

Lubrication Free



DESIGN AND APPLICATION

These compact robust range of linear vibrators are suitable for use in a wide number of applications, to assist in the flow and control materials where large amplitudes are required.

The aluminium body of these vibrators is hard coated and is corrosion resistant. Special 'explosion proof' types, light weight, compact, quiet and efficient, these units are ideal for most applications:

- Feeders:** Natural Frequency Feeders
Particularly good for feeding light materials where large amplitudes are required
- Tables:** For packing industry, foundries for core making, up to loads of more than 100 kg
- Screens:** Very effective on small screens for materials of low specific gravity, granular materials and powder
- Hoppers:** Certain applications where larger materials bridge. Not suitable for sticky or ratholing materials

DESCRIPTION

Linear vibrating force is delivered by a noiseless air cushioned piston. Frequency and amplitude can be regulated independently. Either piston or case can be used as a vibration inducer. Using additional masses the vibrator is able to work at low frequencies, down to 10Hz and to generate large amplitudes. FAL vibrators combine the advantages of low frequency rotary vibrators (large amplitudes) with those of magnetic vibrators (adjustable amplitudes). Additionally, they have the advantage of being able to select the most suitable frequency to obtain optimum results.

ACCESSORIES

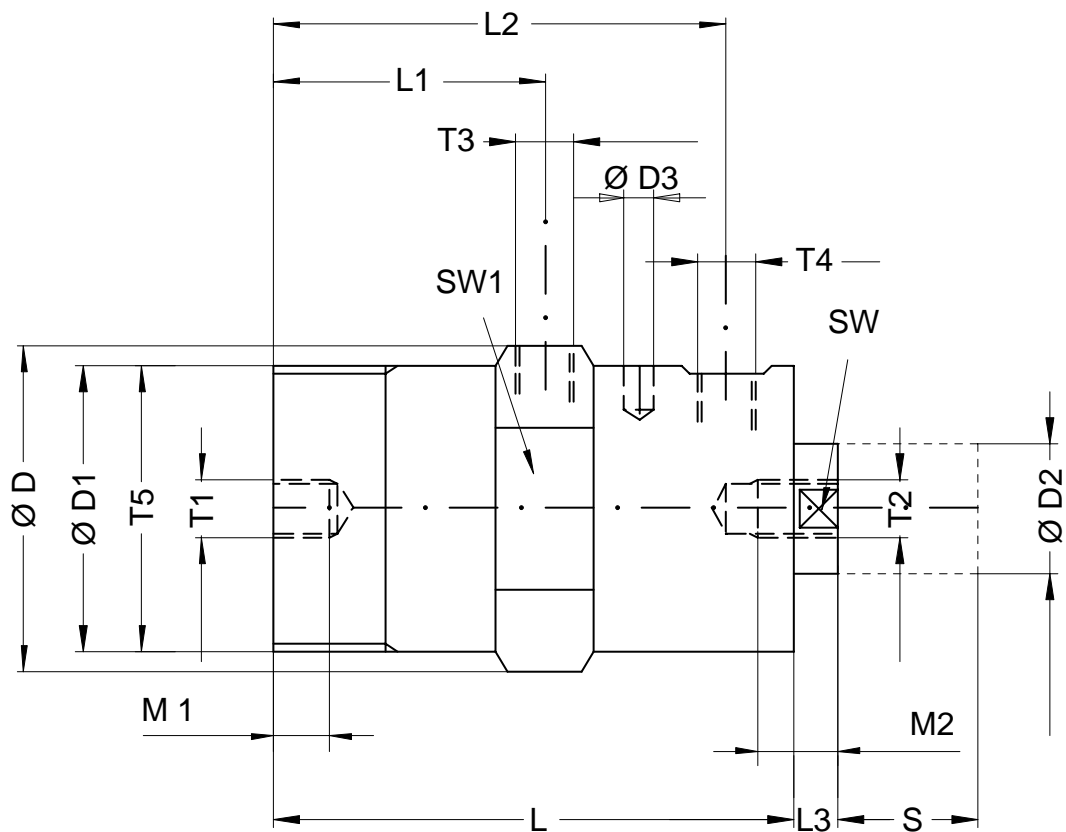
Silencers and suitable air inlet fittings are supplied with these vibrators.

INSTALLATION INSTRUKTIONS

Use a 5-Micron-Filter. Lubrication is not necessary. Minimum operating pressure 2 bar (29 P.S.I.).

Gerät	FREQUENCY min ⁻¹			CENTRIFUGAL FORCE N			WORKING MOMENT cmkg			AIR CONSUMPTION l / min.		
	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar	2 bar	4 bar	6 bar
FAL-8	2050	2900	3400	12	30	42	0.05	0.06	0.06	8	18	30
FAL-18	1420	1900	2250	60	140	205	0.45	0.54	0.54	20	40	60
FAL-25	1130	1550	2020	120	265	530	1.14	1.37	1.26	40	110	155
FAL-35	1240	1550	2010	205	340	655	2.00	2.20	3.00	75	220	350

Data obtained with a Kistler 3-Axis Dynamometer on a heavy laboratory test block and displayed by a Kistler control monitor (COMO). Frequency and force will decrease on a less rigged mount. We reserve the right to improve, modify or withdraw specifications or products without notice or obligation.



DIMENSIONS in mm																	weight/ weight/ total body piston weight				
model	L	L1	L2	L3	S	D	D1	D2	D3	T1	T2	T3	T4	T5	M 1	M 2	SW	SW1	kg	kg	kg
FAL-8	91.0	47.0	74.0	5.0	27.0	25.0	20.0	8.0		M 6	M 5	M 5	M 5	M 20 x 1.5	10.0	15.0	7.0	23.0	0.051	0.036	0.100
FAL-18	117.0	64.5	99.5	8.0	38.0	53.0	48.0	18.0		M 10	M 10	G1/8"	G1/8"		13.0	24.0	14.0	50.0	0.450	0.245	0.730
FAL-25	139.0	75.0	121.0	8.0	42.0	69.0	60.0	25.0		M 16	M 16	G1/4"	G1/4"		14.0	23.0	22.0	65.0	0.780	0.560	1.410
FAL-35	140.0	73.0	122.0	12.0	43.0	88.0	78.0	35.0	8.0	M 16	M 16	G1/4"	G1/4"		14.0	25.0	27.0		1.130	1.250	2.560

The FAL vibrator can be mounted with either the piston of the housing free to oscillate as shown in tables you can see below. The various ratios of 'force to frequency' achieved by adding extra weights, make these vibrators uniquely versatile.

- heavier weight oscillating → higher force, lower frequency and higher amplitude
- lighter weight oscillating → lower force, higher frequency and lower amplitude

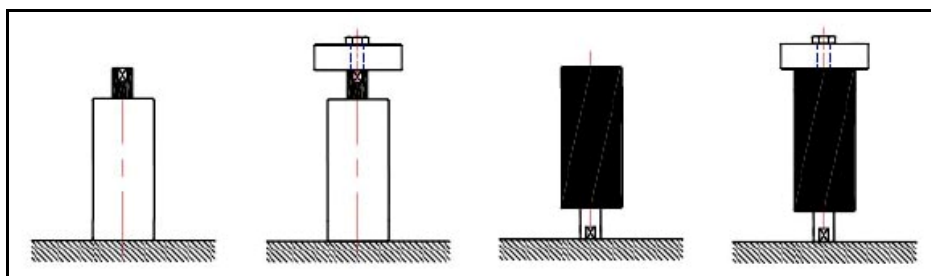
Measures and weights of the additional masses

vibrator	type of the additional mass	measure (diameter x thickness)	drill hole	weight
FAL-8	SM 8-1	∅ 17 x 8 mm	∅ 5,2 mm	12 gr.
	SM 8-2	∅ 30 x 10mm	∅ 5,2 mm	53 gr.
FAL-18	SM 16-1	∅ 50 x 20 mm	∅ 10,5 mm	0,29 kg
	SM 16-2	∅ 65 x 20 mm	∅ 10,5 mm	0,51 kg
FAL-25 & FAL-35	SM 25-1	∅ 50 x 20 mm	∅ 16,5 mm	0,27 kg
	SM 25-2	∅ 65 x 20 mm	∅ 16,5 mm	0,47 kg
FAL-35	SM 25-3	∅ 100 x 20 mm	∅ 16,5 mm	1,18 kg
FAL-35	SM 25-4	∅ 100 x 60 mm	∅ 16,5 mm	3,60 kg

Technical data's of the vibrators without and with additional masses (fixed housing and free piston*)

vibrator-type	additional-masses	frequency min ⁻¹			force N			Working moment kgmm			air consumption l/min		
		2bar	4bar	6bar	2bar	4bar	6bar	2bar	4bar	6bar	2bar	4bar	6bar
FAL-8	without	2050	2900	3400	12	30	42	0,5	0,6	0,6	8	18	30
	SM 8-1	1690	2280	2710	13	31	44	0,8	1,0	1,0	7	15	26
	2 x SM 8-1	1580	2090	2480	11	32	47	0,7	1,2	1,2	6	14	25
	SM 8-2	1240	1710	2030	12	33	48	1,3	1,9	1,9	5	14	24
	2 x SM 8-2	900	1320	1580	11	33	49	2,0	3,1	3,2	5	12	21
FAL-18	without	1420	1900	2250	60	140	205	4,5	5,4	5,4	20	40	60
	SM 16-1	890	1210	1410	75	179	236	14,3	16,9	15,7	13	33	54
	SM 16-2	750	910	1210	79	132	256	21,4	22,3	23,2	12	30	52
	2 x SM 16-2	610	850	990	88	214	301	35,7	41,0	41,0	10	28	46
FAL-25	without	1130	1550	2020	120	265	530	11,4	13,7	12,6	40	110	155
	SM 25-2	780	1000	1210	144	259	462	28,6	31,4	30,5	34	81	145
	SM 25-3	610	790	970	186	303	537	61,1	61,1	55,4	32	76	137
	2 x SM 25-3	490	580	790	150	300	743	76,4	95,4	115,0	27	72	137
FAL-35	without	1240	1550	2010	205	340	655	20	22	30	75	220	350
	SM 25-3	870	1080	1490	254	515	783	48	75	97	66	165	323
	SM 25-3 + 2 x SM 25-2	710	930	1170	266	594	838	75	105	114	63	151	296
	2 x SM 25-3 + SM 25-2	660	840	1060	332	641	890	103	140	148	61	142	283
	SM 25-4	660	790	1000	332	778	1173	111	183	216	56	138	269

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fixed housing*
 without / with additional mass at the piston

fixed piston
 without / with additional mass at the housing

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