

Rotation stage

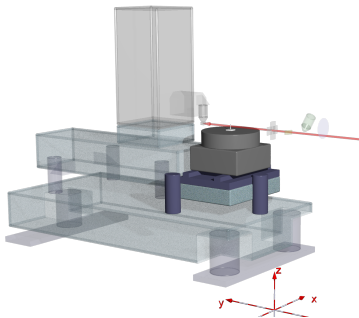
Overview

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The rotation stage is built by Aerotech and consists of a precise air bearing rotation stage (ABRT-260) in the center, a less precise roller bearing rotation stage (ALAR-325) which carries a slip ring and can only be operated in slave mode with the inner rotation stage, a tripod to lift (in z-direction) or tilt the rotation axis and an air bearing linear stage to move the rotation stage sideways (in x-direction). Integrated in the inner rotation stage is the [sample stage](#), a piezo stack with 5 degrees of freedom to align the sample w.r.t. the rotation axis.

i Sample height

Together with the z-displacement of the [base stage](#) and [camera stage](#), a sample can be mounted up to ~180 mm above the top surface of the rotation table and still be brought into the beam.



Motion

The coordinate system is defined in the sketch above - rot_x, rot_y and rot_z refer to rotations around the x, y and z axes respectively.

direction	travel range
x	+/- 100 mm
y	-
z	+/- 50 mm
rot_x	1.5°
rot_y	1.5°
rot_z	endless