

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

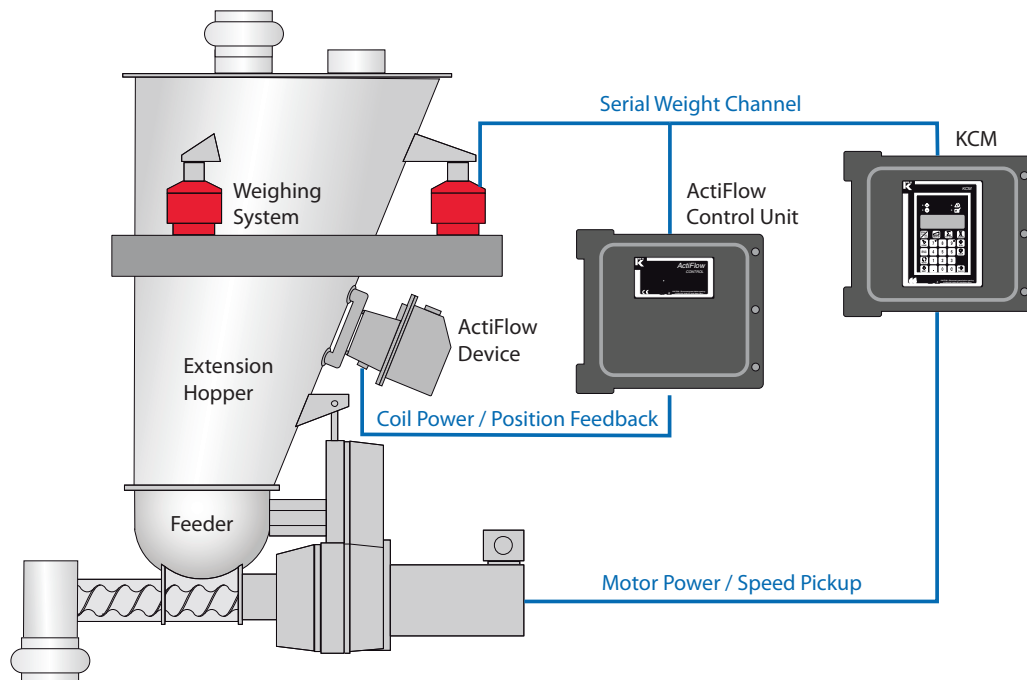
ActiFlow is a non product contact device, consisting of the ActiFlow device and the ActiFlow Control unit. The ActiFlow device is bolted to the outside of the rear wall of the extension hopper, above the feeder. Together with the ActiFlow Control unit, it continuously activates the material inside the 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.

Hazardous Location Solutions: (see sheet I-000002)

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|-----------|------|-------------------------------|
| 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) |



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 consumption | n.a. | 1200W |
| 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 | EN50081-2, EN50082-2 | EN50081-2, EN50082-2 |
| 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 | Available on demand | n.a. |