



FRUIT TEST™ FTX APPLE RIPENESS TESTER

- **ADVANCED APPLE TESTER**
- **UNIQUE DEPTH CONTROL**
- **UNIQUE SPEED CONTROL**
- **ACCURACY VERIFICATION**
- **WATER FLUSH CLEANING**

Accurate Apple Testing Requires:

- Accurate Penetration Depth
- Accurate Penetration Speed
- Accurate Force Gage

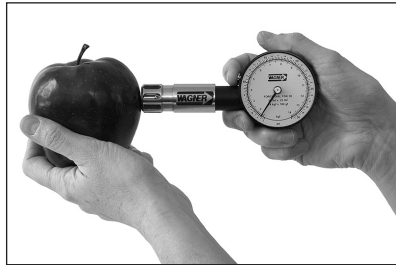
The advanced design of the Wagner FTX Apple Tester with its unique features offers improved accuracy by:

- Stopping penetration at the correct depth.
- Slowing penetration with a unique compression chamber.
- Providing test weight accuracy.

The FTX is dedicated to quality control of apples. The basic 7/16" (11 mm) penetrometer probe of the Magness-Taylor and Effegi fruit testers is unchanged, making previous data comparable with current data.

The FTX Apple Tester is a compact hand held or test stand mounted penetrometer for testing apple firmness, the universally accepted measure of ripeness.

The FTX is the apple growers indispensable tool for knowing when to pick and ship.



ADVANCED DESIGN

- The Wagner FTX Extra Apple Tester features the unique FTXM Penetrometer Module attached to a compact Wagner FDK Force Gage. As the FTXM Module is pressed into the apple, a circular piston compresses air in a small chamber. Unlike a spring, this provides uniform high resistance to the applied force.
- The piston of the FTXM Module, with its oval shaped ports for water flush cleaning, automatically stops at the same specified depth with every test. It is unnecessary to control depth penetration by sighting on a scribed line.
- The FTX Extra includes the Wagner FDK 30 Force Gage with dual pound/ounce and kilo-gram/gram capacities and graduations.
- With the inclusion of the FDK 30, the Repair/ Rebuilt program is available for the FTX Apple Testers. When repair or calibration adjustment is required, the FTX is returned to Wagner. If rebuildable, the FDK Force Gage is replaced with a rebuilt gage for rapid return to service at a reasonable cost.

FIRMNESS

- The Wagner Fruit Test Series is recognized as the worldwide standard for ripeness testing.
- The FTX measures the force required to push a plunger into the fruit pulp. The force reading indicates the appropriate picking time. Testing begins approximately 10 - 15 days prior to normal picking time and periodically continues until harvesting time arrives.
- Because of the number of fruit and vegetable varieties, geographical locations and other variations, the appropriate firmness for harvesting will vary. Therefore, FTX users must use their experience to establish the firmness value that applies to their specific variety and locale.

OPERATION

- Prior to using, the FTX accuracy should be verified with test weights.
- Before daily use, exercise the plunger in and out for 10 seconds to ensure the mechanism is free to function.
- Force must be applied to the load shaft and hook axially - straight in and out.
- The active force measurement range of the FTX begins at 10% of full scale. There is no "zero" on the FTX dial.
- The peak or maximum force applied during the test is retained by the FTX pointer. Pressing the button returns the pointer to the rest position.

APPLE TESTING

FTX 30 Apple Testing

- Select a random sample of 15 to 25 of uniform size and the same temperature or 3% of the lot to be sampled. For best results the same person should test the lot.
- Remove a disc of skin on opposite cheeks of the apple midway between the stem and bottom on sun and shade sides.

Proceed with puncture test.

- The FTX 30 assists in controlling the penetration speed. It limits the speed by offering constant resistance to the penetration force.
- The FTXM Module will consistently stop the penetration at the exact specified depth allowing more attention to penetration speed.
- Hold the apple against a hard surface. Push the FTX 30 into the apple with a force that slightly exceeds the resistance offered by the FTXM Module for a 3 second penetration time.

Record reading to the nearest graduation.

- Use the Wagner FTK 100 Test Stand for more controlled testing.



SPECIFICATIONS

The FTX Fruit Tester combines the compact FDK 30 Force Gage with the all stainless steel FTXM Fruit Test Module. The FTXM Module incorporates an air compression chamber and piston with a return spring and open ports for water flushing.

MODEL	GAGE	CAPACITY		ACCURACY
FTX 30	FDK 30	30 lbf x .25 lbf	14 kgf x 100 gf	± 2 Gradations

- The FTX 30 includes the FDK 30 Force Gage, FTXM Module, FT/PLR Peeler, FT/HK Hook, Case and FTX 30 Manual.

ACCURACY VERIFICATION

- Prior to use, the FTX accuracy should be verified with test weights.
- The FTX is supplied with a 2" verification hook for use in testing the accuracy of the gage. The hook passes through the hole in the gage housing opposite the plunger and is screwed into a threaded hole located internally. Test weights are suspended from the hook.
- Periodical verification of accuracy should be performed with a test weight suspended from the hook. One weight equal to the expected nominal force of the fruit test is applied to the FTX prior to the daily testing.
- Do not attempt to adjust the FTX if found to be inaccurate. The FTX is sealed and any attempt to adjust it may damage the gage. Contact Wagner Instruments.
- The FTX is calibrated with the peak hold active – peak hold button NOT pressed. When verifying calibration with test weights, do NOT hold the button down.

REPAIR/REBUILT PROGRAM

FTX Fruit Testers are repaired at the Wagner factory in the "Repair/Rebuilt Program". An FTX returned for repair is evaluated. If accepted, the FTX Force Gage will be replaced with a rebuilt FTX Force Gage. Rebuilt FTX Force Gages are only available for those returned for repair.

Calibration

- FTX Fruit Testers are calibrated at the factory, but do not have NIST Certification.

NIST Certification

- Optional for new or rebuilt FTX Fruit Testers.

NIST Re-Certification

- An FTX Fruit Tester returned for re-certification will be issued an NIST Certificate if found to be within tolerance.
- An FTX Fruit Tester returned for re-certification will be replaced with a rebuilt force gage with NIST Certificate if found out-of-tolerance.

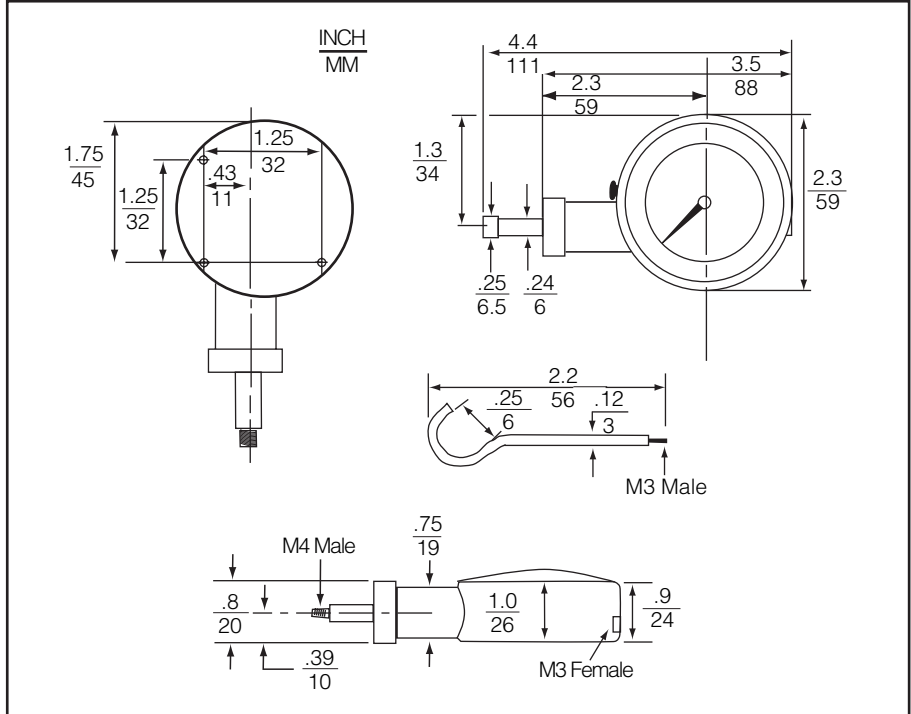


Wagner Fruit Test™ Model FTX



FTX shown mounted on FTK Test Stand

FTX DIMENSIONS



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Warranty and Limitation of Liability

Wagner Instruments expressly warrants to its buyer for one year from the date of purchase that the goods sold shall be free from defects in workmanship and materials under normal conditions. Wagner Instruments will, at its option, replace, repair, or refund in full, the purchase price of the instrument or any part thereof which in our opinion is defective, provided the instrument has not been subjected to tampering, abuse or exposed to highly corrosive conditions. An instrument that has been improperly used cannot be considered under this warranty. We make no warranties, expressed or implied, including, without limitation, any warranties of fitness or merchantability, except as expressly set forth above. We shall not be liable for any anticipated or lost profits, incidental damages, consequential damages, costs, time charges, or other losses in connection with the instrument or replacement parts thereof. If a manufacturing defect is found, we will replace or repair the instrument or any defective part thereof without charge; however, our obligation hereunder does not include the cost of transportation which must be borne by the customer. We assume no responsibility for damage in transit, and any claims for such damage should be presented to the carrier by the purchaser. In addition, we may, at our option, take back the defective instrument and refund, in full settlement, the purchase price thereof.

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FRUIT TEST™ FTX APPLE TESTER



**OPERATION MANUAL
IMPORTANT INSTRUCTIONS
READ BEFORE USING GAGE**

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