MITSUBISHI LASER

GX-F Series

MC MACHINERY SYSTEMS, INC.

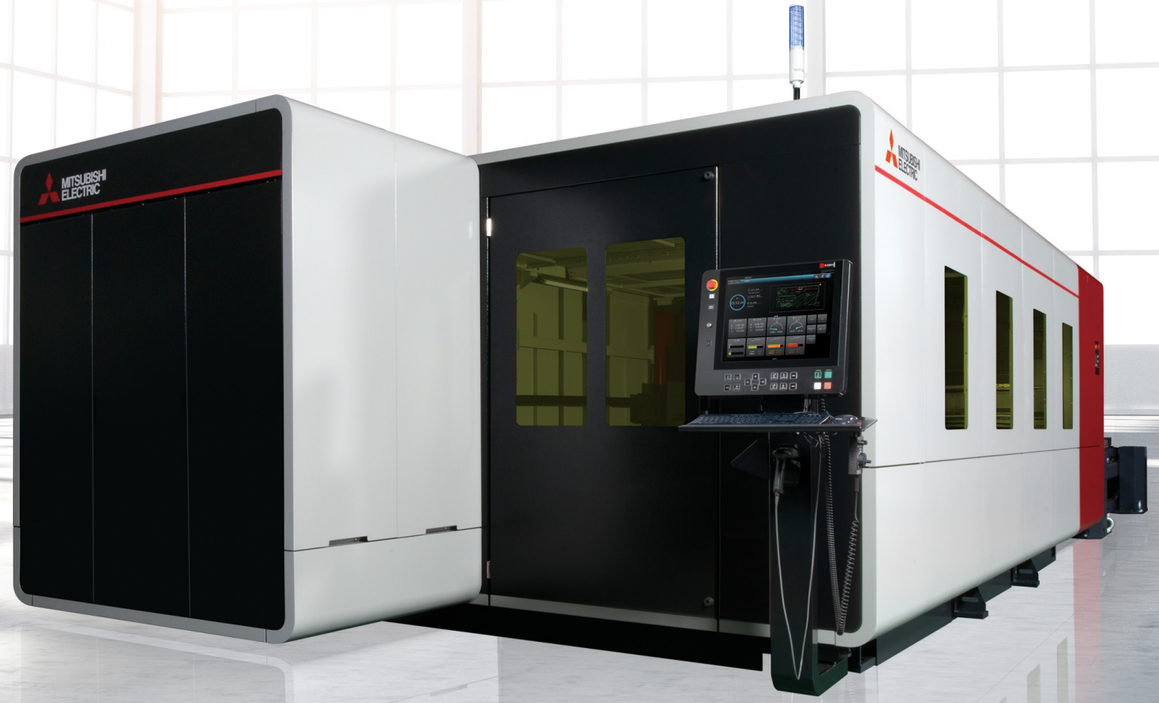
a subsidiary of Mitsubishi Corporation

LESS INPUT. MORE OUTPUT.

Power lies in what a fiber laser can do, not in the kilowatts it has. The new Mitsubishi GX-F Series of two-dimensional fiber lasers delivers more power while using less nitrogen, translating into lower operating costs and higher profitability. These state-of-the-art lasers are easy to operate no matter the skill level, with intuitive, smartphone-like controls and faster, more stable processing that delivers consistent beam quality.

With the manufacturing industry suffering from a shortage of experienced workers, Mitsubishi designed this new generation of fiber lasers to minimize the need for operator input while maximizing quality and productivity.

Designed by Mitsubishi engineers and all major components built by Mitsubishi, the GX-F Series is one of the only laser systems in the industry with a single source for service and support.



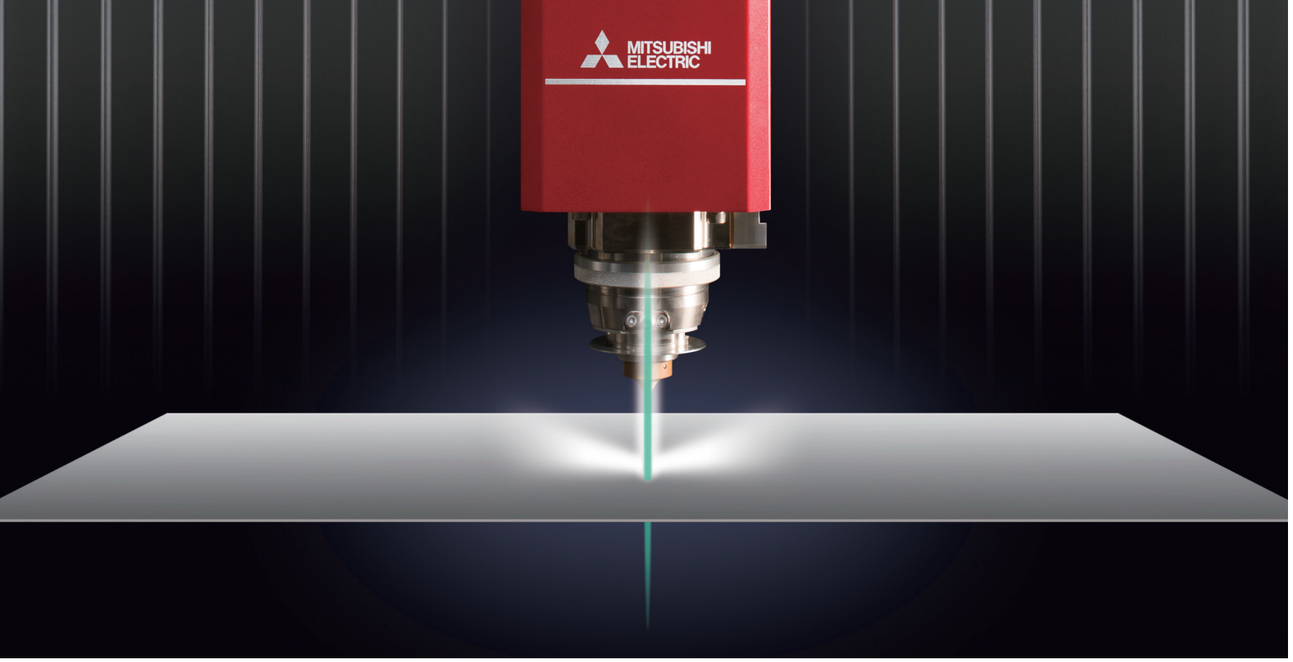
Features
- Mitsubishi-designed automated zoom head
- Reduced nitrogen consumption
- Visible Processing Status (VPS): Provides the operator with multiple indicators for beam on, process time and error alarms
- Dynamic Drive Control (DDC): Fast, accurate and programmable drive system
- Dross Reduction Control (DRC)
- Plasma Guard Control (PGC)
- High Peak Piercing (HPP)
- Mel's Eye (Pierce, Plasma, Burn and Burst Detection)
- Protective Process Window Monitoring

Benefits
- User-friendly, smartphone-like controls
- Major components built by Mitsubishi
- High processing stability with superior beam-quality consistency
- Beam cleaning and anti-reflection technologies
- Faster processing and more stable processing
- Reduced operator input
- No setup time between materials
- Lower operating cost translates into higher profitability
- Longer consumables life
- No material-surface scratching
- Optimized cutting speed
- On-site or remote monitoring of cutting process
- Reduced piercing time
- Remote diagnostics and predictive maintenance
- Single-source, robust training, service and support
- Easy integration with automation systems
- Five-year oscillator parts warranty
- Two-year machine tool warranty
- Two years of remote360™, Mitsubishi's advanced machine monitoring system
- Installation and training

One source. Endless expertise.

MC Machinery Systems, a subsidiary of Mitsubishi, is the U.S.-based supplier and servicer of Mitsubishi Electric laser and automation systems, drawing from an extensive global source of support and innovation.

Our expertise spans virtually every aspect of metalworking—from simple fabrication to CNC-driven, automated manufacturing cells. Serving industries including aerospace, mold and die, job shops, medical, and energy, MC Machinery is headquartered in the Chicago area, with technology centers in Concord, N.C.; Cypress, Calif.; Pine Brook, N.J.; Dallas, Tex.; Querétaro, Mexico; and Richmond Hill in Ontario, Canada.



ADVANCED ZOOM HEAD ADDS MORE VROOM

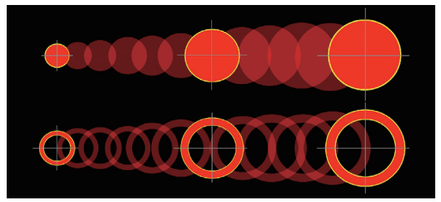
The Mitsubishi Zoom Head Delivers Speed and Flexibility.
Mitsubishi Electric's proprietary optical system offers optimal control of the beam according to the material and plate thickness. The zoom head delivers speed and flexibility by automatically changing the beam size, shape and focal point for each material. It also processes plates with a wide range of thicknesses.

Because it's not necessary to exchange the processing lens according to plate thickness and material, setup time is significantly reduced.

- Operators can switch between sheet material of different thicknesses quickly and without compromising cutting quality.
- Piercing time is reduced by as much as 60 percent, making it possible to pierce a 25-mm-thick mild steel within 0.8 seconds.

Nozzle Changer - Option
The optional add-on nozzle changer automatically cleans, calibrates and changes between material types to eliminate setup time.

Conventional head requires three-step switching



Stepless switching of zoom head mechanism reduces setup time

ME — Mel's Eye (Pierce, Plasma, Burn and Burst Detections)

HPP — High Peak Piercing (HPP)

Anti-Spatter Spray System

Zero-Point Targeting

PG — Plasma Guard Control (PGC)

ENGINEERED FOR EASE AND RELIABILITY

Intuitive, User-Friendly Control
The intelligent M800 control offers a generous 19-inch user interface. The status of the machine and work can be displayed simply on one screen or as a detailed analysis, whichever the operator desires.

Key features include:

- Intuitive, user-friendly operation similar to a smartphone
- Customizable home screen
- Real-time condition adjustment and correction
- Intelligent cutting assist
- Simple multi-part nesting
- Online job scheduling and runtime estimator
- Automatic sheet detection
- Scrap cutting
- Real-time tracking of electrical and assist gas consumption
- Micro-tabbing on the fly
- Advanced help and maintenance screens
- The operator can monitor the cutting process from the machine or remotely

User-Friendly Controls

Visible Processing Status (VPS)

Scheduling

Automatic Sheet Detection and Remnant Off-Cuts

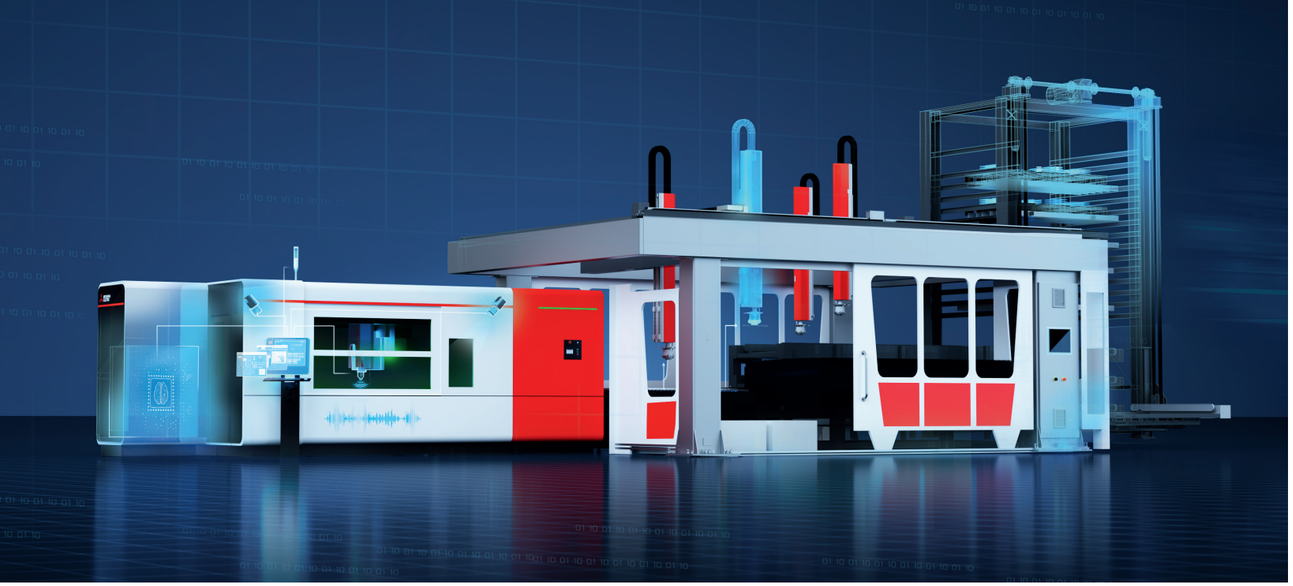
Time Estimation

Dynamic Drive Control (DDC)

Advanced Fiber Laser Oscillator
Fiber laser oscillators are solid state, use no optical components and are sealed from outside air. Because of the reliable design, there is little need for regular maintenance. The Mitsubishi oscillator delivers the latest advances in clean beam and anti-reflection technologies. These advances not only improve reliability but also enhance performance and processing capabilities.

Oscillator features:

- Dynamic power reserve: Prevents gradual power drop from laser diode failure
- Extended lifetime structure: Prevents immediate power loss from laser diode failure
- Maximum processing capabilities
- Compatible with Mitsubishi CNC for high-speed response control
- Automated beam selection for improved processing stability
- Stable processing of different materials means less variation in beam quality
- Enables N_2 cutting of pure copper (making the GX-F Series the only true fiber laser that can cut pure copper)
- Integrated with remote diagnostics for preventive maintenance
- Total service support by MC Machinery
- Five-year parts warranty



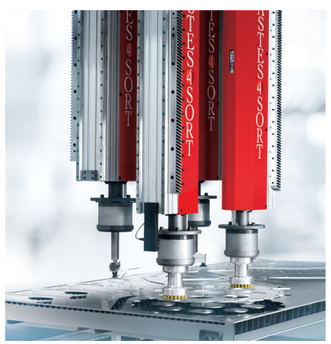
BUILT FOR AUTOMATION

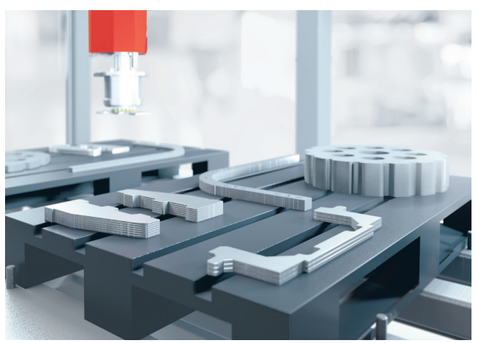
The GX-F Series was built to seamlessly integrate with automation systems that increase productivity and reliability by automating production processes, including material loading, laser processing, laser sorting (lasorting) and material unloading.

A fully automated system means less downtime for unloading, parts removal, sorting and machine adjustments. It also means you'll need fewer skilled operators—a significant advantage as the manufacturing industry faces a continued shortage of an experienced workforce.

And because our automation is modular and flexible, it can grow with you. With our wide range of options—including configurations that require 30 percent less floor space than typical laser automation setups—we have a solution for virtually any application.

To maximize your shop's productivity, our laser automation experts can work with you to determine the right combination of laser, material storage, material delivery/removal and part sorting.





Watch a video of the ASTES4 in action

PREMIER TRAINING, SERVICE AND SUPPORT

Regionalized Service Network
With our industry-leading regionalized service network, we have the most experienced, knowledgeable and responsive employees in the industry. We're here for you with phone support, operation training, on-site service, parts inventory and a robust, interactive website.

- With regionalized locations throughout North America, we can respond promptly to your service needs.
- We have the largest fleet of service vehicles in the field—three times more than any other company in the industry.
- From installation and on-site training to support and service throughout the life of your system, our national service network is just a phone call away.
- You'll have access to 24/7 support, a detailed interactive parts catalog, printable machine manuals and software.

Application Support
The value of our support stretches well beyond service, parts and training. Our experienced and creative team members put their knowledge and problem-solving skills to work for you—offering application and engineering support that includes creating specialized shop-floor setups that work harder and get better results. Whether developing integrated manufacturing cells from the ground up or adding specific solutions to complement existing operations, our pre-sales, sales, installation and application support staff can help you eliminate bottlenecks, improve accuracy and drive throughput.

remote360

Remote Diagnostics

Predictive Maintenance

Two Years of remote360 Support

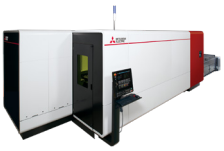
Consumption Monitoring

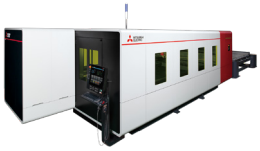
remote360™ Machine Monitoring
The GX-F Series has a two-year machine tool warranty for parts and labor and a five-year oscillator parts warranty. Also included is two years of the remote360 machine monitoring software system.

remote360 is a robust production monitoring and support solution offering real-time data to help increase productivity, improve efficiency and reduce downtime. It provides:

- Email and mobile notifications of stoppages, completions and maintenance warnings
- Dashboard display of runtime performance by shift, day, week and month
- Proactive support with real-time monitoring and remotely connected service technicians

SPECIFICATIONS





	MACHINE SPECIFICATIONS	
Available Platform	**ML 3015 GX-F**	**ML 4020 GX-F**
X – Axis Stroke	122” (3100 mm)	161.41” (4100 mm)
Y – Axis Stroke	61.61” (1565 mm)	82.67” (2100 mm)
Z – Axis Stroke	4.72” (120 mm)	4.72” (120 mm)
Maximum Processing Feed Rate	3937 in/min (100 m/min)	3937 in/min (100 m/min)
Maximum Work Piece Weight	2094 lbs. (950 kg)	3637 lbs. (1650 kg)
Table Pass Height	35” (890 mm)	35” (890 mm)
Rapid Travel Speed	6700” in/min (170 m/min) simultaneous	6700” in/min (170 m/min) simultaneous
Repeatability	±0.00039” (0.0099 mm)	±0.00039” (0.0099 mm)
Machine Weight	20,723 lbs. (9400 kg)	29,843 lbs. (13,537 kg)
	OSCILLATOR SPECIFICATIONS	
Manufacturer	**Mitsubishi Electric**	**Mitsubishi Electric**
Excitation Method	Ytterbium Doped Fiber	Ytterbium Doped Fiber
Wavelength	1.07µm	1.07µm
Available Output Power (CW)	4 kW, 6 kW	4 kW, 6 kW
Processing Head	Zoom	Zoom
Delivery Method	100µm Fiber Cable	100µm Fiber Cable

MITSUBISHI LASER

MC MACHINERY SYSTEMS, INC.
85 Northwest Point Blvd., Elk Grove Village, IL 60007 | Tel: 630-616-5920, Fax: 630-616-4068 | www.mcmachinery.com