

FOL3015AJ Fiber Laser

FIBER LASER TECHNOLOGY. WORLD'S FASTEST LINEAR SPEED.

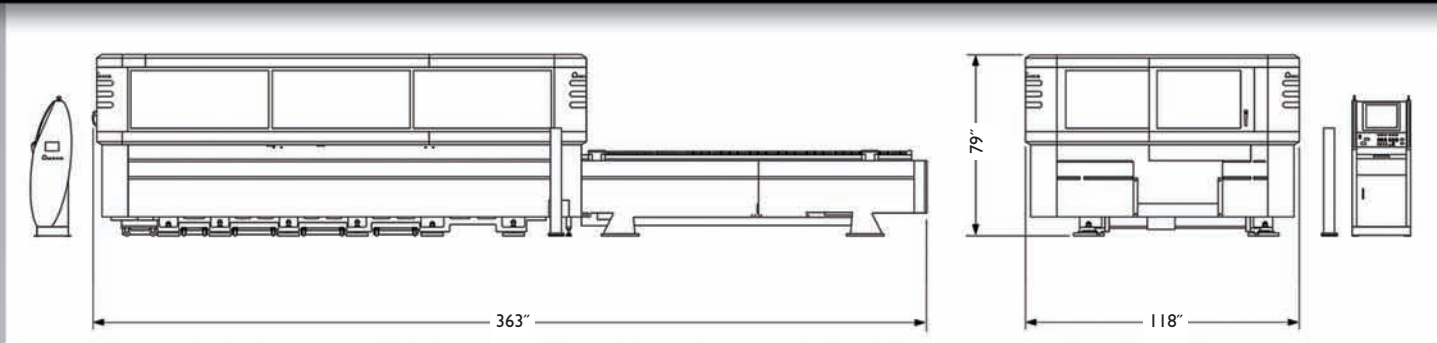


Amada's FOL3015AJ redefines what a fiber laser should be. The FOL-AJ is engineered to produce the highest quality parts at unmatched speed while reducing operating costs and environmental waste. This innovative machine is the world's first 4000 W production fiber laser specifically designed for cutting. The benefits of fiber laser technology are:

- Faster cutting of thin material (2 to 3 times that of a comparable 4000 W CO₂ laser)
- Superior speed and edge quality in material thicknesses up to 7/8" compared to other solid-state systems
- P.R.E. (Process Range Expansion) by providing the ability to laser cut copper, brass, titanium and other materials that were previously difficult to process.



FOL3015AJ FIBER LASER



The Laser Source

Amada's solid-state fiber laser provides one of the many production advantages of this innovative, high speed machine. The heart of the system is a resonator which generates a laser beam with a wavelength that is approximately a tenth of that emitted by a conventional gas laser. Now, materials that CO₂ lasers could not process can easily be cut — enabling you to expand your process range. In addition, thin gauge materials typically associated with CO₂ lasers can be cut at unprecedented speeds. There are no optics or space inside the cavity of the laser source. Therefore, costs associated with mirrors and downtime for alignment of optics have been eliminated.

Solid-state technology does not require laser gas to generate the laser beam — thereby reducing environmentally harmful emissions. In addition, the power requirements for Amada's FOL-AJ is less than its CO₂ counterpart. Since there are no optics to keep cool, a smaller, more efficient chiller further enhances cost savings.

The Machine

Combined with the high speed cutting properties of Amada's fiber resonator, the FOL-AJ quickly accelerates to the required cutting speed or to the next contour to be processed. Very little time is wasted in movement or in ramping up to the cutting speed required for a particular part. With all three axes driven by linear drives, the FOL-AJ boasts rapid traverse speeds of 13,380"/min. and a 5G acceleration speed for the entire work envelope — making the FOL-AJ the fastest 5' X 10' laser system available. The 3-axis linear drive system also ensures superior accuracy and positioning. In addition, the wear of components typically associated with ball-screw or rack and pinion systems has been eliminated.

Machine utilization is enhanced due to the standard high speed shuttle tables and automatic nozzle changer. The shuttle tables externalize the material setup, eliminating interference with the cutting process. The auto-nozzle changer automatically changes nozzles based on material cut conditions ensuring that the laser does not sit idle while waiting for an operator to setup for the next job.

While fiber technology presents new benefits to laser cutting, CO₂ lasers continue to provide ideal processing features for many applications. By offering both CO₂ and fiber laser technology, Amada is uniquely qualified to provide the machine that best suits your needs.

Technical Data	FOL3015AJ
Maximum cutting area	(X) 120.86" x (Y) 61.02"
Axis travel cutting head	(Z) 3.93"
Maximum material thickness	0.875"
Table loading weight	1,653.46 lbs.
Positioning speed X/Y/Z	9,448"/9,448"/4,274"/min.
Simultaneous	13,386"/min.
Drive feed method X/Y/Z	linear
Maximum acceleration	5G
Cutting feed rate (related to material)	0 - 9,448"/min.
Table height	37"
Position accuracy	± 0.002"
Repeatability	± 0.0003"
Power supply	200/60V/Hz (± 10%), 3 phase
Machine weight	31,328 lbs.
Laser	
Laser oscillator	AJ4000
Maximum rated output	4000 W
Principle	Fiber-Laser
Wave length	1 μm
Controller	
Model	AMNC-F
Screen	Touch screen
Number of controlled axis	5 (X/Y/Z/B) and laser control
Memory capacity	10 MB

In the interest of technological progress, we reserve the right to make any changes to technical dimensions, construction and equipment as well as illustrations. Workpiece precision and material thickness to be processed are also dependent on production conditions, material, type of work-piece, its pretreatment, size of the table as well as the location in the work area.

Laser Class 1 according to ANSI Z136.1 for its intended purpose. CO₂ Laser: Class 4 laser with invisible radiation. Eye and skin contact with direct or scattered radiation must be prevented. Positioning laser: Class 3R laser. Visible eye contact with direct radiation must be prevented.

