

# STANDARD HYDRATED LIME AND SODA ASH FEED SYSTEM IN A CAN



## INTEGRATED SILO, FEED, AND DUST COLLECTION SYSTEM IN A CAN

The standard hydrated lime and soda ash feed system from STT provides an integrated solution for receiving, storing, feeding, and delivering up to 2,646 lb/h of hydrated lime or up to 1,012 lb/h of soda ash from truck to the point of application. The two-piece modular design includes a 14 ft. storage silo with a bin vent filter and a skidded module with storage tank, mixer, pump, and feeder.

STT assembles, installs, pipes, wires, and integrates all components/equipment through an automated control panel at our facility prior to shipment. The modularized skid is shipped upright and fits on a conventional truck minimizing shipping costs. The upper storage silo module is shipped separately for simple connection at site.

### TYPICAL BULK MATERIALS PROCESSED

- Hydrated Lime
- Soda Ash

### TYPICAL APPLICATIONS

- Water Treatment
- Chemical Processing
- Mining
- Oil and Gas
- Pulp and Paper / Precipitated Calcium Carbonate (PCC)

### FEATURES

“System-in-a-can” design

Fully engineered and integrated silo, feed, and dust collection system

Pre-assembled, piped, partially wired and factory tested

14' round (can) footprint

Single-piece welded silo construction (14'-0" in diameter)

Low-profile, top access, bin vent filter mounted on roof

Skirted interior lighting, ventilation, and heating

Complete automatic control system with PLC

Storage tank, mixer, pump, and feeder

Equipment module shipped up-right

### BENEFITS

Saves money and decreases equipment footprint enhancing plant utilization

Receives, stores, feeds, and delivers dry chemicals to application point, optimizing material handling

Reduces installation costs and commissioning time ensuring a seamless start-up

Provides a strong foundation improving durability

Ships preassembled limiting the amount of onsite construction needed

Minimizes dust emissions improving air quality and employee safety

Provides a safe work environment enhancing employee safety

Improves productivity limiting downtime adding value to the bottom line

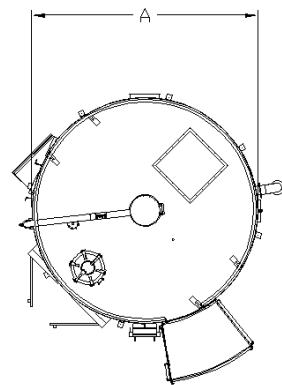
Combines dry chemical and water, making and storing slurry or solution at the desired concentration

Reduces the chance for damage during shipment for faster installation and start-up

## AVAILABILITY

	A (in. [mm])		B (in. [mm])		C (in. [mm])	
Standard Hydrated Lime and Soda Ash Feed System in a Can	168	[4268]	276 1/2	[7024]	203 1/2	[5169]

## PLAN VIEW



### BASIC SILO COMPONENTS

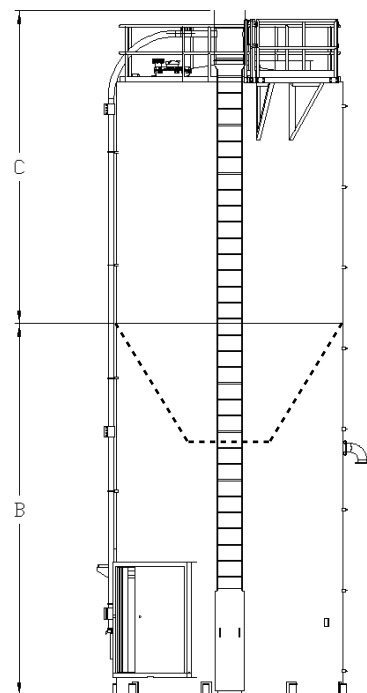
- Storage Silo c/w Truck Fill Line and Pressure/Vacuum Relief Manway
- OSHA Ladder c/w Safety Climbing Protection System
- Bin Vent Filter
- Fluidization System

### SILO SKIRT INTERIOR

- Bin Activator
- Pneumatically Operated Knife Gate
- Volumetric Feeder
- Mixing Tank
- Mixing Tank Agitator
- Forced Draft Wet Scrubber Blower
- Slurry Transfer Pumps or Solution Dosing Pumps
- Piping Spools for Air, Water and Slurry Tie-Ins
- Lighting, Ventilation, and Heating
- Main Operator Panel

**NOTE:** Information / dimensions shown are for reference only and is subject to change based on final design and applications.

## ELEVATION VIEW



## SPECIFICATIONS

### HYDRATED LIME SYSTEM

- Storage Silo Capacity:** 2,611 ft<sup>3</sup> [73.9 m<sup>3</sup>]
- Lime Throughput:** 2,646 lb/h [1,200 kg/h] of hydrated lime @ 36 lb/ft<sup>3</sup> [577 kg/m<sup>3</sup>]
- Slurry Concentration:** Up to 20%
- Feeder:** Operates at fixed speed for batch operation
- Mixing Tank:** 587 USgal [2.2 m<sup>3</sup>]
- Dust Suppression System:** 222 CFM [6.3 m<sup>3</sup>/min] at 1.1 in [28 mm] w.c.
- Transfer Pumps:** 50 USgpm [11.4 m<sup>3</sup>/h] at 50 ft [15.2 m] TDH
- Electrical and Instrumentation Approval:** CSA, FM, cUL<sub>us</sub>, CE Marking
- Process / Utility Requirements**
  - Mixing Water: 19.7 USgpm [4.5 m<sup>3</sup>/h] at 40 psig [276 kPag]
  - Electrical Load: 21 kW (3Ø) and 2 kW (1Ø)
  - Instrument Air: Dry, oil-free, 67 CFM [114 m<sup>3</sup>/h] at 120 psig [827 kPag]

### SODA ASH SYSTEM

- Storage Silo Capacity:** 2,240 ft<sup>3</sup> [63.4 m<sup>3</sup>]
- Soda Ash Throughput:** 1,012 lb/h [459 kg/h] of soda ash @ 55 lb/ft<sup>3</sup> [881 kg/m<sup>3</sup>]
- Solution Concentration:** Up to 5%
- Feeder:** Operates at fixed speed for batch operation
- Mixing Tank:** 587 USgal [2.2 m<sup>3</sup>]
- Dust Suppression System:** 222 CFM [6.3 m<sup>3</sup>/min] at 1.1 in [28 mm] w.c.
- Dosing Pumps:** Up to 9 USgpm [2 m<sup>3</sup>/h] at 50 ft [15.2 m] TDH
- Electrical and Instrumentation Approval:** CSA, FM, cUL<sub>us</sub>, CE Marking
- Process / Utility Requirements**
  - Mixing Water: 41 USgpm [9.1 m<sup>3</sup>/h] at 40 psig [276 kPag]
  - Electrical Load: 15 kW (3Ø) and 2 kW (1Ø)
  - Instrument Air: Dry, oil-free, 67 cfm [114 m<sup>3</sup>/h] at 120 psig [827 kPag]

### OPTIONS

- Aeration piping manifold in Galvanized Carbon Steel
- Upgrade primary equipment's and piping material of construction to 304 or 316 Stainless Steel

### MATERIAL OF CONSTRUCTION / PAINT SPEC

- Storage Silo:**
  - Material: Carbon Steel
  - Surface Preparation: SSPC SP6
  - Interior:
    - (Product area) Finish: Sherwin Williams High Solids Catalyzed Epoxy, 4-6 mils DFT
    - (Product area) Finish Color: Tint Grey
    - (Skirt area) Finish: Sherwin Williams High Solids Catalyzed Epoxy, 4-6 mils DFT
    - (Skirt area) Finish Color: White
  - Exterior:
    - Primer: Sherwin Williams 2.8 V.O.C. Catalyzed Epoxy, 1.8-2.2 mils DFT, White
    - Finish: Sherwin Williams Polane H.S. Plus Polyurethane Enamel, 1.25-1.5 mils DFT
    - Finish Color: Gloss White
- Mixing Tank and Skid:**
  - Material: Carbon Steel
  - Surface Preparation: SSPC SP6
  - Exterior:
    - Primer: Carboline Carbomastic 615, 3-4 mils DFT
    - Finish: Carboline Carboxane 2000, 3-4 mils DFT
    - Finish Color: RAL 7012 Basalt Grey or RAL 9003 White
- Tank Mixer:**
  - Material (shaft and impellers): 304 Stainless Steel
- Piping:**
  - Instrument Air: Galvanized Carbon Steel
  - Water: PVC
  - Slurry: Chlorinated Polyvinyl Chloride (CPVC)
  - Solution: Polyvinyl Chloride (PVC)



OUR NAMES HAVE CHANGED. OUR COMMITMENT TO QUALITY REMAINS.



## IMPORTANT NOTICE

*The information contained in this product data sheet is, to the best of our knowledge, true and accurate. As application-specific factors may impact performance, users are advised to evaluate the product independently to determine suitability for the intended application and use conditions. Product availability and specifications are subject to change without notice.*

## LET US HELP PROVIDE A SOLUTION FOR YOUR NEEDS.

For over 50 years, STT has been designing and installing lime slaking and bulk material handling systems. What makes STT different is our diverse experience in many applications, industries and chemicals, along with the ability to support systems from concept through to decommissioning, and everything in between. To speak with one of our experts, contact us at:

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