

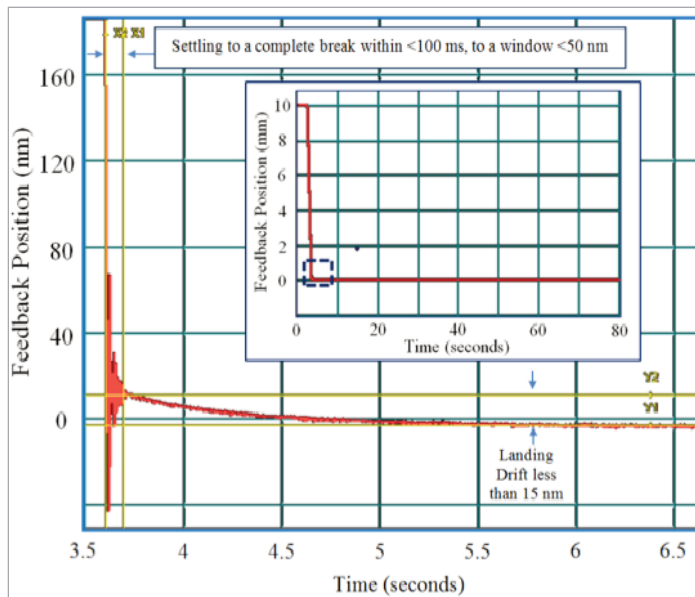
# FB Series

## Move and Settle Motion Profiles & Braking

The ability to step and settle to a stable position is essential to many motion applications. Nanomotion's piezo stages have:

- zero backlash
- zero hysteresis
- no internal motor inertia
- faster response than traditional motor technology

The ability to accelerate an axis with Nanomotion's piezo motor technology is greatly enhanced as the inertia only comes from the moving load. Aside from an ultrasonic standing wave, there are no moving parts internal to the motor. The ability to stop (brake) and hold position with stability is also enhanced by the inherent friction of the ceramic tip working on a ceramic drive surface. These characteristics allow for optimum move and settle, along with the ultimate in position stability.



The motion profile reflects the position and velocity profile, reaching position stability at the end of the move command, settling to +/- 1 encoder count. The drift (position stability) is measured at <5nm per minute.

The ability to make more than 20 moves in 1 second, averaging 50msec, for move and settle, is demonstrated over 25 million cycles.

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The motion profile below reflects the position and velocity profile, reaching position stability