

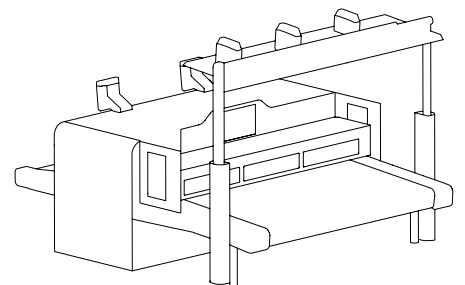
THE HIGHEST PRODUCTIVITY EVER... 24/7



# SIGMA 300X

QUAD  
CUTTING HEADS

MAXIMUM  
PRODUCTIVITY,  
FLEXIBILITY AND  
RELIABILITY



**TESEO**  
OPTIMIZEYOURBUSINESS

## THE **HIGHEST** PRODUCTIVITY EVER

The secret is not just adding cutting heads but be able to make them work synergistically. In 2006 TESEO introduces the first machine with **3** cutting heads which, thanks to an innovative software, manages the individual units in a continuous manner and without interference even in the same area of the leather, increasing the productivity of **90%** compared to the same machine equipped with only **2** cutting heads.

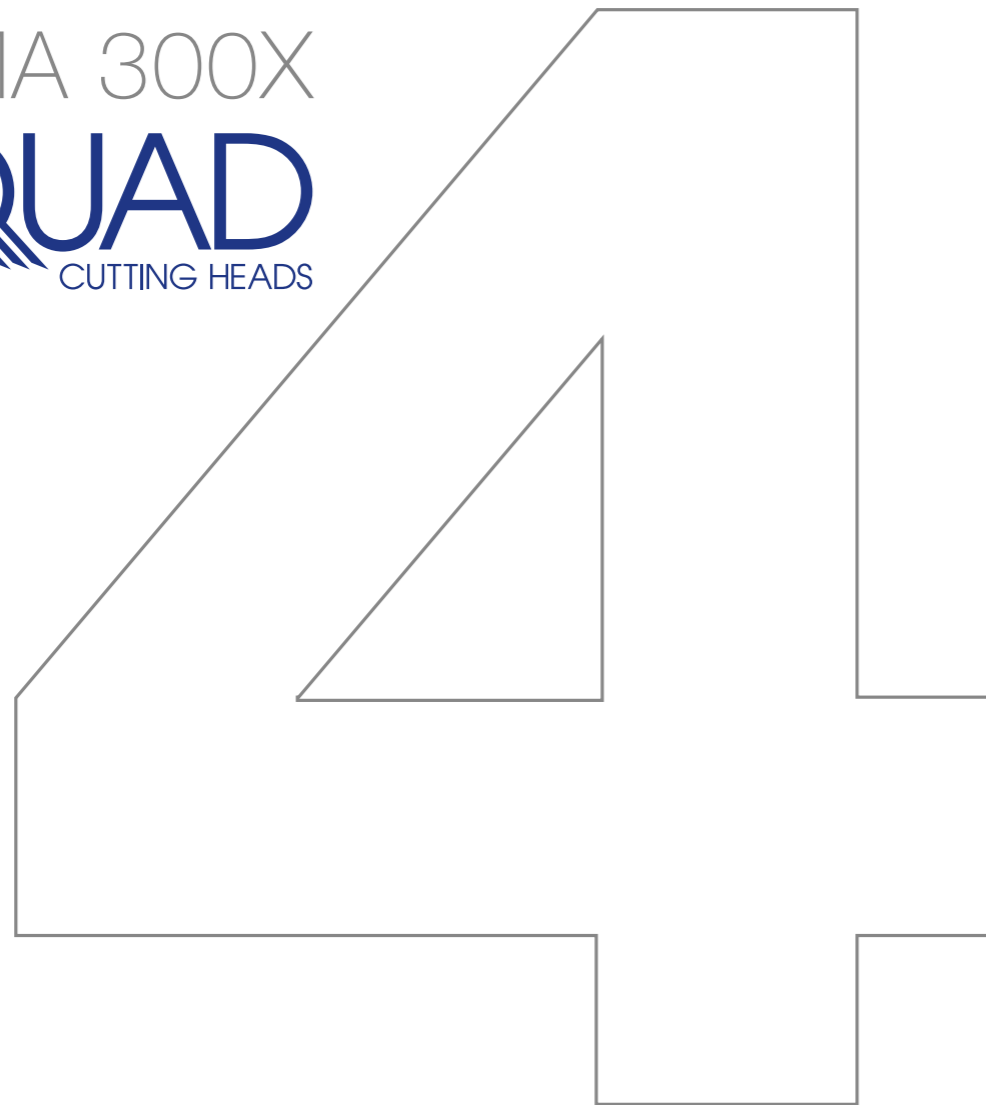
The third head marked a turning point: in this decade, it has evolved and improved thanks to the experience gained with over **4.000** systems installed within the largest companies in the world, in various sectors such as footwear and leather goods, automotive and suite of furniture.

# 4

## CUTTING HEADS

A valuable know-how that now, thanks to the new technology developed in **2016**, the miniaturized components and the innovative materials, make, for the first time on the market, the adoption of the fourth cutting head possible. An exclusive to meet the growing production needs and contextual to the required flexibility that the fragmentation of modern markets imposes.

SIGMA 300X  
**QUAD**  
CUTTING HEADS



CUTTING HEADS

**+93%**  
PRODUCTION  
vs. 2 heads

**330**  
pairs/hour



4' 16"

**4**  
HEADS  
35 MQ/h

**+53%**  
PRODUCTION  
vs. 2 heads

**259**  
pairs/hour



5' 24"

**3**  
HEADS  
27,5 MQ/h

**169**  
pairs/hour



8' 16"

**2**  
HEADS  
18 MQ/h



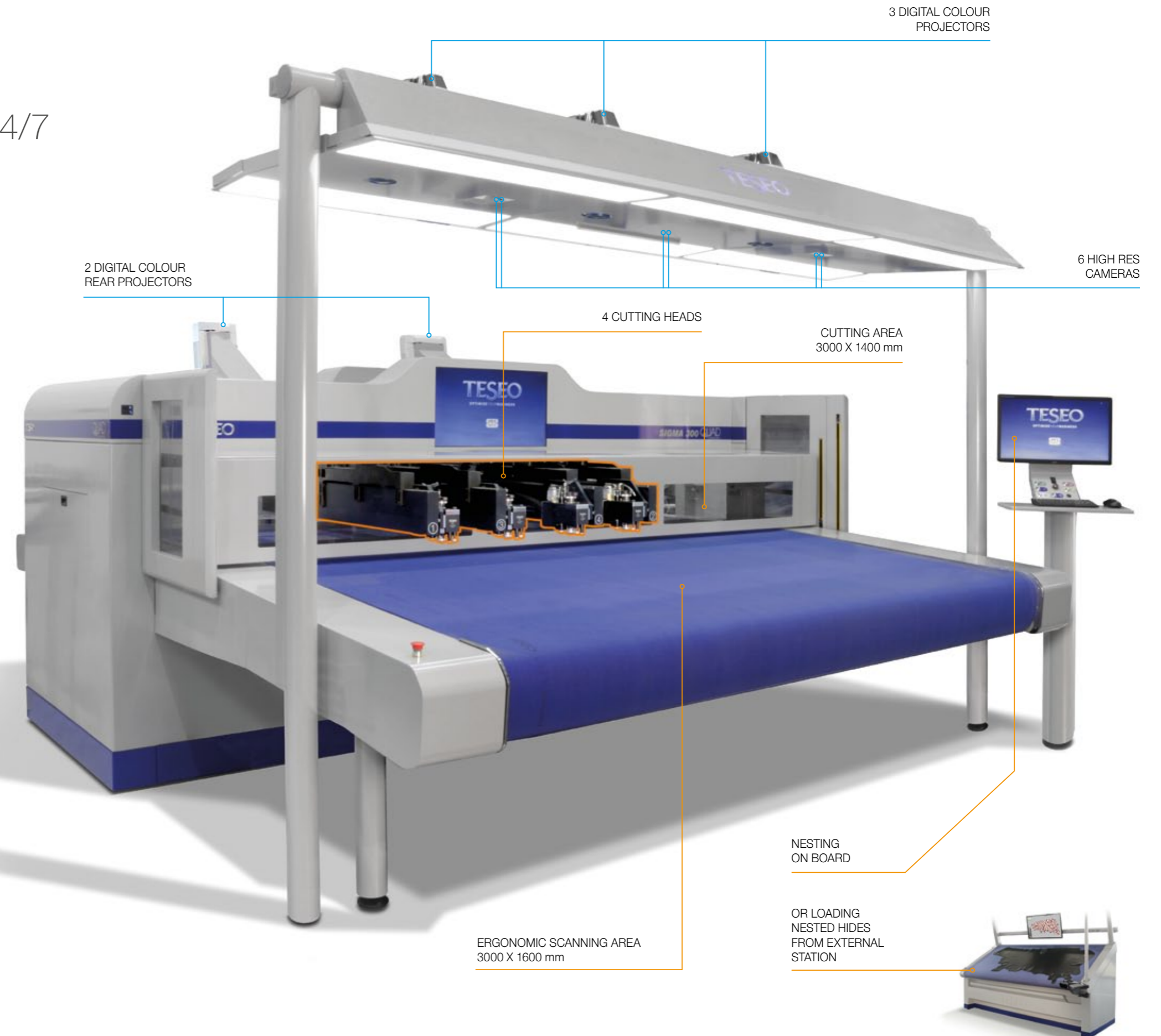
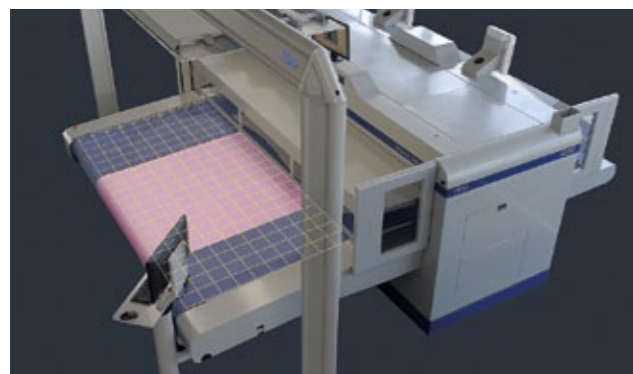
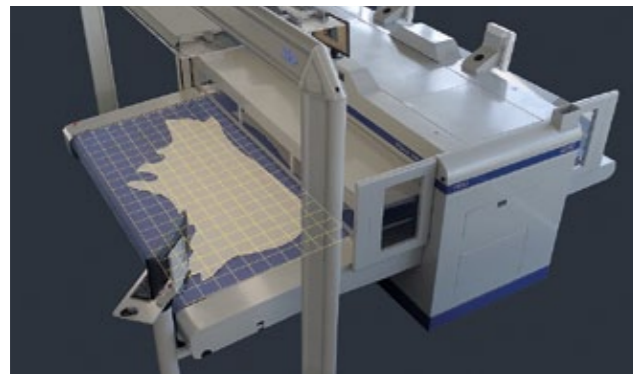
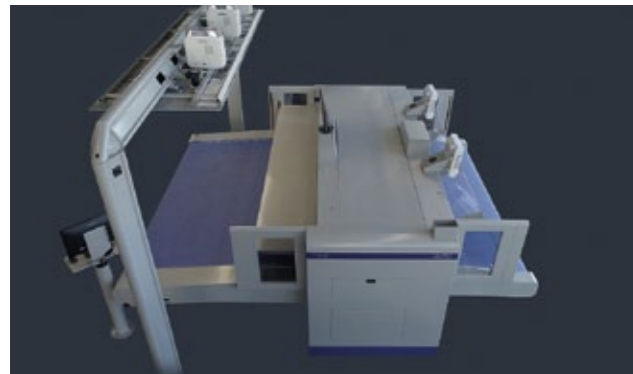
WATCH  
COMPARATIVE  
VIDEO



# SIGMA 300X QUAD CUTTING HEADS

MAXIMUM PRODUCTIVITY,  
FLEXIBILITY AND RELIABILITY 24/7

Cutting system with a working area moving on rollers for continuous automatic cutting of leather and materials in rolls (synthetic and fabrics).





## FAST AND ACCURATE CUTTING ON ALL MATERIALS

- Exclusive pneumatic knife groups interchangeable in a few seconds, with high oscillation frequency (up to **36.000 RPM**).
- Low consumption of compressed air of only 90 l/min (other systems have 250 l/min).
- Available with **1, 3, 5 and 7 mm oscillation stroke** for the best result on any thickness.

0,5 mm  
TEXTILE/FABRIC

2 mm  
LEATHER

6 mm  
LAMINATED SYNTHETIC

10 mm  
MULTI-PLIES



## ULTRA COMPACT CUTTING HEADS

We concentrated the reknown reliability and performances in just **7.5 cm**.

**-40%  
USED  
SPACE**

The willingness to adopt the fourth cutting head has stimulated the search for solutions designed to save space, so that the different heads could better interact. The result is an exceptional head, with **6** tools, that occupies less space (the **40%**).

But not only: the small size and the increased mechanical rigidity, allow this technological jewel a greater dynamism and an improved reliability.



ARGHON is a **dual optical sensor camera with powerful micro computer**. It processes 100 scans per second with 0,02 mm resolution.

ARGHON



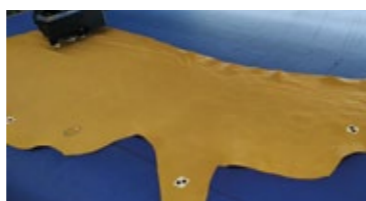
Thanks to the **3D** vision, ARGHON is constantly capable of measuring the wear of the cutting carpet and the hide thickness, detecting variations in height.



ARGHON recognizes the effective execution of cut and punches for an **automatic quality control**.



ARGHON recognizes details size less than **0.1 mm**. It enables a better recognition of **ROT** (Reference Optical Tag) for automatic hide re-centering.



UP TO  
**6**  
TOOLS

Blade for fast cutting



1

Pen and punch for the signature



2



3

Up to 3 different diameter dies: from 0.8 to 12 mm



4

5

6

UP TO  
**12**  
HOLES  
PER SECOND

# SCANNING AND QUALITY CONTROL

The **MHS** system allows to capture the image of the hide and its defects, thanks to the **high resolution cameras**.

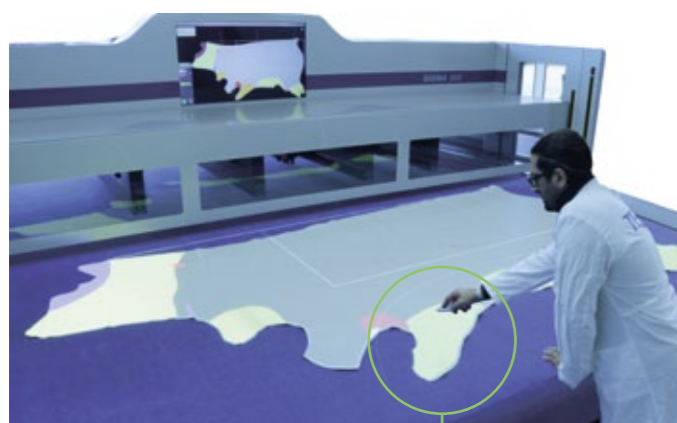


**Sherlock** is a precision optical recognition system developed by TESEO. Installed directly on the cutting heads, it is able to **recognize any kind of pattern** of the material that needs to be cut: logos, textures, designs or lines.



The scan takes only **3 seconds**, covers the entire working area and is static to ensure a perfect quality of the picture, making visible even the smallest detail of the leather texture (resolution 0.25 mm).

Sherlock will automatically adapt in real-time the theoretical nesting to the actual pattern of the material, pieces by pieces.



The mark of the quality areas, the direction lines of the leather and every reference traces are shown instantly on the hide, where it will be directly cut. This ensures the highest accuracy of nesting and the absolute control in each following stage.

High production of automotive parts with absolute accuracy. Inspection on each piece with alignment and rotation in real time.



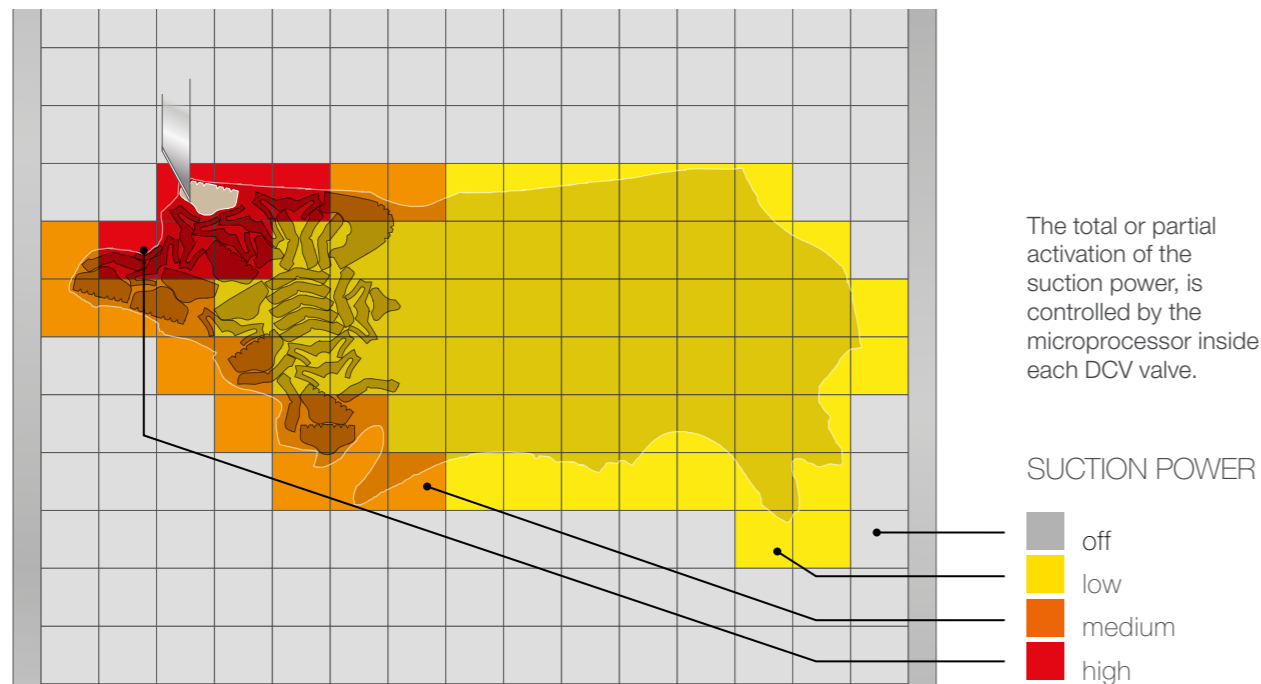
## WIRELESS OPTICAL POINTER

The exclusive **WOP system** allows to mark virtually the defects and the different quality areas, without leaving any trace on the leather.

# VACUUM SYSTEM THE POWER IS IN THE AIR

The vacuum surfaces consist of up to **300 independent and dynamic small sectors** of 150x150 mm. They are dynamic because are driven by a software that recognizes the shape of the material and the position of the cutting head. The system automatically activates, with different power, only those areas interested by the cutting operations, excluding completely those not occupied.

With this patent TESEO concentrates the suction only where it is really needed, for the highest accuracy and speed.



## INTELLIGENT

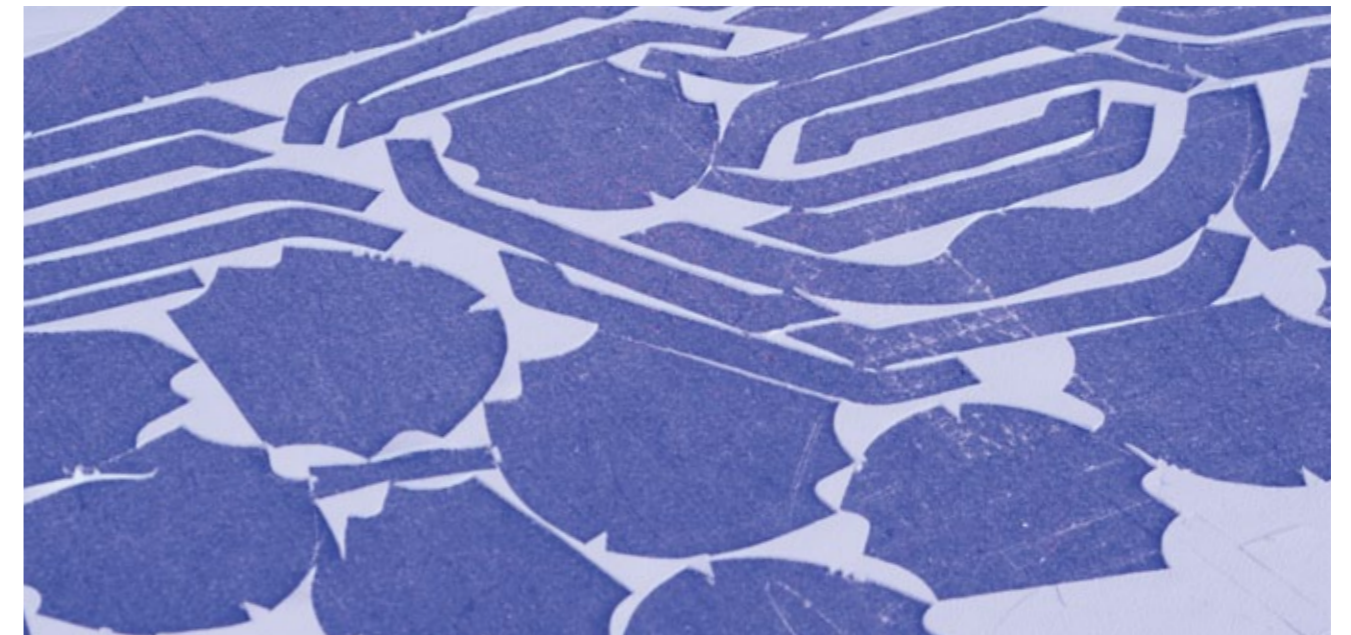
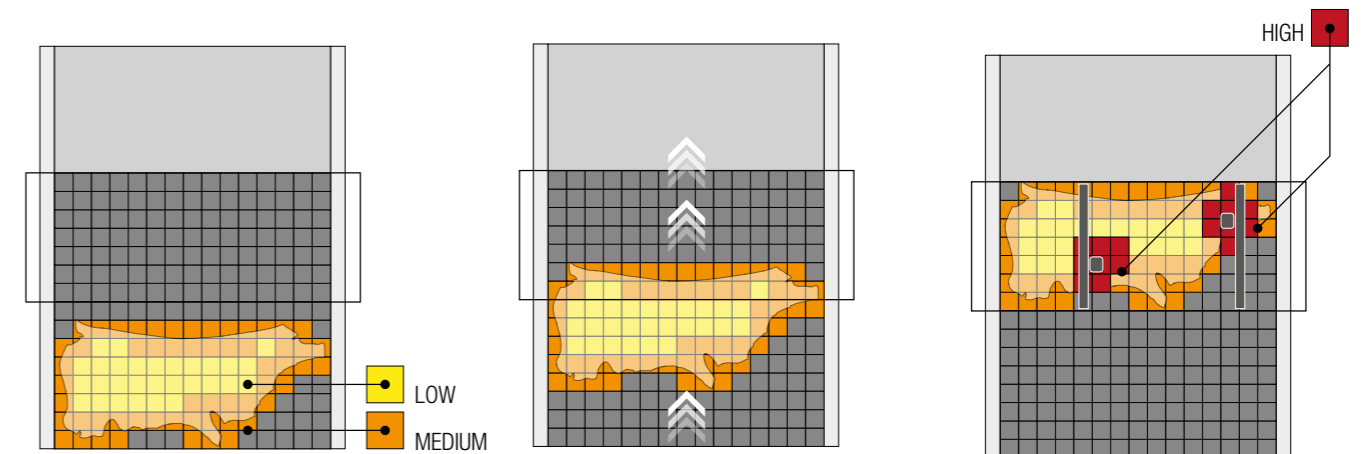
because it activates **only the necessary sectors** and **requires** a low consumption vacuum pump for energy (less than 15 Kw), saving up to **40%** with respect to all the other solutions.

# ONLY IN TESEO CONVEYOR SYSTEMS THE VACUUM ALWAYS FOLLOWS THE LEATHER

The vacuum system **fixes the hide** on the surface during the LOADING, SCANNING and NESTING phase.

The vacuum system is able to **follow the hide** also DURING THE MOVEMENT OF THE CARPET without ever releasing the grip. The suction is active also at the edges of the carpet.

The vacuum system **keeps the hide steady** DURING THE CUTTING PHASE dynamically. It is able to follow the motion of the cutting heads, increasing the suction power of sectors where cutting is done.



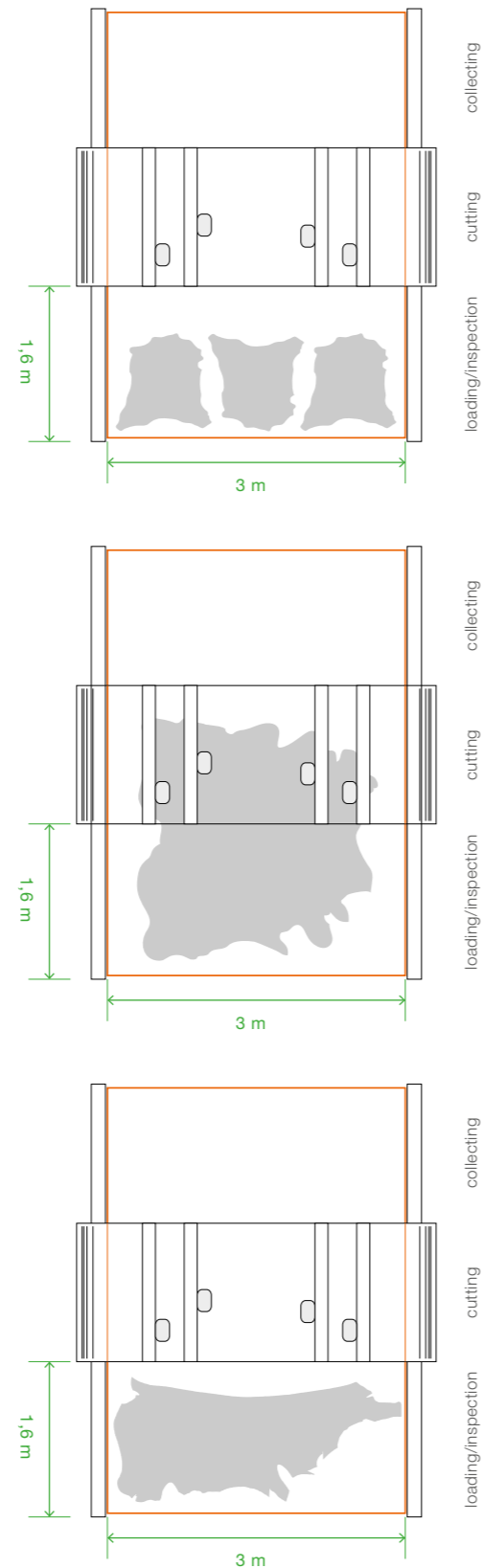
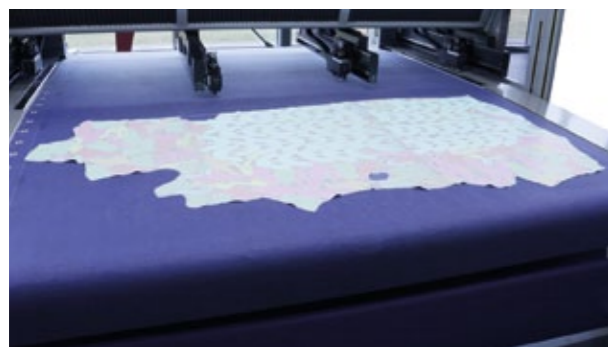
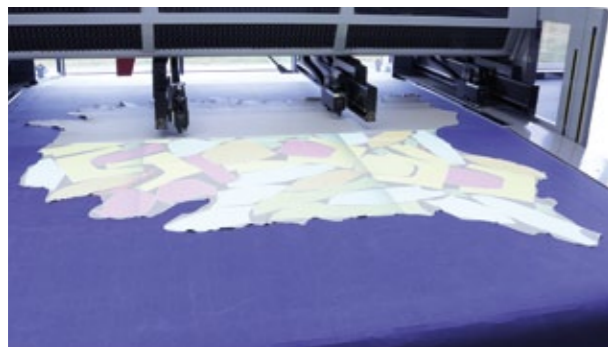
- NO PAPER OR FILM NEEDED
- ZERO BUFFER
- SAVING LEATHER

The vacuum, concentrated only in the cutting zone, allows the maximum of the performance **without having to use plastic or paper film** to keep the pieces blocked. The ability to cut up to the edges and to  $\emptyset$  mm between one piece and another, allows a further **considerable saving of leather**.

# ENGINEERED FOR LEATHER CUTTING

FROM THE CUT COMPONENTS TO THE SIZE, UP TO THE ERGONOMIC INCLINED SURFACES FOR LOADING AND DISCHARGE: ALL IN SIGMA IS DESIGNED TO EASILY WORK THE HIDE IN ALL ITS FORMS AND DIMENSIONS

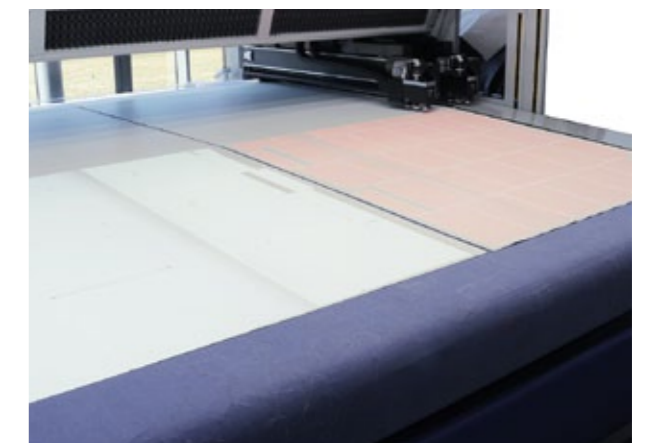
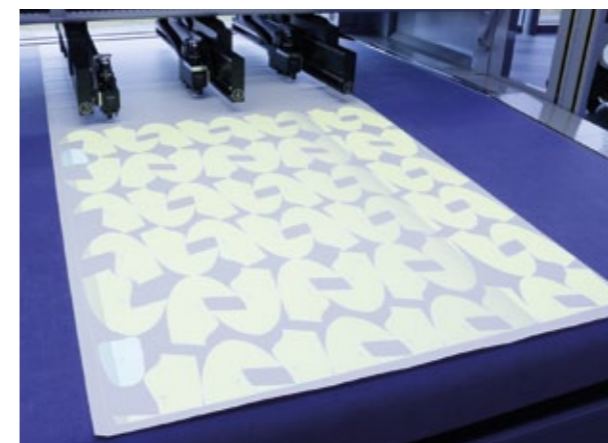
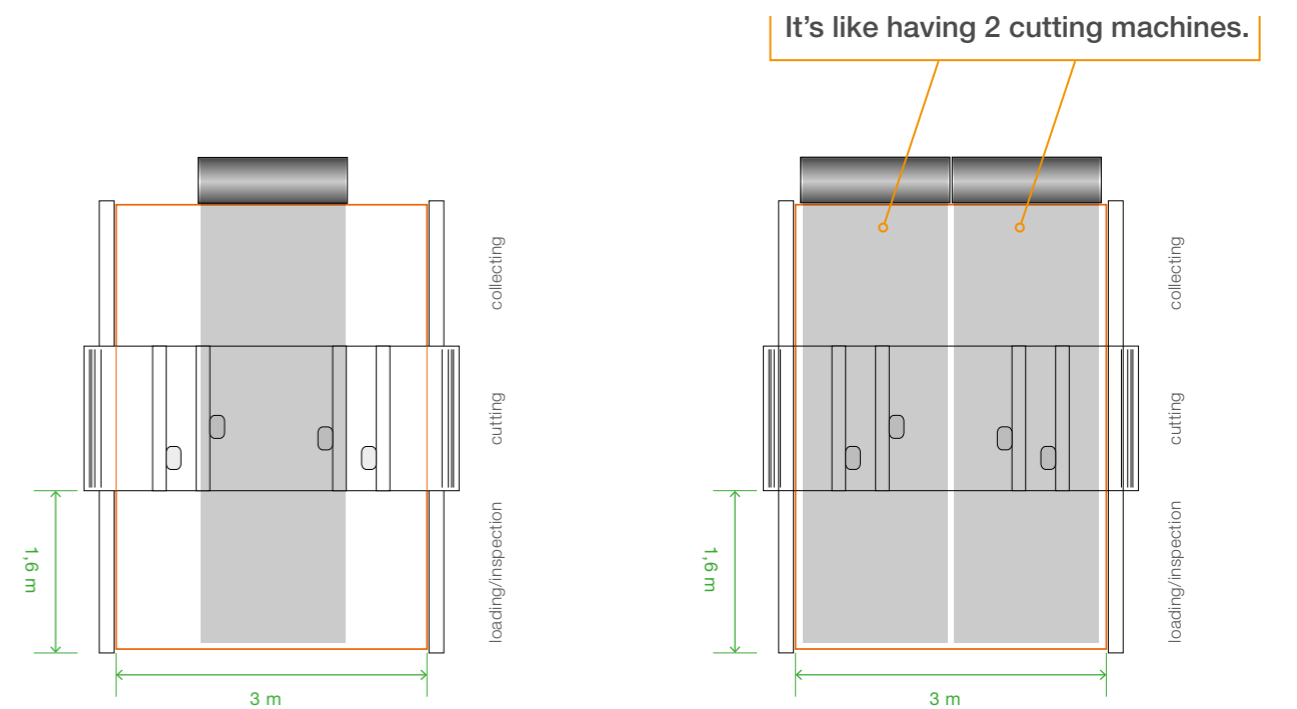
The need to cut even **3** mt wide hides, or more hides at the same time, has led us to design and build appropriate size machines, even if it means going beyond the technical limitations of building materials: surfaces and conveyor that allow a fast and easy processing.



# CUTTING OF MATERIALS IN ROLLS, FABRICS AND SYNTHETICS

The work surface with moving belt on conveyor makes it ideal for the cutting of materials in rolls. The material moves on automatically and continuously; auto-nesting to maximize material consumption. The width of the work surface (3000 mm) allows to simultaneously cut **2 parallel rolls** for an even higher production.

With 4 cutting heads available, you can cut with 2 heads on each roll.



## UP TO 10 LAYERS

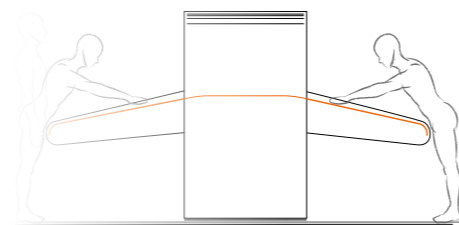
Maximum precision and cutting efficiency for materials from 2 to 10 layers, thickness up to 10 mm.

## ASSISTED COLLECTING OF THE CUT PARTS

High brightness color projecting system directly on the hide to make the activity of nesting and in the collecting of the cut parts faster and easier.



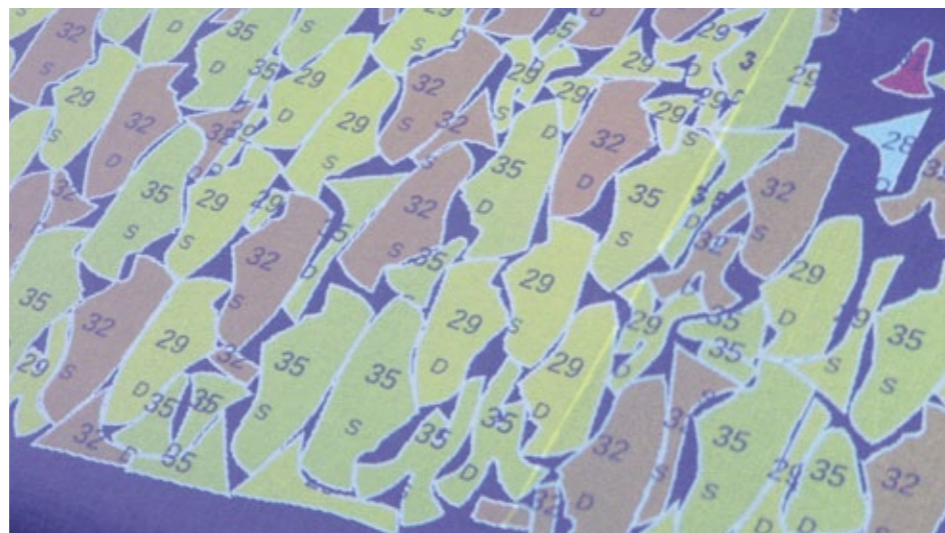
ERGONOMIC



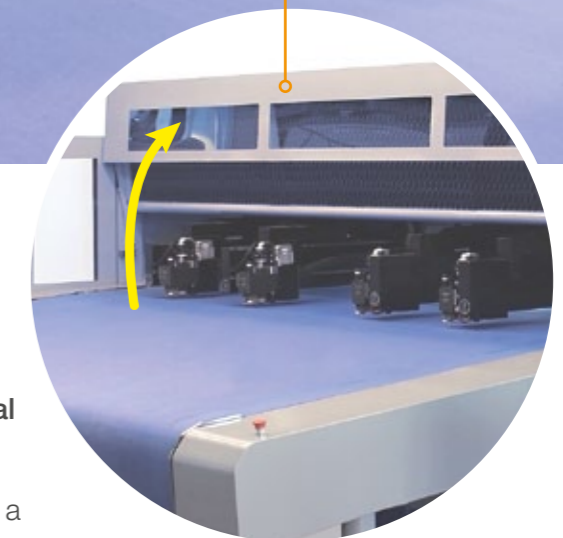
Large in size but accessible, on a human scale

- size 28 ■
- size 31 ■
- size 32 ■
- size 35 ■

COLLECTING the cut parts is easier and faster when you can separate different items or different sizes by their colour, you also avoid errors assembling the product.



## LESS NOISE MORE COMFORT



SIGMA 300 X is equipped with a **special cover protection that reduce the dB emission** of the machines. It guarantee a friendly and healthy working environment for the operators.

Automatic opening and closing of the protection cover

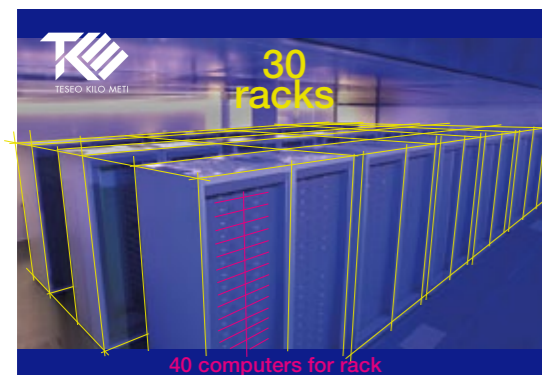
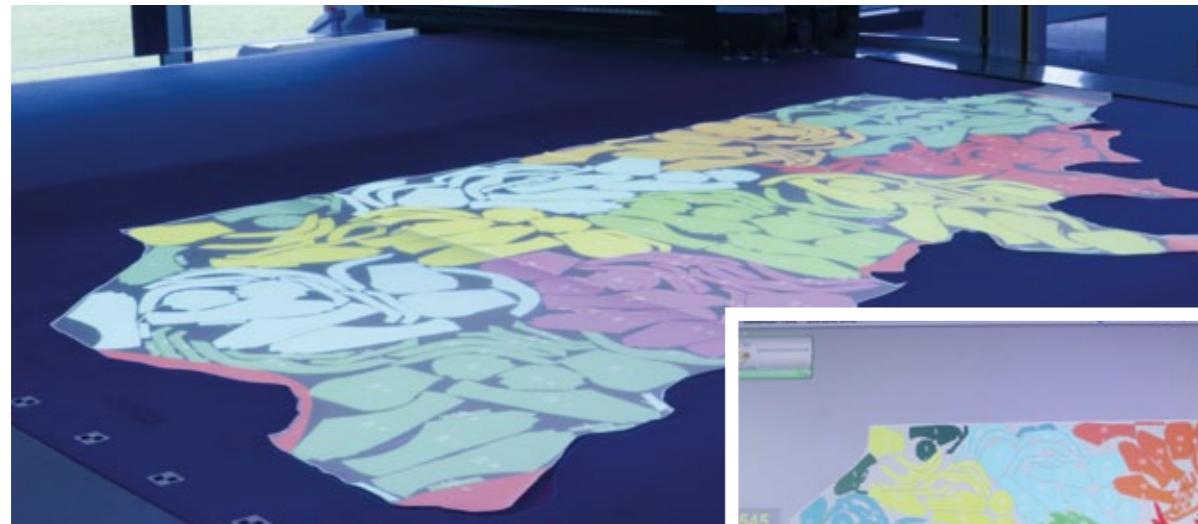




# THE MOST EFFICIENT NESTING IN THE WORLD



As pioneer and inventor of the first automatic nesting for leather, since 1996 Teseo's algorithms it's the most sophisticated and efficient on the market. Compared to the others nesting systems it can guarantee **up to +6% in the saving of leather**.

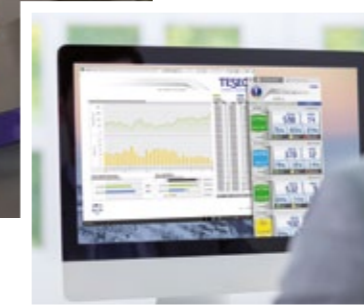


## AUTOMATIC LEATHER NESTING WITH ARTIFICIAL INTELLIGENCE AVAILABLE ON CLOUD

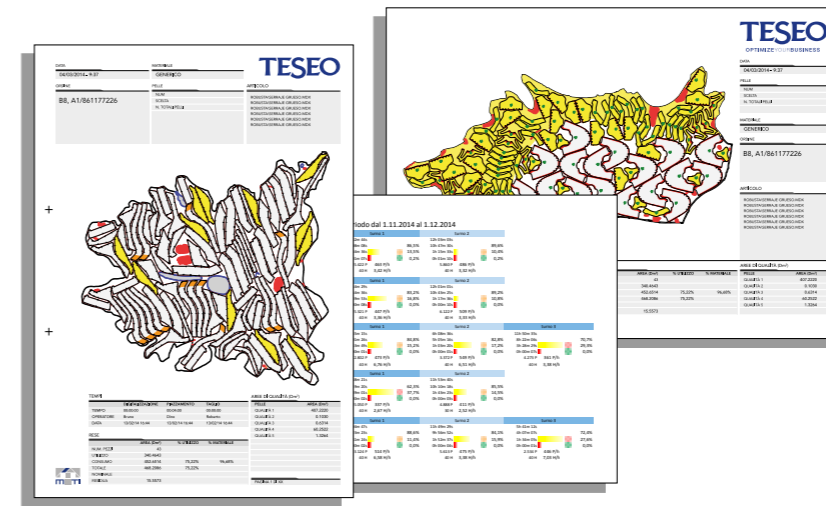
TESEO developed a specific **AI for nesting** with sophisticated recognizing functions. **Neural meti** can run nesting strategies with a speed never seen before. **NeMeSi** on TKM, the neural calculation cluster, is so efficient that you can nest a hide in **less than 3 secs**, instead of **60 secs**, needed with a single PC.



# MONITORING THE PRODUCTION HAS NEVER BEEN THAT EASY



**RTM (Real Time Monitor)** is an application that, through the intelligent selection of these data, allows you to **monitor in real time** the progress of the production on any device you have: computer, smartphone or tablet of any brand and with any operating system.



Detailed and customizable statistics reports, with graphic layouts, can be produced and printed after any cutting job is completed.

**OEE reports** to keep a constant and efficacious productivity of the cutting equipments.

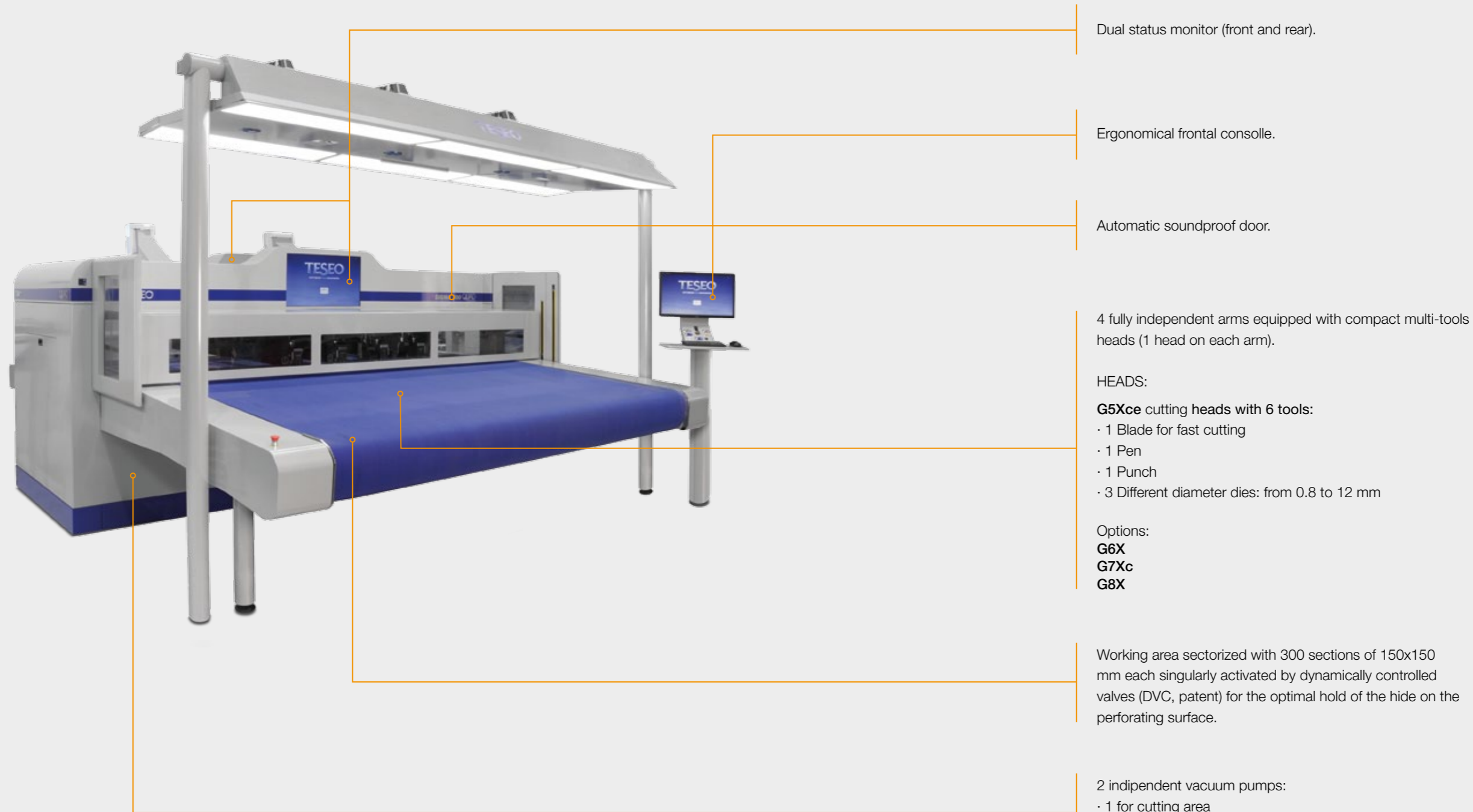


## SUPPORT ONE TO ONE DIRECTLY ON YOUR SYSTEM



We are constantly at our customers' side in more than 67 countries with 10 different languages.

Through our branches all over the world, **NESSO grants a REMOTE technical support in real time, 24 hours a day**, avoiding any production stop. A solution to any problem or just a fast reply to a possible doubt.



Dual status monitor (front and rear).

Ergonomical frontal console.

Automatic soundproof door.

4 fully independent arms equipped with compact multi-tools heads (1 head on each arm).

HEADS:

**G5Xce cutting heads with 6 tools:**

- 1 Blade for fast cutting
- 1 Pen
- 1 Punch
- 3 Different diameter dies: from 0.8 to 12 mm

Options:

- G6X**
- G7Xc**
- G8X**

Working area sectorized with 300 sections of 150x150 mm each singularly activated by dynamically controlled valves (DVC, patent) for the optimal hold of the hide on the perforating surface.

2 independent vacuum pumps:

- 1 for cutting area
- 1 for nesting area

Less 10 kW average consumption

MODEL	<b>SIGMA 300X</b>
HEADS	4 (3 optional)
CUTTING AREA	3000 x 1400 mm
SCANNING AREA	3000 x 1600 mm
WORKING AREA	3000 x 3000 mm
HIGH RESOLUTION CAMERAS	3 + 3
PROJECTORS	3 + 2
DIMENSIONS	3950 x 5030 x 3280 mm
WEIGHT	3500 Kg



#### ISO 9001:2015

Certifies the Quality of the company in each of its process, in order to increase the efficacy and efficiency, to ensure a Quality product and obtain the highest level of Customer satisfaction.



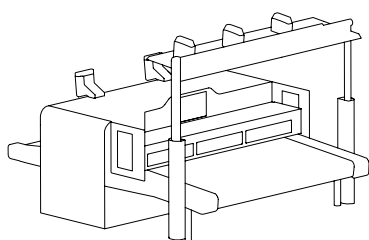
#### ISO 14001:2015

Obtaining Environmental certification means the commitment to limit environmental impact and reduce emissions, encouraging recycling and all the good environmental practices for a sustainable development.



#### ISO 45001:2018

A company certified according to this international standard adopts an organizational model that ensure Safety and Health at work, allowing employees to operate in the best conditions.



GUARANTEED  
AND CERTIFIED  
QUALITY

**2** YEARS  
WARRANTY

**TESEO**  
OPTIMIZEYOURBUSINESS