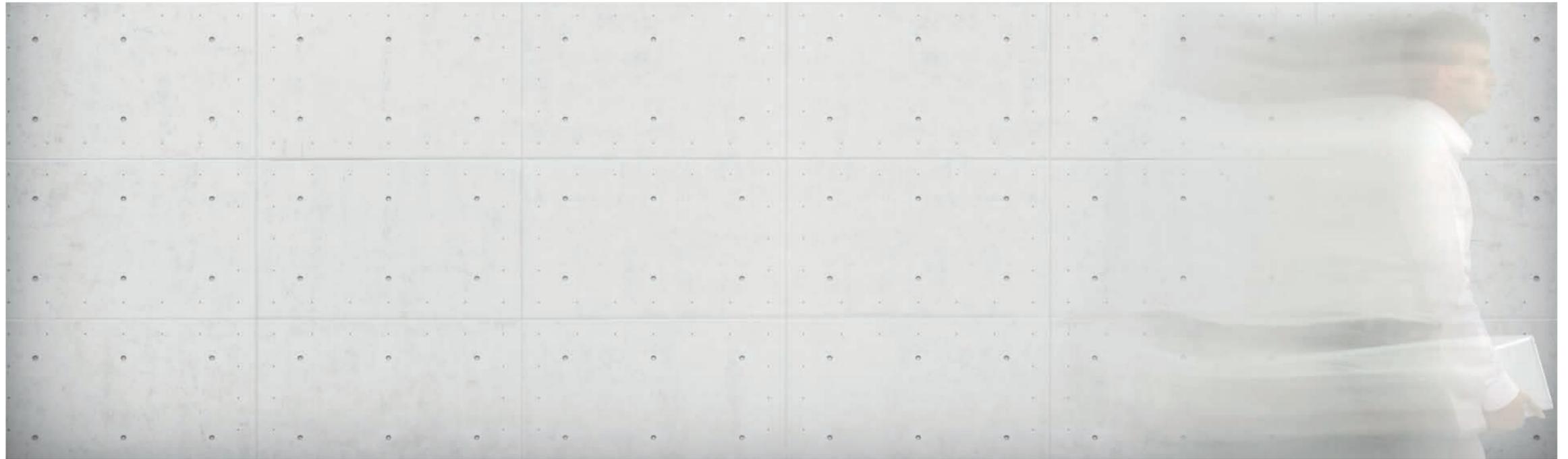


“OUR PHILOSOPHY IS
QUITE SIMPLE: ALWAYS
THE BEST SOLUTION.”



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ONLY THOSE WHO STRIVE FOR TOP PERFORMANCE WILL BE ABLE TO SET NEW STANDARDS.

THOSE WHO USE GERMAN ENGINEERING AS A REFERENCE POINT FOR THEIR WORK ARE ALREADY DOING IT RIGHT. THE MORE INTERESTING QUESTION IS: COULD THEIR WORK BE EVEN BETTER? BETTER THAN MADE IN GERMANY? AS A LONG-ESTABLISHED COMPANY BASED IN THE BADEN MUNICIPALITY OF LAHR, WE GAVE OURSELVES A CLEAR ANSWER TO THIS MORE THAN 50 YEARS AGO: YES!

This is why we are not just classed as levelling technology pioneers today, but also as technology market leaders and problem solvers who build machines with an unmatched degree of individualization. "Nothing ready-made and everything in the interests of our customers" is one of our main principles, with "everything" also including handling, cutting, washing and stacking. This universality, the high level of expertise across our staff and our engineering skills, which are typical of the Baden region, are also demonstrated by complete automation solutions. Solutions resulting from extensive process and user knowledge which KOHLER is naturally pleased to make available to its customers, including through comprehensive consulting services.

Basically, you will receive what you are fully entitled to expect from a partner working in the sensitive high-tech area of levelling technology: high-performance levelling machines pioneering the latest technology!

Welcome to the Competence Center Levelling!

OUR EXPERTISE IS DEMONSTRATED IN EVERY DETAIL.

IT IS EASY TO EXPLAIN WHY A SIGNIFICANT PROPORTION OF THE GERMAN CAR INDUSTRY WORKS WITH HIGH-PERFORMANCE LEVELLING MACHINES MADE BY KOHLER.

It's because safety on the road and precise production efficiency are also dependent on the materials involved and their refinement.



ONE REASON WHY THE GERMAN CAR INDUSTRY IS IN SUCH GOOD SHAPE.

Trust in excellent solutions for your production process.

KOHLER's reputation as a producer of excellent tailor-made levelling technology solutions for industrial production processes really does extend well beyond the borders of Germany. The company is also well-known as a camber levelling line specialist. Traditionally, we are not just successful in our core area of levelling technology and working in the interests of our customers, but also in the all important peripheral areas. In other words, KOHLER perfects the entire levelling process, from individual sheet metal parts right through to fully automated solutions – and does this using an integrated production process as a basis which also includes handling, cutting, washing and stacking.

There is of course plenty of expertise behind this, or to be more precise, knowledge of the highest level which covers the design and construction of levelling machines, installation and start-up, and their maintenance. This guarantees our customers outstanding production efficiency on one hand, and the opportunity to develop new, innovative production processes with integrated competitive advantages on the other hand.



— Fully automatic inspection line



— Reliable feed engineering



— Efficient production

SPECIALIST AND PIONEER

- KOHLER's product portfolio includes both its core area and the peripheral areas of levelling technology.
- KOHLER is the camber levelling line specialist and pioneer.
- KOHLER has mastered every aspect of levelling machines, from their design and construction, installation and start-up, to their maintenance.

SUCCESS IS ALWAYS THE BEST SOLUTION.

IT IS EASY TO EXPLAIN WHY SO MANY COMPANIES IN THE SHIPBUILDING INDUSTRY WORK WITH HIGH-PERFORMANCE LEVELLING MACHINES MADE BY KOHLER.

It's because stability on the high seas and precise production efficiency are also dependent on the materials involved and their refinement.



ONE REASON WHY SHIPS ARE RIDING ON WAVES OF SUCCESS.

Increase your success with perfect levelling technology.

Looking for perfect levelling technology is always a very complex task, primarily because “perfect” can only ever mean individualized. Individuality is produced by resolutely paying attention to customer’s requirements and specific environment. This means that the best and most effective levelling technology solutions are always perfectly designed, and then fit in to enhance a production system seamlessly when actually constructed. And this is exactly what KOHLER’s levelling machines do.

Designing and constructing each component of a system according to its specific use is one of two ways to achieve the highest possible efficiency level. The other way focuses on optimizing each solution with regard to its costs and performance targets. Our motto is “maximum target achievement degree”! Our wide, tried and tested product range also plays a key role in this individualized approach based on customer success, as does the fact that we will offer you intensive support until your new system has been installed and put perfectly into operation. Of course we are pleased to provide you with support beyond this stage too.



— Precise stacking units



— Optimum levelling result



— Perfect strip transfer systems

PERFECT LEVELLING TECHNOLOGY SOLUTIONS

- KOHLER is a levelling technology solution specialist for industrial sheet metal production processes.
- KOHLER has a wide, tried and tested product range.
- KOHLER perfects the entire levelling process – from individual sheet metal parts right through to fully automated solutions.

YOU MAY TAKE OUR PASSION PERSONALLY.

IT IS EASY TO EXPLAIN WHY SO MANY RAIL VEHICLE COMPANIES PLACE THEIR TRUST IN KOHLER.

It's because absolute directional stability in achieving highest performance targets is also a matter of resolutely accepting levelling technology challenges.

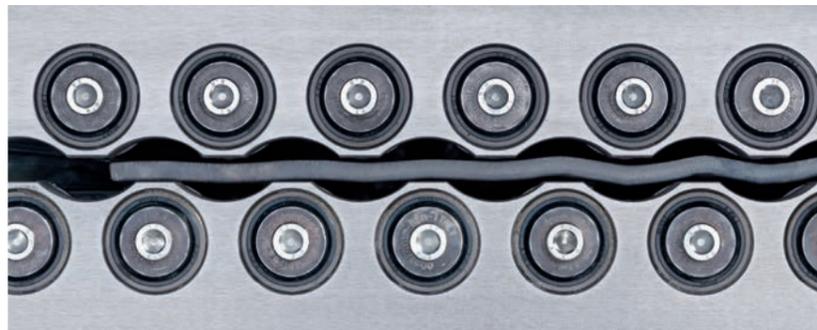


ONE REASON WHY EVERYTHING'S ON TRACK STRAIGHT AWAY.

Benefit from our enthusiasm for overcoming levelling technology challenges.

Striving for a perfect solution always has to be preceded by recognition of the problem or challenge that needs to be solved or overcome. The first stage of our work is therefore always to understand and carry out a detailed analysis of our customer's production processes. A one-to-one discussion with the client in person is crucial here. It can be conducted by any member of the KOHLER Sales Team, because all our sales personnel are highly qualified and dedicated to providing the highest possible quality and efficiency standards.

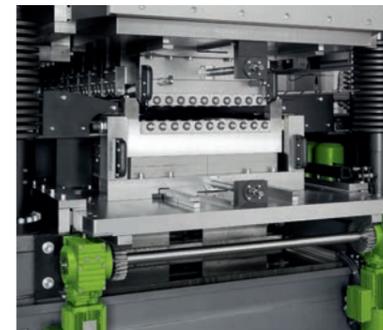
KOHLER doesn't keep its extensive knowledge secret when providing a solution. We are glad to pass on important information to our customers. For example, we might share crucial facts about material – because ultimately, we are only ever interested in something rather simple: the best result! That does of course necessitate a large measure of reliability through to the end of every project, and for this reason we only consider a project complete when the levelling technology solution fulfills the agreed specification down to the last letter.



— Guarantees constant accuracy



— Optimized roller support



— Precision levelling machine

KOHLER MAKES CUSTOMERS MORE SUCCESSFUL

— KOHLER ensures that its levelling technology solutions are always perfectly designed, and then fit in to enhance a production system seamlessly when actually constructed.

— KOHLER designs and constructs all the components of its levelling systems according to their specific use and optimizes them with regard to customers' individual costs and performance targets.

WHEN SOMETHING SPECIAL COMES AS STANDARD.

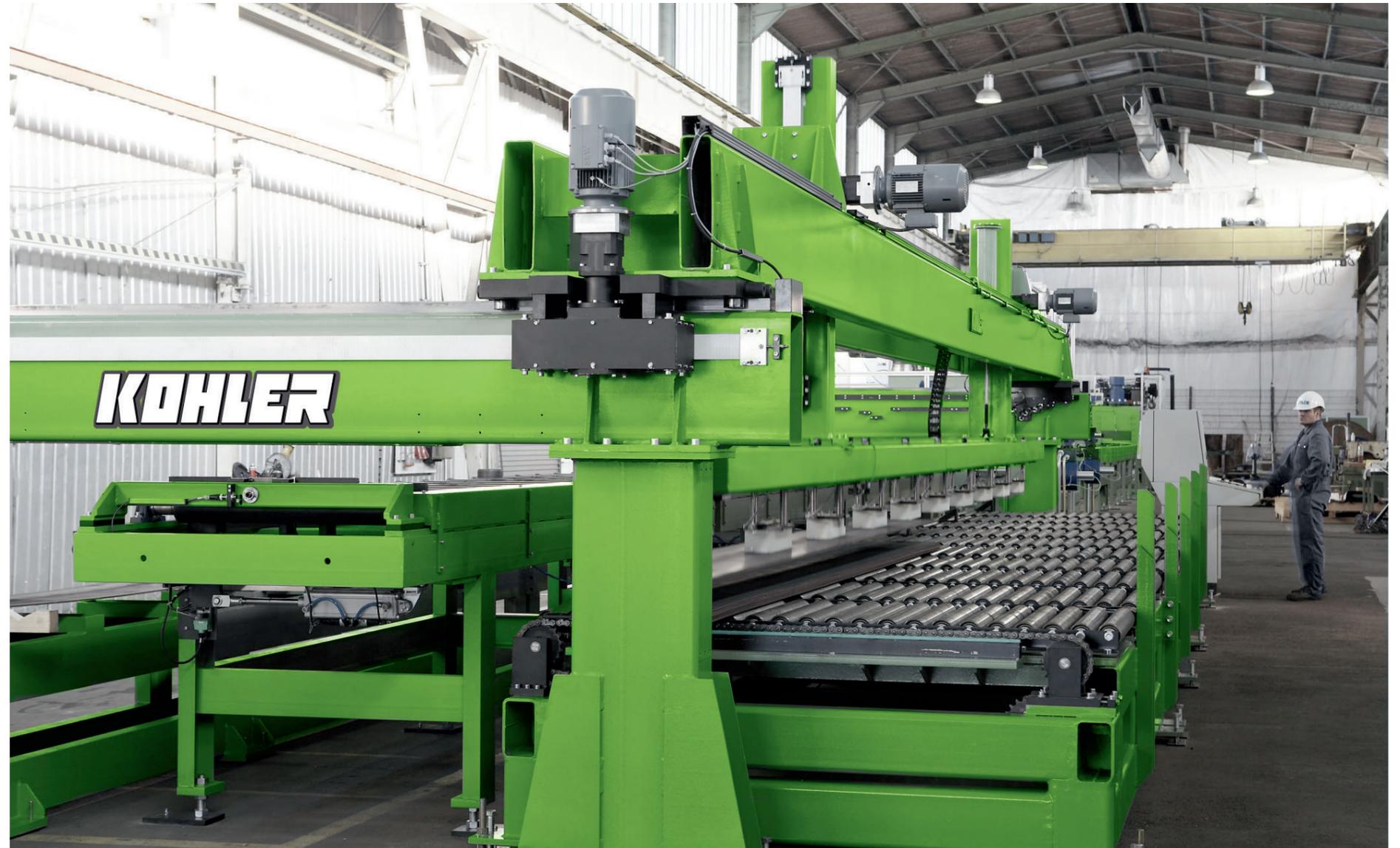
WE SEE SPECIAL MACHINE CONSTRUCTION AS THE SUPREME DISCIPLINE IN LEVELLING TECHNOLOGY, THE NE PLUS ULTRA IN CUSTOMER-SPECIFIC INDIVIDUALIZATION AS IT WERE.

It's because each special machine made by KOHLER is configured to meet the needs of the customer. This puts us well ahead of other providers who do not have such a product range as we can offer.

The special class for special tasks.

Special machine construction at KOHLER has proven to be a logical consequence of our exceptional focus on advice and solutions, our wide product range and the experience we have accumulated through building over 6,000 levelling machines. KOHLER's special machines are also impressive evidence of the company's ability to bring planning, construction and development skills together in one place, and create all the benefits associated with this for its customers. Outstanding efficiency thanks to huge decreases in set-up times and maintenance intervals is one of these benefits, as are the excellent investment protection and the dimensions of the special machines, which are precisely calculated according to their respective performance requirements.

In addition, the freedom we have to produce something special allows us to be completely independent from press builders and other machine manufacturers. That means that we are fully committed to meeting the special needs of our customers and not those of our suppliers.



— Stacking systems for all uses



— Customized levelling technology

ENGINEERING

— KOHLER solves every levelling technology challenge with enthusiasm.



— Customer-specific solutions

RETROFITTING BACK TO THE FUTURE.

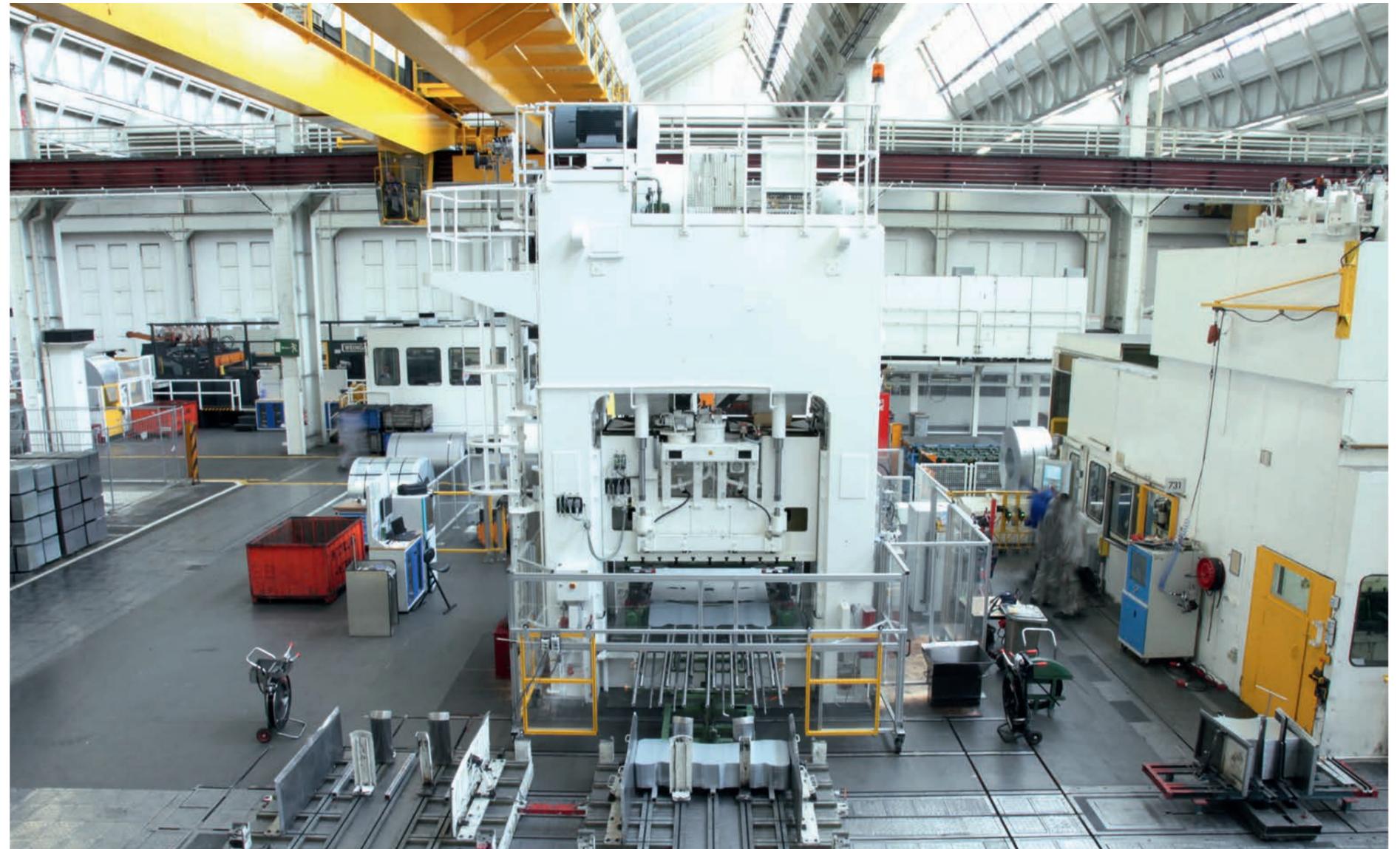
INNOVATIONS ARE ONLY EVER NEW DEVELOPMENTS WHICH ALSO PRODUCE A CONCRETE ECONOMIC BENEFIT.

Cost estimates with expected benefits often indicate that evolution is better than revolution, meaning the modernization of existing reliable resources is more efficient than investing in a completely new machine. The prerequisite for this is of course a partner with retrofitting as a core area of expertise.

More performance and process security.

The modernization of customers' production lines, our own products and products made by other manufacturers is in fact one of KOHLER's core areas of expertise, and the maxim of fulfilling customer wishes and requirements as completely as possible applies here as well – to the construction of both mechanical and electrical components. To ensure this happens, we work in cooperation with our clients to develop special control concepts which significantly improve the performance and quality and reduce energy consumption considerably. We retrofit or replace assembled units or components in existing production systems, including in systems made by other manufacturers, even though KOHLER's technology leadership status in this area is of course based on a large number of other individual achievements and measures.

For example, we are able to enhance the efficiency of existing production systems by giving them their own switch cabinet, adding intelligent process automation, changing hydraulic lines and hoses so that they comply with standard DIN 20066, integrating existing components made by other manufacturers with high-quality materials, offering remote maintenance, and providing replacement parts reliably.



— Press line retrofitting



— Hydraulic retrofitting

UPGRADING

— KOHLER is an expert at modernizing its own machines and systems, as well as those made by other manufacturers. KOHLER also offers complete automation solutions, including the integration of third-party products.



— Retrofit of a coiler and coil handling

OUR AIM IS SIMPLE: TO ALWAYS BE BETTER!

WHEN COMPETITION WORKS, EVERYONE GETS WHAT THEY DESERVE.

That isn't just fair; it also motivates us to develop continuously and never stand still. Of course this basic principle of Baden engineering doesn't just focus on our own progress, but on that of our customers more than anything else – because one is always dependent on the other. In a nutshell, it is about always being better together.

Guarantee competitive advantages with innovative levelling technology solutions from KOHLER.

The process of improvement begins with asking where there is potential for even more competitiveness. Our many years of experience have taught us to look at everything and not to rule out anything, but, above all, to research the areas where our customers see individual potential to gain a crucial advantage with new production processes. That's why we often opt for completely new solutions which make use of our outstanding level of expertise and extensive application and process knowledge of various industries.

It shouldn't really be a surprise that we work primarily for innovative companies that possess a great deal of technical expertise themselves and trust the expert opinion provided by KOHLER, because in the end, our clients always receive the best solution. Our machines also impress because they are so easy to use, ergonomically designed and built with excellent safety features.



— Innovation: the Peak Performer GC, a part levelling machine



— Extended cleaning and quick-change device

ECONOMIC

- The solid quality of KOHLER machines guarantees good investment protection.
- KOHLER prides itself on building space-saving and energy-efficient machines.

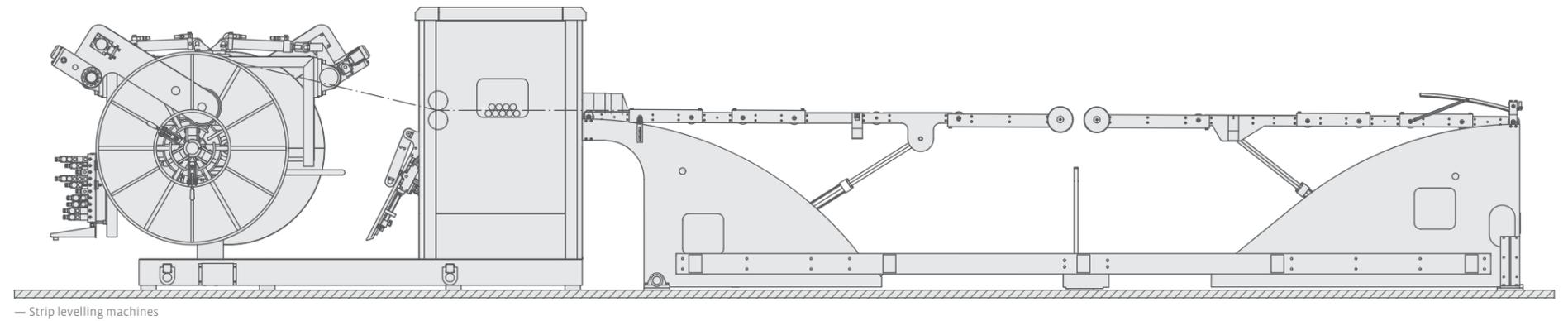


— The infeed and outfeed can be adapted to suit customers' individual needs.

OUR COMPLETE RANGE AT A GLANCE.

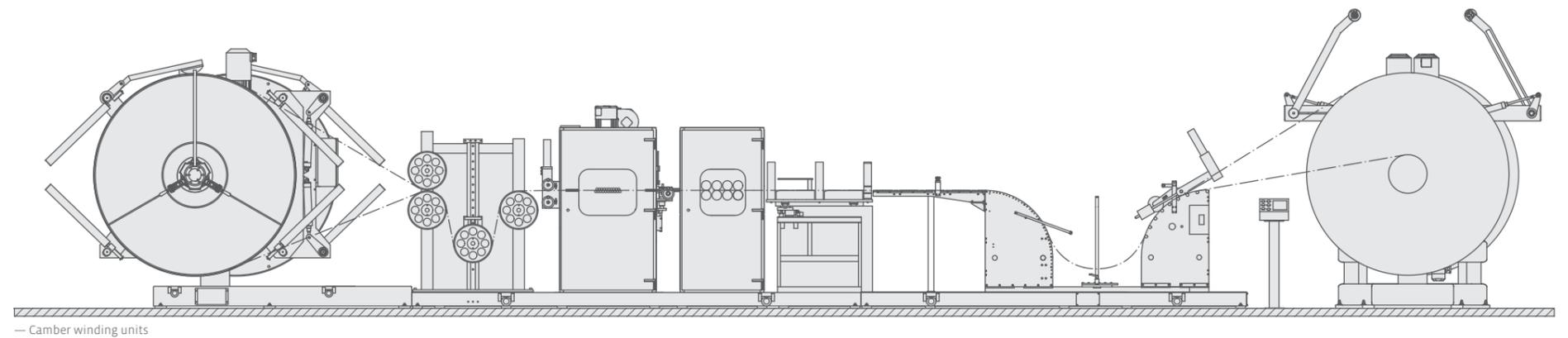
STRIP LEVELLING MACHINES AND STRIP FEEDING LINES

KOHLER's diverse product selection which ranges from the standard levelling machine to the high-precision levelling machine underlines the company's ability to provide perfect solutions in this area. All our machines, whether they're compact versions that take strips as narrow as 5 mm and as thin as 0.05 mm, or standard designs which can work with strips as wide as 2,500 mm and as thick as 12 mm, impress through their exceptional precision, longevity and need for low maintenance. Our strip levelling machines with coilers can be combined with any other KOHLER attachment and are therefore able to fulfill the requirements of any specification. Standard designs with a loop pit are the market's most in-demand versions.



GAMBER LEVELLING LINES

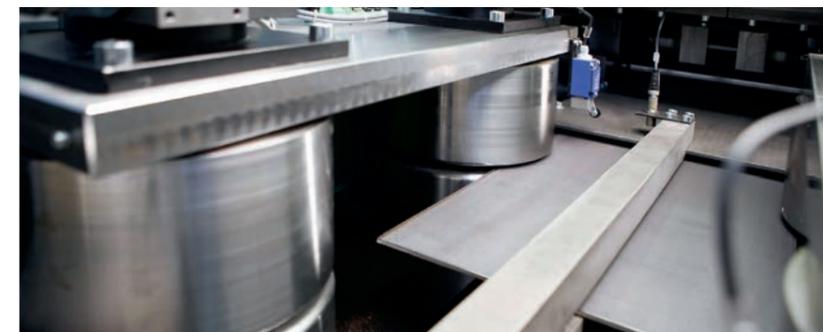
As a pioneer of camber levelling technology, KOHLER develops and produces machines with various degrees of automation for virtually any application. These include special long part production machines for levelling long parts and follow-on composite parts, as well as machines for the production of chassis beams, which combine cut-to-length, levelling and camber levelling technology with a unique degree of automation. Our individually designed winding units for bimetallic strips should be mentioned here, too. These use a tension coiler to wind up strips and relieve stress after the levelling process to prepare the material for the next production stage.



— Recoiling line with camber levelling technology



— Precision levelling aggregate



— Camber levelling machine for thick sheets of metal

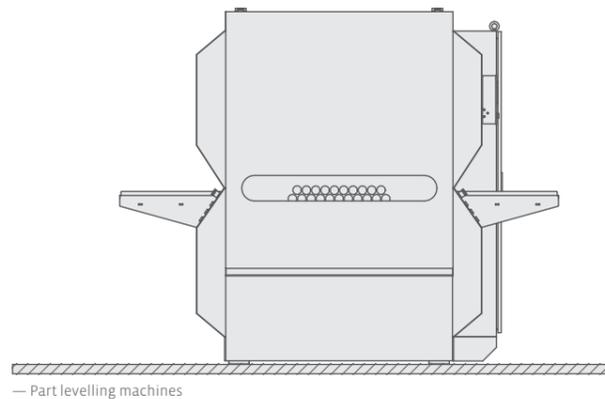
COMPETITIVE ADVANTAGE

— KOHLER identifies and increases potential for improvement in levelling technology solutions, which makes customers more competitive.

OUR COMPLETE RANGE AT A GLANCE.

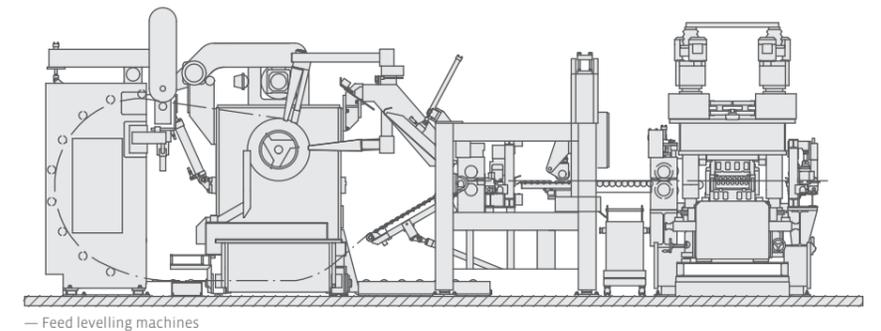
PART AND TANDEM LEVELLING MACHINES

Trends in sheet metal processing show that the levelling of parts is becoming an increasingly important aspect of levelling technology. On the one hand, it is tighter tolerance limits in manufacturing which demand precisely constructed machines, and on the other hand, it is the rising use of high-tensile steels. We offer a wide tandem levelling product range for high-precision parts which are mainly round.



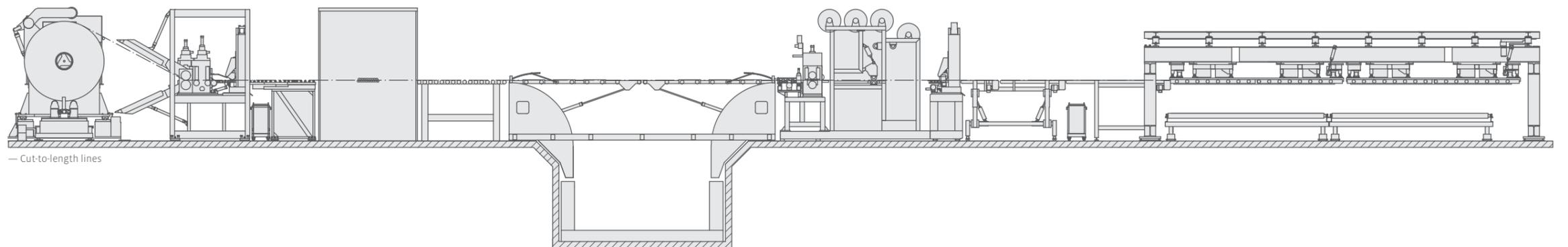
FEED LEVELLING MACHINES AND COMPACT DESIGNS

Feed levelling technology is one of our core areas of expertise. If you don't have enough space for a machine, instead of a classic standard design system, we can supply you with a compact design as a high-performance alternative. Here, the pilot release of the roller frame ensures that strips are fed through the press with precise timing. The use of zigzag feed levelling machines is also possible.



CUT-TO-LENGTH LINES

Our systems in this area are designed to meet customers' specific requirements. First, they take the strip material from the coil, and then they trim it, level it, accurately cut it to length and stack it. Specially assembled units are used to carry out each step, while every machine has a central operating panel to control all functions. Our product range here includes cut-to-length lines, slitting units and edge trimming lines.



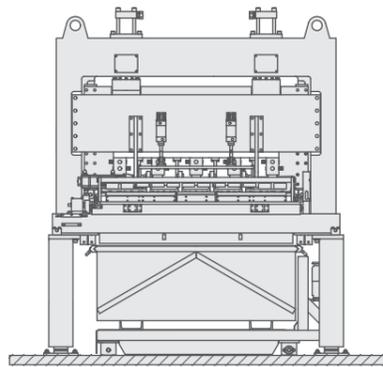
SIMPLER

— KOHLER offers customers everything from one source and therefore reduces the number of interfaces in their levelling process and the peripheral areas associated with it.

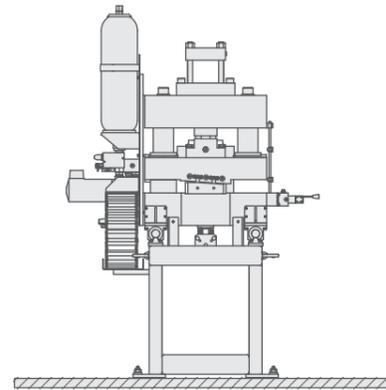
OUR COMPLETE RANGE AT A GLANCE.

SHEARS

KOHLER is able to guarantee the best shear technology for any application thanks to its extensive product range in this area, which includes cropping shears for efficient separating cutting, high-performance cut-to-length shears and edge trimming shears for continuous cuts for inspection, recoiling and cut-to-length lines. We also provide flying shears, drum shears, strip separators and swiveling shears with flexible cutting angles for cutting blanks.



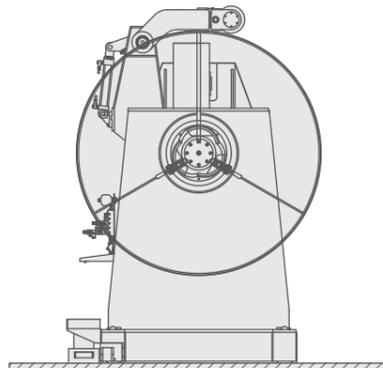
— High-performance cut-to-length shears



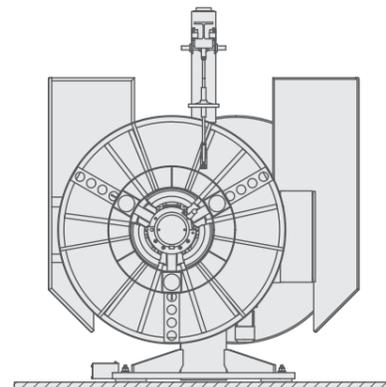
— Flying shears

COILERS AND STRIP WINDERS

We offer coilers with weight-bearing capacities ranging from 500 kg to 35 tons and strip widths ranging from 5 to 2,500 mm. The speed can be set to anywhere between 0 and 300 m/min, while the tensile force is adjustable and can be as strong as several hundred kilonewton. Our product range includes single-sided, double-sided and spool coilers, as well as tension wind-up coilers, spool wind-up coilers and horizontal coilers.



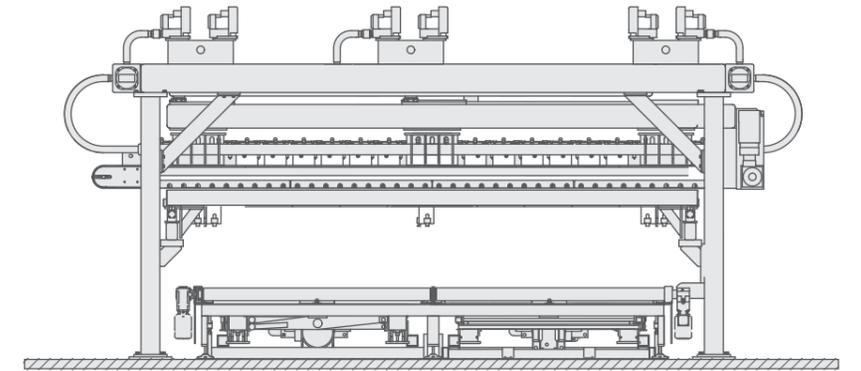
— Single-sided coilers



— Spool coilers

STACKING UNITS

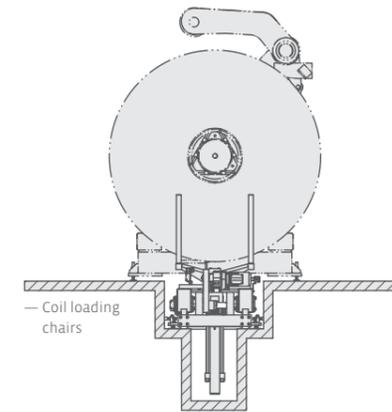
KOHLER stackers allow many production parts to be stacked on top of each other safely and free of scratches. There are various technologies available for different materials. They include cross stackers, magnetic stackers for all ferritic materials, brush stackers in case major machine work isn't required and vacuum stackers for thin, sensitive blanks and blanks which aren't made of ferritic materials.



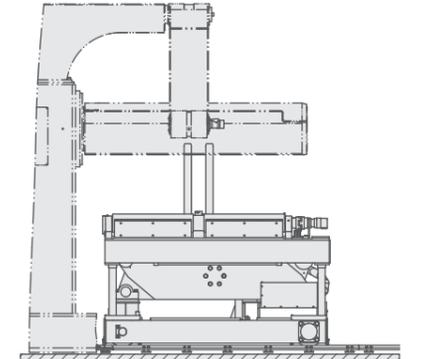
— Vacuum stackers

COIL HANDLING

We have various technologies at our disposal which can be used to feed material from a coil into a strip line. We select the technology to be used according to customers' wishes and the space they have available.



— Coil loading chairs



— Coil loading cars



— Drum shear



— Coiler with toothed rack expansion

A STRONG PARTNER

— KOHLER develops new solutions, which means the engineering market leader's expertise is combined with its extensive application and process knowledge of various industries under one roof.

— KOHLER is the partner for levelling technology solutions which give customers the potential to use new production processes.

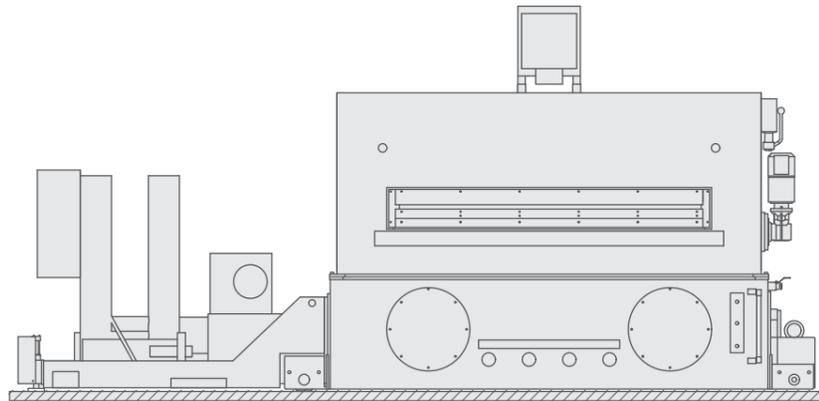


— Vacuum stacker

OUR COMPLETE RANGE AT A GLANCE.

BLANK AND STRIP WASHING MACHINES

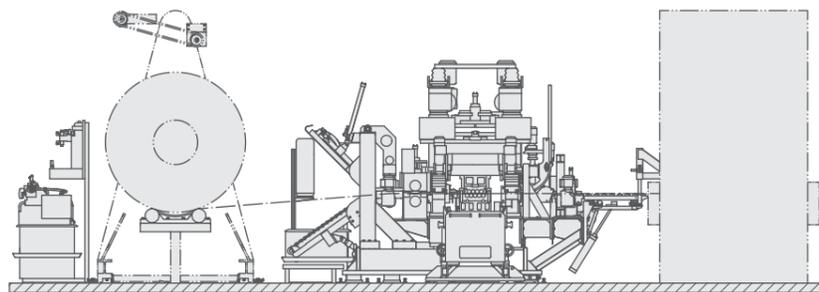
Cleaning and removing the grease from a strip improves its quality considerably in preparation for the production processes which follow. Special oiling then protects the strip from oxidation. Our strip washing machines can process individual sheet parts with varying widths, as well as material which has just been unwound from a coil.



— Blank and strip washing machines

RETROFITTING

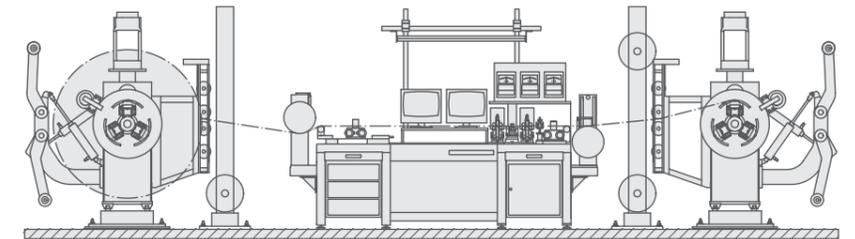
When retrofitting, we analyze the parts and materials used in old systems which have already been written off. Of course we still do this with products made by other manufacturers. The old system is then modernized through the addition of up-to-date electric and mechanical components, which increases productivity at a low cost while enabling the system to produce parts of better quality and comply with tighter production tolerance limits at the same time.



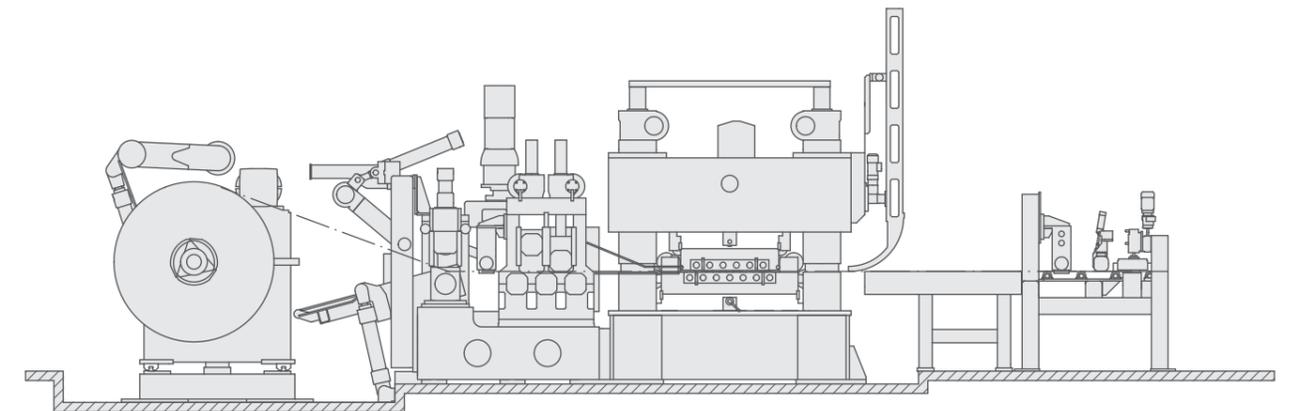
— Retrofitting

SPECIAL SOLUTIONS

Customized solutions, which impress through economic efficiency, high levels of investment protection and precise dimensioning, succeed when added to existing infrastructure thanks to well thought-out automation concepts and faultless implementation. Our product range here covers inspection lines, drag levelling machines, saw blade production, strip accumulators for continuous processing, zigzag applications, blank handling, and much more.



— Inspection lines



— Cut-to-length lines in special configurations



— Retrofitting a coiler and a coil loading chair



— Retrofitting on a press

THE RELIABILITY OF A PIONEER

- KOHLER offers the consistency and reliability of a levelling technology pioneer.
- The extremely solid quality of KOHLER machines guarantees good investment protection.

- KOHLER guarantees maximum functionality of its levelling technology solutions and long-term availability of replacement parts.



— Strip accumulators

THOSE WHO BELONG TOGETHER WORK TOGETHER.

THE PROFILE OF OUR CUSTOMERS IS LIKE A MIRROR OF OURSELVES.

It's because customers of KOHLER generally come from the top end of their industry and are innovative developers and problem solvers who favor high productivity levels and possess a large amount of expertise along with exceptional process knowledge. They are also only willing to trust those who are truly leaders in expertise.



Detlef Fichtner, Project Manager for new systems in the press shop, **Miele Cie. & KG**

"We started working with KOHLER in 1996. Several strip levelling machines work in conjunction with press lines at Miele. In addition, a cut-to-length line is used to produce cuts from materials such as stainless steel, zinc-plated steel, and pre-painted metal. KOHLER supplies durable machines and possesses a huge amount of technical expertise in many areas. This guarantees us highest quality standards."



Uwe Birwe, Head of Industrial Engineering **Aug. Winkaus GmbH & Co. KG**

"We have a wide range of pressing and shaping products from KOHLER. To be specific, we work with levelling machines, feed units, special machines, hydraulic presses, and transverse conveyors for long parts. As far as retrofitting is concerned, we are constantly turning to KOHLER for expertly constructed control units, which proves that we place complete trust in KOHLER. We've done that since 1991."



Michael Kummer, Operations Manager **Gebr. Waasner Elektrotechnische Fabrik GmbH**



Georg Lichtenberg, General Manager **SÜDRAD GmbH Radtechnik**

"SÜDRAD uses a KOHLER cut-to-length line to produce wheel rim cuts. The system, which was put into operation in 2008, is a special machine that had never been built before. KOHLER developed and constructed it in complete accordance with our specific requirements. Thanks to KOHLER, we now only need one machine for the same production step which needed two machines before."



Dieter Kurth, Head of Maintenance **Erdrich Umformtechnik GmbH & Co. KG**

"Erdrich uses KOHLER strip levelling machines at all its sites. They work in conjunction with transfer and fine blanking presses to process coils made of different materials which are then delivered to our plants in various sizes. KOHLER's machines have proven to be reliable here. We have been relying on KOHLER's solution expertise since 1981."

"We rely completely on KOHLER and currently have 51 systems in operation. Waasner presses electrical steels. These particularly hard, highly siliconized steels are found in electric motors used in the electrical and car industries. For example, the "press-pack" method is used for pressing, which necessitates very high levels of precision. It's for this reason more than anything else that we've been relying on KOHLER strip levelling systems since 1974. In our case, they generally consist of a double-sided coiler and a precision strip levelling machine. We recently decided to invest in more motor-driven coilers, because these are gentler on material and therefore achieve higher quality results. KOHLER's systems work according to a three-shift pattern and are extremely reliable."



Thomas Schaub, General Manager **Schaub Metall & Service e.K.**

"The many references, the robust design of the machines, their long service lives, and the ability to comply with special requirements perfectly were all arguments clearly in favor of KOHLER. Since 2008, we have been using a cut-to-length line with a tandem stacker and a laminating facility which, following detailed advice, was built so that it would fit into our production processes perfectly. KOHLER represents real engineering."



Manfred Stoll, Head of Material Technology **Inovon GmbH & Co. KG**

"KOHLER has been supplying us with levelling and recoiling lines for 25 years. In the spring of 2012, we invested in another KOHLER product and bought a cassette changing levelling machine. The innovative concepts and perfect advice, planning, and implementation all speak in favor of KOHLER, as does the excellent service provided by the company."



