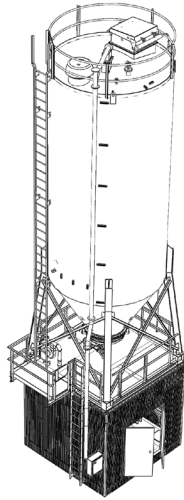


STANDARD HYDRATED LIME AND SODA ASH FEED SYSTEM IN A BOX



INTEGRATED SILO, FEED, AND DUST COLLECTION SYSTEM IN A BOX

Our standard hydrated lime and soda ash feed system provides an integrated solution for receiving, storing, feeding, and delivering up to 2,500 lbs/h of hydrated lime or soda ash from truck to the point of application. The two-piece modular design includes a 12 ft. storage silo with a bin vent filter and a slurry make down/storage tank with mixer module on the lower level.

Carmeuse Systems assembles, installs, pipes, wires, and integrates all components through an automated control panel prior to shipment. The pre-insulated modular box is shipped upright on a skid and fits on a conventional truck, minimizing shipping costs. The upper storage silo module is shipped separately for simple connection at site.

APPLICATIONS & USE

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)

Applicability can vary by system make and model. For an evaluation, contact us: salesinquiries@carmeuse.com

FEATURES

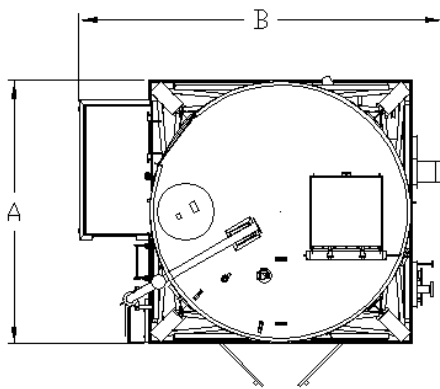
BENEFITS

| | |
|--|---|
| Compact "system-in-a box" | Saves money and decreases equipment footprint enhancing plant utilization |
| Fully engineered and integrated silo, feed, and dust collection system | Receives, stores, feeds, and delivers dry chemicals to application point, optimizing material handling |
| Pre-assembled, piped, wired and factory tested | Reduces installation costs and time ensuring a seamless start-up |
| Modular 'plug-and-play' design | Minimizes the amount of onsite assembly required saving on labor costs |
| 12' square (box) footprint | Requires no pilot car to transport with 25% more space than conventional 12' silos |
| Single-piece welded silo construction (14'-0" diameter) | Ships preassembled limiting the amount of onsite construction needed |
| Low-profile, top access, bin vent filter mounted on roof | Minimizes dust emissions improving air quality and employee safety |
| Skirted interior lighting, ventilation, heating and insulation | Use in cold temperature regions provides flexibility in using similar systems across multiple locations |
| Complete automatic control system with PLC | Improves productivity limiting downtime adding value to the bottom line |
| Slurry make down/storage tank with mixer | Combines dry chemical and water, storing solutions at the desired concentration |
| Equipment module shipped up-right | Reduces the chance for damage during shipment for faster installation and start-up |

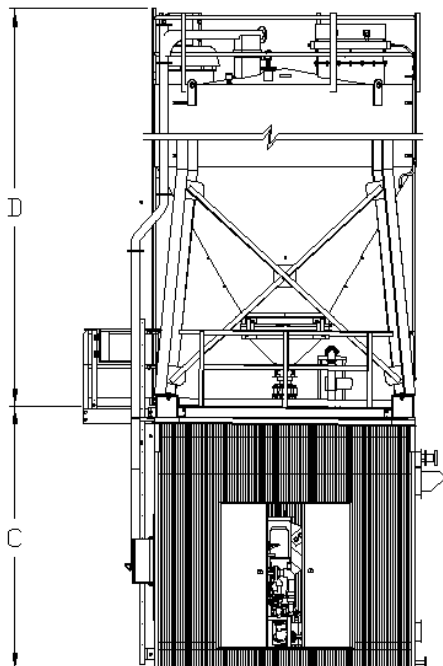
AVAILABILITY

| | A (in. [mm]) | | B (in. [mm]) | | C (in. [mm]) | |
|---------------|-----------------|--------|-----------------|--------|-----------------|--------|
| Mixing System | 144 | [3658] | 200 | [5080] | 145 1/2 | [3696] |

PLAN VIEW



ELEVATION 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
- Bin Activator

ROOF MODULE

- Isolation Knife Gate
- Volumetric Feeder
- Forced Draft Wet Scrubber Blower

LOWER MODULE

- Mixing Tank
- Mixing Tank Agitator
- Forced Draft Wet Scrubber
- Slurry Transfer Pumps or Solution Dosing Pumps
- Piping Spools for Air, Water and Slurry / Solution Tie-Ins
- Lighting, Ventilation, Heating and Insulation
- Main PLC Control Panel
- Silo Fill Panel
- Motor Starter Panel

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

D (in. [mm])

Silo Storage Capacity

| 2800 ft ³ [79.3 m ³] | | 3600 ft ³ [101.9 m ³] | | 4200 ft ³ [118.9 m ³] | | 4800 ft ³ [130.3 m ³] | |
|---|---------|--|---------|--|---------|--|---------|
| 465 | [11811] | 501 | [12726] | 537 | [13640] | 573 | [14555] |

SPECIFICATIONS

HYDRATED LIME SYSTEM

- **Storage Silo Capacity:** 2,800 to 4,800 ft³ [79 to 136 m³]
- **Lime Throughput:** 2,646 lb/h [1,200 kg/h] of hydrated lime @ 36 lb/ft³ [577 kg/m³]
- **Slurry Concentration:** Up to 20%
- **Feeder:** Operates at variable speed for batch or continuous operation
- **Storage Tank Capacity:** 587 USgal [2.2 m³]
- **Dust Suppression System:** 113 CFM [192 m³/h] at 0.28 in [7 mm] w.c.
- **Transfer Pumps:** 50 USgpm [11.4 m³/h] at 50 ft [15.2 m] TDH
- **Process / Utility Requirements**
 - Mixing Water: Hydrated Lime: 19.7 USgpm [4.5 m³/h] at 40 psig [276 kPag]
 - Electrical Load: 38 kW (3Ø) and 7.2 kW (1Ø)
 - Instrument Air: Dry, oil-free, 67 CFM [114 m³/h] at 120 psig [827 kPag]

SODA ASH SYSTEM

- **Storage Silo Capacity:** 2,800 to 4,800 ft³ [79 to 136 m³]
- **Soda Ash Throughput:** 1,012 lb/h [459 kg/h] of soda ash @ 55 lb/ft³ [881 kg/m³]
- **Solution Concentration:** Up to 5%
- **Storage Tank Capacity:** 587 USgal [2.2 m³]
- **Dosing Pumps:** Up to 9 USgpm [2 m³/h] at 50 ft [15.2 m] TDH
- **Electrical and Instrumentation Approval:** CSA, FM, _cUL_{US}, CE Marking
- **Process / Utility Requirements**
 - Mixing Water: Soda Ash: 41 USgpm [9.1 m³/h] at 40 psig [276 kPag]
 - Electrical Load: 38 kW (3Ø) and 7.2 kW (1Ø)
 - Instrument Air: Dry, oil-free, 67 CFM [114 m³/h] at 120 psig [827 kPag]

OPTIONS

- Upgrade primary equipment's material of construction to 304 or 316 Stainless Steel
- Air compressor module – to supply compressed air to equipment/instrument in the systems

MATERIAL OF CONSTRUCTION / PAINT SPEC

- **Storage Silo:**
 - Material: Carbon Steel
 - Surface Preparation: SSPC SP6
 - Exterior:
 - Primer: Sierra Paint, solvent based enamel
 - Finish: Sierra Paint solvent based enamel, 2-3 mils DFT
 - Finish Color: RAL 7038 Grey or RAL 9010 White
- **Slurry / Solution Tank and Modular Structural Box:**
 - 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 impeller): 304 Stainless Steel
- **Slurry Pump:**
 - Material (casing and impeller): Cast Iron with High Chrome
- **Solution Pump:**
 - Material: (body) Cast Iron, (hose) NBR
- **Piping:**
 - Instrument Air: Galvanized Carbon Steel (interior), 304/304L Stainless Steel (exterior)
 - Water Piping: Galvanized Carbon Steel
 - Slurry: Chlorinated Polyvinyl Chloride (CPVC)
 - Solution: PVC



YOUR LIME HANDLING EXPERTS™

Carmeuse Systems is your trusted partner for designing, integrating, and upgrading lime handling systems. As part of the Carmeuse Group, our teams have unrivaled expertise in understanding the role of lime handling equipment within your operation. From selecting the appropriate raw material, to system engineering, enhancements, and maintenance, our teams provide End-2-End support and guidance. We make complex projects seem simple and help our customers every step of the way. Let's start a conversation, contact us at:

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