

# Aquamite EDR Standard Systems

The Aquamite platform is the GE Water & Process Technologies standard product line for Electrodialysis Reversal (EDR) technology. The standard product offering consists of hydraulic and electrical equipment, membrane stack(s) and CIP system. The hydraulic and electrical systems are skid-mounted, and the stacks and ancillary equipment are located off skid. This design minimizes installation and start up time, as the majority of piping and wiring is completed, before the system is shipped to site. These systems are designed for reliable, long-term trouble free operation, with straightforward control.

## Standard Features

- Low energy design reduces electrical requirements and operating costs and provides:
  - Low/no chemical feed for normal operation
  - Long membrane life
  - Low pretreatment requirements
- High Water Recovery – up to 94%
- Adjustable salt removal to match water quality needs and adapt to salinity variations
- Membrane stacks made of durable ion exchange materials
- PLC with HMI alarm interface
- Control module for periodic reversal of stack current every 15 to 30 minutes with simultaneous reversal of the product and waste streams
- Standard designs with either 2 or 3 stages of stacks
- Cartridge Filter for system inlet
- Clean-In-Place (CIP) System
- Full Owners Operation & Maintenance Manual

## Overall TDS Removal

- 2-Stage System up to 80%
- 3-Stage System up to 92%

## Typical Applications

- Municipal Drinking Water
- Reuse of Tertiary Treated Effluent
- Industrial Process Water
- Industrial Wastewater Reuse/Recycle

## Feed Water Requirements

Typical Feed TDS..... 400-3,000 mg/L  
 Maximum Feed TDS ..... 12,000 mg/L  
 pH..... 2 to 11  
 Iron ..... <0.3 mg/L  
 Manganese, Aluminum..... <0.1 mg/L  
 H<sub>2</sub>S ..... <0.1 mg/L  
 SDI (5 min) ..... 10 to 12  
 Turbidity ..... <0.5 NTU  
 COD ..... <50 ppm (mg/L) as O<sub>2</sub>  
 TOC ..... <15 ppm (mg/L)  
 Oil ..... <2 ppm (mg/L) (IR Method)  
 Free Chlorine..... < 0.5 ppm (mg/L)

### Allowable Intermittent Levels:

Free Chlorine..... 30 ppm (mg/L)  
 Turbidity ..... 2.0 NTU  
 SDI (5 min) ..... 15

## Operating Parameters

Recovery: ..... up to 94%  
 Temperature: ..... 40 to 104°F (5 to 40°C)  
 Feed Pressure:..... up to 50 psi (3.4 bar)  
 Input Voltage:..... 480 60Hz, 400 50Hz or 60Hz

## Flow Rate Ranges

System	Maximum Product Flow Rate	
Aquamite III	10,000 gpd	1.57 m <sup>3</sup> /hr
Aquamite V	52,500 gpd	8.28 m <sup>3</sup> /hr
Aquamite X	100,000 gpd	15.8 m <sup>3</sup> /hr
Aquamite XV	200,000 gpd	31.5 m <sup>3</sup> /hr
Aquamite XX	350,000 gpd	55.2 m <sup>3</sup> /hr
Aquamite 50	600,000 gpd	94.6 m <sup>3</sup> /hr
Aquamite 120	1,200,000 gpd	190 m <sup>3</sup> /hr

To determine actual system performance and flow rate, GE must complete a Watsys projection.



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