

# ATZ Series

Suction Filters

Max. 300 l/min



## When the ultimate protection is critical

### Compact and robust cast aluminium filter design

The ATZ Series locate below tank oil level offering maximum protection for the hydraulic system pump. Pre-filtration takes place by means of a magnetic column. Maximum flow 300 l/min. Suitable for heavy duty industrial applications and recommended for reservoirs with high contamination ingress.



## Contact Information:

Parker Hannifin  
**Hydraulic Filter Division Europe**

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Information Centre**  
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## Product Features:

- ATZ submersible suction filters locate below tank oil level.
- Pre-filtration takes place by means of a magnetic column.
- Maximum flow 300 l/min.
- In-to-Out filter stops contaminated oil leaking back into the system.

# ATZ Series

## Suction Filters

### Features & Benefits

Features	Advantages	Benefits
Cast aluminium construction	Compact and robust durable construction	Suitable for heavy duty industrial applications
Integrated check valve	Filter element can be changed when the filter housing is submerged under the oil in the tank	Improved protection of sophisticated pumps
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
Wide range of vacuum measurement devices	Continuous filter condition monitoring	Contributes to just-in-time service Improved protection of pump when pressure measurement device connected with pump drive management

### Typical Applications

- Wool untangling machine
- Hydraulic winch
- Power packs with sophisticated pumps
- Drilling blocks

### The Parker Filtration ATZ Series Submersible Suction Filters.

ATZ Filters are located below the tank's oil level, offering maximum protection for the hydraulic system pump. When removing the element, the check valve closes automatically, eliminating any chance of oil leakage. Pre-filtration takes place by means of a magnet column. Thanks to the 'In-to-Out' filter principle, contaminated oil cannot leak back into the system. ATZ Filters are capable of handling nominal flow rates up to 300 l/min.



## Specification

**Operating pressure:**  
Vacuum.

**Assembly:**  
Suction line filter, mounted horizontally against tank side.

**Connections:**  
Threads G1½ (ISO 228) or flanges 2" SAE-300PSI.

**Filter housing:**  
Aluminium.

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

**Operating temperature range:**  
Seal material Nitrile: -40° to +100°C.  
Seal material Fluoroelastomer: -20° to +130°C.

**Bypass valve:**  
Blocked.

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

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

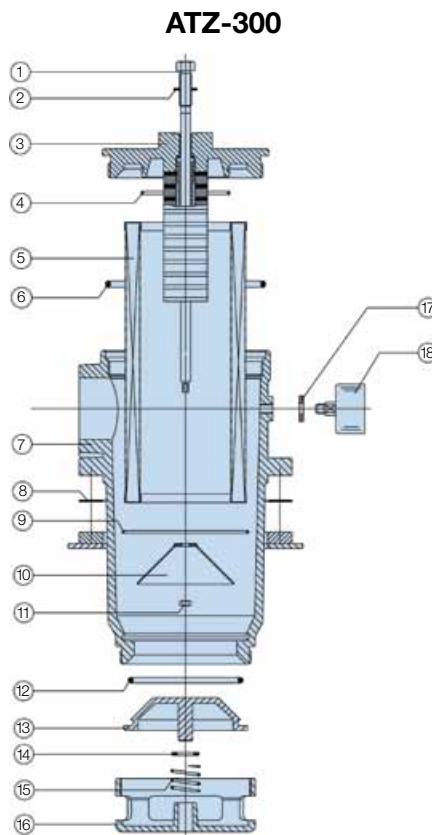
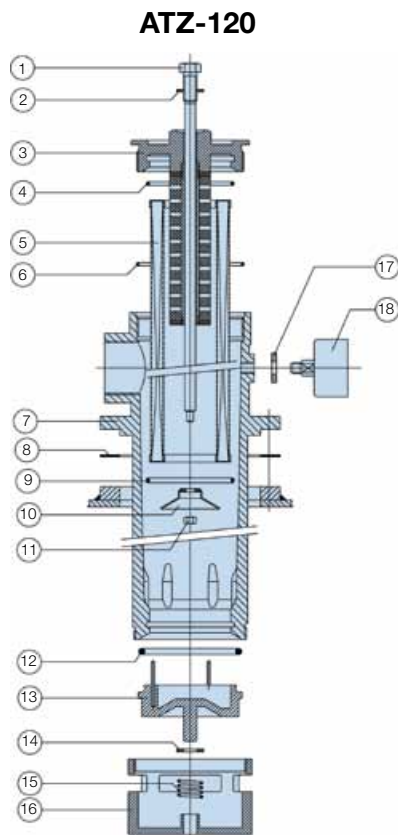
**Filtration media:**  
Microglass III.  
10µ cellulose and 40µ Stainless Steel.

**Element burst+ rating:**  
10 bar (ISO 2941).

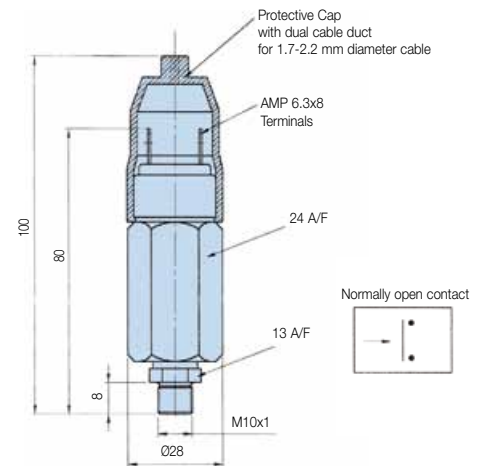
**Pressure indicator options:**  
0.15 bar or 0.30 bar (vacuum gauge).  
125-250VAC (LI-0, 5A, Lr-2, 0A) (electrical vacuum switch).  
12-28Vdc (Li-1, 0A, Lr-3, 0A) (electrical vacuum switch).

**Features:**  
Unique check valve, enabling element change below oil level.

**Filter element:**  
Element with steel end caps.



## Vacuum Switch



ATZ-120 & ATZ-300			
Ref. No.	Description	Ref. No.	Description
1	1 Bolt	10	1 Valve support
2	1 Seal ring	11	1 Nut
3	1 Insert	12	1 O-ring
4	1 O-ring	13	1 Valve
5	1 Element	14	1 Ring
6	1 O-ring	15	1 Spring
7	1 Filter-housing	16	1 Valve-housing
8	1 Gasket	17	1 Bonded seal
9	1 O-ring	18	1 Indicator



## Pressure Drop Curves

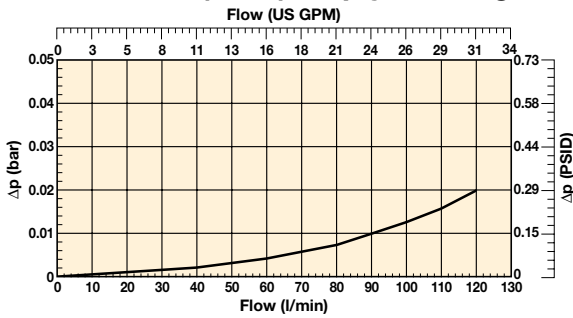
The recommended level of the initial pressure drop for suction filters is 0.03 bar.

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

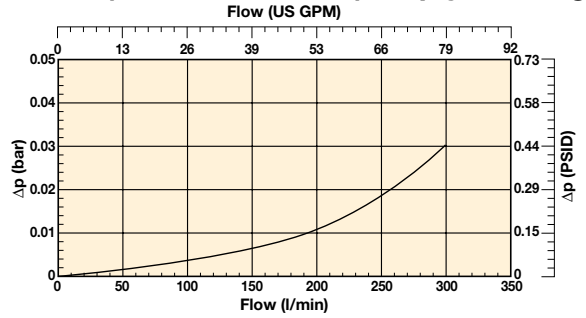
$$\Delta p = (\Delta p_{32} \times \text{viscosity of medium used}) / 32\text{cSt}$$

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

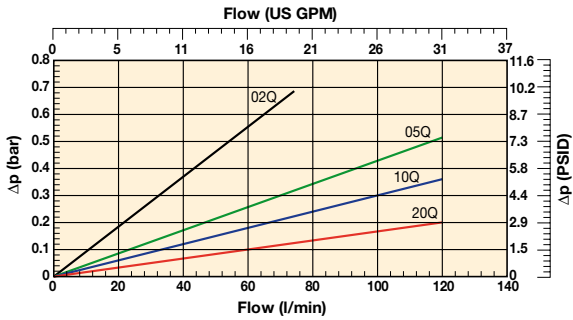
**ATZ 1-120 (G1<sup>1/2</sup>) Empty Housing**



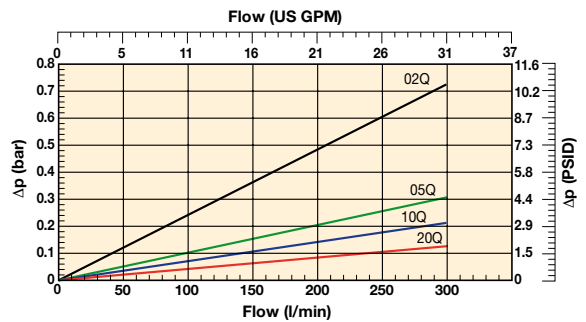
**ATZ 300 (2<sup>1/2</sup> SAE FLANGE) Empty Housing**



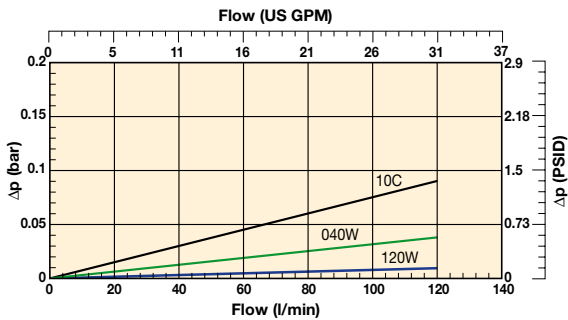
**ATZ120 Filter Element Length 1**



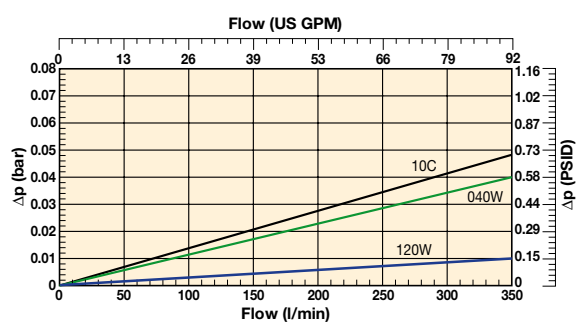
**ATZ300 Filter Element Length 2**



**ATZ120 Filter Element Length 1  
(cellulose and stainless steel)**



**ATZ300 Filter Element Length 2  
(cellulose and stainless steel)**



# ATZ Series

## Suction 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>ATZ110CBPXG241</b>	ATZ120-G1½ FX1-R-10 B M	120	ATZ120	Length 1	10 NOM	Nitrile	Plugged	Blocked	G1½"	None	<b>937958</b>	FX1-R-10
<b>ATZ110QBXPXG241</b>	ATZ120-G1½ FXW1-R-10 B M	120	ATZ120	Length 1	10 ABS	Nitrile	Plugged	Blocked	G1½"	None	<b>937964Q</b>	FXW1-R-10
<b>ATZ210CBPXR481</b>	ATZ300-S2½-C FXX3-10 B M	300	ATZ300	Length 2	10 NOM	Nitrile	Plugged	Blocked	2½" SAE-3000 PSI	None	<b>937959</b>	FXX3-10
<b>ATZ210QBXPXR481</b>	ATZ300-S2½-C FXW3-10 B M	300	ATZ300	Length 2	10 ABS	Nitrile	Plugged	Blocked	2½" SAE-3000 PSI	None	<b>937965Q</b>	FXW3-10

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 ATZ filter

Box 1	Box 2	Box 3	Box 4	Box 5	Box 6	Box 7	Box 8
<b>ATZ</b>	<b>2</b>	<b>10C</b>	<b>B</b>	<b>U2</b>	<b>X</b>	<b>R48</b>	<b>1</b>

Box 1	Box 2	Box 3
<b>Code</b>	<b>Filter type</b>	<b>Degree of filtration</b>
<b>ATZ</b>	<b>Housing</b>	<b>Element media</b>
	ATZ 1-120	<b>Glass fibre</b>
	ATZ 2-300	Microglass III (for disposable elements)
	<b>Code</b>	<b>Cellulose</b>
	<b>1</b>	Nom. rating
	<b>2</b>	Disposable element
		<b>10C</b>
		02Q
		05Q
		<b>10Q</b>
		20Q
		040W
		<b>Wire mesh</b>
		Abs. rating

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

Box 5
<b>Indicator</b>
<b>Code</b>
Vacuum gauge, setting -0.15 bar, M10x1
Vacuum gauge, setting -0.3 bar, M10x1
Vacuum switch 42V, -0.15 bar setting, NO, M10 x 1
Vacuum switch 42V, -0.30 bar setting, NO, M10 x 1
Vacuum switch 250 VAC, -0.15 bar setting, NO/NC, M10 x 1
Vacuum switch 250 VAC, -0.30 bar setting, NO/NC, M10 x 1
No indicator, indicator ports not machined
No indicator, indicator port plugged
Other settings for indicators / gauges on request
<b>U1</b>
<b>U2</b>
V1
V2
V3
V4
N
<b>P</b>
on request

Box 6
<b>Bypass valve</b>
<b>Code</b>
Blocked bypass
<b>X</b>

Box 7
<b>Filter connection</b>
<b>Ports</b>
G1½" + 2 x G1" (For ATZ 1-120 only)
2½" SAE-3000 PSI + 2 x G1½" (For ATZ 2-300 only)
<b>Code</b>
<b>G24</b>
<b>R48</b>

Box 8
<b>Options</b>
<b>Options for ATZ 1-120</b>
1 x G1½" + 1 x G1" plugged
Not plugged
1 x G1" right plugged
2 x G1" left & right plugged
Special
<b>Code</b>
<b>1</b>
Q
R
P
on request
<b>Options for ATZ 2-300</b>
2½" SAE with blind counterflange
No counterflange
Special
<b>Code</b>
<b>1</b>
Q
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

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

<b>Spare element table</b>						
ATZ 1-120	FX1-R-10	FXW1-R-2	FXW1-R-5	FXW1-R-10	FXW1-R-20	SF1-R-40
Part number spare element	937958	937960Q	937962Q	937964Q	937966Q	937967
ATZ 2-300	FXX3-10	FXW3-2	FXW3-5	FXW3-10	FXW3-20	SF3-40
Part number spare element	937959	937961Q	937963Q	937965Q	944296Q	937968



<b>ATZ Series Seal Kits</b>	
<b>Part Number</b>	<b>Description</b>
<b>2049010001</b>	NITRILE SEAL KIT ATZ1
<b>2049010060</b>	FLUOROELASTOMER SEAL KIT ATZ1
<b>2049010002</b>	NITRILE SEAL KIT ATZ2

<b>Visual indicator</b>	
Setting	-0.3 bar
Thread connection	M10x1
Code	FMUJ2VBMM10L

<b>Electrical switch</b>	
Setting	-0.3 bar
Thread connection	M10x1
Switch type	NO
Elec.connection	AMP terminal 6.3x0.8
Protection	IP54 (terminal IP00)
Performance	125-250 VAC (Li 0,5A, Lr 2,0A max)
	12-28 Vdc (Li 1,0A, Lr3,0A max)
Code	FMUJ2VBMM10L

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.