



## YOUR LIME HANDLING EXPERTS™

*STORAGE, CONVEYING, & SLAKING SOLUTIONS*



### WE DESIGN, UPGRADE & MAINTAIN SYSTEMS

For over 50 years, Carmeuse Systems has been a trusted partner for engineering and maintaining lime storage, handling and slaking systems. As part of Carmeuse, a leading supplier of lime and limestone, our experts understand the intricacies of lime handling and the importance of proper material and equipment selection. We work with you to design efficient and reliable solutions and can provide End-2-End support throughout the lifecycle of your system. Our experts help solve complex problems to keep your operation running smoothly, just put us to the test.

YOUR **LIME HANDLING EXPERTS™**

# WHO WE ARE

## OUR MISSION

We design, install, and maintain custom and standard lime systems.

## OUR VISION

A global leader in lime storage, handling, and slaking systems.

# WHAT WE DO

## LIME STORAGE, HANDLING & SLAKING SYSTEM SOLUTIONS

Having the right lime handling system is essential. Based on your chemical type, safety requirements, site, storage volume, consumption rate, and more, Carmeuse Systems designs and supplies standalone lime storage and handling systems, as well as systems and components integrated into existing applications to best meet your project's specifications. We can assist you with the following elements of a lime handling system:



## TRUCK UNLOADING & PNEUMATIC CONVEYING SOLUTIONS

### Unload Systems

Carmeuse Systems designs unload systems to efficiently meet your operational needs offloading your dry bulk lime-based chemicals from truck or rail into your storage silo. We tailor each system to your specifications based on volumes, transfer times and whether you require offloading from trucks versus railcars.

### Pneumatic Conveying Systems

We design dilute phase pneumatic conveying systems to get your lime products to their destination within your process plant, in the quantity required, with the care needed for your specific requirement. We identify the component parts that work together at the appropriate pressure or vacuum to move your lime materials from one area to another.

## OUR PROMISE

We empower you to do your job better by expertly handling your lime.

## OUR VALUES

- Customer Focus
- Long Term
- Responsibility
- Respect
- Efficiency

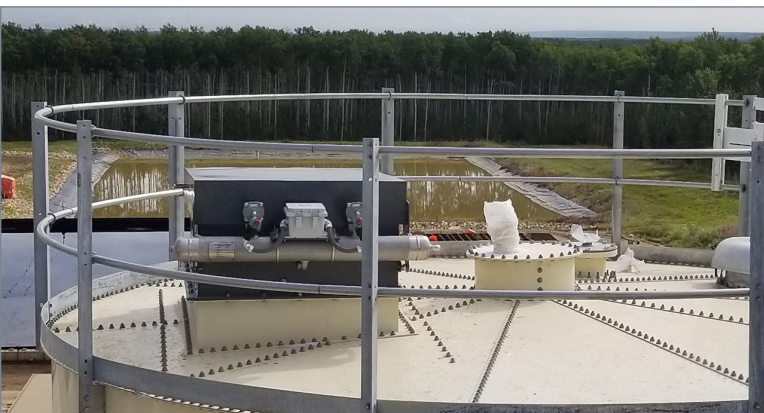


### SILO STORAGE SOLUTIONS

#### Dry Storage Silos

Any processing plant that uses dry bulk chemicals like quicklime, hydrated lime, soda ash, and magnesium oxide in large quantities, requires an efficient method for storing these chemicals as part of your overall storage silo and chemical processing system. Carmeuse Systems helps you select and design the right bulk materials silo system to meet your plant's storage and process needs.

- Shop Welded
- Bolted – Field Erected
- Level Instrumentation



#### Bin Vent Filters

Transporting lime during unloading can cause lime dust accumulation. Our bin vent filters help prevent dust particles and other harmful products from being emitted into the atmosphere by venting displaced air from the storage silos while being filled via a pneumatic or mechanical convey system.

- Bin Vent Filter Square/Rectangular
- Bin Vent Filter Cylindrical
- Replacement Filters



### FLOW PROMOTION SOLUTIONS

Flowability of lime out of the storage silo can be increased by vibration of the silo cone or injection of air into the silo preventing common problems like product buildup, bridging, and ratholing from occurring. Carmeuse Systems provides a variety of solutions to keep materials moving freely, effectively and consistently, making it easier to handle.

- Bin Activators
- Aeration Bottoms
- Air Pads
- Impactors



## FEEDING SOLUTIONS

Moving your lime material from your silo to your downstream process at the necessary feed rate without losing product and minimizing degradation is key to improving your overall productivity. Carmeuse Systems factors in your product's specifications and process needs when designing the right feeding solution that offers you the reliability and accuracy required to make your material handling cost-effective.

- Rotary Airlock Valves
- Volumetric Screw Feeders
- Loss in Weight Feeders
- Screw Conveyors



## LIME SLAKING SOLUTIONS

When using quicklime, the quality of your slaked lime can have a major impact on chemical consumption, material cost, and operating cost of your system. The first step toward avoiding ineffectively slaked lime is selecting the right type of slaker based on your parameters, such as pebble size and water temperature. We collaborate with you to determine the best option for your process and budget, offering the following types of lime slakers:

- ZMI Portec Detention Slaker
- VERTIMILL® Ball Mill Slaker
- Batch Slakers / Mix Tanks



## SLURRY STORAGE SOLUTIONS

Storing your lime slurry is a key component of your lime slaking system. Proper mixing configuration and process understanding are key in keeping the lime slurry in suspension when storing. Carmeuse Systems considers several variables when designing your tank: continuous or batch process, your process' volume or storage time, space availability, and the required injection rate to the downstream application.



## PUMPING & SLURRY HANDLING SOLUTIONS

Transferring the lime slurry to your downstream application is the final major component of your lime handling system. Lime slurry contains high amounts of solid particles, making it difficult to pump. Thus, selecting the right pump is critical to your process. Carmeuse Systems has the expertise in designing solutions to effectively keep the slurry moving allowing for the accurate delivery of a measured quantity to your downstream application.

# STANDARD LIME STORAGE & MIXING SYSTEMS

In addition to our customized chemical feed solutions, Carmeuse Systems has developed several standard chemical feed systems, which are modular and provide integrated solutions for receiving, storing, feeding, slaking (if quicklime application) and delivering quicklime, hydrated lime, soda ash, and magnesium oxide from a truck through to pumping of slurry or solution off to a chemical injection or chemical metering point.

- Standard Quicklime Feed System in a Box
- Standard Hydrated Lime and Soda Ash Feed System in a Box
- Standard Hydrated Lime and Soda Ash Feed System in a Can



# LIME INJECTION SYSTEMS FOR ELECTRIC ARC FURNACE (EAF) STEEL PLANTS

Carmeuse Systems, in partnership with Coperion, Tallman Technologies, and Carmeuse, offers a lime injection system for EAF steel plants that is customized to each site's specific requirements. The components of this system include truck offloading, silo storage, pneumatic conveying, piping and controls, copper blocks, burner boxes and supersonic injectors. Our lime injection systems are designed to minimize lime loss during delivery to the furnace, offer better control of slag, eliminate dusting, and reduce maintenance needs. Design and installation can be in new sites or integrated into existing sites.



# PORTABLE SLURRY PRODUCTION & STORAGE SOLUTIONS

The portable lime slaker from Carmeuse Systems is a self-contained lime detention slaking system that is equipped with all the necessary components needed in a turnkey solution. This lime slaking unit is a plug-and-play slaking plant and with its trailer capability, you can transfer it easily making it both a cost-effective and convenient way to use lime slurry no matter the job and/or location.

Carmeuse Systems also offers a storage mix tank to provide you a complete portable system for lime slurry preparation. The storage mix tank is designed to keep the lime solids in suspension and avoid solids build-up at the bottom of the tank.





## AFTERMARKET SOLUTIONS

Proper design of a lime handling system will add to the ease of operation; however, maintenance must be carried out on your lime system to ensure it continues to run efficiently. Carmeuse Systems is dedicated to ensuring your lime storage, handling, and slaking system continues to work correctly for years to come. We offer a variety of solutions to improve the efficiency and lifecycle of your system.

### SYSTEM RETROFITS & UPGRADE SOLUTIONS

Retrofitting your older lime system with new technologies can help to make your system safer and more efficient at a fraction of the cost of a complete system replacement. Carmeuse Systems continually makes improvements to existing components and offers new features that make equipment, like your lime slakers safer, more reliable and more productive no matter the brand.

### ONSITE AUDITS

Proper system audits can extend the lifecycle of your system and/or increase its efficiency by revealing issues before it is too late and becomes too costly. Our technicians will inspect individual pieces of equipment, controls, as well as entire processes to assess and give you feedback on any operational or maintenance concerns, mechanical failures, and/or process inefficiencies before breakdowns occur.

### AUTOMATION & CONTROLS

Our experience in total PLC migrations, as well as routine programming and maintenance, provides us with the expertise to assist you with selecting and customizing a new automation system designed for your specific needs. Our collaborative approach to these automated systems means that we will work with you to keep your system running efficiently and free of unplanned interruptions. We have established relationships with Allen Bradley, Siemens, Schneider Electric, GE Automation and more.

### REPLACEMENT PARTS & COMPONENTS

We understand that being able to get the right parts and components when you need them is critical to keeping your processes and equipment up and running. Whatever your needs may be from an aftermarket parts standpoint, Carmeuse Systems has the experience, personnel, and inventory to provide a solution that is tailored to your specific application and requirements.

- Rotary Airlock Valves
- Bin Vent Filter Replacement Filters
- Impactors
- Wet Dust Scrubbers
- Wetting Bowl
- And much more...

# INSTALLATION INSPECTIONS

You are making an investment in your business when you purchase a lime handling system, lime slaker, or system/component retrofit from Carmeuse Systems. Protect your investment from day one by beginning with proper installation, commissioning, and start-up. You can count on Carmeuse Systems, your lime handling experts, to do it right.

- Construction Supervision
- Commissioning and Start-Up



Count on the experts  
**to do it right.**



**THE**  
DIFFERENCE  
**WE**  
**MAKE**

At Carmeuse Systems, we realize that a trusted partnership is based on the quality and service we provide. We are committed to our customers and have designed our offerings with your needs in mind.

- Backed by Carmeuse, one of the world's largest lime producers
- Over 50+ years of expertise in lime handling across a variety of industries and applications
- Proper systems, components specifications and recommendations
- Customized solutions to address customer's needs (environments, systems, new processes, and site conditions)
- State-of-the-art products like our ZMI Portec Detention Slaker and the patented *VERTIMILL* retrofit
- Partner with customers throughout entire lifecycle of their lime system and equipment
- Post-installation onsite audits, maintenance repairs, parts and support services
- Over 100 years of design and engineering experience within the company



## 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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