MB Dynamics Innovating and Delivering Solutions ...Vibration and Shock

C-Series "HP" Electro-Dynamic Shaker Systems

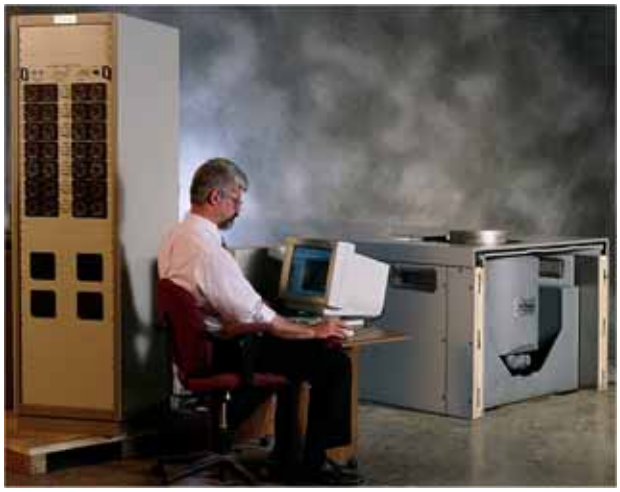
Historically Large Installed Base

The MB Dynamics C40HP, C90HP and C150HP Electrodynamic Shakers comprise current deliverables in a long history of reliable and rugged shakers earning a well-deserved reputation for high performance, longevity, and dependability. They build upon MB's family of C-Series products (C10, C25, C40, C50, C60, C90, C125, C126, C150, C200, C210, C220) with a heritage spanning 50 years.

Versatile Shakers and Amplifiers

The C-Series "HP" Shakers offer exceptionally high acceleration levels with stiff armatures, have 50mm of stroke (continuous duty), full performance SINE & RANDOM tests out to 3000 Hz (usable, at reduced levels, out to 4000 Hz), rugged armatures with no resonances below 2000 Hz, reliable for shock testing using classical pulses (half sine, sawtooth, etc.) as well as time history replication, force ratings from 5kN to 80kN, vertical & horizontal operation, direct-coupled, automatic payload recentering, and trunnion isolation.

M-Series Power Amplifiers drive C-Series shakers. Amps are air-cooled, pulse width modulated using MOSFET technology, 85-90% efficient, 125 and 250 VRMS output, peak currents of 3X continuous-duty, 6 kVA power modules, usable bandwidth from DC – 5000 Hz, 1% distortion, dissipate < 700 BTU/hr per kVA of output power, direct coupled, 19" racks, integral shaker field supply, control panel with normal indicators and interlocks, and reliable.



MB delivers turnkey vibration test systems including PC-based Win2K5 vibration and shock controllers (sine, random, shock, time history, sine-on-random, SRS, etc. up to 8-channels), special-purpose fixtures, head expanders (featuring the 2424 Ultra-Stiff with no troublesome resonances below 2250 Hz), oil-film slip table assemblies from 400mm up to 1200mm square of test item mounting area, horizontal moving tables with patented flexures for extremely quiet operation yet highly resistant to overturning moments, air-isolated common bases for the shaker and slip table, AGREE systems for combined environmental and vibration testing, data acquisition hardware & software, and vibration and acoustic instrumentation and signal conditioning.

Whether in a small or large lab, an MB vibration test system is the preferred choice for busy people on limited budgets. Combine that with MB's applications experience and you have an "HP" system that provides superior performance for many years to come.

Total System Supplier

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Traditional Single-Axis Shakers
Maximum Ratings

C-SERIES SHAKERS	M-SERIES AMPLIFIERS			FORCE RATINGS			Max Accel g's pk	SINE Velocity ips pk	SHOCK Velocity ips pk	30g 11ms Payload	Cont. Duty Stroke in pk-pk	Full Perform. Freq. Range Hz	ARMATURE			
	kVA Rating	Coupling DC/Match	Configuration MF=Max Force MV=Max Velocity	SINE[1] lbs pk	RANDOM[2] lbs rms	SHOCK lbs pk							Axial Res. Hz	Wt lbs	Outer Bolt Circle inches	Diam. inches
C150HP	96 kVA	DC	MF	20,000	18,000	36,000	150	45	45	1100	2	2-3 k	2,400	100	16	17.25
	96 kVA	DC	MV	16,000	13,500	27,000	150	70	90	800						
	48 kVA	DC	MF	14,300	12,900	24,000	145	46	46	700						
	48 kVA	DC	MV	9,200	8,200	18,400	93	70	92	510						
C90HP	48 kVA	DC	MF	10,000	8,500	17,000	150	54	54	520	2	2-3 k	2,550	39	12	13.25
	48 kVA	DC	MV	7,600	6,400	12,800	150	70	108	380						
	42 kVA	DC	MF	10,000	8,500	17,000	150	54	54	520						
	24 kVA	DC	MF	7,600	6,400	12,800	150	54	54	380						
C40HP	24 kVA	DC	MF	5,000	4,000	8,000	120	55	55	220	2	2-3 k	2,550	39	12	13.25
	24 kVA	DC	MV	4,000	3,300	6,600	102	70	110	180						
	18 kVA	DC	MF	5,000	4,000	8,000	120	55	55	220						
	12 kVA	DC	MF	4,000	3,200	6,400	102	55	55	170						
	12 kVA	DC	MV	2,000	1,600	3,200	51	70	110	65						
	6 kVA	DC	MF	2,000	1,600	3,200	51	55	55	65						
C10E	6 kVA	MATCH	MF	1,200	950	2,400	68	70	70	60	1	5-3 k	3,000	17.50	8.00	9.25

PM-SERIES SHAKERS	SS-SERIES AMPLIFIERS			FORCE RATINGS			Max Accel g's pk	SINE Velocity ips pk	SHOCK Velocity ips pk	30 g 11 ms payload	Max Stroke in pk-pk	Freq. Range Hz	ARMATURE			
	Model	Coupling DC/Match		SINE[1] lbs pk	RANDOM[2] lbs rms	SHOCK lbs pk							Res. Hz	Weigh t lbs	Bolt Cricle inches	Diam. inches
PM500HP	SS2500	DC		500*	250*	500	80	55	55	10	2	DC-3 k	2,800	6.2	3.5	4.1
PM250HP	SS1200VCF	DC		250*	125*	250	80	55	55	5	2	DC-3.5 k	3,000	3.1	3.5	4.1
PM100A	SS530	DC		100*	50*	100	106	70	70	2	0.5	DC-7 k	6,000	0.94	2.25	2.7
PM50A	SS250	DC		50*	25*	50	80	70	70	1	0.5	DC-10 k	8,000	0.62	2.25	2.7
PM25A	SS250	DC		25*	12*	25	50	70	70	0.3	0.5	DC-10 k	8,000	0.5	2.25	2.7

Specifications subject to change without notice 11/95

**Derate PM Sine force ratings by 50% if no forced air used*

[1] assumes 1 octave/min sweep rate in full-performance frequency range with pure mass payload equal to the armature weight

[2] assumes 20-2000 Hz flat, equalized PSD with pure mass payload weighing 5 times the armature weight. Vibration response contains 3 sigma peaks