

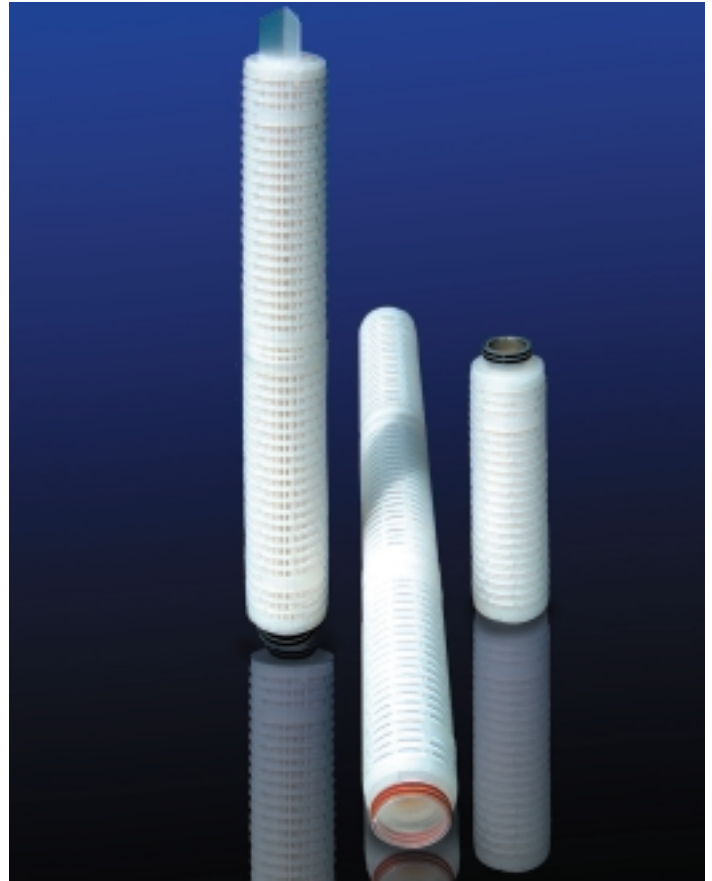
Absolute Rated High Efficiency From All-Polypropylene Pleated Cartridges

Hi-Pure Cartridges, made of pleated polypropylene microfiber, provide high efficiency and high purity filtration. The high submicron efficiency of the Hi-Pure line makes it an ideal membrane prefilter or cost-effective alternative to membrane cartridges in a wide range of applications.

Hi-Pure Pleated Cartridges are available in 0.3µm, 0.6µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 40µm and 70µm absolute rated pore sizes (99.99% removal; $\beta = 10,000$).

Applications

- Chemicals
- Electronic
- Food & Beverage
- Magnetic Media
- Pharmaceuticals
- Cosmetics
- Medical
- Photographic



Features and Benefits

- All-polypropylene media and construction meet a broad range of performance requirements.
- One-piece fused construction is 100% bonded for maximum cartridge integrity.
- High surface area design provides superior flow rates and extended service life.
- All media and structural components comply with biological, USP XXI Class VI requirements for plastic and are nontoxic per WI-38 Human Cell Cytotoxicity Test.
- All materials of construction are FDA listed as acceptable for potable and edible liquid contact according to CFR Title 21.
- Fixed pore construction provides ultimate particle retention efficiency.
- Major end seal options are available to fit most vessel requirements.
- Advantage cartridges are non-fiber releasing.



WARNING! FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.
This document and other information from Clark-Reliance Corporation, its subsidiaries and authorized distributors provide product and/or system options for further investigation by users having technical expertise. It is important that you analyze all aspects of your application and review the information concerning the product or system in the current product catalog. Due to the variety of operating conditions and applications for these products or systems, the user, through its own analysis and testing, is solely responsible for making the final selection for the products and systems and assuring that all performance, safety and warning requirements of the application are met.

Hi-Pure Pleated Series

Specifications

Filtration Ratings:

- 99.99% at 0.3µm, 0.6µm, 1.2µm, 2.5µm, 5µm, 10µm, 20µm, 40µm and 70µm pore sizes.

Materials of Construction:

- Type of Construction: integrally sealed, all-polypropylene pleated media supported by all-polypropylene construction
- Filter Media: composite, spunbonded/melt blown continuous polypropylene microfiber matrix
- Pleat Support Layer (Upstream): polypropylene
- Pleat Drainage Layer (Downstream): polypropylene
- Media Support Core: high-strength polypropylene

- Media Protective Cage: molded polypropylene
- Pleat Pack Side Seal: fused polypropylene
- DOE Caps: polypropylene
- SOE Caps/O-Ring Adaptors: polypropylene
- Gaskets (DOE Style): Buna-N, FDA grade (standard)
- O-Rings (SOE Style): silicone, FDA grade (standard)
- Optional Gasket Materials: (non-FDA): EPR, Viton*, silicone
- Optional O-Ring Materials: (non-FDA): EPR, Viton*, Buna-N, PFA encapsulated Viton*

Maximum Recommended Operating Conditions:

- Temperature: 200°F (93°C)
- Temperature @ 35 psid: 160°F (71°C)
- Change Out ΔP: 35 psi (2.4 bar)
- ΔP @ Ambient 70°F (21°C): 70 psi (4.8 bar)
- ΔP @ 200°F (93°C): 20 psi (1.4 bar)
- Flow Rate: 10 gpm (38 lpm) per 10 in length

Dimensions:

- Overall Length: See Bulletin A-700 SOE fits standard Hi-Pure vessels with dual sump seats.
- Cartridge Outside Diameter: 2-11/16 in
- Cartridge Inside Diameter: DOE: 1-1/16 in SOE: 1-5/32 in

Hi-Pure Length Factors

Length (in)	Length Factor
10	1.0
20	2.0
30	3.0
40	4.0

Hi-Pure Cartridge Flow Factors (psid/gpm @ 1 cks)

Rating Flow (µm)	Factor
0.3	1.600
0.6	0.900
1.2	0.770
2.5	0.300
5	0.120
10	0.020
20	0.020
40	0.010
70	0.008

Notes:

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

Flow Rate and Pressure Drop Formulas:

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

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

Liquid Particle Retention Ratings (µm) @ Removal Efficiency of:

Cartridge	β=10000 Absolute	β=1000 99.9%	β=100 99%	β=50 98%	β=20 95%	β=10 90%
HPPP 003	0.3	<0.3	<0.3	<0.3	<0.3	<0.3
HPPP 006	0.6	0.5	<0.3	<0.3	<0.3	<0.3
HPPP 012	1.2	1	0.6	0.4	<0.3	<0.3
HPPP 025	2.5	2.1	1	0.6	<0.3	<0.3
HPPP 050	5	3.8	1.4	0.8	0.4	<0.3
HPPP 100	10	6.6	2	1.1	0.5	<0.5
HPPP 200	20	12.7	3.1	1.8	0.8	<0.5
HPPP 400	40	22	5.8	3.2	1.2	0.6
HPPP 700	70	50	22	15	8	5.2

Beta Ratio (β) =

$$\frac{\text{Upstream Particle Count @ Specified Particle Size and Larger}}{\text{Downstream Particle Count @ Specified Particle Size and Larger}}$$

$$\text{Percent Removal Efficiency} = \left(\frac{\beta - 1}{\beta} \right) \times 100$$

Performance determined per ASTM F-795-88. Single-Pass Test using AC test dust in water at a flow rate of 3.5 gpm per 10 in (13.2 lpm per 254 mm) cartridge.

Ordering Information

HPPP Cartridge Code	025 Particle Removal Rating	10 Nominal Length	E Seal Material	DO End Cap Configuration	B Special Options
HPPP = Polypropylene	003 = 0.3µm 006 = 0.6µm 012 = 1.2µm 025 = 2.5µm 050 = 5µm 100 = 10µm 200 = 20µm 400 = 40µm 700 = 70µm	10 = 9-13/16" 20 = 19-15/16" 30 = 30-1/16" 40 = 40"	E = EPR N = Buna-N S = Silicone T = PFA Encapsulated Viton (O-Ring only) V = Viton	AR = 020 O-Ring/Recessed DO = Double Open End (DOE) DX = DOE with Core Extender LL = 120 O-Ring/120 O-Ring LR = 120 O-Ring/Recessed Cap PR = 213 O-Ring/Recessed Cap SC = 226 O-Ring/Cap SF = 226 O-Ring/Fin TC = 222 O-Ring/Cap TF = 222 O-Ring/Fin	No Symbol = No Option B = Bubble-Point Test R = DI Water Rinse (5 mins) Z6 = Individual Poly bag only

A
Support Construction
A = Heavy-Wall Polypropylene

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