



## New: UR620 Series Athalon™ Return Line Duplex Filters

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

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

(\* per ISO 16889)

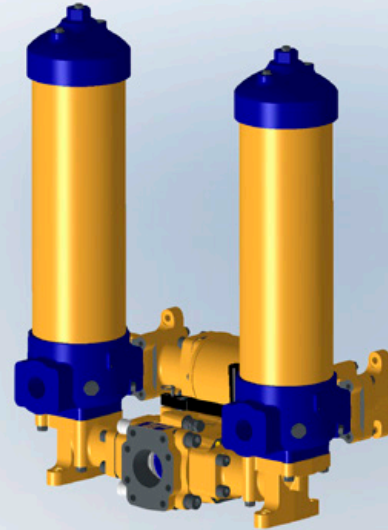
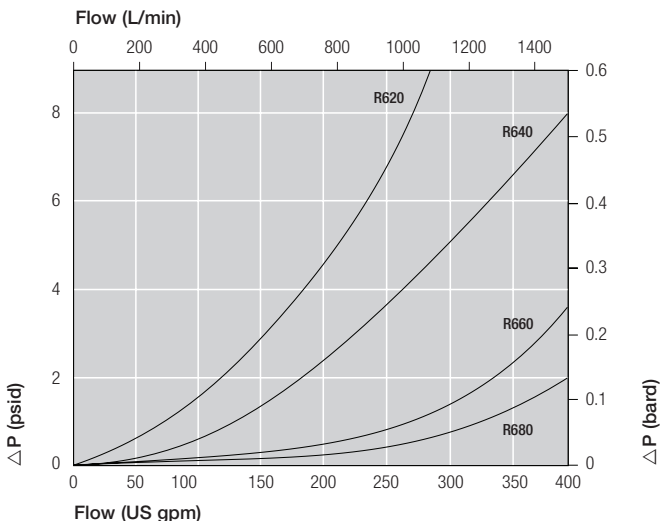
### Notes and Specifications Filter Housing

- Flows to 1500 L/min (400 US gpm)
- Pressures to 28 bar (400 psi)
- Port Size 3" and 4"
- **Rated Fatigue Pressure:**  
0-23 bar (330 psi) per NFPA T2.06.01R2-2001 CAT C/90\*(1 million cycles), verified by testing at 0-27 bar (392 psi) for 1 million cycles.
- **Filter Element Burst Pressure:**  
10 bard (150 psid)
- **Fluid Compatibility:**  
Compatible with all petroleum oils and most water glycols, water-oil emulsions, and most synthetic hydraulic and lubrication fluids
- **Temperature Range:**  
Fluorocarbon Seals:  
-29 °C to 120 °C (-20 °F to 248 °F)  
60 °C (140 °F) maximum in HWCF or water glycol fluids
- **Bypass Valve Setting:**  
4.5 bard (65 psid) or  
1.7 bard (25 psid)
- **Indicator Pressure Setting:**  
3.5 Bard (50 psid) or  
1.1 bard (16 psid)
- **Materials of Construction:**  
Head, cover, tube, manifold and check valve: Aluminium
- **Filter Element :**  
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.



UR620 Series duplex filter housing

- Keeps fluids the cleanest, longest, for the greatest value
- Provides consistent, reliable, protection of system components over the full service life of the filter element
- Rapidly achieves and sustains required fluid system cleanliness
- Delivers maximum filter capacity in the smallest footprint
- Prevents electrostatic discharge from damaging your filter and degrading your fluid

### Features

- Patented Ultipleat (laid-over pleat) filter medium pack
- Pall Stress-Resistant Technology (SRT) Media
- Coreless filter element configuration
- Low clean differential pressure for low energy operation

### Element Pressure Drop

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

Length Code	AZ	AP	AN	AS	AT
20	1.31 (0.072)	0.56 (0.030)	0.43 (0.023)	0.31 (0.017)	0.19 (0.011)
40	0.70 (0.038)	0.30 (0.016)	0.23 (0.013)	0.17 (0.009)	0.10 (0.006)

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

### Sample ΔP calculation

UR620 Series 40" length housing with F48 (3" SAE) split flange ports using AN grade media. Operating conditions 600 L/min flow rate using a hydraulic fluid of 50 cSt and specific gravity (s.g.) 1.2.

#### Total Filter ΔP

$$\begin{aligned}
 &= \Delta P \text{ housing} + \Delta P \text{ element} \\
 &= (0.24 \times 1.2/0.9) \text{ bard (housing)} \\
 &+ ((600 \times 0.23/1000) \times 50/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.32 \text{ (housing)} + 0.29 \text{ bard (element)} \\
 &= \mathbf{0.61 \text{ bard (8.8 psid)}}
 \end{aligned}$$

# Ordering Information

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

## Section 1 Housing P/N: UR

**Note:** Pall Athalon 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.

**Note:** Z indicates fluorocarbon seals are standard. Other options are available; contact Pall. Housing P/N designates indicator port fitted with a plastic shipping plug.

Table A	Table B	Table C
No. of Housings	Port & Length Options	Bypass Options
<b>Table 1</b>	<b>Tables 2, 3, 4</b>	<b>Table 5</b>
620	D4820Z	A,G, or N
	D4840Z	
	D6420Z	
	D6440Z	
	F4820Z	
	F4840Z	
640	F6420Z	A,G, or N
	F6440Z	
	D4820Z	
	D6440Z	
660	F4820Z	A,G, or N
	F6440Z	
	D4840Z	
680	D6440Z	G
	F6440Z	

**Table 1: No. of Filter Housings**

Code	No. of Housings
620	2 (1 per side)
640	4 (2 per side)
660	6 (3 per side)
680	8 (4 per side)

**Table 2: Housing Port Options**

Code	Port Style
D	Flange J518C code 61
F	ISO 6162 split flange

**Table 3: Port Size**

Code	Port Style
48	3" nominal
64	4" nominal

**Table 4: Housing Length and Seal Options**

Code	Length and Seal Material
20Z	20" nominal length, fluorocarbon seals
40Z	40" nominal length, fluorocarbon seals

**Table 5: Bypass Valve and Service Options**

Code	Bypass Valve and Service Type
A	1.7 bard (25 psid) bypass valve, cover service
G	4.5 bard (65 psid) bypass valve, cover service
N	No bypass valve

## Seal Kit P/N: SR6 0SKZ

\*Other seal material options are available; Contact Pall.

## Section 2 Element P/N: UE 610

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


**Table 6: Filter Element Options**

Code	$\beta_{X(c)} \geq 2000$ based on ISO 16889	CST Rating*
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

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

## Section 3 (At least one Differential Pressure Indicator or 'B' type blanking plug must be ordered for each filter tower)

### Differential Pressure Indicator P/N:

RC  Z  Z

**Note:** If no differential pressure indicator is selected, 'B' type blanking plug (P/N HC9000A104Z) must be ordered separately and fitted to replace the plastic shipping plug in each filter tower.

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

For typical installations, only 2 indicators are required - only one housing per side requires an indicator. Replace other shipping plugs with blanking plugs.

**Table 7: 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

Other options are available; contact Pall.

**Table 8: Indicator Pressure Setting Option**

Code	Valve
084	For 'A' Valve Option - Housings (1.1 bard - 16 psid)
091	For 'G' and 'N' Valve Options - Housings (3.5 bard - 50 psid)

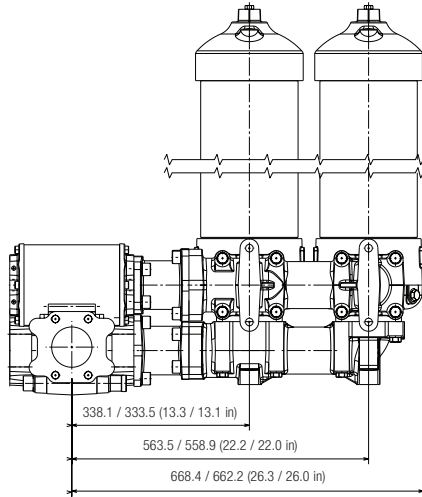
Other setting options are available; contact Pall.

# Dimensional Drawings

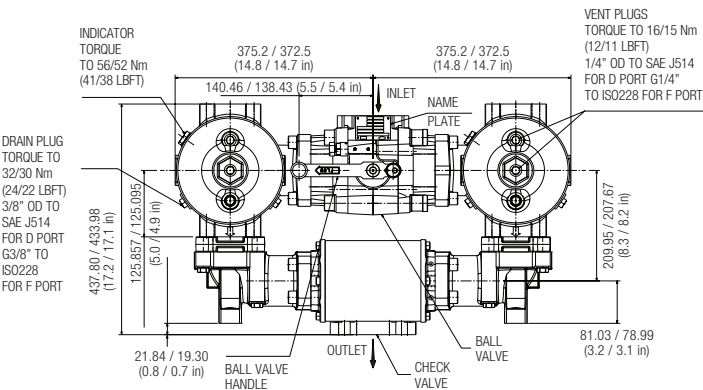
Dimensions in mm (inches)

Contact Pall for dimensions for UR660 and UR680 housings.

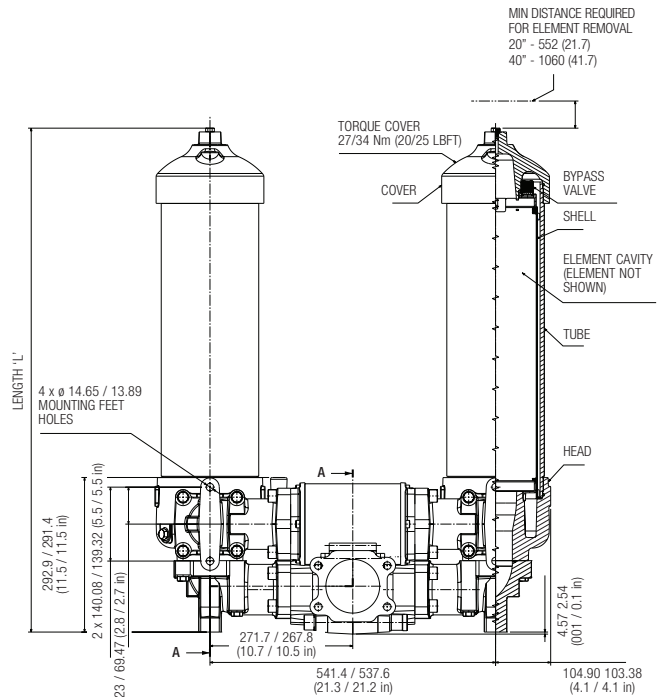
Length Code	Overall length mm (in)	Cover Service Element Removal Clearance mm (in)	Empty Weight kg (lb)
20	952.3 (37.49)	552 (21.7)	106 (234)
40	1460.3 (57.49)	1060 (41.7)	126 (278)



**UR640 Filter Housing**



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.



**UR620 Filter Housing**



25 Harbor Park Drive  
 Port Washington NY 11050  
 +1 516 484 3600 telephone  
 +1 800 289 7255 toll free US

Portsmouth - UK  
 +44 (0)23 9233 8000 telephone  
 +44 (0)23 9233 8811 fax  
 industrialeu@pall.com

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