

**VIBRATORS FOR
PLATING TANKS
IN PRINTED CIRCUIT INDUSTRY**

We're The **SILENT** Vibrator Guys.®

VIBCO

www.VIBCO.com

IDEAS FOR BETTER PLATING WITH VIBRATION

- **Achieve Better Plating with Proper Vibration**
- **Reduce Rejects**

VIBCO has designed a special line of electric & pneumatic vibrators for the PC-board industry. A state-of-the-art painting system allows special epoxy paint to withstand acid fumes, paint chipping and rust. Vibco's continuing research is now investigating plastic and stainless steel models.

who can help you with your installation and answer any questions you may have such as choice of vibrator, cost, engineering support, best placement of vibrator, etc.

Over the years many vibrators have been used in the PC-board industry with a high failure rate, due to the fumes from the bath attacking the vibrator, improperly mounting of the vibrator on tanks and racks causing fatigue cracks, overloading the vibrators and burning them out or damaging them. Improper use of rubber isolators inducing air into the bath instead of removing it. All this has added unnecessary cost to the PC-boards as well as machinery and labor. Vibco has designed special vibrators and isolation systems to give the customer a product that takes into account the specialty of the application and provides long equipment life.

Vibco also has specialized application engineers well acquainted with the PC-boards industry

FEATURES:

- **Special epoxy paint to withstand the fumes from the bath.**
- **Special seals to prevent fumes from entering the vibrator.**
- **High temperature lubricant in the bearings.**
- **High temperature insulation on the windings to give extra safety factor & extra long life.**
- **No lubrication necessary on the pneumatic units eliminating exhausting oil that contaminates bath or PC-board.**

TECHNICAL DATA

Model	Force (Impact) lbs./N		Amp.*	Volt	Phase	Vibrations per Minute		Weight		dB**
	lbs.	N				Cont. Duty	Int. Duty	lbs.	kg.	
SCR-60CE	60	267	2.5	115/230	1	950-2500	2500-4000	8	3.6	68
SCR-100CE	100	448	1.3	115/230****	1	950-2500	2500-4000	11	5.0	68
SCR-300CE	300	1335	1.7	115/230	1	950-2500	2500-4000	20	7.3	70
SCRW-400CE	400	1780	1.7	115/230	1	950-2500	2500-4000	12	5.5	70
CE-60	100	448	0.3	115/230	1	3600		8	3.6	65
DC-60	60	267	3.0	12/24	1	3600		8	3.6	65
SPWT-80CE	80	356	1.7	115/230	1	3200		7	3.2	50

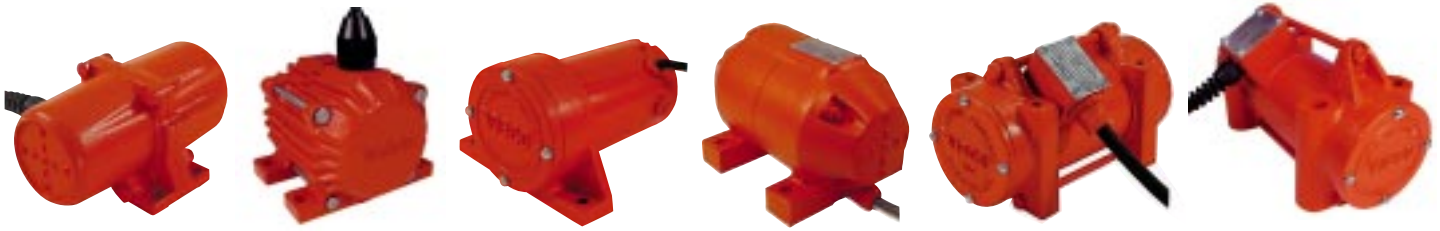
Model	Force (Impact) lbs./N						1 phase			3 phase			R.P.M.	Weight		dB**
	Min.		Standard		Max.		Amperes at Volt			R.P.M.	Weight					
	lbs.	N	lbs.	N	lbs.	N	115/230	230/460	575		lbs.	kg.				
2P-75CE	50	222	75	334	100	445	.5/.25	.2/.1	—	3600	12	5.4	60			
2P-150CE	130	578	175	778	250	1112	1.8/.9	.6/.3	.12	3600	26/25	11.8/11.3	63			

Model	60 PSI		80 PSI		Force		Weight		dB**
	Speed VPM	CFM	Speed VPM	CFM	lbs.	N	lbs.	kg.	
BVS-190CE	5500	7.5	7200	8.5	270	1201	3.5	1.6	71
BVS-250CE	5200	8	7200	9	480	2136	6	2.7	72
BVS-320CE	5500	9	6800	10	600	2669	8.5	3.9	70

*Amps shown 115V. **Decibel at 3' (1 meter on A-Scale) ***Adjustable eccentrics ****12 & 24 Volt DC See catalog 9112

Most Commonly Used Vibrators

ELECTRIC MODELS



SCR-60CE
CE-60CE
DC-60

SPWT-80CE

SCR-100CE

SCRW-400CE

2P-75CE
SCR-300CE

2P150-CE

The SCR-line is speed and force adjustable while in operation. Each unit supplied with a speed dial control. Specify if for 115 volt or 230 volt single phase, standard 50 or 60 cycles, SCR-60CE and SCRW-400CE have O-ring sealed housings for pressure wash down.

Model CE-60CE and SPWT-80CE 115 or 230 volt, single phase, 50 or 60 cycles and 3200 vibrations per minute. Units are speed adjustable with standard speed controls, both high pressure wash down proof.

Model 2P - Single or 3-phase operation can be made in any voltage and 50 or 60 cycles constant speed units with adjustable eccentrics for adjustable force output.

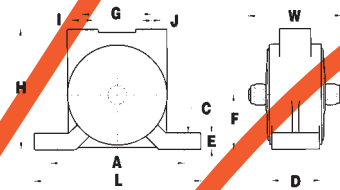
PNEUMATIC MODELS



BVS-190CE

BVS-250CE

BVS-320CE



BVS-190CE, 250CE, 320CE

Model BVS - Silent Pneumatic Turbine Vibrators - Silent operation, need no airline lubrication, bearings prelubricated for life. Totally enclosed for high pressure wash down. Tapped exhaust port for leading off exhausting air.

For more technical data and other available units ask for General Catalog #9001.

DIMENSIONS

Model	L		W		H		A		B		C*		D**		E***	
	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch	mm
SCR-60CE	6 ³ / ₈	162	4 ¹ / ₂	114	3 ¹ / ₄	83	3 ⁵ / ₈	64	1 ⁵ / ₁₆	33	5 ¹ / ₁₆	8	—	—	—	—
SCR-100CE	6 ³ / ₄	187	6	152	4 ¹ / ₄	108	5	127	—	—	3 ³ / ₈	10	—	—	—	—
SCR-300CE	8 ¹ / ₂	216	4 ¹ / ₈	105	5	127	3	76	5 ³ / ₄	145	5 ¹ / ₁₆	8	—	—	—	—
SCRW-400CE	9	229	6 ¹ / ₄	159	5 ³ / ₈	127	5 ¹ / ₄	133	4 ¹ / ₄	114	7 ¹ / ₁₆	14	—	—	—	—
CE-60, DC-60	6 ³ / ₈	140	4 ¹ / ₂	114	3 ¹ / ₄	83	3 ⁵ / ₈	64	1 ⁵ / ₁₆	33	5 ¹ / ₁₆	8	—	—	—	—
SPWT-80CE	5 ³ / ₈	137	5 ¹ / ₂	140	6 ¹ / ₂	165	4 ³ / ₄	121	2 ³ / ₄	70	3 ³ / ₈	10	—	—	—	—
2P-75CE	7 ⁷ / ₈	200	4 ¹ / ₈	105	5	127	3	76	4 ¹¹ / ₁₆	119	5 ¹ / ₁₆	8	—	—	—	—
2P-150CE	10 ³ / ₄	273	4 ⁷ / ₈	124	6 ¹ / ₄	159	3 ¹ / ₂	89	6 ³ / ₈	162	1 ¹ / ₂	13	—	—	—	—
BVS-190CE	5 ¹ / ₄	133	3 ³ / ₁₆	81	3 ⁷ / ₁₆	87	4	102	—	—	3 ³ / ₈	10	1 ¹ / ₄	7	3 ³ / ₈	10
BVS-250CE	6 ³ / ₄	171	3 ⁹ / ₁₆	90	3 ¹⁵ / ₁₆	100	5	127	—	—	1 ¹ / ₂	13	1 ¹ / ₄	7	3 ³ / ₈	10
BVS-320CE	6 ³ / ₄	171	4	102	4 ⁷ / ₈	124	5	127	—	—	1 ¹ / ₂	13	3 ³ / ₈	10	1 ¹ / ₂	13

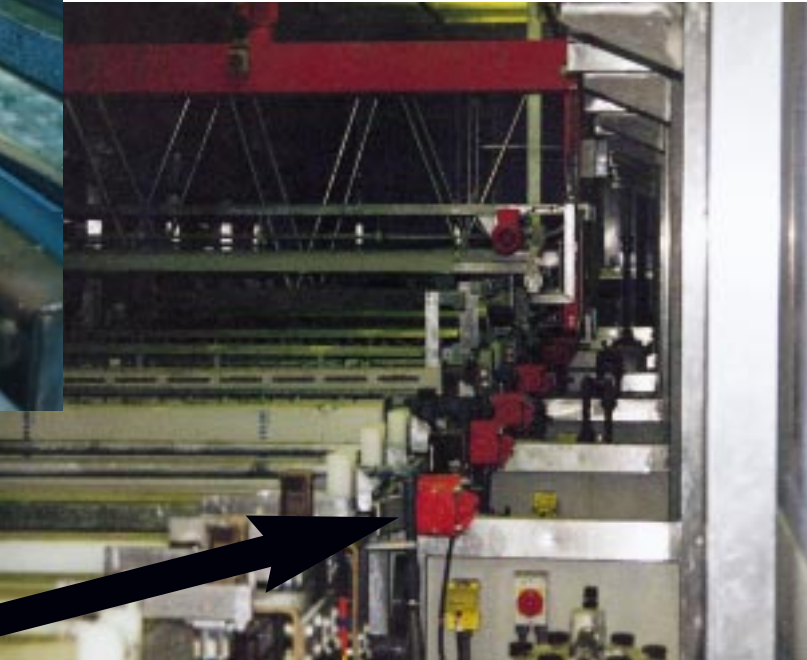
*Bolt Size **Air Inlet NPT Pipe Thread ***Air Exhaust NPT

SEE GENERAL CATALOG FOR ADDITIONAL DIMENSIONS OR ASK FOR CERTIFIED PRINT.

APPLICATIONS



Model 2P-100CE mounted to electroless copper tanks for catalytic activation.



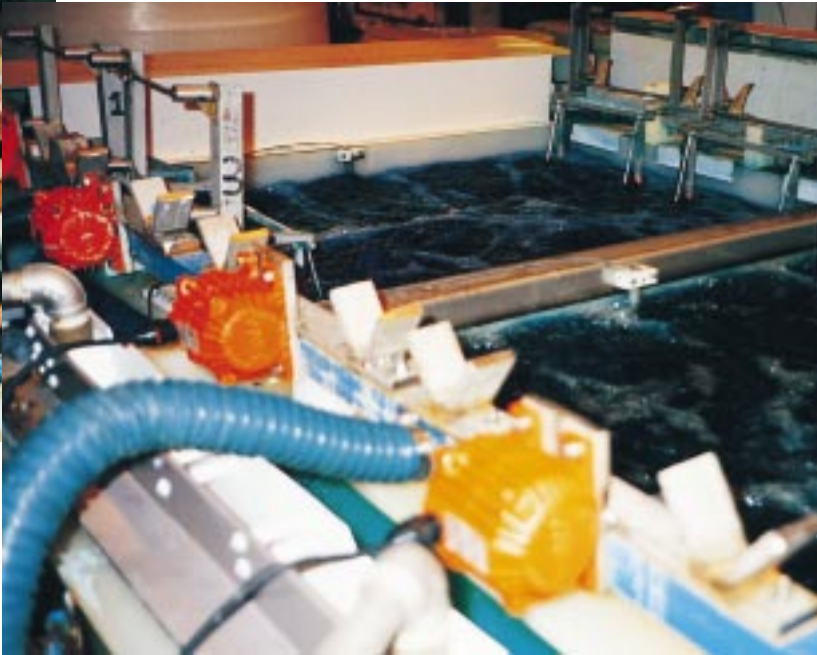
Model 2P-150CE on specially designed mounting bracket. vibration travel only into racks holding PC-boards for greater plate bonding.

IT IS POSSIBLE TO COMPLETELY PLATE THE PC-BOARDS WHEN USING VIBCO'S SPECIFIC VIBRATOR TECHNOLOGY AND RECOMMENDED FLIGHT-BAR LOCATOR MOUNTING SYSTEM FOR BEST VIBRATION TRANSFER & AGITATION.



Model 2P-100CE mounted to top of specially designed rack holder. Racks for PC-boards were put into tank by hand.

Model SPWT-80CE solution tight vibrator assures 100% vibration transfer to PC-boards plating racks.



APPLICATIONS

VIBCO'S APPLICATION ENGINEERS ARE AVAILABLE TO VISIT YOUR PLANT AND HELP TO SOLVE YOUR VIBRATION PROBLEMS.



.007" dia. holes in PC-board did not get plated. A SPRT-80CE vibrator placed in the middle of the flight bar locator to agitate the solution solved the problem.



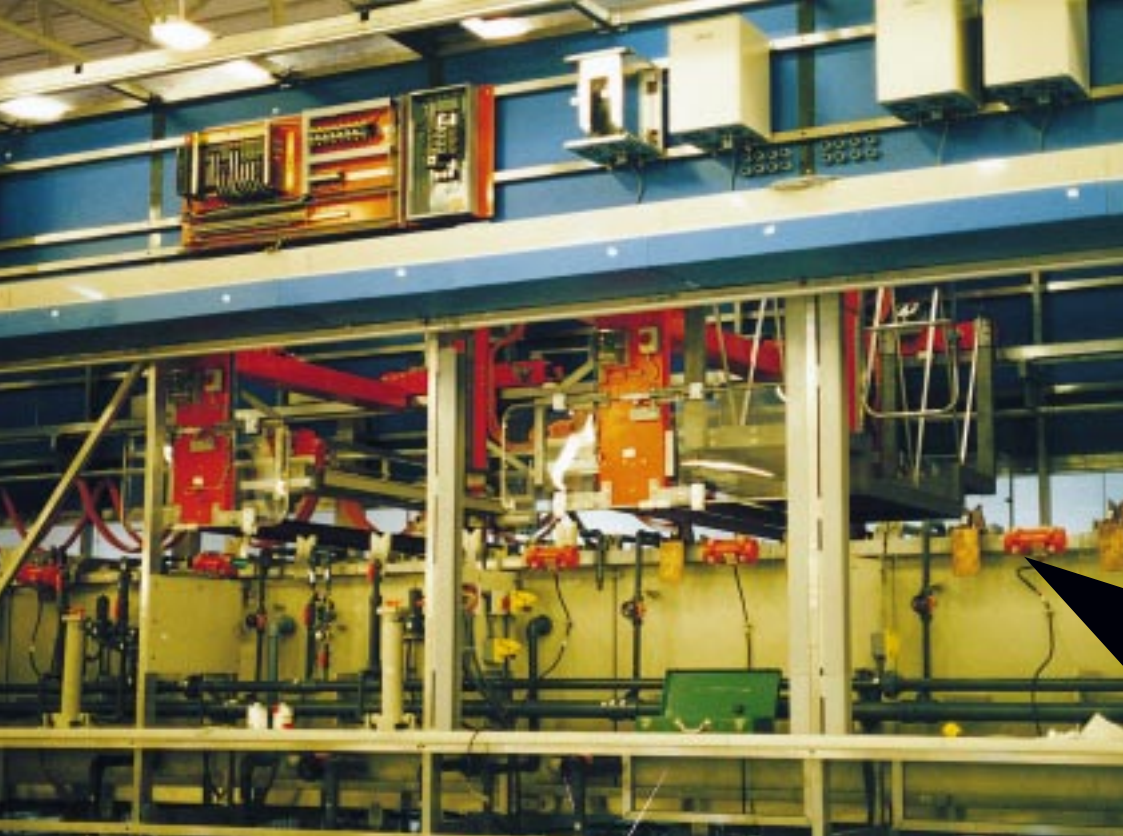
SCR-2P-150CE vibrator solved problem plating double sided holes in PC-board

Below, when tin plating the boards in the solution air bubbles got trapped in the holes. SCR-100CE vibrator mounted to the flight ball with its shaft vertically to obtain a gyratory motion removed the bubbles.



Above, customer was using a competitor vibrator. By using a VIBCO 2P-100CE vibrator on an adapter plate fitting an existing mount customer decreased a 30% rejection rate to almost zero. Have a qualified VIBCO application engineer help you with your vibrator selection.





A series of 2P-150CE vibrators used on robotic plating lines. PLC's allow vibrators to operate when racks with PC-Boards are put into plating tanks.

Model SPRT-80CE on series of single tanks.

Model 2P-150CE used on single rack design for rinse cycle after PC-Board drilling. 100% of drill burrs are removed.



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