

LBC TECHNOLOGY - WORLD'S FIRST NEXT GENERATION FIBRE LASER







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HIGHER PRODUCTIVITY, HIGHER QUALITY, LESS POWER

GROUND BREAKING LBC TECHNOLOGY FOR LASER PROCESSING

The VENTIS fibre laser is the world's first material processing laser to utilise AMADA's Locus Beam Control (LBC) technology. With the ability to manipulate the laser beam pattern whilst processing, LBC Technology creates possibilities never before accomplished with solid state laser cutting machines.

Dross free capabilities, cutting speeds equivalent to much higher power machines and cut width (kerf) control are all achievable. Combined with AMADA's new, in-house developed 4kW single diode module fibre laser engine, the VENTIS has a very high quality laser beam which is perfectly suited to LBC Technology applications.



INNOVATIVE LBC TECHNOLOGY

LASER BEAM PATTERN CONTROL COMBINED WITH A NEW SINGLE DIODE MODULE ENGINE

Standard (Before)





Multi Module

LBC Technology (After)





Utilising a 4kW, single diode module AMADA fibre laser engine, the full energy of the laser beam can be used to process all materials by manipulating the beam movement to exatly match the material and thickness being processed.

AMADA's new 4kW fibre laser engine uses the industries highest power, single diode module with no combiner. This provides the world's highest beam quality in the 4kW class, realising the full benefit of AMADA's LBC Technology.



Single Module



3 ADVANTAGES OF LBC TECHNOLOGY

PRODUCTIVITY MODE



Laser cutting involves melting the material with a laser beam from the top surface and removing the molten material with assist gas. The challenge is to melt the material remaining on the cutting front inclination angle ('General' image).

LBC Technology makes it possible to directly remove the molten material on the inclination angle.

The main benefits are when processing with nitrogen because cutting speeds are very high. This leads to increased productivity and lower cost-per-part.

2 QUALITY MODE



The heat generated by the laser beam reduces as it gets further from the top surface of the material. Therefore, there is not enough heat at the bottom of the cut to efficiently melt and remove the material.

LBC Technology allows the high density laser beam power to be utilised across the side faces of the cutting kerf, providing sufficient heat at the bottom of the cut to give dross free possibilities.

Very high quality stainless steel and aluminium processing is possible, which significantly reduces or eliminates any secondary operations required after cutting.

3 FLEXIBLE CONTROL OF CUTTING WIDTH: KERF CONTROL



> 50% IMPROVEMENT

It is possible to vary the cutting kerf width to make it easier to remove parts either manually or with an automated picking system. Thanks to the control of the cutting width that prevents pickup error, the take-out unit allows long term stable operation.

DIMENSIONS

Unit : mm

VENTIS-3015AJ + shuttle table (LST) (L) 10060 x (W) 2840 x (H) 2432



MACHINE SPECIFICATIONS

			VENTIS-3015AJ		
Numerical Control			AMNC 3i		
Controlled axes			X, Y, Z axes (three axes controlled simultaneously) + B axis		
Axis travel distance	XxYxZ	mm	3070 x 1550 x 100		
Maximum processing dimensions	ХхY	mm	3070 x 1550		
Maximum simultaneous feed rate	X/Y	m/min	170		
Repeatable positioning accuracy		mm	± 0.01		
Maximum material mass		kg	920		
Processing surface height		mm	940		
Machine mass		kg	9100		

OSCILLATOR SPECIFICATIONS

		AJ4000S		
Beam generation			Laser diode-pumped fibre laser	
Maximum power		W	4000	
Wavelength		μm	1.08	
Maximum processing thickness*	Mild steel Stainless steel Aluminium Brass Copper	mm	25 20 18 10 8	

SHUTTLE TABLE SPECIFICATIONS

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

* Maximum value depends on material quality and environmental conditions

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



Be sure to read the user manual carefully before use.

When using this product, appropriate personal protection equipment must be used.



The official model name of the machines and units described in this catalogue are non-hyphenated like VENTIS3015AJ. Use this registered model names when you contact the authorities for applying for installation, exporting, or financing. The hyphenated spellings like VENTIS-3015AJ 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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