

High speed, high productivity  
New concept fiber laser machine



# ORSUS 3015 AJ *e*



Fiber laser machine for  
people and the environment



**The Engineering AMADA**



# New concept fiber laser machine

Equipped with mode converter High-quality processing in a wide range of thin-to-thick plates.  
Global machine equipped with AMNC 4ie **ORSUS-3015AJe** debut!

ORSUS-3015AJe utilizes beam shape control technology to enable fast, stable processing of thin-to-thick materials. i-Process Monitoring detects processing defects to ensure high-quality laser cutting and stable automatic operation.

## Overall Design



High speed, high productivity  
New concept fiber laser machine

# ORSUS 3015 AJe

3kW 6kW 8kW

## Improved processability

### 1 One Lens operation according to the machine power output

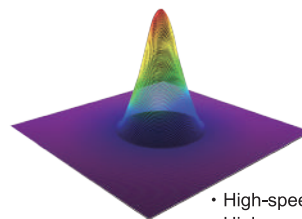
Realizes high-speed processing of a wide range of material thicknesses without setup changes



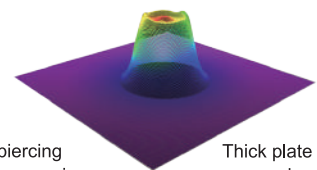
190mm  
3kW

### 2 Mode converter

High-speed piercing and high-speed processing by beam shape control



- High-speed piercing
- High-speed processing of thin materials



Thick plate processing

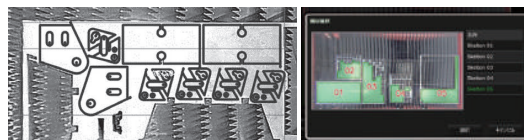
## Improved machine operability

### AMNC 4ie



### 1 Easy nesting on NC

Automatic nesting of remnant is performed by recognizing the shape of the reusable scraps with the camera in the process, and the product arrangement is performed automatically by the nesting engine.



### 2 Startup inspection guidance function

In the startup inspection guidance, NC uses easy-to-understand CG and video to instruct the procedures for the opening inspection. Even novice operators can follow the NC's instructions to ensure error-free startup inspections, and a history of these inspections can be stored.



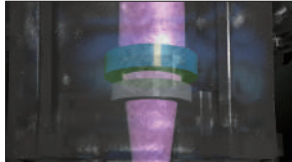
## Stable processing and Easy operation ( options )

Automates operations related to laser processing, reducing operator intervention and supporting continuous operation. ORSUS increases productivity by supporting zero downtime and stable processing.

### i-Optics Sensor

**Diagnoses the condition of the protective glass (LIS\*)**

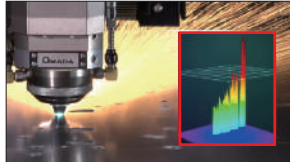
Periodically diagnoses the protective glass to ensure stable cut quality.



### i-Process Monitoring

**Monitoring Piercing and cutting condition (LIS\*)**

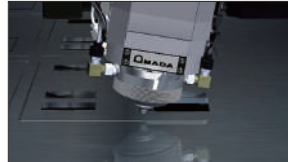
Piercing penetration detection and processing defects are detected by luminance sensor.



### Preventing damage due head collision

**Protecting the head for stable processing (LIS\*)**

When a head collision is detected, the Z-axis instantaneously moves upward to prevent damage to the cutting head.



### Cooling cut WACSII (Tank:20L,39L)

**Stable processing of thick mild steel**

Water mist spray from the nozzle cools the material for stable processing and improves yield ratio.

\*20L is standard for 6kW and 8kW



### Latest processing technology

**Medium thick plate incredibly high speed**

By using the high-power oscillator(6kW & 8kW) and the new nozzle on medium-thick plate, incredibly high-speed processing and operation at low running costs are possible by new processing technology "Clean Fast Cut" and "EX Fast Cut".

### Nozzle Changer (8st/16st)

**No nozzle setup**

Automatic nozzle replacement according to material thickness. Periodic replacement is also possible.

\*8st is standard for 6kW and 8kW.



### HP EZ Cut

**Reduction of processing cost**

HP EZ Device can produce nitrogen rich gas that can be used as an assist gas. A separate compressor is required. (1300L/1.37MPa)



HP EZ Device

NOTE :  
Depending on local sales conditions, this option may not be available.

### Oil shot

**High-quality processing of medium mild steel**

Oil spray minimizes adhesion from the spatter before the piercing.

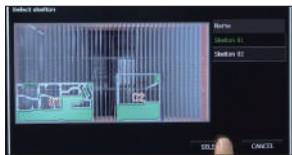


### i-Camera Assisted System

**Easy placements of parts**

This function recognizes the material with the camera and enables manual or automatic plate removal and placement of products.

\*i-Camera Assisted System is standard for 6kW and 8kW.



### V-monitor

**Monitors machine**

Camera images installed inside the machine can be viewed in real time on your smartphone or computer. Video recording is available once alarm occurs.



### OVS-D

**Combined processing with NCT is possible**

CMOS cameras for combined processing with a turret punch press (NCT). The position processed by NCT is measured to correct the home position.



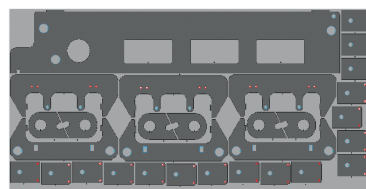
\*LIS (Laser Integration System) is a generic term for operation support functions, which greatly shortens the setup

## Example

### Conventional CO<sub>2</sub> laser vs ORSUS-3015AJe



- Material : Mild Steel
- Thickness : 1.6mm
- Size : 1524 × 3048mm
- Process : Clean Cut



- Material : Mild Steel
- Thickness : 6mm
- Size : 1524 × 3048mm
- Process : Clean Fast Cut

\*Conventional CO<sub>2</sub> laser use Oxygen cutting

	Conventional CO <sub>2</sub> laser (4kW)	ORSUS-3015AJe (3kW)
Process command speed	F6000	F15000

	Conventional CO <sub>2</sub> laser (4kW)	ORSUS-3015AJe (6kW)
Process command speed	F3000	F6500

#### Comparison of processing time **44.6% reduction**

Conventional CO <sub>2</sub> Laser (4kW)	ORSUS-3015AJe (3kW)
35min.42sec.	19min.46sec.

#### Comparison of processing time **52.1% reduction**

Conventional CO <sub>2</sub> Laser (4kW)	ORSUS-3015AJe (6kW)
34min.31sec.	16min.33sec.

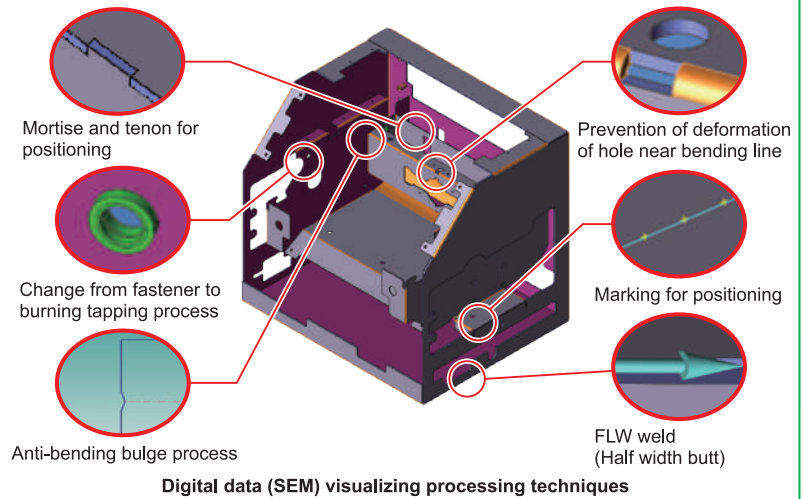
# AMADA's concept of connecting with customers is to

## Software

Advanced sheet metal engineering system

### VPSS 4ie

The evolved sheet metal engineering system, VPSS 4ie, is more intelligent and automated than ever before, digitizing the processing know-how of all processes and bringing revolutionary benefits by connecting machines, software, and people in the factory with information.

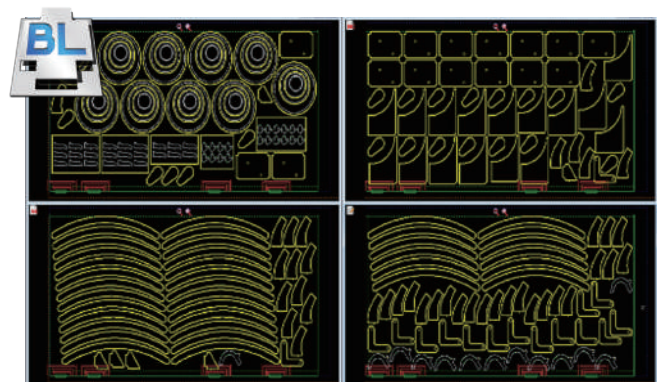


## CAM (VPSS 4ie PREMIUM/BLANK for blanking)

Blank CAM software for sheet metal that fully utilizes the performance of our blanking machines.

It performs cutting, automatic allocation, and processing verification for each part and assembly. It reduces data preparation time and maximizes productivity and utilization of our blanking machines.

\*VPSS 4ie PREMIUM can create efficient programs including bending simulation by CAM for bending.

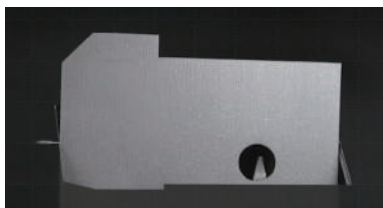


## Soft Joint (Option)

Soft joints can be utilized if using VPSS 4ie BLANK.

This new joint uses the thermal distortion generated in the slit section to clamp the product.

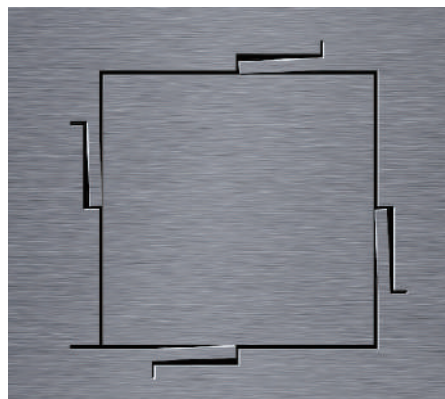
\*Soft Joint is standard for 6kW and 8kW.



Without joint · Product/Hole tip occurrence



Secondary process required to remove joint marks



- Prevents parts from tipping or falling
- Reduction of manual removal time
- Reduced man-hours for finishing joint marks

provide "assurance and satisfaction" to customers

## V-factory

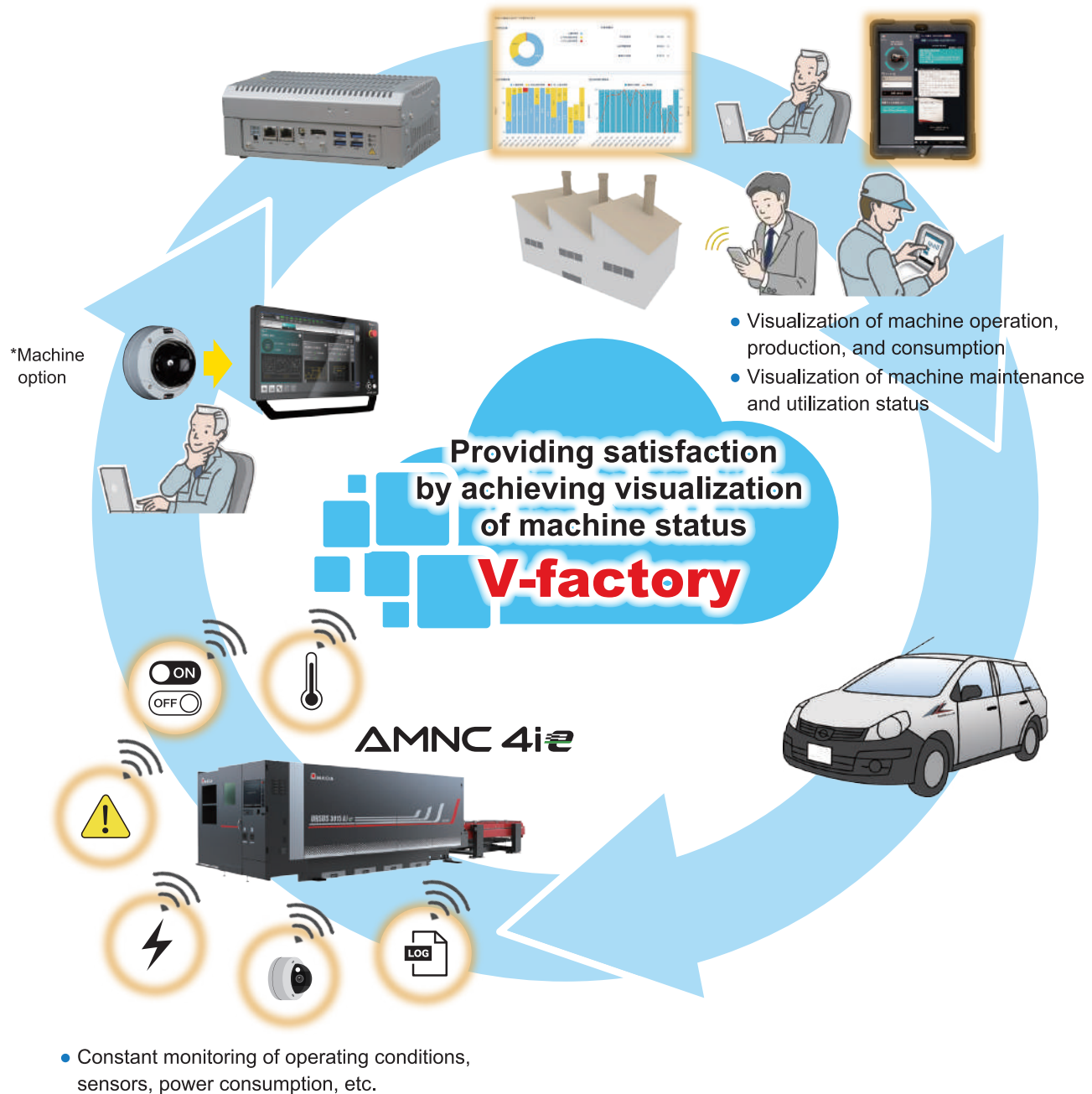
AMADA's recommended V-factory is based on the concept of "creating profits for customers". V-factory will co-create factory reforms with customers by providing visualization, taking advantage of IoT technology and maximizing machine utilization.

### V-factory Connecting Box

Used to connect machines to the cloud and start V-factory.

### V-monitor \*

Automatically records the state of the machine during automatic operation.



# Automation solutions to maximize productivity

## Automation of thick plate processing

Pallet changer

# AS-C

### Continuous operation of thick plate processing

- Process pallet: 10 shelf (standard)
- Lineup from minimum 5 to maximum 20 shelves
- Add the operator support tool to the flexible tool rack (option)\*1



#### Number of shelves that can be selected according to the factory



Low height 5-shelf



20-shelf

#### Worker support tool

Skeleton separation mechanism



Automatic material setting mechanism



Process pallet switch mechanism



Flexible rack (all options\*2)

## Automation to expand production volume and range

Twin tower

# AS-T

### Compatible with the production of a wide variety of materials from thin-to-thick sheets

- ASFH (2 product pallets, 2 material pallets, 2 processing pallets) + AS (10 processing pallets) 2-shelf configuration (standard)



\*1 The area for three shelves is used, 5-stage specifications are not selectable.  
\*2 You cannot select more than one.

## Expansion system to connect multiple machines

Manipulator + Automatic warehouse

# MPL-C MARS-N

### Retrofittable and expandable automation to support high-mix production

- Automated operation from material supply to product accumulation in MPL-C: Max. plate thickness 12mm
- If connected to a MARS, the number of shelves and station numbers can be customized according to the customer.
- Connection with multiple blanking machines is also supported





## Automation of medium-thickness plate processing from packaging material

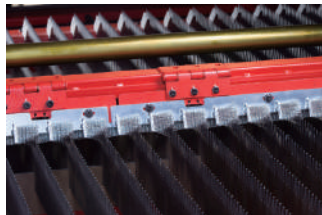
Fork type  
Pallet changer

# ASFH

## Continuous operation up to medium-thick plates using packing materials

- Automatic operation of product accumulation from material supply
- Maximum plate thickness:12mm
- Two product pallets, two material pallets, and two processing pallets (standard)

### ■ Maintenance support



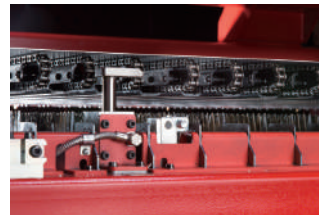
Cleaning brush

### ■ Automation of material supply



Single sheet pick up device

### ■ Automation of product accumulation



Chain fork unit

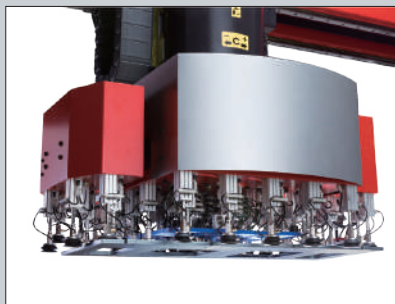
## Take-out loaders for laser machine

# TK 3015L

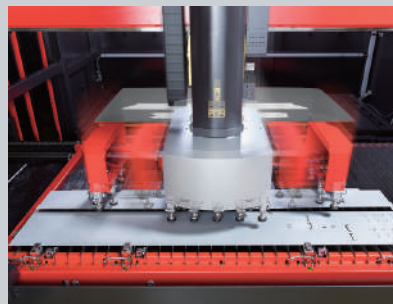
(All models can be connected)

## Automation of parts removal and sorting operations

- Reducing the burden of sorting work
- Reduction of lead time by integrating parts
- Maximum load capacity:150 kg
- Maximum sizes: 2500×1250mm
- Max. plate thickness:12mm



Free from the heavy sorting workload



Rotation and extension/contraction of the suction cup unit to accommodate various products

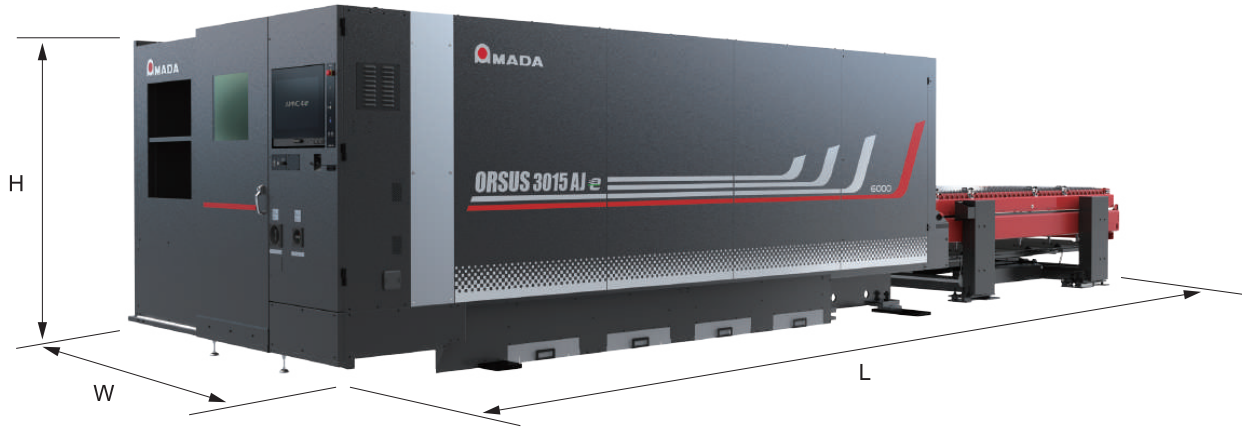


Improved traceability with labeling (option)

## ■ Dimensions

Units: mm

■ ORSUS-3015AJe + shuttle table L:9105 W:2840 H:2000



## ■ Machine Specifications

Model	ORSUS-3015AJe		
Registered model name	OR3015AJE		
Axis travel distance X×Y×Z	mm	3070×1550×100	
Maximum processing dimensions X×Y	mm	3070×1550	
Maximum workpiece mass	kg	920	
NC controller	AMNC 4ie		
Oscillator	FL-3000U	FL-6000U	FL-8000U
Chiller	RKE2200B1-V-2CH-AMD-A	RKE5500B-V-2CH-AMD	RKE7500B-V-2CH-AMD
Dust collector	PXN-6XA / JXN-6XA (self-standing pail can type)		
Axis control method	X,Y : Rack & Pinion, Z : Ball Screw		
Rapid traverse X×Y Composite	m/min	170	
Least input increment	mm	0.001	

## ■ Oscillator specification

Model		FL-3000U	FL-6000U	FL-8000U
Oscillation method		LD excitation fiber laser		
Rated laser output	W	3000	6000	8000
Stability	%	±3.0 or lower		
Pulse frequency	Hz	1 ~ 50000	1 ~ 20000	
Duty	%	0 ~ 100		
Wavelength	μm	1070		

\* Specifications, appearance, and equipment are subject to change without notice by reason of improvement.

\* The specifications described in this catalog are for the Japanese domestic market

© AMADA CO., LTD. All Rights Reserved.

### AMADA CO., LTD.

200, Ishida, Isehara-shi, Kanagawa, 259-1196, Japan  
www.amada.co.jp

inquiry



For your safe use, be sure to read the operator's manual carefully before use.



Use of this product requires hazard prevention measures to suit your work.



This laser product uses a Class 4 invisible laser for processing and a Class 3R visible laser for positioning.

- Class 4 invisible laser : Avoid eye or skin exposure to direct or scattered radiation. Do not look into or touch the laser beam.
- Class 3R visible laser : Avoid direct eye exposure

E186-HQ01en

Aug. 2025