

SEPARATION PROCESSES

# ED COAT CRONO TB CELL

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## Tubular cells for electrophoretic paints

Tubular CRONO TB cells are manufactured with the use of polymeric membranes having low deformability, low electrical resistance and long life.

CRONO TB cells are available in a whole range of models depending on the length, width, electrode material and chosen optional. Models for ceiling and floor positioning are also available on request.

The electrolyte flowing in the CRONO TB cells is forced to start from bottom of the electrode assuring that all the elements work even when a damage of the electrode occurs.

The positioning of the element in the tank is very easy and NITEROI can supply all the required components to fix it. Very easy is also the substitution of the electrode and this can be done without the need to extract the entire cell from the tank. The standard models are "open top". "Closed top" version is also available on request.

## Technical characteristics

- Electrode material: AISI 316 L stainless steel (Option AISI 316 Ti and DSA)
- Electrode thickness: 3 mm
- Membrane typology: Anionic and Cationic
- Current density: 30 ÷ 50 A/m<sup>2</sup> at 200 ÷ 400 Volts
- Electrolyte flow: 450-500 l/m<sup>2</sup> per h

	TB1	TB2
Cell diameter	68	78
Electrode diameter	48	60
Electrode m <sup>2</sup> /meter	0,15	0,19

## Standard specifications

MODEL	ACTIVE LENGTH (mm)	MEMBRANE SURFACE (m <sup>2</sup> )	ELECTRODE SURFACE (m <sup>2</sup> )
Crono TB1 500	500	0,125	0,075
Crono TB1 1000	1000	0,250	0,150
Crono TB1 1500	1500	0,375	0,225
Crono TB1 2000	2000	0,500	0,300
Crono TB1 2500	2500	0,625	0,375
Crono TB1 3000	3000	0,750	0,450
Crono TB2 500	500	0,142	0,095
Crono TB2 1000	1000	0,284	0,190
Crono TB2 1500	1500	0,426	0,285
Crono TB2 2000	2000	0,586	0,380
Crono TB2 2500	2500	0,710	0,475
Crono TB2 3000	3000	0,852	0,570

NOTE: INTERMEDIATE AND LONGER CELLS ARE AVAILABLE UPON REQUEST

## ACCESSORIES

See dedicated technical bulletin.

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# ED COAT CRONO SO CELL



## Semi open cells for electrophoretic paints

Crono SO cells represent a good solution in terms of space, performance, requirement distance between feed pipes and maintenance area.

In this configuration membrane, electrode and support are linked together to form an economic and light structure without bolts.

The electrode and the membrane are easy to replace, with no need to open the cell or empty the tank.

Crono SO cells require little space in the tank and offer a greater surface area.

Paint does not adhere to the smooth surface and the cell is designed with adequate rigidity without the need for stiffening

## Technical characteristics

- Electrode material: AISI 316 L stainless steel (Option AISI 316 Ti and DSA)
- Electrode thickness: 3 mm
- Membrane typology: Anionic and Cationic
- Current density: 32 ÷ 54 A/m<sup>2</sup> at 200 ÷ 400 Volts
- Electrolyte flow: 500 l/m<sup>2</sup> per h

## Standard specifications

MODEL	ACTIVE LENGTH (mm)	MEMBRANE SURFACE (m <sup>2</sup> )	ELECTRODE SURFACE (m <sup>2</sup> )	ESTIMATED WEIGHT (Kg)
Crono SO cell 500	500	0,25	0,21	7,2
Crono SO cell 1000	1000	0,50	0,42	14,4
Crono SO cell 1500	1500	0,75	0,63	21,6
Crono SO cell 2000	2000	1,00	0,84	28,8
Crono SO cell 2500	2500	1,25	1,05	36,0
Crono SO cell 3000	3000	1,50	1,26	43,2

NOTE: INTERMEDIATE AND LONGER CELLS ARE AVAILABLE UPON REQUEST

## ACCESSORIES

See dedicated technical bulletin.



SEPARATION PROCESSES

# ED COAT CRONO FL CELL



## Flat cells for electrophoretic paints

Flat cells are the most economical choice on the market. The use of these cells reduces the number of required elements and the need of electrical connections. The membrane replacement costs are also very low in terms of material but they become higher, when compared to tubular membranes, in terms of man labour costs considering the increased number of working hours required. Due to their small thickness, CRONO FL cells are also used when painting tank must be kept as narrow as possible. They are available in standard shape but it is also possible to build them, according to the need of the customer, in almost any geometry and dimension. The standard models are "open top". "Closed top" version is also available on request.

## Technical characteristics

- Electrode material: AISI 316 L stainless steel (Option AISI 316 Ti and DSA)
- Electrode thickness: 3 mm
- Membrane typology: Anionic and Cationic
- Current density: 30 ÷ 50 A/m<sup>2</sup> at 200 ÷ 400 Volts
- Electrolyte flow: 500 l/m<sup>2</sup> per h

## Standard specifications

MODEL	ACTIVE LENGHT (mm)	MEMBRANE SURFACE (m <sup>2</sup> )	ELECTRODE SURFACE (m <sup>2</sup> )
Crono FL1 500	500	0,35	0,37
Crono FL1 1000	1000	0,70	0,74
Crono FL1 1500	1500	1,05	1,11
Crono FL1 2000	2000	1,40	1,48
Crono FL1 2500	2500	1,75	1,85
Crono FL1 3000	3000	2,10	2,22

NOTE: INTERMEDIATE AND LONGER CELLS ARE AVAILABLE UPON REQUEST

## ACCESSORIES

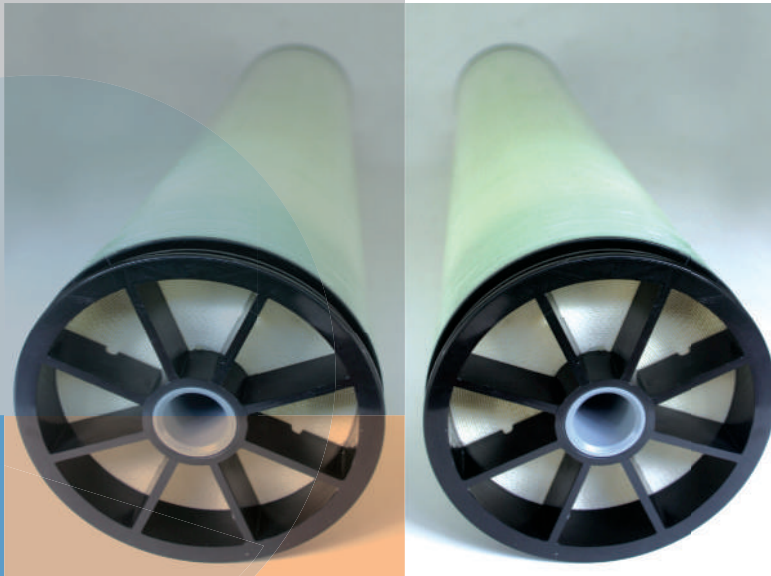
See dedicated technical bulletin.



SEPARATION PROCESSES

# KRATOS. ULTRAFILTRATION MEMBRANES FOR ELECTROCOATING

## KRATOS UF MEMBRANES FOR ED COAT



Kratos membranes are used in the ultrafiltration of paint in ED coat systems.

They have a larger membrane area and therefore a better penetration degree that means lower operative costs and higher energetic efficiency.

Kratos membranes are very easy to install and to replace without requiring long plant stops.

They are retrofitting of the main producers elements which are found on the market.

Available also as integrated UF membrane in a PVC vessel.

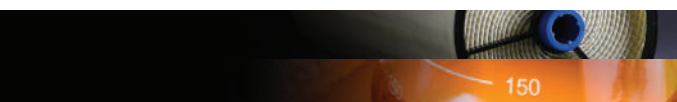
### Available KRATOS membrane models

PRODUCT	DIAMETER		BODY LENGTH		AREA		REPLACEMENT
	inch	mm	inch	mm	ft2	m2	
KRATOS 4040-HE	3.9	99	40	1016	75	7	Osmonics 416 ED1
KRATOS 4051.5-HE	3.9	99	51.5	1380	75	7	SynderV62-4051.5H
KRATOS 5640-HE	5.5	140	40	1016	165	15.3	SynderV62-5640H
KRATOS 5651.5-HE	5.5	140	51.5	1308	165	15.3	SynderV62-5651.5H
KRATOS 7640-HE	7.5	190	40	1016	300	28	Synder V62-7640H
KRATOS 7640-HF	7.5	190	39.3	998	265	24.6	Koch S8-HFM-183LPP; Koch S8-HFM-300-LPP
KRATOS 7647.5-HE	7.5	190	47.5	1206	265	24.6	SynderV62-7647.5H
KRATOS 8040-HH	7.9	200	40	1016	350	32,5	Osmonics 815 ED1; Koch 8040M-183-LPHN
KRATOS 8040-HP with integrated pVC vessel	6.63	219	39.5	1003	312	29	KochS8-HFM-183LPP; Koch S8-HFM-300-LPP

Average permeate flow rate: Anodic 33 l/h m<sup>2</sup> - Cathodic 20 l/h m<sup>2</sup>

### Housing in Stainless steel SIDE PORT for Kratos Membranes HK SERIES

PRODUCT	DIAMETER (inch)	LENGTH (inch)	INLET (inch)	OUTLET (inch)	PRESSURE (Bars)
HK 4040	4	40	1" 1/4	1" 1/4	8
HK 8040	8	80	1" 1/2	1" 1/2	8





SEPARATION PROCESSES

# ILHA. ULTRAFILTRATION MEMBRANES FOR DEGREASING REGENERATION

# ILHA CERAMIC MEMBRANES

## HOUSING

Material	Stainless Steel AISI 304 Pickled optional AISI 316 L Pickled
Seals housing	PTFE
N° of elements	1 - 3 - 7 - 19 - 37
Coupling	tri-clamp type

These membrane elements are ideal for applications that involve extreme processes, such as high solids bulk presence, high temperatures, strong alkaline or acidic solutions or aggressive solvents and where significant long-term durability is required.

The membrane has a tubular shape with several channels. The surface in contact with the fluids has an active layer which determinate the porosity (cut off) of the filter. The range of cut off is: from 300 kd up to 0,14 microns (fine ultrafiltration, ultrafiltration, microfiltration).

### Features:

- Reliability
- Ease to use
- High flux (around 150 l/hm<sup>2</sup> for alkaline solution at 80°C)
- Proven long operational life
- Wide chemical and pH (0-14) compatibility
- Solvent resistant
- Excellent thermal stability
- Sanitizable and sterilizable
- Element burst pressure > 50 bar
- Ability to withstand high frequency backpulsing for mechanical cleaning
- Reduction of industries environmental impact .

## ILHA CERAMIC MEMBRANES

Application field: Regeneration of degreasing solutions silicates and hydrofluoric acid free

### ELEMENT DATA

Configuration	Cylindrical
Selective membrane material	Ceramic
Carrier material	Ceramic
Temperature tolerance	Up to 800°C

### APPLICATION DATA

Operating pressure	Max 10 bar TMP
Maximum operating temperature	140°C
Maximum chlorine concentration	Unlimited
pH tolerance	0 - 14
Clearing	Chlorine, acid, caustic, solvents, oxidizers
Maximum negative TMP	5 bar

### SPECIFICATION SHEET

Model	Lenght	N° channel	Ø channel (mm)	Membrane area (m <sup>2</sup> )	Porosity (microns)
ILHA CM1	1200	23	2,5	0,35	0,14 µm (MF)
ILHA CM2	1200	23	2,5	0,35	300 kd (UF)

## ACCESSORIES

Conical seal in EPDM, Chloroprene, Viton.



SEPARATION PROCESSES

# PRAIX REVERSE OSMOSIS MEMBRANES

# PRAIX REVERSE OSMOSIS MEMBRANES



The LP (low pressure) series of aromatic polyamide compound membrane element has the properties of low-pressure operation, high permeate flow and excellent desalination and are applicable to desalination of brackish water.

Besides, it is particularly applicable to fabrication of high-purity water for electrophoresis industry owing to its excellent performance in removing soluble salts, TOC, SiO<sub>2</sub>, etc.

Being suitable for desalting such water sources as surface water, underground water, tap water and municipal water, etc., LP series is also applicable to treatment of various industrial water such as industrial-purpose pure water, boiler water replenishment in power plant, and can be also applied to such brackish water applications as treatment of high-concentrated saline wastewater.

#### MODEL

PRAIX LP-4040

PRAIX LP-8040

#### Ultra-low Pressure RO Membrane Element

The ULP series of ultra-low pressure aromatic polyamide compound membrane element can work under ultra low pressure to reach as high permeate flow and salt rejection as regular low-pressure membrane element can, and is applicable to desalination of surface water and underground water. It operates under approximately 2 thirds of the operating pressure of regular low-pressure composite membrane, and achieves a salt rejection rate of up to 99.5%, which can decrease the investment costs for such relevant facilities as pump, piping, and container, etc. and the operating cost for the RO system, thus increasing the economic efficiency.

Being suitable for the desalting treatment of those water sources with salt concentration lower than 2000 ppm, such as surface water, underground water, tap water and municipal water, etc., ULP series membrane elements are mainly applicable to numerous applications of various scales, such as pure water, boiler water replenishment, foodstuff processing, and pharmaceutical production, etc.

#### MODEL

PRAIX ULP-2540

PRAIX ULP-4040

PRAIX ULP-8040



SEPARATION PROCESSES

# HOUSING FOR PRAIX MEMBRANES SERIES HPR FV

# HOUSING FOR PRAIX MEMBRANES SERIES HPR FV



## HOUSING STANDARD specifications HPR FV

SERIES	SIDE PORT SERIES	END PORT SERIES	OPERATING PRESSURE		MATERIAL
			PSI	BAR	
2.5" series (1 elements)		2540E300-X W/B	300	20	PRFV
4" series (1 to 4 elements)		40E150-X W/B	150	10	PRFV
4" series (1 to 4 elements)		40E300-X W/B	300	20	PRFV
4" series (1 to 4 elements)		40E450-X W/B	450	30	PRFV
8" series (1 to 7 elements)	80S150-X W/B	80E150-X W/B	150	10	PRFV
8" series (1 to 7 elements)	80S300-X W/B	80E300-X W/B	300	20	PRFV
8" series (1 to 7 elements)	80S450-X W/B	80E450-X W/B	450	30	PRFV

Note: the glass-fiber reinforced pressure vessels with special structures and pressure grades can be customized for large numbers orders.



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SEPARATION PROCESSES

# CERYX BAG FILTERS

# CERYX BAG FILTERS



Material polypropylene  
 Diameter 7,87 inches (220 mm)  
 Length 28,35 inches (720 mm)  
 Porosity 5 - 10 - 25 - 50 microns

Material polypropylene  
 Diameter 7,8 inches (180 mm)  
 Length 31,88 inches (810 mm)  
 Porosity 5 - 10 - 25 - 50 microns



## CERYX MONOBAG HCR BFT FILTER HOUSING

Material

- STAINLESS STEEL AISI 304
- OPTIONAL STAINLESS STEEL AISI 316L

Max working pressure 150 Psi (bars 10)

Polished or shotblasted external surface

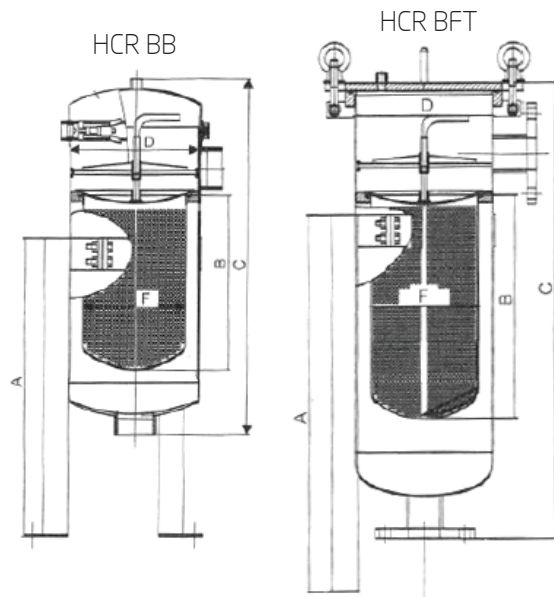
## CERYX MONOBAG HCR BB FILTER HOUSING

Material

- STAINLESS STEEL AISI 304
- OPTIONAL STAINLESS STEEL AISI 316L

Max working pressure 100 Psi (bars 7)

Polished or shotblasted external surface

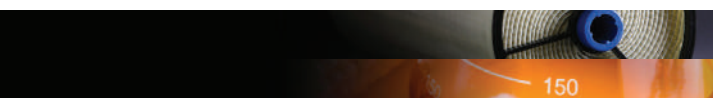


### Standard specifications CERYX MONOBAG HRC BFT FILTER HOUSING

Model	A	B	C	D	F	In/Out	Flowrate
CERYX-MONOBAG HCR BFT 1	500	380	720	Ø 219	Ø 170	2"-3"	30 (mc/h)
CERYX-MONOBAG HCR BFT 2	700	720	1070	Ø 219	Ø 170	2"-3"	30 (mc/h)

### Standard specifications CERYX MONOBAG HCR BB FILTER HOUSING

Model	A	B	C	D	F	In/Out	Flowrate
CERYX-MONOBAG HCR BB 1	500	380	720	Ø 200	Ø 170	2"-3"	30 (mc/h)
CERYX-MONOBAG HCR BB 2	700	720	1070	Ø 200	Ø 170	2"-3"	30 (mc/h)



SEPARATION PROCESSES

# CERYX BAG FILTERS

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Material polypropylene  
 Diameter 7,87 inches (220 mm)  
 Length 28,35 inches (720 mm)  
 Porosity 5 - 10 - 25 - 50 microns

Material polypropylene  
 Diameter 7,8 inches (180 mm)  
 Length 31,88 inches (810 mm)  
 Porosity 5 - 10 - 25 - 50 microns



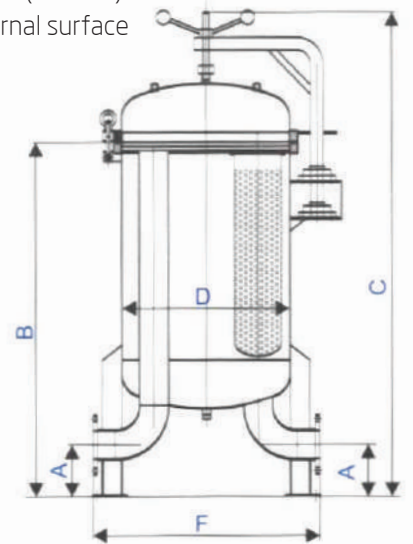
## CERYX MB MULTI BAG FILTER HOUSING

Material

- STAINLESS STEEL AISI 304
- OPTIONAL STAINLESS STEEL AISI 316L

Max working pressure 150 Psi (bars 10)

Polished or shotblasted external surface



## Standard specifications CERYX MB MULTI BAG FILTER HOUSING

Model	A	B	C	D	F	E	H	In/Out	Flowrate	n°Bags
CERYX-MB-450-2F	108	1100	1430	Ø 450	590	Ø 450	590	3"	60 (mc/h)	2
CERYX-MB-500-3F	150	1190	1540	Ø 500	640	Ø 500	640	4"	90 (mc/h)	3
CERYX-MB-550-4F	150	1200	1560	Ø 550	690	Ø 550	590	4"	120 (mc/h)	4
CERYX-MB-600-5F	150	1250	1630	Ø 600	740	Ø 600	740	5"	150 (mc/h)	5
CERYX-MB-700-6F	200	1380	1780	Ø 700	840	Ø 700	840	6"	180 (mc/h)	6

SEPARATION PROCESSES

# ADEX CARTRIDGE WIRE WRAPPED OR SINTERED



# ADEX CARTRIDGE WIRE WRAPPED OR SINTERED

## ADEX CARTRIDGE FILTER HOUSING

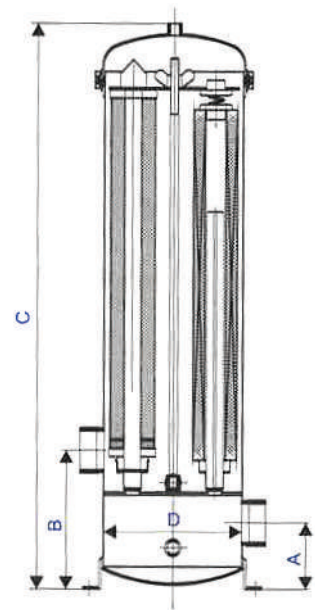
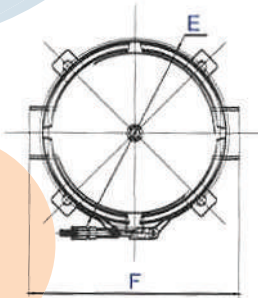
Material

- STAINLESS STEEL AISI 304
- OPTIONAL STAINLESS STEEL AISI 316L

Max working pressure 100 Psi (7 bars)

Polished or shotblasted external surface

Material polypropylene  
 Length 10 - 20 - 30 - 40 inches  
 Porosity 1 - 5 - 10 - 25 microns



### Standard specifications

Model	A	B	C	D	E	F	In/Out	Drain
ADEX N3L1	120	220	600	Ø 170	Ø 216	230	1" -1 1/2"	1/4" -1/2"
ADEX N3L2	120	220	850	Ø 170	Ø 216	230	1" -1 1/2"	1/4" -1/2"
ADEX N3L3	120	220	1100	Ø 170	Ø 216	230	1" -2"	1/4" -1/2"
ADEX N3L4	120	220	1350	Ø 170	Ø 216	230	1" -2"	1/4" -1/2"
ADEX N5L1	120	220	610	Ø 200	Ø 248	260	1" -1 1/2"	1/4" -1/2"
ADEX N5L2	120	220	860	Ø 200	Ø 248	260	1" -1 1/2"	1/4" -1/2"
ADEX N5L3	120	220	1100	Ø 200	Ø 248	260	1" -2"	1/4" -1/2"
ADEX N5L4	120	220	1360	Ø 200	Ø 248	260	1" -2"	1/4" -1/2"
ADEX N7L1	120	220	620	Ø 250	Ø 310	310	1 1/2" -2"	1/2"
ADEX N7L2	120	220	870	Ø 250	Ø 310	310	1 1/2" -2"	1/2"
ADEX N7L3	120	220	1120	Ø 250	Ø 310	310	1 1/2" -2 1/2"	1/2"
ADEX N7L4	120	220	1370	Ø 250	Ø 310	310	1 1/2" -2 1/2"	1/2"

N= number of installed cartridges  
 L= cartridges length (x 10")

