

FARO® 3D-Contour

With High-Speed Focuser

High Bandwidth for Marking on Contoured Surfaces

The FARO 3D-Contour is a scanning solution offering 3-axis capabilities in a compact package for small to medium field sizes. The integrated design features FARO's advanced galvanometer technology providing superior bandwidth, accuracy, and flexibility, and incorporates a high bandwidth Z axis mechanism for marking on highly contoured surfaces. FARO's 3-Axis scan heads are designed to operate seamlessly with our WinLase® Laser Scan Control Software and process controllers, making for easy integration into workstations and assembly lines.

The natural focal surface of an XY galvo pair is a shallow sphere. One solution to operate on planar samples is an f-theta lens, but these limit field size, bloated laser spots, and are expensive. FARO's BLINK High-Speed Focuser is a far better solution. When used as the focusing element of a post-objective scanning system, BLINK dynamically maps a focal correction onto the laser beam as a function of its XY position, allowing high speed processing of large planar samples, with very small spot sizes and supports the processing of 3D samples. BLINK combines a precision ground guideway with direct voice-coil drive, resulting in a very compact, high-performance focuser capable of continuous operation with a 50G peak sine wave. Its ultra-low moving mass minimizes reaction forces. With only one moving part, BLINK offers exceptional reliability and service life when compared to traditional taut band actuators. When used in combination with the 3D-Contour, it provides an impressive 180 mm Focus Depth @ 96 µm spot size over a 425 mm field! (Nd-YAG)

Features and Benefits

- Large Field/Small Spot
- 13 mm input, 20 mm mirror aperture
- 1064nm
- Processes 3D work surface
- Easy generation of custom correction files
- Flexible for process development and job shop settings
- Ideal for high-volume factory laser processing
- Cost effective

Accessories

- Cables for data and power connections
- Protective windows for exit aperture
- Collimator adapters for fiber lasers
- DC power supply



Applications

- Large Field Marking
- Contoured Surface Marking
- Micromachining
- Textile Cutting and Embossing
- Solar/Thin Film Scribing
- Laser Process Development

3D-Contour 3-Axis Scan Head

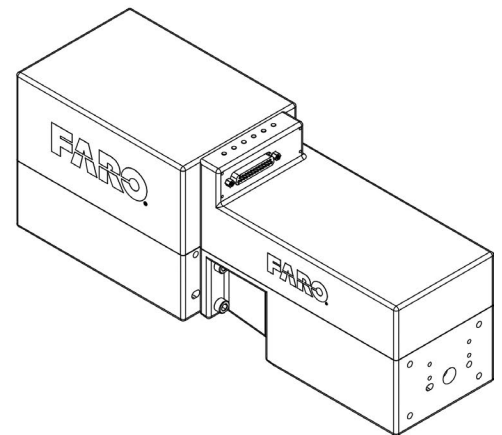
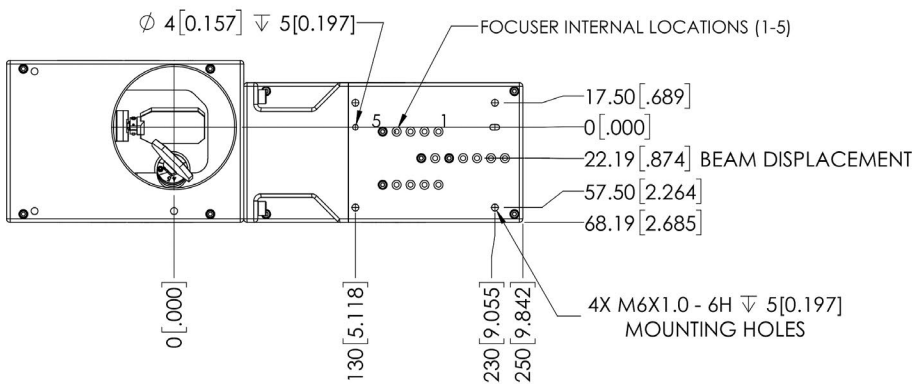
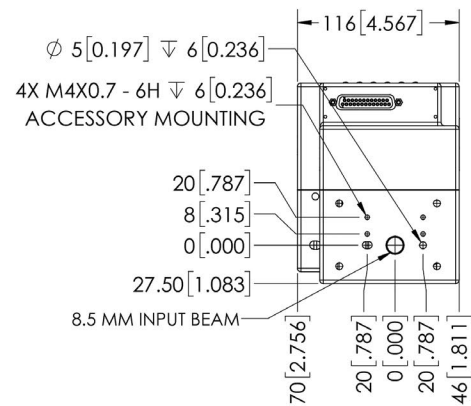
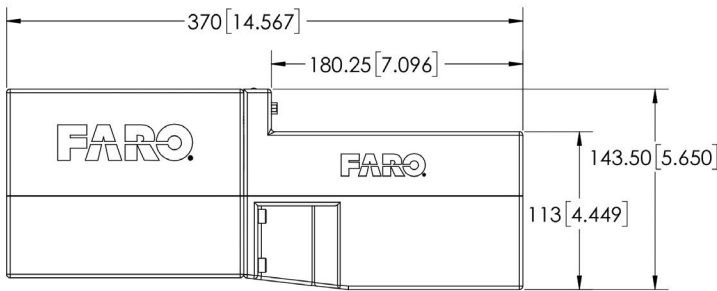
Field Size (mm) and Spot \varnothing^*

20 Nd: YAG (μm)

150	32
300	64
450	96

* $1/e^2$ spot @ center

The above charts assumes TEM 00 and $M^2 = 1.2$



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