AEROSPACE INDUSTRY: THE CHALLENGES AHEAD

With durability and safety — once key aerospace challenges — guaranteed, the aerospace industry faces new and formidable challenges. Dr. Anton Binder, Executive Vice President of Corporate Development and Strategy with MTU Aero Engines, talks about the industry’s growth drivers and the challenges ahead.
MTU Aero Engines, headquartered in Munich, is Germany’s leading aircraft engine manufacturer. Engaged in the development, manufacture, marketing and support of commercial and military aircraft engines as well as industrial gas turbines, MTU Aero Engines employs 8,500 people and has a global footprint. MTU serves key aerospace players including GE Aviation and Pratt & Whitney.

Binder, educated as a mechanical engineer, has a 25-year history with the company, including five years in the aerodynamic design of turbines, and responsibility for two of MTU’s major divisions, commercial OEM engines business for 14 years and strategy.

Our suppliers’ expertise and processes is important to us, our customers and suppliers are very important,” Binder explained. "Innovation does not happen only at MTU; it also comes from suppliers of raw materials, machines and tools,” he said. "Our suppliers’ expertise about new materials and processes is important to us, so that interaction is becoming increasingly important.”

BIG CHALLENGES AHEAD

The global commercial aviation industry, with a market value of nearly US $5 trillion, is poised to accommodate unprecedented growth in the coming decades, thanks to soaring travel demand driven by key megatrends: increasing globalization, rising gross domestic product, liberalization of air transport, and urbanization. In parallel, the industry is committed in the next two decades to reaching ambitious targets for boosting fuel efficiency and reducing aircraft weight, as well as reducing emissions of carbon dioxide, mono-nitrogen oxides, and noise levels.

"In the next 20 years, we anticipate a global demand for 36,000 new aircraft ranging in size from 70 to 500-600 passengers, excluding business jets. Multiple by two engines each, and you get the demand for engines,” said Binder.

DEAR READERS,

Welcome to this latest edition of Results Today. In these pages, you will see how GF AgieCharmilles’ Milling, EDM, Laser, Automation and Customer Services solutions can help you realize your highest potential. From tool, mold and die making to the production of high-value precision parts, businesses of all sizes rely on us for application and process expertise and products.

Our customers in a wide range of industrial areas, like automotive, medtech, aerospace, information and communications technology, and electronic components, are always a step ahead of their competitors, thanks to our machines, Automation solutions and Customer Services.

On the following pages, you will find expert insights about emerging trends as well as examples of successful customers who look to us as a global source of strength and an asset to their businesses.

Better than any other partner in the machine tool business, your GF AgieCharmilles team is positioned to help you take your business to the next level of success. "We put customers first" is one of our core values, and we endeavor to prove it to every customer, every day.

Pascal Boillat, President, GF AgieCharmilles
For GF AgieCharmilles, Europe has always been the reference market. In addition to the European countries, our Market Region Europe also includes the Commonwealth of Independent States (CIS), the Middle East and Africa,” said Bernhard Kasper, Head of GF AgieCharmilles’ Market Region Europe. “In Europe, we see a robust increase in demand in medtech — including a range of dental and surgical applications, like implants. The innovations of the last decade are impressive and have been made predominantly here in Europe.”

Kasper said the region’s aerospace and aeronautics industries have demonstrated stable growth supported by strong demand worldwide, and automotive and motorsports remain key contributors to the European economy. European vehicle manufacturers, he pointed out, are global players driving innovation toward cleaner, safer and more sustainable transport.

MARKET LEADER WITH TOMORROW’S SOLUTIONS TODAY
Manufacturers in Market Region Europe face challenges including continuous product innovations that increase complexity, miniaturization and demand for high precision. GF AgieCharmilles is known for helping customers stay ahead of the market.

“The global competition imposes on our customers to incessantly innovate their processes, maintain local research and development and increase production. In the past, in order to help our customers, it was sufficient to offer better products than our competitors offered,” Kasper explained. “Today, as the market leader, we anticipate future market needs.

That’s why the machines our customers will need tomorrow are available today from GF AgieCharmilles. Our challenge is to innovate and bring added value for our customers, the end users.”

GF AgieCharmilles’ leading position didn’t spring up out of nowhere. It is based on a 60-year history as the pioneer and master of electrical discharge machining (EDM), leadership in high-speed Milling and Automation and, more recently, Laser texturing and Customer Services.

“These are big successes, but we also take into consideration customers’ high expectations,” he said. “For example, the new GF AgieCharmilles Academy adds value by delivering essential process and application knowledge across many market segments. This clearly shows our commitment to continuously helping our customers become more successful.”

That commitment to adding value for customers, combined with a unique array of Milling, EDM, Laser and Automation technologies and Customer Services, makes the Group unique in the machine tool industry.

“Another key success factor is our network of more than 160 technology experts and more than 165 service engineers located close to our customers in Market Region Europe and — better than anyone else — able to deliver the best solutions for continued production efficiency,” said Kasper.

That, he said, is exactly the kind of industry leadership that has helped GF AgieCharmilles maintain its No. 1 position in EDM and enter the top three players in five-axis Milling.

With eight sales companies, and 450 employees operating in 58 European countries, GF AgieCharmilles has long been — and remains — a success-triggering partner to more than 19,000 customers across Market Region Europe. The Group’s customers represent a wide range of growing industries, from medical technology and aerospace to automotive and motorsports.
Schwanog’s management has a clear vision: to extend sales to emerging countries — including India and Brazil — and create small, local production sites to increase reaction speed and closeness to customers. Hand-in-hand with that vision is a drive to manage the production of small batches of three to five pieces by increasing flexibility.

Flexibility carries a lot of weight with Schwanog, because it has been a key success factor in the company’s evolution from a small maker of turning production parts and tools and measuring equipment and machine tools to a leader in tungsten carbide plate machining and holders for special applications.

Founded in 1946, Schwanog today specializes in machining carbide and polycrystalline diamond (PCD) plates, plate holders and turning tools. Schwanog’s products and expertise serve lathe and turning operations producing precision parts for the automotive and medtech industries and others.

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Just as the Danube River’s international journey begins in Germany’s Schwarzwald-Baar district, so does the mission of Schwanog Sigfried Güntert GmbH, a leading producer of insertable form tool systems. GF AgieCharmilles wire-cutting electrical discharge machining (EDM) plays a key role in Schwanog’s high flexibility.
delivery. That’s why we use a completely automated line for wire EDM, entirely managed by a central computer,” he said. “We have standardized the plates in order to maintain our objectives.”

GF AgieCharmilles’ Automatic Wire Changer (AWC) technology allows Schwanog to have various diameters of wire pre-installed on their wire EDM machines, ready for use depending on the wire diameter needed to cut the desired profile.

“That means we don’t have to stop the production line to change wires, and this helps optimize our production,” Güntert explained. “In our case, the AWC is not used as a tool to decrease machining time, but as an instrument of flexibility.”

Cut 2000 OilTech adds flexibility

Also adding flexibility to the company’s processes is GF AgieCharmilles’ Cut 2000 OilTech with AWC. That top-end machine makes it possible to machine special parts in oil and allows pre-programming of the machine for use in Schwanog’s production line.

“We buy what we need, and we had already calculated that the AWC would pay for itself in about a year, thanks to the solution it offers for automatically changing various diameters of wire,” he said.

GF AgieCharmilles’ technology support and good knowledge of Schwanog’s processes and applications bring additional value to the relationship.

“GF AgieCharmilles is always attentive to our needs and responds with the right products for the right applications,” Güntert said. “A good example is how GF AgieCharmilles supports our competitiveness is the AWC in combination with the option of using oil dielectric to eliminate corrosion on workpieces. Our main concerns are the load on our machines and our need to avoid operator intervention. With GF AgieCharmilles’ support, we continue to optimize our automated wire EDM line for efficiency and flexibility.”
ADITEK QUALITY, PRECISION YIELD SMILES WORLDWIDE

When Drs. Alexandre and Dilza Lopes decided to start manufacturing dental parts as a complement to their orthodontics practice, people said they were crazy. But with the skill and enthusiasm of the local workforce, a fast-growing global market for orthodontic appliances, and support from GF AgieCharmilles, business is booming.

Located in the primarily agricultural city of Cravinhos, 300 km north of São Paulo, Brazil, Aditek do Brasil Ltda is a prime example of how proven expertise, unmet market needs and the support of expert supply partners can converge to spark success. Aditek’s orthodontic products help orthodontists worldwide transform patients’ lives by constructing beautiful smiles, improving self-esteem, function and aesthetics for better living.

“My wife and I are dentists with specialty degrees in orthodontics. When we thought about starting a manufacturing facility in an area traditionally tied to farming, everyone told us we were crazy. Fortunately, we found great help in town with talented people eager to learn and evolve for a better future,” Alexandre Lopes explained. “Today, we employ 150 people and are one of the...
GF AgieCharmilles was key in the process of educating us about technology and equipment, supplying information and training to our workforce.

Dr. Alexandre Lopes, Industrial Director, Aditek do Brasil Ltda

Regulatory requirements are becoming more and more stringent, so quality, tight tolerances, surface finish and all of the complexities involved in dental parts must be incorporated into our processes.

Dr. Alexandre Lopes, Industrial Director, Aditek do Brasil Ltda
Delphi Packard’s global tool factory, located in Shanghai, China, is known as a giant in automotive mold manufacturing. The factory got into mold manufacturing in 2005, importing a number of machines — including a MIKRON HSM 300 that still performs at high precision today, three die-sinking machines and six wire-cutting EDM machines — from the US. Today, the factory produces 500 molds per year for plastic injection, high-speed stamping and liquid silicone. Those molds are supplied to Delphi branches not only in China, but Mexico, Germany and Brazil, as well. It is said that the Shanghai mold plant accounts for 80 percent of all molds for Delphi Packard Electric Systems.

When the company moved into mold production, continuous improvement in equipment and technology was high on its list of priorities.

**FIRST CHOICE IS GF AGIECHARMILLES**

To accommodate Delphi’s move into molding, management began considering machine purchases. Their first choice was — and still is — GF AgieCharmilles because the company knows the excellent, long-term performance of the Group’s machines.

For example, some of Delphi’s GF AgieCharmilles machines have been in use for nearly 10 years, and they’re still performing important manufacturing tasks. The factory’s first GF AgieCharmilles wire EDM machine still delivers 5 μm accuracy and 50 to 70 percent cutting efficiency. Delphi management said that’s far better than the Japanese machines that the factory used for five years and can now use only for rough machining.

Delphi’s deep trust in GF AgieCharmilles is evidenced by its growing GF AgieCharmilles machine fleet: 10 MIKRON machining centers, 14 wire EDM and 19 die-sinking EDM machines.

Take Delphi’s MIKRON HSM 400U LP, for instance. The five-axis machine cuts complex three-dimensional forms with excellent machining speed and surface quality.

**AUTOMATION BOOSTS STANDARDIZATION AND QUALITY**

Standardization and high efficiency are essential in modern mold manufacturing. In fact, Delphi considers standardization the best way to expand business. That’s why the company’s mold plant has invested in GF AgieCharmilles Automation since 2010, with a line using only
GF AgieCharmilles machining solutions — two MIKRON machining centers and four EDM machines — plus a cleaning machine and a measuring instrument. The line is used for plastic injection mold making.

The automated line yields great benefits for Delphi. The company saw a fast return — just eight months — on its capital investment. More importantly, Delphi saw an eight-fold increase in production efficiency. Prior to Automation, the production line required four shifts per day, at 15 employees per shift: 60 workers total. Using an automated line, the line requires only seven people who monitor the whole production line over 24 hours.

Moreover, Automation puts customers at the heart of production by ensuring consistent quality.

In late 2011, Delphi purchased its second piece of GF AgieCharmilles Automation equipment, a System 3R mechanical arm. The cooperation of various machines in the Automation line is very important, and the second line includes four GF AgieCharmilles wire EDM machines to make stamping molds. With GF AgieCharmilles, Delphi benefits from one-stop service including professional support for maintenance, training and technical solutions.

Delphi management foresees a bright future for the global tool factory, as requirements for automotive appliances include not just connectors but also global positioning systems, sound, and new electric vehicles. Consequently, Delphi’s high-end automotive products have great market potential.

In the future, Delphi’s advanced vehicle electrification products will help improve the marketability of electric vehicles. Delphi Connection System is expanding its core business and will become more important. GF AgieCharmilles is focused on meeting Delphi’s needs by improving their Automation efficiency and helping to shorten the company’s time to market.
FIFTY YEARS OF SUCCESS FOR C&J INDUSTRIES

If Meadville, Pennsylvania (US) custom injection mold maker C&J Industries has a point of pride, it is the company’s resilience. In the past five years, the privately held, family owned business has not only survived one of the worst recessions in US history but actually grown and come out ahead.

Situated in a small town about 90 miles from Pittsburgh, Pennsylvania’s “steel city,” C&J Industries was founded in 1962 as a tool builder. Over the years, the business evolved to take on injection molding (1974), achieve US Food and Drug Administration (FDA) certification (1981) and — in 1994 — become the first tool builder and injection molder to become ISO 9001 certified through global independent safety science company UL. Seven years ago, the company combined its tool and mold activities in one facility, and in January 2012 inaugurated a $6.8 million facility expansion.

Today, the business boasts a 180,000 square foot (16,722 square meters) facility including 50 plastic presses with a clamping pressure range from 20 to 720 tons, three Class 8 medical molding cleanrooms, one Class 7 clean assembly room, a white room per assembly, and a general, environmentally controlled white room conforming to ISO standards for molding. C&J Industries maintains more than 1,000 active molds, ranging from one to 64 cavities, of various sizes and materials. GF AgieCharmilles helps C&J Industries meet the challenges by providing the reliable and highly precise electrical discharge (EDM) machines needed to complete new tool builds and the maintenance to keep those active molds in service.

“Maintenance, upkeep and throughput make things complex. Satisfying each and every customer is challenging, but we define success by the amount of repeat business we get,” said C&J Industries Sales and Marketing Director Mark Fuhrman.

And there’s plenty of repeat business.

DRAMATIC GROWTH THROUGH DIVERSIFICATION

“We have seen dramatic, double-digit growth in the past five years,” he said. “Key factors in our growth include the fact that we planned for strategic, diversified growth. No single customer and no single market segment will make us successful.”

Today, with 330 employees and annual revenue of $40 million, C&J Industries enjoys a mix of 89...
Getting their start as tool builders, Dick Johnston (foreground) and Harold Corner (center) founded C&J Industries in 1962, working out of a garage. Today, C&J Industries has annual revenue of US $40 million and employs 330 people at its 180,000 square foot facility in Meadville, Pennsylvania.

About 29 percent of C&J Industries’ business is in medical device molding and another 28 percent is in the pharmaceutical industry, with particular emphasis on drug delivery devices. Other major end markets include industrial, telecommunications and consumer products.

“Getting it right the first time” is key to thriving across a wide range of market segments, Fuhrman said.

“Technical challenges are tight lead times, increasingly complex product designs, learning new technology, and having the equipment to support the job as demands change and parts become more complex,” he added.

GF AgieCharmilles helps C&J Industries overcome some of those challenges with computer numerical control EDM machines perfectly suited for multi-cavity medical devices including closures like bottle caps and eye dropper tips.

“We can count on GF AgieCharmilles equipment to do the job right,” said Fuhrman.

The company maintains singular focus on its successes.

“We focus on the positive — what we can do well — and don’t let the negative or setbacks pull us down,” Fuhrman explained. “Our company philosophy is about improvement and it comes down to one very fundamental thing: trust.”

It is, then, not surprising, that C&J Industries partners with like-minded suppliers, including its 20-year partnership with GF AgieCharmilles, whose core values include, “We put customers first,” and “We do what we say.”

“When we say we’re going to do something, we do it. There is no option,” said Fuhrman.

“We can count on GF AgieCharmilles equipment to do the job right.”

Our company philosophy is about improvement and it comes down to one very fundamental thing: trust.”

Mark Fuhrman, Sales and Marketing Director, C&J Industries
The company’s impressive array of equipment—including 45 CAD/CAM/CIM work stations with 2D and 3D finite element method (FEM) and visualization software, 41 sawing, milling and turning machines, industrial robots, grinders, diamond coating systems, laser measuring machines, laser welding and marking systems and 34 GF AgieCharmilles die-sinking and wire-cutting EDM machines—serves a single purpose: ensuring the highest precision and quality of the production of stamping tools and progressive dies.

THE BEST OF MODERN TOOL MAKING

“From our start in 1965, the Fritz Stepper brand has been synonymous with modern tool making, including state-of-the-art technologies and developing quantum leaps on behalf of our customers,” said Managing Director Michael Stepper, son of the company’s founder, Fritz Stepper. “Examples are our Stepper Modular System, our High-Performance Combined Progressive Die, and the Stepper Special Diamond Coating.”

The company’s continued evolution includes the special modular system that makes it possible to change a single module and significantly reduce the time it would otherwise take to restart the stamping machine.

Fritz Stepper GmbH and Co. also pioneered double feed equipment on the tool with two materials, gold and stainless steel or bronze and another material. Such core expertise is one of many factors setting the company apart from competitors.

“The factors that have made our business so successful are...
our unique tooling style, our innovative modular tools, and our very short time to market of two or three weeks for a ‘ready to start’ tool,” Stepper said.

The company has a global customer base and a foothold in many growing industries, but its greatest following is in the automotive industry, thanks to its tooling for connector stamping and connectors themselves.

“The end customers look for the highest quality connectors, and they are ready to pay for that degree of quality,” he explained. “Our products add value through permanent quality optimization.”

“IVU GUARANTEES HIGHEST PRECISION

Among Fritz Stepper GmbH’s impressive machine fleet are four GF AgieCharmilles CUT 1000 and CUT 1000 OilTech wire-cutting EDM machines equipped with the Integrated Vision Unit (IVU), a technology that guarantees easy, automatic and accurate tool measurement and positioning. That in-process measurement plays an important role in guaranteeing the precision expected by the company’s customers.

“We have a leadership role in our market, and we always need first-in-class equipment to maintain our reputation and produce the necessary results,” Stepper said.

A key advantage of IVU is that its autofocus positions the built-in, charge-coupled device (CCD) camera at the right distance and directly measures any shape on the workpiece without removing the workpiece from the machine, saving trips to the metrology department and precious time. Special integrated software allows the machine to detect the right position of the edge by analyzing variations in light intensity. The resulting metrological data can be used in various applications. Moreover, IVU makes it possible to take any reference of the workpiece for hole centering, corner detection, internal or external centering between two faces, and distance between holes, centering and dimensions. That means 100 percent reliable machining results.

“Our vision is to expand our quality with the best partners, integrate the top technologies into our products, and train our people,” he said, explaining that IVU is just one example of how GF AgieCharmilles’ technologies help drive his company’s success and, ultimately, the success of his customers. “GF AgieCharmilles’ technologies and high-end products offer the precision we need.”

Michael Stepper, Managing Director, Fritz Stepper GmbH & Co. KG Precision Tools
MILLING CENTERS THAT GET THE JOB DONE

From general machining to high-performance Milling of components for aerospace, GF AgieCharmilles’ MIKRON machining centers are up to the task. When it comes to flexibility, ease of use and space saving design, the universal, five-axis MIKRON HEM 500U can’t be beaten. It is especially suitable for a wide range of parts production applications in general machining.

With its newly developed rotary tilting table, the HEM 500U offers competitive performance in terms of stiffness and versatility. For the standard production of precision parts in prototyping to series of five or more workpieces, the machine is an ergonomic answer. It offers a good view of the machining process and easy loading and access to the workpiece.

This easy-to-use Milling solution comes with Heidenhain’s iTNC 530 control for production of highly accurate workpiece contours during high-velocity machining. Optionally available is FANUC’s well-known Oi-MD control with various advanced and powerful features.

Even when fully automated, the work area remains accessible and unrestricted.

High-performance machining (HPM) technology necessitates best spindle performance. For the HPM 800U, inline motor spindles, with speeds of 20,000 min⁻¹ for general machining, or a 28,000 min⁻¹ CoolCore motor spindle for high precision machining, are available.

The MIKRON HPM 800U comes with a Heidenhain iTNC 530 control, and the Siemens 840D sl control is available as an option.

LEADING THE WAY IN WIRE, DIE-SINKING EDM

GF AgieCharmilles lays the foundation for precision, productivity, and flexibility with wire-cutting, die-sinking, measuring and Automation solutions to ensure your success. GF AgieCharmilles’ new CUT 2000 S features a new generator concept to significantly boost performance in terms of machining time, thanks in no small part to running time increases and reliable and automatic wire threading. Beginning with its mechanical design, highest precision, perfect surfaces and high productivity are the machine’s hallmarks. The CUT 2000 S paves the way to perfection in the serial production of miniature components where there is absolutely no room for error.

With the second-generation Integrated Vision Unit (IVU Advance), GF AgieCharmilles takes micro machining to the next level. The optical-based measurement system, designed to visualize and measure pieces directly on the highly-precise CUT 1000 and CUT 2000 wire EDM machines, features fully automatic setup by the integrated charge-coupled device (CCD) camera and duplication of measuring cycles for Automation. With IVU Advance, you’re sure to get the best fit for a contour in accordance with the theoretical shape indicated by the DXF source file.

GF AgieCharmilles’ new CUT 200 mS and CUT 300 mS machines feature a vertical sliding door to save floor space and thermostabilization to ensure accuracy even when ambient temperature fluctuates. The CUT 200/300 mS range is the most versatile on the market, plus you can expect highest quality, thanks to Swiss manufacturing and superior flat precision grinding of the guiding and assembly surfaces.

On the die-sinking side, GF AgieCharmilles offers the FORM 20/30 machines featuring the intuitive and fast-reacting AC FORM human-machine interface (HMI) and an integrated Rotary Tool Changer (RTC). With the RTC, the compact FORM 20/30 machines deliver versatility, reliability and ease of use expected in a wide variety of market segments.
MILLING CENTERS THAT GET THE JOB DONE

LASER TEXTURING OPENS NEW DOORS FOR DIFFERENTIATION

Across a wide range of automotive applications, every product in the GF AgieCharmilles’ LASER line delivers consistently high quality, accuracy and infinitely repeatable results, allowing “color and trim” studios and product and interior design centers to take differentiation to new and higher levels.

With a truly innovative and global approach to mold texturing, GF AgieCharmilles has stepped to the forefront by providing auto manufacturers and their suppliers with a 100 percent digital texturing process and wide range of Laser texturing solutions, from the LASER 600 3Ax/5Ax to the extra-large capacity LASER 4000 5Ax, which was engineered specifically for automotive applications.

With a unique machine concept and extra-large capacity the LASER 4000 5Ax is the biggest Laser texturing solution on the market. Thanks to its portal structure design, distinct textures can easily be applied to oversize and overweight molds (4 x 3 x 1.5 meters; unlimited weight), without sacrificing accuracy, for end products like truck and auto bumpers, instrument and door panels, central consoles, airbag covers and headlights.

THE FUTURE OF TEXTURING — TODAY

Moreover, the LASER 4000 5Ax is a visionary texturing solution for texturing molds for aircraft and luxury yacht interiors, home appliances and big-screen TVs, as well as casting molds and forging tools. It is ideal for applying both aesthetic and functional textures. The LASER 4000 5Ax expertly textures workpiece surfaces with ultra-fine detail at a depth, for example, of 0.15 mm on steel. Multiple layers are also easily applied on deep cavity molds, thanks to 580 mm long focal distance. All of the LASER machines have a unique capability for undercuts related to master molds.

Textures can be derived from images created in Photoshop for geometrical or continuous patterns or from natural surfaces reverse engineered via 3D scanner. Onboard machining strategies ensure that textures are perfectly rendered over countless iterations. And, because the cutting tool is a pulsed laser, GF AgieCharmilles’ Laser texturing technology is a clean, sustainable solution: no broken tools and no pollutants.

CUSTOMER SERVICES GETS YOU FIT FOR SUCCESS

Just as a fit body needs a 360-degree approach to achieve optimal power, agility and endurance, your Milling, EDM and Laser machines require key services to remain fit for success.

GF AgieCharmilles Customer Services’ three levels of support represent the machine tool industry’s greatest resource for increasing uptime and keeping your machine fleet in tip-top shape.

OPERATIONS SUPPORT: A HEALTHY DIET

A nutritious diet gives your body the power to compete; similarly your machines’ top performance and precision require a quality diet of original wear parts, certified wires, electrodes, drilling electrodes, filters and other consumables. Customer Services Operations Support offers a full menu of the highest quality ingredients for your continued success.

MACHINE SUPPORT TO INCREASE AGILITY

Another critical fitness compo- nent is agility, which requires maintenance and preventive measures. Customer Services Machine Support maximizes the agility and productive time of your machines with a Helpline, service interventions, components and machine overhauls, spare and exchange parts, and our unique Uptime+ program. Our fundamental preventive services and leading edge advanced preventive services — calibration by laser interferometer, geometrical control, circularity test with ballbar gauge, spindle services, Nadcap accreditation support to facilitate your certification — take your agility to the next level.

BUSINESS SUPPORT TO BOOST ENDURANCE

Whether your chosen sport is running, cycling or swimming, endurance is a key success factor. The same applies to your business. That’s why GF AgieCharmilles Customer Services offers Business Support with solutions tailored to your long-term business needs. These include feasibility and test cuts; training to make your employees real experts; Automation to increase productivity and cost efficiency; upgrades, options and accessories to ensure higher sustainable productivity; and application support to help you achieve your long-term potential.

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We are the partner of choice to successful tool, mold and die makers, and to producers of high-value parts in fast growing market segments.

We offer innovative Milling, EDM, Laser, Automation, and Customer Services solutions. Talking to one expert is what we call “More efficiency,” and that’s a big plus.

Looking to add value to your business?
Let’s talk about your future.

Unleash your potential

Achieve more...