



MORE LIGHT

JENOPTIK – VOTAN® BIM

Efficient & highly flexible 3D  
laser cutting solutions with best  
in class multi robot systems.

# JENOPTIK–VOTAN® BIM. Highly accurate 3D laser cutting of metals & plastics

Jenoptik is the leading manufacturer of laser machines for production processes in the automotive industry. We develop 3D laser processing stand-alone machines as well as optimized systems designed for integration into your production lines for process optimization and automation. Jenoptik laser machines are ideal for processing of metal or plastic parts with maximum efficiency and precision.



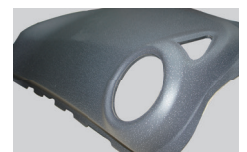
## Best in class 3D laser cutting technology developed by Jenoptik

To define the right processing solution for your new products and materials, Jenoptik supports you with a professional customer application center. Experienced application engineers assist you to reach your targets with our innovative laser machines.

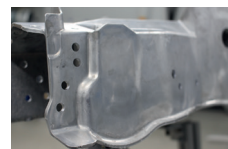
- Highly accurate robot system with an internal beam path
- Highest robot dynamics and precision by lightweight design
- Processing of all 3D plastic or metal parts
- Small footprint
- Flexible tool for smart integration into production lines
- Multi robot solutions for higher automation levels



3D shaped tubes



Interior plastic components



Aluminium light-weight parts



Exterior plastic parts



Presshardened steel for body-in-white



CFRP carbon fiber reinforced plastics

# JENOPTIK–VOTAN® BIM. An innovative product line

The industry receives an ideal tool for processing of 3D components due to the novel technology of the laser cutting system JENOPTIK–VOTAN® BIM. The system dynamics, its compact design and high accessibility to the workpiece allow for an extremely fast, accurate and efficient 3D laser cutting.

air cleaning. To increase the working envelope and productivity two robot modules can be placed into one standard machine setup at nearly the same footprint.

## Customized solutions based on BIM modules

The JENOPTIK – VOTAN® BIM modular set up enables customized laser processing systems for laser cutting at higher automation levels. By arranging multiple robot systems and multi purpose fixtures inside of a single cell the productivity per floor space can be dramatically increased. The target of JENOPTIK – VOTAN® BIM is to accompany our customers on the way to a fully integrated and automated laser cutting solution.

## Automated lines for car body assembly

Beyond laser cutting our extended know how in the field of customized automation will benefit you with tailored robotized solutions for material processing needs like welding, hemming, gluing, riveting and other joining technologies. A clear focus on fully line integrated systems, maximum throughput paired with highest flexibility is our driving factor for your next project.



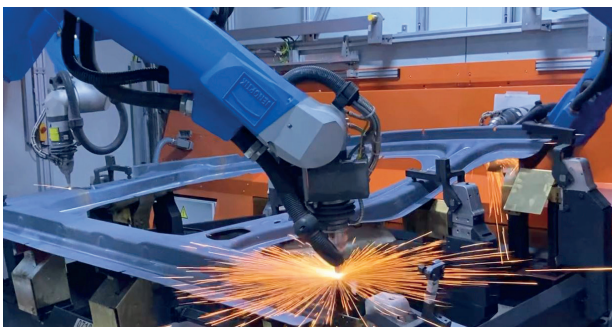
JENOPTIK–VOTAN® BIM is a family of robotic laser cutting equipment designed to meet the demands of high volume production manufacturers. The 3D laser system is designed to provide highest path accuracies at high speeds for best in class cycle times.

The concept behind the JENOPTIK–VOTAN® BIM series is based on a beam guide inside the robot. Different laser sources with a power of up to 4 kW can be used without the need for a complex external beam guide. Several laser cutting robots can be integrated into a single machine in order to achieve a higher output by parallel material processing at a significantly reduced floor space.

Furthermore our robot based machines are the first to enable a complete line integration of the laser cutting process.

## Turnkey system

JENOPTIK–VOTAN® BIM is a highly flexible plug & play system. It can be equipped with the suitable laser for your specific plastic or metal application. As an option, we provide integrated solutions for waste disposal and exhaust



Customized multi robot solution



Automated production line for car body assembly

## Technical specifications

Based on the described robot system for 3D cutting applications a turn key system was developed to process standard parts. This system provides a defined interface for easy fixture integration and standard procedures to cut metal or plastic parts. The system is designed to meet automotive requirements in machine uptime, productivity and serviceability.

Laser type and output	fiber laser 1 - 4 kW; CO <sub>2</sub> laser 400 –1500 W; other sources on request
Cutting speed	up to 300 mm/s
Path repeatability	repeatability down to +/- 50 µm
Beam guide	mirror system integrated in robot
Part handling	rotary table, shuttle systems or line integrations
Fixture change	hot swap quick change
System control	PLC S7 control
Laser protection	class 1
Programming	CENIT offline programming or teach panel

We reserve the right to make changes in the interest of technical progress.

We support you worldwide.



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