

INNOVATIVE TECHNOLOGIES



# Gelatine Capsule Hardness Tester

Auto PharmaCheck



TORONTECH

## Gelatine Capsule Hardness Tester

### Auto PharmaCheck



The Auto PharmaCheck is a software-controlled, automatic instrument designed to measure the hardness and compressive strength of capsules, gelatin substrates, and other soft or elastic materials.

By applying a programmable compressive force, it evaluates deformation resistance and ensures compliance with required standards.

Particularly suited for pharmaceutical, cosmetic, food, and related industries, this instrument offers reliable quality control for delicate products that must adhere to specific regulatory requirements.

## FEATURES/ADVANTAGES

### ► High Precision Testing:

Equipped with a motorized probe displacement device offering a resolution of 0.0001 mm for accurate measurements.

### ► Advanced Force Measurement:

Features a load cell with a full-scale capacity of 60 N and a resolution of 0.001 N, ensuring precise force application.

### ► Customizable Testing Cycles:

The software supports predefined and custom test cycles, offering flexibility to meet various testing requirements.

### ► User-Friendly Display:

A digital interface provides intuitive handling and direct readings of force and displacement.

### ► Efficient Automation:

Includes an automatic probe plate rotation mechanism, enabling seamless testing of multiple capsules in a single session.

### ► Enhanced Data Analysis:

Displays graphical force vs. displacement curves for detailed evaluations.

### ► Streamlined Product Tracking:

Barcode-based product identification with tolerance verification ensures results accuracy.

### ► Reliable Data Management:

Automatically stores test results and curves in SQL databases for efficient record-keeping and traceability.

## FEATURES/ADVANTAGES

The Auto PharmaCheck supports both standard and fully customizable test cycles, ensuring flexibility and precision in testing.

### Standard Test Cycles

Includes a predefined deformation of 2 mm per capsule, representing the force application curve and calculating the maximum applied force during the cycle.

### Customizable Options:

Allows full customization of test parameters, including varying deformation levels, maintaining deformation for a defined duration, and repeating cycles for an adjustable number of times.

### Versatility in Applications:

Designed for both quality control and advanced product development, making it a reliable tool for optimizing formulations and ensuring compliance.

This flexibility makes the Auto PharmaCheck an ideal solution for diverse testing requirements in pharmaceutical and related industries.

## INTERCHANGEABLE CAPSULE HOLDER PLATES

The Auto PharmaCheck is equipped with interchangeable Capsule Holder Plates, enabling flexibility and efficiency in testing.

- **Automatic Testing:** The holder plate attaches to the motorized rotating plate, allowing fully automated testing of capsules placed in the housing compartments.
- **Versatile Options:** Holder plates are available with various housing compartment sizes to accommodate different capsule dimensions.
- **Standard Sizes:**
  - **Oval Capsules:** Sizes 1, 2, 3, 4, 5, 6, 7, 7.5, 8.5, 10, 12, 16, 20, 30
  - **Spherical Capsules:** Sizes 1, 2, 4, 5, 6, 7, 9, 15, 20, 28, 40
  - **Oblong Capsules:** Sizes 3, 4, 6, 8, 9.5, 11, 14, 16, 20, 22, 24



Capsule holder plates with non-standard dimensions can be provided upon request, ensuring compatibility with specific testing requirements.

## TECHNICAL SPECIFICATIONS

Specifications	Details
Test Cycle	Customer-defined test cycle with adjustable force-time application
Load Cell	Max load: 60 N, Resolution: 0.001 N
Displacement of the measuring Unit	Motor controlled screw with ball-screw system. Max speed: 85 mm/min. Stroke: 50 mm. Resolution: 0.0001 mm
Tool for the application of the force	Tool with 10 mm diameter and magnetic attachment
Rotation of the Specimen Holder Plate	Motorised rotation with angle control for automatic execution of multiple tests
Interchangeable Capsule Holder Plates	Plates for Oval, Spherical and Oblong Capsules are available in standard or custom sizes.


## SOFTWARE

Specifications	Details
Software	Software for complete instrument control compatible with Windows 11 and saving of results in SQL database
Tolerance verification	Comparison of test results with the tolerance limits set for the product
Results storage	Test Results and curves are saved in the SQL database which is installed together with the software.
Graphs	The Force-Displacement Curves of the tests performed are displayed in different colours.
Data analysis	Mean, std. Dev., min, max, Cp, Cpk of test results. X-Chart and Gaussian distribution
Test results calculated for each test	Force at Set Displacement, Maximum Force, Displacement at Set Force
Software usage Languages	English, Italian, French, Spanish, German, Portuguese, Russian, Chinese, Japanese, Turkish, Polish, Czech




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