

Success Cases – Quadrupole Movers for European XFEL

- **Function & Architecture**
 - X-Z Movers with submicron repeatability for the positioning of Quadrupoles
- **Product Specificity & Achievements+**
 - Quadrupole weight: 75kg
 - ± 1.5 mm stroke in both axes from nominal centered position
 - Absolute measurement of the vertical and horizontal position with LVDT sensors
 - Closed-loop position control. Precision linear compact actuators
 - Submicron RMS repeatability in both movements
 - Quadrupole upper plane alignment to base for any position better than 3 mrad for Yaw and Pitch angles, 0.6 mrad for Roll angle
 - Travel length of movement limited by limit switches. End of movement physically limited by hard stops
 - High reliability and long-time availability
 - Robust and reliable blocking system for long-term storage and transport
- **Main skills involved & Value Added:**
 - Precision mechanics
 - Measurement and testing technology
 - Electronic control technology

