

CapDI[®] for Commercial Laundry



Tunable desalination and water reuse at high
laundering temperatures

Why use CapDI for your facility?

In commercial laundry, TDS levels above 750 ppm cause dull, gray linens. Unfortunately, the ability to affordably and reliably remove TDS at high temperatures with effective use of recycled laundry water has proven to be limited. Traditional technologies require water to be cooled before TDS removal, which means it must then be reheated for laundering. This expensive, time-consuming process is no longer necessary with the addition of CapDI.

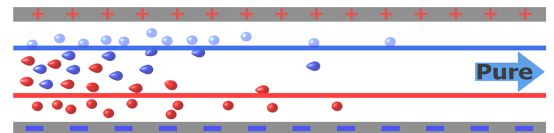
The removal of TDS at laundering temperatures allows Voltea customers to realize exceptional operational, chemical, and energy costs savings. Commercial laundries across the globe have reduced their total water consumption significantly by implementing CapDI. This technology recovers up to 90% of the water it treats, delivering whiter, brighter linens at the high temperatures laundry facilities operate (140°F/60°C). Voltea reuse solutions work across all laundry intakes; healthcare, hospitality, uniforms/industrial, and food & beverage.

Voltea's CapDI experts have developed technology and performance metrics so methodically that our predicted performance data graphics are near perfectly in-line with actual results of each system we install. This allows launderer's to make accurate estimates of laundering times, water usage, and TDS removal while running the CapDI system. Similar data graphics are also made to represent each launderer's current treatment system without CapDI, allowing detailed business case analysis to show just how effectively our technology can help the facility.

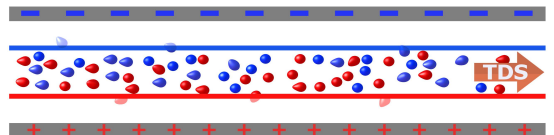
How does it work?

Water flows between electrodes in a two-step process. Electrode surfaces are separated from the water by membranes that selectively allow positive or negative ions to pass.

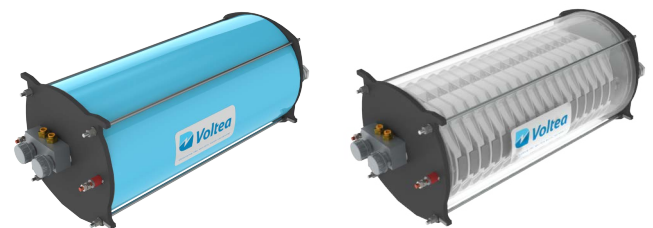
Purification: Saline water passes between oppositely charged electrodes, which electrostatically remove dissolved ions, leaving pure water flowing out of the cell.



Regeneration: Feed water flushes through the cell at a lower flow rate, while electrode polarity is reversed. Ions are rejected from the electrode surface, concentrated in the flow channel, and flushed from the cell.



Voltea's Industrial Series System 12 (IS-12)



Industrial Series Module



What are the benefits?



CapDI is Tunable

- Up to 90% TDS removal
- Allows whiter, brighter linens

We Take Care of the Environment

- Up to 90% water recovery; reduces impact to municipal water sources and aquifers
- CapDI is more efficient and environmentally friendly than any other traditional desal technology
- No chemicals required; avoids polluting aquifers and permitting requirements for discharge

Lowest OpEx

- Low energy consumption; dramatic savings
- High water recovery; reduces municipal water demand
- Longer run times due to TDS not reaching the 1,000 ppm discharge limit, thus maximizing profit

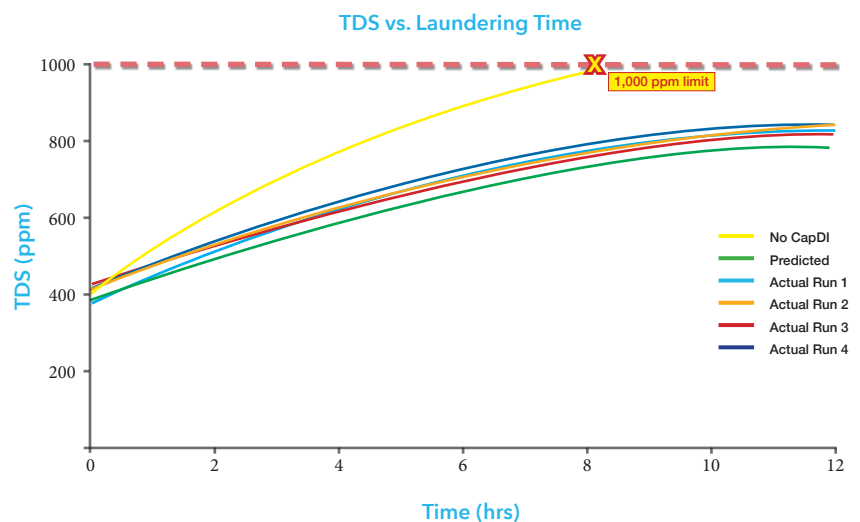
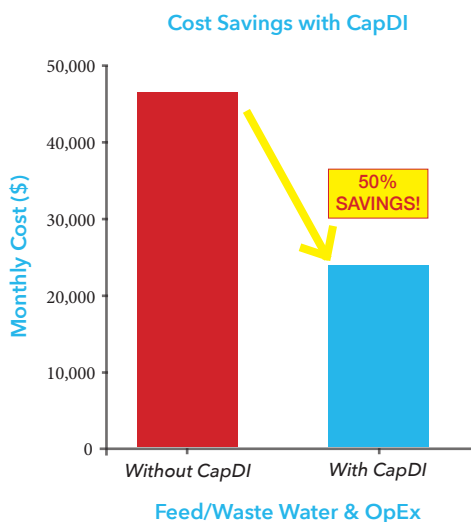
Fully Automated

- Dynamic control subscription allows continuous monitoring of water quality by our field experts
- Fully automated operation; low maintenance allows launderers to focus on their daily operations

CapDI is all about results!

Voltea installed an IS-4 CapDI System at a commercial laundry facility in the state of Georgia where we were able to gather a series of data for the analysis of comparing the TDS removal at the site before and after CapDI was installed. The below graph shows the actual data of the TDS removal with no CapDI present; the predicted TDS removal by our CapDI experts; and four different data sets of actual run time on the CapDI System.

As shown below, before the CapDI System was installed, the facility had met their 1,000 ppm TDS limit after 8 hours of run time and had to discharge. With CapDI, however, even after 12 hours the facility had not yet met their 1,000 ppm TDS limit, therefore had no need to discharge. Using CapDI for the commercial laundry application not only saves on OpEx, but also allows longer run times, thus improving profitability.





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