



CLEVELAND VIBRATOR Model SI

SINGLE IMPACT VIBRATOR
FOR PERMANENT INSTALLATION

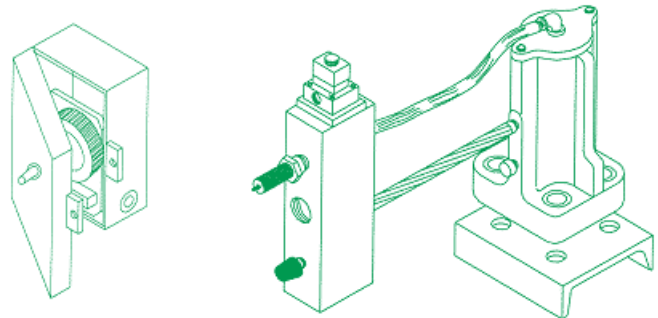
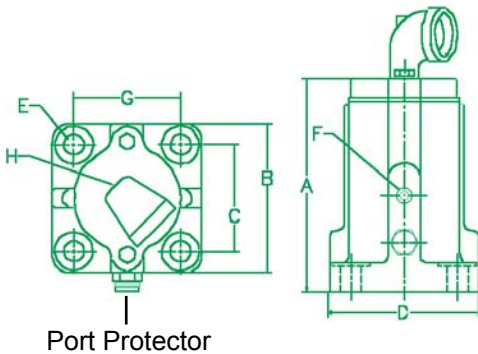
The single impactor delivers one impact at a maximum frequency of once every three seconds through a five-port spool valve. A timer is used to vary the cycle required. Single impactors are most effective for sticky materials because they are less likely than continuous vibration to cause packing in hoppers.

Low maintenance is guaranteed by a combination of a springless design and only one moving part. The single impactor makes less noise and

consumes less air than most air and electric vibrators because there is no continuous blast of exhausting air.

Like VMSAC and VMS, the SI has a one-piece, rugged ductile iron cylinder housing which decreases the weight of the vibrator. It may be mounted on any appropriately sized mounting channel, and comes complete with heavy-duty mounting fasteners and a gasket.

These vibrators are internally coated for enhanced performance.



INSTALLATION AND OPERATING KITS

THE CLEVELAND VIBRATOR COMPANY
2828 CLINTON AVE. CLEVELAND, OH 44113
800-221-3298

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SI													ENERGY PER IMPACT				
MODEL	PISTON DIA. in/cm	A in/cm	B in/cm	C in/cm	D in/cm	E in/cm	F in/cm	G in/cm	H NPT	WT. lbs/kg	AIR CNSMP. cf/stroke liter/stroke @ 80 psig 5.4 bar	ft lbs/cm kg psig/bar					
												@ 20 @ 1.4	@ 40 @ 2.7	@ 60 @ 4.1	@ 80 @ 5.4	@ 100 @ 6.8	
1125	1-1/4 3.2	6-3/8 16.2	3 7.6	2 5.1	3 7.6	3/8 1.3	1/4 0.6	2 5.1	3/8 1.0	8 3.6	.010 0.3	3 41	6 83	8 111	11 152	14 194	
1200	2 5.1	6-1/2 16.5	4-1/2 11.4	3 7.6	4-1/2 11.4	5/8 1.6	1/4 0.6	3 7.6	1/2 1.3	18 18.2	.020 0.6	6 83	12 166	19 263	25 346	31 429	
1300	3 7.6	8-5/16 21.1	5-3/4 14.6	4-1/8 10.5	5-3/4 14.6	3/4 1.9	3/8 1.0	4-1/8 10.5	1/2 1.3	32 15	.084 2.4	21 290	43 595	64 885	86 1,189	108 1,493	
1350	3-1/2 8.9	10 25.4	6 15.2	4-1/8 10.5	6 15.2	3/4 1.9	1/2 1.3	4-1/8 10.5	3/4 1.9	39 18	.120 3.4	43 595	86 489	129 1,784	172 2,378	215 2,973	
1400	4 10.2	11-7/8 30.2	8-5/8 21.9	6-1/4 15.9	8-5/8 21.9	1-1/4 3.2	1/2 1.3	6-1/4 15.9	3/4 1.9	109 49	.242 6.9	88 1,217	177 2,447	265 3,664	354 4,894	442 6,111	
1500	5 12.7	16-3/8 41.6	10-1/2 26.7	7-7/16 18.9	10-1/2 26.7	1-1/4 3.2	3/4 1.9	7-7/16 18.9	1 2.5	253 115	.526 14.9	197 2,724	394 4,065	592 5,420	789 10,909	986 13,632	
1700	7 17.8	19-3/4 50.2	13-1/2 34.3	8-1/2 21.6	16 40.6	1-1/2 3.8	1 2.5	13 33.0	1-1/4 3.2	550 249	1.078 30.5	356 4,922	712 9,844	1,069 14,780	1,425 19,702	1,781 24,624	
1900	9 22.9	19-3/4 50.2	15-1/2 39.4	8-1/2 21.6	16 40.6	1-1/2 3.8	1-1/4 3.2	13 33.0	1-1/2 3.8	700 318	1.658 47.0	568 7,853	1,136 1,571	1,704 23,560	2,277 31,482	2,840 39,266	

OPTIONAL ACCESSORIES

- spool valve*
- timer*
- mounting channel*
- hoses*
- railcar bracket
- included in complete kit for a 5% savings

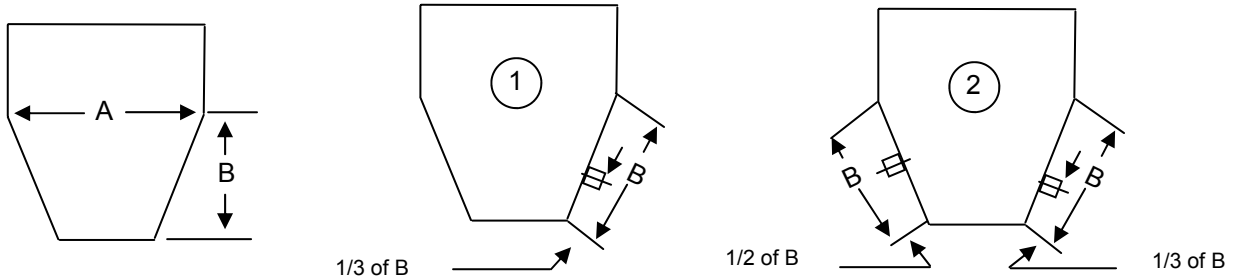
For more information, please contact our sales department at 800-221-3298.

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SI Sizing Chart



A *	B*	model req'd	# req'd	mounting location
1-2	1-2	1125	1	1
1-2	3-5	1125	2	2
1 - 5	1 - 5	1200	1	1
1 - 5	6 - 10	1200	2	2
6 - 10	6 - 10	1300	1	1
6 - 10	11 - 15	1300	2	2
11 - 15	11 - 15	1350	1	1
11 - 15	16 - 20	1350	2	2
16 - 20	16 - 20	1350	2	2
16 - 20	10 - 25	1400	1	1
21 - 25	10 - 25	1400	2	2
26 - 35	10 - 25	1500	1	1
36 - 50	10 - 25	1500	2	2

* distance in feet

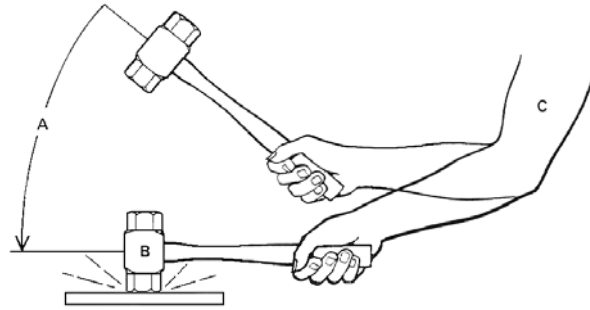
The SI also comes in a railroad car version, please contact sales for more information.

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Hammer Formula

$$A \times B \times C = \text{ft. lbs.}$$

The use of the hammer formula actually requires the use of a hammer or sledge hammer to impart shock to the surface that is to receive the impact. The tests should be conducted under conditions as close to actual as possible.



A = distance hammer travels (1 ft. minimum; 3 ft. maximum)

B = weight of hammer (Recommended weights. = 1 to 8 lbs. depending on the mass to receive the shock)

C = arm power (light = 3, medium = 6, heavy = 9)

Multipliers by which arm power adds to the velocity or speed at which the hammer head travels greater than gravity alone.

Formula	A	x	B	x	C	= ft. lbs.
Description	Distance in Feet	x	Hammer Weight	x	Arm Power	= ft. lbs. energy
Example	3 ft.	x	8 lbs.	x	6 (medium)	= 144 ft. lbs.

Had the above example been an actual test and the 144 ft. lb. energy been sufficient to satisfy the requirement, the next step would then be to refer to the technical data section. Using the 60 P.S.I. ratings, select the impactor that comes closest to your test data.

Note: the 60 PSI ratings will normally allow for sufficient plus or minus power required for the actual use of the impactor.

In the case of the example above, the Model SI 1350 would be best suited.

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