Elastocon®

Cable Testing

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SWEDAC ACKREDITERING 1678 ISO/IEC 17025

Testing with precision

Our calibration lab is accredited by SWEDAC.

SP Certified ISO 9001

Cable Testing

Elastocon manufactures instruments for testing of Rubber and Plastic materials. Some of our instruments meet the special requirements for testing of cables, according to IEC 811.

Ageing Ovens

The cell Ovens EB 01, EB 07, EB 19 and EB 20 together with the cabinet ovens EB 04 and EB 10 meet and exceed the requirements of IEC 811 for ageing tests on cable materials.

The ovens have no fans inside the test environment and have a low air speed, dependant of the air exchange rate only. Yet the ovens have a temperature variation inside of less than ±0,5 °C throughout the test chamber. This exellent temperature uniformity is achieved by a special design and the specification is also met when the optional viewing window is fitted in the door.

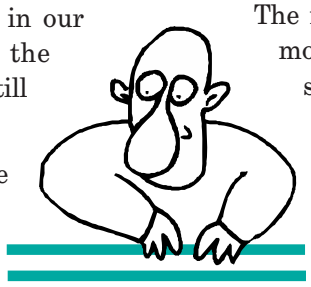
All Elastocon ageing ovens have two independent temperature instruments. One for controlling the temperature and one for measuring the temperature close to the samples, which is required by some standards.

The Elastocon ovens can now also be connected to a computer for monitoring the temperature over time. Two programmes are available: Monitor, for monitoring temperature of 30 ovens, or Monitor Ramp which can monitor and control temperature cycling of 15 ovens.

Specimen preparation

When taking dumb-bells from a cable sheath a big problem is the curling of the sample making the cutting of clean samples difficult. Elastocon has a solution for this problem. By using a guiding rod in our pneumatic or manual cutting presses, the cutting die can stand on the sample and still be guided by the cutting press.

See a video demo on our website www.elastocon.se



Hot Set Tester EB 16-II, New version

Hot Set system

Elastocon has developed a semi-automatic Hot Set System according to IEC 811, as an ageing oven is required.

The system is based on our ageing oven EB 10-60.

To avoid the common problem with temperature dropping when the door is opened, the samples are introduced via the top of the oven through a small opening. To avoid shaking the samples a servo motor driven sample holder is used.

The measuring system uses a laser pointer on a moving arm which is connected to a measuring scale linked to a computer. The measurement after the samples are taken out of the oven is done with a calliper also connected to the computer. Via a special software the data values are fed into an Excel template for calculations and presentation.

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Cell Ageing and Cabinet Ovens

for precision ageing of rubber and plastic materials

All Elastocons Ovens meets or exceeds the requirements in IEC 811 and ISO 188

Cell Oven EB 01, with four cells. The test piece holder in each cell can take up to 24 standard test pieces.

The high temperature accuracy is achieved by using an aluminium block with channels for pre-heating of the air.

Cell Oven EB 07, with three cells which can be used with individual temperatures. The test piece holder in each cell can take up to 24 standard test pieces.

EB 07 gives the laboratory extra flexibility when carrying out sample ageing at several different temperatures.

Cabinet Oven EB 04, excellent temperature stability and distribution is achieved by using an inner chamber with a controlled air flow.

The oven can be supplied in two sizes, with 60 and 120 l useful volume.

EB 04 is ideal for ageing finished products and large test pieces which are unsuitable for cell ovens. Both shelves and rods are supplied with the oven for accommodating most types of samples.

New generation Cell Ovens with four or six cells, EB 19 and EB 20

Elastocon introduce a new generation of cell ovens for the precision ageing of polymeric materials. Benefitting from our 22 years of production and development the new ovens represent a major step forward in the design of such instruments.

Manufactured in 4 or 6 cell configura-tions, the ovens are available with either single temperature controller or multiple (individual) cell controllers.

- Improved insulation for lower energy consumption
- Lower surface temperature
- Settings are done on a colour touch screen
- Micro PLC control
- Resettable countdown timer for each cell
- Individual cell identifier - "Test name"
- Alarm history

The ovens meeting the new specification are: EB 01-II, EB 04-II, EB 10-II, EB 19 and EB 20

Cabinet Oven EB 10, ageing oven for precision ageing of rubbers and plastics under controlled conditions.

Instead of using an air pump and flowmeter these are replaced by a factory set throttle to give a fixed air exchange rate of 7 or 12 changes per hour.

The oven has separate systems for temperature control and indication with alarm.

Specimen Preparation

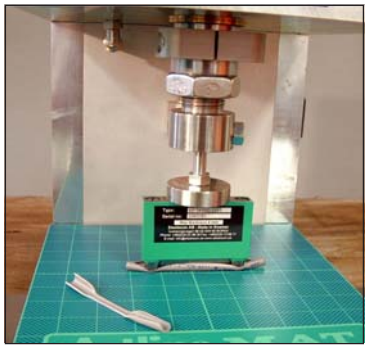
Specimen Cutting Press EP 08, for preparation of test specimens of rubber and plastic materials, by punching.

EP 08 is a small and compact manual press for preparation of test specimens in the laboratory. EP 08 stands on rubber feet and does not need to be attached to the table. The cutting press also has a system for quick change of cutting dies.

Specimen Cutting Press EP 02, for preparation of test specimens of rubber and plastic materials, by punching.

EP 02 is a small and compact pneumatic press for preparation of test specimens in the laboratory. EP 02 stands on rubber feet and does not need to be attached to the table. The cutting press also has a system for quick change of cutting dies.

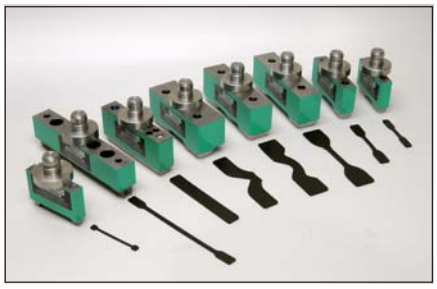
Rod guiding system



Using of cutting dies with a guiding rod

When cutting samples which curl and do not lie flat, the guiding rod (EP 04.04) can be used. The guiding rod makes it possible to have the cutting die standing on the sample and yet get guiding.

Rotating knives

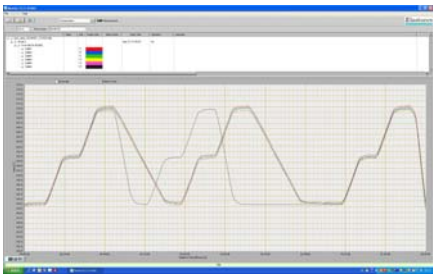


Specimen Cutting Dies EP 04, are manufactured in both standard and special shapes.

A special shank for mounting in presses EP 02 and EP 08 can be fitted. All cutting dies are now manufactured with an ejector plate, which helps the work and protects the edges and operator.

Software

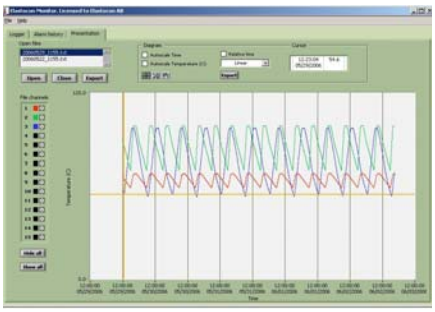
Monitor Plus Software EC 11



Monitor plus EC 11 is a data monitoring software monitoring instruments such as ovens and laboratories for temperature and humidity.

In the software it is possible to set alarm limits.

Monitor Ramp Software EC 07



EC 07 is software for monitoring temperatures and control program cycles in Elastocon Ovens over longer time periods.

Hot Set Tester EB 16-II

Oven for determination of Hot Set according to IEC 811-2-1

Samples with weights

Computer, software caliper and weight set are included

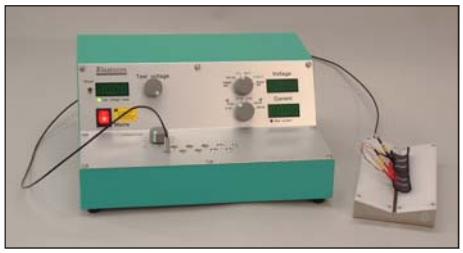
EB 16-II is made for hot set testing of cable material according to IEC 811-2-1. To avoid too high temperature loss when inserting and cutting the samples, the samples are introduced through a small opening in the top of the oven. To get a suitable working height and not shake the samples during insertion, the oven is fixed and the sample holder moves up and down by a servo motor driven screw system.

The oven has a controlled air exchange rate and low air speed which can be controlled by a flow meter, meeting the requirements for ageing ovens in IEC 811.

Measurements are made through the window with a laser pointer mounted on a measuring scale placed on the door. The window can be taken apart for cleaning.

With a push on a button on the scale the measured values are entered in an Excel template, when measuring the elongation. The set is measured outside the oven with a digital caliper also connected to the computer.

A finished report can then be produced in Excel.



Elastocon Resitivity Tester EE 03, for determination of volume resistivity on semi-conductive materials, according to IEC 60502-2, Annex D.

EV 01, Thickness Gauge for thickness measurement according to ISO 23529 and compression set measurement according to ISO 815.

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