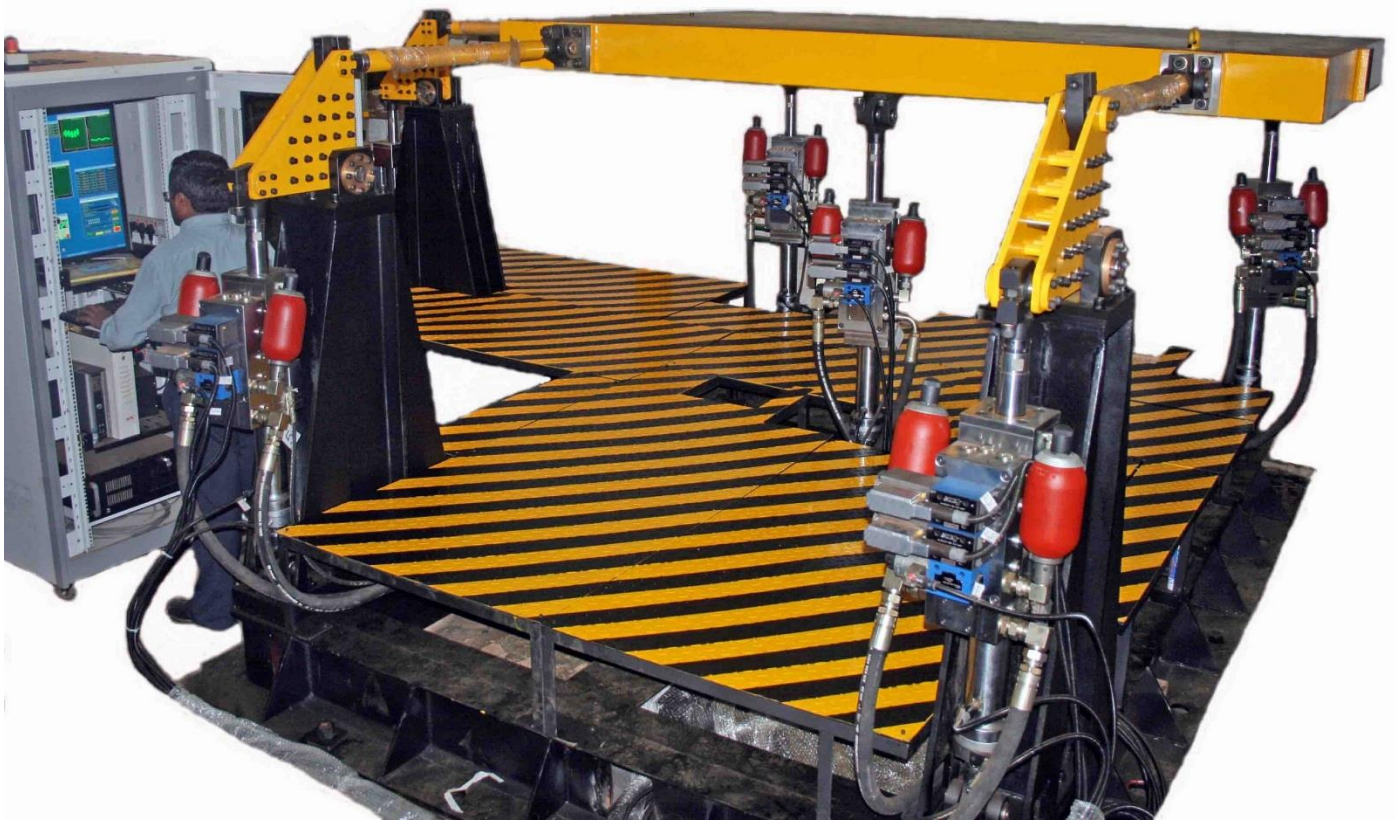


Multi-Axes Shake Table (MAST) is a digitally controlled servo-hydraulic system for durability and performance evaluation of automotive components and sub-assemblies. Digital control system facilitates repeatable, reliable and reproducible operations related to testing under controlled multi-channel loading and simultaneous measurement of multi-channel data acquisition. The user-friendly application software covers a wide range of vibration testing requirements. The software takes care of the transformation from table DOFS (3-translational & 3-rotational) to actuator DOFS (8-axial) which are the actual control DOFS. The double ended, double acting, equal area servo actuators, with swivel mounting on both ends, isolate the piston rods from side loads and lateral accelerations.

All actuators react vertically into the reaction mass and are coupled with suitable lever arms to transfer displacements to the table. The user-friendly real-time software enforces any desired 6DOF table motion history at speeds restricted only by pump capacity.



Standard features

- Frequency 0.01 to 50 Hz
- Single axis to six axis vibration
- Displacement up to 250mm
- Table size 3m x 2m
- Low friction and low maintenance swivels
- 2370 digital controller for synchronous multi-axis control and data acquisition
- “Green” highly efficient hydraulic power pack

Applications

- Durability testing and performance evaluation of automotive components
- Squeak and Rattle tests
- Instrument Panels and testing seats
- Testing fuel tanks, radiators and power train mounting systems
- Batteries, supporting structures and exhaust system of LCV
- Engine cooling modules test

Specifications

Table mass	1.5 ton		
Table size	3 x 2m		
System payload	1 ton		
Actuator capacities	Vertical	Lateral	Longitudinal
	50 kN	50 kN	75 kN
Translational Performance			
	Vertical	Lateral	Longitudinal
Displacement	+/- 125 mm	+/- 75 mm	+/- 75 mm
Velocity	0.75 m/s	1 m/s	0.7 m/s
Acceleration	5g	4g	3g
Rotational Performance			
	Pitch	Roll	Yaw
Displacement	+/- 8°	+/- 8°	+/- 5°
Velocity	0.8 rad/sec	0.8 rad/sec	0.8 rad/sec
2370MS Controller	Control channels: 6 channel of servo control Input channels: 32 Performance: Typical servo-loop update and DAQ frequency up to 5 kHz		
Hydraulic power pack	Digital servo control with flow of up to 200 LPM Operating pressure: Up to 210 bar		
Total weight of rig	7 Ton		
Foot print:	L X W X H = 4900 x 3900 x 2000 mm with table at mean position		