Plastic Ball Vibrator

Safe and anti-corrosive plastic body ball vibrator

Model	Code Number
UP110	082041100
UP113	082041130
UP216	082042160
UP219	082042190
UP325	082043250
UP335	082043350
UP441	082044410
UP451	082044510

Feature | Specification | Size / Installation

This is the easy operation principle which a steel ball rotates at high speed by compressed air, and generates powerful vibration. Since it can use easily with simple structure, it is useful for the place where a little vibration is requested, blockade prevention for hopper chute, tank etc.

Reinforced plastic excellent in corrosion resistance and anti-explosion

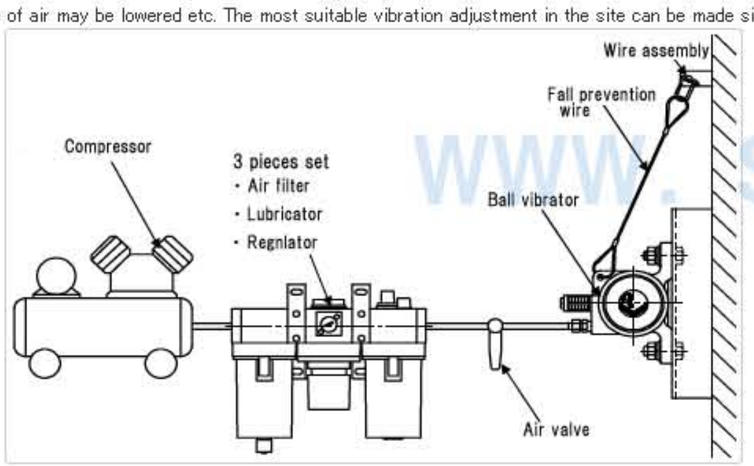
Since the body is made from reinforced plastic, its intensity is high, and is excellent in corrosion resistance, anti-explosion , and can be used for a long period of time even in the watery site.

Easy vibration principle makes less failures

Since it is the structure of generating vibration only in the high velocity revolution of the steel ball which entered in the body, there are no complicated parts and is almost trouble-free.

Vibration is adjustable by the pressure regulation of supply air

Frequency and centrifugal force can be easily changed only by operating the pressure of compressed air. When vibration is weak, the set pressure of air may be raised, and when vibration is too strong conversely, pressure of air may be lowered etc. The most suitable vibration adjustment in the site can be made simply.



Easy maintenance

Ball replacement of all models is possible. Replacement of the ball can be made only by removing the fix bolt of the side cover. (Notes: When wear of the race ring inside is remarkable, just a ball replacement is insufficient.)

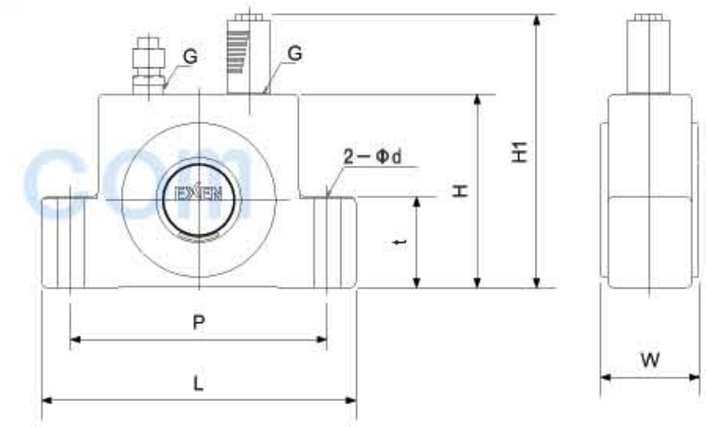
Compact body

Attachment width of smallest UH110 is 34mm and the weight is 400g and this can be attached also in the small hopper and the narrow place in which the usual air vibrator cannot be attached.

Application expands by your ideas

The ball vibrator that is generally used for a little blocked prevention of hopper and chute. This is also applicable as a motor of the vibration table used for filling. Application extends on various ideas, such as accumulation dissolution of part supply line.

dimensional drawing



dimensional chart (mm)

Model	L	H	H1	W	t	P	Φd	G	dia. of application tube
UP110	126	67	96	34	33	101	10	1/8B	Φ8×Φ6
UP113									
UP216	141	87	123	45	41	115	12	1/4B	
UP219									
UP325	164	101	137	56	51	132	13		
UP335									
UP441	225	155	204	70	78	187	16	1/2B	Φ16×Φ13
UP451									

*Bolt recommends a class 10.9

dimensional chart (inch)

Model	L	H	H1	W	t	P	Φd	G	dia. of application tube
UP110	5.0	2.6	3.8	1.3	1.3	4.0	0.4	1/8B	Φ0.3×Φ0.2
UP113									
UP216	5.6	3.4	4.8	1.8	1.6	4.5	0.5	1/4B	
UP219									
UP325	6.5	4.0	5.4	2.2	2.0	5.2	0.5		
UP335									
UP441	8.9	6.1	8.0	2.8	3.1	7.4	0.6	1/2B	Φ0.6×Φ0.5
UP451									

*Bolt recommends a class 10.9

Plastic ball vibrator specification (mm)

Model	Required to start (MPa)		Frequency(Hz) Centrifugal force(KN) Air consumption(N㎥/min)								
			0.2MPa			0.3MPa			0.4MPa		
	Vert.	Horz.	Hz	KN	N㎥/min	Hz	KN	N㎥/min	Hz	KN	N㎥/min
UP110	0.03	0.03	303	0.17	0.13	344	0.22	0.18	375	0.26	0.23
UP113			260	0.25		295	0.32	0.17	322	0.39	0.22
UP216	0.07	0.04	158	0.29		189	0.42		211	0.52	
UP219			137	0.34	0.18	166	0.50	0.25	187	0.63	0.31
UP325	0.13	0.03	92	0.46		113	0.70		137	1.02	
UP335	0.23		96	0.96	0.19		1.33		128	1.71	0.32
UP441	0.27	0.01	–	–	–	79	2.45	0.48	86	2.90	0.63
UP451	0.48	0.03	–	–	–	–	–	–	76	3.57	0.75

Model	Frequency(Hz) Centrifugal force(KN) Air consumption(N㎥/min)						Weight (kg)
	0.5MPa			0.6MPa			
	Hz	KN	N㎥/min	Hz	KN	N㎥/min	
UP110	399	0.29	0.28	423	0.33	0.33	0.4
UP113	344	0.44	0.26	364	0.49	0.31	
UP216	229	0.61		243	0.69		0.9
UP219	203	0.74	0.37	216	0.84	0.43	
UP325	147	1.18		162	1.43		1.4
UP335	138	1.98	0.38	146	2.22	0.44	1.5
UP441	92	3.32	0.77	97	3.66	0.88	3.4
UP451	81	4.06	0.90	85	4.47	1.04	3.6

* Please use it with the ambient temperature of 60 degrees C or less.
* The above-mentioned specification is a result on the measurement condition of our company. It may differ from the above-mentioned specification according to installation conditions.
* A starting pressure may become higher that our test is carried out air pressure up gradually before [3m] of a vibrator.
* A straight is the mounting direction of a right dimensional drawing, and the level is the result of the mounting direction which a ball rotates at the number level (for it to be superficial). In the case of mounting angles other than a straight, perpendicular lay also serves as the inclination for dynamic pressure to be low.

Plastic ball vibrator specification (inch)

Model	Required to start (Psi)		Frequency(Hz) Centrifugal force(KN) Air consumption(ft^3/min)								
			29Psi			43.5Psi			58Psi		
	Vert.	Horz.	Hz	b_f	ft^3/min	Hz	b_f	ft^3/min	Hz	b_f	ft^3/min
UP110	4.35	4.35	303	38	4.59	344	49	6.36	375	58	8.12
UP113			260	56		295	72	6.00	322	88	7.77
UP216	10.15	5.80	158	65		189	94		211	117	
UP219			137	76	6.36	166	112	8.83	187	142	10.95
UP325	18.86	4.35	92	103		113	157		137	229	
UP335			96	216	6.71		299		128	384	11.30
UP441	39.16	1.45	–	–	–	79	551	16.95	86	652	22.25
UP451	69.62	4.35	–	–	–	–	–	–	76	803	26.48

Model	Frequency(Hz) Centrifugal force(KN) Air consumption(ft^3/min)						Weight (lb)
	72.5Psi			87Psi			
	Hz	b_f	ft^3/min	Hz	b_f	ft^3/min	
UP110	399	65	9.89	423	74	11.65	0.18
UP113	344	99	9.18	364	110	10.95	
UP216	229	137		243	155		0.41
UP219	203	166	13.06	216	189	15.18	
UP325	147	265		162	321		0.63
UP335	138	445	13.42	146	499	15.54	0.68
UP441	92	746	27.19	97	823	31.07	1.54
UP451	81	913	31.78	85	1,005	36.72	1.63

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