



MORE POTENTIAL WITH BLM GROUP BENDING MACHINES

Bejot - PL

BEJOT is a Polish family-run company specializing in the production of office chairs and armchairs. To meet the growing expectations of its customers in terms of design, quality and ergonomics, they need machinery that is adequate and capable of achieving precise goals. Marcin Durzyński, Director of Production and Logistics at BEJOT, shared more about these aspects and how the company has developed.

“The beginnings of our company dates back to 1984, when the Jerzy Semeniuk Joinery, specializing in the production of wooden accessories, was founded in Mosina near Poznań. The production of office chairs started seven years later when the management was taken over by the current CEO, Dariusz Wilk,” said Durzyński, who went on to tell the story of Bejot’s evolution. “In the following years, investments were made in the construction of a new production building, warehouse and office space. We first obtained ISO 9001 certification, then ISO 14001, and adopted an ERP information system providing a quantum leap in both production and customer management for us.” Today, the company employs about 230 people and collaborates with the AGH University of Science and Technology in Krakow and the University of Life Sciences in Poznań. The exchanges with the academic staff were very enriching and a major source of inspiration.

Increased production and new challenges

The development of the company and the increase in the product range has resulted in an expansion of the models available in the catalog of office chairs and armchairs and complete soundproofed office workstations for open-plan environments and meeting rooms. “However, the high construction complexity of these products meant that the various production stages, such as the preparation of individual elements for welding, took a long time. Soon production times became a bottleneck for the company’s growth and the solution was to modernize our machines,” Durzyński explained.



New investments to support the company’s fast development

Durzyński stated that the choice was a very careful one. “We evaluated a wide range of machines, from modern milling and saws to laser systems; the latter turned out to be what we needed. So we started a comparative analysis of the market, mainly among our partners and the companies with whom we collaborate or have complementary product models. Very soon there were only two suppliers left in the running, one of which was BLM GROUP. The final decision was made after consulting companies that had had the opportunity to work with both machines by comparing performance and listening to the opinion of people using the software. BLM turned out to be far better for the user.”

500

different pieces

One investment leads to another

The ability to laser cut practically any profile shape offered designers and the product development team completely new possibilities and an additional need arose. “We wanted to bend the profiles after laser-cutting them with a machining processes that allow the joints to connect the tubes precisely. Initially, we tried to bend the profiles with the hydraulic bending machines we had, which were simple, hydraulic and reliable for making conference chairs. Unfortunately, it quickly became apparent that the force (required to bend on the flat side of a rectangular profile) and precision were not sufficient to exploit the full potential offered by the Lasertube system.”

After another market analysis conducted in the same comparative manner as for the laser and evaluating several manufacturers, the choice fell again on BLM GROUP. “The analysis showed that the BLM E-TURN40 solution was the most effective, which of course does not mean that it was the cheapest at the time of purchase,” Durzyński pointed out. “Three things prompted us to buy the E-TURN40. Firstly, set-up time and post-set-up calibration. We produce around



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The choice fell on E-TURN40 for three reasons: fast bending tools changeover, the rotating bending head that reduce steps and the ease of use of the software.
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Thanks to the BLM GROUP solutions we have shortened processes, reduced the size of the warehouse and improved production precision

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500 different structures, or elements of them, in small batches and the changeover time with our wide range is a very important aspect. With electric handling, the clamping device calibrates itself the first time and then stores the parameters for later use. The second item was the rotary head with a double set of tools, which allowed us to reduce the number of elements in the product by bending longer and more complex sections and reducing the number of further steps. And finally, the software is very readable, easy to configure, integrated into a single environment with a 2D laser and combined in the so-called All-In-One. From the outset, it significantly reduced the set-up time of a curved cut product by eliminating errors due to springback and elongation of the tubes during bending.”

Tubes and sections. And wires, too

As is often the case in the world of furniture, Bejot also used wire. They purchased pre-straightened material in approximately 6-meter-long pieces, which was very difficult to handle when loading and unloading. The wire was cut, producing waste, and finally bent on tube benders with special tools. “We saw the DH4010 system from BLM GROUP at a trade fair and, after careful analysis, we estimated that with that wire bending system we could reduce production time by four times, not to mention zero waste and better quality.” Durzyński continued, “Now, we load the coil of wire into the machine and do not think about it anymore. We perform cutting, straightening and bending in one step. In addition, we also configured the tip chamfer module to strengthen the weld seam.”

Why was a twin-head wire bending machine necessary?

The twin-head wire bender is faster than a conventional bender, but this is not the only and most important advantage. “In the single-head machine, the wire rotates during the feeding phase, generating vibrations that affect the quality of the final part, which, especially when long, suffers from the vibrations, particularly in the last bends. The twin-head machine, on the other hand, cuts the wire after feeding and bends on both sides, generating a very precise and repeatable process, especially concerning the flatness of the parts.”

The problem, however, was that Bejot wire has a diameter of 11 mm and it is not easy to find twin-headed bending machines for this wire size. Even BLM GROUP’s DH4010 had a maximum diameter of just 10 mm. “However, BLM decided to take up the challenge and, based on our facility drawings, made modifications to the wire bending machine to meet our requirements, and finally was able to bend Ø11 wire,” Durzyński concluded.

About 9 months after installation, all wire parts were made on the DH4010. “The work previously done by four employees is now done by one, part-time, who also works on the E-TURN40. We have shortened processes, reduced the warehouse size needed to store the wire and save money because we buy it in coils. We have also improved the production accuracy because, as with the E-TURN40 bending machine the DH4010 is fully electric and very accurate, in line with BLM GROUP standards.”