

MARKER

The magazine for the sheet metal working industry

Spotlight
SOLUTION

April 2019

SOLUTION inhouse exhibition in Haan

“Automation Days” at SOLUTION

AMADA is preparing a glittering program of events for its customers to be held in early summer in Haan. From 15th to 17th May and from 22nd to 24th May 2019, the sheet metal working specialist will be welcoming visitors to its “Automation Days” at the SOLUTION exhibition. The focus will be placed on machine demonstrations and expert presentations on various aspects of automation.

In the field of sheet metal working, optimized production cycles and reliable quality play a crucial role. Automation is making sheet metal working more efficient and is preparing businesses to meet the challenges of the future. For this reason AMADA is taking a close look at the subject of automation in a special edition of its SOLUTION inhouse exhibition from 15th to 17th May 2019 and 22nd to 24th May 2019. Under the motto “Automation Days”, the sheet metal working specialist will be demonstrating how automation technologies can be used to achieve outstanding economic

efficiency and round-the-clock production at its showroom in Haan. The modular concept of AMADA’s automation components means that this technology can be retrofitted to practically every machine. In live demonstrations, visitors will be able to experience AMADA’s most up-to-date automation modules for laser cutting such as the ENSIS-3015AJ and the LC-2415 ALPHA V as well as the turret punching machine EM-3612ZRB live at first hand. The servo-hydraulic press brake HG-ATC and the bending robot HG-ARS will also be shown. Experts provide comprehensive professional advice

about all aspects of sheet metal working. What is more, a convivial get-together on the Thursday evening of each event will provide time to discuss and share opinions and experience – barbecued food and cocktails will be on the menu. You can read more on the machine highlights that will be on show at SOLUTION and find information on registering on pages 2–3. On page 4, you can discover how one manufacturer is already producing more economically thanks to the use of AMADA’s automation technologies. ●

Another event in July SOLUTION Landshut

From 9 to 12 July 2019, visitors will also be able to experience AMADA machines at the SOLUTION in Landshut. During live demonstrations the latest laser-, punching- and bending technologies are presented in the showroom. Experts advise comprehensively. Registration and information about the event in southern Germany you find here: www.amada.de/en/



Tailor-made, successful system solutions

Experiencing **automation live**

AMADA supplies compact, individually configurable automation modules for the automatic feed, removal and setting-down of steel sheets. The company will be showing how this permits the efficient, reliable processing of laser cutting jobs with reduced manpower at the forthcoming AMADA SOLUTION.

The next AMADA SOLUTION in May 2019 will be held under the motto “Automation Days” and the focus will be firmly placed on automation. And there is a good reason for this because, in the sheet metal industry in particular, automation has developed into an important competitive factor and AMADA is being asked for the corresponding solutions more than ever before. “Automation focuses on the material feed into the machine and on its removal and setting-down after processing,” explains Rolf Somnitz, Product Manager Automation at AMADA. “Automating these processes reduces the personnel required at the machine and consequently helps enterprises here counteract the problem of high non-wage labor costs and the shortage of qualified specialists.” Furthermore, automation is particularly suitable for systems that manufacture recurrent parts or series runs where production can therefore take place practically unmanned. What is more, when it comes to working with large, heavy sheets or easily-damaged surfaces, human machine operators quickly reach the limit of their capabilities. By contrast, AMADA’s automation systems can handle both large and heavy as well as light and easily-damaged sheets reliably and precisely without any errors or fatigue.



Fully automated: The AMADA ENSIS with the ASF-EU 3 loading and unloading tower and the TK-3015EU part remover for part sorting applications.

Alongside their high performance, another advantage of AMADA’s automation systems lies in their extremely compact design that takes up only a small space in the production hall. With their small footprint they are also the perfect pairing for energy-saving production machines such as the ENSIS and ALPHA V series of laser cutting systems or the EM ZRB-type turret punching machine.

Speeds to match the fiber laser

The automation solution for the ENSIS laser cutting systems consists of the ASF-EU300 loading and unloading tower and the TK-3015EU part remover for part sorting applications. Both of these items are precisely configured for

the sheet thickness range from 0.8 to 25 mm and formats of 3,000 by 1,500 mm which are also covered by the AMADA ENSIS multi-purpose laser cutting systems with their particularly energy-efficient fiber lasers and flying optics. The ASF-EU300 with its modular design automatically loads raw materials into the laser before then unloading it again. In this case, seven pallets are available for the raw materials and three for the finished products. With particularly short loading and unloading times, it perfectly complements the high-speed throughput of the fiber laser. Depending on the material that is to be machined, the ASF-EU 300 is available as a single or twin-tower variant. After the production parts have been machined, the TK-3015 EU single-part sorting system removes them from the sheet and sorts



Loading and unloading at the same machine side: the Auto Storage Loader AS III MP 300.



Automated bending: the bending robot HG-ARS, with innovative gripper technology.



Space for four pallets: the Part Remover PR III 300 OP for removal and sorting.

them as required for the next production step. When used in combination, the ASF-EU300 and TK-3015EU can easily achieve an automation level of 80 to 90 percent.

Part fixing before the final separating stage

In the ALPHA V series of laser cutting machines, automation is performed using the Auto Storage Loader ASL III 300 A and the Part Remover PR III 300 UL A. The ASL III 300 A is a storage tower for raw material and is also equipped with a loading unit that can access a total of nine material pallets with different thicknesses and grades during machine operation. It separates the sheets, checks that they are not doubled, feeds them into the machine and positions them at their gauges. After machining, the Part Remover takes out and sorts the parts. These are fixed in place before the final separating cut, which is performed in the Y-direction by the moving laser head. This ensures particularly reliable and precise removal and sorting and ideally complements the ALPHA V machines, which are able to process even materials with easily-damaged surfaces without any scratching or back

spatters. The parts are sorted and set down at a freely programmable end position on up to four europallets. After this, the Part Remover also takes away the scrap from the machine and places it down separately while material supply has already recommenced at the front of the machine.

Single-sided loading and unloading

At the EM-3612ZRB turret punching machine, automation is again performed by means of an Auto Storage Loader (AS III MP 300) and a Part Remover (PR III 300 OP). Unlike the ASL III 300 A, the AS III MP 300 possesses a loading and unloading station. This means that it is able to separate the sheets, inspect them, feed and position them and also remove the scrap. This leaves considerably more space free on the other side of the machine for removal and part sorting by the PR III 300 OP. Here again, the part is fixed for removal even before the final punching stroke.

Automated bending

In addition to automation for lasers and punching machines, AMADA will also

show at SOLUTION time-saving bending with a patented, automated tool changer. This includes the servo-hydraulic press brake HG-ATC as well as the bending robot HG-ARS, with innovative gripper technology (automatic gripper change and combination of mechanical and vacuum gripper).

Modular principle

The presented automation variants save a number of operating steps and permit reduced-manning or even unmanned production. All AMADA automation solutions have a modular design and can therefore be individually adapted to each manufacturing system and all customer requirements – in every individual task. Visit us at AMADA SOLUTION and experience our automation solutions live on-site! ●



AMADA SOLUTION,
15th to 17th May 2019 and
22nd to 27th May 2019
Solution Center Haan,
Amada Allee 1,
42781 Haan,
Germany.
Register [here](#).



For removing and sorting individual parts: the Part Remover PR III 300 UL A.



Capable of end-to-end automation: the LC-2415 ALPHA V laser cutting system.



For the optimum loading: the Auto Storage Loader ASL III 300 A.





“Competitive through automation”

Thanks to the new ASF-EU loading and unloading towers, the new AMADA ENSIS laser cutting machines at Trio GmbH can run unstaffed around the clock. This ensures the company's competitiveness in a context of planned future growth.

Quality, flexibility and reliable delivery deadlines – these are the three pillars of success at Trio Metall und Design GmbH in Luhe-Wildenau in Germany's Upper Palatinate. The company, which was founded in 2013 and has 44 employees, designs, plans and manufactures short runs and individual parts as well as large series production runs for industrial customers. Automation, and especially of its AMADA systems, is particularly important for the business. “Automation allows us to remain competitive,” stresses Managing Director Robert Käs. “Thanks to automation, production operations can run autonomously round the clock, 365 days a year. At the same time, automation reduces our production costs. Because one operator can operate two machines, we can save approximately 50 percent of our personnel costs for our laser cutting and punching activities.”

Production capacities quadrupled

Quite naturally, the new AMADA ENSIS-3015AJ laser cutting systems, all of which provide 6 kW of output power, are equipped with the ASF-EU loading and unloading station. “With the ENSIS systems, we have been able to quadruple our manufacturing capacities,” explains Käs. “The 6 kW variants ensure particularly high cutting performance even though the energy requirements of the machines are extremely low. This is particularly valuable in the case of continuous operation.” The ENSIS systems, which were delivered to the company in March 2019, are primarily used to manufacture claddings for the mechanical engineering and automotive sectors. To do this, each of the towers is loaded with more tonnes of

sheet metal. “The towers automatically feed the corresponding sheet to the laser cutting system in the required thickness. It is then cut by the system and stored in the defined tower compartment again for further processing. In this way, we can process orders over the weekend fully automatically and without the need for any staff.” The ENSIS systems are programmed externally via AMADA's VPSS 3i software, again reducing the need for highly-qualified metalworking specialists on-site.

For new customers and markets

On the one hand, the new AMADA ENSIS systems ideally complement the existing systems at Trio Metall und Design GmbH, which are themselves also highly automated. These include, for example, the Amada HG-1003ATC-press brake with Automatic Tool Changer or the AMADA EML-3610NT punch-laser combination machine with a fully automatic storage system connection in the form of the CS II. On the other hand, the machines also have a high strategic value for the company's development. “We are planning to extend our sphere of activity to the whole of Bavaria and also parts of Austria and will soon be launching our Internet sales operation,” reports Käs. “With the new systems, we are creating the basis that will allow us to cope with the new order volumes that await us in the future.” •



Robert Käs, Managing Director of Trio Metall und Design GmbH (right) and Florian Gebhard, Sales Executive South at Amada GmbH. The new system is in operation in Trio's factory in Luhe-Wildenau.

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