



LENNTECH

info@lennotech.com

www.lennotech.com

Tel. +31-15-261.09.00

Fax. +31-15-261.62.89

UH219 Series Filters

ULTIPLEAT * SRT HIGH PRESSURE FIL TERS

Port Size 1" and 1¼"



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 230 L/min (60 US gpm)
- Pressures to 420 bard (6100 psid)
- Port size 1" and 1¼"

Notes and Specifications

Filter Housing

- **Maximum Working Pressure:**
420 bard (6100 psid)
- **Rated Fatigue Pressure:**
0-360 bard (5220 psid) per NFPA T2.06.01R2-2001 CAT C/90/* (6 million cycles), verified by testing at 0-420 bard (6090 psid) for 6 million cycles. Contact Pall for applications with higher pressures at lower cycles
- **Typical Burst Pressure:**
1500 bard (21,760 psid)
- **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
- **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

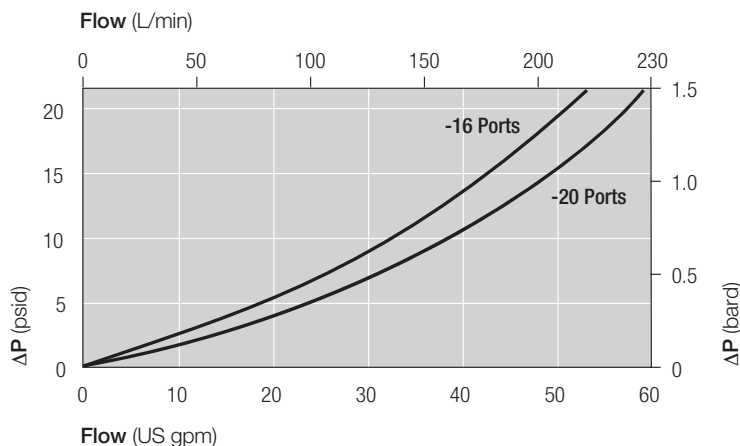
Filter Element

- **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.

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

Length Code	AZ	AP	AN	AS	AT
04	20.07 (1.102)	8.51 (0.467)	5.72 (0.314)	3.55 (0.195)	2.69 (0.148)
08	9.93 (0.545)	4.21 (0.231)	2.83 (0.155)	1.76 (0.096)	1.33 (0.073)
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

UH219 Series 8" length housing with C20 (1¼" BSP) threaded ports using AN grade media. Operating conditions 50 L/min flow rate using a hydraulic fluid of 50 cSt and specific gravity (s.g.) 1.2.

Total Filter ΔP

$$\begin{aligned}
 &= \Delta P_{\text{housing}} + \Delta P_{\text{element}} \\
 &= (0.21 \times 1.2/0.9) \text{ bard (housing)} \\
 &+ ((50 \times 2.83/1000) \times 50/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.28 \text{ bard (housing)} + 0.29 \text{ bard (element)} \\
 &= \mathbf{0.57 \text{ bard (8.3 psid)}}
 \end{aligned}$$

UH219 Series Filters

Ordering Information

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

Section 1

Housing P/N:

Note: Pall Ultiplex 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 Orientation Options

Code	Port
C	Cap service (tube up) -standard
H	Head service (tube down)

Table 3: Housing Length Options

Code	Length (in)*
04	4
08	8
13	13
20	20

* Nominal length

UH 219   ++  ZG9

Table 1 Table 2 Table 3

Note: Z indicates fluorocarbon seals are standard. Other options are available; contact Pall.
The number '9' at the end of the Housing P/N designates 2 indicator ports, one fitted with a plastic shipping plug and the other with a plug.

UH 219 SKZ

*Other seal material options are available; Contact Pall.

Table 2: Housing Port Options

Code	Port
A16	1" SAE J514 straight thread
E16*	1" Flange J518C code 62 with 7/16" -14 UNC holding bolts
A20	1 1/4" SAE J514 straight thread
E20*	1 1/4" Flange J518C code 62 with 1/2" -13 UNC holding bolts
C16	1" BSP ISO 228 threads
G16*	1" ISO 6162 split flange with M12 x 1.75 holding bolts
C20	1 1/4" BSP ISO 228 threads
G20*	1 1/4" ISO 6162 split flange with M14 x 2.00 holding bolts

* Maximum operating pressures 400 bar

Section 2

Element P/N:

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

UE 219   Z

Table 1 Table 2

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

Table 2: Filter Element Length Options

Code	Length (in)*
04	4
08	8
13	13
20	20

* Nominal length

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

Differential Pressure Indicator P/N:

Note: Two Differential Pressure Indicators can be fitted on this housing

Table 1: Differential Pressure Indicator Options*

Code	Indicator	'H' Dim.
778NZ	'P' type Visual indicator with thermal lockout	21mm (0.83in)
860MZ	'D' type Visual indicator with no thermal lockout	21mm (0.83in)
861CZ	'L' type Electrical switch (SPDT) with 6" leads	38mm (1.50in)
861CZ	'M' type Electrical switch (SPDT) with DIN43650 connector and matching cap	78mm (3.07in)
861CZ	'R' type Electrical switch (SPDT) and neon light indicator with DIN43650 connector and cap	89mm (3.50in)
771BZ	'S' type Electrical switch (SPDT) with 3-pin MS connector	57mm (2.24in)

* Other options available on application.

RC  091 Z   

Table 1 Table 2 Table 3 Table 4

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 2: Differential Pressure Indicator Material

Code	Pressure Setting
Omit	Aluminium Alloy Indicator: use at operating pressures < 200 bard (3000 psid)
SS	Stainless Steel Indicator: use at operating pressures > 200 bard (3000 psid)

* Other setting options are available; contact Pall.

Table 3: 'M' & 'R'-Type Indicator Codes*

Code	Option
YM	'M' option
YR	'R' option

* Use only if 'R' or 'M' Indicator is selected from Table 1

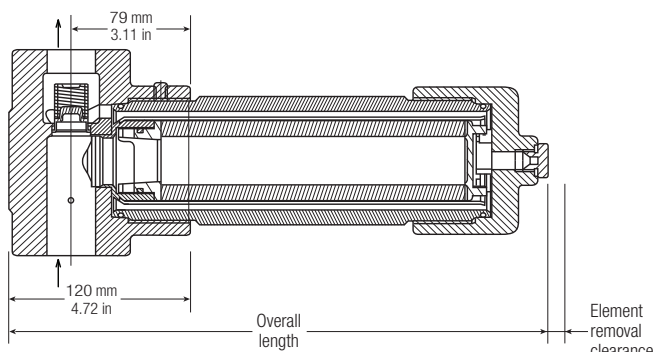
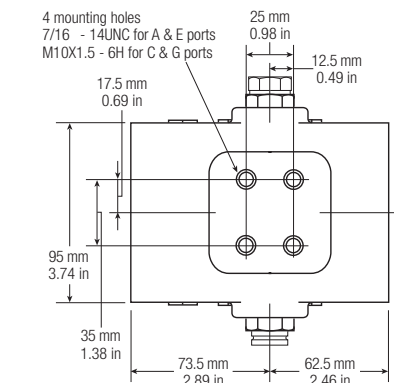
Table 4: 'R' Indicator Options

Code	Option
110AC	110V AC
220AC	220V AC
24DC	24V DC

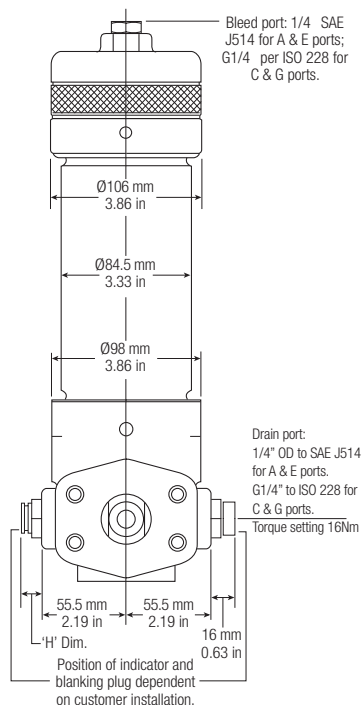
* Use only if 'R' Indicator is selected from Table 1

HIGH PRESSURE FILTERS Technical Information

('C' option housing shown)



Length Code	'C' Option Overall Length mm (in)	'H' Option Overall Length mm (in)	'C' Option Element Removal Clearance mm (in)	'H' Option Element Removal Clearance mm (in)	Empty Weight kg (lb)
04	255 (10)	267 (10.5)	102 (4)	100 (3.9)	12.7 (28.0)
08	357 (14)	369 (14.5)	203 (8)	100 (3.9)	14.5 (32.0)
13	492 (19.4)	504 (19.8)	338 (13.3)	100 (3.9)	17.0 (37.5)
20	662 (26)	674 (26.5)	508 (20)	100 (3.9)	20.5 (45.2)



LENNTECH

info@lennotech.com

www.lennotech.com

Tel. +31-15-261.09.00

Fax. +31-15-261.62.89

Pall Corporation has offices and plants throughout the world. For Pall representatives in your area, please go to www.pall.com/contact

Because of technological developments related to the products, systems, and/or services described herein, the data and procedures are subject to change without notice. Please consult your Pall representative or visit www.pall.com to verify that this information remains valid. Products in this document may be covered by one or more of the following patent numbers: EP 667,800; EP 982,061; EP 1,380,331; EP 1 656 193; US 5,543,047; US 5,690,765; US 5,725,784; US 6,113,784; US 7,083,564; US 7,318,800.

© Copyright 2009, Pall Corporation. Pall,  Ultiplex are trademarks of Pall Corporation.
* Indicates a trademark registered in the USA. Filtration. Separation. Solution. SM is a service mark of Pall Corporation.