

### FOR BRINE SOFTENING

Over the last two decades AATech, Inc. has supplied softening systems to various markets, both locally and nationwide. The need for improved hardness removal demanded by today's membrane cell electrolyzers is accomplished by the use of chelating resin ion exchange columns. Hardness of 20 PPB (or less) is essential to prevent scaling in the membrane electrolyzers. AATech's brine softeners have consistently met and surpassed these demands with continued excellent performance.

This line of packaged brine treatment equipment was developed to remove calcium and magnesium hardness from filtered saturated brine at elevated temperatures. |

This equipment uses both hydrochloric acid (HCL) and sodium hydroxide (NaOH caustic) for regeneration.

Initially hydrochloric acid is passed through the resin which efficiently removes the calcium hardness. This leaves the resin bed in the in the acidic H+ form.

Following acid treatment, sodium hydroxide is then passed through the resin converting it back to the sodium Na+ form which is necessary to remove calcium and magnesium hardness from the incoming feed water with a neutral pH or high pH. Optimum performance occurs for pH levels around 9. Regeneration can occur in a down flow direction (COFLO) or in an upward direct (COUNTERFLO) depending on your specific requirements.

The AATech brine softening systems offer many features as standard that may be optional by other equipment manufacturers. Many years of valuable field experience allows AATech to provide a system designed to our high standards for unattended service with a minimum of routine maintenance. Brine softening columns are a critical necessity for treating filtered brine prior to electrolysis and high quality is required to protect the valuable membrane electrolyzers.

AATech offers it's customers the very best equipment at a most affordable price. We invite you to compare our features with anyone's, then check our price. You will be very pleasantly surprised. We offer a complete line of systems, ranging from pre-engineered to fully custom designs, to meet your specific requirements.



#### STANDARD FEATURES

- Skid mounting, minimizing field costs
- Acid/Caustic regeneration skid
- Inlet and outlet pressure gauges
- Sample cocks
- Resin cleanout
- 100 PSI ASME code vessels
- Low Calcium/Magnesium Rubber Lined
- FRP or Polypropylene lined face piping
- Polypropylene or Hastelloy C, under drain
- Meter initiated regeneration
- Solenoid operated automatic valves actuated by PLC control

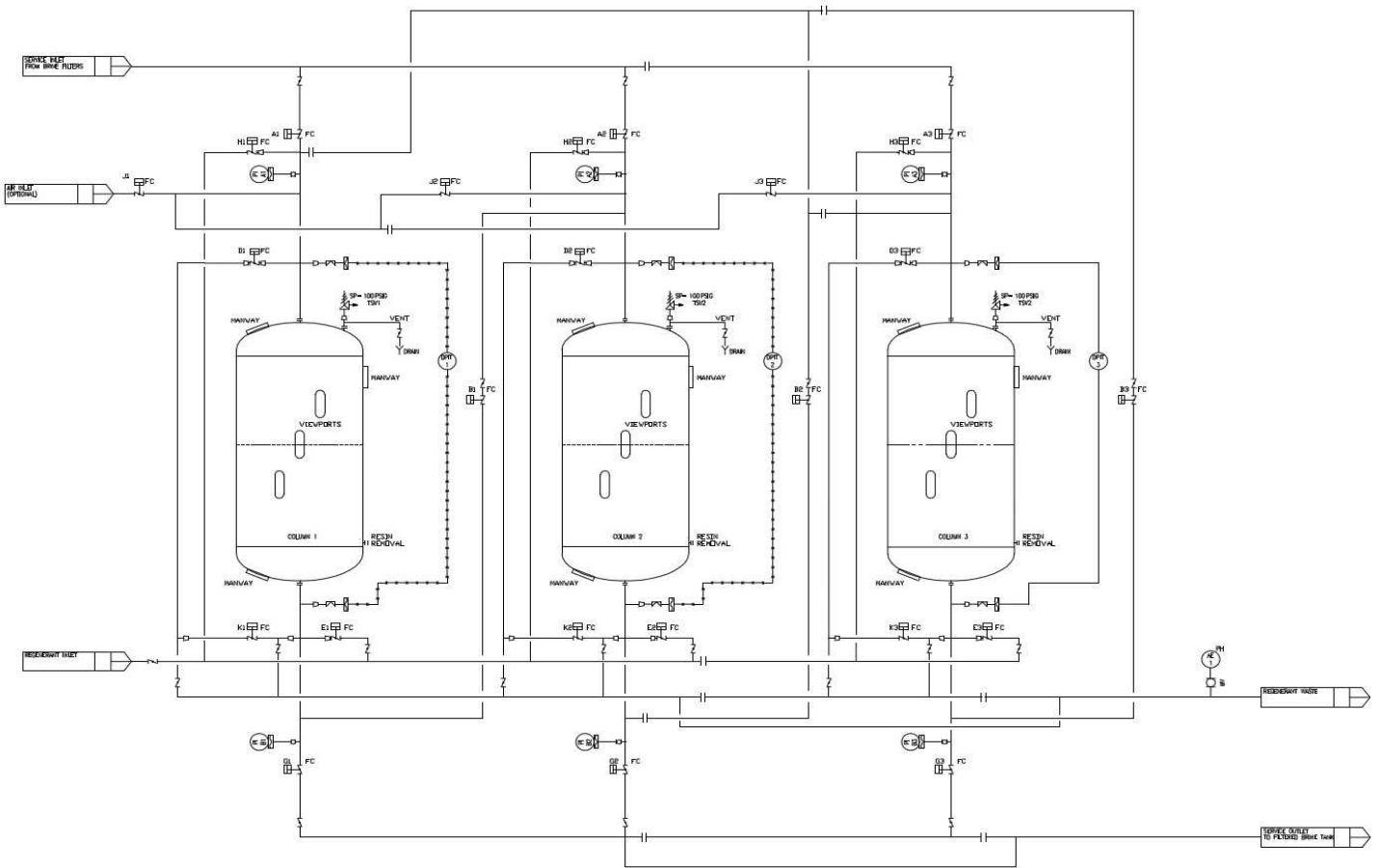
#### OPTIONAL FEATURES

- Higher pressure rated ASME code vessels
- Fiberglass Acid and Caustic tanks
- Hardness analyzer
- Custom PLC controls
- Human machine interface screens
- One column systems, two column lead/lag systems or three column merry go round systems

## SPECIFICATIONS FOR SINGLE COLUMN SYSTEM

MODEL NO.	BRINE SOFT VESSEL (Dia X SS)	RESIN CAPACITY (Cu Ft)	NOMINAL FLOW RATE (Gpm)	MAX FLOW RATE (Gpm)	CAPACITY (GRAINS) X1000	CHEM DOSE ACID (Lbs)	CHEM DOSE CAUST (Lbs)
BSFT-12	60" X 144"	115	100	200	517	1,084	1,188
BSFT-17	72" X 144"	165	200	300	742	1,555	1,704
BSFT-24	84" X 144"	230	300	450	1,035	2,168	2,376
BSFT-30	96" X 144"	300	450	600	1,350	2,827	3,100
BSFT-50	120" X 144"	470	600	900	2,115	4,430	4,855
BSFT-72	144" X 144"	680	900	1,300	3,060	6,408	7,024

**THE ABOVE SIZING IS BASED ON THE PRIMARY UNIT ONLY AT 15 BV/HR**



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