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## Quanser Flexible Beam

This experiment models the behaviour of a real rigid element, e.g., a robotic arm. This additional module can be mounted on the Rotary Servo Base Unit. It consists of a head with an elastic beam and integrated strain gauge. The goal of the exercise is to control the motor in the base in such a way that after the movement the tip of the beam stops in a fixed position as quickly as possible. Students model this object mathematically and then design algorithms necessary to control it. The kit incl...

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### Basic technical parameters:

- Base parameters:
  - High quality servo motor (6V, 1A, 6000 RPM)
  - Potentiometer for measuring the position ( $\pm 5V$ )
  - Quadrature encoder (4096 pulses / revolution)
  - Gears with the possibility of changing the gear ratio
  - Comprehensive educational materials compatible with NI LabVIEW and Matlab / Simulink included
  - Open architecture allows to create own control algorithms.
- Module parameters:
  - Beam length: 419 mm
  - Strain gauge factor: 25.4 mm / V