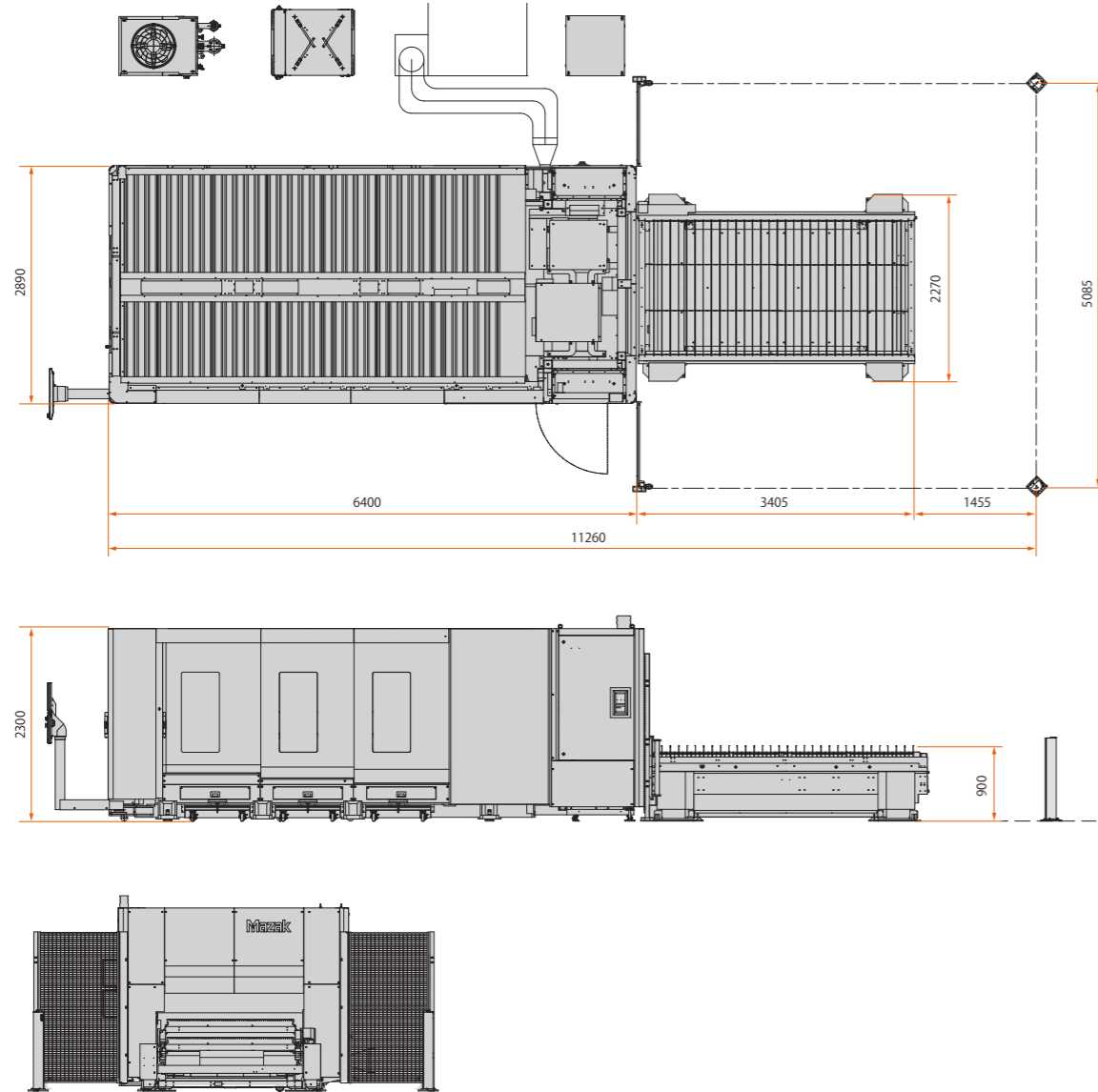


Machine Dimensions

unit : mm



OPTIPLEX 3015 NEO

[2D Laser Processing Machine]



YAMAZAKI MAZAK CORPORATION

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Mazak
OPTONICS CORP.

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OPTIPLEX 3015 NEO 22.01.3000 G 99J453022E0

OPTIPLEX 3015 NEO



Optional Dual Monitor

MAZATROL SMOOTHLX

High Power and High-Quality Cutting With Beam Shaping

Increased Accessibility and Ease of Operation

New MAZATROL SmoothLx CNC Control



Additional options shown

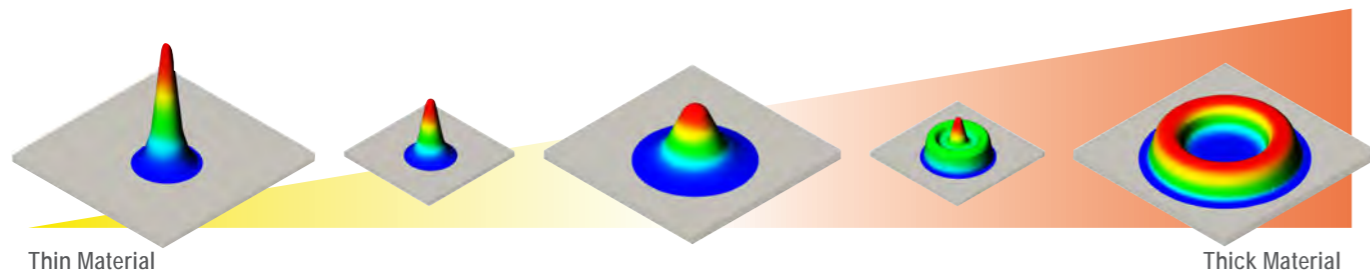
Higher Productivity



State-of-the-art Variable Beam fiber laser technology achieves high speed and high-quality cutting in a wide range of material.

Maximum Control of Beam Shape and Beam Diameter

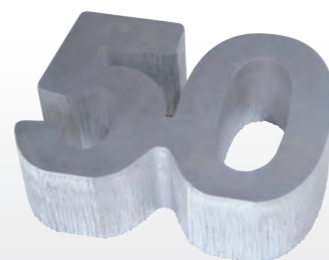
Mazak's OPTIPLEX 3015 NEO automatically adjusts beam diameter to accommodate the cutting of various materials and thicknesses. Additionally, machines are equipped with beam shaping technology which controls where the power density of the laser beam is concentrated. Together, these functions improve cut speed and cut quality for a wide range of materials.



Material: Mild Steel
Thickness: 1.0mm
Assist Gas: Nitrogen



Material: Stainless
Thickness: 14mm
Assist Gas: Nitrogen



Material: Aluminum
Thickness: 50mm
Assist Gas: Nitrogen

Application



Material: Mild Steel
Thickness: 1.0mm
Assist Gas: Nitrogen



Material: Mild Steel
Thickness: 1.6mm
Assist Gas: Nitrogen



Material: Aluminum
Thickness: 5.0mm
Assist Gas: Nitrogen

View 3D Models of Sample Work

Take a closer look at edge quality with a 360° view of sample parts cut with Mazak's OPTIPLEX 3015 NEO.



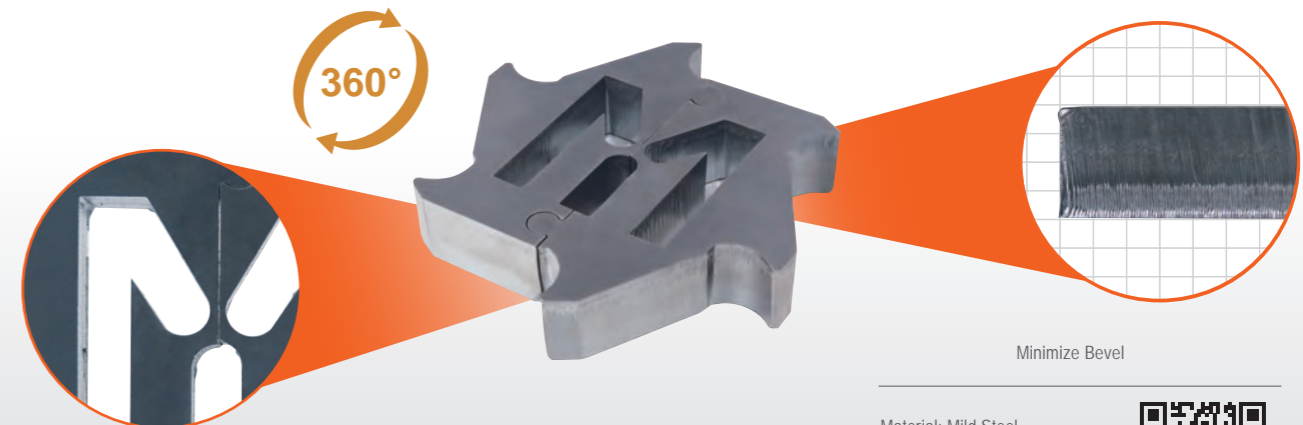
Achieve Great Edge Quality



Material: Stainless
Thickness: 50mm
Assist Gas: Nitrogen



Material: Aluminum
Thickness: 50mm
Assist Gas: Nitrogen



Cut Sharp Angles

Minimize Bevel

Material: Mild Steel
Thickness: 25mm
Assist Gas: Oxygen



Accessibility and Ease of Operation

Equipped With Large Front and Side Access Doors

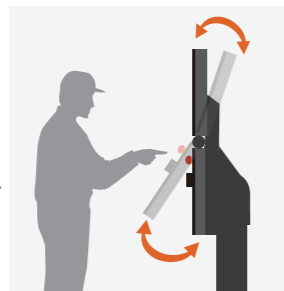
The machine's front and side access doors reduce the floor space needed for installation and make it easier for operators to load and unload material. The front door offers full-width opening and the side doors provide a full length opening.



Additional options shown

Features Adaptable CNC Control

The rotating CNC control gives operators the option to work at the front or side of the machine. Additionally, the adjustable screen tilts, offering users optimal comfort.



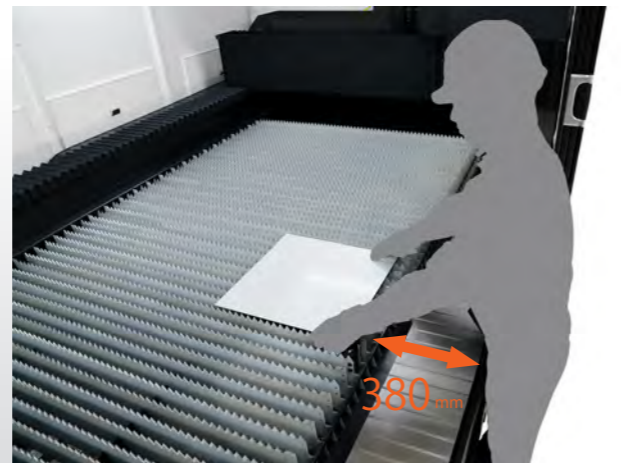
Tilts



Rotates 150°

Offers Easy Accessibility

Work area restrictions are minimized and allow operators easy access to material.



380 mm

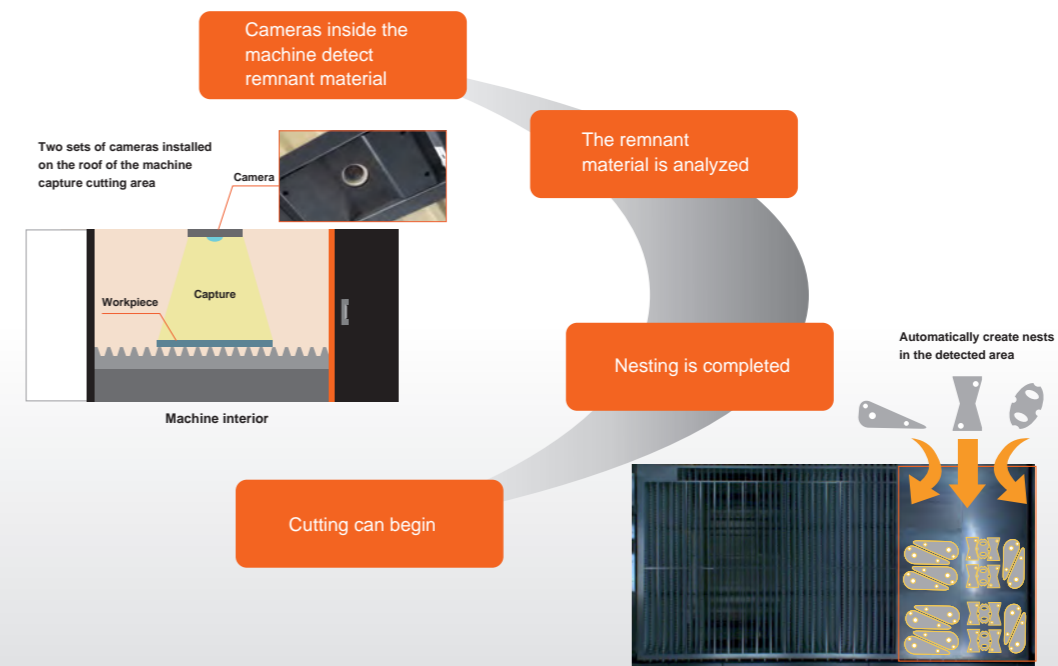
Nozzle Centering Camera

The Nozzle Centering Camera allows operators to view nozzle location on the CNC display—while making adjustments using dials on the torch.



Camera Assisted Part Nesting

The nesting feature automatically determines how to arrange parts for optimal cutting on remnant material.



MAZAK SMART SYSTEM is required for Camera Network Nesting

High Productivity



Intelligent Setup Functions

Improve productivity by automating the setup required when the material or thickness of a workpiece changes.

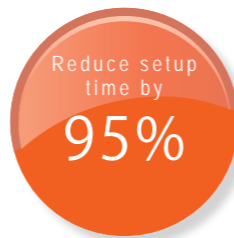
ISF

Standard laser machine

Operator setup takes approximately 20 min.

OPTIPLEX 3015 NEO

Automated setup takes approximately 1 min.



Auto Nozzle Changing

The program command automatically performs nozzle replacement. Selecting the appropriate nozzle ensures optimized laser cutting and reduced assist gas consumption. Standard nozzle storage can hold up to 8 nozzles. Additional capacity can be added to store a maximum of 24 nozzles.



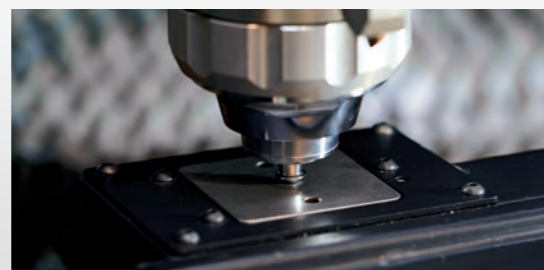
Auto Focus

Focus distance can be adjusted automatically according to the material that is being cut. Utilizing the appropriate lens position for piercing and cutting can result in higher productivity due to faster cutting speeds.



Auto Calibration

To maintain good edge quality, nozzle distance from the workpiece must be properly maintained. Previously, operators would need to update the calibration settings manually; however, the Auto Calibration function adjusts these settings automatically.



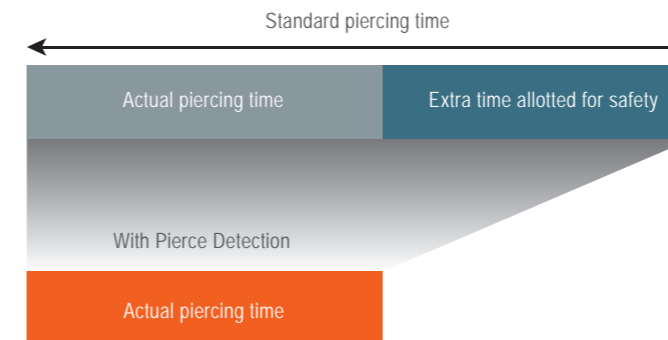
Intelligent Monitoring

The machine monitors piercing and cutting operations. Sensors installed on the torch head detect processing abnormalities and cutting defects. If an abnormality is detected, the operation is automatically corrected, or the cutting is paused for optimized results.

IMF

Pierce Detection

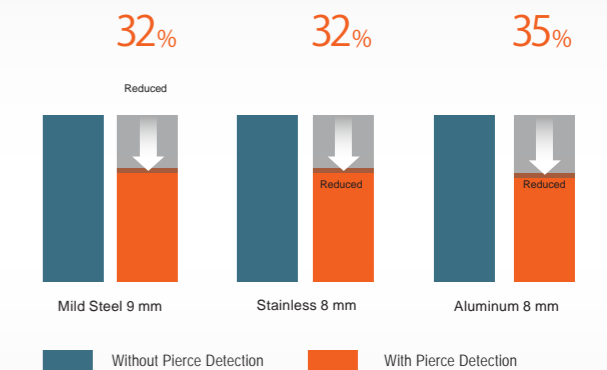
Good cutting results cannot be achieved if the laser-cutting process begins before the piercing process has been completed. For that reason, operators tend to allow extra time for piercing when programming a job. The Pierce Detection function detects when piercing has been completed and automatically begins the cutting process. This function helps reduce cutting time and improves productivity.



Comparison of lead time with and without Pierce Detection

OPTIPLEX 3015 NEO

Result of 100 pierces with and without the Pierce Detection function.



Plasma Detection

When plasma is detected during the cutting process, the Plasma Detection function adjusts to the appropriate cutting speed automatically. This function helps ensure good edge quality and minimizes burr on the material.



Burn Detection

Burning can occur when cutting mid-range to thick plate mild steel. If an abnormality is detected, the Burn Detection function automatically stops the cutting process to reduce cutting failure.



Example of burning
Material: Mild Steel

High Productivity



Intelligent Cutting

Research and development, in addition to advancements in technology, have enabled Mazak to create functions that make high-quality laser cutting and improved productivity possible.

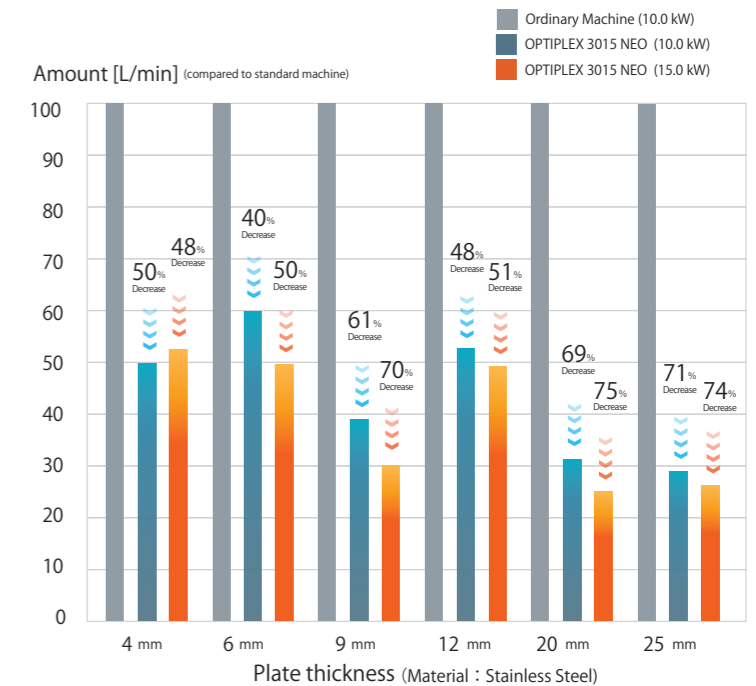
Flash Cutting

Flash cutting is a laser cutting method that turns the laser on and off instead of stopping at each axis when cutting particular features. For example, when cutting multiple square parts, flash cutting would enable the laser to cut all the horizontal lines in one pass and vertical lines in another pass—instead of cutting each square out separately. By synchronizing the axis and laser movements, cutting times are greatly reduced.



Assist Gas Reduction

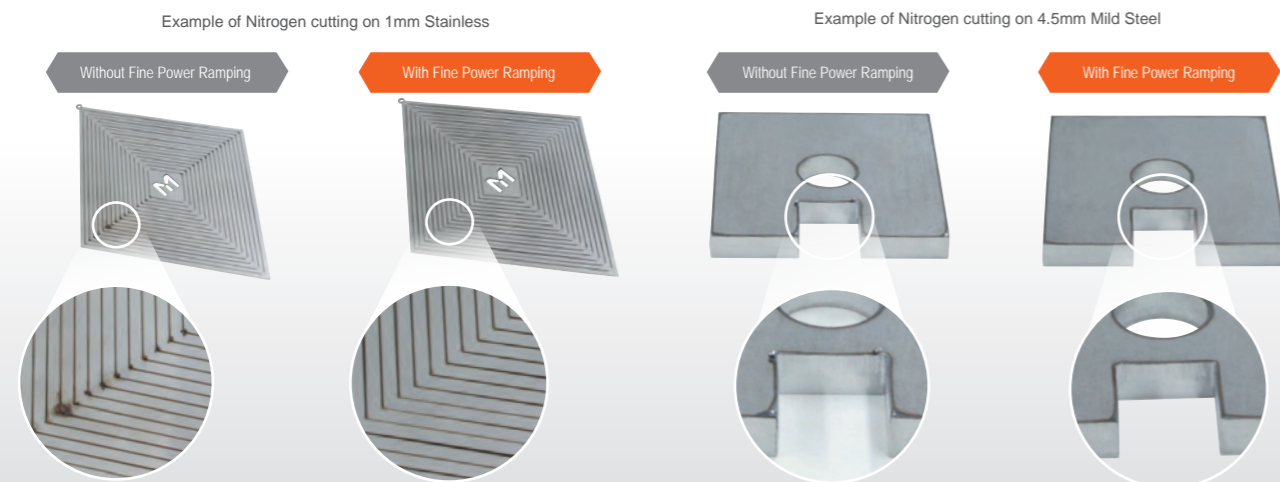
Assist gas consumption is significantly reduced with the new torch and nozzle in comparison to standard machines.



Assist gas consumption is reduced by 75%

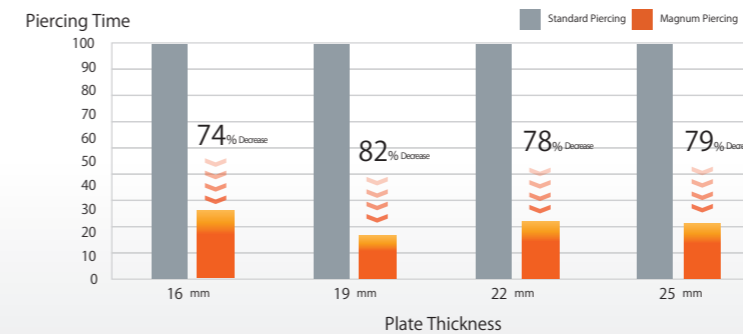
Fine Power Ramping

This function automatically adjusts to the appropriate settings when cutting corners and straight lines. By adjusting the laser power and feed rate according to the features being cut, Fine Power Ramping minimizes dross at corners—without compromising cutting speed for straight lines.



Magnum Piercing

State-of-the-art technology drastically reduces piercing time.



Piercing time is reduced by approximately 80% in comparison to the standard piercing process.





Optional Dual Monitor

MAZATROL
SMOOTH LX

Large 21.5" Screen & Touch Panel

The widescreen enables operators to view nesting at a glance. Additionally, operators can easily zoom in and out using the touch screen display.

Flat Design for Easier Operation

Operational buttons feature a flat design and icons for intuitive performance. The Emergency Stop and Rotary Switch buttons are positioned prominently to ensure easy access.

Optional Dual Monitor

The additional Dual Monitor option allows multiple applications to run simultaneously. Nest Programming, Cut Monitoring, Production Scheduling and Machine Maintenance are just some of the many functions available to the operator while the machine is in operation.

One-Touch Operation

Operators can easily access necessary information, like cut conditions, with the touch of a button.



Assist Functions

Operators can quickly and easily update settings by inputting specifications suggested by assist functions, like Auto Nozzle Changing and Centering.

