

FOUR POSTER TESTING SYSTEMS



VZERO designs and supplies state-of-the-art Four Poster Testing systems to perform structural durability, ride comfort, squeak and rattle and quality testing over a wide range of vehicles.



APPLICATIONS

- Structural durability
- End of line quality testing
- Ride comfort assessment
- Buzz and Squeak and Rattle testing

KEY POINTS

- Customizable according to customer requirements.
- Powerful, easy to use, real time control system
- Possibility to integrate mathematical models
- TestSim module for virtual test simulation

SCOPE OF SUPPLY

- High natural frequency servoactuators with hydrostatic bearings and mounting pedestal
- High performance MOOG servovalves
- High stiffness aluminium wheelpans with continuously adjustable longitudinal and lateral restraints
- Hydraulic power unit and hydraulic service manifolds
- High performance control system based on VZERO MADC and Spectral Dynamics' JAGUAR. Available testing modules: Road Replication, Swept Sine, Random, Sine on Random, Random on Random, etc.
- Civil works design. Reaction mass. Pit cover
- Vibration isolation system
- X-Y positioning systems for servoactuators: Manual or automated. Includes clamps.
- Additional actuators to simulate aerodynamic loads



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KEY FEATURES

Heavy duty servoactuators

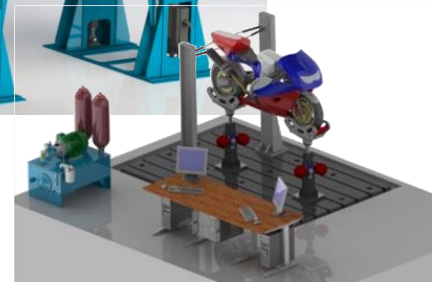
- Hydrostatic self-centering bearings
- High lateral resonant frequency design
- Pedestal mounted
- Close coupled accumulators
- MOOG high performance servovalves

Powerful control system

- Based on the synchronous operation of two high performance real time controllers:
 - Inner loop controller: VZERO MADC
 - Outer loop controller: Spectral Dynamics Jaguar
- Testing modules: Road Replication, Swept Sine, Random, Sine on Random, Random on Random
- DoF or actuator control
- Possibility of integrating mathematical models
- TestSim Module for virtual test simulation prior to actual test execution

Customizable/RD systems

- Two Poster Systems
- Actuators to simulate aerodynamic loads. Seven and Eight Poster Systems
- Electromechanical demonstration systems



BASIC PERFORMANCES TABLE⁽¹⁾

MODEL	VZ4P-MR	VZ4P-HR	VZ4P-SR
Description	Light truck system	Middle truck system	Squeak and Rattle
Gross Vehicle Weight	5000 [kg]	10000 [kg]	2500 [kg]
Frequency range	100 [Hz]	100 [Hz]	200 [Hz]
Sprung mass per servoactuator	1500 [kg]	3000 [kg]	750 [kg]
Unsprung mass per servoactuator	100 [kg]	100 [kg]	100 [kg]
Servoactuator static load	50 [kN]	100 [kN]	30 [kN]
Servoactuator dynamic stroke	250 [mm]	250 [mm]	150 [mm]
Servoactuator maximum velocity	± 3 [m/s]	± 3 [m/s]	± 1.5 [m/s]
Servoactuator maximum acceleration	± 30 [g]	± 30 [g]	± 20 [g]

⁽¹⁾ Standard performances measured at pedestal with assumed unsprung (dynamic mass). Customized versions available.



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