



Pall Corporation

# UFV03/05/10

## UFV Series Filters

ULTIPLEAT® SRT MULTI-ELEMENT FABRICATED VESSELS

Port Size 4", 6" and 8"



### Features

- Patented 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:  
1500 L/min (400 Usgpm), UFV03 Series  
2500 L/min (650 Usgpm), UFV05 Series  
4500 L/min (1200 Usgpm), UFV10 Series
- Port size 4", 6" and 8"

### Notes and Specifications

#### Filter Housing

- **Maximum Allowable Working Pressure Limits:**  
0-10 bar (0-145 psi)
- **Fluid Compatibility:**  
Compatible with all petroleum oils, water glycols, water-oil emulsions and most synthetic hydraulic and lubrication fluids
- **Temperature Range:**  
Nitrile Seals -43°C to 80°C (-45°F to 175°F)  
Fluorocarbon Seals -29°C to 80°C (-20°F to 175°F), 60°C (140°F) maximum in HWCF or water-glycol fluids
- **Materials of Construction:**  
Carbon steel housing, nozzles and flanges  
Carbon steel transfer valve body with S/S valve ball or S/S butterfly disc on 'D' duplex model
- **Finish:**  
Interior finish: grit blast then coated with rust preventative  
Exterior finish: grit blast then coated with primer and paint

#### 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.

	Flowrate		DP vessel	
	(L/min)	(Usgpm)	(mbard)	(psid)
UFV03	500	130	12	0.17
	1000	260	45	0.65
	1500	400	100	1.45
UFV05	500	130	3	0.04
	1500	400	26	0.38
	2000	530	45	0.65
UFV10	2500	660	70	1.01
	1000	260	4	0.06
	2000	530	14	0.20
	3000	790	30	0.43
	4500	1190	67	0.97

### 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.

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

Length Code	AZ	AP	AN	AS	AT
40	1.10 (0.060)	0.46 (0.025)	0.36 (0.020)	0.26 (0.014)	0.16 (0.009)

### Sample ΔP calculation

UFV03 series with 4" split flange ports using AS grade media. Operating conditions 500 L/min flow rate using a lubrication fluid of 150 cSt and specific gravity (s.g.) 1.2.

#### Total Filter ΔP

$$\begin{aligned}
 &= \Delta P \text{ housing} + \Delta P \text{ element} \\
 &= (0.012 \times 1.2/0.9) \text{ bard (housing)} + (500/3 \times 0.26/1000) \\
 &\quad \times (150/32 \times 1.2/0.9) \text{ bard (element)} \\
 &= 0.016 \text{ bard (housing)} + 0.271 \text{ bard (element)} \\
 &= \mathbf{0.287 \text{ bard (4.2 psid)}}
 \end{aligned}$$

# UFV03/05/10 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.

Table 1: Number of Elements

Code	Number of Elements
03	3
05	5
10	10

Table 2: Housing Assembly

Code	Assembly
S	Simplex
D	Duplex

Table 3: Changeover Valves\*

Code	Changeover Valves
W	Butterfly Valve
T	Ball Valve

\* Use only if duplex assembly is selected

Table 4: By-Pass Valve

Code	By-Pass Valve
G	4.5 bard - 65 psid
B	3.4 bard - 49 psid
N	Without

UFV  Table 1  Table 2  Table 3  Table 4 JO  Table 5  Table 6  Table 7

Table 5: Flange Connection

Code	Size	Rating
4	4" ANSI class 150 flanges	UFV03 series
6	6" ANSI class 150 flanges	UFV05 series
8	8" ANSI class 150 flanges	UFV10 series

Table 6: Seal Options

Code	Seal Options
Z	Fluorocarbon
H	Nitrile

Table 7: Pall Name Plate and Label Instruction Language Options\*

Code	Language
EN	English
GR	German
FR	French
IT	Italian
SP	Spanish
DA	Danish
SW	Swedish
FI	Finnish
DU	Dutch
PO	Portuguese

\* Use only if duplex assembly is selected

### Section 2

#### Element P/N:

UE 319  Table 1 40 Z

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

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

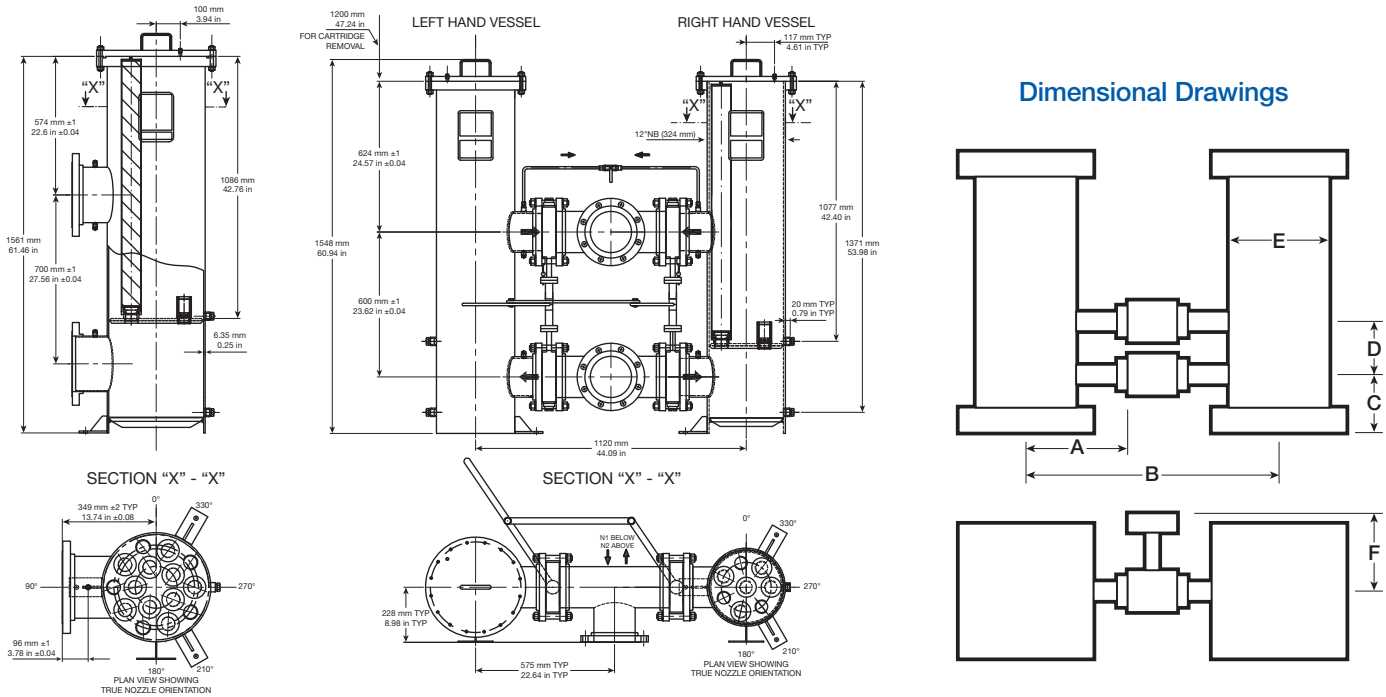
### Section 3

#### Differential Pressure Indicator

All Pall standard visual indicators or electrical switches can be fitted on these vessels. Contact Pall for any further information.

# FABRICATED VESSELS Technical Information

### UFV10 Simplex Assembly    UFV05 Duplex Assembly with Butterfly Valve



#### UFV03 Series (J04 port option)

	'A' Simplex only	'B' Duplex only - W valve	'B' Duplex only - T valve	'C'	'D'	'E'	'F' Duplex only - W valve	'F' Duplex only - T valve	'G'
mm	245	947	643	190	500	273	178	185	1387
in	9.65	37.28	25.31	7.48	19.69	10.75	7.01	7.28	54.61

#### UFV05 series (J06 port option)

	'A' Simplex only	'B' Duplex only - W valve	'B' Duplex only - T valve	'C'	'D'	'E'	'F' Duplex only - W valve	'F' Duplex only - T valve	'G'
mm	261	1120	855	234	600	324	228	216	1458
in	10.28	44.09	33.66	9.21	23.62	12.76	8.98	8.50	57.4

#### UFV10 series (J08 port option)

	'A' Simplex only	'B' Duplex only - W valve	'B' Duplex only - T valve	'C'	'D'	'E'	'F' Duplex only - W valve	'F' Duplex only - T valve	'G'
mm	349	1378	1371	287	700	406	280	335	1561
in	13.74	54.25	53.98	11.3	27.56	15.98	11.02	13.19	61.46

For detailed engineering drawings contact Pall



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