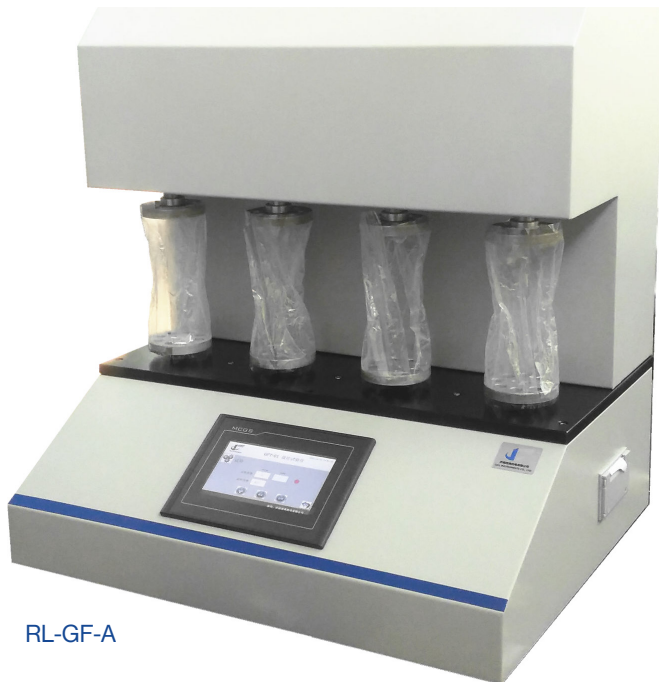


# GFT - Flex Durability Tester



RL-GF-A



RL-GF-B

Repetitive flexing of barrier films can induce microcracks that evolve into pinholes, compromising package integrity and risking product loss. Flex durability (Gelboflex resistance) is therefore a critical quality metric for food, medical, and industrial packaging, directly impacting shelf life, safety, and customer satisfaction. ASTM F392 remains the industry standard for flex testing, correlating laboratory data with real world handling and distribution stresses.

## GFT Flex Durability Tester

The GFT Flex Durability Tester automates the ASTM F392 “Gelbo” flex test—applying combined twisting (440° over 90 mm) and horizontal compression (65 mm) at 45 cycles/min—to quantify pinhole formation and flexcrack resistance in flexible barrier films, composites, and coatings.

## Applications

- Flexible Barrier Films & Laminates: PE, PP, PET, EVOH composites, where flex cracking must be minimized.
- Coating Films & Composites: Metalized or barriercoated substrates used in high performance packaging.
- Medical & Sterile Packaging: Ensuring pouches and pouches withstand flex fatigue during handling and sterilization.
- Industrial Films: Geomembranes, agricultural films, and protective barrier membranes

## Test Method & Sampling

- Specimen Mounting: Clamp or stick 200 × 280 mm samples on three mandrels (GFT-02) or four mandrels (GFT-01).
- Flex Cycle: Execute a 440° twist during the first 90mm of stroke, immediately followed by 65 mm linear compression, at 45 cycles/min
- Mode Selection: Choose one of five preprogrammed modes:
  - A: 2,700 cycles (1 hr)
  - B: 900 cycles (20 min)
  - C: 270 cycles (6 min)
  - D: 20 cycles (full flex)
  - E: 20 cycles (partial flex)
- Failure Detection: Monitor for pinhole or crackformation; Check GTR, OTR, WVTR change.



**Technical Features and Benefit**

1. PLC Control & HMI Touchscreen: Industrial reliability with intuitive test setup and control
2. Three or Four Test Stations: Parallel testing to boost throughput and comparative studies
3. Five Programmable Modes (A–E): Flexible protocols from quick screening to full endurance runs

**Standard**

ASTM F392: Standard Test Method for Flex Durability of Flexible Barrier Materials

**Specifications**

	RL-GF-B	RL-GF-A
Flex Frequency	45 / minute	
Flex Angle	440° (90mm) or 400° (80 mm)	
Capacity	3.5Nm	2.5Nm
Horizontal stroke	155 mm or 80 mm	
Stations	3	4
Sample size	280 mm x 200 mm	
Power	AC 110-220 V 50 Hz	

**Flex Stages**

