A History of Optimizing Chemical Feed

Over thirty years of chemical feed system and silo design experience, and in-house fabrication expertise has refined our approach for optimizing performance, quality, reliability, system layout and ease of installation.

VeloDyne’s MAKO™ High Density Lime (HDL) systems are used in a variety of municipal and industrial water and wastewater treatment processes. Our technology reduces scaling in pipes and maintenance of equipment common with standard lime slurry systems.

**MAKO™ HDL Process Benefits:**

- Reduces cost of lime supply: on-site preparation of high-density slurry concentrations ranging from 32-38%, eliminates the need for costly delivery of lime in slurry form
- HDL Slurry remains in suspension, drastically reducing scaling & build-up in pipe and equipment
- HDL reduces operator maintenance and equipment downtime and prolongs equipment life
The VeloDyne MAKO™ series two-piece, high-density lime (HDL) system is a state-of-the-art, modular technology that optimizes performance, quality and reliability while minimizing installation and commissioning time.

**The MAKO™ Modular HDL System Benefits:**

- Unlike single-piece silo designs, the makedown equipment, plumbing, electrical wiring and controls are fully factory installed, tested and shipped to the job site as a complete, finished and tested unit - no equipment is removed for shipping or is required to be reinstalled.

- Our factory-built design allows for optimal equipment layout, running piping and conduit underneath the floor grating system, along walls and overhead, resulting in minimal operator obstructions.

- The equipment room is shipped complete and upright as opposed to on its side, avoiding common damage during shipping.

- After setting and anchoring the lower section equipment room to the concrete pad, there are five easy steps to completing the system installation:
  - Install the bin vent and level sensors on the storage section using factory installed conduit and air lines.
  - Install the ladder and hand-rail system.
  - Erect, set, and bolt together the storage section to the equipment section & interconnect the flexible adapter to the feed equipment.
  - Electrically interconnect the storage section to the lower section through factory installed junction boxes.
  - Interconnecting power, water, drain, and slurry feed piping.

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**MAKO™**

HIGH DENSITY LIME SILO SYSTEMS

Reducing Scaling, Maintenance & Operator Handling of Hydrated Lime Feed

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VELODYNE
VeloDyne’s MAKO™ HDL Slurry System utilizes state-of-the-art CFD modeling to design and optimize the mixing of HDL slurries.

VeloDyne’s MAKO™ HDL system reduces the cost of lime, drastically minimizes scaling and lime build-up in pipes and equipment, reduces maintenance and our two-piece modular design reduces installation time and cost.

VeloDyne’s MAKO™ HDL Slurry System utilizing weight and density control and monitoring.
MAKO™ HDL System

Features and Options:

- **MAKOTM HDL slurry make-down system** is a proven design using state-of-the-art Computational Fluid Dynamics (CFD) to optimize slurry mixing.
- Local control system with programmable logic controller (PLC) and color touch screen.
- Weight and density monitoring and control.
- Single or modular two-piece silo designs.
- Factory authorized testing for customer approval (two-piece systems only).
- 10’, 12’ and 14’ diameters available.
- Pneumatic silo fill pipe assembly with NEMA 4X operator station.
- Bin-Vent dust collection system (roof mounted).
- OSHA approved caged ladder and handrail for roof access.
- Silo level devices. Continuous and/or point level.
- Bin Activator and Vibrators.
- BarracudaTM volumetric screw feeder with wash-down, inverter duty motor.
- Storage/feed tank with mixer, and level devices.
- Slurry feed pumps.
- Equipment room ventilation fans, heaters, and lighting & optional insulation.
- Optional silo load cell system for inventory monitoring.