

# Non-Linear Fracture Toughness Software



Bulletin 400-01

**The FTA NLFT software is used for performing both linear-elastic fracture mechanics tests such as ASTM E399 and nonlinear tests such as ASTM E1820.**

## NLFT Software

The Non-Linear Fracture Toughness software was written specifically for fracture toughness testing and analysis. This software is used for performing both linear-elastic fracture mechanics tests such as ASTM E399 and nonlinear tests such as ASTM E1820. The firmware running on the ADwin includes high-priority processes for waveform generation, control and data acquisition. PC software that integrates with the ADwin in real time performs the analysis required to determine the crack length and real-time calculation of the K and J parameters.

## Software Features

- ▲ The ability to perform linear-elastic, i.e., ASTM E399, or nonlinear, i.e., ASTM E1820, fracture toughness tests
- ▲ Support for many standard specimen geometries, including C(T), M(T), SEN(T), SEN(B), and user-defined K solutions
- ▲ Compliance and DC potential difference methods of monitoring crack length
- ▲ Simultaneous crack length monitoring with multi-monitoring feature
- ▲ User-specified control and data acquisition rates for a wide range of test conditions
- ▲ Precise position control and high-precision data acquisition
- ▲ Real-time display of load displacement, J- $\Delta a$  and amplified unloading slopes
- ▲ Real-time evaluation of unloading slopes and stable crack growth
- ▲ The ability to perform testing with unloads at a fixed load drop or as a percentage of maximum load
- ▲ Real-time calculation of fracture toughness data and parameters
- ▲ Complete automated control and limit functions



- ▲ Storage of all force and displacement parameters for subsequent analysis
- ▲ Auxiliary channel storage available on up to 2 additional channels
- ▲ Versatile analysis software, including playback tool for slope analysis
- ▲ Support of English and SI units

## Request a Quote

Contact us at [FTAsales@labtesting.com](mailto:FTAsales@labtesting.com) to learn more.