

Toyama

TABLET HARDNESS TESTER

TH-203MP
(10 to 200N/1.0 to 20.0kgf)

TH-303MP
(10 to 300N/1.0 to 30.0kgf)

● Measuring units

The measurement can be displayed in N(Newton) or kgf.

● Built-in computing printer

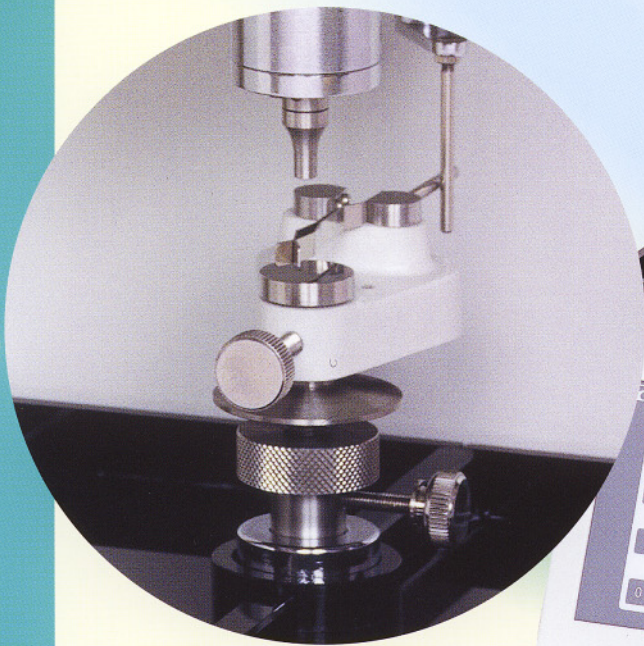
Prints the computed data.

● RS232C output

Enables connection with a computer.

● Calibration

Attach please find the certificate of inspection compared and detected with the load transducer (compressing load cell).



Fly Protection Cover (Option)

⚠ WARNINGS

As an option, Fly Protection Cover is available. Please use it in case of danger. When a solid matter disintegrates, small or broken pieces will fly. If they hit your eyes, they will injure them. Loss of eyesight may occur.

TOYAMA SANGYO CO., LTD.

RELIABLE HIGH-QUALITY TESTERS FINDING MORE APPLICATIONS IN THE FIELD OF TABLET MANUFACTURING.

REPRESENTATIVE TABLET HARDNESS TESTERS HIGHLY APPRECIATED BY LEADING MANUFACTURERS IN JAPAN.

Features

- High Accuracy** ● When the precision ball screw is turned, the weight is slid at a fixed rate to apply load to a tablet. The breaking load of the tablet is detected electrically, and its hardness is computed.
- 100% Reproducibility** ● Since this tester does not use any parts which may be deteriorated with age, such as springs, it ensures always the same measuring conditions.
- No Difference Between Individual Measurements** ● Anyone can obtain the same result because the measurement is fully automatic on all the models.
- Measuring Units** ● The measuring unit switch is provided, so that the values in N or kgf can be indicated alternately on the digital display.
- Built-in Computing Printer** ● The printer computes the measurements and prints the results, maximum, minimum, range, average, standard deviation and coefficient of variation.
- Upper/Lower Limits Setting Device** ● Set the upper and lower limits in advance, and out-of-limit measurements are not included in computation.
- RS232C Output** ● This tester can be connected to a computer.
- Calibration** ● The load transducer (compressing load cell) ensures quick comparison and calibration.

No. 1	78N
No. 2	68N
No. 3	71N
No. 4	76N
No. 5	82N
No. 6	85N
No. 7	92N
No. 8	93N
No. 9	96N
No. 10	95N
No. 11	71N
No. 12	98N
No. 13	88N
No. 14	79N
No. 15	69N
No. 16	82N
No. 17	89N
No. 18	91N
No. 19	87N
No. 20	78N

OPERATION
 DATE 1999.6.18
 Lot-No.
 TOTAL 1640.8
 MAX. 93.8
 MIN. 68.8
 HI < 3
 LO > 2
 RAN. 25.8
 AVE. 92.8
 MEA. 62.8421
 CU 9.4674
 SD 7.9273

There are available the attachments (option) to measure the Bending Hardness of tablet and the Easy Cutting of ampoule.

Principle of Measurement

The super-precision ball screw, applying the principle of the lever, moves the weight, and the load applied to the pressurizing head is increased gradually. Every time the load is increased by 10g, a pulse is detected, and the applied load is displayed on the digital counter (IC).

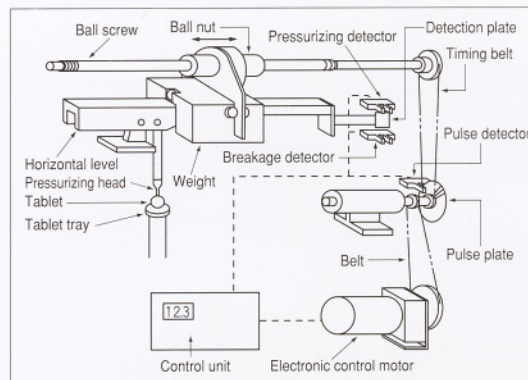
When a slight displacement of horizontal lever caused when the tablet is broken is detected electrically, the counter is stopped, the breaking strength of the tablet is measured extremely precisely, and the result is shown on the digital display.

Standard Specifications

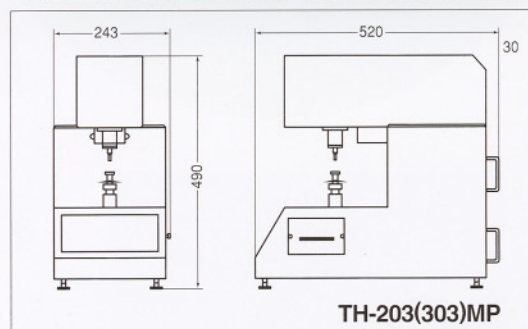
Item	Model	TH-203MP	TH-303MP
Pressurizing System		Weight sliding system	
Measuring Range (N or kgf changeable)		10 to 200N 1.0 to 20.0kgf	10 to 300N 1.0 to 30.0kgf
Min. Graduation		1 N or 0.1kgf	
Accuracy		± 1.5%/FS ± 1 digit	
Loading Rate		15N/s or 1.54kgf/s	
Measuring Time		10 to 200 N : approx. 13 sec. 10 to 300 N : approx. 20 sec. Reset from 200N(300N) to 0: approx. 5sec.	
Tablet Diameter		1 to 30 mm	
Printer		Built-in printer provided with computing function Printed contents: max., min., range, average, deviation, and coefficient of variation	
Upper/Lower Limit Setting		Possible	
Output		RS232C	
Dimensions(mm)		(W)243×(D)520×(H)490	
Weight		Approx. 31kg	
Power Source		AC100V 50/60Hz(standard) AC200V ~ 240V 1φ (available by request)	
Max. Power Consumption		0.3kVA	

(The specifications are subject to change for improvement without prior notice.)

Fly Protection Cover (OPTION) Easily removable (Material: Acrylic plastic)



Outside Dimensions Drawing



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