

ENGA - Test benches for check the quality of hydraulic shock absorbers

Specification

FEATURES

- Extremely reliable system
- Angle of damper inclination up to 90 deg
- Maximum force up to 25 kH (30kH) per damper
- Force measurement accuracy +/-1%
- Amplitude of test oscillation up to 100 mm
- Linear speed of test oscillation 0.02-0.6 m/s
- Built-in infrared thermometer
- Motorised adjusting top fixture

OPTIONS

- Built-in damper cooling module
- Systems without rotating module
- Two-position Life test systems
- Four-position Life test systems
- Bespoke modification with lower/higher force
- Bespoke modification with lower/higher amplitude
- Bespoke modification with an extended speed range



APPLICATION

- Inspection of the hydraulic vibration dampers during exploitation.
- Final check of the dampers in the manufacturing process.
- Strength and Life tests.

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.

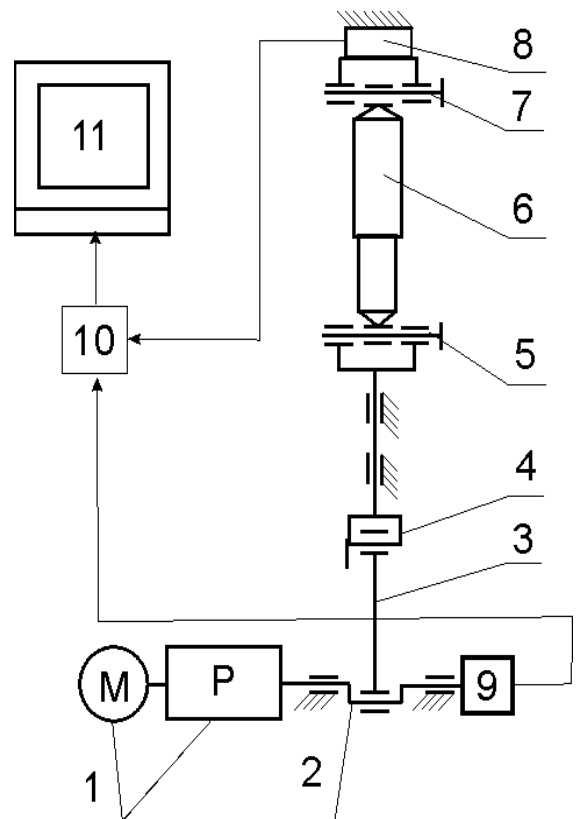
Rotary encoder (9) is put on the end of the crankshaft.

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..90 degrees	-	-	+	+
Fast pneumatic clamping	OPTION	OPTION	OPTION	OPTION
Overall dimensions, mm LxWxH	1700x1000x1900	1700x1000x2400	1700x1000x2000	1700x1000x2500
Weight, kg	700	900	1000	1200

Warranty 2 years

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
Damper inclination 0..90 degrees	OPTION	OPTION	N/A
Cooling module	OPTION	OPTION	OPTION

Limited warranty 2 years