

## Beam Directing Components

A laser beam delivery system is designed to safely deliver the laser beam to the workpiece with precision, accuracy, and stability in an industrial environment.

Haas, Inc.'s modular components feature a carefully considered design as well as a robust finish.

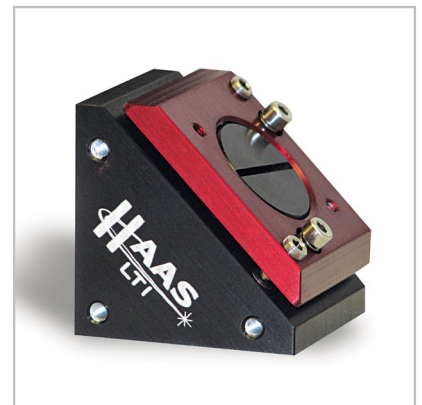
The standard components of the 19 mm aperture series are suitable for a maximum laser power of 500 W.

Laser beam directing components "direct" or "deliver" the laser beam to the workpiece. This is accomplished using laser mirrors that are fabricated using special materials with high-reflective coatings dependent on the laser wavelength and power.

All these units contain an independent orthogonal mirror adjustment of  $\pm 2^\circ$  with fine pitch adjusters. Different mirror sizes are possible from 1" to partly 4". The components can be face and side mounted. They use a sealed design made of anodized aluminum. The optic can be easily removed for cleaning or exchange. The components provide an option of internal-water cooling.

### Kinematic Beam Bender BBK Series

- Distortion-free mount for mirrors for all wavelengths
- For 90° beam displacement
- $\pm 2^\circ$  independent orthogonal mirror adjustment
- For optics with  $\varnothing$  1.0" – 4.0"
- Internally cooled copper mirror option
- Easy optic removal and replacement without affecting alignment
- Anodized aluminium construction



### Kinematic Beam Splitter BSK Series

- For splitting the beam in two parts
- One 90° reflected, while transmitting the other with minimal lateral beam displacement (determined by optic thickness)
- Also for recombining of two laser beams
- For optics with  $\varnothing$  1.0" – 3.0"



### Beam Switching Unit BSU Series

- „Time-sharing“ the same laser beam between two or more processing systems
- Contains an internal BBK beam bender mounted on precision linear bearings that can be translated in and out of the beam path.
- Pneumatic or manual configuration
- For optics with  $\varnothing$  1.0" – 3.0"

