



Water Purification Systems

Requirements for Enapter's AEM electrolyzers

Specifications

The minimum water quality must respect ASTM D1193-06 standard Type IV with additional minimum requirements for Total Organic Carbon (TOC), Silica and Acidity. Enapter recommends that the water quality matches ASTM, Type II or Type III to minimize the frequency of electrolyte replacements.

Water Purification System - Requirements					
Measurement (Unit)	Type I	Type II	Type III	Type IV	Previous Enapter Requirements
Conductivity ($\mu\text{S}/\text{cm}$)	< 0.056	< 1	< 0.25	< 5	< 20
Resistivity ($\text{M}\Omega\text{-cm}$)	> 18	> 1	> 4	> 0.2 (200K Ω)	—
Total Organic Carbon (TOC) ppb or $\mu\text{g}/\text{L}$	< 50	< 50	< 200	< 1000*	—
Sodium (ppb or $\mu\text{g}/\text{L}$)	< 1	< 5	< 10	< 50	—
Chloride (ppb or $\mu\text{g}/\text{L}$)	< 1	< 5	< 10	< 50	—
Silica (ppb or $\mu\text{g}/\text{L}$)	< 3	< 3	< 500	< 500*	—
Acidity (meq/l) according to ASTM D1067	< 0.1*	< 0.1*	< 0.1*	< 0.1*	—

* Not part of ASTM D1193-06 standard but required by Enapter devices.

Standards used from ASTM:

- ≡ ASTM D1193-06 (water types)
- ≡ ASTM D1067 (acidity)

Suppliers Overview

Company	Country	Website
Membrapure	Germany	https://membrapure.de/
Grünbeck	Germany	https://www.gruenbeck.de/
BWT	Germany	https://www.bwt.com/
Watermarq	Netherlands	https://watermarq.nl/
Eurowater	Denmark	https://www.eurowater.com/
Elga	United Kingdom	https://www.elgalabwater.com/