Know-How is Passion

„Fortuna Redux“ - The first cylinder design coin in the world. A collaboration with the Polish mint in Warsaw.

„Seven New Wonders of the World“ - The first spherical design coin in the world. A collaboration with the Polish mint in Warsaw.
ACSYS – Your Partner for perfect system solutions in laser material processing.

**ACSYS at a glance**

ACSYS has also developed into the technological leader and globally sought-after supplier for the most modern laser processing systems in the coin industry through many years of experience and co-operation. Unique, patented solutions offer the required added value for the manufacture of your high-quality stamping tools.

As the managing director and owner of this internationally successful company, I am proud of our team of highly motivated specialists.

As a team player and coach, I work at continuous strategic further development in connection with the responsibility I have towards our employees, families and also customers and business partners. We define goals and strategies in terms of sustainable company development and a long, trustful partnership. We pay particular attention to resource-conserving, environmentally friendly production methods. For this, we develop highly modern, progressive laser and system technology. In this way, we have succeeded in continuously increasing the effectiveness of our laser equipment and significantly increasing efficiency.

Today, ACSYS Lasertechnik is a sought-after technology partner for mints worldwide.

Gerhard Kimmel
Stamping Dies

Every coin begins as an artist’s sketch.

In the traditional process, a plaster model of the coin image about 20 cm in diameter is then produced. This model is reduced through repeated casting processes on the reduction machine to produce a coin-size synthetic resin model. Up to 36 hours are required to mill all details of the model into the untempered steel.

Then the engraver uses the traditional method to work out the contours and fine plastic details on the reduced positive steel die. The reduction is next tempered and the positive forging die is produced by repeated punching.

Finally the forging die is used to produce the actual negative die. After punching, this die is rotated into the correct shape, tempered and hard-chrome-plated. Then it is frosted manually.

ACSYS offers a number of advantages compared to the traditional method and engraving with conventional CNC machines.
ACSYS 3D scanners make it possible to digitize hand crafted oversize models for advanced processing by computer. Existing coins can also be easily digitized, saved and reproduced by ACSYS using 3D laser engraving. Alternatively, they can be used to digitize designs from existing coins, which are then stored for further processing, including reproduction by means of ACSYS 3D laser engraving.

The laser is capable of engraving directly into the previously tempered steel of the stamping die. The tool changes required for CNC engraving, costly in terms of time, and the subsequent pressing and tempering are completely eliminated.

The laser also has great importance in the area of frosting. The high-resolution dual camera systems of ACSYS allow for precise definition of specific areas to be frosted in advance on the computer screen. The laser can then apply a wide range of frosting textures on the die with µ precision.

**Advantages of the Laser:**
- Only one tool needed.
- No tool wearout.
- No tool breaking.
- Only one clamping operation.
- New materials possible, better durability.
- Shorter set-up times.
- Reverse engineering.
- Customization through digitizing.

**Engraving / 3D laser engraving:**
- The reduced positive steel stamp is revised by the engraver.
- Digitized data can be laser engraved directly into the tempered die in a three-dimensional process with the laser.

**Punching:**
- The stamp is tempered and punched into an untempered steel piece with great force.

**Tempering / frosting:**
- The negative die that has been created is rotated into shape, tempered and chrome-plated. Then a partial frosting is applied.
- The high-precision dual camera preview of ACSYS defines frosting in advance on the screen and applies a wide range of textures with µ precision.
Digitizing

Leading edge technology – that’s what we offer. Impressive machine solutions from ACSYS deliver the greatest accuracy, precision and repeatability. Digitizing is based on the conoscopic holography method, allowing extremely precise 3D digital images of all surfaces, plaster models, dies or working directly from coins and medals.

The resulting 3D file can be used for production and reproduction and can be easily processed in the CAD software. The advantages of this non-contact method are high speed and small measuring grid distances. Absolute accuracy of 2 µm can be achieved with the replaceable lens system. Conoscopic holography offers the greatest precision and repeatable accuracy over a wide range of applications.

Efficiency with ACSYS.
The functioning of the of the EAGLE at a glance.
1. Workpiece loading and scanning.
2. The scan result on the screen.
3. Zoom, smooth, cut, optimize and invert directly in the AC-LASER of ACSYS.
The working principle of a conoscopic laser scanner.

Key facts:
- Touchless scanning of all surfaces.
- The perfect tool for reproduction of “old” coins or medals.
- Reverse engineering.
- High resolution up to 2 µm.
1. 3D laser engraving of a coin die after smoothing the surface. (Close up)

2. 3D laser engraving of a coin die after smoothing the surface.

3. The 3D CAD data for the coin die.
Light at its most beautiful form.

3D Laser engraving

3D laser engraving allows the three-dimensional surface ablation on a wide range of materials with outstanding quality.

Since there is no contact whatsoever between the laser and the workpiece, the advantages over conventional CNC engraving are obvious: No tool wear, no tool changes, and no tool breaking. The high level of precisely charged laser energy makes it possible to engrave previously hardened materials while providing a working beam diameter of up to 20 µm.

Our unique ODC - Online depth control makes it possible to control the removal of material. The target depth and actual depth are continuously compared and the 3D laser engraving system is controlled to the exact engraving depth. Free form surfaces can be scanned and digitized with the ODC module, and can also be easily processed in the AC-LASER Software.

Especially in the minting industry, our machining centres in combination with the powerful AC LASER Software offer the highest level of efficiency. From file creation to output on the laser, all details are perfectly co-ordinated to ensure an intuitive workflow.
Reflections.

Frosting & Surface structuring

The unique, patented frosting method of ACSYS for producing surfaces in sand-blast optics provide a smooth surface texture with no discernible pattern. The intensity of areas to be frosted is adjusted individually and the position is conveniently defined graphical by mouse with the unique camera system LAS - Live Adjust System from ACSYS on the system monitor.

Lasers open up entirely new possibilities in terms of design. In addition to the precise surface frosting, unlimited other textures with interesting visual effects can be applied.

A great advantage is the absolute reproducibility, since any frosting and structuring layout can be saved as a file and then automatically transferred to other dies at any time.

In comparison to the conventional process, selective frosting of dies for coins or medals is much more economical with a laser machining system. Overall process time is greatly reduced and constant quality is guaranteed.
1. Laser frosting on a die for punching coins.

2. Ultra-high resolution dual camera systems provide a detailed preview of the specific areas to be frosted.

3. Ultra-high resolution preview of the minting through the laser’s beam path.
The ACSYS material test matrix allows fast parameterization.

1. - 3. One coining die with rainbow effect engraving test pattern seen under various light angles.
Rainbow effect laser engraving opens up new possibilities for the production of coins and medals, for instance as a top-quality application on collectors coins, as a safety feature or as a unique feature. The effect can be produced directly or through punching, and is fully reproducible.

The light refraction structures measuring only a few nanometers are directly applied by laser to the material. The high-precision laser systems and machines from ACSYS are the perfect tools for rainbow effect engraving – be it with fiberlaser, picosecond or UV laser.

By combining 3D laser engraving, surface structuring, frosting, ultra-high resolution microtext and rainbow effect engraving, you can now achieve results that were not possible before.

Technology does no longer limit your creativity!
Your one-stop solution.
LAS - Live Adjust System®
Granit Base
Glass Scales
High precision laser sources

ACSYS Laser machining centers

Laser processing systems from ACSYS combine the micro-precision of the laser with vibration-free granite portals, the unique AC-LASER software suite, high-resolution camera preview systems and excellent software solutions from renowned partners.

The laser is a universal tool in many respects in the coin and medal producing industry.

- Digitizing,
- 3D laser engraving,
- Micro engraving,
- Frosting and surface structuring,
- Colour engraving,
- Edge marking.

Simplicity made by ACSYS.
We show you how.
A holistic view of machine and workpiece handling allows us to achieve highly precise, uncompromisingly tailor-made solutions for processes and products. Our expansive in-house production depth provides the basis for a highest level of flexibility in our laser systems.

Our wide range of available machines allows us to flexibly accommodate product- and production-specific requirements with customized system solutions. For us, reliability is not only a quality criterion, but a basic element of our corporate and product philosophy.

The intelligent networking of the individual modules results in a highly efficient and flexible operation of the system. Our systems communicate with cutting-edge technology and peripheral bus system.

Heavy Metal & Hard Rock

Solid, vibration-free construction made of granite for the PIRANHAμ from ACSYS.
More efficiency in production and service – we’re pacemakers for your laser processing.
AC-LASER
Laser Software Suite.
Discover the new dimensions of laser processing. AC LASER Software is the ideal software package for laser material processing. AC-LASER offers you all the important tools for your work in a homogeneous, intuitive environment – from production of simple marks to manufacturing of complex 3D engravings for single unit manufacturing or series production.

Achieve outstanding results with the powerful modules of the AC-LASER Software. The graphical user interface allows you to implement each request in the shortest possible time, without having to compromise in design or quality. Intelligent image processing functionalities reduce set-up times to a minimum.

AC-LASER Software affords you uncompromising productivity. Close integration and uniform functionality of the different modules allow you to implement your ideas and requirements consistently.

Software made by ACSYS

Discover the new dimensions of laser processing. AC LASER Software is the ideal software package for laser material processing. AC-LASER offers you all the important tools for your work in a homogeneous, intuitive environment – from production of simple marks to manufacturing of complex 3D engravings for single unit manufacturing or series production.

Achieve outstanding results with the powerful modules of the AC-LASER Software. The graphical user interface allows you to implement each request in the shortest possible time, without having to compromise in design or quality. Intelligent image processing functionalities reduce set-up times to a minimum.

AC-LASER Software affords you uncompromising productivity. Close integration and uniform functionality of the different modules allow you to implement your ideas and requirements consistently.

Software made by ACSYS

Discover the new dimensions of laser processing. AC LASER Software is the ideal software package for laser material processing. AC-LASER offers you all the important tools for your work in a homogeneous, intuitive environment – from production of simple marks to manufacturing of complex 3D engravings for single unit manufacturing or series production.

Achieve outstanding results with the powerful modules of the AC-LASER Software. The graphical user interface allows you to implement each request in the shortest possible time, without having to compromise in design or quality. Intelligent image processing functionalities reduce set-up times to a minimum.

AC-LASER Software affords you uncompromising productivity. Close integration and uniform functionality of the different modules allow you to implement your ideas and requirements consistently.

Software made by ACSYS
Key features

▲ Camera image
The LAS - Live Adjust System function ensures precise positioning even for extremely small workpieces.

▲ ACSYS Frosting & Surface Structuring
Exactly a replica of sandblasting with homogenous effect over the whole frosting area, without “line” effect on the parts.

▲ 3D Assistant
The 3D-assistant facilitates convenient creation of complex 3D- and micro-engravings.

▲ Intuitive user interface
Various user interface standards are available. From „Easy Mode“ to customer-programmable user interfaces - the intuitive layout of AC-LASER facilitates quick and creative workflows.

▲ Material-Parameter-Assistant
Easy searching of suitable laser parameters for a wide range of materials. Automatic parameter scale creation from an extensive parameters database.

▲ Split Layout
Intelligent segmentation. Large-surface engraving of flat- or rounded surfaces is „intelligently“ segmented and executed seamlessly.

▲ Multiple Execution
Intelligent batch processing. The laser system is capable of autonomously controlling a task, thereby processing multiple blanks over night or a weekend.

▲ OPR - Optical Parts Recognition
The optical parts recognition enables the fully automatic processing of non-palletized, loose parts.
The camera-based LAS – Live Adjust System reduces setup complexity considerably, and facilitates precise positioning even of small workpieces. A continuous, digital zoom feature reveals the detailed features of the workpiece. Layouts can be placed very precisely in this manner. An exact preview projects the target result on screen. New layouts can be created directly on the workpiece without having to take measurements again.

ACSYS offers a two-camera solution for maximum precision in machining tasks. The first camera shows the entire working area and provides the operator with an overview of the workpieces that are to be machined. This is the basic function of the LAS - Live Adjust System.
EAGLE
Precise and effective.

Technical Data

- Laser digitizing
- max. workpiece weight: 100 kg
- max. working area (mm): 370 x 400 x 140
- Materials: wide range of materials
Laser digitizing is based on the conoscopic holography method, allowing extremely precise 3D digital images of all surfaces, plaster models, dies or working directly from most different applications. The resulting 3D file can be used for production and reproduction and can easily be processed in CAD software. The advantages of this non-contact method are high speed and small measuring grid distances. Absolute accuracy of 2 μm can be achieved with the replaceable lens system.

Conoscopic holography is a patented method offering the greatest precision and repeatable accuracy over a wide range of applications.

The EAGLE EYE, the core of the EAGLE, is also available as a modular option in the laser processing systems of ACSYS.

**EAGLE – Laser digitizing system**

Efficiency with ACSYS.
The functioning of the EAGLE at a glance.  
1. Workpiece loading and scanning. 
2. The scan result on the screen. 
3. Zoom, smooth, cut, optimize and invert directly in the AC-LASER of ACSYS.

3D laser engraving and multi-frosting on a coin.
PEARL
Innovation in ergonomics.

Technical Data

Laser marking, laser engraving

max. workpiece weight

5 kg

max. working area (mm)

25 x 25 x 300 (with cross table)

Materials

Metal, plastic, composites
The PEARL laser table system from ACSYS combines top-quality, high-precision laser marking and engraving on filigree precision tools and jewelry with excellent ergonomics and fast setup.

The PEARL system has been specifically designed to meet the needs of workshops, labs and manufactories as regards ergonomics. The PEARL combines a variety of practical innovations in a newly developed housing that was designed to a complete workstation.

The innovative operating Concept is based on the flexible single-piece machining system with the unique LAS - Live Adjust System from ACSYS. The high-resolution camera preview reveals every little detail of the workpiece, allowing for the positioning of layouts, logos, texts and graphics with micrometer accuracy.

**PEARL - Table laser system**

1. PEARL machining chamber. Easy access to working area and LAS camera system.
2. Fine-detail 3D laser engraving of coining die and minted coin. The coin has been varnished after minting.
3. Special medal by Gravura Kunstpräge GmbH. The minting tools were produced with laser technology from ACSYS.
4. „Fortuna Redux“ - laser frosting and laser microtext application after chrome-plating of punching die.

High-precision laser engraving in titanium and carbon.
PIRANHA®μ
Icon of precision.

Technical Data

- Laser marking, laser engraving
- **max. workpiece weight**: 40 kg
- **max. working area (mm)**: 390 x 390 x 160
- **Materials**: Metal, plastic, composites
The PIRANHAµ has been specifically developed for the minting industry and high-precision applications. This laser system combines up to five solutions for specific requirements of the coin-producing industry in a very compact housing:

- Digitizing,
- 3D laser engraving,
- Micro engraving,
- Frosting and surface structuring,
- Colour engraving,
- Edge marking.

Apart from producing individual punching dies, the PIRANHAµ also caters for the simultaneous production of multiple dies in a single process. For this purpose, ACSYS offers a range of clamping devices and trays holding the blanks in their position.

PIRANHA®µ – Compact high precision
PIRANHA® Multishift
Precision meets automation.

Technical Data
- Laser marking, laser engraving
- max. workpiece weight: 3 kg per pallet
- max. working area (mm): 400 x 470 x 400
- Materials: Metal, plastic, composites
The PIRANHA Multishift system combines fully automated machining with high-precision laser technology. It is based on the PIRANHA laser center whose platform has been extended with loading and unloading lift stations.

Depending on the configuration, the magazine consists of up to 20 trays that are automatically transferred into the machine. The laser system can be equipped with the optional ACSYS OPR (Optical Parts Recognition) function. With ACSYS OPR, the workpieces are placed in the tray recesses where their position and angle are automatically detected by the system so that they can be machined as programmed.

The high-strength, temperature-resistant and vibration-free granite table of the PIRANHA Multishift allows for precision laser machining and ensures that the machine meets the most stringent requirements as regards repeat accuracy for micro-machining.
BARRACUDA®μ
Flexible and versatile.

Technical Data

- Laser marking, laser engraving
- max. workpiece weight: 150 kg
- max. working area (mm): 450 x 540 x 380
- Materials: Metal, plastic, composites
The unique laser processing center by ACSYS has been specifically designed for the µ-range. A vibration-free granite bed, which is embedded in polymer concrete, forms the basis for ensuring maximum precision for laser machining. The special traversing axes with glass scales are fitted in a granite portal in order to guarantee maximum accuracy in every position. As an option, the BARRACUDA µ can be fitted with an EAGLE EYE laser scanning unit, which allows the user the contact-free digitization of a wide range of very different surfaces.

BARRACUDA µ - High precision laser system

1. LAS - Live Adjust System
dual-camera (external + internal through the laser beam).
2. Laser machining of several surfaces and angles in a single working step.
3. 3D laser engraving and detailed frost treatment of several surfaces and angles in a single working step.
ORCA®μ
Precise size.

Technical Data

- Laser marking, laser engraving
- max. workpiece weight: 750 kg
- max. working area (mm): 710 x 710 x 500
- Materials: Metal, plastic, composites

Materials
Metal, plastic, composites
6.5 tons total weight for maximum precision on a processing area of 1300 x 1300 mm. The ORCAμ has been specially developed for high-precision applications.

The massive, vibration-free granite bed in interaction with the granite Z-axis forms the basis for highest precision in laser processing. The high-precision cross table with precision drives and glass scales guarantee highest accuracy in any position. The ORCA μ can be optionally equipped with electrical precision dividing heads and thus provides μ-precise laser machining in all 3 dimensions.

The optional EAGLE EYE laser scanning unit allows the user the contact-free digitization of a wide range of very different surfaces. Stack processing using special clamping devices or the OPR - Optical Part Recognition feature allow the fully automated machining of many parts in a single working step. The extraordinary precision of the ORCA®μ make it a unique tool with numerous application options for achieving maximum accuracy.
The camera-based LAS – Live Adjust System reduces setup complexity considerably, and facilitates precise positioning even of small workpieces. A high-resolution camera with precision optics and image field illumination featuring a continuous digital zoom function captures every minute detail of the part. Layouts can thus be positioned with high precision. The preview function projects the target image onto the computer screen, so that new layouts can be created directly on the workpiece, without additional measuring.

For applications that demand even higher precision, ACSYS offers a two-camera solution. Here, the first camera captures the entire machining area, providing the operator with a clear image of all the workpieces to be machined.
**Pro Mint Suite**

Extended software suite for 3D and micro engraving of coins and dies, including STL interface for CAD and data import from software packages such as Art-Cam. Laser source with oscillator amplifier control, pulse-width modulation and extended frequency range up to 1000 kHz. High-performance PC configuration with faster processor, larger main memory and faster graphics card.

**ASC – Automatic Scanner Calibration**

The digitally controlled high-speed galvo head comes with automatic calibration and compensates internal temperature drifts.

**Frosting Module**

Menu-based wizard for the production of frosting layouts (contours, parameter records and heights). Reproducible production of surfaces with defined roughness (by means of patented system for the random distribution of lines and dots). Only in conjunction with high-resolution camera system.
Pallet processing

Where large numbers of coining or punching dies need to be machined in batches, ACSYS offers customized, high-precision pallet systems for laser machining centers.

Quick-Switch optics change system

When processing workpieces, operators often need to change the laser optics between the machining steps. The „Quick-Switch“ system from ACSYS is a quick-change mechanism catering for various optical systems. Lenses are changed within a few seconds.

ODC – Online Depth Control

Material removal with micrometer precision in deep and 3D laser engraving allows for high-precision results. The ODC module performs contactless measurements of the actual engraving depth and adjusts the laser to the exact target depth.
**OPR – Optical Parts Recognition**

The optical part recognition enables the fully automated processing of non-palletized loose parts. The software recognizes the position and rotational angle of the workpieces and machines in the previously trained location.

**Manual and electrical dividing heads**

Rotary and swivel axis system for the engraving of the inside and outside of rings, cylinder- and cone-shaped workpieces. NC-controlled or with manual swivel mechanism.

**Commissioning & Training**

The modular structure of our training packages for laser machining enables you to obtain in-depth knowledge in the areas that are most relevant to you. In addition, we offer to perform an evaluation of your production infrastructure and training needs so that we can jointly draw up a training scheme that matches the requirements of your company.
## Technical Specifications Machine

<table>
<thead>
<tr>
<th></th>
<th>EAGLE</th>
<th>PEARL</th>
<th>PIRANHA µ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Housing</strong></td>
<td>Laser class 1</td>
<td>Laser class 1</td>
<td>Laser class 1</td>
</tr>
<tr>
<td><strong>Dimensions W/H/D (mm)</strong></td>
<td>960 x 1850 x 1200</td>
<td>1500 x 1600 x 1100</td>
<td>1300 x 2200 x 1300</td>
</tr>
<tr>
<td><strong>Weight approx (kg)</strong></td>
<td>500</td>
<td>430</td>
<td>1450</td>
</tr>
<tr>
<td><strong>Max. workpiece weight (kg)</strong></td>
<td>100</td>
<td>5</td>
<td>40</td>
</tr>
<tr>
<td><strong>Inner surface (mm)</strong></td>
<td>340 x 900</td>
<td>290 x 220 (without cross table)</td>
<td>600 x 700</td>
</tr>
<tr>
<td><strong>Working area</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Traverses x/y/z (mm)</strong></td>
<td>370 x 400 x 140</td>
<td>0 x 0 x 140 (without cross table)</td>
<td>390 x 390 x 160</td>
</tr>
<tr>
<td><strong>Usable range at optics with 110 x 110 mm² machining field x/y/z (mm)</strong></td>
<td>-</td>
<td>110 x 110 x 145 (without cross table)</td>
<td>500 x 500 x 160</td>
</tr>
<tr>
<td><strong>Max. working height with 70 x 70 mm² machining field (mm)</strong></td>
<td>-</td>
<td>220</td>
<td>240</td>
</tr>
<tr>
<td><strong>Max. working height with 170 x 170 mm² machining field (mm)</strong></td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Finely detailed medal. The punching tools were produced with laser technology.
<table>
<thead>
<tr>
<th>PIRANHA Multishift</th>
<th>BARRACUDA µ</th>
<th>ORCA µ</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laser class 1</td>
<td>Laser class 1</td>
<td>Laser class 1</td>
</tr>
<tr>
<td>2550 x 2200 x 1950</td>
<td>1600 x 2150 x 1600</td>
<td>2700 x 2300 x 2050</td>
</tr>
<tr>
<td>3800</td>
<td>2500</td>
<td>6500</td>
</tr>
<tr>
<td>3 (per pallet)</td>
<td>150</td>
<td>750</td>
</tr>
<tr>
<td>350 x 250 (Pallet size)</td>
<td>850 x 1300</td>
<td>1300 x 1300</td>
</tr>
<tr>
<td>400 x 470 x 400</td>
<td>560 x 650 x 380</td>
<td>1300 x 1300 x 500</td>
</tr>
<tr>
<td>510 x 580 x 320</td>
<td>560 x 650 x 300</td>
<td>710 x 710 x 500 (Cross table 600 x 600)</td>
</tr>
<tr>
<td>400 (marking area 470 x 540)</td>
<td>380</td>
<td>550</td>
</tr>
<tr>
<td>-</td>
<td>140</td>
<td>-</td>
</tr>
</tbody>
</table>

All statements current as of the print date of this publication. Binding information available upon request! The figures in this document are maximum values and may vary, depending on the machine model and configuration!
LASER

ACSYS offers various laser sources for a wide range of materials. With a power range of 0.5 to 1000 Watts available, we can find the ideal configuration for every conceivable application.

Technical Specifications Machine

<table>
<thead>
<tr>
<th>EAGLE EYE</th>
<th>EAGLE EYE Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical Z Axis</td>
<td></td>
</tr>
<tr>
<td>Precision</td>
<td>0.5 - 100 μm</td>
</tr>
<tr>
<td>Reproducibility 1 σ</td>
<td>0.1 - 35 μm</td>
</tr>
<tr>
<td>Working range</td>
<td>0.2 - 180 mm</td>
</tr>
<tr>
<td>Standoff</td>
<td>9.5 - 245 mm</td>
</tr>
<tr>
<td>Angle measurement max.</td>
<td>150 - 170 °</td>
</tr>
<tr>
<td>Lateral X Axis</td>
<td></td>
</tr>
<tr>
<td>Lateral resolution</td>
<td>2 - 90 μm</td>
</tr>
<tr>
<td>Laser spot size</td>
<td>3.5 - 100 μm</td>
</tr>
<tr>
<td>Data handling</td>
<td></td>
</tr>
<tr>
<td>Data rate</td>
<td>bis zu 3000 pps</td>
</tr>
</tbody>
</table>

Coin with effect. High-detail 3D laser engraving of punching tools.
### Technical Specifications Software

#### AC-LASER

| Recommended               | Microsoft® Windows® 7  
|                          | Prozessor with at least 1,8 GHz  
|                          | 4 GB RAM  
|                          | 1 GB available hard disk memory  
|                          | USB 2.0  
|                          | 1 serial interface  
|                          | Screen resolution 1680 x 1050 px  
| Language versions        | German, English, French, Italian  
| Security                 | The software is protected by a product-specific dongle.  
| Interfaces               | CANopen, Profield, RS232, LAN, Digital IO (SPS)  
| File import              | STL, DFX, DWG, PLT, JPEG, BMP, HP-GL, HP-GL/2, SVG  
| Text processing          | Line spacing, changes in tracking and record type to professional standards are possible with any font installed in Windows.  
| 3D functionality         | Extensive 3D processing module for a wide range of formats.  
| Database connection       | For automation purposes, AC-LASER offers data interface options for databases and ERP-systems, as well as to other data sources like Excel or text files.  
| Barcode and DataMatrix-Code| Powerful editing module for barcodes and datamatrix codes.  
| Multiple Execution       | The laser system can control your tasks overnight or on the weekend full automatic and process multiple blanks.  
| LAS – Live Adjust System | Camera-based processing of graphics and text directly on the workpiece.  
| OPR – Optical Parts Recognition | Full automatic detection and machining of unpalletised, loose parts.  
| DFC – Dynamic Focus Control | The dynamic focus control makes it possible to modify the focal point while the laser process is in progress. The time-consuming segmentation of the layout into several focus layers is obsolete.  
| ODC – Online Depth Control | μ-exact material removal for keyhole and 3D engraving ensures highly precise results. Free-form surfaces can also be sampled and digitized with the ODC module, making them easy to process.  
| Remote Control           | The online connection „ACSYS - Direct Access Line“ for service, support or training, allows us to assist you directly on your system with complex tasks, to support you with training for new software-based technology or to provide you with remote maintenance service as quickly as possible in case of improper functionality.  
| Custom programming       | Customer-specific layout- and process programming and database connectivity.  
| Intuitive user interface | Various user interface standards are available. From „Easy Mode“ to customer-programmable user interfaces - the intuitive layout of AC-LASER facilitates quick and creative workflows.  
| Material-Parameter-Assistant | Easy searching of suitable laser parameters for a wide range of materials. Automatic parameter scale creation.  
| Split Layout              | Intelligent segmentation. Large-surface engraving of flat- or rounded surfaces is „intelligently“ segmented and executed seamlessly.  
| Dual-laser control       | The software is capable of managing and controlling two laser sources simultaneously.  

▲ All statements current as of the print date of this publication. Binding information available upon request! The figures in this document are maximum values and may vary, depending on the machine model and configuration!