

## The Importance of Patented Parker Products to our customers

**Innovative filter design and patented product protection** brings value added benefits to our OEM customers and their end users.

Benefits that should help protect a manufacturers aftermarket as well as ensure that equipment users specify quality Parker replacement filter elements and accessories and help safeguard warranties.

Installing Parker Filtration patented filter assemblies such as the Suction and Return Series and *LEIF*<sup>®</sup> (Low Environmental Impact Filter) elements can provide the end user and OEM with some positive benefits:

- *LEIF*<sup>®</sup> can provide increased OEM spares business.
- Guaranteed Parker quality with every replacement filter element.
- Supports OEM end user loyalty to Parker elements.
- Support aftermarket sales and machinery performance.
- Parker patented elements promote quality and reliability to end users.



# Providing the products and service our customers expect

### A Global Product Range

With this catalogue we offer our customers an easy way to find technical specification and ordering information about Parker hydraulic filtration, fluid contamination monitoring and fluid power products.

Products shown in this catalogue have a broad range of applications. Our filter products are particularly designed for hydraulic and lubrication systems and transmissions. The fluid power products are also used in many industries and applications.

Typical applications can vary from road sweepers, fork lift trucks, agriculture harvesting machines, grass cutting equipment, lorry mounted cranes, forestry equipment, press brakes, industrial power units, waste management trucks, drilling equipment, marine, military equipment, paper mills, water treatment and filtration systems.

For more information about our products send your inquiry to your nearest sales location, see contact information at the back of this catalogue.

#### Important information on product ordering and part numbers

Parker Filtration has recently undertaken a review of its part numbering with a view to standardising on a common part number style for all Filtration products. As a result of the many acquisitions we have made over the past 10 years, it became clear to us that there was a need to standardise on a clear format for our part numbers.

Accordingly, in this new catalogue you will find the new part number system with a 'product configurator' and a superseded reference relating to previous part numbers issued in earlier editions of our generic catalogues. In the event that the previous reference you have is not shown in this catalogue, could we ask you to please contact our Epic Centre, details of which are on the back cover of this catalogue.

For additional information and an example explained, turn to page 2.

BSP ports offered in this catalogue conform to ISO228.

#### Supply chain management, service and support

Parker is addressing operation efficiency by expanding the systematic approach called 'Lean Manufacturing. Value stream analysis, flow manufacturing, reduced set-ups, manufacturing cell flexibility and fool-proofing systems are all contributing to the continuous improvement in our manufacturing sites. 'Lean' is also expressed in our premier customer service and second-to-none customer partnerships in supply chain management.

#### Engineering and manufacturing excellence

Parker Filtration's Filter Division Europe (FDE) manufacturing focus is driven by a number of key elements that affect all areas of the business. People productivity, customer satisfaction, production throughput, quality and lean achievements are the drivers that help the FDE achieve ISO9001, QS9000, ISO9001 and ISO14001.

Significant investment by our parent Parker Hannifin Corporation continues to give FDE flexible manufacturing systems, automated test equipment and excellent laboratory test facilities.

New product development programmes and on-going product improvement initiatives are vital elements in maintaining a product range that meets customer demands for quality, reliability and engineering excellence.

R & D resources at the Parker Filtration locations in the UK, Finland and the Netherlands are both complementary and comprehensive. Including, as examples, Multipass Test Installations, fatigue test unit, cleanliness service (water detection, special analysis, particle counting and analysis), 3D workstations, Thermal Cycle Test Chamber, Salt Spray and Humidity chambers.

Parker Hannifin (UK) Ltd, herewith declares that Parker Hydraulic Filtration products are intended to be incorporated into machinery covered by Directive 89/392/EEC, as amended and that the following harmonised standards have been applied; EN982, EN292-1, EN292-2

We furthermore declare that, machinery incorporating Parker Hydraulic Filtration products, is not allowed to be put into service until the machinery has been found and declared to be in conformity with the provisions of Directive 89/392/EEC and with national implementing legislation.

In line with our policy of continuous product improvement, Parker Hannifin (UK) Ltd reserve the right to alter product data and specification without notice. This does not affect your statutory rights.

#### Notes:

1. Within this catalogue, each product has been allocated an operating temperature and pressure range.
2. The range listed for each filter is dedicated by the materials of construction and the capability of the seals specified.
3. Consideration should also be given to the characteristics of the system fluid when specifying filters for extreme temperature and/or pressure applications.
4. The use of non-Parker replacement elements and spares may invalidate your warranty.





Tanktop Mounted Return Line Filters  
ETF Series

MAX 140 l/min - 6 bar



## Tanktop Mounted Return Line Filters

# ETF Series

### Features & Benefits

Features	Advantages	Benefits
Co-polymer head	Compact profile, lightweight and durable	Less weight, smaller envelope and cleaner appearance
Multiple return line ports	Flexibility related to return line hose(s) arrangement	More compact solutions can be realised
Quick release cover	No tools required to release the filter cover	Easy change of filter element
Optional magnetic pre-filtration	Removes ferro particles, even during bypass conditions	Improved fluid cleanliness levels
In-to-Out filtration	All captured contamination retains inside the element	No recontamination of system during change of elements
Full flow bypass with low hysteresis	Reduction of bypass period due to low hysteresis	Improved protection of system
	Only a small part of the total flow is bypassing the element	
Optional funnel	Ensures that oil enters the tank under the oil level	Significant reduction of oil foaming

### Typical Applications

- Lorry mounted cranes
- Agricultural equipment
- Container hook loaders

### The Parker Filtration ETF Series Low Pressure Filters

For tank top mounting installation. The ETF Series utilises a reinforced co-polymer head equipped with two return ports and quick release cover. This filter represents an economic solution for hydraulic systems with nominal flows up to 140 l/min.



## Specification

**Pressure ratings:**

Max. 6 bar.

**Assembly:**

Tank top mounted.

**Connections:**

Threads G1" + G1" (ISO 228), port B supplied as plugged connection.

**Filter housing:**

Glass reinforced co-polymer. Funnel made from steel.

**Seal material:**

Nitrile.

**Operating temperature range:**

-20° to +80°C.

**Bypass valve:**

Opening pressure 1.6 bar.

**Filter element:**

Conventional style element with steel end caps.

**Degree of filtration:**

Determined by multipass test according to ISO 16889.

**Flow fatigue characteristics:**

Filter media is supported so that the optimum fatigue life is achieved.

**Filtration media:**

Microglass III.

**Element collapse rating:**

8 bar (ISO 2941).

**Indicator options:**

Setting 1.2 bar.

**Options:**

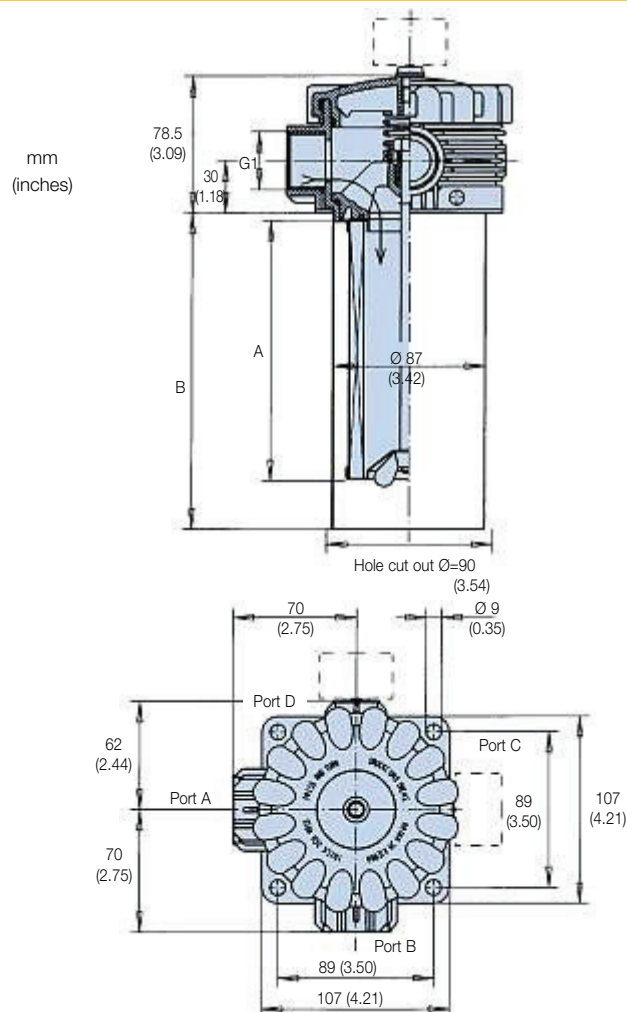
Magnetic pre-filtration.

**Fluid compatibility:**

Suitable for use with mineral and vegetable oils, and some synthetic oils. For other fluids, please consult Parker Filtration.

## Installation Details

ETF Length	Dimensions mm (inches)	A	B
1	ETF45	82 (3.22)	100 (3.94)
2	ETF60	106 (4.17)	125 (4.92)
3	ETF90	150 (5.90)	177 (6.97)
4	ETF120	200 (7.87)	225 (8.86)
4A	ETF140	260 (10.24)	300 (11.81)

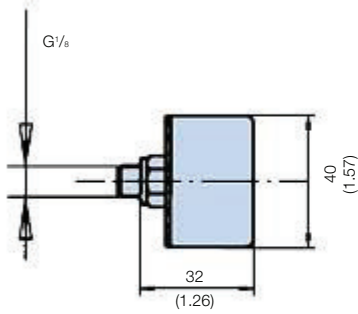


## Tanktop Mounted Return Line Filters

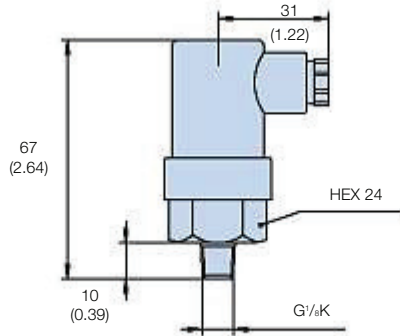
# ETF Series

### Indicator Details

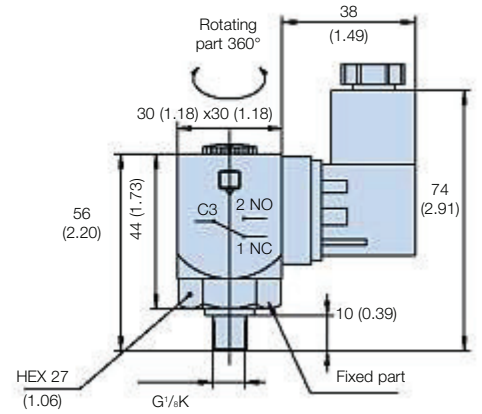
**Visual pressure indicator**  
**Code G2**  
mm (inches)





**48 Vdc electrical indicator 1.2 bar**  
**Code S2/S3**  
mm (inches)

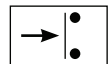


**250 VAC electrical indicator 1.2 bar**  
**Code S4**  
mm (inches)

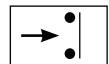


Option	Description	Connection/Voltage	Wiring	Part number						
G2	Visual indicator 1.2 bar	N/A	N/A	FMUG2FBMG02L						
S2/S3	Electrical indicator 1.2 bar	42 Vdc max	 Select either normally open (NO) or normally closed (NC)	FMUS2FBMG02L or FMUS3FBMG02L						
S4	Electrical indicator 1.2 bar	250 VAC max	 <table border="1" data-bbox="885 1299 981 1377"> <tr> <td>1</td> <td>NC</td> </tr> <tr> <td>2</td> <td>NO</td> </tr> <tr> <td>3</td> <td>C</td> </tr> </table>	1	NC	2	NO	3	C	FMUS4FBMG02L
1	NC									
2	NO									
3	C									

Normally open contacts



Normally closed contacts



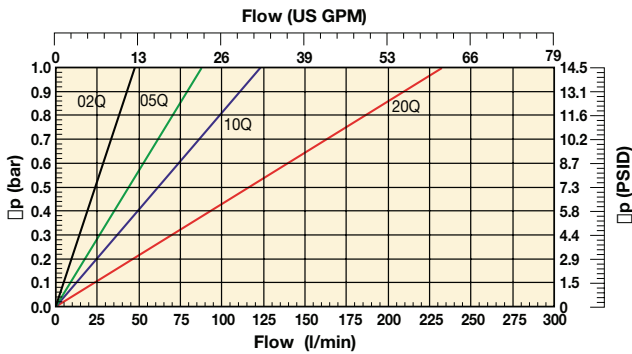
## Pressure Drop Curves

The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

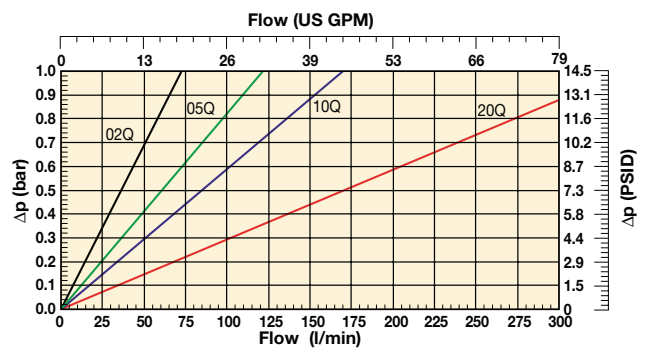
If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt.}$$

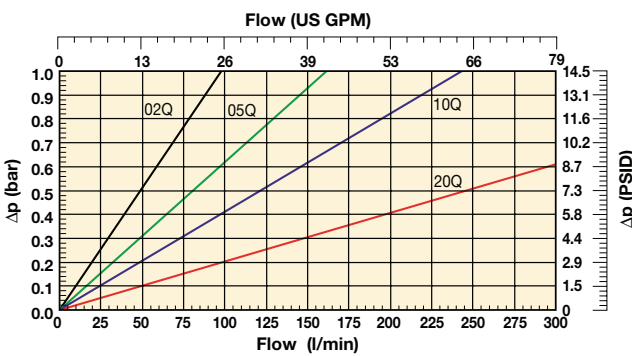
**ETF45 (Element length code 1)**



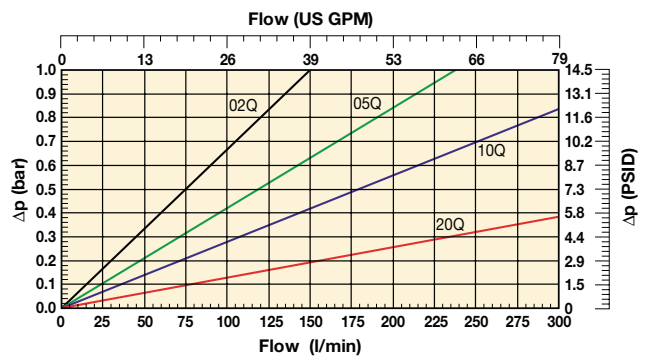
**ETF60 (Element length code 2)**



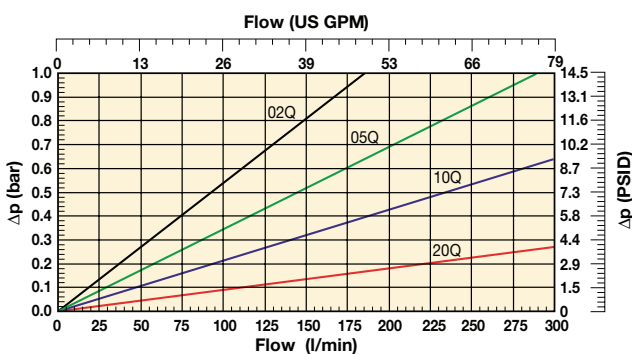
**ETF90 (Element length code 3)**



**ETF120 (Element length code 4)**



**ETF140 (Element length code 4A)**



Note: All pressure drop curves above show total pressure drop. i.e. they are combined housing and element curves.

## Tanktop Mounted Return Line Filters

# ETF Series

## Ordering Information

### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
<b>ETF210QBP2FG164</b>	FK1230.Q010.BK16.GX16	60	ETF60	Length 2	10	Nitrile	Plugged	1.6 Bar (22 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937950Q</b>	FC1230.Q010.XS
<b>ETF220QBP2FG164</b>	FK1230.Q020.BK16.GX16	60	ETF60	Length 2	20	Nitrile	Plugged	1.6 Bar (22 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937951Q</b>	FC1230.Q020.XS
<b>ETF310QBP2FG164</b>	FK1240.Q010.BK16.GX16	90	ETF90	Length 3	10	Nitrile	Plugged	1.6 Bar (22 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937952Q</b>	FC1240.Q010.XS
<b>ETF320QBP2FG164</b>	FK1240.Q020.BK16.GX16	90	ETF90	Length 3	20	Nitrile	Plugged	1.6 Bar (22 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937953Q</b>	FC1240.Q020.XS

Note: Filter assemblies ordered from the product configurator below are on extended lead times. Where possible, please make your selection from the table above.

### Product configurator

#### Configurator example of an ETF Series filter

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>ETF</b>	<b>3</b>	<b>10Q</b>	<b>B</b>	<b>S2</b>	<b>F</b>	<b>G16</b>	<b>1</b>

Code	Filter type
<b>ETF</b>	<b>Housing</b>
	ETF 1-45
	ETF 1-60
	ETF 1-90
	ETF 1-120
	ETF 1-140
	<b>Code</b>
	1
	<b>2</b>
	<b>3</b>
	4
	<b>4A</b>

Degree of filtration
Glassfibre media
Microglass III (for disposable elements)
Disposable element
02Q
05Q
<b>10Q</b>
<b>20Q</b>

Seal type
<b>Seal material</b>
Nitrile
<b>Code</b>
<b>B</b>

Indicator
<b>Code</b>
Pressure gauge, setting 1.2 bar, G $\frac{1}{8}$ for dual head ports and TSR series
<b>G2</b>
Pressure switch 42V, 1.2 bar setting, NO with G $\frac{1}{8}$ BSP
<b>S2</b>
Pressure switch 42V, 1.2 bar setting, NC with G $\frac{1}{8}$ BSP
S3
Pressure switch 250V, 1.2 bar setting NO/NC with G $\frac{1}{8}$
S4
No indicator, indicator ports L + R plugged
<b>P2</b>
Other settings for indicators / gauges on request
on request

Bypass valve
<b>Bypass valve</b>
1.6 bar
Other bypass settings
<b>Code</b>
<b>F</b>
on request

Filter connection
<b>Ports</b>
G1"(BSP) (2 ports, one supplied as plugged connection)
<b>Code</b>
<b>G16</b>

Options
<b>Options</b>
No diffuser required
<b>Code</b>
1
Diffuser type P without perforated plate area
<b>4</b>
Diffuser with integrated hose connection
on request
Magnets
E
Diffuser type P and magnets
F
Other combinations
on request

Note: ETF filters are standard supplied without magnets and including diffuser type P

Spare elements
<b>Replacement elements</b>
<b>Supersedes</b>
937969Q
FC1220.Q002.XS
937970Q
FC1220.Q005.XS
937948Q
FC1220.Q010.XS
937949Q
FC1220.Q020.XS
937971Q
FC1230.Q002.XS
937972Q
FC1230.Q005.XS
937950Q
FC1230.Q010.XS
<b>937951Q</b>
FC1230.Q020.XS
937973Q
FC1240.Q002.XS
937974Q
FC1240.Q005.XS
937952Q
FC1240.Q010.XS
937953Q
FC1240.Q020.XS
937975Q
FC1250.Q002.XS
937976Q
FC1250.Q005.XS
<b>937954Q</b>
FC1250.Q010.XS
937955Q
FC1250.Q020.XS
937977Q
FC1260.Q002.XS
937978Q
FC1260.Q005.XS
937956Q
FC1260.Q010.XS
937957Q
FC1260.Q020.XS
937979Q
FC1275.Q002.XS
937980Q
FC1275.Q005.XS
937981Q
FC1275.Q010.XS
937982Q
FC1275.Q020.XS

Degree of filtration						Media code
Average filtration beta ratio $\beta$ (ISO 16889) / particle size $\mu\text{m}$ [c]						
$\beta_x(c)=2$	$\beta_x(c)=10$	$\beta_x(c)=75$	$\beta_x(c)=100$	$\beta_x(c)=200$	$\beta_x(c)=1000$	
% efficiency, based on the above beta ratio ( $\beta_x$ )						
50.0%	90.0%	98.7%	99.0%	99.5%	99.9%	
N/A	N/A	N/A	N/A	N/A	4.5	
N/A	N/A	4.5	5	6	7	
N/A	6	8.5	9	10	12	
6	11	17	18	20	22	
						<b>02Q</b>
						<b>05Q</b>
						<b>10Q</b>
						<b>20Q</b>

### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Note: Standard items are in stock, semi standard items are available within four weeks

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.







Tanktop Mounted Return Line Filters  
**TTF Series**

MAX 500 l/min - 10 bar

AN INNOVATIVE GREEN  
FILTER FEATURING  
**LEIF®**



## Tanktop Mounted Return Line Filters

# TTF Series

### Features & Benefits

Features	Advantages	Benefits
10 bar rated filter	Can be utilised for severe return line applications	Reduced downtime due to premature filter failures
Cast aluminium head	Compact profile, lightweight and durable	Less weight, smaller envelop and cleaner appearance
LEIF® elements	Patented element safeguards the use of genuine parts	Guaranteed quality of filtration Contributes to ISO 14001 certification
Magnetic pre-filtration	Removes ferrous particles, even during bypass conditions	Improved fluid cleanliness levels Extended element life time
In-to-Out filtration	All captured contamination retains inside the element	No recontamination of system during change of elements
High level of customisation	Dedicated system-matched solutions can be easily made available	Improved integration of filter in system combined with lower initial system costs
Full flow bypass with low hysteresis	Reduction of bypass period due to low hysteresis	Improved protection of system
	Only a small part of the total flow is bypassing the element	
Standard or customised funnel	Ensures that oil enters the tank under the oil level	Significant reduction of oil foaming

### Typical Applications

- Waste management trucks
- Mobile cranes
- Power packs
- Wheeled loaders
- Drilling equipment

### The Parker Filtration TTF Series Return Line Filters

TTF tank top mounted return line filters feature pre-filtration by means of a magnet column and a full flow bypass with low hysteresis. Thanks to the “In-to-Out” filter principle, contaminated oil cannot leak back into the system. TTF filters are available in versions capable of handling flow rates up to 500 l/min. They can operate up to a maximum working pressure of 10 bar. Optional filling port in filter cover, second return port and customised diffusers can be specified. Manifold type filter head (TSR Series) with four return ports is also available.



## Specification

**Operation pressure:**  
Max. 10 bar.

**Assembly:**  
Tank top mounted.

**Connections:**  
Threaded BSP ports.  
Flanged ports on request.  
Manifold filter head type TSR on request available for flows up to 250 l/min.

**Filter housing:**  
Aluminium head and cover.

**Seal material:**  
Nitrile, fluoroelastomer, neoprene.

**Operation temperature range:**  
-40 to +120°C.

**Bypass setting**  
Opening pressure 0.8 / 1.5 or 2 bar.  
Other settings on request.

**Degree of filtration:**  
Determined by multipass test according to ISO 16889.

**Flow fatigue characteristics:**  
Filter media is supported so that the optimum fatigue life is achieved.

**Filtration media:**  
Microglass III and Ecoglass III for *LEIF*<sup>®</sup> elements.  
Also available 10µm cellulose and 40µm stainless steel mesh.

**Element collapse rating:**  
10 bar (ISO 2941)

**Pressure indicator options:**  
Setting 0.7 or 1.2 bar.  
Other settings on request.  
Visual pressure gauge.  
Electrical pressure switch.

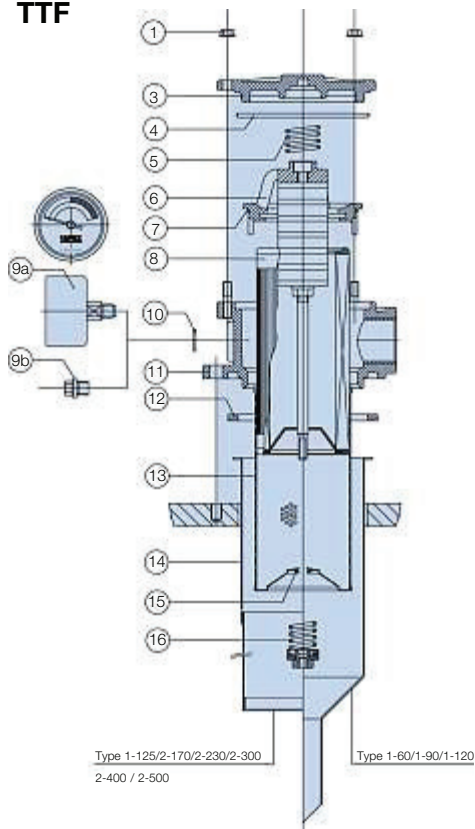
**Options:**  
Diffuser type P (straight pipe, no perforated plate area)  
Diffuser type T (with closed diffuser end cap and with perforated plate area, recommended when oil entry in reservoir is close to the reservoir bottom or to ensure oil entry under the reservoir oil level)

**Magnetic pack:**  
Standard. TTF400 and 500 are standard supplied without magnets

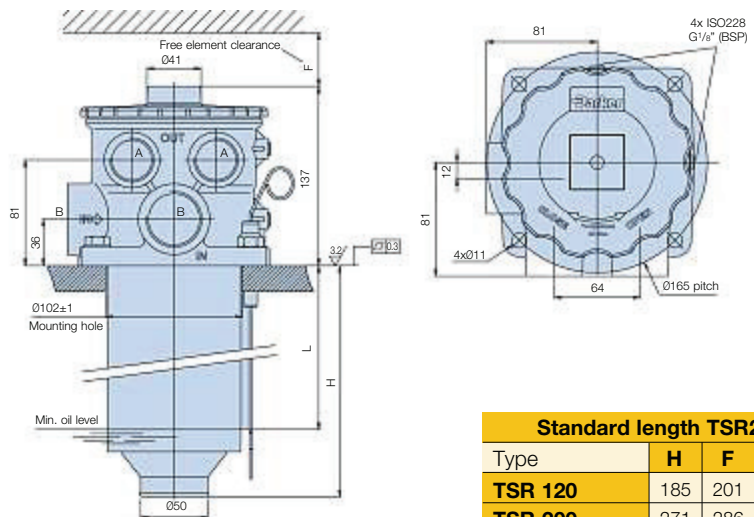
**Filling port in cover: (optional)**  
Plugged.

**Filter element:**  
*LEIF*<sup>®</sup> element with reusable metal element sleeve.  
Optional conventional style element with steel end caps.  
The *LEIF*<sup>®</sup> element is patented and safeguards the use of genuine parts.  
Note: *LEIF*<sup>®</sup> element can be used with mineral and HEES type oils.  
For other fluids consult Parker Filtration.  
*LEIF*<sup>®</sup> contributes to ISO 14001 quality standards.

### TTF



### TSR



**TTF sealkit: No. 4+7+12**

Ref.	No.	Description
1	4	Flange nut
3	1	Cover
4	1	Cover-seal
5	1	Top-spring
6	1	Insert
7	1	Insert-seal
8	1	Element
9a	0-1	Indicator
9b	0-3	Plug M10x1
10	0-3	Unit-ring
11	1	Housing
12	1	Gasket
13	1	Sleeve
14	1	Funnel/diffuser
15	1	O-ring
16	1	Bypass set

**Standard length TSR2**

Type	H	F	L
TSR 120	185	201	150
TSR 200	271	286	286
TSR 250	404	421	369

Dimensions in mm

Ports A	Ports B
G1 (BSP)	G1¼ (BSP)
SAE16	SAE20

Note: All ports for return flow only

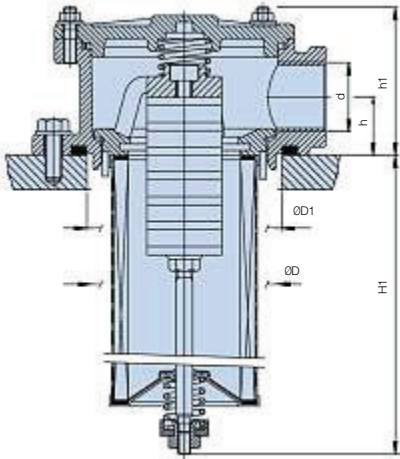
**Technical specification**

Max nominal return flow	120-200-250 l/min
Max working pressure	10 bar
Temperature range	-30°C to +100°C
Bypass pressure	1,5 bar
<i>LEIF</i> <sup>®</sup> -filtration ratio	2µ/5µ/10µ/20µ
Seals	NBR
Options	Dipstick Indicator (electrical/visual)

## Tanktop Mounted Return Line Filters

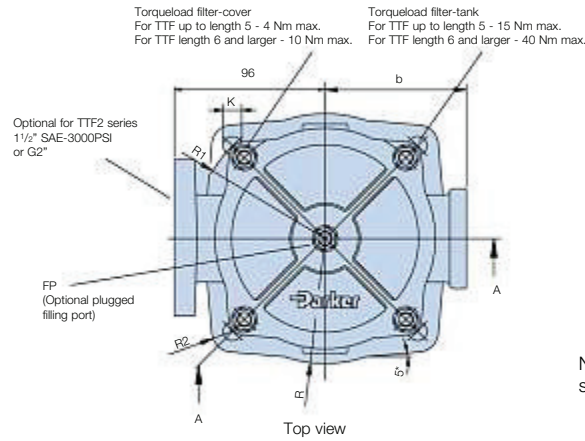
# TTF Series

### Specification (cont.)



Section A-A

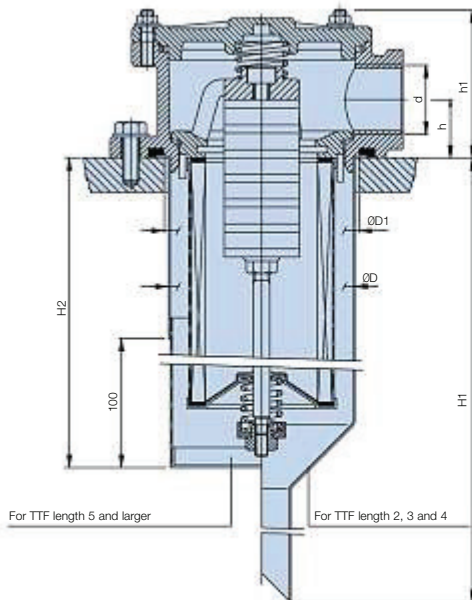
### Without Funnel



NOTE: TTF2 length 9 and 10 are standard supplied without magnets

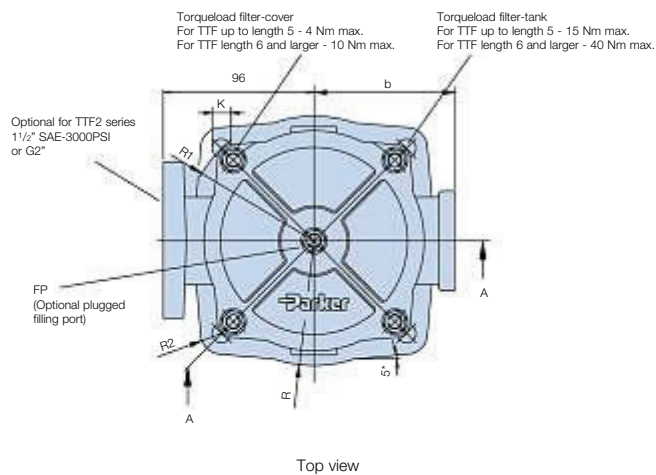
TTF length	Type	Connection Option	h	h1	□D	□D1	H1	b	R	R1	R2	K	FP
2	TTF60	G <sup>3</sup> / <sub>4</sub> , G1	28	73	□90	□93	131	68	60	63	10	4x□9	G <sup>1</sup> / <sub>2</sub>
3	TTF90						175						
4	TTF120						225						
5	TTF125						325						
6	TTF170	G1, G1 <sup>1</sup> / <sub>4</sub> , G1 <sup>1</sup> / <sub>2</sub>	36 (46)	92 (107)	□132	□136	223	90 (96)	83	87.5	12	4x□11	G <sup>3</sup> / <sub>4</sub>  (G1)
7	TTF230	303											
8	TTF300	508											
9	TTF400	523											
10	TTF500	563											

Dimensions in mm



Section A-A

### With Funnel



NOTE: TTF2 length 9 and 10 are standard supplied without magnets

TTF length	Type	Connection Option	h	h1	□D	□D1	H1	H2	b	R	R1	R2	K	FP
2	TTF60	G <sup>3</sup> / <sub>4</sub> , G1	28	73	□90	□93	235	68	60	63	10	4x□9	G <sup>1</sup> / <sub>2</sub>	
3	TTF90						280							
4	TTF120						330							
5	TTF125						420							
6	TTF170	G1, G1 <sup>1</sup> / <sub>4</sub> , G1 <sup>1</sup> / <sub>2</sub>	36 (46)	92 (107)	□132	□136	305	90 (96)	83	87.5	12	4x□11	G <sup>3</sup> / <sub>4</sub>  (G1)	
7	TTF230	305												
8	TTF300	510												
9	TTF400	525												
10	TTF500	575												

Dimensions in mm



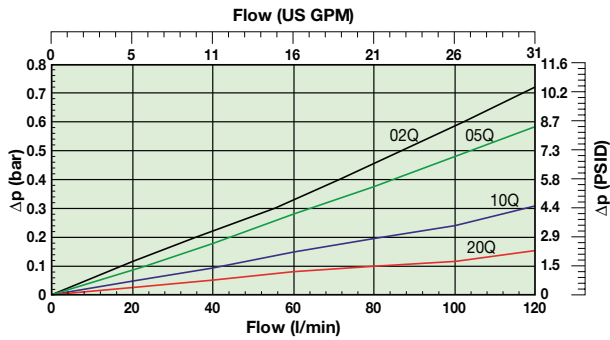
## Pressure Drop Curves

The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

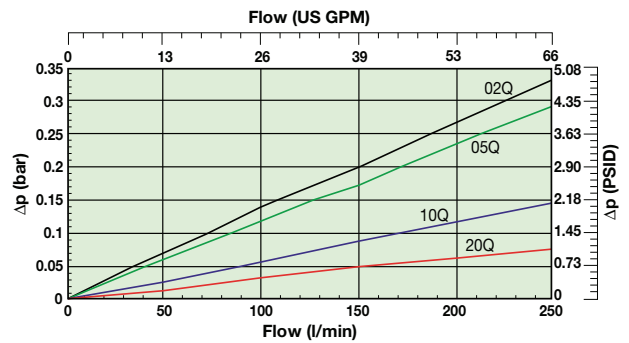
If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

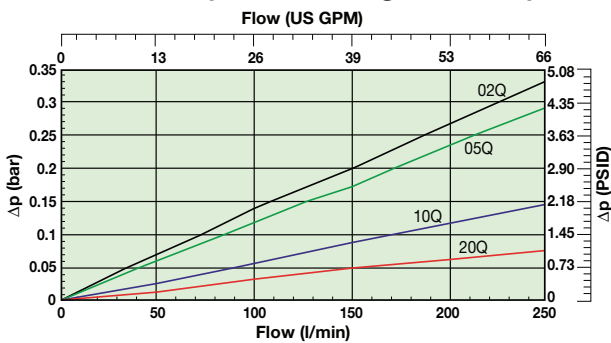
### TSR120 (Element length code 1)



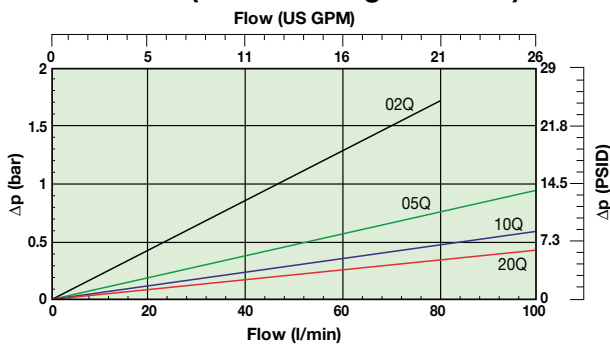
### TSR (Element length code 2)



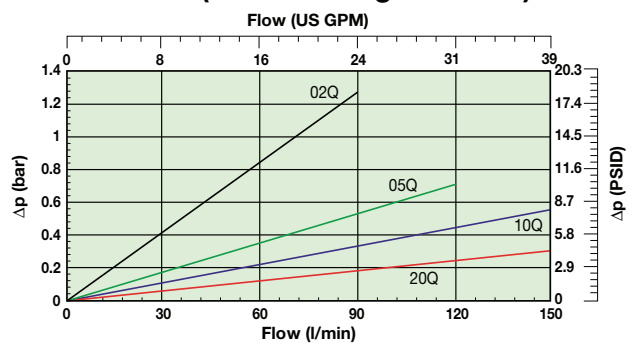
### TSR250 (Element length code 3)



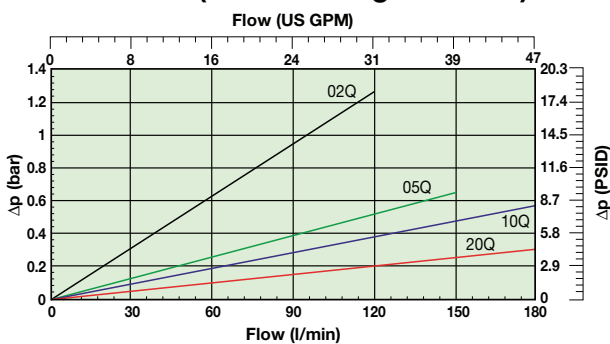
### TTF60 (Element length code 2)



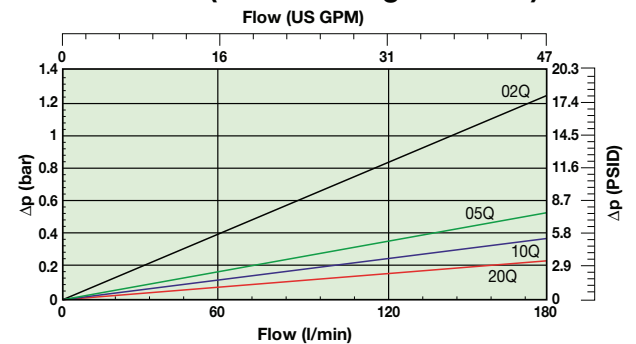
### TTF90 (Element length code 3)



### TTF120 (Element length code 4)



### TTF125 (Element length code 5)



## Tanktop Mounted Return Line Filters

# TTF Series

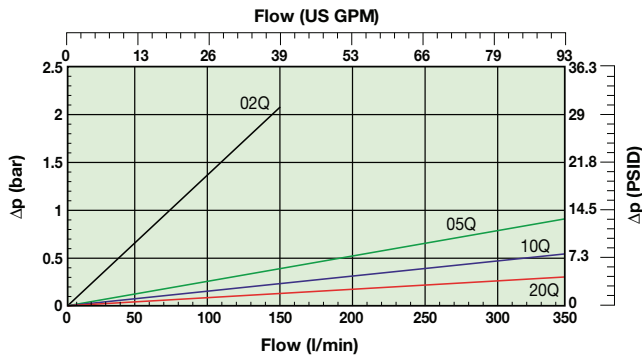
### Pressure Drop Curves (cont.)

The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

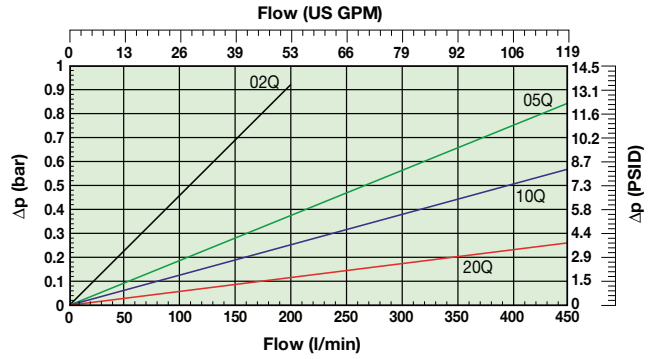
If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

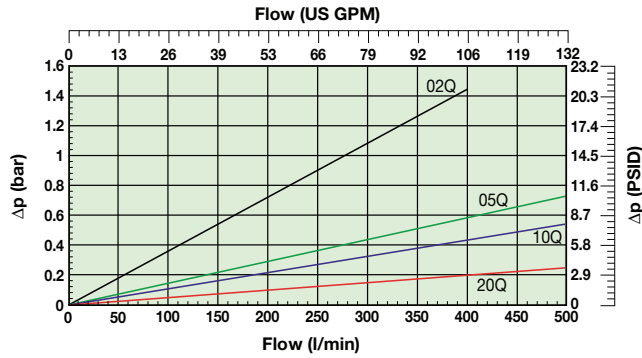
**TTF170 (Element length code 6)**



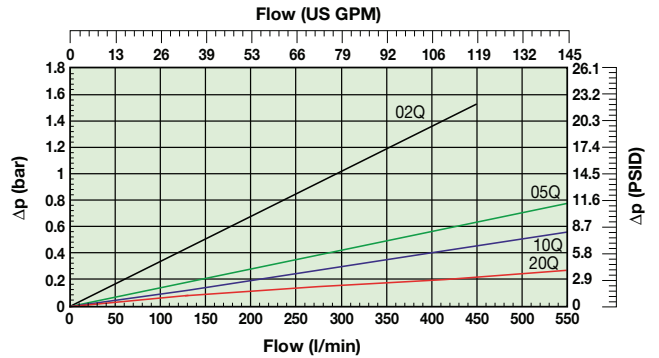
**TTF230 (Element length code 7)**



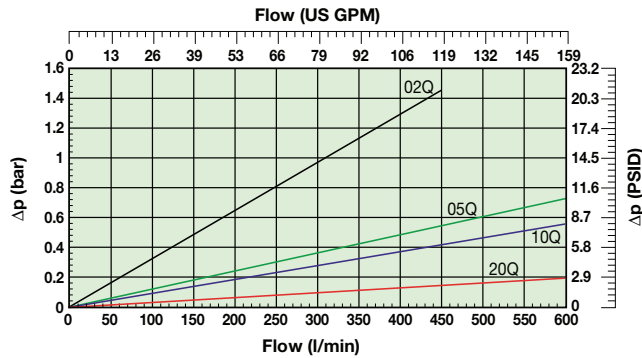
**TTF300 (Element length code 8)**



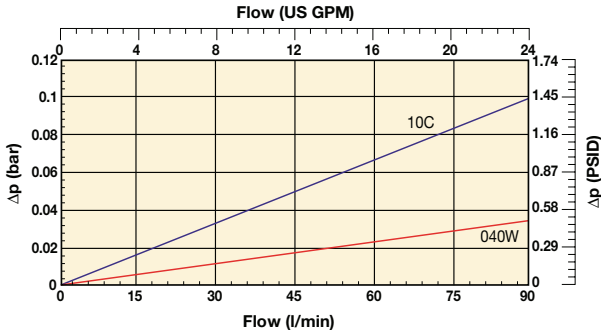
**TTF400 (Element length code 9)**



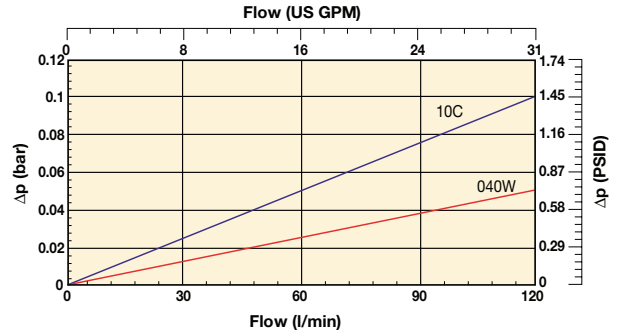
**TTF500 (Element length code 10)**



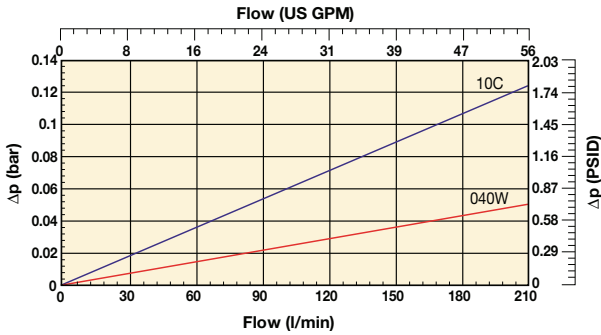
**TTF60 (Element length code 2)**  
Cellulose & stainless steel media



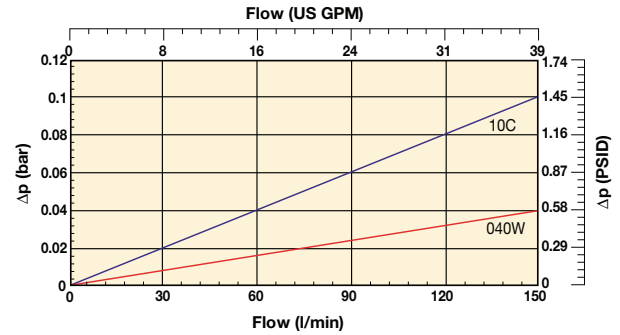
**TTF90 (Element length code 3)**  
Cellulose & stainless steel media



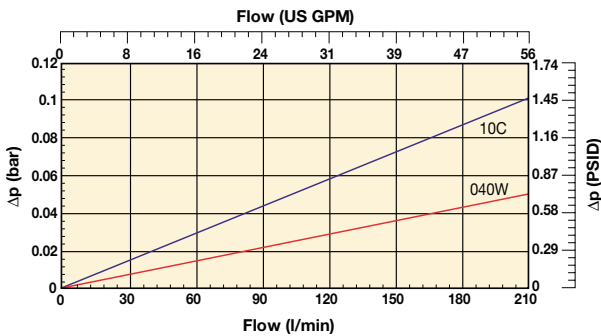
**TTF120 (Element length code 4)**  
Cellulose & stainless steel media



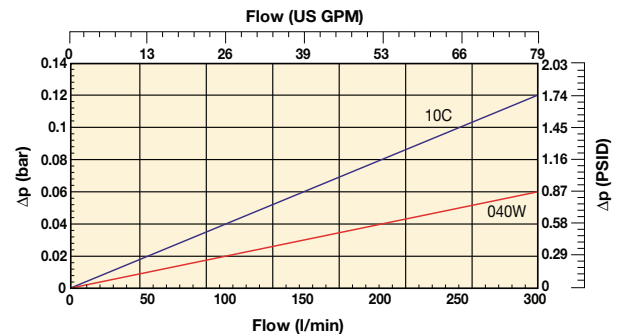
**TTF125 (Element length code 5)**  
Cellulose & stainless steel media



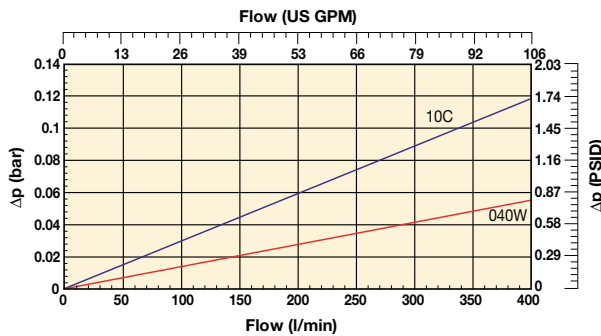
**TTF170 (Element length code 6)**  
Cellulose & stainless steel media



**TTF230 (Element length code 7)**  
Cellulose & stainless steel media



**TTF300 (Element length code 8)**  
Cellulose & stainless steel media

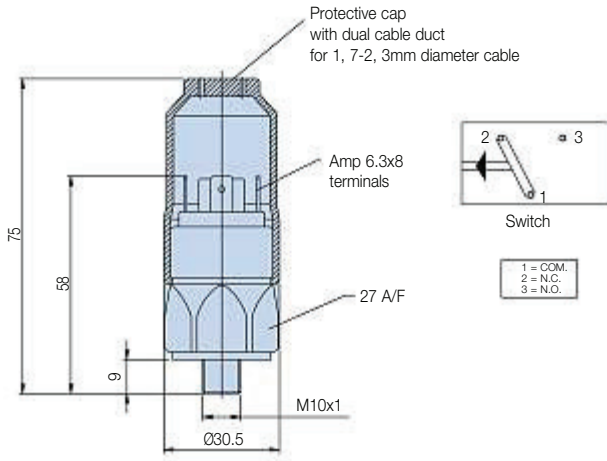


## Tanktop Mounted Return Line Filters

# TTF Series

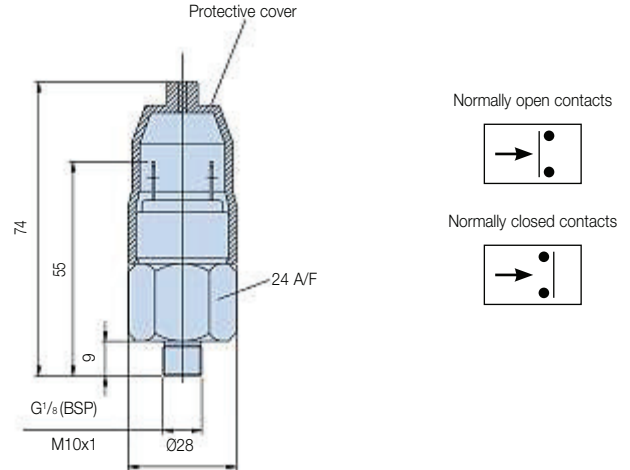
### Indicator Options

#### Indicator PS pressure switch



Specifications	
Elec.rating	42V / 4A
Thread connection	M10x1
Elec.connection	AMP 6.3x0.8 terminals + protective cap
Protection	IP65 (with cap) terminals IP00
Code	FMUS1EBMM10L (Switch)

#### Indicator PS NO/NC pressure switch



Specifications	
Elec.rating	42V / 2A
Thread connection	G <sup>1</sup> / <sub>8</sub>
Elec.connection	AMP terminal 6.3x0.8
Protection	IP65 (terminal IP00)
Switch type	NO or NC
Code	FMUS2EBMG02L (NO switch) FMUS3EBMG02L (NC switch)

#### Indicator Connection / Filter Head Matrix

	Port(s) Filter head	Indicator Thread
TTF	ISO 228-G <sup>1</sup> / <sub>4</sub> " (BSP) (TTF length 2,3,4 and 5)	M10
	ISO 228-G <sup>1</sup> " (BSP)	M10
	ISO 228-G <sup>1</sup> / <sub>2</sub> " (BSP) (TTF length 7 and larger)	M10
	2xISO 228-G <sup>1</sup> / <sub>4</sub> " (BSP) (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
	ISO 228-G <sup>1</sup> / <sub>2</sub> "(BSP) (TTF length 7 and larger)	M10
	2xISO 228-G <sup>1</sup> / <sub>2</sub> "(BSP) (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
	1 <sup>1</sup> / <sub>2</sub> " SAE-3000 PSI (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
	1 <sup>1</sup> / <sub>2</sub> " SAE-3000 PSI (2nd port) + G <sup>1</sup> / <sub>2</sub> " (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
	G <sup>2</sup> " (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
	G <sup>2</sup> " + G <sup>1</sup> / <sub>2</sub> " (TTF length 7 and larger)	G <sup>1</sup> / <sub>8</sub> "
TSR	ISO 228-G <sup>1</sup> / <sub>4</sub> " (BSP) + 2 Ports A ISO228-G <sup>1</sup> " (TSR only)	G <sup>1</sup> / <sub>8</sub> "
	2xISO 228-G <sup>1</sup> / <sub>4</sub> " (BSP) + 2 Ports A ISO228-G <sup>1</sup> " (TSR only)	G <sup>1</sup> / <sub>8</sub> "
	SAE20 + 2 Ports A SAE16 (TSR only)	G <sup>1</sup> / <sub>8</sub> "
	2xSAE20 + 2 Ports SAE16 (TSR only)	G <sup>1</sup> / <sub>8</sub> "

Visual indicator	
Visual indicator	1.2 bar
M10: code	FMUG1EBPM10L
G <sup>1</sup> / <sub>8</sub> : code	FMUG2EBPG02L

### Ordering Information

#### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
TTF310QLBP2EG121	TTF90-G <sup>1</sup> / <sub>4</sub> TXWL3-10 B15 MM	90	TTF90	Length 3	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>4</sub>	None	937878Q	TXWL3-10
TTF320QLBP2EG121	TTF90-G <sup>1</sup> / <sub>4</sub> TXWL3-20 B15 MM	90	TTF90	Length 3	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>4</sub>	None	937877Q	TXWL3-20
TTF510QLBP2EG161	TTF125-G1 TXWL3E-10 B15 MM	125	TTF125	Length 5	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G1	None	937852Q	TXWL3E-10
TTF520QLBP2EG161	TTF125-G1 TXWL3E-20 B15 MM	125	TTF125	Length 5	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G1	None	937875Q	TXWL3E-20
TTF610QLBP2EG203	TTF170-G <sup>1</sup> / <sub>4</sub> TXWL4-10 T B15 MM	170	TTF170	Length 6	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>4</sub>	Diffuser type T	937853Q	TXWL4-10
TTF620QLBP2EG203	TTF170-G <sup>1</sup> / <sub>4</sub> TXWL4-20 T B15 MM	170	TTF170	Length 6	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>4</sub>	Diffuser type T	937874Q	TXWL4-20
TTF810QLBP2EG243	TTF300-G <sup>1</sup> / <sub>2</sub> TXWL5A-10 T B15 MM	300	TTF300	Length 8	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>2</sub>	Diffuser type T	937855Q	TXWL5A-10
TTF820QLBP2EG243	TTF300-G <sup>1</sup> / <sub>2</sub> TXWL5A-20 T B15 MM	300	TTF300	Length 8	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>2</sub>	Diffuser type T	937872Q	TXWL5A-20
TTF1010QLBP2HG24A	TTF500-G <sup>1</sup> / <sub>2</sub> TXWL5C-10 T B20 MM NMG	500	TTF500	Length 10	10	Nitrile	Plugged	2.0 Bar (29 Psi)	G <sup>1</sup> / <sub>2</sub>	Diffuser type T	937857Q	TXWL5C-10
TTF1010QLBP2HG24A	TTF500-G <sup>1</sup> / <sub>2</sub> TXWL5C-20 T B20 MM NMG	500	TTF500	Length 10	20	Nitrile	Plugged	2.0 Bar (29 Psi)	G <sup>1</sup> / <sub>2</sub>	Diffuser type T	937870Q	TXWL5C-20

Note: Filter assemblies ordered from the product configurator on the next page are on extended lead times. Where possible, please make your selection from the table above.



## Ordering Information (cont.)

### Product configurator

#### Configurator example of a TTF Series filter

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>TTF</b>	<b>9</b>	<b>05QL</b>	<b>V</b>	<b>S3</b>	<b>H</b>	<b>L24</b>	<b>1</b>

#### Configurator example of a TSR Series filter

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>TSR</b>	<b>3</b>	<b>20QL</b>	<b>B</b>	<b>G2</b>	<b>E</b>	<b>2G20</b>	<b>3</b>

Box 1		Box 2		Box 3						
Code	Filter type	Degree of filtration								
TTF	Housing	Code		Element media		Glass fibre				
TSR	TTF 1-60	2		Cellulose		Microglass III (for disposable elements)				
	TTF 1-90	3				Ecoglass III (for Leif® elements)				Wire mesh
	TTF 1-120	4		Nom. rating					Abs. rating	
	TTF 1-125	5		10C		02Q	05Q	10Q	20Q	040W
	TTF 2-170	6		Disposable element						
	TTF 2-230	7		LEIF® element		02QL	05QL	10QL	20QL	
	TTF 2-300	8								
	TTF 2-400	9								
	TTF 2-500	10								
	TSR2-120	1								
	TSR2-200	2								
	TSR2-250	3								

Box 4	
Seal type	
Seal material	Code
Nitrile	<b>B</b>
Fluorelastomer	V
Neoprene	N

Box 5	
Indicator	
	Code
Pressure gauge, setting 1.2 bar, M10x1	<b>G1</b>
Pressure gauge, setting 1.2 bar, G $\frac{1}{8}$ for dual head ports and TSR series	G2
Pressure switch 42V, 1.2 bar setting, NO/NC, M10x1	<b>S1</b>
Pressure switch 42V, 1.2 bar setting, NO with G $\frac{1}{8}$ BSP	S2
Pressure switch 42V, 1.2 bar setting, NC with G $\frac{1}{8}$ BSP	S3
Pressure switch 250V, NO/NC with G $\frac{1}{8}$	S4
Pressure switch 220V, NO/NC with M10	S5
No indicator, indicator ports not machined	N
No indicator, indicator port R plugged	P
No indicator, indicator ports L + R plugged	<b>P2</b>
Other settings for indicators / gauges on request	on request

Box 6	
Bypass valve	
Bypass valve	Code
0.8 bar	B
1.5 bar	<b>E</b>
2.0 bar for TTF series	H
Blocked bypass	X
Other bypass settings	on request

Note: for all dual head ports and TSR series apply G $\frac{1}{8}$  connection for indicator

Box 7	
Filter connection	
Ports	Code
ISO 228-G $\frac{1}{4}$ " (BSP) (TTF length 2,3,4 and 5)	<b>G12</b>
ISO 228-G1" (BSP)	<b>G16</b>
ISO 228-G1 $\frac{1}{2}$ " (BSP) (TTF length 7 and larger)	<b>G20</b>
2xISO 228-G1 $\frac{1}{2}$ " (BSP) (TTF length 7 and larger)	2G20
ISO 228-G1 $\frac{1}{2}$ " (BSP) (TTF length 7 and larger)	<b>G24</b>
2xISO 228-G1 $\frac{1}{2}$ " (BSP) (TTF length 7 and larger)	2G24
1 $\frac{1}{2}$ " SAE-3000 PSI (TTF length 7 and larger)	L24
1 $\frac{1}{2}$ " SAE-3000 PSI (2nd port) + G1 $\frac{1}{2}$ " (TTF length 7 and larger)	LD24
G2" (TTF length 7 and larger)	G32
G2" + G1 $\frac{1}{2}$ " (TTF length 7 and larger)	GM32
ISO 228-G1 $\frac{1}{2}$ " (BSP) + 2 Ports A ISO228-G1" (TSR only)	G20
2xISO 228-G1 $\frac{1}{2}$ " (BSP) + 2 Ports A ISO228-G1" (TSR only)	2G20
SAE20 + 2 Ports A SAE16 (TSR only)	S20
2xSAE20 + 2 Ports SAE16 (TSR only)	2S20

Box 8	
Options	
Options	Code
No diffuser required	<b>1</b>
Diffuser type T with perforated plate area	<b>3</b>
Diffuser type P without perforated plate area	4
Diffuser with integrated hose connection for TTF lengths 2, 3 and 4	9
No magnets	5
Dipstick	6
Plugged filling port	8
Diffuser type T and no magnets	<b>A</b>
Diffuser type P and no magnets	B
Diffuser type T, no magnets, plugged filling port	C
Diffuser type P, no magnets, plugged filling port	D
Other combinations	on request

Note: TTF size 2-400 and 2-500 are standard supplied without magnets

Degree of filtration						Media code
Average filtration beta ratio $\beta$ (ISO 16889) / particle size $\mu\text{m}$ [c]						
$\beta_x(c)=2$	$\beta_x(c)=10$	$\beta_x(c)=75$	$\beta_x(c)=100$	$\beta_x(c)=200$	$\beta_x(c)=1000$	
% efficiency, based on the above beta ratio ( $\beta_x$ )						
50.0%	90.0%	98.7%	99.0%	99.5%	99.9%	
N/A	N/A	N/A	N/A	N/A	4.5	<b>02Q/02QL</b>
N/A	N/A	4.5	5	6	7	<b>05Q/05QL</b>
N/A	6	8.5	9	10	12	<b>10Q/10QL</b>
6	11	17	18	20	22	<b>20Q/20QL</b>

#### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Note: Standard items are in stock, semi standard items are available within four weeks

## Tanktop Mounted Return Line Filters

# TTF Series

### Ordering Information (cont.)

#### Supersedes Spare Element table (TXWL & PXWL replaced by 900000 number)

TTF60	TXWL2-2	TXWL2-5	TXWL2-10	TXWL2-20
Part number spare element	937823Q	937880Q	937881Q	937882Q
TTF90	TXWL3-2	TXWL3-5	TXWL3-10	TXWL3-20
Part number spare element	937824Q	937879Q	937878Q	937877Q
TTF120	TXWL3D-2	TXWL3D-5	TXWL3D-10	TXWL3D-20
Part number spare element	937825Q	937825Q	937851Q	937876Q
TTF125	TXWL3E-2	TXWL3E-5	TXWL3D-10	TXWL3E-20
Part number spare element	937826Q	937849Q	937852Q	937875Q
TTF170	TXWL4-2	TXWL4-5	TXWL4-10	TXWL4-20
Part number spare element	937827Q	937848Q	937853Q	937874Q
TTF230	TXWL5-2	TXWL5-5	TXWL5-10	TXWL5-20
Part number spare element	937828Q	937847Q	937854Q	937873Q
TTF300	TXWL5A-2	TXWL5A-5	TXWL5A-10	TXWL5A-20
Part number spare element	937829Q	937846Q	937855Q	937872Q
TTF400	TXWL5B-2	TXWL5B-5	TXWL5B-10	TXWL5B-20
Part number spare element	937830Q	937845Q	937856Q	937871Q
TTF500	TXWL5C-2	TXWL5C-5	TXWL5C-10	TXWL5C-20
Part number spare element	937831Q	937844Q	937857Q	937870Q
TSR120	PXWL3-2	PXWL3-5	PXWL3-10	PXWL3-20
Part number spare element	937886Q	937889Q	937892Q	937895Q
TSR200	PXWL4-2	PXWL4-5	PXWL4-10	PXWL4-20
Part number spare element	937887Q	937890Q	937893Q	937896Q
TSR250	PXWL4A-2	PXWL4A-5	PXWL4A-10	PXWL4A-20
Part number spare element	937888Q	937891Q	937894Q	937897Q

#### Supersedes Spare Element table (TXW & TXX replaced by 900000 number)

TTF60	TXW2-10-B	TXW2-2-B	TXW2-5-B	TXW2-10-B	TXW2-20-B	ST2-40-B
Part number spare element	937721	937751Q	937754Q	937787Q	937790Q	937820
TTF90	TXW3-10-B	TXW3-2-B	TXW3-5-B	TXW3-10-B	TXW3-20-B	ST3-40-B
Part number spare element	937722	937750Q	937755Q	937786Q	937791Q	937819
TTF120	TXW3D-10-B	TXW3D-2-B	TXW3D-5-B	TXW3D-10-B	TXW3D-20-B	ST3D-40-B
Part number spare element	937723	937749Q	937756Q	937785Q	937792Q	937818
TTF125	TXW3E-10-B	TXW3E-2-B	TXW3E-5-B	TXW3E-10-B	TXW3E-20-B	ST3E-40-B
Part number spare element	937724	937748Q	937757Q	937748Q	937793Q	937817
TTF170	TXW4-10-B	TXW4-2-B	TXW4-5-B	TXW4-10-B	TXW4-20-B	ST4-40-B
Part number spare element	937725	937747Q	937758Q	937783Q	937794Q	937816
TTF230	TXW5-10-B	TXW5-2-B	TXW5-5-B	TXW5-10-B	TXW5-20-B	ST5-40-B
Part number spare element	937726	937746Q	937759Q	937782Q	937795Q	937815
TTF300	TXW5A-10-B	TXW5A-2-B	TXW5A-5-B	TXW5A-10-B	TXW5A-20-B	ST5A-40-B
Part number spare element	937727	937745Q	937760Q	937781Q	937796Q	937814



Tanktop Mounted Return Line Filters  
**BGT Series**

MAX 2400 l/min - 10 bar

AN INNOVATIVE GREEN  
FILTER FEATURING  
**LEIF®**



## Tanktop Mounted Return Line Filters

# BGT Series

### Features & Benefits

Features	Advantages	Benefits
10 bar rated filter	Can be utilised for severe return line applications	Reduced downtime due to premature filter failures
Cast aluminium head	Compact profile, lightweight and durable	Less weight, smaller envelop and cleaner appearance
LEIF® elements	Patented element safeguards the use of genuine parts	Guaranteed quality of filtration Contributes to ISO 14001 certification
Magnetic pre-filtration	Removes ferrous particles, even during bypass conditions	Improved fluid cleanliness levels Extended element life time
In-to-Out filtration	All captured contamination retains inside the element	No recontamination of system during change of elements
High level of customisation	Dedicated system-matched solutions can be easily made available	Improved integration of filter in system combined with lower initial system costs
Full flow bypass with low hysteresis	Reduction of bypass period due to low hysteresis	Improved protection of system
	Only a small part of the total flow is bypassing the element	
Standard or customised funnel	Ensures that oil enters the tank under the oil level	Significant reduction of oil foaming

### Typical Applications

- Mobile cranes
- Excavators
- Deck cranes
- Fire fighting equipment
- Hydraulic presses
- Waste balers
- Industrial power units
- Fork lift trucks

### The Parker Filtration BGT Series Tank Mounted Return Line Filters.

BGT tanktop mounted return line filters feature pre-filtration by means of a magnet column and a full flow bypass with low hysteresis. Thanks to the 'In-to-Out' filter principle, contaminated oil cannot leak back into the system. BGT Filters are available in versions capable of handling flow rates up to 2400 l/min. They can operate with a maximum working pressure of 10 bar. LEIF® elements are available for environment-friendly filtration for versions up to 1500 l/min.





## Specification

### Operating pressure:

Max. 10 bar.

### Assembly:

Tank top mounted.

### Connections:

Flanges SAE2", 3".

Threaded ports and multiple ports available.

### Filter housing:

Aluminium head and cover.

### Seal material:

Nitrile, fluoroelastomer, neoprene.

### Operating temperature range:

-40° to +120°C.

### Bypass setting

Opening pressure 0.8 / 1.5 or 2 bar.

Other settings on request.

### Degree of filtration:

Determined by multipass test according to ISO 16889.

### Flow fatigue characteristics:

Filter media is supported so that the optimum fatigue life is achieved.

### Filtration media:

Microglass III and Ecoglass III for *LEIF*<sup>®</sup> elements.

Also available 10µm Cellulose and 40µm stainless steel mesh.

### Element collapse rating:

10 bar (ISO 2941).

### Pressure indicator options:

Setting 0.7 or 1.2 bar.

Other settings on request.

Visual pressure gauge.

Electrical pressure switch.

### Options:

Diffuser type P (straight pipe, no perforated plate area)

Diffuser type T (with closed diffuser end cap and with perforated plate area, recommended when oil entry in reservoir is close to the reservoir bottom or to ensure oil entry under the reservoir oil level)

### Magnetic pack:

Standard.

### Filling port in cover (optional):

Plugged G1<sup>1</sup>/<sub>2</sub>.

### Filter element:

*LEIF*<sup>®</sup> element with reusable metal element sleeve.

Conventional style element with steel end caps.

The *LEIF*<sup>®</sup> element is patented and safeguards the use of genuine parts.

### Note:

*LEIF*<sup>®</sup> element can be used with mineral and HEES type oils.

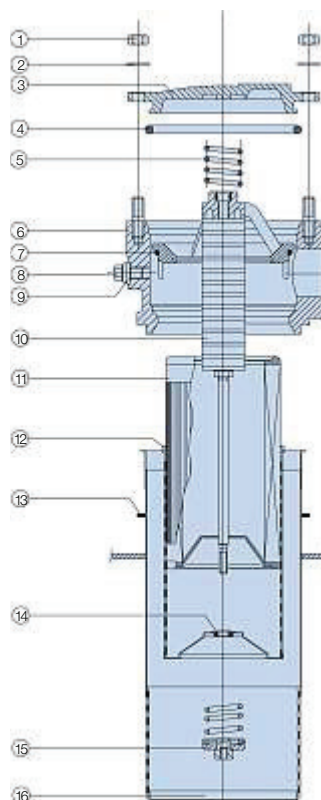
For other fluids consult Parker Filtration.

*LEIF*<sup>®</sup> contributes to ISO 14001 quality standards.

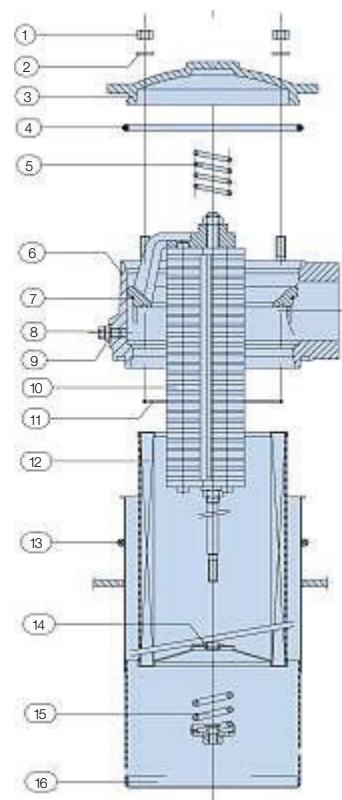
BGT-3 Length 11 and 12 ( <i>LEIF</i> <sup>®</sup> version)		
Ref.	No.	Description
1	1	Nut
2	1	Washer
3	1	Cover
4	1	Cover-seal
5	1	Top-spring
6	1	Housing
7	1	Insert-seal
8	1	Plug M10x1
9	1	Bonded seal
10	1	Insert
11	1	<i>LEIF</i> <sup>®</sup> element
12	1	Element sleeve
13	1	Gasket
14	1	O-ring
15	1	Bypass set
16	1	Diffuser

BGT-4 Length 13 and larger (conventional element)		
Ref.	No.	Description
1	1	Nut
2	1	Washer
3	1	Cover
4	1	Cover-seal
5	1	Top-spring
6	1	Housing
7	1	Insert-seal
8	1	Plug M10x1
9	1	Bonded seal
10	1	Insert
11	1	Element seal
12	1	Element
13	1	O-ring
14	1	O-ring
15	1	Bypass set
16	1	Diffuser

BGT-3 (*LEIF*<sup>®</sup> version)



BGT-4 (conventional element)

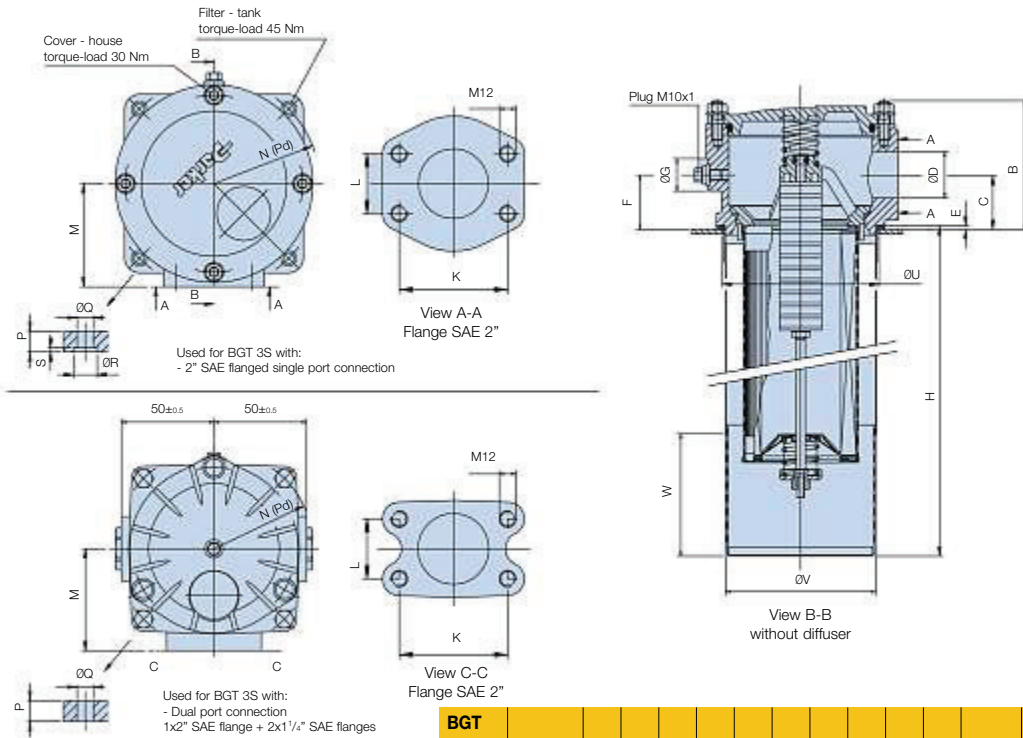


## Tanktop Mounted Return Line Filters

# BGT Series

### Specification (cont.)

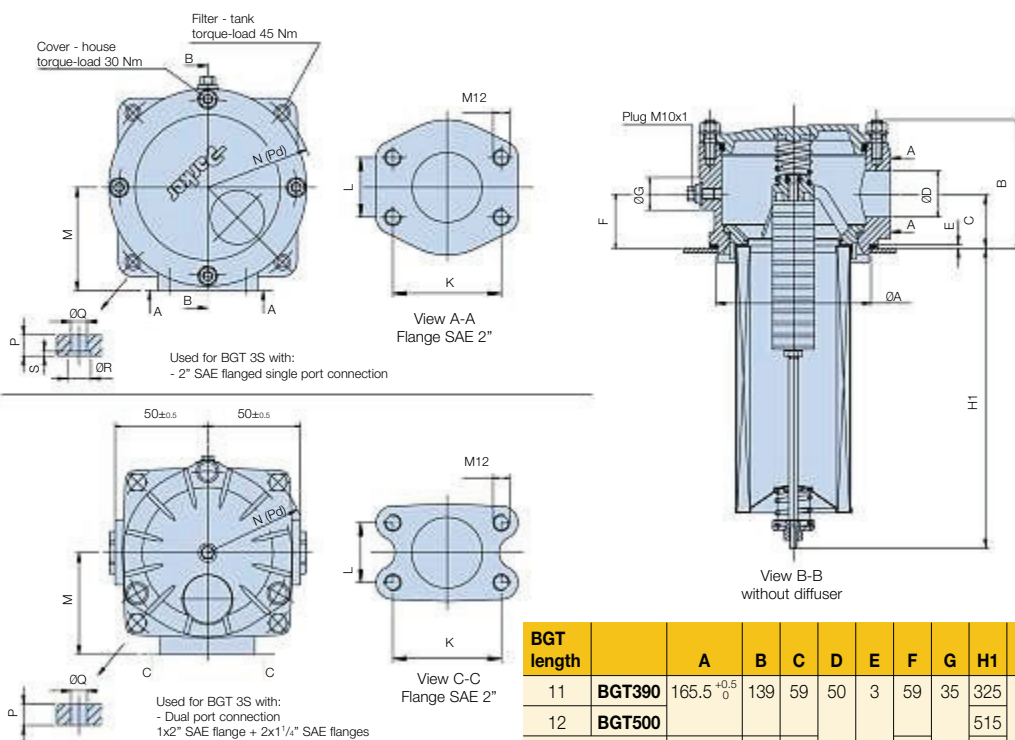
#### BGT-3 with diffuser



Dimensions in mm

BGT length		B	C	D	E	F	G	H1	L	K	M	N(Pd)	P	Q	R	S	U	V	W	Kg.
11	<b>BGT390</b>	139	59	50	3	59	35	325	43	78	105	R107.5	14	13	16	3	165.5 <sup>+0.5</sup> <sub>0</sub>	165	120	7.2
12	<b>BGT500</b>							515									(166 <sup>+0.5</sup> <sub>0</sub> )			8.6
Dual port connection		(131)	(55)			(55)					(110)		(15)							

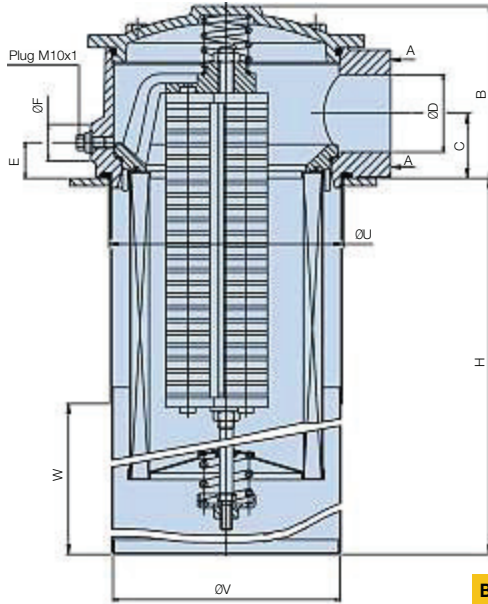
#### BGT-3 without diffuser



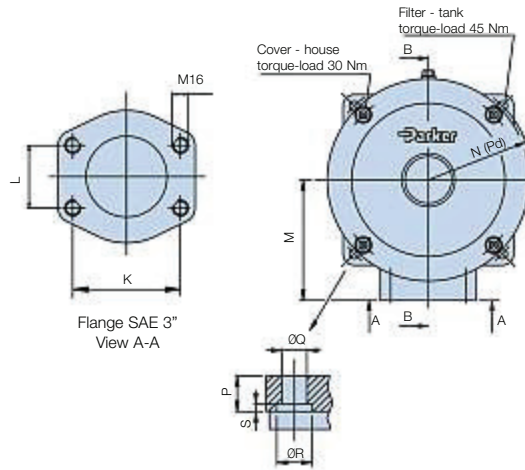
Dimensions in mm

BGT length		A	B	C	D	E	F	G	H1	L	K	M	N(Pd)	P	Q	R	S	Kg.
11	<b>BGT390</b>	165.5 <sup>+0.5</sup> <sub>0</sub>	139	59	50	3	59	35	325	43	78	105	R107.5	14	13	16	3	7.2
12	<b>BGT500</b>								515									8.6
Dual port connection		(166.5 <sup>+0.5</sup> <sub>0</sub> )	(131)	(55)			(55)					(110)		(15)				

## BGT-4 with diffuser



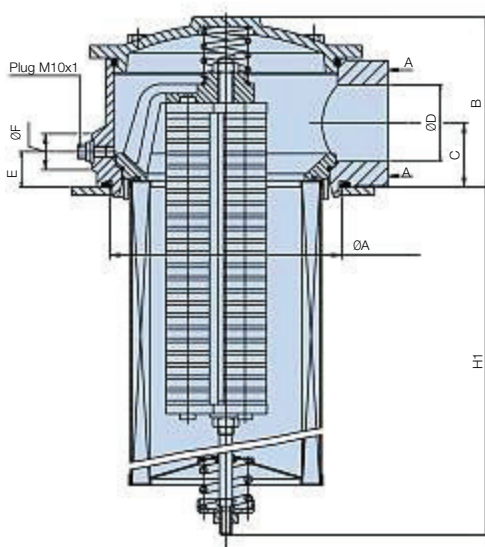
View B-B  
with diffuser



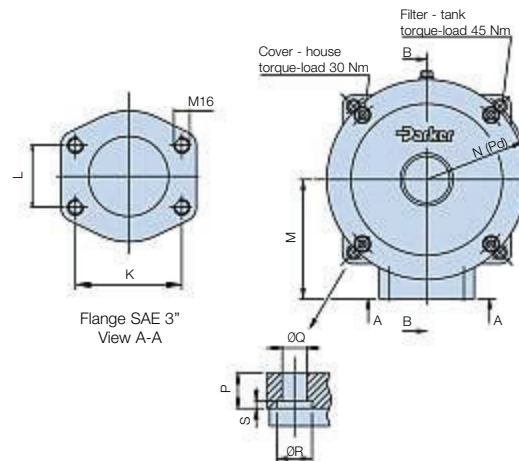
BGT length		B	C	ØD	E	ØF	H	K	L	M	N(Pd)	P	ØQ	ØR	S	ØU	ØV	W	Kg.
13	<b>BGT600</b>						425												20.5
14	<b>BGT800</b>						535												23.0
15	<b>BGT1000</b>	178	67	80	37	40	640	106.4	62	170	R147.5	20	14	20	4	240.5 <sup>+0.5</sup> <sub>0</sub>	240	170	25.5
16	<b>BGT1500</b>						920												30.0
17	<b>BGT2000</b>						1200												37.0
18	<b>BGT2400</b>						1200												37.0

Note: dimensions of BGT-2400 identical to BGT-2000. Dimensions in mm

## BGT-4 without diffuser



View B-B  
without diffuser



BGT length		ØA	B	C	ØD	E	ØF	H1	K	L	M	N(Pd)	P	ØQ	ØR	S	Kg.
13	<b>BGT600</b>							385									20.5
14	<b>BGT800</b>							495									23.0
15	<b>BGT1000</b>	239.5 <sup>+0.5</sup> <sub>0</sub>	178	67	80	37	40	598	106.4	62	170	R147.5	20	14	20	4	25.5
16	<b>BGT1500</b>							878									30.0
17	<b>BGT2000</b>							1143									37.0
18	<b>BGT2400</b>							1143									37.0

Note: dimensions of BGT-2400 identical to BGT-2000. Dimensions in mm

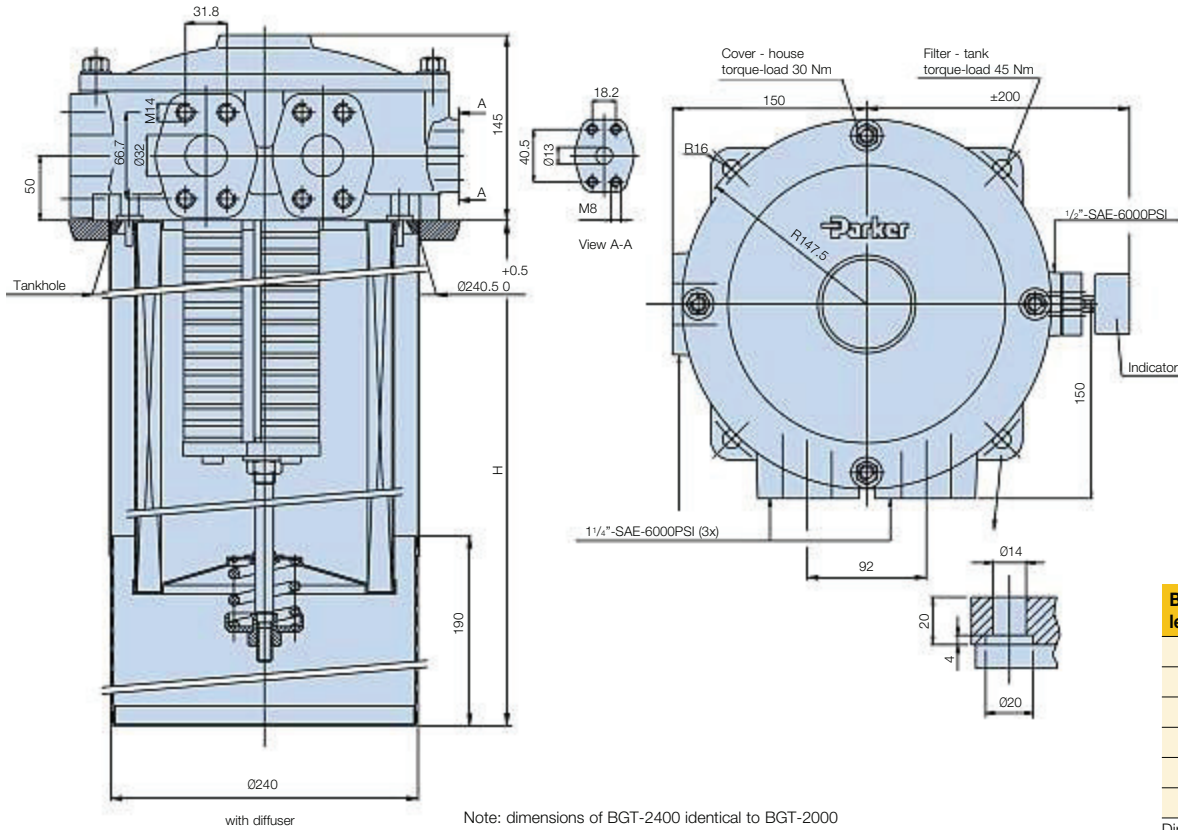


## Tanktop Mounted Return Line Filters

# BGT Series

### Specification (cont.)

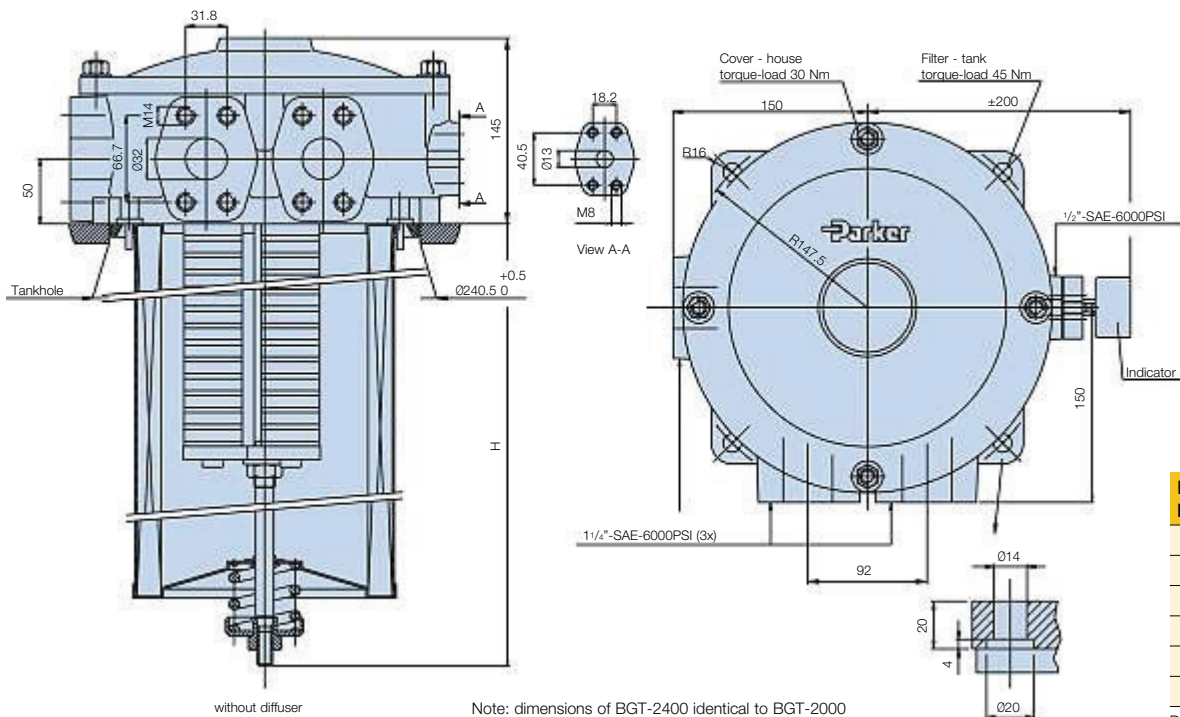
#### BGT F1<sup>1</sup>/<sub>4</sub> manifold type - with diffuser



BGT length		H
13	<b>BGT600L</b>	420
14	<b>BGT800L</b>	530
15	<b>BGT1000L</b>	636
16	<b>BGT1500L</b>	915
17	<b>BGT2000L</b>	1180
18	<b>BGT2400L</b>	1180

Dimensions in mm

#### BGT F1<sup>1</sup>/<sub>4</sub> manifold type - without diffuser

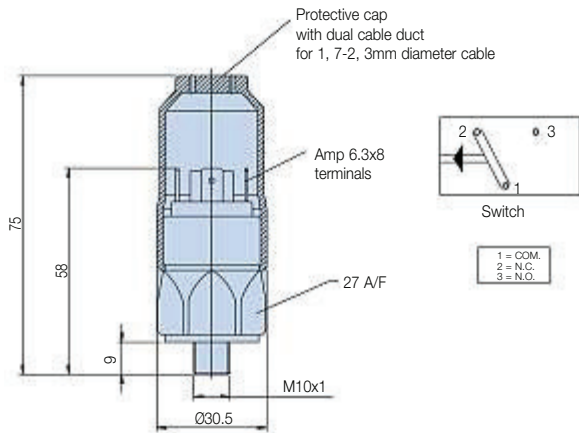


BGT length		H
13	<b>BGT600L</b>	385
14	<b>BGT800L</b>	495
15	<b>BGT1000L</b>	598
16	<b>BGT1500L</b>	878
17	<b>BGT2000L</b>	1143
18	<b>BGT2400L</b>	1143

Dimensions in mm

## Indicator Options

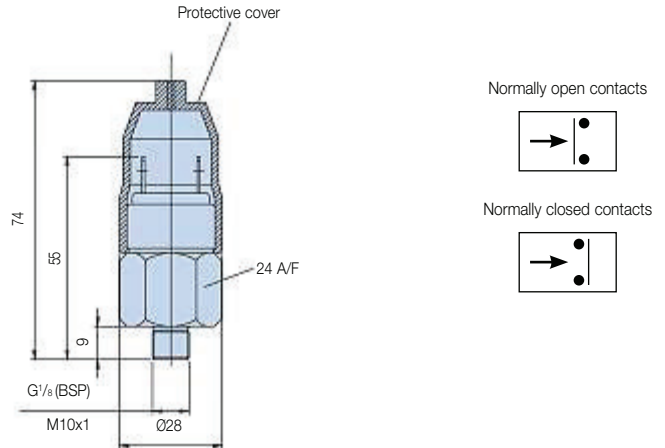
### Indicator PS pressure switch



Specifications	
Elec.rating	42V / 4A
Thread connection	M10x1
Elec.connection	AMP 6.3x0.8 terminals + protective cap
Protection	IP65 (with cap) terminals IP00
Code	FMUS1EBMM10L (Switch)

Indicator Connection / Filter Head Matrix	
Port(s) Filter head	Indicator Thread
2" SAE BGT length 11 and 12	M10
3" SAE BGT Length 13 and larger	M10
1x2" SAE Flanged + 2 x 1 1/4" SAE Flanged for BGT Length 11 and 12	G1/8"
3x1 1/4" SAE Flanges + 1x 1/2" SAE for BGT Length 13 and larger	M10

### Indicator PS NO/NC pressure switch



Specifications	
Elec.rating	42V / 2A
Thread connection	G1/8
Elec.connection	AMP terminal 6.3x0.8
Protection	IP65 (terminal IP00)
Switch type	NO or NC
Code	FMUS2EBMG02L (NO switch) FMUS3EBMG02L (NC switch)

<b>Visual indicator</b>	1.2 bar
M10 code	FMUG1EBPM10L
G1/8 code	FMUG2EBPG02L

## Pressure Drop Curves

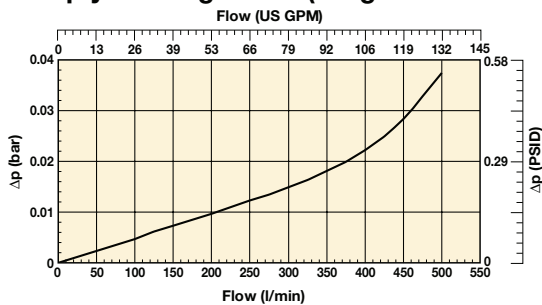
The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

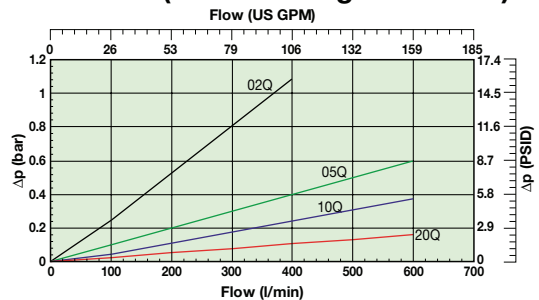
$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

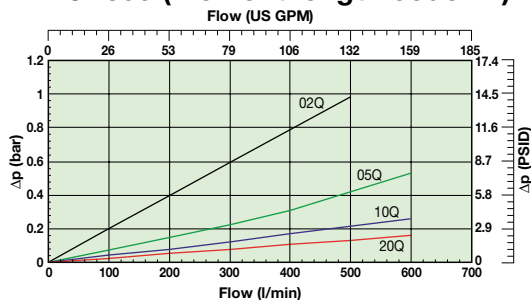
### BGT Empty Housing 2"SAE (Length code 11 and 12)



### BGT390 (Element length code 11)



### BGT500 (Element length code 12)

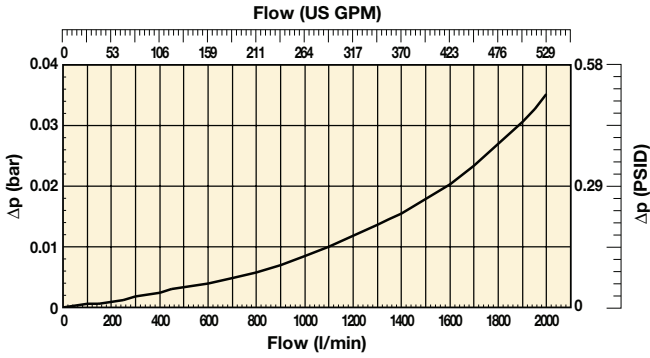




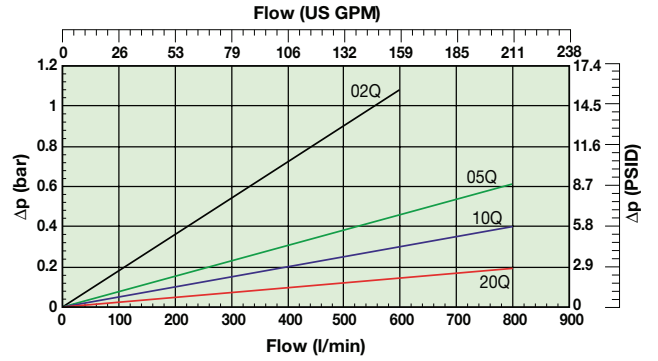
# BGT Series

## Pressure Drop Curves (cont.)

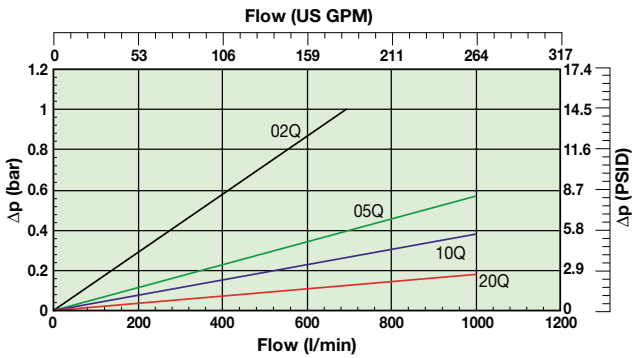
**BGT Empty Housing 3"SAE (Length 13 and larger)**



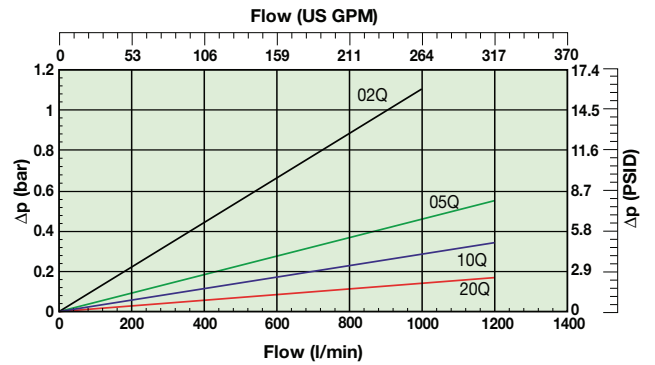
**BGT600 (Element length code 13)**



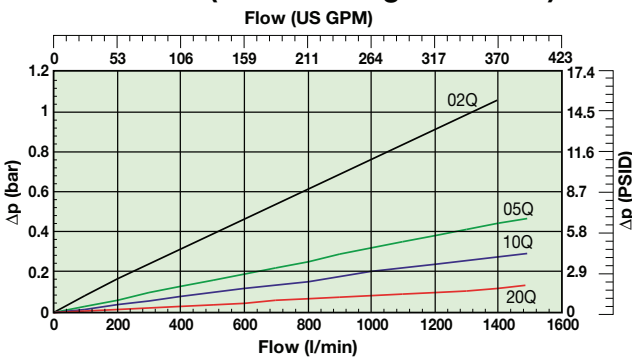
**BGT800 (Element length code 14)**



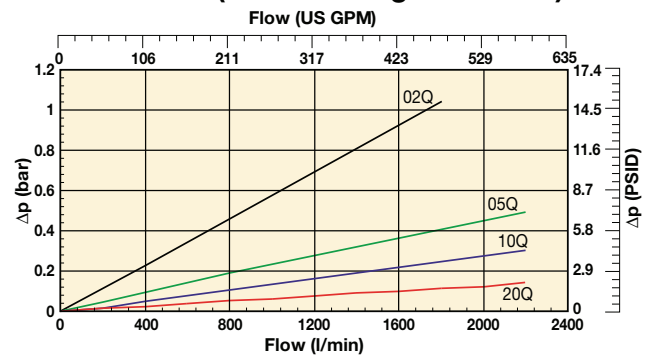
**BGT1000 (Element length code 15)**



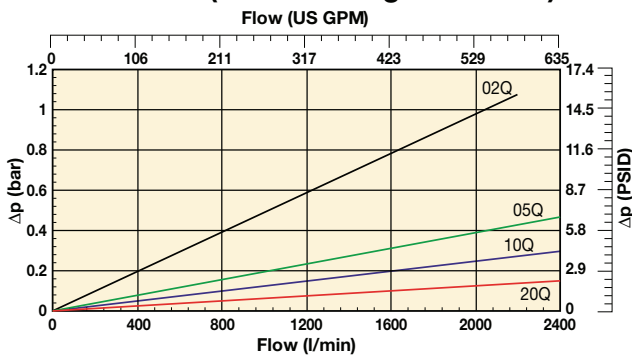
**BGT1500 (Element length code 16)**



**BGT2000 (Element length code 17)**

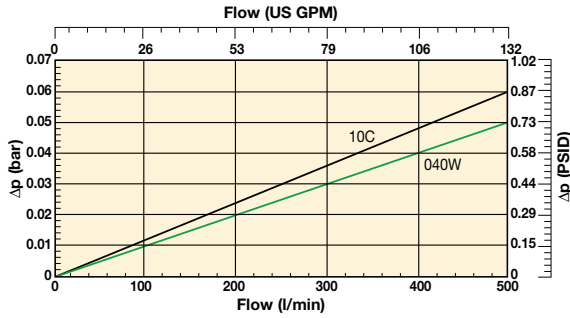


**BGT2400 (Element length code 18)**

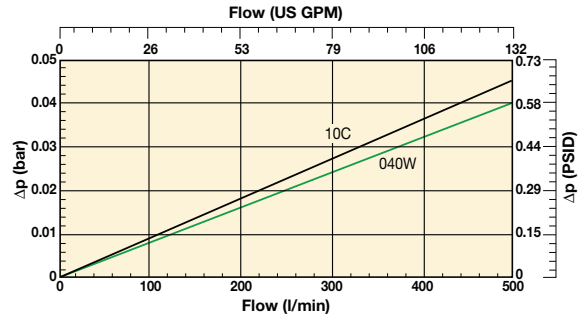


## Pressure Drop Curves (cellulose and stainless steel media)

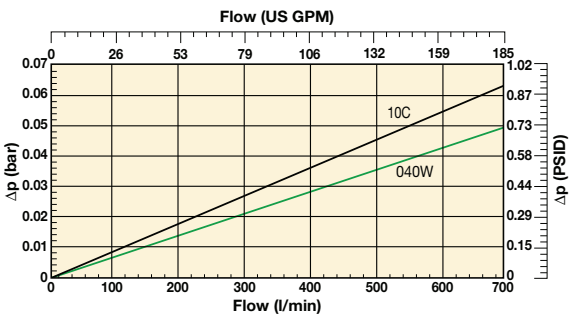
**BGT390 (Element length code 11)  
Cellulose & Stainless steel media**



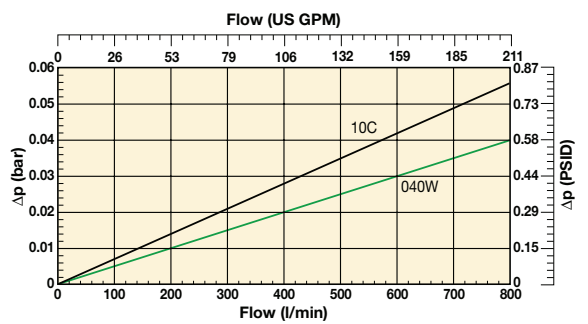
**BGT390 (Element length code 11)  
Cellulose & Stainless steel media**



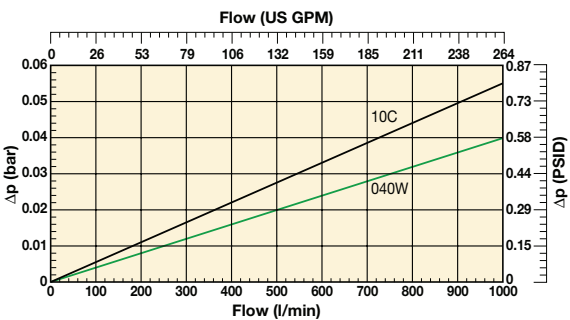
**BGT600 (Element length code 13)  
Cellulose & Stainless steel media**



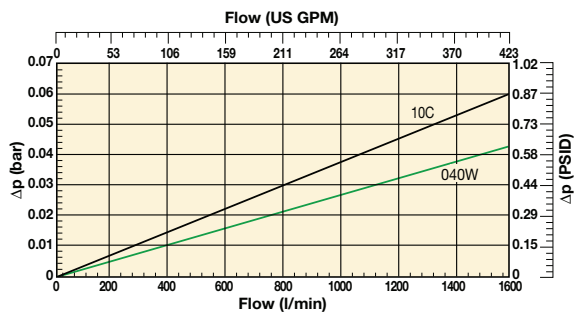
**BGT800 (Element length code 14)  
Cellulose & Stainless steel media**



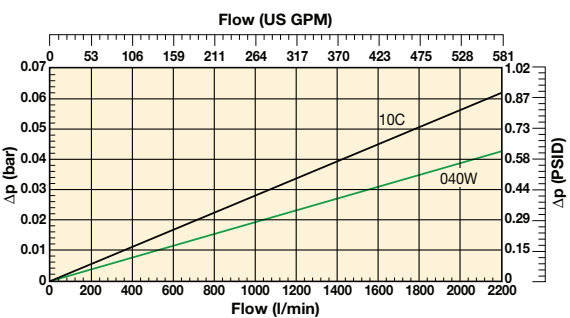
**BGT1000 (Element length code 15)  
Cellulose & Stainless steel media**



**BGT1500 (Element length code 16)  
Cellulose & Stainless steel media**



**BGT2000 (Element length code 17)  
Cellulose & Stainless steel media**



Cellulose and stainless steel media  
Example: BGT2000 Filter Element Length 17 - cellulose and stainless steel media

## Tanktop Mounted Return Line Filters

# BGT Series

## Ordering Information

### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
<b>BGT1210QLBPER323</b>	BGTS500-S2 TXWL8C-10 T B15 M	500	BGT500	Length 12	10	Nitrile	Plugged	1.5 Bar (22 Psi)	2"SAE-3000 PSI	Diffuser type T	<b>937859Q</b>	TXWL8L-10
<b>BGT1220QLBPER323</b>	BGTS500-S2 TXWL8C-20 T B15 M	500	BGT500	Length 12	20	Nitrile	Plugged	1.5 Bar (22 Psi)	2"SAE-3000 PSI	Diffuser type T	<b>937868Q</b>	TXWL8L-20
<b>BGT1510QLBPER483</b>	BGTS1000-S3 TXWL12-10 T B15 M	1000	BGT1000	Length 15	10	Nitrile	Plugged	1.5 Bar (22 Psi)	3"SAE-3000 PSI	Diffuser type T	<b>937862Q</b>	TXWL12-10
<b>BGT1520QLBPER483</b>	BGTS1000-S3 TXWL12-20 T B15 M	1000	BGT1000	Length 15	20	Nitrile	Plugged	1.5 Bar (22 Psi)	3"SAE-3000 PSI	Diffuser type T	<b>937865Q</b>	TXWL12-20
<b>BGT1710QBPER483</b>	BGTS2000-S3 TXW14-10 T B15 M	2000	BGT2000	Length 17	10	Nitrile	Plugged	1.5 Bar (22 Psi)	3"SAE-3000 PSI	Diffuser type T	<b>937772Q</b>	TXW14-10B
<b>BGT1720QBPER483</b>	BGTS2000-S3 TXW14-20 T B15 M	2000	BGT2000	Length 17	20	Nitrile	Plugged	1.5 Bar (22 Psi)	3"SAE-3000 PSI	Diffuser type T	<b>937805Q</b>	TXW14-20B

Note: Filter assemblies ordered from the product configurator below are on extended lead times. Where possible, please make your selection from the table above.

### Product configurator

#### Configurator examples filter including **LEIF®** element

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>BGT</b>	<b>15</b>	<b>05QL</b>	<b>B</b>	<b>S1</b>	<b>E</b>	<b>R48</b>	<b>C</b>

#### Configurator examples filter including conventional element

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>BGT</b>	<b>18</b>	<b>02Q</b>	<b>B</b>	<b>S4</b>	<b>E</b>	<b>3R20</b>	<b>4</b>

Code	Filter type	Degree of filtration					
<b>BGT</b>	<b>Housing</b>	<b>Element media</b>					
	BGT390	<b>Glass fibre</b>					
	BGT500	Microglass III (for disposable elements)					
	BGT600	<b>Cellulose</b>					
	BGT800	Ecoglass III (for Leif® elements)					
	BGT1000	Nom. rating					
	BGT1500	10C					
	BGT2000	02Q					
	BGT2400	05Q					
			10Q				
		20Q					
		10QL					
		20QL					
		<b>Wire mesh</b>					
		Abs. rating					
		040W					

Seal type	Code
Nitrile	<b>B</b>
Fluorelastomer	V
Neoprene	N

Indicator	Code
Pressure gauge, setting 1.2 bar, M10x1	<b>G1</b>
Pressure gauge, setting 1.2 bar, G <sup>1</sup> / <sub>8</sub> for dual port head and TSR series	G2
Pressure switch 24V, 1.2 bar setting, NO/NC, M10x1	<b>S1</b>
Pressure switch 24V, 1.2 bar setting, NO with G <sup>1</sup> / <sub>8</sub> BSP	S2
Pressure switch 24V, 1.2 bar setting, NC with G <sup>1</sup> / <sub>8</sub> BSP	S3
Pressure switch 250V, NO/NC with G <sup>1</sup> / <sub>8</sub>	S4
Pressure switch 220V, NO/NC with M10	S5
No indicator, indicator ports not machined	N
No indicator, indicator port R plugged	<b>P</b>
No indicator, indicator ports L + R plugged	P2
Other settings for indicators / gauges on request	on request

Bypass valve	Code
0.8 bar	B
1.5 bar	<b>E</b>
2.0 bar for BGT-3 series (length 11 and 12)	H
Blocked bypass	X
Other bypass settings	on request

Filter connection	Code
2" SAE BGT length 11 and 12	<b>R32</b>
3" SAE BGT Length 13 and larger	<b>R48</b>
1x2" SAE Flanged + 2 x 1/4" SAE Flanged for BGT Length 11 and 12	R32M
3x1/4" SAE Flanges + 1x 1/2" SAE for BGT Length 13 and larger	3R20

Options	Code
No diffuser required	<b>1</b>
Diffuser type T with perforated plate area	<b>3</b>
Diffuser type P without perforated plate area	4
Diffuser with integrated hose connection	on request
No magnets	5
Dipstick	6
Plugged filling port	8
Diffuser type T and no magnets	A
Diffuser type P and no magnets	B
Diffuser type T, no magnets, plugged filling port	C
Diffuser type P, no magnets, plugged filling port	D
Other combinations	on request

### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Note: Standard items are in stock, semi standard items are available within four weeks

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

## Ordering Information (cont.)

Degree of filtration						Media code
Average filtration beta ratio $\beta$ (ISO 16889) / particle size $\mu\text{m}$ [c]						
$\beta(x)=2$	$\beta(x)=10$	$\beta(x)=75$	$\beta(x)=100$	$\beta(x)=200$	$\beta(x)=1000$	
% efficiency, based on the above beta ratio ( $\beta x$ )						
50.0%	90.0%	98.7%	99.0%	99.5%	99.9%	
N/A	N/A	N/A	N/A	N/A	4.5	02Q/02QL
N/A	N/A	4.5	5	6	7	05Q/05QL
N/A	6	8.5	9	10	12	10Q/10QL
6	11	17	18	20	22	20Q/20QL

Supersedes spare element table					
BGT390	TXWL8A-2	TXWL8A-5	TXWL8A-10	TXWL8A-20	
Part number spare element	937832Q	937843Q	937858Q	937869Q	
BGT500	TXWL8C-2	TXWL8C-5	TXWL8C-10	TXWL8C-20	
Part number spare element	937833Q	937842Q	937859Q	937868Q	
BGT600	TXWL10-2	TXWL10-5	TXWL10-10	TXWL10-20	
Part number spare element	937834Q	937841Q	937860Q	937867Q	
BGT800	TXWL11-2	TXWL11-5	TXWL11-10	TXWL11-20	
Part number spare element	937835Q	937840Q	937861Q	937866Q	
BGT1000	TXWL12-2	TXWL12-5	TXWL12-10	TXWL12-20	
Part number spare element	937836Q	937839Q	937862Q	937865Q	
BGT1500	TXWL13-2	TXWL13-5	TXWL13-10	TXWL13-20	
Part number spare element	937837Q	937838Q	937863Q	937864Q	

Supersedes spare element table						
BGT390	TXX8A-10-B	TXW8A-2-B	TXW8A-5-B	TXW8A-10-B	TXW8A-20-B	ST8A-40-B
Part number spare element	937728	937742Q	937763Q	937778Q	937799Q	937813
BGT500	TXX8C-10-B	TXW8C-2-B	TXW8C-5-B	TXW8C-10-B	TXW8C-20-B	ST8C-40-B
Part number spare element	937729	937741Q	937764Q	937777Q	937800Q	937812
BGT600	TXX10-10-B	TXW10-2-B	TXW10-5-B	TXW10-10-B	TXW10-20-B	ST10-40-B
Part number spare element	937730	937740Q	937765Q	937776Q	937801Q	937811
BGT800	TXX11-10-B	TXW11-2-B	TXW11-5-B	TXW11-10-B	TXW11-20-B	ST11-40-B
Part number spare element	937731	937739Q	937766Q	937775Q	937802Q	937810
BGT1000	TXX12-10-B	TXW12-2-B	TXW12-5-B	TXW12-10-B	TXW12-20-B	ST12-40-B
Part number spare element	937732	937738Q	937767Q	937774Q	937803Q	937809
BGT1500	TXX13-10-B	TXW13-2-B	TXW13-5-B	TXW13-10-B	TXW13-20-B	ST13-40-B
Part number spare element	937733	937737Q	937768Q	937773Q	937804Q	937808
BGT2000	TXX14-10-B	TXW14-2-B	TXW14-5-B	TXW14-10-B	TXW14-20-B	ST14-40-B
Part number spare element	937734	937736Q	937769Q	937772Q	937805Q	937807
BGT2400	-	TXWH14-2-B	TXWH14-5-B	TXWH14-10-B	TXWH14-20-B	-
Part number spare element		937735Q	937770Q	937771Q	937806Q	



# Clearing the way for a greener future



Image courtesy of  
Johnston Sweepers



## ENVIRONMENTALLY-FRIENDLY FILTRATION SOLUTIONS

Trust Parker to provide you with a range of 'green' filter products that impact positively on the environment. With the new E-series your customers benefit from a solution that's smarter, safer and more responsible when it comes to filtration.

By significantly reducing waste levels, the E-Series is designed to increase the lifespan of hydraulic machinery. The Suction Return filter series features *LEIF*<sup>®</sup> elements that can be crushed and incinerated. By reducing bulk for disposal and recycling the material, this cost-effective solution contributes to a safer, cleaner environment.

Through Parker's advanced Laser CM technology, all vehicle operators can monitor fluid contamination on-site through a simple two minute test. This accurate monitoring method helps prevent catastrophic failure in critical systems instantly.

When it comes to filtration solutions you can rely on - the future is Parker.

Enjoy the benefits of 'green' filtration, email [filtrationinfo@parker.com](mailto:filtrationinfo@parker.com)

[www.parker.com/eurofilt](http://www.parker.com/eurofilt)







In-Tank Mounted Return Line Filters

# IN-AGB Series

MAX 2400 l/min

AN INNOVATIVE GREEN  
FILTER FEATURING  
**LEIF®**



Low pressure filters

# IN-AGB Series

## Features & Benefits

Features	Advantages	Benefits
Filter integrated in tank	Compact low cost solution Filter protected by reservoir	Suitable for extreme heavy duty applications or hazardous environments No tank top parts contributes to improved esthetical design
LEIF® elements	Patented element safeguards the use of genuine parts	Guaranteed quality of filtration Contributes to ISO 14001 certification
Magnetic pre-filtration	Removes ferrous particles, even during bypass conditions	Improved fluid cleanliness levels Extended element life time
In-to-Out filtration	All captured contamination retains inside the element	No recontamination of system during change of elements
High level of customisation	Dedicated system-matched solutions can be easily made available	Improved integration of filter in system combined with lower initial system costs
Full flow bypass with low hysteresis	Reduction of bypass period due to low hysteresis Only a small part of the total flow is bypassing the element	Improved protection of system
Standard or customised funnel	Ensures that oil enters the tank under the oil level	Significant reduction of oil foaming

## Typical Applications

- Agricultural machines
- Articulated dump trucks
- Forestry equipment
- Wheeled loaders
- Lubrication systems
- Excavators

### The Parker Filtration IN-AGB In-Tank Mounted Return Line Filters.

The low-cost, high-performance return line IN-AGB filter features Q3 filter media, a bypass construction with low hysteresis, magnetic pre-filtration and a high dirt-holding capacity. The range is capable of handling flow rates from 30 l/min up to 2400 l/min. LEIF® elements are available for flow rates up to 1500 l/min, meeting the most stringent demands for environmentally-friendly filtration and offering protection against poor quality pirate elements.



## Specification

### Assembly:

Inside tank.

### Seal material:

Nitrile, fluoroelastomer, neoprene.

### Operating temperature range:

-40° to +120°C.

### Bypass setting:

0.8/1.5 and 2.0 bar.

Other settings on request.

### Degree of filtration:

Determined by multipass test according to ISO 16889.

### Flow fatigue characteristics:

Filter media is supported so that the optimal fatigue life is achieved.

### Filtration media:

Microglass III, Ecoglass III for *LEIF*® elements

Also available 10µm Cellulose and 40µm stainless steel mesh.

### Element collapse rating:

10 bar (ISO 2941).

### Options:

Diffuser type P (straight pipe, no perforated plate area)

Diffuser type T (with closed diffuser end cap and with perforated plate area, recommended when oil entry in reservoir is close to the reservoir bottom or to ensure oil entry under the reservoir oil level)

### Magnetic pack:

Standard.

**Note:** IN-AGB 2-400 and 2-500 are standard supplied without magnets.

### Filter element:

*LEIF*® element with reusable metal element sleeve.

Optional conventional style element with steel end caps.

The *LEIF*® element is patented and safeguards the use of genuine parts.

**Note:** *LEIF*® element can be used with mineral and HEES type oils.

For other fluids consult Parker Filtration.

*LEIF*® contributes to ISO 14001 quality standards.

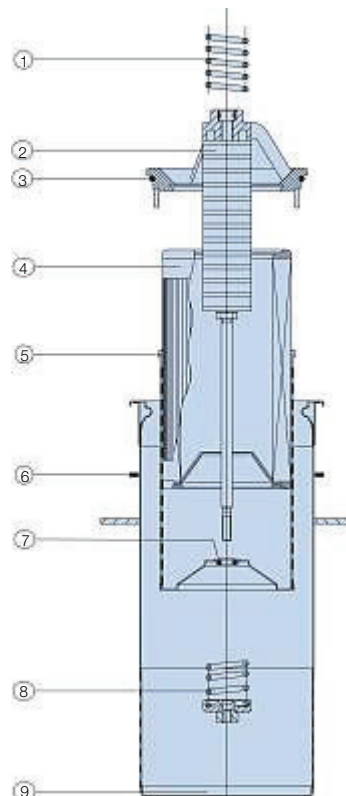
### Insert-AGB *LEIF*® 3 series

Ref.	No.	Description
1	1	Top-spring
2	1	Insert
3	1	Insert-seal
4	1	<i>LEIF</i> ® Element
5	1	Sleeve
6	1	Gasket
7	1	O-ring
8	1	Bypass set
9	1	Diffuser

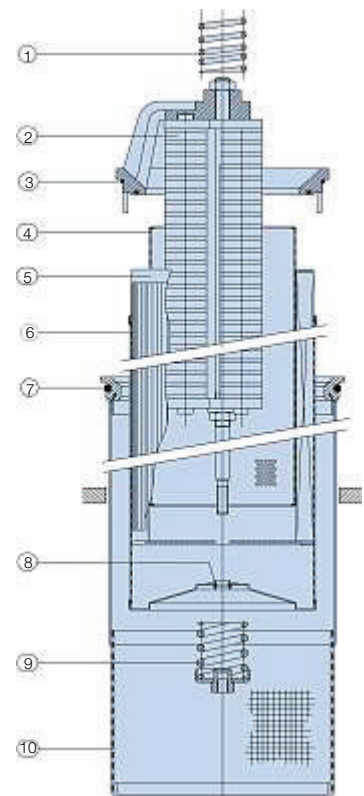
### Insert-AGB *LEIF*® 4 series

Ref.	No.	Description
1	1	Top-spring
2	1	Insert
3	1	Insert-seal
4	1	Inner sleeve
5	1	<i>LEIF</i> ®-element
6	1	Outer sleeve
7	1	O-ring
8	1	O-ring
9	1	Bypass set
10	1	Diffuser

### 1-3 Series

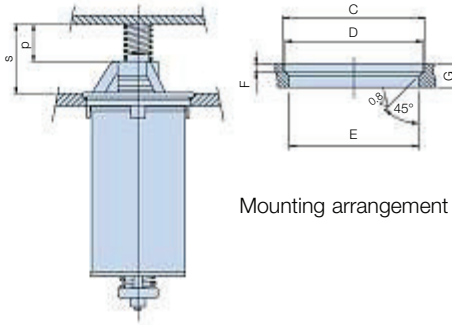
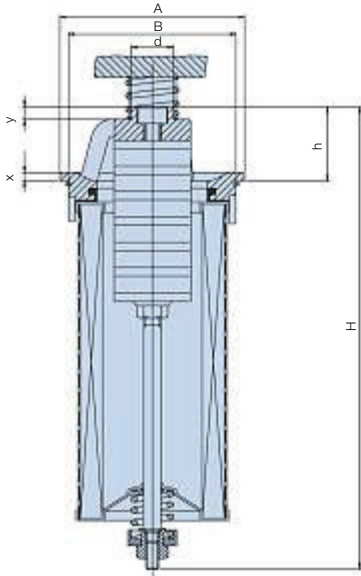


### 4 Series



# IN-AGB Series

Specification (cont.)

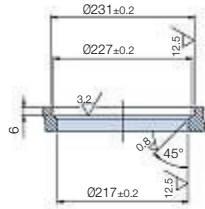
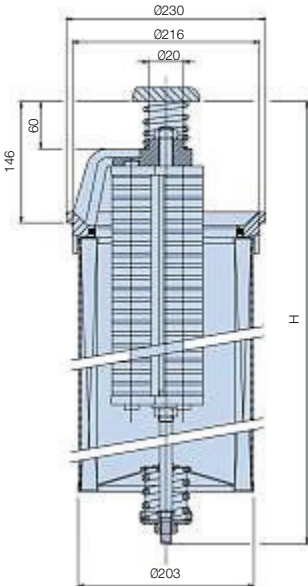


Mounting arrangement

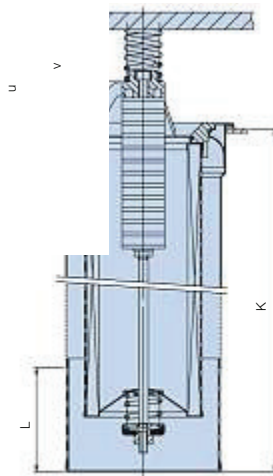
without diffuser

	INAGB Length	Type	A	B	H	h	d	x	y	s	p	C	D	E	F	G
1 Series	0	IN30	87	79	122	35	20	4	6	45	20	88	85	80	4	12
	2	IN60	87	79	173	35	20	4	6	45	20	88	85	80	4	12
	3	IN90	87	79	217	35	20	4	6	45	20	88	85	80	4	12
	4	IN120	87	79	267	35	20	4	6	45	20	88	85	80	4	12
	5	IN125	87	79	381	35	20	4	6	45	20	88	85	80	4	12
2 Series	6	IN170	125	116	284	48	25	5	8	77	42	126	122	117	5	15
	7	IN230	125	116	360	48	25	5	8	77	42	126	122	117	5	15
	8	IN300	125	116	559	48	25	5	8	77	42	126	122	117	5	15
	9	IN400	125	116	579	48	25	5	8	77	42	126	122	117	5	15
	10	IN500	125	116	599	48	25	5	8	77	42	126	122	117	5	15
3 Series	11A	IN270	150	138	325	62	30	7	12	100	55	151	149	139	5	18
	11	IN390	150	138	407	62	30	7	12	100	55	151	149	139	5	18
	12	IN500	150	138	599	62	30	7	12	100	55	151	149	139	5	18

Dimensions in mm



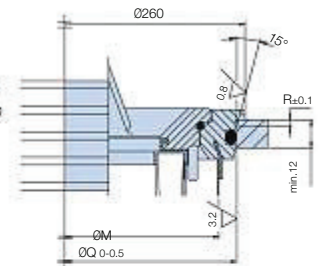
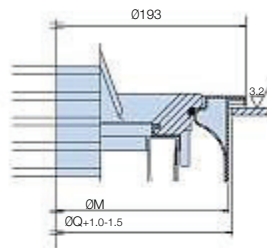
without diffuser



with diffuser

IN-AGB 3

IN-AGB 4



INAGB Length	Type	H
13	IN600	543
14	IN800	653
15	IN1000	758
16	IN1500	1038
17	IN2000	1303
18	IN2400	1303

Dimensions in mm

	INAGB Length	Type	K	L	M	U	V	Q	R
3 Series	11A	IN270	324	110	175	106	55	178	
	11	IN390	364	110	175	106	55	178	
	12	IN500(3)	554	125	175	106	55	178	
4 Series	13	IN600	445	183	239	145	60	250.5	2.5
	14	IN800	555	183	239	145	60	250.5	2.5
	15	IN1000	660	183	239	145	60	250.5	2.5
	16	IN1500	940	183	239	145	60	250.5	2.5
	17	IN2000	1220	183	239	145	60	250.5	2.5
	18	IN2400	1220	183	239	145	60	250.5	2.5

Dimensions in mm



## Pressure Drop Curves

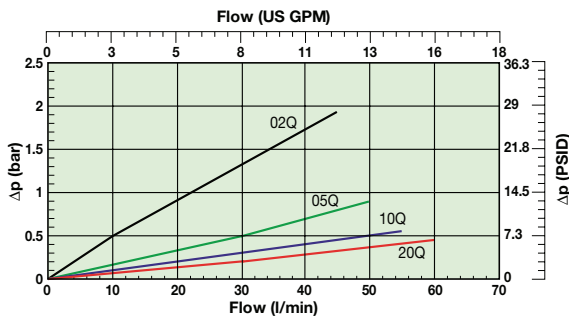
The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

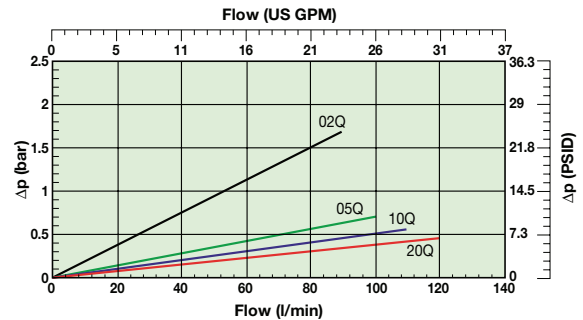
$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

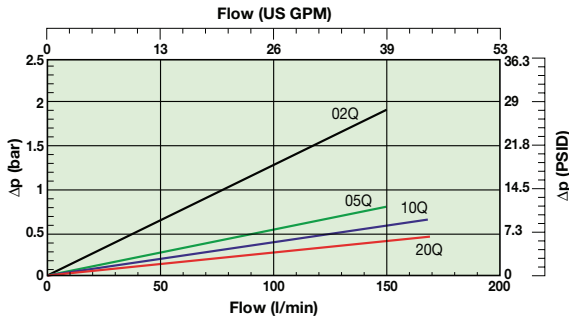
**IN30 (Element length code 0)**



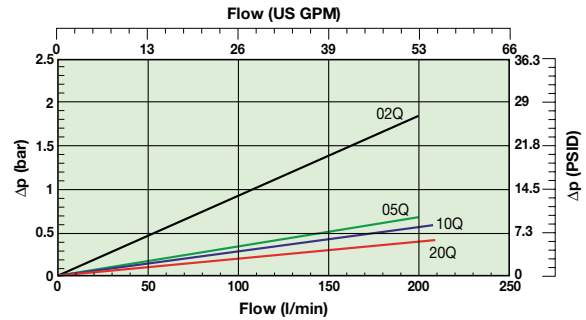
**IN60 (Element length code 2)**



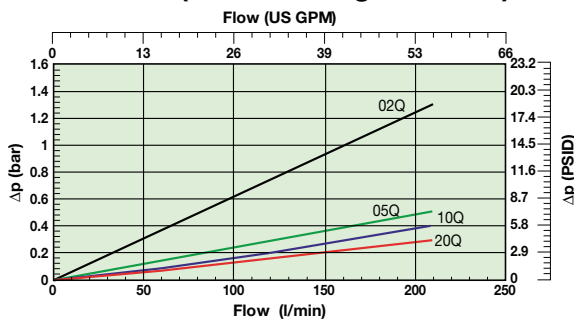
**IN90 (Element length code 3)**



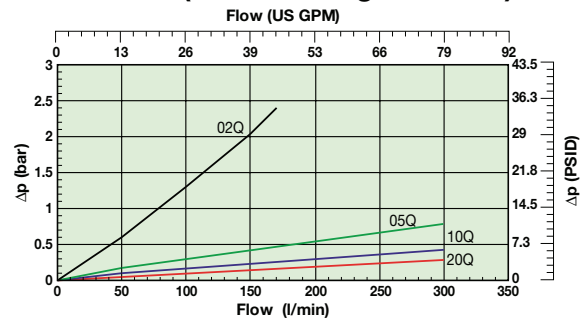
**IN120 (Element length code 4)**



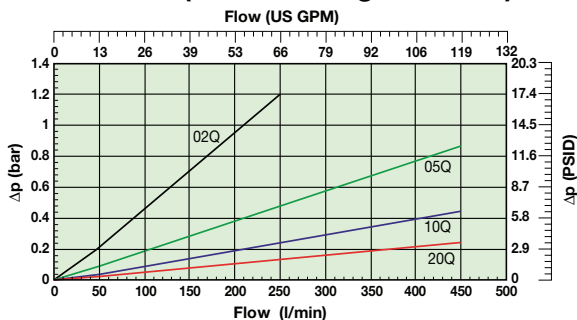
**IN125 (Element length code 5)**



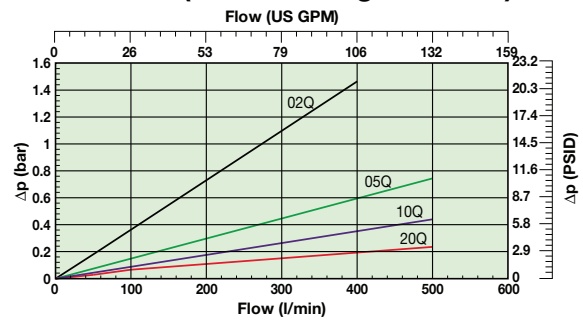
**IN170 (Element length code 6)**



**IN230 (Element length code 7)**



**IN300 (Element length code 8)**

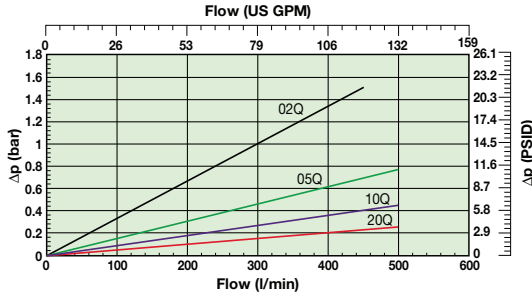




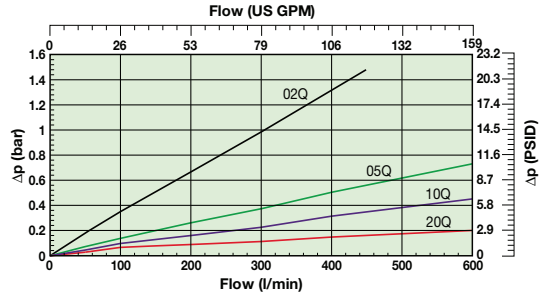
# IN-AGB Series

## Pressure Drop Curves (cont.)

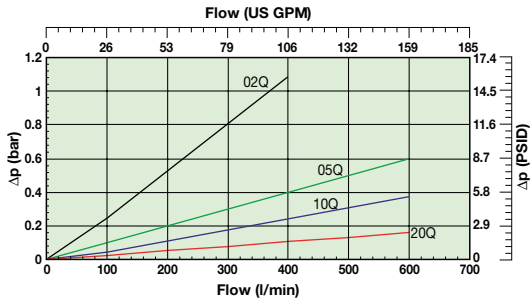
**IN400 (Element length code 9)**



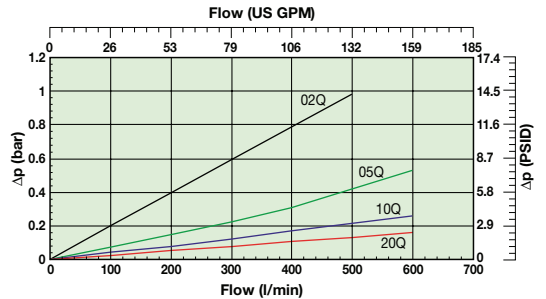
**IN500 (Element length code 10)**



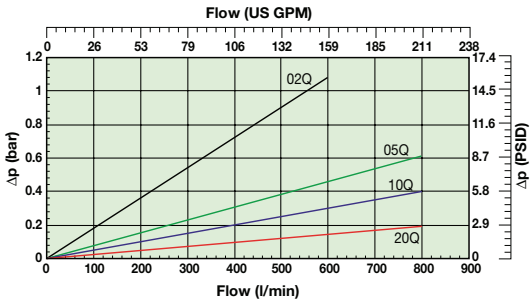
**IN390 (3)(Element length code 11)**



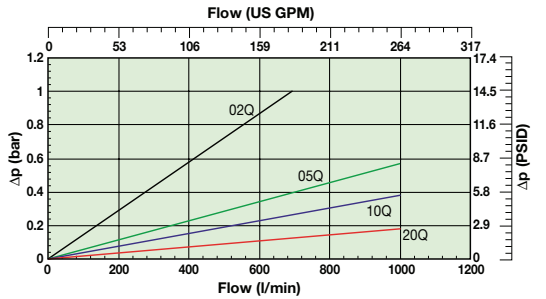
**IN500 (3) (Element length code 12)**



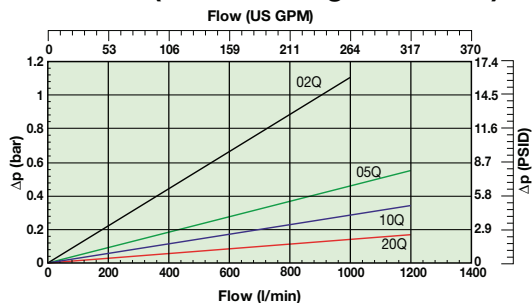
**IN600 (Element length code 13)**



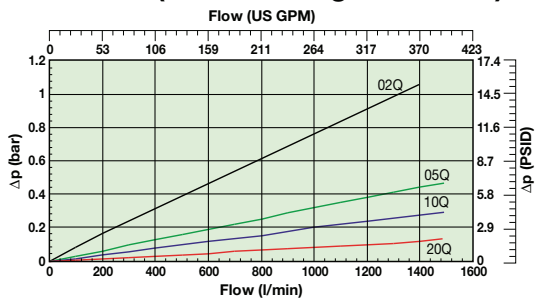
**IN800 (Element length code 14)**



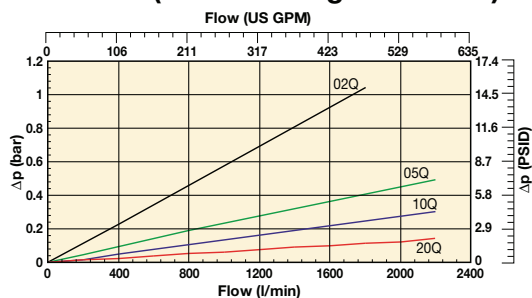
**IN1000 (Element length code 15)**



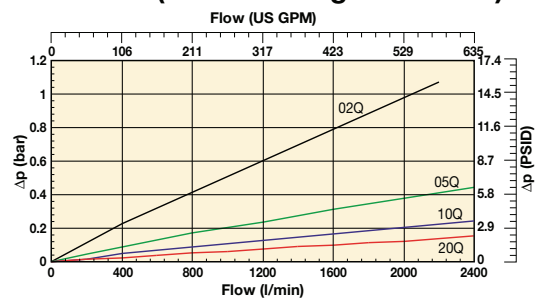
**IN1500 (Element length code 16)**



**IN2000 (Element length code 17)**

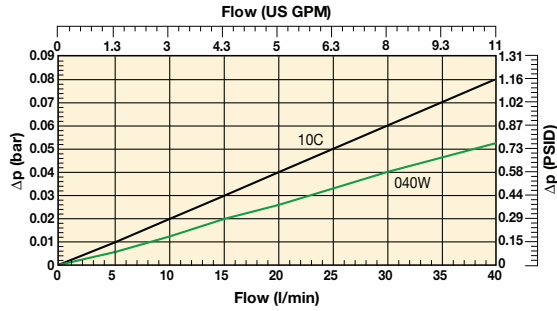


**IN1500 (Element length code 18)**

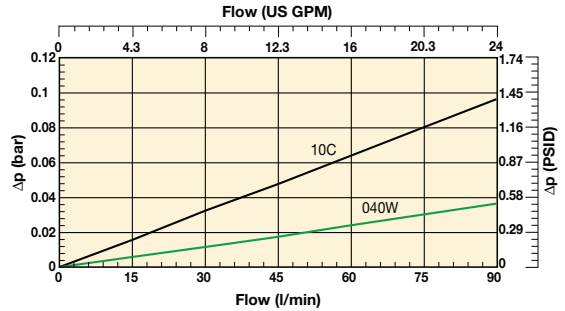


## Pressure Drop Curves (cellulose and stainless steel media)

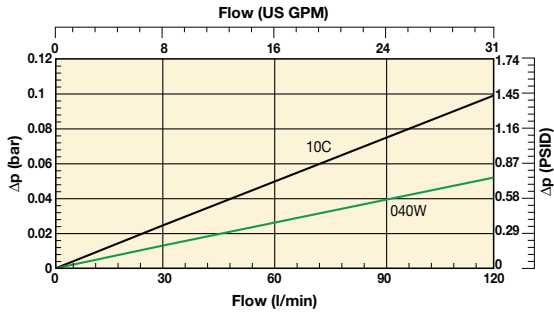
**IN30 (Element length code 0)**  
Cellulose & Stainless steel media



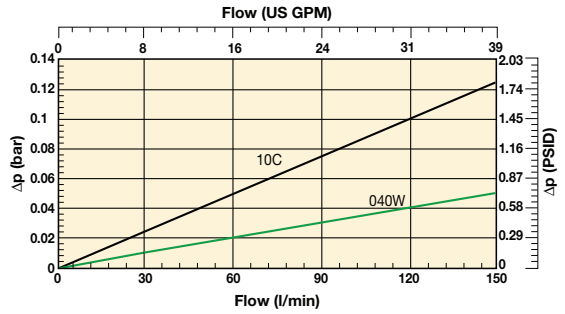
**IN60 (Element length code 2)**  
Cellulose & Stainless steel media



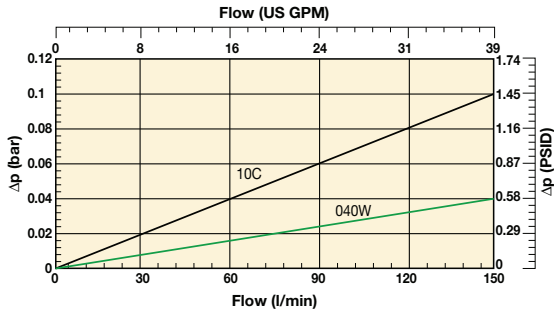
**IN90 (Element length code 3)**  
Cellulose & Stainless steel media



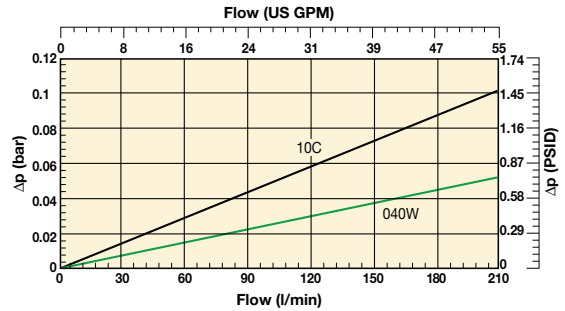
**IN120 (Element length code 4)**  
Cellulose & Stainless steel media



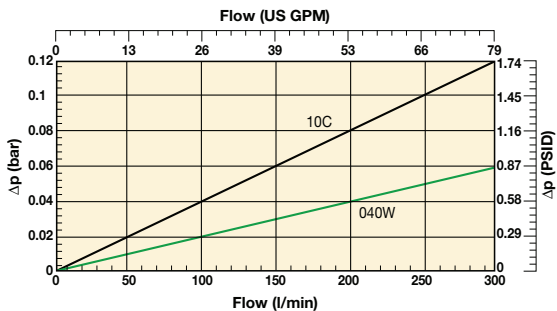
**IN125 (Element length code 5)**  
Cellulose & Stainless steel media



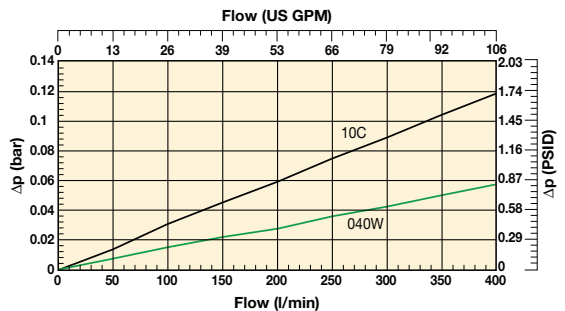
**IN170 (Element length code 6)**  
Cellulose & Stainless steel media



**IN230 (Element length code 7)**  
Cellulose & Stainless steel media



**IN300 (Element length code 8)**  
Cellulose & Stainless steel media

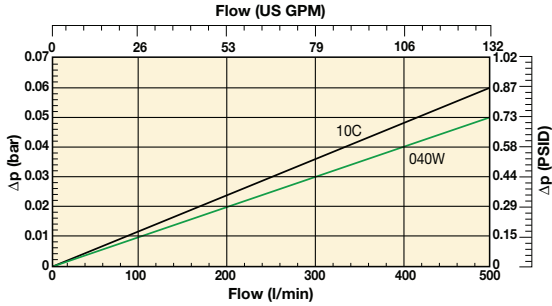


Cellulose and stainless steel media  
Example: IN300 Filter Element Length 8 - Cellulose and stainless steel media

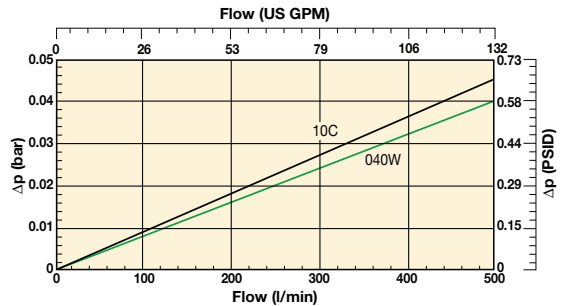
# IN-AGB Series

Pressure Drop Curves (cellulose and stainless steel media)

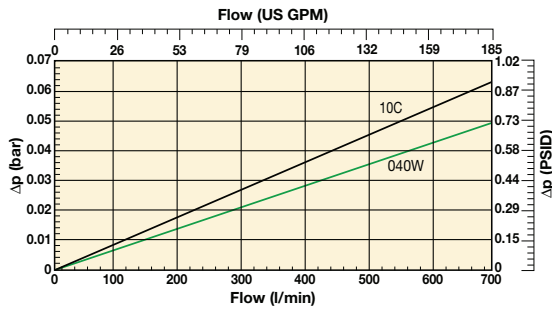
**IN390 (Element length code 11)**  
Cellulose & Stainless steel media



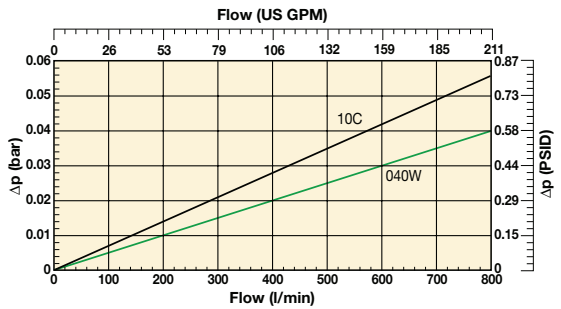
**IN500 (Element length code 12)**  
Cellulose & Stainless steel media



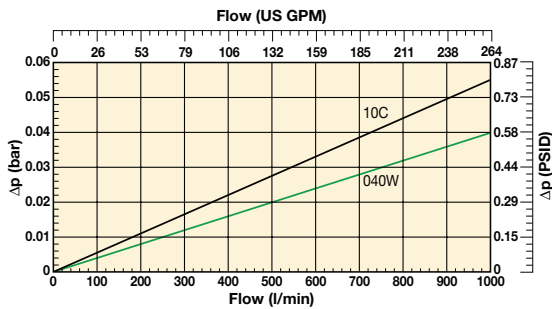
**IN600 (Element length code 13)**  
Cellulose & Stainless steel media



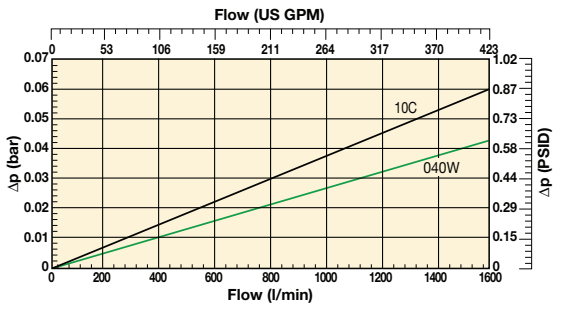
**IN800 (Element length code 14)**  
Cellulose & Stainless steel media



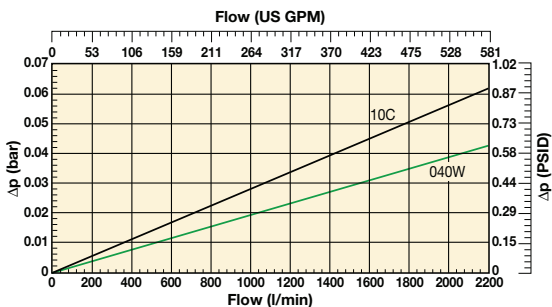
**IN1000 (Element length code 15)**  
Cellulose & Stainless steel media



**IN1500 (Element length code 16)**  
Cellulose & Stainless steel media



**IN2000 (Element length code 17)**  
Cellulose & Stainless steel media



Cellulose and stainless steel media  
Example: IN300 Filter Element Length 8 - Cellulose and stainless steel media

## Ordering Information

### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
<b>IN310QLBNEXXX1</b>	IN90-TXWL3-10B15	90	IN90	Length 3	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937878Q</b>	TXWL3-10
<b>IN320QLBNEXXX1</b>	IN90-TXWL3-20 B15	90	IN90	Length 3	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937877Q</b>	TXWL3-20
<b>IN510QLBNEXXX1</b>	IN125-TXWL3E-10 B15	125	IN125	Length 5	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937852Q</b>	TXWL3E-10
<b>IN520QLBNEXXX1</b>	IN125-TXWL3E-20 B15	125	IN125	Length 5	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937875Q</b>	TXWL3E-20
<b>IN610QLBNEXXX1</b>	IN170-TXWL4-10 B15	170	IN170	Length 6	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937853Q</b>	TXWL4-10
<b>IN620QLBNEXXX1</b>	IN170-TXWL4-20 B15	170	IN170	Length 6	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	None	<b>937874Q</b>	TXWL4-20
<b>IN810QLBNEXXX3</b>	IN300-TXWL5A-10 T B15	300	IN300	Length 8	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937855Q</b>	TXWL5A-10
<b>IN820QLBNEXXX3</b>	IN300-TXWL5A-20 T B15	300	IN300	Length 8	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937872Q</b>	TXWL5A-20
<b>IN1210QLBNEXXX3</b>	IN500-TXWL8C-10 T B15	500	IN500	Length 12	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937859Q</b>	TXWL8C-10
<b>IN1220QLBNEXXX3</b>	IN500-TXWL8C-20 T B15	500	IN500	Length 12	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937868Q</b>	TXWL8C-20
<b>IN1510QLBNEXXX3</b>	IN1000-TXWL12-10 T B15	1000	IN1000	Length 15	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937862Q</b>	TXWL12-10
<b>IN1520QLBNEXXX3</b>	IN1000-TXWL12-20 T B15	1000	IN1000	Length 15	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937865Q</b>	TXWL12-20
<b>IN1710QLBNEXXX3</b>	IN2000-TXW14-10-B T B15	2000	IN2000	Length 17	10	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937772Q</b>	TXW14-10B
<b>IN1720QLBNEXXX3</b>	IN2000-TXW14-20-B T B15	2000	IN2000	Length 17	20	Nitrile	NA	1.5 Bar (22 Psi)	NA	Diffuser type T	<b>937805Q</b>	TXW14-20B

Note: Filter assemblies ordered from the product configurator below are on extended lead times. Where possible, please make your selection from the table above.

### Product configurator

#### Configurator example filter including LEIF® element

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>IN</b>	<b>10</b>	<b>05QL</b>	<b>V</b>	<b>N</b>	<b>H</b>	<b>XXX</b>	<b>1</b>

#### Configurator example filter including conventional element

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>IN</b>	<b>18</b>	<b>20Q</b>	<b>B</b>	<b>N</b>	<b>H</b>	<b>XXX</b>	<b>3</b>

Box 1	Box 2	Box 3	Box 4	Box 5				
<b>Code</b>	<b>Filter Rating</b>	<b>Degree of filtration</b>						
<b>IN</b>	<b>Insert IN-AGB</b>	<b>Element media</b>						
	<b>Code</b>	<b>Glass fibre</b>						
	IN30	Microglass III (for disposable elements)						
	IN60	<b>Cellulose</b>			<b>Wire mesh</b>			
	IN90	Ecoglass III (for Leif® elements)			Abs. rating			
	IN120	Nom. rating						
	IN125	Disposable element	10C	02Q	05Q	<b>10Q</b>	<b>20Q</b>	040W
	IN170	<b>LEIF® element</b>		02QL	<b>05QL</b>	<b>10QL</b>	<b>20QL</b>	
	IN230							
	IN300							
	IN400							
	IN500							
	IN390(3)							
	IN500(3)							
	IN600							
	IN800							
	IN1000							
	IN1500							
	IN2000							
	IN2400							
		<b>Box 4 Seal type</b>			<b>Box 5 Indicator</b>			
		<b>Seal material</b>	<b>Code</b>	<b>Code</b>				
		Nitrile	<b>B</b>	No indicator				
		Fluoroelastomer	V					
		Neoprene	N					

Box 6	<b>Bypass valve</b>
<b>Bypass valve</b>	<b>Code</b>
0.8 bar	B
1.5 bar	<b>E</b>
2.0 bar for IN-AGB (up to length 12)	H
Blocked bypass	X
Other bypass settings	on request

Box 7	<b>Filter connection</b>
<b>Ports</b>	<b>Code</b>
No ports applicable	<b>XXX</b>

Box 8	<b>Options</b>
<b>Options</b>	<b>Code</b>
No diffuser required	<b>1</b>
Diffuser type T with perforated plate area	<b>3</b>
Diffuser type P without perforated plate area	4
No magnets	5
Diffuser type T and no magnets	A
Diffuser type P and no magnets	B

### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Note: Standard items are in stock, semi standard items are available within four weeks

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.

Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

Note: IN-AGB size 2-400 and 2-500 are standard supplied without magnets



## In-Tank Mounted Return Line Filters

# IN-AGB Series

### Ordering Information (cont.)

Degree of filtration						Media code
Average filtration beta ratio $\beta$ (ISO 16889) / particle size $\mu\text{m}$ [c]						
$\beta(x)=2$	$\beta(x)=10$	$\beta(x)=75$	$\beta(x)=100$	$\beta(x)=200$	$\beta(x)=1000$	
% efficiency, based on the above beta ratio ( $\beta x$ )						
50.0%	90.0%	98.7%	99.0%	99.5%	99.9%	
N/A	N/A	N/A	N/A	N/A	4.5	02Q/02QL
N/A	N/A	4.5	5	6	7	05Q/05QL
N/A	6	8.5	9	10	12	10Q/10QL
6	11	17	18	20	22	20Q/20QL

Supersedes spare element table				
IN30	TXWL-2	TXWL-5	TXWL-10	TXWL-20
Part number spare element	937822Q	937885Q	937884Q	937883Q
IN60	TXWL2-2	TXWL2-5	TXWL2-10	TXWL2-20
Part number spare element	937823Q	937880Q	937881Q	937882Q
IN90	TXWL3-2	TXWL3-5	TXWL3-10	TXWL3-20
Part number spare element	937824Q	937879Q	937878Q	937877Q
IN120	TXWL3D-2	TXWL3D-5	TXWL3D-10	TXWL3D-20
Part number spare element	937825Q	937850Q	937851Q	937876Q
IN125	TXWL3E-2	TXWL3E-5	TXWL3E-10	TXWL3E-20
Part number spare element	937826Q	937849Q	937852Q	937875Q
IN170	TXWL4-2	TXWL4-5	TXWL4-10	TXWL4-20
Part number spare element	937827Q	937848Q	937853Q	937874Q
IN230	TXWL5-2	TXWL5-5	TXWL5-10	TXWL5-20
Part number spare element	937828Q	937847Q	937854Q	937873Q
IN300	TXWL5A-2	TXWL5A-5	TXWL5A-10	TXWL5A-20
Part number spare element	937829Q	937846Q	937855Q	937872Q
IN400	TXWL5B-2	TXWL5B-5	TXWL5B-10	TXWL5B-20
Part number spare element	937830Q	937845Q	937856Q	937871Q
IN500	TXWL5C-2	TXWL5C-5	TXWL5C-10	TXWL5C-20
Part number spare element	937831Q	937844Q	937857Q	937870Q
IN390	TXWL8A-2	TXWL8A-5	TXWL8A-10	TXWL8A-20
Part number spare element	937832Q	937843Q	937858Q	937869Q
IN500	TXWL8C-2	TXWL8C-5	TXWL8C-10	TXWL8C-20
Part number spare element	937833Q	937842Q	937859Q	937868Q
IN600	TXWL10-2	TXWL10-5	TXWL10-10	TXWL10-20
Part number spare element	937834Q	937841Q	937860Q	937867Q
IN800	TXWL11-2	TXWL11-5	TXWL11-10	TXWL11-20
Part number spare element	937835Q	937840Q	937861Q	937866Q
IN1000	TXWL12-2	TXWL12-5	TXWL12-10	TXWL12-20
Part number spare element	937836Q	937839Q	937862Q	937865Q
IN1500	TXWL13-2	TXWL13-5	TXWL13-10	TXWL13-20
Part number spare element	937837Q	937838Q	937863Q	937864Q



## Ordering Information (cont.)

**Supersedes spare element table**

IN30	TXX-10-B	TXW-2-B	TXW-5-B	TXW-10-B	TXW-20-B	ST-40-B
Part number spare element	937720	937752Q	937753Q	937788Q	937789Q	937821
IN60	TXX2-10-B	TXW2-2-B	TXW2-5-B	TXW2-10-B	TXW2-20-B	ST2-40-B
Part number spare element	937721	937751Q	937754Q	937787Q	937790Q	937820
IN90	TXX3-10-B	TXW3-2-B	TXW3-5-B	TXW3-10-B	TXW3-20-B	ST3-40-B
Part number spare element	937722	937750Q	937755Q	937786Q	937791Q	937819
IN120	TXX3D-10-B	TXW3D-2-B	TXW3D-5-B	TXW3D-10-B	TXW3D-20-B	ST3D-40-B
Part number spare element	937723	937749Q	937756Q	937785Q	937792Q	937818
IN125	TXX3E-10-B	TXW3E-2-B	TXW3E-5-B	TXW3E-10-B	TXW3E-20-B	ST3E-40-B
Part number spare element	937724	937748Q	937757Q	937784Q	937793Q	937817
IN170	TXX4-10-B	TXW4-2-B	TXW4-5-B	TXW4-10-B	TXW4-20-B	ST4-40-B
Part number spare element	937725	937747Q	937758Q	937783Q	937794Q	937816
IN230	TXX5-10-B	TXW5-2-B	TXW5-5-B	TXW5-10-B	TXW5-20-B	ST5-40-B
Part number spare element	937726	937746Q	937759Q	937782Q	937795Q	937815
IN300	TXX5A-10-B	TXW5A-2-B	TXW5A-5-B	TXW5A-10-B	TXW5A-20-B	ST5A-40-B
Part number spare element	937727	937745Q	937760Q	937781Q	937796Q	937814
IN390	TXX8A-10-B	TXW8A-2-B	TXW8A-5-B	TXW8A-10-B	TXW8A-20-B	ST8A-40-B
Part number spare element	937728	937742Q	937763Q	937778Q	937799Q	937813
IN500 (3 series)	TXX8C-10-B	TXW8C-2-B	TXW8C-5-B	TXW8C-10-B	TXW8C-20-B	ST8C-40-B
Part number spare element	937729	937741Q	937764Q	937777Q	937800Q	937812
IN600	TXX10-10-B	TXW10-2-B	TXW10-5-B	TXW10-10-B	TXW10-20-B	ST10-40-B
Part number spare element	937730	937740Q	937765Q	937776Q	937801Q	937811
IN800	TXX11-10-B	TXW11-2-B	TXW11-5-B	TXW11-10-B	TXW11-20-B	ST11-40-B
Part number spare element	937731	937739Q	937766Q	937775Q	937802Q	937810
IN1000	TXX12-10-B	TXW12-2-B	TXW12-5-B	TXW12-10-B	TXW12-20-B	ST12-40-B
Part number spare element	937732	937738Q	937767Q	937774Q	937803Q	937809
IN1500	TXX13-10-B	TXW13-2-B	TXW13-5-B	TXW13-10-B	TXW13-20-B	ST13-40-B
Part number spare element	937733	937737Q	937768Q	937773Q	937804Q	937808
IN2000	TXX14-10-B	TXW14-2-B	TXW14-5-B	TXW14-10-B	TXW14-20-B	ST14-20
Part number spare element	937734	937736Q	937769Q	937772Q	937805Q	937807
IN2400	-	TXWH14-2-B	TXWH14-5-B	TXWH14-10-B	TXWH14-20-B	-
Part number spare element		937735Q	937770Q	937771Q	937806Q	

# Grab the benefits of a greener future



Image courtesy of Komatsu

## ENVIRONMENTALLY-FRIENDLY FILTRATION SOLUTIONS

Trust Parker to provide you with a range of 'green' filter products that impact positively on the environment. Now with new E-series element ranges your customers benefit from a solution that's smarter, safer and more responsible when it comes to filtration.

By significantly reducing waste levels, E-Series elements are designed to increase the lifespan of hydraulic machinery. CN medium pressure filters feature Ecoglass elements that can be crushed, shredded, baled and when incinerated offer minimal residue causing little or no damage to the environment. Available in three models 15CN, 40CN and 80CN, they provide a reliable service and trouble-free operation under tough conditions.

Through Parker's advanced Laser CM technology, all vehicle operators can monitor fluid contamination on-site through a simple two minute test. This accurate monitoring method helps prevent catastrophic failure in critical systems instantly.

When it comes to filtration solutions you can rely on - the future is Parker.

Enjoy the benefits of 'green' filtration, email [filtrationinfo@parker.com](mailto:filtrationinfo@parker.com)

[www.parker.com/eurofilt](http://www.parker.com/eurofilt)





Tanktop Mounted Return Line Filters with Integrated Air Breather  
Tanktopper Series I, II & III

MAX 650 l/min - 10 bar





# Tanktopper Series I, II & III

## Features & Benefits

Features	Advantages	Benefits
Return line filter with Integrated airbreather	All in one filter	More compact design, cost reduction due to elimination of loose airbreather
Airbreather equipped with high quality labyrinth	No oil leakage through the airbreather	Improved efficiency of airbreather No oil leakage on the tank / in the environment
Second port and dipstick available	Filler port and level glass function can be integrated in filter	Significant reduction of reservoir accessories
Airbreather element always supplied with spare return line filter elements <i>LEIF</i> <sup>®</sup> elements	Both filter elements can be replaced during the service event	Improved protection of system due to change of airbreather element
Magnetic pre-filtration	Patented element safeguards the use of genuine parts	Guaranteed quality of filtration Contributes to ISO 14001 certification
In-to-Out filtration	Removes ferrous particles, even during bypass conditions	Improved fluid cleanliness levels Extended element life time
Full flow bypass with low hysteresis	All captured contamination retains inside the element	No recontamination of system during change of elements
Standard or customised funnel	Reduction of bypass period due to low hysteresis	Improved protection of system
	Only a small part of the total flow is bypassing the element	
Standard or customised funnel	Ensures that oil enters the tank under the oil level	Significant reduction of oil foaming

## Typical Applications

### TPR I

- Fork lift trucks
- Power packs
- Mini excavator

### TPR II

- Gully-sucker
- Power packs
- Dredging ships

### TPR III

- Mobile cranes
- Refuse vehicles



## The Parker Filtration Tanktopper Series I, II & III Tanktop Mounted Return Line Filters.

The TPR Series I, II & III offer a total filtration solution. A 10-micron Abs. air breather that is integrated into the filter housing, a magnet column for pre-filtration, 'In-to-Out' filtration, a full-flow bypass with low hysteresis, and the high performance Q3 filter element materials are all proven success factors in efficient return-line filtration for flow rates up to 650 l/min. Several pressure gauges and switches can be applied, combined or not with a dipstick. The all-in-one, easy-to-mount cost-saving TPR solution allows for a more compact tank design.

## Specification

### Operation pressure:

Max. 10 bar.

### Assembly:

Tank top mounted.

### Connections:

Threaded BSP or SAE ports.  
Second return port available for Tanktopper II and Tanktopper III.

### Filter housing:

Aluminium head and co-polymer cover.

### Seal material:

Nitrile, Fluoroelastomer.

### Operation temperature range:

-40 to +80°C.

### Bypass setting:

Opening pressure 0.8, 1.5 or 2.5 bar for Tanktopper I.  
Opening pressure 1.5 bar for Tanktopper II and III.

### Degree of filtration:

Determined by multipass test according to ISO 16889.

### Flow fatigue characteristics:

Filter media is supported so that the optimum fatigue life is achieved.

### Filtration media:

Microglass III, Ecoglass III for *LEIF*® element. Air breather 10 micron Abs. Also available 10µm Cellulose and 40µm stainless steel mesh. (TPR1)

### Element collapse rating:

10 bar (ISO 2941).

### Pressure indicator options:

Setting 0.7 or 1.2 bar.  
Other settings on request.  
Visual pressure gauge.  
Electrical pressure switch.

### Options:

Dipstick  
Second port (only for TPR II and III)

### Magnetic pack:

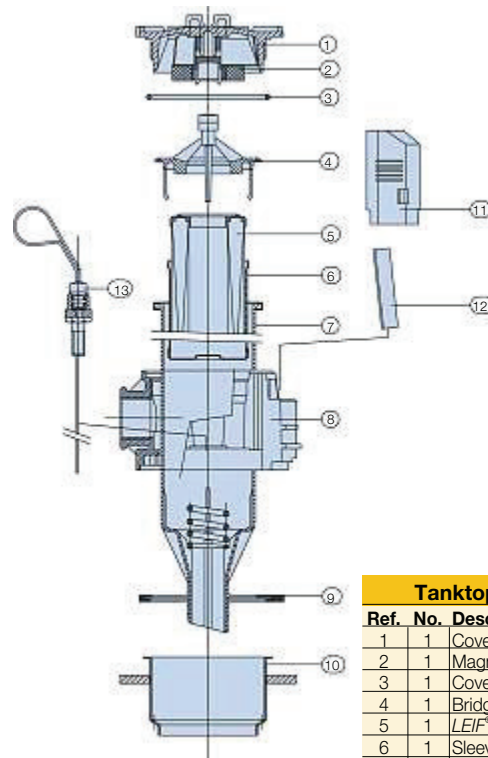
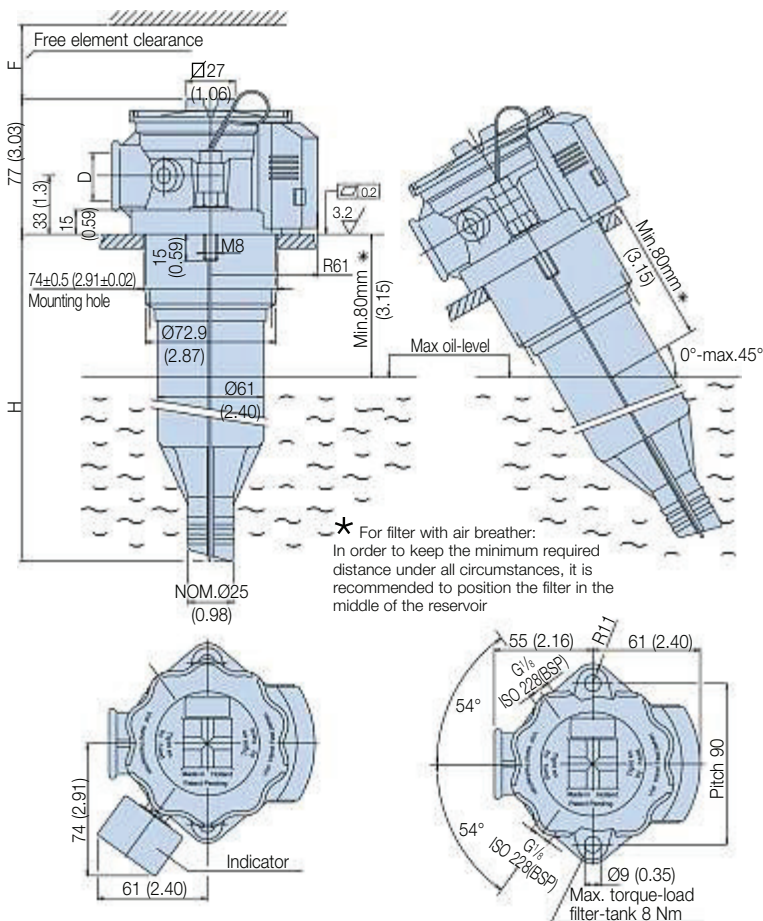
Optional for Tanktopper I.  
Standard for Tanktopper II and III.

### Filter element:

*LEIF*® element with reusable metal element sleeve.  
Conventional style element with steel end caps only optional for Tanktopper I. The *LEIF*® element is patented and safeguards the use of genuine parts.

**Note:** *LEIF*® element can be used with mineral and HEES type oils. For other fluids consult Parker Filtration.  
*LEIF*® contributes to ISO 14001 quality standards

## Tanktopper I (length 1 and 2)



Length		H	F	D
1	TPR1-40	169	160	G <sup>3</sup> / <sub>4</sub>
		(6.65)	(6.30)	(BSP)
2	TPR1-80	269	260	SAE 12
		(10.60)	(10.23)	

Dimensions in mm

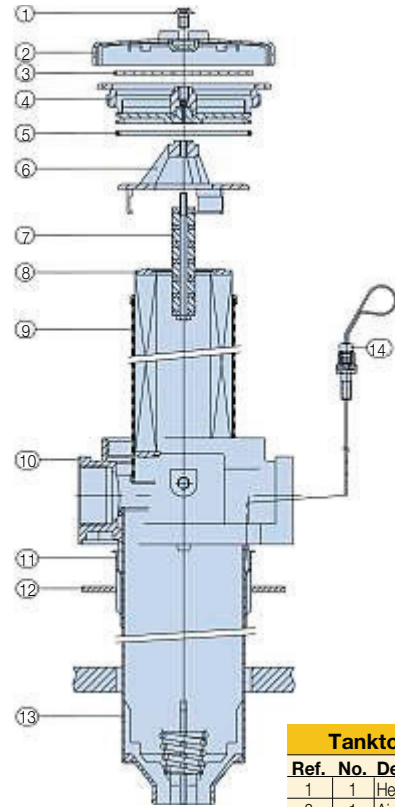
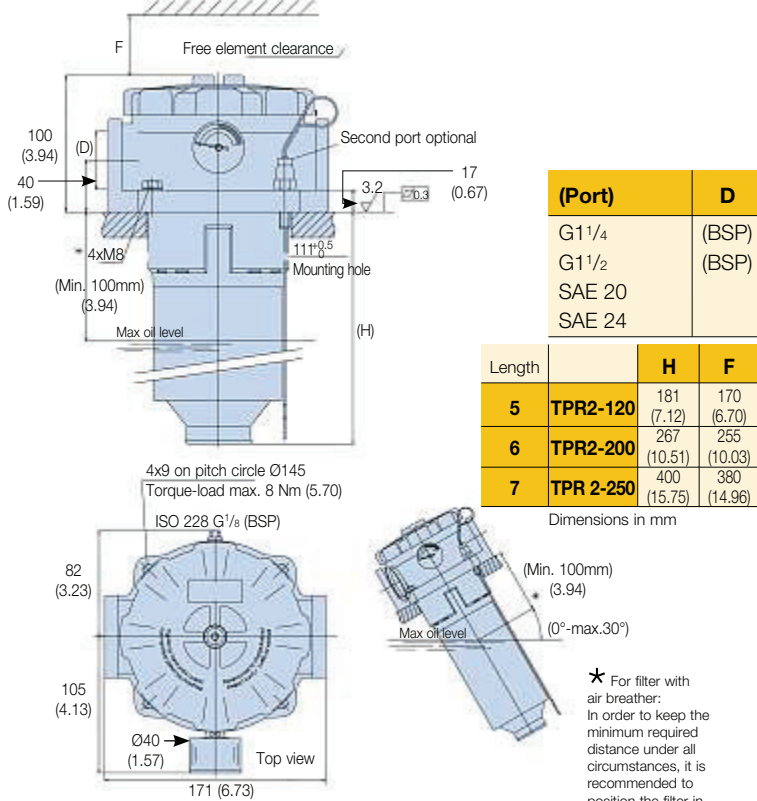
Tanktopper I	
Ref. No.	Description
1	1 Cover
2	1 Magnet-set
3	1 Cover-seal
4	1 Bridge (blue)
5	1 <i>LEIF</i> ® Element
6	1 Sleeve
7	1 Funnel-assembly
8	1 Filter-housing
9	1 Housing-seal
10	1 Airguide
11	1 Cover airbreather
12	1 Breather-element
13	1 Dipstick assembly



# Tanktopper Series I, II & III

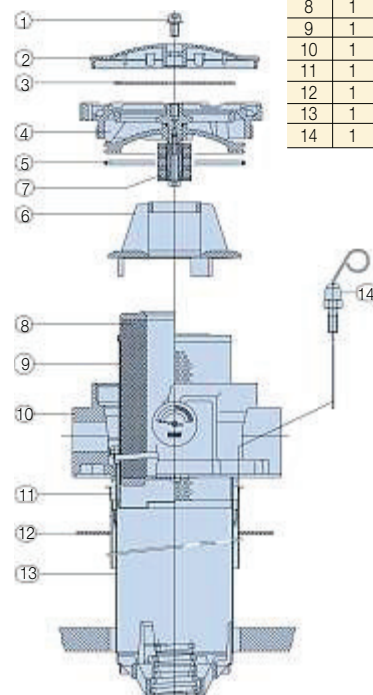
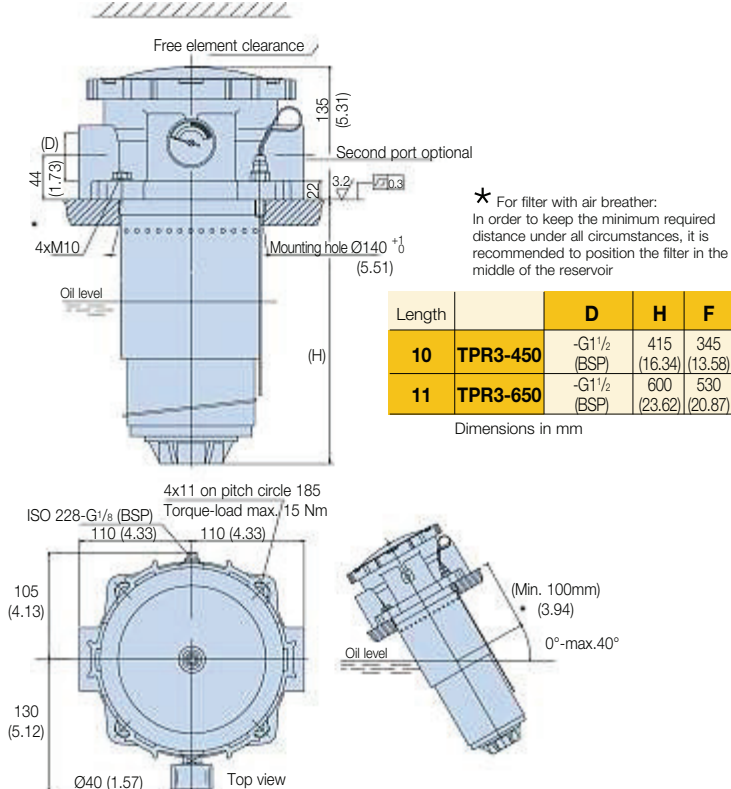
## Specification (cont.)

### Tanktopper II (length 5, 6 and 7)



Tanktopper II & III		
Ref. No.	Description	
1	1	Hexagon socket bolt M8
2	1	Air breather cap
3	1	Air breather filter medium
4	1	Cover (assembly)
5	1	Cover seal
6	1	Bridge
7	1	Magnet set
8	1	Element
9	1	Sleeve
10	1	Filter house
11	1	Airguide
12	1	Tank gasket
13	1	Funnel
14	1	Dipstick assembly

### Tanktopper III (length 10 and 11)

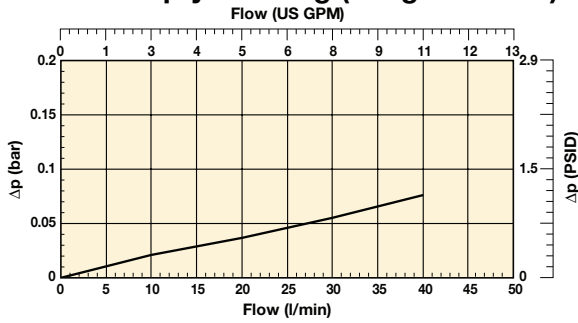


# Tanktopper Series I & II

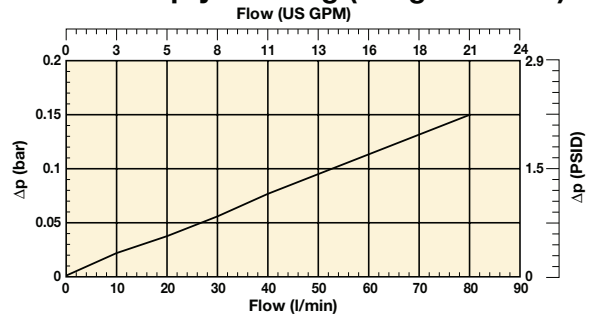
## Pressure Drop Curves - Tanktopper I

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

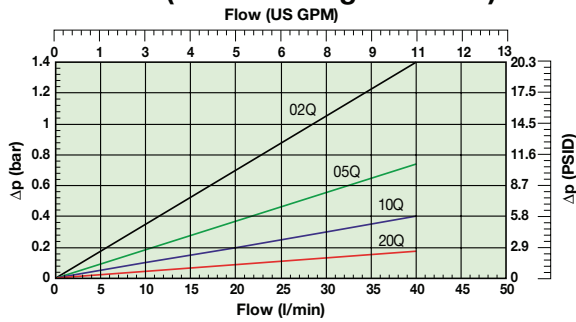
**TPR40 Empty Housing (Length code 1)**



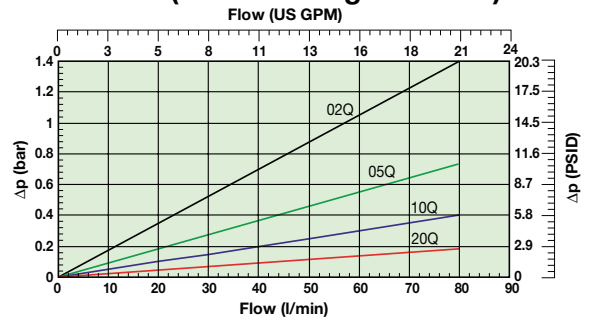
**TPR80 Empty Housing (Length code 2)**



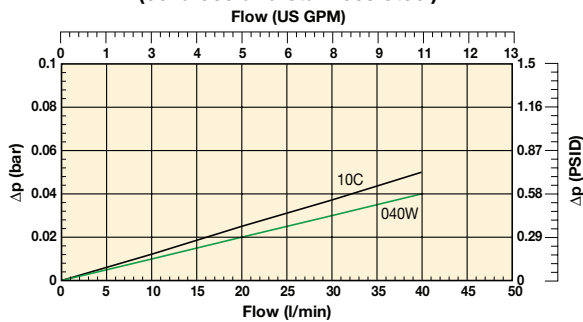
**TPR40 (Element length code 1)**



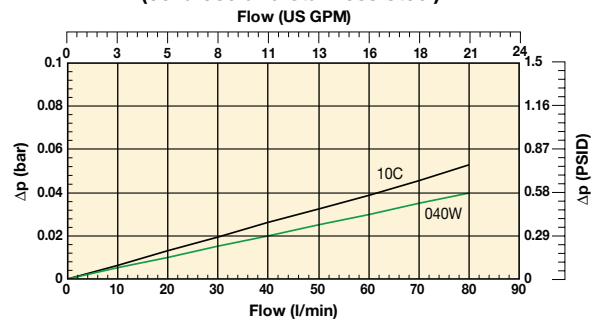
**TPR80 (Element length code 2)**



**TPR40 (Element length code 1)  
(cellulose and stainless steel)**



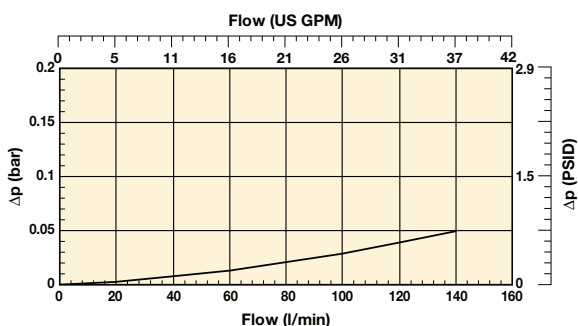
**TPR80 (Element length code 2)  
(cellulose and stainless steel)**



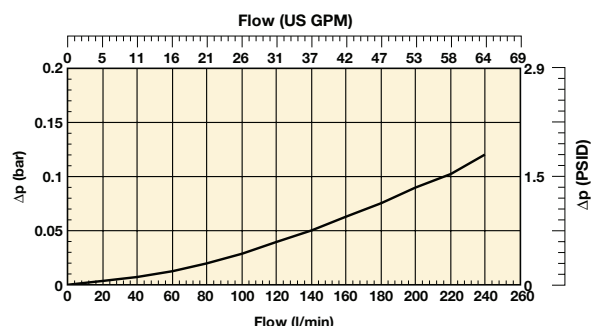
## Pressure Drop Curves - Tanktopper II

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

**TPR II Empty Housing with G1<sup>1</sup>/<sub>4</sub>" ports  
(Length code 5, 6 and 7)**



**TPR II Empty Housing with G1<sup>1</sup>/<sub>2</sub>" ports  
(Length code 5, 6 and 7)**

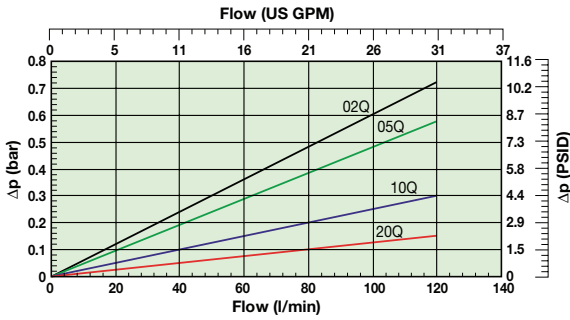


# Tanktopper Series II & III

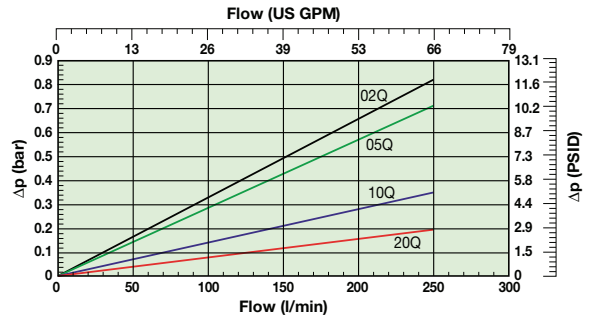
## Pressure Drop Curves - Tanktopper II (cont.)

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

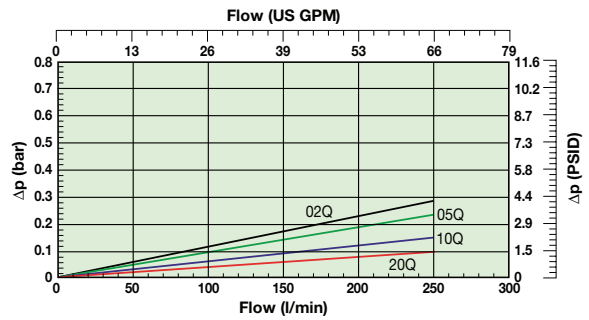
**TPR120 (Element length code 5)**



**TPR200 (Element length code 6)**



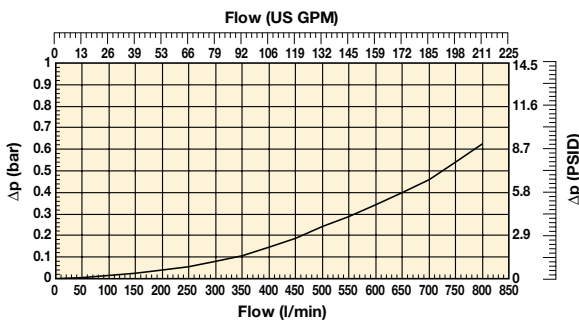
**TPR250 (Element length code 7)**



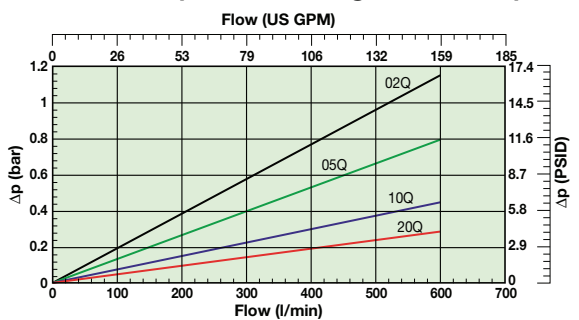
## Pressure Drop Curves - Tanktopper III

Filter housing and element pressure drop based on 32cSt fluid viscosity and 0.87 density.

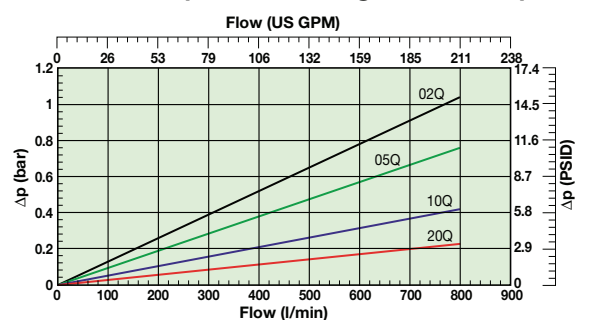
**TPR III Empty Housing with G1½" ports (Length code 10 and 11)**



**TPR450 (Element length code 10)**



**TPR650 (Element length code 11)**



# Tanktopper Series I, II & III

## Ordering Information

### Standard products table

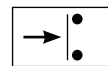
Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
<b>TPR110QLBP2EG12E</b>	TPR40-G <sup>1</sup> / <sub>8</sub> PXWL1-10 B15 MM MA	40	TPR40	Length 1	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>8</sub>	Magnets	<b>937902Q</b>	PXWL1-10
<b>TPR120QLBP2EG12E</b>	TPR40-G <sup>1</sup> / <sub>8</sub> PXWL1-20 B15 MM MA	40	TPR40	Length 1	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>8</sub>	Magnets	<b>937904Q</b>	PXWL1-20
<b>TPR210QLBP2EG12L</b>	TPR80-G <sup>1</sup> / <sub>8</sub> PXWL2-10 AB15 MM MA	80	TPR80	Length 2	10	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>8</sub>	Aluminium funnel, magnets	<b>937903Q</b>	PXWL2-10
<b>TPR220QLBP2EG12L</b>	TPR80-G <sup>1</sup> / <sub>8</sub> PXWL2-20 AB15 MM MA	80	TPR80	Length 2	20	Nitrile	Plugged	1.5 Bar (22 Psi)	G <sup>1</sup> / <sub>8</sub>	Aluminium funnel, magnets	<b>937905Q</b>	PXWL2-20
<b>TPR510QLBP2EG20I</b>	TPR120-2G1 <sup>1</sup> / <sub>2</sub> PXWL3-10 B15 MM	120	TPR120	Length 5	10	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937892Q</b>	PXWL3-10
<b>TPR520QLBP2EG20I</b>	TPR120-2G1 <sup>1</sup> / <sub>2</sub> PXWL3-20 B15 MM	120	TPR120	Length 5	20	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937895Q</b>	PXWL3-20
<b>TPR710QLBP2EG24I</b>	TPR250-2G1 <sup>1</sup> / <sub>2</sub> PXWL4A-10 B15 MM	250	TPR250	Length 7	10	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937894Q</b>	PXWL4A-10
<b>TPR720QLBP2EG24I</b>	TPR250-2G1 <sup>1</sup> / <sub>2</sub> PXWL4A-20 B15 MM	250	TPR250	Length 7	20	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937897Q</b>	PXWL4A-20
<b>TPR1110QLBP2EG24I</b>	TPR650-2G1 <sup>1</sup> / <sub>2</sub> PXWL8-10 B15 MM	650	TPR650	Length 11	10	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937914Q</b>	PXWL8-10
<b>TPR1120QLBP2EG24I</b>	TPR650-2G1 <sup>1</sup> / <sub>2</sub> PXWL8-20 B15 MM	650	TPR650	Length 11	20	Nitrile	Plugged	1.5 Bar (22 Psi)	2xG1 <sup>1</sup> / <sub>2</sub>	None	<b>937917Q</b>	PXWL8-20

Note: Filter assemblies ordered from the product configurator below are on extended lead times. Where possible, please make your selection from the table above.

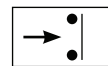
Visual indicator	
Thread connection	G <sup>1</sup> / <sub>8</sub>
Code	FMUG2EBPG02L

Specifications	
Elec.rating	42V / 2A
Thread connection	G <sup>1</sup> / <sub>8</sub>
Elec.connection	AMP terminal 6.3x0.8
Protection	IP65 (terminal IP00)
Switch type	NO or NC
Code	FMUS2EBMG02L (NO switch) FMUS3EBMG02L (NC switch)

Normally open contacts



Normally closed contacts



### Product configurator

#### Configurator example TPR filter

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>TPR</b>	<b>2</b>	<b>05QL</b>	<b>B</b>	<b>S2</b>	<b>I</b>	<b>G12</b>	<b>L</b>

Box 1	Box 2	Box 3																																							
<b>Code</b>	<b>Filter type</b>	<b>Degree of filtration</b>																																							
<b>TPR</b>	<table border="1"> <thead> <tr> <th>Housing</th> <th>Code</th> </tr> </thead> <tbody> <tr><td>TPR 1-40</td><td><b>1</b></td></tr> <tr><td>TPR 1-80</td><td><b>2</b></td></tr> <tr><td>TPR 2-120</td><td><b>5</b></td></tr> <tr><td>TPR 2-200</td><td>6</td></tr> <tr><td>TPR 2-250</td><td><b>7</b></td></tr> <tr><td>TPR 3-450</td><td>10</td></tr> <tr><td>TPR 3-650</td><td><b>11</b></td></tr> </tbody> </table>	Housing	Code	TPR 1-40	<b>1</b>	TPR 1-80	<b>2</b>	TPR 2-120	<b>5</b>	TPR 2-200	6	TPR 2-250	<b>7</b>	TPR 3-450	10	TPR 3-650	<b>11</b>	<table border="1"> <thead> <tr> <th rowspan="2">Element media</th> <th colspan="3">Glass fibre</th> <th rowspan="2">Wire mesh</th> </tr> <tr> <th>Cellulose</th> <th colspan="2">Ecoglass III (for Leif® elements)</th> </tr> <tr> <td></td> <td>Nom. rating</td> <td></td> <td></td> <td>Abs. rating</td> </tr> </thead> <tbody> <tr> <td>Disposable element (TPR I only)</td> <td>10C</td> <td>02Q</td> <td>05Q</td> <td><b>10Q</b>   <b>20Q</b>   040W</td> </tr> <tr> <td><b>LEIF® element (for all TPR Filters)</b></td> <td></td> <td>02QL</td> <td><b>05QL</b></td> <td><b>10QL</b>   <b>20QL</b></td> </tr> </tbody> </table>	Element media	Glass fibre			Wire mesh	Cellulose	Ecoglass III (for Leif® elements)			Nom. rating			Abs. rating	Disposable element (TPR I only)	10C	02Q	05Q	<b>10Q</b> <b>20Q</b> 040W	<b>LEIF® element (for all TPR Filters)</b>		02QL	<b>05QL</b>	<b>10QL</b> <b>20QL</b>
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<b>LEIF® element (for all TPR Filters)</b>		02QL	<b>05QL</b>	<b>10QL</b> <b>20QL</b>																																					

Seal type	
Seal material	Code
Nitrile	<b>B</b>
Fluoroelastomer	on request

Indicator	
Pressure gauge, setting 1.2 bar, G <sup>1</sup> / <sub>8</sub>	<b>G2</b>
Pressure switch 42V, 1.2 bar setting, NO with G <sup>1</sup> / <sub>8</sub>	<b>S2</b>
Pressure switch 42V, 1.2 bar setting, NC with G <sup>1</sup> / <sub>8</sub>	S3
Pressure switch 250V, NO/NC with G <sup>1</sup> / <sub>8</sub>	S4
No indicator, indicator ports not machined	on request
No indicator, indicator port R plugged	on request
No indicator, indicator ports L + R plugged	<b>P2</b>
Other settings for indicators / gauges on request	on request

Bypass valve	
Bypass valve	Code
0.8 bar	B
1.5 bar	<b>E</b>
2.5 bar (TPR 1 Series only)	I
Blocked bypass	on request
Other bypass settings	on request

Note 1: Part numbers featured with bold highlighted codes will ensure a 'standard' product selection.  
 Note 2: Alternate displayed part number selection will require you to contact Parker Filtration for availability.

Filter connection	
Ports	Code
G <sup>1</sup> / <sub>8</sub> (BSP) (TPR 1 Series)	<b>G12</b>
SAE12 (TPR 1 Series)	S12
G <sup>1</sup> / <sub>8</sub> (BSP) (TPR 2 Series)	G20
2 x ISO 228-G <sup>1</sup> / <sub>2</sub> (BSP) (TPR 2 Series)	<b>2G20</b>
SAE 20 (TPR 2 Series)	S20
2 x SAE 20 (TPR 2 Series)	2S20
SAE 24 (TPR 2 Series)	S24
2 x SAE 24 (TPR 2 Series)	2S24
G <sup>1</sup> / <sub>2</sub> (BSP) (TPR 2 and 3 Series)	G24
G <sup>1</sup> / <sub>2</sub> (BSP) (TPR 2 and 3 Series)	<b>2G24</b>

Options	
Options	Code
Standard	<b>1</b>
Dipstick	<b>6</b>
Aluminium funnel for TPR 1-80	J
Magnets for TPR 1 Series	<b>E</b>
Magnets + Dipstick for TPR 1 Series	K
Magnets + Aluminium Diffuser for TPR 1 Series	<b>L</b>
Magnets + Aluminium Diffuser + Dipstick for TPR 1 Series	M
Other combinations	on request

Note: Tanktopper I Series are standard supplied with POM type diffuser. Aluminium funnel is recommended for heavy duty applications, sensitivity for electrostatically charging or high fluid temperatures.  
 Tanktopper II and III Series are always supplied with metal diffuser.

### Highlights Key (Denotes part number availability)

<b>123</b>	Item is standard
<b>123</b>	Item is standard green option
<b>123</b>	Item is semi standard
123	Item is non standard

Note: Standard items are in stock, semi standard items are available within four weeks