



URBAR
ingenieros s.a.



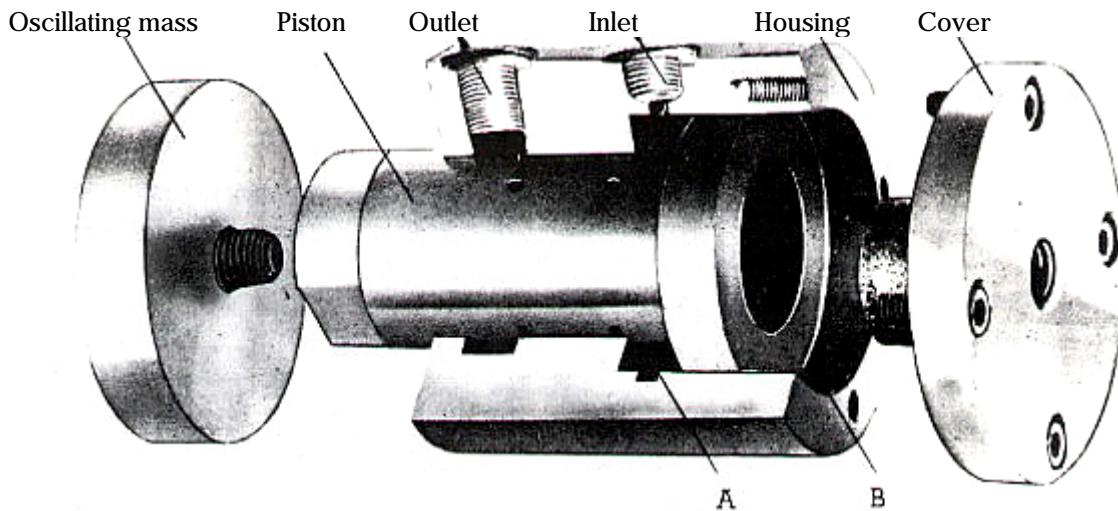
Pneumatic piston vibrators

NTK serie

- Continuous frequency and amplitude regulation independently.
- Linear vibration with high amplitude.
- Instant stop.
- Work in any position.
- Noiseless.
- No maintenance required.
- Low air consumption.



Description



Pneumatic linear vibrators of the series NTK generate directed oscillations or vibration movements. These vibrators are used to empty bunkers, to drive conveyor troughs, screens and vibrating tables, inter alia, generally to loosen, convey, compact and separate bulk materials and to reduce friction.

The vibration is generated by a freely oscillating, self-reversing piston. Both masses, on one hand the piston with the oscillating weight and on the other the housing with the attached mass, are thereby counter-oscillating with the ratio of the total weights. If a higher oscillation amplitude of the vibrating mass is required, the piston is simply fitted with a bigger oscillating weight. In order to keep the weight of the mass subjected to vibration at a low level, it is also possible (on units with steel housings) to fasten the mass to the piston. In this case the housing will freely oscillate, if necessary with an additional oscillating weight.

Pressurized air is always applied to chamber A, while pressurized air in chamber B is alternately applied and discharged through the pilot bores in the piston. Since the pressurized area B is twice the size of the area A, the piston is forced outwards or in the direction of the lid respectively. When the pressure air in chamber B is exhausted the procedure is reversed. As the piston is reversed before it reaches the end stop, the only audible noise is caused by the exhausted air, which is reduced by the silencer.

The drive energy is compressed air or nitrogen with a pressure of 1 - 6 bar.

NTK vibrators may also be used for food processing applications and in explosive and wet environments.

Furthermore the frequency can be infinitely varied by means of pressure regulators or nozzles in the air supply line and the amplitude can be adjusted by installation of nozzles in the air discharge line.

The effective working moment and the amplitude can be increased by the attachment of weights to the piston or the housing. This will, however, reduce the frequency.

Depending on the type (with silencer) and an air pressure of 6 bar the noise level is 78-80 dB(A), even less at lower air pressure.

The units NTK 8 AL, NTK 15 X, NTK 18 AL, NTK 25 AL and NTK 40 AL can be operated lubrication free.

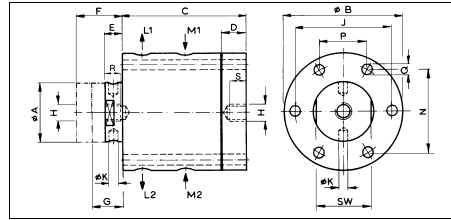


Technical characteristics with 2, 4 and 6 bar air pressure.

Type	Según montaje Piston: P Mass: M Body: C	Weight kg	Air consumption			Frequency			Force			Working moment		
			l / min			golpes / min			N			cm.kg		
			2	4	6	2	4	6	2	4	6	2	4	6
NTK 8 AL	Piston	0,03	8	20	33	2180	3050	3600	12	31	43	0,05	0,06	0,06
	P + M 8-1	0,05	7	17	29	1800	2400	2880	13	32	45	0,07	0,10	0,10
	P + 2xM 8-1	0,06	6	16	28	1680	2200	2640	11	33	48	0,07	0,12	0,13
	P + M 8-2	0,09	5	15	26	1320	1800	2160	12	34	49	0,13	0,19	0,19
	P + 2xM 8-2	0,15	5	13	23	960	1390	1680	11	34	50	0,19	0,32	0,32
NTK 15 X	Piston	0,15	18	40	85	1820	2380	2700	40	72	96	0,22	0,23	0,24
	P + M 16-1	0,45	17	33	67	1030	1270	1430	55	88	112	0,95	1,00	1,00
	P + M 16-2	0,70	16	30	60	870	1075	1260	52	82	113	1,26	1,30	1,30
	P + 2xM 16-2	1,20	15	28	57	660	850	950	45	76	94	1,90	1,90	1,90
NTK 16	Piston	0,15	17	37	70	1900	2450	2700	43	76	96	0,21	0,23	0,24
	P + M 16-1	0,50	12	29	57	1070	1370	1570	59	106	160	0,94	1,03	1,18
	P + M 16-2	0,70	11	27	50	900	1180	1350	63	127	163	1,42	1,66	1,63
	P + 2xM 16-2	1,25	10	25	46	730	950	1100	61	124	171	2,08	2,49	2,57
	Body	1,35	9	23	43	670	850	990	49	109	178	2,47	2,74	3,30
NTK 18 AL	Piston	0,25	21	43	63	1560	2160	2640	60	138	206	0,45	0,54	0,54
	P + M 16-1	0,55	14	35	57	980	1380	1660	75	176	237	1,43	1,69	1,57
	P + M 16-2	0,75	13	32	55	820	1030	1420	79	130	257	2,14	2,23	2,32
	P + 2xM 16-2	1,30	11	30	48	670	970	1160	88	211	302	3,57	4,10	4,10
	Cuerpo	0,55	14	35	57	1000	1290	1580	87	153	236	1,58	1,68	1,73
NTK 25 AL	Piston	0,45	40	109	160	1390	2130	2750	121	342	522	1,14	1,37	1,26
	P + M 25-2	1,00	34	80	150	960	1370	1650	145	334	455	2,86	3,24	3,05
	P + M 25-3	1,70	32	75	141	750	1080	1320	188	391	529	6,11	6,11	5,54
	P + 2xM 25-3	2,98	27	71	141	600	800	1080	151	387	732	7,64	9,54	11,49
	Body	0,50	35	100	160	1200	1800	2640	151	285	598	1,91	1,60	1,56
	C + M 25-3	1,75	30	78	141	765	985	1225	202	345	503	6,30	6,50	6,40
	C + 2xM 25-3	3,05	26	67	127	600	840	1030	132	370	611	6,68	9,55	10,50
NTK 25	Piston	0,47	56	109	180	1585	1670	2200	82	214	398	0,60	1,40	1,50
	P + M 25-2	1,03	50	92	144	1010	1130	1460	123	266	561	2,20	3,80	4,80
	P + M 25-3	1,74	48	87	132	900	980	1200	222	279	600	2,50	5,30	7,60
	P + 2xM 25-3	2,98	45	75	120	640	740	920	216	280	617	4,80	9,30	13,30
	C + M 25-3	3,90	42	68	104	615	640	795	301	326	596	14,50	14,50	17,20
	C + 2xM 25-3	5,14	38	64	98	420	550	710	121	340	597	12,40	20,50	21,60
NTK 40 AL	Piston	1,28	80	240	390	1400	1700	2000	206	343	657	2,00	2,20	3,00
	P + M 25-3	2,55	70	180	360	980	1180	1480	255	520	785	4,80	7,50	9,70
	P + M 25-3	3,49	67	165	330	805	1020	1160	267	599	841	7,50	10,50	11,40
	P + 2xM 25-2													
	P + 2xM 25-3	4,19	65	155	315	750	920	1050	334	647	893	10,30	14,00	14,80
	P + M 25-2													
P + M 25-4	5,03	60	150	300	740	870	996	334	785	1177	11,10	18,30	21,60	
NTK 40	Piston	1,29	80	240	390	1400	1700	2000	206	343	657	2,00	2,20	3,00
	P + M 25-3	2,56	70	180	360	980	1180	1480	255	520	785	4,80	7,50	9,70
	Body	4,20	65	155	315	750	920	1050	334	647	893	10,30	14,00	14,80
	P + M 25-4	5,04	60	150	300	740	870	996	334	785	1177	11,10	18,30	21,60
	C + M 25-4	7,95	52	142	290	600	730	880	363	824	1315	18,40	28,20	31,00
NTK 55 HF	Piston HF	2,10	105	273	449	2200	2760	3300	592	1219	1744	2,19	2,92	2,92
	P-HF + M 85-1	3,42	91	218	342	1650	1944	2304	550	1061	1490	3,66	5,12	5,12
NTK 55 NF	Piston NF	2,10	140	419	717	1600	1970	2500	451	961	1305	3,20	4,50	3,80
	P-NF + M 85-1	3,42	133	328	706	1200	1475	1900	550	1069	1619	6,90	9,00	8,20
	C-NF	5,60	120	319	492	880	1150	1460	834	1324	2433	17,20	18,20	20,80
	C-NF+ M 85-2	9,32	105	273	450	690	930	1120	893	1619	2531	34,20	34,20	36,80
	P-NF + SM 85-3	14,59	91	250	428	600	735	925	834	1638	2933	42,40	55,40	62,60
NTK 85 HF	Piston HF	5,20	168	345	567	2640	3300	3600	1418	3160	2640	3,71	5,19	3,71
	P-HF+ M 85-2	8,92	140	291	674	1896	2376	2700	1463	2758	3262	7,42	8,91	8,16
NTK 85 NF	Piston NF	5,20	301	635	900	1800	2280	2650	706	1137	1530	4,00	4,00	4,00
	P-NF+ M 85-2	8,92	217	515	880	1250	1680	1800	1030	1864	2129	12,00	12,00	12,00
	C-NF	11,30	210	500	865	985	1260	1560	1177	2256	3198	22,00	26,00	24,00
	P-NF+ M 85-3	17,69	175	400	740	890	1080	1300	1727	2747	3698	40,00	43,00	40,00
	P-NF+ M 85-4	29,19	165	385	620	720	840	960	2845	4611	5258	100,00	119,00	104,00
	P-NF+ M 85-5	41,20	160	380	615	625	770	840	4316	6229	7407	201,00	192,00	191,00
NTK 110	Piston	8,00	345	740	920	2130	2625	3000	1550	2619	2737	6,20	6,90	5,50
	P + M 85-2	11,72	340	710	890	1700	2150	2500	1864	3159	4513	11,80	12,50	13,10
	Body	16,60	330	680	880	1330	1680	2050	1687	3551	4807	17,40	23,00	20,90
	P + M 85-4	31,99	285	610	870	950	1200	1400	1844	3286	4836	37,40	41,50	45,00
	C + M 85-4	40,59	270	590	870	790	1050	1280	1991	4199	5631	58,50	69,60	62,60
	P + M 85-5	44,00	270	590	860	770	960	1250	1952	3551	5690	60,00	70,20	66,50
	C + M 85-5	52,60	260	570	840	720	890	1000	1982	3924	4964	69,60	90,50	93,30

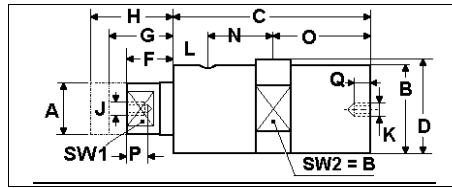
Pneumatic piston vibrators. NTK serie.

Dimensions in mm



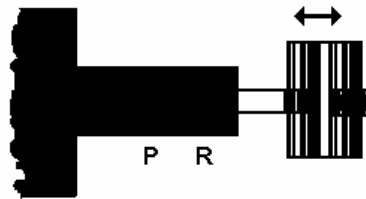
Type	A	B	C	D	E	F	G*	H	J	K	L	M	N	P	Q	R	S	SW
NTK 15 X	15	50	114	20	9	43	23,30	M10			R 1/8"	R 1/8"				20	15	13
NTK 16	16	49	110	16	5	40	22,80	M10			R 1/8"	R 1/8"				21	10	14
NTK 18 AL	18	49	120	20	8	42	25,70	M10			R 1/8"	R 1/8"				21	15	16
NTK 25	25	64	138	20	9	54	36,50	M16			R 1/4"	R 1/4"				25	10	22
NTK 40	40	84	140	22	12	57	36,00	M16			R 3/8"	R 1/4"				40	15	32
NTK 55	55	110	125	15	17	55	30,80	M20	96		R 3/8"	R 3/8"	68	68	8,5	40	30	46
NTK 85	85	160	122	15	20	55	36,30	M20	143	12,8	2 x R 3/8"	R 3/8"	124	71,5	10	40	20	0
NTK 110	110	200	122	15	22	55	36,30	M20	182	12,8	2 x R 1/2"	2 x R 3/8"	168	70	13	40	25	0*

For the HF versions, dimensions E, F and G are 10 mm bigger.

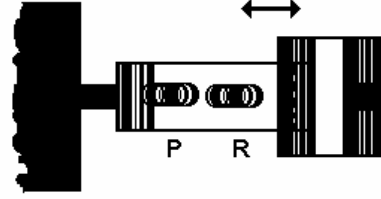


Type	A	B	C	D	E	F	G	H	J	K	L	M	R	S	T	U	SW
NTK 8 AL	8	20	91	22	5	32	21,5	M5	M6	-	M5	M5	15	9	47	76	7
NTK 25 AL	25	50	138	54	7	52	34,5	M16	M16	-	R 1/4"	R 1/4"	20	18	72	116	22
NTK 40 AL	40	73	140	79	12	57	35,7	M16	M16	8	R 3/8"	R 1/4"	25	20	73,5	122	32

Installation



Housing attached to mass
Piston with weight oscillates



Piston attached to mass
Housing with weight oscillates

Piston and housing weight

Type	Piston kg	Housing kg	Total weight kg
NTK 8 AL	0,03	0,06	0,09
NTK 15 X	0,13	0,32	0,45
NTK 16	0,15	1,34	1,49
NTK 18 AL	0,21	0,53	0,74
NTK 25 AL	0,42	0,50	0,92
NTK 25	0,47	2,63	3,10
NTK 40 AL	1,28	1,01	2,29
NTK 40	1,29	4,20	5,49
NTK 55 HF	2,10	5,90	8,00
NTK 55 NF	2,10	5,60	7,70
NTK 85 HF	5,20	12,10	17,30
NTK 85 NF	5,20	11,30	16,50
NTK 110	8,00	16,60	24,60

Oscillating mass additional weight

For Vibrators	Mass type	Dimensions mm	Hole ø mm	Weight kg
NTK 8 AL	M 8-1	17 x 8	5,0	0,01
	M 8-2	30 x 10	5,0	0,05
NTK 15 X 16 y 18 AL	M 16-1	50 x 20	10,5	0,29
	M 16-2	65 x 20	10,5	0,51
NTK 25	M 25-1	50 x 20	16,5	0,27
	M 25-2	65 x 20	16,5	0,47
NTK 25 AL	M 25-3	100 x 20	16,5	1,18
	M 25-4	100 x 60	16,5	3,60
NTK 40 AL	M 85-1	100 x 20	20,5	1,16
NTK 55	M 85-2	100 x 60	20,5	3,50
NTK 85 NTK 110	M 85-3	200 x 50	20,5	12,30
	M 85-4	200 x 100	20,5	23,70
	M 85-5	200 x 150	20,5	35,55



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