

Media Release

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GF Machining Solutions' new AgieCharmilles LASER S series sets a new milestone in terms of productivity with unique flexibility and optimization capabilities while maintaining high quality standards

A new manufacturing era is dawning and GF Machining Solutions today provides manufacturers with greater-than-ever access to its revolutionary Laser texturing technology. With its new AgieCharmilles LASER S series, to be launched in Europe in March, manufacturers gain access to the market's most highly efficient, fully digital, all-in-one Laser texturing solution.

The high-performance AgieCharmilles LASER S series was conceived to help users achieve unprecedented productivity without compromising quality. By optimizing product costs, GF Machining Solutions is making its existing AgieCharmilles LASER P series significantly more attractive at the same time—a step that makes this revolutionary technology more accessible than ever.

Laser texturing helps manufacturers drive their surface texturing transformation by overcoming the limitations of conventional and manual methods. With GF Machining Solutions' Laser texturing technology, manufacturers in a wide variety of industrial segments can defeat their daily challenges of difficult-to-realize designs, eliminate quality deviations, and tackle functional surfaces in order to seize new business opportunities. GF Machining Solutions' LASER P series became the market reference for Laser texturing after its 2009 introduction, delivering the full range of Laser texturing advantages and the big plus of controlled costs. The new LASER S series takes Laser texturing to the next level of performance. As an all-in-one solution, the LASER S series advances manufacturers' productivity, quality, design freedom and time to market. At the same time, users reduce their cost per part in such challenging market segments as packaging, information and communications technology (ICT) and automotive.

Proven performance

Recent benchmarking tests prove the LASER S series' value in, for example, texturing of stainless steel automotive lighting molds. In this case, this solution's 3D scanning system reduced machining time by 30 percent in comparison to its predecessor while improving surface finish quality.

In a packaging closure application, the LASER S reduced machining time of the stainless steel mold and increased the machining quality to achieve a surface finish from Ra 3 μm (in the past) to close to Ra 1 μm . These advancements prove the solution's ability to finish mold inserts, such as closure mold cavities, in a single setup. Additionally, the LASER S limits human error, opens new design possibilities and reduces the need for additional machining processes.

In ICT, the LASER S slashed the fine texturing of molds for laptops and smart phones by up to 50 percent. This extreme performance demonstrates the value in a segment where productivity and perfect reproduction of the original design are crucial.

Work digitally to innovate without compromise

The new LASER S texturing series—which includes the AgieCharmilles LASER S 1000 U and the LASER S 1200 U—was developed to help manufacturers reduce their technical and economic constraints. It readies users to propose new product designs with fewer limitations and positions them to innovate with confidence. These benefits are possible because Laser texturing is a more efficient technology that reduces the cost-per-part gap between existing texturing methods while delivering higher quality.

Working digitally to achieve flawless results is as easy as importing a 3D model of the desired shape into GF Machining Solutions' all-in-one software package. Users can determine with absolute precision the perfect position of the Laser graining operation and develop new textures without limitations. Original textures can be created in-house or from natural surfaces simply by reverse engineering via 3D scanner. The textures can then be precisely applied in a single setup, even on large and complex surfaces, thanks to GF Machining Solutions' software. Time-consuming and error-inducing manual work is minimized.

Faster time to market, lower environmental impact

Shortening time to market requires shortening the manufacturing chain while speeding it up, so innovations can reach the market faster. Laser texturing helps manufacturers meet those challenges: It provides instant access to the texturing operations essential to shortening lead-time by efficiently producing textures internally.

Environmental sustainability is another major issue as governments push chemical etchers to quickly adopt cleaner processes. Compared to chemical etching or sandblasting, GF Machining Solutions' Laser texturing solutions' enable cleaner and more efficient production of textured products. With Laser texturing, manufacturers avoid the need for environment-polluting traditional methods that limit their design potential and can safely bet on a future technology today.

Bringing Laser into the process

Fully digital, precise and ecologically sound, GF Machining Solutions' digital Laser texturing technology is already a proven solution for adding distinct textures to molds for car interiors, packaging and electronics. As an all-in-one solution, the LASER S series adds speed and high efficiency to help manufacturers stay ahead of their competitors.

With its onboard software, including smart mapping and Smartpatch capabilities, this solution series brings together a powerful software solutions package to enable a fully digital five-axis process for five-axis texturing and engraving. Its all-in-one dedicated software suite enables Laser blasting, texturing and other Laser processes. With the LASER S, users master any job from the preparation phase and graphic design all the way through to transition-free patching and ultraviolet (UV) mapping for applying texture and 3D simulation.

Perfect design production

When quality is at stake, stable Laser operations are crucial, and that means there is no room for temperature variations. The LASER S series' Laser head, built to the highest standards, is thermostabilized to keep the Laser beam spot stable at the desired position throughout machining operations. The result: perfect machining quality, even on molds requiring long machining times.

Flexibility is another hallmark of the LASER S series, giving customers the ability to jump to the next business opportunity. It is easy to switch from one Laser source to the other and adapt the process to the specific application. Accurate tool measurement and fast positioning measurement are made possible by the unique, all-in-one Laser head, and the HEIDENHAIN touch probe guarantees perfect part setup with $\pm 1 \mu\text{m}$ repeatability.

Smartpatch advances quality, productivity

To date, even the most advanced Laser texturing solutions have forced manufacturers to make sacrifices in terms of quality and productivity. That is because most existing laser texturing machines randomly apply textures to the workpiece surface, working from area to area to remove material in patches. GF Machining Solutions' Smartpatch at its maximum capacity boosts both quality and productivity to easily master challenging textures. At the same time, the solution's Smartscan technology optimizes the LASER S to deliver full efficiency of each patch machined.

New digital service possibilities for the LASER S series

rConnect is the digital services platform available for all GF Machining Solutions technologies. Following a modular approach, rConnect comprises a range of services that empower customers to increase their manufacturing productivity.

- With rConnect Live Remote Assistance (LRA), expert engineers rapidly respond to service requests. LRA allows effective face-to-face assistance using audio, video, chat and many more functionalities.
- With rConnect Messenger, the user is kept informed of the production thanks to machine data is delivered to a mobile device, making it possible to supervise the workshop from a smartphone.

Customer Services' rConnect remote service is certified with the TÜV iT Trusted Product Certificate.

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Picture caption:

GF Machining Solutions' new AgieCharmilles LASER S range comprises two highly efficient, fully digital, all-in-one Laser texturing solutions to help manufacturers achieve optimal texturing quality without compromising productivity.

**Profile of GF Machining Solutions**

GF Machining Solutions is the world's leading provider of machine tools, diverse technical solutions and services to manufacturers of precision molds and tooling and of tight-tolerance, precision-machined components. The key segments we serve include the aerospace, automotive, medical, energy, information and communications technology (ICT) and electronics industries. Our extensive portfolio ranges from Electrical Discharge Machining (EDM) solutions, three- and five-axis Milling machines and Spindles, 3D Laser texturing machines, Additive Manufacturing and machines for Laser micromachining to solutions for Tooling, Automation, Software and Digitalization—all backed by unrivaled Customer Services and support. GF Machining Solutions is a globally acting Division of the Georg Fischer Group (Switzerland) and maintains a presence at 50 locations worldwide. Its 3,394 employees generated sales of CHF 1,066 million in 2018. More information can be found at www.gfms.com

