



LASER SHEET: NEW CHALLENGES FOR THE BLM GROUP

LS7

The BLM GROUP presents the laser sheet-cutting system called LS7. After many years of combined sheet and tube laser cutting systems, the company is back with a system uniquely designed for sheet processing, continuing a tradition that has its roots far back in time when ADIGE was one of the early pioneers of this technology.

We spoke to Mauricio Gutierrez, Product Manager for sheet metal laser systems at the BLM GROUP, about the evaluations that led to this choice and the main features of the new product.

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*LS7 is a high-end product, but
with an attractive price.*
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Why is the BLM GROUP investing in sheet processing?

There is a large area of overlap between the tube and sheet processing worlds. Many subcontractors and OEMs produce parts and semi-finished products made from both tubes and sheets. Laser machining has further contributed to this by freeing designers from rigid constraints in the use of tubular elements and fostering the emergence of innovative and effective solutions in terms of usability and cost containment.

BLM GROUP, the undisputed leader of the laser tube world, also has a long tradition in the production of sheet cutting systems. The first laser system for sheets made by ADIGE dates back to

the late 1980s. Since then, ADIGE-SYS has been responsible for ensuring the development and growth of this know-how, which has always remained a company asset.

Over the past 20 years, ADIGE-SYS has produced a series of combined, modular, configurable laser cutting systems capable of laser cutting both tube and sheet metal, and now with the LS7, it is firmly entering the world of sheet metal only. LS7 will allow the BLM GROUP to implement useful cross-selling business strategies, acting as a single supplier for every customer who needs, both types of machining, now or in the future.

Was a new product really necessary?

LS7 is a new system entirely redesigned and optimized for sheet metal working, marking a clear break with the recent past of ADIGE-SYS characterized by combined sheet and tube processing systems. The aim is to supply superior quality performance at the lowest possible price. To achieve this, we focused on sheet metal cutting functionality by eliminating all elements of modularity and solutions to integrate tube processing.

LS7 will be appreciated by companies that need a quality system with excellent performance at a reasonable price. This includes, customers who do not process tubes or who do so with dedicated laser systems. In an increasingly competitive market, part cost is a crucial factor requiring the right machine for each piece, only then can cost optimization be realized.

The structure, technology and functionality of LS7 takes into account BLM GROUP's 30 years of experience, shaping it into an innovative and reliable system.

What are its main features?

As before mentioned, the LS7 was designed as an entry-level product in the high-end system segment, i.e. a product with all the features and devices of a high-end system, but at an attractive price.

It has a conventional aluminum mobile gantry structure mobilized by a rack and pinion system, which slides on a very strong metal structure, filled with polymer concrete to ensure high stability even with high accelerations up to 2G.

The processing line was raised to avoid known problems, like protecting the bellows from sparks released from the cutting area, particularly during drilling operations. Access is only from the short side and the entire machine remains completely enclosed for safety reasons related to the fiber laser source. The cutting area can be viewed from the outside using a camera.

Pallets are changed on the long side with an exchange time of just 9 seconds using an innovative mechanical solution that provides for the simultaneous exchange of pallets without pneumatic or hydraulic actuators. All handling is fully electrical.

Other small touches driven by our experience were added to improve the reliability of the system, such as the scrap conveyor belt, which was designed without screws to avoid the problems of fouling and blockage.

All the features that characterize a high-end system will be present.

The focusing head differs according to the maximum power of the laser source used. The ProCutter Thunder head is used up to 4kW and the ProCutter Zoom 2.0 head is used for power greater than 4, up to 12kW.

The ProCutter Thunder head is designed to simplify service operations, such as checking protective slides and calibrating the focal position.

The Zoom head, as the name suggests, allows for greater beam magnification, making it particularly suitable and effective for working in different conditions. The beam size varies to accommodate different materials, thicknesses and work steps. It is particularly effective in reducing drilling times. The head is fitted with sensors allowing control of pressure, temperature and slide cleaning with a reaction time of around one microsecond, guaranteeing extremely fast and effective intervention.

Finally, the LS7 is available in two versions: 1500x3000 and 2000x4000. The newly designed loading and unloading systems provide the most commonly used functions, including loading-unloading and a one or two tower configuration with the new, fully interchangeable loading or unloading boxes.

The system is also designed for easy transport. Installation takes just one week, including training.

