





FCX
FLUIDIZING CONE

MIKE RICHARDSON





ABOUT US



ESTABLISHED IN 1986 | MARYLAND, USA



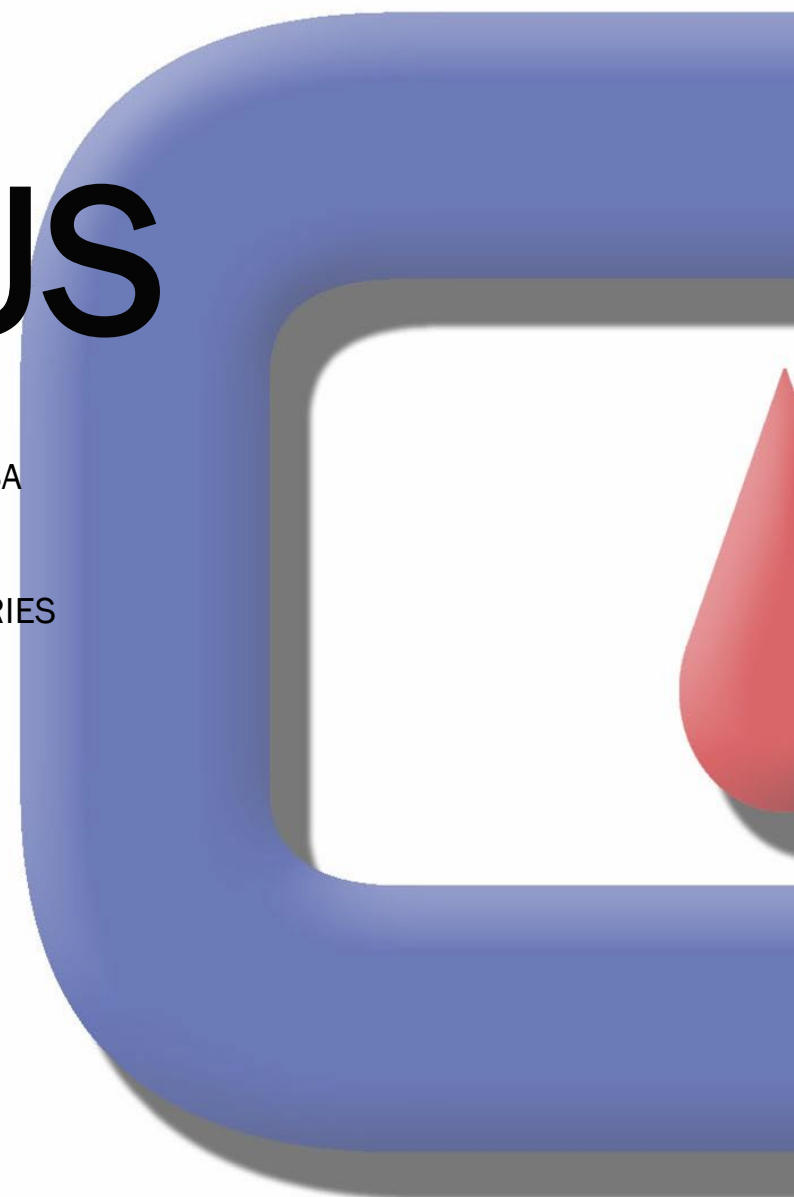
MILLING & FOOD PROCESSING INDUSTRIES



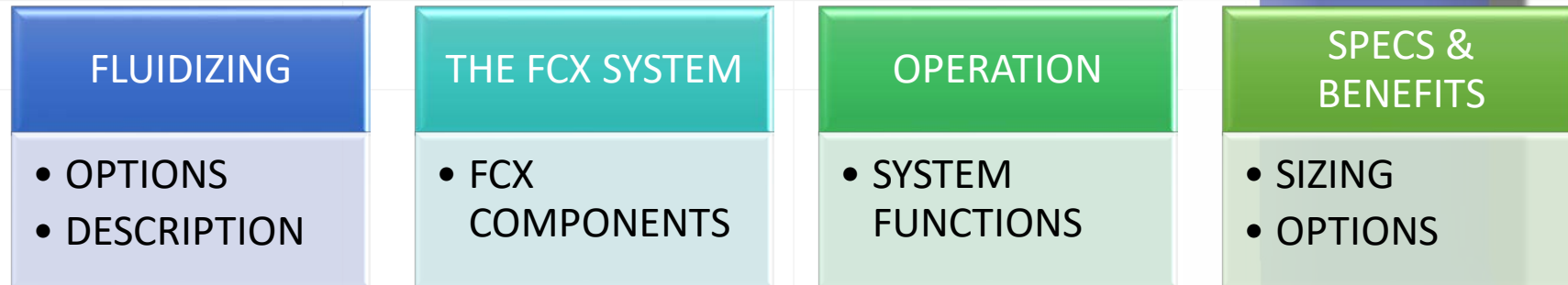
OUR MISSION

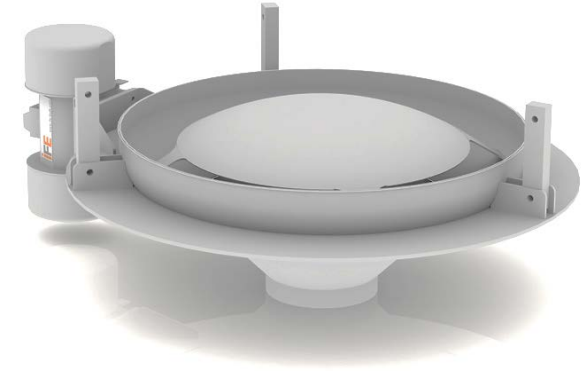


REPRESENTATION & PARTNERS



KEY POINTS





OPTIONS AMONG THE INDUSTRY



Mechanical

- Vibratory motor
- Discharge challenges
- Timely

Hybrid

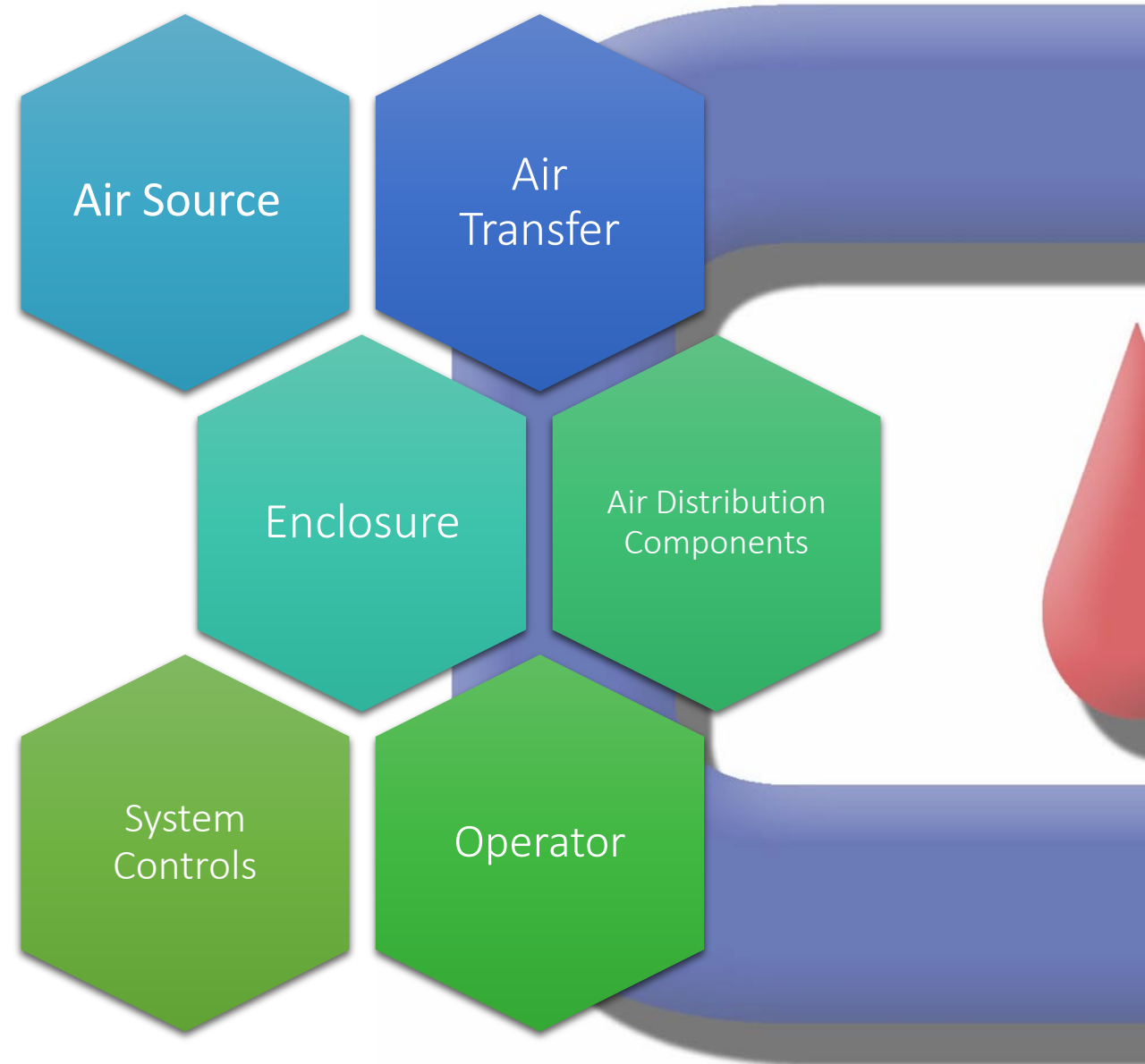
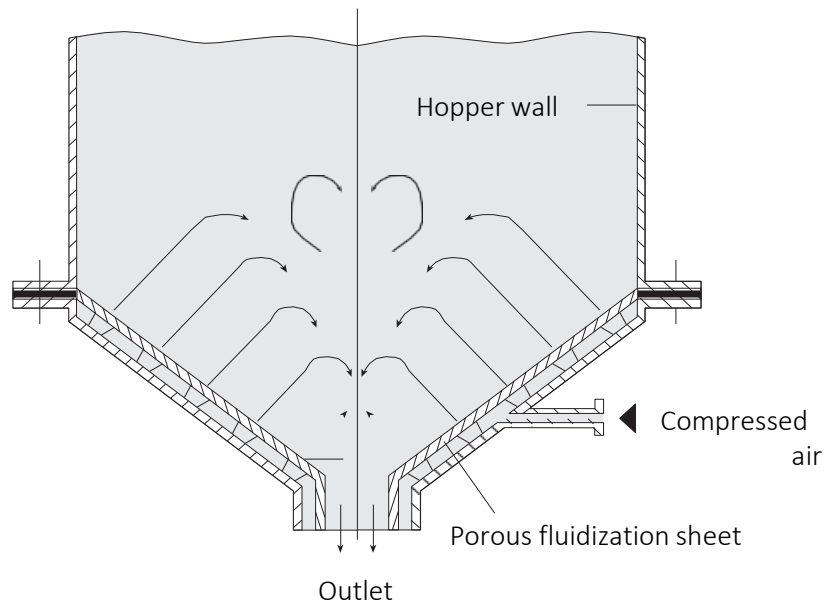
- Vibratory motor & fluidizing nozzles
- Maintenance
- Sanitation
- Energy

Additional Drawbacks

- Money
- Time

FLUIDIZING

"(v) to suspend (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
- Chemicals
- Ash
- Cement
- Other

Uses

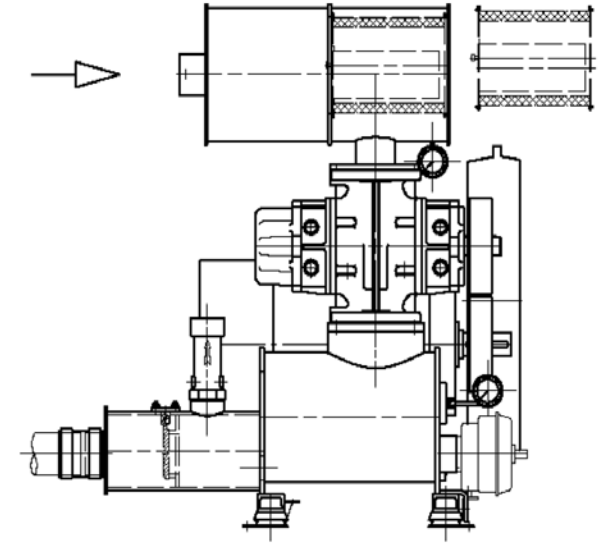
- Bulk loadout
 - Trailers
 - Railcars
 - Other

FCX SYSTEM



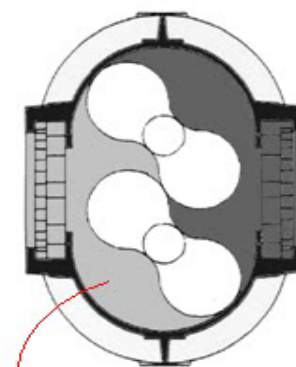
AIR SUPPLY

- 5.5 Kw rotary motor
- Belt-driven
- Pressure regulator (7.5 psi)
- Pneumatic lines
- 1 to 2 air distribution rings (dependent on product type and/or bin capacity)
- Suitable for up to 4-bins

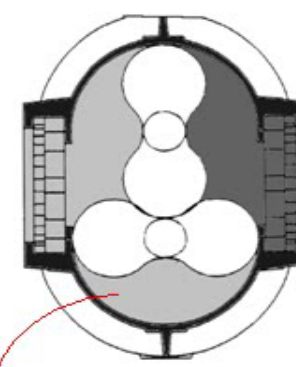


Light Gray is air at atmospheric pressure

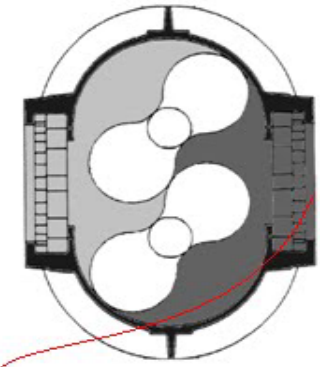
Dark Gray is air at line pressure



Air enters the chamber



Becomes trapped between the impeller and blower casing



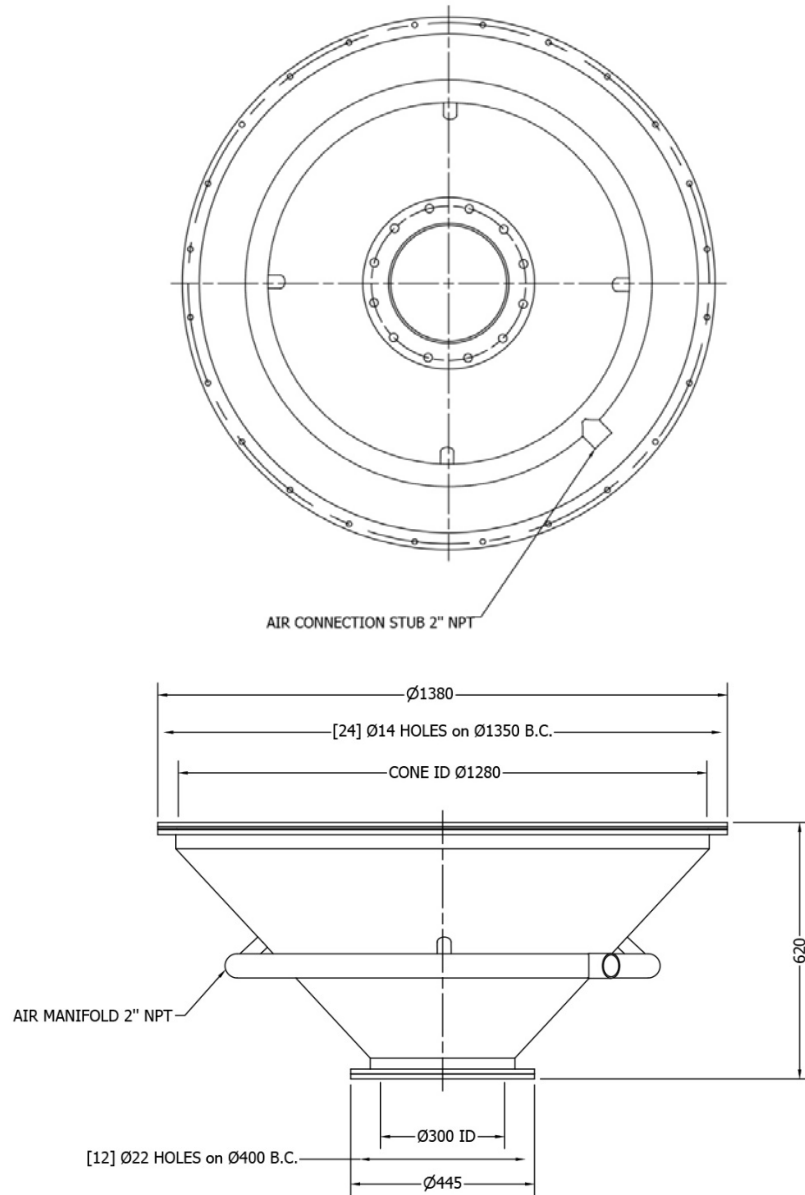
Exits at the discharge port

FCX CONE DESIGN

- Air distribution ring (4-6 inlet nozzles)
- Mesh support liner
- 5-micron porous liner
 - Replaceable
- Stainless Steel | Carbon Steel
- No moving parts



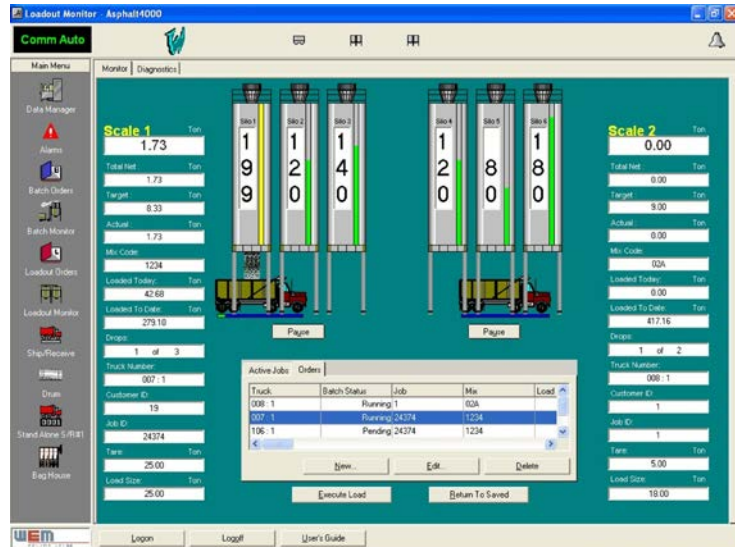
CONE DESIGN



- 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.

CONTROLS

- PLC – Programmable Logic Controller
- Capacitive Sensors



AIR DISPLACEMENT

INDUSTRIAL EXHAUST FAN

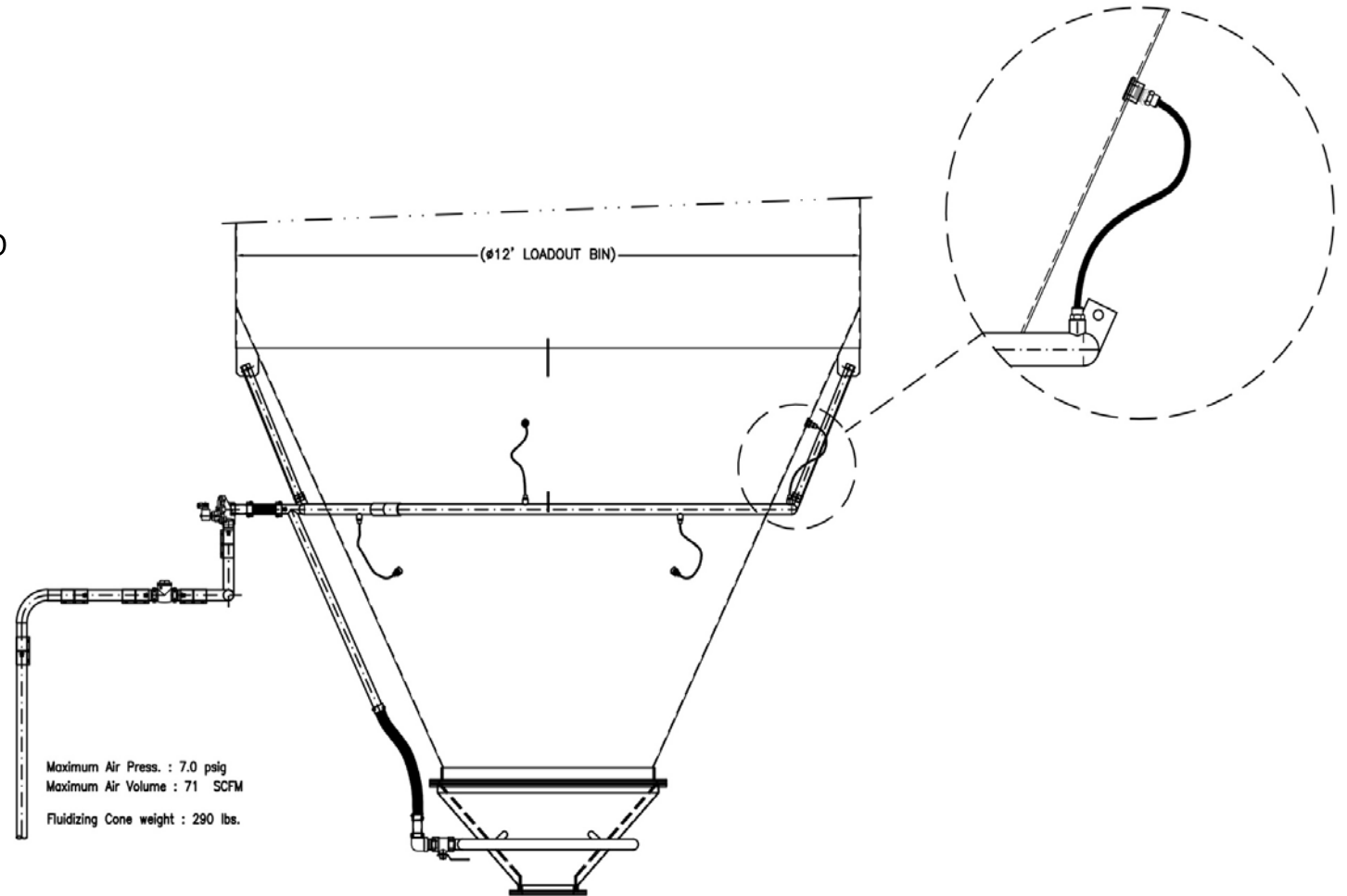
DUCTING



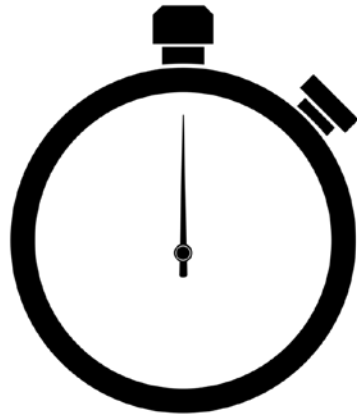
FILTRATION

AIR DISPLACEMENT

- FCX: 4000mm diameter bin.
- 25-ton tanker: Under 2-3 minutes
 - High flour-volume: important to remove the displaced air.
 - Fluidized flour: 2-minute fill time for 25 tons. Remove
 - 30 m³/min. of displaced air.
 - Suitably sized fan & filter connected directly to a telescopic spout.



OPERATION



PLC

RETENTION
(1.5 min)

SLIDEGATE

SHUTDOWN

SIZING & OPTIONS

Sizing

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

Material

- Stainless Steel
- Carbon Steel

Air

- Blower 5.5 Kw (Rotary Lobe Compressor)
- Air Compressor w/ pressure regulator (7.5psi)



SERVICES



Consulting & Drafting

CETEC specializes in bringing your vision to life and our dedicated drafting engineers are extremely detailed 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.



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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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