Suction Return Series

Tank Top Mounted Suction & Return Line Filters – Types SR1 & SR2

Max 250 l/min - 10 bar

Brochure HYD001GB3

anything Parker Possible™

Tank Top Mounted Suction & Return Line Filters

Suction Return Series – Types SR1 & SR2

TYPICAL APPLICATIONS

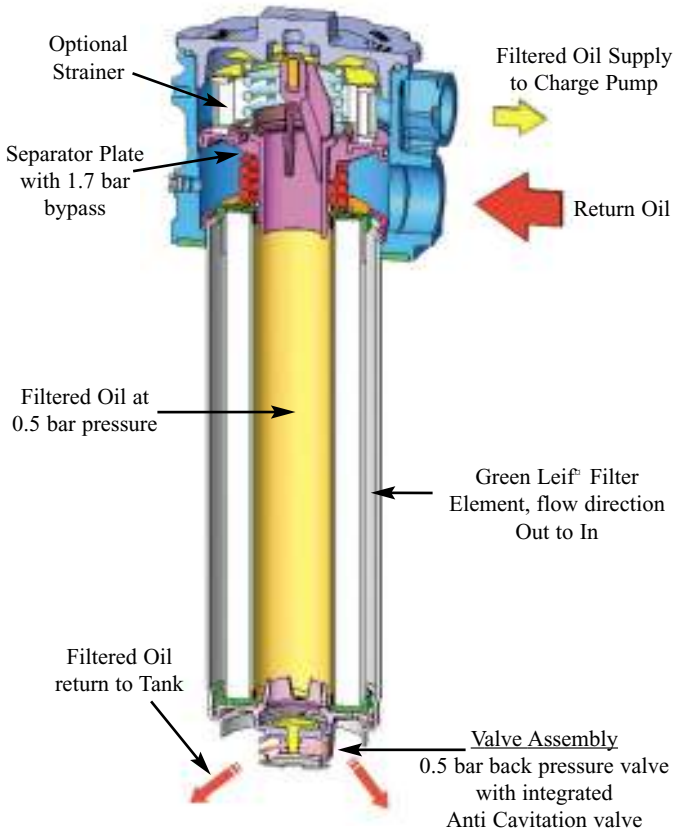
Mobile equipment with both open and closed hydraulic circuits e.g:

- Road Sweepers
- Road Rollers
- Fork Lift Trucks
- Loading Shovels
- Telescopic Handlers
- Dump Trucks
- Skid Steers
- Agricultural Harvesting Machines
- Mini Excavators

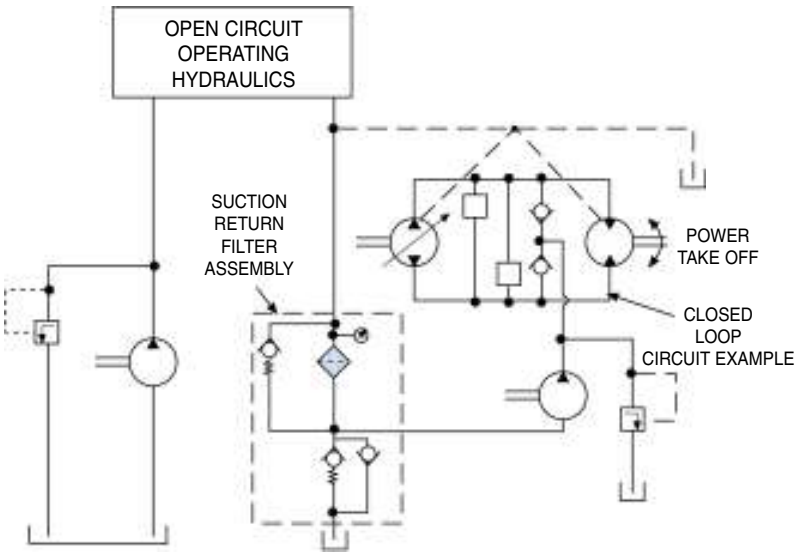
The Parker Filtration Tank Top Mounted Suction & Return Line Filters.

A tank top mounted return filter capable of feeding filtered oil under positive pressure to the suction side of the boost pump, thereby filtering both open and closed loop oil systems through one filter. The Type SR2 uses the patented Leif® elements for environmentally-friendly filtration and offering protection against the use of pirate elements. Several options as integrated suction strainer and dipstick are available.

OPERATIONAL DIAGRAM — TYPE SR2

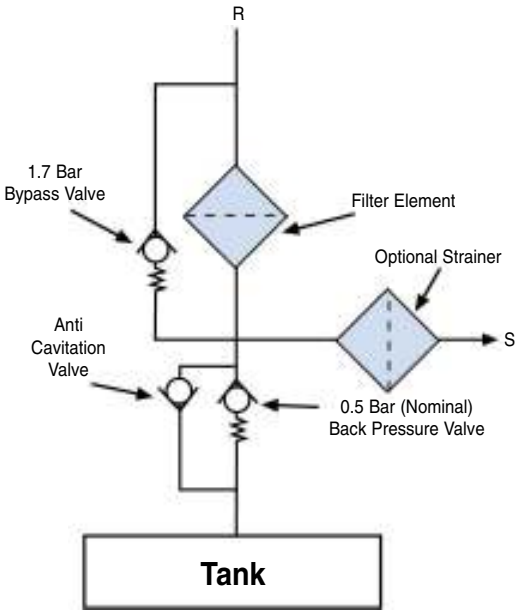


Circuit Application Example



Note: Suction Return Filter without Optional Strainer.

Suction Return Filter: Hydraulic Circuit



Note: Optional Strainer for Type SR2 only.

SPECIFICATION

Assembly:
Tank top mounted filters

Connections:
Return Port G1 (to BS 2779) } Type SR1
Suction Port G¾ (to BS 2779) }

Return Port G1¼ (ISO 228) or SAE20: } Type SR2
Optional second return port
Suction Port G1 (ISO 228) or SAE16:
Standard two suction ports

Operating Pressure:
Max 10 bar

Seal Material:
Type SR1 – Nitrile
Type SR2 – Nitrile, Fluorelastomer
Optional Neoprene on request

Operating Temperature Range:
-30° to +110°C

Degree of Filtration:
Determined by multipass test according to ISO 16889

Filtration Media:
Type SR1 – Microglass III supported with epoxy coated metal wire. See Table 1 on the following page.

- High dirt holding capacity
- Low pressure drop
- Extended service life

Type SR2 – Q3 media grade HPFE. See Table 2

Element Collapse Rating:
Type SR1 – 20 bar ISO 2941
Type SR2 – 10 bar ISO 2941

Flow Fatigue Characteristics:
Filter media designed to optimise fatigue life.

Bypass Valve System:
Main system bypass valve
Type SR1 – 1.7 bar (2.5 bar optional)
Type SR2 – 1.7 bar (2.5 bar optional)
Suction line:
Back-pressure valve setting 0.5 bar (nominal)
Anti-cavitation:
Emergency suction valve fitted as standard.

Construction:

	Type SR1	**Type SR2**
Filter Housing:	Precision pressure die casting	Precision pressure die casting
Cover:	Precision pressure die casting	Glass reinforced Nylon (high impact and temperature resistant)
Weight:	1.4Kg	3.3Kg
Filter Element:	Element with steel end caps	Leif® element with reusable metal element sleeve. The patented Leif® concept contributes to ISO14001 and can only be applied to mineral oils. For other fluid types consult Parker Filtration.

Additional note: Due to continuous product development published data and specifications are subject to change without notice.

Tank Top Mounted Suction & Return Line Filters

Suction Return Series – Types SR1 & SR2

SR1

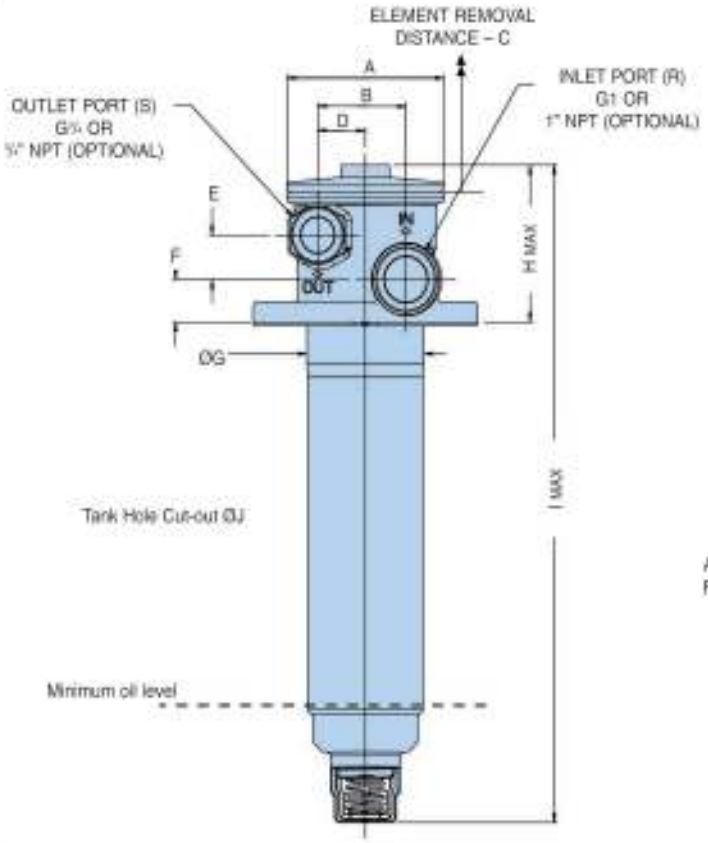
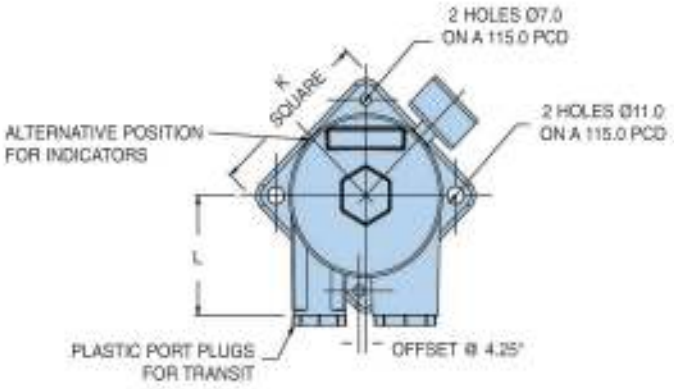


Table 1

Degree of Filtration						
Average filtration ratio ß (ISO 16889) /particle size (µm(c)						CODE
2	10	75	100	200	1000	
N/A	6	8.5	9	10	12	Q010
6	11	17	18	20	22	Q020



SR2

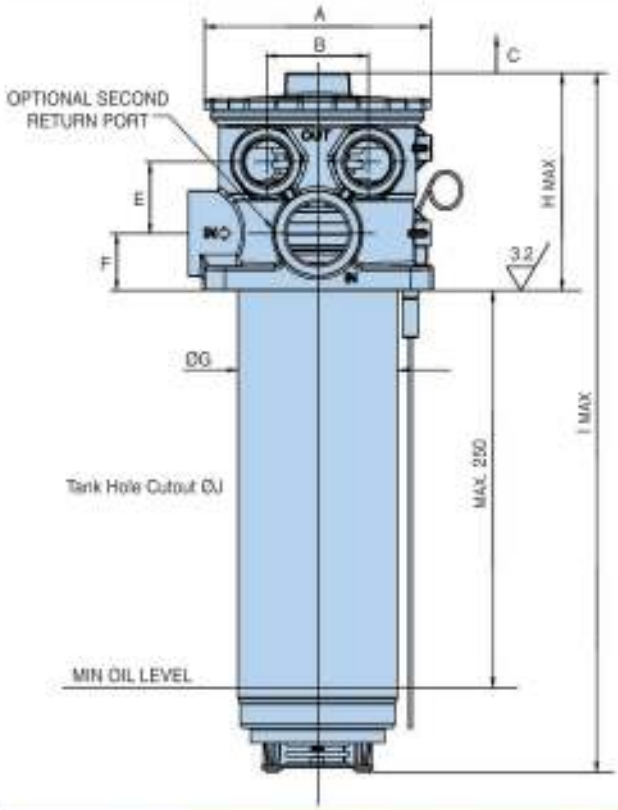
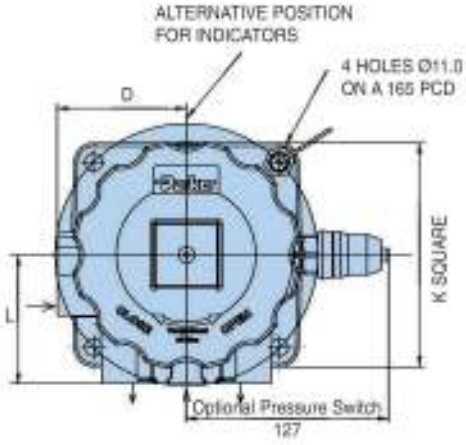


Table 2

Degree of Filtration						
Average filtration ratio ß (ISO 16889) /particle size (µm(c)						CODE
2	10	75	100	200	1000	
N/A	6	8.5	9	10	12	Q010
6	11	17	18	20	22	Q020



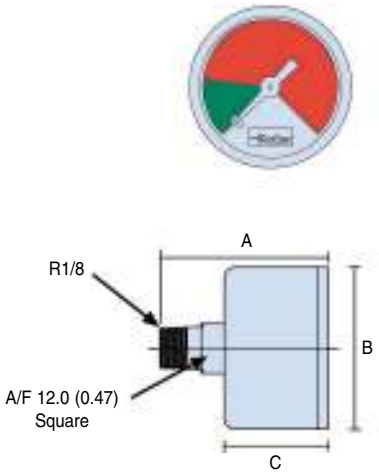
Dimensions mm (inches)	A	B	C	D	E	F	G	H	I	J	K	L
TYPE SR1	98 (3.86)	55 (2.17)	310 (12.2)	29.75 (1.17)	26 (1.02)	25 (0.98)	73 (2.87)	92.8 (3.65)	385.3 (15.17)	75 to 76 (2.95 to 2.99)	105 (4.13)	72 (2.83)
TYPE SR2	142 (5.59)	64 (2.52)	380 (14.96)	81 (3.19)	45 (1.77)	36 (1.42)	100 (3.94)	137 (5.39)	440 (17.32)	101 to 103 (3.98 to 4.06)	145 (5.71)	81 (3.19)

Element removal distance for dimension C.

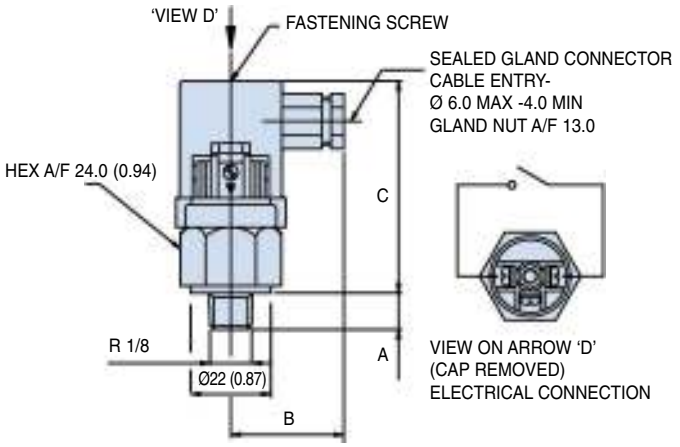
INDICATOR DETAILS (TYPE SR1 ONLY)

Element Condition Indicators:

Visual Pressure Indicator
Code V



Electrical Indicator
Code E



Option	Description	Connection/Voltage	Wiring	A mm (inches)	B mm (inches)	C mm (inches)
V	Visual 10 bar (145psi) Pressure Gauge Part No. S.250016	N/A	N/A	40.5 (1.59)	38.6 (1.52)	24.8 (0.98)
E	Electrical Switch 10 bar (145psi) Part No. S.250018	**Max. operating voltage:** 48V AC/DC **Max. Current:** 0.5 Amp (resistive) 0.2 Amp (inductive)	Normally Open	10 (0.39)	60 (2.36)	31 (1.22)

Note: For full indicator specifications see Section 6.

E Option (Additional Technical Information)

Diaphragm pressure switch: R 1/8

Working temperature: -5°C to +60°C

Protection: IP54

TYPE SR2 ONLY

Option	Description	Connection/Voltage	Wiring
VM	Visual 10 bar (145psi) Pressure Gauge	N/A	N/A
EM	Electrical Switch 10 bar (145psi)	Lr: 42 V/100 VA 2A max	Normally Open

Note: Vacuum indicators, visual or electrical, are available on request for filter type SR2 only.

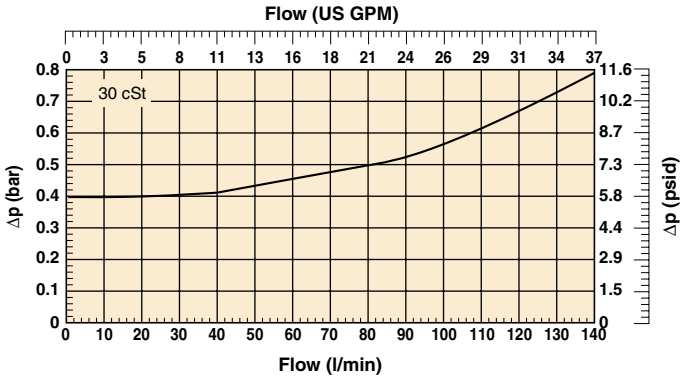
PRESSURE DROP CURVES (TYPE SR1)

The recommended level of the initial pressure drop is approximately 1 bar. (See filter selection example below).

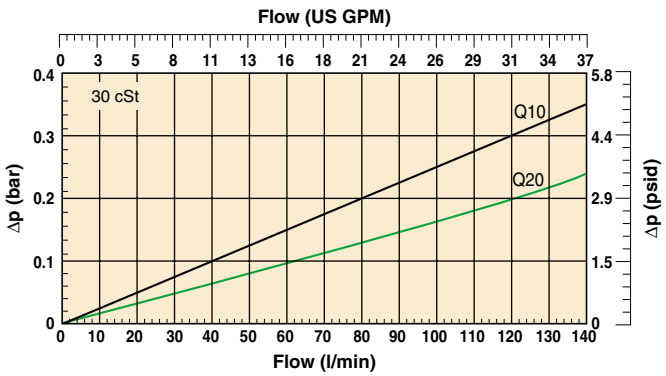
If the medium used has a viscosity different from 30 cSt, pressure drop over the filter can be estimated as follows :-

The total Δp = Housing Δph + (Element Δpe x working viscosity/30)

Filter Housing (Without Element) Δp



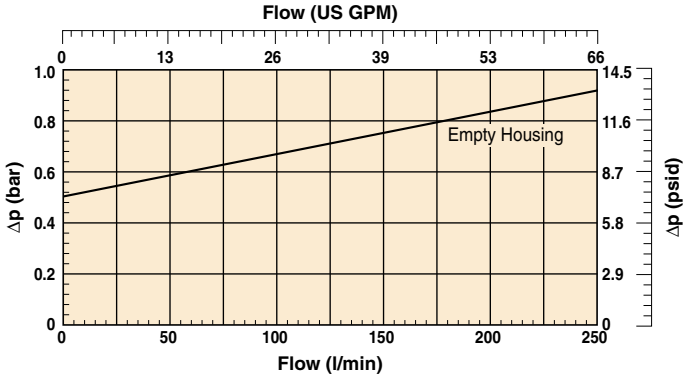
Filter Elements Only Δp



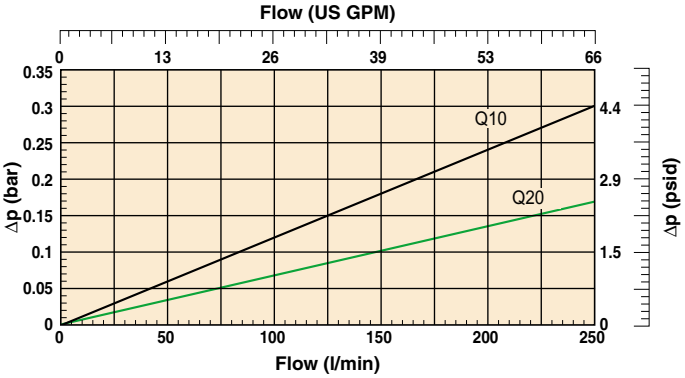
PRESSURE DROP CURVES (TYPE SR2)

Curves are based on 32 cSt fluid viscosity and 0.87 Kg/l density.

Filter Housing SR2 Without Element



Delta P Clean Element



PREFERRED PRODUCTS TABLE
TYPE SR1
Filter assemblies with Nitrile Seals as standard

Part Number	Return Flow (l/min)	Size	Length	Micron	Bypass Cracking Pressure	Indicator Ports	Ports		Replacement Element
							Return	Suction	
SRA12Q10NP1B10	110	1	2	Q10	1.7 bar	Plugged	G1	G3/4	SRR12Q10N
SRA12Q20NP1B10	130	1	2	Q20	1.7 bar	Plugged	G1	G3/4	SRR12Q20N

NOTE: Filter assemblies are sold as standard with plugged indicator ports
PLEASE ORDER INDICATORS SEPARATELY. See table below:

Indicators

Option	Description	Indicator Position	Operation	Part Number
V	Visual colour coded pressure gauge	Left or Right Side	Set for 1.7 bar bypass	S.250016
E	Electrical pressure switch	Left or Right Side	Set for 1.7 bar bypass	S.250018

TYPE SR2
Filter assemblies with Nitrile Seals as standard

Part Number	Return Flow (l/min)	Size	Length	Micron	Bypass Cracking Pressure	Indicator Ports	Ports		Replacement Element
							Return	Suction	
SRL22Q10NP1B10	250	2	2	10	1.7 bar	Plugged	1 x G1 1/4	2 x G1	SRE22Q10
SRL22Q20NP1B10	250	2	2	20	1.7 bar	Plugged	1 x G1 1/4	2 x G1	SRE22Q20

Table 1

Size	
SRL	2

Table 2

Length	
250 l/min	2

Table 3

Element	Micron	
250 l/min	10	Q10
250 l/min	20	Q20

Table 4

Seals	
Nitrile	N
Viton	V

Table 5

Pressure Switch	
No Indicator	P
Visual	V
Electrical	E

Table 6

Bypass Setting	
1.7 bar	1

Table 7

Ports	
Return port 1 x ISO228 G1 1/4, 2 x suction port ISO G1	B1
Return port 2 x ISO228 G1 1/4, 2 x suction port ISO G1	B2
Return port 1 x SAE20, 2 x suction port SAE16	S1
Return port 2 x SAE20, 2 x suction port SAE16	S2

Table 8

Options	
None	0
Strainer 120 micron	Z
Dipstick	D
Strainer 120 micron and dipstick	ZD

Suction Return Series Filter
This one filter assembly is designed to carry out two specific functions:-
(1) Filter system return line oil.
(2) Supply filtered oil under positive pressure to the closed loop hydrostatic circuits.

Principles of Operation
(1) Return oil from both the open and closed circuits* is fed into the Suction Return Series Filter at port 'R'.
(2) The filtered oil is maintained at a nominal 0.5 bar by the unique back pressure valve assembly and fed into the closed loop hydrostatic circuit via port 'S'.
(3) Surplus filtered oil is fed back to the tank via the back pressure valve assembly.
(4) Emergency suction (anti-cavitation) valve: This valve is fitted as standard to ensure oil is always available to the closed loop system, even on emergency occasions when the return flows do not meet the flow demands of the closed loop circuit.

Additional Installation Guidance Notes
(1) Return oil flow should always be greater than the oil flow rate demanded by the closed loop charge pump.
(2) Oil level at all times should not fall below valve assembly at the base of the filter bowl.

Benefits
(1) Only one filter is required to supply filtered oil to both open and closed loop circuits.
(2) Feeding the closed loop circuit with filtered oil at a nominal pressure of 0.5 bar ensures excellent cold start characteristics, thus reducing the risk of cavitation.
(3) Four hole mounting with gasket seal.
(4) HPFE filter element materials ensure; low pressure drop, high dirt holding capacity and extended service life.
(5) Type SR2 filter with patented Leif® element, unique drain construction, quick element replacement concept.

***CAUTION:**
Back pressure in pump and motor drain lines should always be kept at a minimum thus protecting shaft seals etc.
If case drain oils are to be fed through the return line filter please consult the pump/motor manufactures for details on maximum allowable back pressure.
Ensure filter elements are replaced when element condition indicators show that the bypass setting has been reached.
Failure to observe the above operation and guidance notes, or use of non genuine Parker specified filter elements could cause damage to the system. System designers should always ensure that adequate cooling capacity is available.

Multiflow Filter Series

Tank Mounted Return Line Filters

Max 600 l/min - 8 bar

anything Parker Possible™

SPECIFICATION

Construction:
Aluminium LM24 head castings, Zinc coated chimney

Max. working pressure:
8 bar

Operating temperature:
-30°C to +90°C

Flows:
See selection data

Bypass crack pressure:
2 bar

Element Collapse Rating:
10 bar (ISO 2941)

Material Compatibility:
Multiflow can be applied for mineral oils. For other fluid types consult Parker Filtration.

Filtration media:

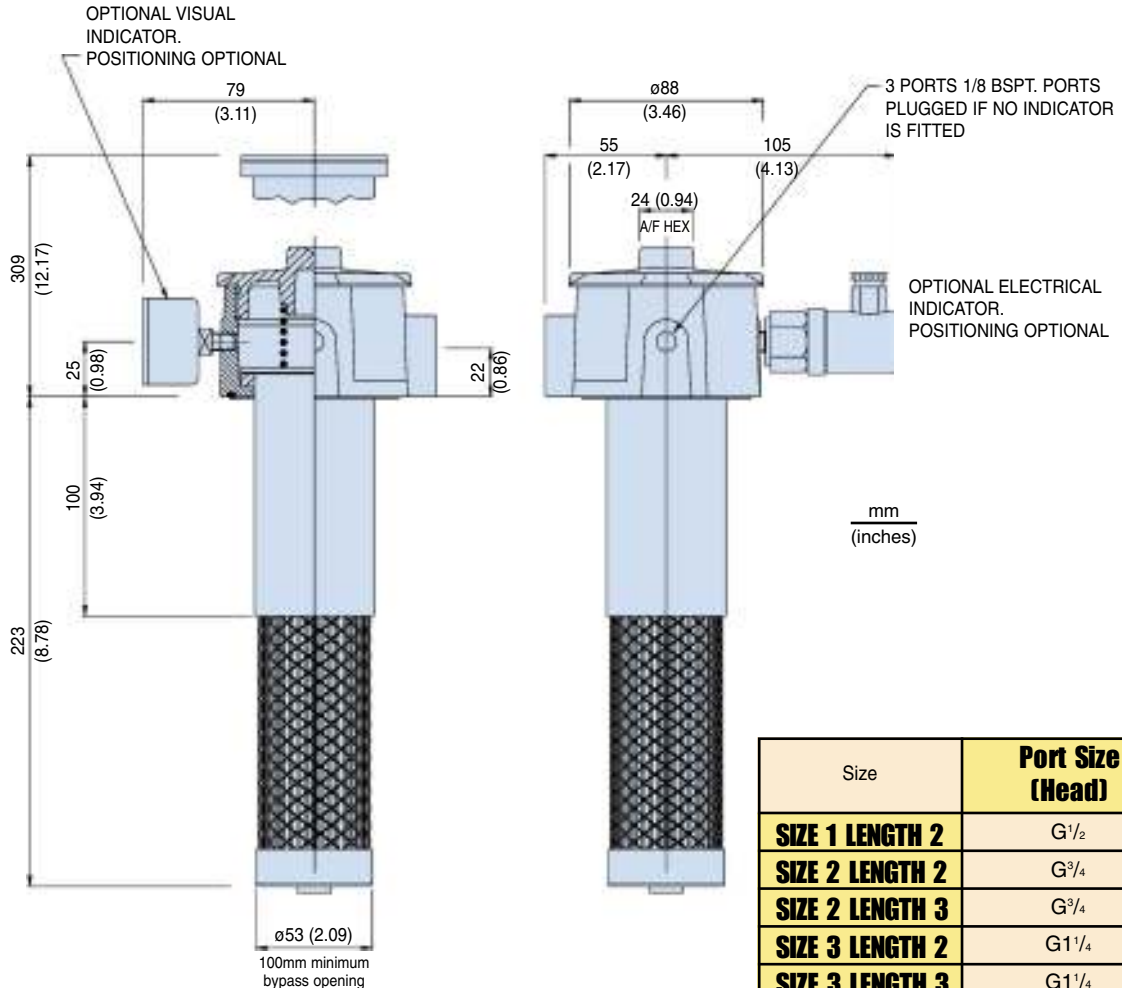
Environmentally-friendly Leif® element type MFE with re-usable chimney:
10 micron glassfibre (GDL/GDH10 media)
20 micron glassfibre (GDL/GDH20 media)
Note: environmentally-friendly elements type MFE are used for MFL type assemblies.

Conversion kit type MFC to convert MFA assembly into MFL:
10 micron glassfibre (GDL/GDH10 media)
20 micron glassfibre (GDL/GDH20 media)
Note: conversion kits are only available for standard Multiflow filters for return line applications with 2 bar bypass.

Disposable elements type MFR:
10 micron cellulose (approximately 25 micron Abs.)
10 micron glassfibre (GDL/GDH10 media)
Note: disposable elements type MFR are used for MFA type assemblies.

SIZE 1 INSTALLATION DETAILS

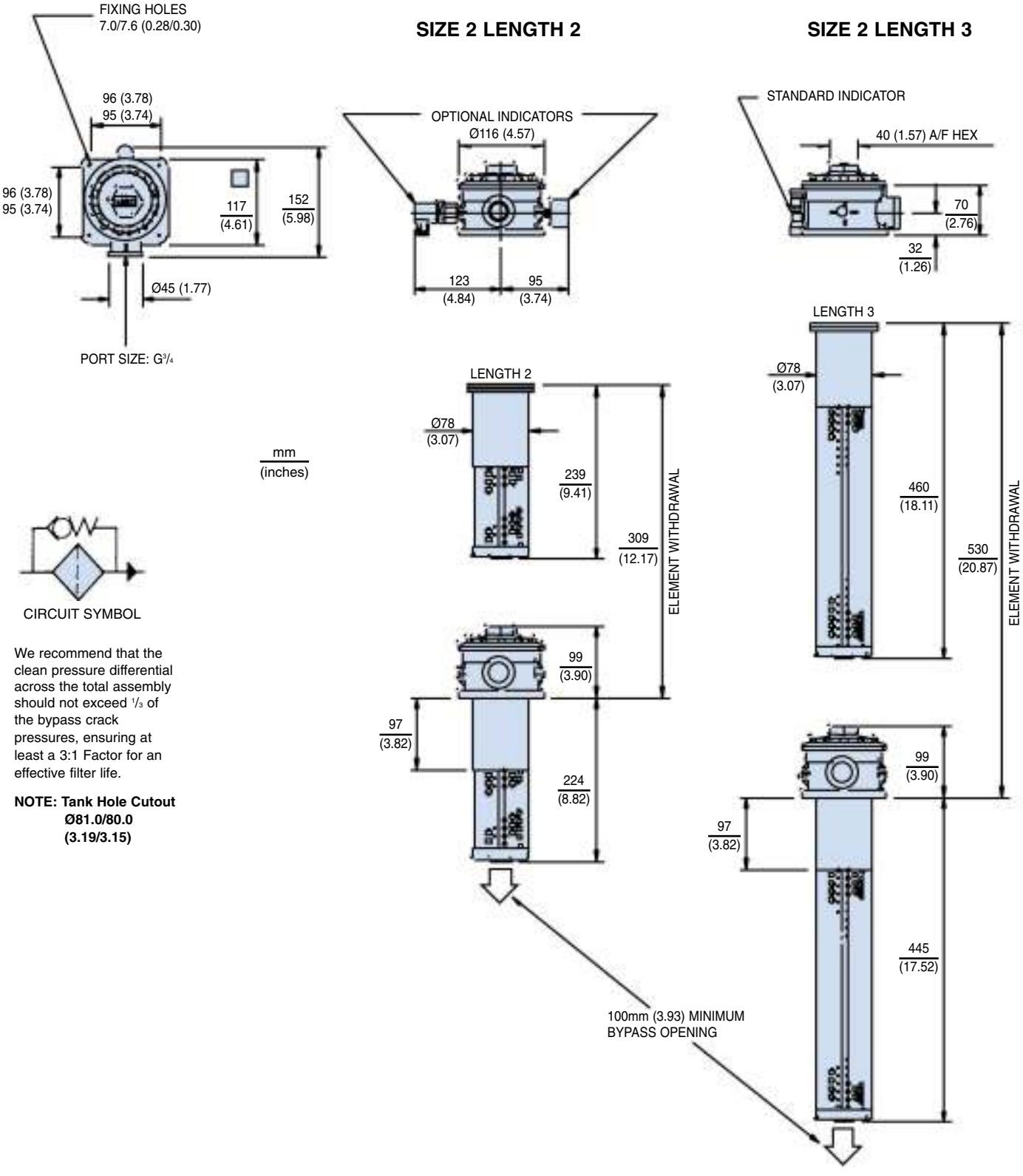
SIZE 1 LENGTH 2
(Contact Parker Filtration for Flow Details)



Size	Port Size (Head)	Weight
SIZE 1 LENGTH 2	G1/2	0.9 Kg (2.0 lbs)
SIZE 2 LENGTH 2	G3/4	1.6 Kg (3.52 lbs)
SIZE 2 LENGTH 3	G3/4	2.0 Kg (4.40 lbs)
SIZE 3 LENGTH 2	G1 1/4	2.1 Kg (4.62 lbs)
SIZE 3 LENGTH 3	G1 1/4	2.5 Kg (5.50 lbs)
SIZE 4*	2" SAE Flange Face	12.4 Kg (27.28 lbs)

* Consult Parker Filtration for details.

SIZE 2 INSTALLATION DETAILS

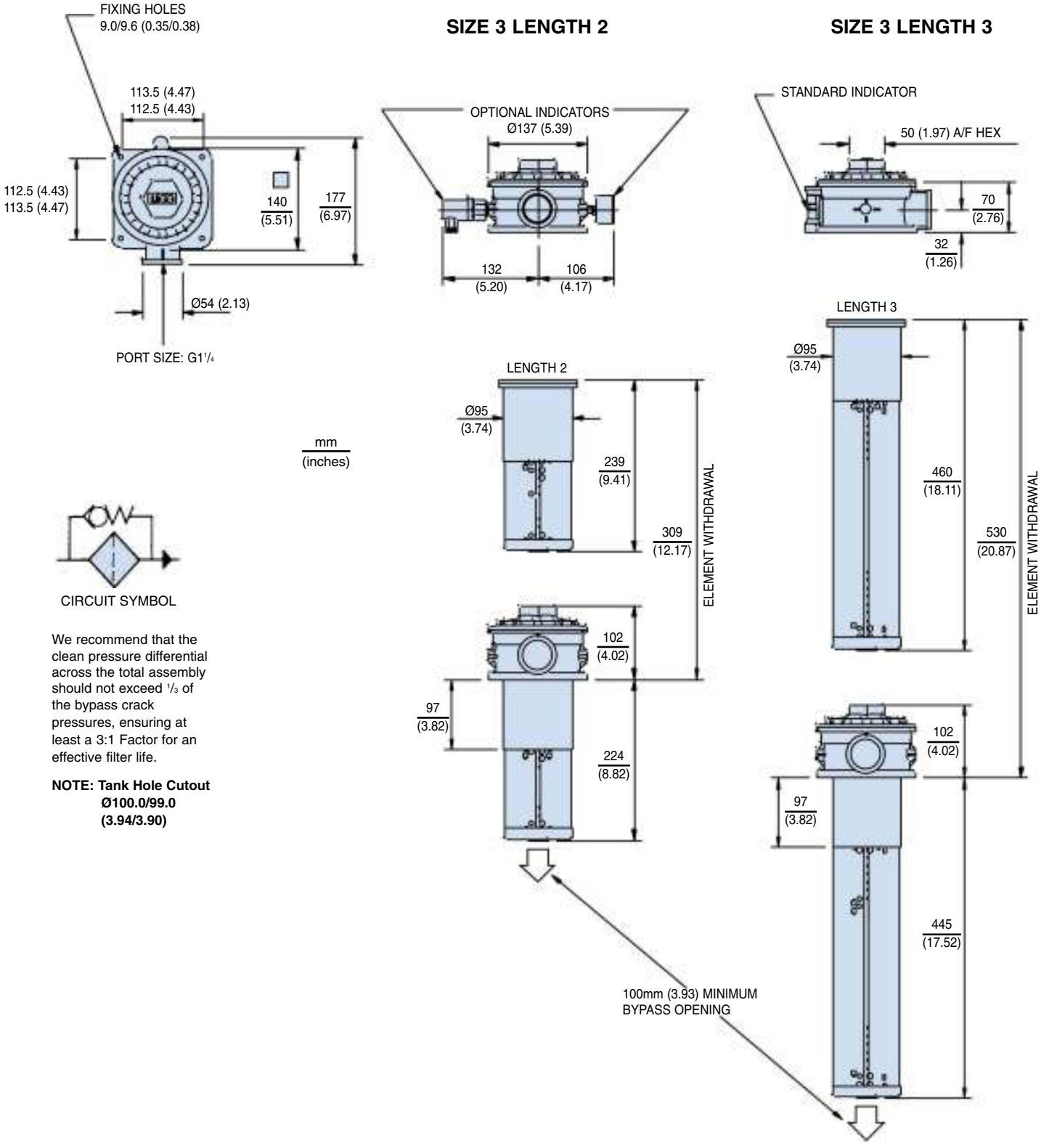


CIRCUIT SYMBOL

We recommend that the clean pressure differential across the total assembly should not exceed 1/3 of the bypass crack pressures, ensuring at least a 3:1 Factor for an effective filter life.

NOTE: Tank Hole Cutout
Ø81.0/80.0
(3.19/3.15)

SIZE 3 INSTALLATION DETAILS



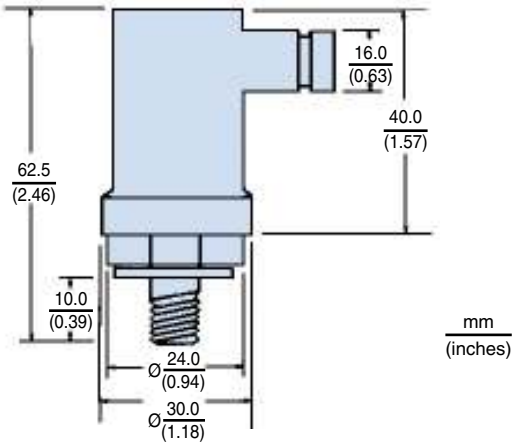
CIRCUIT SYMBOL

We recommend that the clean pressure differential across the total assembly should not exceed ⅓ of the bypass crack pressures, ensuring at least a 3:1 Factor for an effective filter life.

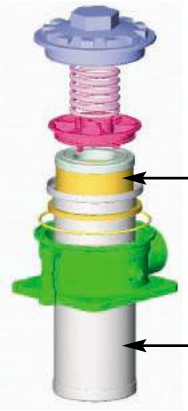
NOTE: Tank Hole Cutout
Ø100.0/99.0
(3.94/3.90)

INDICATOR DETAILS

Electrical Indicator (Adjustable)
Diaphragm Pressure Switch



THE ENVIRONMENTALLY-FRIENDLY VERSION OF THE MULTIFLOW



Picture 1. Exploded view Multiflow Size 3 extended with re-usable chimney and Leif® element type MFE

THE PATENTED GREEN LEIF® ELEMENT

Picture 2. Leif® element

Benefits:

- Patented element concept protects element after market
- Patented concept contributes to guaranteed quality of filtration
- Re-usable chimney, reduction of disposable waste
- Weight reduction over 50% thanks to re-usable chimney
- Remaining oil in the element can be removed by means of simple pressing sequence.

Part Number	Description	Connection/Voltage	Wiring
S.250004	Electrical Switch	Max Operating Voltage: 48V (AC/DC) Max Current: 0.5 Amp (resistive) 0.25 Amp (inductive)	N.O.
N/A	Visual Gauge (Integral Differential)	N/A	N/A

S.250004 Additional Technical Information:

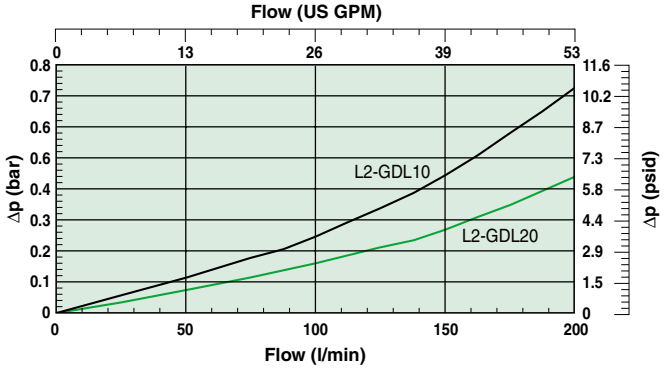
Sealed gland connector: 1/8” BSPT thread
Electrical specification: IP54
Working temperature: -5°C to +60°C
Switch setting: 1.7 bar (return)

PRESSURE DROP CURVES

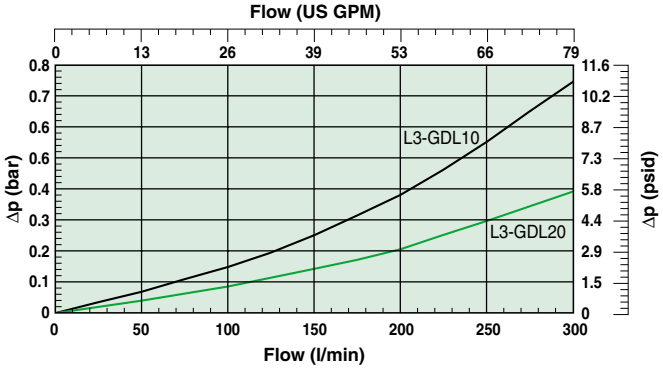
The recommended level of the initial pressure is approximately 0.8 bar (preferred 0.5 bar).

If the medium used has a viscosity different from 32 cSt, pressure drop over the filter can be estimated as follows :
The total Δp = Housing Δph + (Element Δpe x working viscosity/32)

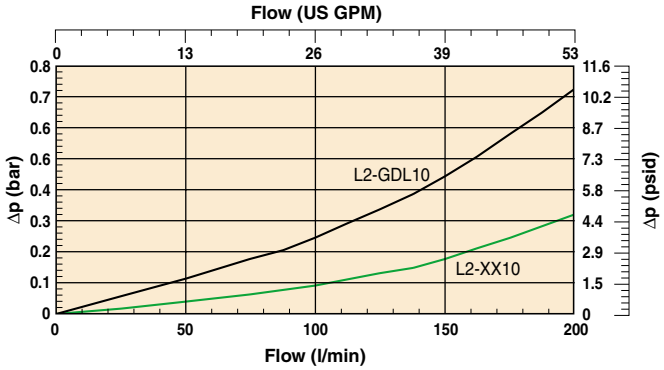
MFL Size 2 Length 2



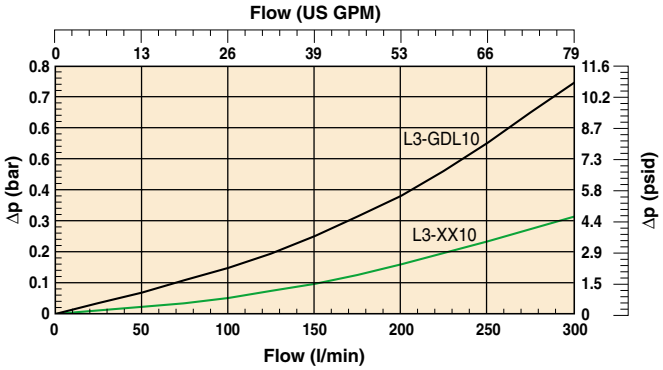
MFL Size 2 Length 3



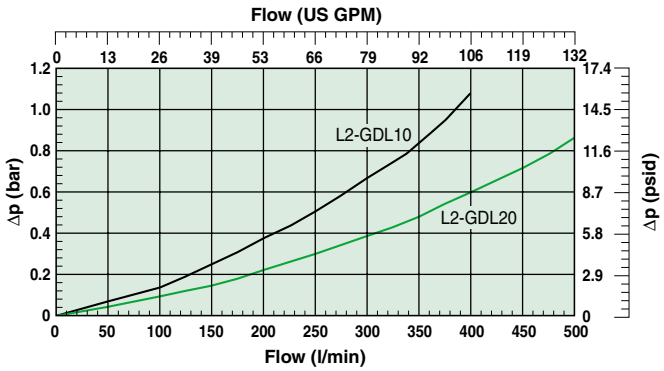
MFA Size 2 Length 2



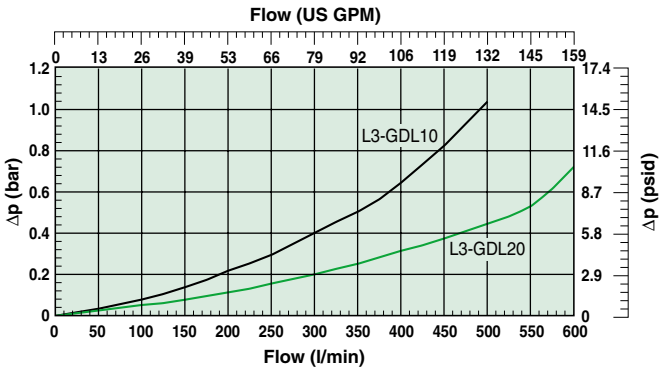
MFA Size 2 Length 3



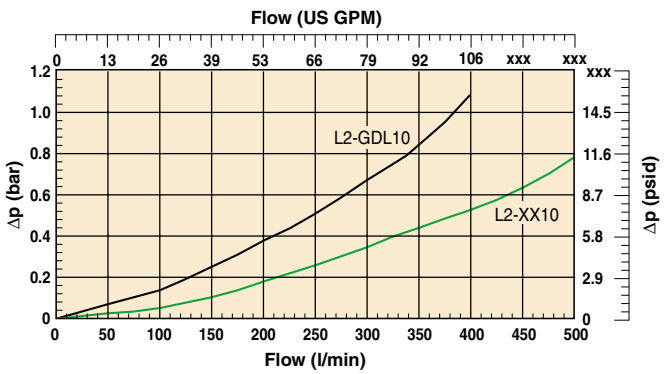
MFL Size 3 Length 2



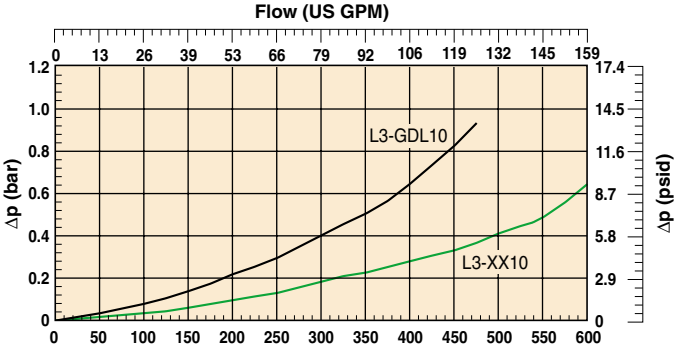
MFL Size 3 Length 3



MFA Size 3 Length 2



MFA Size 3 Length 3



Note: For Length 1 Technical and Installation details contact Parker Filtration. Above data calculated at 30 cSt. Rel. density 0.856.

PREFERRED PRODUCTS TABLE GREEN VERSION

10 MICRON ABSOLUTE ORDERING INFORMATION - RETURN LINE (SIZE 2 & 3)

Size 2 G3/4 Port- Extended element

Length 2*		
Part Number	**Description**	**Replacement Element**
MFL.2601.346	10 Micron Absolute, Length 2 Extended Element with Bypass	MFE.2600

Size 2 G3/4 Port- Extended element

Length 3*		
Part Number	**Description**	**Replacement Element**
MFL.2701.346	10 Micron Absolute, Length 3 Extended Element with Bypass	MFE.2700

Size 3 G1 1/4 Port- Extended element

Length 2*		
Part Number	**Description**	**Replacement Element**
MFL.3601.346	10 Micron Absolute, Length 2 Extended Element with Bypass	MFE.3600

Size 3 G1 1/4 Port- Extended element

Length 3*		
Part Number	**Description**	**Replacement Element**
MFL.3701.346	10 Micron Absolute, Length 3 Extended Element with Bypass	MFE.3700

Note 1: With extended elements, the bypass is integrated in the chimney. The bypass is fitted in the head for Length 1.

Note 2: We recommend that the clean element differential pressure should not exceed one third of the bypass crack pressure. This ratio contributes to effective element life time.

Note 3: If intending to replace Length 1 elements (for return line only) with Extended elements Lengths 2 or 3, Note:- cap spring/bypass assembly must be replaced with a modified spring assembly. Part numbers are as follows; Size 2 = P.817201, Size 3 = P.817301. Contact Parker Filtration for further details.

* Available with electrical indicator

20 MICRON ABSOLUTE ORDERING INFORMATION - RETURN LINE (SIZE 1, 2 & 3)

Size 1 G1/2 Port- Extended element

Length 2		
Part Number	**Description**	**Replacement Element**
MFL.1801.310	20 Micron Absolute, with Bypass No Visual indicator	MFE.1800
MFL.1801.341	20 Micron Absolute, with Bypass With Visual indicator	MFE.1800

Size 2 G3/4 Port- Extended element

Length 2*		
Part Number	**Description**	**Replacement Element**
MFL.2801.346	20 Micron Absolute, Length 2 Extended Element with Bypass	MFE.2800

Size 2 G3/4 Port- Extended element

Length 3*		
Part Number	**Description**	**Replacement Element**
MFL.2901.346	20 Micron Absolute, Length 3 Extended Element with Bypass	MFE.2900

Size 3 G1 1/4 Port- Extended element

Length 2*		
Part Number	**Description**	**Replacement Element**
MFL.3801.346	20 Micron Absolute, Length 2 Extended Element with Bypass	MFE.3800

Size 3 G1 1/4 Port- Extended element

Length 3*		
Part Number	**Description**	**Replacement Element**
MFL.3901.346	20 Micron Absolute, Length 3 Extended Element with Bypass	MFE.3900

Disposable Replacement Elements type MFR for assembly type MFA
&
Conversion Kits to convert MFA type assembly into MFL type assembly

Customers currently using the standard MFA.*** style filter assemblies, fitted with the MFR style elements can EASILY & QUICKLY convert their existing housings to the new Environmental-friendly LEIF® version, by using the appropriate MFC Conversion Kit shown in the list below. This kit consists of a re-usable chimney and a LEIF® element (The original filter head is retained). Having made this one off change, only the new LEIF® element type MFE becomes the future replacement part for the filter.We refer to the column The Green Alternative.

Important Note: Elements listed as "Old Replacement Element" type MFR are replaced by the "new version" of the MFR style element. This new element using GDL/GDH20 or XX10 media offers improved filter efficiency and higher dirt holding capacity. Because of the environmental impact, all elements are no longer supplied as orange painted parts. **For further information and advice please contact Parker Filtration.**

10 MICRON ABSOLUTE - RETURN LINE (SIZE 2 & 3)

Size 2 G¾ Port- Extended element

Length 2*	
Assembly Number	**Replacement Element**
MFA.2601.346	MFR.2600

Go Green

Green Version	
Conversion Kit	**Leif Element**
MFC.2600	MFE.2600

Size 2 G¾ Port- Extended element

Length 3*	
Assembly Number	**Replacement Element**
MFA.2701.346	MFR.2700

Go Green

Green Version	
Conversion Kit	**Element Number**
MFC.2700	MFE.2700

Size 3 G1¼ Port- Extended element

Length 2*	
Assembly Number	**Replacement Element**
MFA.3601.346	MFR.3600

Go Green

Green Version	
Conversion Kit	**Element Number**
MFC.3600	MFE.3600

Size 3 G1¼ Port- Extended element

Length 3*	
Assembly Number	**Replacement Element**
MFA.3701.346	MFR.3700

Go Green

Green Version	
Conversion Kit	**Element Number**
MFC.3700	MFE.3700

10 MICRON NOMINAL (XX10 media replaces former 25 Abs. media) - RETURN LINE (SIZE 1, 2 & 3)

Size 1 G½ Port- Extended element

Length 2	
Assembly Number	**Replacement Element**
MFA.1301.310	MFR.1300
MFA.1301.341	MFR.1300

Size 2 G¾ Port- Extended element

Length 2*	
Assembly Number	**Replacement Element**
MFA.2301.346	MFR.2300

Size 2 G¾ Port- Extended element

Length 3*	
Assembly Number	**Replacement Element**
MFA.2401.346	MFR.2400

Size 3 G1¼ Port- Extended element

Length 2*	
Assembly Number	**Replacement Element**
MFA.3301.346	MFR.3300

Size 3 G1¼ Port- Extended element

Length 3*	
Assembly Number	**Replacement Element**
MFA.3401.346	MFR.3400

Due to continuous product improvement, published data and specifications are subject to change without notice.

PREFERRED PRODUCTS TABLE

Beside the existing disposable chimney, the environmental-friendly version of the Multiflow with re-usable chimney will be available for standard Multiflow filters.

Assembly MFL_ .XXX X.XXX — **Type**

Spare Element MF_ .XXXX — **Type**

Type:

Assembly

L: Complete assembly based on new green version with re-usable chimney

Spare Element

R: Spare element for MFA
E: Spare element for MFL
C: Conversion kit for converting MFA into MFL

Table A

Degree of Filtration						
Average filtration Beta Ratio (ISO 16889) / particle size µm(c)						Glassfibre Media
2	10	75	100	200	1000	
3.1	6.2	9.9	10.4	11.6	14.6	GDL10/GDH10
6.7	12.6	17.8	18.5	20.0	22.6	GDL20/GDH20

1200 Series

Low Pressure Filters

Max 180 l/min - 6 bar

Global Filtration Technology

TYPICAL APPLICATIONS

- Lorry Mounted Cranes
- Small Industrial Power Units
- Small Forestry & Agricultural Equipment
- Container Hook Loaders

The Parker Filtration 1200 Series Low Pressure Filters.

For tank top mounting or for holder with low cost inside tank installation. Reinforced composite head, two return ports and quick release cover offer both strength and low cost hydraulic system filtration for flows up to 180 l/min.

TYPICAL APPLICATIONS

SPECIFICATION

Assembly:
Tank top mounted or with holder inside tank

Connections:
Threads G1 + G1 (ISO 228/1), delivery with connection B closed off (see drawings)

Operating Pressure:
Max 6 bar (composite)
Max 8 bar (aluminium)

Seal Material:
Nitrile (ordering B code)

Operating Temperature Range:
-20° to +80°C

Degree of Filtration:
Determined by multipass test according to ISO 16889

Filtration Media:
Microglass III (see Table 2)

Flow Fatigue Characteristics:
Filter media is supported so that the optimal fatigue life is achieved (ISO 3724)

Element Collapse Rating:
8 bar (ISO 2941)

Bypass Valve:
Opening pressure 1.6 bar

Pressure Indicator Options:
1.0 ± 0.2 bar
- visual pressure gauge (code M10)
- electrical pressure indicator 250 VAC (code G10)
- electrical pressure indicator 48 VDC (code H10)

Magnetic Pack:
Available as option

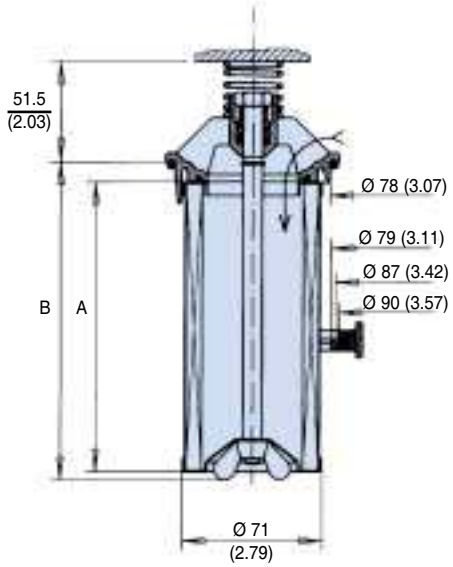
Filter Housing and Holder:
Material; glass reinforced composite (code K), splash guard steel. Also available filter housing of aluminium (code A), filter housing type according to the table:

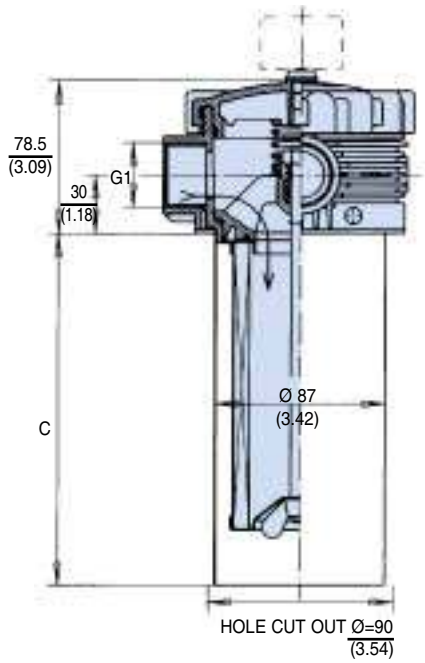
Material of filter housing:	Filter housing type					
Aluminium (A)	1025	1026	1028	1129	1029	1128
Re-inforced Composite (K)	1220	1230	1240	1250	1260	1275

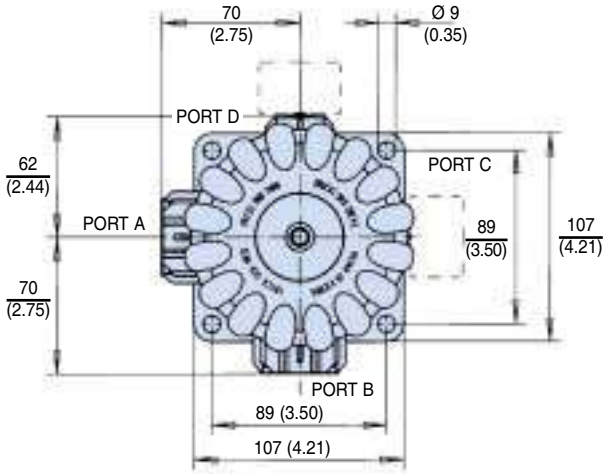
Filter Element:
End cap material steel (code S)

Dimensions mm (inches)	A	B	C
FK1220	82 (3.22)	97 (3.82)	100 (3.94)
FK1230	106 (4.17)	121 (4.76)	125 (4.92)
FK1240	150 (5.90)	165 (7.28)	177 (6.97)
FK1250	200 (7.87)	215 (8.40)	225 (8.86)
FK1260	260 (10.24)	275 (10.83)	300 (11.81)
FK1275	350 (13.78)	365 (14.37)	375 (14.76)

mm
(inches)



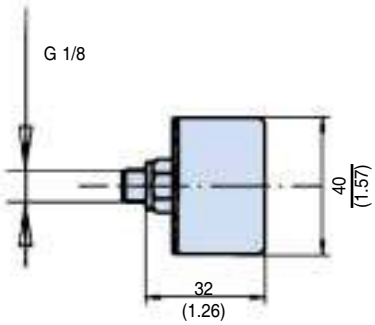




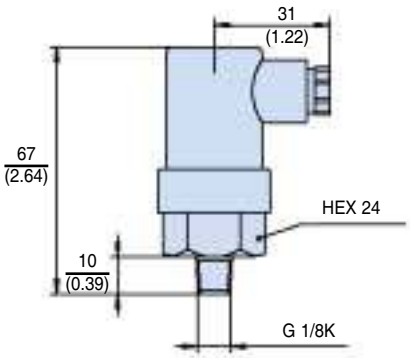
NOTE: Ports C & D are non-standard options.
Consult Parker Filtration for details.

INDICATOR DETAILS

Visual Pressure Indicator
Code M10

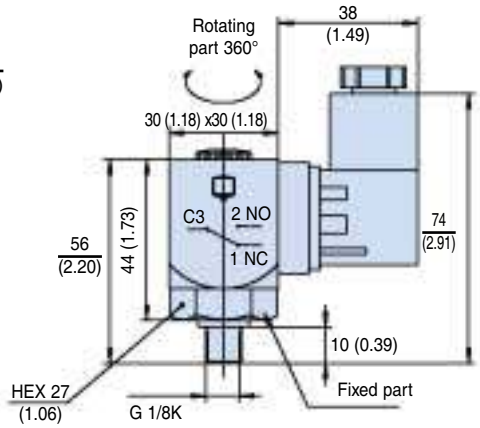


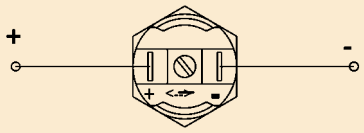
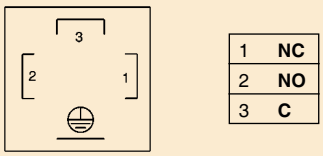
48 VDC Electrical Indicator 1.0 bar
Code H10



mm
(inches)

250VAC Electrical Indicator 1.0 bar
Code G10



Option	Description	Connection/Voltage	Wiring	Part Number
M10	Visual Indicator 1.0 bar	N/A	N/A	FPC.M10XM
H10	Electrical Indicator 1.0 bar	48 VDC Max	 Select either Normally Open (NO) or Normally Closed (NC)	FPC.H10.XM.NO or FPC.H10.XM.NC
G10	Electrical Indicator 1.0 bar	250VAC Max		FPC.G10.XM

Note: For full indicator specifications see Section 6.

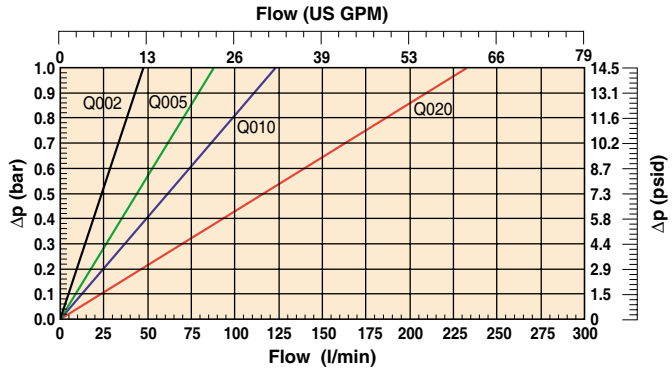
PRESSURE DROP CURVES

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

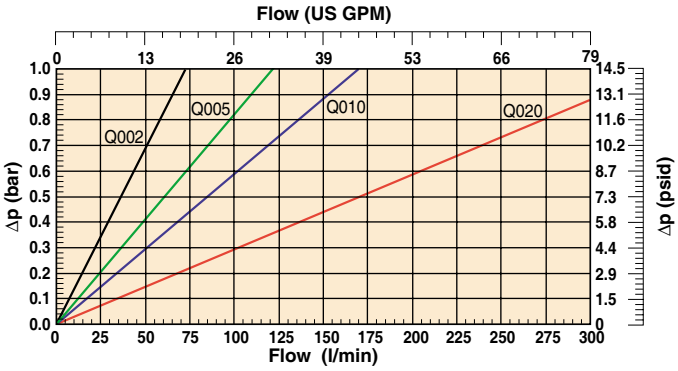
If the medium used has a viscosity different from 30 cSt, pressure drop over the filter can be estimated as follows :

$$\Delta p = (\Delta p30 \text{ x viscosity of medium used}) / 30 \text{ cSt}$$

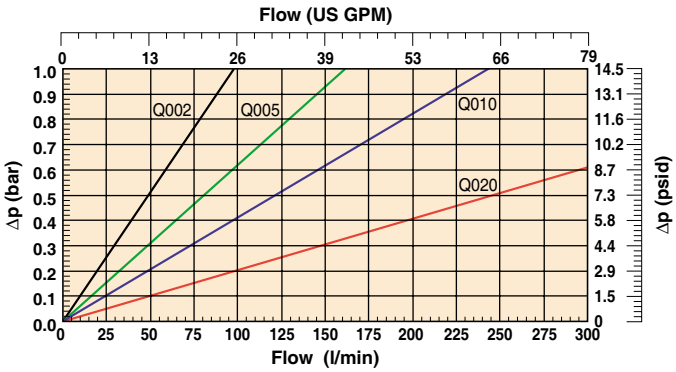
1220 Series with Microglass III Elements



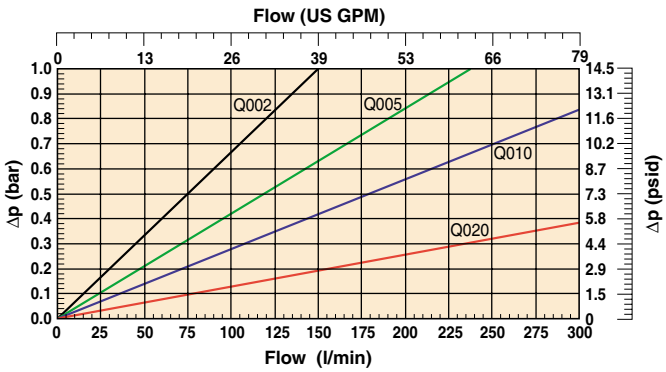
1230 Series with Microglass III Elements



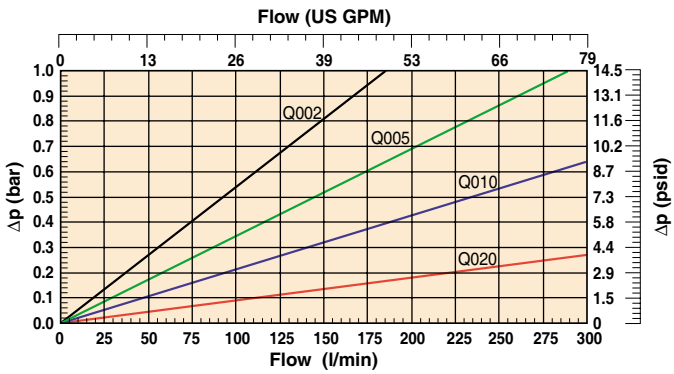
1240 Series with Microglass III Elements



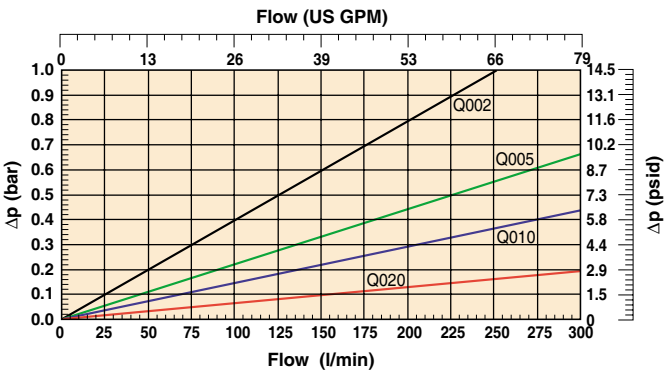
1250 Series with Microglass III Elements



1260 Series with Microglass III Elements



1275 Series with Microglass III Elements



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

PREFERRED PRODUCTS TABLE

The following standard filters are supplied with 1.6 bar bypass and Nitrile seals. Note: Order indicator separately.					
FK1200 -Series	**Flow (l/min)**	**Media Rating**	**Port A**	**Port B**	**Replacement Elements**
FK1220.Q010.BK16.GX16	40	Q010	G1	G1	FC1220.Q010.XS
FK1220.Q020.BK16.GX16	60	Q020	G1	G1	FC1220.Q020.XS
FK1230.Q010.BK16.GX16	50	Q010	G1	G1	FC1230.Q010.XS
FK1230.Q020.BK16.GX16	80	Q020	G1	G1	FC1230.Q020.XS
FK1240.Q005.BK16.GX16	50	Q005	G1	G1	FC1240.Q005.XS
FK1240.Q010.BK16.GX16	70	Q010	G1	G1	FC1240.Q010.XS
FK1240.Q020.BK16.GX16	110	Q020	G1	G1	FC1240.Q020.XS
FK1250.Q010.BK16.GX16	100	Q010	G1	G1	FC1250.Q010.XS
FK1250.Q020.BK16.GX16	140	Q020	G1	G1	FC1250.Q020.XS
FK1260.Q010.BK16.GX16	140	Q010	G1	G1	FC1260.Q010.XS
FK1260.Q020.BK16.GX16	180	Q020	G1	G1	FC1260.Q020.XS

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

PART NUMBER MATRIX

Filter Assembly:
*(Filter housing without element FT)

FK [Table 1] • [Table 2] • [Table 3] K [Table 4] • [Table 5] — [Table 6]

Filter Element with Holder:

FH [Table 1] • [Table 2] • [Table 3] K [Table 4]

Filter Element:

FC [Table 1] • [Table 2] • XS

Pressure Indicator:

FPC • [Table 7] • XM – [Table 8]

Seal Kit:

FD 1200- [Table 3]

Table 1

Filter Type	
Element Length	**CODE**
82mm	1220
106mm	1230
150mm	1240
200mm	1250
260mm	1260
350mm	1275

Table 2

Degree of Filtration						
Average filtration ratio ß (ISO 16889) / particle size µm(c)						CODE
2	10	75	100	200	1000	
N/A	N/A	N/A	N/A	N/A	4.5	Q002
N/A	N/A	4.5	5	6	7	Q005
N/A	6	8.5	9	10	12	Q010
6	11	17	18	20	22	Q020

Table 3

Seal Type	
Seal Material	**CODE**
Nitrile	B

Table 4

Bypass Valve	
Opening Pressure	**CODE**
1.6 bar	16

Table 5

Filter Connection	
Connection Type (PORTS A, B)	**CODE**
G1 + G1 Threads	GX16

Table 6

Option	
Magnets	**CODE**
Magnet Pack	M

Table 7

Pressure Indicator	
Indicator Type Option (On Top) or Ports C, D	**CODE**
Visual Indicator 1.0 bar	M10
250 VAC Electrical Indicator 1.0 bar	G10
48 VDC Electrical Indicator 1.0 bar	H10

Table 8

H10 Option ONLY	
Options	**CODE**
Normally Open	NO
Normally Closed	NC

Tanktopper Series I, II & III

Tank Mounted Return Line Filters

Max 650 l/min - 10 bar

Global Filtration Technology

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 Tank Mounted Return Line Filters.

The TPR Series I, II & III offer a total filtration concept, featuring 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 GDL filter element materials are 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, cost-saving TPR solution allows for a more compact tank design and is easy to mount.

TYPICAL APPLICATIONS

With the courtesy of:
Nissan

SPECIFICATION

Assembly:
Tank top mounted with **integrated air breather**

Operating Pressure:
Max 10 bar

Connections:
TPR I = Threads G¾ (ISO228), SAE12
TPR II = Threads G1¼ or G1½ (ISO228), SAE20, SAE24
TPR III = Threads G1½ (ISO228)

Seal Material:
Nitrile

Operating Temperature Range:
-40°C to +80°C

Degree of Filtration:
Determined by multipass test according to ISO 16889

Filtration Media:
HPFE glass fibre GDL. See Table 'A'.
Also available 10µ cellulose and 40µ Stainless Steel

Filtration Media: Airbreather
10 micron absolute (ßx≥75)

Flow Fatigue Characteristics:
Filter media is supported so that the optimal fatigue life is achieved

Element Collapse Rating:
10 bar (ISO 2941)

Bypass Setting:
1.5 bar

Pressure Indicator Options:
1.2 bar
Visual pressure gauge
Electrical pressure switch

Options:

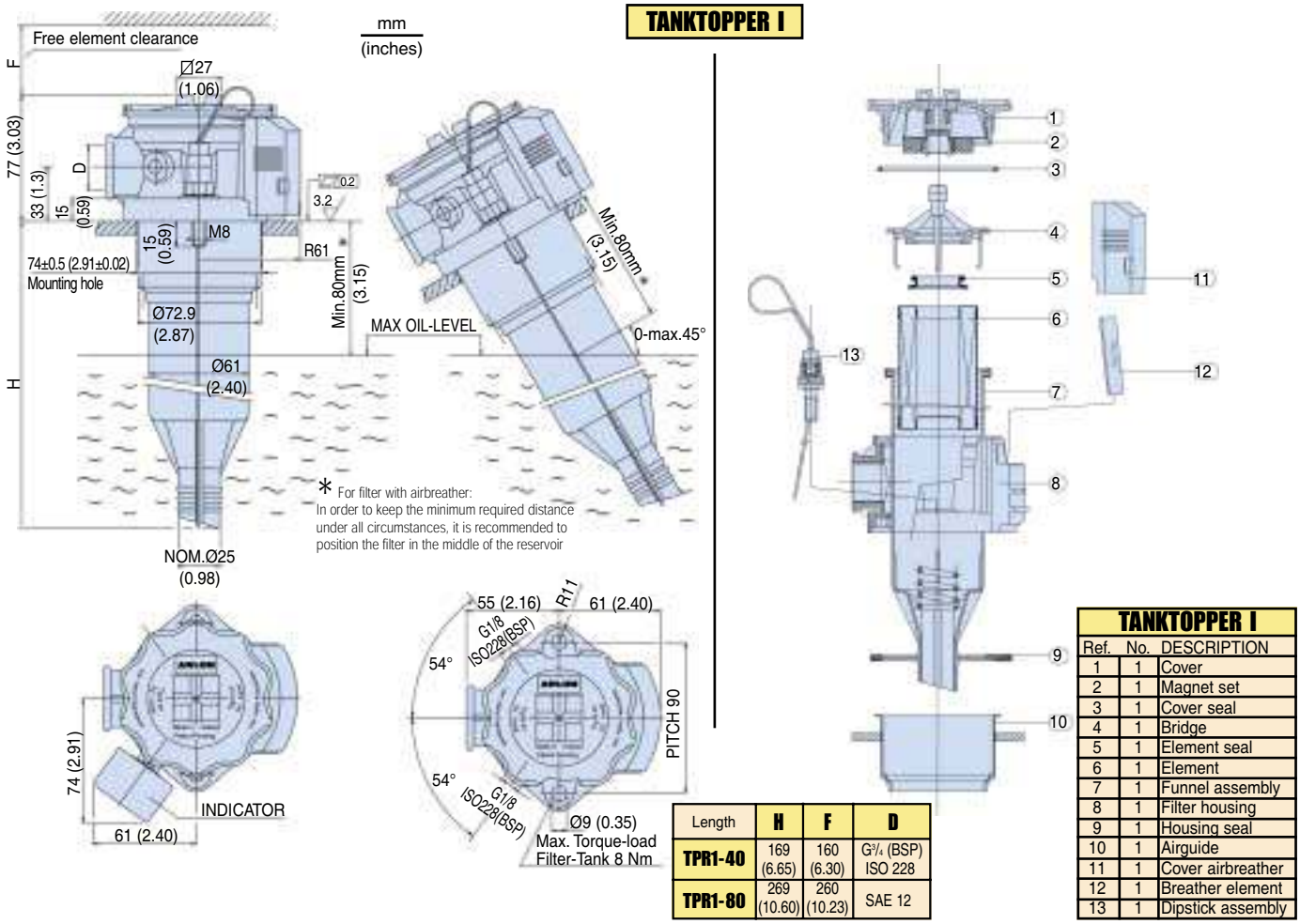
Model	Dipstick	Second Port
TPR I	✔	✗
TPR II	✔	✔
TPR III	✔	✔

Magnetic Pack:
TPR I = Option
TPR II & TPR III = Standard

Filter Housing and Holder:
Aluminium head and steel or aluminium bowl, cover and airguide made from high impact strength composite material

Filter Element:
TPR I = End cap material steel
TPR II & TPR III = Leif® element with reusable metal element sleeve

Note: Leif® elements can only be used with mineral oils.
Leif® contributes to ISO 14001 quality standards.
For other fluids consult Parker Filtration.



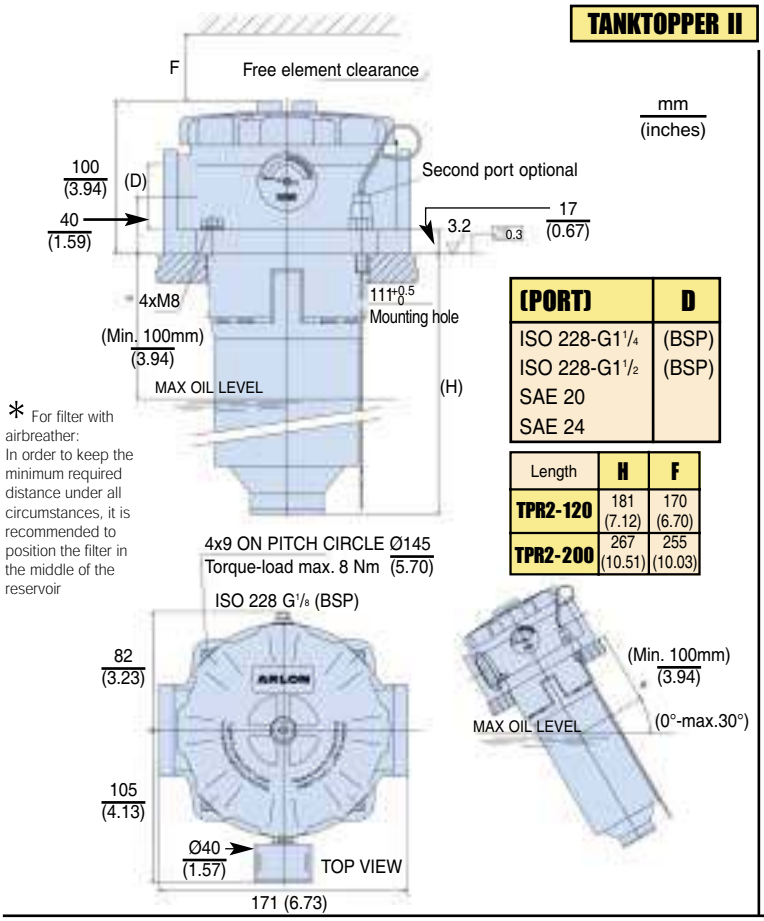
Length	H	F	D
TPR1-40	169 (6.65)	160 (6.30)	G¾ (BSP) ISO 228
TPR1-80	269 (10.60)	260 (10.23)	SAE 12

TANKTOPPER I

Ref.	No.	DESCRIPTION
1	1	Cover
2	1	Magnet set
3	1	Cover seal
4	1	Bridge
5	1	Element seal
6	1	Element
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

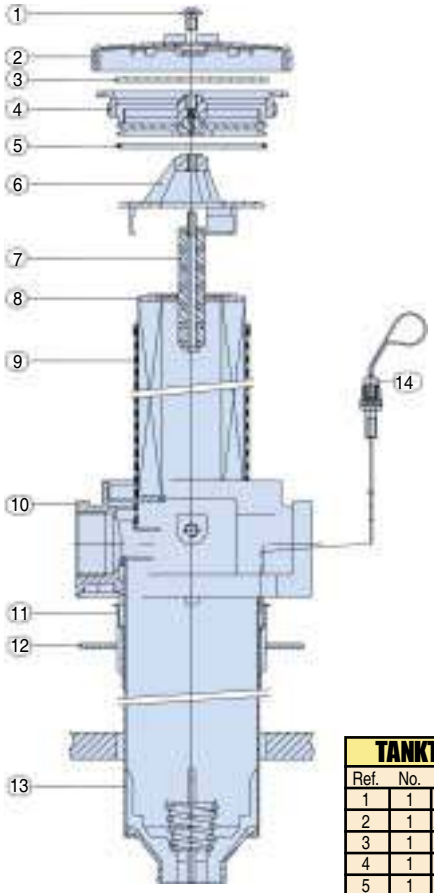
SPECIFICATION CONTINUED

TANKTOPPER II



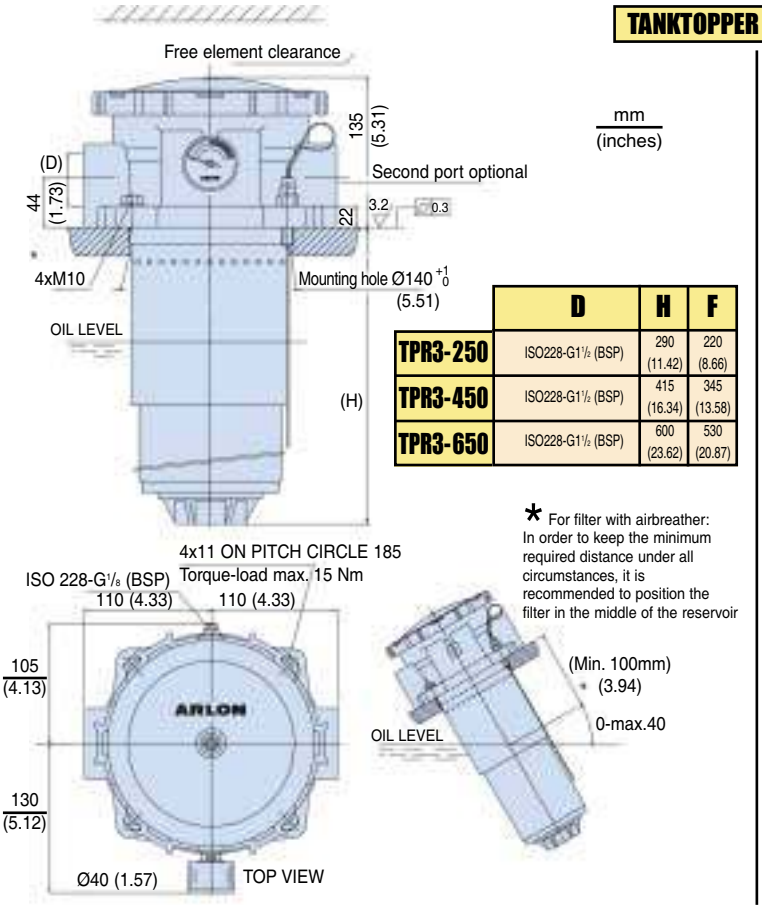
(PORT)	D
ISO 228-G1 1/4	(BSP)
ISO 228-G1 1/2	(BSP)
SAE 20	
SAE 24	

Length	H	F
TPR2-120	181 (7.12)	170 (6.70)
TPR2-200	267 (10.51)	255 (10.03)

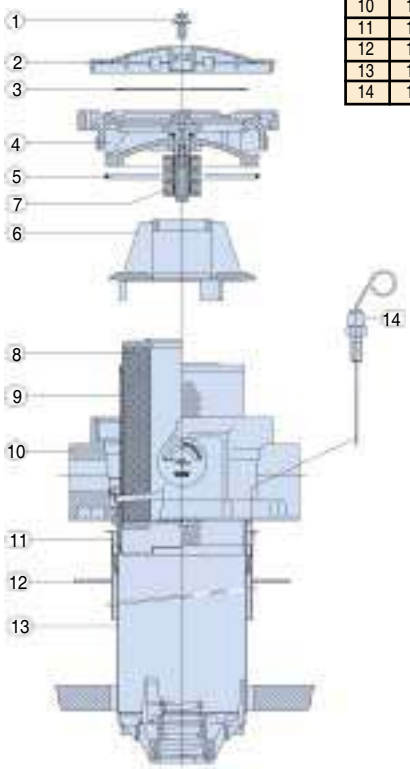


TANKTOPPER II & III		
Ref.	No.	DESCRIPTION
1	1	Hexagon socket bolt M8
2	1	Air breather cap
3	1	Air breather filter medium
4	1	Cover (assembly)
5	1	Cover seal
6	1	Bridge
7	1	Magnet set
8	1	Element
9	1	Sleeve
10	1	Filter house
11	1	Airguide
12	1	Tank gasket
13	1	Funnel
14	1	Dipstick assembly

TANKTOPPER III



D	H	F
TPR3-250 ISO228-G1 1/2 (BSP)	290 (11.42)	220 (8.66)
TPR3-450 ISO228-G1 1/2 (BSP)	415 (16.34)	345 (13.58)
TPR3-650 ISO228-G1 1/2 (BSP)	600 (23.62)	530 (20.87)

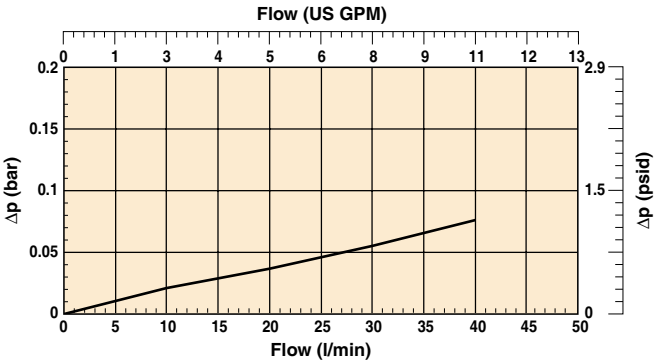


PRESSURE DROP CURVES — TANKTOPPER I

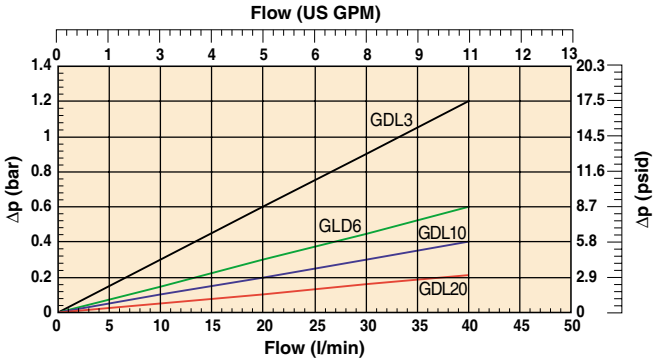
Filter Housing and Element Pressure Drop based on 32cSt fluid viscosity and 0.87 density

LENGTH 1

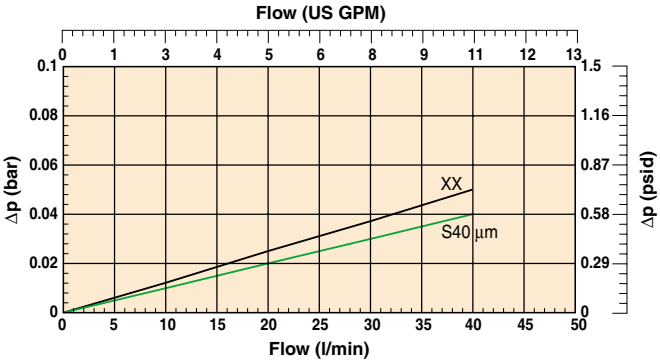
TPR I 40 Empty Housing



Filter Element PXW1A

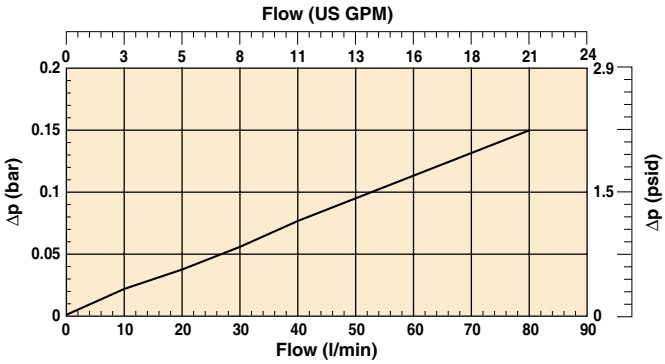


Filter Element P1A

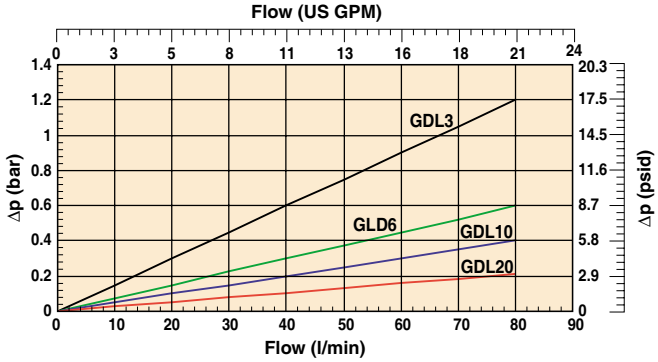


LENGTH 2

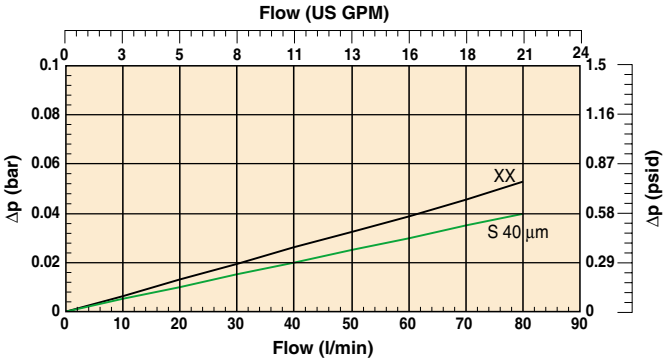
TPR I 80 Empty Housing



Filter Element PXW2A



Filter Element P2A

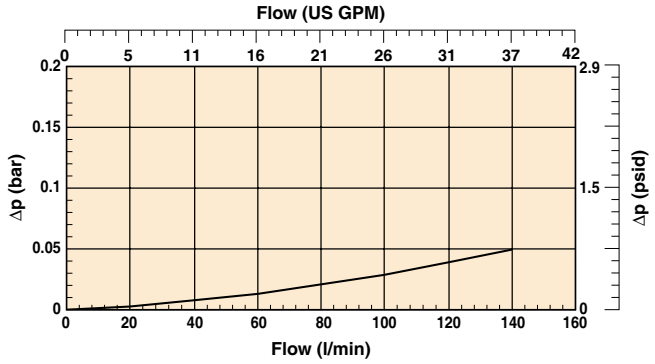


PRESSURE DROP CURVES — TANKTOPPER II

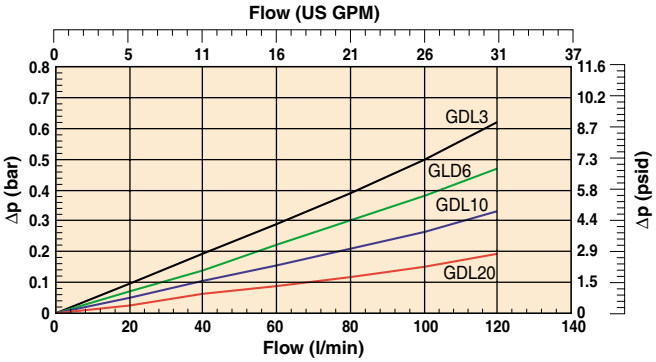
Filter Housing and Element Pressure Drop based on 32cSt fluid viscosity and 0.87 density

TPR 120

TPR II 120 Empty Housing (G1¼ Ports)

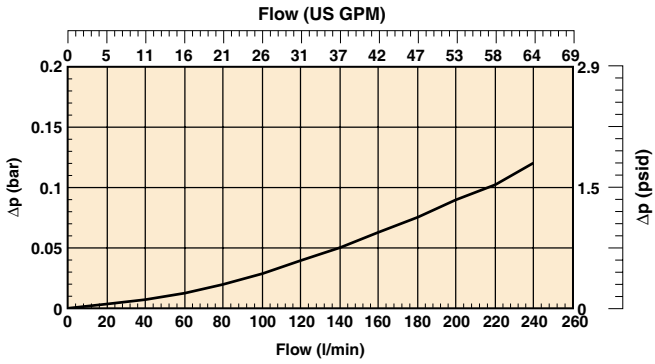


Filter Element PXWL3

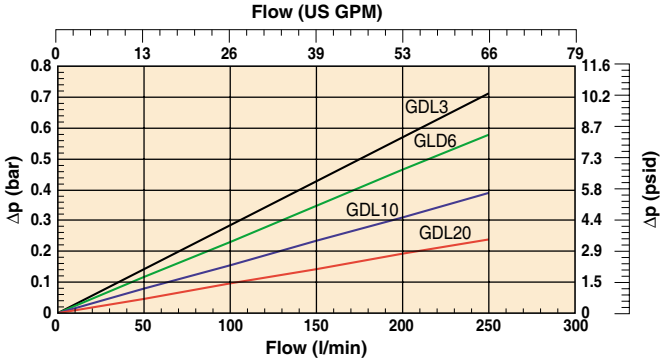


TPR 200

TPR II 200 Empty Housing (G1½ Ports)



Filter Element PXWL4

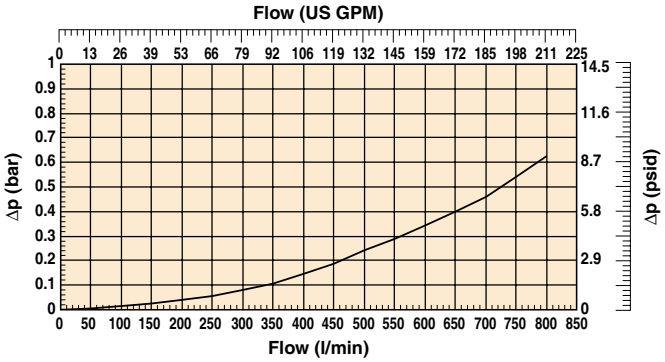


PRESSURE DROP CURVES — TANKTOPPER III

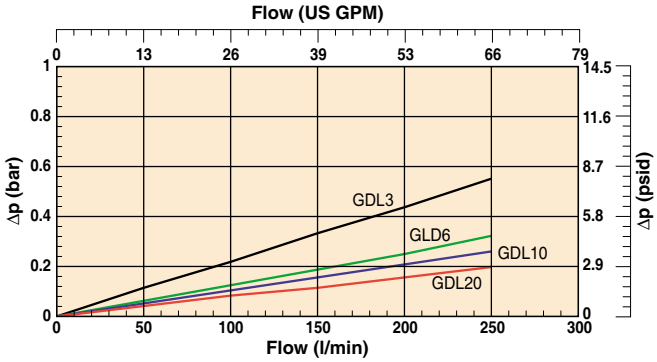
Filter Housing and Element Pressure Drop based on 32cSt fluid viscosity and 0.87 density

TPR 250, 450 & 650

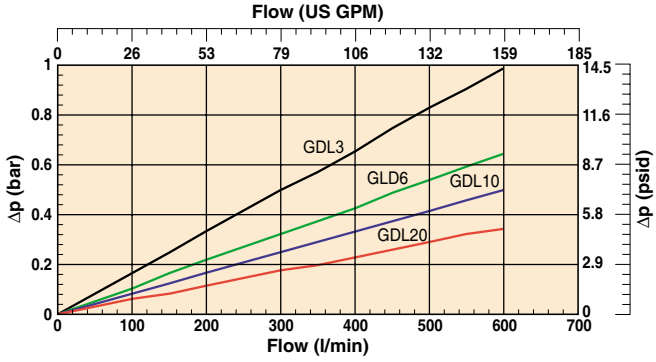
TPR III Empty Housing (G1½ Ports)



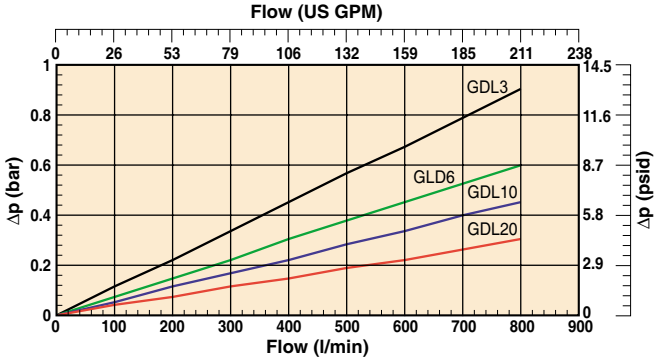
Filter Element PXWL6 (TPR 250)



Filter Element PXWL7 (TPR 450)



Filter Element PXWL8 (TPR 650)



PREFERRED PRODUCTS TABLE — TANKTOPPER I

Ordering Code	Flow (l/min)	Micron Rating	Ports	Indicator	Replacement Elements
TPR40G¾PXW1A-10-B15MMMA	40	GDL 10	G¾	Plugged	PXW1A-10B
TPR40G¾PXW1A-20-B15MMMA	40	GDL 20			PXW1A-20B
TPR80G¾PXW2A-10AB15MMMA	80	GDL 10			PXW2A-10B
TPR80G¾PXW2A-20AB15MMMA	80	GDL 20			PXW2A-20B

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

PART NUMBER MATRIX

Table 1

Filter Type		
Housing	LENGTH	CODE
TPR 40 (Tanktopper I)	1	40
TPR 80 (Tanktopper I)	2	80

Table 2

Filter Connection	
Ports	CODE
ISO 228-G¾ (BSP)	G¾
SAE 12	S12

Table 3

Degree of Filtration						
Element	Nominal	Filtration fineness absolute				
	cellulose	HPFE glass fibre = ßx≥75				Stainless steel mesh
	10 µm	3 µm (GDL3)	6 µm (GDL6)	10 µm (GDL10)	20 µm (GDL20)	40 µm
	CODE	CODE	CODE	CODE	CODE	CODE
TPR 40	PXX1A-10	PXW1A-3	PXW1A-6	PXW1A-10	PXW1A-20	PS1A-40
TPR 80	PXX2A-10	PXW2A-3	PXW2A-6	PXW2A-10	PXW2A-20	PS2A-40

Table 4

Funnel	
Funnel	CODE
POM (TPR40 and TPR80)	–
Aluminium (TPR80)	A

–Aluminium funnel recommended for heavy duty applications (e.g. cold start, flow peaks, vibrations, temp. oil > 80°C) or risk of electrostatically charging.

Table 5

Seal Type	
Seal Material	CODE
Nitrile (NBR)	B

Table 6

Bypass Valve	
Bypass	CODE
1.5 bar	15

Table 7

Pressure Indication		
Indicator		Bypass 1.5 bar
	SETTING	CODE
Pressure Gauge	1.2 bar	VM
Pressure Switch N.O.	1.2 bar	EM
No indicator, drilled and plugged R + L		MM

Table 8

Options	
Options	CODE
Standard	A
Dipstick	AD
Magnet set	MA
Dipstick/Magnet set	MAD

ORDERING EXAMPLE ELEMENT

3	5
PXW2A-20	B

ORDERING EXAMPLE FILTER

Std	1	2	3	4	5	6	7	8
TPR	80	G¾	PXW2A-20	A	B	15	VM	MAD

Table A

Degree of Filtration						
Average filtration Beta Ratio (ISO 16889) / particle size µm(c)						CODE
2	10	75	100	200	1000	
N/A	3.0	4.1	4.4	4.9	6.7	GDL3/GDH3
N/A	4.0	6.7	7.0	7.9	10.0	GDL6/GDH6
3.1	6.2	9.9	10.4	11.6	14.6	GDL10/GDH10
6.7	12.6	17.8	18.5	20.0	22.6	GDL20/GDH20

PREFERRED PRODUCTS TABLE — TANKTOPPER II & III

Ordering Code	Flow (l/min)	Micron Rating	Ports	Indicator	Replacement Elements
TPR1202G1¼PXWL3-10B15MM	120	GDL 10	2 x G1¼	Plugged	PXWL3-10
TPR1202G1¼PXWL3-20B15MM	120	GDL 20	2 x G1¼	Plugged	PXWL3-20
TPR2002G1½PXWL4-10B15MM	200	GDL 10	2 x G1½	Plugged	PXWL4-10
TPR2002G1½PXWL4-20B15MM	200	GDL 20	2 x G1½	Plugged	PXWL4-20
TPR2502G1½PXWL6-10B15MM	250	GDL 10	2 x G1½	Plugged	PXWL6-10
TPR2502G1½PXWL6-20B15MM	250	GDL 20	2 x G1½	Plugged	PXWL6-20
TPR4502G1½PXWL7-10B15MM	450	GDL 10	2 x G1½	Plugged	PXWL7-10
TPR4502G1½PXWL7-20B15MM	450	GDL 20	2 x G1½	Plugged	PXWL7-20
TPR6502G1½PXWL8-10B15MM	650	GDL 10	2 x G1½	Plugged	PXWL8-10
TPR6502G1½PXWL8-20B15MM	650	GDL 20	2 x G1½	Plugged	PXWL8-20

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

PART NUMBER MATRIX

Table 1

Filter Type		
Housing	LENGTH	CODE
TPR 120 (Tanktopper II)	1	120
TPR 200 (Tanktopper II)	2	200
TPR 250 (Tanktopper III)	1	250
TPR 450 (Tanktopper III)	2	450
TPR 650 (Tanktopper III)	3	650

Table 2

Filter Connection	
Ports	CODE
ISO 228-G1¼ (BSP) (TPR II ONLY)	G1¼
ISO 228-G1½ (BSP)	G1½
SAE 20 (TPR II ONLY)	S20
SAE 24 (TPR II ONLY)	S24
2 x ISO 228-G1¼ (BSP) (TPR II ONLY)	2G1¼
2 x ISO 228-G1½ (BSP)	2G1½
2 x SAE 20 (TPR II ONLY)	2S20
2 x SAE 24 (TPR II ONLY)	2S24

Table 3

Degree of Filtration					
Element		Filtration fineness absolute			
		Leif® HPFE glass fibre = βx≥75			
		3 µm (GDL 3)	6 µm (GDL 6)	10 µm (GDL 10)	20 µm (GDL 20)
	LENGTH	CODE	CODE	CODE	CODE
TPR 120 (Tanktopper II)	1	PXWL3-3	PXWL3-6	PXWL3-10	PXWL3-20
TPR 200 (Tanktopper II)	2	PXWL4-3	PXWL4-6	PXWL4-10	PXWL4-20
TPR 250 (Tanktopper III)	1	PXWL6-3	PXWL6-6	PXWL6-10	PXWL6-20
TPR 450 (Tanktopper III)	2	PXWL7-3	PXWL7-6	PXWL7-10	PXWL7-20
TPR 650 (Tanktopper III)	3	PXWL8-3	PXWL8-6	PXWL8-10	PXWL8-20

Table 4

Seal Type	
Seal Material	CODE
Nitrile (NBR)	B

Table 5

Bypass Valve	
Bypass	CODE
1.5 bar	15

Table 6

Pressure Indication		
Indicator		Bypass 1.5 bar
	SETTING	CODE
Pressure Gauge	1.2 bar	V
Pressure Switch N.O.	1.2 bar	E
No indicator, drilled and plugged R + L		MM

Table 7

Options	CODE
Dipstick	D

ORDERING EXAMPLES ELEMENT (Spare Leif® Elements: No sleeve included)

	3
TANKTOPPER II	**PXWL3-6**

	3
TANKTOPPER III	**PXWL8-20**

ORDERING EXAMPLES FILTER

	Std	1	2	3	4	5	6	7
TANKTOPPER II	**TPR**	**120**	**G1¼**	**PXWL3-6**	**B**	**15**	**VM**	**D**

	Std	1	2	3	4	5	6	7
TANKTOPPER III	**TPR**	**650**	**G1½**	**PXWL8-20**	**B**	**15**	**VM**	**D**

Table A

Degree of Filtration						
Average filtration Beta Ratio (ISO 16889) / particle size µm(c)						CODE
2	10	75	100	200	1000	
N/A	3.0	4.1	4.4	4.9	6.7	GDL3/GDH3
N/A	4.0	6.7	7.0	7.9	10.0	GDL6/GDH6
3.1	6.2	9.9	10.4	11.6	14.6	GDL10/GDH10
6.7	12.6	17.8	18.5	20.0	22.6	GDL20/GDH20

IN-AGB Series

In-Tank Mounted Return Line Filters

Max 2000 l/min

Global Filtration Technology

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 filtration concept features GDL filter materials, 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 2000 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 pirate elements.

TYPICAL APPLICATIONS

SPECIFICATION

Assembly:
Inside tank

Seal Material:
Nitrile, Fluoroelastomer, Neoprene

Operating Temperature Range:
-40° to +120°C

Degree of Filtration:
Determined by multipass test according to ISO 16889

Filtration Media:
HPFE glass fibre GDL. See Table A.
Also available 10µ cellulose and 40µ Stainless Steel.

Flow Fatigue Characteristics:
Filter media is supported so that the optimal fatigue life is achieved

Element Collapse Rating:
10 bar (ISO 2941)

Bypass Setting:
1.5 bar

Options:
Diffuser

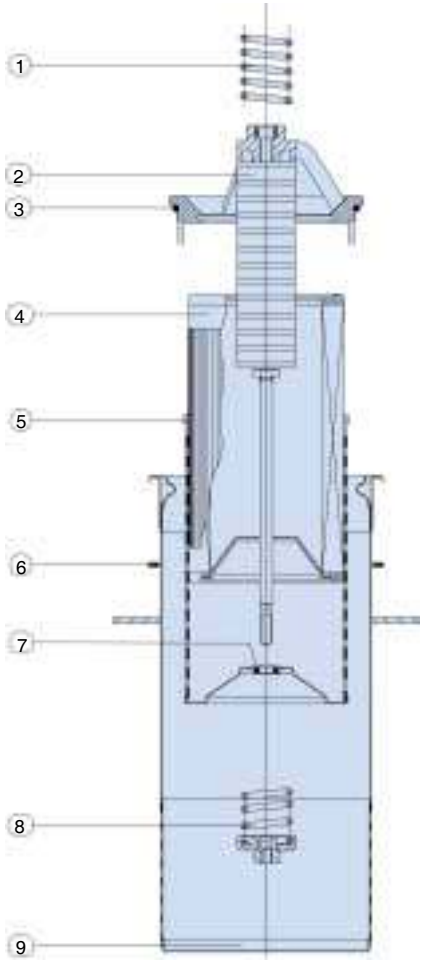
Magnetic Pack:
Standard

Filter Housing and Holder:
Leif® element with re-usable metal element sleeve
Optional conventional style element with steel end caps

Note: Leif® elements can only be used with mineral oils. Leif® contributes to ISO 14005 quality standards. For other fluids consult Parker Filtration.

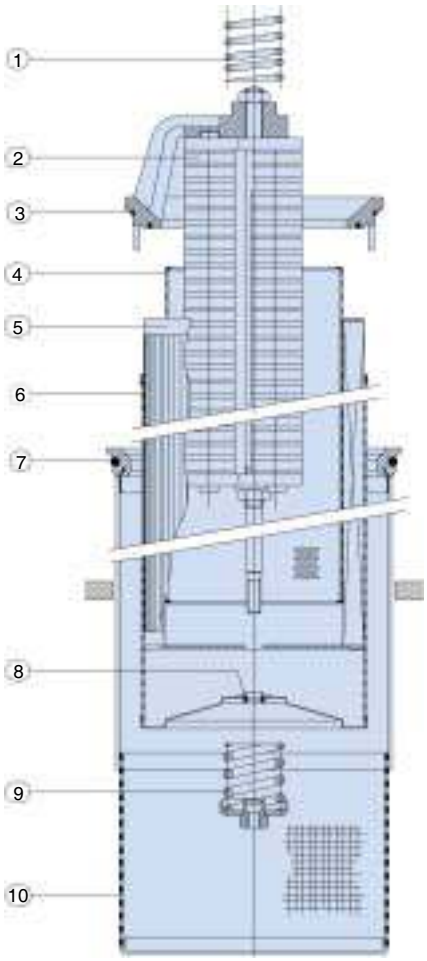
1-3 SERIES

INSERT-AGB LEIF® 3 SERIES		
Ref.	No.	DESCRIPTION
1	1	Top-spring
2	1	Insert
3	1	Insert-seal
4	1	Leif® Element
5	1	Sleeve
6	1	Gasket (AGB-3)
7	1	O-ring
8	1	Bypass set
9	1	Diffuser (AGB-3)

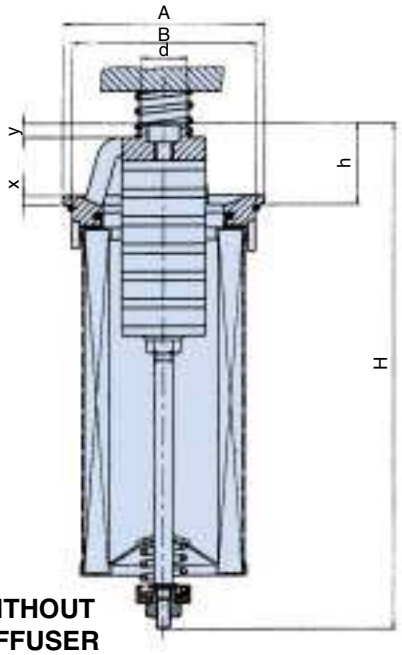


4 SERIES

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	Leif®-element
6	1	Outer sleeve
7	1	O-ring
8	1	O-ring
9	1	Bypass set
10	1	Diffuser



SPECIFICATION



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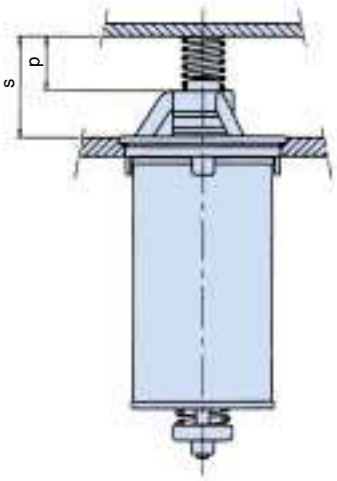
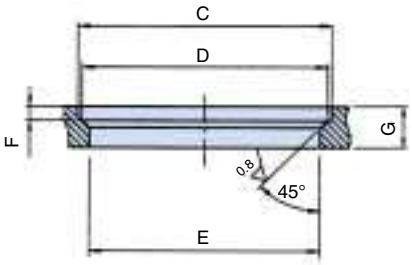
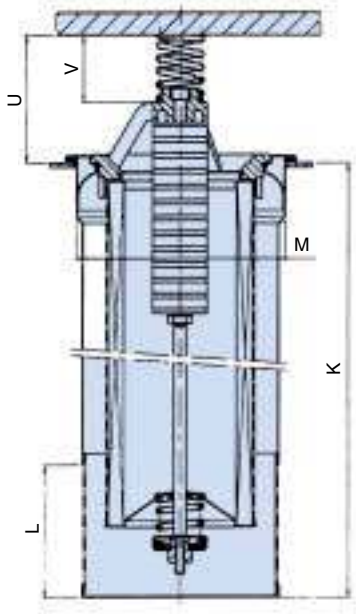




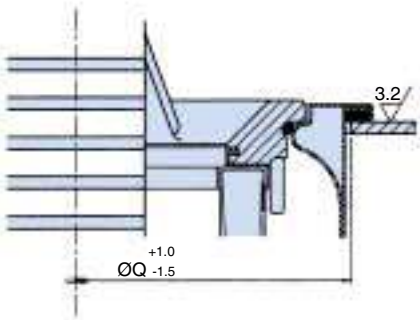
MOUNTING ARRANGEMENT

Type	A	B	H	h	d	x	y	s	p	C	D	E	F	G
IN-AGB 1-30	87	79	122	35	20	4	6	45	20	88	85	80	4	12
IN-AGB 1-60	87	79	173	35	20	4	6	45	20	88	85	80	4	12
IN-AGB 1-90	87	79	218	35	20	4	6	45	20	88	85	80	4	12
IN-AGB 1-120	87	79	267	35	20	4	6	45	20	88	85	80	4	12
IN-AGB 1-125	87	79	367	35	20	4	6	45	20	88	85	80	4	12
IN-AGB 2-170	125	116	287	48	25	5	8	77	42	126	122	117	5	15
IN-AGB 2-230	125	116	358	48	25	5	8	77	42	126	122	117	5	15
IN-AGB 2-300	125	116	563	48	25	5	8	77	42	126	122	117	5	15
IN-AGB 3-270	150	138	325	62	30	7	12	100	55	151	149	139	5	18
IN-AGB 3-390	150	138	407	62	30	7	12	100	55	151	149	139	5	18
IN-AGB 3-500	150	138	599	62	30	7	12	100	55	151	149	139	5	18
IN-AGB 4-600	230	216	505	100	40	12	12	142	60	231	227	217	6	20
IN-AGB 4-800	230	216	615	100	40	12	12	142	60	231	227	217	6	20
IN-AGB 4-1000	230	216	720	100	40	12	12	142	60	231	227	217	6	20
IN-AGB 4-1500	230	216	1000	100	40	12	12	142	60	231	227	217	6	20
IN-AGB 4-2000	230	216	1265	100	40	12	12	142	60	231	227	217	6	20

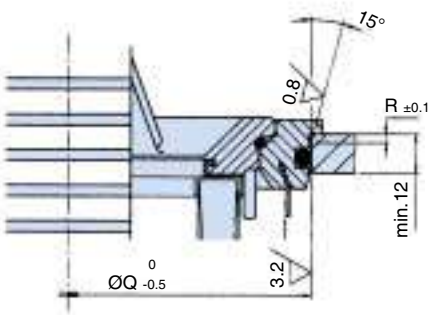


WITH DIFFUSER

AGB 3



AGB 4



Type	K	L	M	U	V	Q	R
IN-AGB 3-270	324	110	175	106	55	178	
IN-AGB 3-390	364	110	175	106	55	178	
IN-AGB 3-500	554	125	175	106	55	178	
IN-AGB 4-600	445	183	239	145	60	250.5	2.5
IN-AGB 4-800	555	183	239	145	60	250.5	2.5
IN-AGB 4-1000	660	183	239	145	60	250.5	2.5
IN-AGB 4-1500	940	183	239	145	60	250.5	2.5
IN-AGB 4-2000	1220	183	239	145	60	250.5	2.5

PRESSURE DROP CURVES

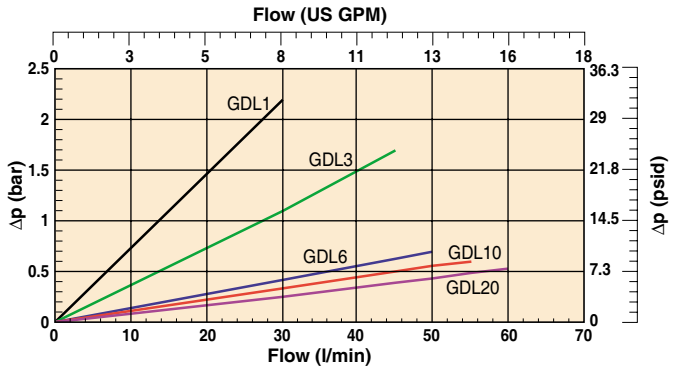
The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

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

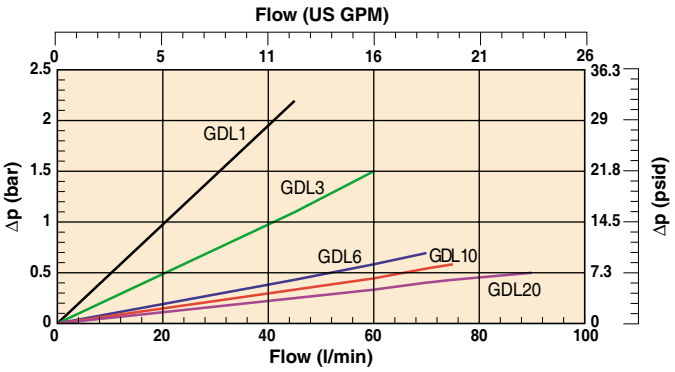
$$\Delta p = (\Delta p32 \text{ x viscosity of medium used}) / 32 \text{ cSt}$$

Filter Housing and Element Pressure Drop based on 32cSt fluid viscosity and 0.87 density

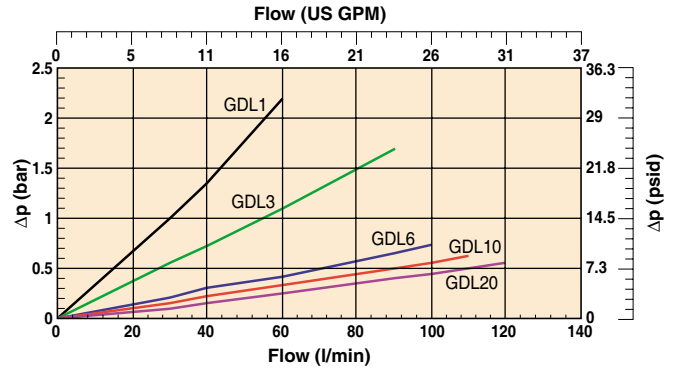
Filter Element TXW



Filter Element TXW1



Filter Element TXW2



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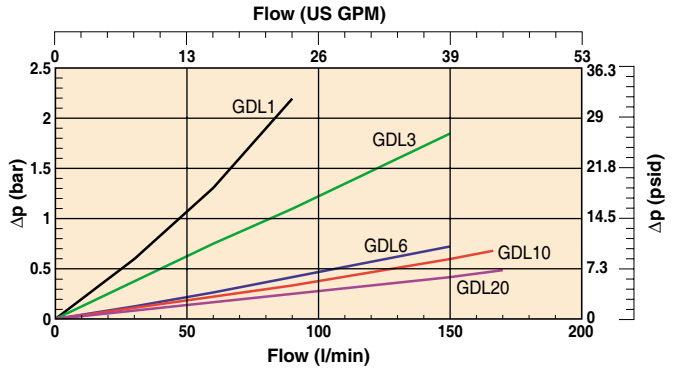
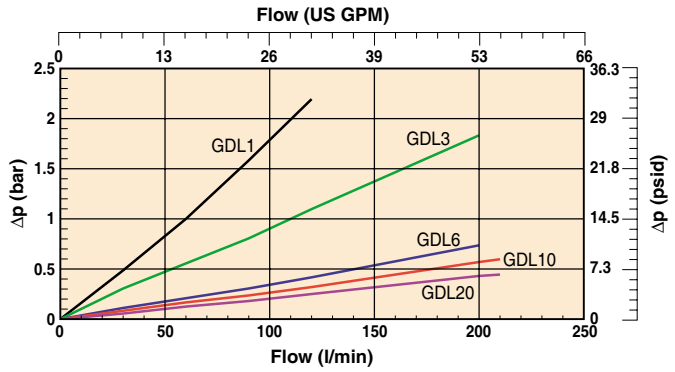
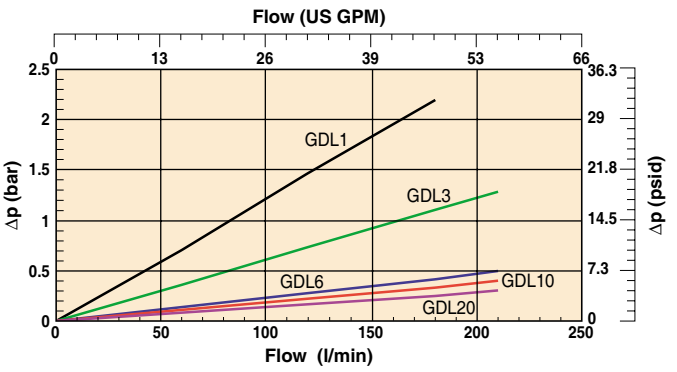


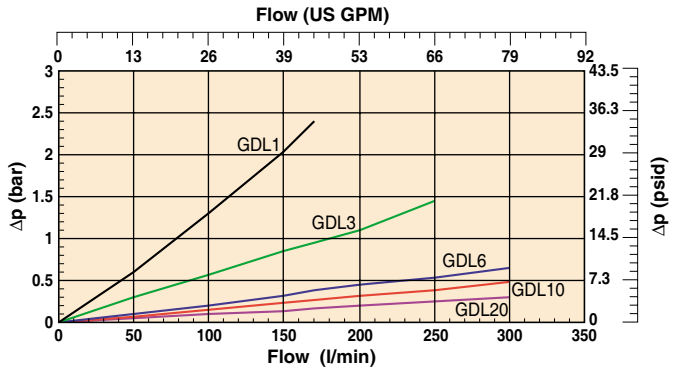
Filter Element TXW3D



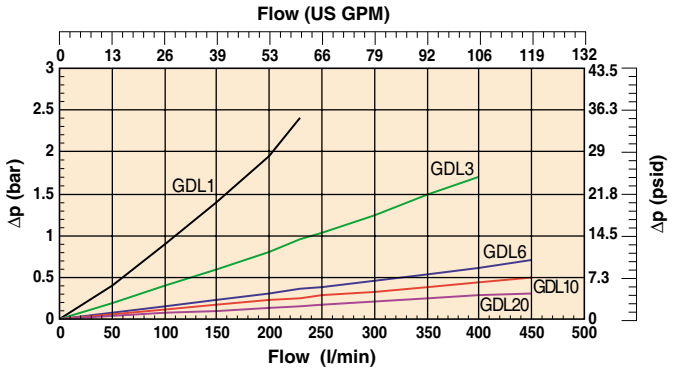
Filter Element TXW3E



Filter Element TXW4

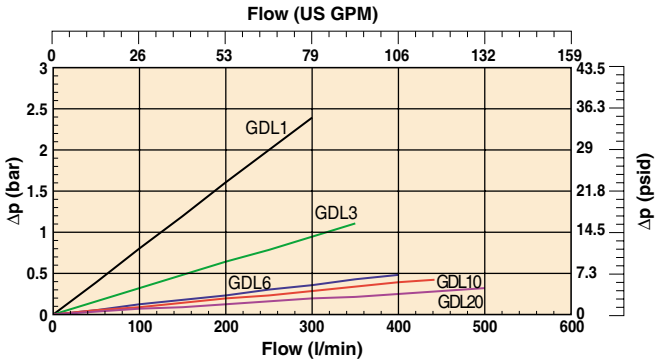


Filter Element TXW5

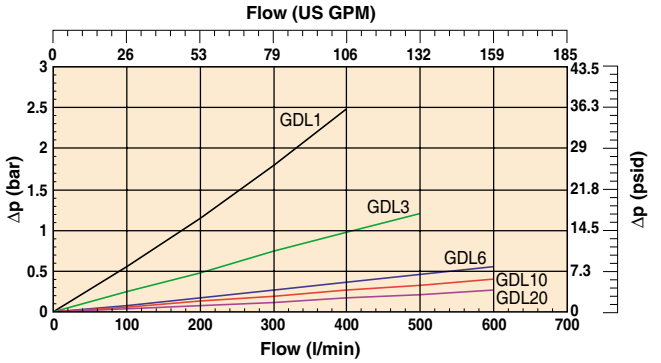


PRESSURE DROP CURVES CONTINUED

Filter Element TXW5A



Filter Element TXW8A



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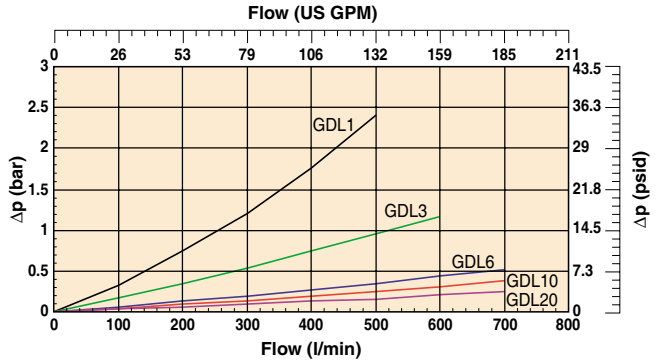
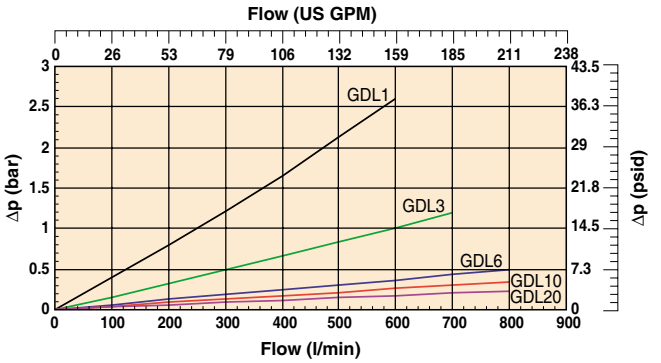


Filter Element TXW10



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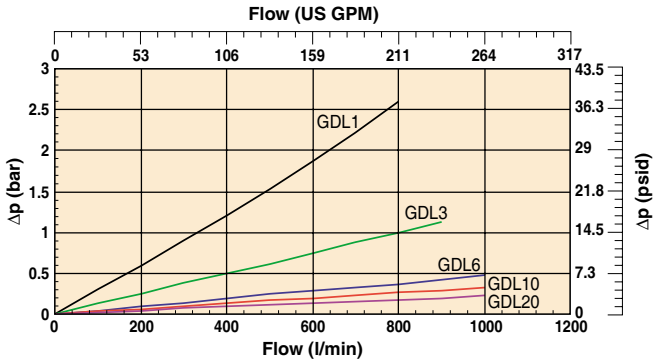
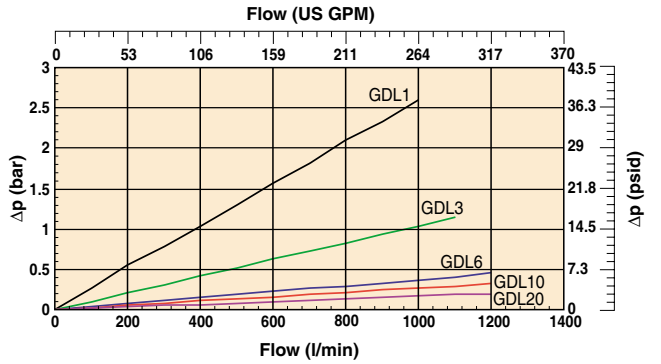
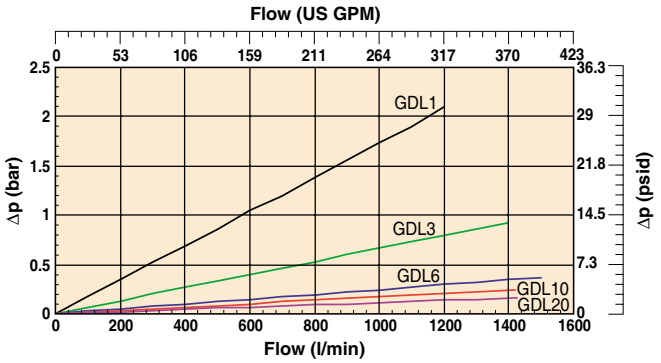


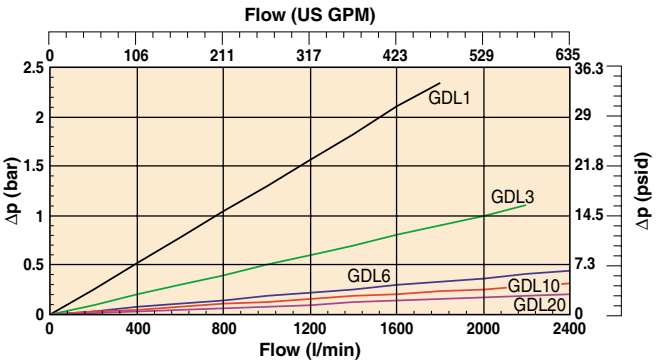
Filter Element TXW12



Filter Element TXW13

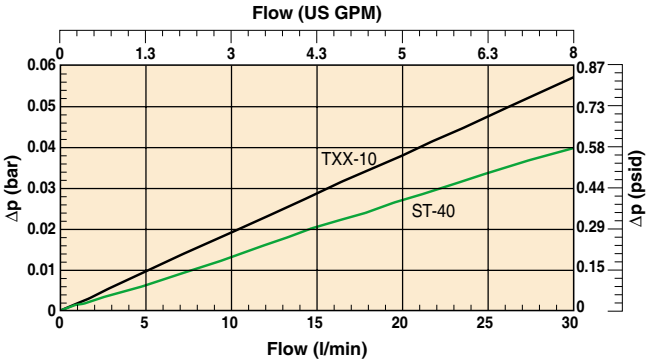


Filter Element TXW14

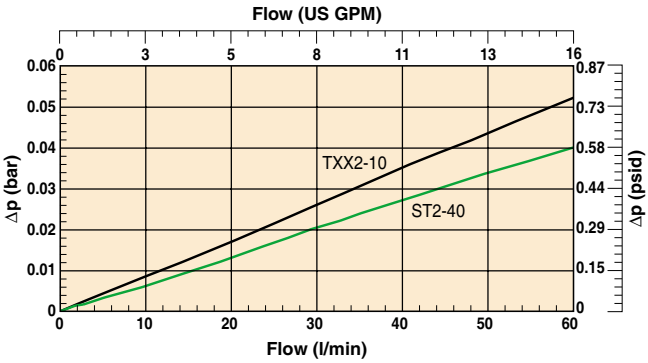


PRESSURE DROP CURVES (CELLULOSE AND STAINLESS STEEL MEDIA)

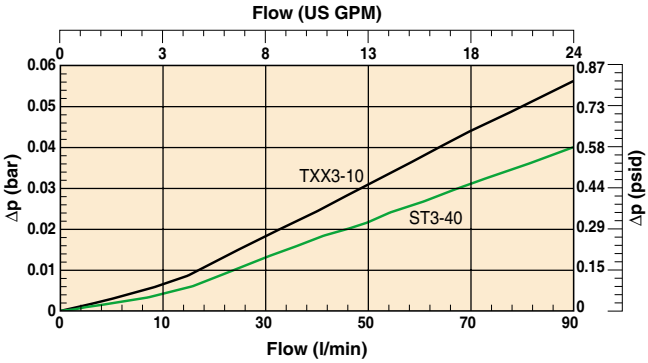
IN-AGB 1-30 Element T



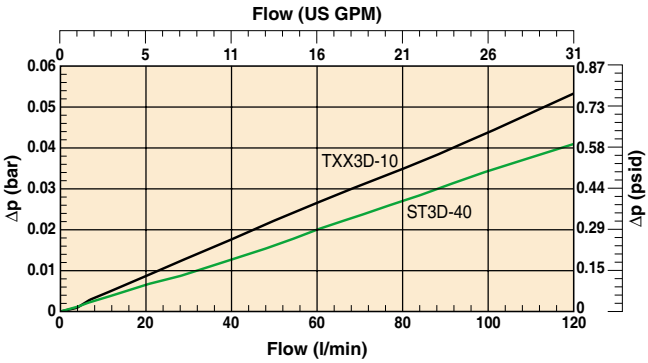
IN-AGB 1-60 Element T2



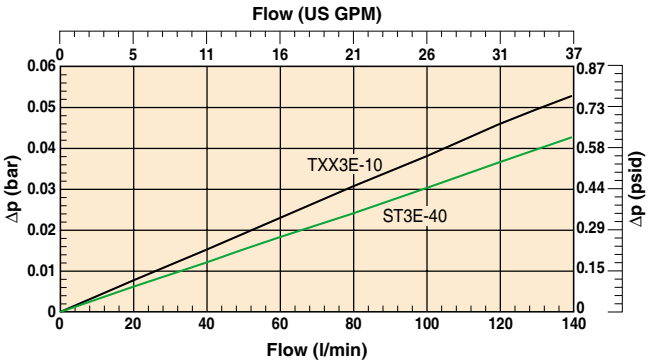
IN-AGB 1-90 Element T3



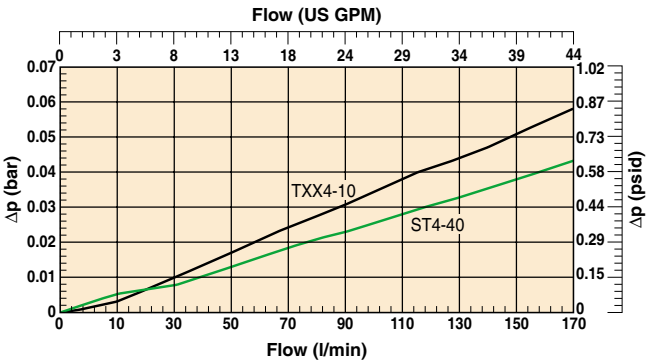
IN-AGB 1-120 Element T3D



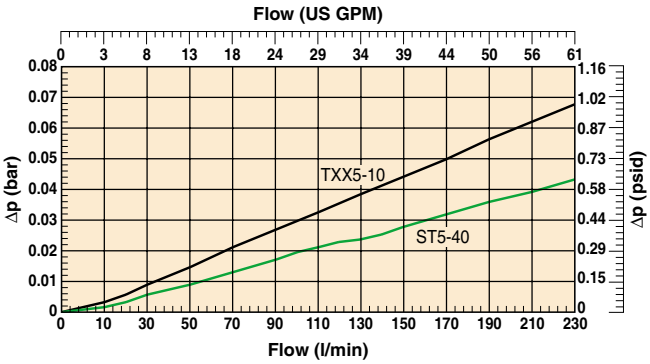
IN-AGB 1-125 Element T3E



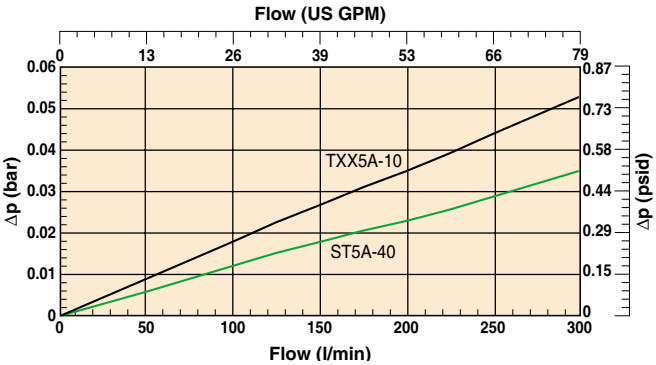
IN-AGB 2-170 Element T4



IN-AGB 2-230 Element T5

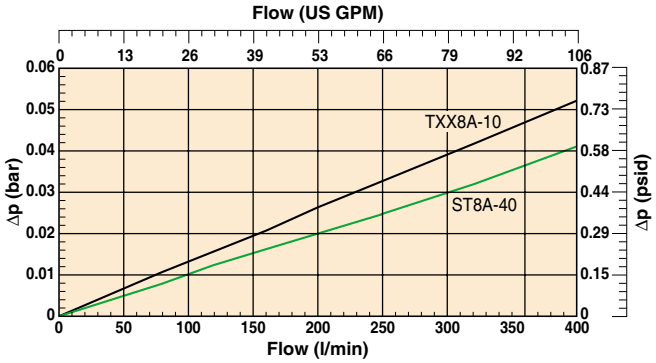


IN-AGB 2-300 Element T5A

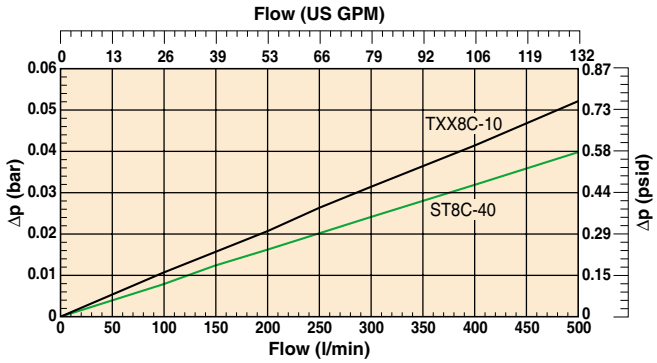


PRESSURE DROP CURVES (CELLULOSE AND STAINLESS STEEL MEDIA)

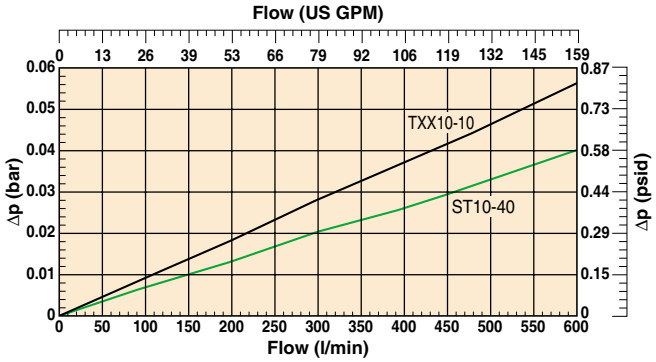
Filter Element T8A



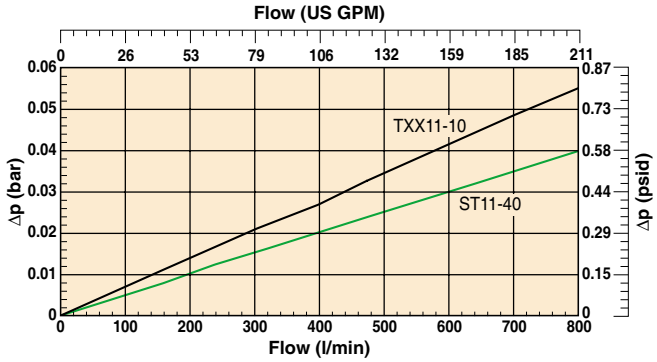
Filter Element T8C



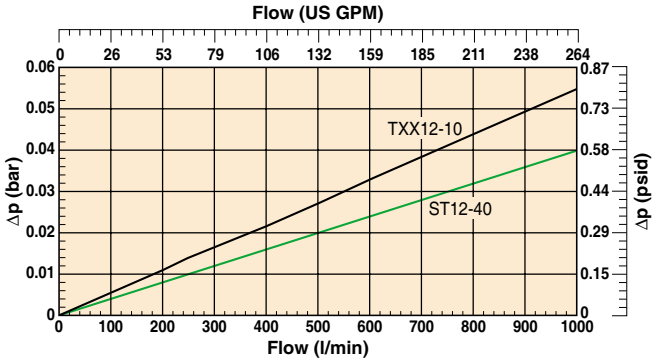
Filter Element T10



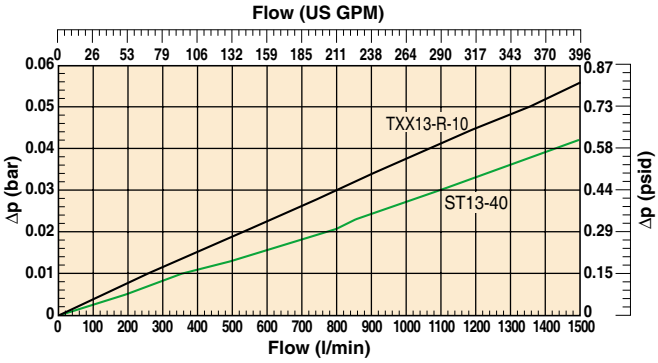
Filter Element T11



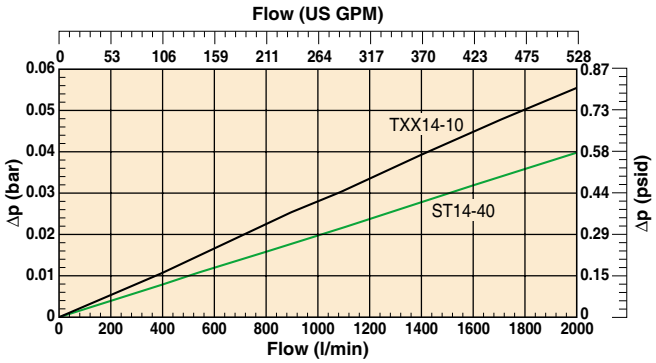
Filter Element T12



Filter Element T13



Filter Element T14



PREFERRED PRODUCTS TABLE

The following standard filters are supplied with Nitrile seals.

Ordering Code	Flow (l/min)	Micron Rating	Ports	Indicator	Replacement Elements
IN90TXWL3-10-B15	90	GDL 10	–	–	TXWL3-10
IN90TXWL3-20-B15	90	GDL 20	–	–	TXWL3-20
IN120TXWL3D-10-B15	120	GDL 10	–	–	TXWL3D-10
IN120TXWL3D-20-B15	120	GDL 20	–	–	TXWL3D-20
IN170TXWL4-10-B15	170	GDL 10	–	–	TXWL4-10
IN170TXWL4-20-B15	170	GDL 20	–	–	TXWL4-20
IN390TXWL8A-10TB15	390	GDL 10	–	–	TXWL8A-10
IN390TXWL8A-20TB15	390	GDL 20	–	–	TXWL8A-20
IN500TXWL8C-10TB15	500	GDL 10	–	–	TXWL8C-10
IN500TXWL8C-20TB15	500	GDL 20	–	–	TXWL8C-20
IN800TXWL11-10TB15	800	GDL 10	–	–	TXWL11-10
IN800TXWL11-20TB15	800	GDL 20	–	–	TXWL11-20
IN1000TXWL12-10TB15	1000	GDL 10	–	–	TXWL12-10
IN1000TXWL12-20TB15	1000	GDL 20	–	–	TXW12-20
IN2000TXW14-10TB15	2000	GDL 10	–	–	TXW14-10B
IN2000TXW14-20TB15	2000	GDL 20	–	–	TXW14-20B

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

ORDERING EXAMPLE LEIF® ELEMENT

2
TXWL8A-20

Note: Spare Leif® element: no sleeve included

ORDERING EXAMPLE STANDARD ELEMENT

2	4
TXW8A-20	**B**

ORDERING EXAMPLE FILTER INCLUDING LEIF® ELEMENT

Std	1	2	3	4	5
IN	**390**	**TXWL8A-20**	**T**	**B**	**B**

ORDERING EXAMPLE FILTER INCLUDING STANDARD ELEMENT

Std	1	2	3	4	5
IN	**390**	**TXW8A-20**	**T**	**B**	**B**

Table 1

Filter Rating	
Insert IN-AGB	**CODE**
1-30 l/min	30
1-60 l/min	60
1-90 l/min	90
1-120 l/min	120
1-125 l/min	125
2-170 l/min	170
2-230 l/min	230
2-300 l/min	300
3-390 l/min	390
3-500 l/min	500
4-600 l/min	600
4-800 l/min	800
4-1000 l/min	1000
4-1500 l/min	1500
4-2000 l/min	2000

Table 2

Degree of Filtration						
Element	**Nominal**	Filtration fineness absolute				
	cellulose	**Leif®**				Stainless steel mesh
		HPFE glass fibre = ßx≥75				
	10 µm	3 µm (GDL 3)	6 µm (GDL 6)	10 µm (GDL 10)	20 µm (GDL 20)	40 µm
	CODE	**CODE**	**CODE**	**CODE**	**CODE**	**CODE**
1-30 l/min	TXX-10	TXWL-3	TXWL-6	TXWL-10	TXWL-20	ST-40
1-60 l/min	TXX2-10	TXWL2-3	TXWL2-6	TXWL2-10	TXWL2-20	ST2-40
1-90 l/min	TXX3-10	TXWL3-3	TXWL3-6	TXWL3-10	TXWL3-20	ST3-40
1-120 l/min	TXX3D-10	TXWL3D-3	TXWL3D-6	TXWL3D-10	TXWL3D-20	ST3D-40
1-125 l/min	TXX3E-R-10	TXWL3E-R-3	TXWL3E-R-6	TXWL3E-R-10	TXWL3E-R-20	ST3E-R-40
2-170 l/min	TXX4-10	TXWL4-3	TXWL4-6	TXWL4-10	TXWL4-20	ST4-40
2-230 l/min	TXX5-10	TXWL5-3	TXWL5-6	TXWL5-10	TXWL5-20	ST5-40
2-300 l/min	TXX5A-10	TXWL5A-3	TXWL5A-6	TXWL5A-10	TXWL5A-20	ST5A-40
3-390 l/min	TXX8A-10	TXWL8A-3	TXWL8A-6	TXWL8A-10	TXWL8A-20	ST8A-40
3-500 l/min	TXX8C-10	TXWL8C-3	TXWL8C-6	TXWL8C-10	TXWL8C-20	ST8C-40
4-600 l/min	TXX10-10	TXWL10-3	TXWL10-6	TXWL10-10	TXWL10-20	ST10-40
4-800 l/min	TXX11-10	TXWL11-3	TXWL11-6	TXWL11-10	TXWL11-20	ST11-40
4-1000 l/min	TXX12-10	TXWL12-3	TXWL12-6	TXWL12-10	TXWL12-20	ST12-40
4-1500 l/min	TXX13-R-10	TXWL13-R-3	TXWL13-R-6	TXWL13-R-10	TXWL13-R-20	ST13-R-40
		In case of non Leif®, delete L in code				
4-2000 l/min	TXX14-10	TXW14-3	TXW14-6	TXW14-10	TXW14-20	ST14-40

Table 3

Diffuser Type	
Diffuser	**CODE**
For model 390 or larger	T
if diffuser not required	–

Table A

Degree of Filtration						
Average filtration Beta Ratio (ISO 16889) / particle size µm(c)						CODE
2	10	75	100	200	1000	
N/A	3.0	4.1	4.4	4.9	6.7	GDL3/GDH3
N/A	4.0	6.7	7.0	7.9	10.0	GDL6/GDH6
3.1	6.2	9.9	10.4	11.6	14.6	GDL10/GDH10
6.7	12.6	17.8	18.5	20.0	22.6	GDL20/GDH20

Table 4

Seal Type	
Seal Material	**CODE**
Nitrile (NBR)	B
Neoprene (CR)	N
Fluoroelastomer (FBN)	V

Table 5

Bypass Valve	
Bypass	**CODE**
0.8 bar	08
1.5 bar	15
Blocked	B

BGT-S Series

Tank Mounted Return Line Filters

Max 2000 l/min - 10 bar

Global Filtration Technology

Tank Mounted Return Line Filters

BGT-S Series

TYPICAL APPLICATIONS

- Mobile Cranes
- Excavators
- Deck Cranes
- Fire Fighting Equipment
- Hydraulic Presses
- Waste Balers
- Industrial Power Units

The Parker Filtration BGT-S Series Tank Mounted Return Line Filters.

BGT-S 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-S filters are available in versions capable of handling flow rates up to 2000 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.

TYPICAL APPLICATIONS

SPECIFICATION

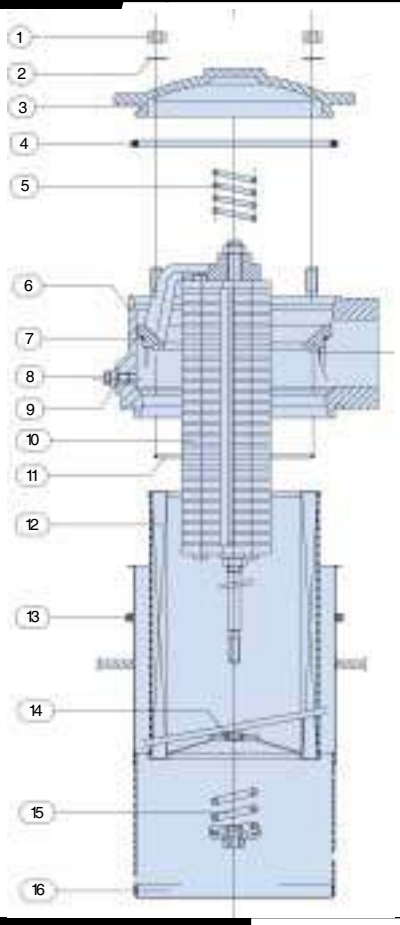
Assembly:
Tank top mounted
Operating Pressure:
Max 10 bar
Connections:
Flanges SAE2", SAE3"
Seal Material:
Nitrile, Fluoroelastomer, Neoprene
Operating Temperature Range
-40° to +120°C
Degree of Filtration:
Determined by multipass te
Filtration Media:
HPFE glass fibre GDL
Also available 10µ cel
Flow Fatigue Cha
Filter media is suppo
Element Collap
10 bar (ISO 294

Bypass Setting:
Opening pressure 1.5 bar
Pressure Indicator Options:
1.2 bar
visual pressure gauge
switch

ement sleeve
with steel end caps
sed with mineral oils.
05 quality standards.
For other
ker Filtration.

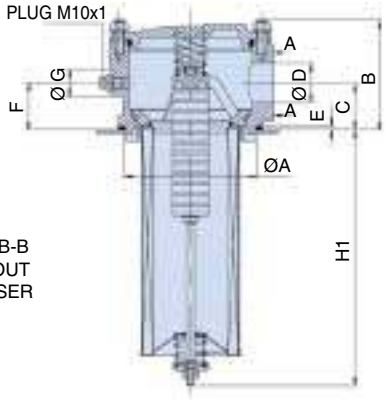
Ref.	No.	DESCRIPTION
1		
2		
3		
4		

BGT-4S (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

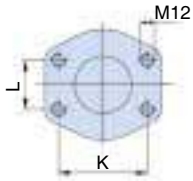


SPECIFICATION CONTINUED

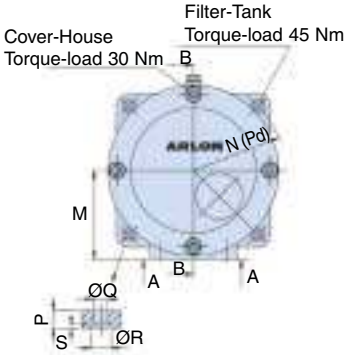
BGT3S

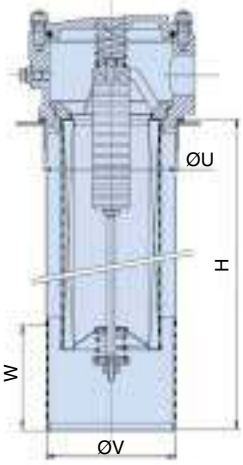


VIEW B-B
WITHOUT
DIFFUSER



FLANGE SAE 2"
VIEW A-A



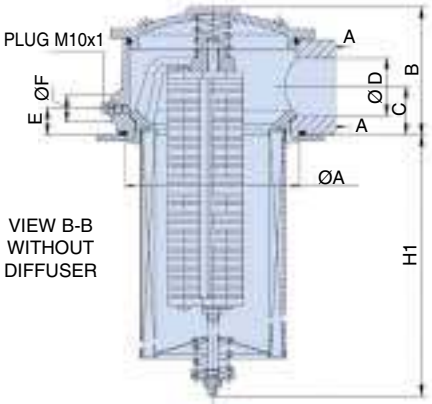


VIEW B-B
WITH
DIFFUSER

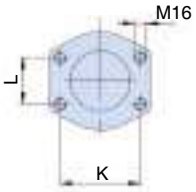
Type	A	B	C	D	E	F	G	H1	L	K	M	N(Pd)	P	Q	R	S	Kg
BGT-3S270	163.5 $^{+0.5}_{0}$	139	59	50	3	59	35	245	62	43	105	R107.5	14	11	16	3	5.9
BGT-3S390								325									7.2
BGT-3S500								515									8.6

Type	H	U	V	W	Kg
BGT-3S270	290	165.5 $^{+0.5}_{0}$	165	120	6.7
BGT-3S390	370				8.2
BGT-3S500	560				10.1

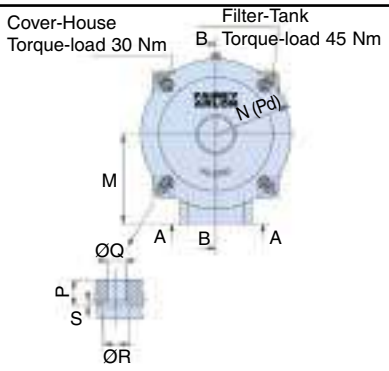
BGT4S

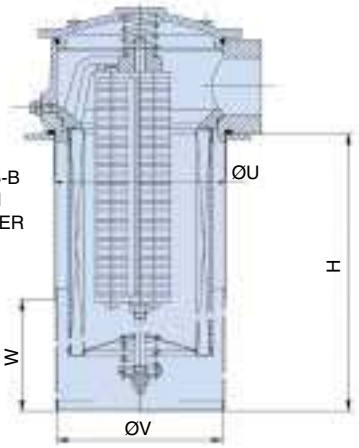


VIEW B-B
WITHOUT
DIFFUSER



FLANGE SAE 3"
VIEW A-A





VIEW B-B
WITH
DIFFUSER

Type	flA	B	C	D	E	flF	H1	K	L	M	N(Pd)	P	flQ	flR	S	Kg
BGT-4S600	239.5 $^{+0.5}_{0}$	178	67	80	37	40	385	106.4	62	170	R147.5	20	14	20	4	20.5
BGT-4S800							495									23.0
BGT-4S1000							598									25.5
BGT-4S1500							878									30.0
BGT-4S2000							1143									37.0

Type	H	flU	flV	W	Kg
BGT-4S600	425	240.5 $^{+0.5}_{0}$	240	170	22.5
BGT-4S800	535				25.5
BGT-4S1000	640				28.5
BGT-4S1500	920				36.5
BGT-4S2000	1200				44.0

PRESSURE DROP CURVES

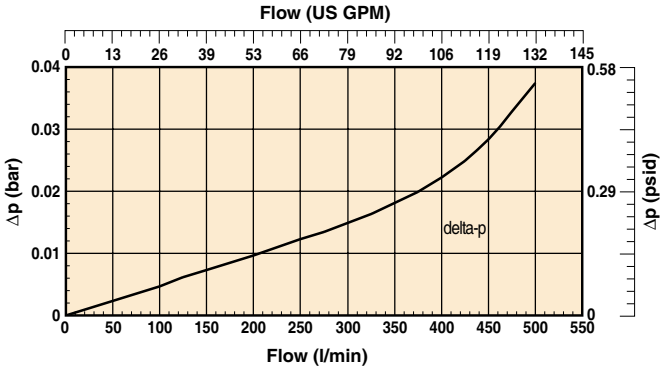
The recommended level of the initial pressure drop for low pressure filters is max 0.5 bar.

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

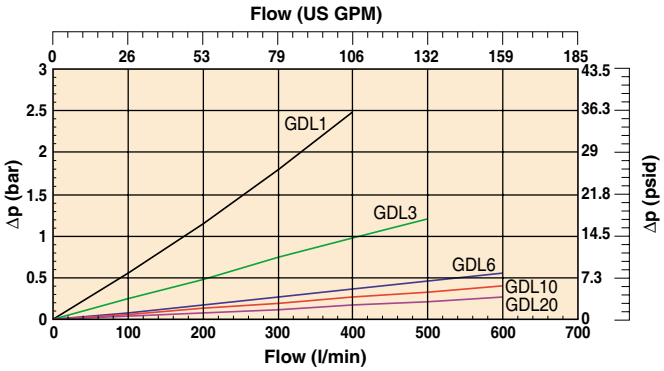
$$\Delta p = (\Delta p32 \text{ x viscosity of medium used}) / 32 \text{ cSt}$$

Filter Housing and Element Pressure Drop based on 32cSt fluid viscosity and 0.87 density

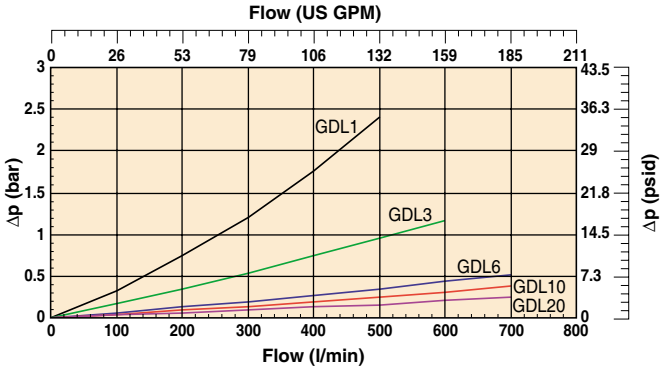
Empty Housing BGT-3S Series (2" SAE Flange)



Pressure Loss Curve Filter Element TXW8A

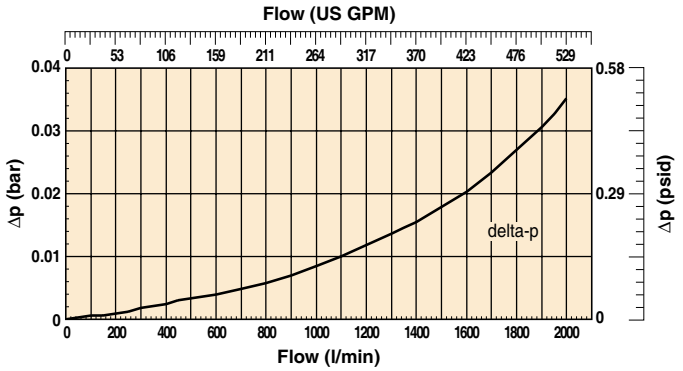


Pressure Loss Curve Filter Element TXW8C

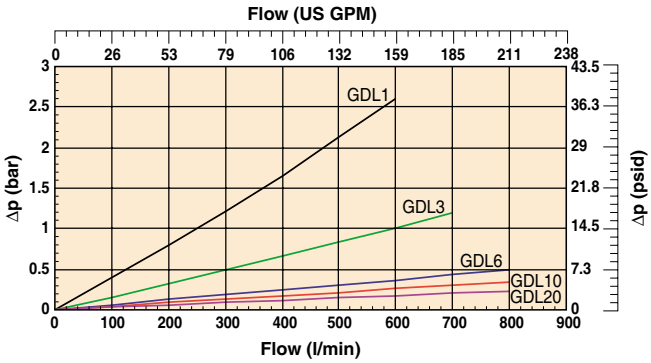


PRESSURE DROP CURVES CONTINUED

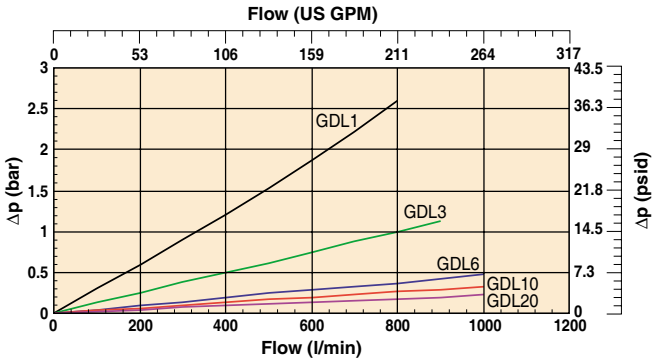
Empty Housing BGT-4S Series (3" SAE Flange)



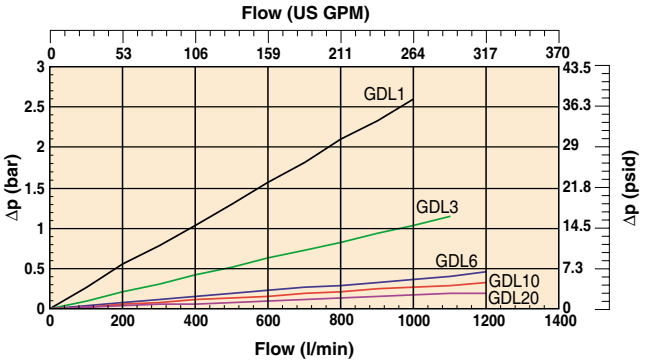
Filter Element TXW10



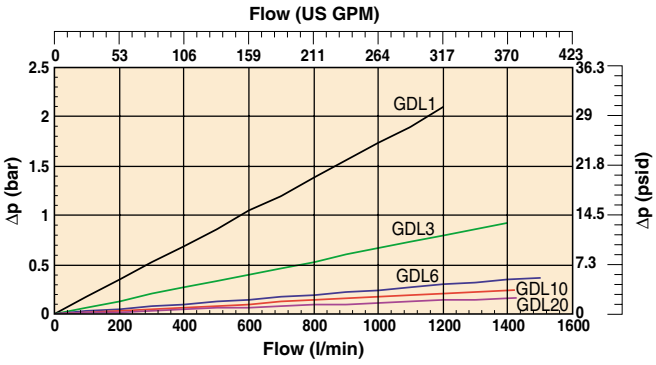
Filter Element TXW11



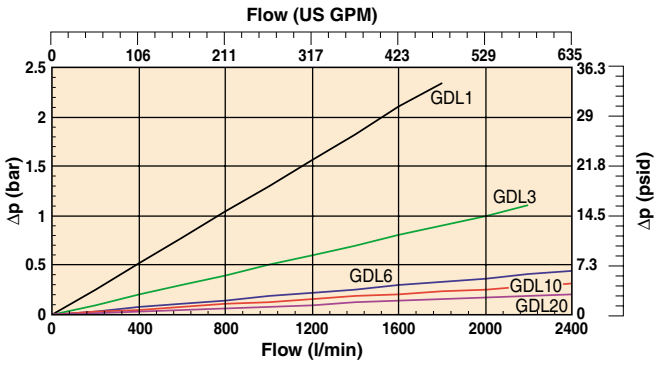
Filter Element TXW12



Filter Element TXW13

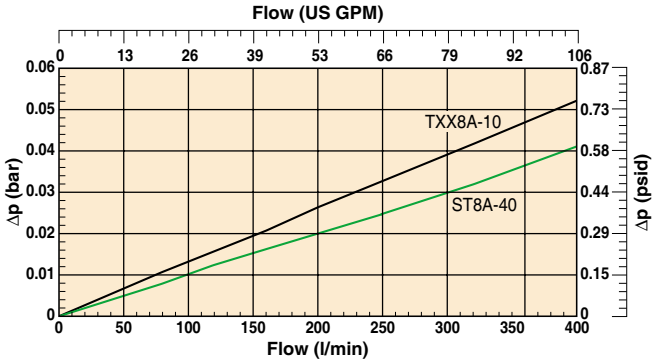


Filter Element TXW14

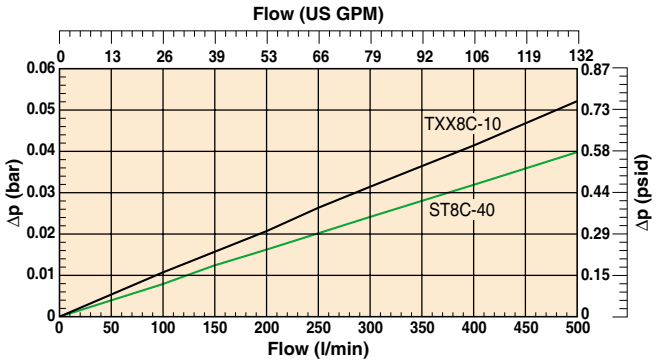


PRESSURE DROP CURVES (CELLULOSE AND STAINLESS STEEL MEDIA)

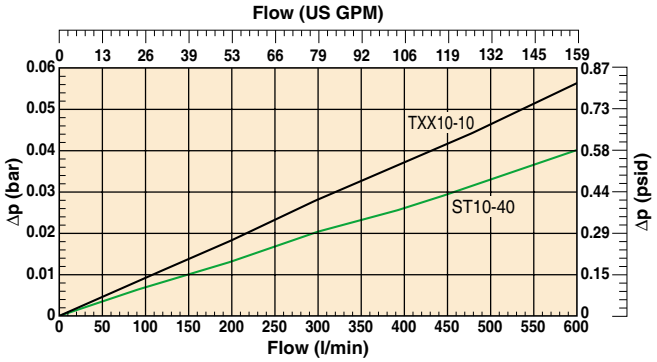
Filter Element T8A



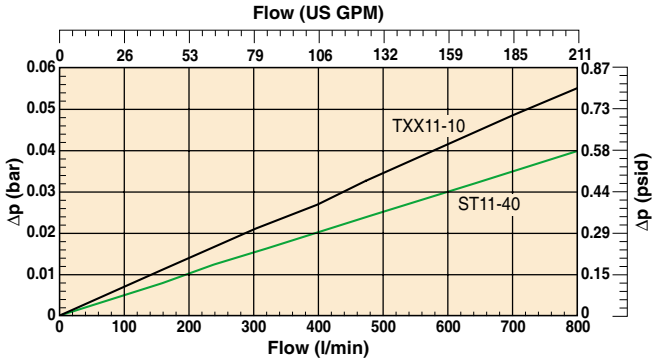
Filter Element T8C



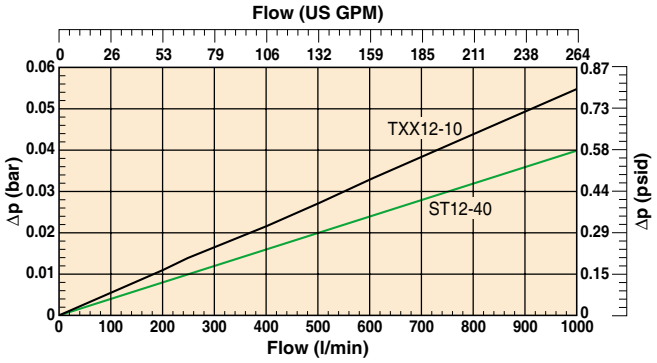
Filter Element T10



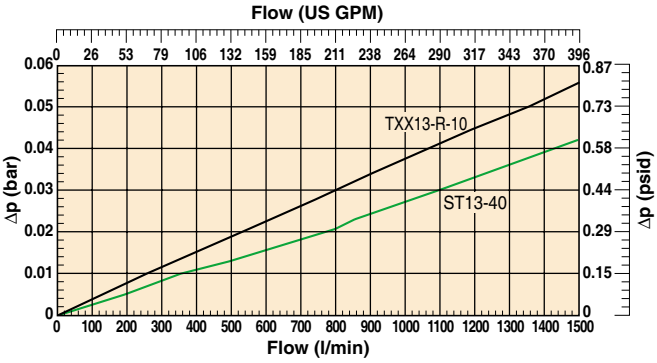
Filter Element T11



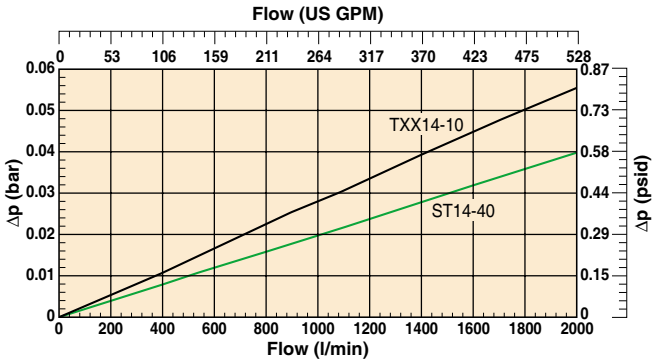
Filter Element T12



Filter Element T13



Filter Element T14



PREFERRED PRODUCTS TABLE

The following standard filters are supplied with Nitrile seals.					
Ordering Code	**Flow (l/min)**	**Micron Rating**	**Ports**	**Indicator**	**Replacement Elements**
BGT-S390S2TXWL8A-10TB15M	390	GDL 10	2” SAE	Plugged	TXWL8A-10
BGT-S390S2TXWL8A-20TB15M	390	GDL 20	2” SAE	Plugged	TXWL8A-20
BGT-S500S2TXWL8C-10TB15M	500	GDL 10	2” SAE	Plugged	TXWL8C-10
BGT-S500S2TXWL8C-20TB15M	500	GDL 20	2” SAE	Plugged	TXWL8C-20
BGT-S800S3TXWL11-10TB15M	800	GDL 10	3” SAE	Plugged	TXWL11-10
BGT-S800S3TXWL11-20TB15M	800	GDL 20	3” SAE	Plugged	TXWL11-20
BGT-S1000S3TXWL12-10TB15M	1000	GDL 10	3” SAE	Plugged	TXWL12-10
BGT-S1000S3TXWL12-20TB15M	1000	GDL 20	3” SAE	Plugged	TXWL12-20
BGT-S2000S3TXW14-10TB15M	2000	GDL 10	3” SAE	Plugged	TXW14-10B
BGT-S2000S3TXW14-20TB15M	2000	GDL 20	3” SAE	Plugged	TXW14-20B

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

ORDERING EXAMPLE LEIF® ELEMENT

3
TXWL10-10

Note: Spare Leif® element: no sleeve included

ORDERING EXAMPLE STANDARD ELEMENT

3	5
TXW10-10	**B**

ORDERING EXAMPLE FILTER INCLUDING LEIF® ELEMENT

Std	1	2	3	4	5	6	7
BGT-S	**600**	**S3**	**TXWL10-10**	**T**	**B**	**15**	**M**

ORDERING EXAMPLE FILTER INCLUDING STANDARD ELEMENT

Std	1	2	3	4	5	6	7
BGT-S	**600**	**S3**	**TXW10-10**	**T**	**B**	**15**	**M**

Table 1

Filter Type	
Housing	**CODE**
3 – 390 l/min	390
3 – 500 l/min	500
4 – 800 l/min	800
4 – 1000 l/min	1000
4 – 1500 l/min	1500
4 – 2000 l/min	2000

Table 2

Filter Connection	
Ports	**CODE**
2” SAE BGT-3S	S2
3” SAE BGT-4S	S3

Table 3

Degree of Filtration						
Element	**Nominal**	Filtration fineness absolute				
	cellulose	**Leif®**				Stainless steel mesh
		HPFE glass fibre = ßx≥75				
	10 µm	3 µm (GDL3)	6 µm (GDL6)	10 µm (GDL10)	20 µm (GDL20)	40 µm
	CODE	**CODE**	**CODE**	**CODE**	**CODE**	**CODE**
BGT-3S-390	TXX8A-10	TXWL8A-3	TXWL8A-6	TXWL8A-10	TXWL8A-20	ST8A-40
BGT-3S-500	TXX8C-10	TXWL8C-3	TXWL8C-6	TXWL8C-10	TXWL8C-20	ST8C-40
BGT-4S-600	TXX10-10	TXWL10-3	TXWL10-6	TXWL10-10	TXWL10-20	ST10-40
BGT-4S-800	TXX11-10	TXWL11-3	TXWL11-6	TXWL11-10	TXWL11-20	ST11-40
BGT-4S-1000	TXX12-10	TXWL12-3	TXWL12-6	TXWL12-10	TXWL12-20	ST12-40
BGT-4S-1500	TXX13-R-10	TXWL13-R-3	TXWL13-R-6	TXWL13-R-10	TXWL13-R-20	ST13-R-40
		In case of non Leif®, delete L in code				
BGT-4S-2000	TXX14-10	TXW14-3	TXW14-6	TXW14-10	TXW14-20	ST14-40

Table 4

Options	
Options	**CODE**
Standard	–
Funnel/Diffuser	T

Table 5

Seal Type	
Seal Material	**CODE**
Nitrile (NBR)	B
Neoprene (CR)	N
Fluoroelastomer (FBM)	V

Table 6

Bypass Type	
Bypass	**CODE**
0.8 bar	08
1.5 bar	15
Blocked	B

Table 7

Pressure Indication		
Indicator	**Bypass blocked CODE**	**Bypass CODE**
Pressure gauge	V12	V
Pressure switch	E12	E
No indicator, drilled & plugged backside	M	M

Table A

Degree of Filtration						
Average filtration Beta Ratio (ISO 16889) / particle size µm(c)						**CODE**
2	**10**	**75**	**100**	**200**	**1000**	
N/A	3.0	4.1	4.4	4.9	6.7	GDL3/GDH3
N/A	4.0	6.7	7.0	7.9	10.0	GDL6/GDH6
3.1	6.2	9.9	10.4	11.6	14.6	GDL10/GDH10
6.7	12.6	17.8	18.5	20.0	22.6	GDL20/GDH20