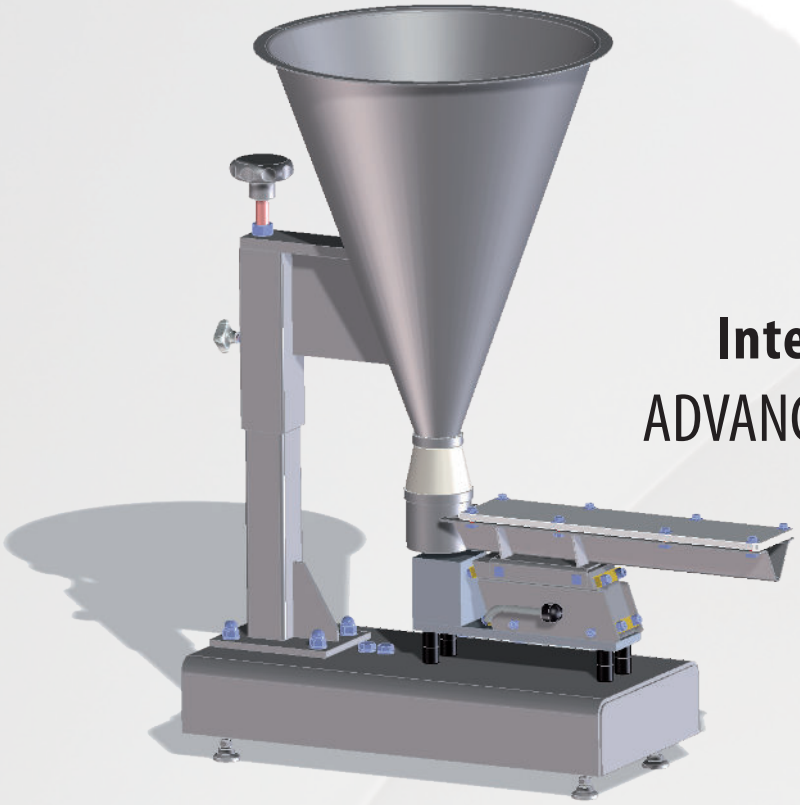


AVITEQ
Vibrationstechnik GmbH

Intelligent combination,
ADVANCED DOSING

AViTEQ's NEW **LOSS-IN-WEIGHT FEEDERS**

FUNCTION

The AViTEQ Loss-in-Weight Feeders are designed to ensure a continuous, gravimetric and high tolerance batch dosing of flowable bulk materials that are not hygroscopic, adhesive or interleaving features. Suitable for many bulk materials including those with the following characteristics:

- fragile (food products)
- abrasive (coarse powder, pellets, granulate)
- difficult to handle (like fibres, glass fibres, pharmaceutical powders)

INDUSTRIES

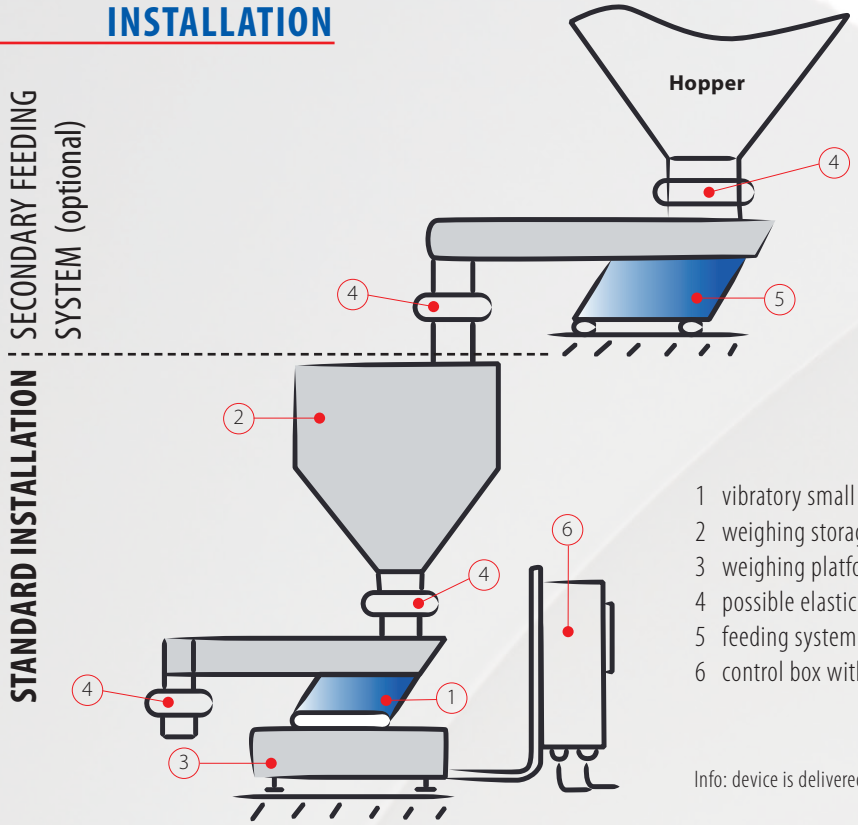
Suitable for wherever precise dosing and weighing of the main components and additives is necessary. Ideal in the following industries:

- Food & Animal Feed
- Plastics / Chemicals
- Pharmaceuticals

APPLICATION ADVANTAGES AND BENEFITS

- less shear and pressure forces
- Troughs have a dead space-free design
- quick and easy cleaning, maintenance-free vibration discharge
- very gentle weighing (volumetric and gravimetric)
- highly precise dosing
- high throughputs

INSTALLATION



1 vibratory small conveyor with trough
2 weighing storage hopper (optional: with hopper vibrator)
3 weighing platform with load cell
4 possible elastic cover, optional: dustproof model
5 feeding system (vibratory small conveyor with trough and container)
6 control box with weighing terminal

Info: device is delivered fully assembled, wired and tested.

FUNCTIONALITY OF THE LOSS-IN-WEIGHT FEEDERS

The AViTEQ vibration small conveyor (KF Series) discharges from the weighing storage container a predetermined portion of the material at a predetermined conveying capacity. The amount of the bulk material discharged is measured continuously and gravimetrically by a high-resolution load cell. The LIW algorithm then calculates the conveying rate. The weighing terminal processes the values of the load cell with a fixed set point and regulates the conveying capacity of the dosed small conveyor using the AViTEQ Vibtronic control. If the minimum level of the material obtained in the weighing storage container, the secondary feeding conveyor (optional feeding system) will turn on and the weighing storage container is filled again, followed by a settling phase. The operations of a Loss-in-Weight process is divided into the dosing, refilling and settling phase.

Dosing is basically gravimetric. Since the load cell cannot distinguish between dosing and refilling, the dosage works volumetrically in the refilling and settling phase. A positive feature is that bulk density variations, grain size changes or changing flow behavior at the Loss-in-Weight Feeder have little effect on the metering accuracy because the material flow is monitored continuously by weight and regulated.

TECHNICAL DATA

DRIVE	STANDARD WIDTH (TROUGH)	CONVEYING CAPACITY* MAX.	WEIGHING HOPPER
KF 0,5	44 mm V-trough	Up to 50 kg/h	max. 23 l = 9 l + 14 l
	50 mm Rectangle-trough	Up to 300 kg/h	
KF 6	150 mm Rectangle-trough	Up to 1400 kg/h	max. 75 l = 25 l + 25 l + 25 l
		higher capacity on request	

weighing accuracy :	± 0,5 %
material:	1.4301 (different hopper sizes on request)
bulk material temperature:	-25 . . . + 80 C° (different hopper sizes on request)
ambient temperature:	-25 . . . + 40 C°
voltage:	105 . . . 115 V, 60 Hz / 220 . . . 240 V, 50 Hz
protection class:	IP54, IP65 (possible)

* calculated with reference bulk material sand (density 1,3 t/m^3 / 100 lbs/ft3)