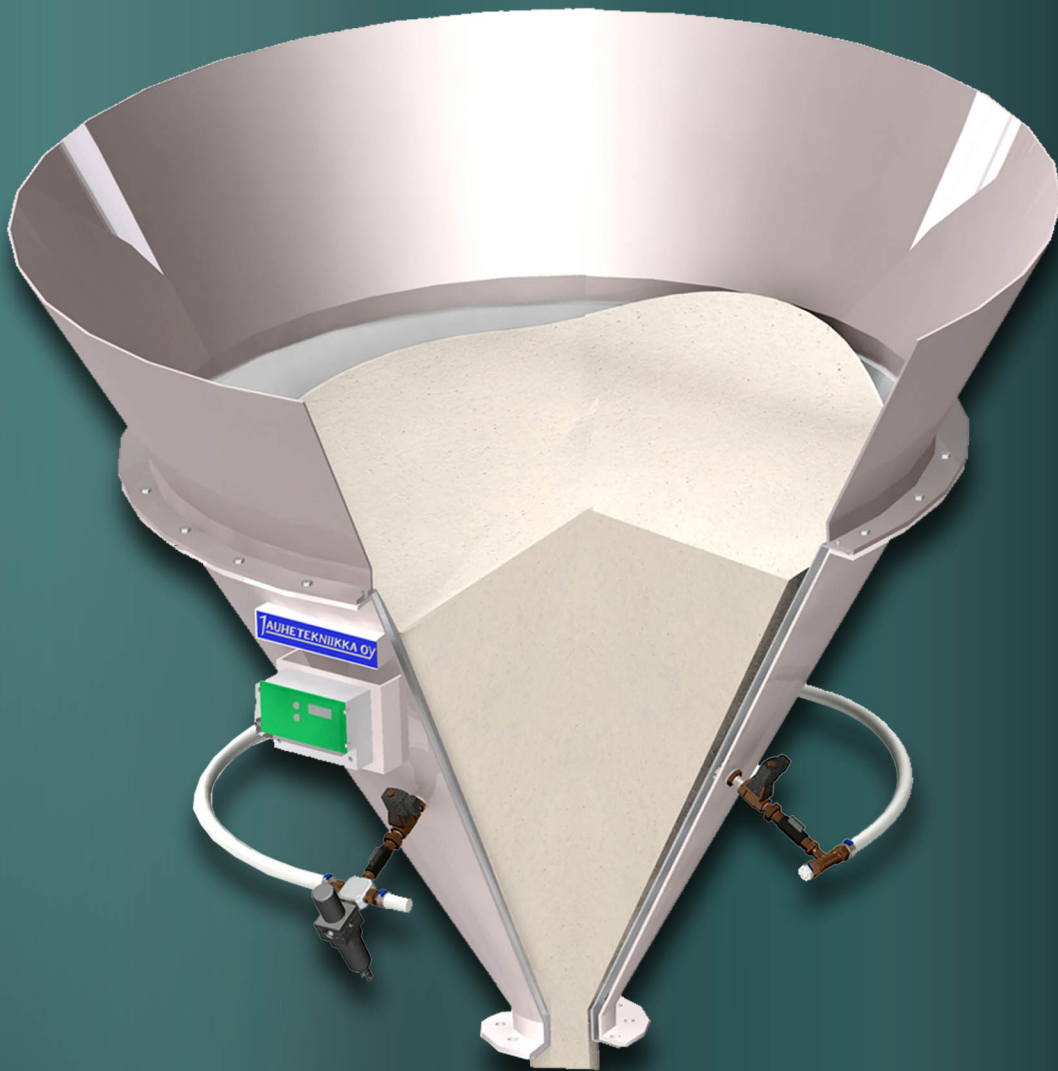


ADVANCED POWDER HANDLING SOLUTIONS
for food industry and bakeries

Powder Technic Fluidiser™

discharge aid for silos and hoppers



POWDER
TECHNIC

Features and benefits



Pic 1. A Sequencer Timer Unit controls the air burst and pause times in precision of 0.1 s intervals, thus ensuring a perfect control of fluidisation.

1. Sequencer Timer Unit for fluidisation bursts

- ▶ Timer unit directs the air burst into different fluidisation sectors in the Fluidiser cone. Remote control connection starts the timer unit when the silo discharge begins.
- ▶ The timer unit has pre-adjusted factory settings that are suitable for most powders.
- ▶ Suitable also for outside silos in winter conditions up to - 30 degrees

2. Pressure regulator/Air Filter Unit for compressed air

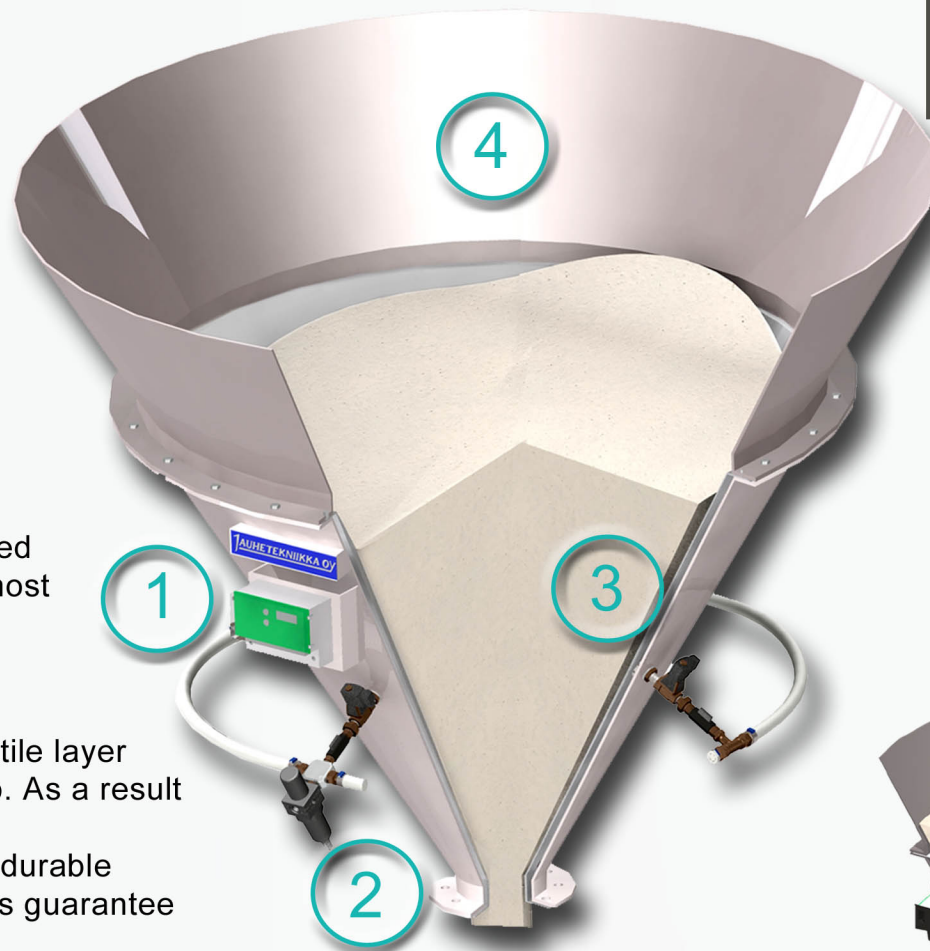
- ▶ A combined air pressure regulator and filter unit adjust the operation pressure to 2 bars and filters moist and dirt from the compressed air. Therefore the product is extremely reliable to use.
- ▶ The pressure regulator has pre-adjusted factory settings that are suitable for most powders.

3. Fluidisation textile layer

- ▶ Air burst penetrate the fluidisation textile layer evenly into the material inside the silo. As a result the powder aerates from a large area
- ▶ The textile layer is made of extremely durable industrial PolyAmide that has a 3 years guarantee

4. Fulfils EU safety and ATEX regulations

- ▶ The product fulfils all EU safety and ATEX requirements.
- ▶ The product has a CE marking to declare that it meets harmonised European standards.



CE Ex II 3D

Overview: The Powder Technic Fluidiser™ is the most effective solution in the market for ensuring a steady discharge of powdery materials inside silos and hoppers. Powder Technic's Fluidiser™ equipment is based on micro-processor controlled fluidisation technology, which is THE ONLY effective technology for discharge of powders that have fluidisation characteristics (that is: they form dust).

Suitability: The product is suitable for all dry powders that are used in food and process industry. The Fluidiser™ equipment is easy to retro-fit with adapter flanges to all sized and shaped silos and hoppers.

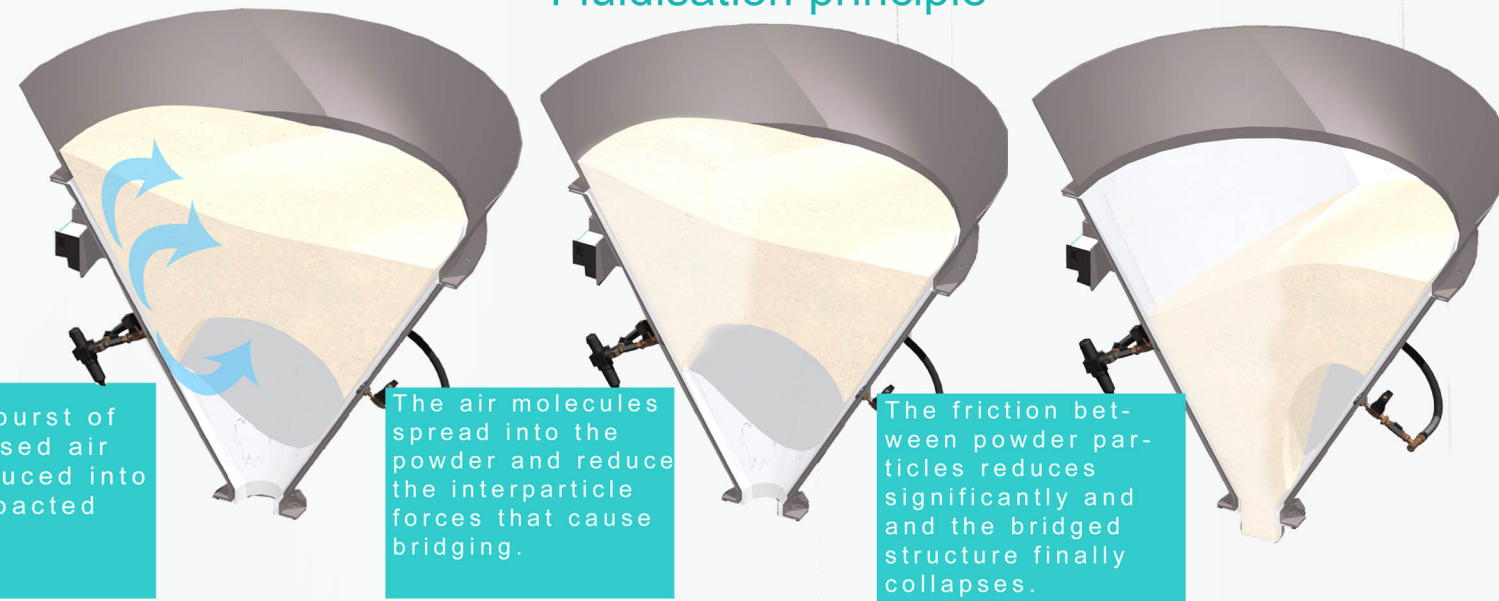
Comparison to vibrator-based solutions (bin-activators): Fluidiser™ equipment works best with fine, non-free flowing and dust-forming powders – it's not a good solution for coarse, granulated materials.

Vibrators/bin activator are the best solution for coarse materials and the worst solution for fine powders – they tend to compress the powder, not discharge it.

MAIN BENEFITS

- ▶ **Improves productivity** -> production delays because of material bridging are gone
- ▶ **Saves money** -> work-time spend on solving bridging problems can be spend more productively
- ▶ **Improves end-product quality** ->steady material flow eliminates material shortages because of discharge problems
- ▶ **Reliable - install and forget** ->The system is based on low-pressure air burst and has virtually no moving parts, thus it needs no maintenance and it doesn't stress silo structures like bin activators do.

Fluidisation principle



A short burst of compressed air is introduced into the compacted powder.

The air molecules spread into the powder and reduce the interparticle forces that cause bridging.

The friction between powder particles reduces significantly and the bridged structure finally collapses.

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Technical specifications

Manufacturer: Powder Technic Ltd.
Suitability: All dry powders, also non-free flowing
Atex classification : ATEX II 22 on request

Steel cone

- construction material: Stainless steel epoxy painted carbon steel on request
- cone angle: 60 degrees
- flanges according to dimension drawing, other sizes on request

Fluidisation textile layer:

- material: Industry-grade Polyamide
- heat endurance: up to 100 degrees

Air regulator/filter unit

- pressure meter
- size: 1/2" - pre-assembled and pre-adjusted

Sequencer Timer unit

- pulse time/pause time setting with +/- /menu -buttons
- remote control connection
- pre-adjusted factory settings
- LCD display
- operation temperature +30..-30 centigrade with optional heating cable
- 230 VAC

Fluidisation valves

- manufacturer: Byrkert type: 6221 magnetic valve
- 24VDC
- size: 1/2"

Applications



Powder Technic Fluidiser™ equipment installed into 10 powder silos and 2 collector hoppers at Fazer Mill's road tanker loading station in Lahti, Finland.

Accessories



Adsorption dryer

- removes moisture from compressed air



Timer Unit heating cable

- Pre-set and installed heating cable for outside silos in winter conditions
- operation temperature: +30..-30 degrees centigrade



ATEX II 22 components

- fluidisation valves and other components fulfil ATEX II 22 requirements