

From development to  
implementation



Czech manufacturer of materials testing equipment and automation



Testing machines with  
Low - speed AC drive  
series **C.3 – CREEPTest 6.30 – 250**

... from development to  
implementation

all base corners  
radius R125



Production of materials testing  
equipment and automation

constant speed operation of  
the drive and its maintenance  
with the LabTech LabTest 6.50C.5

# Testing machines for long-term test - CREEPTest

Reliable, precise with high rigidity and repeatability

The LABORTECH company offers special testing machines for long-term CREEP TEST tests designed to determine creep or stress relaxation in the material. These machines allow tests to be performed at a constant temperature up to 1600 ° C, where the deformation is recorded at specified time intervals. The constant load of these machines is derived from a lever mechanism and weight, 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 with long-term constant loading (material flow) with force or stress, including elongation and at a constant homogeneous temperature in a high-temperature furnace. Intuitive and trouble-free use of test software designed for long-term tests produced by LABORTECH guarantees 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

Precise, coaxiality and durability are the parameters in the standard



Vertical two-column stand design with high rigidity, guaranteed mechanical coaxiality and durability inducing direct load by means of a precise linear servo driver with low noise. These machines are designed to perform **long-term low-cycle fatigue in the I quadrant up to 2 Hz**, determine crack expansion, creep, stress relaxation in the material, corrosion resistance, etc. The machine includes durable vibration 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, machine movement control, grips, extensometer, crossbar displacement and clamping, test start and especially integrated CENTRAL STOP button



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



Based on their concept and construction, LABORTECH machines comply with all the above-mentioned ES directives on machines and equipment. Only state-of-the-art safety techniques and proven industrial components are used that work in accordance with the new safety functions according to ENB ISO 13850-SIL 1 / PL.



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



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





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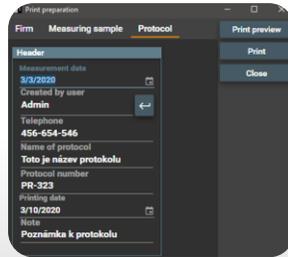
# Software CREEPTest

Higher form of software for long-term tests with great endurance...

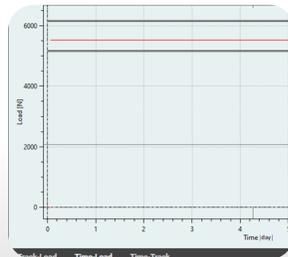


## Features of software CREEPTest – BASIC

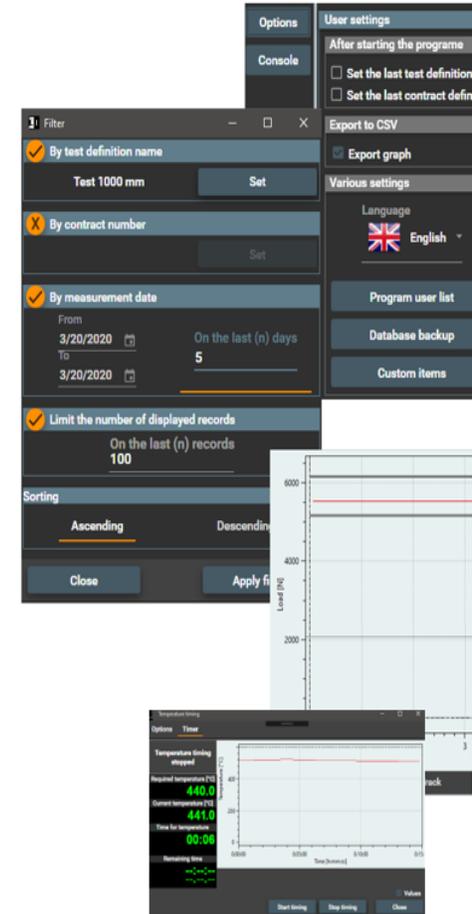
CREEPTest - BASIC will help you increase reliability and quality during long-term testing in your test rooms and testing laboratories. Software designed for long-term CREEP tests with full automation of the test process and elimination of errors during long-term tests according to EN, ISO, ASTM and GOST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



- Simple and 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 results and analysis of tests, database storage of results, data backup
- Saving of measured data in a database with the possibility of filtering



- Modules for long - term tests, determination of creep, stress relaxation in material, Andrade creep test at constant real stress during uniform deformation of test specimen, fracture time depending on deformation and time, Sherby - Dorn parameter, etc.
- Automatic control, including temperature records during long-term tests
- Multilingual version (ČJ, EN, POL, RU, ESP atd.)
- Data export to CSV - BASIS, or to MYSQL and MS SQL
- Unlimited license



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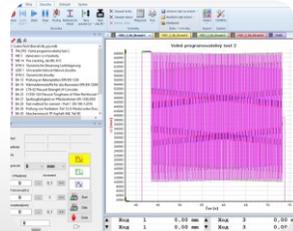
... from development to implementation



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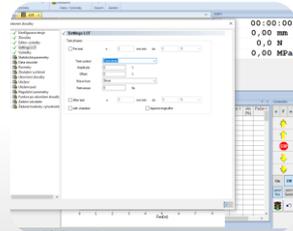
# Software Test&Motion+

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

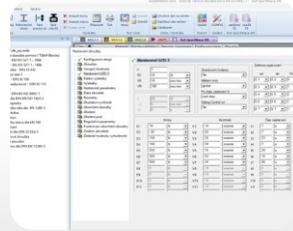


### Test&Motion+ – BASIC software features

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



- Unlimited number of test methods.
- Modular system of libraries designed for standardized tests - to select for activation.
- Evaluation of optional parameters: maximum strength, strength, elongation, elongation, stress, 5 different reference points, etc .
- Graph in real time, possibility of individual processing after the test
- Mass graphs, Zoom, serial testing
- Data export to ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- Clamping length setting for each method
- Display of multiple quantities on the x, y axes



- Online display of up to 6 graphs with arbitrary quantities in the x, y axis
- Control of feed rate depending on elongation, force, stress, elongation, etc ..
- Software control of hydraulic and pneumatic jaws, temperature, automatic extensometer
- Receiving sample dimensions from peripheral devices
- Data collection from analog and digital external meters
- Setting user rights, operator login
- Custom setting of test results
- Automatic saving of results according to the selected tree, database
- Statistical evaluation
- 12 language mutations (Cs, En, De, Fr, Pl, It, Es, Ru, NI, Tr, Zh, Pt)

Controller x DISP3

Čas	0,0 s
Síla	0,00 N
Napětí	0,0 MPa
Tažnost	0,00 %
Protažení	0,000 mm
Pos.	0,00 mm

On Off

DROT Pos. DROT Speed

OK	Datum	Čas	Ozn.1	Ozn.2	FH [N]	RH [N/mm²]
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2						
3						
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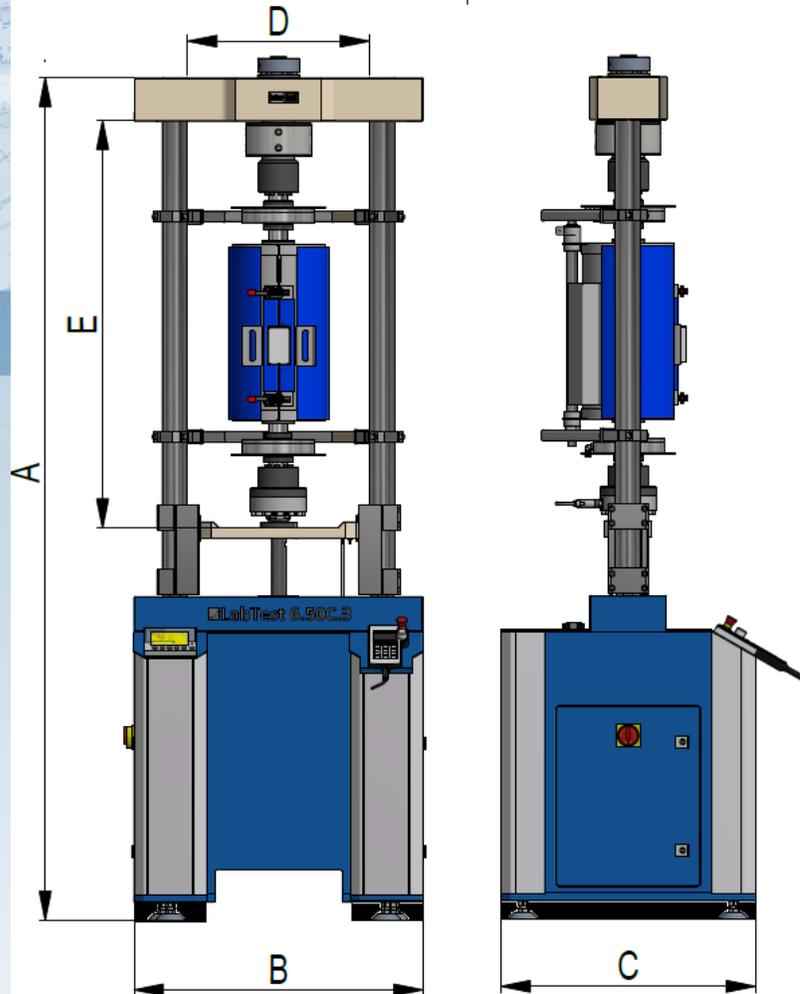


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### C.3 series – with a low-speed AC driver

Technical data	Unit	6.30C.3	6.50C.3	6.100C.3	6.250C.3
Product ordering code		1.03030019	1.03030119	1.03030219	1.03030319
Maximum load	kN	30	50	100	250
Testing speed	mm/h - mm/min	0,001 to 100	0,001 to 100	0,001 to 100	0,001 to 100
<b>Measurement accuracy</b>					
Accuracy class 1 – measuring from...	kN	0,09	0,15	0,3	0,75
Accuracy class 0,5 – measuring from...	kN	0,3	0,5	1	2,5
Traction sensor resolution	um	0,1	0,1	0,1	0,1
Positioning accuracy	mm	± 0,005	± 0,005	± 0,005	± 0,005
<b>Machine dimensions</b>					
Machine height - A	mm	2310	2310	2395	2395
Machine width - B	mm	860	860	860	860
Machine depth - C	mm	650	650	690	690
Width of the working space - D	mm	610	610	610	610
Height of the working space – E*	mm	1360	1360	1360	1360
Machine weight	kg	835	835	1095	1095
<b>Electrical connection</b>					
Supply voltage / frequency	V/Hz	230 / 50-60	230 / 50-60	230 / 50-60	230 / 50-60
Number of phases		1Ph/N/E	1Ph/N/E	1Ph/N/E	1Ph/N/E
Power consumption	VA	600	600	1350	1350
Power consumption with high temperature furnace	VA	3700	3700	3700	3700
<b>Environmental conditions</b>					
Working environment temperature	°C	+10 ... +35	+10 ... +35	+10 ... +35	+10 ... +35
Storage temperature	°C	-25 ... +55	-25 ... +55	-25 ... +55	-25 ... +55
Humidity of the working environment	%	<90	<90	<90	<90
<b>Others</b>					
Color combination	RAL	1015, 5015	1015, 5015	1015, 5015	1015, 5015



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Technical changes reserved during development, machine parameters at room temperature, \* without testing fixtures

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## Technical specifications C.3 series

What else you have to know...



### Security

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



### Minimum PC configuration requirements for CREEPTest software.

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

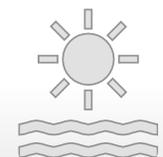
**Monitor-Standard** - LCD monitor, 1920x1080 resolution and higher



### Servis

**STANDARD servis** - Our testing machines can work 24 hours a day, 7 days a week, 365 days a year. We provide you with On-line service at all times with our qualified application and service technicians on the telephone line +420 602 527 577.

**LABWEBservis** - Telephone service using remote access provided by LABORTECH employees. Up to 10 minutes FREE, further according to the LABORTECH price list



### Environmental and operating conditions

**Power voltage** - Guaranteed reliable operation of our machines is possible with the usual deviations (supply voltage  $\pm 10\%$ , frequency  $\pm 1\%$ , ie 230V - 1f or 400V - 3f).

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

**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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all base corners  
radius R125

**Labor Tech**<sup>®</sup>

Production of materials testing  
equipment and automation

directed into a position of  
the thing, not to reach the  
with the other hand, but to  
with the other hand, but to



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## LABORTECH in the world

Where to find LABORTECH representations...



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