

# FLUIDIZED SCREW™

## Model FS510 Reclaim System



- *Need storage and reclaim of fluidizable bulk materials?*
- *Want automated reclaim you can depend on?*
- *Tired of dealing with multiple dead zones?*
- *Is hard pack hampering process flow?*
- *Would avoiding manual clean-out be of value?*

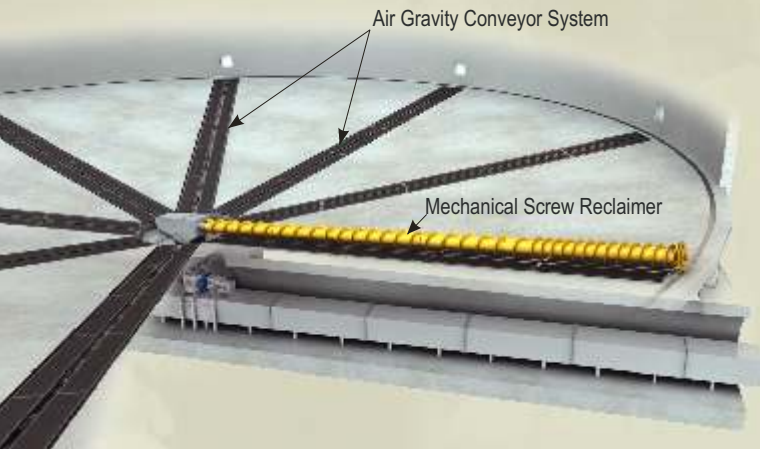


**Bulk Storage and Reclaim Systems**

# RECLAIM HARD PACK WITH TOTAL CONFIDENCE

## FS510 Fluidized Screw Reclaim System

- **Integrates the best of two technologies**
  - ♦ Rugged mechanical screw reclaimer
  - ♦ Efficient air-gravity conveyor system
- **Totally-automated finger-tip control**
- **Reclaim hard pack with confidence**



## How does the FS510 work?

- **Air-gravity conveyors**, consisting of an aerated center hub and radial spokes, are embedded into the dome's sloped floor.
- The **mechanical screw reclaimer** is located at a "home position" over any one of the radial spokes.
- At start-up, **initial reclamation via air-gravity conveyors** reclaims a large percentage of the total stored material.
- **Secondary reclamation from the mechanical screw reclaimer** breaks down remaining piles and hard pack.
- **Control systems sequentially activate air-gravity conveyor zones** to coincide with the location of the screw reclaimer.
- At shut-down, the **screw reclaimer automatically returns to the nearest "home position"**.



The reclaim screw is parked at a "home position" over any one of the air-gravity conveyor spokes prior to fill.



Initial reclamation via air-gravity conveyors reclaims a large percentage of the stored material, and allows the screw to start under minimal load.

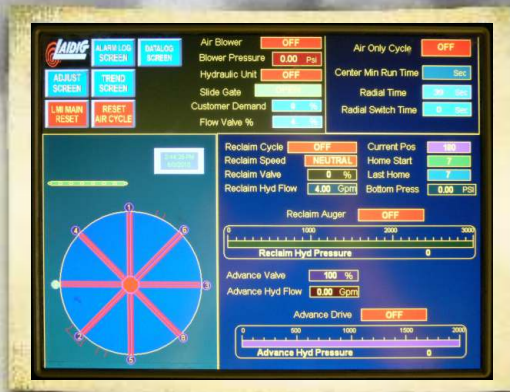


Pie-shaped piles of hard-packed material remain after operation air-gravity conveyors.

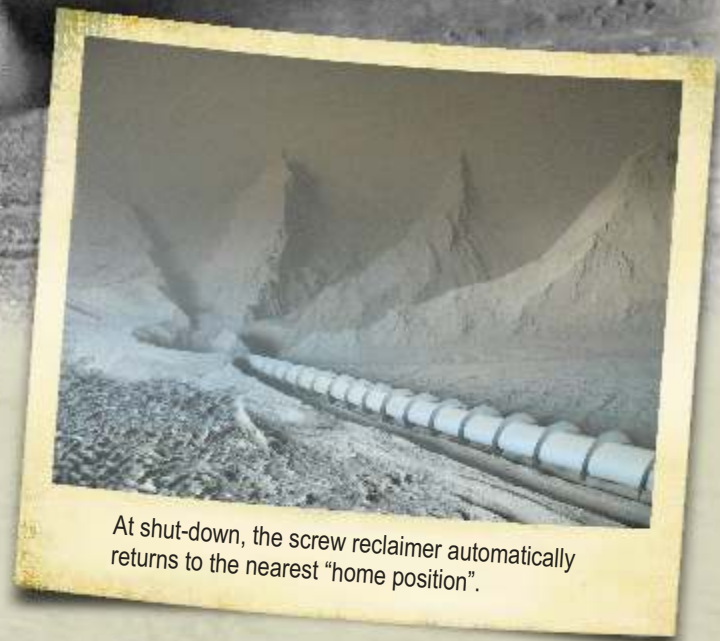
**INTEGRATING THE BEST OF TWO TECHNOLOGIES**

# RECLAIM HARD PACK WITH TOTAL CONFIDENCE

Secondary reclamation from the mechanical screw reclaimer breaks down remaining piles and hard pack.



Laidig's automated control system sequentially activates air-gravity conveyor zones to coincide with the location of the reclaim screw.



At shut-down, the screw reclaimer automatically returns to the nearest "home position".



The fully-aerated center section and discharge chute prevents hard-pack formation if material is stored for an extended time without reclamation.



The rotary control valve varies the reclaim rate by comparing a weigh-scale signal with the desired discharge rate.



PLC-controlled air manifold system in the access tunnel delivers clean air from the blower system to the air-gravity conveyors.

## INTEGRATING THE BEST OF TWO TECHNOLOGIES



## *What does the FS510 include?*

### **Dome Storage Vessel**

- Cylindrical base with hemispherical roof
- Service and discharge tunnel
- Sloped floor with recessed center
- Large equipment access door

### **Mechanical Screw Reclaim System**

- Reclaim auger
- Center assembly & drive trains
- Hydraulic power unit

### **Air Gravity Conveyor System**

- Radial conveyor sections
- Aerated center hub
- Manifolds and actuators
- Aerated discharge & transition
- Blower unit & drive motor

### **Fully-Automated Control System**

- Local operating station
- Main control station
- Touchscreen GUI
- Customized software

## *General Specifications\**

- Dome systems up to 164' (50 m) diameter
- Discharge rate up to ~250 MT/hr, nominal
- ~200 HP blower, typical
- ~150 HP hydraulic power unit, typical

\* For systems less than ~100' (30 m) diameter, Laidig recommends the 8300/9300 Cone Bottom Series, the Planetaire, or the Symetrix, depending upon specific application requirements.

## **WITH LAIDIG YOU GET THE TOTAL PACKAGE:**

### **The Storage Structure**

Designed specifically for the dynamic-load requirements of bottom-reclaim systems.

### **The Reclaim System**

Custom engineered for high delivery rates with a wide range of material applications.

### **The Laidig Guarantee**

If we design and install your storage and reclaim system, we guarantee it will work.

## **WE DON'T JUST SELL EQUIPMENT, WE PROVIDE SOLUTIONS.**



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