



Tanktop Mounted Return Line Filters  
**BGT Series**

MAX 2400 l/min - 10 bar

AN INNOVATIVE GREEN  
FILTER FEATURING  
**LEIF®**



# 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*® 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 G1½.

### Filter element:

*LEIF*® element with reusable metal element sleeve.

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.

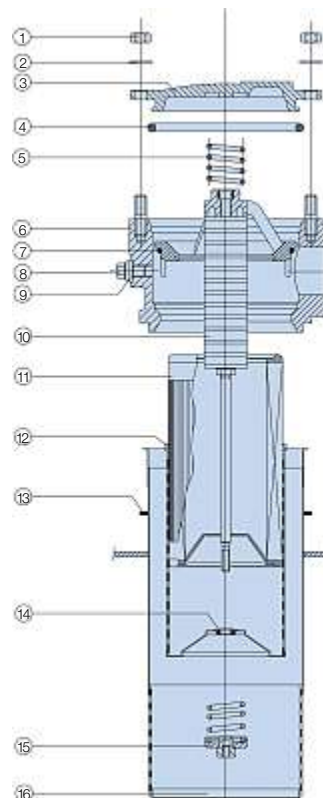
For other fluids consult Parker Filtration.

*LEIF*® contributes to ISO 14001 quality standards.

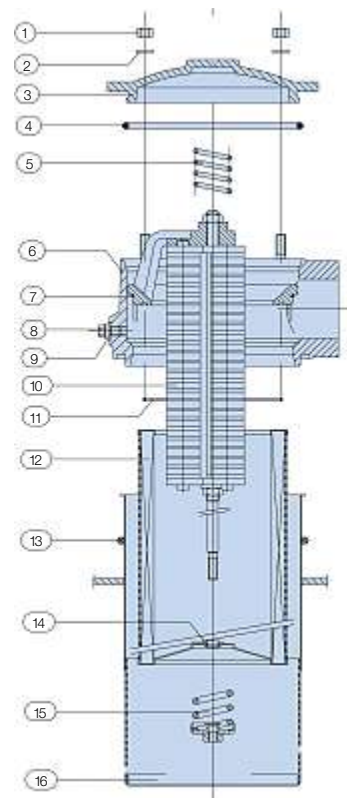
BGT-3 Length 11 and 12 ( <i>LEIF</i> ® version)		
Ref.	No.	Description
1	1	Nut
2	1	Washer
3	1	Cover
4	1	Cover-seal
5	1	Top-spring
6	1	Housing
7	1	Insert-seal
8	1	Plug M10x1
9	1	Bonded seal
10	1	Insert
11	1	<i>LEIF</i> ® element
12	1	Element sleeve
13	1	Gasket
14	1	O-ring
15	1	Bypass set
16	1	Diffuser

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*® version)



BGT-4 (conventional element)

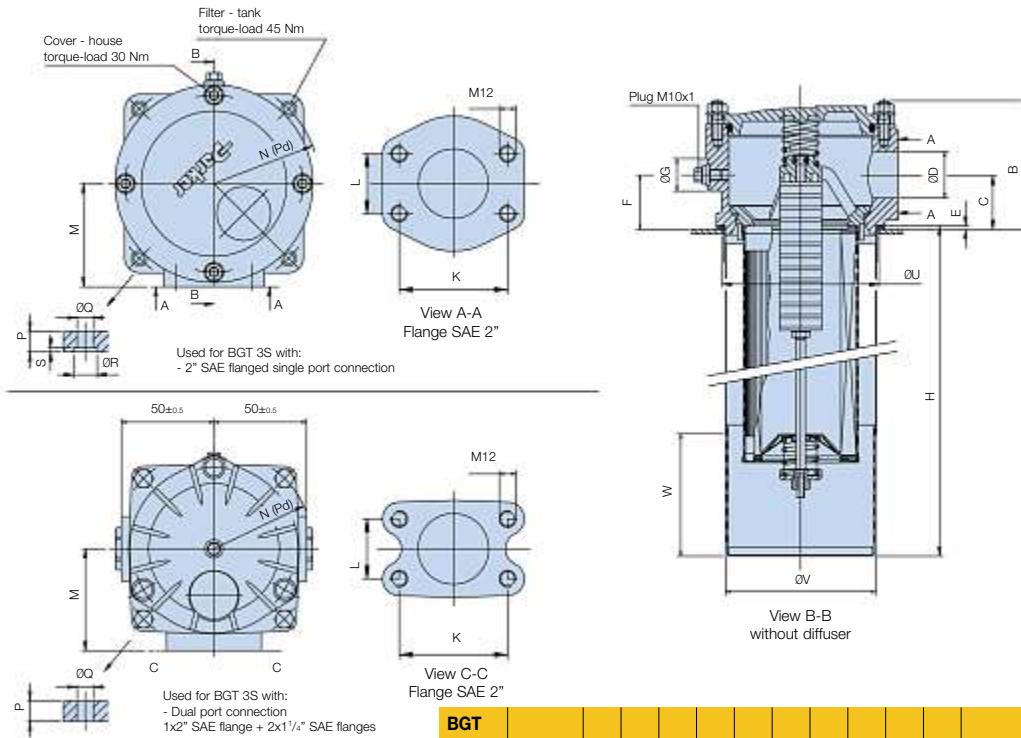


## Tanktop Mounted Return Line Filters

# BGT Series

### Specification (cont.)

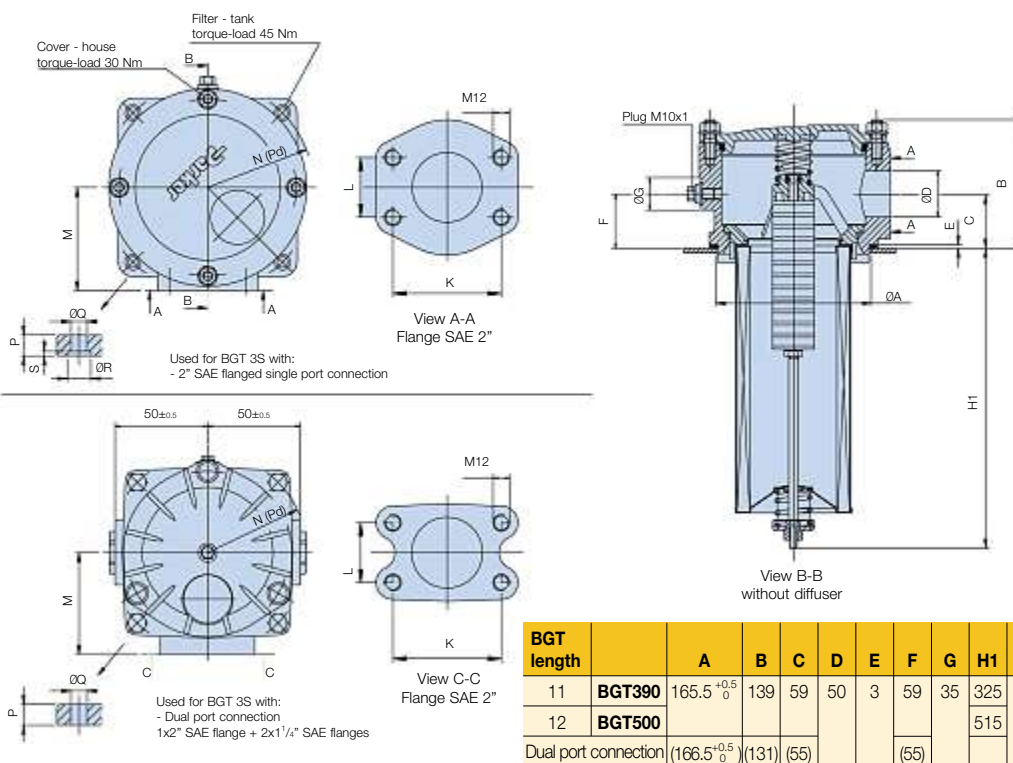
#### BGT-3 with diffuser



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)							

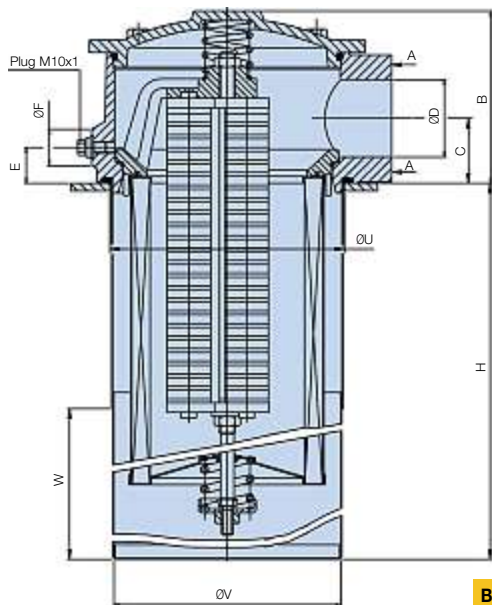
#### BGT-3 without diffuser



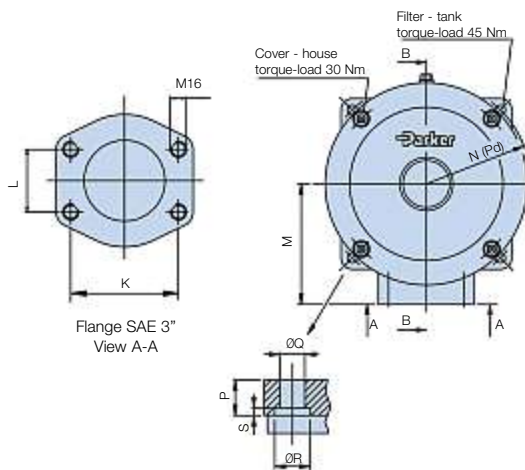
Dimensions in mm

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



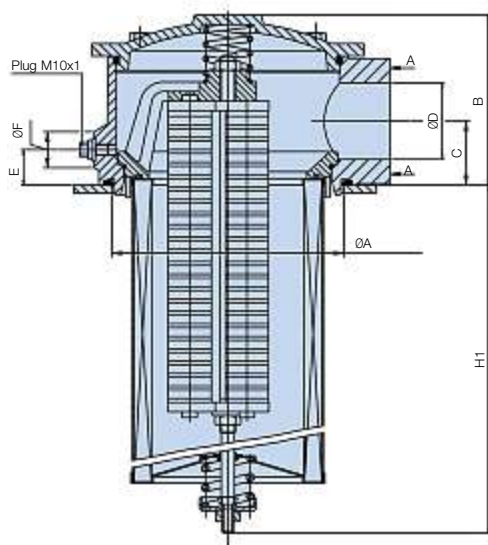
View B-B  
with diffuser



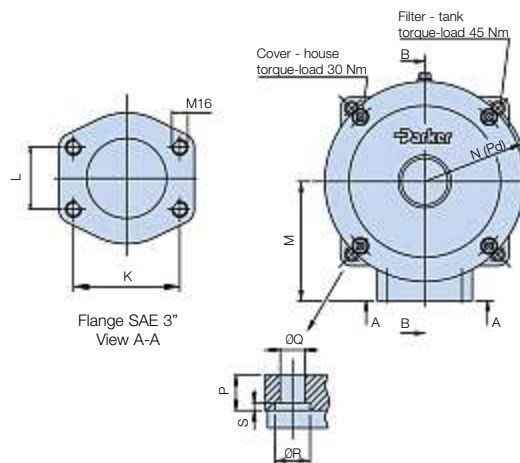
BGT length		B	C	ØD	E	ØF	H	K	L	M	N(Pd)	P	ØQ	ØR	S	ØU	ØV	W	Kg.
13	<b>BGT600</b>						425												20.5
14	<b>BGT800</b>						535												23.0
15	<b>BGT1000</b>	178	67	80	37	40	640	106.4	62	170	R147.5	20	14	20	4	240.5 <sup>+0.5</sup> <sub>0</sub>	240	170	25.5
16	<b>BGT1500</b>						920												30.0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

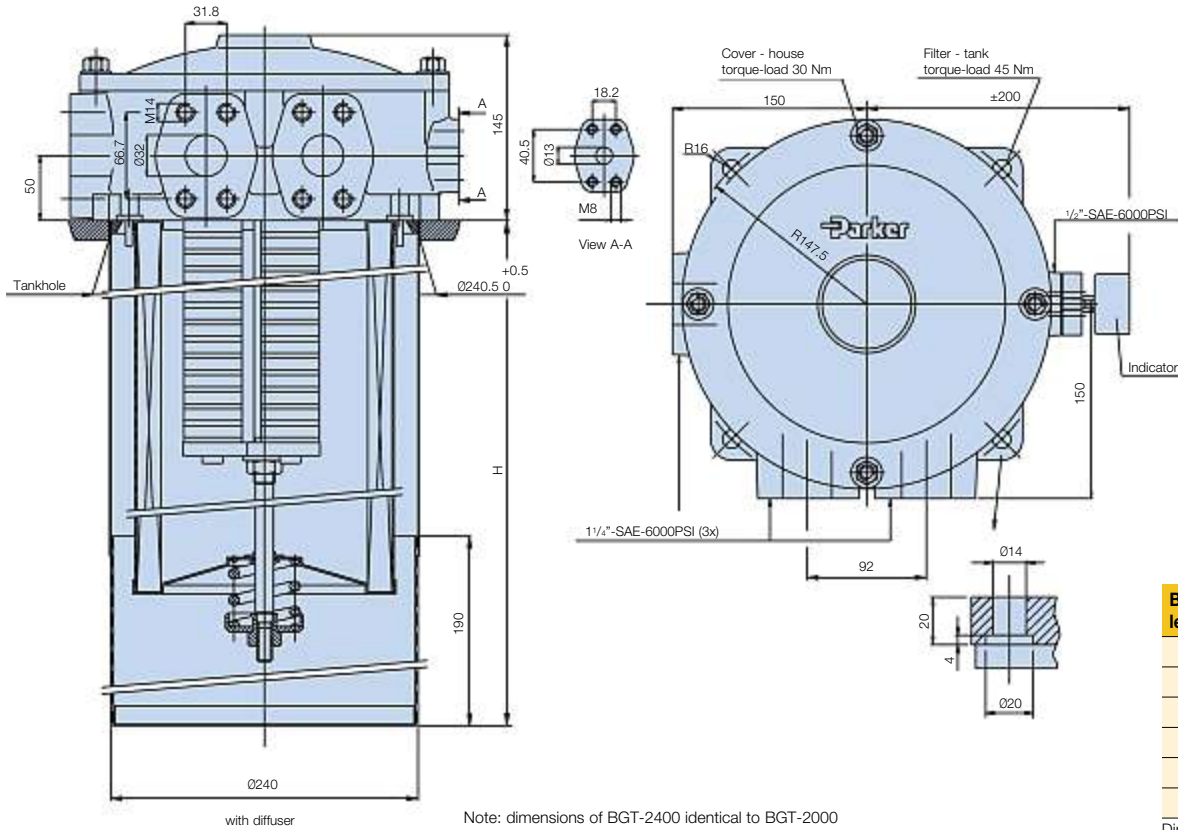
Note: dimensions of BGT-2400 identical to BGT-2000. Dimensions in mm

## Tanktop Mounted Return Line Filters

# BGT Series

### Specification (cont.)

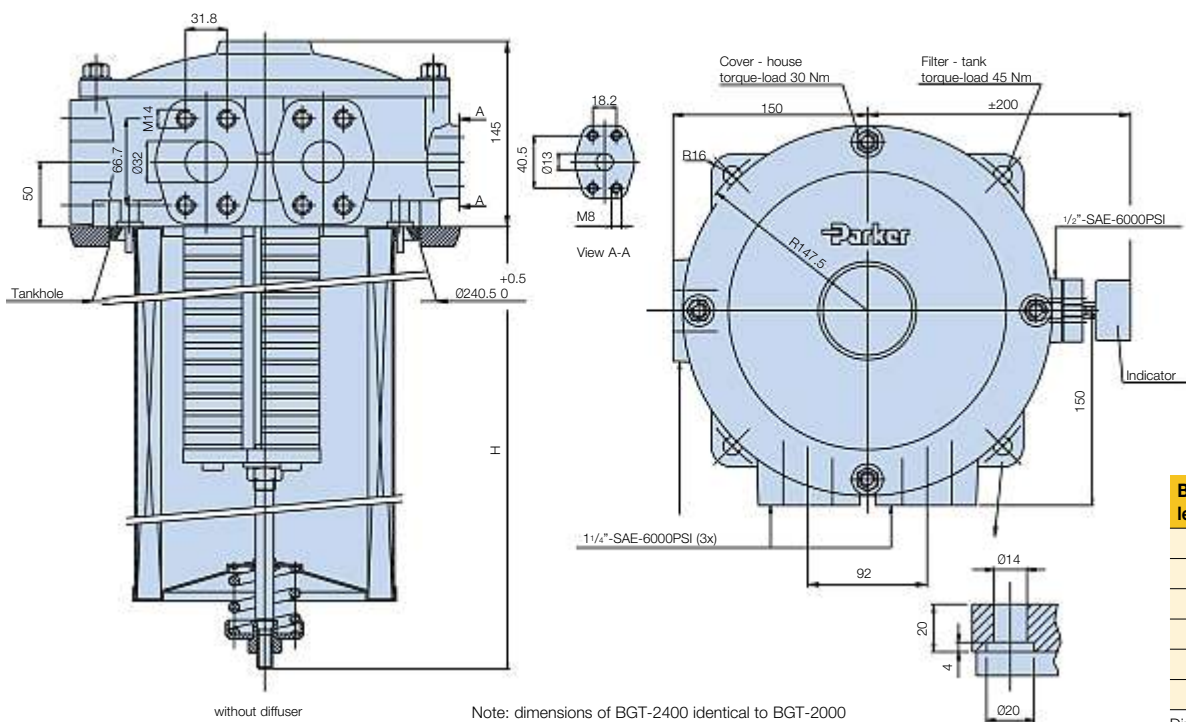
#### BGT F1<sup>1</sup>/<sub>4</sub> manifold type - with diffuser



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

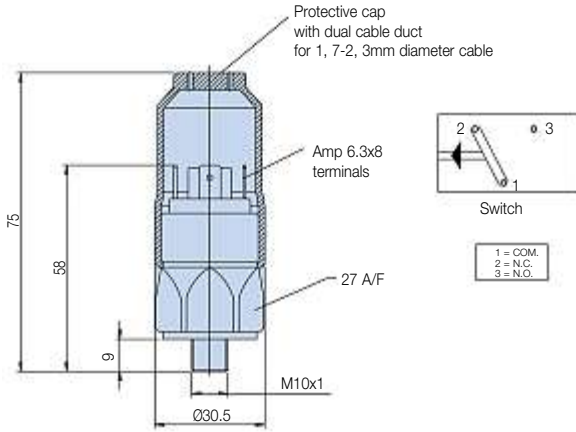


BGT length		H
13	<b>BGT600L</b>	385
14	<b>BGT800L</b>	495
15	<b>BGT1000L</b>	598
16	<b>BGT1500L</b>	878
17	<b>BGT2000L</b>	1143
18	<b>BGT2400L</b>	1143

Dimensions in mm

## Indicator Options

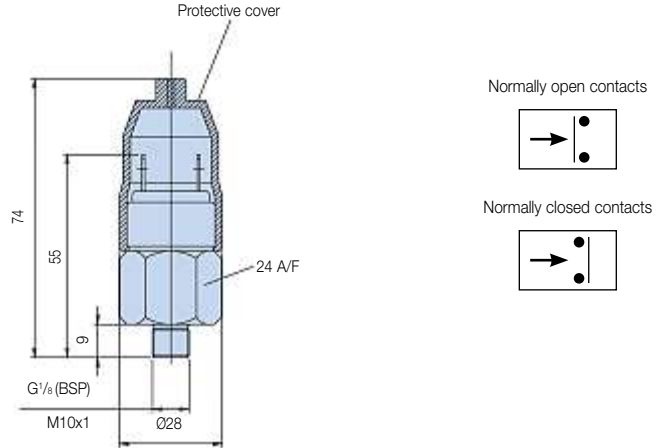
### Indicator PS pressure switch



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

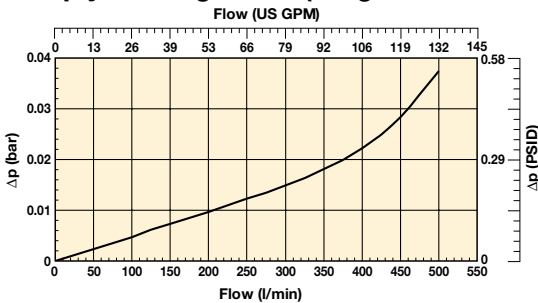
The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

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

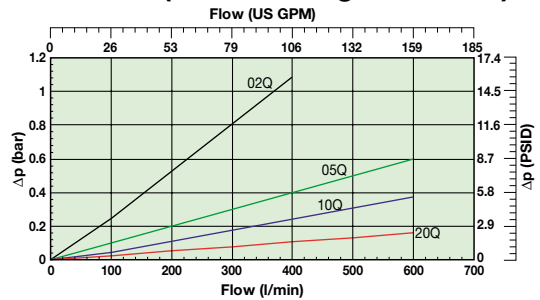
$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

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

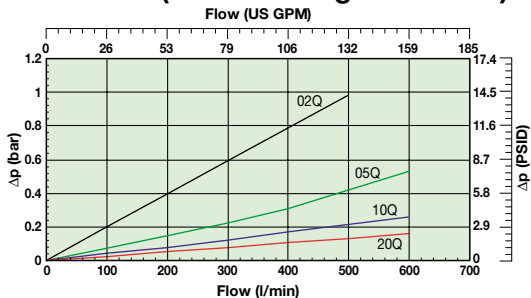
### BGT Empty Housing 2"SAE (Length code 11 and 12)



### BGT390 (Element length code 11)



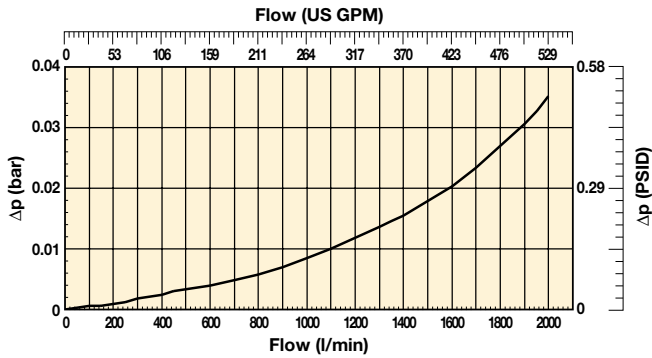
### BGT500 (Element length code 12)



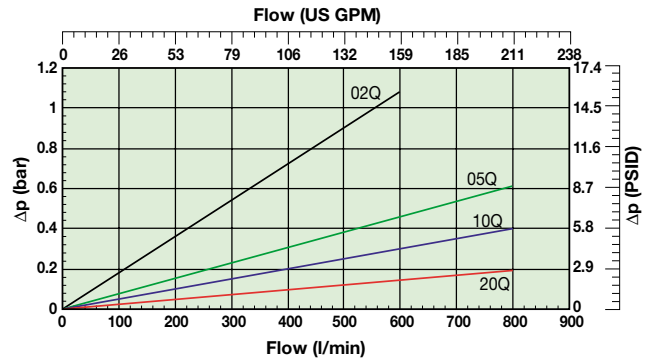
# BGT Series

## Pressure Drop Curves (cont.)

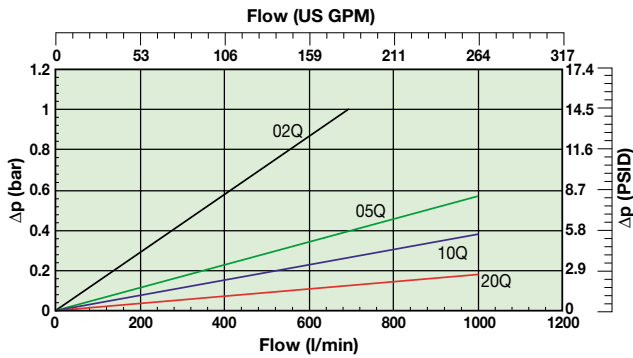
**BGT Empty Housing 3"SAE (Length 13 and larger)**



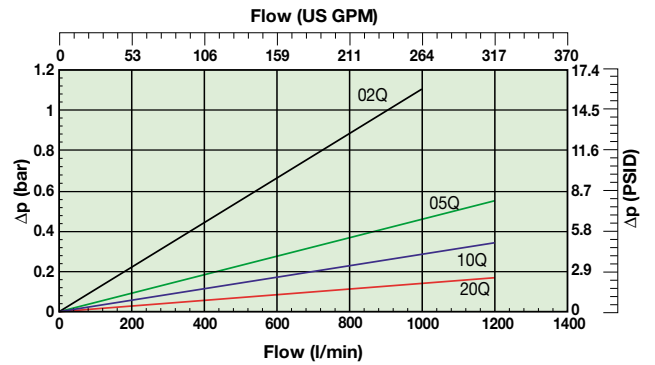
**BGT600 (Element length code 13)**



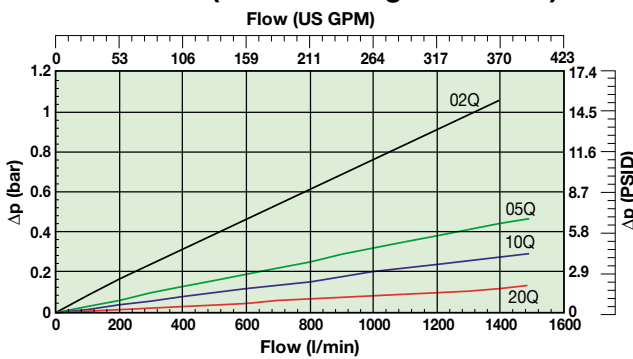
**BGT800 (Element length code 14)**



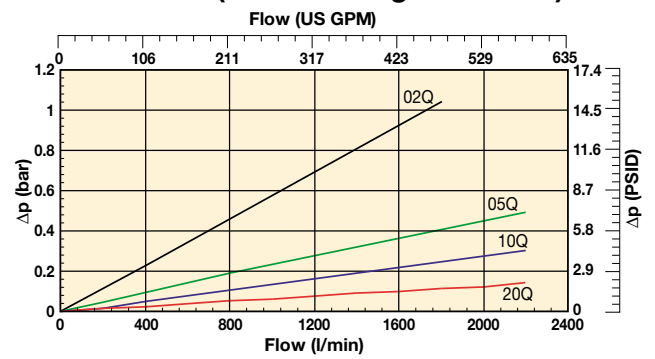
**BGT1000 (Element length code 15)**



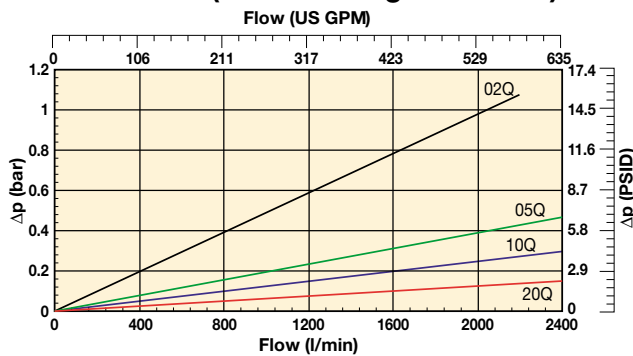
**BGT1500 (Element length code 16)**



**BGT2000 (Element length code 17)**

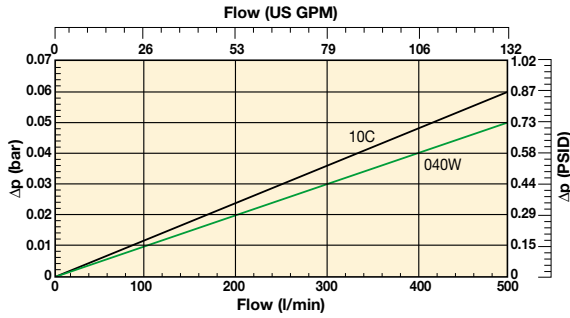


**BGT2400 (Element length code 18)**

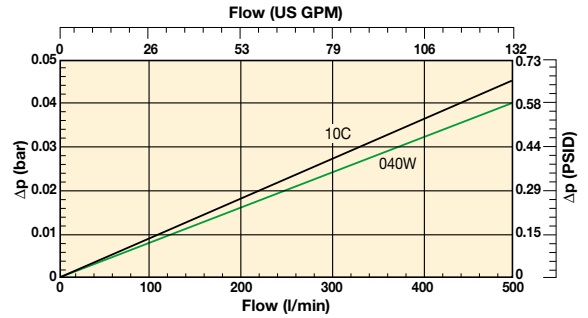


## Pressure Drop Curves (cellulose and stainless steel media)

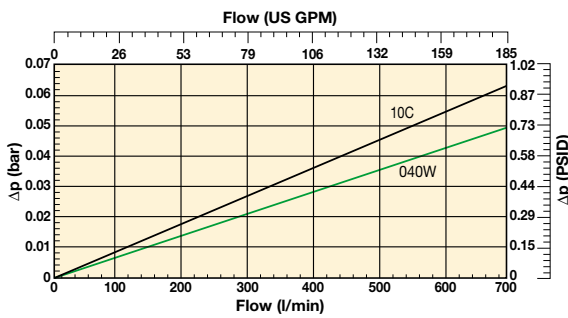
**BGT390 (Element length code 11)  
Cellulose & Stainless steel media**



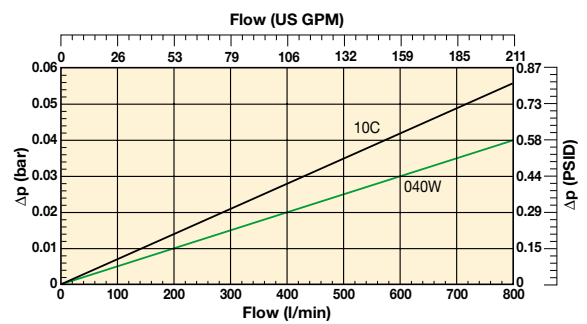
**BGT390 (Element length code 11)  
Cellulose & Stainless steel media**



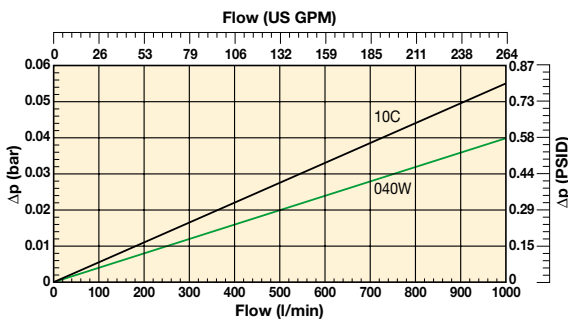
**BGT600 (Element length code 13)  
Cellulose & Stainless steel media**



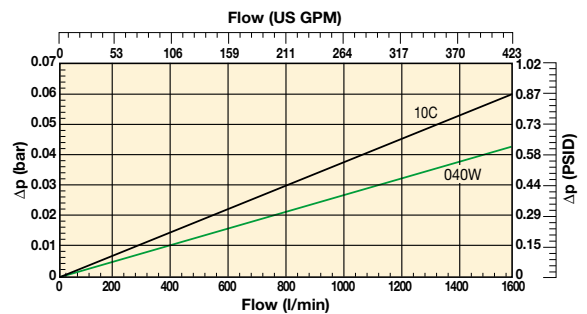
**BGT800 (Element length code 14)  
Cellulose & Stainless steel media**



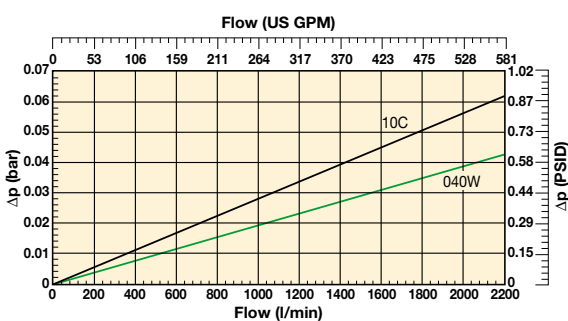
**BGT1000 (Element length code 15)  
Cellulose & Stainless steel media**



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

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 $\frac{1}{8}$ 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 $\frac{1}{8}$ BSP	S2
Pressure switch 24V, 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	<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

Note: For all dual head ports for BGTS apply G $\frac{1}{8}$  connection for indicators

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 $\frac{1}{4}$ " SAE Flanged for BGT Length 11 and 12	R32M
3x1 $\frac{1}{2}$ " SAE Flanges + 1x 1 $\frac{1}{2}$ " 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	-