



### MARKETS SERVED

Municipal Water and Wastewater  
Industrial Water and Wastewater

### CUSTOM DESIGN

CHEMCO custom designs and fabricates each system to satisfy the process feed rate, desired concentration, and available space requirements.

Sodium Carbonate ( $\text{Na}_2\text{CO}_3$ ), commonly known as Soda Ash, is used in water treatment to increase the pH of acidic water. Soda ash systems are employed to act as first a pH adjuster with the added benefit of softening of the water as changes in pH will result in solids precipitating out of solution. Soda ash systems are typically used as a point-of-entry injection system. Corrosion-resistant chemical feed pumps will discharge the soda ash solution into the water to raise the pH. Alternatively, the solution can be delivered by gravity by utilizing an overflow weir and trough to deliver the soda ash solution to the point of application. The carbonate ion is utilized to precipitate out the hardness in water. The primary advantage to using soda ash is that it acts as a water softener, since carbonate can precipitate the calcium and magnesium ions present in "hard" water.



Soda ash can be used in tandem with a lime treatment system as the lime slurry will remove chemicals associated with carbonate hardness while the soda ash solution will handle the remaining chemicals that cause non-carbonate hardness. These hardness-causing chemicals precipitate and are then removed by conventional processes of coagulation/flocculation, sedimentation, and filtration. This dual treatment method can reduce the amount of  $\text{CO}_2$  needed to re-carbonate water to bring the pH of the water down to a stable level and increases cost savings due to the reduced lime usage.

## STANDARD SYSTEM COMPONENTS:

- Storage Silo - Fully Skirted or Leg-Supported
- Pneumatic silo fill-pipe and NEMA 4X Operator Station
- Product level monitoring devices. Both continuous level and/or point level indication are available.
- Roof mounted dust collector and associated valves.
- Storage Silo Bin Activator or Vibrator
- Volumetric or LIW Screw Feeder with inverter-duty drive motor and variable frequency drive.
- All piping, valving, and instrumentation.
- Solution make-down storage tank with level devices, mixer, dust & vapor removal system, and nozzles.
- Feed pumps as required.
- Local system control panel complete with programmable logic controller (PLC) including pre-programmed system logic.
- All systems are factory tested to the greatest possible extent before leaving the factory.
- Silo systems are provided with ventilation fans, heaters and lighting. Silo skirted interior is insulated.