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UR209

UR209 Series Filters

ULTIPLEAT® SRT RETURN LINE FILTERS

Port Size $\frac{3}{4}$ " and 1"



Features

- Patented Ultipleat (laid-over pleat) filter medium pack
- Coreless, cageless element configuration
- Pall Stress-Resistant Technology (SRT) Media
- In-to-out filter element flow path
- Flows to 120 L/min (32 US gpm)
- Pressures to 41 bar (600 psi)
- Port size ¾" and 1"

Notes and Specifications

Filter Housing

- **Maximum Working Pressure:**
41 bar (600 psi)
- **Rated Fatigue Pressure:**
41 bar (600 psi)
10⁶ cycles per NFPA T2.06.01R2-2001
- **Typical Burst Pressure:**
130 bar (2650 psi)
- **Fluid Compatibility:**
Compatible with all petroleum oils, water glycols, water-oil emulsions and most synthetic hydraulic and lubrication fluids
- **Temperature Range:**
Fluorocarbon Seals:
-29 °C to 120 °C (-20 °F to 250 °F)
60 °C (140 °F) maximum in HWCF or water glycol fluids
- **Materials of Construction:**
Aluminum alloy head and bowl.

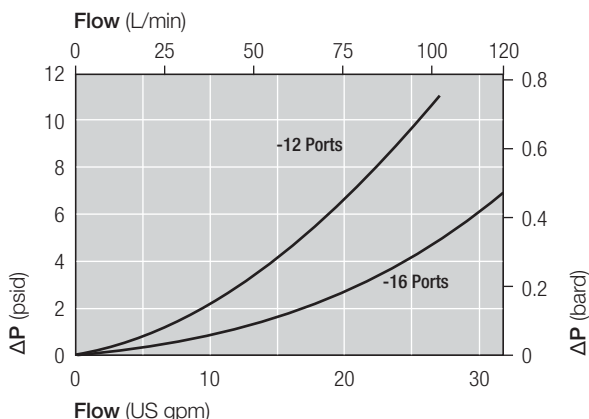
Filter Housing

- **Filter Element Burst Pressure:**
10 bard (150 psid)
- **Ultipleat SRT Element Construction:**
Inorganic fibers impregnated and bonded with epoxy resins. Polymer endcaps. Anti-static media design

Pressure Drop Information

Housing pressure drop using fluid with 0.9 S.G.

Housing pressure drop is directly proportional to specific gravity.



Element Pressure Drop

Multiply actual flow rate times factor in table below to determine pressure drop with fluid at 32 cSt (150 SUS), 0.9 S.G. Correct for other fluids by multiplying new viscosity in cSt/32 (SUS/150) x new S.G./0.9. Note: factors are per 1000 L/min and per 1 US gpm.

209 Series Filter Elements — bard/1000 L/min (psid/US gpm)

Length Code	AZ	AP	AN	AS	AT
03	34.75 (1.907)	13.92 (0.764)	10.62 (0.583)	9.00 (0.494)	7.67 (0.421)
07	15.69 (0.861)	6.29 (0.345)	4.79 (0.263)	4.06 (0.223)	3.46 (0.190)

Sample ΔP calculation

UR209 Series 3" length housing with C12 (¾" BSP) threaded ports using AN grade media. Operating conditions 20 L/min flow rate using a hydraulic fluid of 50 cSt and specific gravity (s.g.) 1.2.

Total Filter ΔP

$$\begin{aligned}
 &= \Delta P_{\text{housing}} + \Delta P_{\text{element}} \\
 &= (0.07 \times 1.2/0.9) \text{ bard (housing)} \\
 &+ ((20 \times 10.62/1000) \times 50/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.09 \text{ bard (housing)} + 0.44 \text{ bard (element)} \\
 &= \mathbf{0.53 \text{ bard (7.7 psid)}}
 \end{aligned}$$

The equipment has been assessed in accordance with the guidelines laid down in The European Pressure Directive 97/23/EC and has been classified within Sound Engineering Practice S.E.P. Suitable for use with Group 2 fluids only. Consult Sales for other fluid gas group suitability.

UR209 Series Filters

Ordering Information

For new installations, select one complete part number from each section below

Section 1

Housing P/N:

Note: Pall Ultipleat SRT filter housings are supplied without filter elements or warning devices fitted. Never operate the filter unless a filter element is fitted and all warning device ports are sealed.

Seal Kit P/N:

Table 1: Housing Port Options

Code	Port
A12	¾" SAE J514 straight thread
A16	1" SAE J514 straight thread
B12	¾" NPT Thread
B16	1" NPT Thread
C12	¾" BSP ISO 228 threads
C16	1" BSP ISO 228 threads

Table 2: Housing Length Options

Code	Length (in)*
03	3
07	7

* Nominal length

UR 209H  ++  Z  F1 

Note: Z indicates fluorocarbon seals are standard. Other options are available; contact Pall.
The number F1 at the end of the Housing P/N designates 1 indicator port, fitted with a plastic shipping plug.

UR 209 SKZ

*Other seal material options are available; Contact Pall.

Table 3: Housing Bypass Valve Options

Code	Valve
A	1.7 bard (25 psid)
G	4.5 bard (65 psid)
N	Non-Bypass

Table 4: Other Options

Code	Description
OMIT	Aluminum alloy head and bowl (standard)
YS45	Anodized aluminum alloy finish for use with water glycols and HWCF

Section 2

Element P/N:

UE 209   Z

Note: Z indicates fluorocarbon seals are standard. Other options are available; contact Pall.

Table 1: Filter Element Options

Code	$\beta_{x(c)} \geq 1000$ based on ISO 16889	CST Rating*
AZ	3	08/04/01
AP	5	12/07/02
AN	7	15/11/04
AS	12	16/13/04
AT	22	17/15/08

* CST: Cyclic Stabilization Test to determine filter rating under stress conditions, based on SAE ARP4205

Table 2: Element Length Options

Code	Length (in)*
03	3
07	7

* Nominal length

Section 3 (At least one Differential Pressure Indicator or 'B' type blanking plug must be ordered)

Differential Pressure Indicator P/N:

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Note: If no differential pressure indicator is selected, 'B' type blanking plug (P/N 1373772) must be ordered separately and fitted to replace the plastic shipping plug.

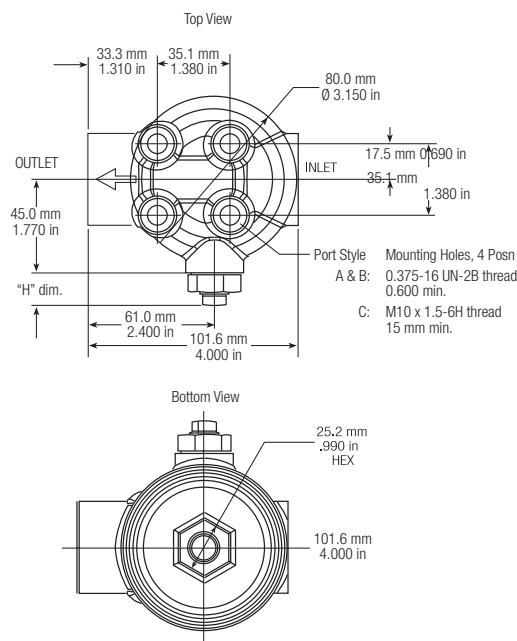
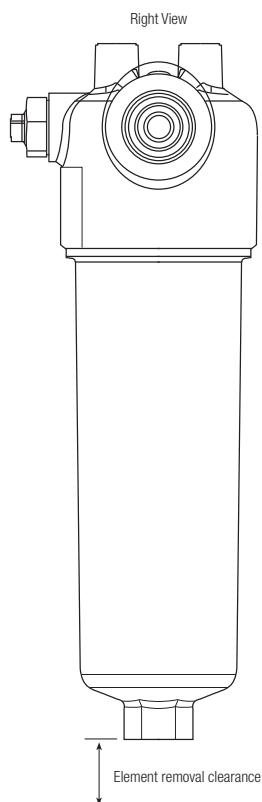
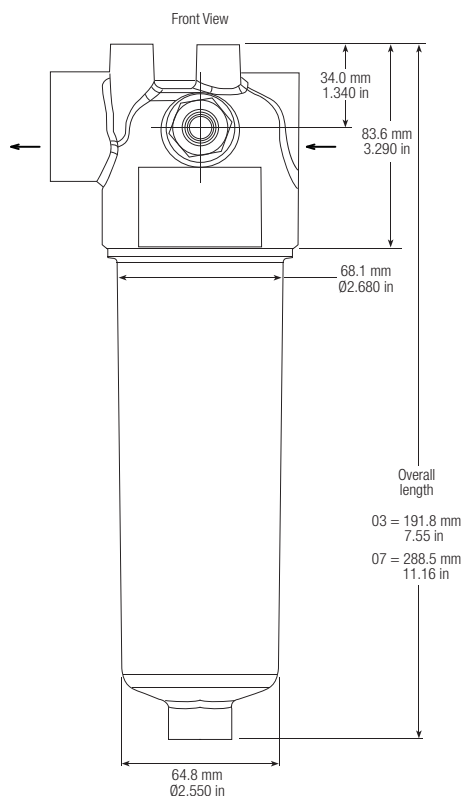
Note: Fluorocarbon seals are standard. Other options are available; contact Pall.

Table 1: Differential Pressure Indicator Options

Code	Rating	Indicator	'H' Dim.
75888	1.1 bard (16 psid)	'FD' Type Visual (auto reset) with thermal lockout	15mm (0.6in)
82233	3.5 bard (50 psid)		
75887	1.1 bard (16 psid)	'F5' Type Electrical switch (SPDT) maximum 24VDC single wire for switched ground connection	23mm (0.9in)
79743	3.5 bard (50 psid)		
73772	N/A	'FB' Type blanking plug	10mm (0.4in)

1.1 bard (16 psid) rating recommended for 'A' bypass valve
3.5 bard (50 psid) rating recommended for 'G' bypass valve

Length Code	Overall Length mm (in)	Element Removal Clearance mm (in)
03	192 (7.55)	69 (2.7)
07	283 (11.16)	69 (2.7)



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