

# ETF Series

Tanktop Mounted Return Line Filters  
max. 175 l/min - 6 bar



## An economic return line filter

### Improved system protection

The ETF Series utilizes a re-inforced co-polymer head equipped with 2 return ports and quick-release cover. Maximum pressure 6 bar. Maximum flow 175 l/min. An economic return line filter that has been used and proven in many hydraulic filtration applications.



## Contact Information:

Parker Hannifin  
**Hydraulic Filter Division Europe**

**European Product  
Information Centre**  
Freephone: 00800 27 27 5374  
(from AT, BE, CH, CZ, DE, EE, ES,  
FI, FR, IE, IT, PT, SE, SK, UK)  
filtrationinfo@parker.com

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

## Product Features:

- ETF utilizes a re-inforced co-polymer head equipped with 2 return ports.
- Quick-release cover design.
- Flow from inside to out.
- Maximum pressure 6 bar. Maximum flow 175 l/min.
- An economic return line filter for hydraulic systems.

# ETF Series

## Tanktop Mounted Return Line Filters

### Features & Benefits

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

### Typical Applications

- Lorry mounted cranes
- Agricultural equipment
- Container hook loaders

### The Parker Filtration ETF Series Low Pressure Filters

For tank top mounting installation. The ETF Series utilises a reinforced co-polymer head equipped with two return ports and quick release cover. This filter represents an economic solution for hydraulic systems with nominal flows up to 175 l/min.



## Specification

### Pressure ratings:

Max. 6 bar.

### Assembly:

Tank top mounted.

### Connections:

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

### Filter housing:

Glass reinforced co-polymer.  
Funnel made from steel.

### Seal material:

Nitrile.

### Operating temperature range:

-20° to +80°C.

### Bypass valve:

Opening pressure 1.6 bar.

### Filter element:

Conventional style element with steel end caps.

### Degree of filtration:

Determined by multipass test according to ISO 16889.

### Flow fatigue characteristics:

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

### Filtration media:

Microglass III.

### Element burst rating:

8 bar (ISO 2941).

### Indicator options:

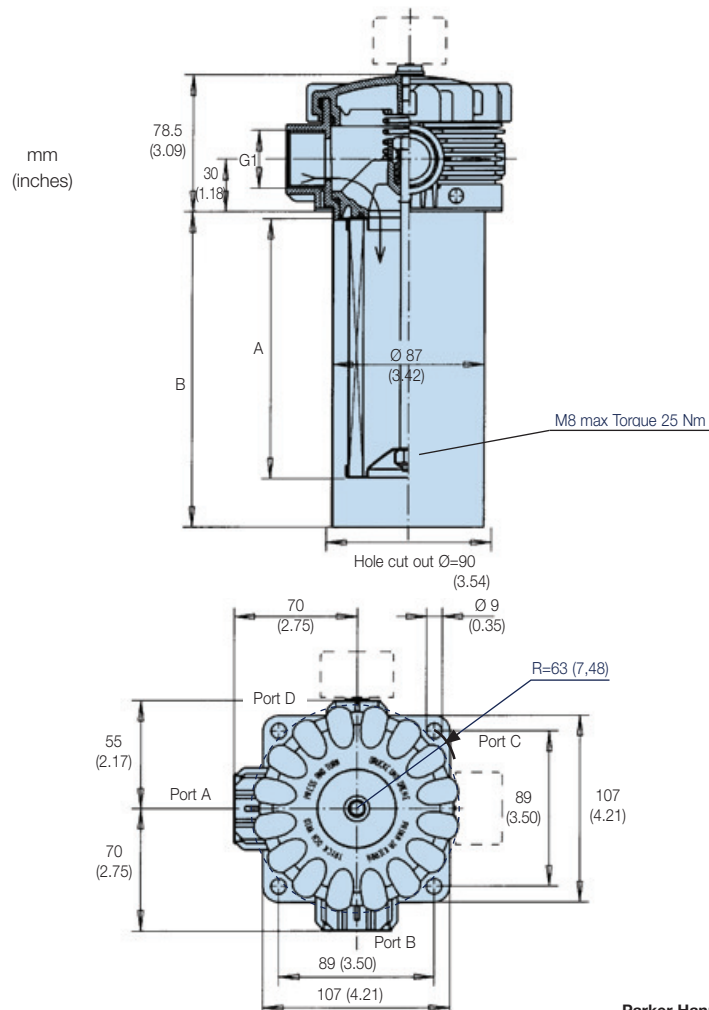
Setting 1.0 bar.

### Fluid compatibility:

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

## Installation Details

ETF Length	Dimensions mm (inches)	A	B
1	<b>ETF45</b>	82 (3.22)	100 (3.94)
2	<b>ETF60</b>	106 (4.17)	125 (4.92)
3	<b>ETF90</b>	150 (5.90)	177 (6.97)
4	<b>ETF120</b>	200 (7.87)	225 (8.86)
4A	<b>ETF140</b>	260 (10.24)	300 (11.81)
4B	<b>ETF175</b>	350 (13.78)	375 (14.76)



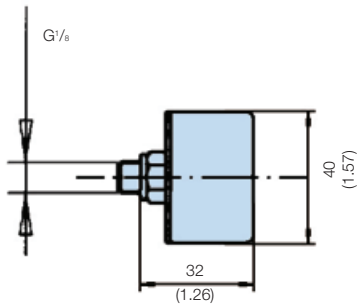
# ETF Series

## Tanktop Mounted Return Line Filters

### Indicator Details

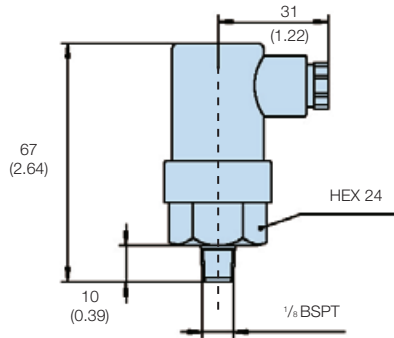
Visual pressure indicator

**Code G2**  
mm (inches)



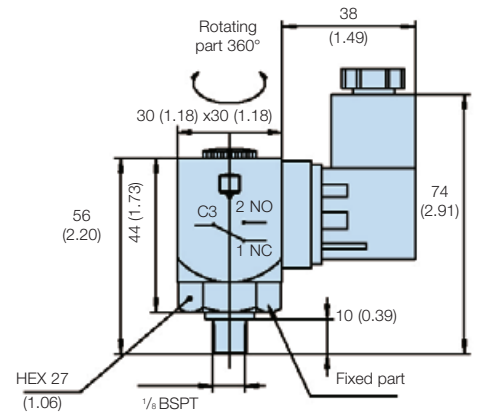
48 Vdc electrical indicator 1.2 bar



**Code S2/S3**  
mm (inches)



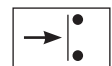
250 VAC electrical indicator 1.2 bar

**Code S4**  
mm (inches)

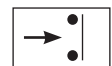


Option	Description	Connection/Voltage	Wiring	Part number						
G2	Visual indicator 1.0 bar	N/A	N/A	FMUG2FBMG02L						
S2/S3	Electrical indicator 1.0 bar	42 Vdc max	 Select either normally open (NO) or normally closed (NC)	FMUS2FBMG02L or FMUS3FBMG02L						
S4	Electrical indicator 1.0 bar	250 VAC max	 <table border="1" data-bbox="885 1299 981 1377"> <tr> <td>1</td> <td>NC</td> </tr> <tr> <td>2</td> <td>NO</td> </tr> <tr> <td>3</td> <td>C</td> </tr> </table>	1	NC	2	NO	3	C	FMUS4FFAG02L
1	NC									
2	NO									
3	C									

Normally open contacts



Normally closed contacts



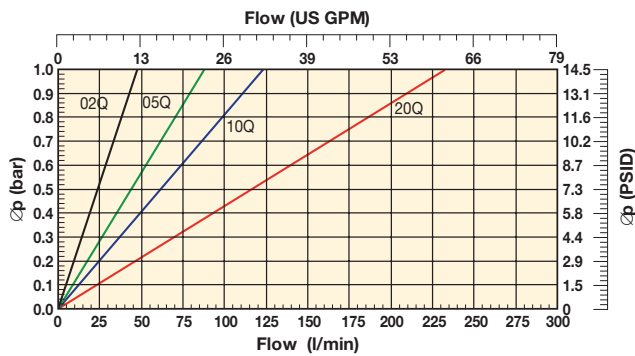
## Pressure Drop Curves

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

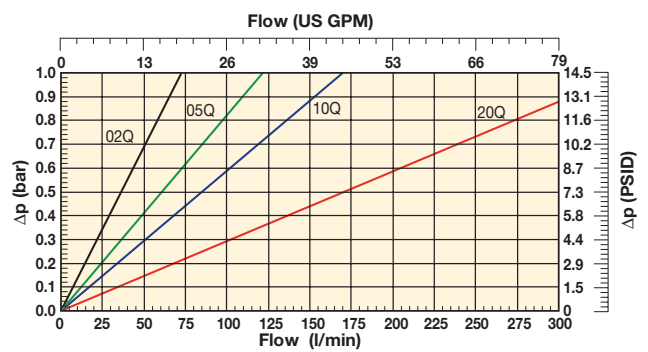
If the medium used has a viscosity different from 32cSt, pressure drop over the filter can be estimated as follows:

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

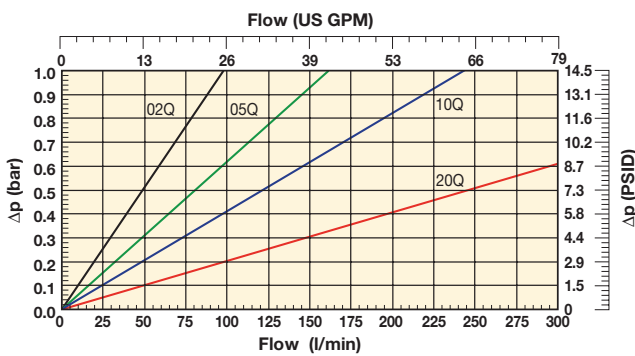
### ETF45 (Element length code 1)



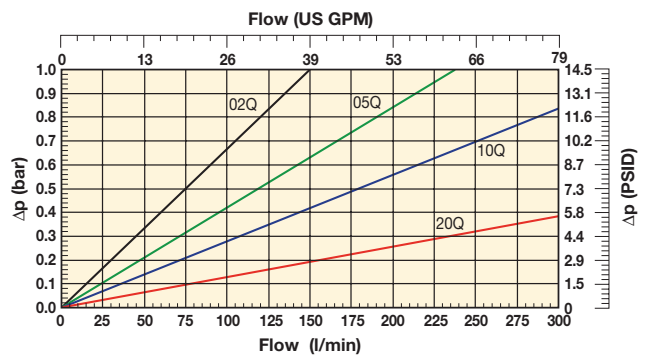
### ETF60 (Element length code 2)



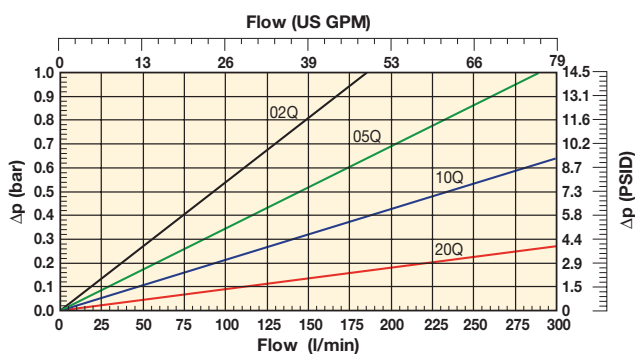
### ETF90 (Element length code 3)



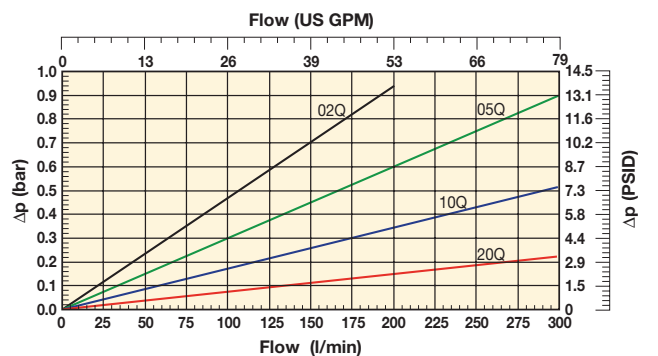
### ETF120 (Element length code 4)



### ETF140 (Element length code 4A)



### ETF175 (Element length code 4B)



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

# ETF Series

## Tanktop Mounted Return Line Filters

### Ordering Information

#### Standard products table

Part number	Supersedes	Flow (l/min)	Model number	Element length	Media rating (µ)	Seals	Indicator	Bypass settings	Ports	Included options	Replacement elements	Supersedes
<b>ETF210QBP2FG164</b>	FK1230.Q010.BK16.GX16	60	ETF60	Length 2	10	Nitrile	Plugged	1.6 Bar (23 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937950Q</b>	FC1230.Q010.XS
<b>ETF220QBP2FG164</b>	FK1230.Q020.BK16.GX16	60	ETF60	Length 2	20	Nitrile	Plugged	1.6 Bar (23 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937951Q</b>	FC1230.Q020.XS
<b>ETF310QBP2FG164</b>	FK1240.Q010.BK16.GX16	90	ETF90	Length 3	10	Nitrile	Plugged	1.6 Bar (23 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937952Q</b>	FC1240.Q010.XS
<b>ETF320QBP2FG164</b>	FK1240.Q020.BK16.GX16	90	ETF90	Length 3	20	Nitrile	Plugged	1.6 Bar (23 Psi)	2xG1 (one port plugged)	Diffuser type P	<b>937953Q</b>	FC1240.Q020.XS

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

#### Product configurator

##### Configurator example of an ETF Series filter

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

Code	Filter type
<b>ETF</b>	<b>Housing</b>
	ETF 1-45
	ETF 1-60
	ETF 1-90
	ETF 1-120
	ETF 1-140
	ETF 1-175

Degree of filtration
Glassfibre media
Microglass III (for disposable elements)
Disposable element

Seal type
Seal material
Nitrile

Indicator
Pressure gauge, setting 1.2 bar, G <sup>1</sup> / <sub>8</sub>
Pressure switch 42V, 1.2 bar setting, NO with G <sup>1</sup> / <sub>8</sub> BSP
Pressure switch 42V, 1.2 bar setting, NC with G <sup>1</sup> / <sub>8</sub> BSP
Pressure switch 250V, 1.2 bar setting NO/NC with G <sup>1</sup> / <sub>8</sub>
No indicator, indicator ports L + T plugged
Other settings for indicators / gauges on request

Bypass valve
Bypass valve
1.6 bar
Other bypass settings

Filter connection
Ports
G1"(BSP) (2 ports, one supplied as plugged connection)

Options
No diffuser required
Diffuser type P without perforated plate area
Diffuser with integrated hose connection
Magnets
Diffuser type P and magnets
Other combinations

Spare elements table				
ETF1-45	937969Q	937970Q	937948Q	937949Q
ETF1-60	937971Q	937972Q	937950Q	937951Q
ETF1-90	937973Q	937974Q	937952Q	937953Q
ETF1-120	937975Q	937976Q	937954Q	937955Q
ETF1-140	937977Q	937978Q	937956Q	937957Q
ETF1-175	937979Q	937980Q	937981Q	937982Q

Degree of filtration	Media code
Average filtration beta ratio β (ISO 16889) / particle size µm [c]	
βx(c)=2	βx(c)=10
βx(c)=75	βx(c)=100
βx(c)=200	βx(c)=1000
% efficiency, based on the above beta ratio (βx)	
50.0%	90.0%
98.7%	99.0%
99.5%	99.9%
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A
6	11
17	18
20	22

ETF Series Seal Kit
Part Number
918045037
Description
NITRILE SEAL KIT ETF 0 -4B

#### 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 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.

