

TEI Fluidizer

Move Inventory Fast!

Benefits

Class C Fly Ash & Cement

- Increases effective silo storage capacity by 10% to 20%
- Increases transfer rate:
 - 70%(dense phase)
 - 20% (dilute phase)
- Fluidizes stagnant powders when continuous air flow fails
- Provides low cost solution
- Enhances performance of existing air-slides
- Easy to install—connects to existing air flow pipes
- Prevents rat-holes, channels and pneumatic fractures
- Decreases working slope to ~4 degrees (cement and Class C fly ash)
- Uses 50% less air than continuous flow
- Low power usage (300 W) and halves air compressor energy costs
- 100% increase in horizontal chute reach
- Field-Test Unit available for short-term rental & trial

THE PROBLEM: When using air slides, sticky and cohesive powders will often resist uniform passage of air, which leads to pneumatic fractures, channels and rat-holes. These no-flow conditions leave storage units with significantly reduced capacity and immobile inventory.

THE SOLUTION: The TEI Fluidizer is proven for many operating conditions.

Materials Tested	Cement Class C Fly Ash
Facilities	Terminals Shipping Trucking Storage Units Dome Bunker Silo Cement Plant
Infrastructure	Air-slides & Air-chutes

THE ADVANTAGE: Using a patented process to transmit multiple vibrating frequencies through existing pipe work, the TEI Fluidizer applies shearing action to particles at the fluidizing surface where it is most effective. Other mechanical devices used to clean silos can be difficult to install and require a two-man crew for safe operations. The TEI Fluidizer connects to the outside of a storage unit and requires no entry.



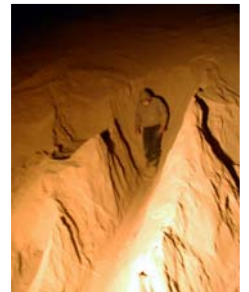
6" PRODUCTION UNIT (Model 62)

THE TRIALS: The TEI Fluidizer is suitable for large storage units (1,000 tons to 200,000 tons) equipped with air-slides.

The Unit does not require installation of equipment inside the storage unit. It is installed in the air line after the blower and next to the storage silo.

Class C Fly Ash Domes

Clean Air Slide



Why a Demonstration ?

Not all powders, operations or air slide systems are the same. To learn more about whether a TEI Fluidizer demonstration makes sense at your facility, please call us. (630) 879-0297.



6" Trial Unit

The Problem

Inventory Stuck for 5+ Years
25% Unusable Storage
Slow Transfer Rates

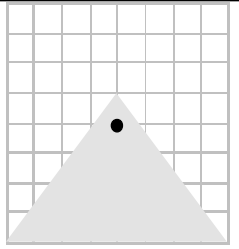
TEI Fluidizer Results

Cleaned air slides
Recovered lost capacity
Improved transfer rate 70%

Licensed: The TEI Fluidizer is patented, designed and manufactured under license. Companies interested in using this technology, or discussing its application and licensing rights should contact Technology Evaluations, Inc.

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Bench Scale Testing



One-half ton test bin with Class C Flyash (*a very difficult and prone to warehouse-set material*) shows discharge channels carved out above the air-slides with TEI Fluidizer at 5 ft/m. Same flow rate without the TEI Fluidizer failed to discharge any fly ash.



PMT doubles the reach of air-slides by dramatically reducing internal friction of powders.

Test above shows two identical air-slides at 5 degrees. Only the right-hand side with PMT discharged completely

Demonstration Unit Specifications

A full sized Model 62 test unit is now available for application testing. This unit is designed to handle fluidizing air flows of up to 3,000 cfm, sufficient for 300 to 600 sq. ft. of airslide at 6-8 psi. Features a wide frequency range and pulse-widths. Drive can be customized to different electrical feeds if needed.

Physical Features

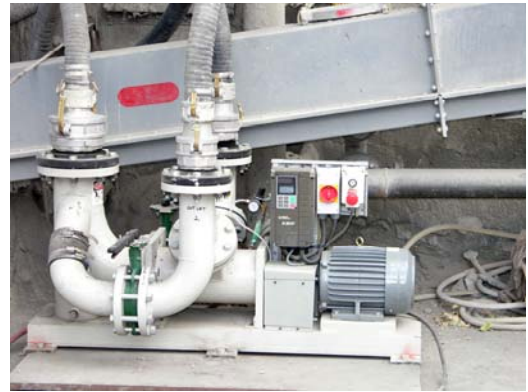
- **Unit Weight:** 650 Lbs.
- **Multi-Frequency:** 4 to 40 Hz
- **Pulse width:** 25% to 100% (depending on model)
- **Dimensions:** 50" long x 34" wide x 24" high
- **Crated:** 800 LB (54" x 38" x 34") reusable/returnable crate
- **Maximum Air Pressure:** 15 psi

Connections

- **Power :** 460V AC, 3 phase, 2HP; (*others by arrangement*)
- **Air Inlet:** 6" flange, either vertical or horizontal connection
- **Air Outlets:** The unit has two (2) sine-wave outlets fitted with 4" flanges.

Note: A lightweight 4" prototype is also available for tight access situations.

Model 61 Unit in Action



Mobile unit connected to air-slides at storage unit using quick connect cam-lock system. Once the pipe work is modified, the TEI Fluidizer can be up and running in minutes with flex hose.

Field Trial Gives Immediate Results



PROBLEM
CEMENT SHIPPING TERMINAL WITH STUCK INVENTORY AND HIGH DEMURRAGE COSTS.

RECENT RESULTS:

- ◆ MOBILIZED CEMENT
- ◆ INCREASED TRANSFER RATE 20%
- ◆ CLEANED UNIT DOWN TO AIR SLIDE FABRIC



STUCK CEMENT
(OVER 12 FT.)



**HAPPY CUSTOMER
GIVES
THUMBS UP!!**

Notice: As with any piece of equipment that incorporates a vibrating energy source, whether it be pneumatic, hydraulic or direct mechanical connection, stresses on infrastructure and equipment will occur. Plant personnel are responsible to ensure equipment is compatible and properly secured.
Warranty: Field tests are used to ascertain the **TEI Fluidizer's** operating performance under site specific conditions. Technology Evaluations Inc offers a return policy on purchased equipment not meeting the field test unit's performance.