

Sliding Frame Storage Systems



Multiple Uses

Schwing Bioset, Inc., the leader in storage, conveyance and pumping of municipal and industrial materials, presents our proven line of sliding frame and push floor storage handling systems. Available in circular or rectangular designs, sliding frame and push floor technologies provide low cost methods to store both large and small volumes of material.

The simplicity and reliability of Schwing Bioset's sliding frame live bottom silos has quickly made them a favorite of wastewater plants. Actuated by a small hydraulic power pack, the sliding frame eliminates the need for multiple gear boxes, spur gears, and other maintenance-intensive components common to traditional live bottom hoppers.

The hydraulic drive actuates a hydraulic cylinder to move the sliding frame across the silo floor. The leading beveled edge of the sliding frame cuts underneath the material as the flat surface on the interior feeds material into the extraction screws. This process breaks any material bridging or arching that may occur in the extraction screw feed zone.

The sliding frame reciprocates slowly during operation and only when material is being removed from the bin, allowing the stored material to be loaded into trailers or fed into pumps or conveyors. Schwing Bioset's design of the sliding frame removes the high wear components associated with live bottoms and replaces them with servicable items external to the silo that require only basic maintenance.



Typical Uses:

Sliding frame silos and push floor bunkers serve three primary roles in the design of a wastewater treatment plant.

1. Truck Loading: Silos can be built for nearly any storage volume, discharge rate, and number of discharge points. This provides the ultimate in design flexibility to accommodate on-site storage requirements and greatly compressed loading cycles.

2. Intermediate Storage: Silos can be integrated into the process stream to equalize surges in solids production and provide an inventory of material that allows constant feed to drying, incineration, or truck loading stations.

3. Truck Receiving: Receiving stations can be designed using either the push floor or sliding frame design and allows utilities to accept solids dewatered at off-site locations.



Truck Loading

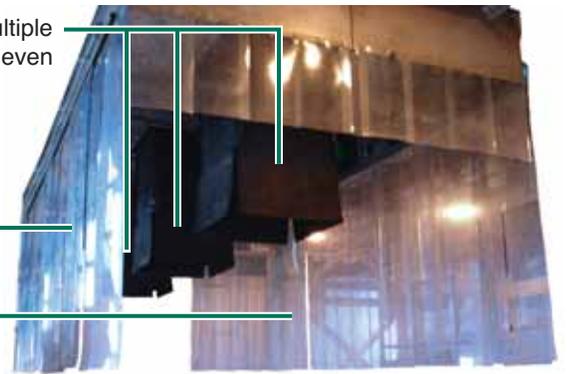
Truck loading sliding frame silos can be designed for nearly any capacity and nearly any discharge configuration, whether used as the primary means for material to leave the plant or as an emergency bypass to the primary system. Equipped with optional odor and splash control hoods, the operational simplicity and minimal maintenance requirements of sliding frame technology are appreciated by both operators and mechanics alike.

Features and Benefits of Truck Loading Silos



Options for single or multiple discharge points allow for even loading of any trailer

Optional odor control shroud contains odors and potential biosolids splashing



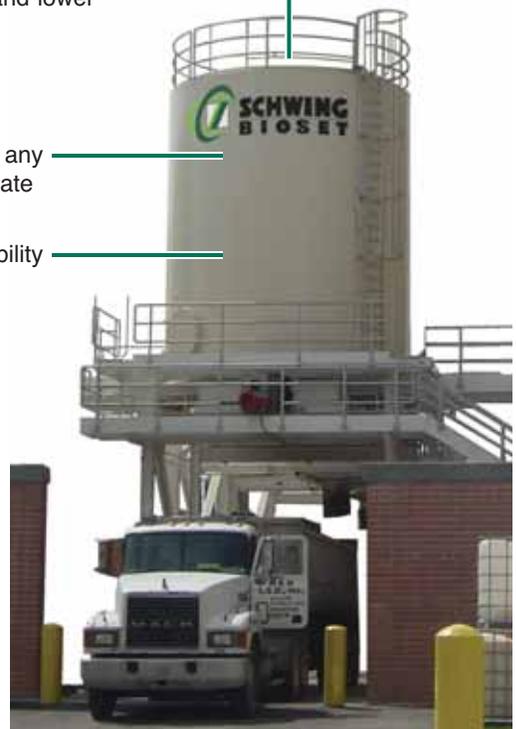
Silos are clean systems with minimal housekeeping requirements as there is no external ribbing or bracing to collect water or spilled material as with traditional live bottom bin designs

Silo shell is a superior structural shape compared to traditional live bottoms, requiring less steel to fabricate and lower fabrication costs

Silos can be designed for any storage capacity and discharge rate

Vertical silo walls eliminate possibility of material bridging or arching

Silos and piping can be insulated and heat traced for use in cold weather climates



Intermediate Storage

Intermediate storage silos provide the ultimate in plant operation flexibility. Sized to store a few hours to a few days of material, the intermediate silos allow a plant to store an inventory of material to feed systems that require constant material feed rates. They also allow for interruptions in material production without impacting the next treatment process.

Features and Benefits of Intermediate Storage Silos



One power pack can drive both the piston pump and sliding frame

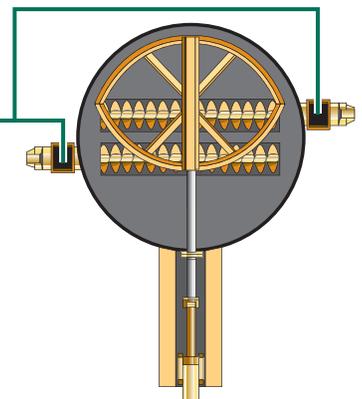
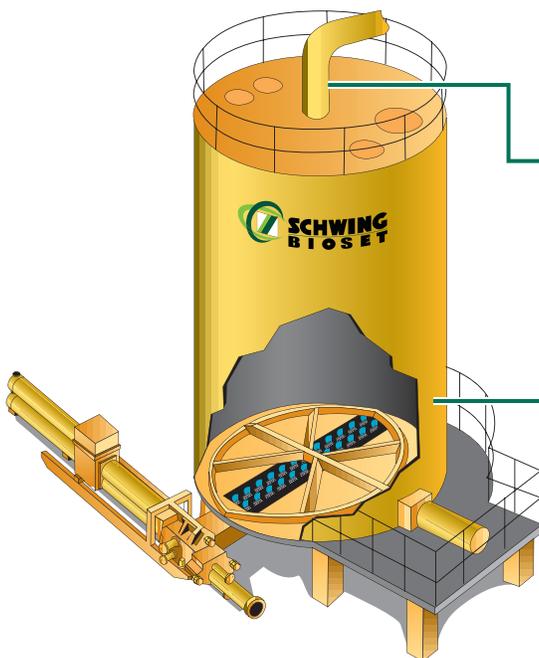
Piston pump can be directly connected to the floor of the silo to maximize storage capacity and minimize overall height



First in/first out provides a uniform draw down of material

Silos can be equipped with multiple discharge locations, providing the ultimate in design flexibility

Vertical silo walls provide a low profile storage bin and eliminate the possibility of material bridging/arching

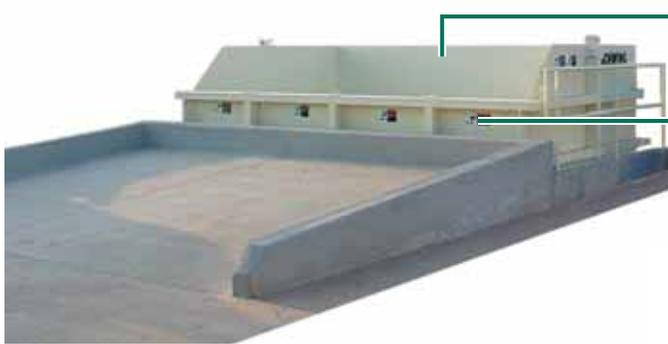


Truck Receiving

The push floor rectangular bunker design consists of two or more hydraulically-driven push frames that reciprocate along the bunker floor. The cylinder action pushes or pulls the material toward either end of the bin or the center of the bunker, depending on site requirements.

Rectangular bunkers are ideal for truck receiving stations as they have straight edges that allow for single or multiple trucks to back up to and unload into the bunker. Side-dump trailers can also be accommodated.

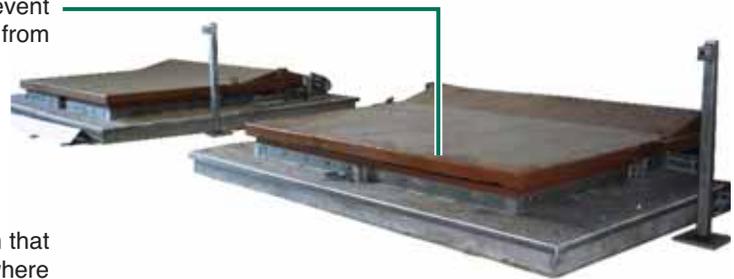
Features and Benefits of Truck Receiving Bin



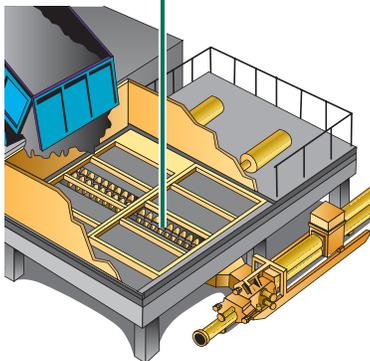
Can accommodate side-dump trailers and multiple trucks unloading at same the time.

Can be located at or below grade

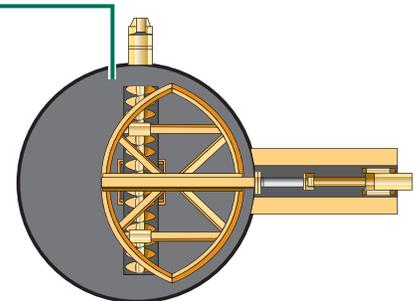
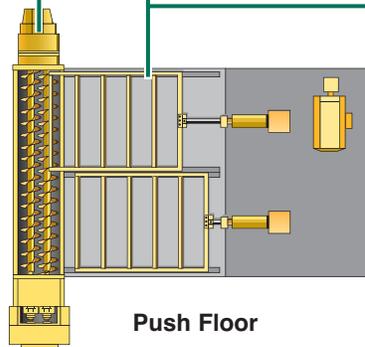
Optional covers contain odors and prevent rain, snow and other tramp materials from falling into the bunker



Pitch of push floors can be arranged such that the bunker discharge can be located anywhere in bin



Either sliding frame or push floor design can be used



Biosolids Processing and Handling Solutions

Sludge Pumps



Schwing Bioset, Inc. is a recognized leader in sludge pump technology. SBI units pump dewatered biosolids from Belt Presses, Centrifuges, Plate & Frame Presses, and Rotary Presses with dry solids content up to 56%. The versatile pumps have been used in both large and small wastewater plants since 1984 and remain a preferred technology for conveying dewatered biosolids.

Bioset Process



To address the growing need for Class 'A' solutions Schwing Bioset also offers the Bioset lime stabilization process. Approved to operate at temperatures lower than specified in the EPA's 503 regulations, the Bioset process offers municipalities a low cost Class 'A' system that is affordable to operate and easy to maintain.

Container Wagon



Schwing Bioset's container wagon was developed to transfer dumpsters in and out of buildings with low clearances that prevented transport trucks from delivering containers to the needed location. Simply deposit the dumpster onto the container wagon and it shuttles the dumpster into position.

Fluid Bed Dryer



Schwing Bioset's fluid bed dryer offers a thermally efficient means of producing dust-free Class 'A' biosolids. Automated to allow unattended operation, the Fluid Bed dryer operates under completely inert conditions and, unlike other technologies, it does not require any recycle of already dried biosolids.

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