Pall Corporation

# UH219

## UH219 Series Filters

### ULTIPLEAT® SRT HIGH PRESSURE FILTERS

Port Size 1" and 1¼"


*Filtration. Separation. Solution.SM*

# UH219

## HIGH PRESSURE FILTERS

## UH219 Series Filters
# Technical Information

### Features
- Unique 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 Allowable 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

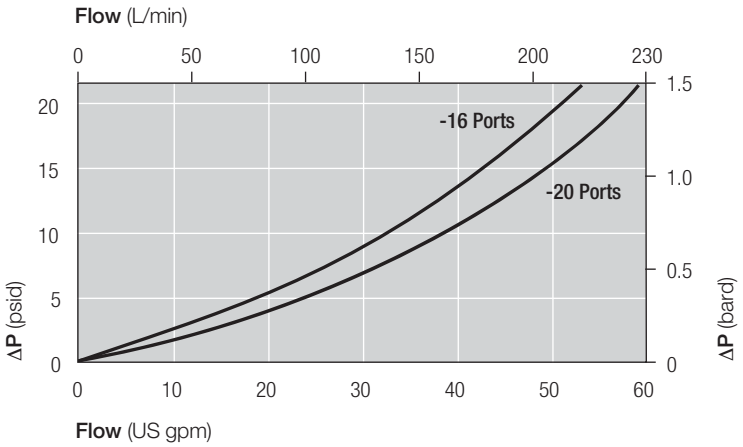
### Filter Element
- **Filter Element Burst Pressure:** 10 bard (150 psid)
- **Ultipleat SRT Element Construction:** Inorganic fibers impregnated and bonded with epoxy resins. Polymer endcaps. Anti-static media design

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.

### 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**

= ΔP housing + ΔP element

= (0.21 x 1.2/0.9) bard (housing)

+ ((50 x 2.83/1000) x 50/32 x 1.2/0.9) bard (element)

= 0.28 bard (housing) + 0.29 bard (element)

**= 0.57 bard (8.3 psid)**

## UH219 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.

## 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.

## Seal Kit P/N:

## UH 219 SKZ

*Other seal material options are available; Contact Pall.

**Table 1: Housing Orientation Options**

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

**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 | 1¼" SAE J514 straight thread |
| E20* | 1¼" Flange J518C code 62 with ½"-13 UNC holding bolts |
| C16 | 1" BSP ISO 228 threads |
| G16* | 1" ISO 6162 split flange with M12 x 1.75 holding bolts |
| C20 | 1¼" BSP ISO 228 threads |
| G20* | 1¼" ISO 6162 split flange with M12 x 1.75 holding bolts |

* Maximum operating pressures 400 bar

**Table 3: Housing Length Options**

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

* Nominal length

### Section 2

## Element P/N:

## UE 219 ☐ ☐ Z

Table 1 Table 2

**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: 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

## 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 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.

**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

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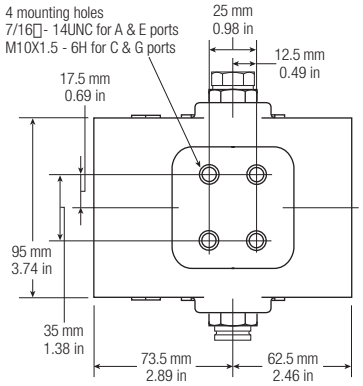
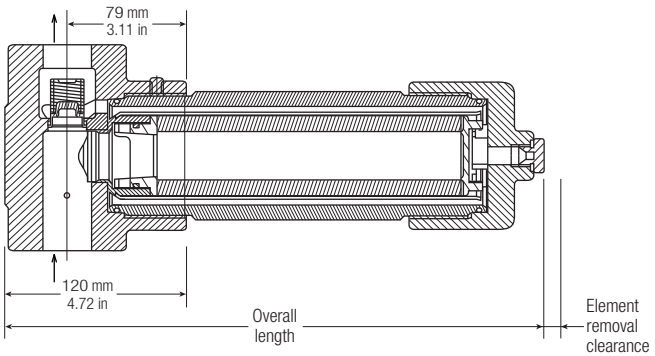
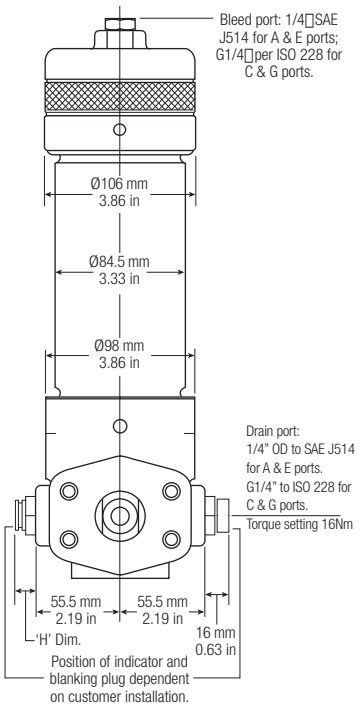
# HIGH PRESSURE FILTERS Technical Information

('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) |





Pall Corporation

**Pall Industrial Manufacturing**

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 9230 3303 telephone
+44 (0)23 9230 2507 fax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