

### Standard Systems Offer Cost Savings

CeraMem® Skidded Systems offer robust and reliable performance for a wide range of light to heavy industrial applications. Our systems are designed to operate with our full range of membrane materials, which include silicon carbide, titanium oxide and alumina. Membranes are available with either 2 mm or 5 mm square channels, and have pore sizes of 5, 10, and 50 nm, or 0.1 and 0.2 micron.

CeraMem skidded systems come complete as a pre-engineered, expandable package designed with a variety of standard features not normally found in competitive systems. CeraMem systems have a compact footprint and are ideal for difficult industrial wastewater and product filtration applications where a high permeate or product quality is required.



### Markets

### Applications

<b>Heavy Metals</b>	Plating and metal finishing Alkaline cleaner recovery	Precipitation and removal processes
<b>Industrial Laundries</b>	Wastewater treatment and recovery	Whites or heavy laundry
<b>Product Filtration &amp; Recovery</b>	Chlor-Alkali brine Hot brine solutions	Specialty chemicals Polymer concentration
<b>General Industry</b>	High-fouling, oily wastewater Pretreatment for reverse osmosis	Abrasive fines removal (wafer saw/catalyst)

### What Makes CeraMem Systems Unique?

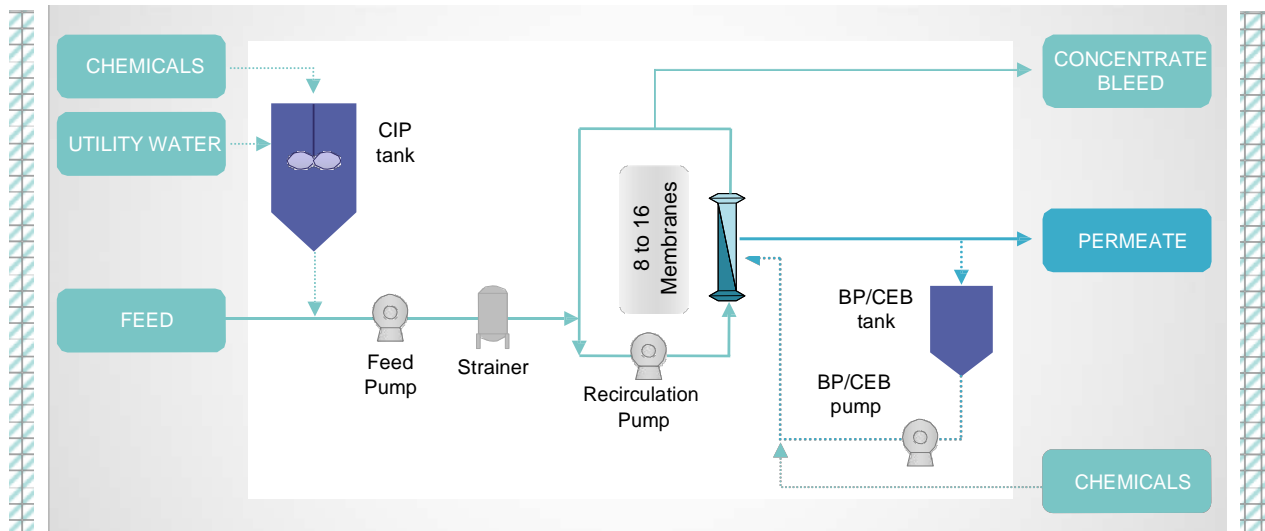
- Flexible capacity ranges from 40 gpm to over 150 gpm
- Modular design allows for 8, 12 and 16-module installations
- Plug and play skid is supplied with membranes, housings, CIP & CEB tanks, CIP mixer, pumps, and basket strainer
- Vertical modules reduce footprint and drain efficiently
- All 316 Stainless steel wetted construction (ASME B31.3)
- Welded, heavy duty, epoxy coated carbon steel frame
- Fully automated integrated controller enables easy operation
- Touch screen HMI
- Built-in expandability facilitates integration of pre and post unit operations (e.g., Reaction Tank, RO, Sludge Treatment)
- Automatic Backpulsing (BP) and Chemically Enhanced Backwashing (CEB) maximizes throughputs and extends time between cleanings
- Operator-initiated fully automated CIP cleaning cycle for full flow recovery
- Optional reverse flow feature allows for periodic debris removal

**CeraMem membranes offer high performance in harsh applications and environments where polymeric membranes cannot be applied:**

- Operating temperatures up to 100°C
- Solids levels of up to 20,000 ppm
- pH range of 0 – 14 S.U.
- Extreme oxidizing conditions
- Oil & Grease and solids levels from 0 to >50,000 ppm
- Chemically aggressive fluids
- Solvents



# CeraMem® Skidded Industrial Systems



## System Performance & Capacity

Model	# 8	# 12	# 16
Number of Elements	8	12	16
Membrane Area (m <sup>2</sup> ), 2-mm/5-mm	84/40	126/60	168/80
Operating TMP (psi)	0 to 40	0 to 40	0 to 40
Nominal Capacity (gpm at 50 – 120°F)	39 - 62	58 - 93	78 - 125
Nominal Capacity (gpm at 120 – 210°F)	62 - 86	93 - 128	125 - 171
System Recovery	Up to 99% depending upon solids loading and application		

## Motor Information

(All pumps are Grundfos CRN Vertical)

Model	# 8	# 12	# 16
Number of Recirculation Pumps	1	2	2
Recirculation Pump HP	40	40/40	40/40
1 X 15 HP CIP/Feed Pump			
1 X 20 HP Backpulse Pump			
1 X 2 HP CIP Tank Agitator			



## Mechanical Information

Tank Volumes & Materials	
CIP Tank Volume	250 gal
BP/CEB Tank Volume	150 gal
Material	HDPE
Utility Information	
Power Requirements	125 amps 460V/3Ph/60 Hz
Control	120V/1Ph/60Hz
Instrument Air	>75 psi, oil-free, 1" flange
Feed Connection	4" flange
Permeate Connection	3" flange
Concentrate Connection	2" flange
Waste Connection	3" flange
Utility Water Connection (25 psig min/100 - 140°F)	1.5" flange
Dimensions & Weight	
Skid Height	124 – 136 in
Skid Width	122 in
Skid Length	144 in
Shipping Weight	12,000 lbs



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