

Damper Test Systems

Testing Railway Shock Absorbers

The test bed is meant to test shock absorbers used in the tilting position, as used on railway coaches. The machine is used to ensure that assembled parts meet specified performance specifications. It is the result of over seven years of R&D with a focus on harmonizing tilt test requirements.

Features

- Extremely Reliable System
- Built-In Infrared Thermometer
- Motorised Adjusting Top Fixture
- Force Measurement Accuracy +/-1%
- Angle Of Damper Inclination Up To 90° Deg
- Amplitude Of Test Oscillation Up To 100 mm
- Linear Speed Of Test Oscillation 0.02-0.6 M/S
- Maximum Force Up To 25 Kh (30kh) Per Damper



Options

- Two-Position Life Test Systems
- Four-Position Life Test Systems
- Built-In Damper Cooling Module
- Systems Without Rotating Module
- Bespoke Modification With Lower/Higher Force
- Bespoke Modification With Lower/Higher Amplitude
- Bespoke Modification With An Extended Speed Range

Applications

- Strength And Life Tests.
- Final Check Of The Dampers In The Manufacturing Process.
- Inspection Of The Hydraulic Vibration Dampers During Exploitation.

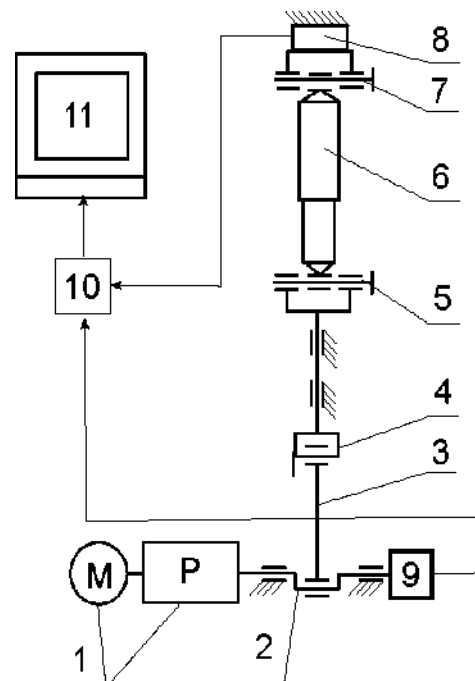
General Description

Mechanics Of The Test Bench Consists Of The Electrical Motor Gearbox (1), Whose Output Shaft Is Linked With A Crankshaft (2). The Crankshaft Hosts A Crankarm (3) Whose Top End Is Linked With A Slider (4). The Slider Is A Bed For Bottom Clamping Device (5).

A Damper (6), Being Tested, Is Fixed Between The Top And Bottom Clamping Devices.

Top Clamping Device (7) Is Placed On The Load Cell (8) Which Is Strongly Fixed On The Body Of The Test Bench. Top Clamping Is Adjustable And Can Be Moved Up And Down By Vertical Actuator.

Rotary Encoder (9) Is Put On The End Of The Crankshaft.



Being Rotated, The Crankshaft Creates High-Quality Harmonic Oscillations.

To Test A Damper, A User Selects The Needed Scenario And Push Start Button. Rotating Module Of The Test Bench Inclines On The Set Angle And Activates The Brake.

Electrical Motor Gearbox Starts Rotating With Chosen Speed What Results In Harmonic Oscillations Of Exact Frequency And Amplitude. The Test Bench Determines A Chart "Force-Displacement" And Calculates Quality Parameters Of Dampers. The Temperature Of Dampers Is Also Measured.

The Systems Supplied With Adjustable Top Clamping Also Allow Measuring Dry Friction Of The Dampers.

Modifications

Quality Check Systems

Article	SIL-01	SIL-01M	SIL-02	SIL-02M
# Of Test Positions:	1	1	1	1
Adjustable Top Clamping:	-	+	-	+
Damper Inclination: (0° to 90° Degrees)	-	-	+	+
Fast Pneumatic Clamping:	Option	Option	Option	Option
Overall Dimensions mm:	1700x1000x1900	1700x1000x2400	1700x1000x2000	1700x1000x2500
Weight Kg:	700	900	1000	1200

Strength And Lifetime Check Systems

Article	SIL-02-LT-1	SIL-02-LT-2	SIL-02-LT-4
# Of Test Positions:	1	2	4
Adjustable Top Clamping:	Option	Option	Option
Cooling Module:	Option	Option	Option
Damper Inclination: (0° to 90° Degrees)	Option	Option	N/A
Limited Warranty:	2 Years		

Test Examples

