



PRECISE AND EFFICIENT  
LEVELING

**PEAK PERFORMER  
PART LEVELING MACHINE**

# LEVELING WITH KOHLER FOR

Precise leveling results in low-tension and level sheets and partial blanks, thus creating the best conditions to raise productivity and increase quality in downstream processes.



## Why level?

Irrespective of the size and material, sheets need to be leveled after cutting to size. This is because tension-free sheets are a precondition of achieving the absolute best quality in downstream manufacturing processes when welding, bending, or assembling. Precise leveling with a roller leveling machine produces sheets that are level and largely free of stresses.



## Efficient welding

Leveled parts speed up both automated and manual welding processes, since the welding gap is more constant due to leveling of the material having been leveled. The use of leveled and therefore low-tension parts means they remain flat during welding. This reduces the pre-work required and the end product is more dimensionally stable.



## Reproducible bending process

Leveled materials provide for more constant elastic recovery in the bent component. The stresses created within the initial material by the rolling direction are removed by leveling. Two benefits result from this. Firstly, less rework is required, and secondly, the bending process is reproducible and allows for automated production. Rework becomes a thing of the past!



## More precise assembly

Materials that are straight and dimensionally stable are also a key aspect in assembly operations. Materials that were previously leveled can be assembled more quickly and precisely. The product will also be of higher quality both optically and technically.

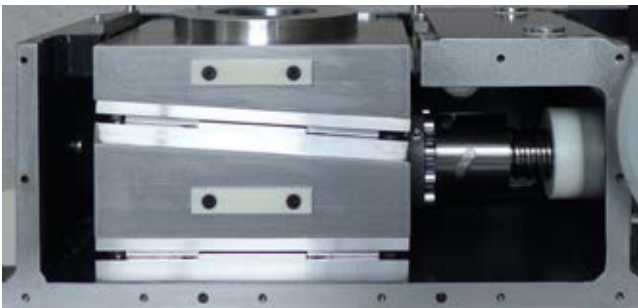
# INCREASED PRODUCTIVITY

The hydraulic-free Peak Performer part leveling machine with electromechanical leveling gap control confirms KOHLER's position as the leader in leveling technology and market leader for the sector.



## Cost efficiency without hydraulics

The Peak Performer from KOHLER operates without hydraulic systems and so combines ultimate precision with maximum efficiency as well as environmental sustainability. Reduced energy consumption, lower maintenance requirements, zero leaks, and no susceptibility to temperature fluctuations reduce costs and maximize efficiency.



## Electromechanical leveling gap control

The quiet, energy-efficient leveling gap control actuators keep the leveling gap constant through a four-fold wedge system on roller bearings. The high level of rigidity and force-stroke conversion rate permit incompressible, rapid, and precise control at variable high loads. As a result, the machine can also level complex parts with varying profiles made of high-strength materials to produce outstanding results.



## Advanced cleaning system

The Peak Performer features an advanced cleaning system to make it easy to clean the leveling rollers and supporting rollers. After the powered raising of the top roller frame, 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. This allows any dirt particles to be removed quickly and without any fuss.



## Reversible leveling rollers

The patented reversible leveling rollers on the Peak Performers increase the service life of the rollers when leveling narrow parts on machines that have a comparatively large processing width. The special arrangement of the supporting rollers displaces the point load onto the leveling rollers once they have been turned, which again increases the service life of the leveling rollers.

# COMMITTED TO HIGH PERFORM

The Peak Performer sets new standards in leveling technology with forward-looking technical features.

This makes it the right investment choice for quality-focused industrial enterprises in various sectors, including

- Automotive engineering
- Construction and agricultural machinery
- Mechanical engineering
- Steel service centers
- Housing construction



#### Return feed operation

allows the machine to be loaded and unloaded from one side. After the leveling process, the top roller frame will automatically open, change the rotating direction of the leveling rollers, and send back the material.



#### The advanced cleaning system

makes it easy to clean the leveling rollers and supporting rollers using the fully extendable leveling cassette.



#### Patented reversible leveling rollers

increase the service life of the rollers when leveling narrow parts on machines that have a comparatively large processing width.

# PERFORMANCE WITHOUT COMPROMISE



#### The direct drive

brings many advantages: greater energy efficiency, less wear and reduced noise, greater machinable profile, material processing while protecting the surface, and higher torques transmitted to the leveling rollers.



#### The intuitive user interface

speeds up the process of entering settings for different materials on the part leveling machine. A state-of-the-art multi-finger touch display lets the machine operator enter, save, and reload settings.

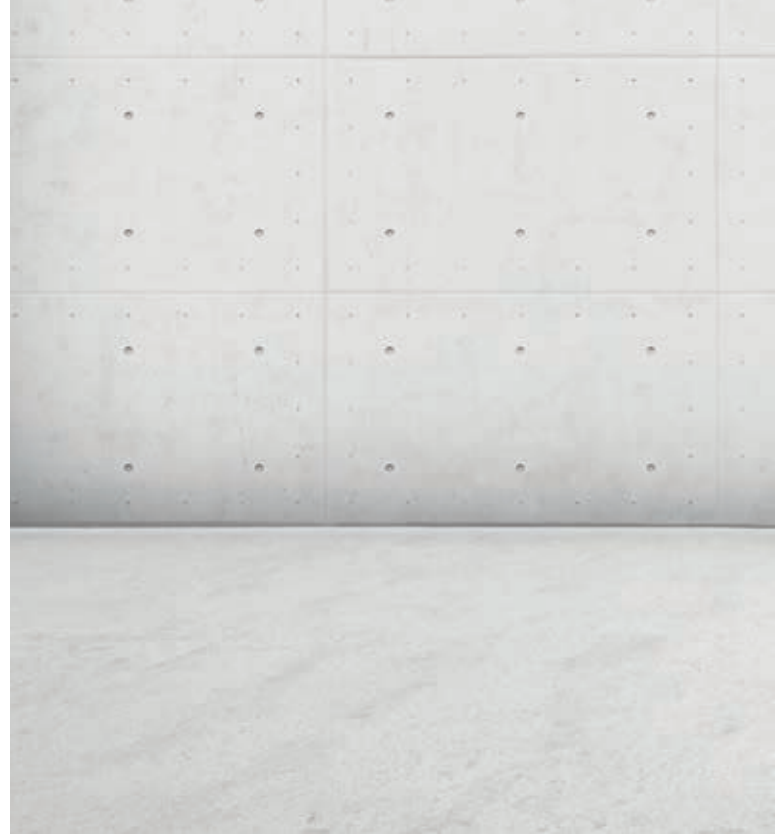


#### Extra-wide supporting rollers

provide extremely stable support for the leveling rollers over nearly 50% of their length. The benefits: Extremely precise concentricity, higher power input, less wear, and reproducible leveling results.

# BEST OF PEAK PERFORMER

Every Peak Performer represents KOHLER's many years of experience and market-leading know-how.



## Ready for Industry 4.0

The IP interface gives a defined user group 24/7 online access to the Peak Performer and all status information. For example, they can access speed data or information on the capacity utilization of the machine, or check how often particular load scenarios occurred over a specific period. The interface also permits a connection to the ERP system for data exchange. It is important to note here that the application-specific interface is individually configured in conjunction with the customer.



## Direct drive with numerous benefits

Part leveling machines from the Peak Performer 85P range onwards operate with an optimized drive concept. The leveling rollers are now directly driven via geared motors rather than by conventional distribution gears and cardan shafts. The benefits include reduced wear and noticeably higher energy efficiency in the driveline. Another factor that benefits from the direct input of power into the leveling rollers is the profile of the material that can be leveled. The working range is significantly increased, particularly in the case of wider sheets.



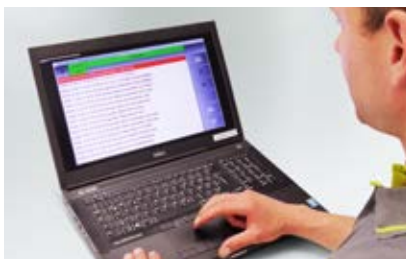
## Extra-wide supporting rollers

To provide extra stable support to the leveling rollers and so achieve reproducible leveling results, the leveling rollers are supported by numerous extra-wide supporting rollers over nearly 50 % of the length. Their width and double-ended bearing enable ultra-precise concentricity and increases the stability of the leveling rollers. The supporting rollers have been lubricated for life, so they do not require maintenance.



#### Intuitive user interface with Expert Calculation

The calculation module with intelligent user interface to pre-calculate the roller frame setting has been optimized for machines with PLC control. It will put forward suggestions for the roller frame setting based on the material data for the relevant material. Once the sheet thickness, yield point, and required degree of plastification have been entered, the precise roller frame position is calculated. Manual adjustments can then be made to further fine-tune the leveling results. If implausible settings are entered, this will be identified and flagged.

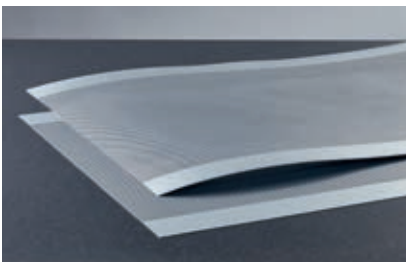


#### Teleservice for PLC functions via the Internet

The PLC service module is the central tool on the service PC for technical customer support. It can be used to send PLC logs and commands, and to retrieve status variables. The benefits include pre-diagnosis in the case of system faults, rapid and cost-effective program adjustments, and the installation of updates.

# WE ARE HERE FOR YOU!

With a comprehensive and customized service portfolio, KOHLER is there to support you as an expert partner.



## **Contract leveling of the highest standard**

Setting yourself up to perform part leveling in-house is no easy task. Ever smaller tolerance limits and increasingly demanding requirements on flatness require professional technology and in-depth know-how. The good news: KOHLER can level sheets from 0.2 to 40 mm under contract using the high precision, powerful part leveling machines in our leveling center, to produce results of the highest standard.



## **Application advice**

Professional advice has proven to be a key factor in achieving the best results, especially in leveling technology. Our highly experienced experts understand precisely the best way to handle different sheet thicknesses, geometries, etc. Furthermore, they know which KOHLER machine will deliver the optimum results while precisely maintaining tolerances. We share our know-how with you as part of our application advice service, and look forward to welcoming you to our leveling center.



## **Leveling trials for individual result optimization**

KOHLER offers a further service with the potential to increase efficiency in the form of leveling trials at the leveling center in Lahr. These trials will demonstrate the leveling results that can be achieved and will help in selecting the right leveler for your application.



#### **Maintenance, repair and spare parts**

Keeping processes running is more economical than having to stop and then get started again. To avoid unscheduled machine downtime as far as possible, KOHLER recommends preventive maintenance. However, our service teams are on hand to provide rapid support if a repair is required. Where required, we will quickly dispatch parts to you from our spare and wearing parts warehouse.



#### **Training courses to get started in leveling technology**

Before starting to level parts, it is essential to have an in-depth, individual grounding in the basics. KOHLER offers precisely this service. Experienced leveling experts will explain the principles of leveling technology, starting with the theory before moving on to practical exercises. This will help you achieve the very best leveling results even faster.

# PERFORMANCE DATA

Peak Performer Type	Max. material width		Material thickness <sup>1</sup>		Advanced cleaning system	Electromechanical GAP Control	Motorized roller frame adjustment
	mm	inch	mm	inch			
18P	400	16	0.2 - 3.5	.008 - .138	□	-	□
18P	600	24	0.2 - 3.5	.008 - .138	□	-	□
30P	400	16	0.4 - 6.5	.016 - .256	□	-	□
30P	600	24	0.4 - 6.5	.016 - .256	□	-	□
30P	900	36	0.4 - 6.5	.016 - .256	□	-	□
30P	1300	52	0.4 - 6.5	.016 - .256	□	-	□
45P	600	24	0.5 - 9.5	.020 - .374	□	-	■
45P	900	36	0.5 - 9.5	.020 - .374	□	-	■
45P	1300	52	0.5 - 9.5	.020 - .374	□	-	■
45P <sup>2</sup>	1600	63	0.5 - 9.5	.020 - .374	□	-	■
45P <sup>2</sup>	2000	79	0.5 - 9.5	.020 - .374	□	-	■
60P	600	24	0.6 - 17	.024 - .669	□	□	■
60P	900	36	0.6 - 17	.024 - .669	□	□	■
60P	1300	52	0.6 - 17	.024 - .669	□	□	■
60P	1600	63	0.6 - 17	.024 - .669	□	□	■
60P	2000	79	0.6 - 17	.024 - .669	□	□	■
90P	1600	63	1.0 - 28	.040 - 1.102	□	■	■
90P	2000	79	1.0 - 28	.040 - 1.102	□	■	■
90P	2500	99	1.0 - 28	.040 - 1.102	□	■	■
100P	1300	52	1.0 - 33	.040 - 1.299	□	■	■
100P	1600	63	1.0 - 33	.040 - 1.299	□	■	■
100P	2000	79	1.0 - 33	.040 - 1.299	□	■	■
100P	2500	99	1.0 - 33	.040 - 1.299	□	■	■
130P	1300	52	1.6 - 44	.063 - 1.732	□	■	■
130P	1600	63	1.6 - 44	.063 - 1.732	□	■	■
130P	2000	79	1.6 - 44	.063 - 1.732	□	■	■
130P	2500	99	1.6 - 44	.063 - 1.732	□	■	■
150P	1300	52	2.0 - 54	.079 - 2.126	□	■	■
150P	1600	63	2.0 - 54	.079 - 2.126	□	■	■
150P	2000	79	2.0 - 54	.079 - 2.126	□	■	■
150P	2500	99	2.0 - 54	.079 - 2.126	□	■	■
190P	1600	63	2.5 - 66	.099 - 2.598	□	■	■
190P	2000	79	2.5 - 66	.099 - 2.598	□	■	■
190P	2500	99	2.5 - 66	.099 - 2.598	□	■	■
190P	3000	119	2.5 - 66	.099 - 2.598	□	■	■

<sup>1</sup> at a yield strength of 220 N/mm<sup>2</sup> - 220 MPa - 32,000 psi    <sup>2</sup> with roller bending    ■ = standard    □ = option

Special sizes and applications on request

All Peak Performers are designed with a cleaning system and can optionally be equipped with an advanced cleaning system.

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# WELCOME TO KOHLER!

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We are pioneers and technology leaders in innovative leveling technology.

KOHLER develops and produces part leveling machines and strip feeding lines for presses and stamping machines, as well as cut-to-length lines, including for instance steel service centers, mechanical engineering firms, and for the automotive industry. We level sheets under contract and perform leveling trials in our fully equipped, state-of-the-art leveling center. We give our customers individual support and advice and will always find a customized solution to meet their needs.

As the technology leader we set standards in the industry through innovative solutions, such as trendsetting drive concepts and dispensing with hydraulic systems on our part leveling machines. Levelers from KOHLER produce optimum leveling results that increase sheet-metal processing quality and productivity. Highly efficient and consistently reliable machines from KOHLER provide for consistent cost-effectiveness over the long term. We are reducing the energy consumption and resources used in machines to benefit the environment.

Our headquarters and production facility are located in Lahr in southern Germany, with further sites for sales and service in Shanghai (China), Moscow (Russia) and Salt Lake City (USA). In its almost 60 years of existence, KOHLER has successfully realized more than 6,700 reference projects around the world. As the leading name on the market, we are focused on development and project management to meet the needs of our customers, always with the aim of working together in a reliable, long-term partnership.





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**WINTERSTEIGER INC.**  
4705 W. Amelia Earhart Drive  
Salt Lake City, UT 84116-2876,  
United States  
Telephone: 801-355-6550  
Fax: 801-355-6541  
dennis.ebner@kohler-germany.com  
www.kohler-germany.com

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**KOHLER Maschinenbau GmbH**  
Einsteinallee 7  
77933 Lahr, Germany  
Telephone: +49 7821 6339 - 0  
Fax: +49 7821 62585  
info@kohler-germany.com  
www.kohler-germany.com