

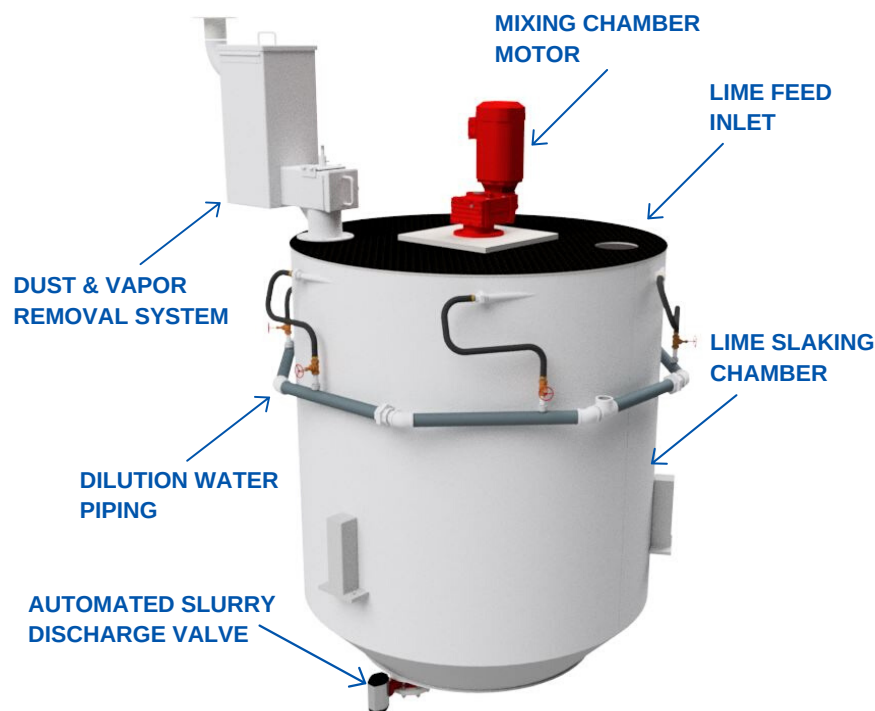
The Batch Slaking System is designed to produce high-quality hydrated lime slurry from AWWA grade pebble quicklime or commercially provided pulverized quicklime. Chemco developed this system not only for customers that require lower slurry dosing rates, but also to provide our clients with a dependable system that requires very little maintenance. Chemco's Batch Slaking system is inherently cleaner and less maintenance intensive than a continuous operating detention slaker as quicklime is efficiently delivered to the totally enclosed slaking chamber. This enclosed delivery method generates little to no dust, thereby almost eliminating the labor required for regular housekeeping. Maintenance is reduced even further by the self-cleaning rinse cycle that is initiated after every batch cycle utilizing the dilution water shown below.

This system employs Chemo's proven temperature control operating philosophy to deliver consistent, high quality hydrated lime without the need for maintenance-reliant weighing devices. Temperature control of the slaking process has proven, over many years of experience, to be the most reliable method of ensuring consistent, small hydrated lime particle size, which greatly increases system efficiency and reduces operational and material costs. The grit separation stage of the process is engineered to remove grit from the slurry before the slurry is pumped to process. The grit separation stage prior to pumping eliminates excessive grit loop pumps and associated hardware, which significantly reduces capital costs. This practice also eliminates the wear and tear that occurs from recycling grit through the primary feed lines and pumps, further cutting down on maintenance and equipment replacement costs over time.

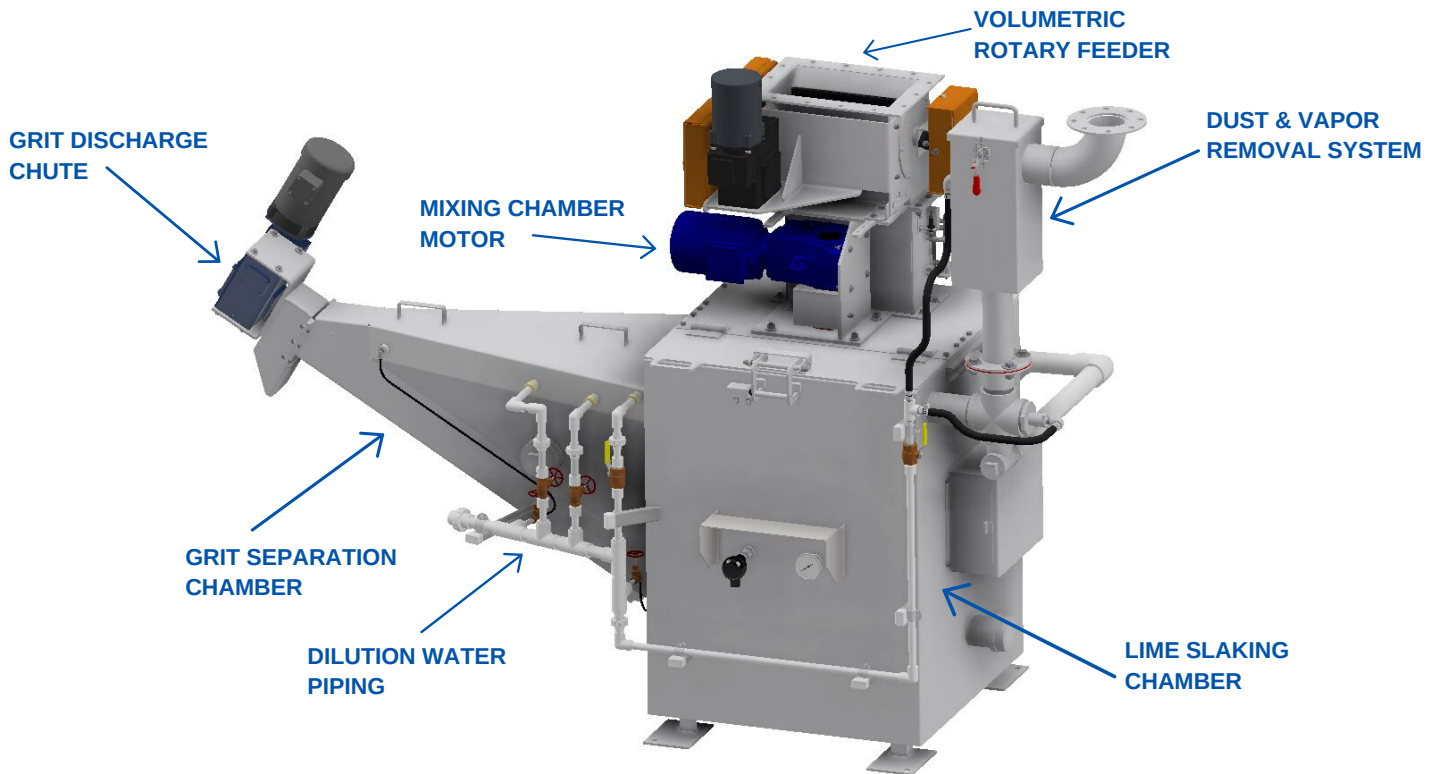
## BATCH SLAKER SYSTEM COMPONENTS

Chemco Batch Slakers are available in sizes ranging from 500 lbs/hr to 8000 lbs/hr and include the following:

- Grit Separation Tank with inclined shaft-less screw conveyor
- Pump Feed Tank
- Lime Slurry Dosing Assemblies with modulating valves (optional)
- Pneumatic or Motor actuated valves
- Control System w/touch screen interface for customizing system parameters



Chemco detention slakers are able to control all of the critical variables in the lime slaking process. Pebble lime is delivered to the slaker reaction chamber by a rotary feeder. A water control panel, which includes modulating valves, flow meters, solenoid valves, and manual valves, supplies the slaking water, dilution water, and spray water to the slaker through adjustable parameters set at the system control panel. The slaker reaction chamber is equipped with an agitator, which vigorously mixes the water and quicklime continuously into a concentrated slurry. The intense mixing allows the calcium oxide (quicklime) to react with the water to form calcium hydroxide (hydrated lime). The resulting hydrated lime slurry flows over a weir into the integral grit separator, where grit settles in the bottom and is carried upward via the grit removal screw and disposed of at the grit discharge. An optional vibrating screen can be provided in place of the integral grit remover when screen separation is preferred. The de-gritted hydrated lime slurry flows out through the slurry discharge at the top of the grit removal chamber after being diluted to the final slurry concentration.



- Motorized hoist and trolley
- Manual iris valve
- Aeration nozzle or vibrating trays to induce material flow.
- Range of feed storage hoppers sized to meet your system's requirements.
- Volumetric Screw Feeder with optional loss-in-weight system.
- Wetting cone or slurry tank with level device.
- Slurry feed pumps or booster pumps with associated piping and valving.
- Graphical operator interface with programmable system control panel.
- Optional air compressor system including air dryer, separator, and oil filter that attach to structure.
- Explosion proof components optional.

The Chemco Paste Slaker is designed to produce quality hydrated lime slurry from commercial grades of quicklime. The slaker can be constructed from carbon steel or stainless steel. The Chemco paste slaker incorporates abrasion resistant alloy steel mixing paddles to assure a long service life.

## OPERATION

Water and lime are proportionally delivered when the machine is started. The paste forming within the slaking chamber is electronically monitored and water is automatically metered as required to ensure proper viscosity. Internal paddles provide the proper degree of mixing, ensuring the paste is thoroughly blended and moves toward the discharge weir. The slaking chamber is equipped with a dust and vapor removal system to prevent the escape of steam generated by the exothermic reaction to migrate up into the dry lime feed chute. Lime paste exits the slaking chamber over a discharge weir. Paste is diluted in the discharge chamber before existing the machine. From the discharge chamber, slurry can either be directed into an inclined grit removal chamber or a vibrating screen classifier. When the system is shutdown, control logic initiates a sequence of events to thoroughly flush the system allowing it to cool. Once flushed, the unit automatically shuts down and enters a standby mode, this simplifies future slaker start-up and requires minimum input from the operator.

## PASTE SLAKER STANDARD SYSTEM COMPONENTS

Chemco Paste Slakers are available in sizes ranging from 500 lbs/hr to 8000 lbs/hr and include the following:

- Dust & Vapor Removal System
- Grit Removal Screw or Vibrating Grit Screen
- Pneumatic or Motor actuated valves (optional)
- Control System w/touch screen interface for customizing system parameters

