

Pleated Paper Elements

Cellulose/Phenolic



**PLEATED
SERIES**

Superior Industrial Filtration From a Pleated Cartridge Design

Rellumit Filtration cartridges are the perfect choice for many industrial filtration requirements. Pleated cartridges contain premium grade, phenolic impregnated cellulosic filter media. Rellumit Filtration's line of pleated cartridges is designed for critical filtration applications, providing long service life, high flow rate and low pressure drop.

Rellumit Filtration pleated cartridges are available in 0.5 μ m, 1 μ m, 5 μ m, 10 μ m, 20 μ m, 30 μ m, and 60 μ m pore sizes (95% removal; $\beta = 20$).

Applications

- ✓ Boiler Feedwater
- ✓ Hydrocarbon Condensate
- ✓ Fuels
- ✓ EDM Dielectrics
- ✓ Quench Oils
- ✓ Water Soluble Coolants
- ✓ Processing Liquids
- ✓ Lubricating Oils
- ✓ Hydraulic Oils
- ✓ Rolling Mill Oils

FEATURES AND BENEFITS

- Pleated cellulosic media allow high flow capacity at low pressure drop.
- Available in a variety of sizes and configurations to fit most industrial vessels.
- Phenolic resin impregnated to provide strength, integrity and high contaminant capacity.
- High strength spiral core withstands pressure surges to 100 psid.
- Suitable for operating temperatures to 250°F (121°C).
- Outer sleeve protects the media from damage.
- ETP (Electro-tin-plated) steel metal components for both aqueous and oil-based applications.
- Buna-N gaskets are standard. Other materials are available.



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FILTRATION

PLEATED SERIES

SPECIFICATIONS

Filtration Ratings:

- 95% at 0.5µm, 1µm, 5µm, 10µm, 20µm, 30µm, and 60µm pore sizes

Materials of Construction:

- Filter Media: phenolic impregnated cellulose
- Cores: ETP steel
- End Caps: ETP steel
- Sleeve: 300 series - polypropylene
600 & 700 series - ETP steel
- Adhesive: thermosetting PVC
- End Seals:
 - 300 & 700 Series - Buna-N gaskets
 - 600 Series - Buna-N gaskets/grommets
 - 500 Series - fiber gaskets

Maximum Recommended

Operating Conditions

- Temperature: 250°F (121°C)
- Differential Pressure; 70 psi (4.8 bar)
- Change Out ΔP: 35 psid (2.4 bar)
- Flow Rate per Single Length Cartridge:
 - 300 Series 7 gpm
 - 500 Series 50 gpm
 - 600 Series (3-1/2 in ID) 50 gpm
 - 600 Series (1-9/16 in ID) 35 gpm
 - 700 Series 50 gpm

Dimensions:

- 300 Series -
 - 2-1/2 in OD x 1 in ID x 9-5/8 in,
 - 19-3/4 in, 29-1/4 in, 29-5/8 in,
 - 40 in long
- 500 Series -
 - 4-1/2 in OD x 1-3/4 in ID x 18 in long
- 600 Series -
 - 6-1/4 in OD x 3-1/12, 1-9/16, in or
 - 1-1/4 in ID x 14-3/8, 29 or 43-3/8 in long

- 700 Series -
 - 6-1/4 in OD x 2-5/8 in or
 - 2-1/8 in ID x 18, 36, or 54 in long

Packaging:

- 300 Series -
 - 310 - 24/carton (12 lb » shipping weight)
 - 320 - 12/carton (12 lb » shipping weight)
 - 330 - 12/carton (18 lb » shipping weight)
 - 340 - 12/carton (24 lb » shipping weight)
- 500 Series -
 - 518 - 6/carton (14 lb » shipping weight)
- 600 Series -
 - 614 - 6/carton (20 lb » shipping weight)
 - 629 - 4/carton (26 lb » shipping weight)
 - 644 - 4/carton (40 lb » shipping weight)
- 700 Series -
 - 718 - 6/carton (20 lb » shipping weight)
 - 736 - 4/carton (26 lb » shipping weight)
 - 754 - 4/carton (39 lb » shipping weight)

FP Length Factors

Style	Length Factor
HP-310	1.0
HP-320	2.0
HP-330	3.0
HP-340	4.0
HP-518	3.3
HP-614	3.6
HP-629	7.2
HP-644	10.8
HP-718	6.5
HP-736	13.0
HP-754	19.5

FP Flow Factors (psid/gpm @ 1 cks)

Rating (µm)	Flow Factor
0.5	0.0260
1	0.0170
5	0.0020
10	0.0018
20	0.0010
30	0.0009
60	0.0005

Liquid Particle Retention Ratings (µm) at Removal Efficiencies of:

Cartridge	β=5000 Absolute	β=1000 99.9%	β=100 99%	β=20 95%	β=10 90%
HP-0.5	12	10	3	0.5	<0.5
HP-1	15	12	6	1	<1.0
HP-5	30	20	9	5	3.5
HP-10	50	35	18	10	7
HP-20	90	70	40	20	12
HP-30	100	85	50	30	21
HP-60	200	150	90	60	45

Flow Rate and Pressure Drop Formulas:

$$\text{Flow Rate (gpm)} = \frac{\text{Clean } \Delta P \times \text{Length Factor}}{\text{Viscosity} \times \text{Flow Factor}}$$

*In water at 1 cks

$$\text{Clean } \Delta P = \frac{\text{Flow Rate} \times \text{Viscosity} \times \text{Flow Factor}}{\text{Length Factor}}$$

Notes:

1. **Clean ΔP** is PSI differential at start.
2. **Viscosity** is centistokes. Use Conversion Tables for other units.
3. **Flow Factor** is ΔP/GPM at 1 cks for 10 in (or single).
4. **Length Factors** convert flow or ΔP from 10 in (single length) to required cartridge length.

ORDERING INFORMATION

FP	6	14	5	1	G	N
Cartridge Code	Outside Diameter	Length (code) (in)	Micron Rating (µm)	Inside Diameter	Seal Material	Body
HP =	3 = 2-1/2 in	(code) (in)	0.5	None = 1 in	None = Buna-N Gaskets	None = Metal
Hydro-Pac	(300 Series)	10 9-5/8	1	(300 Series)	A = Vellumoid	(500, 600)
	5 = 4-1/2 in	14 14-3/8	5	None = 1-3/4 in	(300, 600, 700 Series)	700 series
	(500 Series)	18 18	10	(500 Series)	B = Fiber	= Polypro
	6 = 6-1/4 in	20 19-3/4	20	None = 3-1/2 in,	(500 Series Only)	(300 series)
	(600 Series)	29 29	30	(600 Series)	C = Cork	M = Metal
	7 = 6-1/4 in	29 29-1/4	60	None = 2-5/8 in,	(700 Series Only)	(300 series)
	(700 Series)	30 29-5/8		(700 Series)	G = Buna-N Grommets	N = No Body
		36 36		1 = 1-9/16 in	(600 Series 1-9/16 in ID)	
		40 40		(600 Series)	V = Viton*	
		44 43-3/8		8 = 2-1/8 in		
		54 54		(700 Series)		

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