

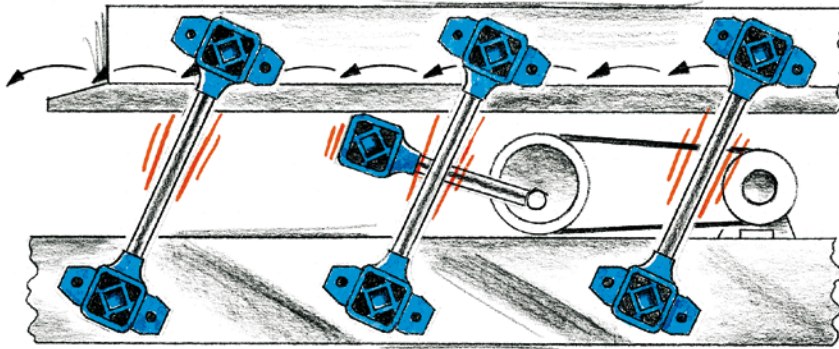
ROSTA Screen Mounts

Long-life Suspensions for Screens and Shaker Conveyors



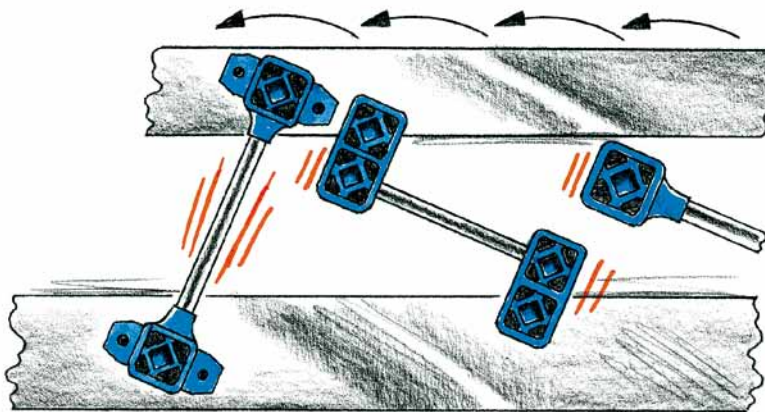
ROSTA-Oscil

elastic suspensions for all types of



rocker-arms and drive-heads for crank driven shaker conveyors

- maintenance-free and long lasting guide arms for shakers
- resilient rod-heads for alternating loads

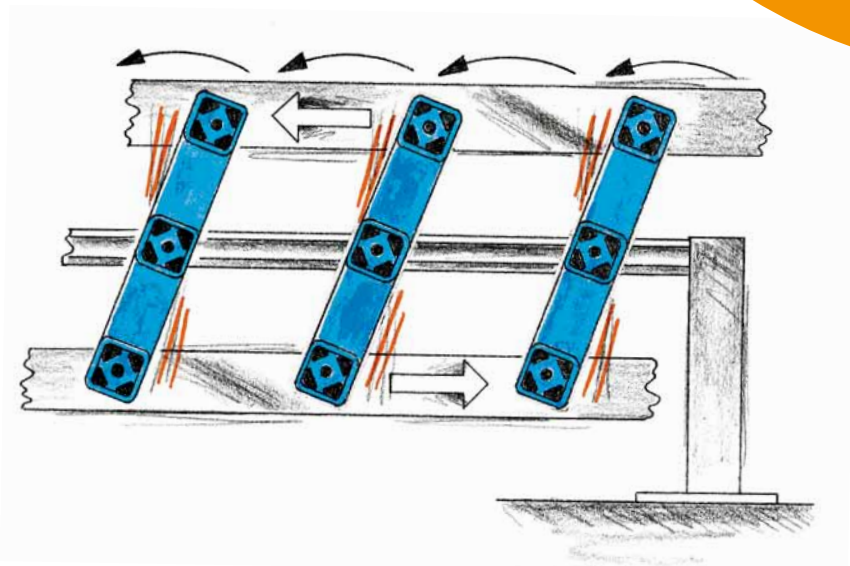


Spring accumulators for natural frequency shakers

- for the powerful, harmonic actuation of feeders
- energy-saving and silent power packs

double rocker arms for high speed shaker conveyors

- 1 : 1 mass balancing, reaction neutral suspensions
- high dynamic spring rates for natural frequency systems



AU-rocker arm



lating Mounts

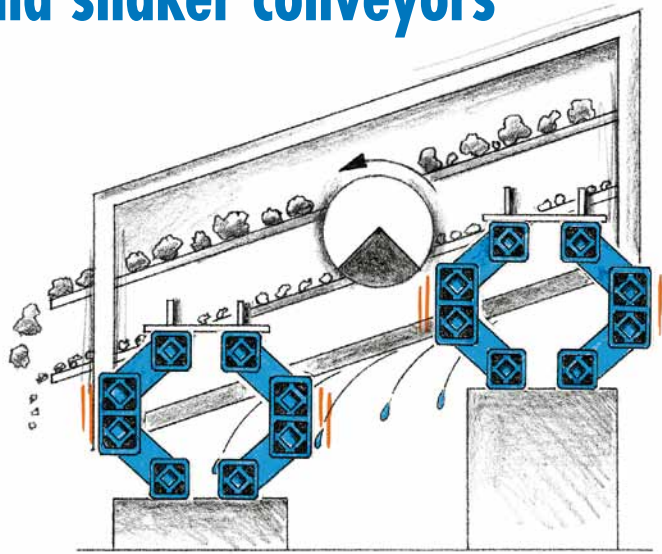
screening machines and shaker conveyors



AB-screen mount

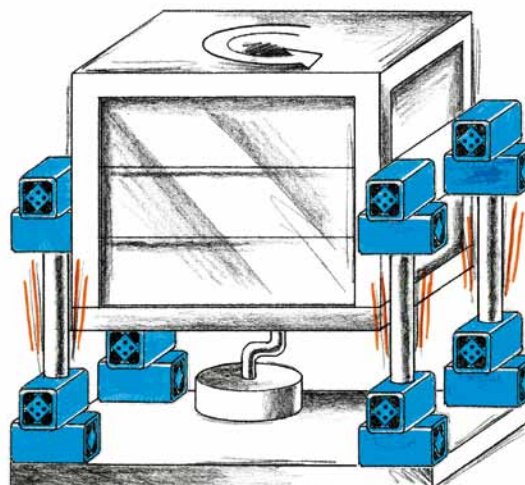
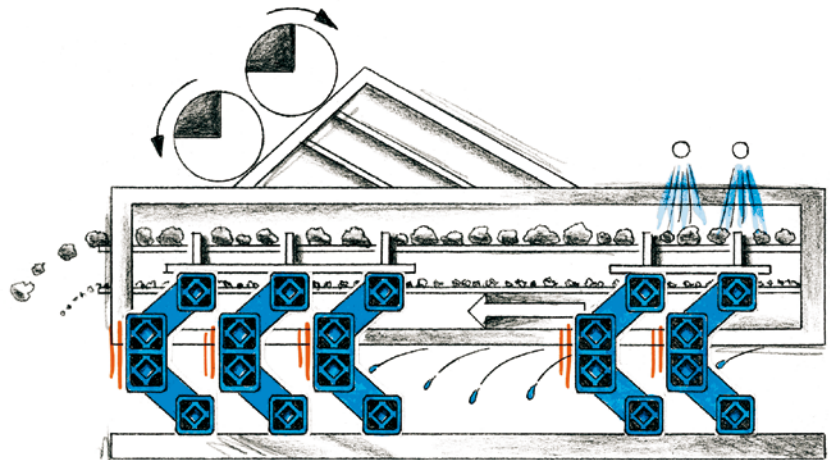
AK-universal joint

**maintenance-free,
long lasting, noiseless,
corrosion-resistant
and overload-proof for
all oscillatory equip-
ments and machinery**



Vibration absorbing mounts for circular- and linear motion screens

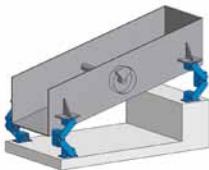

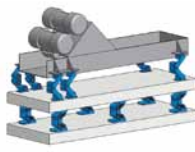
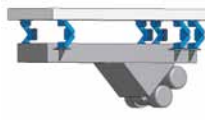



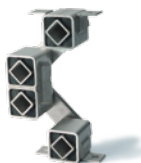

- long lasting
- high isolation degree
- corrosion-resistant
- overload-proof





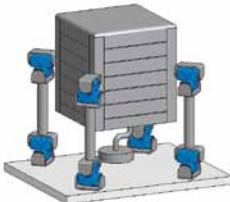

**universal joint suspensions for
gyratory sifters**

- long lasting articulations
for guiding horizontal
gyrations
- offering extremely high
supporting force, up to
40'000 N per mount

Selection table for free oscillating systems (with unbalanced excitation)

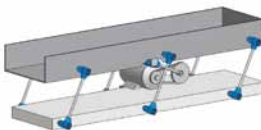
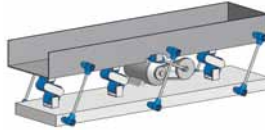
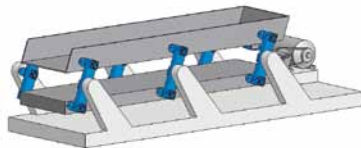





					
		One-mass system circular screen	One-mass system linear screen	Two-mass system with counterframe	One-mass system hanging linear screen
	AB p. 11	Oscillating mounting universal mounting. High vibration isolation and low residual force transmission. Natural frequencies approx. 2–3 Hz. 9 sizes from 50 N to 20'000 N per AB.			
	AB-HD p. 12	Oscillating mounting for impact loading and high production peaks. Natural frequencies approx. 2.4–3.2 Hz. 3 sizes from 3'500 N to 14'000 N per AB-HD.			
	AB-D p. 13		Oscillating mounting in compact design. Optimal in two-mass systems as counterframe mounting. Natural frequencies approx. 3–4.5 Hz. 7 sizes from 500 N to 16'000 N per AB-D.		
	ABI p. 14	Oscillating mounting made from stainless steel for the food and pharmaceutical industry. High vibration isolation and low residual force transmission. Natural frequencies approx. 2–3 Hz. 6 sizes from 70 N to 6'800 N per ABI.			
	HS p. 15				Oscillating mounting for hanging systems. Natural frequencies approx. 3–4 Hz. 5 sizes from 500 N to 14'000 N per HS.

Selection table for gyratory sifters

	AK *	Universal joint for the support or suspension of positive drive or freely oscillating gyratory sifting machines. 10 sizes up to max. 40'000 N per unit.	Gyratory sifter upright staying	Gyratory sifter hanging
	AV *	Single joint specially designed with large rubber volume for the suspension of gyratory sifting machines. Models with right- and left-hand threads. 5 sizes up to max. 16'000 N per unit.		

* Please consult our general catalogue.

Selection table for guided systems (crank driven)

				
One-mass shaker brute force system	One-mass shaker with spring accumulator	Two-mass shaker with direct compensation of reaction forces		
Single rocker with adjustable length. Models with right- and left-hand threads. 7 sizes up to max. 5'000 N per rocker suspension.			AU *	
Single rocker and double rocker with adjustable length, connection of the AR elements using round pipe. Two-mass shakers with design feasibility of two-directional conveying. 2 sizes up to max. 800 N per rocker suspension.			AR *	
Single rocker with decided centre distance. 6 sizes up to max. 2'500 N for flange fixation. 6 sizes up to max. 2'500 N for central fixation.			AS-P AS-C *	
		Double rocker with decided centre distance. 5 sizes up to max. 2'500 N for flange fixation. 4 sizes up to max. 1'600 N for central fixation.	AD-P AD-C *	
	Spring accumulator with high dynamic spring value for feeder systems running close to resonance frequency. A spring accumulator consists of 2 DO-A elements. 5 sizes up to max. dynamic spring value of 300 N/mm.		DO-A *	
Drive head for crank drive transmission in shaker conveyors. Models with right- and left-hand threads. 7 sizes up to max. 24'000 N per drive head.			ST *	

* Please consult our general catalogue.

Notes regarding some special shaker systems:

- For free oscillating systems on pages 16–19
- For guided systems consult our general catalogue
- For gyratory sifters consult our general catalogue



Technology of free oscillating systems with unbalanced excitation

Introduction

Free oscillating systems are either activated in using exciters, unbalanced motors or unbalanced shafts.

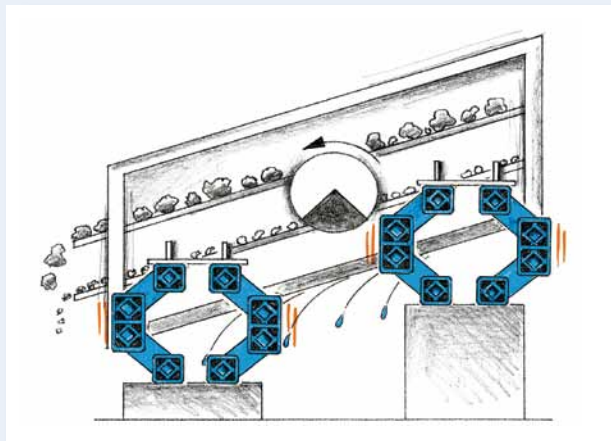
The oscillation amplitude, type of vibration and the direction of vibration of the screen are determined by the dimensioning and arrangement of these actuators. The excitation force, the angle of inclination of the excitation, the inclination of the screen-box and the position of the centre of gravity determine the resulting oscillation amplitude of the device. The oscillation amplitude, and thereby the conveying speed of the machine, can be optimised by augmenting these.

ROSTA spring suspensions support the desired oscillation movement of the screen machine. Through their shape and function, they help to achieve a purely linear conveyor motion without unwanted lateral tumbling.

These ideal spring suspensions harmonically support the running of the vibrating screen. Because of their high spring deflection capacity, they offer a good detuning of the excitation frequency with a very low natural frequency, which guarantees a high isolation effect with regard to the machine substructure. The ROSTA mounts effectively dissipate the large residual force peaks at start-up and shut-down, when passing through the natural frequency of the suspension.



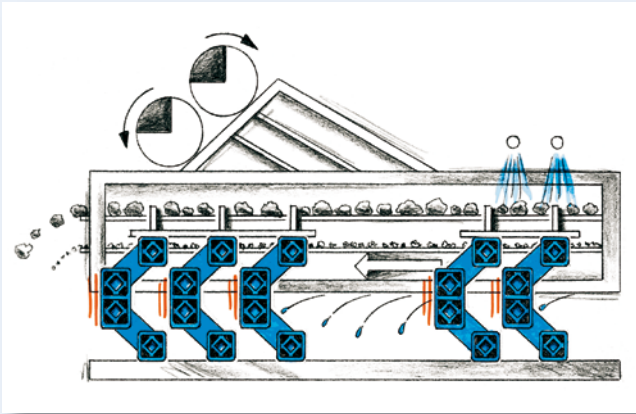
Circular motion screens



Circular motion screens or circular vibrators are normally excited by an unbalanced weight that creates a circular rotating oscillation of the screening frame. Relatively low accelerations of the screened material are achieved with this form of excitement. Circular vibrators thereby normally work with a screening frame inclination of 15° to 30° , so that an adequate material throughput is ensured.

It is recommended to mount circular vibratory screens of this kind on ROSTA type AB oscillating mountings. Experience has shown that the positioning of the AB suspensions under circular vibrators should be a mirror-inverted of each other, which, with the above-mentioned frame inclination, will counteract the tendency of the shifting of the centre of gravity. If the suspension of the screening frame requires two supporting suspensions per brace support for reasons of capacity, these should also be preferably arranged in mirror-inverted manner for the above-mentioned reason.

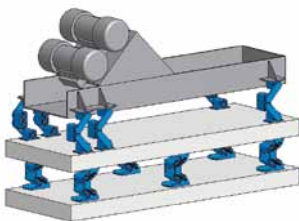
Linear motion screens



Linear motion screens or linear vibrators are normally excited by two unbalanced motors or by means of linear exciters, as well as through double unbalanced shafts (Eliptex), which generate a linear or slightly elliptical oscillation of the screening frame. Depending on the inclination positioning of the exciter, the angle of throw of the screened product can be adapted to the desired form of processing. A very high acceleration of the screened product, i.e. a higher material throughput, is achieved with linear vibrating screens. The screening frame of the linear vibrator is normally in the horizontal position.

Linear vibrating screens are preferably mounted on ROSTA oscillating mountings type AB. Depending on the positioning of the exciter on the screening frame, the feed-end : discharge-end load distribution can be different. The feed-end side is normally lighter, as the exciters are positioned close to the discharge-end and thereby pull the material through the screening frame; in many cases, the feed-end : discharge-end distribution is thereby 40% to 60%. In the interest of an even suspension, it is thereby recommended to mount the screening frame on six or more ROSTA oscillating mountings. All type AB oscillating mountings should stand in the same direction, with the «knee» pointing in the discharge-end direction.

Linear motion screens with counterframe

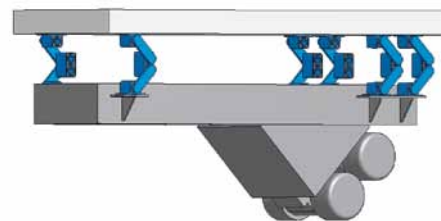


If, due to the demands of the process, large screens are mounted at a very high position in a building or in a purely steel construction, the transmission of the residual forces of a single-mass machine can set the

entire structure into unwanted vibrations. Or if a new and more powerful machine is mounted in an existing building, the residual force transmission could be too high for the older building. The residual force transmission is drastically reduced through the mounting of a counterframe under the screen, with only a negligible loss of oscillation amplitude (compensation movement of the counterframe reduces the oscillation amplitude).

ROSTA also has the ideal supports for the suspension of counterframes, the very compact mounts type AB-D.

Discharge chutes hanging under silos and bunkers

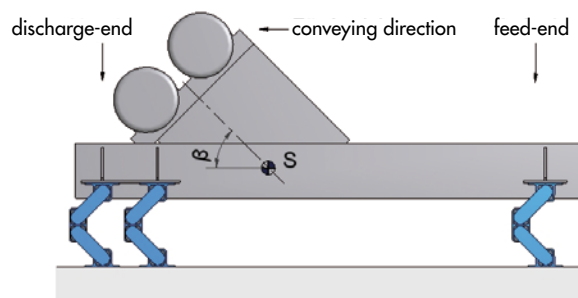


Discharge chutes under silos are normally supported by means of complicated yoke constructions and are suspended on pressure springs. With its HS suspensions (HS = hanging screen), ROSTA offers the possibility of the direct, cost-effective suspension of the discharge unit on silos and bunkers. The geometry of the HS suspensions has been designed to accommodate tensile loads.

Technology

Design layout and evaluation

Subject	Symbol	• Example
Mass of the empty channel and drive	m_0	680 kg
Products on the channel		200 kg
of which approx. 50% coupling *		100 kg
Total vibrating mass *	m	780 kg
Mass distribution: feed-end	% feed-end	33%
discharge-end	% discharge-end	67%
Acceleration due to gravity	g	9.81 m/s ²
Loading per corner feeding	$F_{\text{feed-end}}$	1263 N
Loading per corner discharge	$F_{\text{discharge-end}}$	2563 N
• Element choice in example		6 x AB 38
Working torque of both drives	AM	600 kgcm
Oscillation amplitude empty channel	sw_0	8.8 mm
Oscillation amplitude in operation	sw	7.7 mm
Motor revolutions	n_s	960 rpm
Centrifugal force of both drives	F_z	30'319 N
Oscillating machine factor	K	4.0
Machine acceleration	$a = K \cdot g$	4.0 g
• Natural frequency suspensions		fe 2.7 Hz
Degree of isolation	W	97%



Formulas

Loading per corner

$$F_{\text{feed-end}} = \frac{m \cdot g \cdot \% \text{ feed-end}}{2 \cdot 100} \quad F_{\text{discharge-end}} = \frac{m \cdot g \cdot \% \text{ discharge-end}}{2 \cdot 100}$$

Oscillation amplitude

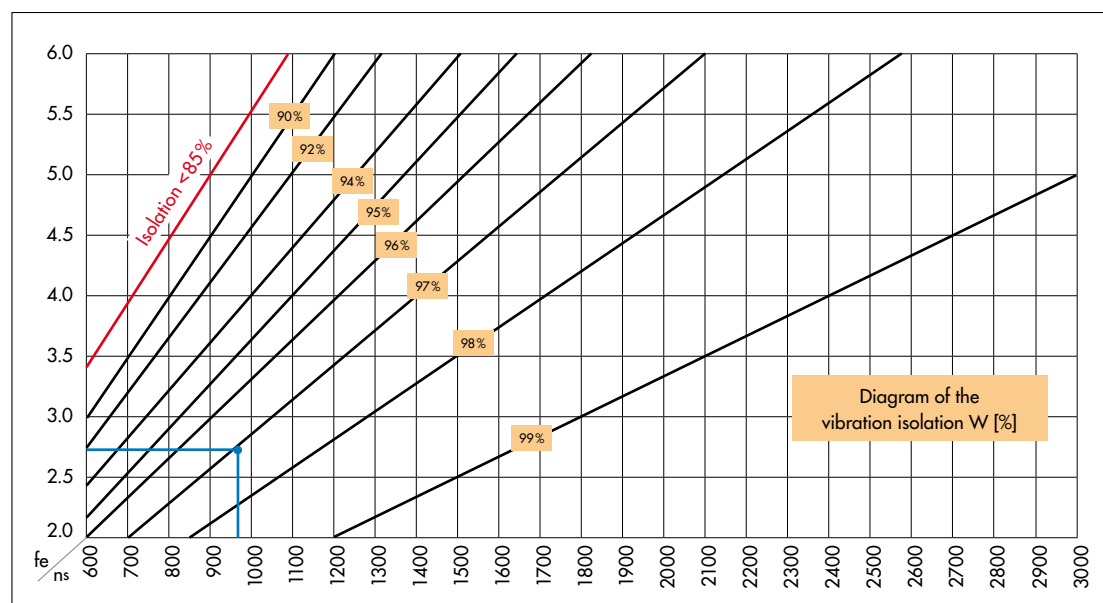
$$sw_0 = \frac{AM}{m_0} \cdot 10 \quad sw = \frac{AM}{m} \cdot 10$$

Centrifugal force

$$F_z = \frac{\left(\frac{2\pi}{60} \cdot n_s\right)^2 \cdot AM \cdot 10}{2 \cdot 1000} = \frac{n_s^2 \cdot AM}{18'240}$$

Oscillating machine factor

$$K = \frac{\left(\frac{2\pi}{60} \cdot n_s\right)^2 \cdot sw}{2 \cdot g \cdot 1000} = \frac{n_s^2 \cdot sw}{1'789'000}$$



Vibration isolation

$$W = 100 - \frac{100}{\left(\frac{n_s}{60 \cdot f_e}\right)^2 - 1}$$

• Example:

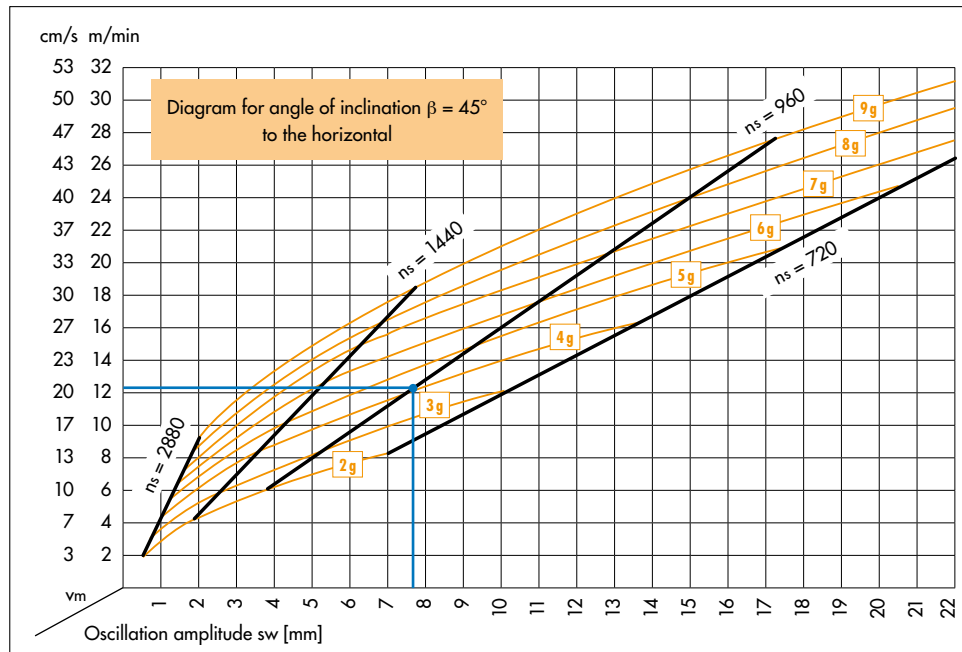
The proportion of the relationship between exciter frequency 16 Hz (960 rpm) and mount frequency 2.7 Hz is offering an isolation degree of 97%.

* The following has to be observed for the determination of the coupling effect and material flow:

- High coupling or sticking of humid bulk material
- Channel running full
- Fully stacked screen deck with humid material
- Weight distribution with and without conveyed material
- Centrifugal force does not run through the centre of gravity (channel full or empty)
- Sudden impact loading occurs
- Subsequent additions to the screen structure (e.g. additional screening deck)

Technology

Determination of the average material conveying speed v_m



Main influencing factors:

- Conveying ability of the material
- Height of the bulk goods
- Screen box inclination
- Position of unbalanced motors
- Position of the centre of gravity

The material speed on circular motion screens does vary, due to differing screen-box inclination angles.

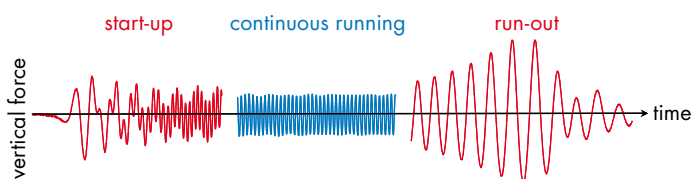
• Example:

The horizontal line out of the intercept point of amplitude (7,7 mm peak to peak) and motor revolutions (960 rpm) is indicating an average theoretical speed of 12.3 m/min or 20.5 cm/sec.

Resonance amplification and residual comportment

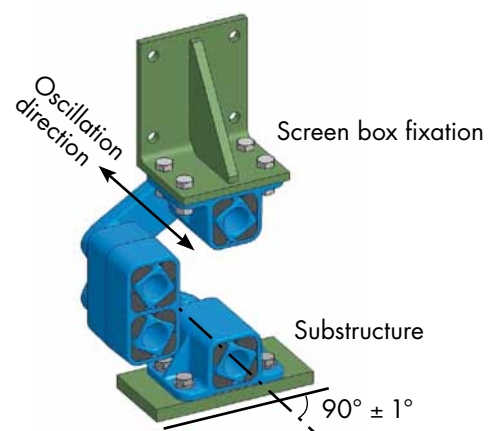
At the screen start-up and run-out the suspension elements are passing through their resonance frequency. By the resulting amplitude superelevation the four rubber suspensions in the AB mounts do generate a high level of damping which is absorbing the remaining energy after only a few strokes. The screen box stops its motion within seconds.

Laboratory measurements of a typical development of the residual forces on a ROSTA screen suspension:



Alignment of the elements

If the suspensions for linear motion screens are arranged as shown on page 7, a harmonic, noiseless oscillation of the screen will result. The rocker arm fixed to the screen carries out the greater part of the oscillations. The rocker arm fixed to the substructure remains virtually stationary and ensures a low natural frequency, and thereby also a good isolation. The mounting axis has to be arranged to be at right angles (90°) to the conveying axis, with maximum tolerance $\pm 1^\circ$.



Technology

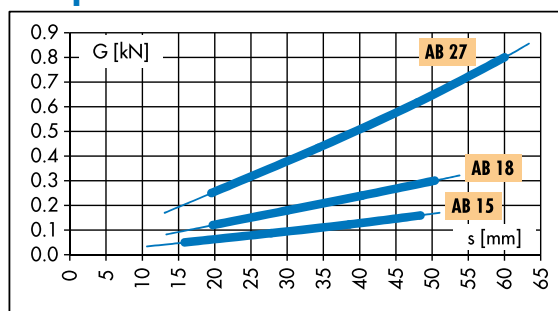
Deflection curves and cold flow behaviours

Diagrams showing the vertical deflection s (in mm) by compression or tensile load G (in kN). The shown values comprehend the initial cold flow settling after one day of operation. The final element deflection after the full cold flow compensation (after approx. 1 year) is usually factor $\times 1,09$ higher (depending on specific application, climate etc.).

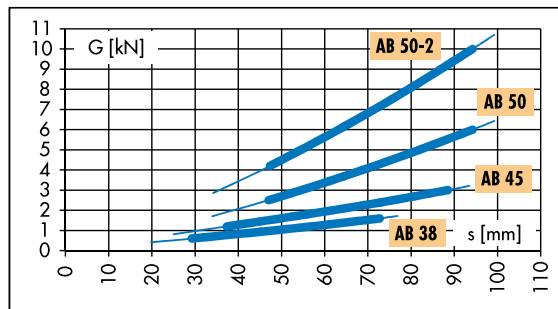
The deflection values are based on our catalogue specifications and should be understood as approximate values. Please consult also our tolerance specifications in chapter «Technology» in the general catalogue.

Compression load

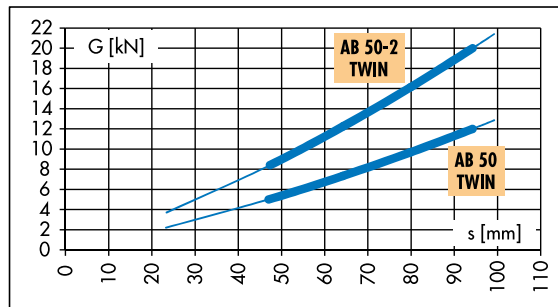
AB 15 to AB 27



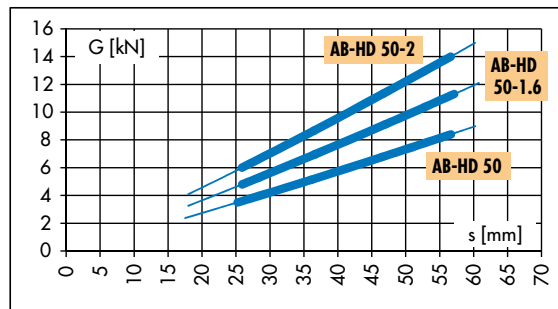
AB 38 to AB 50-2



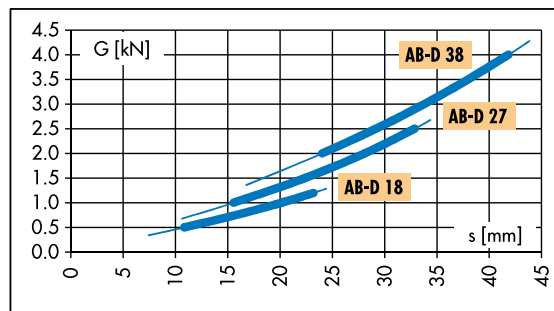
AB TWIN



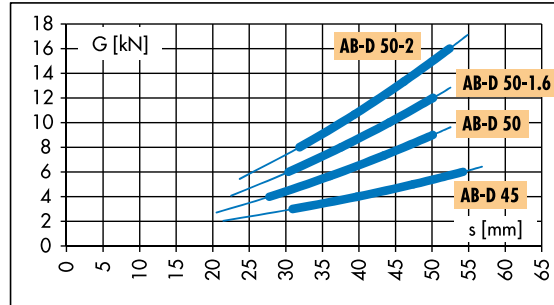
AB-HD



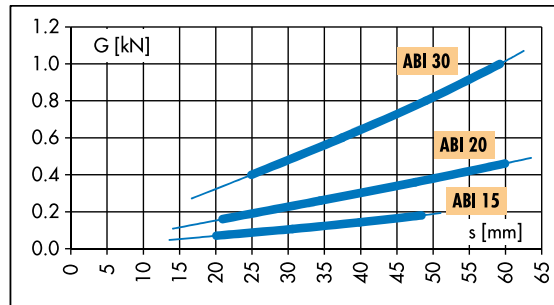
AB-D 18 to AB-D 38



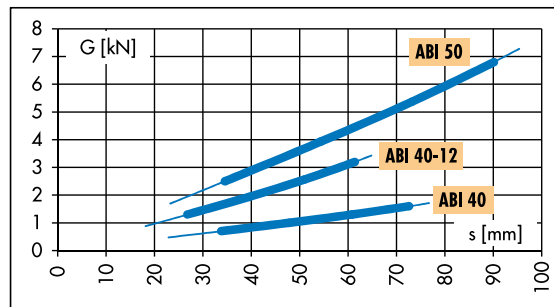
AB-D 45 to AB-D 50-2



ABI 15 to ABI 30

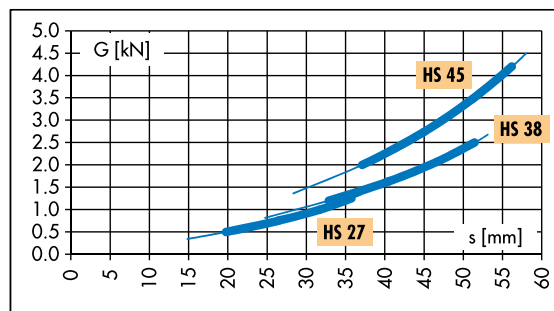


ABI 40 to ABI 50

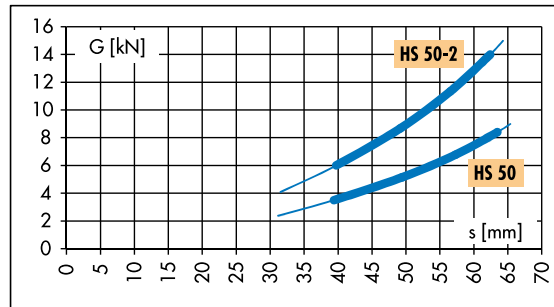


Tensile load

HS 27 to HS 45

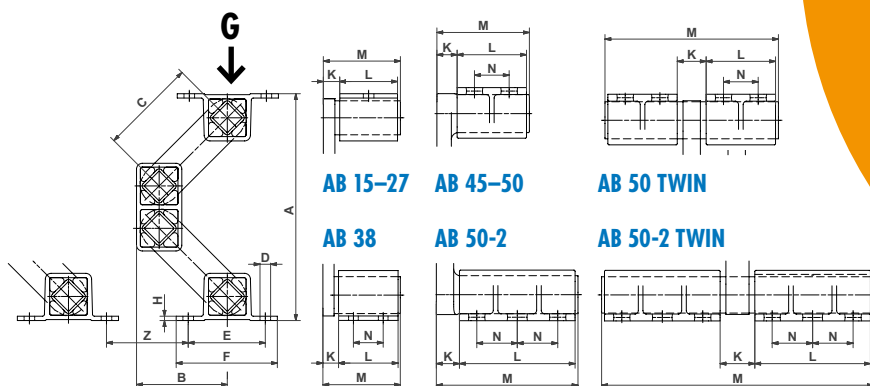


HS 50 and HS 50-2



Oscillating Mounting

Type AB



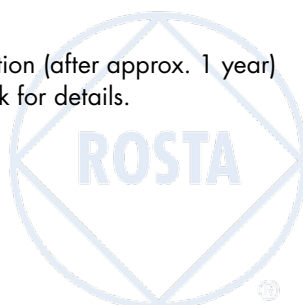
Art. No.	Type	Load capacity G _{min.} –G _{max.} [N]	A un- loaded	A* max. load	B un- loaded	B* max. load	C	D	E	F	H	K	L	M	N	Weight [kg]
07 051 056	AB 15	50 – 160	169	115	71	89	80	ø7	50	65	9	10	40	52	–	0.51
07 051 057	AB 18	120 – 300	208	154	88	107	100	ø9	60	80	3.5	14	50	67	–	1.15
07 051 058	AB 27	250 – 800	235	170	94	116	100	ø11	80	105	4.5	17	60	80	–	2.20
07 051 059	AB 38	600 – 1'600	305	225	120	147	125	ø13	100	125	6	21	80	104	40	5.10
07 051 054	AB 45	1'200 – 3'000	353	257	141	172	140	13x20	115	145	8	28	100	132	65	11.5
07 051 061	AB 50	2'500 – 6'000	380	277	150	184	150	17x27	130	170	12	35	120	160	60	20.8
07 051 055	AB 50-2	4'200 – 10'000	380	277	150	184	150	17x27	130	170	12	40	200	245	70	32.2
07 051 008	AB 50 TWIN	5'000 – 12'000	380	277	150	184	150	17x27	130	170	12	50	120	300	60	35.0
07 051 009	AB 50-2 TWIN	8'400 – 20'000	380	277	150	184	150	17x27	130	170	12	60	200	470	70	54.0

Art. No.	Type	Natural frequency G _{min.} –G _{max.} [Hz]	Z**	Dynamic spring value		Capacity limits by different rpm.						Material structure			
				cd vertical [N/mm]	cd horizontal [N/mm]	720 min ⁻¹ sw max. [mm]	K max. [-]	960 min ⁻¹ sw max. [mm]	K max. [-]	1440 min ⁻¹ sw max. [mm]	K max. [-]	Light alloy profile	Steel welded construction	Nodular cast iron	ROSTA blue painted
07 051 056	AB 15	4.3–2.8	65	10	6	14	4.1	12	6.2	8	9.3	x	x		x
07 051 057	AB 18	3.6–2.6	80	18	14	17	4.9	15	7.7	8	9.3	x	x		x
07 051 058	AB 27	3.7–2.7	80	40	25	17	4.9	14	7.2	8	9.3	x	x		x
07 051 059	AB 38	3.0–2.4	100	60	30	20	5.8	17	8.8	8	9.3	x	x		x
07 051 054	AB 45	2.8–2.3	115	100	50	21	6.1	18	9.3	8	9.3	x	x	x	x
07 051 061	AB 50	2.4–2.1	140	190	85	22	6.4	18	9.3	8	9.3			x	x
07 051 055	AB 50-2	2.4–2.1	140	320	140	22	6.4	18	9.3	8	9.3			x	x
07 051 008	AB 50 TWIN	2.4–2.1	140	380	170	22	6.4	18	9.3	8	9.3		x	x	x
07 051 009	AB 50-2 TWIN	2.4–2.1	140	640	280	22	6.4	18	9.3	8	9.3		x	x	x
				values in nominal load range at 960 rpm and sw of 8 mm.		Acceleration > 9.3 g is not recommended						Material structure			

These types can be combined with one another (identical heights and operation behaviour)

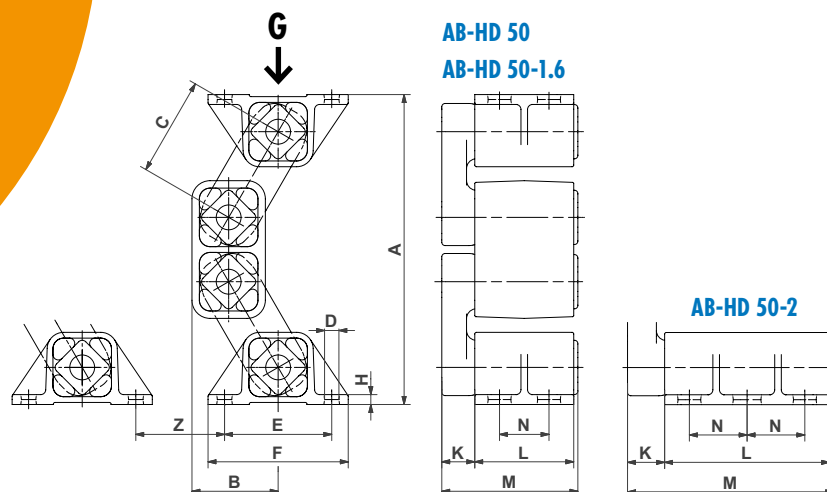
* compression load G_{max.} and final cold-flow compensation (after approx. 1 year)

** separate assembly instructions are available, please ask for details.





Oscillating Mounting Type AB-HD



Art. No.	Type	Load capacity Gmin. – Gmax. [N]	A un- loaded	A* max. load	B un- loaded	B* max. load	C	D	E	F	H	K	L	M	N	Weight [kg]
07 051 062	AB-HD 50	3'500 – 8'400	376	313	105	141	120	17x27	130	170	12	40	120	165	60	22.7
△ 07 051 063	AB-HD 50-1.6	4'800 – 11'300	376	313	105	141	120	17x27	130	170	12	40	160	205	70	27.1
07 051 060	AB-HD 50-2	6'000 – 14'000	376	313	105	141	120	17x27	130	170	12	45	200	250	70	35.5

Art. No.	Type	Natural frequency Gmin.–Gmax. [Hz]	Z**	Dynamic spring value		Capacity limits by different rpm.						Steel welded construction	Nodular cast iron	ROSTA blue painted
				cd vertical [N/mm]	cd horizontal [N/mm]	720 min ⁻¹		960 min ⁻¹		1440 min ⁻¹				
						sw max. [mm]	K max. [-]	sw max. [mm]	K max. [-]	sw max. [mm]	K max. [-]			
07 051 062	AB-HD 50	3.2–2.4	120	270	130	18	5.2	15	7.7	8	9.3		x	x
△07 051 063	AB-HD 50-1.6	3.2–2.4	120	360	172	18	5.2	15	7.7	8	9.3	x	x	x
07 051 060	AB-HD 50-2	3.2–2.4	120	450	215	18	5.2	15	7.7	8	9.3		x	x
				values in nominal load range at 960 rpm and sw of 8 mm.		Acceleration > 9.3 g is not recommended						Material structure		

These types can be combined with one another (identical heights and operation behaviour)

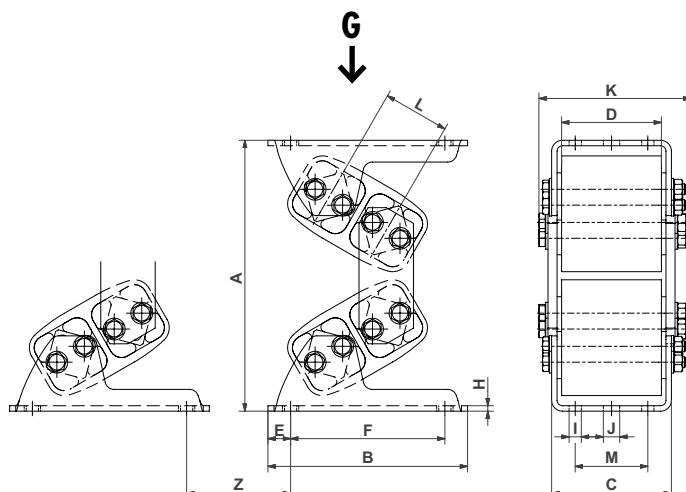
* compression load Gmax. and final cold-flow compensation (after approx. 1 year)

** separate assembly instructions are available, please ask for details.

△ available on request

Oscillating Mounting

Type AB-D



Art. No.	Type	Load capacity Gmin. – Gmax. [N]	A un- loaded	A* max. load	B	C	D	E	F	H	I	J	K	L	M	Weight [kg]
07 281 000	AB-D 18	500 – 1'200	137	112	115	61	50	12.5	90	3	9	9	74	31	30	1.3
07 281 001	AB-D 27	1'000 – 2'500	184	148	150	93	80	15	120	4	9	11	116	44	50	2.9
07 281 002	AB-D 38	2'000 – 4'000	244	199	185	118	100	17.5	150	5	11	13.5	147	60	70	7.5
07 281 003	AB-D 45	3'000 – 6'000	298	240	220	132	110	25	170	6	13.5	18	168	73	80	11.5
07 281 004	AB-D 50	4'000 – 9'000	329	272	235	142	120	25	185	6	13.5	18	166	78	90	22.0
07 281 005	AB-D 50-1.6	6'000 – 12'000	329	272	235	186	160	25	185	8	13.5	18	214	78	90	25.5
07 281 006	AB-D 50-2	8'000 – 16'000	329	272	235	226	200	25	185	8	13.5	18	260	78	90	29.0

Art. No.	Type	Natural frequency Gmin. – Gmax. [Hz]	Z**	Dynamic spring value			Capacity limits by different rpm.						Light alloy profile	Steel plate	Nodular cast iron	ROSTA blue painted
				cd vertical [N/mm]	cd at sw [mm]	cd horizontal [N/mm]	720 min ⁻¹ sw max. [mm]	K max. [–]	960 min ⁻¹ sw max. [mm]	K max. [–]	1440 min ⁻¹ sw max. [mm]	K max. [–]				
07 281 000	AB-D 18	6.1–4.4	30	100	4	20	5	1.4	5	2.6	4	4.6	x	x		x
07 281 001	AB-D 27	5.4–3.9	35	160	4	35	7	2.0	6	3.1	5	5.8	x	x		partial
07 281 002	AB-D 38	4.3–3.4	40	185	6	40	9	2.6	8	4.1	6	7.0	x	x		partial
07 281 003	AB-D 45	3.7–3.1	55	230	8	70	11	3.2	9	4.6	7	8.1	x	x		partial
07 281 004	AB-D 50	3.7–2.9	55	310	8	120	12	3.5	10	5.2	8	9.3	x	x	x	x
07 281 005	AB-D 50-1.6	3.6–2.9	55	430	8	160	12	3.5	10	5.2	8	9.3	x	x	x	x
07 281 006	AB-D 50-2	3.5–2.8	55	540	8	198	12	3.5	10	5.2	8	9.3	x	x	x	x
				values in nominal load range at 960 rpm			Acceleration > 9.3 g is not recommended						Material structure (zinc-plated couplings)			

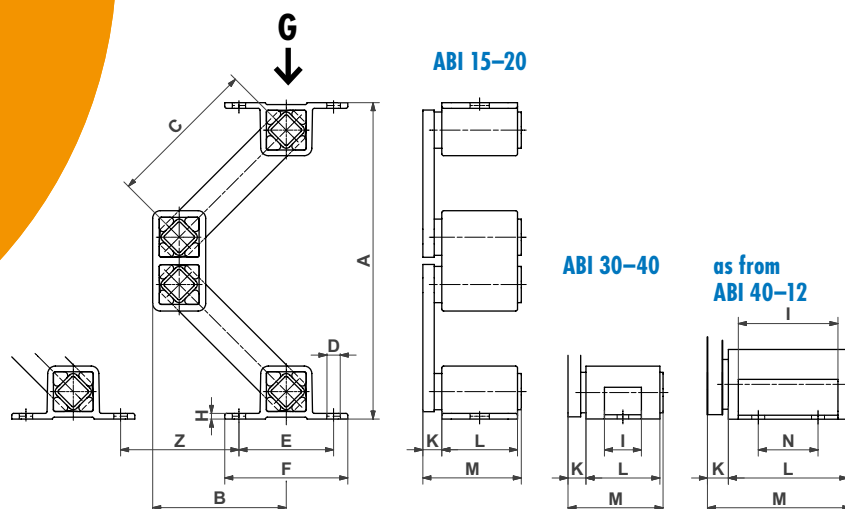
These types can be combined with one another (identical heights and operation behaviour)

* compression load Gmax. and final cold-flow compensation (after approx. 1 year)

** separate assembly instructions are available, please ask for details.

Oscillating Mounting

Type ABI



Art. No.	Type	Load capacity Gmin. – Gmax. [N]	A un- loaded	A* max. load	B un- loaded	B* max. load	C	D	E	F	H	I	K	L	M	N	Weight [kg]
07 171 107	ABI 15	70 – 180	167	114	70	88	80	7x10	50	65	3	–	10	40	52	–	0.71
07 171 108	ABI 20	160 – 460	214	147	89	111	100	9x15	65	85	3	–	14	50	67	–	1.57
07 171 103	ABI 30	400 – 1'000	241	176	99	121	100	ø11	85	110	4	35	17	70	90	–	3.27
07 171 104	ABI 40	700 – 1'600	317	237	128	155	125	ø13	115	150	4	40	21	80	104	–	7.87
07 171 106	ABI 40-12	1'300 – 3'200	281	214	111	133	100	ø13	115	150	4	100	21	120	144	60	11.3
07 171 105	ABI 50	2'500 – 6'800	372	274	151	184	150	ø18	140	180	5	120	33	150	187	70	14.3

Art. No.	Type	Natural frequency Gmin. – Gmax. [Hz]	Z**	Dynamic spring value		Capacity limits by different rpm.						Stainless steel welded	Stainless steel casted	Unpainted
				cd vertical [N/mm]	cd horizontal [N/mm]	720 min ⁻¹ sw max. [mm]	K max. [–]	960 min ⁻¹ sw max. [mm]	K max. [–]	1440 min ⁻¹ sw max. [mm]	K max. [–]			
07 171 107	ABI 15	4.0–2.8	65	10	6	14	4.1	12	6.2	8	9.3	x	x	x
07 171 108	ABI 20	3.6–2.4	80	22	14	17	4.9	15	7.7	8	9.3	x	x	x
07 171 103	ABI 30	3.5–2.6	80	48	27	17	4.9	14	7.2	8	9.3	x		x
07 171 104	ABI 40	3.0–2.4	100	60	30	20	5.8	17	8.8	8	9.3	x		x
07 171 106	ABI 40-12	3.4–2.6	90	115	55	16	4.6	13	6.7	8	9.3	x		x
07 171 105	ABI 50	2.8–2.2	140	220	100	22	6.4	18	9.3	8	9.3	x		x
				values in nominal load range at 960 rpm and sw of 8 mm.		Acceleration > 9.3 g is not recommended						Material structure		

Description of stainless steel:

X5CrNi18-10 (1.4301) and

GX5CrNi19-10 (1.4308)

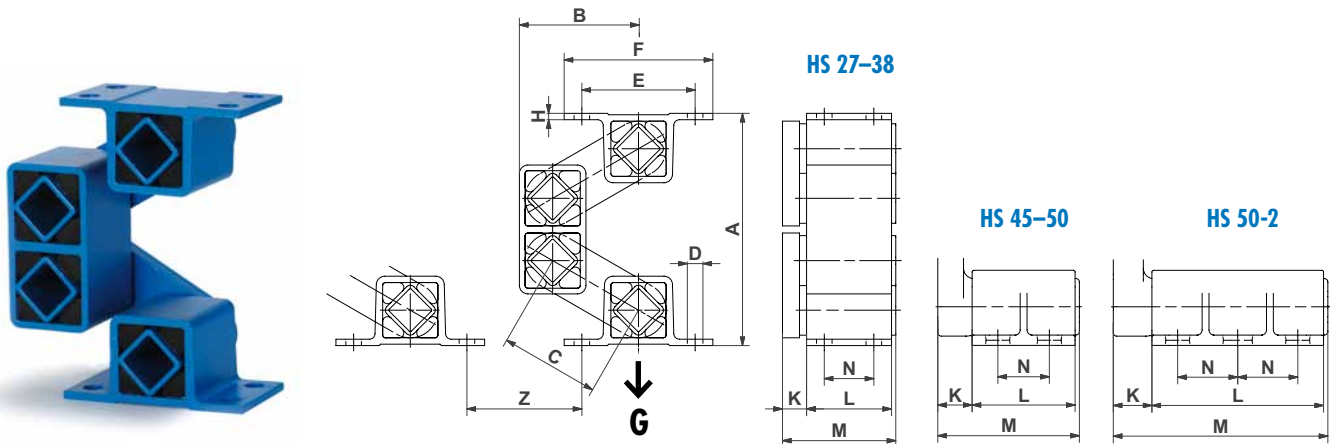
* compression load Gmax. and final cold-flow compensation (after approx. 1 year)

** separate assembly instructions are available, please ask for details.



Oscillating Mounting

Type HS



Art. No.	Type	Load capacity Gmin. – Gmax. [N]	A un- loaded	A* max. load	B un- loaded	B* max. load	C	D	E	F	H	K	L	M	N	Weight [kg]
07 311 001	HS 27	500 – 1'250	164	202	84	68	70	11	80	105	4.5	17	60	80	35	1.6
07 311 002	HS 38	1'200 – 2'500	223	275	114	92	95	13	100	125	6	21	80	104	40	4.9
07 311 003	HS 45	2'000 – 4'200	265	325	138	113	110	13x20	115	145	8	28	100	132	65	11.3
07 311 004	HS 50	3'500 – 8'400	288	357	148	118	120	17x27	130	170	12	40	120	165	60	20.2
07 311 005	HS 50-2	6'000 – 14'000	288	357	148	118	120	17x27	130	170	12	45	200	250	70	34.0

Art. No.	Type	Natural frequency Gmin. – Gmax. [Hz]	Z**	Dynamic spring value		Capacity limits by different rpm.						Light alloy profile	Steel welded construction	Nodular cast iron	ROSTA blue painted
				cd vertical [N/mm]	cd horizontal [N/mm]	720 min ⁻¹ sw max. [mm]	K max. [–]	960 min ⁻¹ sw max. [mm]	K max. [–]	1440 min ⁻¹ sw max. [mm]	K max. [–]				
07 311 001	HS 27	4.2–3.8	70	65	32	12	3.5	10	5.2	8	9.3	x	x		x
07 311 002	HS 38	3.6–3.3	90	95	46	15	4.3	13	6.7	8	9.3	x	x		x
07 311 003	HS 45	3.3–3.0	100	142	70	17	4.9	14	7.2	8	9.3	x	x	x	x
07 311 004	HS 50	3.2–3.0	120	245	120	18	5.2	15	7.7	8	9.3			x	x
07 311 005	HS 50-2	3.2–2.9	120	410	200	18	5.2	15	7.7	8	9.3			x	x
				values in nominal load range at 960 rpm and sw of 8 mm.		Acceleration > 9.3 g is not recommended						Material structure			

These types can be combined with one another (identical heights and operation behaviour)

Safety regulations based on the machine engineering directives **2006/42/EG (hanging load bearing capacities)** must be fulfilled on the part of the machine manufacturer. The ROSTA mounts shall be fastened with the foreseen amount of screws (existing fixation holes or slots) of quality 8.8 with consideration of the prescribed fastening torque.

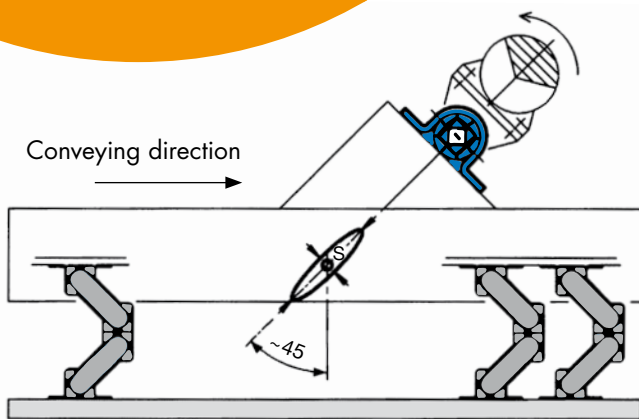
* tensile load G_{max.} and final cold-flow compensation (after approx. 1 year)

** separate assembly instructions are available, please ask for details.

ROSTA-oscillating mountings and accessories for individual customer solutions

Pendulum joint, the cost-efficient drive solution with only one unbalanced motor

If a single vibration motor is built onto an elastic pendulum joint (e.g. a DK element), the device will carry out a slightly elliptical oscillation shape (linear movement). The final oscillation motion is dependent on the distance between pendulum axis and motor axis. The pendulum suspension has only been used on rather smaller feeding devices. The setting angle of the motor configuration is approx. 45°.



Allocation table

Art. No. DK	Type	centrifugal force max.	Number of clamps	Type	Art. No. BK
01 071 008	DK-A 27 x 60	1'000 N	1	BK 27	01 520 004
01 071 011	DK-A 38 x 80	2'000 N	2	BK 38	01 520 005
01 071 014	DK-A 45 x 100	3'500 N	2	BK 45	01 520 006
01 071 015	DK-A 45 x 150	5'250 N	3	BK 45	01 520 006
01 071 017	DK-A 50 x 200	10'000 N	3	BK 50	01 520 007
01 071 018	DK-A 50 x 300	15'000 N	4	BK 50	01 520 007



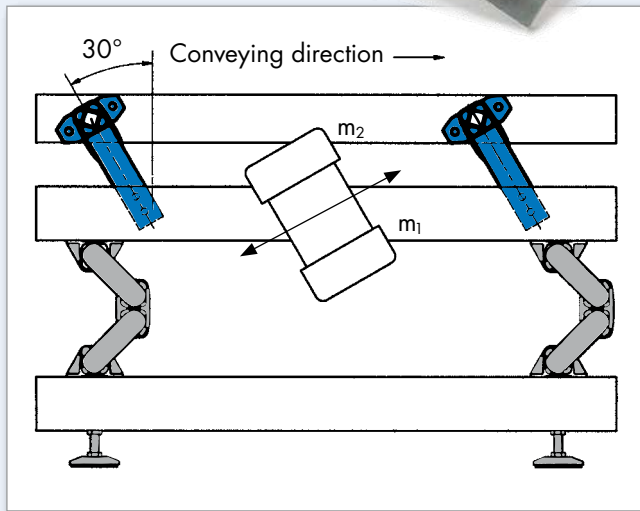
ROSTA components for pendulum mounts are mentioned in the general catalogue «rubber suspension units».

Suspensions of spiral or coil feeders

Spiral-shaped conveyors are used in processing systems where bulk goods should stay on the conveying trough in the smallest possible space for a long period in order to cool down or dry. Not infrequently, the resulting channel length can be 25–30 meters in a spiral tower that is only five meters high! With a spiral conveyor supported on ROSTA Type AB-D oscillating mountings, there is no need for additional fall-prevention devices such as cable bracings or securing pipes in the spiral, as is the case for helical spring supports. If a spring breaks here, the complete spiral tower tilts – unless it has been secured with cable bracings. ROSTA AB-D suspensions offer a high isolation effect, clearly defined oscillations up to the topmost spiral and absolute stability for the spiral tower.



AU-DO

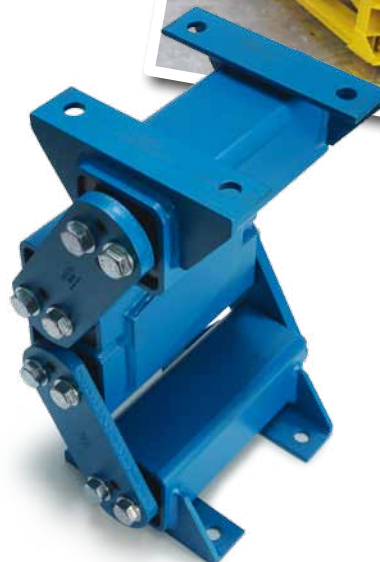
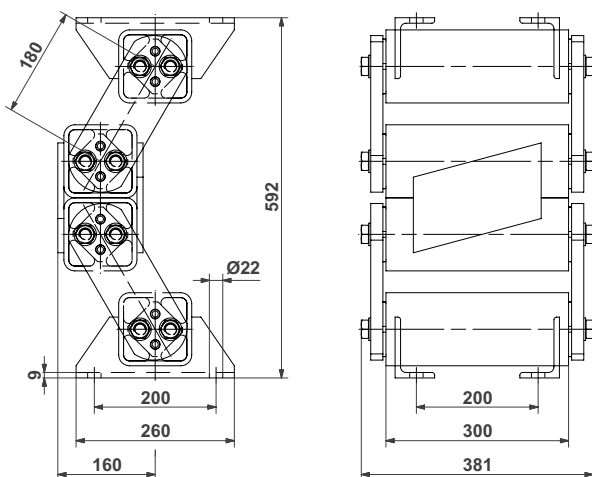


The AU-DO rocker suspensions have been mainly developed for the channel support in continuously loaded, base frame excited two-mass oscillation systems with unbalanced drive (energetic amplification). The base frame m_1 is excited by means of unbalanced motors and the spring accumulators of the AU-DO-rocker suspensions amplify the marginal frame oscillation amplitude into a considerable throw amplitude on the conveying channel m_2 . The base frame is ideally supported on ROSTA Type AB oscillating mountings. These systems are characterised by low, hardly measurable residual force transmission into the substructure and are therefore suitable for installation on steel frameworks and intermediate floors in processing buildings. Additional customer benefits are the low-noise operation, the low motor power involved and the simple installation.

The AU-DO elements are available in 5 sizes. We will be glad to calculate your specific system, please ask for our relevant questionnaire.

AB-HD 70-3 (customized product with low natural frequency and high load capacity)

Compression load from 9'000 N to 20'000 N per element.
Natural frequency approx. 2.1–2.4 Hz.

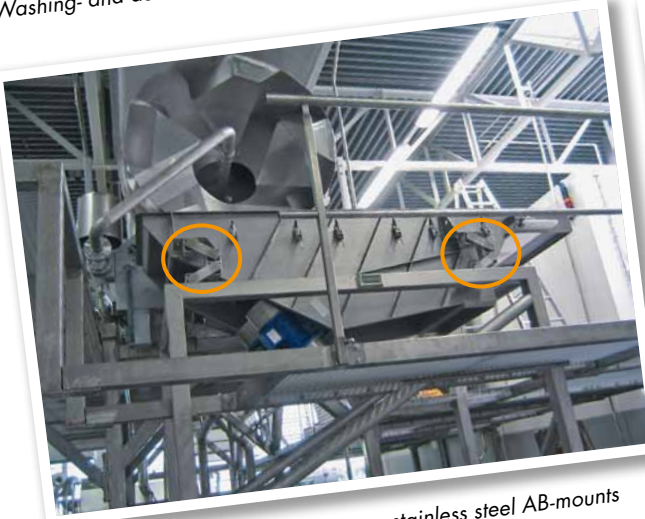




Washing- and dewatering-screen for vegetables on AB-mounts



Vegetable-feeder on stainless steel AB-mounts



Selection-screen for potato chips on stainless steel AB-mounts



Washing- and dewatering-screen for vegetables on AB-mounts



Circular motion screen for minerals on AB TWIN-mounts



Circular motion screen for gravel on AB TWIN-mounts



Circular motion screen in mobile crushing plant on AB-mounts



Fluid-bed-cooler on AB-D-mounts



Fluid-bed-cooler on AB-D-mounts



Cement screening- and feeding device on AB-mounts



Wheat-cleaning-plant on AB-mounts



Pasta-feeding-channel hanging on HS-mounts

Applications!

Examples:



Changes regarding data reserved.



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swinging solutions

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