

5-axis Alignment Table

Features of the alignment table

The alignment table forms the basis of the experimental set-up and is equipped with two different platforms to support the required endstation components. The goniometer (diffractometer), the cryojet, a compact sample changer such as the SC3, and any other component to be installed in the sample environment will sit on the lower level platform. This will be positioned as one common unit to the beam by means of a very robust 5 axis kinematic mount. The upper level platform allows a manual adjustment of beam conditioning elements such as attenuators, beam position monitors, slits, ion chambers, and the shutter. Each of these devices can be positioned parallel and perpendicular to the beam by means of manual or motorized positioning units for alignment purpose. Once the initial alignment is achieved, all the elements of the endstation can be adjusted to the beam position, as one assembly, using the kinematic mount of the support structure.



Mechanical properties

5 axis kinematic mount:

- Vertical and horizontal motions designed to carry a weight of up to 3000 kg
- Every motion equipped with rotary encoders on the motors
- Linear encoders available optionally
- Two high precision limit switches on each axis
- Self locking gears on each unit to secure the position at power failure

Support table:

- Customized dimensions of the support tables
- Individual arrangement of beam conditioning elements
- Easy Integration of additional components
- Integration of the sample robots possible.

Control options:

Beside the hardware of the alignment table and the detector support Bruker ASC can also supply:

Motion control:

- Connectors and cables as specified by the customer
- Motor drivers
- Motor control software
- Software for the combined motions

Diffractometer/Beam-Conditioning-Elements:

- Control of the Microdiffractometer MD2 (see product sheet)
- Shutter Control
- Beam Position Monitor readout
- Slit system and attenuator control
- Customized GUI
- System integration of the components mentioned above

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