

„QUALITY STARTS WITH LEVELING“

THE FINEBLANKING SPECIALIST HAS ALREADY ORDERED A SECOND STRIP FEEDING LINE

Swiss Feinstanz AG once again turns to KOHLER when investing in a new strip feeding line. The line fulfils the particularly high demands for precision and quality in relation to the production of fineblanked and formed components.



The single decoiler accepts coils of up to 2,000 mm in diameter and 7,000 kg in weight. The stationary coil loading chair can be hydraulically adjusted in height.

„Our KOHLER machines level more precisely than any other lines on the market,” says Marco Gmür, Head of Production at Feinstanz AG in Rapperswil-Jona, Switzerland – and he certainly knows what he is talking about when it comes to precision. In the upper reaches of Lake Zürich, just an hour to the south-east of Zürich itself, is the headquarters of the leading specialists in fineblanking and forming technology. Customers across the entire world are supplied from here – with products that are all about precision.

The wide range of products offered by Feinstanz AG comprises fineblanking and forming components, as well as tooth-cutting and customer-specific solutions for complete assemblies. Buyers of Feinstanz products include big names in the automobile and commercial vehicle industries, the furniture industry, mechanical engineering industry, building and ventilation technology, the electrical appliances industry, equipment and conveying technology, and agricultural engineering. Founded in 1958, the company and its 70 employees generate a turnover of around 22 million Swiss francs under the leadership of CEO Florian Thoma.

A distinctive feature of forming technology for blanking – and therefore Feinstanz AG products – is the extremely high precision of the components. This means that special requirements are met regarding cut surfaces which means that a high rate of smooth cuts, actually up to 100%, is achieved. The company has secured a strikingly successful position on the market thanks to the expertise of its experienced in-house fineblanking and forming specialists, which benefits customers



through the premium quality of the components produced. As well as this, Feinstanz relies on a state-of-the-art and high-performance fleet of machines.

Perfect support

Marco Gmür adds: „We achieve a high level of customer satisfaction thanks to the comprehensive degree of support we offer at an early stage and then over the entire course of the project.“ This was the level of service that Gmür was expecting when it came to investing in a new strip feeding line. „We received the best-possible advice and support from KOHLER in the design and specification of our line. They were competent, objective and, best of all, they had a professional outlook in terms of further refinements.“

With state-of-the-art hydraulic fineblanking presses in the range of 100 to 700 tons, Feinstanz AG produces complex, ultra-precise fineblanked and formed components made from various materials. Before these can be fed into the hydraulic presses, it is essential to level the coiled material. The quality of the end products depends on the precision with which the material is initially leveled by the strip feeding line. This is why Feinstanz has been using a strip feeding line from KOHLER Maschinenbau GmbH in Lahr since 2017. The second line, which was commissioned in mid-2018, has allowed production capacity to be increased in Rapperswil-Jona.

Reliably processed

The single decoiler on the strip feeding line manufactured by KOHLER for Feinstanz AG accepts coils of up to 2,000mm in diameter and 7,000kg in weight. The coiler mandrel is equipped with a transversing device to

collect the coil from the stationary coil loading chair, which can be hydraulically adjusted in height. The Feinstanz employee controls the transversing device according to the setting of the strip width from the operator panel.

To make sure that the strip is reliably unwound from the coil, the KOHLER engineers have equipped the coiler mandrel with both pressure rollers and hydraulically pivoting conical rollers. The holding-down device, as well as the strip lead-in wedge, ensure that the unwound strip is fed precisely into the strip feeding line according to the strip width and coil diameter.

Precisely leveled

At the heart of the strip feeding line is the KOHLER leveler, which is equipped with 21 leveling rollers to meet the high quality requirements of fineblanking technology.

In order to ensure a material handling setup that protects the extremely important surfaces for Feinstanz, the leveling rollers with a diameter of 65mm are manufactured from high-tensile steel and are finely ground.

To protect them against bending and the transmission of high forces, the rollers sit on a ‚bearing‘ of generously dimensioned and maintenance-free supporting rollers. „The precise leveling results that we are able to achieve thanks to this machine from KOHLER means our product-specific quality demands are consistently met,“ explains Marco Gmür.

Rollers are quick to clean and replace

The cleaning and quick-change device developed by KOHLER allows the machine operator at Feinstanz to quickly and safely

gain access to the leveling rollers and supporting rollers. A motor moves the upper roller frame upwards and the front bearing rail is removed. Not only can the leveling and supporting rollers be quickly

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and easily cleaned as a result, but it also means that changing the rollers is a fast and straightforward process. Tobias Frank, Project Manager at KOHLER, reports: „Less than 30 minutes. That’s how quick it is to change the leveling rollers thanks to this easy accessibility.“

The individual rollers on the strip transfer bridge to the downstream press have an articulated mounting. The strip guidance can be moved into a horizontal position via hydraulic cylinder, thus creating a strip transfer table. Depending on the strength of the strip, radii for the roller baskets of either 1,800mm or 6,300mm can be selected. >>>



Alongside the production of fineblanking and formed components, Feinstanz AG specializes in tooth-cutting with a high smooth cut proportion and enhanced accuracy requirements.



In modern metalworking – and fineblanking in particular – precision and quality is the number one priority. Meticulous quality control is therefore standard procedure at Feinstanz.



The strip feeding line consists of a stationary coil loading chair, a single decoiler, a 21-roller leveler, and a strip transfer bridge to the downstream press – all adapted to meet the customer's needs.

An ultrasonic control system combined with the press speed and feed length allow for a particularly quiet and even running of the strip feeding line.

Leveling is essential

Marco Gmür is convinced that: „Quality starts with leveling.“ In order to meet the quality requirements of fineblanking and forming technology, it is essential that material is leveled with the highest degree of precision. The strip feeding line supplied to Feinstanz by KOHLER seamlessly blends into the Swiss company's quality philosophy. Alongside the specialist expertise of the machine builders from Baden-Württemberg, customers are always deeply impressed with KOHLER's collaborative approach to projects in particular – from the first informative consultation session to the successful commissioning of the machine.

Details of both strip feeding lines

- KOHLER single decoiler 7000.1H
Load capacity: 7,000 kg; strip width: 50–300 mm
- KOHLER 21-roller strip leveling machine type 65.300/21 with 2 pinch rollers, passing width: 50–300 mm; leveling rollers smoothly ground
- Strip transfer bridge BÜ 12 / Radius 1.800 above floor for material thicknesses up to 12 mm with special design for 2 loop radii

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Flexible strip transfer bridge: the strip guidance can be moved into a horizontal position thus creating a strip transfer table.



In addition to extremely precise leveling results, it was particularly important for Feinstanz AG to receive the best-possible service and support from the project management team when investing in a new strip feeding line from KOHLER. Left: Tobias Frank, Project Manager at KOHLER and Mark Barry, right, Fineblanking Foreman at Feinstanz