Precision Fruit Sclerometer (**FOR**CE GAUGE)

FRUIT HARDNESS TESTER *20 Kg*

Model : FR-5120 ***ISO-9001, CE, IEC1010***

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The Art of Measurement

20 Kg X 0.01 Kg (10 g), Precision Fruit Sclerometer (FORCE GAUGE)

FRUIT HARDNESS TESTER

Model : FR-5120

FEATURES

* The tester is used to measure the hardness of most kind fruits such as apple, pear, strawberry, grape, large/hard fruits, small/soft fruits. It is suitable for the fruit scientific research department, fruit company, fruit farm, agriculture colleges and universities to improve the fruit quality, the harvest storage, the product transportation... by the fruits' hardness. The useful tester to judge fruit's mature degree.
* Max. capacity : 20 Kgf x 0.01 Kgf (10 gf).
* Unit : Kg/LB/Newton.
* Use load cell sensor, high precision.
* Digital display with Peak hold function, easy measurement.
* Tension or Compression, Zero.
* Positive/ Reverse display.
* Large LCD display with back light.
* Tip size : 3 mm, 6 mm, 8 mm, 11 mm.
* RS-232/USB computer interface.
* Complete set with hard carrying case and 4 kind tips (3 mm, 6 mm, 8 mm, 11 mm).
* Test stand, FS-1001, optional.
* USB cable (USB-01) and the data acquisition are optional.
* Peak hold (Max. load) can be held in display during make the measurement.
* Zero button can operate both for normal measuring & the " peak hold " operation.
* Full capacity zero (tare) control capability.
* Fast/Slow response time push button.
* Hand held & stand mounted gauges are available.
* Low power consumption gives long battery life.
* Microprocessor circuit & exclusive load cell transducer.
* Over load protection.
* Built-in DC 9V power adapter input socket.
* Range of 0 to 13 Kg (Appropriate for fruits such as apples, pears, peaches or kiwis....), with the 6 mm diameter sensor (FRTP-6) or 11 mm diameter sensor (FRTP-11).
* Range of 0 to 20 Kg (Appropriate for very hard fruits) using the 11 mm diameter sensor (FRTP-11).

SPECIFICATIONS

Principal	The hardness of Fruit can express by the unit area (S) could undertake the pressure of dynamometer (N) , their specific value is just as the hardness (P). P = N / S P = Hardness value of fruit (Kg/cm^2) N = Pressure of dynamometer (N, Kg, LB) S = Area of pressure (m^2, cm^2)
Display	LCD (Liquid crystal display). 5 digits, 16 mm (0.63") digit size. Back light.
Display Dif';f	Positive or Reverse direction, select by the push button on the front panel.
Function	Tension & Compression (Push & Pull). Normal force, Peak hold (Max. load).
Peak hold	Will freeze the display value of the Peak load (Max. load).
Zero	Zero button can be operated both for "normal force" or "peak hold" operation
Unit select	Kg/Newton/LB.
Measure Capacity	20.00 Kg/44.10 LB/196.10 Newton.
Resolution	0.01 Kg/0.01 LB/0.05Newton.
Min. Display	0.02 Kg/0.07 LB/0.3 Newton,
Accuracy	± (0.5 % + 2 digits), within 23± 5℃. * Under the test weight on 10 Kg & 20 Kg.
Update time	Fast Approx. 0.2 second. Slow Approx. 0.6 second.
Over range Indicator	Display show " - - - - " when in over range status.
Data output	RS-232 serial computer interface.
Overload Capacity	Max. 30 kg.
Full Scale Deflection	Approx. 0.4 mm max.
Zero/tare Control	Max. full capacity.
Circuit	Exclusive microprocessor LSI-circuit.
Power Supply	6 x 1.5 V AA (UM-3) size battery or DC 9V adapter (not included).
Power Consumption	Approx. DC 28 mA
Transducer	Exclusive load cell.
Operating Temperature	0℃ to 50℃ (32℉ to 122℉).
Operating Humidity	Less than 80% RH.
Dimension	215 x 90 x 45 mm (8.5 x 3.5 x 1.8 inch).
Weight	650 g (1.43 LB)/with batteries.
Data output	RS-232 serial computer interface
Mounting Holes	Main instrument with mounting holes are provided on the back case, easy stand mounting.
Accessories Included	Operating manual ..... 1 PC. 11 mm Penetrometer Tip, FRTP-11..... 1 PC. 8 mm Penetrometer Tip, FRTP-8.....1 PC. 6 mm Penetrometer Tip, FRTP-6.....1 PC. 3 mm Penetrometer Tip, FRTP-3.....1 PC. Carrying case .....1 PC.
Optional Accessories	* Test stand, Model : FS-1001 * RS232 cable, Model : UPCB-01. * USB cable, Model : USB-01. * SD card data recorder, DL-9602SD. * Software for data logging & data recorder, Model : SW-U801-WIN.

* Appearance and specifications listed in this brochure are subject to change without notice.