

## PRESS RELEASE

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### **JUARISTI exhibits at EMO a new multifunction machining center optimized for milling and turning operations and a new range of universal heads**

- The new JUARISTI TH3-MT multifunction machining center is optimized for milling and turning work and will offer users ergonomics, versatility and high productivity.
- The ACD7 and ACD8 universal heads combine all the benefits of the JUARISTI range of heads and feature improved turning speed, high power and productivity in 5-axis machining.
- The company will unveil to its customers the benefits of its new advanced production center, the Accuracy Cube, and its new comprehensive service offer.

JUARISTI presents its latest developments in multitasking machining solutions at EMO 2019. On this occasion, the company, which specializes in the design and manufacture of Premium machining solutions, presents the benefits of the new TH3-MT multifunction center, its commitment to meeting the needs of customers who demand a unit capable of performing multiple machining techniques with high productivity and accurate results. It is also unveiling its new range of 5-axis universal heads.

The new machining center is a development of the TH series, the JUARISTI 5-axis multifunction centers, incorporating a turning table and a special head with a design optimized for turning operations. The center includes a comprehensive automation package and has a completely renewed design to improve its ergonomics, extend its useful life and optimize chips and cutting fluid management.

The JUARISTI TH3-MT maintains the main benefits of the TH series solutions: high dynamics (up to 40 m / min rapid feed with accelerations of 3 m / s<sup>2</sup>) and compatibility with latest generation high feed tools and excellent chip removal. With its symmetrical design and column-centred head, it offers matchless precision and high cutting capacity.

Its greatest novelty is the incorporation of a new special turning head and a turning table. The new head developed by JUARISTI, named ACD8, is a universal model that provides 5-axis machining and reaches speeds of 8,000 min<sup>-1</sup>, at high power (60 kW) and spindle torque (1,600 Nm).

The turning table incorporated in the machine has a plate diameter of Ø1,600 mm (optionally up to Ø 2,000 mm) with a maximum speed of 400 min<sup>-1</sup> and maximum part capacity of 5 ton in turning and 10 ton in milling. Rotation speed of up to 400 min<sup>-1</sup>.

The new machine comes with a range of automation systems that can be adapted to the customer's requirements, including a quick-change matrix tool changer with capacity that can be expanded to 450 tools, and an FMS multipallet system.

Finally, the JUARISTI TH3-MT has gone through a comprehensive redesign process to achieve a more stylized and ergonomic unit. The new design achieves a more compact layout for better use of the space in the factory. In addition, it optimises the chips and cutting fluid collection system by improving the autonomy of the machine and avoiding non-productive time spent cleaning it manually.

Another of the improvements related to the design is the coating of the interior of the enclosure in stainless steel, which protects and extends the life of the machine. It offers excellent ergonomics, for perfect control of operations by the user, as well as the careful arrangement of the main components to facilitate supervision and maintenance.

### **New range of heads**

JUARISTI heads have a solid market reputation due to their robustness and good performance. Now the design department of the company is striking another blow with a 5-axis universal head model enabling high precision milling, turning and boring and maximum reduction of the time needed to change the tool. The result of this innovation effort is the development of not one, but two cutting-edge universal head models aimed at different types of users: the ACD7 and the ACD8.

The ACD7 is notable for its double axis of continuous rotation (horizontal and 45 °) and for achieving very fast repositioning movements (from 0 to 180 ° in 7 seconds). In terms of performance, it offers outstanding rotation speeds of up to 6.000 min<sup>-1</sup>.

Also, the new ACD8 head is a development that incorporates all the ACD7 technology but also enables turning operations with the same head. It has a continuous 45° rotation axis with double pinion system, with spindle speeds of up to 8,000 min<sup>-1</sup>. Automatic change of the accessory for turning means that the head enables demanding turning operations due to its robustness.

In both models, given their rapid positioning time and capacity for interpolation with the rest of the axes, a drastic reduction in tool change time is achieved, significantly increasing productivity.

### **Made by JUARISTI, integrated production philosophy**

JUARISTI continues to reinforce its integrated production philosophy to offer maximum value to its customers through precise, reliable machining solutions adapted to the productive requirements of each customer.

The company attaches great value to the knowledge and experience acquired in its 80 years of operations. This high degree of specialization means its designers and engineers can always offer the most suitable machine type, customizing the product according to the customer's needs, with the most appropriate design, the most convenient guiding system and the most advanced technologies.

All this thanks to the constant exchanges between JUARISTI's team of experts and their customers, in order to study the production uses and requirements, applying all the necessary improvements and innovations.

This way of approaching the manufacture of the machines involves mastering the production process of all its components, which guarantees that the solutions are delivered to the customer with the maximum guarantee of reliability and precision.

Another of the key features of Made by JUARISTI is flexibility in customization. For this, JUARISTI has a wide range of milling machines, boring machines and multifunction centers so that it can always offer the most appropriate design. In addition, all machines have flexible configurations and support different sizes to fit all production plants.

With regard to structural design, JUARISTI specialises in the manufacture of thermosymmetrical machines. This configuration prevents thermal deformation and eliminates vibrations ensuring maximum stability and robustness.

Moreover, the specialization in guiding systems is another area of innovation of the company. At JUARISTI we have expert knowledge of hydrostatic, linear and dual guiding (combining hydrostatic and linear guiding on the same machine), which means we can always offer the best option for the machining work of our customers.

Finally, JUARISTI designs and manufactures all the structural components of the machines, tables, heads and all their accessories and automation systems, which ensures the traceability and safety of the entire production process.

In summary, the Made by JUARISTI seal ensures solutions of maximum added value, matchless precision in milling, boring and turning, great power and roughing capacity, versatility and productive flexibility with multitasking solutions, long component life and safe and efficient operations.

### **New advanced manufacturing center, the Accuracy Cube**

JUARISTI is continuing to take steps towards 100% control of the accuracy and reliability of its solutions and reduced lead-time of its machines. This is the goal of one of its largest investments in recent years: the creation of an advanced manufacturing center, the new Accuracy Cube. The space, measuring more than 1,200 m<sup>2</sup> and located at the headquarters of JUARISTI, will be dedicated to the machining, assembly and verification of all the critical parts and components of its machines.

The unit will be operational at the end of 2019 and has required an investment of more than 4 million euros. It is equipped with some of the most advanced systems on the market, including a Jig Borer, several grinding machines and a high-precision three-dimensional machine.

This will also be where all data is collected and analysed for constant improvements to the Accuracy Best+ process, the advanced production method developed by JUARISTI to ensure a precise fit before and after assembly. The space has been designed to ensure that JUARISTI solutions meet all customer needs.

The Accuracy Cube consists of a critical parts machining area (Precision Parts Center), a dimensional verification room (3D Verification Lab) and a head assembly laboratory (The White Room).

The Precision Parts Center is a space dedicated to the machining of critical parts. It is equipped with a high performance TH3 Jig Borer manufactured by JUARISTI and several high-end cylindrical grinders. These appliances guarantee perfect finishes in all the critical components of our customers' products, resulting in greater precision and reliability.

The TH3 Jig Borer is specially designed to ensure thermal stability and achieve maximum precision in the parts. It offers technical details that make it an especially accurate solution. Components of the RAM headstock, head bodies, etc. are machined in this unit.

The grinding units have the capacity to grind parts up to 600 mm in diameter and 4,000 mm in length, and are suitable for both exterior and interior grinding. The aim is to extract the maximum precision and productivity from these appliances. To achieve this, work has been done on improving the grinding process, taking advantage of the experience acquired over the years, developing the appropriate tools and seeking out the most suitable process properties to achieve the highest precision.

The second space of the Accuracy Cube is intended for dimensional verification. It is equipped with a Zeiss brand large volume coordinate measuring machine (CMM), the most accurate for this volume of work (it achieves accuracies of 3-5  $\mu\text{m}$  in full volumes and less than 1  $\mu\text{m}$  in small parts).

This equipment enables measurements of parts of up to 6,000 x 3,000 x 2,000 mm. It will be used to verify the geometry of all parts prior to assembly, to achieve complete traceability of the components and complete quality control.

The final space of the Accuracy Cube will be dedicated to high-precision mechanical assembly. It is a clean room free of impurities with the most advanced productive means to ensure optimum assembly of precision mechanical units, such as milling heads. The temperature inside is controlled and kept constant at 20 ° C.

In a space adjacent to the White Room, there is a test bench, where the milling heads are subjected to load cycles to ensure that the final assembly result is correct.

### **JUARISTI Direct Service+, optimized service strategy**

One of the fundamental milestones within JUARISTI's business strategy in recent years has been the optimization of its service structure and the expansion of its service catalogue. The strategy has managed to develop the service, previously based mainly on on-site repairs and spare parts, to form an integral package featuring preventive maintenance, specialized training and consulting during the entire project.

Thus, the new JUARISTI Direct Service+ strategy seeks to improve the customer experience in all phases of their relationship with JUARISTI, from initial consultation to after-sales. The new strategy includes the appointment of a service coordinator in each project to devise a bespoke plan and supervise all actions and service work in each of the phases.

The strategy means involvement from the initial customer consultation. In that phase, representatives of the technical and commercial departments, in coordination with the service department, advise on the most appropriate solution for meeting the productive requirements of the customer.

On the other hand, JUARISTI's new service strategy emphasizes training packages on maintenance and specific applications. These packages seek to ensure that users of the milling-boring machines learn practices to improve the operability and maintenance of the machines.

But the most important issue is JUARISTI's major investment to optimize its international service structure. This impulse involved the opening of new Service Hubs in Germany, China and India, the recruitment of more technicians dedicated exclusively to technical assistance and the implementation of 4.0 tools to simplify maintenance and make it more intuitive.

The global service network covers more than 40 countries and ensures provision in less than 48 hours. In addition, it is complemented by a support hotline managed directly by specialist technicians.

In recent years, investments have been made in expanding and consolidating the spare parts warehouse at JUARISTI HQ and in the creation of a new warehouse in JUARISTI Deutschland. This investment guarantees the availability of original spare parts and delivery of critical parts in 48 hours. Also, the spare parts service includes parts advice to identify the correct model of the part and send it in the shortest possible time.

Regarding Industry 4.0, the JUARISTI technical department has developed the My JUARISTI software, a very intuitive tool with a clear interface that provides a comprehensive system for monitoring, self-diagnosis and predictive maintenance of the machine. The software includes the Osasun system, which automatically generates predictive maintenance plans and increases productivity by reducing downtime.

### **Solvency and financial security**

JUARISTI's firm commitment to improving its service and expanding its international reach is attracting a very favourable response from the market. Last year, the company closed with a record number of new orders, estimated at 46 million euros.

Furthermore, in financial year 2018 the company registered growth of 25% over the previous year and in 2019 it expects to exceed turnover of 35 million euros. JUARISTI's good results offer its customers the security of a reliable partner for the future.

### **About JUARISTI**

JUARISTI, experts in manufacturing milling and boring solutions and multifunction centers, has been a benchmark company in the machine tool sector for 80 years. Its headquarters are in Azkoitia (Basque Country) and its product range covers all configurations of milling machines, boring machines and multifunction centers.

The company is recognized in its sector for the quality and robustness of its products, high productivity and close cooperation with customers from advice in the purchase phase to technical service.

The JUARISTI technical service network is present in more than 40 countries. The speed of response, the availability of spare parts and the high professional level of its technical staff, enables them to offer a personalized and professional service that ensures the reliability of their solutions.

Constantly analysing the market and listening to the needs of its customers has given shape to the core of JUARISTI's strategy for the coming years, summarized in the C.A.S.T concept: Connectivity, Automation, Service and Technology, the 4 strategic areas in which it will concentrate its efforts in the coming years.

**For more information:**

Susana J. Ubarrechena

[marketing@juaristi.com](mailto:marketing@juaristi.com)

T: + 34 943 851 1221