

Ethanol Market Products and Services

Integrated water treatment
systems with guaranteed
water quality for ethanol
plants of all sizes

SIEMENS

APPLICATIONS

- Well water
- City water
- Gray water
- Reclaimed water
- Surface water
- Uses
 - Boiler feed
 - Cooling tower makeup
 - Processes (yeast propagation, liquefaction, CO₂ scrubbing)

IRON REMOVAL

- Manganese greensand filtration
- Aeralator iron oxidation towers
- Atomerator iron oxidizers
- Oxidation and filtration via chlorine injection

OUTSIDE SERVICES

Siemens Water Technologies can bring in skilled third parties to arrange for:

- Site engineering and permitting
- System design
- System construction
- Site work and buildings
- Foundations
- Crystallization equipment to achieve zero liquid discharge
- Boiler feed water and cooling tower water treatment chemical management
- Total ethanol plant water balance projection and modeling
- Plant system controls from Siemens Energy and Automation

FILTRATION

- Hollow Fiber Microfiltration
- VP Series Filters
 - Sand
 - Multimedia
 - Manganese greensand
 - Carbon filters

BOILER FEEDWATER

- RO systems
- KF water softeners – economy model
- Value packaged VP water softeners
- Mobile softeners with offsite regeneration

REVERSE OSMOSIS

Standard RO models:

- M83 for 50-100 GPM
- M84 for 100-200 GPM
- Flowmax™ RO for 200-500 GPM
- Value design.....Value price

CHEMICAL FEED EQUIPMENT

- Chlorine feeders
- Lime and soda ash feeders
- Polymer feeders
- Acid and caustic feeders

WASTEWATER TREATMENT

- Direct stream discharge systems
- Water recycle systems
- Biological treatment
- Anaerobic methanization
- Aerobic treatment
- Turnkey installation
- Guaranteed performance

ULTRAHIGH RECOVERY TECHNOLOGY

- Memtek® ultrahigh recovery water softening membranes
- Tubular microfiltration
- >98% total system water recovery where water discharges need to be minimized

WATER SOFTENING

- Systems for feedwater of any hardness level
- Cold lime softening clarifiers for iron, manganese and hardness removal –Contraflo®, Contrafast® solids contact clarifiers
- Sodium Zeolite softeners
- Mobile, trailer mounted softeners

SERVICES

- Mobile, trailer mounted RO and filtration units
- Guaranteed Water system uptime
- Membrane system monitoring and maintenance
- Build-Own-Operate
- Rental equipment
- Outsourcing
- System financing
- Contract operations
- Membrane cleaning and replacement
- 24/7 phone support
- Remote system monitoring
- Emergency local response