

*Quality products for  
demanding applications*



**WANDFLUH  
PRODUKTIONS AG**

“ We want to inspire our customers around the world with high-quality products and services and get engaged as a valuable partner in the development and manufacturing of technically demanding components and systems. ”

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Hansruedi Wandfluh and Matthias Wandfluh

# ABOUT US

Since 1946, Wandfluh has been producing and developing high-quality products tailored to various markets. With Wandfluh Produktions AG, our customers have an efficient partner at their side for mechanical manufacturing, mounting of assemblies and customer-specific automation solutions.

## WANDFLUH GROUP



### WANDFLUH AG

Frutigen / CH



### WANDFLUH PRODUKTIONS AG

Frutigen / CH



### WANDFLUH OF AMERICA, INC.

Gurnee, IL & Charlotte, NC / USA



### WANDFLUH GMBH

Emmingen / DE



### WANDFLUH SM GMBH

Schweinfurt / DE



### WANDFLUH UK LTD

Southam / UK



### WANDFLUH SARL

Saint-Priest / FR



### WANDFLUH CO. LTD

Shanghai & Beijing / CN



### WANDFLUH GMBH

Dornbirn / AT



Hansruedi Wandfluh, Vice Chairman of the Board  
Matthias Wandfluh, Group CEO & Chairman of the Board

## WORLDWIDE

- Own companies in Europe, North America and Asia
- Distributors in more than 30 countries around the world
- Flexible and solution-oriented handling of customer needs
- High-quality, cost-effective and punctual processing of projects

## PARTNER

- A partner for demanding hydraulic projects due to technical specialists in every field
- Design and construction of customer-specific automation solutions
- Manufacturing partner for mechanical components and assemblies

## KEY POINTS

- High level of in-house production
- Swiss manufacturer
- Quality products and services
- Fast delivery times from prototype to series production
- ISO 9001 certified, documented quality since 1992
- ISO 13485 for medical devices

# MECHANICAL PROCESSING

The machinery of Wandfluh Produktions AG comprises about 30 state-of-the-art CNC machines that are equipped with automated loading and unloading systems. These enable around the clock production of high-quality and cost-effective precision components. The core competences are turning and milling as well as upstream and downstream process steps.

## BRANCHES AND MARKETS

Wapro deliberately focuses on markets with high manufacturing and testing requirements. The manufacturing with validated processes and defined measuring and testing procedures is documented accordingly and made available to the customer on request.

The clear traceability of the manufacturing process makes it possible to determine when, on which machine and from which material a component was manufactured. Especially in highly regulated and demanding markets, such proofs are important to minimise risks, guarantee security and make change management transparent.

### The customers are active in the following markets:

- Machine industry
- Security and defence technology
- Food industry
- Medical technology
- Aviation and special vehicles
- Measurement and sensor technology

## DOCUMENTED PRECISION

Validated or verified processes provide customers with security and guarantee that the products are manufactured in accordance with the regulations of the respective industries. Wandfluh Produktions AG is familiar with the requirements from the medical, food, automotive and aviation industries and applies their specifications with process reliability.

...industry-dependent **manufacturing processes**

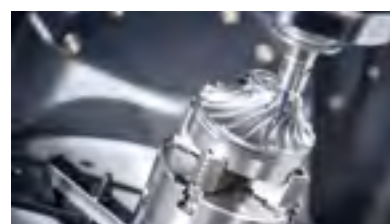


**Mechanical processing**

## DESIGN CONSULTING

Depending on the component, up to 80% of the product costs arise from the design and construction of the parts. Wandfluh Produktions AG maintains its own design department in order to efficiently organise the interaction of the upstream and mechanical work. If requested, this department provides support already during the development phase and advises customers on how to manufacture the parts economically.

The CAD software SolidWorks is used for the design. This allows 3D models and assemblies to be created and transferred to the CNC machines via a CAD-CAM interface. In addition, the models can be printed on the 3D printer so that the constructed model can be discussed with the customer using a demonstration object. The design department often provides support for individual questions or solutions, but can also accompany complex customer projects and take over the entire design process together with the customer's design department.





## MATERIALS

All common metals and plastics up to metal alloys that are difficult to machine can be processed on the production machines. In addition, Wapro can advise customers on the choice of materials to be used.

### Extract from the material list:

- Aluminium, aluminium alloys
- Tool steel
- High-grade steel
- Titanium
- Inconel
- PEEK, PEAK, POM
- Magnesium
- Brass
- Copper
- Silver
- Cast aluminium
- Cast steel



## LOGISTICS

Customer projects do not end with the manufacturing process. They include the timely delivery of the manufactured parts, including the necessary customs documents and certificates. Thanks to our experience in worldwide shipping, in various industries and with a wide variety of materials, we can ensure that the goods pass through customs safely and that no incalculable additional costs occur.

### Logistics services at a glance:

- Purchase and dispatch of raw material
- Purchase and dispatch of commercial and standard parts
- Planning and organisation of surface treatments
- Inspection of incoming goods
- Storage of components ready for delivery
- Transport safe packing and shipping
- Worldwide shipping
- Obtaining appropriate formalities and customs documents

## SERIES SIZE

The production processes are designed for batch sizes from 50 units up to an annual quantity of approximately 80,000 units. On customer request, immediate availability of a batch size can be ensured with a buffer stock provided by Wandfluh Produktions AG.

## CERTIFIED

Wandfluh Produktions AG is certified according to:

- ISO/EN 9001:2015 (Q-management system)
- ISO/EN 13485:2016 (Medical devices)



# WAPRO ASSEMBLIES

Practically all components manufactured by Wandfluh Produktions AG are sooner or later integrated into an assembly or build the basis of an assembly in the form of a housing or platform. It is often more economical to mount them at the production site and thus consolidate the logistics onto an assembly instead of managing the many individual parts.

## BRANCHES AND MARKETS

Medium- and large-sized product manufacturers often concentrate on the development, mounting, testing and distribution of their products. Mounting generally requires large resources, especially if the individual assemblies are also mounted in-house. By outsourcing the mounting of assemblies, the manufacturer is relieved of the procurement process for raw materials and individual parts as well as their warehousing, on the one hand, and the personnel and space resources for the mounting stations, on the other. This results in a significantly lower financial risk for the OEM, especially in the case of fluctuating production volumes. As a company with expertise in the mounting of assemblies, Wapro can compensate such fluctuations well and, thanks to established procurement, handling and logistics processes, is always able to plan and offer just-in-time deliveries.

### The customers are active in the following markets:

- Machine industry
- Security and defence technology
- Food industry
- Medical technology
- Special vehicles
- Measurement and sensor technology

## SERIES SIZE

Wandfluh Produktions AG is flexible with regard to the size of the series. It is important that the mounting of assemblies makes sense for both sides and results in an increase in efficiency. During the setup of a project, Wapro is usually already involved in the prototype phase and in the production of the pre-series.

...the **efficient** way to buy **competence**



## ASSEMBLIES AND SYSTEMS

## TYPE OF ASSEMBLIES

Wapro mounts and tests simple mechanical modules as well as complex electromechanical subsystems with a total weight of up to 30 kg. A, from Wapro's point of view, reasonable manufacturing of assemblies includes the highest possible proportion of internally produced components, as the passing on of costs of commercial goods does not create any added value and therefore does not directly benefit the customer.

### Extract from the assembly projects:

- Safety valves
- Pressure sensors
- Electronic braking and steering modules
- Damping controller
- Feeding systems
- Materials testing equipment



Under "Lean Management", "One-Piece-Flow" and "Automation", the procurement, warehousing and production processes are recorded as a whole and offered where the service is useful for the customer.

### ASSEMBLIES MOUNTING

Wapro's mounting department is constantly evolving to meet customer requirements and technological progress, with "lean", "one-piece flow" and "partial automation" being the current keywords. Mounting and testing instructions, which are also made available to customers on request, ensure that process reliability is maintained and that knowledge can be distributed among several people. In this way, readiness of delivery can be guaranteed all year round. It is still uncertain which developments will have to be mastered in the coming years. Wapro is aware of this and faces this challenge year after year anew.

### LOGISTICS

As a process-oriented company, new processes are developed if deviations from the standard processes make sense. This is often the case with assemblies in particular, as some of them contain electronic components (ESD protection) or do not yet have protective covers against dust. Such assemblies can be packed in a ESD protected area and/or vacuumed sealed dust-free in a clean room.

Depending on the type of assembly, the logistics processes also include specific accompanying documents, test and quality documents etc., as Wandfluh Produktions AG has profound knowledge in import and export and can thus ensure delivery in conformity with the law to practically all countries of the world.

### INSPECTION AND TESTS

The finished assemblies are tested on the existing hydraulic, electronic, mechanical or pneumatic test benches. If the assembly requires other test procedures, an appropriate test procedure can be developed together with the customer and a test bench can be set up. The test and measurement results are always available in electronic form, so that they can be made available to customers simply and easily. Both the standard as well as the customer-specific test systems are regularly tested and calibrated.

#### Mounting, inspection and testing services:

- Single or serial mounting
- In-house production of mechanical components for the assembly
- Laser marking
- Purchasing and storage of purchased parts
- Mechanical and electromechanical assemblies including ESD mounting
- Testing and documentation according to customer requirements
- Mounting, cleaning and packaging
- Special packaging (e.g. vacuum packaging)
- Unit weight up to 30 kg
- Stock keeping of mounted assemblies
- Worldwide shipping
- Obtaining appropriate formalities and customs documents

### CONFORMITY

Due to the great differences between the various assemblies, specific test and inspection processes are developed together with the customer. These are of course adapted to the applicable Swiss and EU standards and also take into account the industry-specific requirements and characteristics.



# WAPRO AUTOMATION

Through the manufacturing of individual parts and their mounting into assemblies, Wandfluh Produktions AG has been active for years in the automation of manufacturing processes. With a team of automation specialists with years of practical experience in this field, Wapro develops solutions for its customers, whether as special machines or based on an industrial robot.

## BRANCHES AND MARKETS

An automation solution is used wherever monotonous series work can be performed by a machine. Usually, these are individual work steps in an overall process, but require a large number of working hours. For example, an automation system can often also eliminate a bottleneck in a production chain, as such a machine can work in shifts if necessary without causing significant additional costs. Experience in the various industries has shown that the amortisation of a corresponding system can be achieved after a short time.

### The customers are active in the following markets:

- Machine industry
- Automotive industry
- Food industry
- Construction industry
- Defence industry

## PROJECT SCOPE

Projects for automation systems range from simple mounting aids to fully integrated solutions with several workstations. The planning and construction phase depends strongly on the complexity of the required work steps on the installation. This phase may take up to several months. The implementation time, however, is then only a few weeks to months.

...**process reliability** in precision



**SPECIAL MECHANICAL ENGINEERING**

## AUTOMATED SYSTEMS

Depending on the quantities involved, such systems differ mainly in their degree of automation. This is determined together with the customer to find the most efficient and cost-effective solution for the respective application. The many years of experience in this field and the possibility to design and manufacture the parts required for an automation solution in-house, result in cost-effective systems with short delivery times that are precisely adapted to customer requirements.

### Extract from the projects:

- Unloading system to machine tools as own product
- Automatic assembly machines for mechanical assemblies
- Assembly cell for coffee grinders
- Seal press
- Valve assembly and test bench
- Leak tests in vacuum
- Pressure measurement of valves with automated good/bad sorting





## ENGINEERING

The automation team accompanies the customer from the feasibility study through planning, design and construction to the implementation of the desired system. Finally, the right package can be put together from the extensive catalogue of services.

### The service includes:

- Feasibility study
- Risk analysis
- Pre-project
- Test series with corresponding evaluation
- Design and construction of the special system
- Drawing work on a subcontract basis

For the engineering process, the latest calculation and design tools are used and value is placed on simple and reliable data exchange as well as open and uncomplicated communication with the customer.

### Features:

- Development, design and construction of an application-specific automation system
- CE certification on customer request
- Compliance with all laws and regulations applicable in Switzerland in accordance with the Machinery Directive 2006/42/EC and the corresponding standards according to EN/ISO
- Monitoring of the overall project from the specifications to and including acceptance of the plant
- Repair and customer service on site
- Support for any expansion, modification or adaptation projects over many years

## CONFORMITY

All automation solutions are developed and built according to current Swiss and EU standards. Other specifications, such as a system with explosion protection certificate, can be implemented on customer request.



## SERVICES AND SUPPORT

Wandfluh Produktions AG offers complete solutions from a single source. The development of a customised system is under the same roof as the calculation and design, the manufacture of the required special parts and the assembly and programming of the entire system or individual modules.

### The services include:

- Support with the creation of a requirement specification sheet
- Elaboration of the customer's specifications
- Rough and detailed concept with layout drawings
- Realisation with initial acceptance in the factory at Wapro
- Transport to site and commissioning
- Final acceptance at the customer's site
- Operating instructions and declarations of conformity
- Support and service
- Customer service



# MANUFACTURING TECHNOLOGY

As a production partner in Switzerland, Wapro is aware of the price sensitivity in the industry. For Wapro, this means producing more efficiently than the competitors in neighbouring countries and securing a steady competitive advantage through innovation and

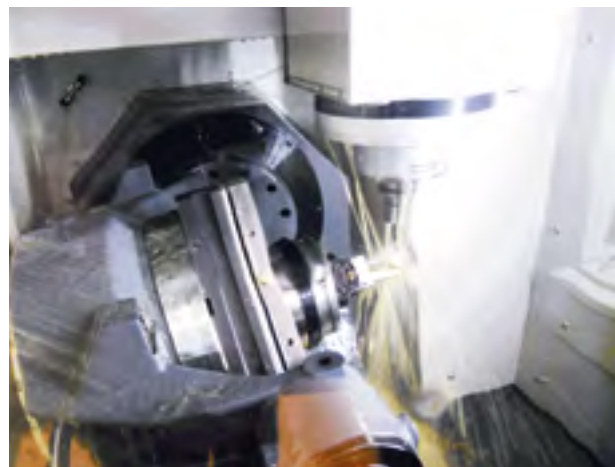
## MILLING

Especially with cubic components, flexible solutions are required with which a wide variety of quantities can be realised quickly and cost-effectively. Thanks to modern automation and clamping systems, Wapro is able to offer both small and large series at competitive prices. "Set-up time zero" for small but recurring series has been realised and in addition, volumes of up to 80,000 units per year are produced at attractive conditions.

The modern 5-axes machines, combined with an automated pallet system and large tool magazines, allow complete and cost-effective machining of cubic parts - even in small quantities. Multiple clamping reduces processing times and significantly increases unattended machining time.

When high quantities are required, the solution is called "double spindle". Thanks to a fully automated loading and unloading system, two parallel milling spindles and a monitored milling process, the most sophisticated components are produced around the clock in the accustomed Wandfluh quality.

The 3D volume programming (.dxf or .step files) on the CAM system "Esprit" simplifies the elaborate programming of complex workpieces and allows simultaneous milling operations on all axes.



## Dimensions

Traversing range 5-axes	X: 730 mm Y: 510 mm Z: 510 mm
Work spindles	up to 30,000 1/min
Tool places	up to 380 tools
Workpiece size 3- and 4-axes	10-500 mm side length
Unit weight	up to 25 kg

the improvement of manufacturing processes and procedures. One of the most important factors for this is well-trained and proactive workforce, who can bring suggestions for improvement very quickly and directly into the production processes.

## TURNING

Wandfluh Produktions AG considers itself as a manufacturing partner that can offer its customers the widest possible range of services. Its machinery therefore includes both normal turning machines and sliding-headstock lathes ("décolletage machines"). Continuous investments in new technologies make it possible to work automatically with bar and/or gantry loaders in shift operation. Large or heavy individual parts are processed "in the chuck".

For components with the highest demands on position and form tolerances, "multitasking machines" are used that allow turning and milling operations on the same machine without reclamping.

The latest machines are equipped with integrated monitoring systems that allow long running times to be maintained in a process-reliable manner. Tool monitoring, twin tools and in-process measurement are the corresponding keywords. Via interfaces it is possible to output the values measured on the workpiece and to prepare them for process analysis.



## Dimensions

Manufacturing from bar	Ø 5–32 mm	Sliding-headstock lathes
	Ø 32–65 mm	Turning machine
	Ø 20–65 mm	Multitask
Manufacturing in chuck	Ø bis 280 mm	Turning machine
Production from gantry loader and Multitask	Ø 32–65 mm	Turning machine
Max. workpiece length	500–600 mm	all areas
Maximum piece weight	12 kg	



# MEASURING EQUIPMENT

In the manufacturing of components and assemblies, the various measuring methods are part of the quality assurance process steps in a company. Precise manufacturing requires very precise testing equipment and measuring methods to ensure the high quality of the delivered parts. Specially trained employees define the optimum testing

## MEASURING AND TESTING LABORATORY

In Wapro's air-conditioned measuring and testing laboratory, the specialists check and document the parts that cannot or must not be measured in the factory workshop. The most important working tools are Mitutoyo's high-precision 3D measuring machines (CNC CMM).

The measurement results can be issued as a measurement report in paper form and/or made available to customers as an electronic file. For internal purposes or on customer request, characteristics that are critical to the function are evaluated. On the one hand, it can be determined whether the manufacturing processes are stable and on the other hand, the inspection severity can be adapted to the specific requirements. Consequently, the customer does not pay any excessive measuring and testing costs.



## MEASURLINK - PROCESS DATA

For safety-relevant parts or at customer request, the manufacturing process is accompanied by statistical process control (SPC). Process capability indices together with a preceding production FMEA (Failure Mode and Effects Analysis) form the solid foundation for one of the highest possible quality levels. Mitutoyo's "MeasurLink" is used as a measuring and evaluation instrument.





procedure and the measuring equipment to be used for individual components. The testing and measuring equipment used is regularly checked, calibrated and adapted to the latest state of the art.

### MONITORING AND CALIBRATION

The measuring and testing equipment is electronically managed and calibrated at fixed intervals. The devices are assigned an inventory number, the current and next inspection date.

Calibration is carried out either in-house (original meter set available) or by external specialists certified by the Swiss Accreditation Service SAS.



### KEYENCE

Keyence is an optical testing device that provides fast and reliable measurement values during the manufacturing process. A measurement takes only a few seconds and is integrated into the manufacturing process. The measured values provide a good indicator of any drifting away from the specified dimensions and are mainly used for continuous checking of the dimensions of turned parts in series production. The data collected in this way can be stored and analysed.



### CONTUROMATIC T1

This measuring system is used for production monitoring and testing work. Diameter, double contours and roughness can be measured and determined easily and reliably. Thanks to various probe tips and clamping devices, the contour measuring device can be used very flexibly.

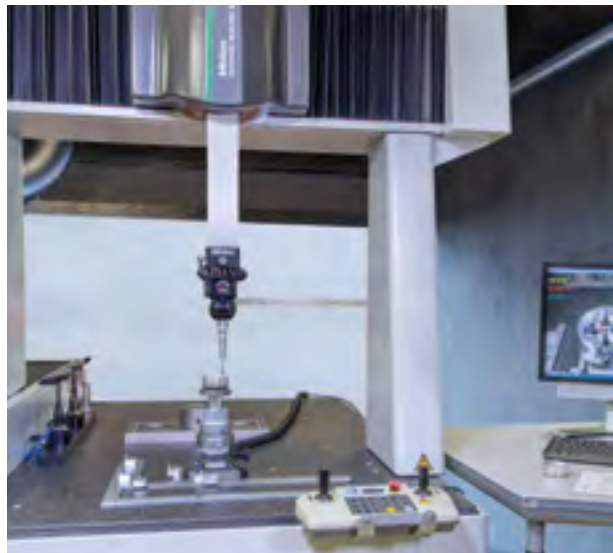


### 3D MEASURING MACHINES

The two high-precision 3D measuring machines (CNC CMM) from Mitutoyo are among the most important working tools in the air-conditioned measuring and testing laboratory:

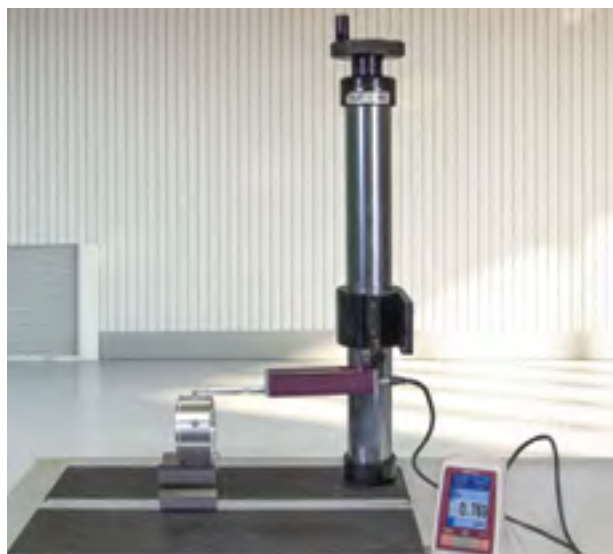
- The "Premier 7106" with a measuring range of X = 700 mm, Y = 1000 mm, Z = 600 mm and a measuring accuracy of 2.0  $\mu\text{m}$
- The "Strato-Apex 9106" with a measuring range of X = 900 mm, Y = 1000 mm, Z = 600 mm and a measuring accuracy of 0.9  $\mu\text{m}$

A measurement strategy agreed upon with the customer prevents uncertainties or unexplainable deviations between Wapro's measurements and those of the customer.



### SURFACE ROUGHNESS TESTING DEVICE SIP MUL-300

The roughness of a surface determines its quality to a large extent. It is therefore important to be able to measure the achieved roughness under standardised conditions. The instrument of SIP is used for this purpose.



# DESIGN TOOLS

Clear and comprehensible communication is considered one of the most important factors for the success of a project. In addition to a simple and clear communication style, the visualisation of the proposals and solutions has proven itself at Wandfluh Produktions AG and has been established in various processes. The parts to be manufactured are made visible in a 3D model. If required, these models can be transferred into a photorealistic image by rendering or printed out as a real demonstration object using a 3D printer.

## CAD SOFTWARE SOLIDWORKS

The design software SolidWorks is a 3D CAD program from Dassault Systèmes with over 3 million users worldwide in around 220,000 companies. The models drawn with SolidWorks can be used cross-departmental and versatile. In addition to the production department, which uses CNC machines and model drawing to manufacture the products, sales and marketing also benefit from the 3D models in various forms.



*Manufactured product (l), transparent view from design data (r)*

## 3D PRINTER

A 3D printer is used to create illustrative models or to manufacture specific components in the field of automation. This allows all types of parts to be generated quickly and inexpensively without influencing the ongoing production in the plant.

### Specifications:

- Printing volume/part size: max. 230 mm x 150 mm x 140 mm
- Layer thickness: 0.10 mm
- Material: Polymers, PLA filaments
- Colours: 10 different colours



*Manufactured product (l), demonstration object from 3D printer (r)*

## PHOTOREALISTIC IMAGES

The drawn components can be displayed in a photorealistic image using the 3D data. The respective materials and surface structures must be assigned to the various individual parts. To display the reflections and shadows, it is possible to work with various light sources and angles, similar to a photo studio. The rendering process with a powerful computer creates an image of the component that is hardly distinguishable from a real photo. Such pictures are used where, in addition to functionality, design also plays an important role.



*Manufactured product (l), photorealistic image from design data (r)*

# CLEANING SYSTEMS

During the production of mounting parts, metal chips, dust and impurities from cooling liquids arise that would severely disrupt the operation of an assembly or a machine. High-quality cleaning, which reliably removes all residues and chips from sometimes complex structures, is therefore an elementary component of the respective manufacturing process for all parts produced by Wapro.

## ULTRASONIC CLEANING

Ultrasonic cleaning devices are often used to clean complex and finely structured components, also at Wandfluh Produktions AG. For high purity requirements, even a second cleaning system is used for final cleaning, it is located in a clean room and not in the workshop.

In the area of "Food Safety", the entire production and thus of course also the cleaning process complies with the corresponding customer requirements.



## CLEANING SYSTEM FROM ECOCLEAN GMBH

To clean the complex and sometimes even finely structured components, Wapro relies on a product from its proven partner, Ecoclean GmbH. The EcoCore cleaning system works with ultrasound in an immersion or swivel bath and a final drying process in a vacuum. A hydrocarbon-based liquid is used as cleaning medium.

### Parameters of the cleaning system:

Process steps	<ul style="list-style-type: none"><li>• Vapour degreasing</li><li>• Flooding 1 with ultrasound</li><li>• Flooding 2 – clean or preserve</li><li>• Intermediate drying</li><li>• Vapour degreasing with vacuum support</li><li>• Vacuum drying</li></ul>
Ultrasonic frequency	four times 25 kHz
Cleaning medium	hydrocarbon based
Dimensions container LxWxH	four times 530 x 320 x 200 mm or once 640 x 520 x 390 mm
Particle filter	100 µm





## CLEANING SYSTEM FROM KKS ULTRASCHALL AG

Special requirements also entail special measures. This is particularly evident in the cleaning of parts manufactured for demanding applications in certain markets. With the ultrasonic cleaning system from KKS, which is located in a clean room, specific customer requirements for final cleaning can be implemented accordingly.

### Parameters of the cleaning system:

Process steps	<ul style="list-style-type: none"><li>• Ultrasonic cleaning</li><li>• Ultrasonic rinsing in clean water</li><li>• Final rinse in demineralised water (fully desalinated)</li><li>• Drying cabinet 80° C</li></ul>
Ultrasonic frequencies	dual frequency 27/80 kHz
Cleaning medium	alkaline/aqueous
Dimensions bath LxWxH	three times 400 x 300 x 380 mm



## CLEAN ROOM

The core competences of Wandfluh Produktions AG are optimally supplemented by the possibilities of a clean zone. These cleaning and packaging competences are also offered on the market as services. Customers can have their own products cleaned, packaged and shrink-wrapped in Wapro's clean room. The clean room is certified by a specialised company, which confirms that it complies with cleanliness class 7 according to ISO 14644-1.

### Parameters of the clean room:

Classification according to ISO standard 14644.1	Class 7
Room size	15 m <sup>2</sup>
Air exchange rate	via flowbox, 1300 m <sup>3</sup> /h
Overpressure to the lock	2.0 Pa



# EXTERNAL PROCESSING

The field of modern surface treatments is so broad that only certified specialists have the latest processes in their portfolio and are able to handle these processes properly. To ensure that customers are always offered the best possible solutions for their products, these process steps are carried out in cooperation with selected partners who meet the high quality and deadline requirements. This allows Wapro to focus on its core competencies, whereby the quality of the partner companies is always critically reviewed and responsibility to the customer for the finished and delivered product is taken.

## **GALVANIC AND CHEMICAL FINISHING**

- Coating
- Anodising, ALTEF coating
- Nickel plating
- Chrome plating
- Phosphating
- Anodizing



## **HEAT TREATMENTS**

- Hardening
- Annealing
- Nitriding



## **OTHER EXTERNAL PROCESSES**

- Soldering
- Welding
- Polishing
- Grinding
- Eroding
- Laser cutting
- Water jet cutting



# LOGISTICS PROCESSES

Logistics is an important but often neglected area in the manufacturing of products. On the one hand, it must be ensured that the necessary raw materials are available on time, and on the other hand that the finished products arrive at the customer's premises properly packed, in perfect condition and on the agreed date.

## FOR EACH PRODUCT ITS PACKAGING

Parts for the metal and machine industry are conventionally packed for transport and delivered to the customer according to specifications. However, the packaging of parts and assemblies for other industries is specifically defined and adapted accordingly. For example, Wapro packs a coffee grinder from the food sector differently than parts produced for the medical sector. Sensitive products can be vacuum-packed and made ready for shipment immediately after cleaning in a low-dust clean room.



## MATERIALS MANAGEMENT

The efficient production of individual parts, assemblies or entire installations requires the timely availability of the corresponding raw materials. The upstream work scheduling and logistics processes are extremely important in order to deliver on time. To be able to guarantee this at all times, Wapro can store a batch size of the corresponding products for customers with very short call-off times and deliver them within a few hours if required.



## WORLDWIDE SHIPPING

With Wapro's entry into the US business in 2006, logistics became even more important as additional customs forms had to be delivered and compliance with all country-specific laws and regulations had to be ensured. In the meantime, Wandfluh Produktions AG has profound import and export knowledge and can thus ensure a legally compliant delivery to almost all countries of the world. This means that solutions can be offered "from a single source" practically along the entire value chain, which also offers great advantages for customers.



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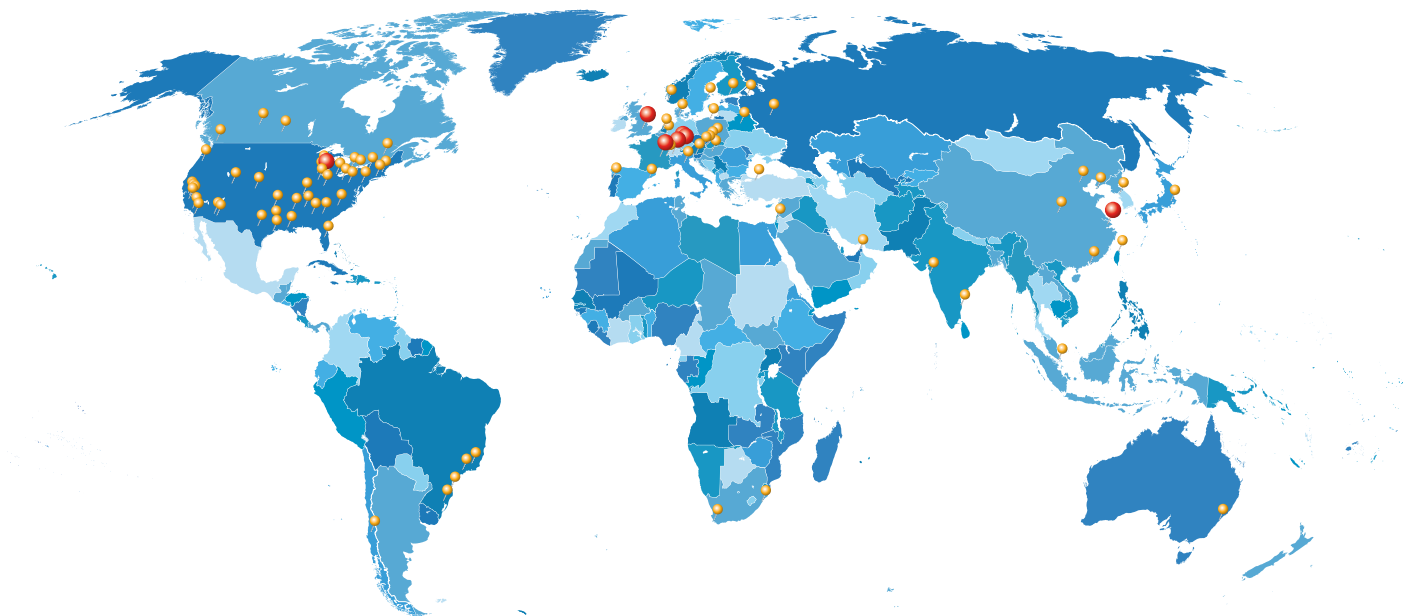
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**SOLUTIONS SINCE 1946**