This tool is perfectly fit to detect proper picking maturity and control fruit softening during cold storage.
It measures the pressure necessary to force a plunger of specified size into the pulp of fruit

Preparing samples
About ten days before normal picking time, control pulp firmness, repeat control each 6-7 days for winter pome-fruits, each 2-3 days for summer pome-fruits, and stone fruits. Take samples from several plants and several spots of each plant as a random sample will be more representative of the lot.
A suitable sample will be composed of 15-20 fruits; 2 measures have to be taken on each fruit at opposite sides, at the middle point of each side, after removing 1/2"-3/4" diameter disc of peel.

Hand held measurement
Hold the fruit firmly in the left hand, hold the fruit tester between thumb and forefinger of the right hand, push button-commanded indicator hand, place the plunger against the fruit and press with increasing strength until the plunger tip is penetrated into the pulp up to the notch.
Slow penetration of the plunger is essential. Sharp movements and sudden pressure application may impair your measurements. In order to avoid mistakes and to assure slow penetration of the plunger, make sure that the hand holding the fruit is firm, leaning it on the table, and keep the arm rigid.

Test stand measurement
When make the measurement, the SENSING HEAD along the adapter has to be on a line with measuring fruit.

FEATURES

- 20 Kg, wide capacity, high resolution, high accuracy, high repeatability.
- 3 kind display unit: Kg, LB, Newton.
- Full capacity zero (calibration) control capability.
- Fast/Slow response time push button.
- Positive or reverse display direction select.
- Accessories (plungers) are included.
- Hand held & stand mounted gauges are available.
- Low power consumption gives long battery life.
- Build in low battery indicator.
- Microprocessor circuit & exclusive load cell transducer.
- Over load protection.
- RS-232 computer interface (optional).
- Professional test stand 53205SP (optional).

2. 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 Direction	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/0.05 Newton
Min. Display	0.01 Kg/0.01 LB/0.05 Newton
Accuracy	(0.5%+2 digits), within 23 +/- 5°C **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 15 mA.
Transducer	Exclusive load cell.
Operating Temperature and Humidity	0°C to 50°C (32°F to 122°F). Less than 80% RH
Dimension	215x90x45mm (8.5 x 3.5 x 1.8 inch)
Weight	470 g (1.0 LB)/meter only.
Mounting Holes	Mounting holes are provided on the back case, easy stand mounting.
Accessories Included	Operating manual 11 mm Penetrometer Tip 8 mm Penetrometer Tip Fruit Peeler Carrying case
Optional Accessories	Test Stand Software USB cable and data acquisition