KOHLER
COMPETENCE CENTER
LEVELING

PRECISE AND EFFICIENT LEVELING

PEAK PERFORMER PART LEVELING MACHINE

Part of WINTERSTEIGER Group

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.

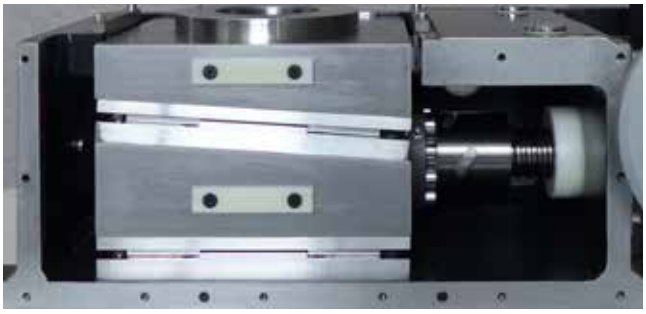
Reproducible bending process
Leveled materials provide for more constant elastic recovery in the bent component. The stresses created within the initial material by the rolling direction are removed by leveling. Two benefits result from this. Firstly, less rework is required, and secondly, the bending 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.

MANCE 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.

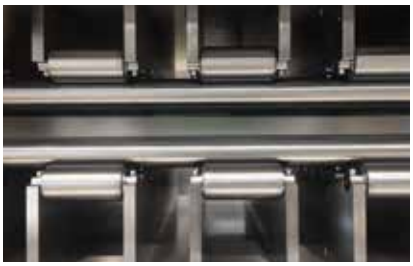
Extra-wide supporting rollers
provide extremely stable support for the leveling rollers over nearly 50% of their length. The benefits: Extremely precise concentricity, higher power input, less wear, and reproducible leveling results.

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 80P 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.



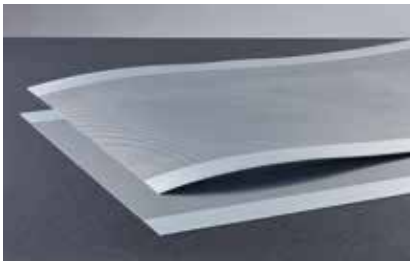
Extra-wide supporting rollers
To provide extra stable support to the leveling rollers and so achieve reproducible leveling results, the leveling rollers are supported by numerous extra-wide supporting rollers over nearly 50 % of the length. Their width and double-ended bearing enable ultra-precise concentricity 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 mm	inch	Material thickness[1] mm	inch	Advanced cleaning system	Electromechanical GAP Control	Motorized roller frame adjustment
18P	400	15	0.2 – 3.5	.008 – .138	□	–	□
18P	600	24	0.2 – 3.5	.008 – .138	□	–	□
24P	400	15	0.3 – 4.0	.012 – .157	□	–	□
24P	600	24	0.3 – 4.0	.012 – .157	□	–	□
24P	900	36	0.3 – 4.0	.012 – .157	□	–	□
30[2]	1250	49	0.2 – 3.0	.008 – .118	□	–	■
30P	400	15	0.4 – 6.0	.016 – .236	□	–	□
30P	600	24	0.4 – 6.0	.016 – .236	□	–	□
30P	900	36	0.4 – 6.0	.016 – .236	□	–	□
30P	1300	52	0.4 – 6.0	.016 – .236	□	–	□
40[2]	1500	59	0.3 – 6.0	.012 – .236	□	–	■
40P	400	15	0.4 – 8.0	.016 – .315	□	–	■
40P	600	24	0.4 – 8.0	.016 – .315	□	–	■
40P	900	36	0.4 – 8.0	.016 – .315	□	–	■
40P	1300	52	0.4 – 8.0	.016 – .315	□	–	■
40P	1600	62	0.4 – 8.0	.016 – .315	□	–	■
50[2]	1500	59	0.4 – 8.5	.016 – .335	□	■	■
50P	600	24	0.6 – 16	.024 – .630	□	■	■
50P	900	36	0.6 – 16	.024 – .630	□	■	■
50P	1300	52	0.6 – 16	.024 – .630	□	■	■
50P	1600	62	0.6 – 16	.024 – .630	□	■	■
50P	2000	78	0.6 – 16	.024 – .630	□	■	■
80[2]	2500	98	1.0 – 15	.040 – .590	□	■	■
80 PE	900	36	1.0 – 25	.040 – .984	□	■	■
80 PE	1300	52	1.0 – 25	.040 – .984	□	■	■
80 PE	1600	62	1.0 – 25	.040 – .984	□	■	■
80 PE	2000	78	1.0 – 25	.040 – .984	□	■	■
80 P	900	36	1.0 – 28	.040 – 1.102	□	■	■
80 P	1300	52	1.0 – 28	.040 – 1.102	□	■	■
80 P	1600	62	1.0 – 28	.040 – 1.102	□	■	■
80 P	2000	78	1.0 – 28	.040 – 1.102	□	■	■
80 P	2500	98	1.0 – 28	.040 – 1.102	□	■	■
120P	900	36	1.6 – 40	.063 – 1.575	□	■	■
120P	1300	52	1.6 – 40	.063 – 1.575	□	■	■
120P	1600	62	1.6 – 40	.063 – 1.575	□	■	■
120P	2000	78	1.6 – 40	.063 – 1.575	□	■	■
120P	2500	98	1.6 – 40	.063 – 1.575	□	■	■
150P	900	36	2.0 – 50	.079 – 1.968	□	■	■
150P	1300	52	2.0 – 50	.079 – 1.968	□	■	■
150P	1600	62	2.0 – 50	.079 – 1.968	□	■	■
150P	2000	78	2.0 – 50	.079 – 1.968	□	■	■
150P	2500	98	2.0 – 50	.079 – 1.968	□	■	■
180P	1600	62	2.5 – 65	.099 – 2.559	□	■	■
180P	2000	78	2.5 – 65	.099 – 2.559	□	■	■
180P	2500	98	2.5 – 65	.099 – 2.559	□	■	■
180P	3000	118	2.5 – 65	.099 – 2.559	□	■	■
180P	3500	137	2.5 – 65	.099 – 2.559	□	■	■

[1] at a yield strength of 250 N/mm^2 (250 Mpa / 36,000 PSI) [2] with roller bending ■ = standard □ = option

Further machine types upon request

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

WELCOME TO KOHLER!

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 a further site in Shanghai, China. In its 55 years of existence, KOHLER has successfully realized more than 6,500 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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