

...from development to  
implementation



Production of materials testing equipment and automation



Testing machines with low-speed  
electric drive  
**C.3 – CREEPTest 6.500 series**

... from development to  
implementation

all boss corners



Production of materials testing  
equipment and automation

constant speed to provide for  
the supply of the material  
with the force of the material



Every small detail matters...

# Testing machines for long-term tests CREEPTest

**Reliable, accurate with high rigidity and repeatability**

LABORTECH offers special testing machines for long-term CREEPTest tests designed to determine creep or relaxation of stress in the material. These machines allow tests to be carried out at a constant temperature up to 1600 °C, where the deformation is recorded at specified time intervals. The constant load of these machines is generated by a lever mechanism and weights, a spring mechanism or a special low-speed AC drive with a long service life.



All modifications of CREEP test systems manufactured by us are designed so that the customer can fully rely on its function and accuracy under long-term constant loading (creep) of the material by force or stress, including elongation, and at a constant homogeneous temperature in a high-temperature furnace. Intuitive and trouble-free use of the testing software designed for long-term tests produced by LABORTECH will guarantee you a reliable declaration of results even after 100,000 hours of continuous loading.

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## Key features of the C.3 series

Accuracy, concentricity and service life are parameters as standard



Vertical column four-column design with high rigidity, guaranteed mechanical alignment and service life resulting in direct load by means of a low-noise precision linear servo drive. These machines are designed to perform long-term **low-cycle fatigue in the I quadrant up to a frequency of 2 Hz**, determination of crack propagation, creep, stress relaxation in the material, corrosion resistance, etc. The machine includes durable vibrating pads to prevent the transmission of vibrations.



High comfort of machine operation at a very high level thanks to the RMCi remote control with LCD display, having independent machine control of the machine, control of the machine's movement, jaws, extensometer, **movement and clamping of the crossbar**, test start and, above all, an integrated CENTRAL STOP button.



The machine is controlled by new measuring and control electronics of the EDCi series with a sampling frequency of 2.5 kHz. The resolution level of analog signals  $\pm 250,000$  divisions (20 ms). Internal frequency 64bit, data acquisition 32bit, AD 24 bit, arithmetically. Integrated RS232 for VIDEO extensometers. PC connection - Ethernet 10/100 Mbit, USB 2.0.



Based on their concept and design, LABORTECH machines comply with all the EC directives on machinery and equipment. Only state-of-the-art safety techniques and tried-and-tested industrial components are used in accordance with the new safety functions according to ENB ISO 13850-SIL 1/PL.



Each CREEP machine includes a high-temperature furnace controlled from a JUMO LCD PID controller, which ensures the accuracy of temperature control in accordance with the EN ISO 6892-2 standard. Depending on the material to be tested, you can choose from one to three zone furnaces operating in the temperature range from 200°C to 1600°C with the possibility of using axial extensometers.



The intuitive testing software CREEPTest and Test&Motion+ - BASIC produced by LABORTECH will guarantee you reliable, accurate, powerful and long-term testing. These software will increase the quality of testing in your test rooms and testing laboratories using different modules for individual test standards.



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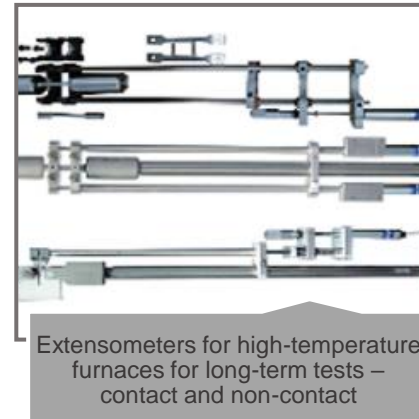
# Create your own machine configuration!

With our range of accessories, you can try everything...

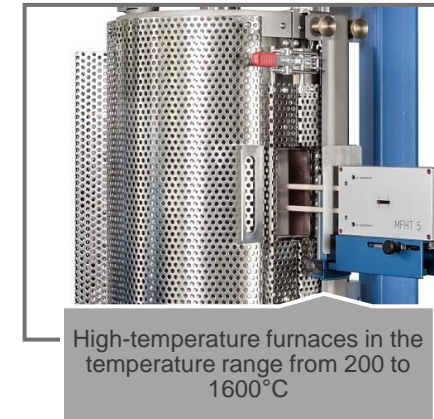
A large assortment of various options and accessories, including software, allows you to configure the machine exactly according to your ideas, technical requirements and standards. All you have to do is fill out a simple form [HERE](#) and we will send you a quote immediately. We offer both standard accessories and "tailor-made" accessories.



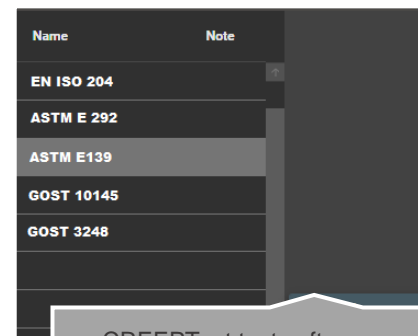
Clamping and centering jigs  
designed for long-term tests with  
jigs for high-temperature  
furnaces



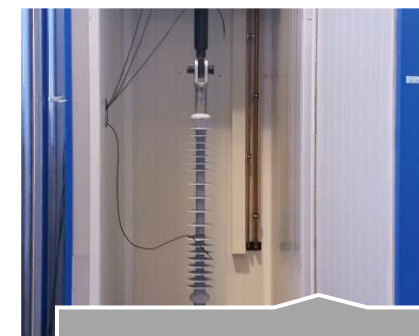
Extensometers for high-temperature  
furnaces for long-term tests –  
contact and non-contact



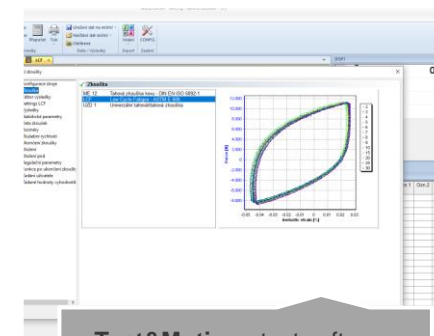
High-temperature furnaces in the  
temperature range from 200 to  
1600°C



CREEPTest test software  
supplied by LABORTECH with  
various test modules



Temperature chambers ranging  
from -80°C to +350°C



Test&Motion+ test software  
supplied by LABORTECH with  
various test modules



... from development to  
implementation



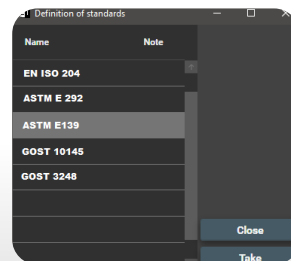
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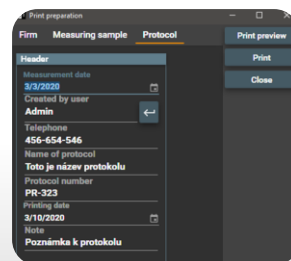
# Software CREEPTest

A higher form of software for long-term exams with great endurance...

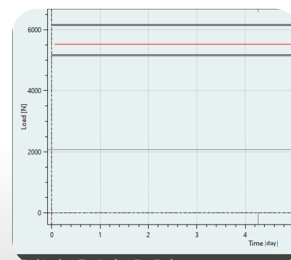


## Features of CREEPTest – BASIC software

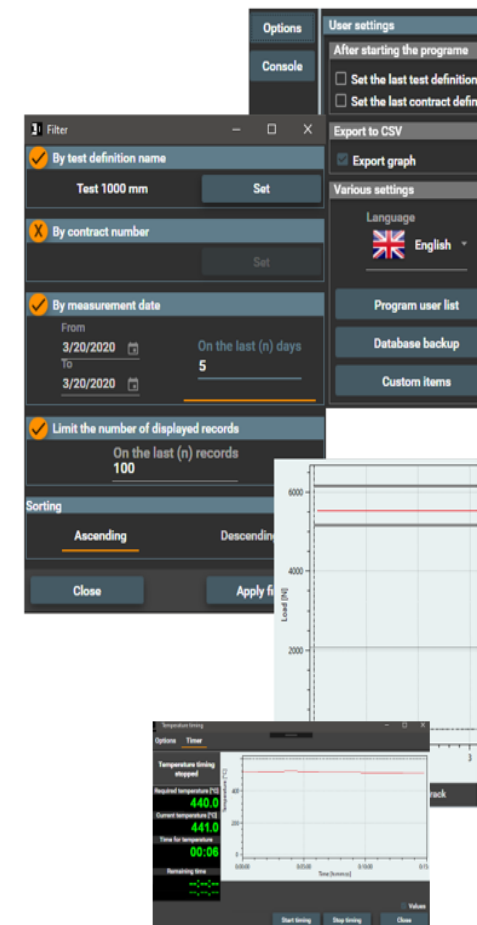
CREEPTest – BASIC will help you increase confidence and quality during long-term testing in your testing rooms and testing laboratories. Software designed for long-term CREEP tests with full automation of the test process and elimination of errors during long-term tests according to EN, ISO, ASTM and GOST standards.



- Simple, intuitive operation, continuous data collection from multiple stations of the C.1 and C.2 series
- Digital display of all current values.
- Remote monitoring of the testing process, statistical processing of test results and analysis, database storage of results, data backup
- Storage of measured data in a database with the possibility of filtering



- Modules for long-term tests, creep determination, stress relaxation in the material, Andrade test creep at constant true stress during uniform deformation of the test specimen, fracture time as a function of deformation and time, Sherby–Dorn parameter, etc.
- Automatic control including temperature recording during long-term tests
- Multilingual version (CZ, EN, POL, RU, ESP, etc.)
- Export data to CSV – BASIS, or to MY SQL and MS SQL
- Perpetual license



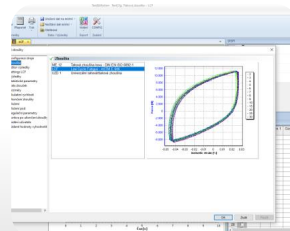
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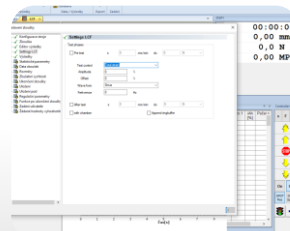
## Software Test&Motion+

Intuitive long-term exam software you'll love...

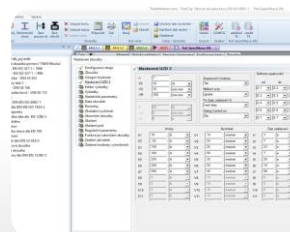


### Features of software Test&Motion+ – BASIC

Test&Motion+ - BASIC - intelligent, intuitive and powerful software that will help you increase your productivity and quality of testing in your test rooms and test laboratories. You can streamline, refine and speed up the execution of your tests and adapt your testing environment to It was easy for operators to measure the mechanical properties of materials in tension, compression, bending, and torsion with support for EN, ISO, DIN, ASTM and GOST standards.



- Unlimited number of test methods.
- Modular system of libraries designed for standardized tests - to be selected for activation.
- Evaluation of selectable parameters: maximum force, strength, elongation, elongation, tension, 5 different reference points, etc.
- Real-time graph, possibility of individual processing after the exam
- Mass Charts, Zoom, Serial Testing
- Export data to ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- Clamping length adjustment for each method
- Display of multiple variables on x, y axes



- Online display of up to 6 graphs with any values in the x, y axis
- Control feed rate depending on stretch, force, tension, elongation, etc.
- Software control of hydraulic and pneumatic jaws, temperature, automatic extensometer
- Receiving sample dimensions from peripherals
- Data collection from analog and digital external gauges
- Setting user rights, operator login
- Customizing test results
- Automatic saving of results according to the selected tree, data
- Statistical evaluation
- 12 language versions (Cs, En, De, Fr, Pl, It, Es, Ru, NI, Tr, Zh, Pt)

Controller x DISP3

s F e

↑

↑

STOP

↓

↓

On Off

DPOT Pos. DPOT Speed

Čas 0,0 s

Síla 0,00 N

Napětí 0,0 MPa

Tažnost 0,00 %

Protažení 0,000 mm

Pos. 0,00 mm

☐ 1. Požadovaná hodnota max

☐ 2. Požadovaná hodnota min

☒ 3. Střední hodnota

☒ 4. Standardní odchylka

☐ 5. Variance

☒ 6. Variační koeficient

☐ 7. Medián

☐ 8. Rel.rozsah 95%

☐ 9. Rel.rozsah 99%

OK	Datum	Čas	Rm [MPa]	Rp0.2 [MPa]	Fm [N]
1	23.04.19	13.27	24	13	4396.60
2	23.04.19	14.02	35	20	4401.60
3	23.04.19	14.17	35	32	4345.80
4	23.04.19	14.23	0	0	0.00

Sprache / Language

první jazyk druhý

☐ German

☐ English

☒ Czech

☐ Polish

☐ French

☐ Italian

☐ Spanish

☐ Dutch

☐ Russian

☐ Turkish

☐ Chinese

☐ Portuguese

☐ 7 x <ALT> -> Úpravy

Verze 1.01-2021-11-T&M+C.3

STAT



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all boss corners  
radius R 125

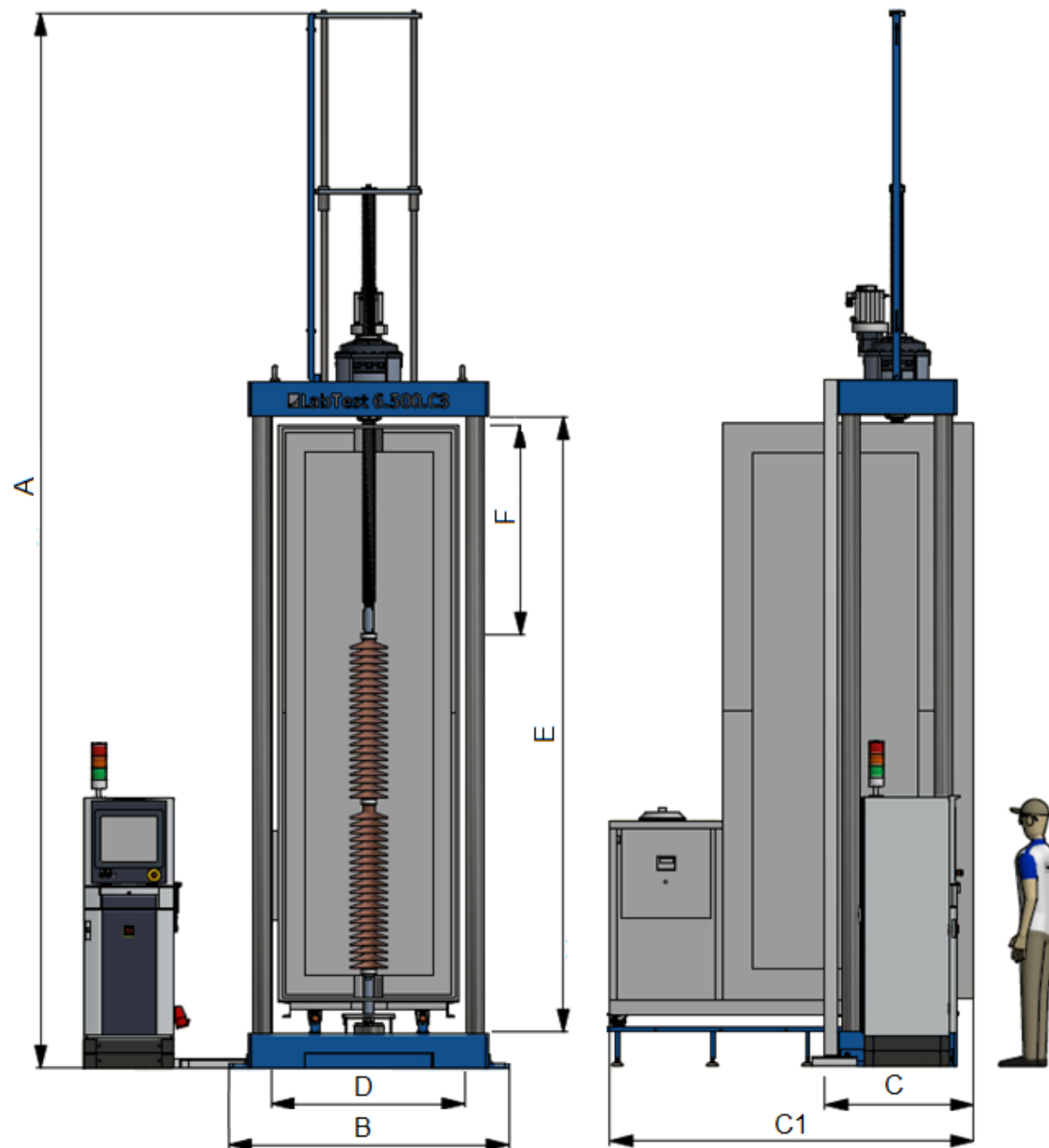
**Labor Tech<sup>®</sup>**

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constant speed to 50 mm/min  
with 500 mm stroke  
with 100 mm stroke  
with 50 mm stroke



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## Series C.3 – with special chamber

Ratings	Units	6.500C.3
Product code		1.03020319
Maximum load	kN	500
Test speed	mm/min	0,00001 to 50
Adjustment speed	mm/min	1000
Machine rigidity at max. force (without sensor)	kN/mm	875
<b>Measurement accuracy</b>		
Accuracy class 1 – measurement from...	kN	1,5
Positioning accuracy	mm	± 0,01
<b>Dimensions of the machine</b>		
Machine height - A	mm	7105
Machine width - B	mm	1600
Machine depth - C	mm	935
Depth of the machine with chamber - C1	mm	2635
Workspace width - E	mm	1300
Height of work area - D	mm	4120
Working height of the machine – stroke - F	mm	60-2075
Machine weight*	kg	7000
<b>Environmental conditions</b>		
Temperature of the working environment	°C	+10 ... +35
Storage temperature	°C	-25 ... +55
Humidity of the working environment	%	<90
<b>Electrical connection</b>		
Supply voltage/frequency	V/Hz	400 / 50-60
Number of phases		3Ph/N/E
Wattage	kVA	8
Power consumption with chamber	kVA	20
<b>Others</b>		
Color combination	RAL	1015, 5015

Technical changes reserved during development,  
machine parameters at room temperature, \* without test jigs, chamber, etc.

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# Technical specification of the C.3 series

What else you need to know...



## Safety

The safety corresponds to the European Machinery Safety CE Directive (89/392/EEC and 91/368/EEC – Machine Safety EN60204-1:1992). The emergency stop function electrically interrupts the drive of the hydraulic unit and the entire machine. All safety systems are dual-circuit and fail-safe.



## Minimum configuration of a computer assembly for CREEPTest software

**PC-Standard** - Processor: min. two cores, min. 2.5 GHz, RAM: min. 4GB, Hard disk: HDD min. 500GB or SSD min. 120GB, Graphics card: integrated in processor, network connector: min. 2x, Drive: DVD RW, keyboard, mouse, min. 2x USB 3.0, operating system: MS Windows 10 Pro

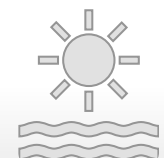
**Monitor-Standard** - LCD monitor, resolution 1920x1080 and higher



## Service

**STANDARD service** - our testing machines can work 24 hours a day, 7 days a week, 365 days a year. We provide you with on-line service by our qualified application and service technicians at +420 602 527577.

**LABWEBSERVICE** - telephone service with the help of remote access provided by an employee of LABORTECH. Up to 10 minutes FREE, then according to the LABORTECH price list



## Environmental and operating conditions

**Supply voltage** - guaranteed reliable operation of our machines is possible with usual deviations (supply voltage  $\pm 10\%$ , frequency  $\pm 1\%$ , i.e. 230V - 1f or 400V - 3f).

**Electromagnetic compatibility (EMC)** - our test systems are designed in accordance with applicable EMC directives.

**Ambient environment** - it is necessary to observe the range of working temperatures and humidity according to the manufacturer's recommendations to secure the machine against corrosion, shocks, vibrations, oscillations, etc.





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contact us to get more  
information about our  
products and services



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## LABORTECH in the world

Where to find our representation...



### Contact:

#### **LABORTECH, s.r.o.**

Rolnická 130a, 747 05 OPAVA, Czech Republic

Phone: +420 553 731 956, +420 553 668 648

E-mail: [info@labortech.cz](mailto:info@labortech.cz)

Web: [www.labortech.cz](http://www.labortech.cz)

GPS: 49°57'05.1"N

17°54'04.4"E

#### **LABORTECH TRADING s.r.o.**

Territory VVÚD Praha, Na Florenci 1686/9, 111 71 PRAHA 1, Czech Republic

Phone: +420 731 656 723, +420 724 020 052

E-mail: [trading@labortech.cz](mailto:trading@labortech.cz)

Web: [www.labortech.eu](http://www.labortech.eu)