

VIBRATION AND SHOCK TESTING SERVICES

Available September, 2012

MPA714 M748A

M2 Series shakers are designed for the vibration testing of medium-sized payloads such as electronic, avionic and automotive components and other types of sub-assemblies up to 1764 lb (800 kg).

- Specimen payload up to 1764 lb (800 kg)
- Armature diameters: 18.9 in (480mm)
- Servo controlled operation up to 2 in (51 mm) continuous displacement
- Available as a Unibase slip table with GT and BT type bearings. See Slip Table page for full details
- Rugged trunnion design with air isolation with dual support bearing guidance
- Usable frequency range from 5Hz to 2,700Hz



System Performance	American	Metric
Sine Force	15,400 lbf	7,000 kgf
Random Force	15,400 lbf	7,000 kgf
Shock Force (6ms)	30,800 lbf	14,000 kgf
Useful Frequency Range	DC to 2,700 Hz	DC to 2,700 Hz
Continuous Displacement	2.0 in	51 mm
Shock Displacement	2.0 in	51 mm
Max Velocity	5.9 ft/s	1.8 m/s
Max Acceleration (sine)	100 g	981 m/s ²

Shaker - M2 Series

Armature Diameter	18.9 in	480 mm
Armature Material	Aluminum (A)	Aluminum (A)
Effective Armature Mass	141 lb	64 kg
Load Attachment Points	1/2 in : 3/8 in UNC	M12
Armature Insert Pattern (PCD)	8 on 8.0 in : 8 on 16.0 in	8 on 200 mm : 8 on 400 mm
First Resonant Frequency ±5%, bare table	2,100 Hz	2,100 Hz
Max Static Payload	1764 lb	800 kg
Natural frequency thrust axis	< 5 Hz	< 5 Hz
Stray Flux Density	< 10 gauss	< 10 gauss
Dimensions uncrated (W x D x H)	63.0 x 44.2 x 52.8 in	1605 x 1124 x 1342 mm
Shaker weight uncrated	9921 lb	4500 kg

Associated Equipment

Power Amplifier - MPA700 Series

Amplifier Series/Model Number	MPA714	MPA714
Number of sub-modules supplied	14	14
Rated Power Output	66 kVA	66 kVA
Rated Output Voltage	100 V rms	100 V rms
Rated Output Current	660 A rms	660 A rms
Number of Cabinets	1	1
Dimensions uncrated (W x D x H)	21.6 x 31.5 x 81.0 in	550 x 800 x 2060 mm
Amplifier weight uncrated	1790 lb	810 kg

Amplifiers are designed with a conservative performance margin please refer to amplifier page for maximum ratings.

Blower

Power Requirements	30 kW	30 kW
Blower Model Number	HP5	HP5
Standard Air Hose Length	19.7 ft	6 meter
Hose Diameter	8 in	200 mm
Dimensions including silencer (W x D x H)	39 x 57 x 90.5 in	990 x 1448 x 2300 mm
Blower weight uncrated	1122 lb	510 kg

Applications

- Sine-Sweep Resonance Checks
- Random Vibration Qualification
- Product Screens
- Reliability Testing
- Transportation Specification Verification

“Controlled vibe testing is an excellent compliment to HALT/HASS for qualifying products”



Electro-Dynamic Shaker with 5'x5' Slip Table

Slip Table Specification

BT1500M - Max payload 26,455 lb (12,000 kg)

Slip Plate Working Surface	59 x 59 in	1500 x 1500 mm
Slip Plate Material	Magnesium (M)	Magnesium (M)
Slip Plate Thickness	1.96 in	50 mm
Slip Plate Grid plus amature pattern	4 in grid	100 mm grid
Usable Frequency	2000 Hz	2000 Hz
Slip Plate Mass	536 lb	243 kg
Max Payload	26,455 lb	12,000 kg
Number of Hydrostatic Bearings	3	3
Mass per Hydrostatic Bearing	10.6 lb	4.8 kg
Overturning Moment Pitch	119,316 lbft	161,763 Nm
Overturning Moment Roll	95,333 lbft	129,248 Nm
Overturning Moment Yaw	68,951 lbft	93,481 Nm