

Coperion K-Tron K3 Vibratory Feeder

Highly accurate feeding solution for the gentle handling of a wide variety of free-flowing materials, including friable products, abrasive products, products with non-uniform shapes and glass fibers.



The Coperion K-Tron K3 line of vibratory feeders has been completely re-designed, featuring a unique, patent-pending drive system. The innovative K3 vibratory feeder is able to achieve accuracies averaging 35% better over traditional technologies. The new feeder design features a modular concept incorporating the highly accurate Smart Force Transducer (SFT) weighing technology. The modular quick change design allows the easy exchange of feed trays or hoppers for fast adaptation to new processes and formulations, while also ensuring easy cleaning and maintenance.

The key to achieving high accuracy is the ability to deliver a continuous, even mass flow with minimal pulsations. The new K3 vibratory drive is able to do this thanks to a completely new shock absorber design. Unlike the rubber or spring shock absorbers used in conventional vibratory feeders, the new K3 line uses a unique flexible pendulum technology which provides shock absorption only parallel to the desired direction of motion, ensuring an even material flow of the product along the entire length of the tray.

The fast-acting controller inside the coil drive module uses input from sensors to adjust the coil drive signal to maintain clean sinusoidal displacement for optimal mass flow.

The new K3 vibratory feeders are available in standard and hygienic design (HD) as well as Pharma configurations.

Vibratory feeders are ideally suited to applications such as the high accuracy feeding of finished food products to packaging lines, uncoated tablets to coating lines, as well as difficult feeding of pellets or regrind to plastic extrusion lines.

Features

Key features of the new K3 vibratory feeders include:

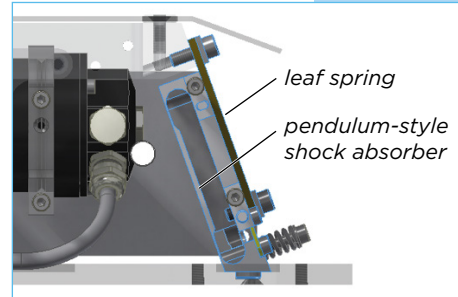
- Lower maintenance requirements due to the absence of mechanical wear parts
- Ensures gentle handling of bulk materials
- Special quick-release clamp mechanism on the feeder tray allows for quick product changeover
- Modular design allows for custom tray configurations to meet the specific needs of an application
- Ideal for friable or irregularly shaped bulk materials not suitable for other feeder technologies
- Suitable for bulk materials from -20 to 120°C [-4 to 248°F] with an open tray; max. 60°C [140°F] with a closed tray; max. 180°C [356°F] with a High Temperature tray
- HD version includes a hygienic silicone cover to enclose the complete drive assembly, making it suitable for food applications
- Certified for use in ATEX zones 22/2 outside and zone 21 inside as well as NEC Class I & II, Division 2
- Low energy consumption in comparison to other feeding technologies



Key Features of the K3 Vibratory Feeder

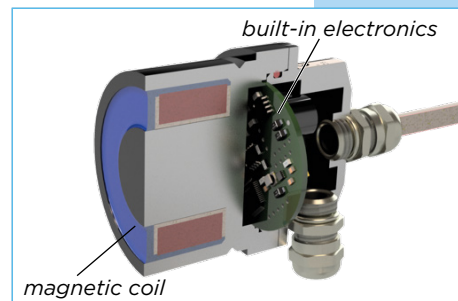
Unique shock absorber design

- New flexible pendulum design eliminates rotational movement
- Continuous, even mass flow along entire length of feed tray
- High accuracy feeding of a wide range of bulk materials
- Ensures stable parallel tray motion, allowing more flexibility in designing custom trays



New coil drive module

- Built-in electronics for faster, more robust digital processing
- Controlled sinusoidal displacement for more precise motion, especially at very low amplitudes
- Integrated sensors measure key parameters such as acceleration, current, temperature, etc.
- Automatic tray weight/displacement compensation



Quick change tray design

- Quick release clamps integrated into the tray cover
- Tray is easy to exchange for quick product changeover
- Modular design allows for custom tray designs



Hygienic & Pharma designs available

- Hygienic silicone cover encloses complete drive assembly
- All product contact parts stainless steel or FDA and EC 1935/2004 compliant materials
- Easy-clean design with no crevices or dead spaces for material to accumulate



Four Models

- **V100** for feed rates 1 to 500 dm³/h (0.035 to 17.66 ft³/h)
- **V200** for feed rates 8 to 4000 dm³/h (0.28 to 141.25 ft³/h)
- **V300** for feed rates 17 to 8500 dm³/h (0.6 to 300 ft³/h)
- **PH-V200** for feed rates 5 to 1600 dm³/h (0.18 to 56.5 ft³/h)

Feed rates are based on a free-flowing granulate bulk material.

