IRELEC
ALCEN

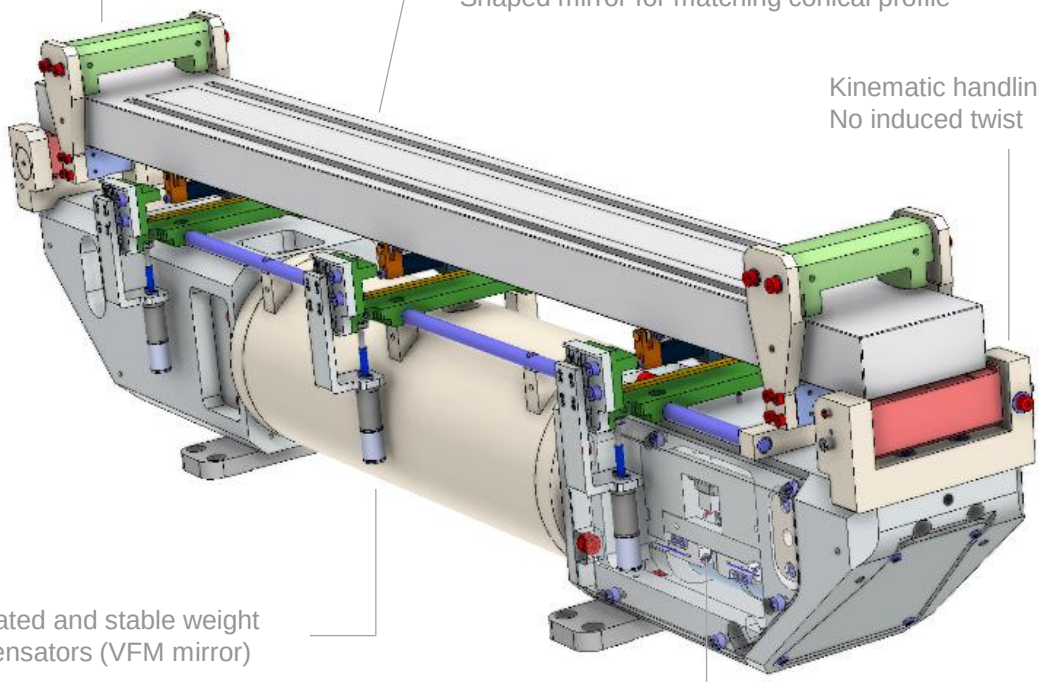
Bending system | IR-B-2

A decisive asset for a fine control of the mirror desired shape whatever the optical configuration

Force-driven bender
Minimum thermal sensitivity

Mirror length from 0.1 to 1.5 m
Shaped mirror for matching conical profile

Kinematic handling of mirrors
No induced twist



Calibrated and stable weight compensators (VFM mirror)

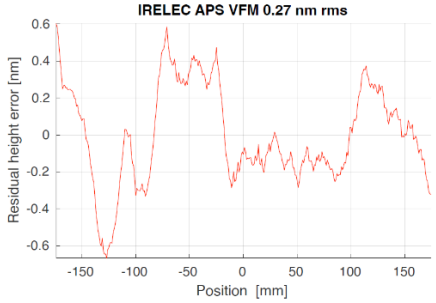
Two independent actuators with absolute encoding and end travel switches

Phone: 33 (0)4 76 44 12 96
Irelec@Irelec-alcen.com
Irelec-alcen.com
20 rue du tour de l'Eau | F-38400 S^{T} Martin d'Hères

Bending system | IR-B-2

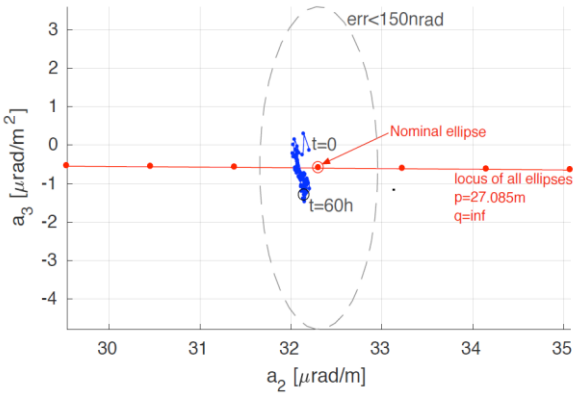
Performances

Tangential slope error	< 100 nrad rms / target shape
Bending range	From 50 m to ∝
Resolution	ΔR/R ≤ 0.01%
Long term stability	ΔR/R ≤ 0.05%
Vacuum compatibility	10^{-10} mbar



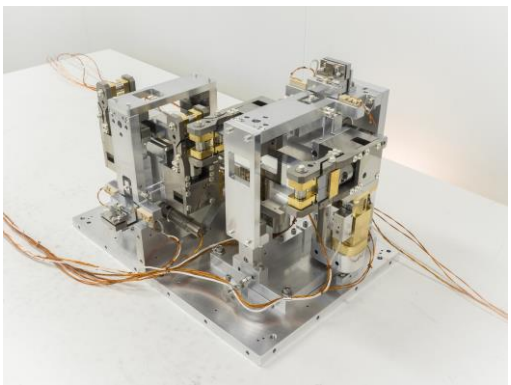
Distinguished advantages

- Fine control of the bent shape
- No twist induced
- Independent bending moments
- No sensitive to thermal effect
- UHV compliant
- Custom integration



Options

- Mirror long-period error compensation
- Cooling system
- Compact version



Reference & Publications

MAX IV, PETRA III, NSLS II, ESRF, SOLEIL, DIAMOND, ALBA, ANKA, APS, NSLS II, Australian Synchrotron, DELTA, INDUS II, Eu-XFEL, SHINE

J. Juanhuix et al., J. Synchrotron Rad. (2014), 21, 679-689.
Developments in optics and performance at BL13-XALOC, the macromolecular crystallography beamline at the Alba Synchrotron.

T. Plivelic at al., AIP Conference Proceedings 2054, 030013 (2019) – X-ray tracing, design and construction of an optimized optics scheme for CoSAXS, the small angle x-ray scattering beamline at MAX IV laboratory.

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