

CASE STUDY

CEDRO TEXTIL

Brazil



Why Marzoli?

Cedro Textil:
a leader in the global
textile industry



Mr. Patrick Melo Pinheiro,
Industrial superintendent

Cedro Textil is a Brazilian textile company founded in 1872. Its factory park has four industrial units, equipped with the latest generation technology, which are located in the cities of Sete Lagoas, Caetanópolis and Pirapora, in the state of Minas Gerais (Brazil).

Cedro Textil offers a wide variety of denim, twill and canvas for the fashion segment and technical textiles for professional work-wear. The fashion category comprises two lines: Denim and Colors, both characterized by a great range in terms of weights, textures and dyeing and finishing processes.

The professional work-wear category includes technical textiles for the most varied applications, ranging from medical to metallurgical. All Cedro Textil's products are synonym of style, comfort, durability, resistance and practicality and are sold in all regions of the country through

a cohesive and dynamic sales power and in South, Central, North Americas, Europe and Asia through a global network of representatives.

The company also offers complete assistance to its clients before and after sale while a modern distribution center, with an advanced logistics system, follows production, controls stocks and ensures deliveries in the shortest time, in any part of the country and abroad. Cedro Textil has thrived throughout the years and today it is an established global leader in the textile industry as testified by its impressive production numbers:

- Yarn production: over 3.000 tons per month.
- Dyeing capacity: 5 million meters per month.
- Printing capacity: 700 thousand meters per month.
- Weaving capacity: over 7.5 million meters per month with 459 looms.

Cedro Textil's recipe for success comprises several ingredients; however, two key contributing factors have been: market knowledge and enabling advanced technology; a powerful combination in a volatile market.

"In Cedro Textil, we undertake permanent research on tendencies and we also participate to the main fashion fairs and events in Brazil and worldwide, sharing updates, evolutions and tendencies with our clients. Drawing on this knowledge, we develop and differentiate our products" Cedro Textil's Industrial superintendent, Mr Patrick Melo Pinheiro, states. However, product innovation requires flexibility in production processes: ideally technology should efficiently produce any kind and any quantity of yarn demanded by downstream operations and this is what made Cedro Textil encounter Marzoli.



Our Solution

A partnership based on technology & competence

- HIGH PRODUCTIVITY
- GREAT QUALITY
- OUTSTANDING FLEXIBILITY
- COMPETENT & RELIABLE SERVICE

Between the end of 2013 and the beginning of 2014, Marzoli provided Cedro Textil with four FT7D roving frames and twelve MDS1 ring frames for a production capacity of over 22 tons per day.

"The partnership with Marzoli is very important to us because the Italian technology allows us to reach the highest productivity standards without compromising on quality and because it grants a high degree of flexibility. Marzoli spinning line yields core-spun yarn with any slub effect without altering the efficiency and productivity of the machine"

Mr Pinheiro states.

Beside the soundness of the technological solution, Marzoli, in order to delight customers, implements a partnership approach: highly

competent Marzoli personnel follows the client through every step of the relationship, from the first commercial discussions, through the plant design and installation, to the after-sale service. Cedro Textil has benefited from this approach in several ways: Marzoli personnel visited the Brazilian plant in order to design the spinning line; Cedro Textil technicians visited Marzoli headquarter in Italy in order to try out the machinery and undertake tests on yarn quality to better evaluate the commercial offer; Marzoli asked some of its customers to show Cedro Textil technicians their plants so that they could better appreciate the output volumes, the low cost maintenance, the user-friendly control and the great flexibility of the machines in a real spinning setting.

"We really appreciated the fact that Marzoli asked some of its clients to let us visit their plants. It really surprised us because it

does not usually happen that a supplier works with such a degree of transparency with customers" Mr Pinheiro states. Marzoli's partnership approach extends also after the sale. Marzoli's customer assistance service is always available in case of any customer necessity. Moreover, Marzoli technicians periodically visit customers in order to secure that production is proceeding correctly and preventively maintain the spinning plant.

"We are very satisfied with Marzoli as our participation to this case study demonstrates: not only we have installed a flexible and productive spinning line, but we have also had the opportunity to cooperate with friendly and competent people... In case we decided to enlarge our spinning mill, we would contact Marzoli again" Mr Pinheiro concludes.





Marzoli roving frame is an effective solution for spinners willing to boost productivity and minimize operating costs

Roving frame

- TECHNOLOGICAL EXCELLENCE
- LOWEST Kw/Kg RATIO
- HIGH PRODUCTION VOLUMES
- OUTSTANDING EFFICIENCY

Four FT7D-roving frame with 144 spindles are currently working at Cedro Textil's plant. The FT7D model stands for technological excellence as testified by its great market success. Marzoli roving frame is an effective solution for spinners willing to boost productivity and minimize operating costs.

The multi-motor drive concept

The FT7D roving frame has an innovative design which builds on the multi-motor drive concept. This concept substitutes one motor, with several mechanical transmissions, with more less-powerful motors, all coordinated by electronics. This working concept, while ensuring the same reliability, grants great economic advantages:

- The compartmentalization of the machine (division of the machine in modules) allows to have up to 168 spindles for the FT7 and up to 224 spindles for the FT6 roving frame spindles and still work at high efficiency levels.
- The synchronization of the motors guarantee the perfect bobbin formation with the speed of the spindle adjusting electronically to the diameter of the bobbin in order to maintain a constant tension.
- Less mechanical transmission allows to reduce mechanical vibrations, machine wear, entailing longer machine lifespan and lower maintenance cycles and downtimes. It also allows the spinner to work at higher production volumes.
- Less mechanical transmission also entails lower mechanical friction, granting lower energy consumption and higher efficiency.





AUTOMATION

- COMPLETE AUTOMATION
- MINIMUM OPERATING COST
- FAST&RELIABLE DOFFING
- TOP QUALITY IN ALL WORKING CONDITIONS & WITH ALL RAW MATERIALS

The FT7D model is completely automated. The machine is controlled by a microprocessor and the technological parameters are inserted through a user-friendly touch screen system.

The automatic doffing grants the arrest of the machine, the substitution of the full roving bobbins with empty tubes and the restart of the roving frame: no human operation is required. Moreover, the installed transport system automatically delivers the full roving bobbins to the ring frames allowing to:

- minimize operating costs;
- avoid poor handling of the bobbins and, consequently, their damage.

While conventional photocell detects the presence of a broken roving, the sensors on Marzoli FT7D, one for each spindle, detect the absence of the roving. This guarantees that the machine stops when and only when roving breaks.

Beside high productivity and excellent efficiency, the FT7D also scores high on flexibility: the programmability of the bobbins speed allows to obtain high quality bobbins in all working conditions and with all types of raw material.



Spinning Frame with integrated slubbing device

"Thanks to Marzoli's machinery we currently produce over 22 tons per day of high-quality yarn"

Mr Branquinho Junior says



Mr. Marco Antônio Branquinho Junior,
CEO at Cedro Textil

- INNOVATIVE DESIGN FOR HIGHER PRODUCTIVITY
- EASY SETTING OF THE MACHINE
- EXCELLENT FLEXIBILITY

Twelve MDS1 spinning frames are currently running at Cedro Textil's production plant.

The MDS1 constitutes an excellent product for customers interested in productivity and flexibility.

"Thanks to Marzoli's spinning frame we currently produce over 940 kg/h of high-quality yarn"
Mr. Branquinho Junior, Director at Cedro Textil, says.

This outcome was possible because everything in Marzoli's spinning frame has been designed and refined to reach this specific objective: high productivity without

compromising on quality.

The multi-motor driving system with tangential belt, the spinning rings with adjustable plate for an optimal centering of the spindles and shock absorbing spindles and bolsters are just few examples of Marzoli's technical solutions that allow MDS1 to build up perfect bobbins at a speed of 25,000 rpm, depending on the type of yarn, with almost no speed variation of the spindles (speed CV% below 1%). Marzoli MDS1 also enhances productivity through the reduction of downtimes and human error during lot changes: all technological parameters (e.g. count, S or Z twist, bobbin speed) can be set directly on the touch screen keyboard and the working

programs can be saved and recalled at any time in order to save time and reduce human mistakes. On the other hand productivity does not alter yarn quality. This in particular is possible thanks to the design of the frame components, such as the pendulum arm which, by granting a better control of the fibers in the drafting area, reduces the imperfections on the yarn. As for flexibility, MDS1 is a spinning frame that particularly matches the needs of spinners that target specific market niches or segments, like Cedro Textil.





- PERFECT INTEGRATION BETWEEN SLUBBING DEVICE AND SPINNING FRAME
- ALL KINDS OF SLUB EFFECT
- BEST MACHINE PERFORMANCE FOR YARN SLUBBING

"Market requests in both the fashion and the work-wear segments are becoming more and more demanding in terms of characteristics of the yarn: the fashion segment, for example, has increasingly required elastic fabric with particular fancy designs. Hence, spinning frames must produce core-spun yarn with different slub effects. Marzoli MDS1 has proved to be up to the task"

Mr. Branquinho Junior states. Each MDS1 working at Cedro Textil's plant is equipped with Marzoli integrated slubbing

device and three of them are also equipped with Lycra. This technology is the output of years of improvements and refinements that today allow spinners with a MDS1 to yield perfect core-spun yarn with any slub effect, without altering the machine performance. Marzoli was the first manufacturer to introduce a fully integrated slubbing device on its spinning frame which has then redesigned to deal with the increasing mechanical stress due to the continuous and sudden accelerations and decelerations of the cylinders. The continuous refinements to the device and the spinning frame, thanks to the close cooperation with some of its customers, have made Marzoli's device the best technology

available for yarn slubbing, as testified by its market leading position. Beside being very easy to use, thanks to the user-friendly interface, it is also very versatile as it can produce any kind of effect (multi-twist, multi-count, etc.) without altering the great productivity levels of the spinning frame. *"We are very satisfied with Marzoli's spinning line: it enables us to produce 22 tons of high-quality yarn per day and it also allows us to be flexible. Flexibility is necessary in this industry. Thanks to constant market research, we know what customers want and we act accordingly because we have technology that allows us to adapt and, consequently, exploit market opportunities"* Mr. Branquinho Junior concludes.

Top quality thanks to technical excellence

Since its conception Cedro Textil has always identified yarn quality as one of its main objectives: although fierce competition fosters every spinner to reduce costs, this cannot go to the detriment of yarn quality. Yarn quality is a necessary condition to compete at an international level: it allows to yield higher value products, avoid price competition and obtain high efficiency in downstream processes. It is argued that in an integrated mill, conducting spinning, weaving, dyeing and finishing operations, yarn quality reduces overall mill's costs and boosts productivity.

In order to benefit from all these advantages, Cedro Textil carefully controls all the incoming and outgoing material on a daily basis with state-of-the-art technology.

However, to produce high quality yarn has become harder. On one hand, the quality of raw material is decreasing worldwide because of hard ginning and cleaning. On the other hand, the shrinking of profit margins due to the fierce price competition in the textile sector does not allow to increase the percentage of high quality raw material in the processed

blends. These negative effects have been counteracted by technical advancements which have granted substantial improvements in yarn quality. Marzoli's machinery, in particular, sets the lead in yarn quality production as testified by Mr Pinheiro's words: *"Cedro Textil currently produces high quality yarn at accessible operating costs thanks to excellent spinning technology... We are very satisfied with Marzoli: Marzoli machines are essential to achieve the quality standards that we want for the Cedro brand"* Mr Pinheiro states.



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USA

MARZOLI MACHINES
TEXTILE SRL
Italy

MARZOLI INDIA
MTMM PVT. LTD.
India

 CEDRO TEXTIL

Legend

- Marzoli premises
- Sales & service network
- Sales affiliates

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