

MEMBRANE DECARBONATOR

CO₂ REMOVAL
WITHOUT CHEMICALS



WITH

Liqui-Cel[®]
MEMBRANE CONTACTORS

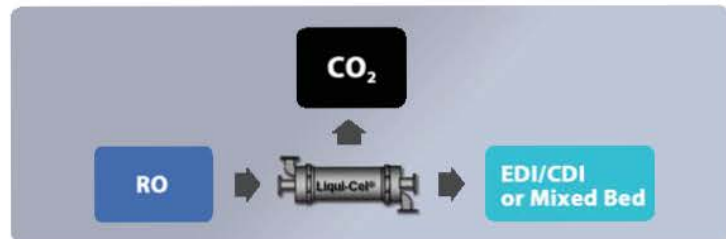
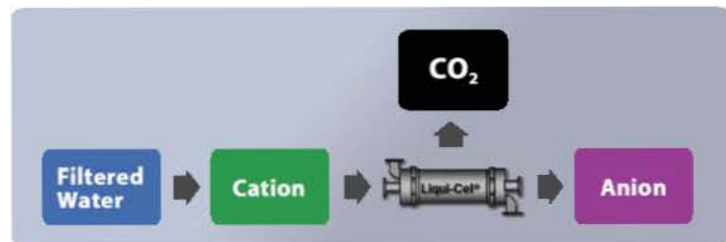
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Simple, High Efficiency Decarbonation For Small Water Deionization Systems

- ▶ Cut Resin Regeneration Frequency
- ▶ Reduce Chemical Use
- ▶ Improve Water Quality in EDI/CDI Systems
- ▶ Low Operating Costs
- ▶ Easy Setup
- ▶ Quick Payback



Dimensions: 51cm (20") W x 69cm (27") D x 163cm (64") H
Weight: 87kg (190lbs.)



ANNUAL DI WATER SYSTEM REGENERATION COST COMPARISON

	NaOH ¹ Use (ton)	HCl ² Use (ton)	Service ³ Water Use (m ³)	ANNUAL OPERATING COST
Without Membrane Decarbonator	28	17	4,725	\$24,698
With Membrane Decarbonator	21	14	3,710	\$19,068
Savings up to				\$5,630

All units are in metric.

System Design: 10m³/hr (44gpm) regenerated 1 time/day

1) NaOH Cost: USD \$330/ton 2) HCl Cost: USD \$260/ton 3) Filtered Water Cost: \$2.10 per m³

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Features

Simple Installation and Operation



High Performance



Does Not Require Chemicals to Operate



Clean, In-line Operation



Operates Using Small Blower
in Suction Mode



Compact Design, Small Size



Mobility



Benefits

Minimal Setup Time and Low Maintenance

Up to 95% Removal of Free CO₂ at 25°C

Reduce Chemical Storage Costs and Risk of
Employee Exposure; Lower Operating Costs

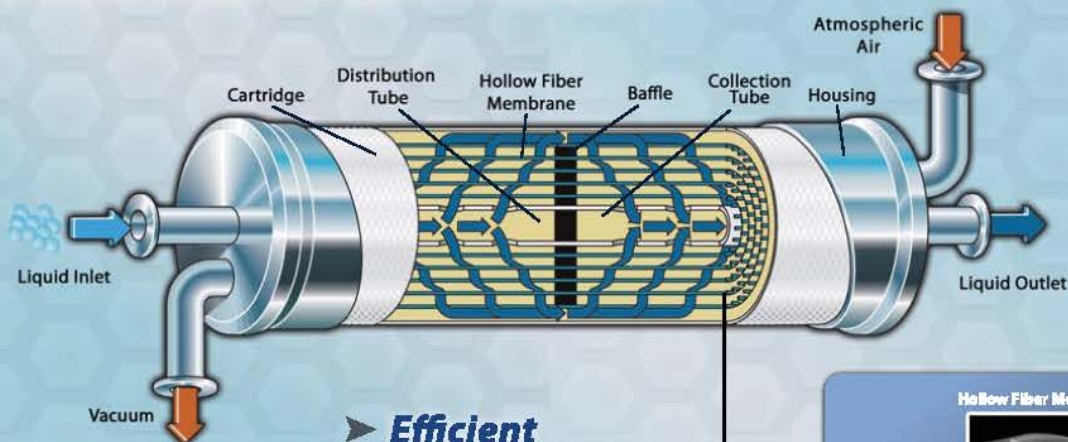
Remove CO₂ without Contaminating Water

Low Energy Use and Capital Cost

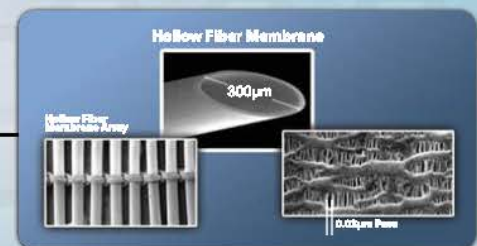
Can Fit into Many Existing Spaces

Easily Relocated

High Performance, Compact Solution



- **Efficient**
- **Reliable**
- **Proven**



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Liqui-Cel® 8x20 Decarbonator Skid



Standard Equipment

- 8 x 20 EXTRA-FLOW Liqui-Cel Contactor mounted in a painted steel frame
- Airtech model 3BA1300 motor 0.6 HP (0.45kW) regenerative blower
110-120V 60Hz 6 amp single phase
220-230V 50 Hz 3 amp single phase
- Liquid trap with high level cut-off switch to protect blower.
- Air filter 5µm rating 99% removal
- Vacuum & water pressure relief valves
- Inlet/outlet water pressure gages 0 - 680 kPa (0 - 100 psi)
- Compound vacuum gage for blower 100 to -100 KPa (+15 psi to -30 in Hg)
- Temperature gage -20 to 120°C (0-150°F)
- Water line: 1 ½ inch schedule 80 PVC piping with inlet & outlet ball valves
- Blower line: 1 inch PVC discharge
- Drain line: 1 inch PVC with ball valve
- On/Off switch with circuit breakers mounted in control panel

Operating Conditions

Water flow rate: 1.1 – 11 m³/hr (5 – 50 gpm)

Maximum Water Temperature/Pressure
25°C, 4.8 barg (77°F, 70 psig)
40°C, 2.1 barg (104°F, 30 psig)

- * 5 micron water pre-filtration and softened or RO water is recommended.
- * Air temperature should not exceed 30°C (86°F). If the water temperature exceeds the air temperature some heat transfer can occur.
- * The unit can be placed in an environment 40°C (104°F). Beware that air temperatures exceeding 30°C (86°F) will reduce membrane life.

Ordering Info

Model	Voltage	Plug	Connections (lumen side)	Dimensions	Weight (dry)	Weight (shipping)
SK-100-116	110-127V 50-60Hz	US	1.5" Female NPT	51cm (20") - W 69cm (27") - D 163cm (64") - H	86kg (190lbs)	141kg (310lbs)
SK-100-216	220-240V 50-60Hz	No Plug				

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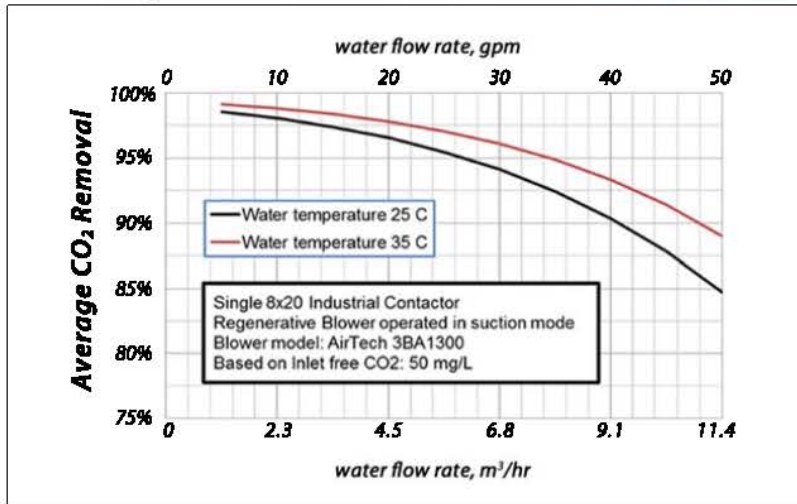
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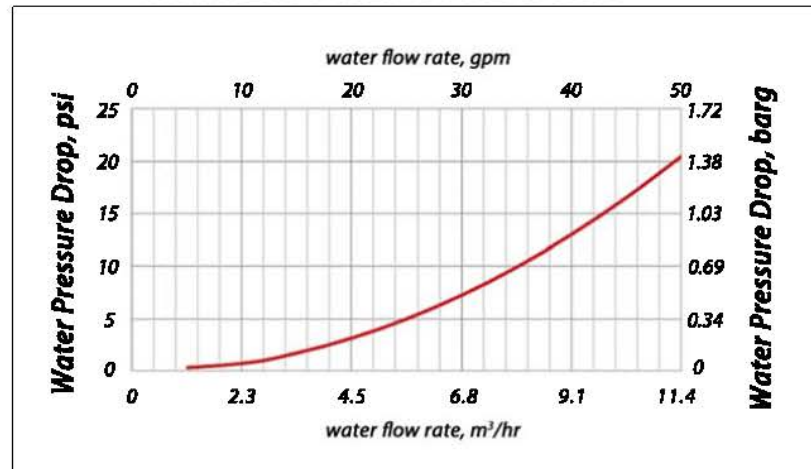


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CO₂ REMOVAL PERFORMANCE



SYSTEM PRESSURE DROP

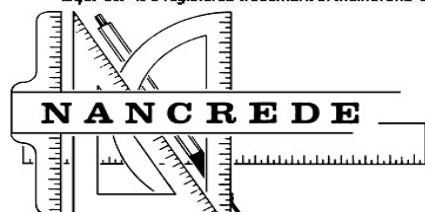


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