

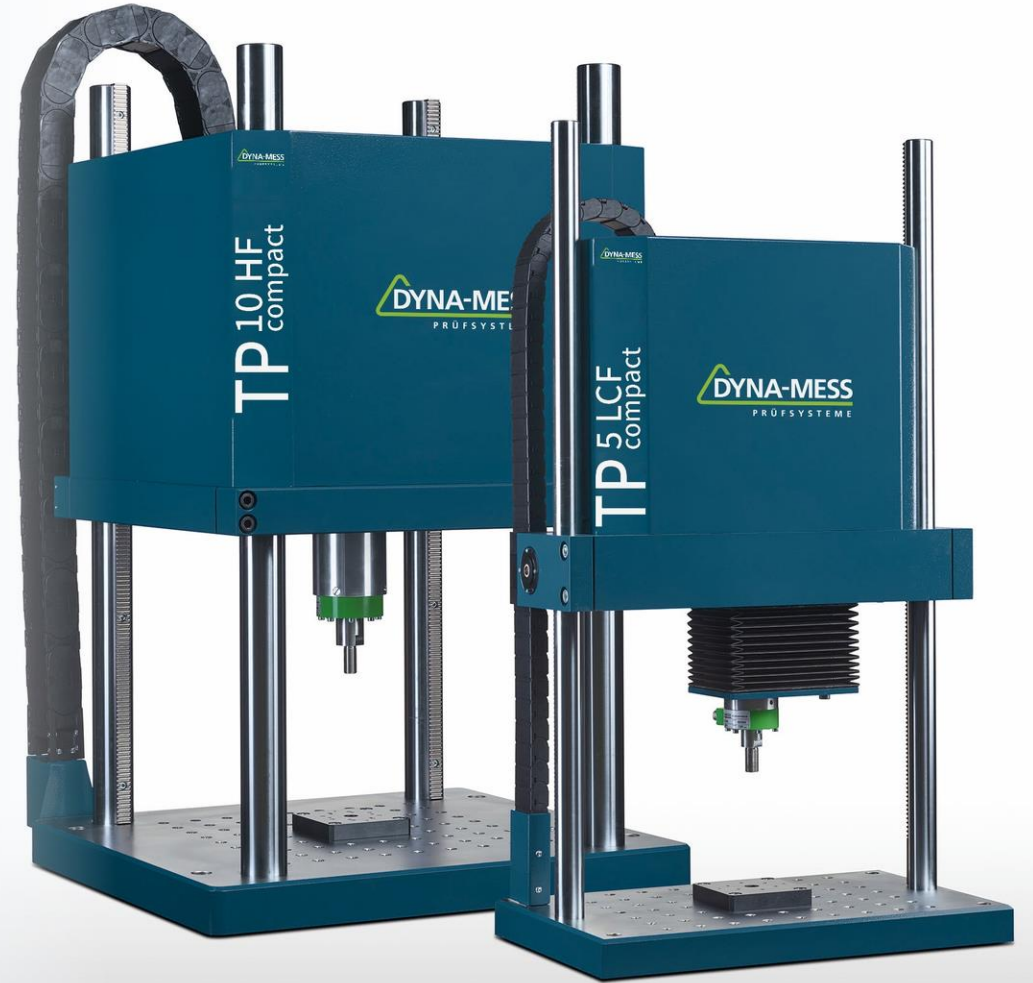
NEW

TP compact Series

Static and dynamic testing · 1 to 20 kN
Your entry into materials and component testing



Testing Limits. **Elevating Quality.**



TP compact

Your entry into static and
dynamic testing

01

Technical specifications

Key facts, models and technical data

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Software & sensors

Electronics, software, example evaluations, measurement

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Exemplary applications

Where TP compact machines are used

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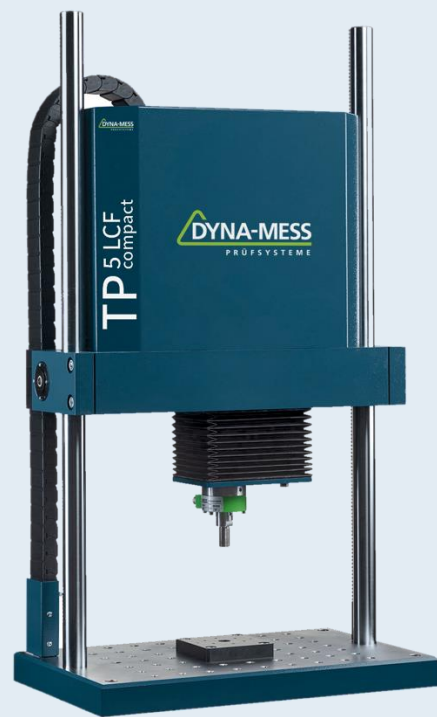
About DYNA-MESS

Who we are, what sets us apart and our partners

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NEW TP compact

Your entry into static and dynamic testing



Static & dynamic

Tensile, compression and cyclic tests, ready from day one

Plug & Play

CLCcompact electronics, control from your own computer, no control cabinet

Two variants

LCF up to 5 Hz and HF up to 15 Hz, matched to the workload

Built to grow

Upgrade to DYNA-CLCsingle for more performance and test capabilities

MODELS

Nominal force

Max. frequency

Electronics

Test types

Options

1 LCF	2.5 LCF	5 LCF	10 LCF	20 LCF	5 HF	10 HF	20 HF
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1 kN	2.5 kN	5 kN	10 kN	20 kN	5 kN	10 kN	20 kN
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5 Hz					15 Hz		
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DYNA-CLCcompact, plug & play · upgrade to DYNA-CLCsingle

Tensile · Compression · Cyclic

T-slots in base plate · Column extension · Safety protection · UPS · PC system · Ramp testing software

Variant	LCF · up to 5 Hz · stroke 100 mm					HF · up to 15 Hz · stroke 12 mm		
Model	1 LCF	2.5 LCF	5 LCF	10 LCF	20 LCF	5 HF	10 HF	20 HF
PERFORMANCE								
Static nominal force	1 kN	2.5 kN	5 kN	10 kN	20 kN	5 kN	10 kN	20 kN
Max. test frequency	5 Hz					15 Hz		
Stroke	100 mm					12 mm		
Actuator	Servo-pneumatic actuator with precision servo valve, mounted on traverse							
FRAME								
Frame type	2-column			4-column		2-column	4-column	
Clear width	510 mm			450 mm		510 mm	450 mm	
Clear height	550 mm			800 mm*		550 mm	800 mm*	
Traverse	Adjustable in height, lockable by screws in any position							
MEASUREMENT								
Force	Precision load cell (strain gauge) for tension and compression, better than class 1 (DIN EN ISO 7500-1)							
Displacement	Non-contact precision displacement sensor (inductive), class 0.1							
FURTHER DETAILS								
Control electronics	DYNA-CLCcompact, Ethernet interface to your PC · upgrade to DYNA-CLCsingle							
Software	DYNA-TCC incl. modules "Cyclic testing" and "Tensile/compression testing"							
Compressed air	Quick connect fitting, pressure regulator, filter (5 µm), water separator · supply by customer							

Options T-slots M8 in base plate · Column extension +300 mm · Safety protection (CE) · UPS · PC system DYNA-PCA · Software module "Ramp testing"

* Without adaption on the piston

ELECTRONICS

DYNA-CLCcompact

Plug & play

No control cabinet: connected to your own PC via Ethernet

Precise acquisition

Parallel 24-bit A/D converters with high sample rate, integrated amplifiers

Real-time control

High-performance controller for digital closed-loop control

Built to grow

Upgrade to DYNA-CLCsingle for more performance and test capabilities

TESTING SOFTWARE DYNA-TCC



Basic software

Manual mode via digital joystick, live display of all signals, automatic data storage, reusable test sequences



Cyclic testing

Included: force or displacement control, sine, triangle, square or custom waveforms



Tensile / compression

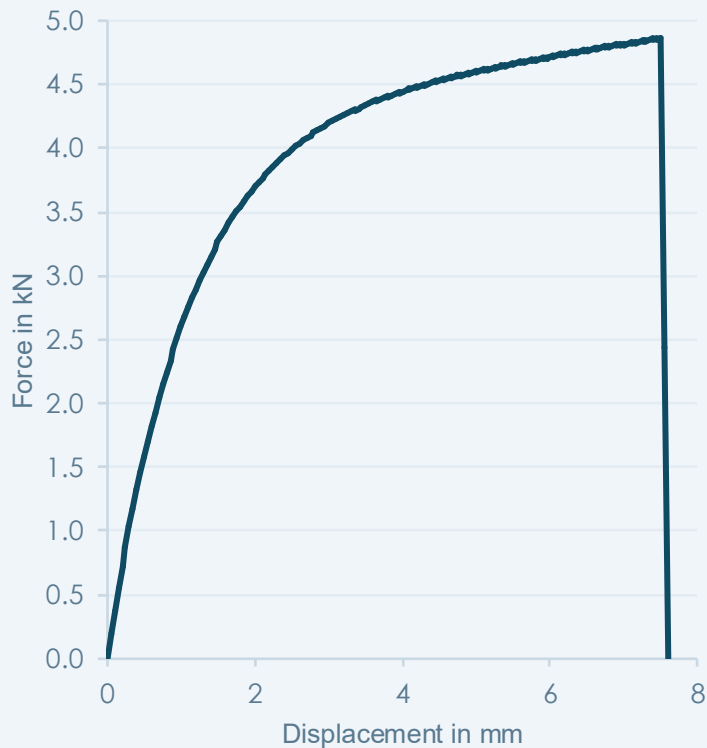
Included: defined loading rate, stress for standard specimens, failure detection



Ramp testing

Option: go to and hold force or position, loops for cyclic repetitions

Tensile test

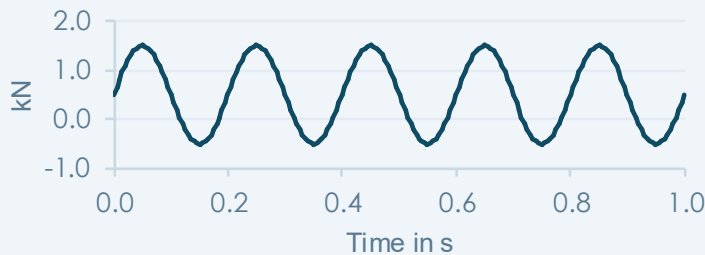


Force over displacement up to break: max. force, stiffness and elongation

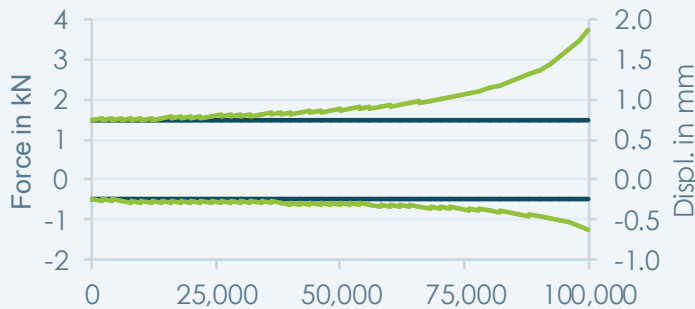
Cyclic test

Force or displacement control

Example force control: time signal



Trend: force (left) · displacement (right)

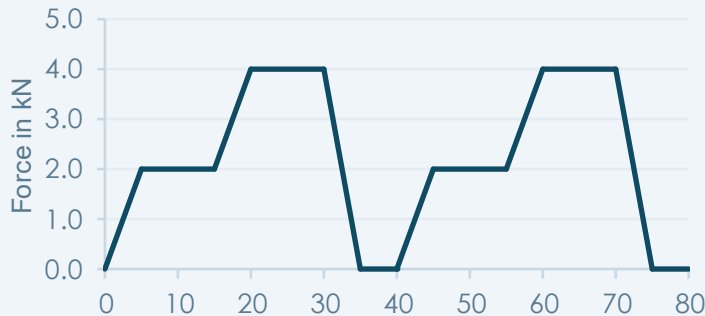


Displacement control: evaluated the same way.

Force stays constant, displacement leaves the corridor as stiffness drops

Ramp testing

Force control



Displacement control



Programmed sequence: go to level, hold, repeated as a loop



Force measurement

- Precision load cell (strain gauge) for tension and compression
- Accuracy better than class 1 according to DIN EN ISO 7500-1
- Signal processing by integrated amplifiers



Displacement measurement

- Non-contact precision displacement sensor (inductive)
- Accuracy class 0.1
- Wear-free thanks to the non-contact principle



Additional sensors

- Further measuring systems can be easily integrated
- Live display of all sensor signals in DYNA-TCC

Class 1

Force measurement, better than class 1 (DIN EN ISO 7500-1)

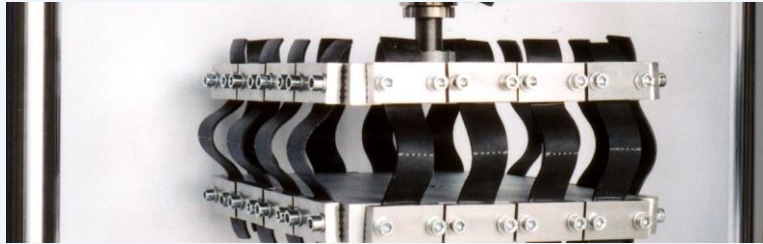
Class 0.1

Non-contact displacement measurement

24 bit

Parallel A/D converters with high sample rate

Exemplary Applications



Plastics & elastomers

Tensile, compression and bending tests on specimens and seals



Metals & composites

Static tests and low-cycle fatigue on small specimens



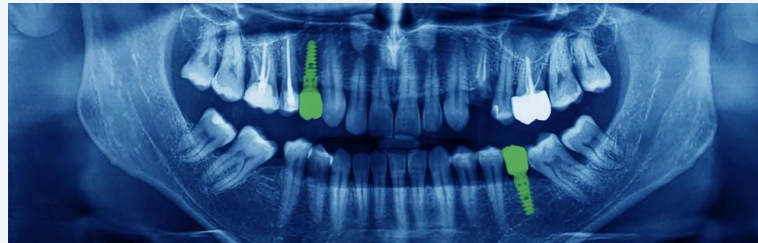
Components & assemblies

Springs, clips, connectors and joints: stiffness and durability



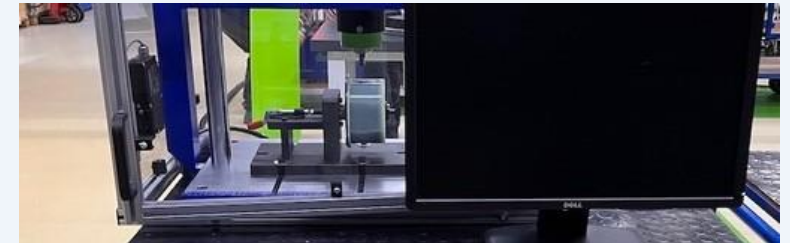
Automotive & e-mobility

Bushings, brackets, cable holders and battery components



Medical technology

Dental implants, instruments and devices under static and cyclic load



Research & teaching

Flexible test bench for universities, institutes and labs

1985

founded

Aachen, Germany

~30

employees

~45

projects per year

from single axes to large
special machines

Global

service

local commissioning and
remote support

2,000+

machines built

20+

countries

with DYNA-MESS systems in
operation

50%

repeat customers

4.8/5.0

service rating

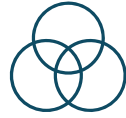
ALL IN-HOUSE

Mechanical design · Servo actuators (electric, pneumatic, hydraulic)
Control electronics (DYNA-CLC) · Software (DYNA-TCC) · Commissioning · Calibration · Service



Application focus

Designed around your component and test standard, not adapted afterwards



Hybrid engineering

UTM reliability combined with application-specific mechanics in one integrated platform



Global service

Local commissioning, service, and technical support to reduce operational risk



Data sovereignty

Full control over test data, IP and validation know-how, kept in-house



Management
System
ISO 9001:2015

www.tuv.com
ID 9105025485



Let's talk about your testing task

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