

SUHNER®

Custom Automation

Custom automation solutions for
manufacturing components



The modular automation solution by SUHNER

Individual manufacturing assemblies for drilling, sawing, deep drilling, thread cutting, milling and deburring

With more than 6,000 custom machining units installed worldwide, SUHNER leads the global market.

SUHNER offers custom-specific solutions for relevant processes in machining operations in manufacturing. The manufacturing assemblies are constructed and produced according to your requirements from a modular kit containing machine components, electric drives and feed slides.

Our development and production of machining units and complex manufacturing systems is based on longstanding expertise and is characterized by precision, long service life, easy handling and high reliability.

Multiply your capacities and save time on machining operations with our products.

The SUHNER advantage:

All key processes from a single supplier: evaluation, development, machining, mounting and final tests.

High compatibility with third-party systems thanks to standardized tool interfaces.

Extensive testing: technical data and performance are checked before delivery.

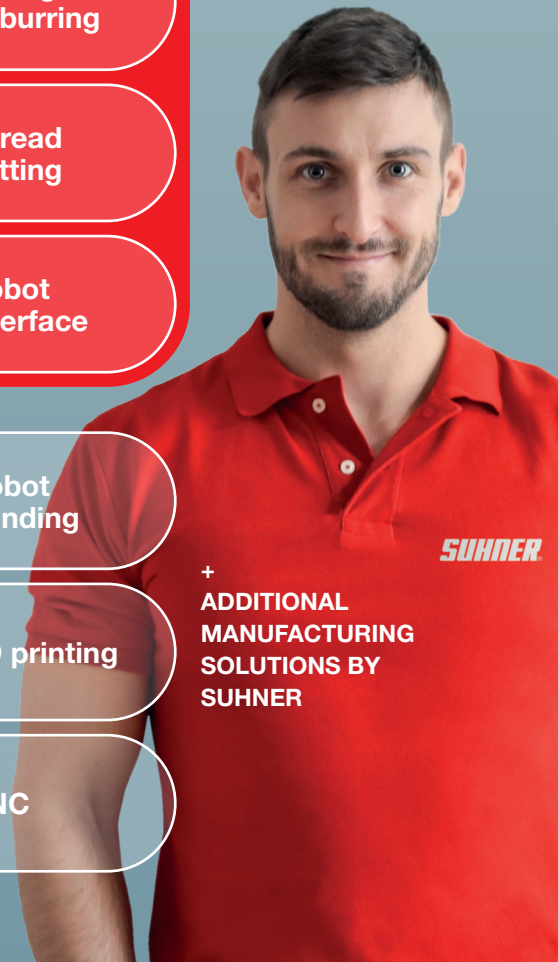
Your goals are our goals

Our designs are adapted individually to meet your requirements. We choose the appropriate units and then customize them to fit with your applications. What can we do for you? Define your specifications including all characteristics, operating values and requirements – from performance to paint.

We'd be happy to recommend a custom solution to you!



THE SUHNER
MODULAR KIT
SYSTEM



+
ADDITIONAL
MANUFACTURING
SOLUTIONS BY
SUHNER

SUHNER



Drilling units

Customized units for drilling and deep drilling.

Standard spindles and feed slides are the starting point for the integrable machining units for drilling and deep drilling. SUHNER products are based on a modular kit system.

Our solutions are designed for precise and fast processes. Multiple simultaneous operations cause a significant increase in profitability.

Not only large volumes but also bulky workpieces can be efficiently machined in several work steps and operations.



Customer manufacturing systems do not need refitting. Any **machining units can be designed as refitting kits** as well.

The broad product range meets a variety of application-specific demands. The narrow dimensions make sophisticated constructions possible.

- › **Bores from Ø 2.5 to 80 mm**
- › **Deep drilled bores from Ø 3 to 12 mm, depth up to 800 mm**



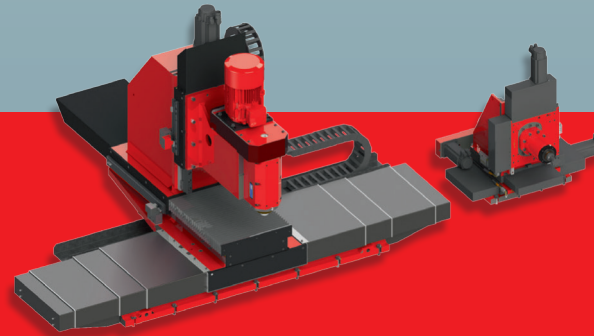
Feed slides

Pneumatic, hydraulic or with a servo motor – SUHNER has them all.

The comprehensive standard range of feed slides (motion units) includes three drive variants and a large variety of stroke lengths.

Our field of know-how comprises single axle systems, cross axles and assemblies with three axles. Our experience, our knowledge and a comprehensive standard range are the foundation from which we develop solutions to customer requirements.

A feed slide can also be used to move workpieces.



Advantages of SUHNER solutions:

- › **Stroke lengths of up to 3,000 mm**
- › **Compact, robust construction with a cast steel base allows even demanding applications to be implemented**
- › **Maximum precision thanks to optimized vibration dampening**
- › **With a large variety of feed slides, SUHNER is able to provide sub-systems with a higher feed force, faster feeds and more precise positioning**



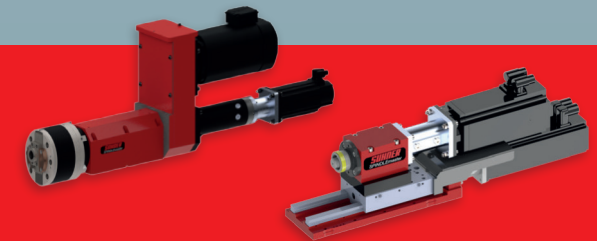
Straightening and reaming

Exact shaping of workpieces to fulfill the highest quality requirements.

The work processes “Straightening” and “Reaming” create workpieces that meet the highest demands in terms of tolerance. SUHNER systems make this possible through their high efficiency.

Reboring or reaming means the diligent and exact machining of the inner surface of a bore or other hollow workpieces. During straightening, for example, unmachined parts made of drawn or ground steel undergo finishing work.

SUHNER rotating spindles can be equipped with heads for aligning and thread cutting.



The SUHNER assemblies are suitable for all applications that require special tools, for example, actuating, facing, leveling, forming, rolling, turning or thread cutting heads as well as all other tools that require a tie rod to be controlled by the center.

More of our units' classic properties:

- › **Coolant supply and greasing of the head by the spindle center**
- › **Control through servo motor or hydraulic cylinders**



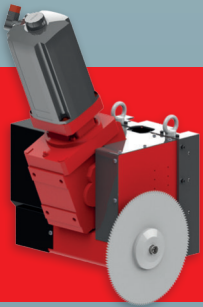
Sawing and cutting units

Seasoned safety technology – modular robust construction.

Precise alignment of the saw blade and accompanying movement by electric motor guarantee a clean saw cut.

A broad range of SUHNER spindle units and feed slides work together to achieve a high number of different stroke lengths. The rotational speed of the saw blade can be individually regulated.

With unique solutions by SUHNER, a wide variety of profiles, even with tight tolerances, can be trimmed to length. This concept encompasses almost all fabrication tasks.



The various properties like the size and performance of SUHNER drive units allow the construction of customer-specific sawing and cutting units. For example, compact constructions are possible even in confined spaces.

- › **SUHNER solutions are very robust system units suitable for operation even in harsh ambient conditions.**
- › **Saw blades with ISO and HSK interfaces can be easily fitted to our spindle noses.**



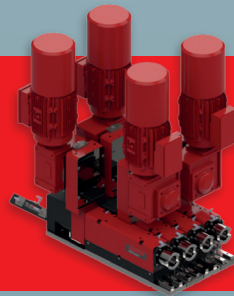
Thread cutting units

With mechanically programmable feed.

In order to cut threads in a high-quality, precise manner, it is of critical importance to link rotation and feed.

With our specialized thread cutting spindles, we give top priority to synchronizing the feed and cutting speed. Our modular kit system offers a very wide variety of solutions.

For example (see illustration), SUHNER developed a customer-specific assembly consisting of four independent thread cutting drives with a 2.2 kW gear motor and a starting speed of 140 rpm.



- › **The cycle times during permanent load are designed to increase efficiency while minimizing wear.**
- › **All pitch sizes for M2 to M12 between 64 and 13 TPI can be obtained through interchangeable timing belts and pulleys. As an alternative, the system can be equipped for use with multiple spindle cutting heads.**
- › **SUHNER products all feature a brake motor which stops the spindle on reaching the home position.**



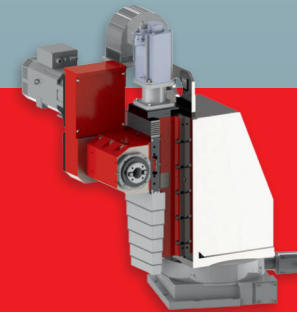
Milling units

Streamlined for high efficiency, productivity and precision.

Our milling units are used both for machining level surfaces and for fabricating complex, three-dimensional contours.

Be it for face, circular, shape or profile milling: the conditions for cutting are demanding, either due to high performance or a high torque at low speeds.

The SUHNER range of standard spindles and feed slides meets the required cutting standards and can be universally applied.



Our systems for milling units feature a very high **level of concentricity of 0.01 mm** and the spindle bearings are precision angular ball bearings.

For minimal risks and high reliability, SUHNER systems use proven, standardized components.

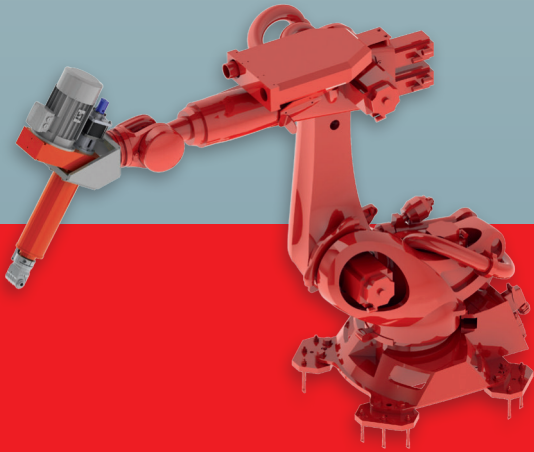
Alternatively, the units can also be manufactured with specific or standardized motor components, with or without automatic clamping or tool holders.



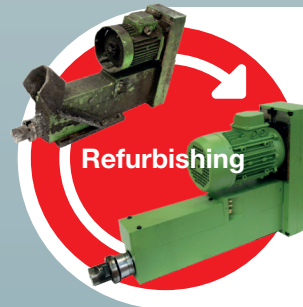
Units for robot-assisted machining

The modular system is adapted for seamless integration into robotic assembly lines.

Automated and robot-assisted assembly are necessary in order to compensate for the lack of skilled workers and to increase efficiency. The system units are adapted for use on a robot arm, for example with lengthened spindles or special housings.



- › It is possible to depict all machining processes, even for robotics.
- › Suitable for metals, wood, plastics, composite materials and many more.
- › Light-weight construction with a small size.
- › Short development time thanks to modular construction.



SUHNER units have a long service life. Maintenance, repair or retrofitting always pay off.

We work on units by SUHNER, SOMEX and BSI. Extend the service life for machining units for constant precision, more sustainability and reduced costs. Your advantages: Free cost quote, 6-month guarantee for machined units and our full technical support.



SUHNER Robotic Grinding: Automated surface treatment processes. Rough machining, grinding and polishing.

SUHNER offers end-to-end solutions to help you make inroads into the robotics field. You get all key components from a single source: end effectors with force compliance, abrasive changers, abrasives and accessories, process know-how, advice on integration. For more information, see: robotic-grinding.suhner.com



3D printing for small volumes, prototypes, out-of-stock spare parts, novel geometries or manufacture on demand.

Our comprehensive range for 3D metal printing using the SLM method (selective laser melting): quickly available with a variety of materials, optimized design, advice, finishing and a transparent, agile manufacturing process: 3dstore.suhner.com



POLYdrill – the SUHNER range of multiple spindle heads for increased efficiency.

The range is adapted to your needs and contains fixed and adjustable hole pitches as well as compact models. This guarantees maximum throughput for a high degree of flexibility and reduced process costs. Standardized interfaces guarantee a high degree of compatibility with conventional systems on the market.

SUHNER[®]

ADVANCED COMPONENT CREATION



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