

From development to
implementation



Czech manufacturer of materials testing equipment and automation



Testing machines with
low-speed drive
C.5 – CREEPTest 6.30 – 250

From development to
implementation

all base corners
radius R125



Production of materials testing
equipment and automation

constant speed in a range of
100-1000 mm/min with a
load up to 10000 N



Every small detail matters...

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.5 series

Low cycle testing over "0" with guaranteed accuracy, coaxiality and reliability.



Vertical two-column stand design with high rigidity, guaranteed mechanical coaxiality and durability inducing direct load by means of a precise linear servo drive with low noise. These machines are designed to perform **long-term low-cycle fatigue in I. and III. quadrant up to a frequency of 2 Hz**, determination of 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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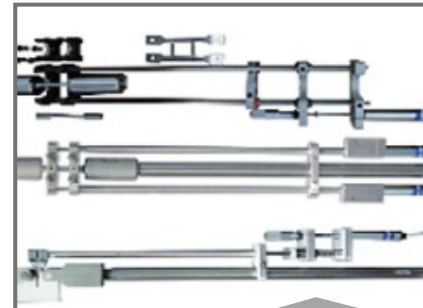
Create your own machine configuration!

Test everything with our wide range of accessories...

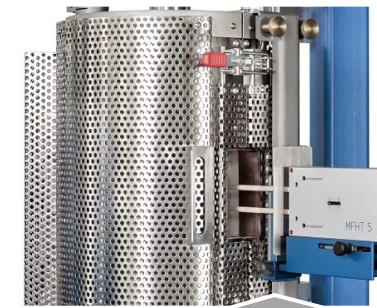
A large range of various accessories, including software, will allow you to configure the machine exactly according to your ideas, technical requirements and standards. Just fill out the simple form [HERE](#) and we will send you a price offer immediately. We offer both standard accessories and "tailor-made" accessories.



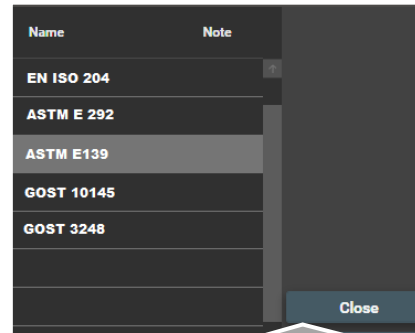
Clamping and centering jigs designed for long-term tests with jigs for high-temperature furnaces.



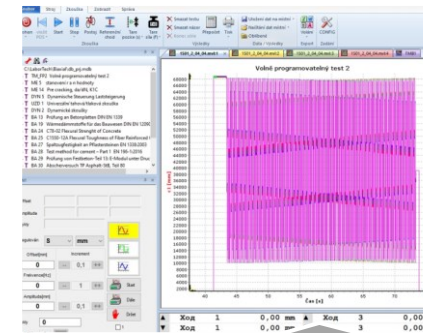
Extensometers for high-temperature furnaces for long-term tests - contact and contactless



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



CREEPTest software supplied by LABORTECH with various test modules.



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



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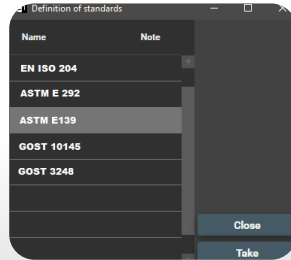
From development to implementation



Production of materials testing equipment and automation

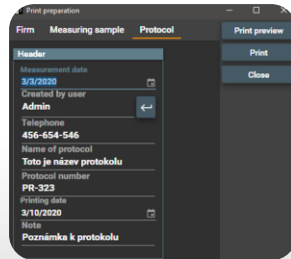
Software CREEPTest

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

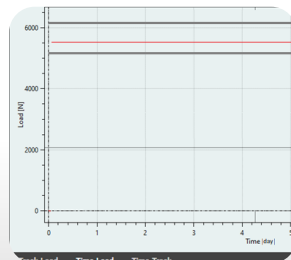


Features of software CREEPTest – BASIC

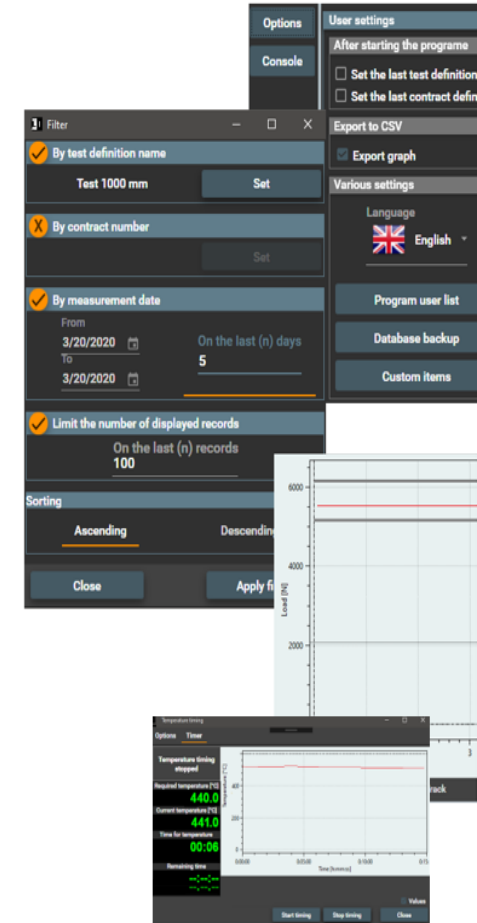
CREEPTest - BASIC will help you increase reliability and quality during long-term testing in your test rooms and testing laboratories. Software designed for long-term CREEP tests with full automation of the test process and elimination of errors during long-term tests according to EN, ISO, ASTM and GOST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



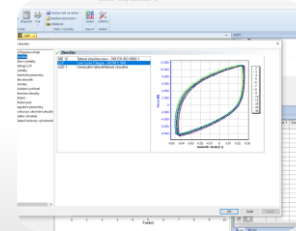
- Modules for long - term tests, determination of creep, stress relaxation in material, Andrade creep test at constant real stress during uniform deformation of test specimen, fracture time depending on deformation and time, Sherby - Dorn parameter, etc.
- Automatic control, including temperature records 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



Every small detail matters...

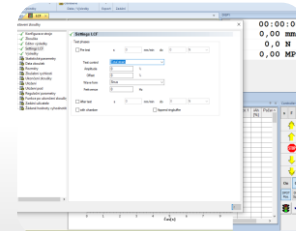
Software Test&Motion+

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

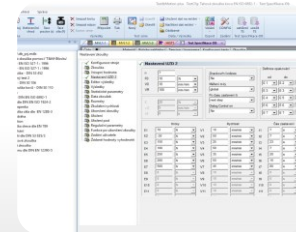


Vlastnosti software Test&Motion+ – BASIC

Test&Motion+ - BASIC - inteligentní, intuitivní a výkonný software, který Vám pomůže zvýšit produktivitu a kvalitu zkoušení ve vašich zkušebnách a testovacích laboratořích. Můžete zefektivnit, zpřesnit a zrychlit provádění vašich testů a přizpůsobit své testování prostředí tak, aby bylo snadné pro provozovatele měření mechanických vlastností materiálů v tahu, tlaku ohybu a krutu s podporou norem EN, ISO, DIN, ASTM a GOST.



- Neomezený počet zkušebních metod.
- Modulový systém knihoven navržených pro normované zkoušky - k výběru pro aktivaci.
- Vyhodnocení volitelných parametrů: maximální síla, pevnost, protažení, tažnost, napětí, 5-ti různých referenčních bodů atd..
- Graf v reálném čase, možnost individuálního zpracování po zkoušce
- Hromadné grafy, Zoom, sériové zkoušení
- Export dat do ASCII, EXCEL, WORD, Eclipse, Diadem, Q-DAS,
- Nastavení upínací délky pro každou metodu
- Zobrazení více veličin na osách x, y



- Online zobrazení až 6 grafů s libovolnými veličinami v ose x, y
- Ovládání rychlosti posuvu v závislosti na protažení, síle, napětí, tažnosti, atd..
- Softwarové ovládání hydraulických a pneumatických čelistí, teploty, automatického průtahoměru
- Přijímání rozměrů vzorků z periferních zařízení
- Sběr dat z analogových a digitálních externích měřidel
- Nastavení uživatelských práv, přihlášení obsluhy
- Vlastní nastavení výsledků zkoušky
- Automatické ukládání výsledků dle zvoleného stromu, databáze
- Statistické vyhodnocení
- 12 jazykových mutací (Cs,En,De,Fr,Pl,It,Es,Ru,Nl,Tr,Zh,Pt)

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

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

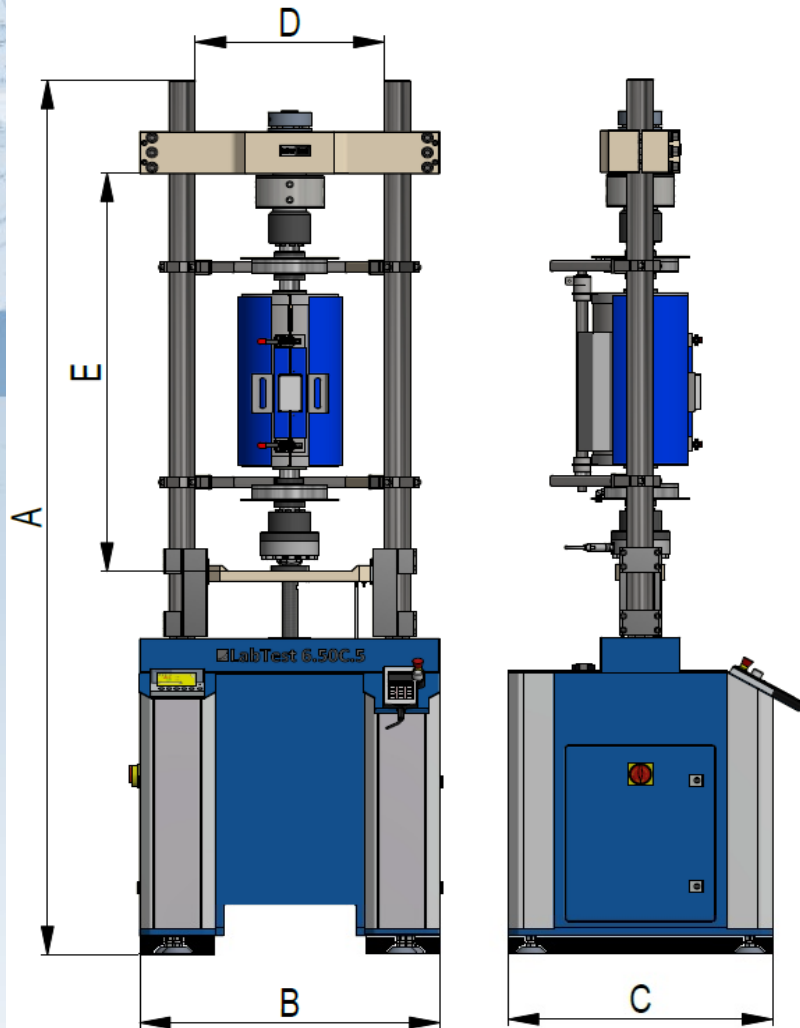
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Verze 1.01-2021-11-T&M+C.5

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C.5 series – with a low - speed driver

Technical data	Unit	6.30C.5	6.50C.5	6.100C.5	6.250C.5
Product ordering code		1.03050019	1.03050119	1.03050219	1.03050319
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
Measurement accuracy					
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	µm	0,1	0,1	0,1	0,1
Positioning accuracy	mm	± 0,005	± 0,005	± 0,005	± 0,005
Machine dimensions					
Machine height - A	mm	2475	2475	2980	2980
Machine width - B	mm	795	975	795	895
Machine depth - C	mm	700	700	880	930
Width of the working space - D	mm	500	500	600	600
Height of the working space – E*	mm	1300	1300	1100	1100
Machine weight	kg	760	760	1185	1350
Electrical connection					
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
Environmental conditions					
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
Others					
Color combination	RAL	1015, 5015	1015, 5015	1015, 5015	1015, 5015

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



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Technical specifications C.5 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

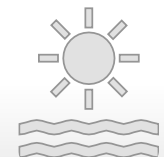
Monitor-Standard - LCD monitor, 1920x1080 resolution and higher



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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LABORTECH in the world

Where to find LABORTECH representations...



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