

Application

The ActiFlow bulk solid activator reliably prevents bridge-building of cohesive bulk materials, eliminating the need for mechanical vertical agitation. The ActiFlow can be used with all K-Tron loss-in-weight modular feeders equipped with a K-Tron Control Module (KCM) and standard 4D and 6D asymmetric hoppers, up to 180 dm³ (6.4 ft³).

Design

ActiFlow is a non product contact device, consisting of the ActiFlow device and the ActiFlow Control unit. The ActiFlow device is bolted to the outside of the rear wall of the extension hopper, above the feeder. Together with the ActiFlow Control unit, it continuously activates the material inside the hopper with an optimized frequency and amplitude. ActiFlow is self-tuning; the KCM constantly monitors the system and regulates the ActiFlow, adjusting the frequency and amplitude to compensate for changes in hopper fill level or material flow, thus preventing bridges or rat holes before they can form.

Working in concert with K-Tron's patented Smart Force Transducer (SFT) load cells, advanced filtering algorithms are used to screen out vibrations, ensuring an accurate weight signal, even with the ActiFlow running.

The ActiFlow Control unit must be mounted near the feeder control. Only the ActiFlow device is added to the tare of the feeder setup.

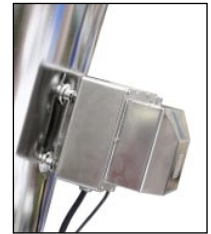
Mechanical Options

- ActiFlow Device in sanitary design for use in pharmaceutical applications
- Stainless steel housing for ActiFlow Control

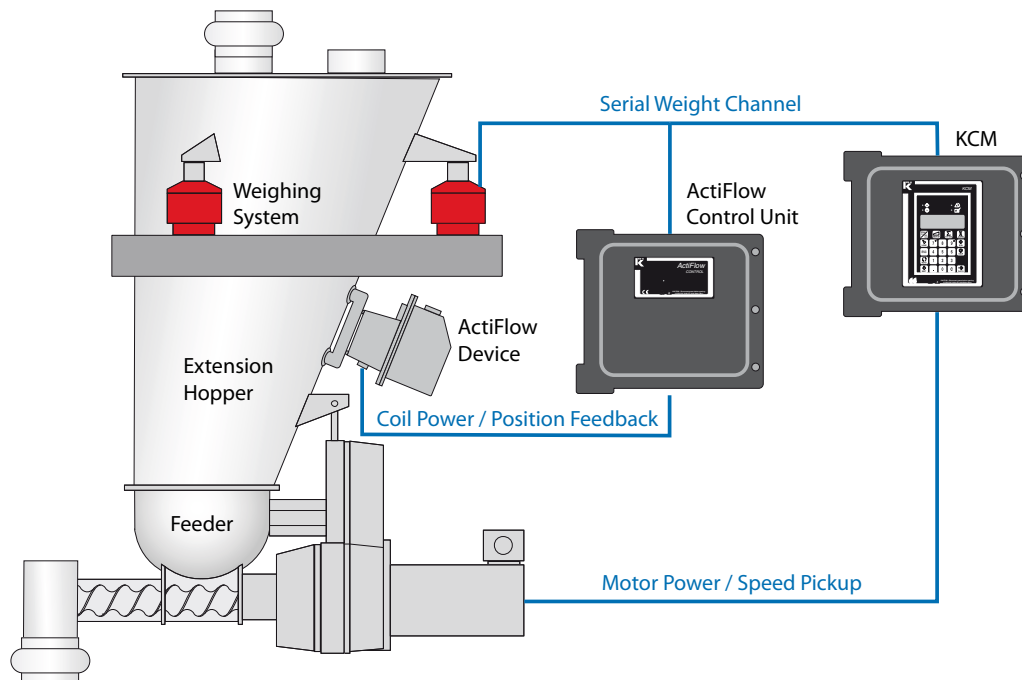
Hazardous Location Solutions: (see sheet I-000002)

Standard: NEC Class II, Div. 2, Group F & G
 ATEX 3D/3D (outside/inside)

Option: NEC Class I, Div. 1, Group C & D
 ATEX 2GD/2GD (outside/inside)



The ActiFlow device is available in a standard version for general use (below) and a pharma version (above).



Technical Data

Criteria	ActiFlow device	ActiFlow Control unit
Material of construction	Cast aluminum painted, stainless steel (non product contact)	Cast aluminum housing, painted
Operating temperature range	0...50°C (32...122°F)	0...50°C (32...122°F)
Storage temperature range	-25...80°C (-13...176°F)	-25...80°C (-13...176°F)
Suitability for bulk materials	Most materials	n.a.
Impact on the bulk material	Mixtures: Minimal risk of product segregation	n.a.
Space requirement above the feeder	None	n.a.
Influence on feeding accuracy	Improved material flow	n.a.
Influence on feed rates	For certain bulk materials higher feed rates	n.a.
Maintenance	Maintenance free	Maintenance free
Hopper discharge	100%	n.a.
Restrictions on inlet/vent placement in hopper lid	None	n.a.
Hopper sizes	4D-hopper: 50L and 80L 6D-hopper: 110L and 180L	n.a.
Hopper type	Asymmetric	n.a.
Unit weight	9.6 kg (21.6 lb)	9.5 kg (20.9 lb)
Cable length <i>ActiFlow</i> Device to Control Unit	standard 3 m (10 ft) max. 10 m (33 ft) with add'l junction box	n.a.
CE compliance	Yes	Yes
Max. power output	n.a.	0.9 kVA
Power supply <i>ActiFlow</i> control	n.a.	115V AC, 50-60Hz 230V AC, 50-60Hz
Enclosure rating	NEMA 4, IP 65	NEMA 4, IP 65
EMC	EN61000-6-4:2007 , EN61000-6-2:2005	EN61000-6-4:2007 , EN61000-6-2:2005
Electrical safety	EN61010-1	EN61010-1
Hazardous locations	Standard: NEC Class II Div 2 or ATEX 3D Special: NEC Class I Div 1 or ATEX 2GD	NEC Class II Div 2 or ATEX 3D
Pharma / Food version	Sanitary version available on request	Stainless steel housing available on request