



# FZT-2

**FULLY AUTOMATIC  
FLOAT GLASS ZEBRA  
ANGLE TESTER**

# Overview

The Automatic Float Glass Zebra Angle Tester is a patented inspection instrument developed in China to replace traditional manual observation with high-precision computerized measurement.

This system automatically evaluates the zebra angle of float glass using advanced optical technology, providing consistent, objective, and highly accurate results.



## Standards Compliance

- ISO TC160 N63E-83
- JIS R3202-1996
- EN 572-2
- GB 11614-2009

## Measurement Capabilities

Measuring range:  $0^{\circ}$ – $75^{\circ}$

Measurement accuracy:  $\pm 0.2^{\circ}$

Repeatability: Better than  $1^{\circ}$

# Core Technology

Powered by virtual moiré technology, the FZT-2 is a powerful tool for glass quality inspection, capable of accurately detecting zebra angles across a wide range of float glass products. The system is fully compliant with major international standards.

# Model Upgrade Summary

The FZT-2 Fully Automatic Float Glass Zebra Angle Tester is an upgraded model of the earlier FZT-1. It features higher precision components, faster processing, and a newly engineered low-noise rotating sample table. Together, these improvements deliver significantly enhanced performance compared with the FZT-1.



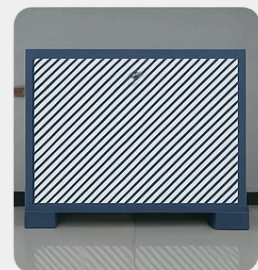
# Usability and Operation

The FZT-2 delivers fast, accurate, and user-friendly measurement performance. It supports both manual and automatic modes, allowing operators to select the testing method that best fits their workflow and inspection requirements.

## Industrial Applications and Measurement Reliability

Equipped with advanced optical components, upgraded mechanical design, and intelligent software control, the FZT-2 ensures stable and reliable zebra-angle measurement. Its precision and consistency make it suitable for use in laboratories, production lines, and quality-inspection departments throughout the glass manufacturing industry.

## Component Display Figures



# OPERATING CONDITIONS

Power Supply	Single-phase AC 220 V, 50 Hz
Grounding Requirement	Instrument must be properly grounded
Environmental Requirements	Clean workspace; dim lighting; no direct sunlight
Ambient Stability	Indoor conditions must remain stable; no dust, strong vibration, or rapid environmental changes

# TECHNICAL SPECIFICATIONS

Zebra Screen Size	2400 × 1500 mm
Zebra Stripe Width	25 mm
Dial Resolution	1°
Measurement Accuracy	±0.2°
Measurement Stability (Repeatability)	≤ 1°
Supported Glass Thickness	0.25 mm – 19 mm
Ultra-Thin Glass	Requires dedicated fixture
Tendon Display	Capable of displaying positions of the five most prominent glass tendons
Supported Transmittance	Suitable for glass with 10%–95% optical transmittance

# Function Introduction

## 1. Manual and Automatic Measurement Modes

To support both traditional and automated testing workflows, the FZT-2 Zebra Angle Tester is equipped with manual and automatic measurement functions.

In manual mode, the operator controls the rotation of the glass bracket. The measurement process is similar to the traditional zebra-angle method performed by the human eye, allowing direct comparison between manual and instrument-based results.

In automatic mode, the operator simply places the glass sample onto the rotating bracket. All subsequent testing steps are completed automatically by the instrument. The system intelligently determines the critical deformation state of the zebra stripes and calculates the zebra angle without operator intervention. Measurement results—including the positions of the five most prominent glass tendons—are automatically displayed on the computer screen.

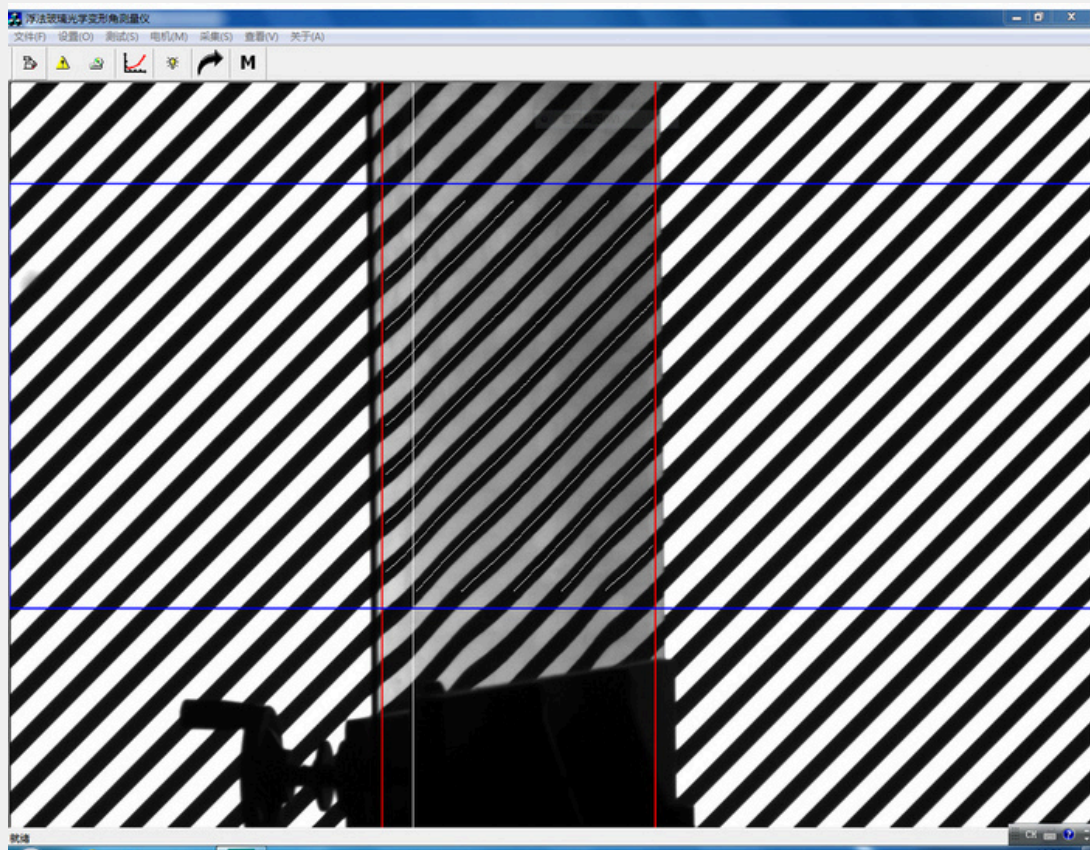
## 2. Advanced Technology and Industry Application

As a new-generation testing instrument for the glass industry, the FZT-2 employs advanced optoelectronic technology and modern measurement algorithms to deliver stable, objective, and highly accurate zebra-angle data. Its performance has earned wide recognition from major glass manufacturers and inspection institutions.

The FZT-2 has been adopted by numerous industry leaders, including Qibin Group, Jinjing Glass Group, Xinyi Glass Group, and other well-known enterprises. It has become an essential instrument for laboratory testing and quality-control departments throughout the float-glass industry.

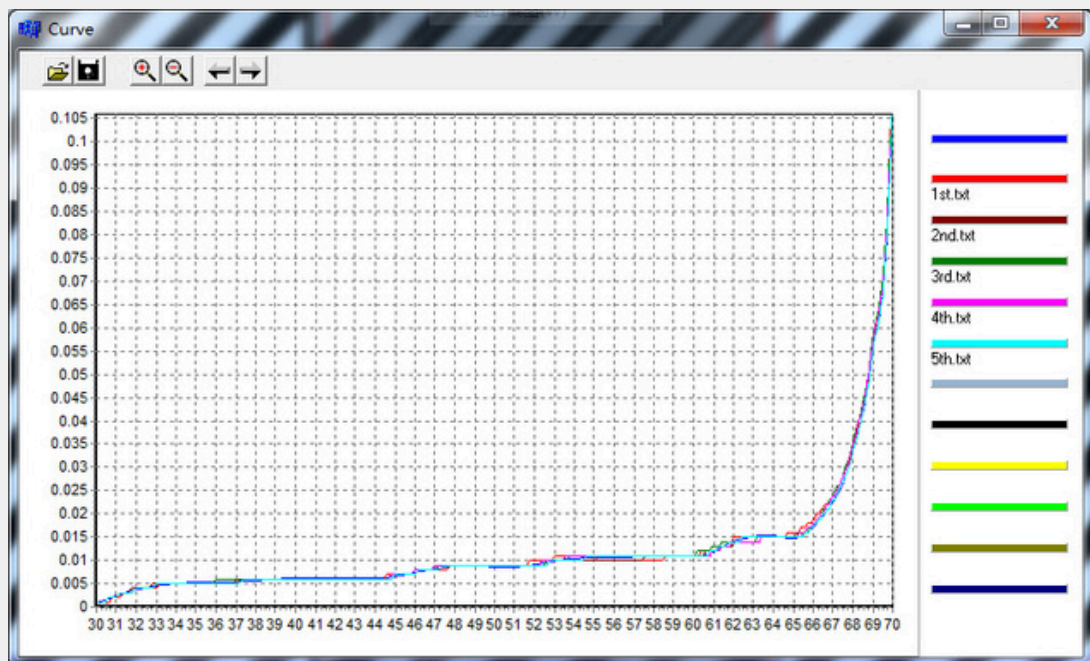
The instrument is protected by a national patent, Patent No. ZL.2004200069278.





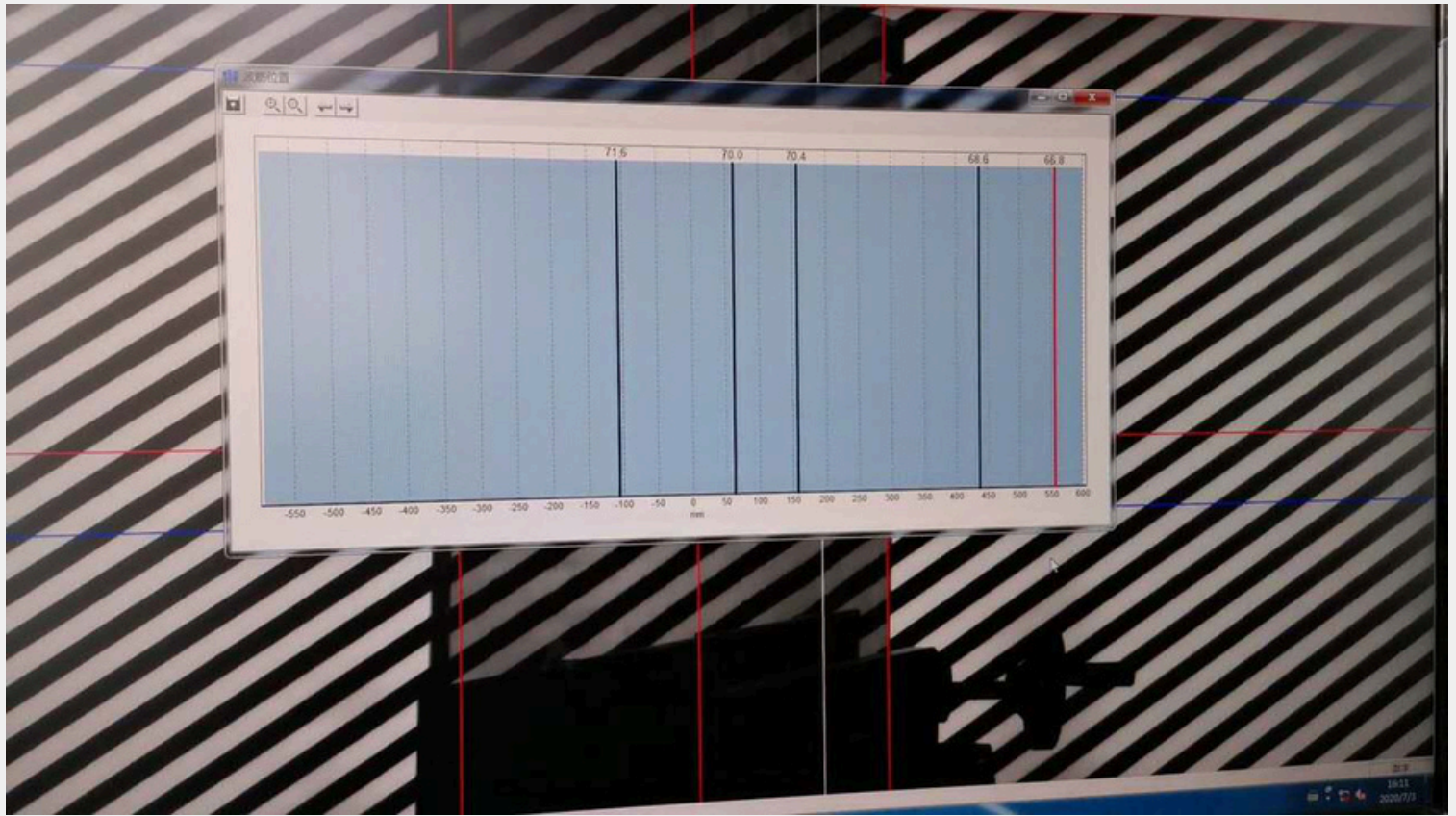
## Real-Time Visualization of Zebra-Stripe Deformation During Measurement

The system interface provides live imaging of the sample with overlaid reference lines, enabling real-time observation of zebra-stripe deformation and immediate confirmation of measurement alignment.



## Repeatability Curves Demonstrating Zebra-Angle Measurement Stability

This chart displays multiple consecutive test curves (1st–5th runs), illustrating the system's ability to produce highly consistent zebra-angle calculations across repeated measurements.



### **Automated Mapping of the Five Tendons With the Highest Stress Signal**

This diagram illustrates the system's automatic identification and spatial positioning of the five most pronounced stress tendons, allowing operators to assess structural uniformity and localized deformation.

Repeat Test Curves Showing Zebra Angle Measurement Consistency

1



### **DUAL MODES**

Manual and automatic measurement modes

2



### **FULL AUTOMATION**

Automatic mode performs full testing after sample placement

3



### **SMART DETECTION**

System detects zebra-stripe deformation and calculates angle automatically

4



### **CLEAR RESULTS**

Displays zebra angle and top five tendon positions

5



### **HIGH ACCURACY**

Provides stable, objective, and accurate measurement data

5



### **INDUSTRY ADOPTION**

Trusted by major manufacturers