





# FC FLUIDIZING CONE X

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# ABOUT US

ESTABLISHED IN 1986 | MARYLAND, USA



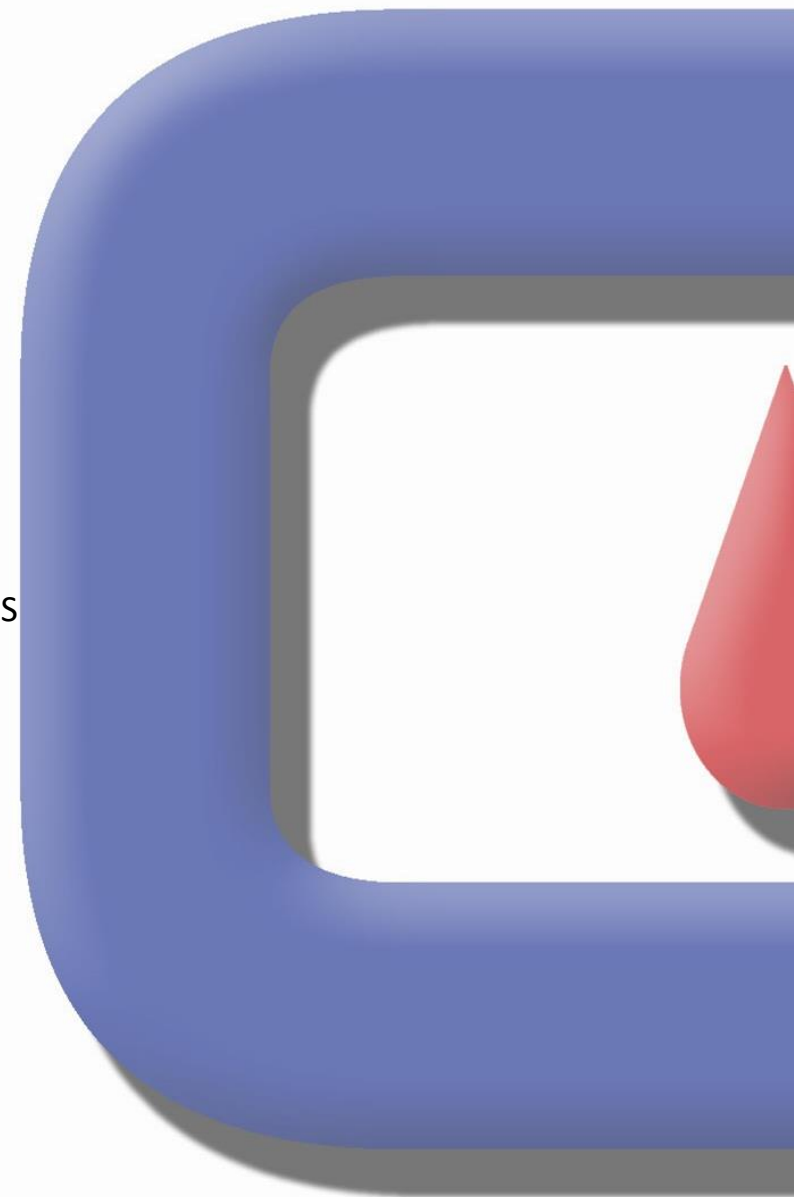
MILLING & FOOD PROCESSING INDUSTRIES



OUR MISSION



REPRESENTATION & PARTNERS



# KEY POINTS

## FLUIDIZING

- FCX MAKEUP

## THE FCX SYSTEM

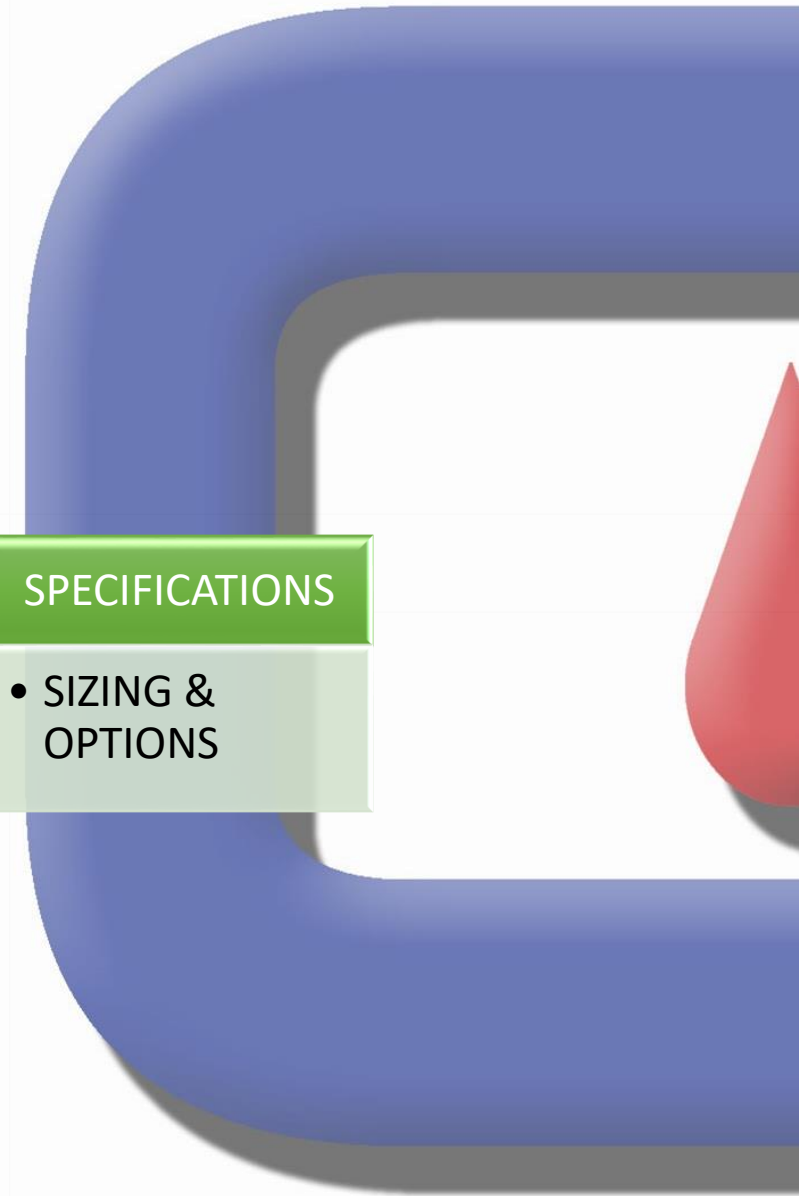
- FCX COMPONENTS

## OPERATION

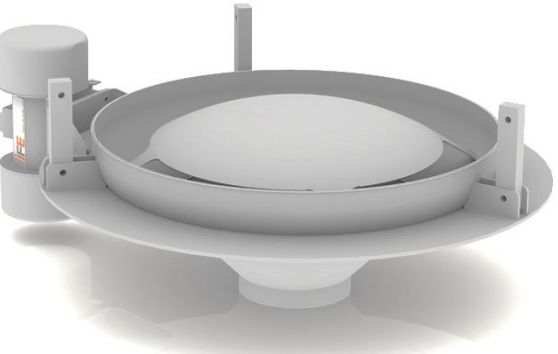
- FCX SYSTEM FUNCTIONS

## SPECIFICATIONS

- SIZING & OPTIONS



# OPTIONS AMONG THE INDUSTRY



## Mechanical

- Vibratory motor
- Discharge challenges
- Timely

## Hybrid

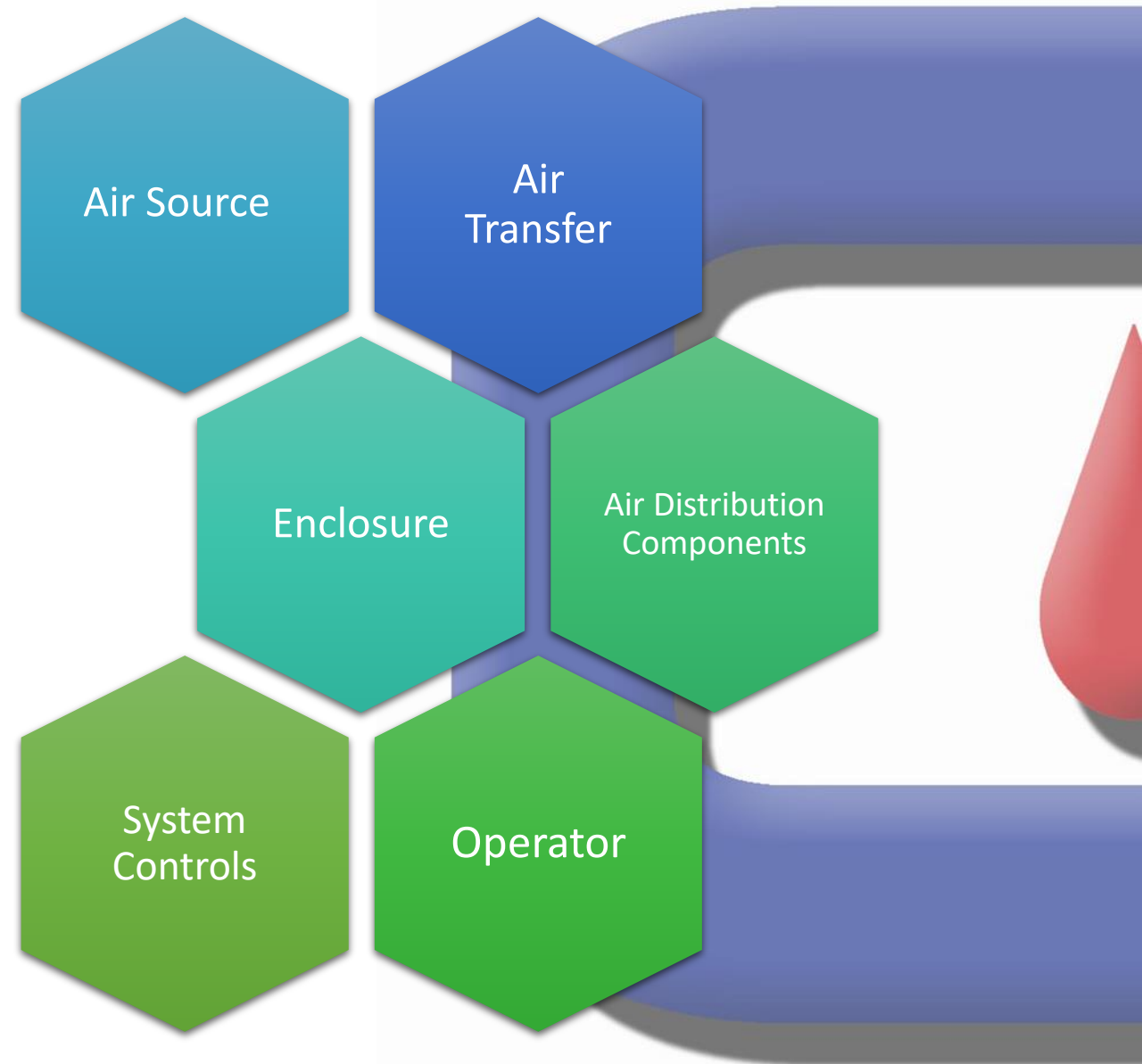
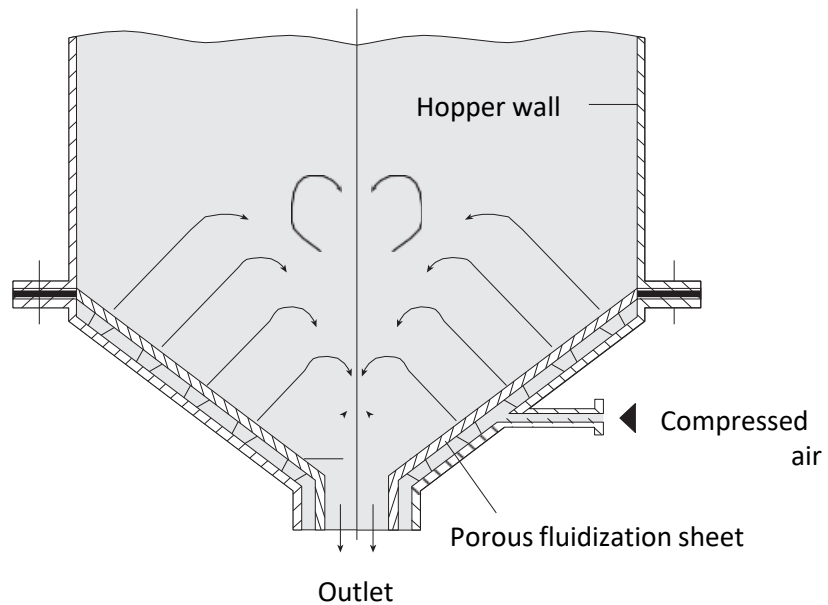
- Vibratory motor & fluidizing nozzles
- Maintenance
- Sanitation
- Energy

## Additional Drawbacks

- Money
- Time

# FLUIDIZIN

**G** 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



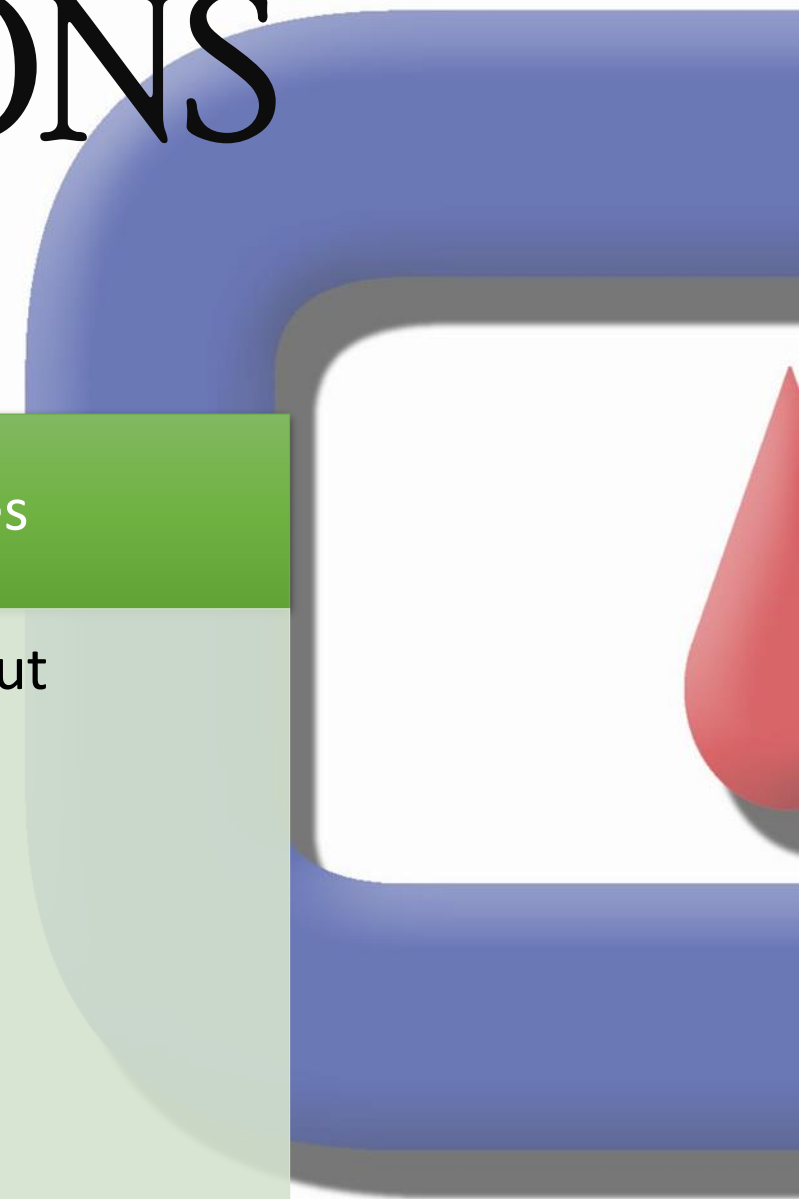
# APPLICATIONS & USES

## 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

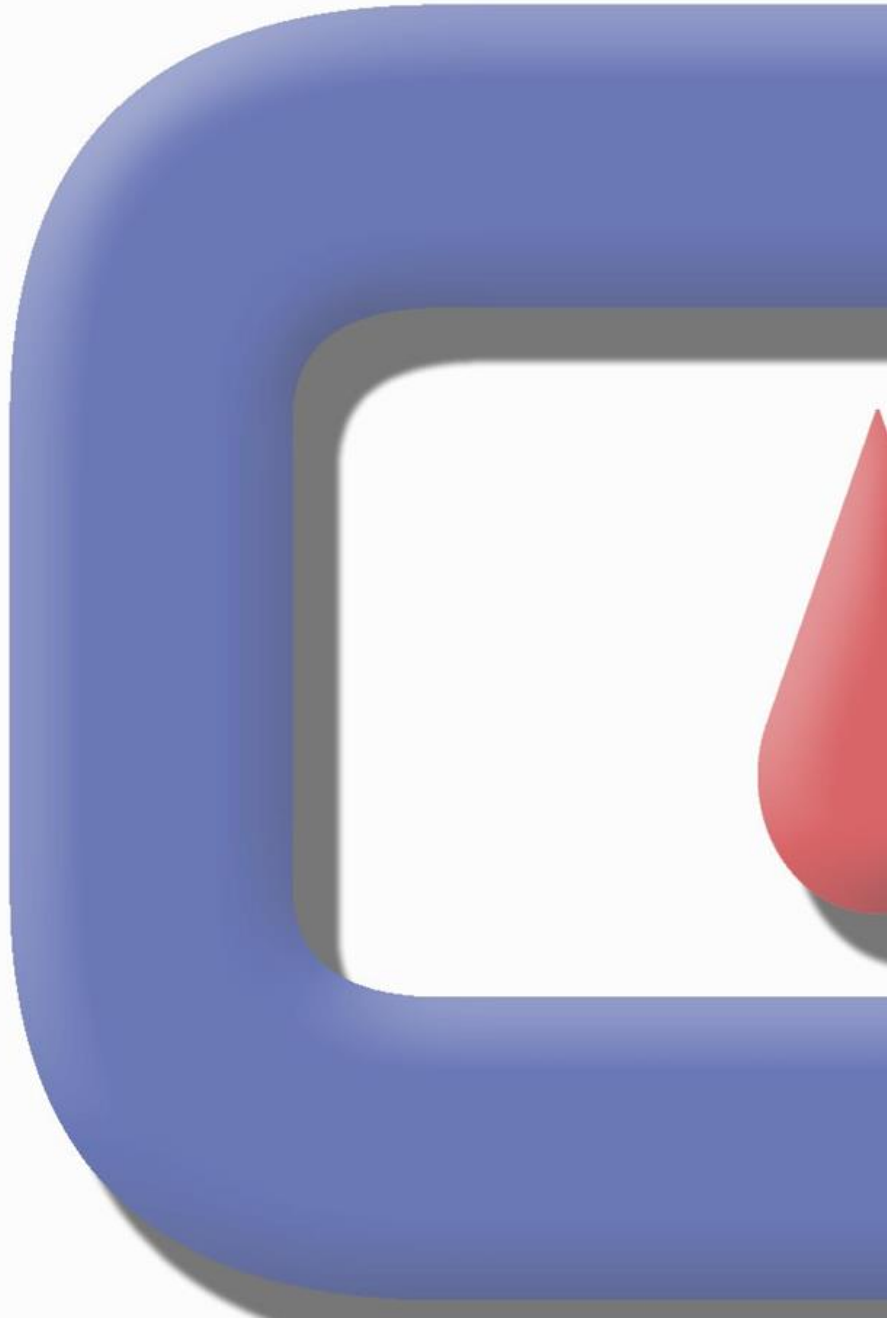
## Cone

- 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



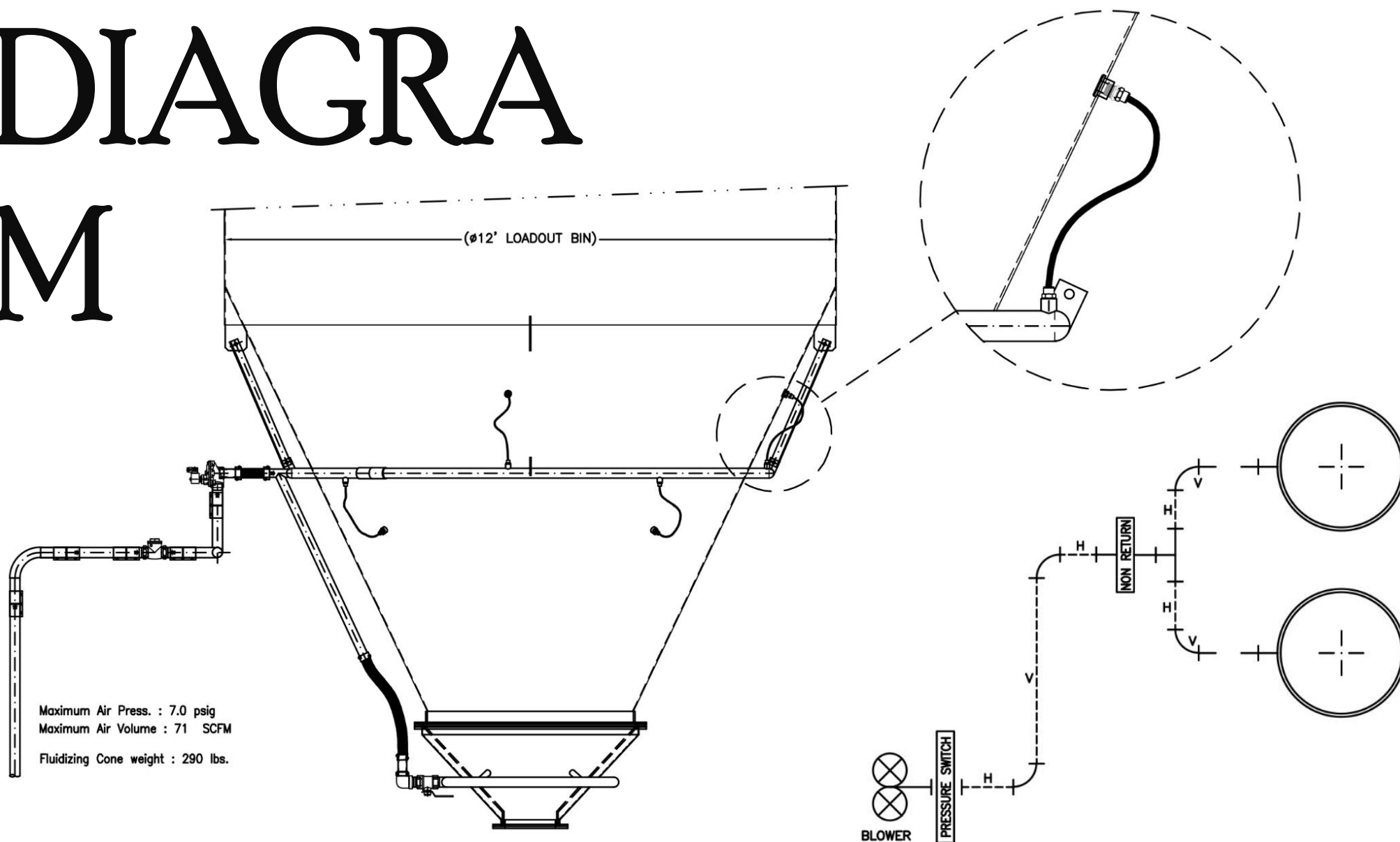


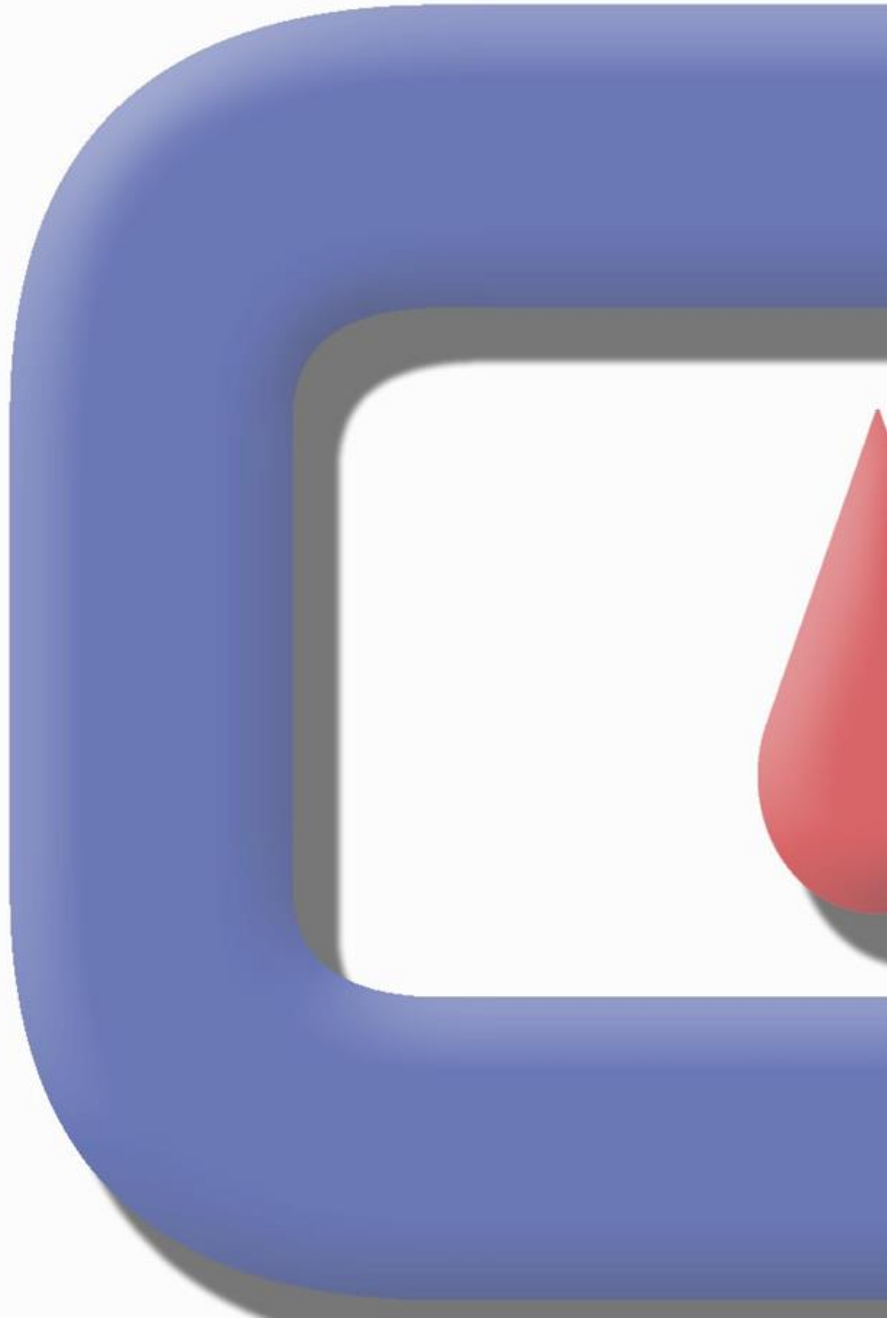
# OPERATION

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- 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

# DIAGRAM M



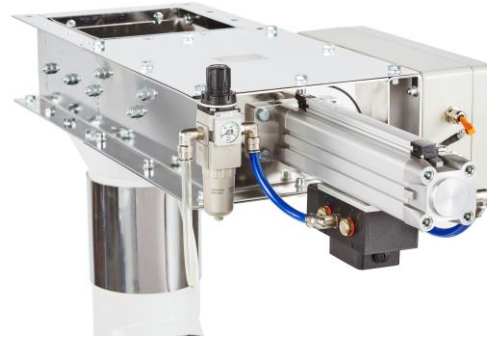
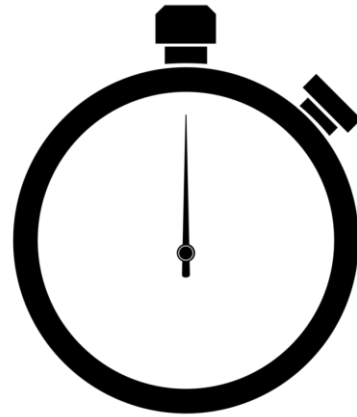


# OPERATION

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- 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 m<sup>3</sup> /min. of displaced air.
  - Achieved through a suitably sized fan and 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

## PLC

- Siemens
- Allen Bradley

## Air

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



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