

Standards : ISO 14616 and DIN 53369

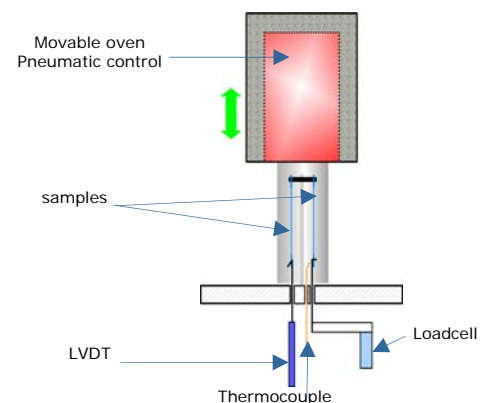
Designed for characterisation of shrinkage films, 'load' and 'retraction rate' (PE, PET, PVC, PP, etc.) according, ISO 14616 & DIN 53369

The RETRATECH is designed to control the parameters of shrinkage film retraction properties. It is also useful for film manufacturers to develop and test new products, or for users to adjust the parameters according to the received materials, and carry out an effective control on incoming goods.

Typical users – Petrochemical industries, Manufacturers and Users of shrinkage films.



Working method



Principle

Two samples are exposed to a thermal process. One sample is connected to a LVDT (displacement sensor) and the second sample to a Load cell.

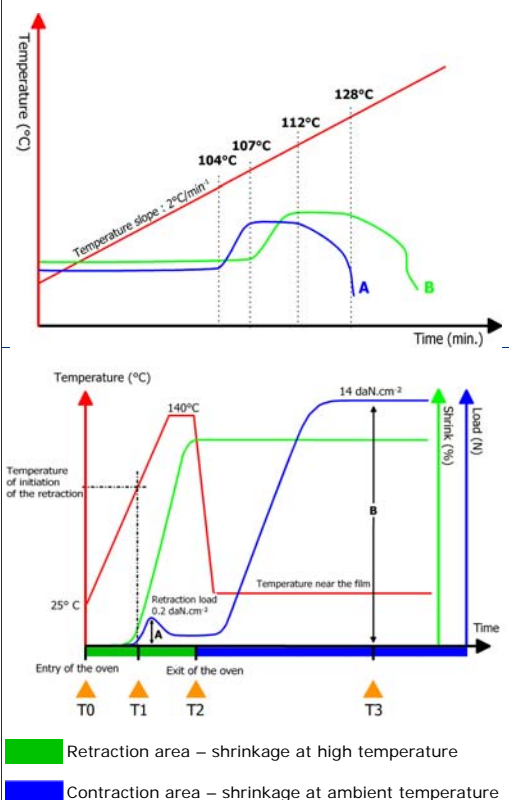
Two test methods

1. **"Thermal ramp"** Used as part of a preliminary study of a film. The oven lowered and the temperature is increasing at a preset rate. Allows to determine the temperature at which shrinkage begins and then the start and end of maximum shrinkage.
2. **"Simulation"** simulating the behaviour of the film in a shrinkage tunnel. The specimen is placed on a vertical support, one connected to a force transducer and the other to a displacement sensor. The furnace, controlled by a timer is lowered over the specimens. Force, displacement and temperature are continuously displayed and recorded. The oven is then raised.

The dedicated software offers functions like setting the test parameters and displaying, storage and analysis of the test results, which are:

- ⊕ Shrinkage - force(N), rate(%) and temperature
- ⊕ Contraction - force(N)

Example graphs



The **RETRATECH** is used for:

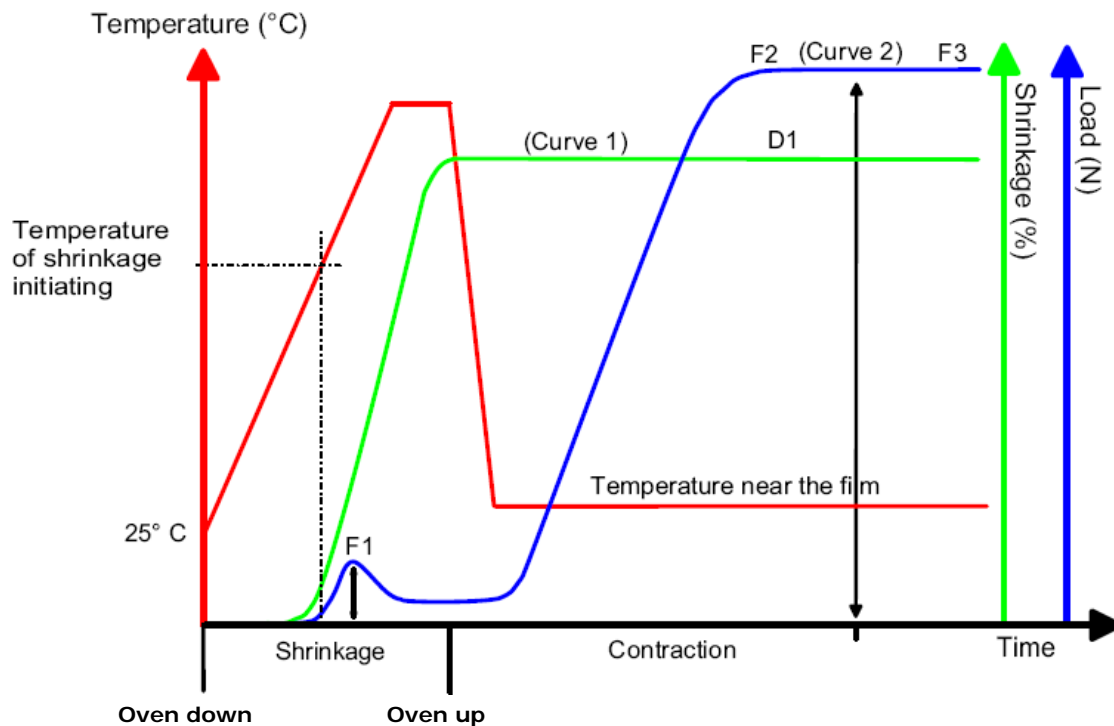
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| ⊕ Research & Development | ⊕ Waste reduction |
| ⊕ Control on incoming goods | ⊕ Packing process optimization |
| ⊕ Formulation optimization | ⊕ Total quality control |

Measured parameters

Shrinkage – A displacement sensor (LVDT) allows determining of the shrinkage rate (curve 1)

Load – A load cell measures shrinkage and contraction forces (curve 2)

Load and shrinkage values are displayed in a graph, against time and temperature.



Conforms to standards:

ISO 14616 and DIN 53369

Specifications

Load measuring range		1 daN
Shrinkage measuring range		Up to 90%
Temperature range		ambient + 10 to 300°C
Specimen dimensions		100 x 15 mm
Software	- Compatibility	Windows 2000/Me/XP
Machine / PC	- Connection	USB
Supply:	- Mains	230V/50 Hz
	- Pressurised air	5 Bar, dry air
Weight		30 kg.
Overall dimensions – W x D x H		50 x 40 x 60 cm