure Loss



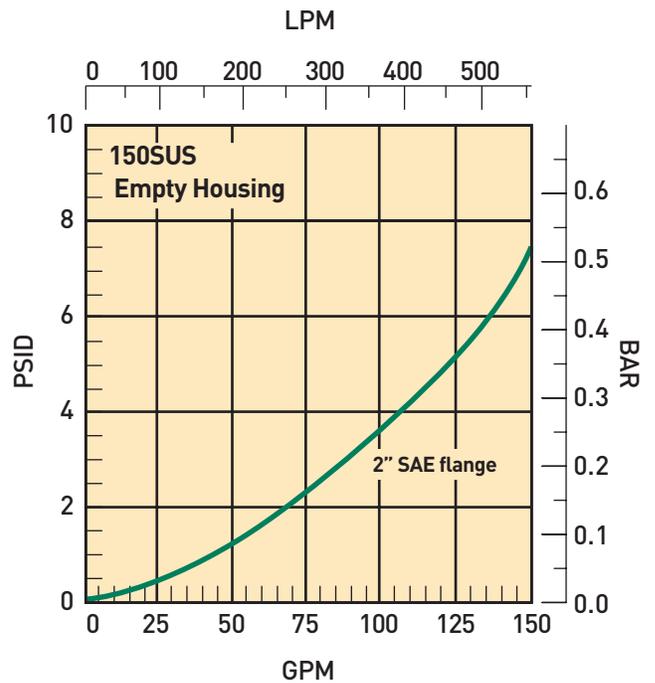
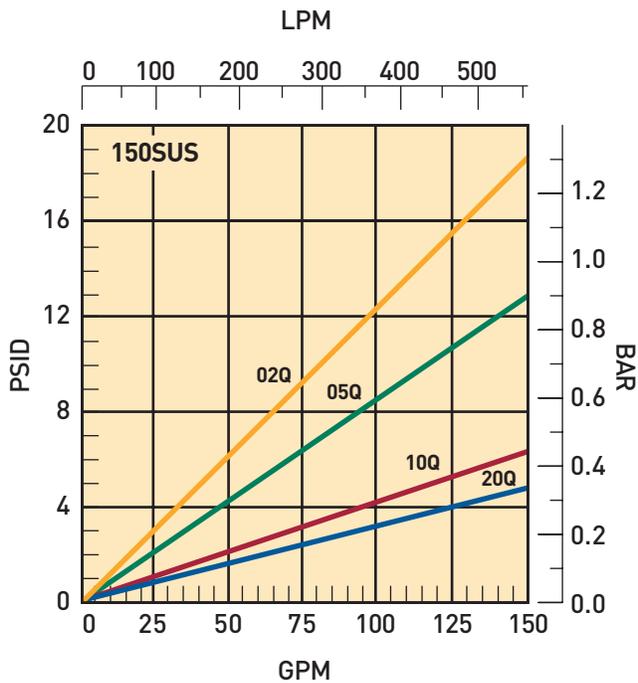
# Moduflow™ Plus Series

## RFP-2 and ILP-2 Element Performance



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

### Flow vs. Pressure Loss



# 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:

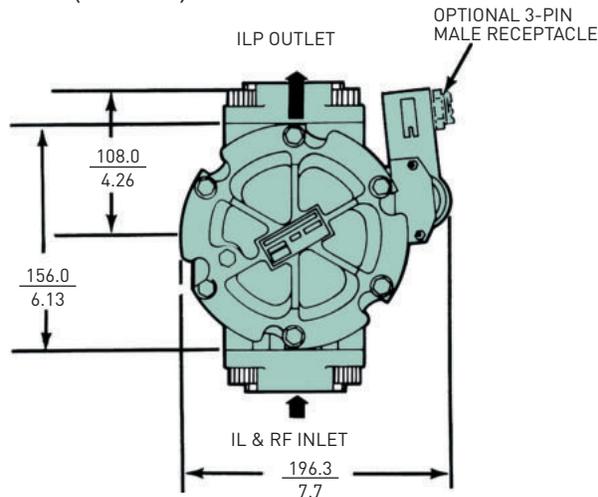
Visual (optional)  
 Electrical (optional) 15A @ 250VAC / .5A @ 125 VDC  
 Electrical ("D" option) 5A @ 250VAC / 3A @ 28 VDC

### Color Coding:

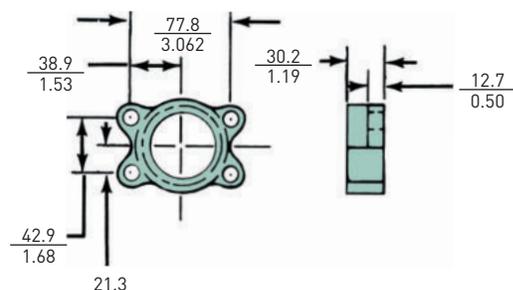
White (normally closed)  
 Red (normally open)  
 Black (common)

Model	Dimensions: mm/inch			
	A	B	C	D
RFP-1 with optional 2" fitting	68.3 2.69	—	390.0 15.37	117.1 4.61
RFP-1 without optional 2" fitting	65.0 2.56	378.0 14.87	—	114.0 4.50
RFP-2 with optional 2" fitting	68.3 2.69	—	625.0 24.61	117.1 4.61
RFP-2 without optional 2" fitting	68.3 2.69	612.0 24.11	—	114.0 4.50
ILP-1	65.0 2.56	336.0 13.24	N/A	117.1 4.61
ILP-2	68.3 2.69	618.0 24.32	N/A	117.1 4.61

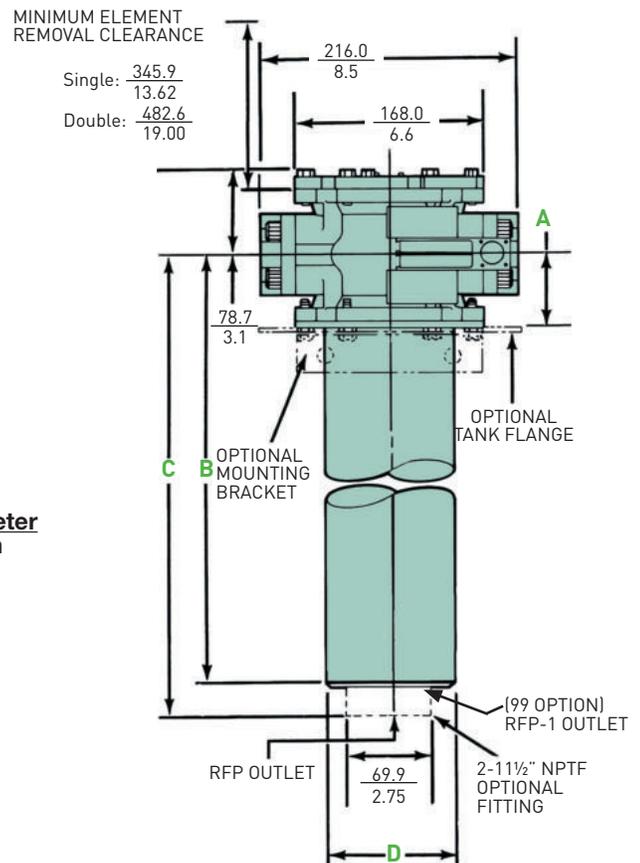
Drawings are for reference only.  
 Contact factory for current version.



OPTIONAL PORT FLANGE



Linear Measure: **millimeter**  
 inch



# Moduflow™ Plus Series

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

## 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

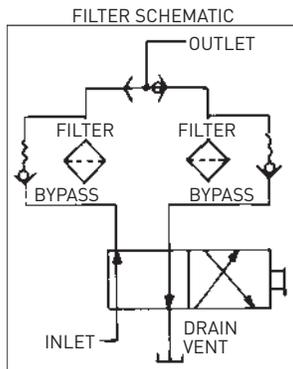
Electrical ("D" option) 5A @ 250VAC / 3A @ 28 VDC

### Color Coding:

White (normally closed)

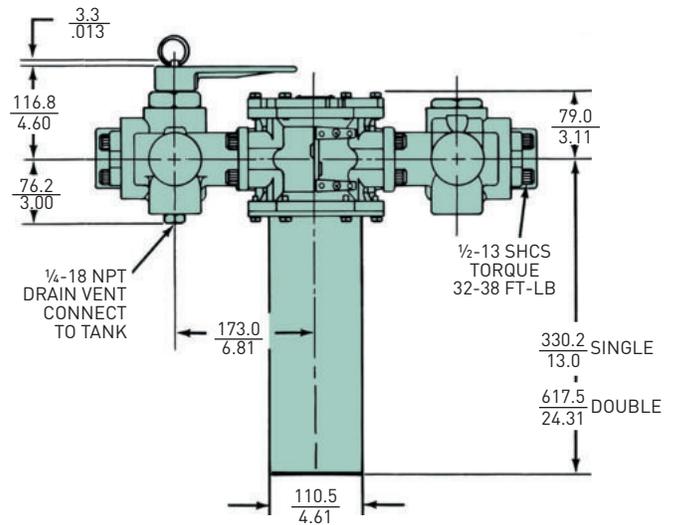
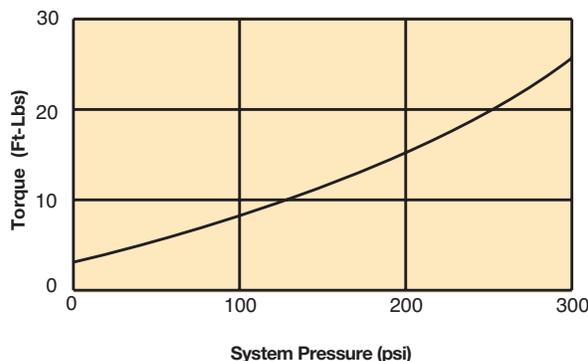
Red (normally open)

Black (common)

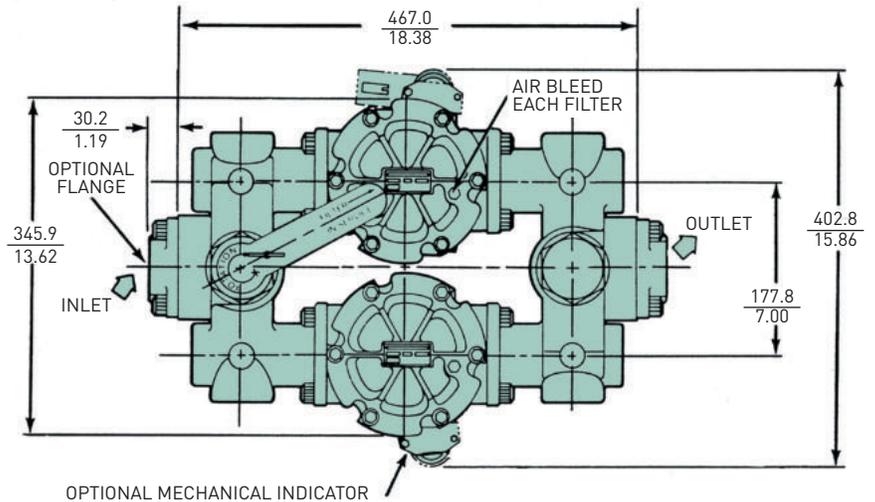


BOTH CHECK VALVES MOVE SAME DIRECTION

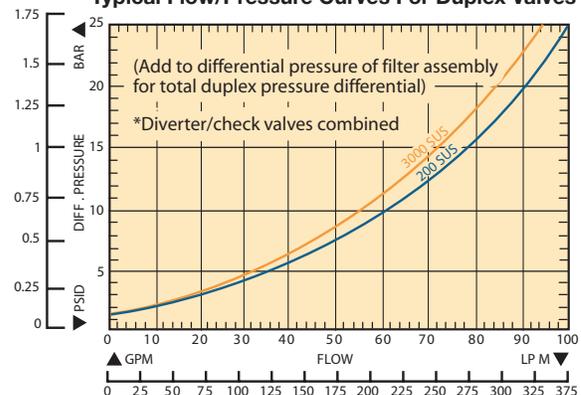
### Approximate handle torque required for changeover.



Linear Measure: millimeter  
inch



### Typical Flow/Pressure Curves For Duplex Valves

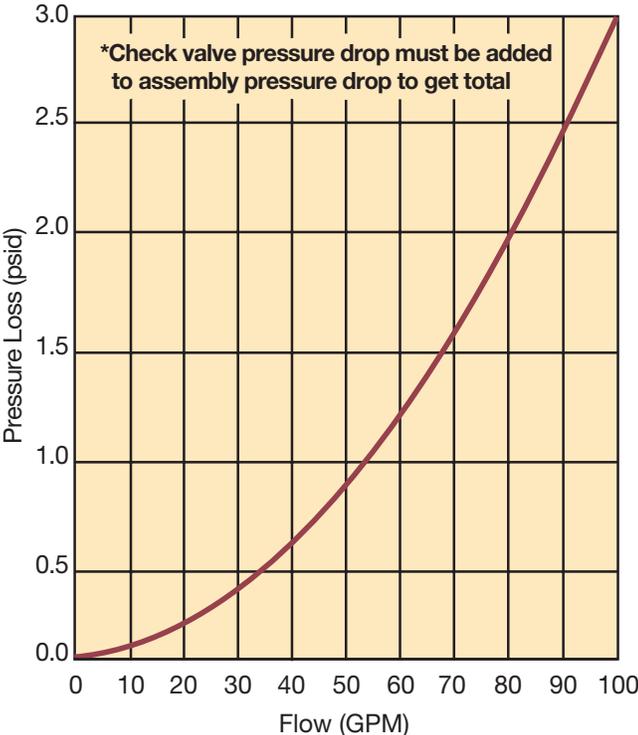


# Moduflow™ Plus Series

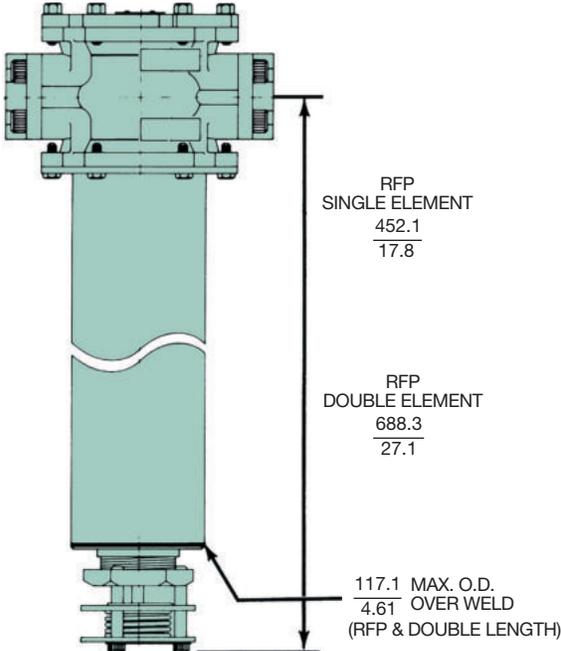
## Specifications

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.

Check Valve Flow/Pressure Drop



Linear Measure:  $\frac{\text{millimeter}}{\text{inch}}$



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 ports. 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**

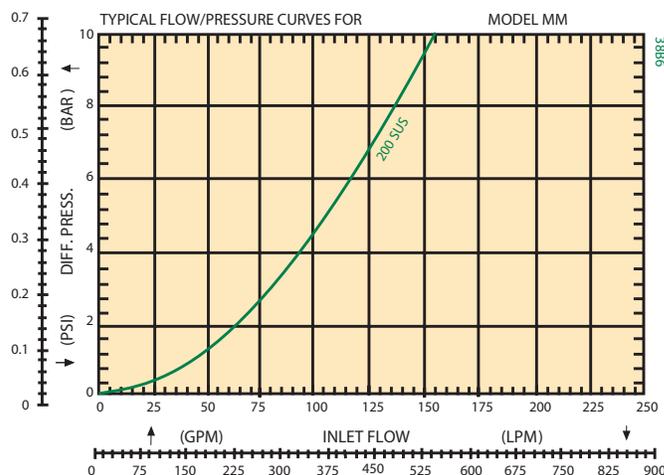
Such applications are frequently encountered on mobile equipment, machine tools, and large lubricating systems. In such applications, use of a manifold can often reduce total piping and installation costs.

#### Proven Reliability

The rugged design of the Model MM manifold has been proven in demanding mobile 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, max.:**

20.7 bar (300 psi)

**Typical Burst Pressure:**

62.1 bar (900 psi)

**Operating Temperature**

**(Nitrile seals):** -40°C to 121°C  
(-40°F to 250°F)

**Housing Material:**

ANSI 356-T6 cast aluminum

**Approximate Shipping Weight:**

3.6 kg (8 lbs)

**Porting:** See Options Below

**Screws & O-Rings Separately:**

Inlet & outlet screws (12 required):  
P/N 900228

Outlet port o-rings (2 required):

Nitrile: P/N N72228

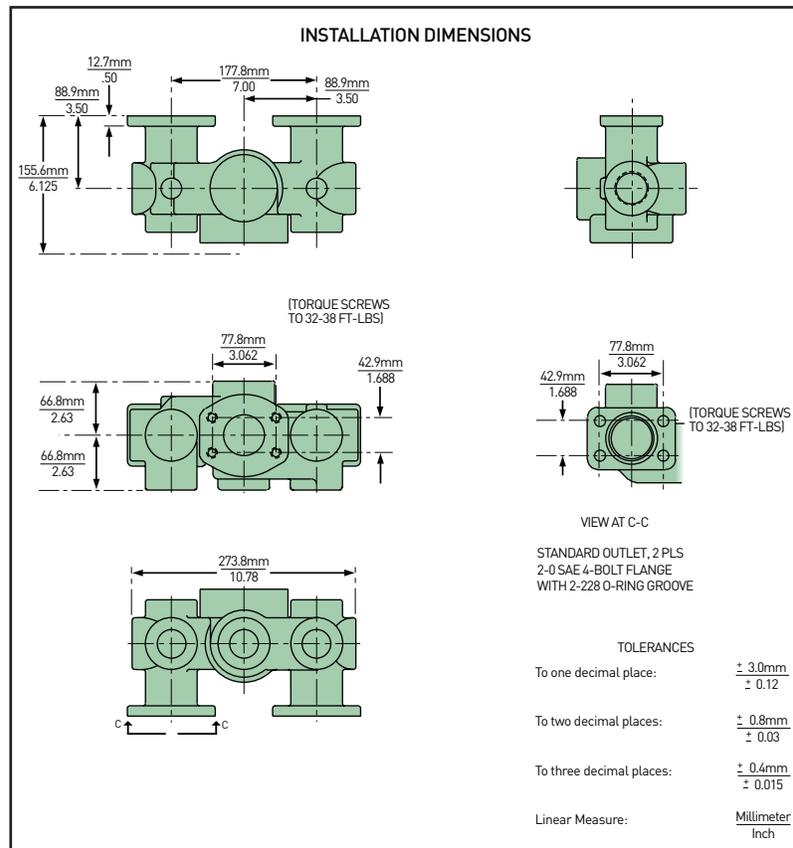
Fluorocarbon: P/N V92228

### How to order manifolds

Part Number	Description
926466	Moduflow Manifold

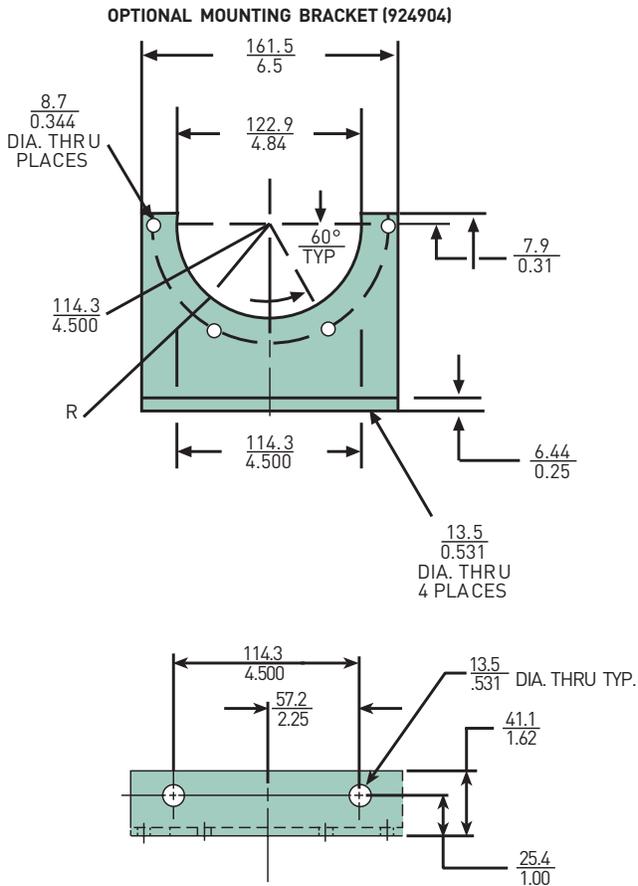
\* Tank-top mounted RFP filters will require one manifold on filter inlets; in-line mounted ILP filters will require two manifolds on both inlets and outlets.

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



# Moduflow™ Plus Series

## Accessories

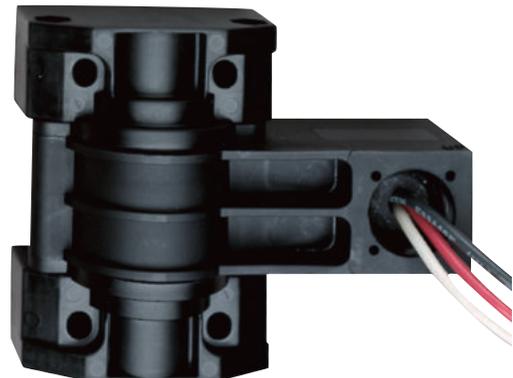


Linear Measure: millimeter  
inch

**"M" OPTION-VISUAL INDICATOR,  
NO ELEMENT WARNING**



**"E" OPTION-ELECTRICAL INDICATOR  
926643**



Black - Common  
White - Normally Closed  
Red - Normally Open

## Parts List

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

Size	Code	Part Number	
		Nitrile	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

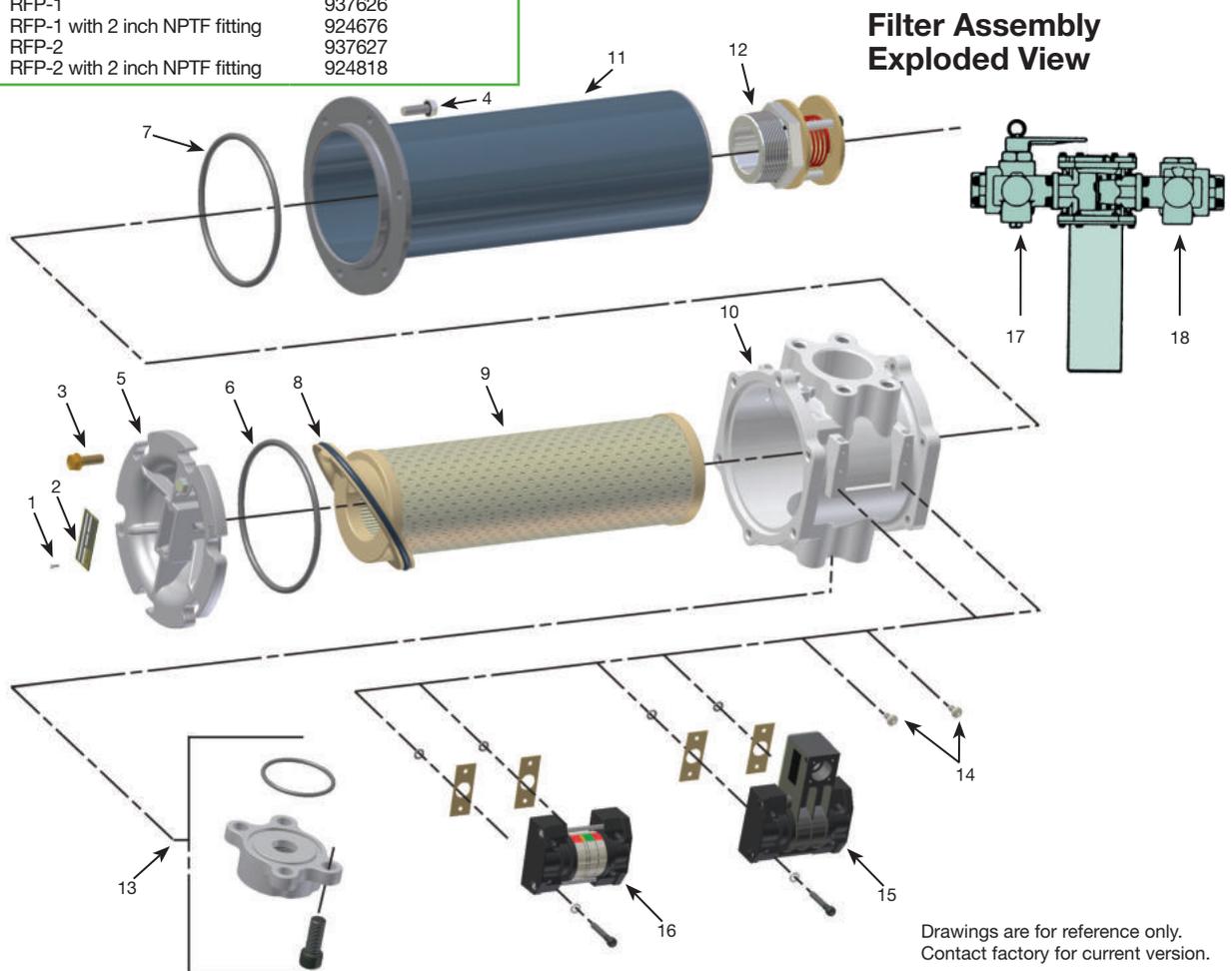
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# Moduflow™ Plus Series

## Parts List

Index	Description	Part No.	Quantity
1	Screws, Nameplate	900028	2
2	Name Plate, Unstamped	920928	1
3	Cover Screws, 5/16-18 UNC x 1"	926633	6
4	Bowl Screws, 5/16-18 UNC x 1"	926633	6
5	Cover, Without nameplate	924634	1
6	Cover O-Ring Nitrile Fluorocarbon	N72350 V72350	1 1
7	Bowl O-Ring Nitrile Fluorocarbon	N72251 V72251	1 1
8	Element Seal Nitrile Fluorocarbon	937410 937411	1 1
9	Element	Refer to Table	1
10	Head, Machined only 2" SAE Flange 1½" SAE Flange 1½" NPTF	925972 926146 925949	1 1 1
11	Bowl, Select desired model		1
	ILP-1	925916	
	ILP-2	924816	
	RFP-1	937626	
	RFP-1 with 2 inch NPTF fitting	924676	
	RFP-2	937627	
	RFP-2 with 2 inch NPTF fitting	924818	

Index	Description	Part No.	Quantity
12	Check Valve Assy.	925120	1
13	Flange Kits O-Ring	Refer to Table V72228	1 1
14	Plug Kit, Fastener, self-sealing, o-ring seal included with fastener	925974	2
15	Indicator Electrical 35 psid 35 psid, 3-pin male receptacle Gasket O-Ring	926643 926753 926126 V72010	Optional  2 2
16	Indicator Visual 35 psid 4-band Bracket, Inline mounting Indicator Kit, Remote mount	926748 924904 924894	Optional Optional Optional
17	Changeover Valve Assy., Duplex	926758	Optional
18	Check Valve Assy., Duplex	926757	Optional
Not Shown	Drain Plug, SAE-24 for RFP model Nitrile Fluorocarbon	909992 928363	1 1
Not Shown	Check Valve Assy., Duplex	N72265	1



# Moduflow™ Plus 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
ILP	1	10Q	B	MP	35	Y9Y9	1

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

BOX 2: Element 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
WR	Water Removal

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

BOX 5: Indicator	
Symbol	Description
P	Plugged Ports
M	Visual indicator w/ "no element" warning
E	Electrical indicator w/ 12" leads
D	Electrical indicator w/ 3-pin male quick disconnect

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	
Symbol	Description
35	35 psid (2.4 bar)

BOX 7: Ports			
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	
DILP	Y9 2" flange face	Y9 2" flange face	

BOX 8: Options	
Symbol	Description
1	None

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.

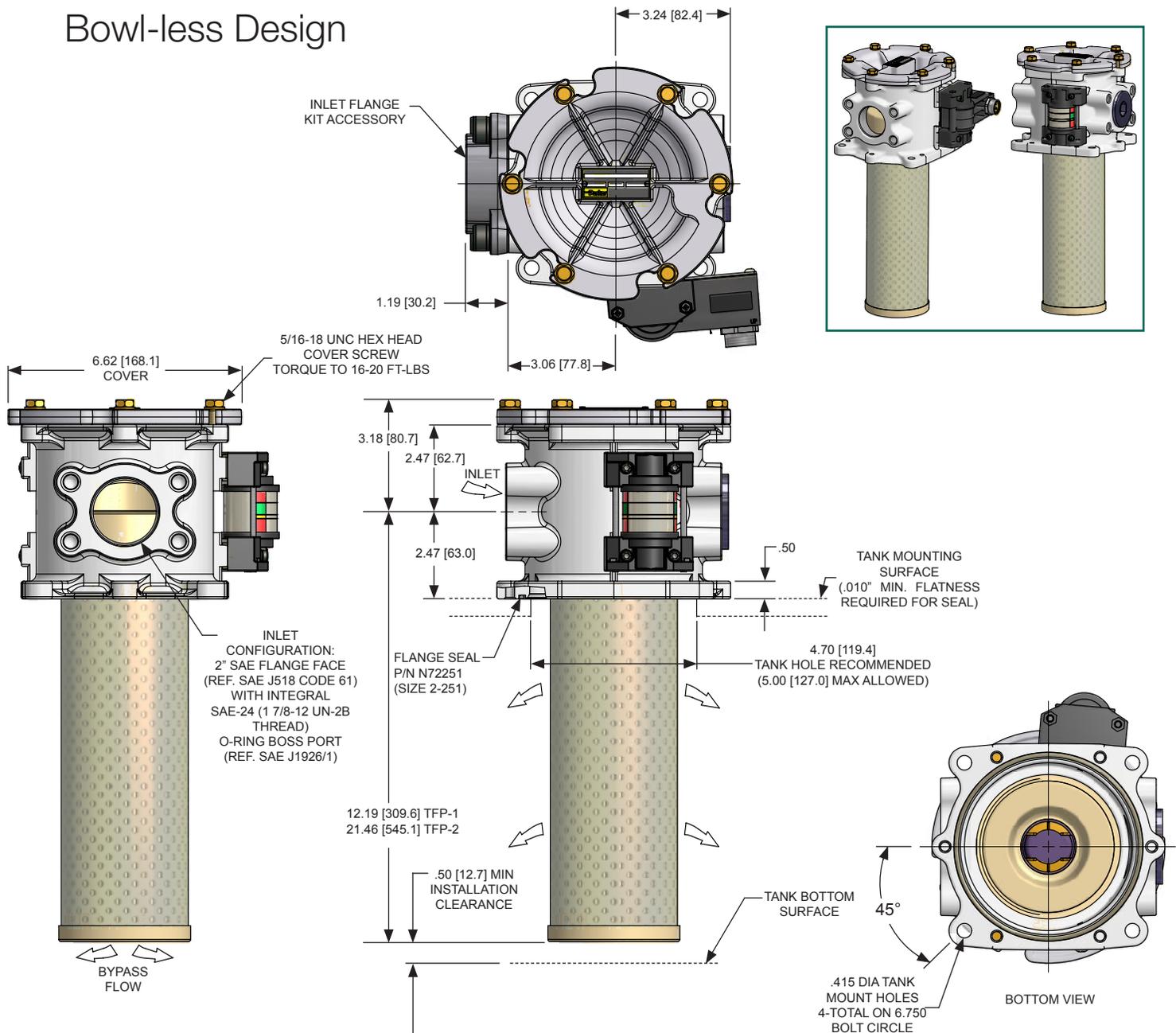
Please note the bolded options reflect standard options with a reduced lead time.

### RFP/ILP/ DILP Replacement Elements

Media	Nitrile Seals		Fluorocarbon Seals	
	Single	Double	Single	Double
02Q	937393Q	937397Q	937401Q	937405Q
05Q	937394Q	937398Q	937402Q	937406Q
10Q	937395Q	937399Q	937403Q	937407Q
20Q	937396Q	937400Q	937404Q	937408Q
WR	940733	940734	940735	940736

# 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

## 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
TFP	1	10Q	B	MP	35	C32	1

BOX 1: Filter Series	
Symbol	Description
<b>TFP</b>	<b>Return-line filter</b>
TFPW	Return-line filter anodized for HWHC fluid

BOX 2: Element Length	
Symbol	Description
<b>1</b>	<b>Single</b>
2	Double

BOX 3: Media Code	
Symbol	Description
<b>02Q</b>	<b>Microglass, 2 micron</b>
<b>05Q</b>	<b>Microglass, 5 micron</b>
<b>10Q</b>	<b>Microglass, 10 micron</b>
<b>20Q</b>	<b>Microglass, 20 micron</b>
WR	Water Removal

BOX 4: Seals	
Symbol	Description
<b>B</b>	<b>Nitrile</b>
E	EPR
V	Fluorocarbon

BOX 5: Indicator	
Symbol	Description
<b>P</b>	<b>Plugged Ports</b>
<b>M</b>	<b>Visual indicator w/ "no element" warning</b>
<b>E</b>	<b>Electrical indicator w/ 12" leads</b>
D	Electrical indicator w/ 3-pin male quick dsconnect

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	
Symbol	Description
<b>35</b>	<b>35 psid (2.4 bar)</b>

BOX 7: Ports	
Symbol	Description
<b>C32</b>	<b>2" SAE flange face SAE-24 combination inlet port</b>

BOX 8: Options	
Symbol	Description
<b>1</b>	<b>None</b>

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

### 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