

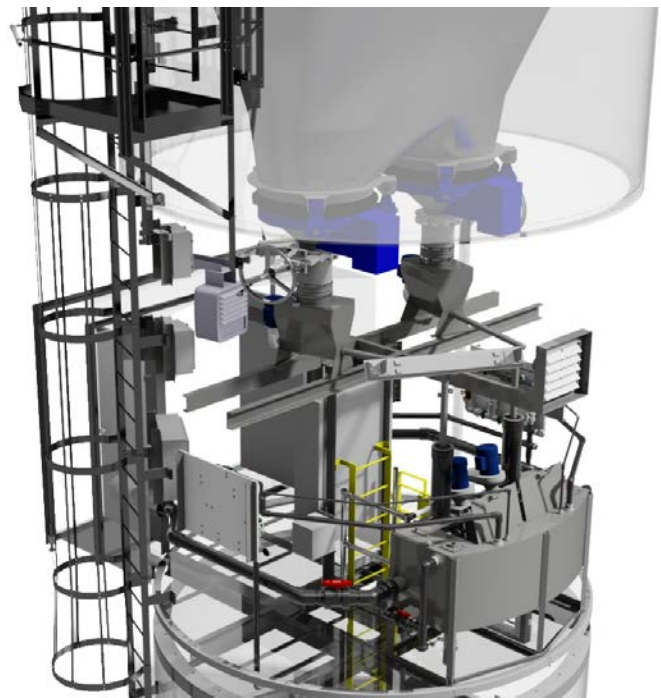
SILO PAC

Reduce Operator Handling of Dry Material



The EnPro Silo Pac is used to store, feed, dissolve, and deliver chemical to the desired process point. They are used in many applications for municipal and industrial waste and water treatment applications. Typical applications include neutralization and PH control, heavy metal removal, and taste and odor control.

The EnPro Silo Pac is a unique product that eliminates quality control issues typically seen in most silo systems. For example, EnPro provides the Silo Pac in two sections, a lower equipment room section, and an upper storage section. This allows for a preassembled modular approach to delivering large chemical feed systems.



Contact our sales department at
sales@enpro-tech.com

4225 NE Port Dr.
Lee's Summit, MO 64064
816-795-6333 phone
816-795-6030 fax
www.enpro-tech.com

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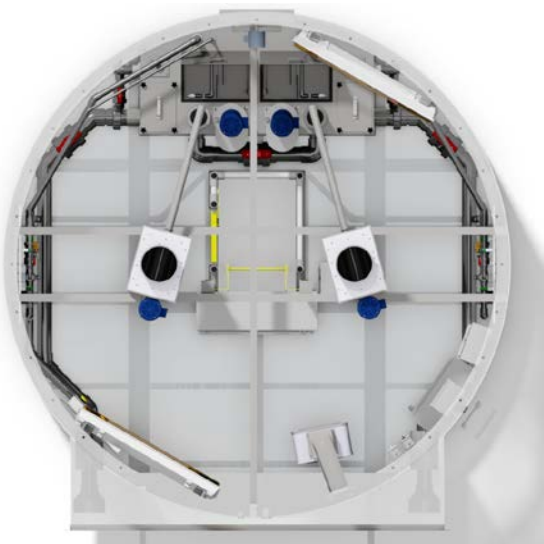
CUSTOM INTEGRATION

EnPro's engineering team takes great pride in providing for the customization needs of its customers. Each silo is designed to meet specific project requirements with operator handling and maintenance space in mind. Some of the unique features that we incorporate are revealed in the silo equipment room. We provide concave mix tanks to allow the mix tank to be as close to the wall of the silo as possible. We also run all conduit, wire, and plumbing either below the floor grating, above the head on the feeder bridge, or against the silo wall. This helps to maximize space in and around the mechanical components and control panels, making the silo spacious and organized during operation of the equipment.



Typical Silo Features:

- Storage silo (pre assembled two piece design) – Sizes range from 8' -0" up to 15' -0" in diameter.
- Pneumatic silo fill pipe assembly with NEMA 4X operator station.
- Dust collection system (mounted on roof).
- OSHA approved caged ladder & hand rail for roof access.
- Silo level devices. Continuous and or point level.
- Bin Activator or Vibrators.
- Volumetric screw feeder with wash down inverter duty motor and variable frequency drive.
- Slurry make down/storage tank with mixer, and level devices.
- Slurry feed pumps if required.
- All required piping and valves.
- Local control system with programmable logic controller (PLC) including pre-programmed system logic. All systems are completely tested with water for the engineer or customers viewing before leaving our facility. All of EnPro's control panels are UL or CUL listed.
- Silo systems are provided with ventilation fans, heaters and lighting. The interior of the skirt section is insulated.



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SILO STORAGE OPTIONS:

Shop Welded – Skirted Silo:



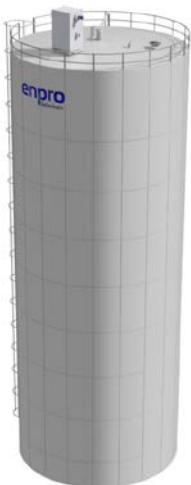
The Skirted, Shop Welded Silo by EnPro Technologies is the most complete, pre-assembled silo system in the world. EnPro's unique delivery method ensures a smooth and well coordinated installation each and every time. Because EnPro pre-assembles the lower equipment room in our facility we offer pre-delivery inspection by the customer. This inspection decreases the amount of obstacles in the field and produces a highly satisfied customer that knows they are getting exactly what they want. These skirted storage silos are provided with single or dual discharge if redundant feed trains are required. Other options include; insulation, climate control systems, multi level equipment rooms, and much more. Typical diameters range from 10' to 15'.

Shop Welded – Leg Supported Silo:



The Leg Supported Silo is the most popular option for retrofitting existing buildings with large chemical feed systems. These silos are designed to allow any of our feed trains to mount directly below the hopper discharge. The leg supported silos are available with single or dual discharge hoppers. Each silo is engineered and built to the specific requirements of the project. Other options include flashing for "through the roof" application, as well as concrete wall supported silos. Typical diameters range from 10' to 15'.

Field Bolted – Skirted Silo:



The Field Bolted silo is typically provided on larger applications. The silo is completely erected on-site by experienced professionals. These silos are designed to allow any of our feed train assemblies to mount directly to the discharge hoppers. The field bolted silo is also available with multi level equipment rooms, multi discharge hoppers, insulation, and much more. These silos are specifically designed to maximize on-site chemical storage. Typical diameters range from 20' to 30'. All field erected silos are coated on-site by highly trained professionals.

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FEED TRAIN OPTIONS:

Mix Tank System:



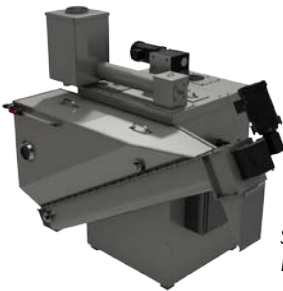
The mix tank configuration is typically used for chemicals that require dissolving such as; hydrated lime, soda ash, magnesium oxide, trona, and often times powdered activated carbon. Mix tank sizes will vary depending on feed rates and chemical to accomplish the desired results. Mechanical and hydraulic mixers are placed inside the mix tank to reduce chemical short circuiting. All mix tank systems are equipped with dust control systems to ensure a safe operating environment. Our mix tank configuration can be provided with pumps to dose the application, or elevated to allow for gravity flow to the application. All of our feed trains have a redundancy option to allow two feed trains under a single silo system.

Wetting Cone & Eductor System:



The wetting cone and eductor configuration is designed for those chemicals that are less soluble. These systems are typically used for powdered activated carbon, and potassium permanganate. The wetting cone and eductor uses motive water to create a vacuum in the water/chemical interface to hydraulically convey the slurry to the application point. All of our feed trains have a redundancy option to allow two feed trains under a single silo system. Control systems for classified locations are also available.

Slaker System:



*Series 85
Detention Slaker*

EnPro's slaker systems are specifically used when hydrating commercial grade pebble quick lime. Whether it's our Series 85 detention slaker or our Series 100 Paste slaker EnPro has a way to provide a system to produce great lime slurry with minimal grit.

Series 85 Detention Slaker:

The Series 85 is a tried and true slaker. This heavy duty machine is designed to produce 15-25% slurry with minimal grit. This Series is available in 300 – 25,000pph. Please request our Technical Bulletin # 60001-1 for more details.



*Series 100
Paste Slaker*

Series 100 Paste Slaker:

The Series 100 Paste Slaker is designed to produce 15-25% slurry, with much smaller foot print. This Series is available in 500 – 8,000pph. Please request our Technical Bulletin # 60006-1 for more details.

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MATERIAL CONDITIONING:

Bin Activators:



The Bin Activator is designed specifically to ensure that products contained in silo hopper flow freely into the silo's feeder. Bin Activators use vibration to "unpack" powders, granules, or flakes. This allows material to flow continuously eliminating rat-holing, degradation, bridging, flushing, and segregation. Bin Activators are bolted or welded to silo hopper and are fully dust tight.

Bin Vibrators:



Bin Vibrators, like Bin Activators, use vibration to loosen packed silo material allowing free flow. Vibrators are mainly used in smaller applications where a heavy duty Bin Activator is not necessary. Vibrators are mounted directly to the side wall of the silo hopper and can be used in many locations including hazardous areas.

Air Fluidization Nozzles:



Air Fluidization Nozzles use compressed air to fluidize material. Multiple nozzles are installed around the cone in various points. These nozzles disperse air in sequential order in various frequencies and durations. Air Fluidization is often used on materials that are normally free flowing such as Powdered Activated Carbon. These nozzles are also a great answer to retro-fit applications due to the fact that they are easy to install in existing equipment.

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FEEDER OPTIONS:

Volumetric Feeder:



Model VF-2

EnPro's volumetric auger style feeder is backed with over 25 years of proven handling and feeding of dry materials (powders, pellets, flakes, and chips).

Our Volumetric Feeders are guaranteed to feed within 1-2% accuracy of your desired feed rate, and are the most simplistic and maintenance friendly feeders in the industry.

Here are a few of our auger style feeder models:

- **Model VF-2** - Feed rates from .02-11.5 Cubic Feet/hour. 1 ½ cu/ft hopper, 304 or 316 SS construction
- **Model VF-4** - Feed rates up to 100 Cubic Feet/hour. 3 cu/ft hopper, 304 or 316 SS construction
- **Model VF-5** - - Feed rates up to 100 Cubic Feet/hour. Designed specifically for potassium permanganate. 1 ½ cu/ft hopper, 304 or 316 SS construction

For a complete list of our Volumetric Feeder options, request our Volumetric Feeder brochure (technical bulletin # 50013-1)

EnPro also offers other proven feeder options to accurately feed your chemical:

Belt Feeder



Rotary Feeder



Loss In Weight Feeder



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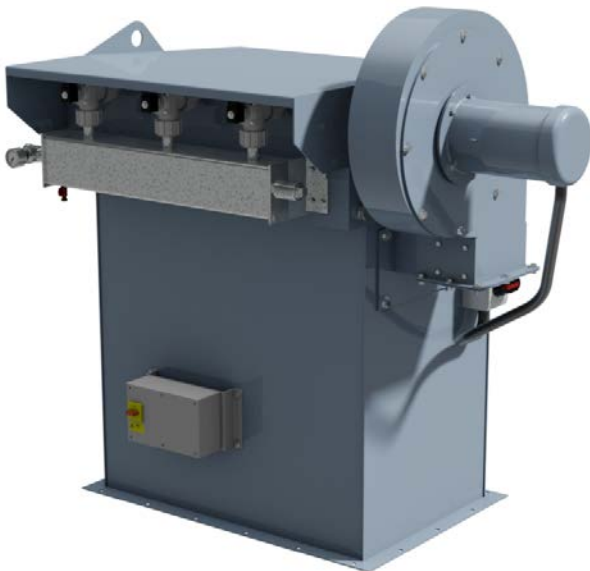
DUST COLLECTOR OPTIONS:

Shaker Type:



Shaker Type Dust Collectors pull dust-filled air to the top of the silo through vertically hung open socks; these socks capture any dust particles allowing for clean discharge of the silo's pressurized air. After the dust collector shuts off, the dust filled socks, which are hung from a shaker bar, are shaken from the top allowing the dust particles to drop back down into the silo tank.

Pulse Jet Type:



The Pulse Jet Dust Collector uses a high pressure blast of air to remove dust from the cartridge. The blast enters the top of the cartridge, temporarily stopping the flow of dirty air. The shock of air causes a wave of expansion to travel down the cartridge. The flexing of the bag shatters and discharges the dust cake. The air burst is about 0.1 second and it takes about 0.5 seconds for the shock wave to travel down the length of the cartridge. Due to its rapid release, the blast of air does not interfere with contaminated gas flow. Therefore, pulse-jet filter houses can operate continuously and are not usually compartmentalized.

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CONTROL OPTIONS:



- Allen Bradley PLC based controls with color touch screen for simple operation and monitoring
- Easy to navigate system screens for calibration, status, operating parameters
- NEMA 4X control panel standard
- 304 or 316 stainless steel enclosure
- Ethernet communications standard
- Optional PLC and HMI manufacturers and types available
- UL labeled control panel as standard
- Door mounted power disconnect standard
- Emergency stop pushbutton standard
- 460 VAC/ 3 phase/ 60 Hz standard. Other voltages include-230 VAC/ 1 phase/ 60 Hz, 600 VAC/ 3 phase/ 60 Hz, 380 VAC/ 3 phase/ 50 Hz
- System pre-assembled and tested prior to shipment
- Control systems for classified locations are also available.

Please contact our sales department at sales@enpro-tech.com or call us: **816-795-6333** for additional information and pricing.