

**SAME DAY SHIPMENT MODEL AVAILABLE!**

# Spin-On Filter

# PAF1



## Features and Benefits

- Spin-On with full ported die cast aluminum head for minimal pressure drop
- Offered in pipe and SAE straight thread porting
- Spin-On thread = 1.00-12UNF-2B
- Visual gauge or electrical switch dirt alarms
- Small profile for use in limited space
- Same day shipment model available

**20 gpm**  
**75 L/min**  
**100 psi**  
**7 bar**

IRF  
TF1  
KF3  
KL3  
LF1-2"  
MLF1  
RLD  
GRTB  
MTA  
MTB  
ZT

Model No. of filter in photograph is PAF16P10P.



INDUSTRIAL



MOBILE VEHICLES



AUTOMOTIVE MANUFACTURING



MACHINE TOOL



STEEL MAKING



AGRICULTURE



PULP & PAPER

## Applications

KFT  
RT  
RTI  
LRT  
ART  
BFT  
QT  
KTK  
LTK  
MRT

Flow Rating:	Up to 20 gpm (75 L/min) for 150 SUS (32 cSt) fluids
Max. Operating Pressure:	100 psi (7 bar)
Min. Yield Pressure:	150 psi (10 bar), per NFPA T2.6.1
Rated Fatigue Pressure:	Contact factory
Temp. Range:	-20°F to 225°F (-29°C to 107°C)
Bypass Setting:	Cracking: 30 psi (2 bar) Full Flow: 36 psi (2 bar)
Porting Head & Cap:	Die Cast Aluminum
Element Case:	Steel
Weight of PAF1-6P:	1.8 lbs. (0.8 kg)
Element Change Clearance:	2.50" (65 mm)

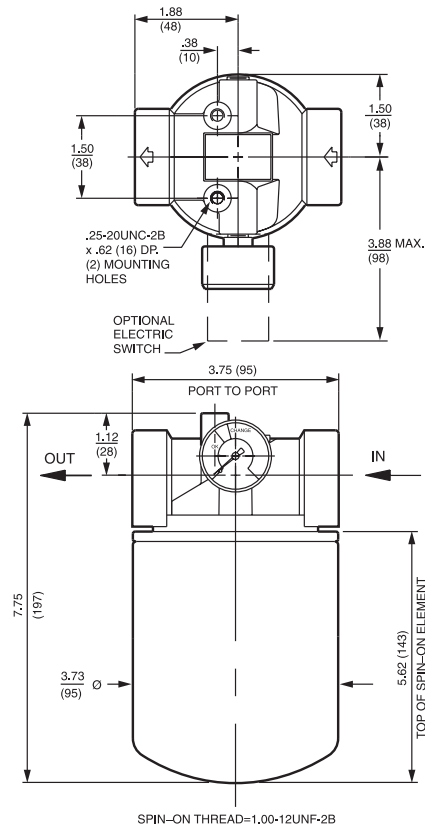
## Filter Housing Specifications

Accessories for Tank-Mounted Filters

**PAF1**

MAF1

MF2



Metric dimensions in ( ).

Installation instructions included on element.

**Element Performance Information**

Element	Filtration Ratio Per ISO 4572/NFPA T3.10.8.8 Using automated particle counter (APC) calibrated per ISO 4402			Filtration Ratio wrt ISO 16889 Using APC calibrated per ISO 11171	
	$\beta_x \geq 75$	$\beta_x \geq 100$	$\beta_x \geq 200$	$\beta_{x(c)} \geq 200$	$\beta_{x(c)} \geq 1000$
P10	15.5	16.2	18.0	N/A	N/A
PZ10	7.4	8.2	10.0	8.0	10.0
PZ25	18.0	20.0	22.5	19.0	24.0

**Dirt Holding Capacity**

Element	DHC (gm)
P10	37
PZ10	N/A
PZ25	N/A

Element Collapse Rating: 100 psid (7 bar)  
 Flow Direction: Outside In  
 Element Nominal Dimensions: 3.75" (95 mm) O.D. x 5.5" (140 mm) long

**Type Fluid Appropriate Schroeder Media**

Petroleum Based Fluids	10 μ E media (cellulose) and 25 μ Z-Media® (synthetic)
High Water Content	10, 25 μ Z-Media® (synthetic)
Invert Emulsions	10, 25 μ Z-Media® (synthetic)
Water Glycols	10, 25 μ Z-Media® (synthetic)

**Fluid Compatibility**

- IRF
- TF1
- KF3
- KL3

Pressure	Element		Element selections are predicated on the use of 150 SUS (32 cSt) petroleum based fluid and a 30 psi (2.1 bar) bypass valve.			
	Series	Part No.				
To 100 psi (7 bar)	E Media	P10	P10			
	Z-Media®	PZ10	PZ25			
		PZ25	PZ10			
Flow	gpm	0	10	20		
	(L/min)	0	25	50	75	

**Element Selection Based on Flow Rate**

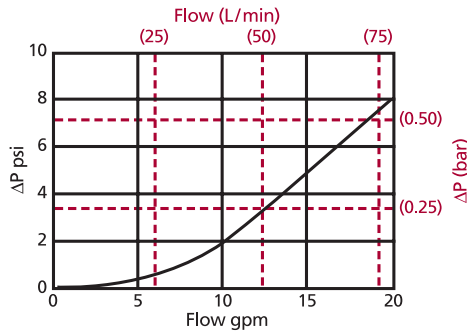
- LF1-2"
- MLF1
- RLD
- GRTB
- MTA
- MTB
- ZT

Shown above are the elements most commonly used in this housing.

Note: Contact factory regarding use of E media in High Water Content, Invert Emulsion and Water Glycol Applications. For more information, refer to Fluid Compatibility: Fire Resistant Fluids, pages 19 and 20.

**ΔP<sub>housing</sub>**

PAF1 ΔP<sub>housing</sub> for fluids with sp gr = 0.86:



sp gr = specific gravity

**ΔP<sub>element</sub>**

$$\Delta P_{\text{element}} = \text{flow} \times \text{element } \Delta P \text{ factor} \times \text{viscosity factor}$$

El. ΔP factors @ 150 SUS (32 cSt):

<b>P10</b>	.17
<b>PZ25</b>	.15

If working in units of bars & L/min, divide above factor by 54.9.

Viscosity factor: Divide viscosity by 150 SUS (32 cSt).

**Pressure Drop Information Based on Flow Rate and Viscosity**

- KFT
- RT
- RTI
- LRT
- ART
- BFT
- QT
- KTK
- LTK
- MRT

Sizing of elements should be based on element flow information provided in the Element Selection chart above.

Notes

$$\Delta P_{\text{filter}} = \Delta P_{\text{housing}} + \Delta P_{\text{element}}$$

**Exercise:**

Determine ΔP at 10 gpm (38 L/min) for PAF16P10SY2 using 200 SUS (44 cSt) fluid.

**Solution:**

$$\begin{aligned} \Delta P_{\text{housing}} &= 2.0 \text{ psi } [.18 \text{ bar}] \\ \Delta P_{\text{element}} &= 10 \times .17 \times (200 \div 150) = 2.3 \text{ psi} \\ &\text{or} \\ &= [38 \times (.17 \div 54.9) \times (44 \div 32)] = .16 \text{ bar} \\ \Delta P_{\text{total}} &= 2.0 + 2.3 = 4.3 \text{ psi} \\ &\text{or} \\ &= [.18 + .16] = .34 \text{ bar} \end{aligned}$$

Accessories for Tank-Mounted Filters

**PAF1**

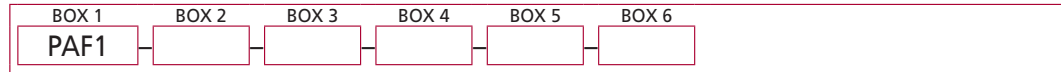
MAF1

MF2

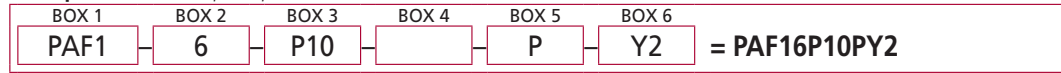
## Filter Model Number Selection

**Same Day Shipment Model**  
See inside back cover for details.

### How to Build a Valid Model Number for a Schroeder PAF1:



**Example:** NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
<b>Filter Series</b>	<b>Element Length (in)</b>	<b>Element Size and Media</b>	
PAF1	6	P10 = P size 10 μ E media (cellulose) PZ10 = P size 10 μ Excellement® Z-Media® (synthetic) PZ25 = P size 25 μ Excellement® Z-Media® (synthetic)	
			<b>Seal Material</b>
			Omit = Buna N

BOX 5	BOX 6
<b>Inlet Porting</b>	<b>Dirt Alarm® Options</b>
P = ¾" NPTF	Omit = None
S = SAE-12	Visual Y2 = Back-mounted tri-color gauge
	Electrical ES = Electric switch

**NOTE:**

Box 2. Replacement element part numbers are a combination of Boxes 3 and 4.  
Example: P10