

## HDC® II - “J” Series

### Description

HDC® II filter cartridges are constructed of pure polypropylene, high area, pleated media. This new generation of HDC II filters, unlike the original HDC filters and other polypropylene pleated filters, has incorporated a proprietary concept into its medium construction: varying the fiber diameter continuously to produce a pore size distribution from coarse (upstream) to fine (downstream). This unique construction permits more contaminants to be trapped in the outer layers of the medium, thus substantially increasing dirt-holding capacity. The finer inner layers are essentially unchanged from those of the original HDC medium, thus maintaining the absolute rating of the filter.

Relative filter life studies, both in the laboratory and in the field, have shown that this new construction increases service life as much as *four times* compared to other filters of similar appearance.

Removal ratings range from 0.6 µm (micron) to 70.0 µm absolute. Refer to Bulletin HDC 700 for more detailed information.

### Operating Characteristics

The recommended maximum pressure differential for the HDC “J” Series filters is 75 psid up to 140°F (60°C) and 45 psid up to 180°F (82°C) for UNI CAP filters, and 80 psid up to 122°F (50°C) and 60 psid up to 176°F (80°C) for AB style filters.

Warning: Using these filters for filtration at higher pressures or temperatures than recommended, or with fluids incompatible with polypropylene, can result in property damage or personal injury and contaminated filtrate.

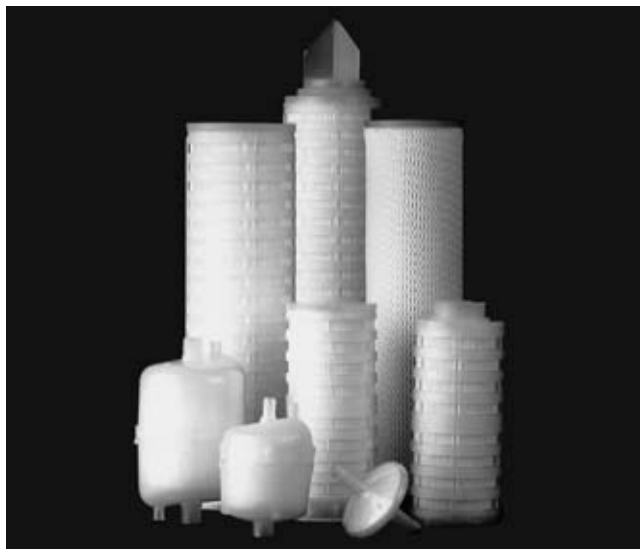
### Sizes

HDC II “J” Series media are available in the UNI CAP configuration. UNI CAP series pleated elements are manufactured as 2 1/2" OD by 10, 20, 30, and 40 inch long filter cartridges. Elastomeric gaskets are attached to each end cap.

Sanitary (AB Style) elements are 2 3/4" OD by 10" single open-ended constructions with an O-ring piston seal at the open end. AB style elements are also available in 20, 30, and 40 inch lengths.

### Applications

HDC II filters are specifically designed for use in applications where economy and reliability are critical. All materials of construction are FDA listed for direct food contact, and all components have been tested according to the USP Class VI biological tests for plastics at 250°F (121°C).



HDC II Filter Cartridges

Representative applications include:

**General Service:** rinse water, reverse osmosis system pre-filtration, water-prior to and/or after demineralization.

**General Process Industries:** electroplating solutions, metal etching solutions, audio and video tape coatings, automotive paints, can coatings, coil coatings, computer tape and disc coatings, photographic film manufacturing and processing.

**Chemical/Petrochemical Industries:** amines for gas scrubbing, monomers, polymers, glycols, herbicides and pesticides, liquid catalysts, product polishing, photoresists, acids, bases, solvents, deep well disposal fluids.

**Film and Fiber Industries:** monomers, quench water, slurry additives, delusterants, slip agents, D.I. water, solvents, spin finishes, aqueous salt solutions.

**Power Generation Industries:** makeup water, laundry drain wastewater, steam generator blowdown prefilters.

**Pharmaceutical Industry:** parenterals, ophthalmics, oral medications.

**Biological Industry:** serum and serum fractions, tissue culture media, vaccine preparations, microbiological growth media, media makeup water, diagnostic sera.

**Cosmetics:** toiletries, aftershaves, perfumes, oils, lotions, creams, ointments, shampoos, body rinses, mouthwashes.

**Fermentation Industries:** liquid growth media, makeup water, intermediates, final liquid products, additives, exhaust gas, prefiltration.

**Food and Beverage Industries:** potable liquids, wine, beer, soft drinks, flavors, storage tank/reactor vents, corn syrup, edible oils.

**Electronic Industries:** photoresists, acids, bases, solvents, etchant gases, D.I. water prefiltration.

**Table I: Liquid Service**

Cartridge Grade	Liquid Removal <sup>(1)</sup> Rating in Microns (µm) at % Efficiency		Aqueous Clean Pressure Drop <sup>(2)</sup> Per 10" Module (PSI/GPM)		Typical Flow Rate Per 10" Module (GPM)
	90%	99.98%	AB Style	UNI CAP Style	
	J006	-	<1.0*	1.25	
J012	<1.0*	1.2	0.22	0.31	2-3
J025	<1.0*	2.5	0.15	0.16	2-3
J045	1.2	4.5	0.11	0.12	2-3
J060	3.0	6.0	0.08	0.08	2-3
J100	5.4	10.0	0.06	0.06	3-5
J200	10.0	20.0	0.03	0.03	3-5
J400	22.0	40.0	0.02	0.02	5-8
J700	35	70.0	0.01	0.01	8-10

\* Extrapolated value.

- (1) The test procedure used for liquid service rating is an adaptation of ANSI B93.31 - 1973, modified to determine the micron size above which particles are quantitatively removed.
- (2) Pressure drop in PSI per GPM water for a single 10" module. Multiply this value by the required flow to determine the total aqueous pressure drop. Next, for fluids other than water, multiply by viscosity in centipoise. If this calculated pressure drop is excessive, then divide this value by the number of 10" modules required to reduce this pressure drop to an acceptable level.

**Table II: Ordering Information/Part Numbers**

HDC II "J" Series Element Part Number:		UNI CAP Element PUY●■▲		Sanitary (AB) Style Element AB●■★◆▼			
▼	▲	◆	●	●	●		
Code	O-Ring Option	Code	Gasket Option	Code	Application Option	Code	Cartridge Lengths
H4	Silicone (Standard)	H13	Buna N	Omit	Other	1	10"
H	Viton A*	H	Viton A	P	Pharmaceutical	2	20"
J	Ethylene Propylene	J	Ethylene Propylene (Std)			3	30"
						4	40"

■	★	End Fittings		
Code	Grade: 99.98% Removal Rating (µm)	O-Ring Fitting I.D. (In.)	O-Ring Replacement Size	
J006	<1.0*	3	1 1/4	-222 (Flat end)
J012	1.2	7	1 1/2	-226 (Finned end & bayonet lock)
J025	2.5			
J045	4.5	8	1 1/4	-222 (Finned end)
J060	6.0			
J100	10			
J200	20			
J400	40			
J700	70			

\* Trademark of E.I. du Pont de Nemours and Co.

\* Extrapolated Value

**Table III: Features and Benefits**

Features	Advantages	Benefits
Absolute Rated Medium	99.98% removal efficiency.	Consistent, reliable filtration.
Tapered Pore Medium	Prefilter layers.	Longer service life by factors up to 4 times.
Fixed Pore Structure	No solids unloading or media migration.	No contamination of filtered process fluid.
Polypropylene Medium with No Surfactants or Binders	Negligible level of extractables.	Wide chemical compatibility.

**Housing Information**

Housings are available in polypropylene, other polymers, carbon steel. Refer to brochure SUM 200 for further details.



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