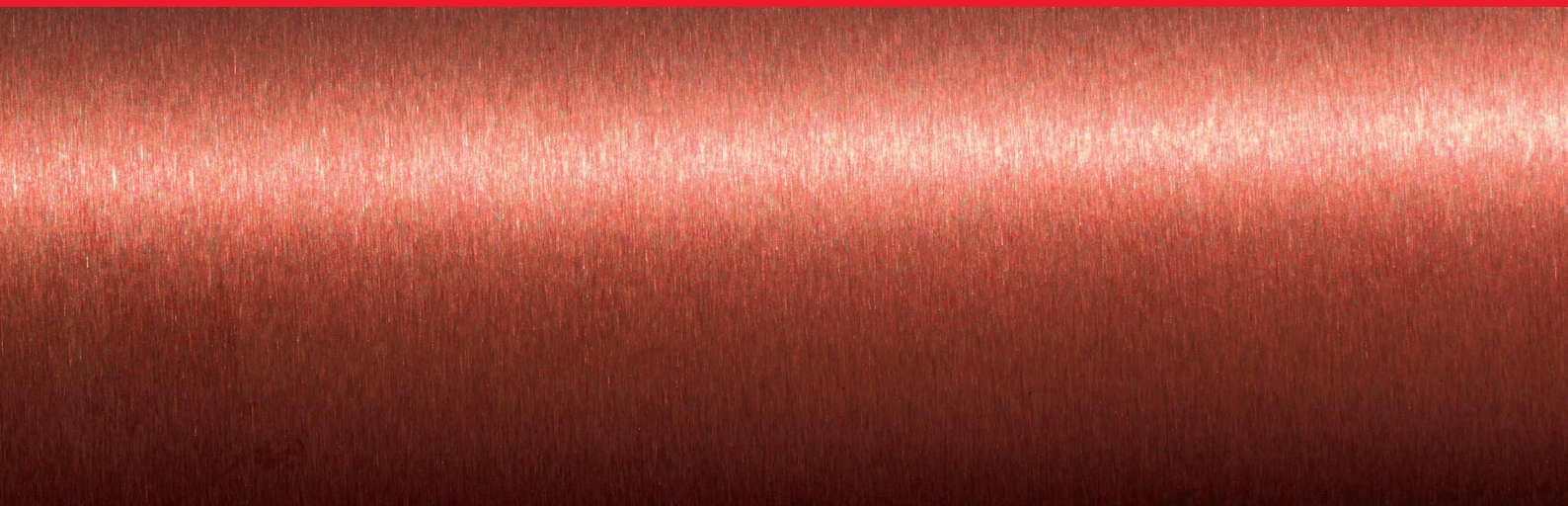
STÄHLI
FEELING FOR FINISHING

Flat Honing - Lapping - Polishing

Industry-Leading Precision – High Production – Dependable – Versatile – User-Friendly Design



Our Commitment

STÄHLI-Group

The STÄHLI Group, with over 50 years of experience, is recognized as one of the leading global manufacturers of flat honing, lapping, and polishing equipment.

Beyond developing and manufacturing state-of-the-art machines, we also support our customers with our advanced commercial machining centers. We perform flat honing, lapping, and polishing according to customer specifications, while managing highly complex project studies aimed at enhancing size, shape, and surface quality.

As a complete system supplier, we bring extensive expertise in working wheels, consumables, and accessories, all of which are developed and produced in-house.

We design and assemble our production machinery at our headquarters in Switzerland, where we uphold Swiss values such as precision, innovation, reliability, quality, and efficiency. These principles guide our commitment to delivering superior solutions and ensuring excellence in every aspect of our operations.

In the USA, Germany, and China, our customers benefit from local services, training, and testing centers. Additionally, our dedicated after-sales team ensures continued support long after the purchase.

A cornerstone to our approach is a commitment to the continuous improvement of both our machines and processes. We strive to apply this knowledge to optimize solutions for our customers and enhance our own commercial operations.





STÄHLI - Feeling for Finishing



DLM



FH3



FH



FLM



CLM

Applied Machining Techniques

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Flat Honing

Flat honing, also referred to as fine grinding, is a cutting process that uses bonded abrasive grains. The workpieces are loosely held in carriers, which, together with the inner and outer pin rings, create a planetary motion, ensuring mimimal variation. This process achieves both high material removal and exceptional surface roughness and flatness in a single step.



Lapping

Lapping is the most widely used finishing technique for flat and planar surfaces. It employs loose abrasives, offering an efficient and material-friendly method that meets the highest standards of size, shape, and surface quality.

After lapping, the workpiece achieves a matte surface finish.



Polishing

Polishing is a machining process that can follow flat honing and/or lapping, depending on the required surface quality. Both visual and dimensional aspects play a crucial role in this step.

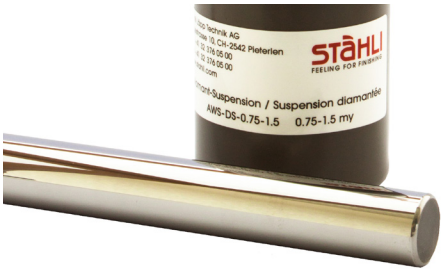
Polishing may vary from semi-reflective to a scratch-free, mirror-like finish on any given workpiece.



Cylindrical Lapping / Polishing

Cylindrical lapping and cylindrical polishing are centerless processes that provide a precise enhancement of surface roughness and dimensional tolerance on round-ground components.

Stahli offers two distinct cylindrical lapping and polishing options, which are the CLM und FLM 500-R Series.



Flat Honing, Lapping, Polishing

DLM

The DLM Series double-sided flat honing machine from Stahli exemplifies exceptional precision and reliability. Built with a mineral cast structure, it ensures superior thermal and mechanical endurance, making it highly resilient during demanding operations.

This best-selling machine is specifically designed for the efficient processing of large volumes of high-precision parts, catering to diverse industries that require consistent and accurate results. Whether for automotive, aerospace, or other high-precision sectors, the DLM Series offers unmatched performance, ensuring top-quality parts with minimal downtime.





The DLM Series is designed for high-speed and cost-effective operations. Featuring a fixed abrasive process, it offers significant time-saving benefits by minimizing waste generation and reducing the need for post-process cleaning of workpieces. These machines are highly-productive, with a low cost-per-piece, minimal wheel wear, and the added benefit of recycling both flushing and coolant agents.

Additionally, the DLM Series is highly adaptable, allowing for seamless integration with partial or full automation systems. Its flexible design also supports interlinking with other equipment, enhancing overall production efficiency and streamlining manufacturing processes. This makes the DLM Series an ideal choice for industries seeking high throughput and precision with reduced operational costs.

STÄHLI
FEELING FOR FINISHING

FH3



The FH3 Series represents the next generation of flat honing technology, featuring an advanced 3-wheel double-sided system that enables simultaneous loading and unloading of workpieces during machining. This innovative design maximizes production efficiency by reducing downtime and boosting throughput. The machine is optimized for high-volume production, with features like short changeover time, clean operations with fixed abrasives, and low wheel wear, all contributing to lower operating times. With its emphasis on both productivity and cost-effectiveness, the FH3 Series ensures consistent, high-quality results making it an ideal choice for businesses seeking to optimize their operations and maintain competitive performance.

Engineered for peak performance, the FH3 Series is designed to seamlessly integrate with full automation systems. Its capability to load and unload workpieces during operations makes it an ideal choice for automation, enhancing workflow efficiency. The high-precision in-process measuring system ensures that the machine consistently operates within specifications, producing high-quality workpieces with minimal variation.

Additionally, the FH3 Series features a design that supports interlinks for pre- and post-operations, facilitating a smooth transition between processes. This enhances overall operational efficiency, enabling businesses to optimize their production flow and seamlessly connect various stages of manufacturing.



Flat Honing, Lapping, Polishing

FH

The FH Series single-sided flat honing machine is designed for small to medium production quantities, offering exceptional flexibility. Equipped with modern cBN or diamond wheels, it ensures high stock removal and outstanding productivity.

The machine‘s unique in-process measuring system significantly enhances quality and efficiency, allowing for precise adjustment of the stock removal during the process.

Additionally, machines are tailored to specific customer requirements, including options with automation for even greater customization.



FLM

The FLM Series single-sided flat lapping and polishing machines, with wheel diameters ranging from 500 to 4000 mm, are optimized for maximum production output.

Designed with exceptional versatility, including integrated loading and unloading devices, this series is ideal for mass production and small-batch processing. A standout feature is the wheel correction system, which allows for precise geometry adjustment via a central control mechanism.



CLM



The CLM 150-2 and 500 Series machines are designed for time-saving, centerless cylindrical lapping and polishing of longer workpieces, utilizing two parallel-running rollers.

Ideal for single-piece machining and small batches with tight tolerances, the CLM Series offers easy and time-saving handling, significantly accelerating production time.

FLM 500-R



An alternative for cylindrical lapping and polishing, the FLM Series introduces the FLM 500-R, which uses the 2-wheel principle for processing workpieces. This design is ideal for the high-precision machining of small, cylindrical components, ensuring consistent and accurate results. The FLM 500-R is versatile, accomodating both small and large series workpieces. It removes material precisely through an oscillating movement, achieving high-quality finishes.

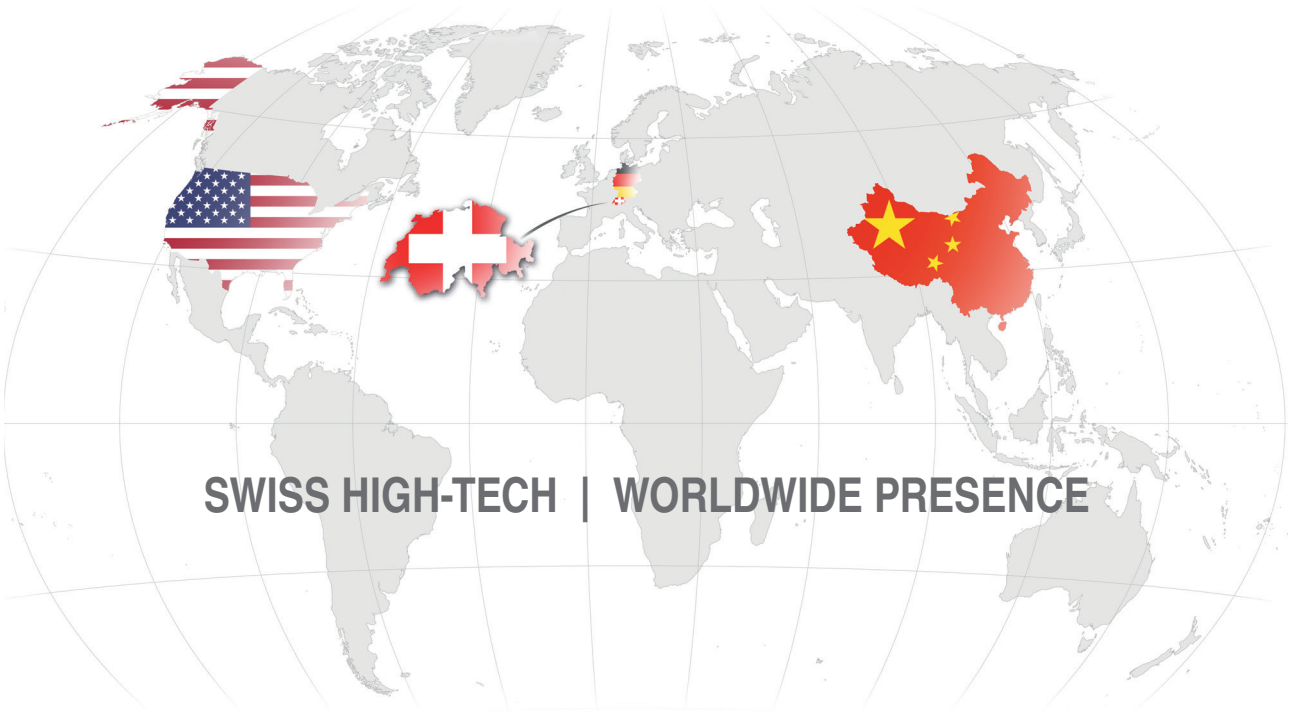
As an added benefit, the FLM 500-R can quickly transform into a flat lapping or polishing machine, offering enhanced flexibility for various production needs.

As a leading manufacturer of flat honing, lapping, and polishing machines worldwide, Stahli is recognized for both our standard and custom specialized products.

Our technical expertise stems from decades of experience, continually enriched by daily challenges in contract work and the dedication of our skilled workforce. We're eager to share our knowledge with customers through contract services, testing, and complex project studies.

Experience our innovation and reliability firsthand.

Discover more at our website, www.stahliusa.com, or contact our facilities listed below.



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www.stahliusa.com

Consultation, Sales, Machining, and Testing Centers

USA
STAHLI USA, Inc
US-Lake Geneva, WI 53147
Tel. +1 847 719 0360
LTUS@stahli.com

Switzerland
STÄHLI Lapping Technology Ltd
CH-2542 Pieterlen / Biel
Tel. +41 32 376 05 00
LTP@stahli.com

Germany
STÄHLI Läpp-Technik GmbH
DE-71093 Weil i.S. / Stuttgart
Tel. +49 7031 75 779 6
LTS@stahli.com

China
STAHLI Lapping Technology Co., LTD
CN-Haicang, Xiamen
Tel. +86 592 651 3551
LTCN@stahli.com