



LINOVIS

high performance modular testing



I N P H Y S I C S W E T R U S T

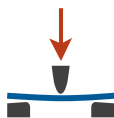
Just another electro-dynamic testing machine?

The brand-new LINOVIS® testing system is the most comprehensive electro-dynamic testing machine up to date. With its 3 modes of use (static, dynamic, cyclic), its various test setups, which are switched in minutes, as well as a maximum force of 25 kN even in static mode and the option of 2 integrated DIC cameras we can assure you no wishes stay unfulfilled. The oil-free precision linear drive and the extra stiff frame design ensure similar testing conditions for every test from ductile plastics to high strength steel alloys. The applications seem endless: high fidelity material characterization, mechanical characterization of battery cells and cell stacks, impact testing on component level, combined complex loading scenarios for all driving modes ...

- up to 4 industry-standard machines in one
- modular test chamber design for maximum flexibility
 - fast exchange of test setups
 - thermal chamber
 - battery test chamber
- highest force and speed range of all available electro-dynamic machines
- remote control and automated test data upload
- prepared for automated test execution and change of test setups
- seamless 2D/3D DIC integration
- precision control with 16 kHz frequency
- low operation and maintenance costs due to linear drive technology
- high precision extra stiff frame design
- high performance DAQ system with 500 kHz sampling rate
- fully detachable and movable user interface

bending tests

e.g.
ISO 178
ISO 7438



tensile tests

e.g.
ISO 6892-1
ISO 527
ISO 26203-2
ISO 18872



compression tests

e.g.
ISO 844



puncture / impact tests

e.g.
ISO 6603



component tests

e.g.
crash box
similar to sled test or
drop tower



special setups

e.g.
Klc based an ASTM E399

compatible with IMPETUS test setups



steel



plastics



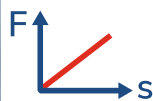
light metals



adhesives



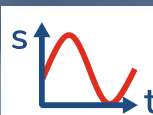
composites



static



dynamic



cyclic



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key specs

max force	25 kN
max speed	3.2 m/s
max stroke	269 mm
energy	600 J
frequency	~30 Hz

dimensions

weight	1500 kg
x / y / z	322 cm / 70 cm / 193 cm
power	3 phases 400 V



VALIMAT

1

test data
management

- full VALIMAT® integration
- all data in one place



test results



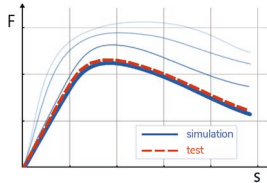
DIC data



2

optimization

- automated FE-model generation
- automated parameter identification
- customizable work-flows



3

validation

- ... of deformation and failure behavior
 - load cases
 - mesh sizes
- one click material card generation



from test to validated material card in one software

Our stand-alone software VALIMAT® combines test- and model data into an efficient database format for material characterization. All testing devices are supported and data can be used to optimize a huge variety of complex material models in LS-Dyna, Pam-Crash, Abaqus with our fully automated AutoFit process. The material model can then be validated on simple FEM coupon tests or even custom built-up geometries and load-cases.

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