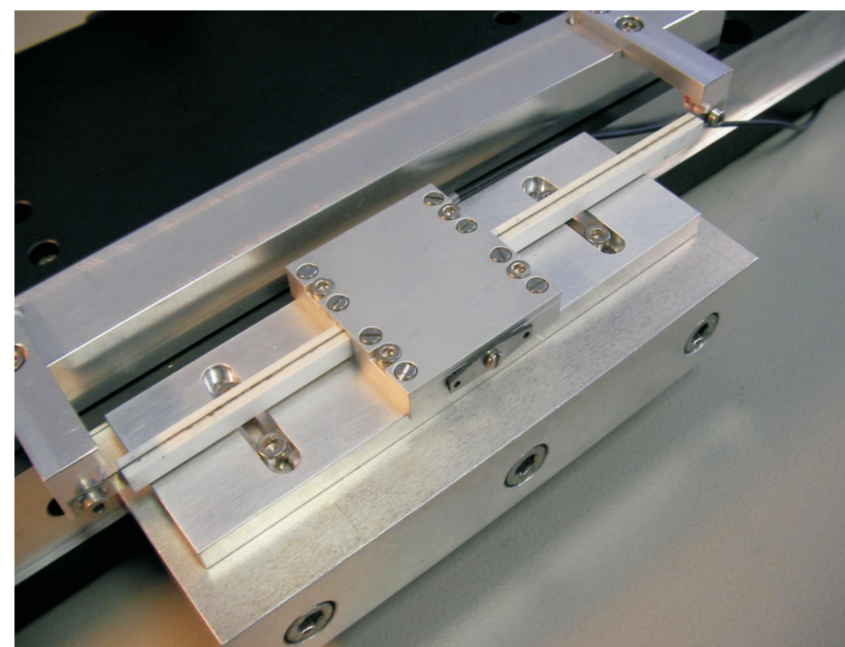
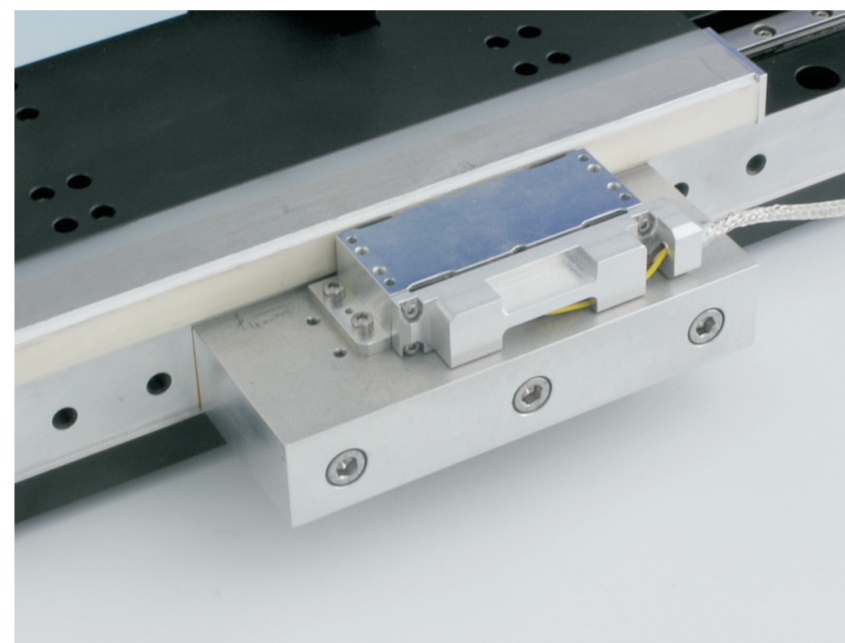
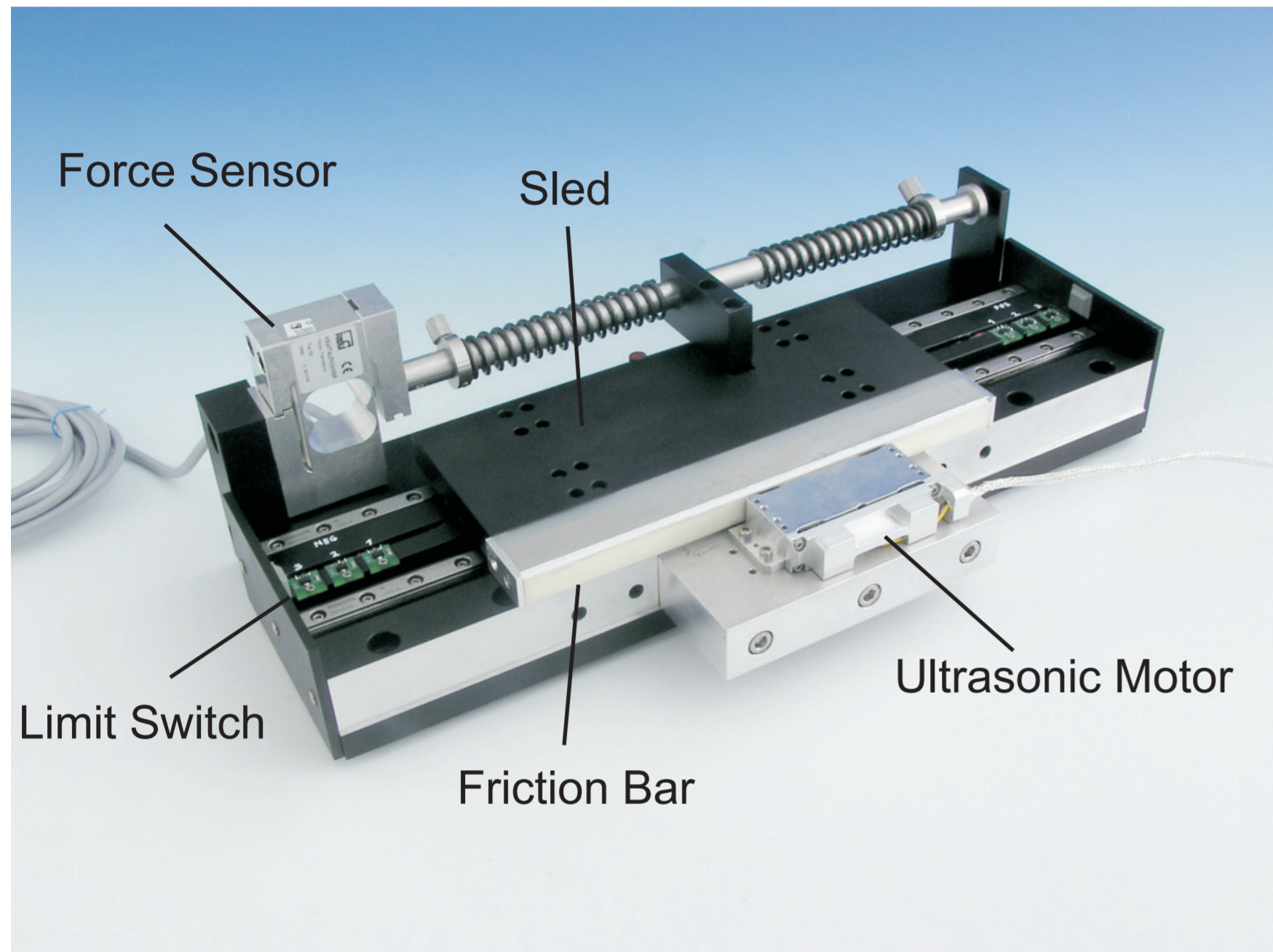


Test Stand for Analyzing New Types of High-Performance Ultrasonic Piezomotor Drives

Variable Metrology Stand for Piezoelectric Ultrasonic Motors

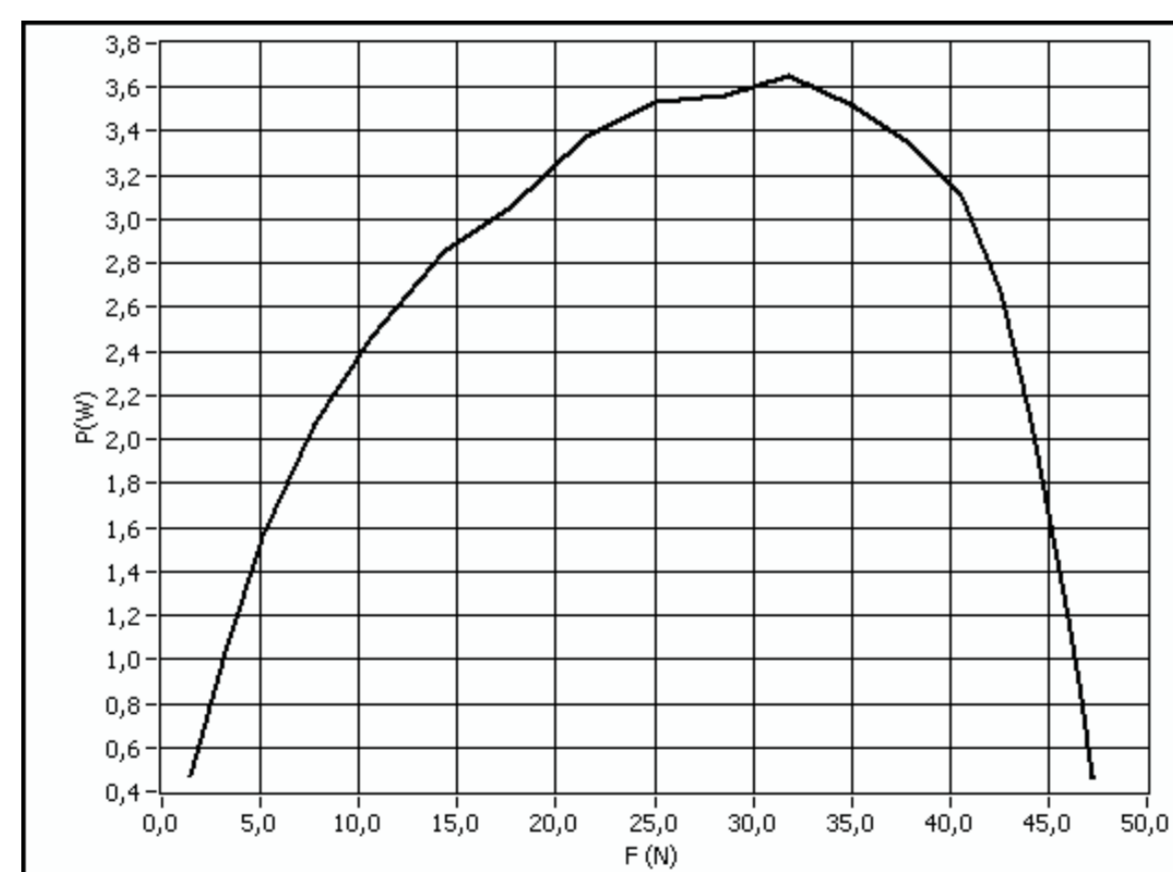
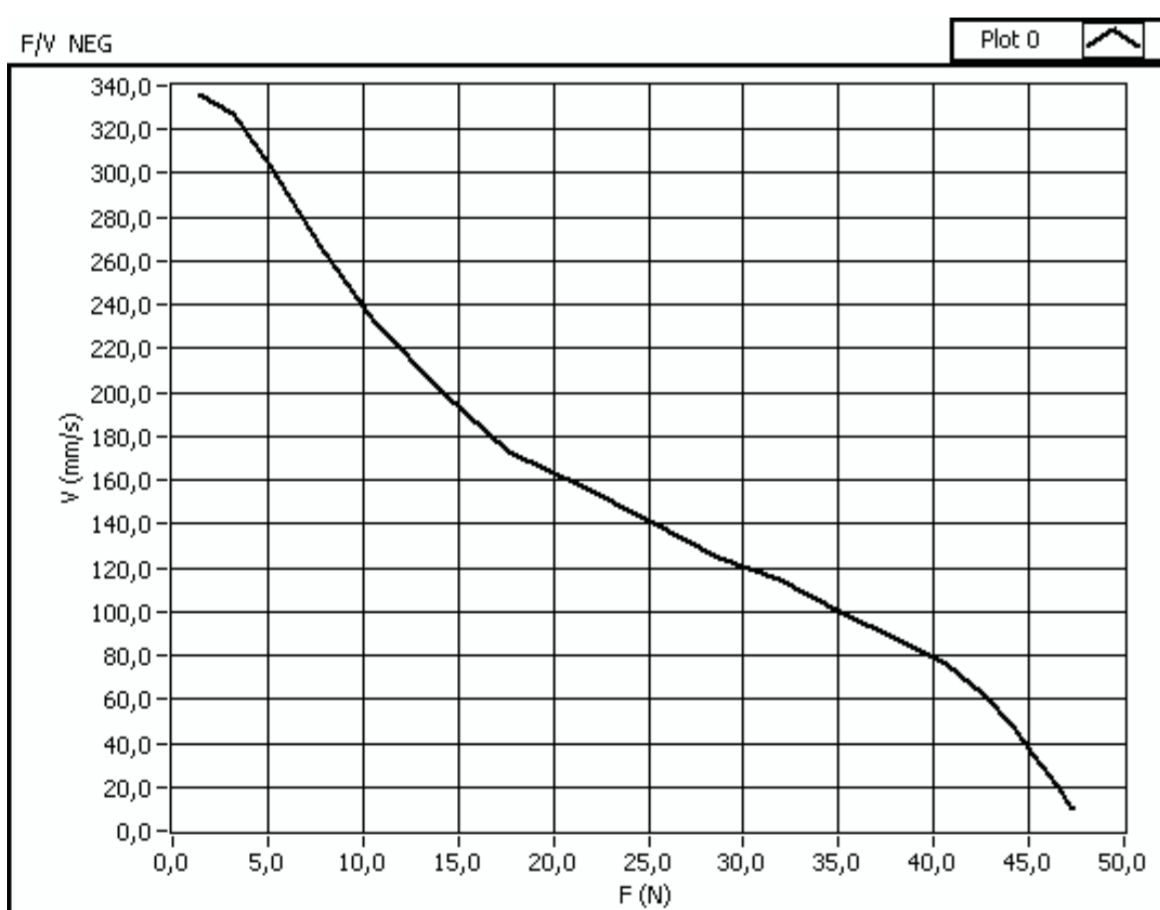
Test Stand



Design Features

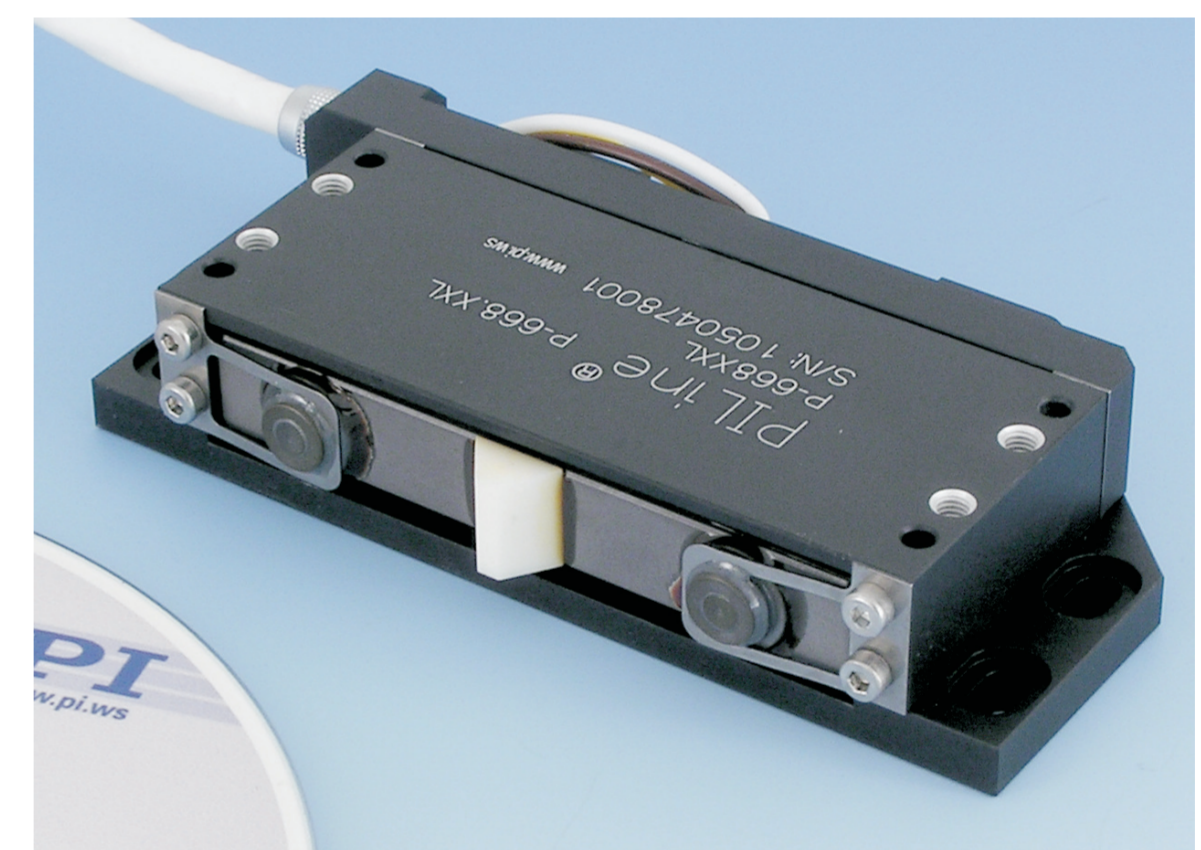
- Interchangeable adapter to fit various piezo actuators and motors
- Interchangeable friction bar for analysis of different friction materials
- Travel range of 160mm
- Velocities up to 1.2m/s
- Resolution of 100nm
- Force measurement of 0.5 to 100N
- Automated measurement process

Measured Characteristic Curves



Force vs. Speed Characteristic

Force vs. Power Characteristic



- Measured characteristics of a 60x26x9mm piezo ceramic actuator
- Various mechanical and electrical properties can be displayed and permit easy analysis

Summary

- Flexible, easy to handle measurement
- Automated measurement of travel, speed and force
- Graphic user interface to control and evaluate measurement
- Measurement of electrical characteristics
- Open-loop and closed-loop operation

Fields of application

- Determination of characteristic curves
- Investigation of different friction element pairs
- Development and improvement of linear, ultrasonic motors
- Endurance and efficiency testing
- Production quality assurance
- Optimization of the motor driver electronics