

Model: FT-3103

# CONSTANT STRAIN FATIGUE TESTER



## Outline

As specified in ISO 6943, this fatigue tester applies a constant maximum elongation (strain) of repeated tensile deformation to dumbbell-shaped test pieces with predetermined gauge lines. It automatically detects the number of repeated deformations at the break. This is a device that measures the mechanical fatigue life of vulcanized rubber.

Up to 20 test pieces can be attached, and the model equipped with a constant temperature chamber can create a temperature environment up to 150 °C. In addition, a handle for rotating the eccentric wheel is standard equipment to reduce the burden of attaching the sample to the grip.

## Features

- Tests can be performed on up to 20 test pieces simultaneously. The number of strokes at breakage is retained for each test piece.
- The lower chuck position can be adjusted by turning the handle outside the device so that the test pieces can be set easily.
- A fine chuck adjustment mechanism, optional, allows for a more precise elongation (strain) setting.
- The machine will stop when there is not enough machine oil in the bending drive unit.
- It has a robust design that can withstand long-term use.

## Specifications

|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| MODEL                  | FT-3103                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Reference Standard     | JIS K 6270、ISO 6943                                                                                                                                                                                                                                                                                                                                                                                                            |
| Quantity of Specimen   | 20                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Shape of Specimen      | Dumbbell Shape (JIS Types 3, 5, 6)                                                                                                                                                                                                                                                                                                                                                                                             |
| Frequency              | 1 to 5Hz                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Stroke                 | 3 to 100mm                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Temperature range      | Rt+10°C to 150°C                                                                                                                                                                                                                                                                                                                                                                                                               |
| Operation unit         | Touch panel method                                                                                                                                                                                                                                                                                                                                                                                                             |
| Counters               | Total Counter 8digits<br>Preset Counter 8digits<br>Counter of each Channel 8digits<br>Preset timer 9999H 59M 59S                                                                                                                                                                                                                                                                                                               |
| Heating method         | Heater 4kW agitated by the fan                                                                                                                                                                                                                                                                                                                                                                                                 |
| Temperature Controller | Digital controller, Sensor 100Ω, PID control                                                                                                                                                                                                                                                                                                                                                                                   |
| Agitation Equipment    | 3-phase 200V 90W motor, Sirocco Fan                                                                                                                                                                                                                                                                                                                                                                                            |
| Drive unit             | 3-phase 200V 1.5kW motor                                                                                                                                                                                                                                                                                                                                                                                                       |
| Safety Devices         | (1) Earth leakage breaker<br>(2) Overheat protector<br>(3) Door open / close detection<br>(4) Thermal relay (drive and stirring motor)<br>(5) Oil level detection                                                                                                                                                                                                                                                              |
| Power supply           | 3-phase 200V 50Hz 30A                                                                                                                                                                                                                                                                                                                                                                                                          |
| Power consumption      | 6kVA max.                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Dimensions             | 970(W)×1620(H)×700(D) (mm)                                                                                                                                                                                                                                                                                                                                                                                                     |
| Optional               | (1) Chuck fine adjustment mechanism<br>The elongation between the gauge lines can be fine-tuned for each individual channel by adjusting the vertical position of the lower chuck.<br>Adjustment range : 40mm max.<br>(2) Refrigerator Specifications<br>We will consult with you depending on the temperature range.<br>(3) Oil drip control mechanism<br>(4) Liquefied carbon dioxide gas cylinder connection specifications |



~ Simulate product testing in the lab ~

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