

**LABA<sup>7</sup>**

The future of shock  
absorber testing

# What is LABA7?

We manufacture and distribute quality equipment to test, diagnose, and service shock absorbers.

The products are developed with a focus on you – the user. We designed our machines to be:

- simple to work with,
- accurate,
- durable,
- and simply beautiful to look at.



We are committed to delivering exceptional service to our clients. From the initial consultation to support after purchase, we strive to help you achieve your goals.

We are building the future of shock absorber testing, one piece of equipment at a time.

# In Accuracy we trust!

Every single piece of equipment we produce is developed with a sole purpose - being the best. We do not settle for existing technology. Our engineers develop electronics and software in-house to deliver unparalleled accuracy, sampling rate, and data resolution. Paired with hardware made from premium materials, equipment of LABA7 offers new golden standard of suspension testing and maintenance.



## Customer support

We have you covered. Our dedicated customer support team provides prompt and effective assistance. With a commitment to responsiveness, customers can expect to receive answers to their questions in a timely manner, enhancing their overall experience with our products and services.



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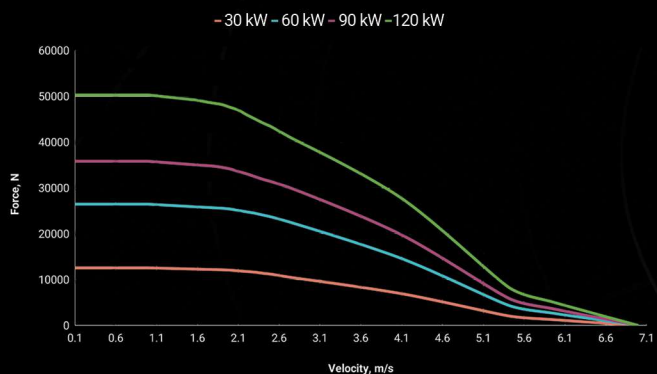
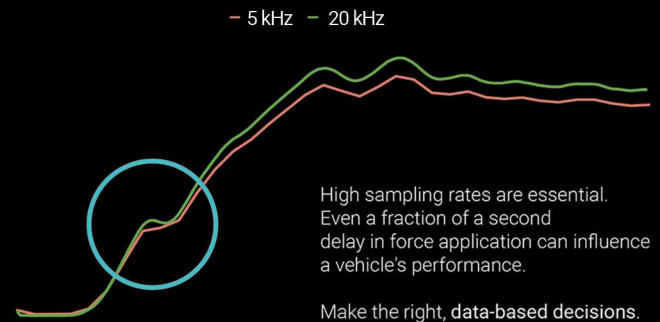
## ElectroMagnetic Actuator

Linear motor

30 kW  
60 kW  
90 kW  
120 kW

EMA by LABA7 comes feature-rich and brings jaw-dropping specs. We developed our electromagnetic shock dyno to deliver remarkably accurate results at an affordable price. To provide the best damper testing experience and results, we designed next-gen components in-house from the ground up.

The data logger for EMA is developed in-house with the sole objective of detecting even the tiniest force changes in damper performance. The numbers speak for themselves: Position resolution and sampling rate of 50 nanometers at 20 kHz digitally. The load cell resolution and sampling rate are 20 bit at 20 kHz. Even more so, its temperature sampling and analog output and input channels are designed for precision and flexibility. With interfaces ranging from Ethernet to Wifi, and HDMI to USB, it's equipped for any modern application.



Force measured at 100 mm stroke tests.  
Force measured in impulse testing method.  
Maximum force can vary according to damper characteristics.

## Power Unit

The smart power supply unit of LABA7 EMA is a game-changer in how we approach power needs.

While the larger EMA versions require a 380V 16-32A connection, the smallest model can operate from a standard 220/240V outlet.

## Control unit

The control unit seamlessly interfaces with the data logger, facilitating real-time feedback on damping forces generated by the shock absorber. Incorporating state-of-the-art technologies such as silicon carbide (SiC) MOSFETs has empowered us to generate significantly more power at a fraction of the cost.

## 30 kW

Peak force: ~11.9kN@2m/s  
Stroke: 0/200mm  
Maximum velocity no load: ~7m/s  
Maximum acceleration: ~40G  
Power 220/240 V

50 000 EUR

## 60 kW

Peak force: ~25kN@2m/s  
Stroke: 0/200mm  
Maximum velocity no load: ~7m/s  
Maximum acceleration: ~40G  
Power 380/400 V from 16 A

75 000 EUR

## 90 kW

Peak force: ~33.8kN@2m/s  
Stroke: 0/200mm  
Maximum velocity no load: ~7m/s  
Maximum acceleration: ~40G  
Power 380/400 V from 16 A

110 000 EUR

## 120 kW

Peak force: ~47.5kN@2m/s  
Stroke: 0/200mm  
Maximum velocity no load: ~7m/s  
Maximum acceleration: ~40G  
Power 380/400 V from 16 A

160 000 EUR



# MOTOR CONTROL AND MEASUREMENT UNIT

Position resolution and sampling rate: 50 nanometers / 20 kHz (digital)

Load cell resolution and sampling rate: 20 bit / 20 kHz

Temperature sampling rate and resolution: 12 bit,

1 analog output channel: 0...10 V 12 bit, up to 20 kHz

2 analog input channel: 0...10 V/ 4...20 mA 12 bit up to 20 kHz

1 isolated CAN interface for extension add-on communication

5 open drain outputs, 8 A

2 open drain outputs, 1 A

2 digital input channel: 0...24 V

RS485 interface for extension add-on

1 isolated USB interface

HDMI interface

2 USB non-isolated interfaces.

## Features

- Rod force calibration
- Warmup and interval testing
- Unlimited graph comparison
- Force vs Displacement
- Force vs Velocity, PVP graphs available for sine wave tests
- Force, Displacement and Velocity over time graphs
- Pass / Fail feature, manufacturing mode
- Live dyno data preview
- Testing preset

## Configuration

- Velocity
- Acceleration
- Force
- Temperature and stroke limits

## Patterns

- Single pulse with separately adjustable rise/fall time
- Sine wave
- Triangle

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# Shock dyno

Scotch-Yoke

Heavy  
Mid  
Light  
Featherlight  
Adapters

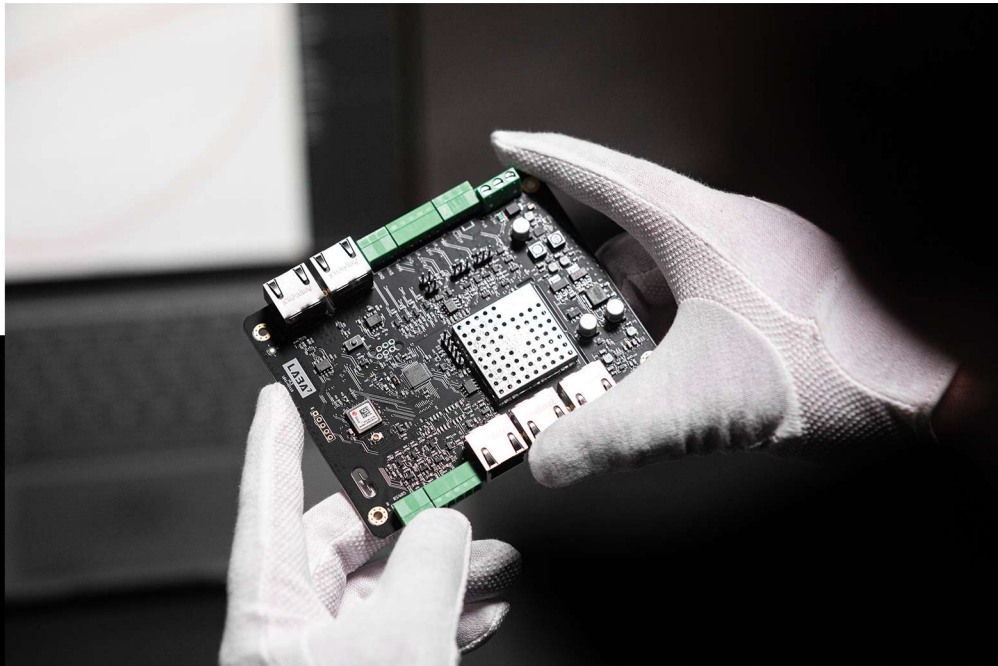


# 6th-gen data logger

Meet LABA7's newest and the most powerful data logger for the Scotch-Yoke shock dynos.

When compared to previous generation, this engineering marvel is 50% more accurate and can record 2x more data per second, while ensuring excellent connectivity. Whether via USB cable, or via WiFi.

We designed it in-house to ensure highest accuracy, build quality, and upgradability in the future.



Data loggers record and store various parameters during shock dyno testing. These parameters include force, displacement, velocity, temperature, and other relevant data points.

When we talk about shock dynos, data loggers have two very important tasks:

- capture real-time measurements,
- ensure that data is not lost during the testing process.

It's their job to obtain accurate data and provide reliable results. So you could make an informed decision about the performance of shock absorbers and dampers.

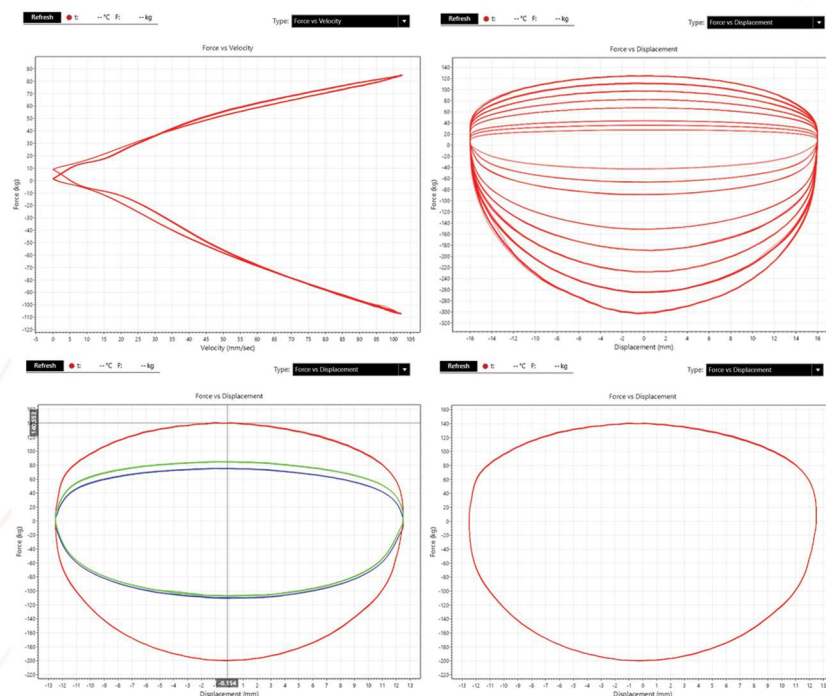
# Software

- Modern and intuitive design
- Easy-to-understand real-time graphs
- Simple calibration of the sensor
- Simple Wi-Fi setup
- Print-ready reports
- Export to .csv

## Graphs and features

With a press of a button, you can see live shock dyno graphs of the damper you are testing. Whether it is Force vs. Displacement or Force vs. Velocity – you get all the data plotted to test the performance of your shock.

- All necessary graphs
- Real-time data
- Live temperature readings
- Gas pressure elimination
- Comparison of different runs



# Featherlight

The entry to the shock-testing world comes in the form of the Featherlight dyno. This compact and affordable machine is oriented towards the MTB market. Featherlight shock dyno can be put in a van and taken to the track.

3 HP motor  
10 000 N load cell  
Up to 1.9 m/s speed  
Up to 1,000 kg load  
25-100 mm adjustable stroke

7 950 EUR

# Light

A more affordable version that is a must-have device for building, rebuilding, or tuning shocks and forks. It is perfect for testing MTB, road motorcycles, and road car suspensions.

4 HP motor  
10 000 N load cell  
Up to 2.5 m/s speed  
Up to 1000 kg load  
25-150 mm adjustable stroke

10 950 EUR



# Mid

It is the most popular version of our shock dynamometers as it provides the best price-to-performance ratio. It is perfect for dirt track, motocross, and track car suspension servicing and turning.

5.5 HP motor  
15 000 N load cell  
Up to 2.5 m/s speed  
Up to 1 500 kg load  
25-150 mm adjustable stroke

15 000 EUR

# Heavy

This is the most powerful version of our shock dynamometers. It can service any shock and fork but is best suited for off-road cars, 4X4s, trucks, or advanced motocross suspension work.

10 HP motor  
15 000 N load cell  
Up to 3 m/s speed  
Up to 1500 kg load  
25-150 mm adjustable stroke

19 000 EUR



# Adapters



## Self-preload clevis – 200 EUR

Self-preload clevis can be mounted both at the top and bottom. It enables quick and easy mounting/dismounting of dampers and ensures efficiency in testing.



## MTB adapter – 430 EUR

MTB fork adapter for 100 x 15 mm, 110 x 15 mm, and 110 x 20 mm inserts.



## Trunnion adapter – 210 EUR

Offers efficient and secure attachment and detachment of shock absorbers during testing. It safeguards shocks, ensuring a damage-free testing process.



## MOTO adapter – 600 EUR

MOTO fork adapter for 54 mm, 55 mm, and 56 mm forks. Custom inserts are available.



## AUTO adapter – 100 EUR

Rod-end adapter with 6 custom threads.



## AUTO adapter – 150 EUR

MacPherson strut holder. Fits multiple diameters.

# Cartridges

## MTB cartridges – 800 EUR

- RockShox  
RS32 M29 x 1  
RS35 (old) M33 x 1  
RS35 (new) M32 x 0,5  
(Bottom) D8  
RS38 M35 x 0,75 & ÖhlinsRXF38
- Öhlins  
RXF36 M34 x 1  
DH38 M35 x 1  
(Bottom) D12
- FOX  
32" 1-11/64" – 28G  
34" 1-15/64" – 32G  
36" 1-5/16" – 32G  
38" 1-3/8" – 32G  
40" 1-31/64" – 32G  
(Bottom) D13,5

## MTB cartridges – 400 EUR

- SR Suntour  
AURON RC2 M32 x 1  
RL-RC PCS M31 x 1  
DUROLUX R2C2 D10  
(Bottom) D8  
RL-RC PCS M29 x 1

## MOTO cartridges – 600 EUR

- TOP M51 x 1 mm
- TOP M50 x 1 mm
- TOP M51 x 1,5 mm
- BOTTOM M20 x 1 mm
- BOTTOM M22 x 1 mm
- BOTTOM M15 x 1 mm
- BOTTOM M24 x 1 mm
- BOTTOM M22 x 1.25 mm
- BOTTOM D21



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## Vacuum bleed pump

Fully automatic

PRO  
Daily  
Module  
External tank  
Adapters

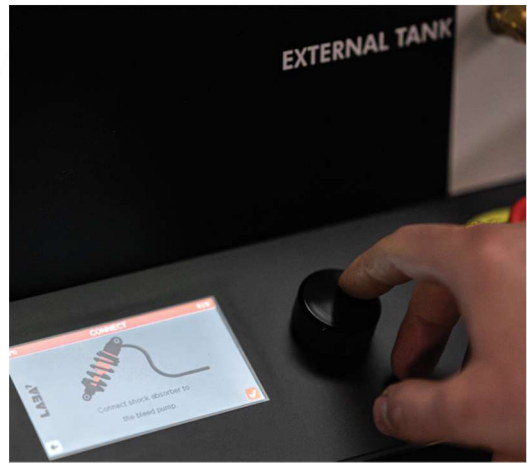
# Fully automatic damper service

As easy as making a cup of coffee!

1. Connect the shock absorber



2. Select the program and click "Start"



3. Let the LABA7 pump do the rest





# External tank

Compatible with Vacuum Pump PRO and MODULE. Available in 3-liter and 6-liter tanks. Warns about low oil level. Ideal when working with different oil varieties or multiple shocks need to be filled at the same time.

Detectable automatically

Dimensions (3-liter) - 225 x 537 x 250 mm

Dimensions (6-liter) - 287 x 577 x 284 mm

500 EUR (3-liter)

700 EUR (6-liter)



# Module

Probably, the most advanced pump to bring to the track day. It is very compact and will fit in the tightest spaces. Connect two external tanks to be able to fill up to two shocks at the same time.

Fully automatic

8 custom presets

Internal tanks – No

External tanks – Yes

Pressure 0.5 - 5 BAR

Vacuum -0.3 - -0.99 BAR

260 x 271 x 343 mm

2 500 EUR



# Daily

This pump is designed to stand in every workshop and help refill shocks with ease. DAILY is slightly smaller than the PRO pump and shares key features. It has two 3-liter tanks and is capable of filling two shocks at the same time.

Fully automatic  
8 custom presets  
Internal tanks – Yes, two  
External tanks – No  
Pressure 0.5 - 5 BAR  
Vacuum -0.3 - -0.99 BAR  
333x497x478 mm

2 950 EUR



# PRO

The most advanced vacuum bleed pump in our lineup. It has two 6-liter tanks can fill up to three shocks simultaneously.

Fully automatic  
8 custom presets  
Internal tanks – Yes, two  
External tanks – Yes, optional  
Pressure 0.5 - 5 BAR  
Vacuum -0.3 - -0.99 BAR  
411x497x551 mm

4 000 EUR



# Adapters



## MTB adapter kit – 350 EUR

- FOX FIT4, FIT CTD, RC2, DHX2, X2, DPX2, DHX Air, DHX RC
- RockshoxBrain (pre 2018 and post), Charger, Pike, Lyrik, Yari, Boxxer, Monarch, Deluxe Plus, Vivid
- ÖhlinsTTX22M, RXF36
- Cane creek DB Inline
- MarzocchiBomber RC (2018+)



## AUTO adapter – 350 EUR

- 41.4x9.4 M6x1
- 41.4x9.4M5x0.9
- 41.4x9.4 M4x0.75
- 60x7M3x0.5



## Glass adapter – 130 EUR

The additional bleeding tank can be brought closer to the shock absorber and help you bleed more complicated shocks.

# Adapters



## MOTO adapter kit – 350 EUR

- WP –all shocks and WP steering dampers
- KAYABA –MX and Street
- SHOWA –MX and Street
- ÖHLINS –all shocks and steering dampers
- Mono Cross SACHS

## MOTO gas tank kit – 400 EUR



For the following diameters of expansion tanks:

- 40mm
- 46mm
- 48mm
- 52mm
- 54mm
- 60mm
- 64mm

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# Spring rate tester

Automatic

PRO  
Daily  
Mini  
Adapters

# Test any spring

LABA7 spring test machines are developed having suspension professionals in mind. They are being used in workshops, springs manufacturers as well as motorsport teams.

Our fully automatic spring tester allows you to check the spring rate of any fork or shock absorber.

Track performance data wirelessly in real-time.



## Mini

Even though the Mini has a smaller stroke it still can be a very powerful tool at your disposal.

Stroke - 0-150 mm

10 000N

Spring length - 305-430 mm

505×957×310 mm

70 kg

**3 000 EUR**



# Daily

Ideal for MTBs, motorcycles, cars, off-road trucks, or race cars. All springs can be tested. Custom adapters can be used to test springs up to 1000 mm.

Stroke - 0-300 mm  
10 000N  
Spring length - 374-564 mm  
642x1904x570 mm  
200 kg

**3 800 EUR**



# PRO

The most powerful spring rate tester in the LABA7 range. Its principal components are reinforced to accommodate massive loads.

Stroke - 0-350 mm  
15 000N  
Spring length - adjustable  
642x2144x570 mm  
200 kg

**8 000 EUR**



# Adapters



## Self-preload clevis – 200 EUR

Self-preload clevis can be mounted both at the top and bottom. It enables quick and easy mounting/dismounting of dampers and ensures efficiency in testing.



## U-clamp – 100 EUR

Universal adapter for AUTO and MOTO. Can be mounted both on top and bottom.



## MTB fork adapter – 350 EUR

Mountain bike fork adapter with inserts for these forks:  
100 × 15 mm  
110 × 15 mm  
110 × 20 mm  
Custom inserts are available.



## MOTO fork adapter – 425 EUR

Motorcycle fork adapter with inserts for 54 mm, 55 mm, and 56 mm forks.  
Custom inserts are available.



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# Race car scales

Wireless

PRO  
Mini  
Accessories

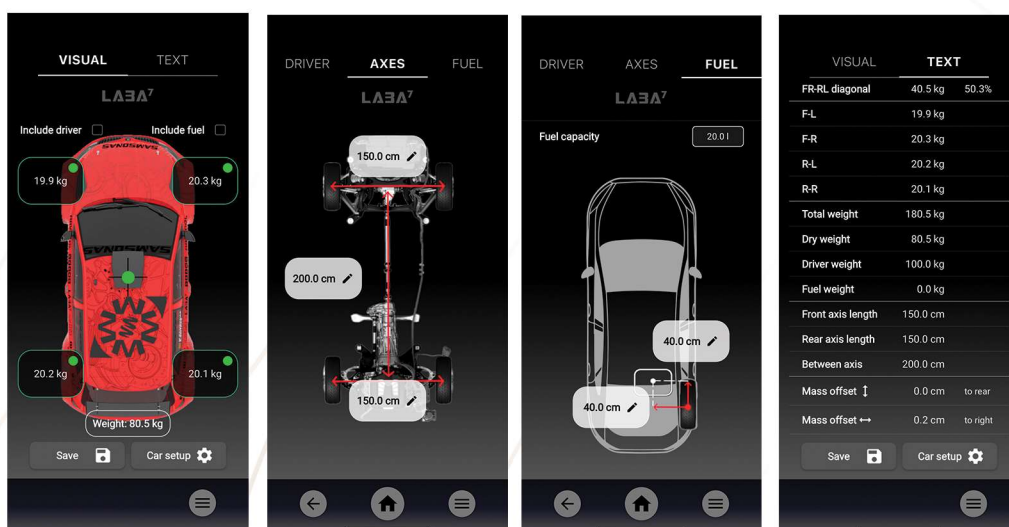
# Digital. Portable. Accurate.

The LABA7 wireless race car scales—no cumbersome wires, no proprietary devices. Enjoy unparalleled accuracy and high-performance measurement, all encased in the brilliance of our award-winning design, redefining both functionality and style.

- Maximum accuracy
- Wireless operation
- From the lightest kit cars to trucks
- Levelling has never been easier
- Continuous app updates
- No unnecessary devices



## Customized balancing experience



# Mini

One load sensor per pad  
500 kg load per pad  
0.1% accuracy  
Adjustable feet for leveling

2 200 EUR



# PRO

4 load sensors per pad for maximum accuracy  
1200 kg load per pad  
0.015% accuracy with 100g resolution  
3-point laser leveling (included)  
Award winning design

4 000 EUR



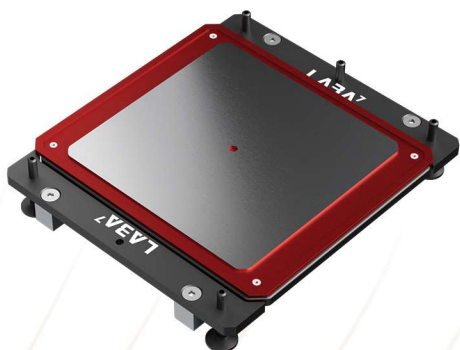
# Accessories



Protective case – 500 EUR



Drive-on ramps – 500 EUR



Sliders – 500 EUR

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## Suspension tools

Premium

MTB shock tester  
Bushingsizing toolkit  
Runout measuring tool  
Stretching and measuring tool  
MTB shaft clamp set  
Spring removal tool

# Bushing sizing toolkit

Available in a range of sizes to fit all current forks in the market -30mm, 32mm, 34mm, 35mm, 36mm, 37mm, 38mm, and 40mm.

Has four increments\* steps per each diameter (+0.04, +0.07, +0.10, +0.13) bushings.



1 500 EUR

# MTB fork clamp set

The clamp set features precisely machined shaft beds and clamping inserts made of hard aluminum 7075 for strong and damage-free clamping.

This clamp set is the most comprehensive option, offering 46 sizes to fit forks and dampers.



800 EUR

# MTB shock tester

Both versions include mountings for:

- Trunnion shocks (55 mm, M10 x 1,5)
- FOX Brain (81 mm)
- FOX Brain 2.0 (73 mm)
- FOX Iso Strut
- Top eyelet: 8/10/12/12,7/15 mm
- Bottom eyelet: 8/10/12/12,7/15 mm

Shock testers with electronics also include:

- Pancake-type load cell
- Easy-to-use app for Android and iOS
- Power supply – 3 x AA batteries

850 EUR  
1200 EUR with electronics



# Runout measuring tool

Calibrated, billet aluminum base plate.  
High-quality Hiwin Rails.  
Adjustable gauge indicator.



1 000 EUR

# Stretching and measuring tool

Available in two sizes so you can measure any shock absorber: 150/500 mm and 300/1200 mm.

Mountings in various diameters: 8, 10, 12, and 14 mm.

Made from durable, anodized, billet aluminium and equipped with chrome-coated calibrated shafts.



550 EUR - 150/500 mm  
750 EUR - 300/1200 mm

# Spring removal tool

Perfect for MTB, ATV, motorcycle rear shock absorbers, and some automotive dampers.

- 5 adapters and 7 height settings
- Heavy-duty construction
- Hard anodized columns and bushing-supported slider
- Operated by hand
- Dimensions: 885 x 280 x 180 mm
- Free mounting length up to 650 mm



600 EUR



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