



Pall Corporation

UR229

UR229 Series Filters

ULTIPLEAT® SRT MEDIUM PRESSURE

DUPLEX FILTERS

Port Size 1¼"



Features

- Unique Ultipleat (laid-over pleat) filter medium pack
- Coreless, cageless filter element configuration
- Pall Stress-Resistant Technology (SRT) Media
- In-to-out filter element flow path
- 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)
10⁶ 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

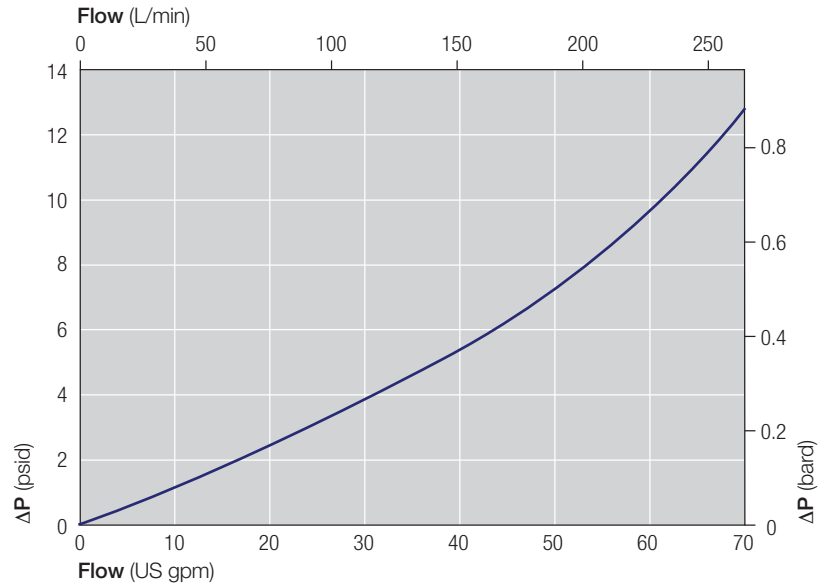
Filter Element

- **Filter Element Burst Pressure:**
10 barg (145 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 — barg/1000 L/min (psid/US gpm)

Length Code	AZ	AP	AN	AS	AT
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

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

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

UR229 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.

Seal Kit P/N:

Table 1: Inlet/Outlet Port Options

Code	Port
D20	1¼" split flange J518C code 61 with 7/16" - 14 UNC holding bolts
F20	1¼" ISO 6162 split flange with M10 x 1.5 holding bolts

Table 2: Housing Length Options

Code	Length (in)*
08	8"
13	13"
20	20"

* Nominal length

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

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

Differential Pressure Indicator P/N:

Note: One Differential Pressure Indicator can be fitted on each filter tower

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 indicator options are available; contact Pall.

Table 2: Indicator Pressure Setting Options*

Code	Valve
084	For 'A' by-pass valve option (1.1 bard - 16 psid)
091	For 'G' by-pass valve option (3.5 bard - 50 psid)

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

UR 229 C 1 ++ 2 Z 3 1 YR85

Note: Z indicates fluorocarbon seals are standard. Other options are available; contact Pall. The number '1' at the end of the Housing P/N designates 1 indicator port per filter tower, this port will be fitted with a plastic shipping plug.

UR 229 SK Z

*Other seal material options are available; Contact Pall.

Table 3: Housing Bypass Valve Options

Code	Valve
A	1.7 bard - 25 psid
G	4.5 bard - 65 psid

UE 219 1 2 Z

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

Table 2: Filter Element Length Options

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

* Nominal length

RC 1 2 3 4 Z

Note: A differential pressure indicator or a 'B' Type blanking plug (P/N HA9000-P8-Kit Z) must be ordered separately for each filter tower on the housing and fitted to replace the plastic shipping plug.

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

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

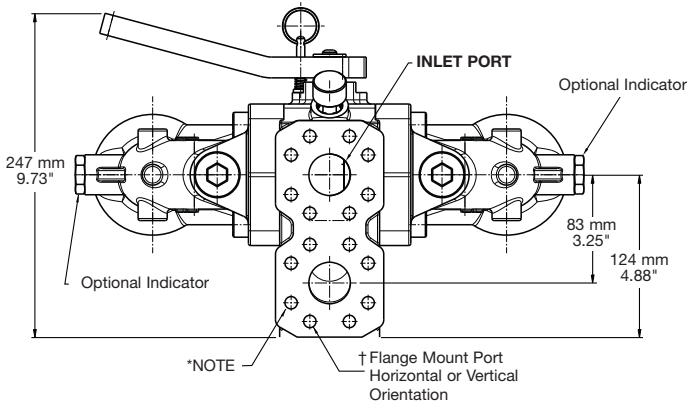
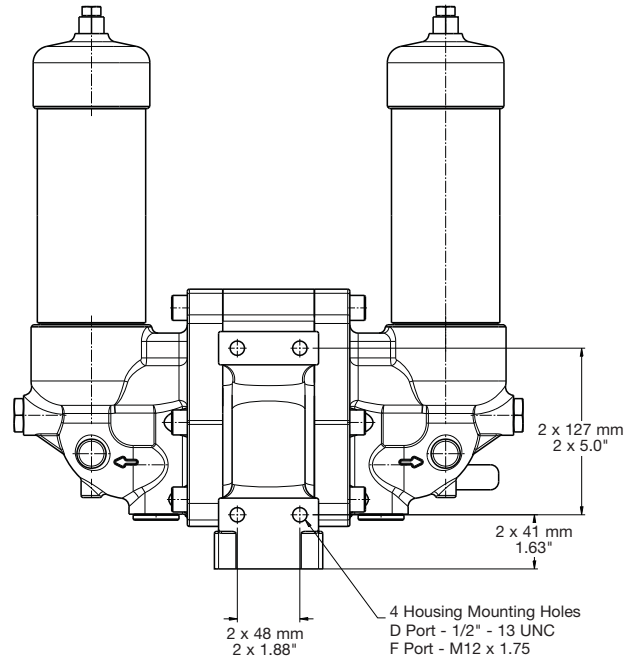
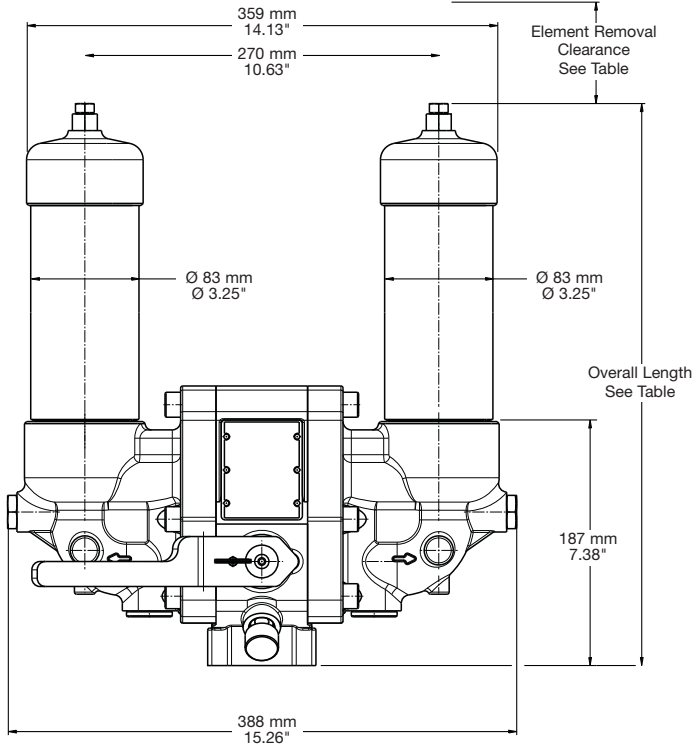
Code	Option
YM	'M' option
YR	'R' option

* 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



UR229 Housing

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)	533 (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. All dimensions shown in the diagram are in millimeters.



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