

# FLUIDIZATION PAD

The Powtek **U-100** Fluidization Pad is widely used to aid the flow of product out of bins and silos.

It is one of the most simple and economical flow aids devices available on the market.

With its large contact surface and its round shape air is distributed more uniformly to the material inside the bin.

Being made in of durable polymer this pad is rust free. There is no metal contact with the product. It is also unaffected by possible moisture present in the air.



## AIR PADS or VIBRATORS?

There are many **products** that do not respond well to vibration. Since they are **highly compactible**, if vibrated, the discharge is inhibited. By making the material more fluid and without any shaking, aerators are much more capable of achieving a better flow.

## How it works

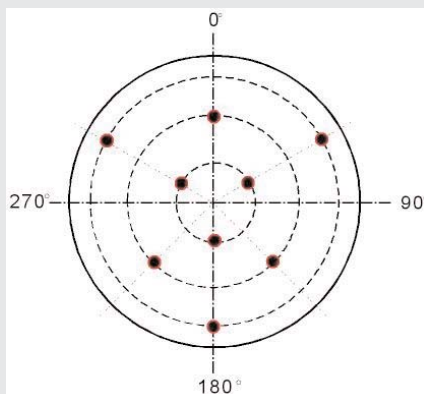
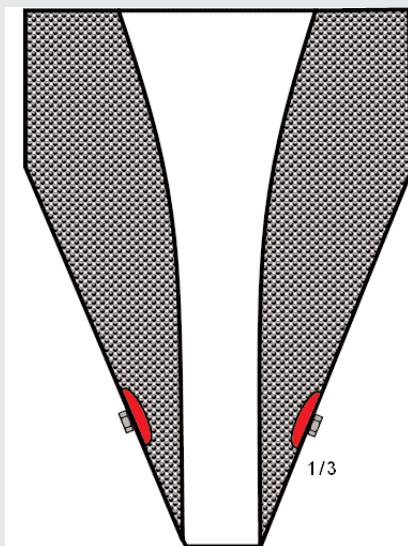
By adding air to the powder inside the silo's cone the friction between the wall and the product is reduced enhancing a more balanced material discharge.

The number of pads to be used depends on the cone's size. Pads are usually applied in rows of 3. Common quantities are 3 (small bins); 6 (medium silos); 9+ (larger silos)

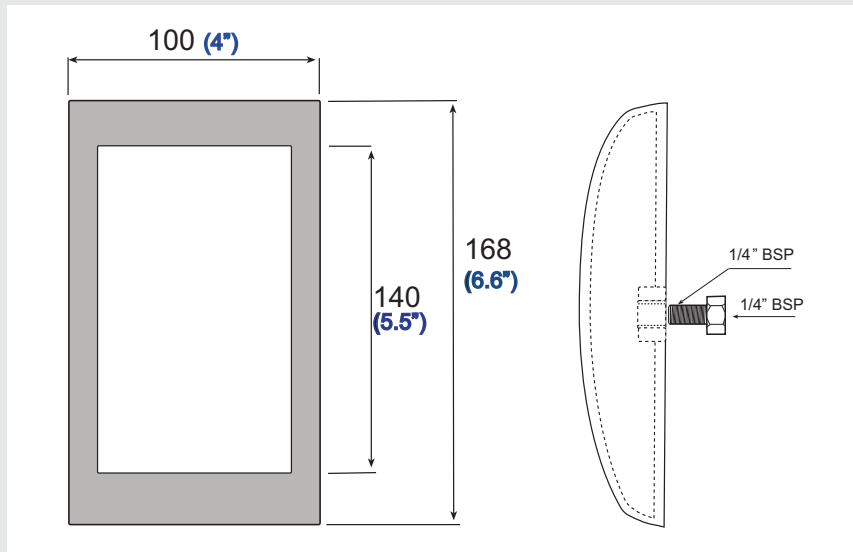
The operation cycle can be:

- **continuous** with a constant flow of air at 3 psi
  - **intermittent** using a higher 10 psi air pressure.
- In this case a timer and a solenoid valve are required.

## Installation Layout



## Dimensions



## COMPONENTS REQUIRED

In order to operate the fluidization pads the following components are needed:

### Air regulator

Manual **air valve** or, for automatized plants, a **solenoid valve** and a switch. Air valve opening should be synchronized with opening of bin valve.

Time of opening should be long enough to properly fluidize product to achieve best product outflow. However it should not be too long as it might add too much air and reduce the specific weight of the material.

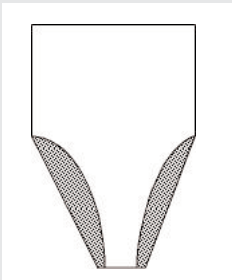
Example: If we have cement in the bin discharging into a screw conveyor below, the capacity of the auger will be diminished in case of overfluidized cement. This will increase the time required to fill the batch hopper.

The installation is made from inside. The pad is secured through a 1/4" BSP metal fitting.

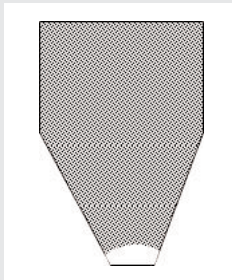
## TECHNICAL SPECS

Pressure	3 PSI
Air Consumption	0.1 cfm at 3 PSI
Weight	1/2 lbs
Housing	Durable polymer
Contact surface	100 sq cm - 15 sq inches
Inlet air port size	1/4" BSP

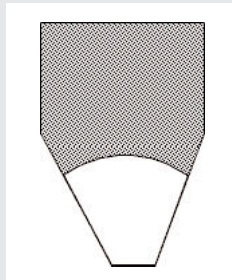
## COMMON BIN PROBLEMS WITHOUT FLUIDUZATION



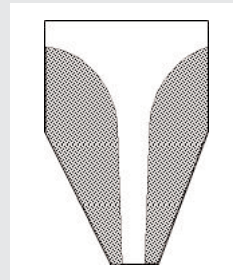
**Clinging**



**Bridging**



**Arching**



**Ratholing**



# POWTEK

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