

# VISION OF FUTURE



**Morgan Tecnica**

# MorganTecnica accentuates innovation

The Brescia-based company, known globally for its comprehensive cutting room solutions, continues to grow and dedicate itself to innovation with the launch of two new products destined to shake up the market: the new Rex range of automatic cutters, and 2Design, developed to meet all the needs of the patternmaker



All automatic cutting systems are built at MorganTecnica's Adro (BS) facility. Here you have an overview of part of the production departments



MorganTecnica's Area 51, where the Brescia-based company's new machine models are developed. The final details of the Rex 70 Pro cutting machine are being fine-tuned in this R&D department

# M

MorganTecnica, the Adro (BS)-based company specializing in hardware and software solutions for the cutting room from automatic cutters to CAD, experienced record growth in 2022. Over the past two years it has focused on intense R&D work. As a result, it is now preparing to launch two important new products on the market:

- the first automatic cutter in the Rex range (Rex 70 Pro), which will gradually replace all Next 2 Δ models;
- the innovative 2D, consisting of the 2Capture, 2Design and 2Tetrix modules.

We will talk further about these two innovations in the following pages; but first, here are conversations with Federica and Fabrizio, who are co-founders of MorganTecnica and respectively President and CEO of the company.

## Interview with... **Federica Giachetti**

### How was 2022 for you?

“Morgan ended the year with record-breaking numbers, well over the budget we had set for ourselves (+44% in sales over the previous year, which had already equaled the pre-pandemic results of 2019), despite the unforeseen international geopolitical tensions and their inevitable consequences on the markets.

We would also like to emphasize the fact that these numbers were not distorted by an increase in our pricelist, which remained unchanged throughout 2022, despite the surge in general inflation and widespread increases in the costs of raw materials, components (in addition to the well-known procurement difficulties), and services, such as transportation and energy.

We did not pass these increases on to our customers. We absorbed them entirely, thanks in part to our purchasing department, which did an excellent job of containing and limiting their impact on our cost margins.”

### How did you achieve these results?

“We opened up to new markets, in both a geographical and industrial sense. It was an expansion that was the result of impressive work by the sales department and R&D, which helped us to expand into areas where we previously had not been present or were not present in a sufficiently incisive way.

This also made our brand more competitive for the Furniture and Automotive sectors, in addition to the traditional Fashion sector.

Sadly, 2022 was also the year of the painful passing of our father, Franco Giachetti: a founding father of Morgan who made an invaluable contribution to its birth and growth. We are confident that he will continue to inspire us in all future choices.”

### This year, your 15<sup>th</sup> anniversary, are you preparing to launch new products?

“Taking advantage of the extraordinary showcase offered by ITMA in Milan, we are presenting many new products, which are the result of large investments in R&D in a process that has been underway for some years now.”

“In my opinion, the launch by one company of so many new products all at once is really unprecedented in our industry and testifies to the solidity and maturity of our business project. These are highly innovative hardware and software products protected by several patents. Their range covers wide and differentiated areas: from leather cutting to the new 2Design, from the multi-task vision system for single sheet cutting to the new multi-layer cutting, a champion of energy saving and sustainability.”

### What are your expectations for 2024-2026?

“We believe that these innovations will be real turning points, and we expect them to lead to another and even more substantial growth for Morgan in the 2024-2026 period.

It is therefore crucial that we be ready: that is why we are devoting a great deal of attention to a thorough internal reorganization, through the addition of several new high-profile key figures in the company's most strategic departments. We are also introducing new procedures and organizational solutions, with the aim of being more efficient and more effective in meeting our customers' needs at both the product and service levels. In short, the best is yet to come!”



Federica and Fabrizio Giachetti

## Interview with... **Fabrizio Giachetti**

*With Fabrizio Giachetti we delve into the important news regarding the Rex 70 Pro automatic cutter.*

### The Covid period, for most companies, was a period of slowdown or absolute standstill. Was it a period of downtime for MorganTecnica as well?

“Far from it. The years 2020 and 2021 were particularly creative years for us, during which we did not slow down our activity and indeed invested in R&D, strengthening the dedicated area, and hiring new staff.

In doing so, we laid the foundation for launching, among other things, two particularly significant products: the new 2D CAD and the new automatic cutter.”

### What can you tell us in advance about this new automatic cutter?

“Historically, every three or four years, we come out with a new line. Initially we launched Razor, the development of which was represented first by Next 1, then Next 2, and finally Next 2 Δ, which allowed us to position ourselves at a high level in the world as both real and perceived quality. Its further evolution should have been called Next 3, but our R&D department (which we call Area 51) developed a machine so innovative and different from the previous one that we decided to turn over a new leaf, even in the name. Thus, Rex was born, which we will preview during ITMA in the Rex 70 Pro version and start selling in early 2024.”

### What are Rex's key innovations?

“We have maximized the experience gained over the years by developing an automatic cutting system with unique features, covered by three patents, that significantly improve both performance and energy consumption. We are convinced that we are bringing to the market a real game changer, as English speakers call it.”

MorganTecnica is launching a real revolution with the **new Rex range of automatic cutters**, which will gradually replace all models in the Next 2 Δ line. **At ITMA the company is presenting Rex 70 Pro**, successor to the Next 2 Δ 70 Pro system and first to be launched on the market. Here's a preview of all the innovations in Rex, protected by three patents, which save energy and increase productivity



# In the cutting room the evolution is called **REX**

Originally, MorganTecnica's new range of automatic cutters was to be called Next 3. In Area 51 (the name given to the space where all the company's new systems are created), the R&D team, which during the general slowdown caused by Covid instead accelerated its activities, managed to fine-tune a new machine with such innovative features that it deserved a complete name-change.

The new cutting line will be called Rex and will gradually replace the pre-existing models (30, 50, 70, 90, Lingerie and Denim). The first model in the new range, the Rex 70 Pro, which replaces the Next 2 Δ 70 Pro, will be officially presented at ITMA. MorganTecnica will begin taking orders next September, and the first deliveries are scheduled to start in January 2024.

#### Three patents at the heart of Rex

The most salient features of the Morgan Rex 70 Pro are: 90 cm shorter than the Next 2 Δ 70 Pro system, overall productivity up to +15% compared to the previous model, and energy savings estimated at up to +50% compared to the Next 2 Δ 70 Pro.

#### How did these interesting results come about?

In addition to a complete re-engineering of the Rex 70 Pro and the use of new electronics, the new cutting system boasts three patents developed in Area 51. The first two regard energy savings, while the third relates to productivity.

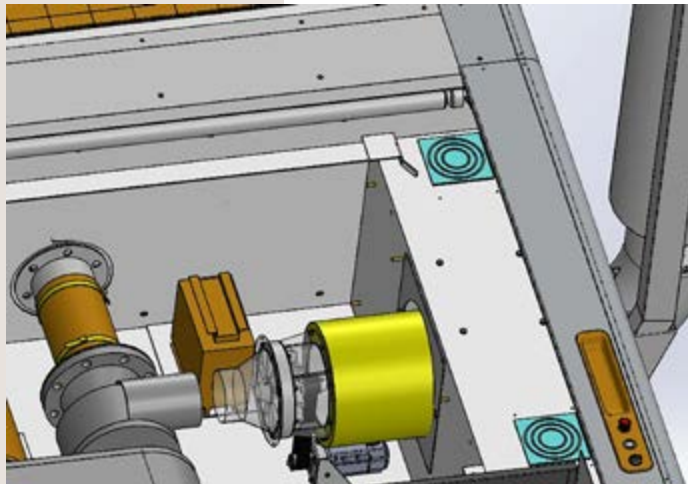
- SPIN POWER

This first patent involves a special

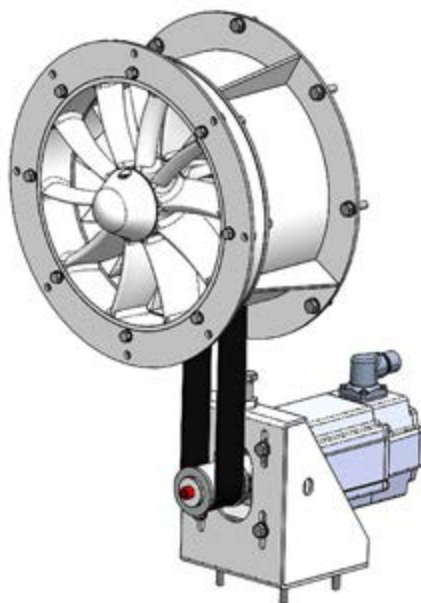
Right, the chimney of the new **Rex**, at the beginning of which is the special patented **Spin Power** turbine that generates energy from expelled air



**Rex 70 Pro is the first automatic cutter in MorganTecnica's new range that will gradually replace all the various Next 2 Δ models**



Above and right, two views of **Morgan Tecnica's** patented **Spin Power** turbine and its positioning



turbine placed at the inlet of the machine's chimney, the tube that conveys the jet of air upward, and silences the noise.

- ERS (ENERGY RECOVERY SYSTEM)  
The concept of operation is comparable to that found in hybrid cars, whose batteries are recharged during braking, and has been applied for the first time to an automatic cut-off. Again, during 'braking' the system recovers energy that is normally wasted, which is channeled into a series of capacitors rather than the batteries typical of electric vehicles, so that it can then be reused during peaks in power demand.
- ADB (ACTIVE DATA BASE)  
Automatic cutting machines are designed to process a large quantity of shapes, with files that may contain hundreds of them: some may turn out to be more problematic than others and require processing at a reduced cutting speed or with other expedients. Operators therefore tend to reduce overall cutting speed, and with it, productivity, since there is no algorithm to date that recognizes a potentially problematic template. MorganTecnica has chosen a different path, combining operator experience, automated procedures, and a collaborative approach. When the operator comes across a problematic shape, he or she enters it into Morgan's ADB with a simple click and applies corrective measures

(e.g., a lower speed). This creates an archive of problematic shapes that the software recognizes, even at different scales, and automatically applies the relevant measures. Not only that: the user can decide whether to simply create a personal local database or share it via MorganTecnica (which safely filters out silhouettes and possible consequential measures) with other ADB users who have subscribed to it.

**The first comparative data**

Of course, the data regarding consumption are still provisional, as the R&D department is still working to refine the last details of the new automatic cutting system.

The values measured by the company, comparing the Next 2 Δ 70 Pro with the Rex 70 Pro in their most powerful versions, are currently as follows:

- installed power of 37 + 10 kW for Next 2, of 22 + 10 for Rex;
- average consumption less than 24 kW for Next 2, less than 13 kW for Rex;
- in the Rex 70 Pro there is a new vacuum system, which ensures greater efficiency in terms of vacuum and flow rate, estimated at around +30% compared to the Next 2 Δ 70, while having significantly lower consumption;
- a 20% faster peripheral blade speed than the previous model.



**2Design** is an innovative **CAD solution** developed by **MorganTecnica** to focus on the efficiency of the pattern-maker, responding to his or her actual needs while minimizing learning time. It consists of the modules **2Capture**, **2Design** and **2Tetrix**. Let's look in detail at the strengths of this software solution and how it can actually be useful in the cutting room

# Tailored to the pattern-maker's needs

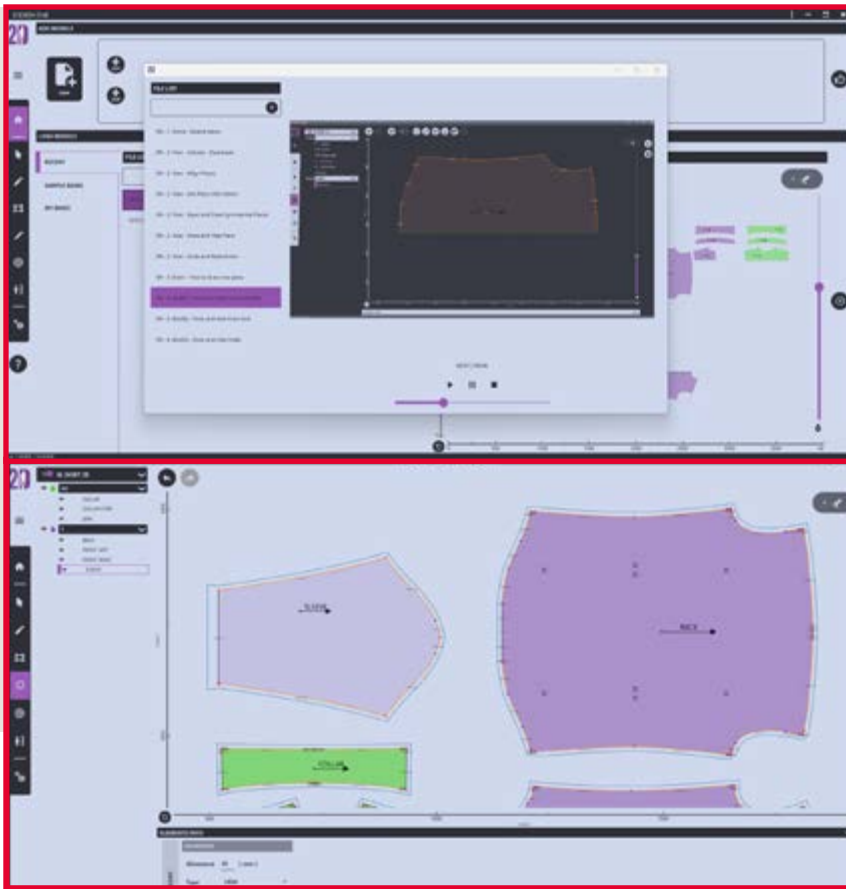
# 2Design



MorganTecnica's in-house team that developed 2Design

"You might think of it as yet another two-dimensional CAD, but we developed it with a new concept in mind: namely, to put the pattern-maker's work process at the center of attention. How? By avoiding an overly mathematical, engineering-derived approach and focusing on the actual needs of those who create on the fabric, especially garments. The goal is to put him or her immediately at ease and minimize

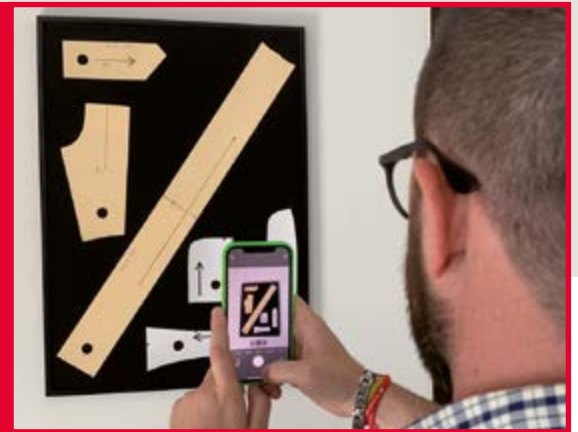
learning time. All of this, of course, is combined with the opportunities offered by the latest information technology, which allows us to optimize the user experience in a clean and streamlined environment". This is how Federica Giachetti, co-founder and President of MorganTecnica, explains the philosophy behind the new 2D CAD, consisting of the 2Capture, 2Design and 2Tetrix modules.



Design moments with **2Design**, the CAD developed entirely by **MorganTecnica** with the actual needs of the pattern maker in mind

Thanks to a series of **video tutorials** built into the program, with **2Design** even those without **CAD software experience** can work immediately

The company decided to put the new 2D to use in an entirely Made in Morgan project, ensuring maximum continuity, and avoiding the outsourcing experiences it had undertaken in the past



#### A project entirely Made in Morgan

“2Design (which is read “to design” and means “to create”) abbreviates 2D and is a project that I strongly wanted, that I personally followed and of which I am very proud”, continues Federica Giachetti. “I wanted a CAD that also takes into account the needs of production and its proper planning, and that integrates in a harmonious and efficient flow with all the other actors in the production process. To do this, you need a profound knowledge not only of model creation itself, but also of what happens before, during and after the process, in all the departments directly or indirectly involved, up to the cutting room. This know-how is the result of 30 years of experience. This time we decided to put it to use in a project entirely Made in Morgan, as a guarantee of maximum continuity, thus avoiding the outsourcing experiences that we had undertaken in the past.”

#### The configurations and modules of the new 2D CAD

“2Design will be available in different configurations, each with a specific set of ready-to-use design bases, depending on the macro-typology of companies and applications (underwear and swimwear, outerwear, shirts, jeans, women’s wear, and so on). A modular logic will ensure, for each use, the optimal setup of features and reference sample bases, which the user can then also integrate with his or her own personal set of bases.” “With this software,” Federica Giachetti concludes, “we are aiming towards the ambitious goal of convincing even the most conservative pattern-makers to open up to a CAD of a new conception which is much more agile, easier and performance-oriented, but is also equipped with a service carried out by attentive, competent and helpful interlocutors. The ingredients, in short, are all there.”

configured as desired, and a series of video tutorials that explain in simple and effective terms the fundamentals of use. You can start using it by choosing from several options:

- select the model from a free base library with 3D previews;
- open the model from your personal library using the connection to the bases for any updates to your models;
- import a DXF file;
- create models directly on the screen using 2D design tools;
- digitize models with 2Capture.

The latter module, 2Capture, allows you to take a picture with a regular camera, webcam, or smartphone to digitize a part without the need for special setup or calibration.

Finally, 2Tetrix is the nesting solution for turning 2D designs into efficient manual or automatic nestings.

#### 2Design, 2Capture and 2Tetrix

Finally, let’s look at the three pillars on which 2Design rests.

Let’s start with 2Design, which is an advanced design tool for professionals and beginners and is designed for fast learning. This is made possible by a smart, minimalist interface that can be



<https://youtu.be/SNQZs2ZROj4>



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