

CATS Sample Manipulator for MX Beamlines



Robotic system intended for macromolecular crystallography on Synchrotron beamlines.

Transfers automatically frozen samples (SPINE standard or similar) from the storage Dewar to a diffractometer.

Performs in-situ analysis with crystallization plates.

Released in 2007, CATS has a leading position in Europe, equips the high-throughput beamlines at Argonne and is the reference station for the Chinese scientific community.

Free your hands and mind for Science

- Fast and reliable sample transfer
- Low maintenance
- Compatible with all existing standards
- Ready for future standards and functions
- Advanced technology for plates screening
- Custom and smooth integration



Courtesy of Dr Uwe Mueller – MX beamlines at BESSY II

Technical information

- High performance Stäubli robot (30µm repeatability, 50µm sphere of confusion for a 20° screening range)
- Different storage Dewars with automatic liquid nitrogen filling (capacity from 3 to 27 pucks)
- Automatic gripper changer (frozen samples / plates manipulation)
- Numerous hardware inputs/outputs and simple software communication via socket commands
- Shock sensor on robot arm for safe process
- Robot automatic calibration for absolute precision and reliability over time
- CE marking and compliance with international safety standards
- Built-in traceability and diagnostic tools (barcode reader, laser sensor)

References

SLS, DLS, Bessy II, APS, LNLS, Alba, MAX II, Soleil, ESRF, SSRF.

Engineering company located in a high-tech environment, IRELEC supplies highly reliable systems operating in extreme environmental conditions for Industry and Scientific Research.

