

# ROBOTIK DENTAL



## ‘ROBALIGN’SOLUTION

RobAlign’ is a fully automated, robot-based cutting solution for aligners.

From loading to unloading, optical recognition and laser cutting, the job is done automatically 24/7.

[contact@robotikdental.com](mailto:contact@robotikdental.com) / [www.RobotikDental.com](http://www.RobotikDental.com)

# ROBALIGN'SOLUTION

RobAlign incorporates laser cutting technology which allows you to achieve an optimum quality cut that require no finishing.

Cutting line & setup preparation are automated with the integrated software solution WORKNC DENTAL 'AO', allowing a fully automated workflow to generate the laser cutting path.



## KEY POINTS

The laser cutting cell is compact and autonomous, allowing models to be loaded and unloaded and cutting to be carried out fully automatically **24 hours a day**.

A touch screen panel is available on the robot for main operation. An advanced mode is also available for engineers.

The robotic handling system allows the Aligner to be cut either with or without the model which ensure reliable and repeatable loading/unloading and a perfect cut of the Aligner that does not require any manual finishing or polishing. The cutting path has been optimised to ensure a smooth and continuous cut, providing optimum cutting movement and the best quality

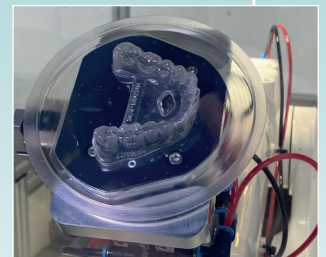
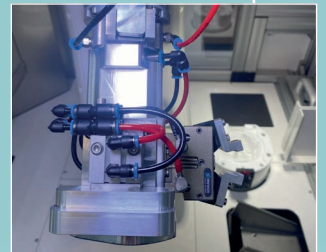
Robotik Dental offers a demoulding device to be used after thermoforming, allowing the model to be removed in a few seconds.

An optical sensor can detect either a QR code or an engraving on the model or directly on the thermoformed sheet, associating and automatically calling the laser cutting path, ensuring full traceability during the production workflow and eliminating any risk or error.

WORKNC DENTAL generates a continuous 6-axis cutting path with a smooth and continuous movement that ensures the maximum quality, fast and repeatable cut. The quality of laser cutting, and the capability to manage the cutting power and the airflow, makes finishing operations almost unnecessary.

The Aligner's cutting time is between 15 and 25 seconds, depending on the different materials and model size. The Robotic workflow can be customized to load and unload the aligner in the racks or output in a bin. Each rack has 25 positions and the cells can have between 2 to 15 racks (or more on demands)..

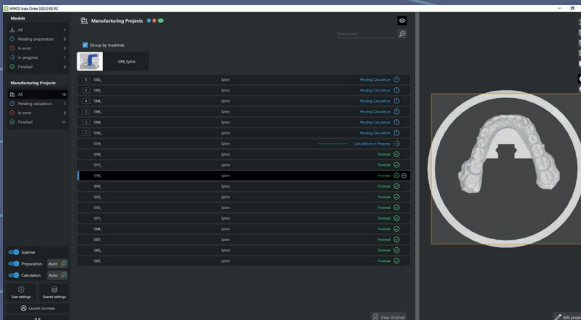
A wide range of materials have been qualified to ensure high quality cuts and minimum back-office operations.



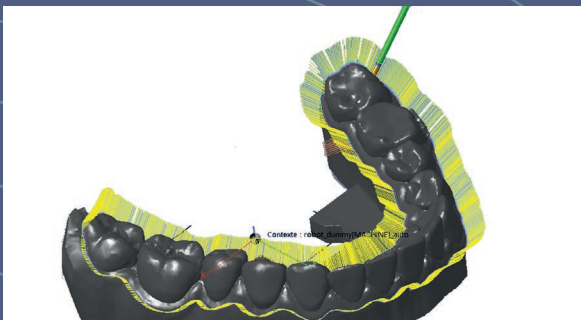
# 'ROBALIGN'SOLUTION SOFTWARE SOLUTION



The solution integrates a cutting line generation software allowing to create the cutting line on any type of STL model and/or offer a compatibility with any orthodontic CAD.

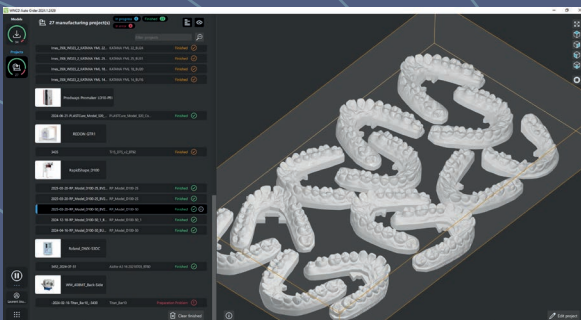


The setup preparation solution allows to batch process the complete workflow and allows optimization of the model mesh and basis size modification as well as adding engraving and/or QR code .



WORKNC DENTAL 'Auto Order' ('AO') automatically calculate the Laser cut path in fully automatic WORKFLOW from any setup export, from our solution or the Orthodontic CAD solution.

No operator, is needed when the setups are generated from the cutting line software, 'AO' is managing automatically the process.



The integrated WORKNC CAM kernel generate a 6 Axis cutting toolpath totally collisions checked, generating a very smooth trajectory in order to provide the best quality of the cut.

The Cutting path of any Aligners are directly send and stored in the robot Controller waiting to loaded and trimmed.



WORKNC DENTAL 'AO', can also automatically process the preparation of your 3D printing plates whatever the printer used.

## ROBALIGN LC50



## Key Specs.

Fully Automated CAD/CAM WORKFLOW

Cycle time for Aligner :  $\approx$  60 Sec.

Autonomy : 24/24

Production Capacity :  $\approx$  1440 Aligners/day - (60 Aligners/hour)

Fully Automated Lead in / Lead out

Dimension W x D x H : 760 mm x 1480 mm x 1860 mm

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[www.RobotikDental.com](http://www.RobotikDental.com)

Parc Industriel, 266 rue de Chambourg  
01100 Oyonnax FRANCE

## ROBALIGN LC100



## Key Specs.

Fully Automated CAD/CAM WORKFLOW  
Cycle time for Aligner :  $\approx$  60 Sec.  
Autonomy : 24/24

Production Capacity :  $\approx$  1440 Aligner/day (60 Aligners/hour)  
Fully Automated Lead in / Lead out  
Dimension W x D x H : 2033 mm x 2663 mm x 1900 mm

