



The semi-automated hardness tester

# TBH 425

Testing of up to four tablet parameters with a functional rotary magazine



**ERWEKA**

# Overview

The ERWEKA TBH 425 is a semi-automatic tablet hardness and combination tester for measuring of up to ten samples. The samples are automatically transported to the test station by a star-shaped rotary magazine. Depending on the device model, automatic measurement can be taken for tablet hardness and thickness (optional), diameter (for round tablets) or length (for oblongs). In combination with the optional balance the weight can also be determined. In addition, the rotary magazine enables full visual inspection of the test processes at all times. Up to 100 tablets can be precisely tested in one run and the acquired data can be documented and evaluated in a variety of ways. Therefore the TBH 425 can be connected to a printer via the USB printer interface or directly integrated into a computer network via the Ethernet LAN interface.



100%  
USP / EP / JP  
compliant



Setting of test  
speed (0.5 - 3.0  
mm/sec.)



Adjustment of  
force increase  
(10 - 200 N/sec.)



Automatic cleaning of  
the magazine



Collection  
container for  
broken samples



## Star-shaped rotary magazine

The star-shaped rotary magazine of the THB 425 enables semi-automatic testing of up to ten samples. All you have to do is to insert the tablets in the intended chambers of the magazine - the subsequent testing is completely performed by the TBH 425. Sample residues are automatically removed during sample transport.

\*= Option

## 4 Parameters:



Thickness



Diameter/  
Length



Hardness



Weight



### Automatic calibration with AutoCal 2.0\*

The calibration of the TBH 425 is completely menu-driven and may be carried out statically by weight stones or dynamically by the electronic ERWEKA AutoCal 2.0 System. In addition, the unit generates a calibration print-out outlining individual calibration data and further information (service date and time, serial number).

### PC control via MC.NET

The Ethernet LAN interface allows connecting a computer with the ERWEKA MC.NET software. In combination with this option the TBH 425 series is 100 % 21 CFR 11 compliant and can be controlled via a PC.

### Storage for up to 50 products

Via a numeric keypad with alphanumeric subfunction the nominal hardness values in combination with three individual tolerances can be entered for up to 50 products and afterwards recalled for testing.



With the optional MC.NET software the test results can be easily stored in a database\*.

## Technical Specifications

<b>Measurement range</b>	
Hardness	3 - 500 N
Extended measuring range hardness*	3 - 1000 N ( $\pm 1$ N)
Diameter/Length	2 - 28 mm ( $\pm 0.05$ mm)
Thickness*	2.0 - 10 mm ( $\pm 0.05$ mm)
Weight*	20.0 mg - 64 g** ( $\pm 0.1$ mg)
<b>Measurement principles</b>	
Constant speed	0.1 - 3 mm/sec.
Constant force	10 - 200 N/sec.
<b>Appliance details</b>	
Power	100 - 240 V / 50 - 60 Hz
Width/depth/height	350 mm / 375 mm / 240 mm
Weight	15 kg
Connectivity	SD card, Ethernet (LAN), RS 232 C*, 1x USB-A and 1x USB-B interface for printer / Autoal 2.0
Calibration	Weights (statistic calibration), Optional: AutoCal 2.0 (dynamic calibration)

## Options

- + Diameter measurement (length for oblongs) up to 28 mm, accuracy  $\pm 0.05$  mm
- + Thickness measurement up to 10 mm, accuracy  $\pm 0.05$  mm
- + Weight measurement, different Sartorius and Mettler balances available
- + Extended measuring range 3 - 1.000 N, accuracy  $\pm 1$  N
- + AutoCal 2.0 system - automated tool for calibrating the hardness test without weight
- + Test jaws for sugar coated tablets
- + Test jaws for oblong shaped tablets
- + Win.print software to transfer measuring results to a PC
- + MC.NET software to operate TBH 425 via PC
- + RS 232 interface for standard data export
- + Qualification documents IQ/OQ/PV
- + ERWEKA IQ/OQ/PV service on customer site
- + Maintenance service

\*= Option

\*\*= Depending on the balance type



Optional thickness testing via a linear potentiometer\*.

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