ABOUT US

ESTABLISHED IN 1986 | MARYLAND, USA

MILLING & FOOD PROCESSING INDUSTRIES

OUR MISSION

REPRESENTATION & PARTNERS
KEY POINTS

FLUIDIZING
• FCX MAKEUP

THE FCX SYSTEM
• FCX COMPONENTS

OPERATION
• FCX SYSTEM FUNCTIONS

SPECIFICATIONS
• SIZING & OPTIONS
OPTIONS AMONG THE INDUSTRY

**Mechanical**
- Vibratory motor
- Discharge challenges
- Timely

**Hybrid**
- Vibratory motor & fluidizing nozzles
- Maintenance
- Sanitation
- Energy

**Additional Drawbacks**
- Money
- Time
Fluidization

“...to suspend (something, such as solid particles) in a rapidly moving stream of gas or vapor to induce flowing motion of the whole.” - Merriam-Webster
APPLICATIONS & USES

Common Applications
- Bulk powders
- Cereals/kernels
- Chemicals
- Ash
- Cement
- Other

Uses
- Bulk loadout
  - Trailers
  - Railcars
  - Ships
  - Silos
  - Other
**FCX SYSTEM**

**Air Supply**
- 5.5 Kw rotary motor
- Air Compressor w/ Pressure regulator for 0.5 bar (7.5 psi)
- Air distribution lines
- 1 or 2 air distribution rings

**Cone**
- Air distribution ring (1 inlet connection)
- Mesh liner (support)
- 5-micron porous liner

**Controls**
- Plant PLC to control cycle
- Bin possibly on loadcells (preferred application)
- Slide gate
OPERATION

- The FCX fluidizing cone has a 1250 mm internal ID, and 300 mm discharge diameter.
- For bins up to 1750 mm diameter, we use no additional fluidizing means.
- For bins up to 3000 mm diameter, we add 4 sintered bronze fluidizing nozzles to ensure the outer boundary of the bin is fluidized.
- For bins up to 4000 mm diameter, we add two rings of 4 sintered bronze fluidizing nozzles (8 total).
- All are fed off the same single blower air feed
Maximum Air Press.: 7.0 psig
Maximum Air Volume: 71 SCFM
Fluidizing Cone weight: 280 lbs.
• In the preceding diagram, you can see our FCX discharger applied to a 4000mm diameter bin.
• We can see the lower and upper distribution rings, and the two sets of nozzles.
• 25-ton tanker in under 2-3 minutes
  • With such high flour-volume within the tanker, it’s important to remove the displaced air.
  • For fluidized flour, and a 2-minute fill time for 25 tons, we need to extract some 30 m³/min. of displaced air.
  • Achieved through a suitably sized fan and filter connected directly to a telescopic spout.
OPERATION

PLC

RETENTION (1.5 min)

SLIDE GATE

SHUTDOWN
Sizing & Options

**Sizing**
- One-size fits all
- Adapter (If required)

**Material**
- Stainless Steel
- Carbon Steel

**PLC**
- Siemens
- Allen Bradley

**Air**
- Blower 5.5 Kw (Rotary Lobe Compressor)
- Air Compressor w/ pressure regulator (7.5psi)
Plant Design, Engineering & Drafting
CETEC specializes in bringing your vision to life and our dedicated drafting engineers are extremely detail oriented in making sure every specification meets our customers’ demands.

Fabrication & Machining
Our expert techs can design and manufacture whatever fabrication needs you may instore. Our staff works hand-in-hand with our draft engineering team to make sure your specifications and design meets your standards.

Retrofit & Reconditioning
CETEC offers complete overhaul and restoration services to meet your equipment needs. We also offer a variety of software upgrades and additional component functionalities.

Spare Parts
Our well-maintained stock levels include both mechanical and electronic components. With advanced and efficient shipping logistics, we guarantee a fast turn-around.

Maintenance
CETEC is an advanced maintenance provider that can assist in a wide spectrum of service options. Get the best out of your machinery and equipment by allowing our experts to assist you today.

Testing
Our testing facility allows us to assess and analyze your product on a wide range of CETEC units. For more information, please visit our website.
THANK YOU

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