



COMPACT FEEDERS

Conveying and Feeding  
bulk material to perfection



AVITEQ VIBRATION TECHNOLOGY  
**We drive your success**

For more than 85 years, AVITEQ Vibrationstechnik GmbH have provided oscillating conveyor solutions to almost 375,000 projects. Our extensive experience and vibrating conveyor expertise is evident with our 120 AVITEQ employees worldwide, who are always available to support our international client base.

**Unshakeable Quality**

AVITEQ systems and components feature comprehensive functionality including: conveying, sorting, dosing, screening, classifying and dewatering, compacting and loosening, cooling and heating of various bulk materials. We provide extremely varied solutions and can apply these to many different materials, from small pills and coffee beans, to rocks and metal pieces weighing tons.

Every bulk material has its own special requirements and AVITEQ have a vast array of experience, having designed systems and components for more than 3,600 different bulk materials to date. Endurance tests performed in our technical laboratories, and numerous finite element calculations, ensure the highest quality components and systems. Experience the unshakeable quality of AVITEQ.

AVITEQ  
**About us**



120 employees worldwide



85 Years of experience



Expert advice for machine and motor design



large stock warehouse



International experiences

AVITEQ  
**Systems**

AVITEQ plans and creates vibration and processing engineering solutions. A comprehensive all-round service is possible through AVITEQ and AEG.



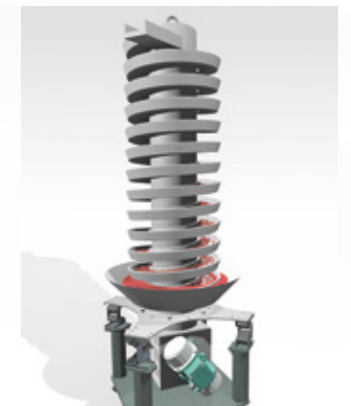
Hopper Discharge Units



Vibrating Screens



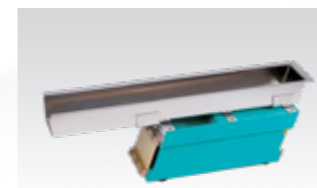
Tubular feeders



Spiral Conveyors

AVITEQ  
**Components**

AVITEQ develops, builds and distributes drive components and control systems for vibrating conveyor systems. We also offer 24-hour replacement part support from the spare part warehouse, as well as various repair services (in-house or on-site).



Compact feeder drives & compact feeder



Magnetic vibrators



Unbalanced motors



Parts conveyor

**Compact feeders**

When it comes to discharging, feeding, conveying, sorting or dosing of fine-grained bulk materials, AVITEQ's compact feeders are true all-rounders. The drives are available in various sizes – from very small to very big – so they can be used in a wide range of systems. The modular construction of these compact feeders means that they offer ideal custom solutions.

## COMPACT FEEDER TECHNOLOGY FROM AVITEQ

# Quality Made in Germany

The greatest strength of AVITEQ compact feeders is their modular construction. This allows them to be tailored for specific applications. As well as conveying goods, AVITEQ compact feeders can also be used for screening, spreading, sorting or weighing. The materials used are chosen to suit the conveyed goods and if desired, it is possible to use the controllers to fully automate the process.

This gives customers complete freedom of choice. They have quick, easy access to standard solutions but they can also take advantage of customised solutions that are tailored for their specific applications.



4

### HOPPER

- In a conical, wedge or pyramid shape
- Optional gate
- Optional level indication

5

### WEIGHING (LOSS-IN-WEIGHT SYSTEM)

- As standard or replacement components (weighing cell, weighing platform, weighing terminal)
- Customer-specific programming
- Optional: Housing design

6

### STAND/ENCLOSURE

- Adjustable
- Can be moved on rollers
- Also available in stainless steel

3

### CONTROLLERS

- Conveyor controllers, available as an open-frame version or in a version with housing
- Frequency controller available (optional)
- Weighing terminal available (optional)
- Complete control cabinet (optional)

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### CONVEYOR ATTACHMENTS

- Trough, tube, screen
- With or without covers
- Choose from a range of
  - linings
  - materials
  - inlets and outlets
  - seals
  - quick release systems
  - surface finishes (textures)

1

### DRIVE

- Different vibration frequencies
- Various sizes
- Optionally available in stainless steel
- Explosion-proof versions
- Coatings optionally available (e.g., PTFE, PFA)
- Optional protection against tropical conditions



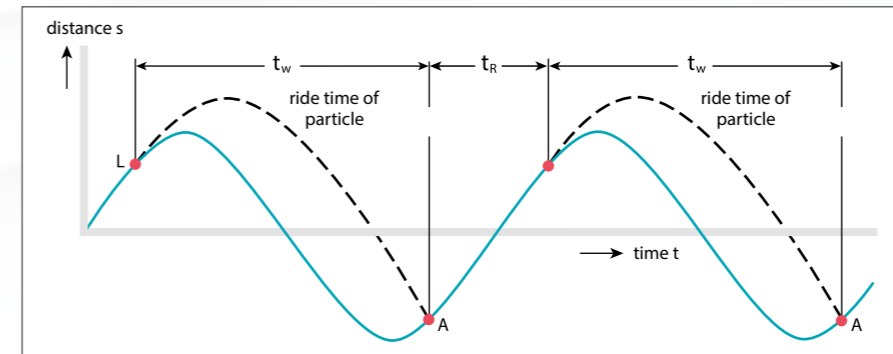
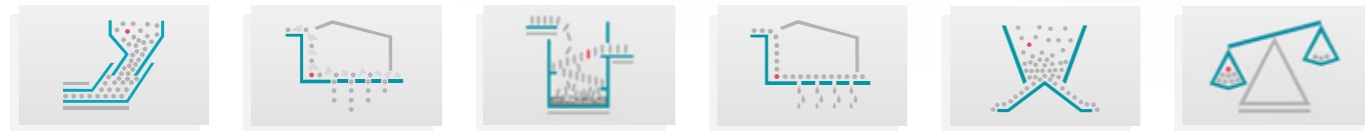
## DESIGN VARIANTS

# Multi-talented devices

AViTEQ compact feeders are two-mass vibration systems, which are tuned to be close to resonance frequency. The drive section contains the elements that generate the vibration. These include an electromagnet and the leaf spring packages. The conveyor attachment – also referred to as the working unit – is firmly attached to the drive and can be removed in a matter of moments. Thanks to their optimum design and tuning, the vibration of these systems is exceptionally regular.

A characteristic feature of AViTEQ compact feeders is their modular construction, which consists of a feeder drive and a conveyor attachment (trough, tube and conveyor rail). The Vibtronic-S controller from AViTEQ is suitable for all drives. Using this controller and an integrated vibration distance adjuster, the flowrate can be freely adjusted within wide limits. AViTEQ compact feeders do not disturb the peace – they stand on rubber buffers, so the vibration only has an effect on the conveyed materials and is hardly noticeable in the surroundings.

Compact feeders from AViTEQ feature tailor-made conveying technology that is „Made in Germany“. Multi-talented – for a multitude of applications.

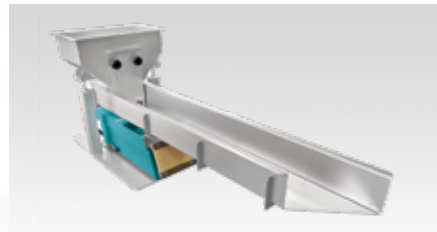


s = vibration amplitude  
 L = release point  
 L\* = release point following L  
 A = landing point  
 $t_w$  = jump time  
 $t_r$  = ride time of particle on the trough

## The conveying principle

AViTEQ conveying equipment is based on a single conveying principle that has stood the test of time: a vibrating drive accelerates a trough-shaped steel structure in the jump direction, gently moving the bulk material forward in tiny jumps. The transport process is determined by the frequency and amplitude of vibration, the angle of impact and the trough inclination. The drive system is selected on the basis of the conveying length, the performance, the material characteristics and any additional functions.

## Compact feeders



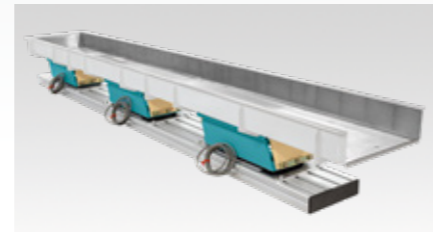
### Trough conveyor with hopper

- High capacity, precise dosing and a compact design
- Standard sizes in stock: available quickly and at low prices
- Trough and hopper can be adapted to meet custom requirements



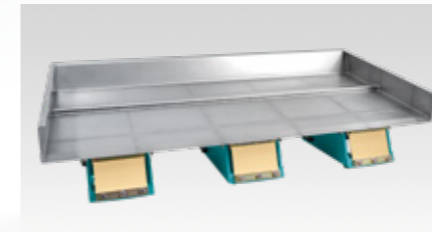
### Screening trough

- Individual screening solutions
- Easy to clean and replace
- Choose from a very wide range of materials and screen linings



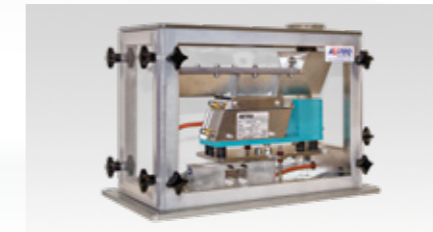
### Supply trough conveyor

- Trough conveyors for longer distances
- Custom length
- Multiple drives: Drives positioned behind one another
- The compact design means it can also be used in very narrow spaces



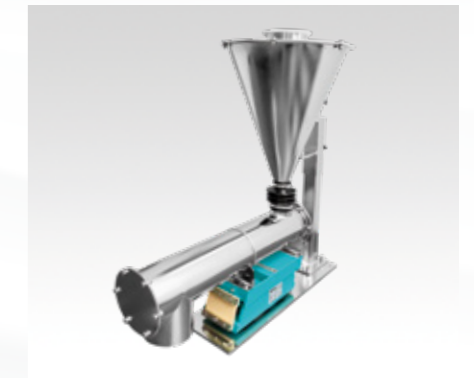
### Distributing conveyor, strewing feeder

- Distribution troughs can cover a width of up to 1,5m
- Multiple drives: Drives positioned side by side
- Speed can be freely adjusted
- Precise, single layer metering (perfect for sorting machines)



### Loss-in-weight

- Very gentle weighing (volumetric and gravimetric)
- Extremely precise dosing
- High throughput capacity
- Low levels of shear and compression forces
- Troughs designed to have no dead space (quick and easy to clean)



### Conveyor tube with hopper

- Enclosed, dustproof design
- Inlet and outlets can be selected on an individual basis

## AVITEQ COMPACT FEEDER DRIVES

# Small but mighty

The AVITEQ product portfolio contains two groups of compact feeder drives. The characteristics of these two groups are tailored for different applications:

The group with the KF 1, KF 6, KF 12 and KF 24 devices are mainly suitable for discharging and conveying bulk material. This includes applications such as distributing components in mixing plants. For this purpose, the compact feeder drive is equipped with a suitable tube or trough. The compact feeder devices KF 1, KF 6, KF 12 and KF 24 are type approved and can be used in potentially explosive atmospheres, in accordance with Directive 94/9/EC (ATEX).

The second group, with the devices KF 0.3, KF 0.5, KF 0.7 and KF 0.9, are mainly for use as drivers for rails for conveying ordered parts. A practical example is the transport or distribution route between a parts conveyor and a downstream machine. For this purpose, a conveyor trough that is optimised for the material being transported is mounted onto the drive. The compact feeder drives in CR-Design are uncoated, easy to clean and resistant to UV-light, alcohol and formalin. Furthermore, they are suitable for use in sterile areas.

### TECHNICAL FEATURES

Vibration frequency: 25, 50, 100 Hz in a 50 Hz mains  
30, 60, 120 Hz in a 60 Hz mains

Capacity: from a few cm<sup>3</sup>/h to more than 50 m<sup>3</sup>/h

Working weight: 0,3 – 45 kg (higher on request)

Mains frequency: alternating current (50 or 60 Hz)

Mains voltage: 42, 110, 230, 400 V  
(special voltages available on request)

Ambient temperature: -20 °C to + 40 °C  
(lower and higher temperatures possible)

Protection class magnetic core\*: IP65 according to  
DIN EN 60529

Optional: tropicalised insulation, special paint finish,  
stainless steel design, various coatings (on request),  
optimised for frequency control

\* Different protection classes for different types of compact  
feeder drives

### OUR SAFETY STANDARDS



### 3 SPRING PACKAGES

Made of plastic to ensure a long service life  
and maintain linear vibration motions

- BENEFITS:
- no wear
  - no maintenance costs
  - continuous operation with 100% performance
  - optional food version (blue)

### 4 RUBBER BUFFER

Optimum vibration isolation

- BENEFITS:
- High rates of absorbenc under load
  - Very good vibration damping

### MOUNTING HOLES

For attaching working units

BENEFIT:

- High degree of flexibility – either to the top or to the front

### 1 UPPER SECTION (OPERATING SIDE)

Cast iron base plate for mounting the working unit

BENEFITS:

- High levels of operational safety
- Long service life
- Easy additional weight installation

### 8 LOWER SECTION (FREE SIDE)

Cast iron plate designed for heavy loads

BENEFITS:

- Closed system for vibrations
- High levels of operational safety
- Long service life

### 7 VIBRATION SENSOR (optional)

Fully integrable vibration sensor in stainless steel design for frequency control

BENEFITS:

- Washable
- Spring break detection
- High accuracy

### 6 ELECTROMAGNET

Split toroid core cast in electro-casting resin

BENEFITS:

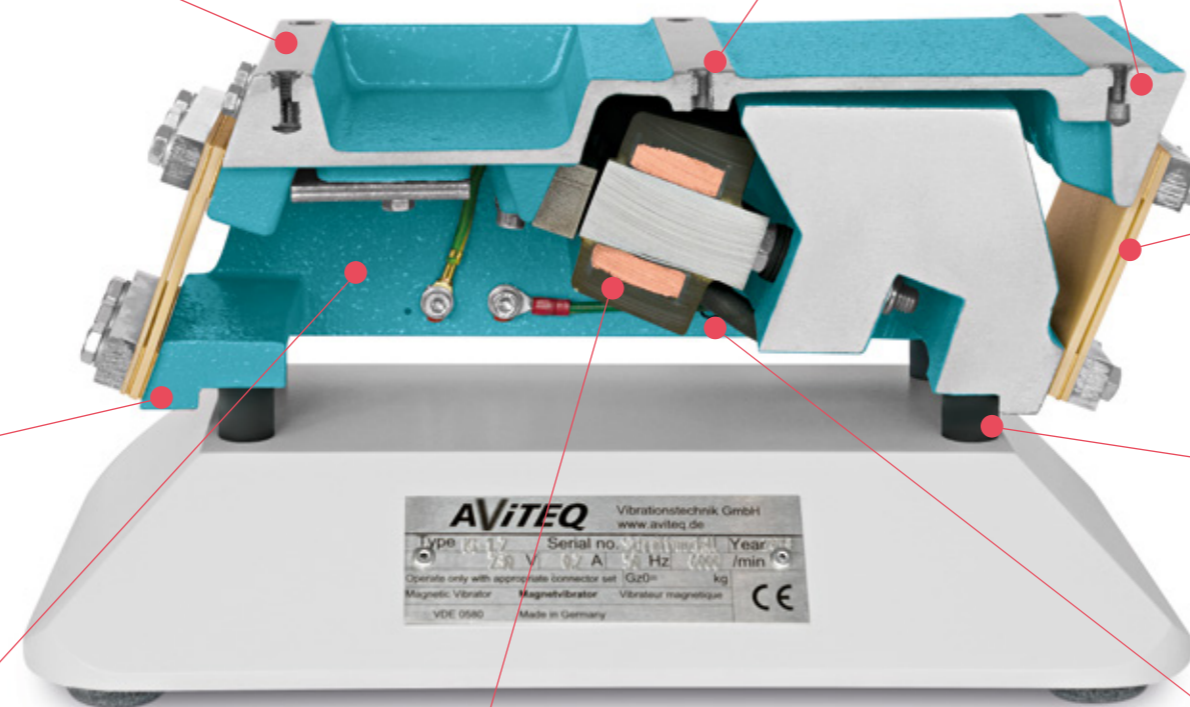
- High levels of operational safety in harsh environments
- Available for use in potentially explosive atmospheres
- Not susceptible to moisture or dust

### 5 CABLE ENTRY POINT

Overmoulded cable (length: 2.5 metres) with strain relief

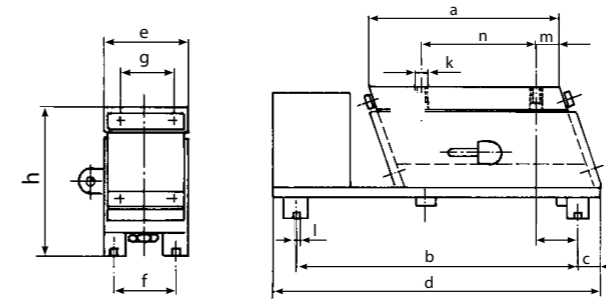
BENEFITS:

- Quick and easy to install
- High levels of operational safety
- Secure fit
- Voltages up to 460V, no additional insulation required

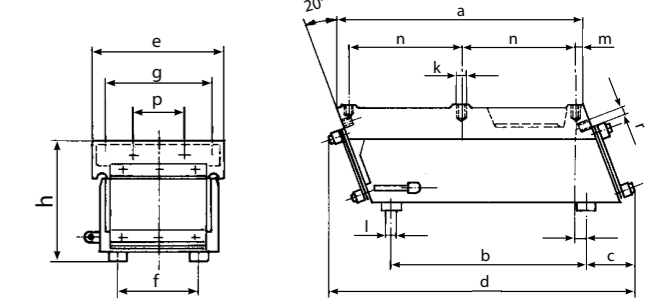


# Compact feeder drive in a 50/60 Hz mains

**Types**  
KF 0,3, KF 0,5, KF 0,7, KF 0,9



**Types**  
KF 1, KF 6, KF 12, KF 24



## Vibration frequency 25 Hz (X)

Type	Working units with ideal to maximum weight <sup>1)</sup> [kg]	ATEX <sup>2)</sup>	Stainless steel (optional)	Frequency control variant (optional)	max. length L <sup>3)</sup> [mm]	Weight without working unit [kg]	Vibrations/min in a mains 50/60 Hz	Max. current draw at 230 V, 50/60 Hz [A]	Type	Dimensions [mm]													
	kg				mm	kg		[A]	Type	a	b	c	d	e	f	g	h	k	l	m	n	p	r
KF 0.9 X <sup>4)</sup>	30 - 70	-	+ <sup>5)</sup>	+	950	18.0	1,500/1,800	1.20	KF 0.9 X	200	330	23	375	100	75	80	140	M8	M6	20.0	130	-	-
KF 6 X	30 - 70	-	-	+	1,000	20.0	1,500/1,800	1.20	KF 6 X	340	270	65	425	163	100	140	149	M8	M6	10.0	155	60	M6
KF 12 X	60 - 200	-	-	+	1,400	33.0	1,500/1,800	3.90	KF 12 X	415	345	70	515	203	140	180	172	M8	M6	10.0	190	80	M8
KF 24 X	180 - 450	-	-	+	1,800	113.0	1,500/1,800	4.60	KF 24 X	524	430	90	670	305	200	250	265	M10	M8	13.0	240	150	M10

## Vibration frequency 50/60 Hz (Y)

Type	Working units with ideal to maximum weight <sup>1)</sup> [kg]	ATEX <sup>2)</sup>	Stainless steel (optional)	Frequency control variant (optional)	max. length L <sup>3)</sup> [mm]	Weight without working unit [kg]	Vibrations/min in a mains 50/60 Hz	Max. current draw at 230 V, 50/60 Hz [A]	Type	Dimensions [mm]													
	kg				mm	kg		[A]	Type	a	b	c	d	e	f	g	h	k	l	m	n	p	r
KF 0.9 Y	30 - 55	-	+	+	950	18.0	3,000/3,600	1.20	KF 0.9 Y	200	330	23	375	100	75	80	140	M8	M6	20.0	130	-	-
KF 1 Y	15 - 30	-	-	+	600	8.0	3,000/3,600	0.27	KF 1 Y	247	200	45	305	123	70	100	121	M5	M4	7.5	110	40	M5
KF 6 Y	30 - 70	+	-	+	1,000	20.0	3,000/3,600	0.85	KF 6 Y	340	270	65	425	163	100	140	145	M8	M6	10.0	155	60	M6
KF 12 Y	60 - 200	+	-	+	1,400	33.0	3,000/3,600	2.20	KF 12 Y	415	345	70	515	203	140	180	164	M8	M6	10.0	190	80	M8
KF 24 Y	180 - 450	+	-	+	1,800	113.0	3,000/3,600	3.75	KF 24 Y	524	430	90	670	305	200	250	240	M10	M8	13.0	240	150	M10

## Vibration frequency 100/120 Hz (Z)

Type	Working units with ideal to maximum weight <sup>1)</sup> [kg]	ATEX <sup>2)</sup>	Stainless steel (optional)	Frequency control variant (optional)	max. length L <sup>3)</sup> [mm]	Weight without working unit [kg]	Vibrations/min in a mains 50/60 Hz	Max. current draw at 230 V, 50/60 Hz [A]	Type	Dimensions [mm]													
	kg				mm	kg		[A]	Type	a	b	c	d	e	f	g	h	k	l	m	n	p	r
KF 0.3 Z	0.3 - 0.5	-	+	-	350	1.5	6,000/7,200	0.60	KF 0.3 Z	90	140	10	160	35	25	25	65	M4	M4	15.0	55	-	-
KF 0.5 Z	0.5 - 0.8	-	+	-	450	2.8	6,000/7,200	0.07	KF 0.5 Z	120	180	15	210	50	35	33	85	M5	M4	15.0	72	-	-
KF 0.7 Z	1.5 - 2.7	-	+	-	700	10.0	6,000/7,200	0.32	KF 0.7 Z	180	290	15	320	75	60	55	110	M6	M4	15.0	12.0	-	-
KF 1 Z	1.5 - 3.5	+	-	+	600	8.0	6,000/7,200	0.20	KF 1 Z	247	200	45	305	123	70	100	107	M5	M4	7.5	110	40	M5

1) Smaller and larger working weights possible (on request)

2) BVS ... ATEX ... II 2 G Ex e IIB T4 Gb, II 2 D Ex tb IIIC T...°C(I) Db IP65

3) longer possible (on request)

4) only with frequency control SFA and vibration sensor

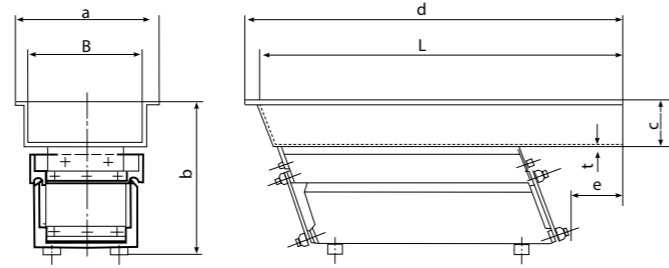
5) Variant VA: with hard-coated aluminium support plate, variant VAS: completely made of stainless steel

All values are in mm. Manufacturing tolerances are relative to the respective container. The value, d' may vary depending on the working weight (leaf spring placement)

## COMPACT FEEDERS

### Versatile all-rounders

Our core competence lies in individually developed and manufactured solutions, precisely tailored to your requirements. We also offer standard solutions – cost-optimised and with short delivery times.



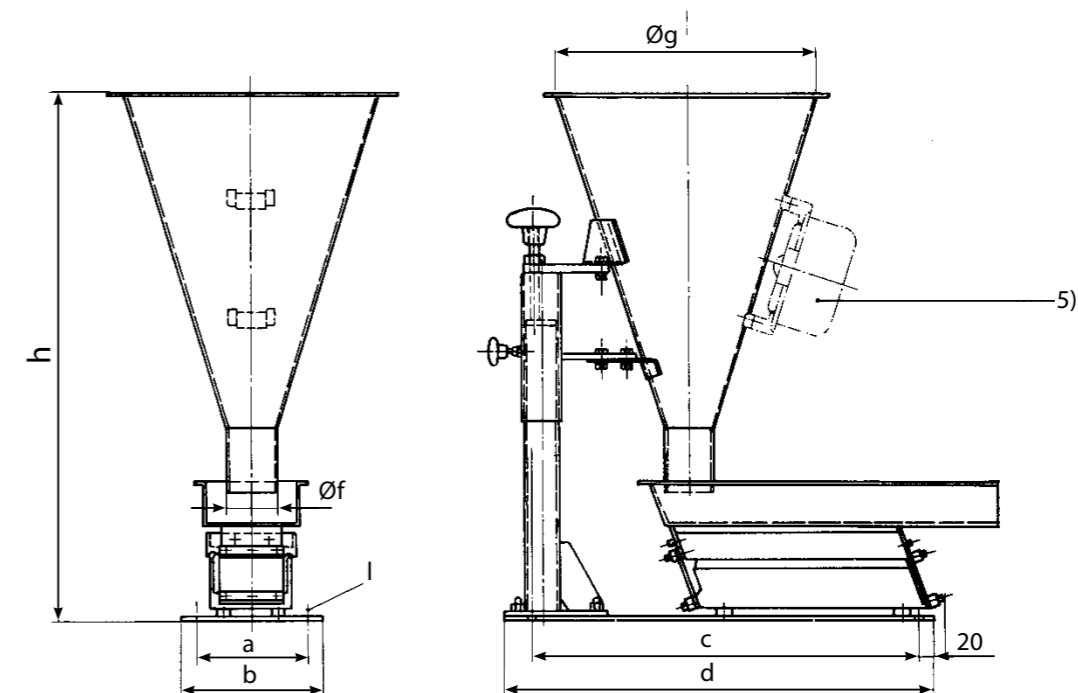
Type	L/B	Material	Capacity <sup>1)</sup>	Dimensions [mm]						Trough weight	
				mm	m <sup>3</sup> /h	a	b	c	d		e
KF 1 /	400/ 50	1.4301	0.8	80	155	40	415	75	1.0	0.60	
	450/ 50	1.4301	0.7	80	155	40	465	125	1.5	0.95	
	500/ 50	1.4301	0.7	80	155	40	515	175	1.0	0.75	
	600/ 50	1.4301	0.7	80	155	40	615	275	1.5	1.25	
	400/ 100	1.4301	2.2	130	175	60	415	70	1.5	1.70	
	500/ 100	1.4301	2.1	130	175	60	515	170	1.5	1.90	
KF 6 /	500/ 100	1.4301	3.0	130	210	60	515	65	1.5	1.90	
	550/ 100	1.4301	3.0	130	210	60	565	115	1.5	2.10	
	630/ 100	1.4301	2.8	130	210	60	645	195	1.5	2.30	
	800/ 100	1.4301	2.6	130	210	60	815	365	1.5	2.70	
	1.000/ 100	1.4301	2.5	130	210	60	1.015	460	1.5	3.20	
	500/ 150	1.4301	4.4	190	210	60	520	65	1.5	2.40	
	700/ 150	1.4301	4.4	190	210	60	720	265	1.5	2.90	
	850/ 150	1.4301	4.2	190	210	60	870	415	1.5	3.40	
	1.000/ 150	1.4301	4.0	190	210	60	1.020	550	1.5	4.00	
	500/ 200	1.4301	5.8	240	210	60	520	65	1.5	2.80	
	630/ 200	1.4301	5.6	240	210	60	650	180	1.5	3.40	
	KF 12 /	630/ 200	1.4301	9.7	240	270	100	650	80	2.0	4.70
		800/ 200	1.4301	9.5	240	270	100	820	250	2.0	5.70
		1.000/ 200	1.4301	9.3	240	270	100	1.020	400	2.0	6.90
630/ 300		1.4301	14.5	340	270	100	650	80	2.0	6.65	
800/ 300		1.4301	16.5	360	295	125	820	250	2.0	9.10	
1.100/ 300		1.4301	14.2	360	270	100	1.120	500	2.0	10.60	
630/ 400		1.4301	17.3	440	270	100	650	80	2.0	8.70	
800/ 400		1.4301	25.0	440	320	150	820	230	2.0	12.10	
KF 24 /	1.600/ 200	1.4301	10.8	260	376	120	1.630	881	2.5	17.80	
	1.800/ 200	1.4301	12.9	260	405	150	1.830	995	2.5	22.10	
	2.000/ 300	1.4301	19.4	360	403	150	2.030	1.170	2.5	30.00	
	1.400/ 600	1.4301	41.5	660	416	160	1.430	688	2.5	35.80	
KF 0.5 /	350/ 13	1.4301	0.1	45	115	25	350	125	1.0	0.50	
	275/ 50	1.4301	0.8	80	130	40	290	65	1.0	0.50	
	400/ 50	1.4301	0.7	80	130	40	415	145	1.0	0.60	
KF 0.7 /	630/ 50	1.4301	0.7	80	155	40	645	250	1.5	1.50	
	400/ 100	1.4301	2.2	130	175	60	415	50	1.5	1.40	
KF 0.9 /	500/ 100	1.4301	2.8	130	205	60	515	90	1.5	2.00	
	800/ 100	1.4301	2.7	130	205	60	815	350	1.5	2.80	
	700/ 150	1.4301	4.1	180	205	60	715	250	1.5	3.00	

## COMPACT FEEDERS WITH STORAGE CONTAINERS

### All-rounders that just keep giving

#### Main measurements

Type	Suitable for compact feeders	Material Storage container and base	Container capacity	Dimensions [mm]							Weight of storage container with base	
				[dm <sup>3</sup> ]	a	b	c	d	Øf	Øg		h
KF 1 /... /...		Stainless	9	120	150	480	520	43	300	620	7	8.5
		Stainless	25	180	200	480	520	90	400	730	7	11.5
KF 6 /... /...		Stainless	25	180	200	530	570	90	400	765	7	12.0
KF 12 /... /...		Stainless	50	230	260	600	640	159	510	940	9	28.0
KF 0.5 /... /...		Stainless	9	120	150	390	430	43	300	580	7	8.0
KF 0.7 /... /...		Stainless	9	120	150	480	520	43	300	580	7	8.5
		Stainless	25	180	200	480	520	90	400	730	7	11.5
KF 0.9 /... /...		Stainless	25	180	200	560	600	90	400	765	7	12.0



1) Theoretical conveying speed based on a defined reference bulk material (sand) with the following parameters: bulk density 1.6 t/m<sup>3</sup>, grain size 3-10 mm, 8% product moisture and approximately cubic grain size, 200 mm layer height, without bunker pressure, with horizontal device installation.

FOR OUR LIGHTWEIGHTS

## Controller up to 6A and Gateway



SDE06/GW-2 SDE06/...-2

FOR OUR HEAVYWEIGHTS

## Controller up to 15/25/50A



SDE15/...-2 SDE25/...-2 SDE50/...-2

FOR OUR VERY FLEXIBLE LIGHTWEIGHTS

## Frequency control up to 6A (optionally up to 10A)



SFA06/08-...-3

Energy efficient

Applicable worldwide

A few simple steps to commissioning:

1. Connect the SFAE06/08 control unit and attach the acceleration sensor. Plug in the connector for the acceleration sensor, mains and magnet.
2. Set the desired acceleration, e.g. via the quick selection button '+'
3. Start device 'RUN'

	SDE06/...-2 SDE06/GW-2 (optional)	SDE15/...-2	SDE25/...-2	SDE50/...-2
<b>Mains frequencies</b>	50 Hz and 60 Hz			
<b>Vibration frequencies with 50Hz mains</b>	25, 33, 50 and 100 Hz			
<b>Vibration frequencies with 60Hz mains</b>	30, 40, 60 and 120 Hz			
<b>Mains voltage</b>	100-250V	100-250V	100-250V	
	-	380-600V	380-600V	380-600V
<b>Limit current, max</b>	6A	15A	25A	50A
<b>Setpoint specification</b>	Poti, 0-10 VDC, 0-20 mA or 4-20 mA (switchable)			
<b>Ambient temperature</b>	built-in version -5 up to +45 °C			
<b>Protection class</b>	built-in version: IP 20 housing version: IP 55 on request			
<b>Dimensions (W x H x D)</b>	45x115.5x110 mm (GW: 22.5x115.5x110 mm)	75x244x194 mm	80x244x194 mm	141x250x194 mm
<b>Weight</b>	288 g (GW: 102 g)	2,2 kg	2,6 kg	4,2 kg
<b>Betriebsarten</b>	Single-mode operating modes (B x H x D): Voltage pre-control or vibration amplitude control Master-slave: Reverse or parallel mode			
<b>Additional function</b>	<ul style="list-style-type: none"> <li>adjustable soft start</li> <li>With fill level control/exchange circuit</li> </ul>			
<b>Approvals/conformity</b>	CE marking in accordance with Low Voltage Directive 2014/35/EU CSA/UL (in planning)			
<b>Permissible tolerances</b>	Mains voltage: +/-10.0%			
	Mains frequency: +/-0.5%			
<b>Connections (data)</b>	<ul style="list-style-type: none"> <li>Analogue and digital</li> <li>Ethernet (only in conjunction with gateway SDE06/GW-2)</li> <li>USB-A for software &amp; parameter update</li> </ul>	<ul style="list-style-type: none"> <li>Analogue and digital</li> <li>Ethernet/LAN socket 100BaseT with Auto-MDI (RJ45 socket)</li> <li>USB-A for software &amp; parameter updates</li> <li>VICAN socket (2x)</li> </ul>		

PARAMETERS	VALUE
Mains voltage	100/240V +/-10%
Oscillation frequency	5-300Hz
Limit current	6/10A with additional heat sink
Output power	1200/2000VA
Inputs	5 (freely configurable: analogue or digital)
Outputs	4 (digital) x 24V + potential-free NO contact
Power supply for external consumers	24 V, 100 mA
Ambient temperature	0 up to +40°C
Storage temperature	-10 up to +80°C
Humidity	max. 80%, non-condensing
Fieldbus interfaces	on request: Profinet, Ethernet IP
Interface	optional RS485
Protection class	IP54

## HIGHLIGHTS

- Very energy-efficient compared to the market alternatives
- Can be used worldwide: Multi-voltage input and independent of mains frequency
- Once mechanical basic tuning of the spring system has been completed, manual fine tuning is not necessary
- This means that other pots and troughs can be changed quickly without mechanical adjustment
- Spring breakage detection
- Operation via display and buttons or via PC (RS485 interface)
- Continuous readjustment of the optimum output frequency and voltage
- Adjustable overload protection for the solenoid coils
- Covers a wide range of desired functions thanks to individually assignable inputs and outputs
- Constant acceleration with mains voltage fluctuations
- Saving and importing parameter data via AVFI software

### Additional options:

Master-slave operation, 10A version with heat sink, Sensor made of Stainless Steel

WE ARE THERE FOR YOU

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