SOLUTION

LASER CUTTING

ENSIS 3015 RI

Fiber Laser

UNIQUE BEAM CONTROL WITH SHEET AND TUBE CUTTING POSSIBILITIES




AMADA

ENSIS 3015 RI Fiber Laser

UNIQUE BEAM CONTROL WITH SHEET AND TUBE CUTTING POSSIBILITIES

PROCESS RANGE EXPANSION

FAST CHANGEOVER FOR INCREASED OPPORTUNITIES

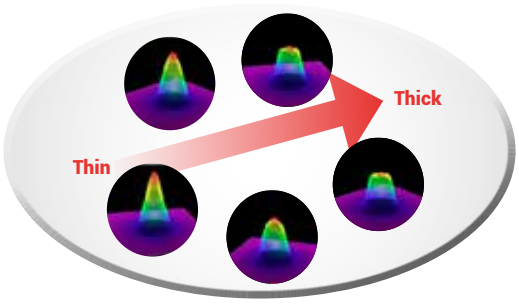
Utilising all the benefits of the ENSIS-AJ 3kW fibre laser, the ENSIS-RI adds the capability to process tube, channel and angle profiles. With a fast changeover between flat sheet and tubes and many new functions to decrease setup and increase efficiency, the ENSIS-RI provides the perfect platform to expand your business opportunities.

Photograph may include optional equipment

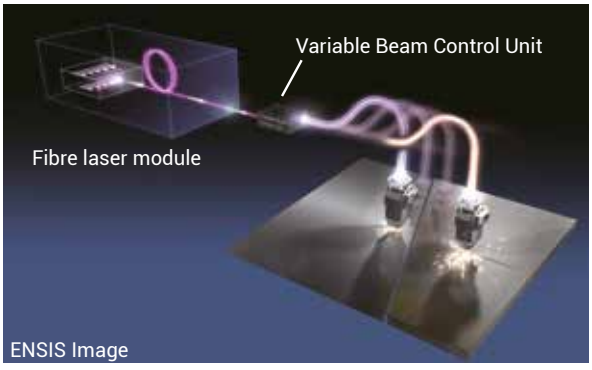
VARIABLE BEAM CONTROL TECHNOLOGY

COMPLETE BEAM MODE CONTROL

AMADA's original Variable Beam Control technology has been in use since 2014, providing highly stable cutting of thin to thick materials by automatically adapting the laser beam mode exactly to the type and thickness of material being processed. This also means that a single lens can be used to cut the entire specification range.



Beam shape images



The system can change the beam mode incrementally from a high density, concentrated mode for high speed, thin material processing to a ring mode, CO_2 type beam shape, which is good for thick material processing.

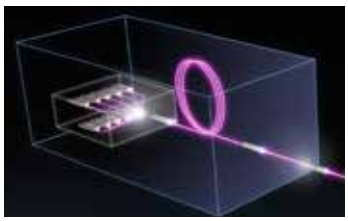
When combined with AMADA's in-house developed fibre laser engine, the results provide a machine capable of full range processing with low running costs and higher profitability for our customers.

FEATURES OF THE ENSIS RI

1 POWERFUL

HIGH POWER DIODE MODULE

All AMADA fibre lasers utilise the in-house developed high power diode modules. Each individual module provides 3kW of cutting power, which is the industries highest. The high brightness, long lifetime diodes provide superior energy efficiency, which benefits not only the environment, but lowers running costs significantly compared to CO_2 lasers.



2 HIGHLY ACCURATE, STABLE CUTTING OF TUBES

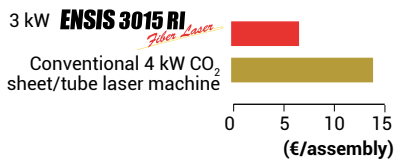
TUBE CUTTING APPLICATIONS

3kW is also the perfect choice for tube cutting applications. It provides fast, stable cutting and piercing, without the possibility of inner tube damage that higher power tube cutting systems can suffer from. This means higher quality tube processing is an advantage given by the ENSIS-RI.

Material : Mild steel
Various sheet and tube thicknesses
Dimensions: (W) x (D) x (H)
2121 x 1121 x 1500 mm

RUNNING COST COMPARISON

66.7% COST REDUCTION PER PART



ROTARY INDEX SYSTEM STANDARD FEATURES

1 ACCURATE POSITIONNING

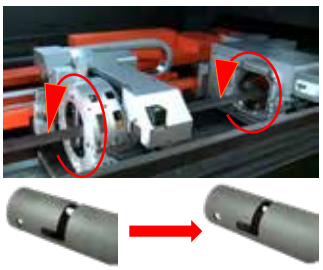
TOUCH PROBE

Tube can often be bowed, bent, twisted or squashed, which creates specific processing problems. The ENSIS-RI is equipped with a touch probe that measures the tube and offsets any holes as required to ensure accurate positioning. This is especially important when assembling components after cutting the tube.

If holes are not aligned, assembly can be difficult or impossible. The touch probe can also check if the 2 sides of an angle profile have the correct height and take the appropriate action if necessary.

2 RELIABLE PROCESSING

SYNCHRONOUS, DUAL CHUCK ROTATION



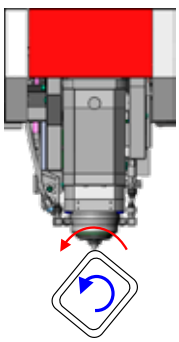
Unlike other systems, the ENSIS-RI has a main drive chuck and a support chuck which are both driven synchronously to ensure that the profile being cut is not twisted during processing. It also means scratching does not occur when cutting round tube, allowing for higher quality parts to be manufactured.

The main drive chuck also provides the automatic tube feed function which removes the need for an operator to manually push the tube through the machine during processing.

3 HIGH SPEED PROCESSING

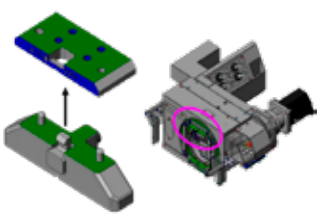
Z AXIS INTERPOLATION

New to the ENSIS-RI is a Z axis interpolation feature that significantly increases productivity. The rotation of the profile being cut and the movement of the Z axis are now calculated by the machine, providing high speed processing around corners. Depending on the shape, processing time can be decreased by up to 70% compared to the previous system.



4 ACCURATE CLAMPING

ONE TOUCH CLAMP CHANGING

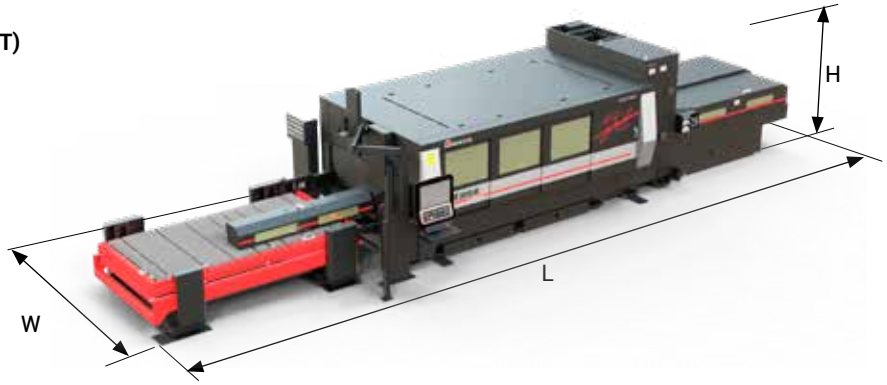


Another new feature on the ENSIS-RI that reduces setup time is the adoption of quick change jaws. These are used to provide accurate clamping of different size tubes or profiles. A simple button system is used to remove the previous jaw. No tools are necessary. Due to this, setup time can be reduced by over 50% compared to systems that require tools for chuck adjustments.

DIMENSIONS

Unit : mm

ENSIS-3015RI + shuttle table (LST)
(L) 12505x (W) 2915 x (H) 2532



MACHINE SPECIFICATIONS

ENSIS-3015RI			
Numerical Control			AMNC 3i
Controlled axes			X, Y, Z axes (three axes controlled simultaneously) + B axis
Axis travel distance	X x Y x Z	mm	3070 x 1550 x 200
Maximum simultaneous feed rate	X/Y	m/min	170
Maximum flat sheet material mass		kg	920
Processing surface height		mm	940

OSCILLATOR SPECIFICATIONS

ENSIS-3000			
Beam generation			Laser diode-pumped fibre laser
Maximum power		W	3000
Maximum processing thickness*	Mild steel Stainless steel Aluminium	mm	25 15 12

* Maximum value depends on material quality and environmental conditions

ROTARY INDEX SPECIFICATIONS

Chuckable diameter	Round tube Square tube	mm	Ø 19 to 220 □ 19 to 150
	Channels Angles	mm	19 to 150 19 to 90
Diameter through chuck		mm	Ø 19 to 220
Maximum pipe mass		kg	200

SHUTTLE TABLE SPECIFICATIONS

LST		
Max. material dimensions X x Y	mm	3070 x 1550
Number of pallets		2

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

For your safe use
Be sure to read the user manual carefully before use.
When using this product, appropriate personal protection equipment must be used.

Laser class 1 when operated in accordance with CE Regulations

The official model name of the machines and units described in this catalogue are non-hyphenated like ENSIS RI. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spellings like ENSIS-RI are used in some portions of the catalogue for sake of readability.

Hazard prevention measures are removed in the photos used in this catalogue.

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