

Elastocon

Automatic Creep and Relaxation Tester, EB 18

- For stress relaxation tests
- For creep tests



Test station for testing in compression and for testing in tension.



With EB 18 automatic Creep and Stress Relaxation tests can be done.

The instrument is based on our triple temperature oven EB 07, which means that each test station can run with an individual temperature.

The test rigs are based on our relaxation rig EB 02, but lowering and raising of the rigs is motor driven. The compression or tension of the samples is also motor driven with a servo motor.

The test rigs are built into a plastic cabinet made of polycarbonate and aluminium profiles. The cabinet is cooled by Peltier elements which keep a constant room temperature around the test stations.

This design gives the following advantages

For Creep tests

- Creep test can be done in both compression and tension.
- Utilising load cells and servo motors to apply and hold the load the EB 18 tester, eliminates the handling problems associated with dead load weights.
- The load in MPa or N is set in the software and the computer instructs the closed loop circuit of the servo motor and load cell amplifier to keep the set load. This means that the load is kept even if the computer fails.
- High accuracy in the displacement measurement.
- Results are presented in graphical or table formats as absolute creep or creep index. In order to study the actual sample failure the data logging rate is increased just before break occurs.
- Possibility of running new features such as load and temperature ramps controlled by the computer.
- Test can be made in liquids using a liquid container. (option)
- Versions with 3 to 10 test stations can be supplied.

For Stress Relaxation Tests

- Relaxation tests can be done in both compression and tension.
- Utilising load cells and servo motors to apply and hold the compression the EB 18, automatically compensates for the spring effect in the load cells.
- The compression or tension in mm or % is set in the software and the computer instructs the closed loop circuit of the servomotor and load cell amplifier to keep the set value. This means that the position is kept even if the computer fails.
- High accuracy in the displacement measurement.
- Results are presented in graphical or table formats as absolute relaxation in N or as F/F0 in absolute or relative time as well as linear or log time.
- Possibility of running new features such as load and temperature ramps controlled by the computer.
- Test can be made in liquids using a liquid container. (option)
- Versions with 3 to 10 test stations can be supplied.

Technical specification EB 18

Force range, N:	0 -1 000 (alternatively 100 ,500 or 2 000)
Force resolution, N:	0,1 (0,01, 0,05, 0,2)
Force accuracy, N:	0,2 (0,02, 0,1, 0,4)
Displacement range, mm:	50
Displacement resolution, mm:	0,0001
Displacement accuracy, mm:	0,003
Transport speed, mm/min:	0,1 -1 000
Testing speed, mm/min:	0,1-500
Compression plate, mm:	dia 50
Power, W:	900
Voltage, V/Hz:	220-240/50, or 110-120/60

Materials:

Compression plates:	Stainless steel
Compression rig:	Stainless steel and aluminium
Casing:	Powder painted steel
Size, w x d x h, mm:	500 x 370 x 870
Weight, kg:	52

Embedded PC specifications for NANO-8522E Board

EPIC SBC Intel / Celeron M CPU, 800 MHz
1 CRT/LCD adapter
1 LAN port
2 SATA connectors
Audio
4 serial ports - COM1 -> front mounted, COM2 -> 1 RS422/485, 3 and 4-wire
4 USB ports

Peripherals

1 17" LCD monitor 768x1024
1 PS2 - US keyboard
1 USB mouse

OP system

Windows XP professional embedded version