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Media Release

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Feintool präsentiert zukunftsweisende Technologien

At EuroBLECH 2022 in hall 27, booth H128, Feintool is presenting pioneering technologies and components ensuring economical, long-lasting and sustainable reliability in demanding business areas such as automotive, industry and renewable energies. Furthermore Feintool takes the chance to present new applications in high-volume production.

Fineblanking press FB one: more energy-efficient and environmentally friendly than ever

From its press portfolio, Feintool is presenting its energy-saving and efficient FB one fineblanking press system for a wide range of applications, such as the economical manufacture of metallic bipolar plates for fuel cells. When designing our latest-generation high-tech production system, we coordinated numerous functional details in a way that previously unattainable technical, procedural and economic advantages were achieved. Markus Schaltegger, Head of Fineblanking Technology Segment at Feintool, emphasizes: «Especially in the current times, when energy costs have become more onerous, the FB one with its energy-optimized functionality makes a significant contribution to reducing operating expenses for a company.» Specifically, the press offers the following strengths:

- **Up to 50% less energy consumption:** The hydraulic direct drive of the FB one achieves short-er cycle times despite massively reduced energy consumption, which enables higher stroke rates and increased productivity. This lowers the parts costs and improves the environmental balance
- **Resource-saving use:** Thanks to the press concept on two levels, there is no foundation pit on the FB one, which allows for a simplified construction at the production site. Parts or waste can be discharged on all four sides. Less of the expensive space is

therefore required for sig-nificantly more performance and flexibility.

- **Oil quantity reduced by 40%:** Thanks to the direct drive, in combination with degassing, the FB one requires 40 percent less oil in the hydraulic tank, with longer replacement intervals.
- **Energy-saving waste separation:** For energy-saving and process-optimized cutting of the lead frame, the waste separator module can be optimally adjusted to the lead frame. Additional pistons enable energy-saving cutting of the full strip cross-section.
- **Protection of the press and tools:** An integrated cutting shock absorber protects the press and tools, which increases the longevity of the investment.

Image: 01, FB one 1100.jpg
Fineblanking press FB one in final assembly at the press competence center in Rapperswil-Jona (CH)

FEINal plus: increased surface protection for less tool wear

Fineblanking tools are complex tailor-made products for manufacturing high-precision components. Customer demands for precision, longevity and cost efficiency are correspondingly high.

Feintool, together with its partners Blösch and Platit, is launching its dedicated PVD coating (physical vapor deposition) FEINal plus for fineblanking. The process is characterized by a tough aluminum-chromium multilayer structure that is selectively doped with boron. This reduces the adhesive wear from an adhesion of punched material from the tools, which can lead to fatigue and consequently to chipping at the cut edges of the fineblanked product. This surface refinement has a positive effect on the tool life time. By increasing the system efficiency in production with FEINal plus, Feintool achieves ecological and economic benefits in equal measure.

Image: 02, FEINal plus.jpg
Fineblanking tools for surface finishing using FEINal plus

Technical presentation FEINforming for bipolar plate production

Hydrogen for fuel cells and from electrolysers is facing a fundamental change, with the metallic bipolar and interconnector plates taking on a decisive role due to the trend-setting advantages in terms of weight, installation space and costs.

In his specialist presentation "FEINforming: Current tool and machine developments for bipolar plate production" on Tuesday, October 25 and Thursday, October 27 at 3.30 p.m. on the presentation stage in Hall 26, Sven Hofstetter, Head of Competence Center Tools, will illuminate the main success factors of the FEINforming process patented by Feintool: high stability of the press, flexibility of the tool concept and high cost-effectiveness. Only a perfect-ly

coordinated production system like the FB one from Feintool can achieve the homogene-ous, almost right-angled channel geometries in connection with the required level equality of the flow field.

Image: 03, Sven Hofstetter.jpg
Sven Hofstetter, Head of Competence Center Tools at Feintool

New applications in serial parts production

With the acquisition of the German company Kienle + Spiess GmbH, Feintool is expanding its strategic business fields into the market for electric motor components, in addition to fineblanking and forming. Feintool's new business unit specializes in the highly automated manufacture of rotor and stator assemblies, as well as ready-to-install rotor assemblies, which form the heart of electric motors. They serve a broad customer base from automotive, industry and renewable energies.

Feintool masters all technologies with a high degree of vertical integration: laser cutting, punching loose sheet metal, stamped packaging, back-packaged, glued-packaged, laser welding as well as aluminum and copper die-casting. With our GeoShift® technology, we achieve the tightest manufacturing tolerances for segmented components and thus signifi-cantly increased efficiency of electric motors and generators. With plastic-insulated pack-ages, we also supply ready-to-wind assemblies, including numerous options for further pro-cessing.

Image: 04, E-Motor Rotor und Stator.jpg
Rotor and stator form the core element of an electric motor

Forming and fineblanking at the highest performance level

Feintool has mastered all the processes required for forming in the parts market: cold form-ing, cold rolling, axial rolling, flow spinning, tumbling, etc. In addition to these key processes, we also offer heat treatment processes such as gas nitriding, induction hardening or nitrocar-buriz-ing, profile and double disc grinding, machining operations and laser welding. The re-sult is always economical and ready-to-install components for our customers, such as battery housings for e-cars, components for the cooling water jacket, sheet metal pipe supports, sup-port flanges.

Feintool can count on its many years of experience, as well as technology and market lead-ership when it comes to the fine blanking of clutch elements, electrical contacts, conductor rails, brake pad carriers, safety systems and components for seat mechanisms. and supply the process chain from a single source.

Image: 05, Feinschneiden.jpg
Fine blanking with absolute precision

The Feintool Group

Feintool is an international technology and market leader in fineblanking and a global supplier of fineblanked, formed and stamped electrical steel components of the highest quality and economy. As a driver of innovation, Feintool is constantly pushing the boundaries of these technologies and developing intelligent solutions for customers' ideas.

On the one hand, Feintool offers the complete production of precise fineblanking, forming and stamped electrical steel components in large quantities for demanding applications (industrial applications), on the other hand, complete solutions in fineblanking and related processes.

The processes used by Feintool are ideally suited to implementing trends in the automotive industry. Feintool is a project and development partner in the areas of lightweight construction/sustainability, module variants/platforms and alternative drive concepts such as hybrid and electric drives.

Founded in 1959 and headquartered in Lyss, Switzerland, the company has its own production plants and technology centers in Europe, the USA, China and Japan and is therefore always close to the customer. Around 3,500 employees and 100 trainees work on new solutions worldwide and provide Feintool customers with crucial advantages.