

# NEWS **KOHLER**

COMPETENCE CENTER  
LEVELING

EDITION 32



1963-2023



## LEVELING FOR DAIRY INDUSTRY

+++ WECUBEX relies on Peak Performer 60P.1600 +++ SUCCESS FACTOR roller bending +++



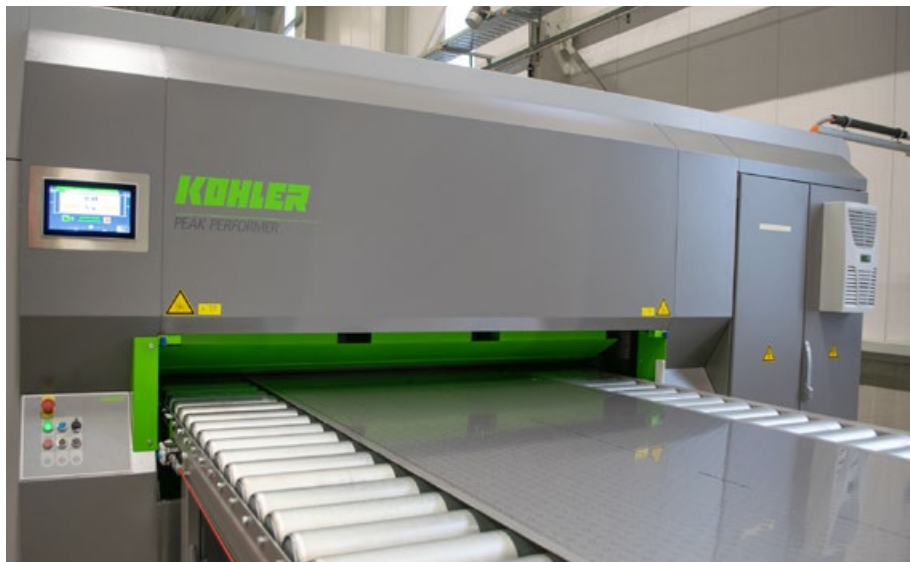
# HIGHEST PRECISION LEVELING FOR DAIRY AND BREWERY TECHNOLOGY

## PART LEVELING MACHINES ALLEVIATE UNEVENNESS FROM LARGE PARTS AND SHEETS

Leveling machines have two functions: they level and relieve stress from sheet metal parts. For tank builder Mueller in Groenlo, the removal of unevenness is of particular importance. For this task, Mueller now uses a Peak Performer electromechanical precision leveling machine from the German manufacturer Kohler, which was supplied by HEVAMI Oppervlaktetechniek. The exact same machine has also been installed at Paul Mueller Company, the parent company in the United States.



Each week, Mueller produces dozens of tanks at its site in Groenlo.  
Image: Mueller



At Mueller, all cut and laser welded sheet metal parts go through the Peak Performer 60P2000. This machine has a working width of 2000 mm and is suitable for leveling large sheet metal parts with thicknesses of between 0.6 mm and 17 mm.

Image: Mueller

The new part leveling machine represents the completion of an efficient line that is located at the beginning of the tank production process at Mueller's plant: The sheet material is cut at the beginning of the line in the laser cutting machine, then welded in a laser welding machine and subsequently leveled in the Peak Performer. The entire line is designed for a plate material of 6,000 x 2,000 mm. This size offers clear advantages in tank construction: The fewer segments needed, the better.

### Multifaceted variety of milk & beer tanks

Mueller makes various types and sizes of tank in enormous quantities. The company started out in the US, where it has been manufacturing tanks for the cooling and storage of milk on farms since the 1940s. Since the 1960s, the company has also been active in Europe. For many years, production, sales, and service were spread across various locations in the Netherlands, but since 2018 all activities have been aggregated in Groenlo, in the Achterhoek region. Here, the company produces not only milk tanks, but also beer tanks: from cask beer tanks with a volume of between 250 and 1500 liters to 50,000-liter tanks for breweries. For the dairy sector, it produces milk silos with volumes from 12,000 to 60,000 liters that are used on farms and in large cheese and dairy factories, as well as horizontal milk tanks with a volume of up to 36,000 liters. The majority of the tanks are made from stainless steel, but the company also makes copper tanks. Each week, Mueller produces dozens of tanks at its site in Groenlo.

### Leveling with care

The laser cutting machine is used to cut stainless steel sheets with thicknesses of between 0.8 and 12 mm. The plate coolers through which the coolant flows are then welded together on the laser welding machine. The most common cooling plate thickness combinations are 0.8 mm/2 mm, 0.8 mm/2.5 mm, 1 mm/3 mm, and 1.2 mm/3 mm. „We have always leveled the plates after welding,“ says Remco de Fauw, Head of the Technical Department and Process Innovation at Mueller. „If you don't, the plates can warp because of the different thicknesses of metal that are welded together. Obviously, we can't let that happen.“

The sheet metal parts only have to be level, but must not be leveled too much. If we were to level the cooling plates too much, this would overload the welds and there would be a risk that the welds would not remain intact and the cooling plates would leak, Remco de Fauw emphasizes. Because of this, leveling requires the highest precision.

### Collaboration with the Parent Company

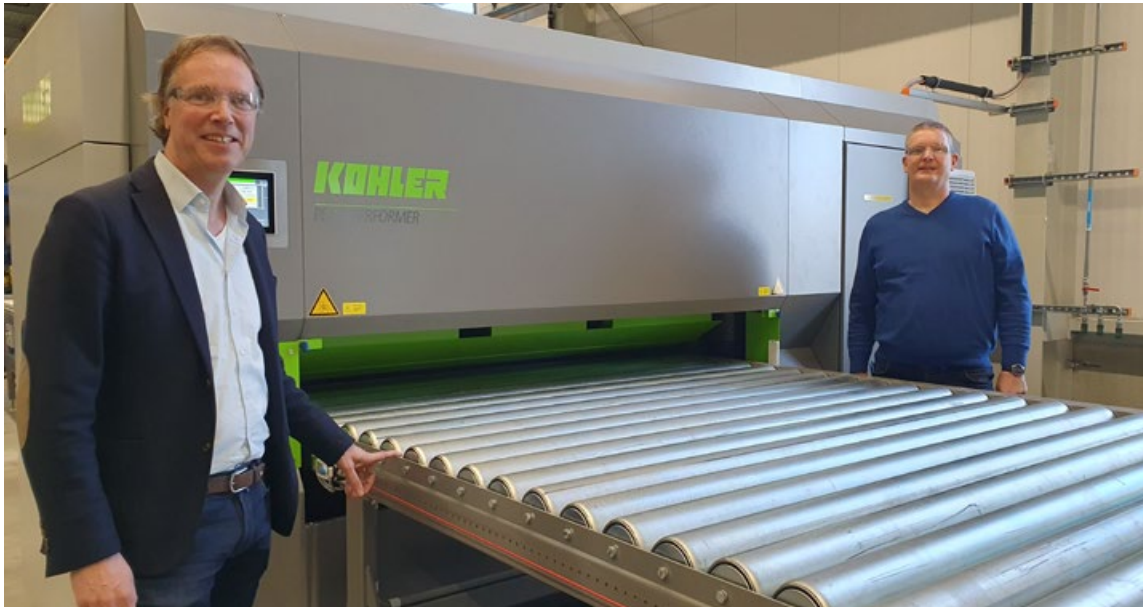
Mueller's old leveling machine that Mueller was unable to level sheet metal with a width of 2 meters and was increasingly running into problems. In addition, this machine was in a completely different part of the factory, which resulted in extra logistics. A new solution was also needed at the parent company in the US. In recent years, staff from both sites are working together to develop a global milk cooler, creating a closer relationship between the two locations and a need for parallel machines. De Fauw, who is part of the production automation technology group and is therefore involved in this project,

explains: „We currently make two types of tank. The Americans produce tanks in their own way, and so do we. If we both produce the same type of tanks, this will of course be hugely beneficial. For example, if one of us has extra production capacity, we can start producing tanks for the other and vice versa. The first prototype is due to be completed this year. Once the global cooler has been fully developed, we will look at what machines we need to make it. Then we can start making decisions about how we automate things in future.“

### Next Level

Ultimately, the solution was for both companies to invest in exact same leveling machine. Like the site in the Netherlands, the US factory needed a new leveling machine and was a little further along with its investment plan. In fact, an American manufacturer had already been selected. Although De Fauw was prepared to get on board, he felt that the manufacturer they used at least needed to have representation in Europe, preferably in the Netherlands. However, that was easier said than done. There were plans to carry out a leveling test in Italy, but they fell through. At that point, De Fauw decided to take the initiative himself. He already knew Michel van Heeswijk from HEVAMI Oppervlaktetechniek and was aware that the company was a supplier of Kohler leveling machines in the Netherlands. Test material was prepared and used to carry out leveling tests at Kohler in Germany. Numerous photos and videos were taken, which were then sent to the colleagues in America. They were soon won over. The Kohler Peak Performer was „next level“ in terms of technology compared to the leveling machine from





Michel van Heeswijk from HEVAMI Oppervlaktetechniek (left) and Remco de Fauw, Head of the Technical Department and Process Innovation at Mueller, next to the Peak Performer electromechanical precision leveling machine from the German manufacturer Kohler.  
Image: Mueller

the American manufacturer, which looked like a machine from the 1980s: conventional with no room for tweaks. The decision was an easy one, and Mueller purchased two Peak Performers. Kohler dealt directly with Mueller in the US, and HEVAMI took care of the order in the Netherlands.

### Highest precision for sheet metal parts

The leveling machine in Groenlo has been in operation since the start of 2023. All cut and laser welded sheet metal parts now go through the Peak Performer 60P2000. This machine has a working width of 2000 mm and is suitable for leveling large sheet metal parts with thicknesses of between 0.6 mm and 17 mm. Equipped with servomotors, the machine keeps the required offset between the upper and lower leveling rollers constant, which means that extremely complex parts with varying thicknesses and a high yield strength can be leveled to a high degree of precision. „That is unique for this width of sheet metal,“ says Michel van Heeswijk. The machine can easily be set up to this end thanks to its user-friendly and intuitive control system.

Additional benefits of using a servo motor include lower energy consumption, cleaner operation, no risk of oil polluting the environment, and lower maintenance compared to a hydraulic machine. The Peak Performer is equipped with an advanced cleaning system that allows the cassettes with the leveling and support rollers to be automatically removed from the machine for maintenance. Two roller tables with automatic return operation ensure the exact return of the sheet

metal to the original starting position and allow loading and unloading on the same side.

### More Control over the Leveling Process

Mueller is fully satisfied with the functioning of the Kohler Peak Performer. „It’s easier to use than our old leveling machine and gives us more control over the leveling process,“ says De Fauw. „This makes it much easier for us to achieve the right quality. The fact that the machine is now right next to the laser welding machine has saved us a lot of logistical effort. It is also safer for employees compared to the old machine.“

Mueller has purchased the new leveling machine for its own use; the company is not technically a supplier. However, the tank manufacturer is open to performing leveling for other companies as well. „We have the space to do that here,“ says Remco de Fauw, who understands that there is huge demand for leveling of large sheet metal parts. „In any case, we are happy to share our knowledge about the leveling process.“

### Part Leveling Machine at Mueller in Groenlo

- Peak Performer 60P.2000
- Width of sheets: up to 2.000 mm
- Thickness of sheets: from 0.6 mm to 17 mm
- Patented electromechanical gap control
- Advanced cleaning system
- Intuitive operator guidance
- Servo-electronic machine concept with the environment plus

### Your contact person at KOHLER:

Jens Schendekehl  
Head of Sales Export Leveling Machines  
Phone: +49 7821 6339 – 256  
Jens.Schendekehl@kohler-germany.com



# GREATER PRODUCTIVITY IN MODERN SHEET METAL PROCESSING

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## LOW-TENSION SHEETS REDUCE LEAD TIMES DURING BENDING, WELDING, AND ASSEMBLY

Tension in sheet metal plays a decisive role in all areas of sheet metal processing. When combined with how level the blanks are, it has a critical influence on productivity and quality in the manufacture of edged and bent parts, especially in the production of welded assemblies. Leveled sheets are low in stress and have the required degree of flatness to be processed further without any problems. WECUBEX Systemtechnik GmbH is aware of these advantages, so they use a part leveling machine from KOHLER Maschinenbau GmbH.

WECUBEX, a complete supplier of sheet metal assemblies, manufactures 1.4 million sheet metal parts annually at its facility in Herbolzheim, Germany with a workforce of 270 people. Approximately 12,000 metric tons of steel, stainless steel, and aluminum is processed every year. Its range of services includes lasering, edging, bending, welding, coating, and assembly – from individual components to complex system groups.

Sheet metal fabricators need level and low-tension sheets in order to be able to supply high-quality products to customers in the mechanical engineering, automotive, construction, and furniture industries, as well as the rail and transport, solar and energy technology, food, and packaging sectors.

The machinery that WECUBEX has at its disposal is hugely impressive. In an area of roughly 25,000 square meters, they have laser machines, punching-laser combination machines, edging benches, welding stations, and welding robots available for sheet metal processing. Additionally, parts of the production and storage area are used for painting, assembly, and storage.

The sheet metal specialists in Herbolzheim have long known that punched and laser-cut sheets have to be leveled before they can be further processed. The lower the stress and the more level the parts are, the easier it is to edge, weld, and assemble them. With the stresses in the sheet metal reduced to a minimum giving the resulting parts low distortion, there is higher repeatability of the bending angle during edging and the fit accuracy of the parts. As a result, downstream work becomes more reliable and more efficient.

### Improved quality, more efficient

The higher quality of the products made from these parts is a decisive advantage of leveling. In many areas of the industry today, the required degree of levelness is usually achieved via a manual process. But this manual form of sheet preparation does not reduce any of the residual stresses. It is also a time-consuming and expensive approach requiring skilled workers, who may not always be available.

With a KOHLER Peak Performer, parts are leveled in just a few seconds. Often, after only one pass the sheets not only have the required degree of levelness, but the stresses are also significantly reduced.

„While the demands of our customers have increased enormously on the one hand, the quality of the raw material is getting ever worse on the other,“ says Klaus Wehrle, Head of Sheet Metal Production. „That’s why it’s so important to get the best quality out of every sheet,“ emphasizes Wehrle.



Fully satisfied with the Peak Performer (from left): Alexey Levantev, Leveling Machine Operator together with Head of Sheet Metal Prefabrication at WECUBEX, Theo Pflieger

In the past, the company still leveled its sheets itself with a roll-bending machine, but was not convinced of the results. Therefore, a few years ago, they decided to outsource part leveling to KOHLER under its contract manufacturing service.

Then, when demand for leveled parts increased sharply, company management decided to purchase a KOHLER Peak Performer. The excellent leveling quality experienced with the outsourced orders spoke for itself, and the part leveling machine was available immediately. The geographical proximity also brings its own advantages. As the WECUBEX site in Herbolzheim is just a few miles away from KOHLER in Lahr. Because of this the WECUBEX team was able to get started quickly and level the required sheets themselves. The Peak Performer has been in operation in a two-shift model since December 2021.

” KOHLER was our problem-solver at a time when we realized that we could no longer go without a precision leveling machine.

Klaus Wehrle, Head of Sheet Metal Production/ Mechanics at WECUBEX:

The benefits for WECUBEX are clear: „With our own machine, we are even more flexible, the parts are optimally leveled, and the quality of our products is higher as a result. Our customers noticed the improvement immediately. And as a modern, environmentally conscious company, we specifically chose the hydraulic-free part leveling machine from KOHLER,“ says Klaus Wehrle.

#### Part leveling machine at WECUBEX:

- Peak Performer 60P.1600
- Sheets of various steels are leveled: stainless steel, aluminum S235 and S355
- Width of the sheets: up to 1600 mm
- Material thickness of the sheets: up to 17 mm
- Advanced cleaning system
- Gap Control system
- Intelligent overload protection
- Extra-wide supporting rollers
- Intuitive user interface

Sheet metal and sheet metal parts leveled on a KOHLER Peak Performer make an important contribution to the quality of the end product, such as a welded assembly. The high energy efficiency and improved environmental compatibility also conserve resources during every leveling process.

#### User-friendly and hydraulic-free

The intuitive operating concept makes a significant difference. KOHLER continues to think ahead when it comes to operating the Peak Performer. The human-machine interface is designed to be so simple and intuitive that operators find it comfortable and easy to use, which in turn makes it safer too. This is because the menu structure is modeled on human thinking. Comparable to a smartphone, there are only clearly recognizable input options.

Another big plus is the advanced cleaning system, it’s ease of use is greatly appreciated by many customers. Since regular cleaning of the





Presaved settings for known parts can be accessed quickly, making work easier.

leveling rollers and supporting rollers to remove dirt particles must not be overlooked, especially when a mix of steel and stainless steel is being processed. This prevents abrasive particles from being deposited on the material to be leveled and soiling or scratching it and adversely affecting the metal sheets. The rollers can be easily cleaned by only one person between two leveling jobs.

The patented KOHLER Gap Control also ensures the perfect leveling results for WECUBEX. As a result of the robust construction of all Peak Performers, the responsive leveling Gap Control system ensures a constant leveling gap during the entire leveling process regardless of the contour of the parts to be leveled or the distribution of the stresses in the part. With a lack of hydraulics, the entire Gap Control system is virtually maintenance-free, which also ensures excellent energy efficiency.

**The extra-green KOHLER part leveling machines:**

Powerful and energy-efficient at the same time – and environmentally friendly too

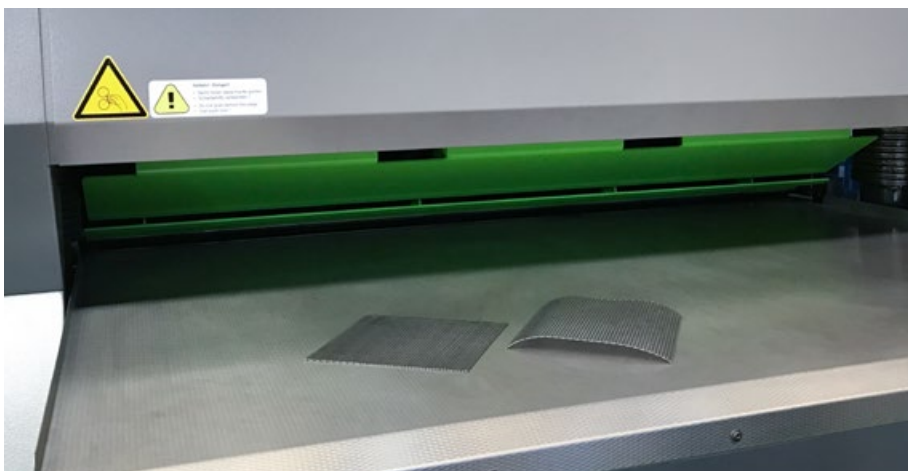
- Servo-electronic machine concept without any hydraulics
- From size 60P: responsive, electromechanical leveling gap control
- From size 85P: energy-efficient and powerful direct drives

All KOHLER part leveling machines operate without hydraulics. The result is a machine that is low maintenance, leak-free, unaffected by temperature fluctuations, more energy efficient and environmentally friendly. All 85P series and larger Peak Performers are equipped with a powerful and energy-efficient direct drive. This significantly reduces



Before and after: The parts are even and low stress (front) after leveling and can therefore be processed faster and better. The results are higher quality products. The unlevelled sheet can be seen at the rear for comparison.

the energy consumption, while increasing the leveling power and further reducing the maintenance required.



On the KOHLER Peak Performer 60P.100, WECUBEX levels laser-cut and punched sheets of various steels such as stainless steel, aluminum, S235, and S355.

**Your contact person at KOHLER:**  
 Jens Schendekehl  
 Head of Sales Export Leveling Machines  
 Phone: +49 7821 6339 – 256  
 Jens.Schendekehl@kohler-germany.com

# PERFORATED SHEETS LEVELLED TO PERFECTION

## PART LEVELING MACHINE WITH ROLLER BENDING ENSURES LEVEL, LOW-TENSION PERFORATED SHEETS

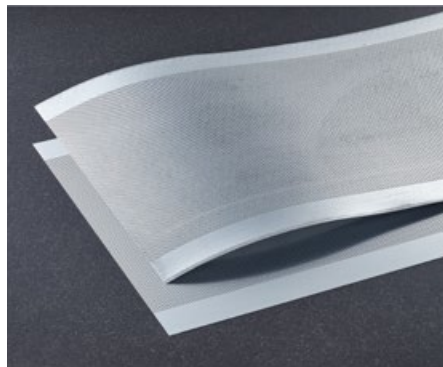
Processing perforated sheets poses a huge challenge for lots of companies. High internal tensions in the perforated material coupled with at times significant unevenness that is random and intermittent means that sheets often need to be leveled before they can be used or undergo further machining. Part leveling machines with roller bending reliably eliminate unevenly distributed tensions and unevenness. With the Peak Performer, KOHLER Maschinenbau GmbH has the solution for different material thicknesses and part dimensions.

Perforated sheets are manufactured from a wide range of materials depending on the respective application. Many manufacturers have products in various kinds of steel in their portfolios – raw, galvanized, or stainless steel, as well as nonferrous metals such as aluminum, copper, brass, nickel, or titanium. All perforated metal sheets have one thing in common: perforating the material results in a considerable degree of unevenness and distortion, caused by its low inherent rigidity and internal tensions. Often flatness errors are often clearly visible at the edges too or run irregularly across the entire sheet. Even the most careful production process cannot prevent tricky center and edge waves from developing during punching. These turn out differently depending on the material as well as the sheet thickness, length, and width, making it virtually impossible to send the warped sheets directly on for further processing like welding, edging, and assembly. As a result, perforated sheets need to be low-tension and leveled to begin with to eliminate the need for time-consuming, manual rework.

Leveling perforated sheets is a demanding processing step since the material poses special technological challenges. That's why sheet metal processors and perforated sheet manufacturers turn to KOHLER.

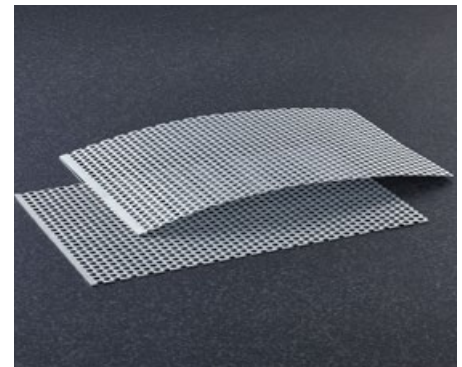
### Roller bending is the key

What makes KOHLER part leveling machines with roller bending unique is that all leveling rollers in the lower roller frame



You never know how a piece of sheet metal will behave when perforated. Warpage and tension develop almost haphazardly. Leveling is essential for maintaining level and tension-free sheets that can be further processed without manual rework.

can be advanced vertically. This feature has been specially developed to level complex perforated sheets with unevenly distributed regions of tension. Even heavily deformed sheets with a combination of perforated and unperforated areas can be leveled with minimal tension via roller bending – efficiently, gently, and to a consistent level of quality. The secret to making this possible is an adjustable motorized wedge system – a special feature of the KOHLER Peak Performer with roller bending. The leveling rollers are raised and lowered by the lower supporting roller blocks, which are adjusted by electric motors. Wherever edge or center waves impair material quality, the supporting rollers are positioned higher and generate a stretching effect in the edges of the material, causing the unwanted waves to disappear.



### Intuitive operation, quick cleaning

All KOHLER Peak Performers with roller bending have a multicolor touch display. Thanks to the optimized menu navigation and „Expert Calculation System“, the system operator can intuitively operate and make optimal use of the machine. Formulas are saved in the control unit both numerically and as plain text. The roller bending visualization reliably shows the operator the current setting of each individual roller bending point in a way that is easy to understand.

Larger Peak Performers with roller bending are also equipped with the KOHLER „GAP Control system“. This ensures a constant leveling gap throughout the entire leveling processes and guarantees excellent results even in the case of larger material



thicknesses. All KOHLER part leveling machines are operated servo-electronically without any hydraulics whatsoever. This is particularly beneficial for leveling gap control since there is no hydraulic damping in the system that could have a negative impact on leveling precision.

A further unique feature of all KOHLER levelers with roller bending comes in the form of a special cleaning system that allows quick, safe, and reliable cleaning of the leveling rollers and leveling unit. At the touch of a button, the entire unit can be slid out and then returned to its position again after cleaning. This option is particularly useful if, for instance, a mix of steel and stainless steel is being processed and is intended to prevent the spread of wear.

KOHLER offers its machines with roller bending with optional intermediate rollers too, which can be installed either in both the upper and lower leveling unit or in the upper unit only. These additional rollers ensure particularly gentle handling of the material surface during the leveling process.



Fine perforations with a motif are typically used for decorative purposes such as balcony cladding, facades, and ceiling ventilation. Only after precise leveling can they undergo meticulous further processing – such as edging, assembly, and welding.



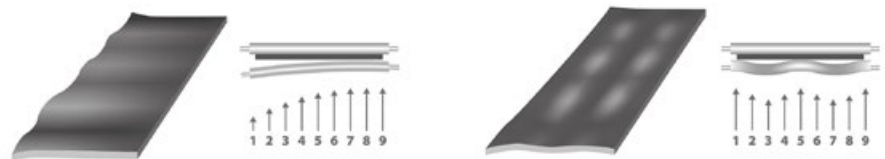
Even large Peak Performer machine series can be supplied with roller bending.

### Highlights of the KOHLER part leveling machines:

- Servo-electronic machine concept without hydraulics for high energy efficiency and minimal maintenance requirements
- Electromechanical leveling gap control for consistently good leveling results
- Enhanced system for quick and easy cleaning
- Innovative control system with intuitive operation
- Roller bending for reliable elimination of edge and center waves



Leveling perforated sheets on a Peak Performer 30P.1250 with roller bending  
Image: Özselin Perforated Sheet Ltd. Co.



Edge and center waves can be safely and reliably eliminated using the KOHLER Peak Performer with roller bending. The supporting rollers at the corresponding points are higher here and cause a stretching effect in the edges of the material. The unwanted waves disappear.

### Efficient and environmentally friendly

After leveling with the Peak Performer, the sheets are even and low-tension, bringing reliability and greater efficiency to all downstream work. The repeat accuracy of the bend angle during edging is higher, while the parts fit first time during welding and assembly because they exhibit less distortion.

The state-of-the-art machine concept of all part leveling machines from KOHLER works without any hydraulics at all. The result? Reduced energy consumption, lower maintenance requirements, zero leaks, and no susceptibility to temperature fluctuations. The KOHLER Peak Performer thereby makes an active contribution to resource conservation in industrial sheet metal processing.

### Nothing but satisfied customers

KOHLER part leveling machines with roller bending are not only being used in Germany, but have also been exported to countries such as the Netherlands and Turkey.

The Dutch company Laura Metaal based in Maastricht specializes in processing steel coils into customized plates. During the ongoing modernization of its machine park, Laura Metaal has invested in a KOHLER Peak Performer 100P.2500 with roller bending. The precision part leveling machine is replacing the two existing levelers and can be used to level plates that are up to 2500 mm wide and up to 24 mm thick. Harnessing the perfor-

mance of the Peak Performer, Laura is able to meet the rising demand for higher-strength steel. Leveling with a machine with roller bending optimally eliminates tensions in the material as well as edge and center waves in particular. Not only does this reduce scrap, but it also saves time and money on manual rework. The quality also undergoes a sustainable improvement thanks to reproducible work processes.

Part leveling machines from KOHLER are also popular in Turkey. Take Özselin for example, who have a Peak Performer 30P.1250 part leveling machine with roller bending. The leveled sheets are used to manufacture various products such as inserts for filter systems or elements for facades and suspended ceilings. Thanks to leveling on a machine with roller bending, the repeat accuracy of the bend angle is higher during bending, and, during welding and assembly, the parts fit first time because they exhibit less distortion.

### Your contact person at KOHLER:

Jens Schendekehl  
Head of Sales Export Leveling Machines  
Phone: +49 7821 6339 – 256  
Jens.Schendekehl@kohler-germany.com



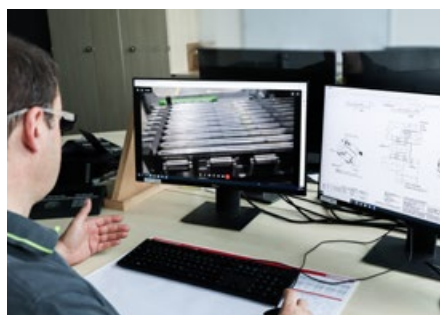
# IN PARTNERSHIP WITH OUR CUSTOMERS

## KOHLER SERVICES FOR THE ENTIRE LIFETIME OF THE MACHINE

KOHLER Maschinenbau GmbH not only makes high-quality strip leveling lines and part leveling machines, the company also offers a wide range of services – for new and old lines. The number one priority for the machine manufacturer is always measurable added value for customers – regardless of whether commissioning, maintenance, diagnostics, repair, supplying spare parts, or retrofitting are involved. There is a well-trained and qualified service team at various KOHLER sites to ensure customer satisfaction around the globe.

„To us, service means more than the regular maintenance of our machines“, explains Ralph Schäfer, Head of After Sales Services at KOHLER. „This is a huge part of our work, of course, but we offer a comprehensive range of services that starts with commissioning a new machine or line on site.“ Because once a customer has checked and accepted the line at KOHLER, the service technicians set it up at the location assigned by the user, level it, position it as appropriate for the downstream machine, and test it to make sure that everything works properly. The service also includes electrical installation, running-in using customer materials, and final acceptance, together with the operator. Commissioning ends with staff training for operation and maintenance, after which the strip feeding line or Peak Performer part leveling machine is ready to use. Training operating personnel in leveling is also an optional part of the service.

„It is no longer essential for us to be on site for commissioning to be successful“, explains Schäfer. „Thanks to modern channels of communication and remote maintenance, we can easily get lines ready to use across



To decrease downtime and reduce travel costs, KOHLER relies on digital service support via a service app. Simply by having this on their smartphone or tablet, customers can contact the KOHLER service technician directly.

continents by collaborating with the customer's maintenance team.“ For example, KOHLER delivered a cut-to-length line to an automotive manufacturer in India, and got it up and running by remote access. The line had previously been set up by KOHLER. The commissioning of Peak Performer part leveling machines online in countries such as Australia and Taiwan also ran smoothly in this way.

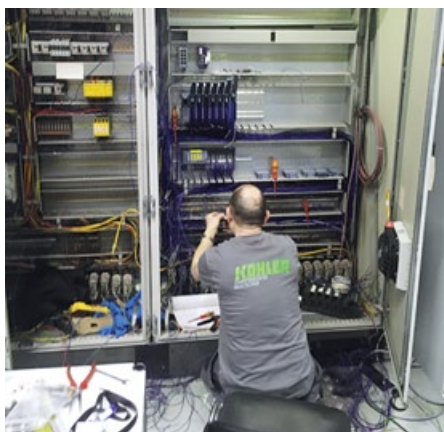
### Maintenance contracts ensure longevity

„Once one of our lines is brought into service, it will easily last for twenty years or more“, says Schäfer. „On condition, of course, that firstly the machine is handled with care, and secondly, that it receives regular maintenance.“ Although the user's trained team can manage this themselves, KOHLER usually offers its customers maintenance

contracts, to ensure process reliability, optimum functioning, and longevity. These include inspecting, testing and recording the condition of the machine. If required, the service department will send a quotation for spare parts, installation, an oil change, and other measures that go beyond what is offered in a normal maintenance contract. „We contact customers in good time before the maintenance deadline arrives, and also offer companies the opportunity to have us inspect their machines that are not covered by a maintenance contract with us“, says the Service Director. „Regular surveys confirm the high level of satisfaction associated with our maintenance service. This motivates the team to keep offering excellent service in future.“

### Getting in touch with the service team is easy

„But even the best-maintained line is not immune to breakdowns“, admits Schäfer. KOHLER experts provide sound advice over the phone for error diagnosis. The service team connects to the machine online, and can view and correct the settings, as well as adjust the parameters, by means of remote maintenance. With older lines, it is even possible to retrofit modules for remote diagnostics. „If repair becomes necessary, customers benefit from the know-how of our technicians, who are well-informed, and know their way around the machines and lines,“ emphasizes Schäfer. They offer advice on choosing parts for all machine types and components. The aim is, to get production up and running again as quickly as possible, by providing suitable spare or wear parts in the original quality.



KOHLER service technicians on site ensure that everything runs smoothly on the customer's lines. This also includes working on the switch cabinet.

To decrease downtime and reduce travel costs, KOHLER then also relies on digital service support via a service app. „Simply by having this on their smartphone or tablet, customers can contact one of our service technicians directly“, says Schäfer. „They then use videos, photos, audio and text files to communicate. A whiteboard function is provided for short consultations, we go live



Retrofitting is often the right solution, as with this 30-year-old strip leveling line. To enable the customer to still keep using the proven and familiar technology economically over the long term, KOHLER modernized and overhauled the line in Lahr, bringing it up to the latest safety and control standards.

for bigger problems.“ Using a smartphone camera, AR glasses, or a remote desktop solution, the remote maintenance specialists see in real time what the technician is seeing on site, and show the details. Step-by-step, they guide the employee through the problem-solving process, providing them with all the information they need.

### Sustainable upgrades rather than new acquisitions

But with every machine, the time will come when age decrees that it has reached its limits. „This is the case when spare parts are difficult to come by, the control system is outdated, and performance no longer meets requirements“, explains Schäfer. „To enable our customers to still keep using the proven and familiar technology economically over the long term, we modernize and overhaul existing machines – even those from third-party manufacturers – and bring them up to the latest safety and control standards.“ The service team carries out a general overhaul to inspect the technical scope, and replaces components and wear parts that are outdated or faulty. If required, the team also fits specially requested equipment, and performs an update for the control system. „When it comes to retrofitting, sustainability and saving resources are our number one priority. This is why, when overhauling the machines, we do everything we can to keep them running as efficiently as possible for a long time“, says Schäfer, and summarizes KOHLER's service approach as follows: „We see ourselves as being in partnership with our customers. Our qualified and experienced service team is always there to support them, from offering advice, to quickly taking action in the event of a breakdown, to converting and modernizing machines and lines.“

#### The service app

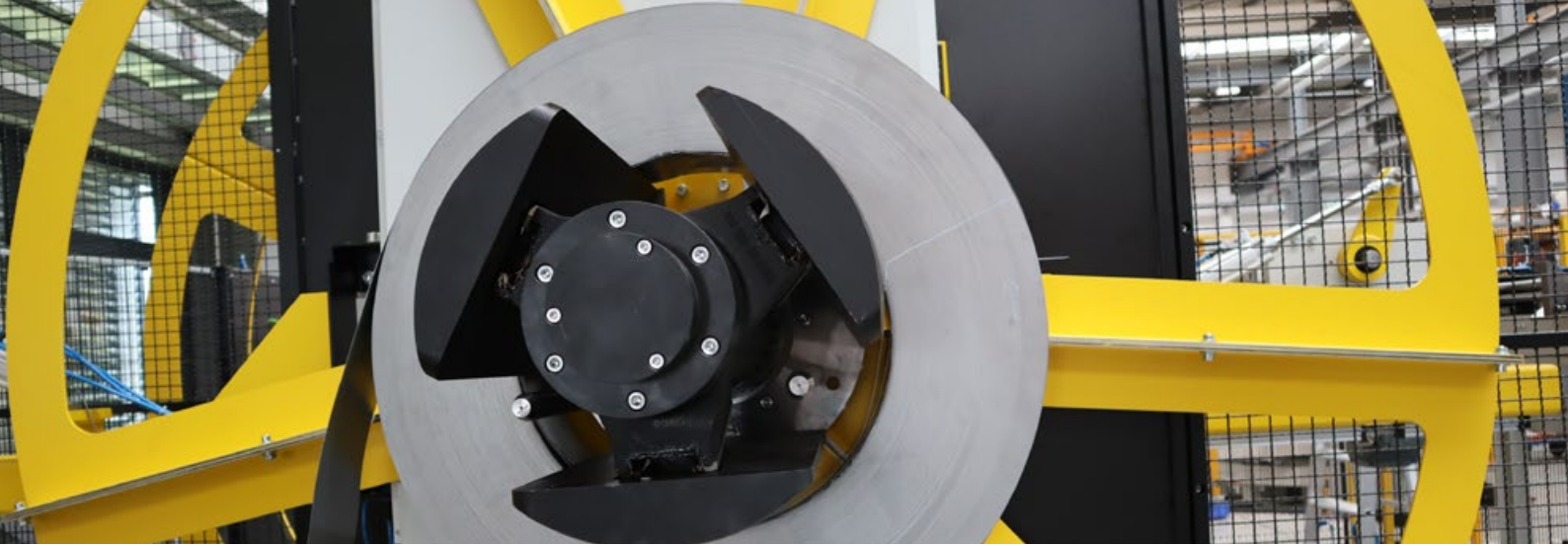
After installing the app on their mobile or tablet, users can contact a technician quickly and easily. Chat, video and whiteboard functions are provided to help them. Remote support is easily accessible as well – and there are only three steps involved: The user requests a service number and a password. The user tells these to the service technician, who uses them to establish the connection. Once the remote maintenance connection is established, users and technicians can solve the problem together.



Ralph Schäfer, Head of After Sales Services at KOHLER Maschinenbau: „We see ourselves as being in partnership with our customers. Our qualified and experienced service team is always there to support them, from offering advice, to quickly taking action in the event of a breakdown, to converting and modernizing machines and lines.“

#### Your contact person at KOHLER:

Ralph Schäfer  
Head of After Sales Services  
Phone: +49 7821 6339 – 680  
Ralph.Schaefer@kohler-germany.com

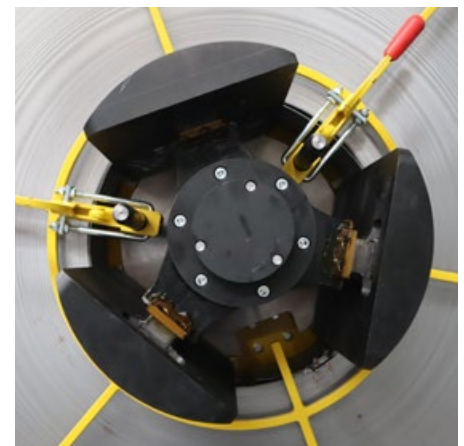


Expanding coiler mandrels without hydraulics

# TRENDSETTER 2023: SERVOMOTOR-DRIVEN EXPANSION OF COILER MANDREL

## FOR CONTINUOUS TOP QUALITY PRODUCTION

More and more companies are turning to the hydraulics-free solution from KOHLER.



Servomotor-controlled expansion has the distinct benefit of consistent expansion of the coil on the mandrel.

Previously, expanding coiler mandrels for securing the coil were usually actuated hydraulically; KOHLER can now also provide this important function via servomotor.

### Trend-setting solution with added value

Servomotor-controlled expansion has the distinct benefit of consistent expansion of the coil on the mandrel. This prevents the individual layers of the coil from sliding against each other, thus effectively preventing and drastically reducing any damage to the surface finish of the material that could result. When processing high-quality coil material, the quality of the surface finish is extremely important, making the ability to wind and unwind coils in a way that protects the finish even more significant. Another benefit of servomotor-driven expansion is the ability to set a precise inner coil diameter for the coiler or recoiler. It is self-speaking for KOHLER that the coil edges

are aligned precisely during winding, so that this is only mentioned in passing.

### The environmental plus of servomotor-driven expansion of coiler mandrel

However, the complete elimination of hydraulic power units not only brings advantages in terms of quality and grade, but also offers efficient savings potential such as reduced maintenance, service, operating and, above all, environmental costs.



The servomotor offers efficient savings potential.  
Image: KOHLER

### Benefits for the future

- Extremely precise regulation of the coiler mandrel expansion force against the inner coil windings
- Process material of the highest grade and quality
- Set individual inner coil diameters for winding and unwinding coils
- Reduced maintenance and service costs
- Lower operational and environmental costs
- No open oils and grease because no hydraulic system is used

### Your contact person at KOHLER:

Volker Ihling  
Head of Sales Strip feeding lines  
Phone: +49 7821 6339 - 255  
Volker.Ihling@kohler-germany.com

### KOHLER Maschinenbau GmbH

Einsteinallee 7  
77933 Lahr, Germany  
Phone: +49 7821 6339 - 0  
Fax: +49 7821 62585  
info@kohler-germany.com  
www.kohler-germany.com

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