

Shock Absorber Tester

Model: MSD 3000

for Passenger Cars and Vans

For simple and exact inspection of the axle damping – indirect shock absorber test according to the Theta principle



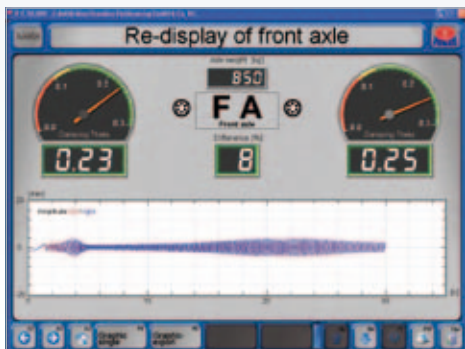
- ▶ Fast, physical inspection of axle damping
- ▶ Assessment according to damping factor “D”
- ▶ Automatic tester type after loading both test plates
- ▶ Fully automatic test sequence
- ▶ Automatic determination of the axle and vehicle weight
- ▶ Prepared for frequency-controlled noise detection

The MSD 3000 – Simple use with a high significance

Extremely easy handling is guaranteed using the fully automatic test sequence. The customer can be presented with a substantial document with a print-out of the measured values with date and company address. The comprehensive graphic representation of the waveform using the EUROSYSYSTEM software eases the assessment even more. A comparative measurement with previous measurements can be conducted with measurements of the same or same type of vehicles. In this way, the motor vehicle specialist is given a useful supporting aid when dealing with customers.

There are also further advantages for motor vehicle workshops:

- ▶ Image revaluation as a specialist operation using a professional chassis service
- ▶ Increase in workshop utilisation and parts sales as a result of repair orders



Digital and graphic representation of measured values using the EUROSYSYSTEM software



Significant representation of defective axle damping (example)



Separate representation of measured values for clear assessment.

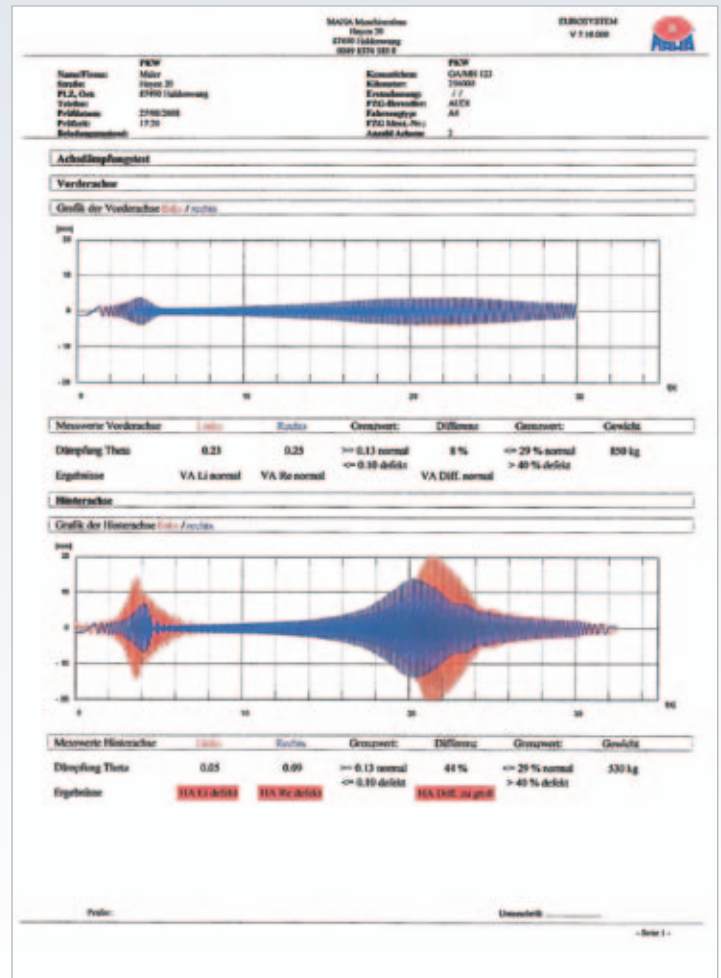
Assessment with the MSD 3000 – The new axle damping tester from MAHA

The MSD 3000 from MAHA Maschinenbau Haldenweg can quickly and clearly test and assess axle damping as it makes a determination on a physical basis. The MSD 3000 operates according to the resonance method and analyses the resonance frequency of the energy present at the vibration system during resonance (wheels, axle and car body). The dimensional damping factor (also known as damping factor "D") can be determined by an additional physical assessment. This measurement principle is considered to be the most precise and was already confirmed by extensive serial examinations and comparative tests.

$$D = \frac{d}{2\sqrt{k * m}} \quad d(\delta) = \frac{(C_{Ges} * r)}{2\pi * f_{Messung} * X_1} - d_{Prüfstand}$$



MDS 3000 floor group integrated in the EUROSYSTEM test lane



Print-out

The test result can be documented and presented to the customer when the measured values are printed out.

The MSD 3000 – The noise detection option for test drives in the workshop

Further development of motor vehicles also brings about a reduction in interior vehicle noises. The noise level has been drastically reduced especially in passenger vehicles. As a result, customers are considerably more sensitive to unexpected ambient noises. The detection of noise sources is often associated with time-consuming test drives and this is not always successful. To solve this problem, MAHA has developed this new simulation option.



The controller enables individual switching of test plates as well as simultaneous activation of both plates. In addition, the frequency can be changed independently at each side by the operator. Due to extremely quiet operation of the tester, noises that arise during the simulation process can be detected and localised without problem. After the fault is rectified, the success of the work can be checked by the same simulation.

Technical data		MSD 3000
Floor group		
Testable axle load		2200 kg
Drivable axle load		2500 kg / 13000 kg (option)
Driving power		(2 x) 1,1 kW
Excitation stroke		6,5 mm
Excitation frequency (controlled)		2 - 10 Hz
Maximum plate stroke approx.		70 mm
Track width min. / max.		880 / 2200 mm
Measurement range for damping factor "D"		0.02 – 0.3 (no units)
Voltage supply / fuse		230 V, 1 phase, 50/60 Hz /16 A (time delay)
Start of tester		Automatic with load on both sides with more than 60 kg (adjustable)
Display accuracy		2% of measurement range value, 2 % difference between left and right side
Floor group dimensions (L x W x H)		2320 x 800 x 280 mm
Packaging height (L x W x H)		2400 x 1000 x 700 mm
Total weight approx.		650 kg
Display/controller	LON	EUROSYSTEM
Display unit	Analogue via pointer representation	Digital via screen
Controller	Fully automatic via LON controller	Fully automatic via communication panel
Measured values	Damping factor "D", difference right/left	Damping factor "D", difference right/left, graphic representation, result, axle weight
Display unit dimensions (H x W x D)	Analogue display for passenger cars 630/910 x 870 x 240/300 mm	Communication panel MCD 2000 1230 x 860 x 350 mm