

# LASER Mate System 4™

## Basic Description

FANUC Robotics' LASER Mate System 4 is a high-performance laser processing cell designed to provide metal fabricators a complete, reliable and cost-effective process solution for laser cutting and welding. LASER Mate System 4 includes the FANUC Robotics YAGROBOT™ series of robots with proven application software, a FANUC Robotics AM-HF500 servo controlled "H-Frame" style positioner, laser process equipment and a safety environment light tight enclosure.

## Features and Benefits

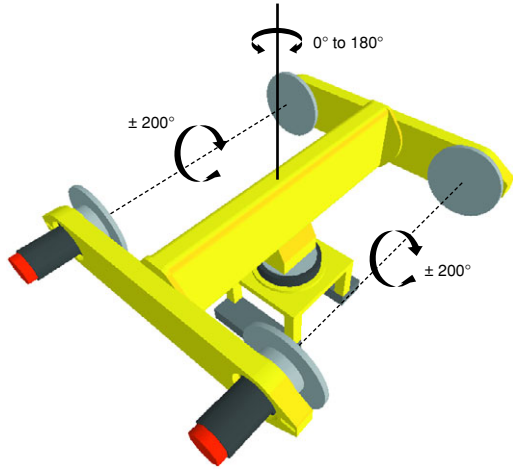
- YAGROBOT is a complete laser processing solution that delivers optimum laser processing performance by utilizing superior mechanical design, advanced software control, and leading edge laser technology through a common teach pendant interface.
- CDRH registered Class 1 light tight enclosure with electrically interlocked access door for operator safety.
- Patented passive light tight cell design provides fast and maintenance-free part interchanges.
- Shape Generation software reduces programming time for hole cutting and improves part quality.
- High-speed YAGROBOT and positioner allows quick repositioning to minimize cycle time.
- H-Frame design allows safe part load and unload on one side while robotic welding or cutting on the other side, maximizing system throughput.
- Sturdy design allows operator or robotic load and unload of parts without affecting process performance.
- Robot and operator work zones are electrically interlocked for operator safety during part load/unload.
- Ergonomic work height helps reduce operator fatigue.
- Electrical lockout on the main interchange axis ensures operator safety.
- 500 kg payload at 150 mm offset per side capacity minimizes fixturing constraints.
- 1150 mm part swing diameter accommodates large parts.
- 457 mm faceplates on headstock and tailstock including locating dowels.
- 25 mm tailstock axial float allows easy fixture installation and quick changeovers.
- No picture frame is required for tooling, which reduces payload constraints.
- The same FANUC AC servo motors and controls that deliver reliable robot performance are used on the servo-controlled positioner axes.
- Position index control capability allows pre- and post-process operations, such as sequential loading or inspection, independent of robot operation.
- Programmable Machine Controller (PMC) provides capability to execute Ladder Logic on the robot controller, eliminating the need for some external controllers.
- System control panel option include power distribution, servo lockout, programmable logic controller (PLC) and dual robot interface.
- Operator station control option includes maintenance position, position index and clamp control.
- Rugged construction maximizes equipment longevity.
- FANUC RV reducers are designed for years of trouble-free performance.
- Pre-engineered mounting location for peripheral devices simplifies system integration.
- Standard system libraries for laser EOAT, maintenance positions/paths and home position simplify setup and system modifications.
- Enclosed cables eliminate trip/safety hazards.
- Ships on standard size trucks and can be installed with minimal rigging equipment.



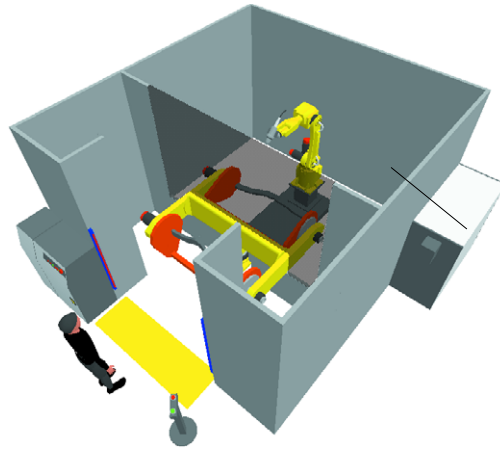
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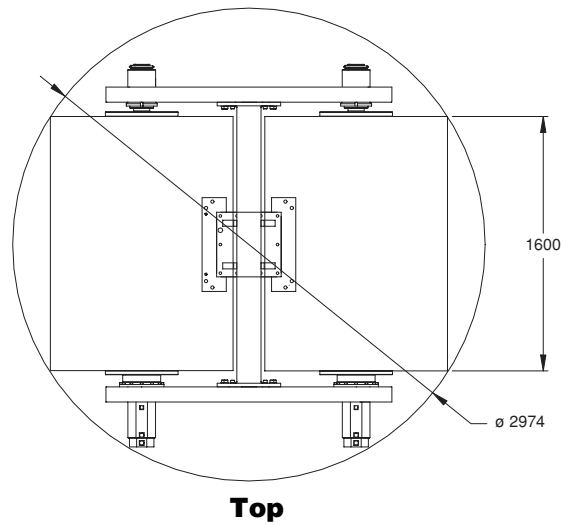
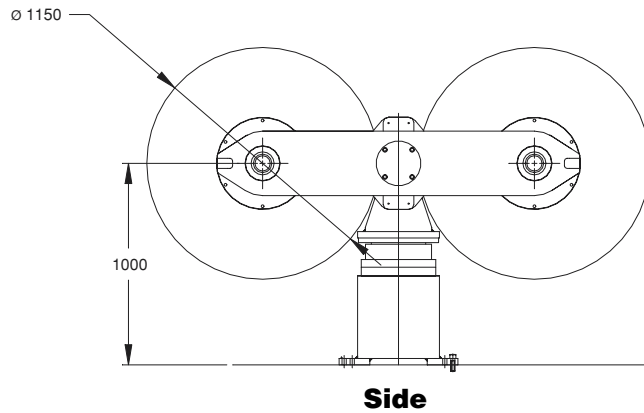
## AM-HF500 Positioner Isometric



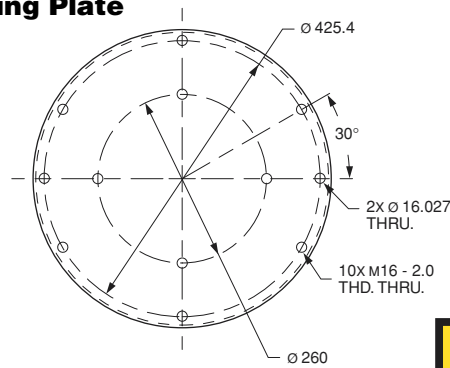
## LASER Mate System 4 Isometric



## AM-HF500 Dimensions



## Mounting Plate



## AM-HF500 Specifications

Items	
<b>Main Interchange Axis</b>	
Motion range	0° to 180° horizontal oscillating
Interchange time	3-4 sec
Failsafe brakes	Standard
<b>Headstock/Tailstock (same as AM-HS500)</b>	
Motion range	Limited only by utility cabling
Max motion speed	120°/sec (20 rpm)
Torque	970 Nm (715 lb.-ft)
Load moment	75 kg - m
Load inertia	15.1 kg - m - sec 2
Maximum work axis payload	635 kg balanced 500 kg imbalanced
Tailstock axial float	25 mm
Mechanical brakes	Standard
Mounting plate	457 mm diameter with locating dowels
Max part length	2480 mm
Max part swept diameter	1150 mm
<b>Repeatability</b>	
1150 mm	±0.09 mm
<b>Weight</b>	
Std length	1500 kg
<b>Load Height</b>	
Standard	1000 mm at load side

Note: Dimensions shown in millimeters

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