



Film Heat Shrinkage Tester

GBK-D1



广州标际包装设备有限公司

Guangzhou Biaoji packaging equipment Co., Ltd

Product Introduction

Film Heat Shrinkage Tester tests various heat shrinkage properties for the film according to the principle of air heating (air bath). Suitable for heat shrinkable films which produced with polyethylene, ethylene copolymers and their mixtures, such as beverage labels, bottled bundle packaging, sausage shrinkage packaging, outer film of daily chemical products, outer film of cigarette boxes, etc.

It is a device that can accurately and quantitatively measure the thermal shrinkage force, cold shrinkage force, shrinkage rate, shrinkage time and other properties of plastic films during thermal shrinkage.

The test results have a variety of data, which can evaluate the heat shrinkage performance of the film from different aspects, contribute to the research and development of heat shrinkable films of different materials, ensure the stability of heat shrinkable films performance of various materials, and meet the requirements of various heat shrinkable films in various industries.

GBPI checks the key thermal shrinkage properties of film products for you. The traditional oven or oil bath equipment only detects the heat shrinkage rate of the heat shrinkable film, and the test results are relatively limited. Our Film Heat Shrinkage Tester GBK-D1 can evaluate the thermal shrinkage performance of films from various data. It is easy to operate, environmentally friendly, with high data accuracy and more comprehensive test results to meet your requirements.



Standard:

GB/T 34848-2017、ISO 14616-1997、DIN 53369-1976

Test principle

This tester uses the principle of air heating to connect the tested sample to the tension sensor and displacement sensor. After reaching the maximum shrinkage force, it is placed in an external test environment with an ambient temperature of $23^{\circ}\text{C} \pm 2^{\circ}\text{C}$ to cool down, the instrument continuously records the reference temperature, shrinkage force, and displacement, the recorded data can be used to determine optimal shrinkage conditions for the film.

The internal structure of the instrument is shown in Figure 1

Force and Shrinkage Measurement Chart is shown in Figure 2

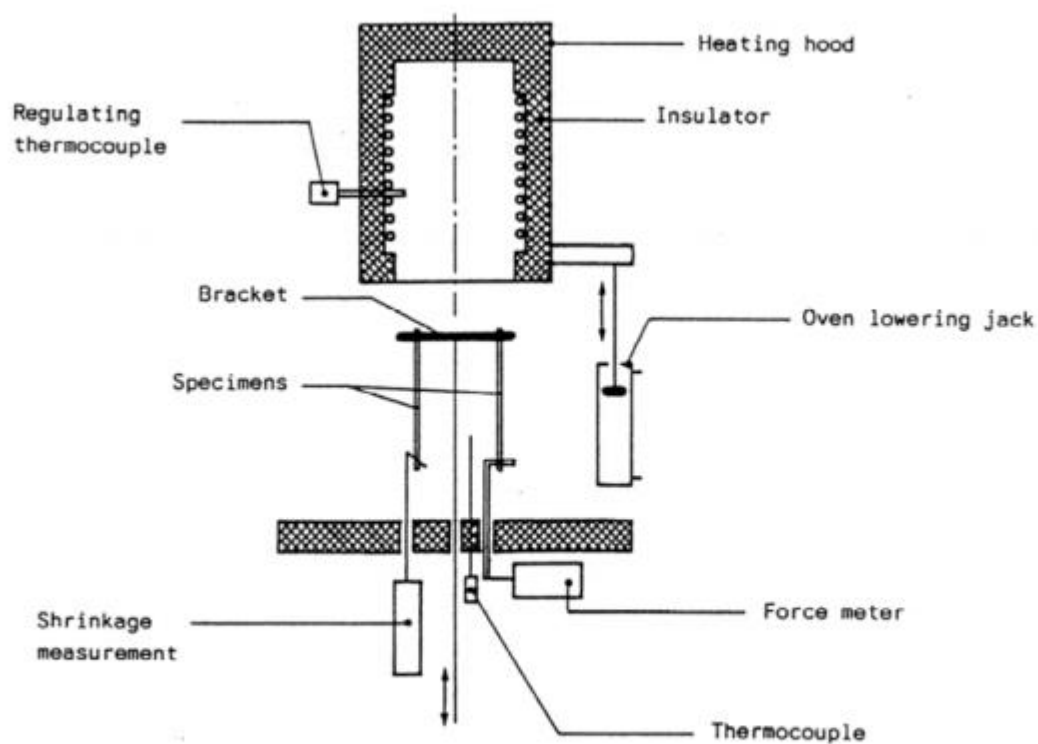


Figure 1 - Example of apparatus

Figure 1

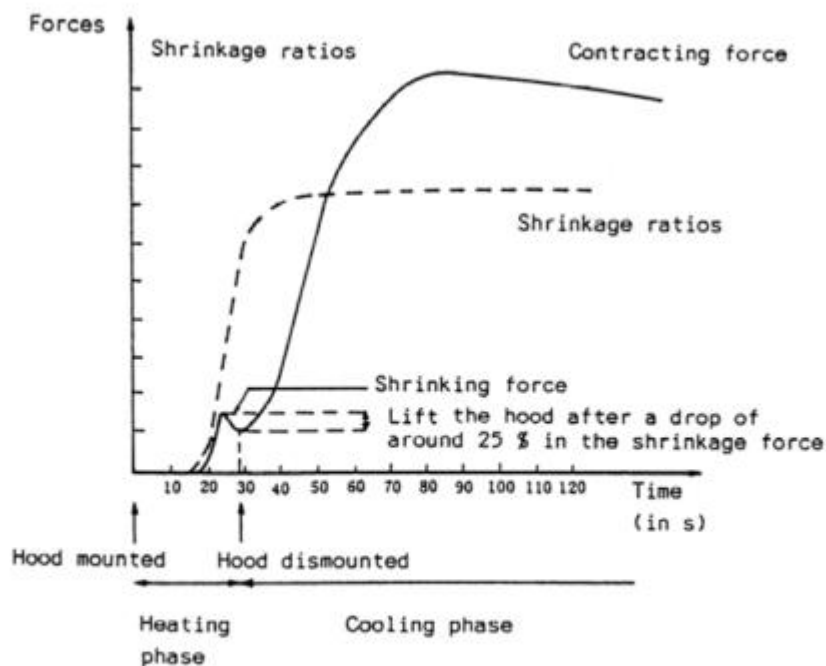


Figure 2 - Measurement of the forces and of the shrinkage ratio -
Example of typical kinetics of the phenomena

Figure 2

Specification

Item	Technical Parameters
Sensor Specifications	5 N (standard) 10 N、30 N (optional)
Contraction force accuracy	Display value $\pm 0.5\%$ (10%-100% of sensor specification) $\pm 0.05\%FS$ (0%-10% of sensor specification)
Display resolution	0.001 N

Displacement measurement range	0.1~70 mm
Displacement sensor accuracy	±0.07 mm
Shrinkage measurement range	0.1%~95%
working temperature	room temperature~210℃
temperature fluctuation	±0.2℃
temperature accuracy	±0.5℃ (Single point calibration)
Number of workstations	1 Set (two stations)
Sample size	110 mm×15 mm(Standard size)
Dimensions	480 mm(L)×400 mm(W)×630 mm(H)
Power supply	220VAC±10%50Hz/120VAC±10%60Hz
Net weight	26 kg

Features

- ◆ Laser measurement technology, Non-contact precise measurement.
- ◆ High-precision force sensor and displacement sensor, can accurately determine the thermal shrinkage performance parameters of the sample.
- ◆ Automatic temperature control, intelligent digital PID algorithm.
- ◆ The system displays the heat shrinkage force, cold shrinkage force and heat shrinkage rate in real time during the test.
- ◆ With built-in system, more safety.
- ◆ User hierarchical permission setting, meeting GMP requirements, test record auditing, and tracking functions.
- ◆ Support DSM laboratory data management system, which can be maintained and upgraded remotely.

Application



Beverage film packaging



sausage shrink wrap



film packaging



Daily chemical film packaging



tableware packaging film



Parafilm

Configuration

Standard: Host, professional software, keyboard, mouse, sampling board, wireless data interface

Optional: Printer (need to be compatible with standard PCL3 print command language)

Warranty

- ◆ Free packaging testing technical support.
- ◆ One-year instrument warranty, free software upgrade service, and lifetime free technical support.
- ◆ Free training of instrument operation at our factory, with free board and lodging, and

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those who pass will be issued a diploma.

- ◆ Instrument "trade-in" policy, as well as providing backup instruments in case of failure.
- ◆ Testing center (CNAS L8185) provide customers with sample testing and sample data comparison services.
- ◆ Reference material research and development center to provide customers with instrument calibration services.

Company Profile

Guangzhou Biaoji Packaging Equipment Co., Ltd. was established in 2002 and headquartered in Guangzhou Economic Development Zone. It is an enterprise integrating R&D, production and sales of packaging testing instruments, packaging equipment, biodegradation, modified atmosphere preservation equipment and other products, as well as providing third-party testing and standard material proficiency verification.

GBPI provided the most competitive laboratory construction solutions for more than 10,000 enterprises and institutions in more than 40 countries and regions around the world. We services covering quality inspection and drug inspection institutions, scientific research institutions, packaging, printing, food, medicine, daily chemicals, chemical industry , new energy, new materials and other fields.

After more than ten years of hard work, and the support of our customers, the scale of production and operation and product quality have reached the national leading level. GBPI has an advanced R&D team, a large factory, three marketing centers, a CNAS certification laboratory, an inspection and testing agency qualification (CMA), a national standard material research and development center, etc. GBPI will always play the role of a leader in packaging solutions and strive to provide customers with high-quality products and services!

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