

# Quality in vibrators

**Pneumatic  
vibrators  
for industries**

- **Conveying**
- **Filling**
- **Compacting**
- **Separating**

Valid from 2021

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# Quality and innovation

Since more than 50 years worldwide at the top.  
Wide range for the best solution in every case.



## Evaluation of the perfect vibrator: (in detail under [www.findeva.com](http://www.findeva.com))

- Non-directional circular oscillations: Rotating vibrators series K, R, DAR, T, GT
- Linear aligned oscillations: Series FP, FPLF, FAL, VTL.
- Interval knockers: Series FKL, FPK

## Vibration characteristics:

- Mainly high-frequency oscillations with low amplitude: Rotating vibrators series K, R, DAR, T, GT
- Low-frequency oscillations with high amplitude: Piston Vibrators series FP, FPLF, FAL, VTL
- Hammer impacts: Klocker series FKL, FPK

## Advantages of Findeva vibrators and knockers:

- Excellent power to weight ratio
- High-quality aluminium housings, intricate surface tooling: corrosion-resistant and easy to clean
- Low air consumption, frequency/pulse controllable by air pressure
- Sturdy and simple construction for long life and low maintenance costs
- Wide range covering over 70 models
- High availability of stock and fast delivery
- No risk of explosion
- All models available with ATEX certification

## Explanations to the technical Data:

Technical data were measured unless otherwise stated, using a Kistler 3-axis dynamometer. Trials were carried out on a massive laboratory test block and displayed by means of a Kistler Control Monitor (COMO). Frequency and power decrease when less rigid bases are used. We reserve the right to improve, modify or withdraw specifications our products without prior notice or obligation.

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# Ball Vibrators K

Ball vibrators, simple and good.  
Wide range for many applications.



## Properties

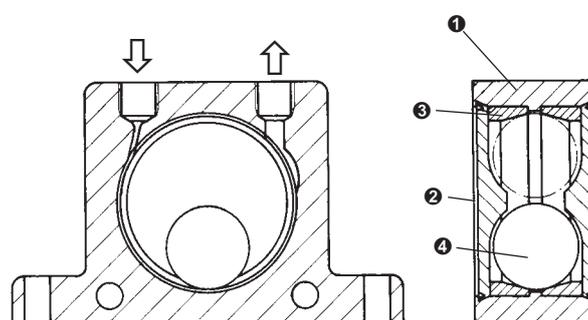
- Powerful
- Rated frequency 7'300 – 35'000 rpm
- Centrifugal force 130 – 4'050 N
- Continuously variable
- Applicable up to 100°C
- HT version up to 150°C on request
- Also available with ATEX certification

## Field of application

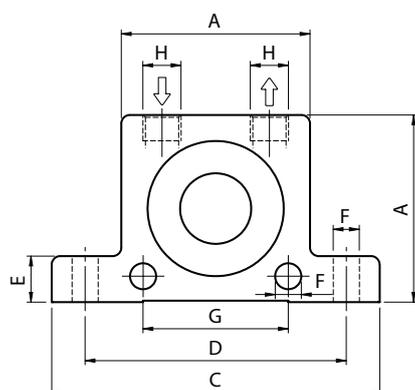
- Emptying of bunkers
- Screen filters
- Vibrating tables
- Preventing adhesions in pipelines and silos
- Moving of bulk solids

## Construction

- Vibration due to rotating ball running on hardened, ground steel guides.
- Nylon plates on both sides to support the ball and as protection against dust and water.
- Housing with 4 mounting bores.



- ❶ Housing of extruded aluminium alloy, powder-coated
- ❷ Nylon caps
- ❸ Guides made of hardened steel
- ❹ Hardened ball



## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H Thread	Weight [kg]
K-8	50	20	86	68	12	7	40	G 1/4"	0.13
K-10	50	20	86	68	12	7	40	G 1/4"	0.13
K-13	65	24	113	90	16	9	50	G 1/4"	0.26
K-16	65	27	113	90	16	9	50	G 1/4"	0.30
K-20	80	33	128	104	16	9	60	G 1/4"	0.53
K-25	80	38	128	104	16	9	60	G 1/4"	0.63
K-30	100	44	160	130	20	11	80	G 3/8"	1.13
K-36	100	50	160	130	20	11	80	G 3/8"	1.34

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
K-8	25.5	31.0	35.0	130	260	360	83	145	195
K-10	22.5	28.0	34.5	250	470	710	92	150	200
K-13	15.0	18.5	22.5	320	550	870	94	158	225
K-16	13.0	17.0	19.5	450	800	1'100	122	200	280
K-20	10.5	14.5	16.5	720	1'220	1'720	130	230	340
K-25	9.2	12.2	14.0	930	1'570	2'050	160	290	425
K-30	7.8	9.7	12.5	1'510	2'470	3'210	215	375	570
K-36	7.3	9.0	10.0	2'060	3'150	4'050	260	475	675



# Roller Vibrators R

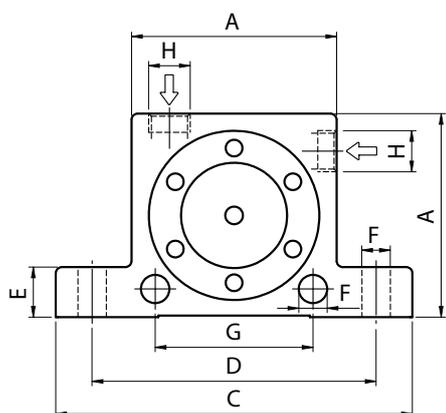
Simply constructed high-frequency roller vibrators, wide range for many applications.

## Properties

- High centrifugal force
- Rated frequency 10'000 – 36'000 min<sup>-1</sup>
- Centrifugal force 1'070 – 12'500 N
- Continuously variable
- Applicable up to 150°C
- Resistant against extreme environmental conditions
- Also available with ATEX certification

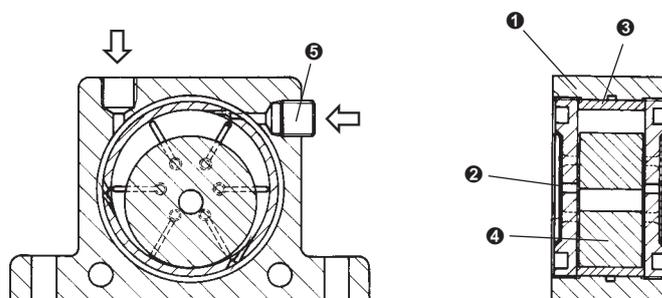
## Construction

- Vibration by a rotating precision-steel roller.
- Shockproof synthetic caps.
- Housing with 4 mounting bores.
- Air feed from the top or lateral.



## Field of application

- Emptying of hoppers and chutes
- Screen filters
- Conveyance of small particles
- Preventing adhesions in pipelines and silos
- Transport of fine powders
- Compacting of plastic and concrete in troughs



- ❶ Housing of extruded aluminium alloy, powder-coated
- ❷ Synthetic caps
- ❸ Guides made of steel castings
- ❹ Steel roller
- ❺ Screw plug

## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H Thread	Weight [kg]
R-50	50	29	86	68	12	7	40	G 1/8"	0.24
R-65	65	37	113	90	16	9	50	G 1/4"	0.54
R-80	80	43	128	104	16	9	60	G 1/4"	0.95
R-100	100	52	160	130	20	11	80	G 3/8"	1.81
R-120	120	77	194	152	24	17	–	G 3/8"	4.26

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
R-50	25.0	35.0	36.0	1'070	2'920	4'220	100	145	195
R-65	19.0	21.0	26.0	2'730	4'830	6'120	200	300	400
R-80	15.5	18.5	19.0	3'000	6'090	7'450	290	430	570
R-100	11.0	14.0	16.0	3'750	6'750	8'900	370	550	730
R-120	10.0	11.5	12.5	8'000	10'000	12'500	500	730	970

# Roller Vibrators DAR

Roller vibrators, especially for concrete and other heavy-duty applications.



## Properties

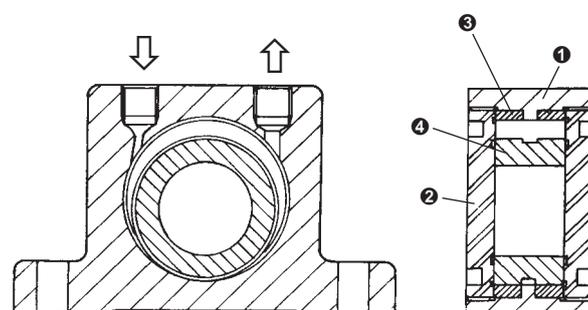
- High centrifugal force
- Rated frequency 7'800 – 38'000 min<sup>-1</sup>
- Centrifugal force 1'680 – 12'000 N
- Continuously variable
- Applicable up to 150°C
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

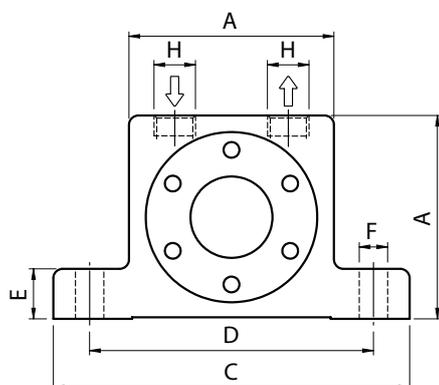
- Compacting of plastic and concrete
- Assisting the flow of material in silos and hoppers
- Separating of different sized products on sieves

## Construction

- Vibration through rotating precision rollers in highly flexible steel guides.
- Reinforced by two shockproof bronze caps.



- ❶ Housing of extruded aluminium alloy, powder-coated
- ❷ Bronze-cover
- ❸ Highly flexible steel guides
- ❹ Roller made of steel casting



## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H Thread	Weight [kg]
DAR-2	50	30	86	68	12	7	G 1/8"	0.37
DAR-3	65	36	113	90	16	9	G 1/4"	0.76
DAR-4	80	40	128	104	16	11	G 1/4"	1.27
DAR-5	100	52	160	130	20	13	G 3/8"	2.45
DAR-6	120	62	194	152	24	17	G 3/8"	4.70
DAR-7	120	77	194	152	24	17	G 3/8"	5.70

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
DAR-2	36.0	37.0	38.0	2'200	3'880	4'090	70	140	200
DAR-3	27.0	31.0	32.0	2'720	4'560	6'050	100	200	300
DAR-4	18.0	22.5	25.0	2'360	4'610	6'690	120	250	360
DAR-5	9.5	15.0	16.5	1'680	4'640	7'200	130	270	390
DAR-6	7.8	10.0	12.0	4'370	6'680	10'300	170	320	470
DAR-7	8.0	9.8	11.5	5'870	9'500	12'000	180	350	500



# Turbine Vibrators T

High speed and high working torque for strong vibration at large amplitude.

## Properties

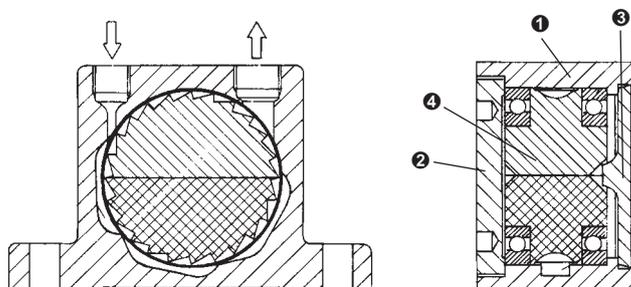
- Rated frequency 6'500 – 23'000 min<sup>-1</sup>
- Centrifugal force 600 – 6'060 N
- Continuously variable
- Applicable up to 100°C
- Resistant against extreme environmental conditions
- Low noise level
- Also available with ATEX certification

## Construction

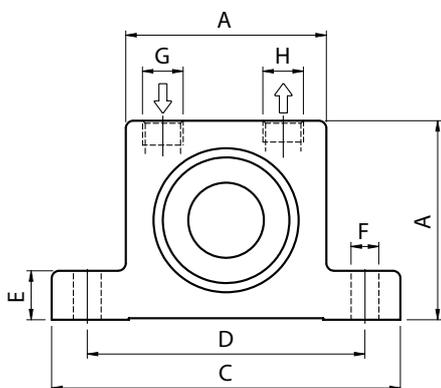
- Vibration with a high excentric torque, caused by the rotor's imbalance
- Rotor on two ball bearings arranged in pairs

## Field of application

- Emptying of bunkers
- Screen filters
- Vibrating tables
- Preventing adhesions in pipelines and silos
- Transporting of fine powders
- Moving of bulk solids



- ❶ Housing anodized of extruded aluminium alloy
- ❷ Synthetic cap with screw thread
- ❸ Nylon cap
- ❹ Rotor, half of aluminium, respectively bronze



## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G BSP	H BSP	Weight [kg]
T-50 / LP	50	46	86	68	12	7	G 1/8"	G 1/4"	0.38
T-50 / HP	50	60	86	68	12	7	G 1/8"	G 1/4"	0.52
T-65 / LP	65	50	113	90	16	9	G 1/4"	G 1/4"	0.73
T-65 / HP	65	64	113	90	16	9	G 1/4"	G 1/4"	0.97
T-80 / LP	80	56	128	104	16	11	G 1/4"	G 3/8"	1.21
T-80 / HP	80	70	128	104	16	11	G 1/4"	G 3/8"	1.56
T-100 / HP	100	67	160	130	20	13	G 3/8"	G 3/8"	2.27

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
T-50 / LP	17.0	21.5	23.0	700	1'240	1'710	67	115	165
T-50 / HP	11.0	14.5	16.5	600	1'020	1'350	79	140	198
T-65 / LP	9.5	13.0	15.0	770	1'380	1'800	89	157	236
T-65 / HP	8.5	10.5	12.0	1'300	2'050	2'600	108	193	290
T-80 / LP	9.0	11.5	13.0	1'840	2'960	3'790	150	260	385
T-80 / HP	-	9.0	10.5	-	3'470	4'740	-	260	385
T-100 / HP	-	9.0	10.0	-	4'800	6'060	-	300	430

# Golden Turbine® GT

High speed and excentric working torques for strong vibration. Wide range.

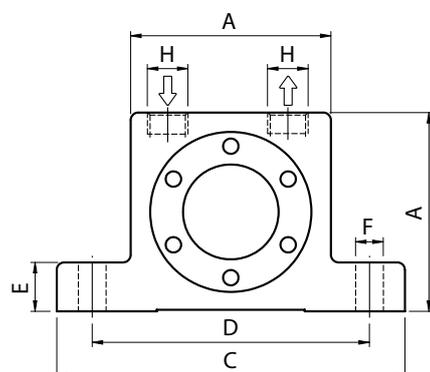


## Properties

- Lubrication-free
- Low noise level
- Strong vibration by high speed and excentric working torques
- Rated frequency 6'000 – 46'000 rpm
- Centrifugal force 130 – 12'000 N
- Continuously variable
- Applicable up to 120°C, HT version on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

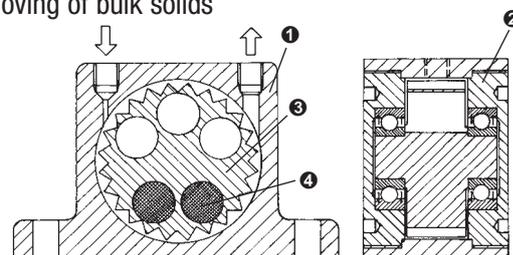
## Construction

- Vibration by the centrifugal force of positive and negative imbalanced torques in the rotor.
- Rotor on two pre-lubricated and enclosed ball bearings arranged in pairs. Lubricated with special grease for long life.



## Field of application

- Emptying of bunkers
- Screen filters
- Vibrating tables
- Preventing adhesions in pipelines and silos
- Transporting of fine powders
- Moving of bulk solids



- ❶ Housing of extruded aluminium alloy, powder-coated
- ❷ Aluminium caps
- ❸ Rotor in hard anodized aluminium
- ❹ Imbalance weight

## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F [mm]	H Thread	Weight [kg]
GT-4 / 6	40	28	70	56	10.5	6	G 1/8"	0.17
GT-8 / 10	50	33	86	68	12	7	G 1/8"	0.25
GT-13 / 16	65	42	113	90	16	9	G 1/4"	0.58
GT-20 / 25	80	56	128	104	16	9	G 1/4"	1.12
GT-30 / 36	100	73	160	130	20	11	G 3/8"	2.30
GT-40 / 48	120	86	194	152	24	17	G 3/8"	3.89

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
GT-4	14.0	15.0	15.0	135	180	200	33	58	83
GT-6	11.5	12.0	12.5	130	175	210			
GT-8	36.0	42.0	46.0	990	2'060	2'910	46	80	112
GT-10	27.5	35.0	37.5	840	1'390	2'400			
GT-10-S	17.0	23.0	25.0	650	1'350	1'950	120	200	290
GT-13	26.0	30.0	33.0	1'400	2'440	3'730			
GT-16	17.0	21.5	24.0	1'220	2'090	3'160			
GT-16-S	11.5	15.5	17.0	1'100	1'900	2'700	185	325	455
GT-20	17.0	20.0	23.0	2'170	4'040	5'520			
GT-25	12.0	15.5	17.0	2'120	3'510	5'070			
GT-25-S	8.5	11.0	13.0	2'250	3'600	4'900	330	530	745
GT-30	13.0	14.0	16.0	3'380	5'430	7'540			
GT-36	8.0	10.0	13.0	3'290	5'360	7'190			
GT-36-S	6.1	7.2	8.3	4'100	6'200	7'500	425	700	970
GT-40	7.7	8.8	9.5	4'300	7'300	9'800			
GT-48	6.0	7.5	9.7	4'900	7'700	10'500			
GT-48-S	-	5.6	6.3	-	7'500	12'000			



# Stainless Turbines GTRF

Pneumatic turbine vibrators made of stainless steel.

## Properties

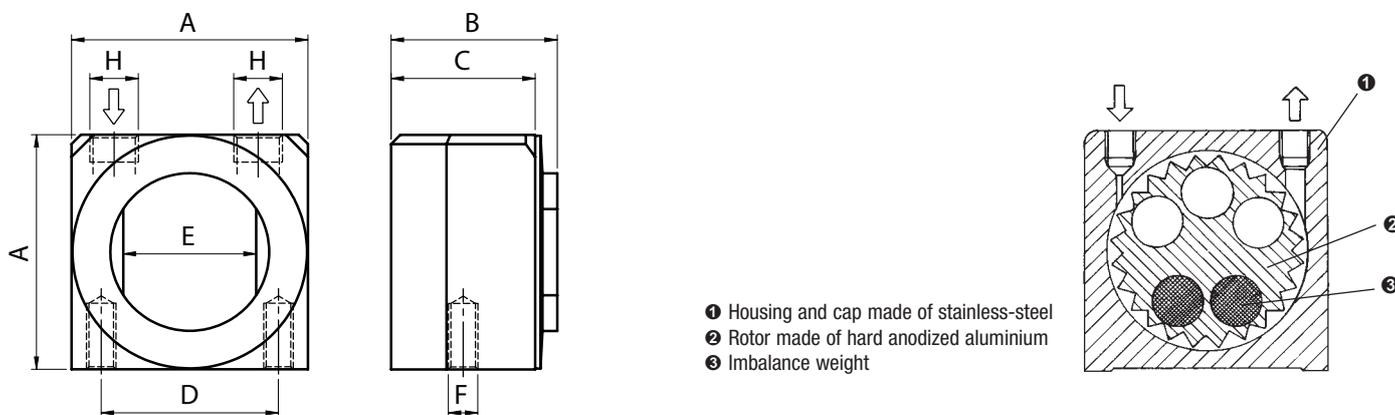
- Lubrication-free
- Low noise level
- Strong vibration by high speed and excentric working torques
- Rated frequency 14'000 – 37'000 rpm
- Centrifugal force 750 – 5'700 N
- Continuously variable
- Applicable up to 120°C, HT version on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

- For foodstuffs and pharmaceuticals
- Emptying of bunkers
- Screen filters
- Vibrating tables
- Preventing adhesions in pipelines and silos
- Transporting of fine powders
- Moving of bulk solids

## Construction

- Vibration by the centrifugal force of positive and negative imbalanced torques in the rotor.
- Rotor on two pre-lubricated and enclosed ball bearings arranged in pairs, lubricated with special grease for long life.
- Stainless steel 316Ti (1.4571).



## Dimensions and weights

Model	A [mm]	Width [mm]	C [mm]	D [mm]	E [mm]	F	H Thread	Weight [kg]
GT-10-RF	49	38	32	36	27	M6	G 1/8"	0.52
GT-16-RF	64	45	39	48	36	M8	G 1/4"	1.00
GT-25-RF	78	55	49	60	50	M10	G 1/4"	1.81

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Centrifugal force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
GT-10-RF	27.0	32.0	37.0	750	1'350	2'100	46	80	112
GT-16-RF	20.0	23.0	27.5	1'700	2'500	3'700	120	200	290
GT-25-RF	14.0	17.0	19.5	2'500	4'150	5'700	185	325	455

# Piston-Vibrators FP-12 to 35

Pneumatic piston vibrators for linear vibration with unlimited fine-tuning facilities for amplitude and frequency. Wide range.



socket as accessoire

## Properties

- Quiet and efficient
- Rated frequency 2'400 – 9'300 min<sup>-1</sup>
- Force 32 – 6'066 N
- Continuously variable
- Applicable up to 150°C, LT version down to -40° C on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

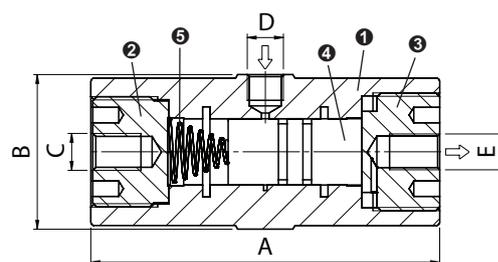
- Driving conveyor and discharge chutes
- Loosening or compacting of bulk solids
- Activating of mechanical processes
- Filling facilities

## Construction

Aluminium housing surface-hardened and corrosion-resistant

## Dimensions and weights

Model	A [mm]	B (ws) [mm]	C [mm]	D Thread	E BSP	Weight [kg]
FP-12-S	71	34	M8	G 1/8"	G 1/8"	0.15
FP-12-M	81	34	M8	G 1/8"	G 1/8"	0.17
FP-12-L	94	34	M8	G 1/8"	G 1/8"	0.21
FP-18-S	81	42	M10	G 1/8"	G 1/8"	0.30
FP-18-M	94	42	M10	G 1/8"	G 1/8"	0.35
FP-18-L	109	42	M10	G 1/8"	G 1/8"	0.42
FP-25-S	98	50	M12	G 1/8"	G 1/4"	0.55
FP-25-M	116	50	M12	G 1/8"	G 1/4"	0.67
FP-25-L	136	50	M12	G 1/8"	G 1/4"	0.82
FP-35-S	98	65	M12	G 1/4"	G 1/4"	0.92
FP-35-M	116	65	M12	G 1/4"	G 1/4"	1.13
FP-35-L	136	65	M12	G 1/4"	G 1/4"	1.38



- ❶ Housing of hard anodized aluminium alloy
- ❷ Hard anodized aluminium socket
- ❸ Cap anodized
- ❹ Piston of leaded-bronze
- ❺ Compression spring

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
FP-12-S	6.2	7.8	9.3	34	70	92	0.8	7.5	25.0
FP-12-M	5.0	6.0	6.7	34	58	74	0.5	4.0	19.0
FP-12-L	4.0	4.8	5.4	32	58	81	1.0	3.0	20.0
FP-18-S	5.0	6.4	7.7	66	134	187	5.0	33.0	57.0
FP-18-M	4.0	5.0	5.9	68	134	188	4.0	28.0	52.0
FP-18-L	3.1	4.0	4.6	64	150	206	5.0	23.0	46.0
FP-25-S	3.6	4.3	5.5	126	270	416	13.0	54.0	93.0
FP-25-M	3.0	3.8	4.2	142	364	504	23.0	50.0	87.0
FP-25-L	2.4	3.1	3.7	186	392	594	18.0	62.0	93.0
FP-35-S	3.8	4.7	5.8	294	668	1'038	23.0	101.0	162.0
FP-35-M	3.0	4.0	4.6	248	778	1'080	24.0	83.0	141.0
FP-35-L	2.4	3.1	3.6	282	680	1'066	38.0	89.0	135.0



# Piston-Vibrators FP-50 to 95

Pneumatic piston vibrators for linear vibration with unlimited fine-tuning facilities for amplitude and frequency.

## Properties

- Quiet and efficient
- Rated frequency 1'800 – 2'800 min<sup>-1</sup>
- Force 490 – 6'150 N
- Continuously variable
- Applicable up to 120°C, HT version up to 150°C and LT version down to -40°C on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

- Driving conveyor and discharge chutes
- Loosening or compacting of bulk solids
- Activating of mechanical processes
- Filling facilities

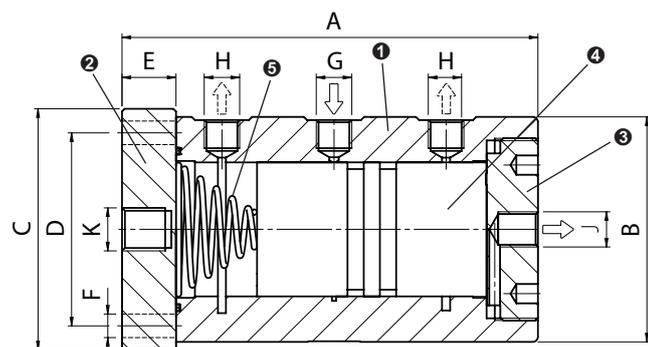
## Construction

Aluminium housing surface-hardened and corrosion-resistant

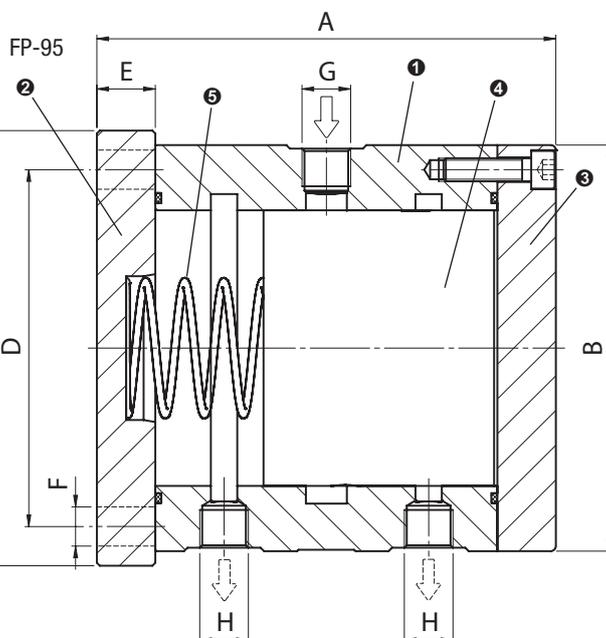
## Dimensions and weights

Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G Thread	H Thread	J Thread	K	Weight [kg]
FP-50-M	154	∅ 84	90	72	20	8.8	G 1/4"	G 1/4"	G 1/4"	M16	3.30
FP-60-M	154	∅ 94	110	90	20	8.8	G 1/4"	G 3/8"	G 1/4"	M16	4.25
FP-95-M	157	∅ 140	150	125	20	13.0	G 3/8"	G 3/8"	G 3/8"	–	9.46

FP-50 and 60



- ① Housing of hard anodized aluminium alloy
- ② Baseplate Ematal-coated
- ③ Cap anodized
- ④ Piston of leaded-bronze
- ⑤ Compression spring



## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
FP-50-M	1.8	2.3	2.8	490	970	1'660	48	100	190
FP-60-M	1.9	2.4	2.7	610	1'400	2'170	90	160	270
FP-95-M	1.8	2.4	2.8	1'620	4'060	6'150	170	320	450

# Piston-Vibrators FPLF-12 to 35

**Lubrication-free** pneumatic vibrators for linear vibration with unlimited fine-tuning facilities for amplitude and frequency. Wide range.



## Properties

- Quiet and efficient
- Lubrification-free
- Rated frequency 2'400 – 9'300 min<sup>-1</sup>
- Force 32 – 6'066 N
- Continuously variable
- Applicable up to 120°C, HT version up to 150°C and LT version down to -40°C on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

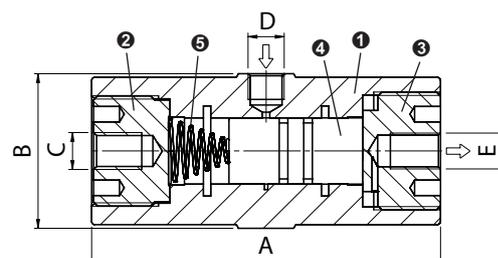
- For foodstuffs and pharmaceuticals,
- Driving conveyor and discharge chutes
- Loosening or compacting of bulk solids
- Activating of mechanical processes
- Filling facilities

## Construction

Extra hard and corrosion-resistant surface through aluminium oxide, generated by titaniferous electrolyte.

## Dimensions and weights

Model	A [mm]	B (ws) [mm]	C	D Thread	E Thread	Weight [kg]
FPLF-12-XS	50	34	M8	G 1/8"	G 1/8"	0.10
FPLF-12-S	71	34	M8	G 1/8"	G 1/8"	0.15
FPLF-12-M	81	34	M8	G 1/8"	G 1/8"	0.18
FPLF-12-L	94	34	M8	G 1/8"	G 1/8"	0.21
FPLF-18-S	81	42	M10	G 1/8"	G 1/8"	0.30
FPLF-18-M	94	42	M10	G 1/8"	G 1/8"	0.35
FPLF-18-L	109	42	M10	G 1/8"	G 1/8"	0.42
FPLF-25-S	98	50	M12	G 1/8"	G 1/4"	0.55
FPLF-25-M	116	50	M12	G 1/8"	G 1/4"	0.67
FPLF-25-L	136	50	M12	G 1/8"	G 1/4"	0.82
FPLF-35-S	98	65	M12	G 1/4"	G 1/4"	0.93
FPLF-35-M	116	65	M12	G 1/4"	G 1/4"	1.13
FPLF-35-L	136	65	M12	G 1/4"	G 1/4"	1.38



- ① Aluminium housing, coated with hard Ematal
- ② Hard anodized aluminium socket
- ③ Cap anodized
- ④ Piston of covered steel
- ⑤ Compression spring

## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
FPLF-12-XS	6.0	9.0	11.5	22	48	68	0.8	6.0	15.0
FPLF-12-S	6.2	7.8	9.3	34	70	92	0.8	7.5	25.0
FPLF-12-M	5.0	6.0	6.7	34	58	74	0.5	4.0	19.0
FPLF-12-L	4.0	4.8	5.4	32	58	81	1.0	3.0	20.0
FPLF-18-S	5.0	6.4	7.7	66	134	187	5.0	33.0	57.0
FPLF-18-M	4.0	5.0	5.9	68	134	188	4.0	28.0	52.0
FPLF-18-L	3.1	4.0	4.6	64	150	206	5.0	23.0	46.0
FPLF-25-S	3.6	4.3	5.5	126	270	416	13.0	54.0	93.0
FPLF-25-M	3.0	3.8	4.2	142	364	504	23.0	50.0	87.0
FPLF-25-L	2.4	3.1	3.7	186	392	594	18.0	62.0	93.0
FPLF-35-S	3.8	4.7	5.8	294	668	1'038	23.0	101.0	162.0
FPLF-35-M	3.0	4.0	4.6	248	778	1'080	24.0	83.0	141.0
FPLF-35-L	2.4	3.1	3.6	282	680	1'066	38.0	89.0	135.0



# Piston-Vibrators FPLF-50 bis 95

**Lubrication-free** pneumatic vibrators for linear vibration with unlimited fine-tuning facilities for amplitude and frequency.

## Properties

- Quiet and efficient
- Lubrication-free
- Rated frequency 1'800 – 2'800 min<sup>-1</sup>
- Force 490 – 6'150 N
- Continuously variable
- Applicable up to 120°C, HT version up to 150°C and LT version down to -40°C on request
- Resistant against extreme environmental conditions
- Also available with ATEX certification

## Field of application

- For foodstuffs and pharmaceuticals,
- Driving conveyor and discharge chutes
- Loosening or compacting of bulk solids
- Activating of mechanical processes
- Filling facilities

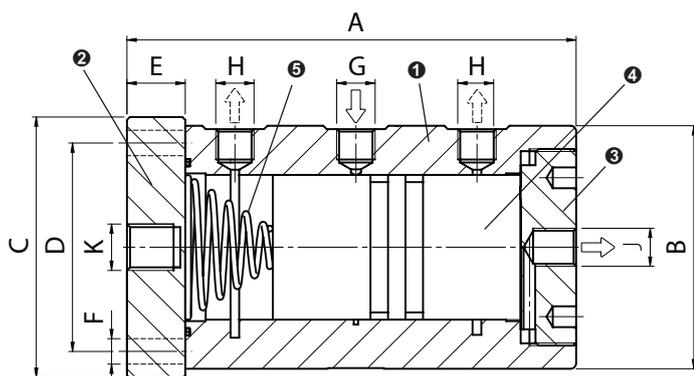
## Construction

Extra hard and corrosion-resistant surface through aluminium oxide, generated by titaniferous electrolyte.

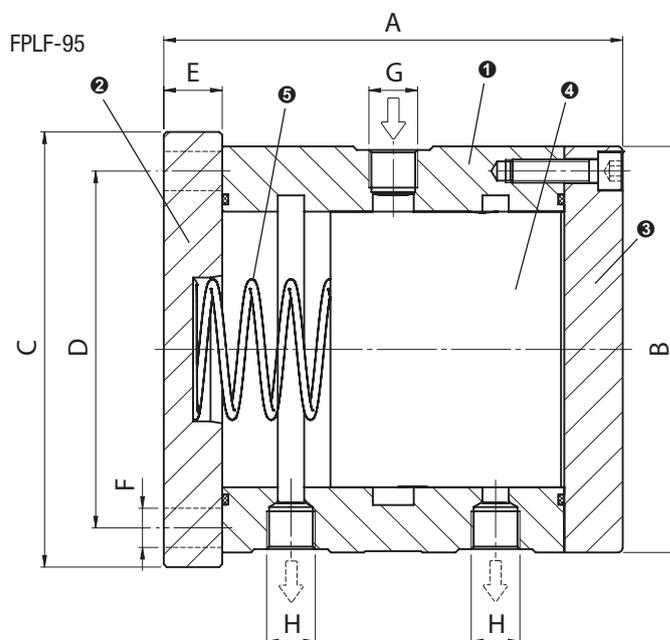
## Dimensions and weights

Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G Thread	H Thread	J Thread	K	Weight [kg]
FPLF-50-M	154	∅ 84	90	72	20	8.8	G 1/4"	G 1/4"	G 1/4"	M16	3.05
FPLF-60-M	154	∅ 94	110	90	20	8.8	G 1/4"	G 3/8"	G 1/4"	M16	4.10
FPLF-95-M	157	∅ 140	150	125	20	13.0	G 3/8"	G 3/8"	G 3/8"	–	8.75

FPLF-50 and 60



- ① Aluminium housing, coated with hard Ematal
- ② Baseplate hard Ematal coated
- ③ Cap anodized
- ④ Piston of covered steel
- ⑤ Compression spring



## Technical data

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Force [N]			Air consumption [l/min]		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
FPLF-50-M	1.85	2.3	2.8	490	970	1'600	48.0	100	190
FPLF-60-M	1.95	2.4	2.7	610	1'400	2'170	90.0	160	270
FPLF-95-M	1.8	2.4	2.8	1'620	4'060	6'150	170.0	320	450

# Piston-Vibrators FAL (lubrication-free) and VTL

Pneumatic piston vibrators for linear vibration with unlimited fine-tuning facilities for amplitude and frequency. Wide range.



## Properties

- Quiet and efficient
- Lubrication-free possible (FAL)
- Rated frequency 1'130 – 3'400 min<sup>-1</sup>
- Force 12 – 2'740 N
- Continuously variable
- FAL applicable up to 120 °C, HT version up to 150 °C and LT version down to -40°C on request
- VTL-155 up to 100 °C, remaining VTLs up to 150 °C
- Resistant against extreme environmental conditions
- Also available with ATEX certification

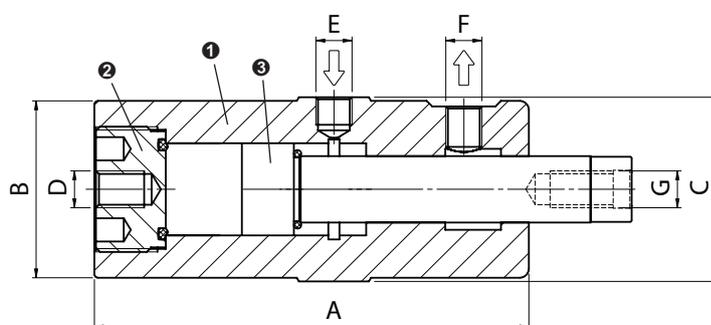
## Field of application

- For foodstuffs and pharmaceuticals
- Driving conveyor and discharge chutes
- Loosening or compacting of bulk solids
- Activating of mechanical processes
- Filling facilities
- Bellows for ATEX or dusty environment as accessory

## Construction

- The vibration is generated by a freely oscillating, self-reversing piston.
- The optimum power to weight ratio makes its employment in conveying impulses efficient.
- FAL: Extra hard and non-corrosive surface through aluminium oxide – generated by titaniferous electrolyte.

- FAL:
- ① Aluminium housing, coated with hard Ematal
  - ② Socket hard anodized aluminium
  - ③ Piston covered steel
- VTL:
- ① Housing, in steel (VTL 155 in synthetic material)
  - ② Socket steel (VTL-155 aluminium)
  - ③ Piston covered steel



## Technical data, Dimensions, weights and piston stroke

Model	Vibrations [x 1000 min <sup>-1</sup> ]			Force [N]			Air consumption [l/min]			A [mm]	B ø	C (SW) [mm]	D	E	F	G	Weight [kg]	Piston-Stroke [mm]
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar									
FAL-8	2.05	2.9	3.4	12	30	42	8	18	30	91	20	23	M6	M5	M5	M5	0.09	27.0
FAL-18	1.42	1.9	2.25	60	140	205	20	40	60	117	48	50	M10	G 1/8"	G 1/8"	M10	0.67	33.0
FAL-25	1.13	1.55	2.02	120	265	530	40	110	155	139	60	65	M16	G 1/4"	G 1/4"	M16	1.31	40.0
FAL-35	1.24	1.55	2.01	205	340	655	75	220	350	140	77	-	M16	G 1/4"	G 1/4"	M16	2.35	37.0
VTL-155	1.8	2.4	2.7	40	72	96	18	40	85	114	50	-	M10	G 1/8"	G 1/8"	M10	0.55	34.0
VTL-165	1.9	2.5	2.7	43	76	96	17	37	70	111	49	-	M10	G 1/8"	G 1/8"	M10	1.51	35.0
VTL-255	1.6	1.7	2.2	82	214	398	56	109	180	140	64	-	M16	G 1/4"	G 1/4"	M16	3.22	45.0
VTL-405	1.4	1.7	2.0	206	343	657	80	240	390	140	84	-	M16	G 1/4"	G 1/4"	M16	5.43	45.0
VTL-555	1.6	1.2	2.5	451	961	1'305	140	419	717	125	115	-	M20	G 3/8"	G 3/8"	M20	8.90	37.7
VTL-855	1.8	2.3	2.6	706	1'137	1'530	301	635	900	122	160	-	M20	G 3/8"	G 3/8"	M20	17.10	34.7
VTL-1105	2.1	2.6	3.0	1'550	2'619	2'737	345	740	920	122	200	-	M20	G 1/2"	G 3/8"	M20	25.83	32.7

# High-frequency Knockers FPK



## Properties

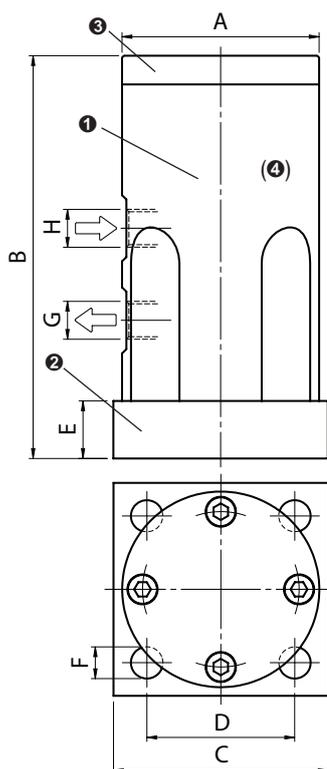
- High impact frequency 1'350 – 4'600 min<sup>-1</sup>
- High force range 195 – 56'350 N
- Lubrication-free
- Applicable up to 120°C, HT version up to 150°C and LT version down to -40 °C on request
- Applicable in dusty environments
- Also available with ATEX certification

## Field of application

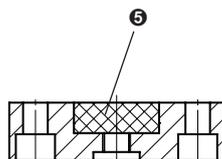
Wide range of application, for example knocking off adhering material from container walls such as silos, chutes, filter outlets, reactors and pipelines. Excellent use for food, beverage and pharmaceuticals.

## Construction

- The piston bounces against an air cushion - or with impact plate - against one of the two synthetic baffle plates included in the delivery.
- Additional impact regulation is provided by the two supplied baffle plates of varying hardness.
- Extra hard and non-corrosive surface through aluminium oxide – generated by titaniferous electrolyte.



- ① Aluminium housing hard Ematal coated
- ② Baseplate hard Ematal coated
- ③ Cap hard Ematal coated
- ④ Piston of coated steel
- ⑤ Baffle plate of synthetic material



Supplied with two baffle plates. The hard one (white) is premounted.

## Dimensions and weights

Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G Thread	H Thread	Weight [kg]
FPK-40	ø 68	140	74	51	20	11	G 1/4"	G 1/4"	1.20
FPK-55	ø 94	191	104	78	25	13	G 3/8"	G 3/8"	4.70

## Technical data

Model	Baffle plate	Frequency [x 1000 min <sup>-1</sup> ]			Force (peak) [N]			Air consumption [l/min]		
		2 bar	4 bar	6 bar	2bar	4 bar	6 bar	2 bar	4 bar	6 bar
FPK-40	none	2.10	2.40	2.80	195	455	730	93	150	225
	soft	2.80	3.90	4.60	3'920	10'410	15'030	100	195	360
	hard	2.80	3.90	4.60	7'240	14'990	22'750	100	195	360
FPK-55	none	1.35	1.75	2.05	510	1'165	1'985	162	360	470
	soft	2.20	3.40	4.30	5'430	21'310	36'570	230	380	500
	hard	2.20	3.40	4.30	17'570	36'960	56'350	230	380	500

# Knocker «FKL in»

Variable impact force and interval.

## Properties

- Single or interval impact mode
- Variable impact force and interval
- Lubrication-free
- Flexible range of application
- Applicable up to 120°C, HT version up to 150°C and LT version down to -40°C on request
- Also available with ATEX certification 

## Field of application

Wide field of application. Resistant against extreme environmental conditions and in wet- and explosive environments. Best for knocking off adhering material from container walls such as silos, chutes, filter outlets, reactors and pipelines.

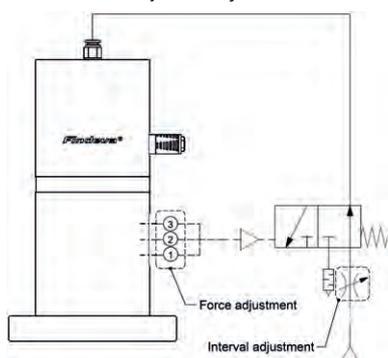
## Construction

A piston is forced against a spring by compressed air. With rapid rapid bleeding, the piston bounces against a baffle plate.

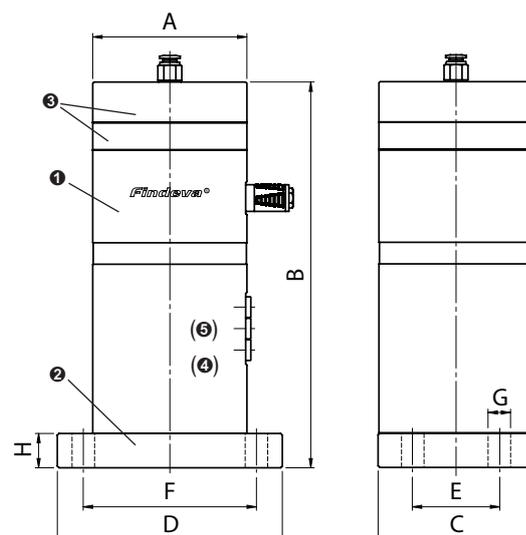


### Interval impact mode

The impact depends on the interval time which is set by a throttle valve. The force is adjusted by the three control bores 1 - 3.

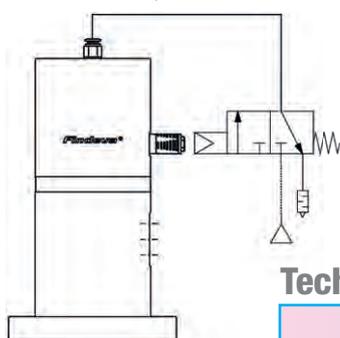


- ❶ Housing of hard-anodized aluminium alloy
- ❷ Baseplate of hard anodized aluminium
- ❸ Cap and flange hard Ematal-covered
- ❹ Piston in steel
- ❺ Compression spring



### Single impact mode

The impact is triggered immediately after the 3/2-way valve switches. Several knockers can be switched in parallel.

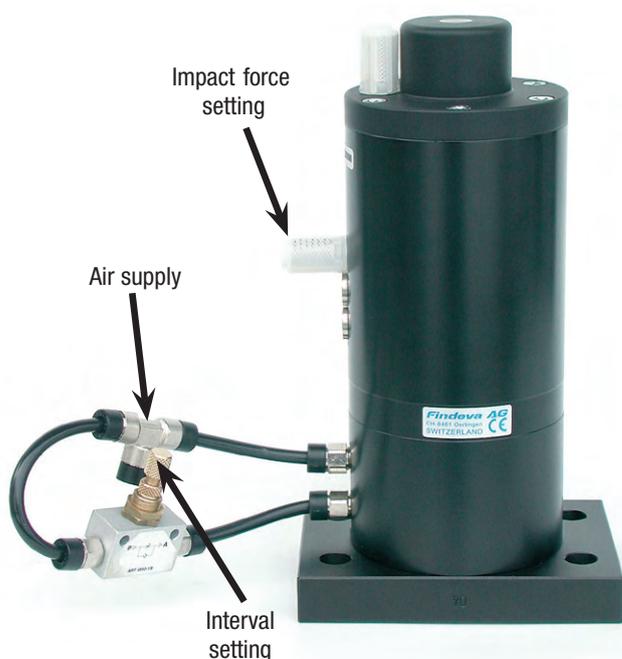


## Dimensions and weights

Model	A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	H [mm]	Weight [kg]
FKL-25 in	∅ 52	155	54	88	-	70	9	12	1.03
FKL-50 in	∅ 64	177	65	115	-	90	13	15	1.85
FKL-100 in	∅ 89	225	90	130	50	100	13	20	4.50
FKL-150 in	∅ 118	309	-	∅ 140	-	∅ 115	13	21	9.50
FKL 200 in	∅ 147	319	-	∅ 180	-	∅ 152	17	24	14.80

## Technical data

Model	Min. op. pressure [bar] Control bores No.			Op. pressure single impact [bar]	Energy/impact [Nm]	Impulse/impact [Ns]	Stroke [min <sup>-1</sup> ]	Air consump- tion [l/impact]	For wall-thick- ness to [mm]
	❶	❷	❸						
FKL-25 in	3.0	4.5	6.5	2.5 - 8.0	1 - 7	1 - 1.4	max. 10	0.07 - 0.2	2
FKL-50 in	3.0	4.5	6.5	2.5 - 8.0	5 - 21	1.2 - 4.7	max. 10	0.1 - 0.3	4
FKL-100 in	4.0	5.0	6.5	2.0 - 7.5	10 - 70	2.1 - 14.7	max. 10	0.5 - 1.1	7
FKL-150 in	5.3	6.7	8.0	2.5 - 9.0	50 - 196	10.4 - 40.6	max. 10	1.2 - 2.0	10
FKL-200 in	5.3	6.7	8.0	2.0 - 8.0	100 - 280	28.8 - 80.5	max. 10	2.2 - 3.3	15



# Knocker «FKL mi»

**Self-controlled.**  
**Force of impact adjustable.**

## Properties

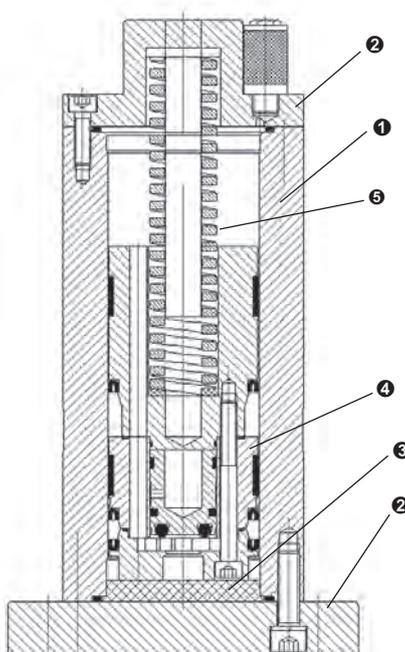
- Wide range of impact force and interval
- Impact force and interval adjustable
- Use up to 120° C
- HT-version up to 150°C and LT-Version down to -40°C on request
- Flexible range of application
- Also available with ATEX certification

## Field of application

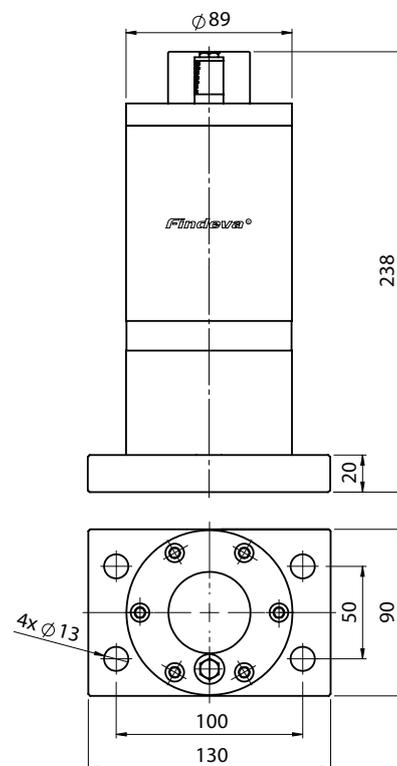
Resistant against extreme environmental conditions. Knocking off adhering material from container walls such as silos, chutes, filter outlets, reactors and pipelines.

## Construction

A piston is forced against a spring by compressed air. When the impact piston passes the control outlet duct, it is vented suddenly and the piston bounces against a baffle plate. The piston closes the air duct and the procedure is repeated at the interval set by the throttle.



- 1 Housing of hard-anodized aluminium alloy
- 2 Cap and baseplate of hard anodizes aluminium
- 3 Baffle plate of impact-resistant plastic
- 4 Piston in steel
- 5 Compression spring



## Technical data an weight

Model	Pressure [bar]	Work impact [Nm]	Impulse/impact [Ns]	Stroke [min <sup>-1</sup> ]	Air-consumption [l/impact]	For wall thickness to [mm]	Weight [kg]
FKL-100 mi	6-8	10 - 40	5 - 10	0.5-10	0.5-1.1	5	4.5

# Vacuum Clamps

The flexible solution –  
Fixing, vibrating, unfixing.



VTC-20D



VTC-10 with Vibrator GT-10

Mounting plate with bores for fixing the vibrator



VTC-15S

## Properties

- Fast and flexible solution to mount the vibrator temporary
- Sturdy and simple construction
- Easy connection to the air supply of the Vibrator together with the vacuum clamp

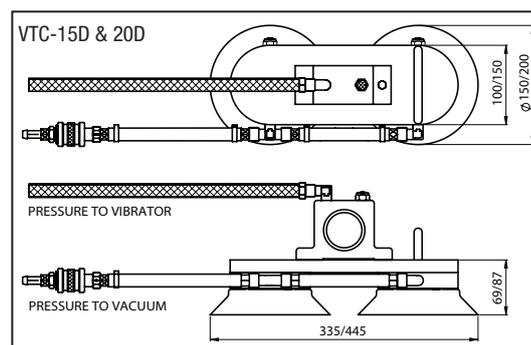
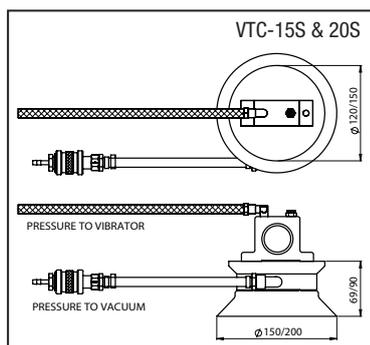
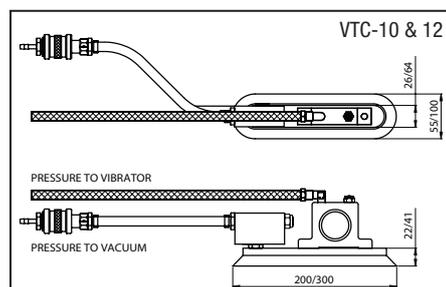
## Field of application

Wherever vibration is needed for a short time, at silos, containers, reactors and pipelines...  
A smooth, clean and not too high-crowned surface increases the retention of the Vacuum-Clamps .

## Construction

Air-actuated suction cups. Single or two-way (series D) with mounting plate for fixing the vibrator and – if desired – of the compressed-air conditioner.

Model	Quantity of suction cups	Possible Vibrators	Minimum-ø containers [mm]	Air consumption [l/min]	Weight [kg]
VTC-10	1	DAR-2 • K-8/10 • GT-4 to -10 • FP(LF)-12/18 • R-50 • T-50 • VTL-155/165 • FAL-18	110	79	1.5
VTC-12S	1	DAR-2 • DAR-4 • K-8 to -25 • FP(LF)-25/35 • R-50/80 • GT-8 to -25 • T-50 to -80	350	79	3.0
VTC-15S	1	DAR-2/3 • K-8 to -16 • GT-4 to -16 • FP(LF)-12/18 • R-50/65 • T-50/65 VTL-155 to -255 • FAL-18/25	760	79	2.5
VTC-15D	2	DAR-4 • K-20 to -36 • GT-20 to -36 • FP(LF)-25/35 • FP(LF)-50 M • R-80 • T-80 FAL-25/35 • FKL-100 in/mi	760	158	4.5
VTC-20S	1	K-20/25 • GT-20/25 • FP(LF)-50 M/60M • FAL-35 • R-80 • T-80	860	79	4.0
VTC-20D	2	DAR-5 • GT-30/36 • FP(LF)-60/95 M • R-100 • T-100 • FKL-150 in	860	158	8.5





# Free-Flow Silencer

**Silencer with airflow limiter for the piston vibrators FP, FPLF, FPK und FAL.**

Application for further Vibrators on request.

## Construction

The diffusion happens via a flow labyrinth. This elegantly circumvents the clogging problems that occur with filter silencers.

The built-in airflow limiter allows fine adjustment of the amplitude.

## Field of application

Can be installed on top of the vibrator or in an exhaust line. The noise level can be reduced by up to 50%.

## Construction

Sturdy construction made of anodized aluminium.

## 2 Dimensions thread 1/8" and thread 1/4"

(Thread 3/8" with reduction on thread 1/4" possible)



