

LABA⁷

ElectroMagnetic Actuator

Linear motor

30 kW
60 kW
90 kW
120 kW

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.

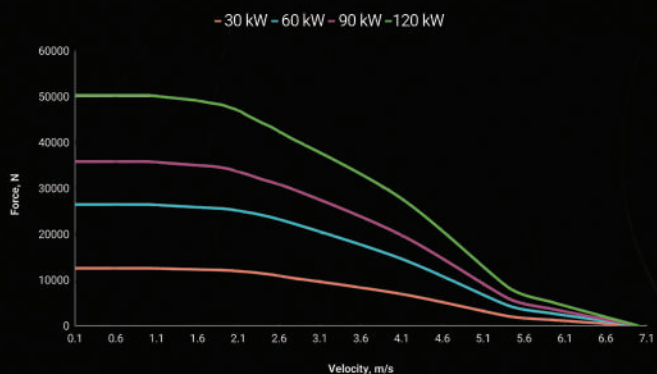
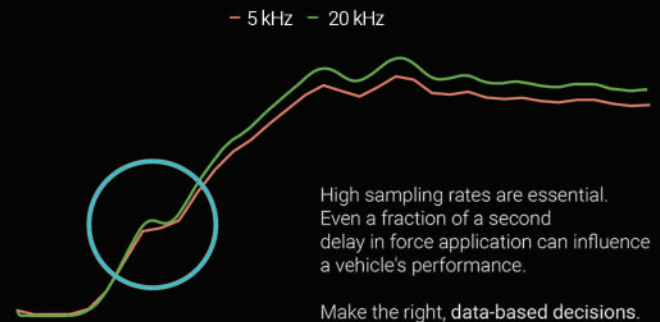




Built-in LED illumination is sold separately.

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.

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

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



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