Model 835 System For Testing Small Dampers

Benefits

- Easy specimen loading and removal
- Software meets all performance testing needs
- Option optimizes friction force testing and gas force evaluation
- Available NVH package

The MTS Model 835 Damper Test System equips you with the tools you need for functional evaluation of ground vehicle damper performance. Featuring the most advanced damper testing software available, with options for NVH and friction force testing, it equips you to make virtually any kind of damper performance evaluation.

The 835 features unparalleled MTS load unit performance that allows you to simulate the conditions you need for accurate evaluation of damper performance. The complete system specifications are on the opposite side of this document.

Supporting that performance is an advanced controller that works with the software to facilitate test setup and test storage for later use at any time. Control waveforms include:

- Sine
- Ramp
- Square
- Sine-on-sine
- Sine sweep
- Dual rate sine
- Dual rate ramp
- Arbitrary (profile)
- RPC® time history playback (optional)
- And many more.

With the arbitrary or profile command waveform you can generate block cyclic waveforms that are user defined. RPC time history playback is optionally available with this software for true road simulation.

MTS Damper Testing Software provides data acquisition that is both flexible and comprehensive. You can automate data reports and include standard force-displacement and force velocity curves or other typical methods of presentation and analysis.

Another feature is the ability of the software to run temperature dependent performance tests. You simply program a performance test inside a temperature loop. Test result reporting includes graphs of fading. The entire test is automated and very easy to set up.

MTS 835.15
load frame

MTS Model 835 System Specifications

	Model 835.15
Actuator Maximum Dynamic Force	15kN (3.3 kip)
Actuator Rod Diameter	45 mm
Actuator Stroke	100 mm
Actuator Hydrostatic Bearing	No
Actuator Anti-Rotate	No
Servovalve	63 lpm (16.6 gpm)
Friction Force Servovalve	3.8 lpm (1 gpm) (optional)
Hydraulic Low Flow	None
Friction Force Load Cell	7kN (1500 lbs.)
Sideload	Pneumatic, static (optional)
Accumulators	8 liters
HSM	Integral to accumulator manifold
Performance:	1.7 m/s 0 kN
For 3 cycles at 100mm stroke	1.5 2.5
sine wave command, 14 kg	1.2 5.0
moving mass	0.9 7.5
	0.4 10.0

Also new in the software is position dependent gas force evaluation. You simply set up the software with a series of positions. The software will then perform an evaluation of the gas force at each position and report the coefficients of a curve fit to the data. The position dependent gas force can then be subtracted from the load data.

NVH, Friction Force, Sideload Options

For friction force testing, MTS provides an additional servovalve and load cell designed to handle the small and precision controlled loads required for these applications.

MTS also provides a package for NVH shock absorber applications. This option includes an accelerometer for chuckle testing and one microphone. These transducer signals are acquired using digital universal conditioners in the MTS FlexTest™ GT (or FlexTest SE) controller. With this system, you do not need a spectrum analyzer or separate data acquisition system. Data is collected at up to 48 kHz and analyzed using MTS supplied software tools.

Also available as an option is a fixture that provides a dynamic hydraulic or static pneumatic sideload capability for your tests.

Another option is a remote setpoint adjuster that can be situated near the load frame for local control of the actuator.

For More Information

Contact your local MTS sales engineer for more information on the Model 835 Damper Test System, its software, or options. Or contact MTS at info@mts.com or visit our web site, www.mts.com.

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ISO 9001 CERTIFIED QMS

100-065-506a Damper835 Printed in U.S.A. 4/07