ENG

PLY 1 Δ

MorganTecnica

PLY 1 Δ

PROTOTYPES, CUSTOM SAMPLES, REPEATED PATTERNS, PANELS, TECHNICAL MATERIALS

Discover the technological evolution of our **Ply 1 Delta** cutting machine, completely redesigned to offer unprecedented modern performance. The tool that will make you more productive thanks to its speed, waste reduction, precision, and versatility in the sustainable cutting of any fabric and surface.

- New design
- New user-friendly interface
- More powerful and high-performing linear motors
- Vacuum management in modules
- Integration with vision system
- Technical fabric cutting
- Modular vacuum tanks
- CNC
- IO LINK

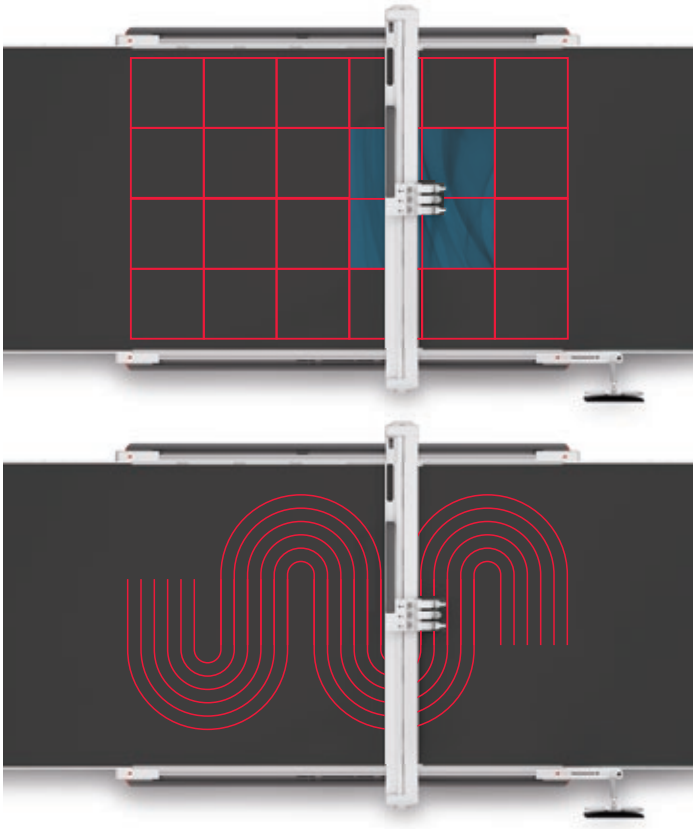
  State-of-the-art electrical system that enables component diagnostics

Modular Vacuum Tank

The machine can be configured with **1 or 24 vacuum tanks** depending on the application and customer requirements.

The software dynamically selects the tanks to activate to optimize suction capacity during cutting.

Energy efficiency is improved thanks to the dynamic management of the vacuum opening.

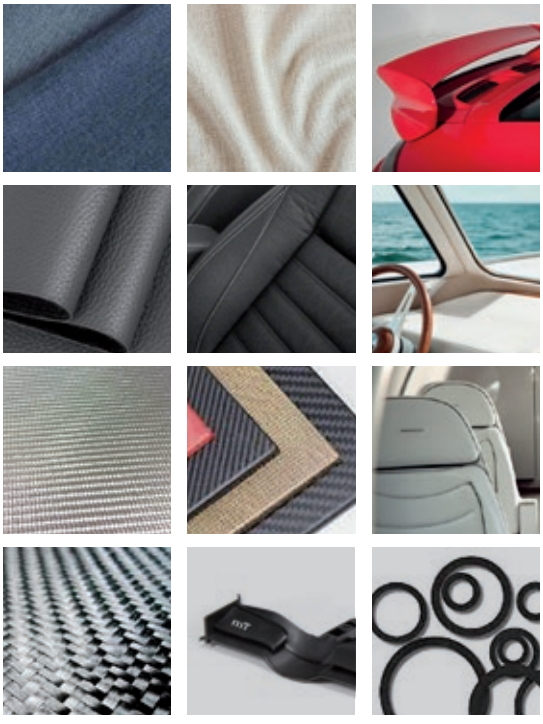


CNC

An evolution of the Motion platform that enables smoother movements while maintaining high performance (from PLC to CNC).

PERFORMANCE*

• Maximum speed:	180 m/min
• Maximum acceleration:	29.4 m/s^2 (with a tool)
• Cutting thickness:	30 mm
• Cutting area dimensions:	H 180 x L 250 cm H 220 x L 250 cm H 280 x L 320 cm



TECHNICAL SPECIFICATIONS*

• Max. Position Tools Available:	3
• Installed electrical power:	16.5 kW
• Voltage / Frequency:	400 V 50/60 Hz 3PH
• Aspirated Power:	11kW
• Environment temperature:	10-40°
• Humidity(at 30° ecc…):	< 95°
• File Compatibility:	ISO cutting file DXF file vision system
• Operating system:	Win10 IoT LTSC

**Please note that the values given may change, for continuous improvement and adaptation to production needs.*

Green Solution

VISION SCAN SIGMA

MAXIMUM ACCURACY OF DETECTION

Waste reduction
Performance optimization
Detection accuracy

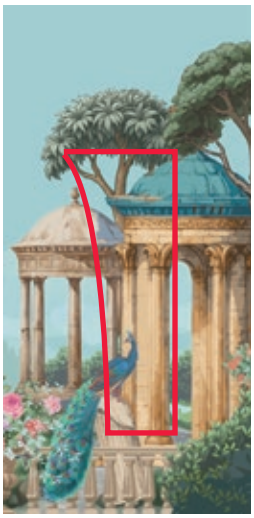
The system “Vision Scan Sigma” is a fully automated solution that allows one to recognize fabrics and their characteristics such as prints and repetitive motifs. The system is equipped with 4 cameras that generate an image of 80Mp. The structure is positioned above the cutting area to ensure maximum detection accuracy. Vision Scan Sigma manages different methods:

- Panel Management
- Repetitive Motifs
- Contours Extraction
- Printed marks

Panel Management

Vision Scan Sigma, with its Panel Management function, automatically links defined shape points to a fabric layer, without requiring repetition.
Using standard cutting files, the operator only needs to set placement rules (the recipe) on the first panel.
The calculation algorithms automatically replicate the placement in subsequent processes in two modes:
1) Keeping the exact original geometries of the pieces;
2) Adapting the pieces to the actual fabric deformations.
In summary, Panel Management is a set of intelligent algorithms capable of replicating theoretical placements on fabrics that change in appearance and geometry each time.


Recipe creation

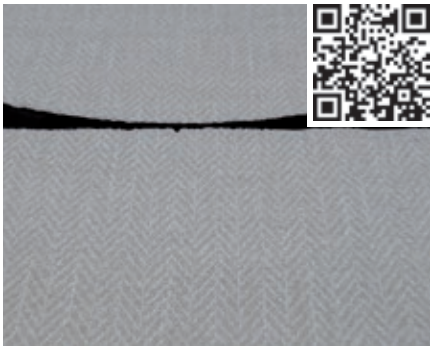

Panel preparation with recipe application


Cut

ENG

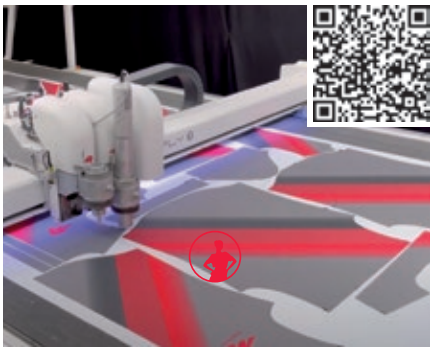
Repetitive Motifs

The Vision System for “Repetitive Motifs”, manages fabrics typical of Apparel, Upholstery, and Automotive sector, characterized by patterns such as stripes, plaids, rhombus, panel prints… Vision Scan Sigma manages the repetition of patterns by creating a “virtual grid” to position and adapt the contour of the pieces to the fabric structure. The Vision System is positioned above the cutting area to ensure maximum precision between pattern detection and cutting.



Contours Extraction

“Contour extraction” is one of the operating methods of Vision Scan Sigma, by which contours of shapes are identified. The System analyzes the fabric, identifies the contrast between the background and the piece, and extracts the contours. This operating method requires no files to work.



Printed Marks

Working with printed fabric, Vision Scan Sigma also manages “printed marks” that are reference points for the recognition of the positions and deviations of the fabric, which naturally is very elastic. Based on a DXF file, the system gives feedback on all dimensional deviations compared to the theoretical requirement. With this system, you can also manage all the pieces’ information such as order number, size, name, etc.

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Company with integrated Management System
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