# FiberCUT® RAa

Laser Mechanisms' FiberCUT® RAa laser processing head collimates and focuses a fiber-delivered laser beam and directs it, along with cutting gas, through its nozzle for optimal metal cutting. The head features programmable focus position adjustment which delivers exacting cutting in materials with varying thickness and fastest possible piercing. FiberCUT® RAa's nozzle also senses the required tip standoff from the workpiece and automatically maintains that standoff through its internal drive system.

- 3-dimensional cutting with fiber-coupled laser for 16 kg robots
- Up to 30 mm of programmable focus-to-tip adjustment
- Low moving mass minimizes inertia transfer to robot support arm
- Right angle entry of all connections, including fiber, provides tight access to parts, easy cable routing and stress reduction on input fiber

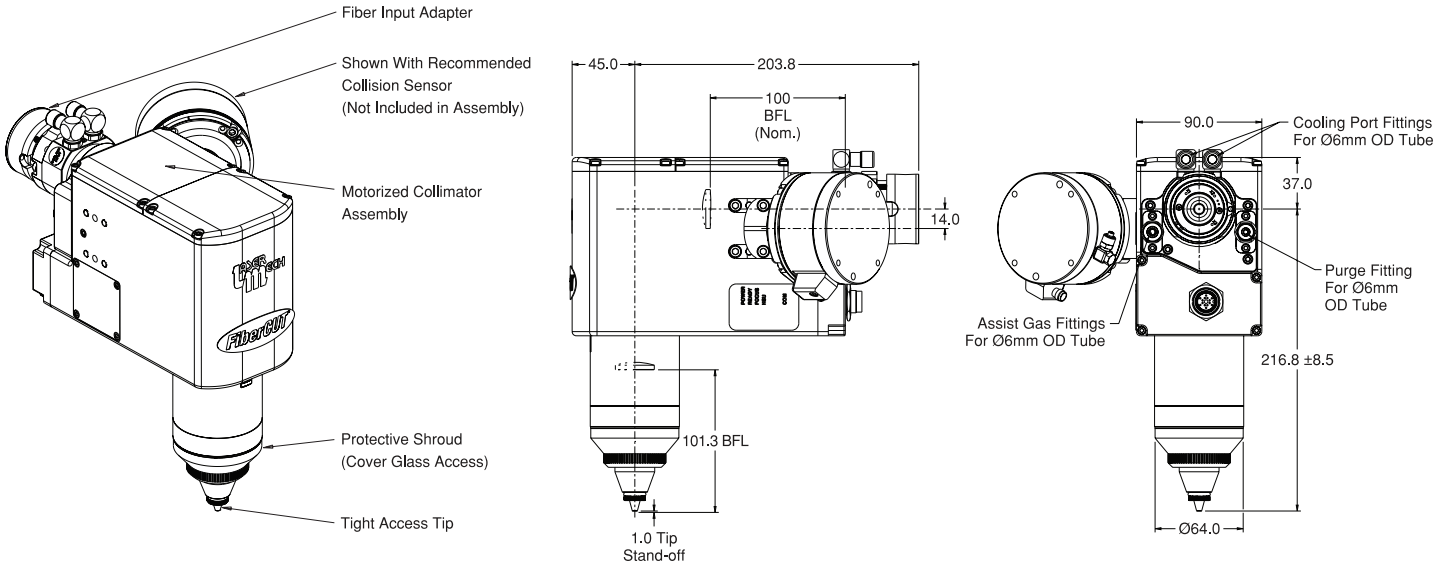
## Features

- Complete system consists of cutting head, motorized fiber collimator and linear drive with position monitoring
- Cam-operated drive system with axial crash protection

***Cartridge style drawer provides quick and easy access to the lower cover glass. Cleaning and replacement requires no tools and can be performed in a matter of seconds.***

***By locating all wiring and assist gas lines within the head, the potential for downtime due to snags and breaks is virtually eliminated.***

- All wiring and assist gas lines are internally plumbed – avoiding costly snags and breaks
- Upper cover glass to protect fiber/collimator optics
- Provides error signals in case of collision, over-temperature and exceeding the operating range
- Sealed beam path
- Multiple gas jet tip options to optimize cutting quality and speed
- X-Y beam-to-tip centering adjustment
- Works with all leading fiber-delivered laser systems up to 6 kW with wavelengths of 1030-1080 nm
- Multiple process monitoring capabilities
- Multiple water-cooling aperture specifications for varying (NA or BPP) lasers
- Engineered for the harsh factory floor environment
- Internal, low-noise height sensing system is unaffected by cutting plasma or piercing debris




***FiberCUT® RAa Laser Processing Head***

# Specifications

| | |
|---|---|
| **CUTTING HEAD** | |
| Power Rating | up to 6 kW |
| Focusing Lens (Focal Length) | 104mm, 130 mm, 150 mm |
| Focusing Lens (Diameter) | 28 mm |
| Clear Aperture | 25 mm |
| Nozzle Tip | Various Shapes |
| Assist Gas Pressure | up to 20 BAR |
| Weight | 4.5 kg |
| Slide Travel | ±8.5 mm |
| Max. Travel Speed | 175 mm/sec. |
| Standoff Distance Range (1 mm Recommended) | 0.5 mm to 2.0 mm |
| **COLLIMATOR** | |
| Focal Lengths (Doublet, Fused Silica) | 79 mm, 103 mm |
| Recollimating Lens (Diameter) | 28 mm |
| Clear Aperture | 25 mm |
| Fiber Socket (Others Available On Request) | QBH, LLK-B, QD |
| **CONTROL BOX** | |
| Sealed Enclosure | 380 mm L x 300 mm W x 160 mm H |
| Single Interconnect Cable | up to 20 m long |
| Number of Standoff Settings | 7 |
| Electrical Supply | 85-264 VAC, 1-Phase,47-63 Hz |
| Interface Inputs | 5-24 VDC, 2.2 kΩ impedance, optically isolated |
| Interface Outputs | 12-24 VDC, 150 mA max., sink/source, optically isolated |

Specifications subject to change without notice.

**Laser Mechanisms, Inc.**
25325 Regency Drive
Novi, Michigan 48375
Phone: (248) 474-9480
Fax: (248) 474-9277

**Laser Mechanisms Europe NV**
Groenestaakstraat 59
B-9030 Mariakerke, Belgium
Phone: +32 (0)92 18 70 70
Fax: +32 (0)92 18 70 79

**Internet**
Web: www.lasermech.com
E-Mail: info@lasermech.com

© 2024 Laser Mechanisms, Inc.
Laser Mech® and FiberCUT® are registered trademarks of Laser Mechanisms, Inc.