

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)

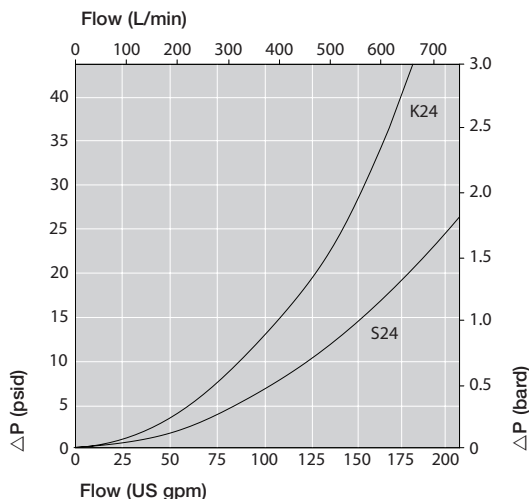
Notes and Specifications Filter Housing

- Flows to 600 L/min (160 US gpm)
- Pressures to 414 bar (6000 psi)
- Port size 1½"
- **Rated Fatigue Pressure:**
0-240 bar (3500 psi) per NFPA T2.06.01R2-2001 CAT C/90/(1 million cycles), verified by testing at 0-280 bar (4050 psi) for 1 million cycles. Contact Pall for applications with higher pressures at lower cycles
- **Filter Element Burst Pressure:**
10 bard (150 psid)
- **Fluid Compatibility:**
Compatible with all petroleum oils and most water glycols, water-oil emulsions, and 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
- **Bypass Valve Setting:**
4.5 bard (65 psid)
- **Indicator Pressure Setting:**
3.5 bard (50 psid)
- **Materials of Construction:**
Head and Cover: Ductile Cast Iron
Tube: Carbon steel
- **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.



New: UH310 Series Athalon™ High Pressure Manifold Filters

- 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



UH310 Series
Manifold mount
filter housing

Features

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

Element Pressure Drop

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

Length Code	AZ	AP	AN	AS	AT
08	5.52 (0.302)	2.30 (0.126)	1.82 (0.100)	1.32 (0.072)	0.82 (0.045)
13	3.31 (0.182)	1.38 (0.076)	1.09 (0.060)	0.79 (0.043)	0.49 (0.027)
20	2.18 (0.120)	0.91 (0.050)	0.72 (0.040)	0.52 (0.029)	0.33 (0.018)
40	1.10 (0.060)	0.46 (0.025)	0.36 (0.020)	0.26 (0.014)	0.16 (0.009)

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

UH310 Series 13" length housing with K24 1 1/2" topmount flange using AN grade media. Operating conditions 300 L/min flow rate using a hydraulic fluid of 50 cSt and specific gravity (s.g.) 1.2.

Total Filter ΔP

$$\begin{aligned}
 &= \Delta P_{\text{housing}} + \Delta P_{\text{element}} \\
 &= (0.58 \times 1.2/0.9) \text{ bard (housing)} \\
 &+ ((300 \times 1.09/1000) \times 50/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.77 \text{ (housing)} + 0.68 \text{ bard (element)} \\
 &= \mathbf{1.45 \text{ bard (21.1 psid)}}
 \end{aligned}$$

Ordering Information

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

Section 1 Housing P/N: UH310

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
Port & Length Options Tables 1, 2 and 3	Bypass & Orientation Options Tables 4
K24087, G3, G6, C3, C6	G3, G6, C3, C6
K2420Z	G3, G6, C3, C6
S2408Z, G3, G6, G3H	G6H, C3, C6
S2413Z, G3, G6, G3H	G6H, C3, C6
S2420Z	G3, G6, C3, C6

Table 1: Housing Port Options

Code	Port Style	Max. Operating Pressure
K	Top manifold mount	414 bar (6000 psi)
S	Side manifold mount	414 bar (6000 psi)

Table 2: Port Size

Code	Port Style
24	1 1/2" nominal

Table 3: Housing Length and Seal Options

Code	Length and Seal Material
08Z	8" nominal length, fluorocarbon seals
13Z	13" nominal length, fluorocarbon seals
20Z	20" nominal length, fluorocarbon seals

Table 4: Bypass Valve and Service Options

Code	Bypass Valve and Service Type
G3	4.5 bard (65 psid) bypass valve, Cap service, metric port
G3H	4.5 bard (65 psid) bypass valve, Head service, metric port
G6	4.5 bard (65 psid) bypass valve, Cap service, imperial port
G6H	4.5 bard (65 psid) bypass valve, Head service, imperial port
C3	4.5 bard (65 psid) bypass valve with reverse flow, metric port
C6	4.5 bard (65 psid) bypass valve with reverse flow, imperial port

Seal Kit P/N: SH 310 SKZ

*Other seal material options are available; Contact Pall.

Section 2 Element P/N: UE 310

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

Table 5: 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)

Differential Pressure Indicator P/N:

RC  Z091 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.

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

Table 6: 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

Code	Stainless Steel indicator
778NZ	Visual filter with thermal lockout
861CZ	Electrical Switch (SPDT) with 6" leads
861CZ*	Electrical switch (SPDT) with Hirschmann connector
771BZ	Electrical switch (SPDT) with 3-pin

Other options available; contact Pall.
* Requires YM suffix after SS code from Table 7.

Table 7: Differential Pressure Indicator Material

Code	Pressure Setting
Omit	Brass Indicator
SS	Stainless Steel Indicator: recommended for high pressure cycle applications with pressure > 200 bar (3000 psi)

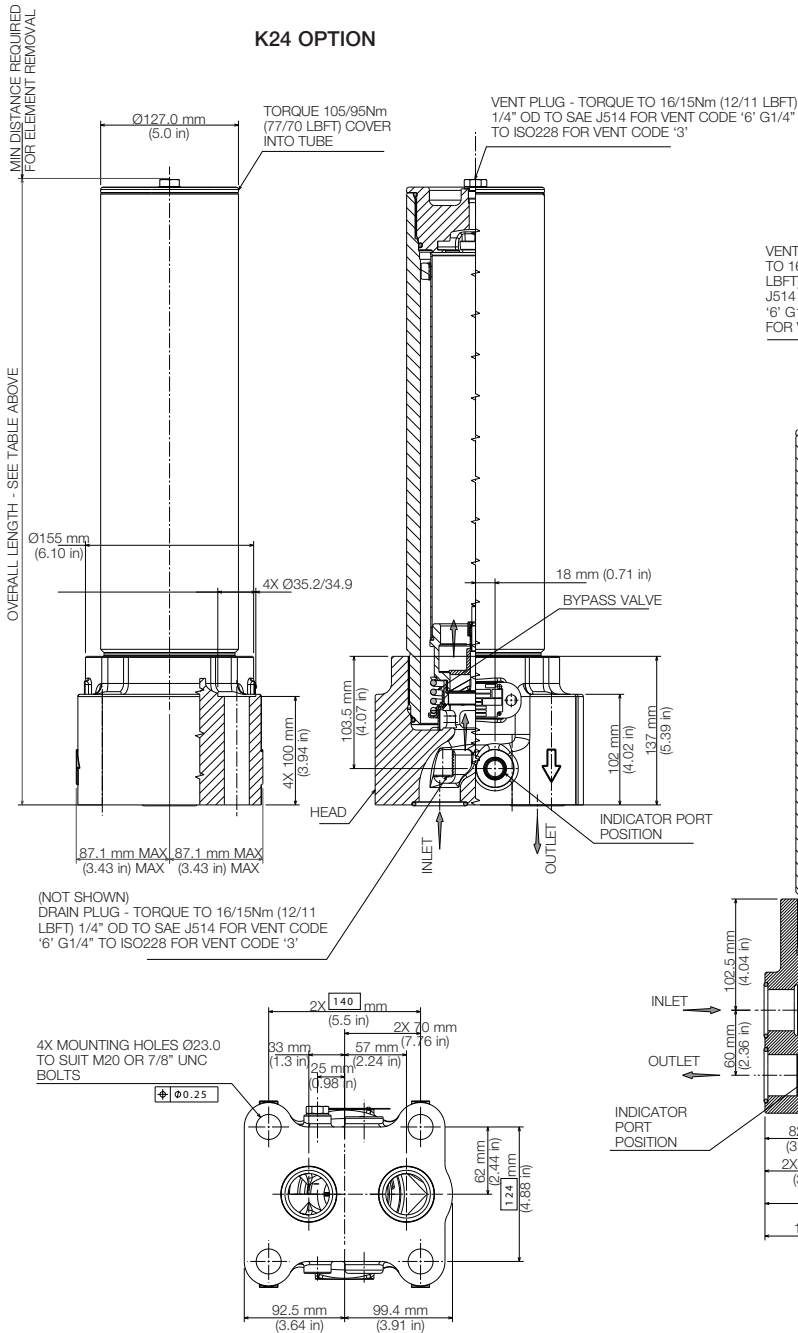
Other setting options are available; contact Pall.

Dimensional Drawings

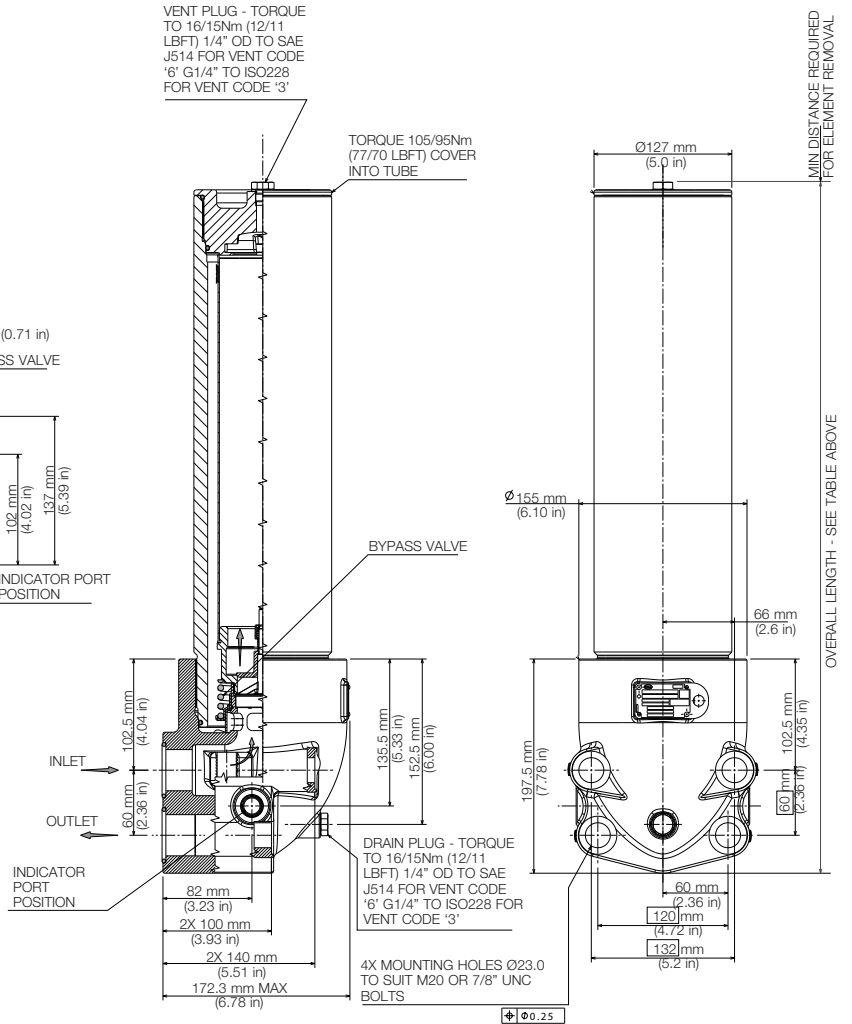
Dimensions in mm (inches)

Length Code	Overall length mm (in)	Cover Service Element Removal Clearance mm (in)	Head Service Element Removal Clearance mm (in)	Empty Weight kg (lb)		
	K Type Head	S Type Head		K Type Head	S Type Head	
08	444.6 (17.50)	505.1 (19.89)	248 (9.76)	305 (12)	31.7 (69.9)	31.7 (69.9)
13	579.2 (22.80)	639.7 (25.19)	383 (15.08)	440 (17.32)	36.5 (80.5)	36.5 (80.5)
20	749.4 (29.50)	809.9 (31.89)	553 (21.77)	N/A	42.5 (93.9)	42.5 (93.9)

K24 OPTION



S24 OPTION



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