Articulated Mirror Arm

The articulated mirror arm is an integrated light guide for delivering controlled laser illumination to the measurement plane in PIV experiments. This beam delivery solution is particularly effective in cases when the laser needs to be kept away from the experiment due to space constraints or hostile conditions. In addition, the optical alignment of the laser-arm assembly is highly stable and independent from the application it is used on. The arm interfaces to Nd:YAG PIV lasers, both mini- and large models, assembled on static or mobile bench units that can be moved easily around the laboratory. The addition of a compact light sheet optics results in a versatile and self-contained illumination system that can safely deliver high power laser pulses to the experiment.

Main Features:
- Simple setup and alignment
- High mechanical stability
- Safe beam containment between the laser and the experiment
- 360 degree orientation and positioning of the light sheet
- Reach up to 1.6m extended
- Automatic traversing option
- also in UV range capable
Specifications

Arm
Dimensions: Fully deployed length 2000mm
Weight: 3kg
Counterweight(*): 8 kg
Degrees of Freedom: 7
Mirrors: 7 45 degree mirrors, rated to 4.5 J/cm²
Clear aperture: 15 mm

(*) Spring balancing option available on request

Base Block
Dimensions: 112 mm x 92 mm x 101 mm
Weight: ca. 5 kg
Beam adjustment: 45 degree steering mirror, 2 axis adjustment
Antireflection coating: Rated to 4.5 J/cm²

Accessories
Adapter for light sheet optics
Beam alignment tool

Options
Automatic light sheet traversing system

Light Sheet Optics
The articulated mirror arm interfaces with the complete range of ILA light sheet optics