

BMC-B1 Falling Dart Impact Tester

BMC-B1 is designed for determination of mechanical properties, impact resistance, of packaging materials such as plastic films, laminates and paper by a free falling dart from a certain height. This instrument is designed according to ASTM D1709 with method A & B.

Technology

- Two 2 test methods, Method A and Method B.
- Electromagnetic suspension and automatic release of the falling dart reduce the errors caused by manual operation.
- Pneumatic clamping, 2 starting modes of manual and pedal switch and built-in observation light are convenient for user's operation.
- Professional software supports multi-unit result display, graphic display of testing process and data export and printing.
- Equipped with RS232 port and micro printer port which is convenient to the data transmission and PC connection.
- Supports Lab Data Sharing System for uniform and systematic data management.



Test Principle

Before starting the test, choose test method, and estimate an initial mass and Δm . Start the test. If the first specimen fails, decrease the mass of the falling dart by Δm . If the first specimen is not a failure, increase the mass of the falling dart by Δm . Continue the test according to this rule. In brief, increase or decrease by Δm according to whether the former specimen is a failure or not. After 20 specimens, calculate the total number of failed specimens N. If N equals to 10, the test is over. If N is less than 10, add specimens and continue to test until N equals to 10. If N is greater than 10, add specimen and continue the test until the number of non-failure specimens reaches 10. Then the tester calculates the test results automatically according to specific formulas.

Test Standards

ISO 7765-1-1988, ASTM D1709, JIS K7124-1, GB/T 9639.1-2008

Applications

Basic Applications	Impact resistance test of plastic films, sheets and composite films e.g. PE preservative films, wrapping films, PET sheets and other food packages and heavy packages
	Impact resistance test of aluminum foils and aluminum plastic composite films
	Impact resistance test of paper and paper board
Extended Applications	Test the resistance of the specimen against the falling ball. Mount the specimen on specific clamp for falling ball impact test and select falling ball of certain weight for the impact test. Check the status of the specimen and determine the impact resistance of the specimen
	Impact test of shoulder lining. Mount the shoulder lining specimen to the specified clamp and select falling dart of certain weight for impact test. Check the status of the specimen and determine the impact resistance of the shoulder lining specimen.

Technical Specifications

Specifications	BMC-B1
Test Method	Method A or Method B is optional
Test Range	Method A:50~2000 g Method B:300~2000 g
Accuracy	0.1 g (0.1J)
Specimen Clamp	Pneumatic Clamp
Gas Supply Pressure	0.6 MPa (outside of supply scope)
Port Size	Φ8 mm PU Tubing
Specimen Size	>150 mm x150 mm
Power Supply	AC 220V 50Hz
Net Weight	70 kg
Instrument Dimension	Method A:500 mm (L) x 450 mm (W) x 1320 mm (H)
	Method B:500 mm (L) x 450 mm (W) x 2160 mm (H)

Configurations

Standard	Method A Accessories and Micro Printer
Optional Parts	Method B Accessories, Professional Software and Communication Cable
Note	<ol style="list-style-type: none"> The gas supply port of this instrument is Φ8 mm PU Tubing; Customers will need to prepare for gas supply.