2018 AT A GLANCE

- Turnover increase on the previous year’s level: 7%
- Turnover (million EUR) for 2018: 498
- 60% of orders from the automotive industry
- Employees: 2,100
- Active in more than 60 countries
- 500 service professionals worldwide

**Turnover by regions:**
- Asia: 17%
- Europe: 38%
- America: 16%
- Germany: 29%
- Service: 29%
- Standard machines: 33%

**Turnover by segments:**
- Automotive: 60%
- Tool Manufacturing: 6%
- Aerospace: 8%
- Medical & Precision Technology: 10%
- Mechanical Engineering: 13%

**CHIRON FZ 15 W**
- CHIRON MILL 800 five axis
- STAMA MC 528 TWIN
- SCHERER VDZ 100 DS

**New Factories:**
- Taicang Innovation Factory
  - Taicang, China
  - Approx. 14,000 m² surface area
  - Room for 290 employees
- CHIRON Precision Factory
  - Neuhausen o. E., Germany
  - Approx. 14,000 m² surface area
  - Room for 220 employees

**Orders by industries:**
- Automotive: 60%
- Tool Manufacturing: 6%
- Aerospace: 8%
- Medical & Precision Technology: 10%
- Mechanical Engineering: 13%

**Orders by segments:**
- Automotive: 54%
- Service: 29%
- Tool Manufacturing: 6%
- Aerospace: 8%
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**Order receipts by industries:**
- Automotive: 60%
- Tool Manufacturing: 6%
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CHIRON Group announces record turnover

Excellent start for new machine generation

The FZ/DZ 16 series from CHIRON and the MT 733 from STAMA, which made their world premiere at AMB 2018, have got off to a promising start; thanks to the new machine tools, which score highly in terms of both dynamics and precision, orders are now being received that would previously have been placed with established competitors. The construction of new factories in Taicang, China and Neuhaven ob Eck, Germany is also running according to schedule.

CHIRON Group 2018 strong across the board

In 2018, the CHIRON Group announced a record turnover of 498 million euros, 7% above the previous year’s level. The domestic market was also revealed to be particularly strong with a turnover share of 29% (2017: 30%). The share of European markets rose by 3% to 38%, whereas the American share decreased by 21% compared to the previous year to 16%. Asia accounted for 17% (previous year 14%).

The increase in turnkey projects (38% turnover share) demonstrates that these turnkey complete solutions from the CHIRON Group remain an important success factor. The other two segments also showed encouraging signs of development; standard machines accounted for 33% of the turnover, services 29%.

In terms of incoming orders, the automotive industry remained the strongest segment with 60%. Mechanical engineering declined slightly in comparison with the previous year at 13%. Medical and precision technology (10%) and the aerospace industry (8%) also showed positive signs of development. Tool manufacturing accounted for 3%.

New factories opening in May and October

Totaling more than 3.0 million euros, the new construction of the CHIRON Precision Factory in Neuhaven ob Eck, Germany, is the largest single investment in the company’s history. The most state-of-the-art machine tool factory in Europe, with a surface area of 14,000 square meters, will be opening its doors in October 2019. Construction work at the site in Taicang, China, where the Group has invested more than 30 million euros, is also running according to schedule. Work began on the site at the end of 2017 and the factory is due to be opened in late May 2019. It will be the first factory in the world to produce machines from all three manufacturers (CHIRON, STAMA, SCHERER) under one roof.

Software as a fundamental component of machining solutions

One thing the company particularly focused on in 2018 was the development of new platforms and the market launch of the first series to be based on these – the FZ/DZ 16 from CHIRON and the MT 733 from STAMA. Thanks to their gantry design, both platforms are characterized by particularly high static, dynamic and thermal rigidity. This enables CHIRON and STAMA to use their highly developed turnkey skills to optimize existing manufacturing solutions and to tap into new markets. The new machining centers have been designed to meet the increased requirements in the automotive industry but are also equally well suited to applications in the aerospace and medical technology industries. The Smartline portfolio now also includes the new ConditionLine software module for the targeted planning of maintenance work and repairs as well as ProtectLine, a system that protects the machine against collisions in all operating modes. The Smartline modules, which will be extended again in 2019, are a fundamental component of the Group’s machining solutions; used in combination, the extraordinary productivity and precision of the new machining centers from CHIRON and STAMA can be exploited even further.

«We are delighted to have seen the highest turnover in the company’s history as well as the successful launch of our new CHIRON FZ/DZ 16 and STAMA MT 733 series. The market has confirmed that we are adopting the right approach with our gantry design, which combines dynamics, precision and higher cutting forces in a way that has never been seen before.»

Dr. Markus Flik, CEO
Successful market launch of the new series

Following their world premieres at AMB 2018, the new machining centers developed by CHIRON and STAMA from the ground up have made a successful entry onto the market. Further variants will be introduced in 2019.

Individualization, digitalization and the mobility of the future present considerable challenges when it comes to machining. This applies to mass production in the automotive industry as well as to individual and small series production, for example in tool manufacturing. In response to the present and future requirements of its customers, the CHIRON Group has introduced new machine series from CHIRON and STAMA for high-precision and dynamic CNC machining. The FZ 16 S five axis and the DZ 16 W from CHIRON were developed in response to the ever more stringent requirements in the machining industry and the increasing complexity of the workpieces to be machined,« explains Dr. Claus Eppler, Head of Research and Development at CHIRON. »The STAMA MT 733 two is the complete machining center for high-precision and flexible to configure machines are further requirements in mind – particularly with regard to precision, dynamics and a high-quality surface finish on increasingly complex workpieces. Designs incorporating a moving gantry are completely new for CHIRON. The moving gantry significantly increases rigidity, enabling far greater levels of precision in machining. The modular concept enables the system to be configured exactly in line with specifications. With 5-axis tool rotation table or workpiece changer, with one or two spindles and with individual automation solutions. The standard equipment includes the new TouchLine operating system with 24" panel for monitoring the machine condition directly on the control panel. The new machining centers can also be equipped with the ConditionLine, DataLine and, from fall 2019, ProtectLine software modules from the SmartLine range – for even greater productivity.

The advantages of the FZ/DZ 16: Even with their compact design, they can accommodate up to 162 tools, resulting in maximum space productivity, flexibility and optimized setup times. The new additions from CHIRON can machine workpieces with a diameter of up to 700 millimeters and a maximum weight of 360 kilograms and, at the same time, produce complex geometries with up to five axes operating in parallel.

Customers with special precision-related requirements for five-axis machining will find in the FZ 16 S five axis a machine that impresses with top levels of dynamics and rigidity and therefore guarantees high productivity. If large quantities are involved, the DZ 16 W produces complex parts with a precision that has never been seen before.

In 2019, CHIRON will be presenting further variants of the 16 series: An FZ 16 S five axis combined with pallet automation as well as the highly productive 5-axis double-spindle DZ 16 W five axis.

STAMA MT 733 – milling-turning centers with outstanding complete machining concept

Complex components with comprehensive machining operations require new solutions – this was the finding of an extensive trend and technology screening. Difficult-to-machine high-performance materials, greater power density and flexible to configure machines are further requirements. The integration of high-performance turning processes is currently a particular point of interest. The new MT 733 platform, which is available in four variants, shows its strengths in this market environment: The thermosymmetric design of the polymer mineral cast base frame results in improved thermal, static and dynamic stability. The Galaxis® drive system from Wittenstein, which is used in the 4th axis, is characterized by zero play, optimum synchronism, a high overload capacity and extremely high repeat accuracy. It is therefore ideally equipped for the reliable implementation of a first-part-good-part strategy, whereby the very first workpiece of each new series is always correctly dimensioned.

The MT 733 machines provide unlimited dynamics right through to simultaneous 5-axis machining. With powerful turning and heavy-duty milling operations, all six sides of the workpiece are machined on just one machine in a single setup. The automation that is integrated as standard and the option of complete machining from the bar and/or from the chuck apply to all four variants of the MT 733. Together with the DataLine and ConditionLine software modules from the Smartline range, this makes the machines a versatile and flexible production solution for many sectors, whether for a batch size of 1 or 1 million. This has been confirmed in practice; for nine months, an MT 733 two has been producing components for products from Wittenstein, a company nominated for the Deutscher Zukunftspreis 2018. Significant improvements have been made in terms of throughput time, setup and configuration, stock levels and process reliability. The workpieces, which would previously have been the work of several machines, are now produced on a single machine with high precision in 40% less time.

Variants MT 733 one (one working chamber with a milling and a turning spindle), MT 733 one plus (with additional counter spindle for six-sided machining) and MT 733 two plus (bar and chuck machining in two working chambers with a milling and a turning spindle) are currently under construction at STAMA. The entire range will be available by the end of 2019.

CHIRON FZ/DZ 16 – efficient production with maximum precision

The FZ/DZ 16 from CHIRON was developed with customer requirements in mind – particularly with regard to precision, dynamics and a high-quality surface finish on increasingly complex workpieces. Designs incorporating a moving gantry are completely new for CHIRON. The moving gantry significantly increases rigidity, enabling far greater levels of precision in machining. The modular concept enables the system to be configured exactly in line with specifications. With 5-axis tool rotation table or workpiece changer, with one or two spindles and with individual automation solutions. The standard equipment includes the new TouchLine operating system with 24" panel for monitoring the machine condition directly on the control panel. The new machining centers can also be equipped with the ConditionLine, DataLine and, from fall 2019, ProtectLine software modules from the SmartLine range – for even greater productivity.

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Exploiting the full performance of the machine

Smartline: Digital solutions provide the basis for exploiting the full productivity and precision of the machining centers from CHIRON and STAMA

Digitalization in machine tool building is advancing. With its portfolio of modular solutions, the CHIRON Group is taking the lead in this area. The software range currently comprises six perfectly harmonized components that are making an important contribution to creating added value in the machining industry. Data security is always a top priority. It is possible to implement all relevant functions and information on a powerful industrial PC, a so-called «edge computer», directly on the machine. At the same time, customers can benefit from the advantages of cloud technology via the platform connection. Data sovereignty remains with the customer: They decide which information should be stored locally on the machine and which should be sent to the cloud.

Smartline: Complete control of data

Cloud Computing
Global data retention and data processing

Remoteline
ConditionLine

The customer decides whether to transfer data.

Fog Computing
Local data distribution within the operator’s network

Dataline
ProcessLine
ConditionLine

The customer decides whether to transfer data.

Edge Computing
Collection, storage and evaluation of data directly on the machine

TouchLine
ProtectLine
ConditionLine

The customer decides whether to transfer data.

DataLine

A variety of modern apps determine, analyze and visualize machine and process data live. The system enables the process owner to respond quickly and safely to deviations and make the necessary changes whenever necessary. The IT solution can independently signal faults and provide information as to their cause.

RemoteLine
Service via cloud: In the event of a fault, the machine, having been configured by the customer, independently sends a qualified error message regarding the machine condition to the technical experts from the CHIRON Group via a secure Internet connection. They diagnose the causes of the faults online and are often able to rectify these remotely. If necessary, a service callout can be arranged, including all of the necessary spare parts.

Touchline
The new Touchline operating system guides the user step-by-step through the use of their machine, adapting its interface depending on the task and the context. It boasts intuitive and interactive operation via the familiar tap, drag and swipe gestures used on smartphones and tablets. Touchline also reports critical conditions, including their cause, and suggests measures to rectify these. The new operating system is supplied with a large 24” panel as standard with the new F2/D2 series from CHIRON as well as the MT 73S from STAMA.

ConditionLine
Conditionline can be used to plan maintenance work and repairs according to the machine condition. The solution detects and reports signs of wear and unusual operating behavior in good time. This prevents costly production downtimes. All data is recorded, gathered and processed directly on the machine.

Processline
ProcessLine offers full machining process simulation; the module unites the geometry, kinematics and dynamics of real CNC machining centers as well as all CNC functionalities and the NC archive in an end-to-end virtual process chain. The advantages include fast, safe production as well as efficient use of the machining center.

ProtectLine
The new ProtectLine module protects the machine against collisions in all operating modes. A digital twin continuously runs ahead of the physical machine and detects impending collisions. In the event of an emergency, only the virtual machine «crashes»; the real machining center is shut down in a controlled manner and in good time. This reliably prevents potentially major damage and failures. Used together, the ProcessLine and ProtectLine modules form a continuous digital process chain. ProcessLine simulates the real NC program and ProtectLine protects against malfunctions in a live environment.

The CHIRON Group is an active player in the digitalization of machine tool building around the globe; the Group not only develops its own IT systems but is also one of the founding members of MindSphere World. As such, the company is both supporting the expansion of the «MindSphere» IoT platform as well as using it to design and operate its own software systems. RemoteLine, for example, will be based on MindSphere as of fall 2019 and will provide customers with the foundation for even more productive, efficient and faster production. Representatives from the CHIRON Group are also members of the core VDW initiative team for networked production. Its objective is to connect different machines and control systems via the uniform and universal «umati» interface (universal machine tool interface).
Continuously expanding both the organization and services: That is the aim of Frank Geiselhart, Director Global Service CHIRON Group since October 2018. The most important aspects of the Group’s new service strategy are looking ahead, individual offers, a consistently high level of service across all companies and highly qualified experts to support customers around the globe. The position was created with the objective of pooling together all service activities worldwide. Geiselhart has more than ten years’ experience in service management. From Head of Key Customer Support at national level through to overall leadership of international customer service, he has held numerous positions at KUKA Roboter and KUKA Industries and is now managing key members of service staff within the CHIRON Group.

Mr. Geiselhart, how would you describe the optimum service that the CHIRON Group is striving for worldwide on the basis of its new service strategy?

It is an organizational unit that works closely with customers. This ‘closeness’ is something I find particularly important; being close means being able to respond to customers quickly whenever they need us. But it also means knowing our customers well enough to offer them the best possible advice and active support and, in the best case, even surprising them. Individual services tailored to the customer are a key factor here. This includes our service agreements, retrofits and modernizations as well as classic training, spare parts and on-site services. Not forgetting our future SmartServices. Our offers should ideally be precisely tailored to the production environment and needs of the customer concerned. The objective of these individual service products as well as the way we do business must be to ensure maximum machine availability in order to increase customers’ productivity. Nowadays customers expect much more than a fast response in the event of an emergency.

What are the prerequisites for being able to offer customers individual solutions at such a high level?

First we need uniform interfaces and processes. In the ideal future scenario, all of our service employees will work with the same systems, processes, tools and approaches to solutions throughout the world. This is something we definitely need to focus on further. We also want to put our expertise to better use. We have a huge number of highly skilled employees and specialists. We need to pool together and apply their knowledge in a more targeted way for our customers. And again, we need to be close to our customers in order to understand them better and be able to identify market trends.

Where do you see potential for the CHIRON Group?

Not only potential but also real opportunities! We have a globally active, strong and motivated team with experienced managers and a total of approximately 500 service experts. This is a really strong foundation. And our digital solutions – the SmartServices mentioned earlier – offer great potential for further intensifying our relationships with our customers. With our knowledge and experience in service, we are the ideal partner when it comes to optimizing or modernizing existing machining centers from CHIRON, STAMA and SCHERER.

What does this mean for employees within the Group?

Professional, customer-oriented service starts with the individual. This means that managers and service staff alike are expected to work at a high professional level. Every interaction, whether in direct contact with customers or internally, affects how our company is perceived. The better we respond, the more our commitment to customer loyalty and business development will pay off. By focusing in this way, we are able to offer our customers a coherent overall package for increased productivity and machine availability.

Act proactively, surprise positively

Offering a coherent overall package with tailor-made services

Further service managers of the CHIRON Group