

NEWS **KOHLER**

COMPETENCE CENTER
LEVELING

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Fineblanked and formed parts: Quality starts with leveling

Designed for variety: Peak Performer impresses in the Czech Republic

China: Part leveling machine for leading textile technology company

„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

„ 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,“

Marco Gmür, Head of Production at Feinstanz AG

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

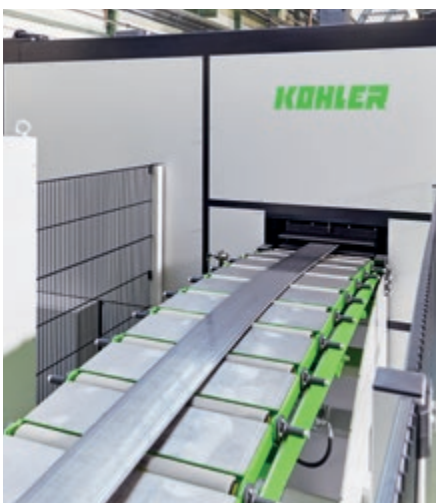
Marco Gmür is convinced that: „Quality starts with leveling.“ In order to meet the quality requirements of fineblanking and forming technology, it is essential that material is leveled with the highest degree of precision. The strip feeding line supplied to Feinstanz by KOHLER seamlessly blends into 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

VANĚK EXPANDS MACHINE PARK WITH A PART LEVELING MACHINE

THE CZECH COMPANY RECENTLY STARTED USING A KOHLER PEAK PERFORMER

Vaněk Engineering, based in Ostrava in the Czech Republic, manufactures a broad range of products for its customers from sheet metal. The company recently invested in a KOHLER Peak Performer part leveling machine, allowing it to meet the increased quality requirements of its customers.

The product portfolio of the medium-sized company includes machine enclosures, doors, gates, ventilation components, and components for the automotive industry.

Faced with increasingly exacting quality requirements from its customers, Vaněk decided to purchase a Peak Performer 50P.1600 part leveling machine, thus giving the company a strong edge over its competitors.

allows the machine operator to quickly and easily clean leveling rollers and supporting rollers – just one more way in which the part leveling machine delivers greater efficiency savings.

Jiří Vaněk is also pleased with the electromechanical leveling gap control, which keeps the leveling gap constant and also helps to ensure optimum leveling results, even for complex parts with variable

profiles. The CEO is impressed: “It has already become clear that investing in modern leveling technology from KOHLER was the right decision to make. We are now perfectly equipped for whatever the future holds.”

Canmet s.r.o. – KOHLER's Czech sales partner – is Vaněk's local expert partner with highly trained service technicians.

” A KOHLER part leveling machine starts to pay you back as soon as you switch it on,”

Jiří Vaněk, CEO and owner of Vaněk

The machine is capable of precisely leveling sheet metal with a profile of up to 10,000 mm² and part blanks up to a thickness of 16 mm, allowing Vaněk to immediately increase the quality of the components produced while also boosting efficiency. The use of low-tension and level sheets reduces the amount of time-consuming manual reworking required during downstream processes, such as robot welding and assembly.

No hydraulics and low-maintenance

From Vaněk's point of view, another significant advantage is the servo electronic machine concept of the KOHLER Peak Performer, which does not use any hydraulic systems and is thus very low-maintenance. Furthermore the advanced cleaning system



The servo electronic Peak Performer 50P part leveling machine impresses with innovative technical features such as the electromechanical leveling gap control and the advanced cleaning system.

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LEADING GLOBAL MANUFACTURER OF SPECIAL MACHINES ORDERS PART LEVELING MACHINE

KOHLER DELIVERS PEAK PERFORMER TO CHINA

KOHLER Maschinenbau GmbH installed a Peak Performer part leveling machine at a plant belonging to Saurer, the world leader in textile technology. Delivering the machine to Saurer's Chinese site represents another success in the East Asian market for KOHLER.

The Saurer Group is a global leader in textile technology. The company draws on decades of experience to develop, produce, and sell special machines and components for processing yarns. Around 4,300 employees across sites in Switzerland, Germany, Turkey, Brazil, Mexico, the USA, China, India, and Singapore help the company to achieve an annual turnover of 1.1 billion euros. As well as the company's strong focus on innovation, Saurer's commitment to customer service and exceptionally high quality standards in mechanical engineering have made them the market leader. A KOHLER part leveling machine at the company's production site in China will help Saurer Xingjiang Intelligent Machinery Co. Ltd to maintain these high standards in future.

„Our team in Shanghai gave the customer expert and appropriate advice based on their needs,” reports Chief Sales Officer Dr. Hans-Peter Laubscher. “Saurer were ultimately impressed by the cutting edge technology in our part leveling machine. The precise leveling results we provide will help them to meet increasing quality requirements for the manufacture of machine components in the future.“

Peak Performer with cutting edge technology

The KOHLER part leveling machine does not use any hydraulic systems at all and therefore combines optimum leveling results

with maximum efficiency and environmental sustainability. Reduced energy consumption, lower maintenance requirements, zero leaks, and no susceptibility to temperature fluctuations reduce costs and maximize efficiency.

Saurer chose a Peak Performer 50P.1600, which can level sheet metal and part blanks up to 16 millimeters thick.

The machine is equipped with KOHLER's advanced cleaning system for leveling rollers and supporting rollers, which is designed so that cleaning can easily be carried out by just one person. In order to remove dirt particles quickly and easily, either the top or the bottom guide plate with the supporting rollers and leveling rollers can be slid out of the machine, powered entirely by an electric motor.

Furthermore, the Peak Performer has a fast reacting electromechanical leveling gap control system that responds at lightning speed to keep the leveling gap constant. This therefore enables the machine to produce optimum results, even when leveling complex parts made from high-strength materials that have variable profiles.

The intelligent 4-point overload protection system on the Peak Performer 50P.1600 ensures that the roller frame, rollers, and



The part leveling machine from KOHLER does not use any hydraulic systems and impressed Saurer with its sophisticated innovations and high degree of cost-effectiveness. KOHLER Workshop Manager Huang Jianzhong (right) with a Saurer employee (left) during the commissioning of the KOHLER part leveling machine in Xingjiang

motors are protected from excessive loads. This also reliably avoids damage to the materials being leveled.

„Our team will continue to support the customer even after the machine has been commissioned,” promises Huang Jianzhong, Workshop Manager at KOHLER in Shanghai.

„As we are based in the same country, we can answer questions quickly and provide our customers with the professional level of service they know and expect from KOHLER.“

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