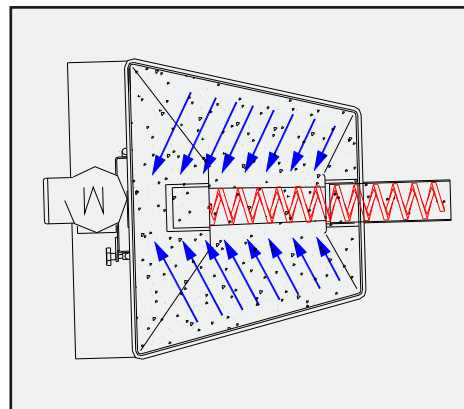
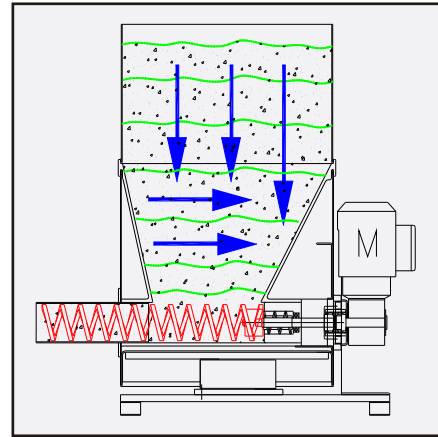


Brabender Technologie

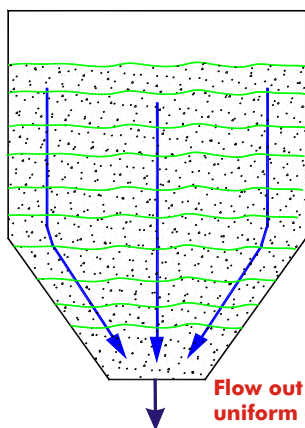
FlexWall® Plus

The REAL Mass Flow Feeder



The trapezoid shape and paddle activation pushes the ingredient toward the lead screw flight. The ingredient level in the hopper remains flat.

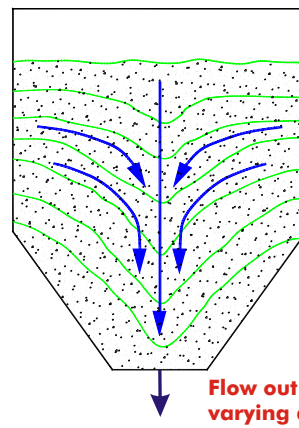
1. Mass Flow



Flow out has uniform density.

All particles in motion. Surface is flat as ingredient flows out.

2. Funnel Flow



Flow out has varying density.

Particles above outlet move more than particles at side. Surface has indentation. Severe case is a "rathole" particularly for poor flowing ingredients.

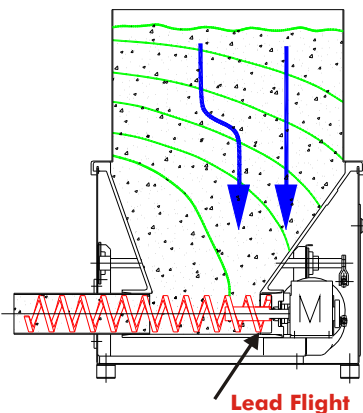


lines depict surface level of ingredient



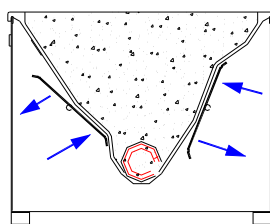
arrows depict direction of particle flow

3. Conventional FlexWall® (activation perpendicular toward screw)

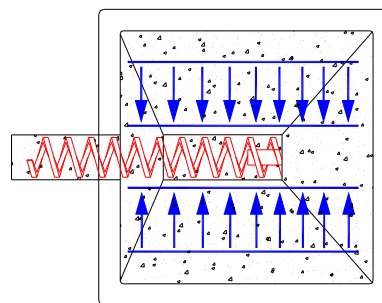


Lead Flight

Particles move to fill lead flight. Funnel flow results.

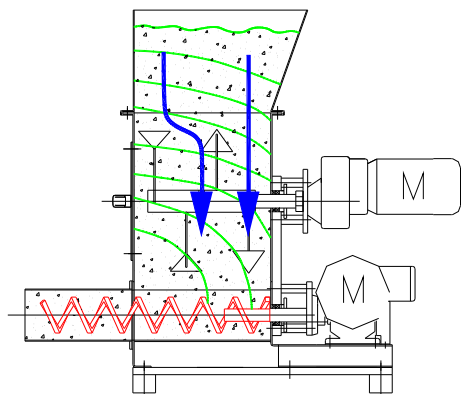


Paddle activation movement.

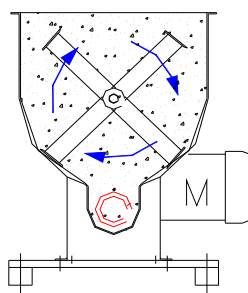


Activation forces on particles are at right angles into screw to ensure a uniform density in the screw.

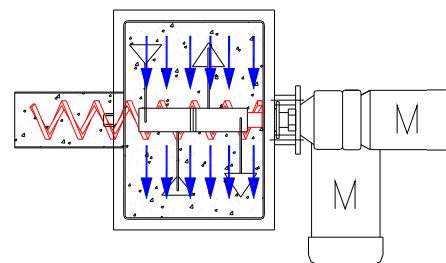
4. Internal Stirring Agitator



Particles move to fill lead flight. Funnel Flow Results

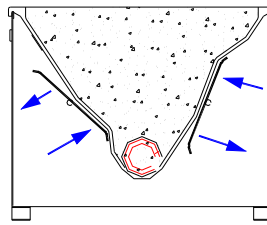
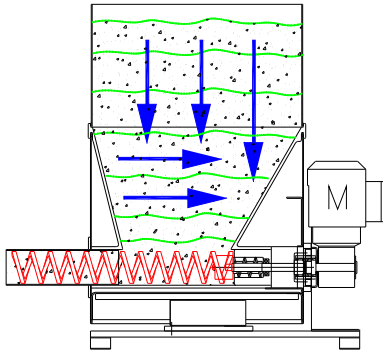


Stirring agitator activation motion

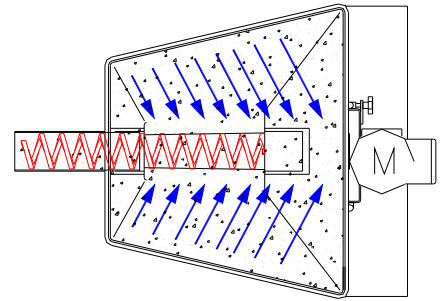


Activation forces on particles are at right angles into screw and away from screw to ensure uniform density in the screw.

5. FlexWall® Plus - Real Mass Flow Feeder



Paddle activation movement.



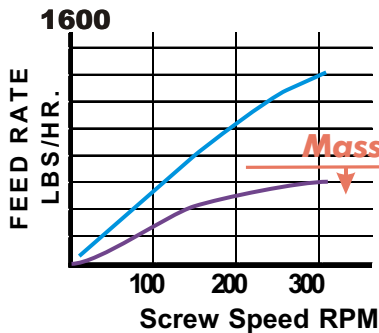
Particles move to fill lead flight in 2 directions, vertically by gravity and horizontally pushed by activation.

FlexWall™plus - bulk density of particles surrounding lead flight remains constant.

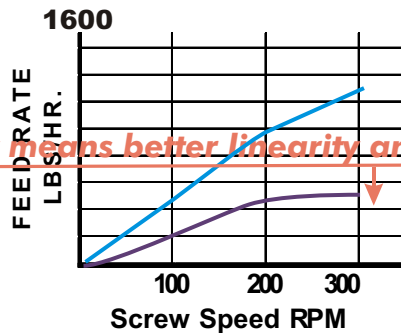
Activation is not at right angles to the screw. The particles move down by gravity and horizontal toward lead flight.

Feeder Performance Comparison

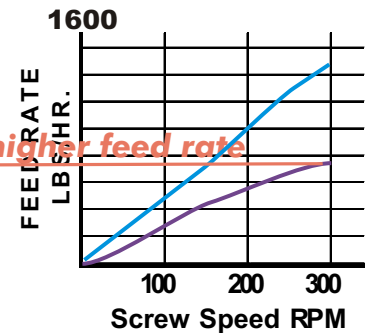
Conventional FlexWall®



Internal Stirring Agitator

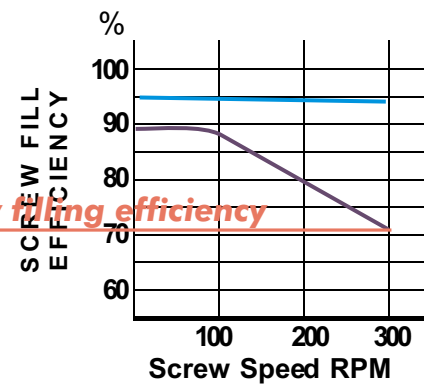
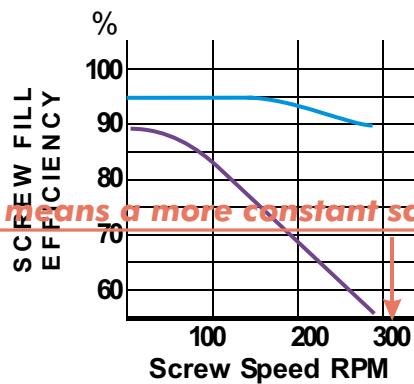
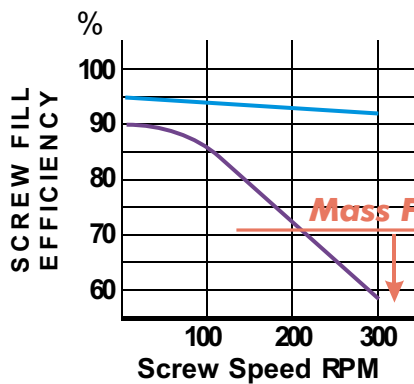


FlexWall®plus



Mass Flow means better linearity, and a higher feed rate

- Feeding sodium acetate, granular, 54lbs/cu.ft., free flowing.
- Feeding wheat flour; powder, 37 lbs./cu.ft., poor flowing.



Mass Flow means a more constant screw filling efficiency

Test performed with 1.5 inch dia. x 1.5 inch pitch screw and same hopper level variation.

We'll Show You!
Our Rep has a demo feeder, ask for a demo in your plant.

How does FlexWall[®] plus achieve Mass Flow?

- The trapezoid hopper shape presents different angles to induce reliable flow.
- Non parallel paddle activation pushes and squeezes the ingredient toward the lead flight.
- The ingredient is maintained at a constant bulk density at the lead flight - there is no aeration or creation of voids.
- Ingredient moves in all parts of the hopper, there are no "dead" spaces.

Why is Mass Flow better in a Screw Feeder?

- Reduces possibility of bridging in the feeder hopper.
- Paddle activation efficiency is increased resulting in paddle movement frequency reduction of 50%.
- Poor flowing ingredients feed similar to free flowing ingredients.
- Feed rate repeatable accuracy is improved due to more consistent bulk density also a higher screw speed increases flow pulse frequency.
- Feed rate less sensitive to hopper level variation (improves volumetric feed rate repeatability).
- A dimensionally smaller feeder can achieve higher feed rates (reduced floor space requirements).

www.brabenderti.com

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