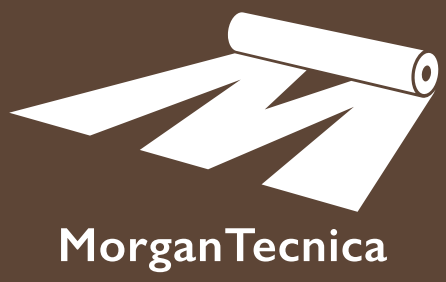


PLY 1  
LEATHER SOLUTIONS



The Perfect Cut

# THE PERFECT MANAGEMENT OF THE LEATHER CUTTING PROCESS

Automation has revolutionized the industry in numerous ways, and leather cutting is no exception. The use of automated cutting machines has transformed the way leather is cut. In today's highly competitive furniture industry, automation is no longer optional, but a requirement for companies to remain cost efficient and meet growing customer demands. One of the most significant advantages of automation in leather cutting is the increased efficiency and speed of the process. The complexity of the process is induced by the characteristic of the raw material processed. Each hide is unique as shape and distribution of quality areas both from aesthetic and physical point of view. A solution needs to bring together advanced algorithms for hides digitization and nesting, production performance optimization software and high productivity equipment.



MorganTecnica and Thagora meet the challenges of global leather upholstery industry



# MORGANTECNICA & THAGORA THE ADVANCED CUTTING ROOM

The leather upholstery industry is facing major challenges worldwide. The continuous sophistication of end customers' tastes leads to a higher degree of products customization. At the same time, the price of materials on a global scale and the cost of the highly qualified workforce are very important aspects. They add the pressure of increasing production to cover new opportunities in emerging markets. With an understanding of these needs, MorganTecnica & Thagora offer the best-performing technical solutions for the core of this business: the leather cutting room.

### 3 MODULAR SOLUTIONS FOR EVERY REQUIREMENT

The combined Thagora software and hardware solution together and MorganTecnica cutting machine constitute a modular and scalable package designed to be configured for any volume of production. From small workshops, where there are a few hides to be cut every day up to large factories, with thousands of hides to be cut daily. It is also suitable for any type of production being adaptable to manufacturing of highly customized or series products.

- In Line Solution
- Hybrid Solution
- Off Line Solution



Leather digitization



Nesting



Cutting



Quality control



Reporting and data management



# IN LINE SOLUTION < 100 HIDES/ DAY

## LEATHER SUPPLIER'S DELIVERIES

The hides delivered by suppliers are stored in the warehouse. Information about leather types, batches and quantities can be stored in the Thagora database, to offer a complete view of the stock.

## QUALITY ZONES MARKING

According to the jobs scheduling, the quantity of hides required for one job is transported to the marking area. After all the hides from one scan job are marked, they are sent to our Single Ply cutting machine.

## JOB PROCESSING

The marked hides are processed in sequence on our Ply1. The 3 zones architecture is optimal for maximizing the productivity of each step of the process.

## QUALITY CONTROL AND PARTS BUNDLING

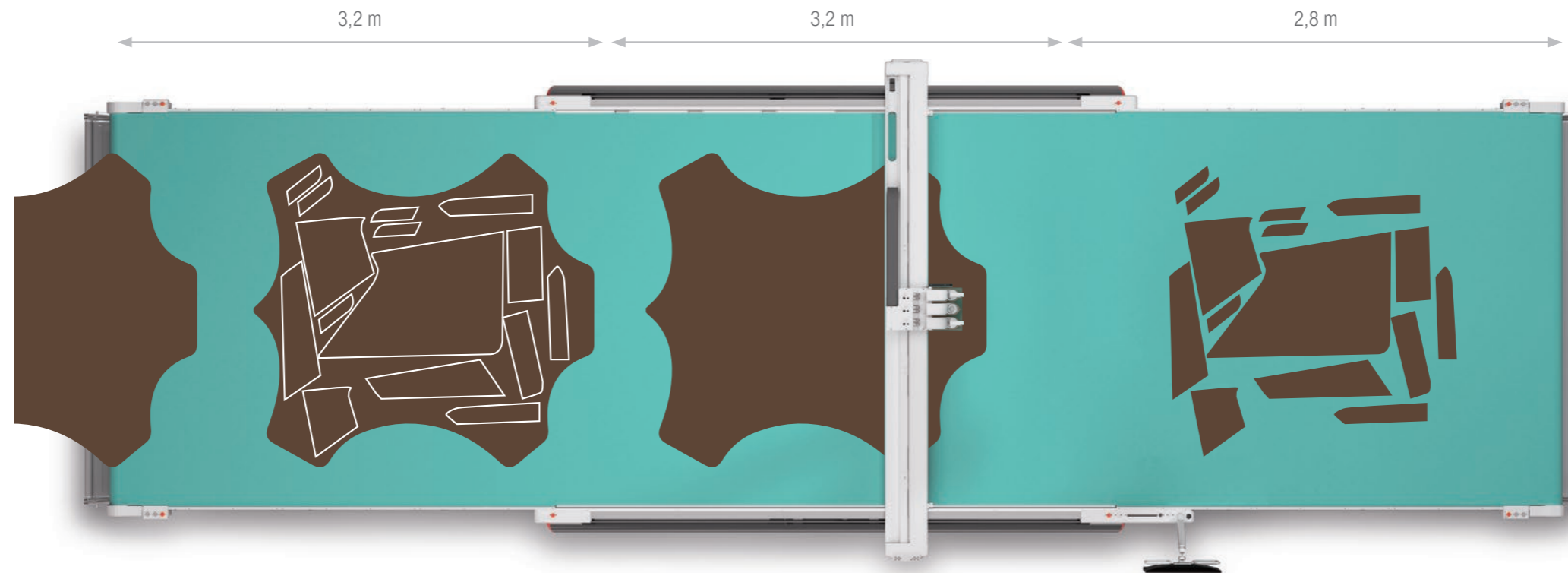
The operator checks the parts for quality and quantity after collecting using the information displayed on the monitor. The parts can be bundled using different criteria [by customer order, by product. etc.) and sent to sewing.

All steps of the leather cutting workflow: Digitizing, Nesting, Cutting and Collecting, are performed at once, on the single Ply1 cutting machine.



- Cutting area dimensions: 180x250 cm
- Cutting area dimensions: 220x250 cm
- Cutting area dimensions: 280x3200 cm
- Power plants: 4,5+9/15 kW
- Average power consumption: 3,5 kW
- Acceleration up to 3G / Speed up to 180 m/min
- Humidity from 30% to 80% without condense
- Voltage: 400 V 3 Ph 50/60 Hz

IN LINE SOLUTION



- Hide Placement
- Flattening

- Manual Nesting: Computer / Video Projection
- Automatic Nesting: CPU / GPU based
- Flattening
- Manual cutting of wrinkles

- Cutting

- Monitor or / and beamer projection of parts incl.
- Sorting infos
- Picking

- WasteBox



ENJOY THE VIDEO

# HYBRID SOLUTION < 100 HIDES/ DAY

## FABRIC AND LEATHER CUTTING TOGETHER

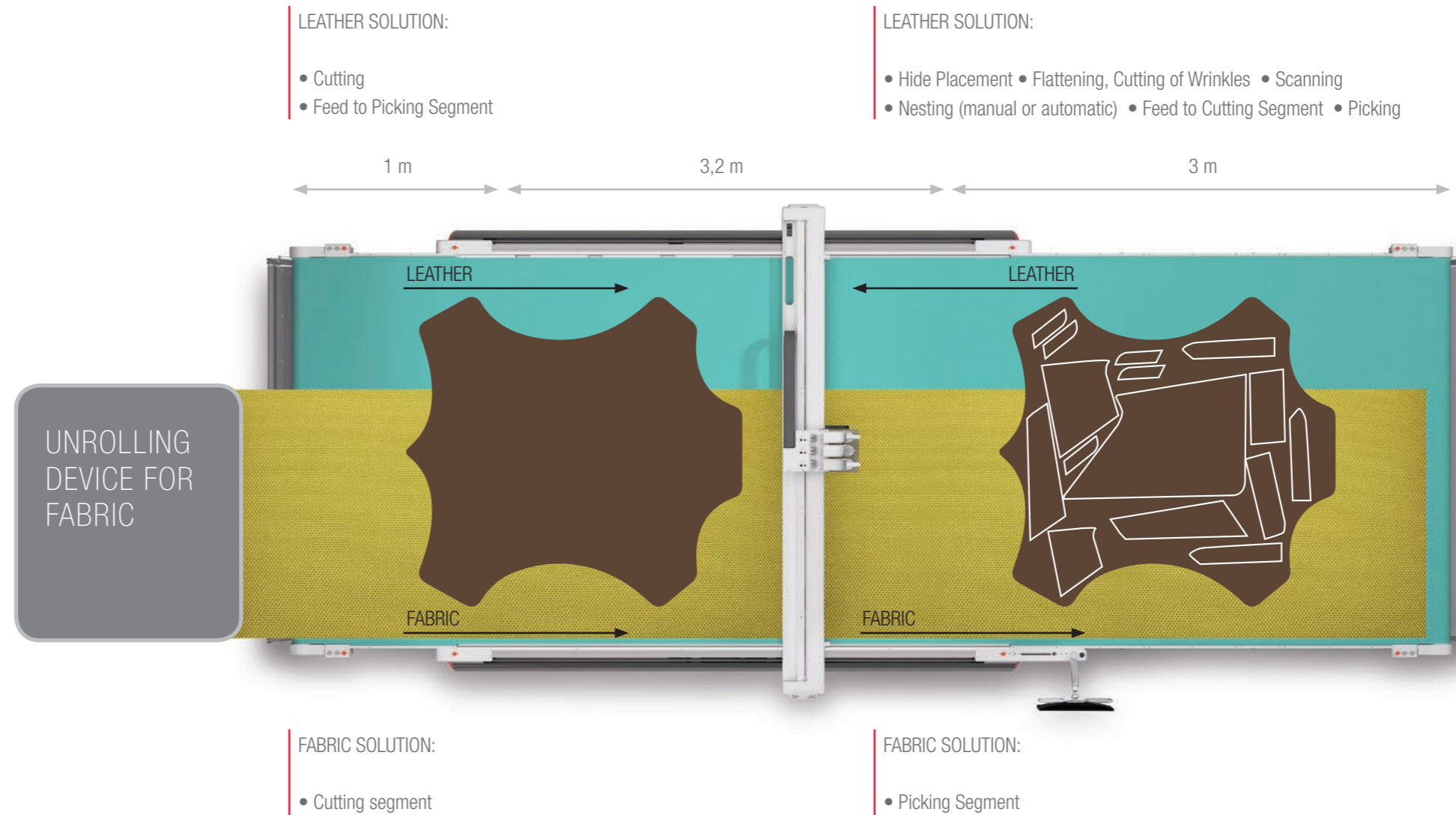
This represents the ideal and strategic option for companies that are mainly dedicated to cutting fabric, and occasionally cutting the leather.

This system offers versatility and efficiency, allowing companies to easily adapt to various production needs.

Thanks to its ability to transition between different materials, our machine optimizes the workflow, reducing downtime and increasing overall productivity.



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# OFF LINE SOLUTION > 100 HIDES/ DAY

## PLANT FLOOR

**Leather supplier's deliveries.** The hides delivered by suppliers are stored in the warehouse. Leather's information can be stored in the Thagora database.

**Scanning the hides per job.** According to the scan jobs scheduling, the quantity of hides required for one job is transported to the scanning stations. After all the hides from one scan job are scanned, they are sent to the cutting area.

**Multi-hide nesting.** After all the hides from one scan job are scanned, the corresponding nest jobs start automatically. When a nesting job is finished, it can be approved either automatically or manually, by an operator.

**Cutting the hides.** The approved jobs are ready to be cut. The hides are processed one by one. MorganTecnica Ply1 delivers high cutting performance as speed and precision. Each step of the process is enhanced by using augmented reality when placing the hides and collecting the cut parts together with an innovative and userfriendly graphics interface.

**Quality control and parts bundling.** The operator checks the parts for quality and quantity using the information displayed on the monitor. The parts can be bundled using different criteria (by customer order, by product. etc.) and sent to sewing.

The scanning, nesting and cutting are performed separately on different workstations. The hides required for one cutting job are selected and scanned. After the last hide is scanned, the Nesting Server starts the automatic multi-hide nesting. When the nesting job is approved, the hides are processed on the cutting machine.

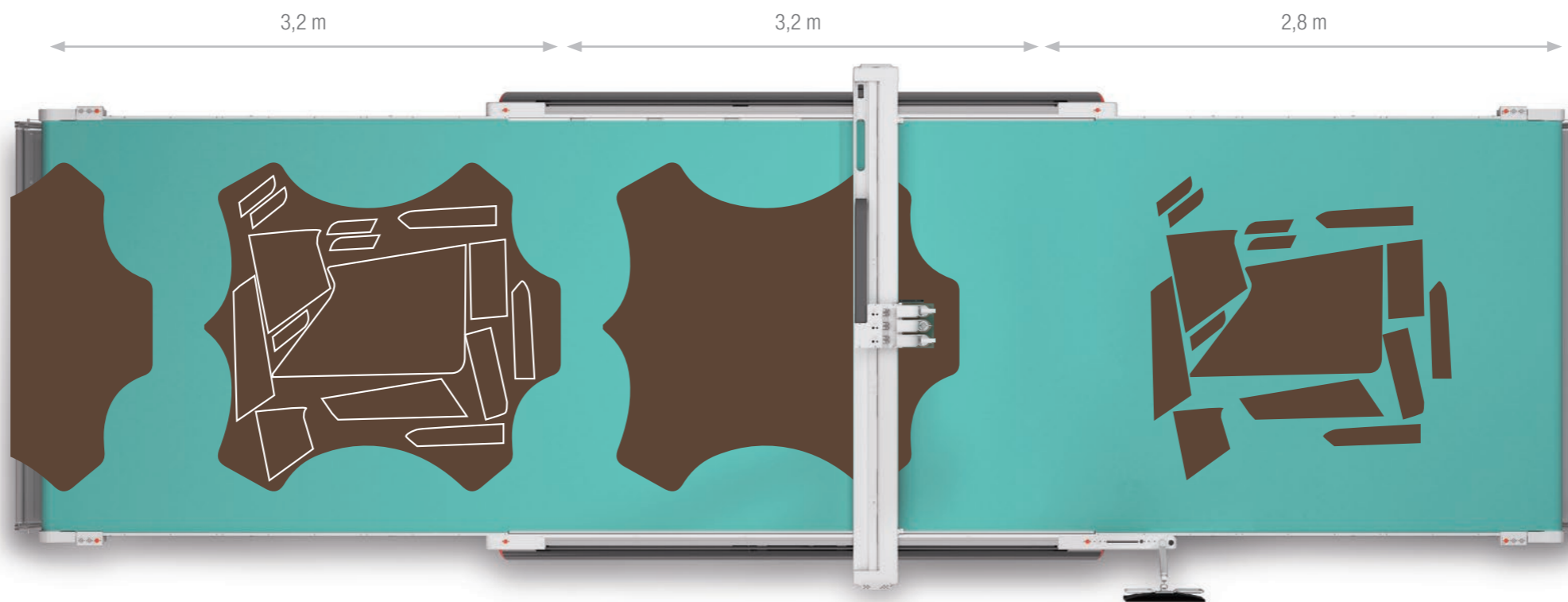


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### Thagora Leather Scanning

This is a conveyerized leather scanning machine dedicated for mass production enterprises. The digital pen used for marking doesn't leave traces of chalk or ink on the hides. The machine uses augmented reality and other advanced features for a fast and accurate inspection process and high detection stability. The leather scanning machine is available for two working scenarios: analogic for automatic digitization of pre-marked hides and digital for marking the defects using a digital pen directly on the conveyor.

## THAGORA LEATHER SCANNING MACHINE



- Hide Placement
- Flattening

- Manual Nesting: Computer / Video Projection
- Automatic Nesting: CPU / GPU based
- Flattening
- Manual cutting of wrinkles

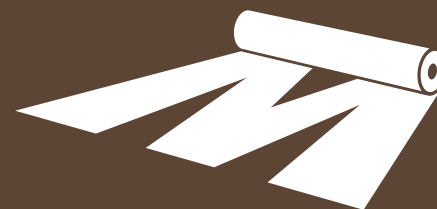
- Cutting

- Beamer projection of parts incl.
- Sorting infos
- Picking

- WasteBox



ENJOY THE VIDEO



**MorganTecnica**

www.morgantecnica.com    

ITALY / INDIA / CANADA / HONG KONG / USA / VIETNAM

## INLINE SOFTWARE PACKAGE

4 solutions

Package	BASIC	BASIC +	LIGHT	EFFICIENCY
Volumes	< 20 hides / day	< 20 hides / day	< 20-50 hides / day	< 50-100 hides / day
Ideal for	Leather / Fabric Leather cut occasionally	Leather / Fabric Leather cut occasionally	Leather	Leather
Industry	Furniture	Furniture	Furniture	Furniture /Automotive

## HARDWARE CONFIGURATIONS



Every License package require a specific list of additional HARDWARE necessary to complete the configuration and the number of hardware depends on the selected package:

- Camera
- Video Projector
- PC
- Monitor