

Athalon® maximum-life filters deliver the highest level of sustained fluid system protection, across all applications, regardless of severity.

Featuring an industry leading  $\text{Beta}_{X(C)}=2000^*$  filter efficiency; the highest rated filter performance available today.

(\* per ISO 16889)

- Duplex filter configuration allows uninterrupted flow to the system when changing filter elements
- Flows to 225 L/min (60 US gpm)
- Pressures to 110 bar (1,600 psi)
- Port size 1¼"

## Notes and Specifications

### Filter Housing

- **Maximum Allowable Working Pressure:**  
110 bar (1,600 psi)
- **Rated Fatigue Pressure:**  
110 bar (1,600 psi)  
10<sup>6</sup> cycles per NFPA T2.06.01R2-2001
- **Fluid Compatibility:**  
Compatible with 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:**  
Head and cover: Ductile iron  
Tube: Carbon steel  
Transfer and check valve: Steel with zinc plating

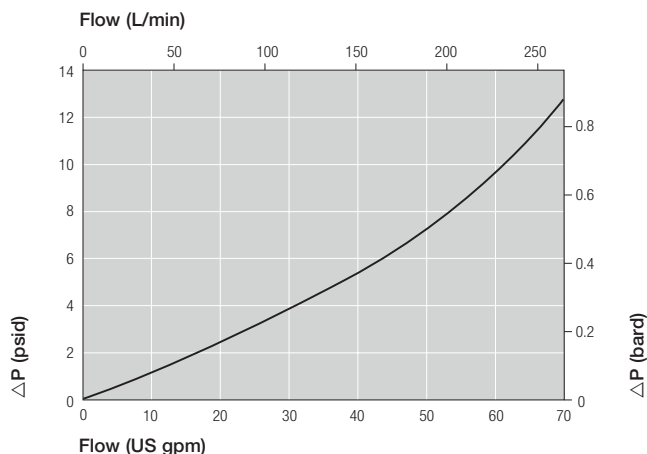
### Filter Element

- **Filter Element Burst Pressure:**  
10 bard (145 psid)
- **Athalon 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.



## UR229 Series Filters Athalon® Medium Pressure Duplex Filters Port Size 1¼"



UR229 Series  
Filter Housing

### 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.

### 210 Series Filter Elements – bard/1000 L/min (psid/US gpm)

Length Code	AZ	AP	AN	AS	AT
13	5.95 (0.327)	2.52 (0.139)	1.70 (0.093)	1.05 (0.058)	0.80 (0.044)
20	3.95 (0.217)	1.68 (0.092)	1.13 (0.062)	0.70 (0.038)	0.53 (0.029)

### Sample ΔP calculation

UR229 Series 13" length housing with F20 (1¼" SAE) split flange ports using AN grade media. Operating conditions 75 L/min (20 USgpm) flow rate using a hydraulic fluid of 50 cSt and specific gravity (s.g.) 1.2.

#### Total Filter ΔP

$$\begin{aligned}
 &= \Delta P \text{ housing} + \Delta P \text{ element} \\
 &= (0.5 \times 1.2/0.9) \text{ bard (housing)} \\
 &+ ((75 \times 1.7/1000) \times 50/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.67 \text{ bard (housing)} + 0.27 \text{ bard (element)} \\
 &= \mathbf{0.94 \text{ bard (13.63 psid)}}
 \end{aligned}$$

## Ordering Information

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

### Section 1 Housing P/N:

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

Housing part number designates indicator port is fitted with a plastic shipping plug.

Part Number	Description
UR229CD2013ZS00001	UR229CD2013ZG1NYR85
UR229CD2013ZS00003	UR229CD2013ZA1NYR85
UR229CD2020ZS00001	UR229CD2020ZG1NYR85
UR229CD2020ZS00005	UR229CD2020ZA1NYR85
UR229CF2013ZS00001	UR229CF2013ZG1NYR85
UR229CF2013ZS00003	UR229CF2013ZA1NYR85
UR229CF2020ZS00001	UR229CF2020ZG1NYR85
UR229CF2020ZS00004	UR229CF2020ZA1NYR85

#### Part Number (Description) Breakdown

UR229C	= UR229 series housing, cover service
C20	= 1¼" BSP ISO228 thread ports
D20	= 1¼" Flange ports SAE J518C code 61 (207 bar/3000)
F20	= 1¼" ISO 6162 split flange ports (250 bar/3625 psi max pressure)
13	= 13 inch nominal length
20	= 20 inch nominal length
Z	= Fluorocarbon seals
G	= 4.5 bard (65 psid) bypass valve
A	= 1.7 bard (25 psid) bypass valve
1	= 1 indicator warning device port
N	= No secondary port
YR85	= Iron/Steel construction

### Section 2 Element P/N: UE 210

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



Table 1: Filter Element Options

Code	$\beta_{x(c)} \geq 2000$ based on ISO 16889	CST Rating*	*CST: Cyclic Stabilization Test to determine filter rating under stress conditions, based on SAE ARP4205
AZ	3	07/04/01	
AP	5	11/08/03	
AN	7	13/09/04	
AS	12	15/11/06	
AT	25	16/14/08	

Table 2: Filter Element Length Options

Code	Description
13	13 inch nominal length
20	20 inch nominal length

### Section 3 Differential Pressure Indicator



(One Differential Pressure Indicator or 'B' type blanking plug must be ordered for each filter tower)

Note: If no Differential Indicator is selected, 'B' type blanking plug (P/N HC9000A104Z) must be ordered separately and fitted to replace the shipping plug.

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

Table 3: Indicator Options

Code	Brass Option Indicator
A218M	Electrical switch (SPDT) with Hirschmann connector
A218R	Electrical switch (SPDT) with Hirschmann connector with Red and Green LED indicators
A219D	Visual indicator

Table 4: Indicator Pressure Setting Option

Code	Stainless Steel Option Indicator
778N	Visual filter with thermal lockout
861C	Electrical switch (SPDT) with Hirschmann connector
771B	Electrical switch (SPDT) with 3-pin

Table 5: Differential Pressure Indicator Material

Code	Pressure Setting
Omit	If Brass Indicator is selected in Table 3
SS	If Stainless Steel Indicator is selected in Table 3 (recommended for high pressure applications with pressure > 200 bar (3000 psi))

# Dimensional Drawings

Dimensions in mm (inches)

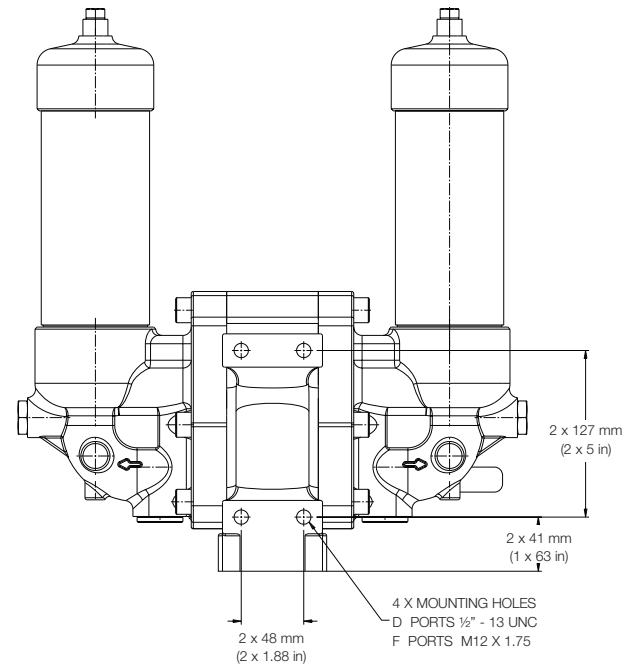
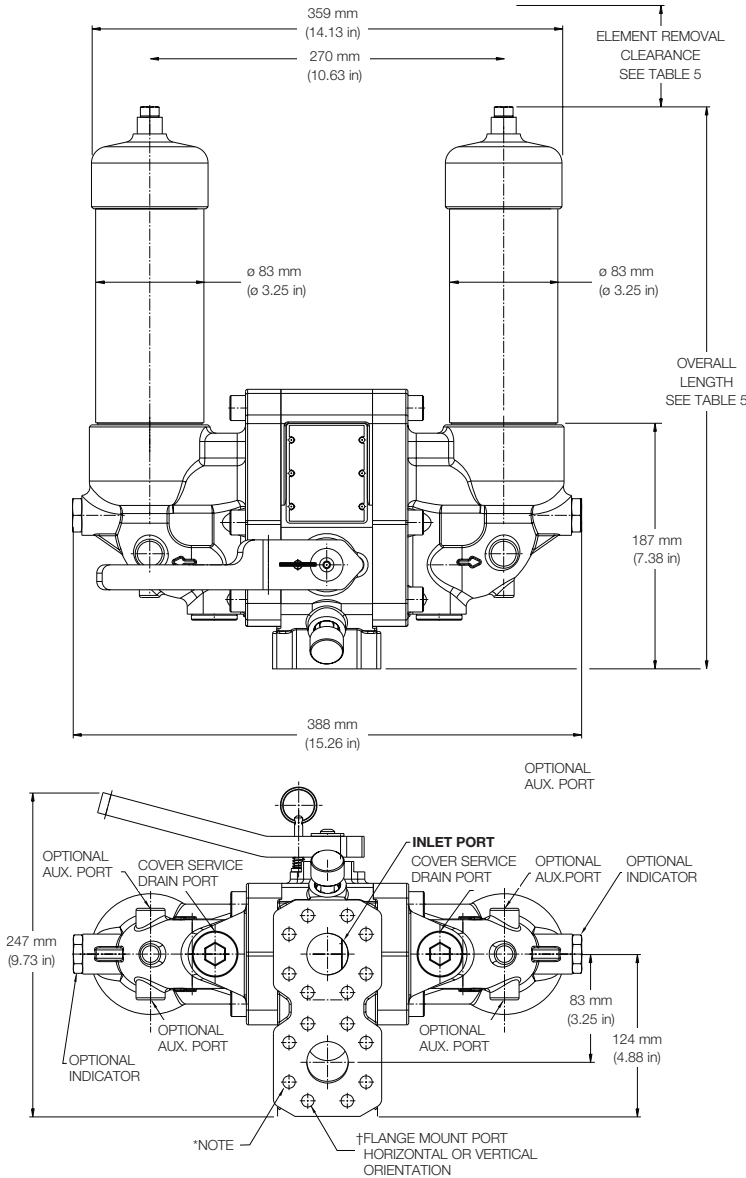
## UR229 Housing

## Specifications

Length Code	Overall Length mm (in)	Element Removal Clearance mm (in)	Empty Weight kg (lb)
08	432 (17.0)	229 (9.0)	35 (77)
13	566 (22.3)	368 (14.5)	37 (81)
20	737 (29.0)	553 (21.0)	39.5 (87)

Other housing configurations available on application.

† 7/16" - 14 UNC - 2B holding bolts for D port option  
M10 x 1.5 holding bolts for F port option



### \*NOTE:

The inlet/outlet flange connection ports have been configured with a dual 90° axis option to allow flexibility of mounting and piping arrangements. This offers various piping orientations and mounting flexibility when using SAE flange elbow connections.

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 1 and 2 fluids only. Consult Sales for other fluid gas group suitability.



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