

SUER STAHLTECHNIK:

Leveling and deburring parts on a single line

Companies are increasingly focusing on improving their production processes – by combining multiple processes that might ordinarily be considered a secondary workflow – in an effort to improve their productivity. The increasing demand for part leveling machines in combination with a deburring machine underlines this trend. At Suer Stahltechnik in Raesfeld, Germany, a Peak Performer 85P.1600 from KOHLER operates in a single line with the 1,600 mm wide 42 RB series from Timesavers. One person can operate both systems to save time, space, energy, and increase productivity.

Suer Stahltechnik is a young company, having been founded in 2020 by Leonard Suer. With a team of 12 people, it provides high-quality sheet metal work: from laser cutting, leveling, and deburring, to edging and milling. All machining work takes place in Raesfeld. A product that has been through the laser cutter is not finished yet: *“We would still like to deburr it, drill the holes, galvanize the surface, and cut the necessary threads in it. We take care of everything for our customers so that they no longer have to do a thing,”* explains Leonard Suer. Most of Suer’s customers come from the same federal state of North Rhine-Westphalia and are mainly machine, steel, and hall builders, but there are also representatives from the railing and staircase construction sector or even the automotive industry.

Suer Stahltechnik is committed to its customers in order to grow together. But what makes Suer different from all the rest? They are still young and embrace new challenges. For example, Suer recently purchased a machine to meet a particular customer request. The customer wanted a product that they were originally unable to make. After discussing what they needed with Suer, the decision to purchase an additional machine was made.

Deburring

After discussions with several abrasive manufacturers, Suer was steered in the direction of Timesavers: and it quickly became clear that a Timesaver was the way to go. Suer originally opted for a 42 RB series machine with a working width of 1,350 mm, but which was ultima-

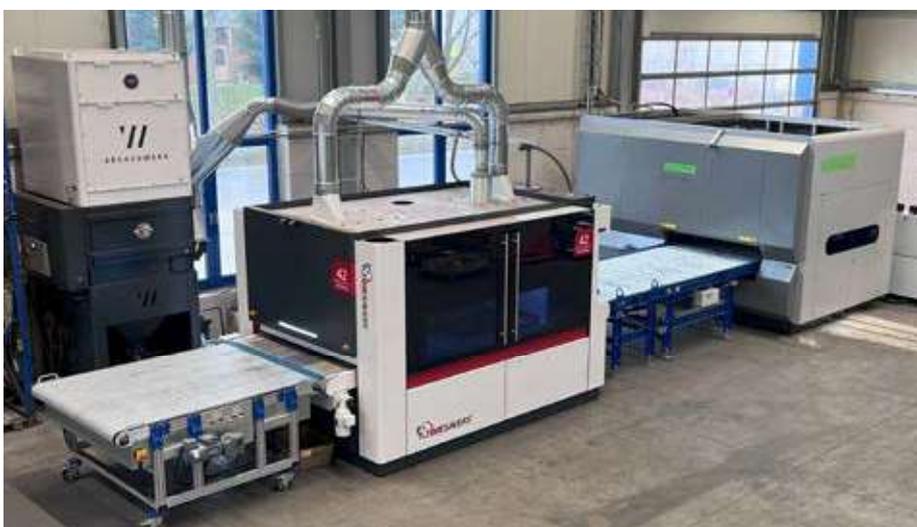


The Peak Performer ensures level and low-tension metal sheets.

tely replaced by a model of the same series but with a working width of 1,600 mm in order to accommodate new customer requirements. The machine with rotating brushes is ideal for deburring, edge rounding up to a radius of 2 mm, oxide layer removal, and finishing. Removing the oxide layer is crucial for coating and galvanizing, as the coating adheres much better to a clean surface. An important role in this project was played by 1A-Maschinen, the dealer of Timesavers machines. It supplied the deburring machine in combination with AMI roller tables and the extraction system from Absaugwerk GmbH.

Curved parts and plates

Suer had been working with the Timesavers deburring machine for two years and were very satisfied with it. Nevertheless, they always had the same problem: the parts



The KOHLER 85P.1600 part leveling machine and the deburring machine from Timesavers in a single process line



that they fed into the deburring machine were not completely flat. During laser cutting, tension is introduced to the sheet metal. When this tension is released, the sheet metal deforms. This can lead to time-consuming reworking and higher costs in subsequent processes such as welding or assembly. However, deburring is also difficult with deformed, uneven sheet metal. To save such costs, the tension has to be removed first. Therefore, a **Peak Performer 85P.1600** was purchased from KOHLER Maschinenbau GmbH. The deburring machine from Timesavers and the part leveling machine were then linked together by KOHLER to form the line.



The Peak Performer 85P.1600 has an advanced cleaning system.

Relaxed leveling of sheet metal

The Peak Performer 85P.1600 part leveling machine is used to level sheet metal blanks of steel, aluminum, and stainless steel with **dimensions up to a maximum of 1,500 x 3,000 mm and at a thickness of up to 28.0 mm.**

It is fitted with an advanced cleaning system whereby the leveling rollers can be electrically extended from the machine, which significantly simplifies the cleaning process, especially after straightening blackplate. This is very important for Suer, as the company processes a wide range of metals including aluminum, stainless steel, and blackplate. The machine also has an electromechanical leveling gap control, which shows its full strength with

workpieces of varying cross-sections and easily masters the changing forces that occur. The patented electromechanical leveling gap control detects the change in force flow in just milliseconds, compensating and counteracting it immediately. The leveling gap also remains constant during the leveling process – an enormous advantage for optimum leveling results, especially with more complex components. In addition, the part leveling machine is also equipped with a barcode scanner, reversible leveling rollers for a longer service life, and functions such as pinch-off edge prevention and overload protection.

Relaxed combination for a process-optimized production line

In order to save space, Suer wanted to combine the part leveling machine with the deburring machine to form a single process line. The control panels of the KOHLER and Timesavers machines are integrated into a single system, allowing just one person to control and monitor the entire process. *“This saves time, space, and energy – and it works very well,”* emphasizes Leonard Suer. The KOHLER part leveling machine thus ensures flat and low-tension metal sheets. Max Burgert, Product Manager at KOHLER, explains that there is more to leveling than just making a flat sheet. By reducing and equalizing the stresses

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in the material, further processing becomes more reliable and efficient. The leveled part then runs over the roller table into the deburring machine, where it is deburred, the edges are rounded, the oxide layer is removed, and the surface is finished. If required, the conveyor belt reverses again at the push of a button, conveying the part back to the infeed.

Good cooperation as the basis for success

KOHLER, Timesavers, 1A-Maschinen, and Suer Stahltechnik can look back on a good working relationship. Their cooperation was not just centered on supplying individual products, but about offering the best process. Regular consultations were essential

during the development and delivery of the production line. *“What I really liked was that no customer request was ignored. You could simply say ‘I’d like this and this, is that possible?’ and they would try and implement it. Every company also worked very closely together, which I found extremely positive. The whole process was a great success,”* says Raoul Knoop, Machine Operator and Workshop Manager. ■

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Ecological sustainability living responsibly as a company

In the sustainability triangle, ecology, economy, and social issues are interconnected and considered equally important. Only if all three principles are given equal consideration can a sustainable and future-oriented corporate culture be created. To achieve this high standard, companies are required to improve the longevity of their machines and systems and save resources through energy-efficient concepts.

Low-Tension Leveling with green accents

KOHLER part leveling machines not only achieve optimum leveling results, but also score points with their environmental benefits. This is because all KOHLER part levelers operate entirely without hydraulic systems. The result: low maintenance, no leaks, insensitivity to temperature fluctuations, higher energy efficiency and therefore improved environmental compatibility.

Thanks to the use of a direct drive for the leveling rollers and the proven electromechanical dynamic gap control, the Peak Performer part leveling machine from model series 85P upwards also outperforms conventional machines on the market with **up to 75 % less energy consumption**.

KOHLER is not only breaking new ground in the field of part leveling machines but is also underscoring its sustainable corporate strategy in the field of strip feeding lines. Until now, the coiler mandrel was only spread hydraulically to fix the coils. This important function can now also be performed by a servo motor. The complete elimination of hydraulic units not only brings advantages in terms of quality and performance, but also offers efficient savings potential such as reduced maintenance, service, operating and, above all, environmental costs.



Images: AdobeStock.com

With electricity from its own photovoltaic system, KOHLER is setting additional benchmarks in terms of ecological sustainability.

The roof of the production hall with an area of of **1500 m²** was equipped with **816 PV** modules. The PV system has been in operation since November 2023 and is designed to be **100 %** self-sufficient in the summer months with **310 kWp**.