LASER SURFACE TREATMENT

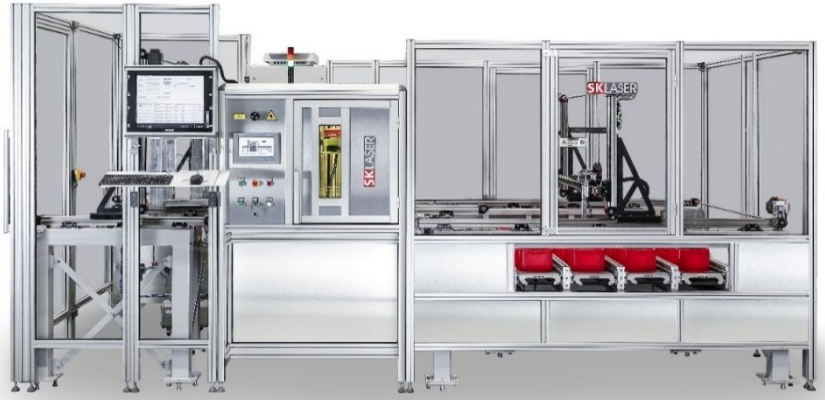
LASER ENGRAVING - LASER MARKING

LASER ABLATION

LASER CUTTING - LASER PERFORATING

SK LASER

The laser specialist



The laser specialist

About us

Christoph Kollbach founded SK LASER GmbH in January 2005 and built up the mechanical engineering company specialising in laser technology from nothing. With great commitment, he developed what was typically a small garage company into what is now a globally operating company with machine installations on six continents around the world. Today, SK LASER is one of the leading producers of laser systems in Germany.

SK LASER's goal is to manufacture high-quality machines and special machines with laser technology for industry at favourable prices.

“We love mechanical engineering
and the happy faces of our
Customers,
by presentating our solutions
for their specific needs"

Christoph Kollbach & daughter Dina Reit
Management of SK LASER GmbH

German ‚Mittelstand' since 2005

Experience
Since 2005, SK LASER has been a specialist in laser material processing on almost all materials.

Employees
15 employees with extensive laser experience areworking at SK LASER.

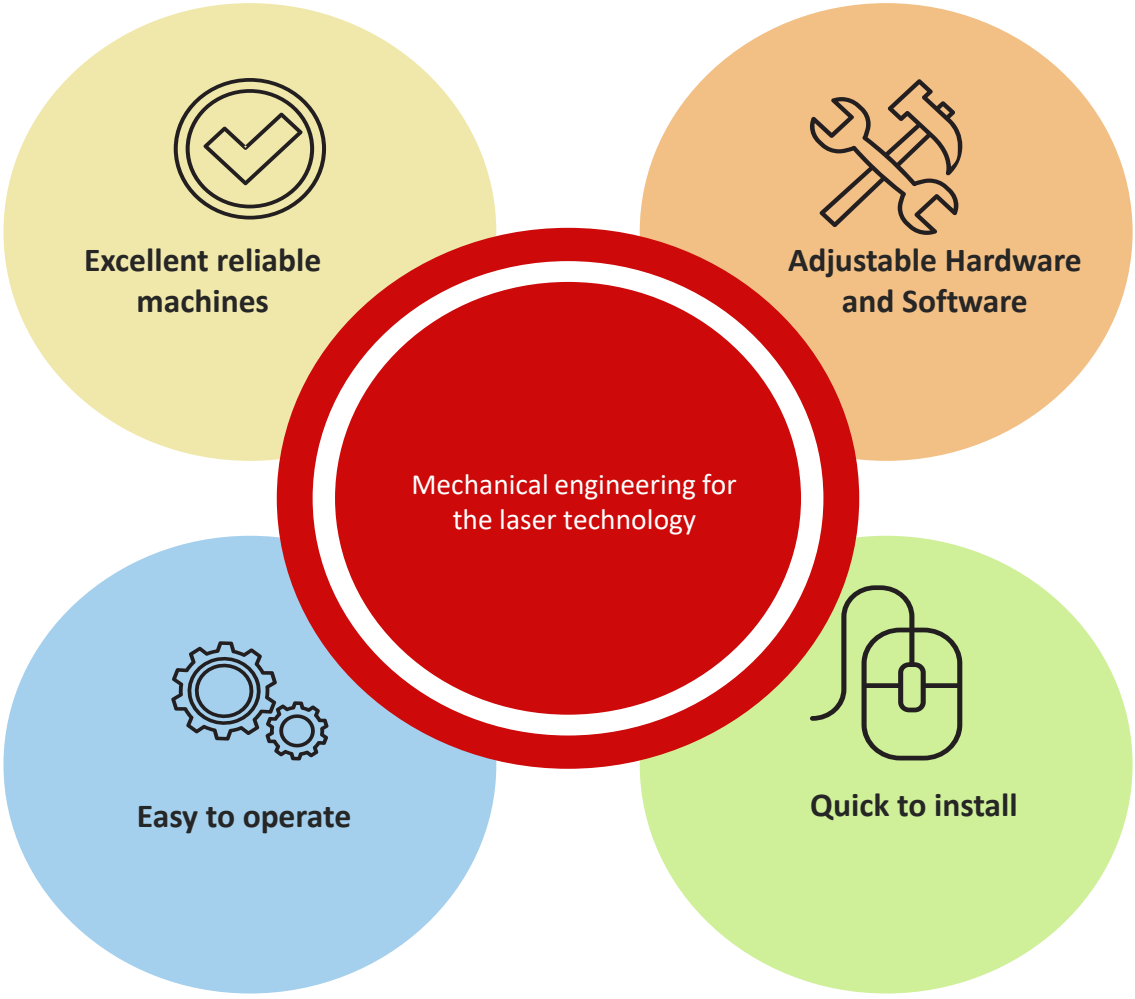
TÜV
TÜV Saar has been inspecting SK LASER machines since 2017.

DIN ISO 9001
Since 2014 SK LASER is practicing DIN ISO 9001 with certificate.

Creditworthiness
Creditreform rates SK LASER with the excellent creditworthiness index of 161.

Debt-free
SK LASER is debt-free and profitable.

Our Mission


Excellent reliable machines
Adjustable Hardware and Software
Mechanical engineering for the laser technology
Easy to operate
Quick to install

Lasers sold worldwide

Germany, Egypt, Armenia, Australia, Bosnia Herzegovina, Denmark, Dubai, England, France, Greece, Italy, Croatia, Lithuania, Netherlands, Norway, Austria, Poland, Portugal, Romania, Russia, Sweden, Switzerland, Spain, Sudan, Thailand, Tunisia, Turkey, USA, Vietnam


GREENLAND (DENMARK)
ALASKA (USA)
CANADA
UNITED STATES OF AMERICA
MEXICO
CUBA
VENEZUELA
GUYANA
COLOMBIA
ECUADOR
PERU
BRAZIL
BOLIVIA
PARAGUAY
CHILE
URUGUAY
ARGENTINA
ICELAND
SVALBARD (NORWAY)
SWEDEN
FINLAND
NORWAY
RUSSIA
KAZKAHSTAN
MONGOLIA
CHINA
JAPAN
NORTH KOREA
IRAN
IRAQ
TURKEY
SYRIA
SAUDI ARABIA
OMAN
INDIA
PHILIPPINES
GUAM
INDONESIA
AUSTRALIA
NEW ZELAND
SPAIN
ITALY
POLAND
BELARUS
UKRAINE
ALGERIA
LIBYA
EGYPT
MALI
NIGER
CHAD
SUDAN
ERITREA
YEMEN
NIGERIA
ETHIOPIA
SOMALIA
KENYA
UGANDA
TANZANIA
ANGOLA
ZAMBIA
NAMIBIA
BOTSWANA
ZIMBABWE
MOZAMBIQUE
MADAGASCAR
SOUTH AFRICA

Laser technology

The laser source

The word laser (Light Amplification by Stimulated Emission of Radiation) refers to the amplification of light by stimulated emission of radiation.
The laser consists of three essential components: the active medium, the pump and a resonator. The pump emits energy in the form of light onto the medium. This can consist of gas (CO_2), liquid (dye solution) or solids (Nd:YAG crystal (YAG: yterbium aluminium garnet)). By "pumping", the atoms are excited and rise to a higher energy level. Through recombination, they lose energy and release photons in the form of light. The photons in turn excite other atoms (coherent radiation is produced) and a chain reaction, stimulated emission, occurs. Once a certain level is reached, the laser beam exits through the partially transparent mirror.

Laser technology

Albert Einstein

If an stimulated atom, as Einstein noted in his theory in 1916, is endowed with precisely the light energy that it has to emit, then this energy causes an emission, a stimulated emission.

Einstein distinguished between two forms of light emission by atoms, which he called spontaneous and stimulated. In the case of spontaneous emission, an atom is in an excited state. It releases its additional energy through a quantum leap to the ground state, in the form of light. One exciting light particle has become two, and it did not escape Einstein's attention that, if enough stimulated atoms were to be found, two light particles could become four, four eight, eight sixteen and so on, until a veritable beam of light is formed. Einstein saw the laser.

Laser technology

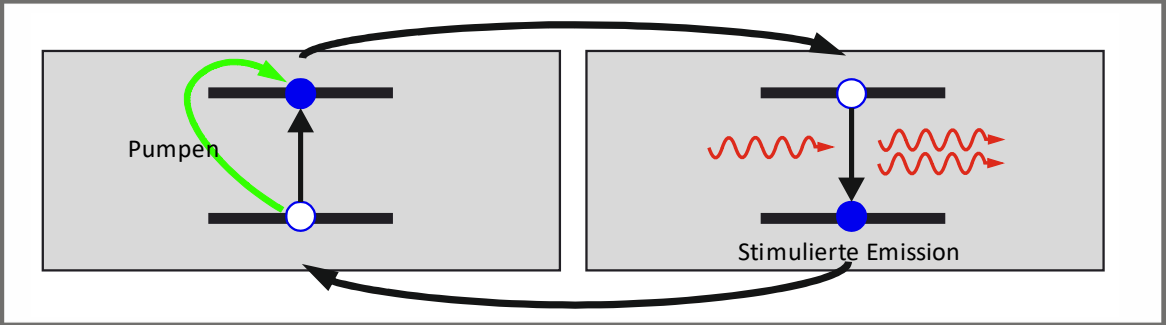
Thoedore Maiman

On the morning of May, 16th 1960, when Theodore Maiman and his assistant, Charles Asawa, illuminated a mirrored ruby crystal with a bright flash lamp, they made a groundbreaking discovery. The two-centimetre-long ruby rod emitted bright red light pulses in time with the flash lamp.
The laser was invented.

Laser technology

Procedure

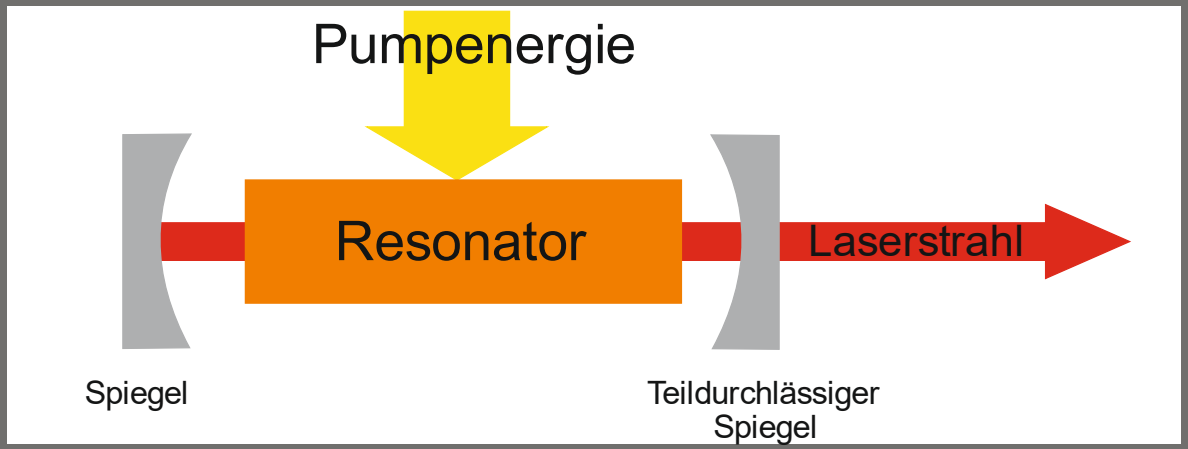
The atoms of the amplification medium are brought from the ground level to a higher, stimulated state by the energy of the pump. When a suitable light particle (photon) passes by, it can stimulate the atom to release its excess energy and fall back to the ground level.
This energy is always produced in the form of a photon. A photon that is in every respect indistinguishable from the first photon. In the end, there are now two photons. Each of these photons can in turn stimulate another stimulated atom to emit an identical photon, and so on.



Laser technology

Structure

Ein Laser besteht im Prinzip aus einem lichtverstärkenden Medium in einem aus Spiegeln gebildeten Resonator sowie einer externen Energiequelle. In das Verstärkungsmedium wird von außen Energie "hineingepumpt". Diese Energie kann dann in Form von Lichtteilchen, sogenannten Photonen, wieder abgegeben werden.



Laser technology

Properties

The outstanding properties of the laser are its high spatial and temporal coherence (coherent, constant, uniform). The spatial coherence means that the beam is strongly bundled and directed and can therefore be focused well into the smallest space.

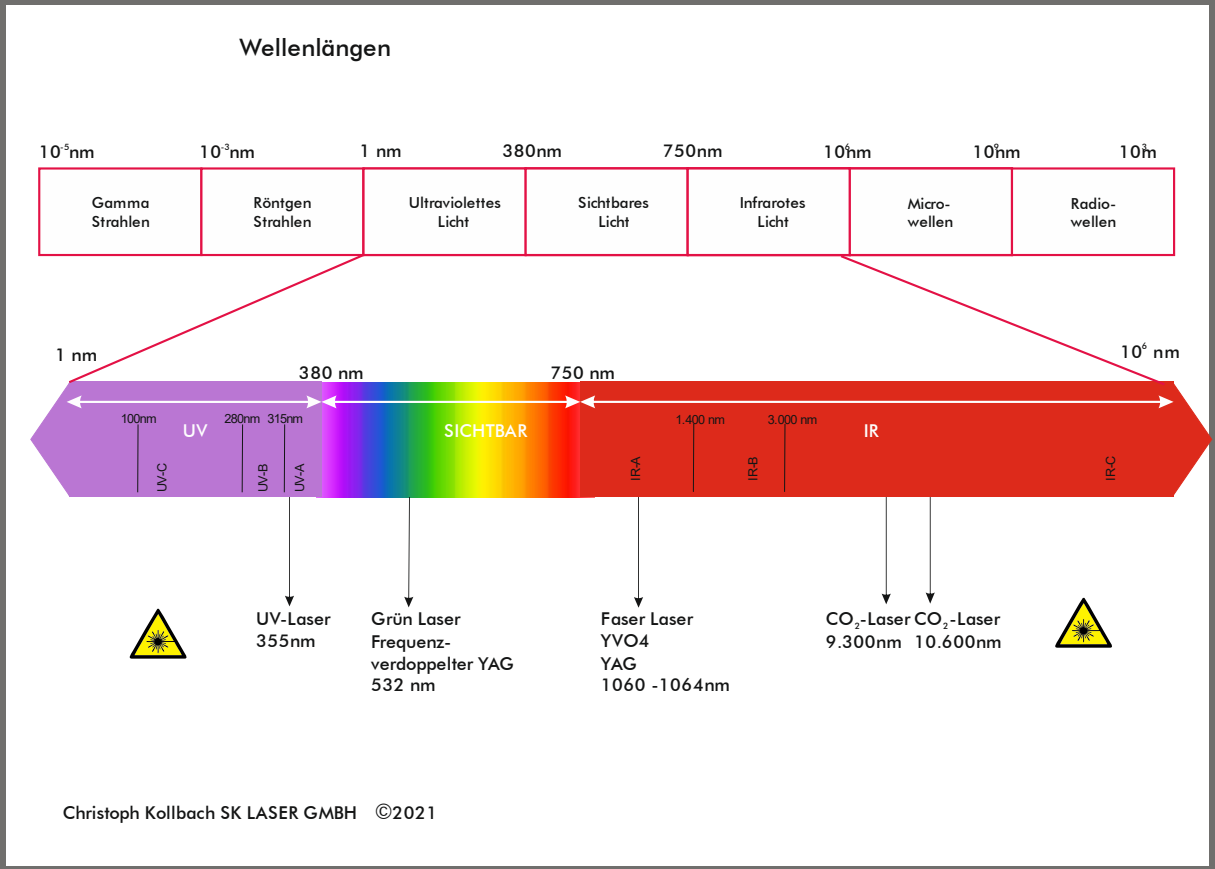
At the same time, enormous energy can be concentrated in a small area, which can be used for material processing. Machines of SK LASER.

Lasertechnik

Farbe	Wellenlänge [nm]
Rot	~ 635-770
Orange	~ 590-635
Gelb	~ 565-590
Grün	~ 520-565
Cyan	~ 500-520
Blau	~ 450-500
Violett	~ 380-450

SK LASER:
Fiber laser 1.060 – 1.062nm
CO2-Laser 10.600nm
Green ligth 532nm
UV-Laser 355nm

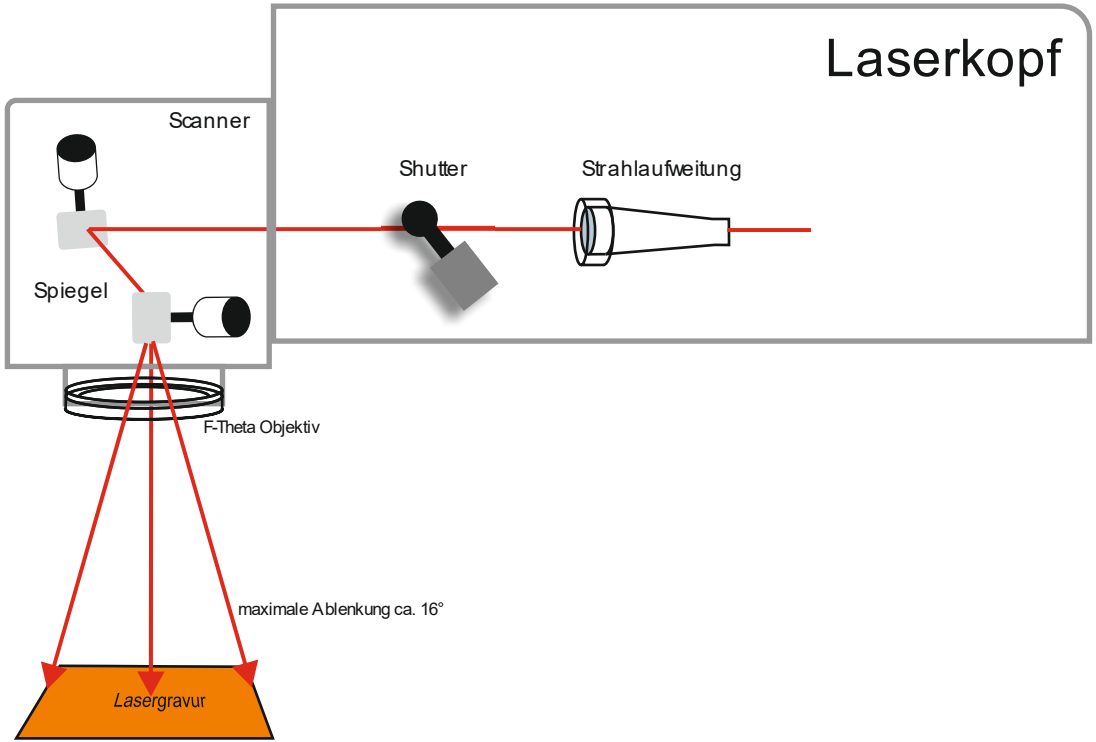
Laser


Wellenlängen
10⁻⁵nm
10⁻³nm
1 nm
380nm
750nm
10⁶nm
10⁹nm
10³m
Gamma Strahlen
Röntgen Strahlen
Ultraviolettes Licht
Sichtbares Licht
Infrarotes Licht
Micro-wellen
Radio-wellen
1 nm
380 nm
750 nm
10⁶ nm
100nm
UV
280nm
315nm
UV-C
UV-B
UV-A
SICHTBAR
1.400 nm
3.000 nm
IR
IR-A
IR-B
IR-C
UV-Laser 355nm
Grün Laser Frequenz-verdoppelter YAG 532 nm
Faser Laser YVO4 YAG 1060 -1064nm
CO2-Laser 9.300nm
CO2-Laser 10.600nm
Christoph Kollbach SK LASER GMBH ©2021

Laser technology

Scanner

The laser beam passes through the partially transparent mirror, goes through a beam expander and is directed by the two piezo motor controlled mirrors onto the product.


Laserkopf
Scanner
Shutter
Strahlaufweitung
Spiegel
F-Theta Objektiv
maximale Ablenkung ca. 16°
Lasergravur

Applicastions

Laser material processing of almost all materials

Laser engraving enables permanent marking for unique traceability.

There are hardly any limits to the materials that can be marked. This is why laser engraving has become indispensable in many industries

Automotive industry
Mechanical engineering
Electronics/electrical engineering
Medical technology
Plastics industry
Plastics processing
Aerospace technology
Defence technology
Packaging industry
Textile industry

Barcode on metall

On different metals (e.g. steel, stainless steel, aluminium) the position, size and font can be designed flexibly. Different codes such as data matrix code, barcode 128 EAN and QR code are possible.

Logo and Data-Matrix-Code

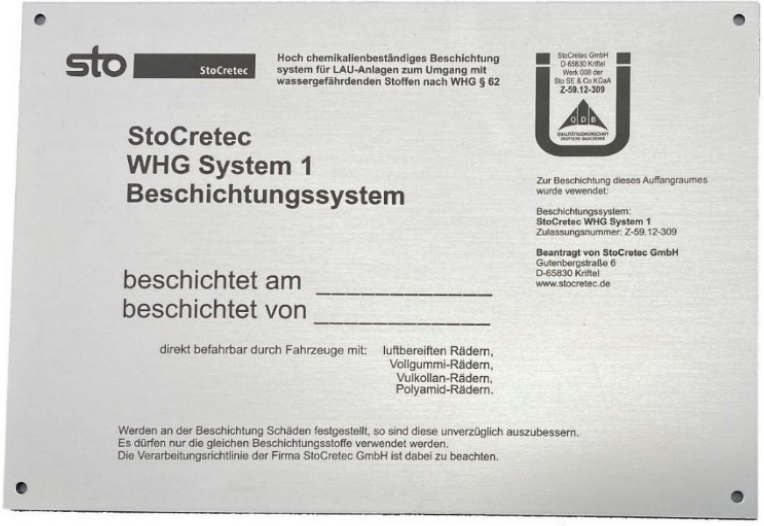
Marking on brass with DMC and logo. Flexible design of position, size and font. Logo importable as file, e.g. dxf, eps, jpg, bmp, dwg, eps and others.

Anealing

Anealing is possible on steel and stainless steel with carbon.
The result is a deep black laser marking that cannot be felt, as there is only a colour change in the material at the top layer.

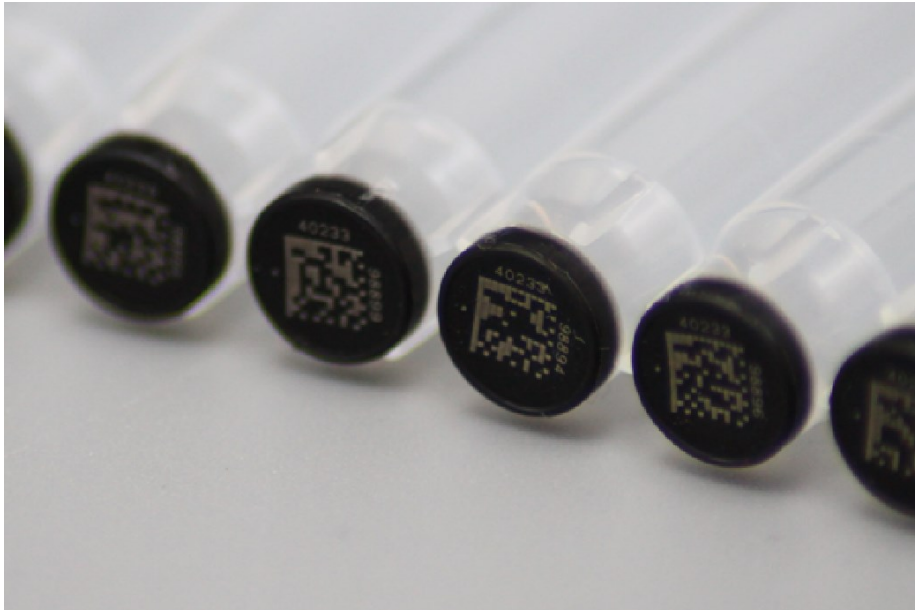
Signs

Type plates in different sizes and on different materials (plastic, metal, organic materials). Fully automatic machines for sign marking are available.



Data-Matrix-Code

4mm Data-Matrix-Code on sample tubes for laboratories and biotechnology for optimal traceability.



Remove coatings by laser

There are many applications in laser material removal. Since the laser can remove layer by layer in the µ-range, there is a huge field of applications.

Removal of annealing colours after welding, removal of coatings, paint stripping, rust removal, but also partial paint stripping for electrical conductivity can be very interesting.

The creation of very fine surfaces with defined roughness is another area that offers a wide range of applications for our lasers.

Plastic marking

SK LASER offers solutions for many plastics, here the example of ABS in yellow. In addition to the fibre laser, the MOPA, green light and UV lasers are also available.

Cabel stripping

Stripping cables with SK LASER. Depending on the material, powerful CO_2 lasers with 10,600 nm or fibre lasers with 1,064 nm with up to 650 watts of power are used.

Textile engraving

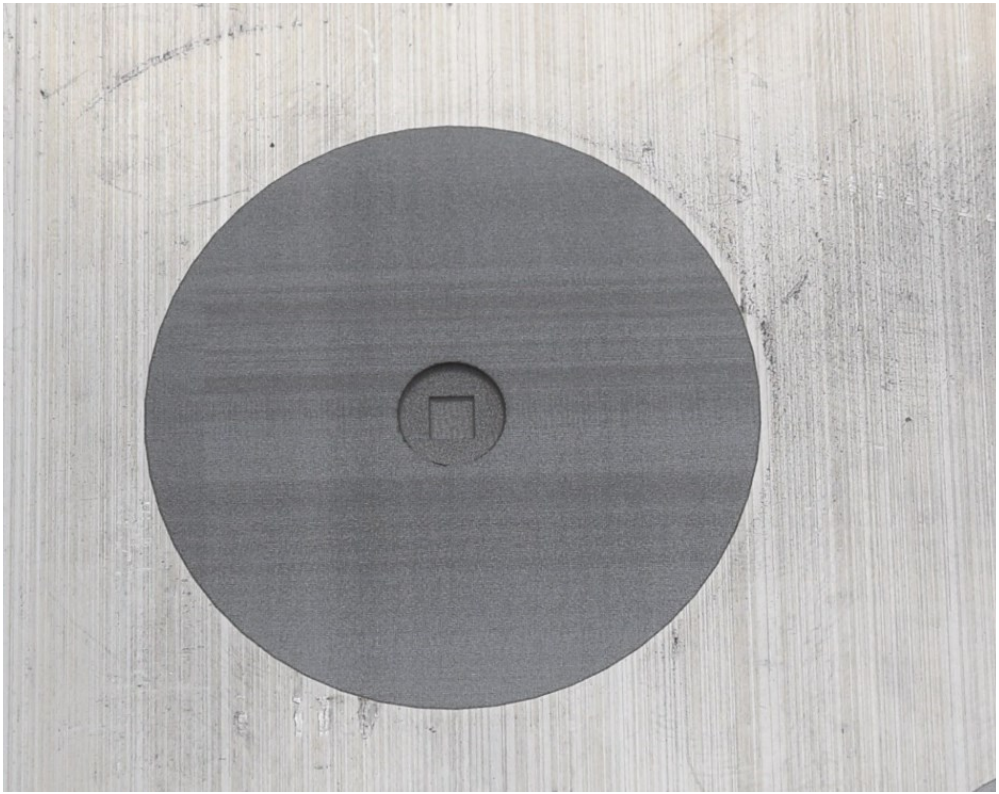
Micro removal / fine removal
and surface treatment
on textiles such as fleece and
jeans and many other
materials.

Laser cutting metal foils up to 1mm

With the lasers from SK LASER, they cut metal foils of different thicknesses and grades up to a thickness of 1mm. This involves industrial processing at high speed in the processing field of the scan head. The processing fields here, depending on the lens, range from 70 mm x 70mm up to 300mm x 300mm and with the axial scan, fields up to 1.00m x 1.00m can also be processed. It should be noted that the force of the laser beam decreases quadratically with distance.

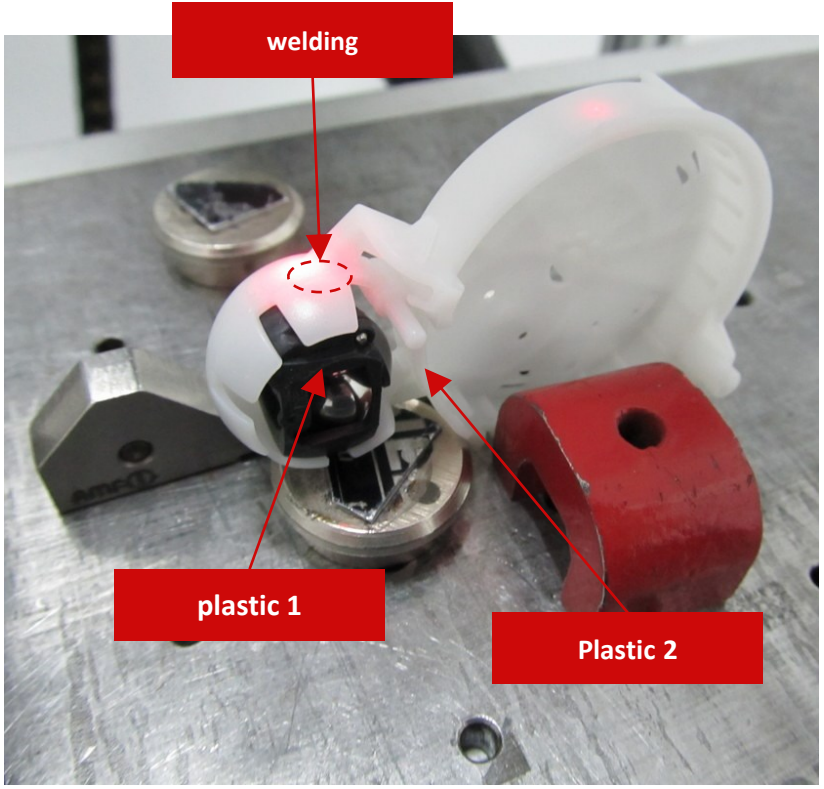
Ablation

Materials can be ablated with the powerful lasers from SK Laser. Laser ablation in various depths in metal and plastic is useful wherever, for example, milling is not possible. The laser beam may reach positions that cannot be reached with a mechanical tool. The fine removal and the surface procurement are further aspects that make the use of the laser first choice.



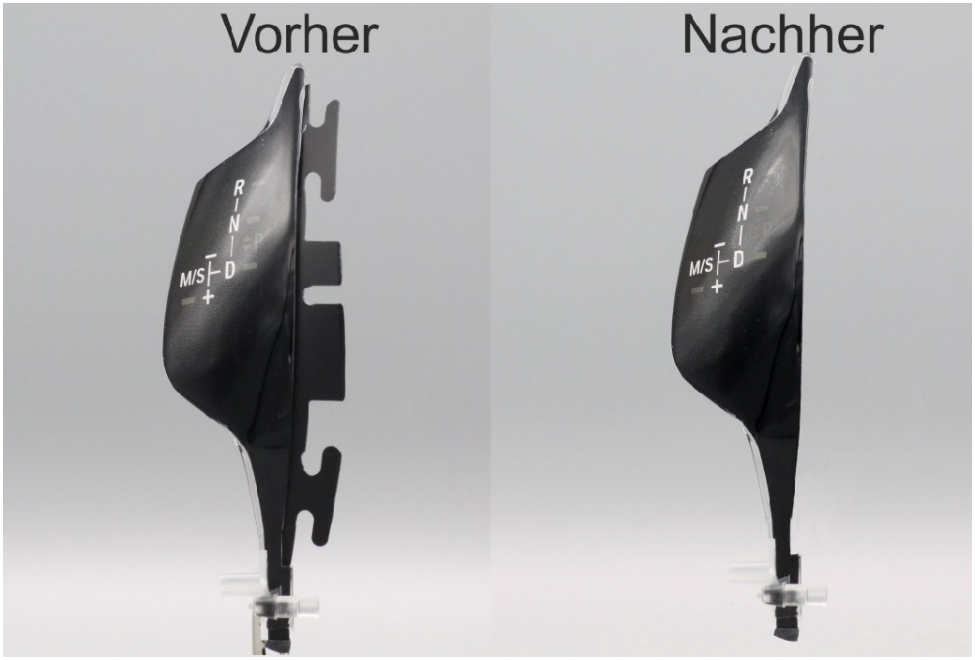
Plastic welding through the material

The laser beam passes through the white plastic from the outside without damaging it and is absorbed by the black plastic. The resulting melt welds the two plastics together.



Laser cutting of sprue for injection moulded parts

Laser cutting is an alternative to mechanically cutting off sprues on injection moulded parts. 200 watt and 400 watt CO_2 lasers are used for this. The advantage of the process lies in its flexibility and low operating costs. There is virtually no wear.

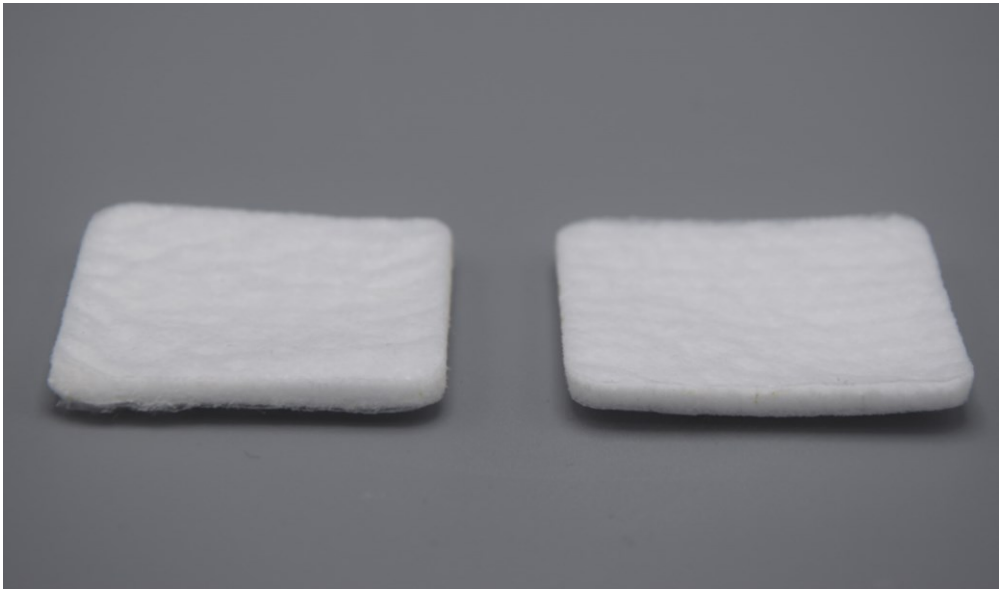


Foil processing / Kisscut

Cutting foils with semi-automatic or fully automatic machines from SK LASER. Kisscut as shown in the photo is possible. SK LASER offers CO_2 lasers up to 650 Watt power.
The roll-to-roll system from SK LASER cuts films from the roll fully automatically in a continuous process and rewinds them after processing. Two-lane processing with 2 laser heads is possible.

Fleece cutting and marking

Laser cutting of foils and fleece with lasers from SK LASER offers many advantages, such as clear edges, precise dimensions, fusing of edges and quick adaptation to new shapes. Laser marking is also an option.



Machines

Workstation

The Stadard Machine

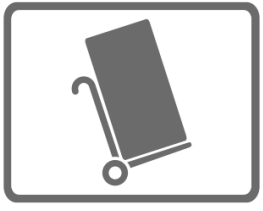
KOLLTRONIC® F20iW1

Configurable according to customer requirements

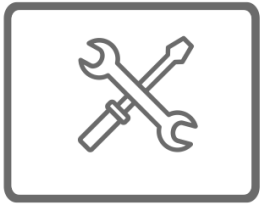
Workstation

Easy to use
Quick to install

Ideal for all laser engraving tasks in industry

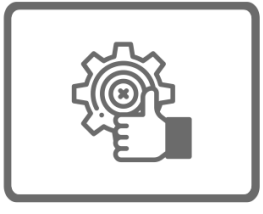


Easy to transport thanks to favourable external dimensions



Resilient due to stable construction durch stabile Konstruktion

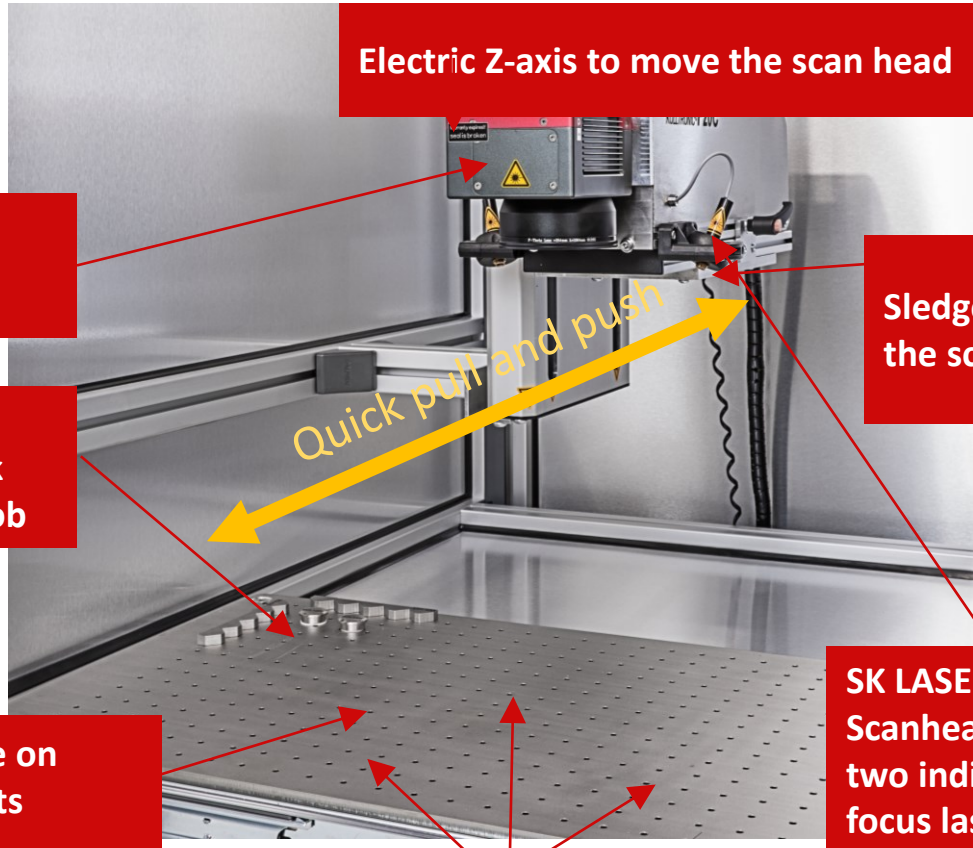
Flexible use as a sitting or standing workstation



Bewährte Proven basic components

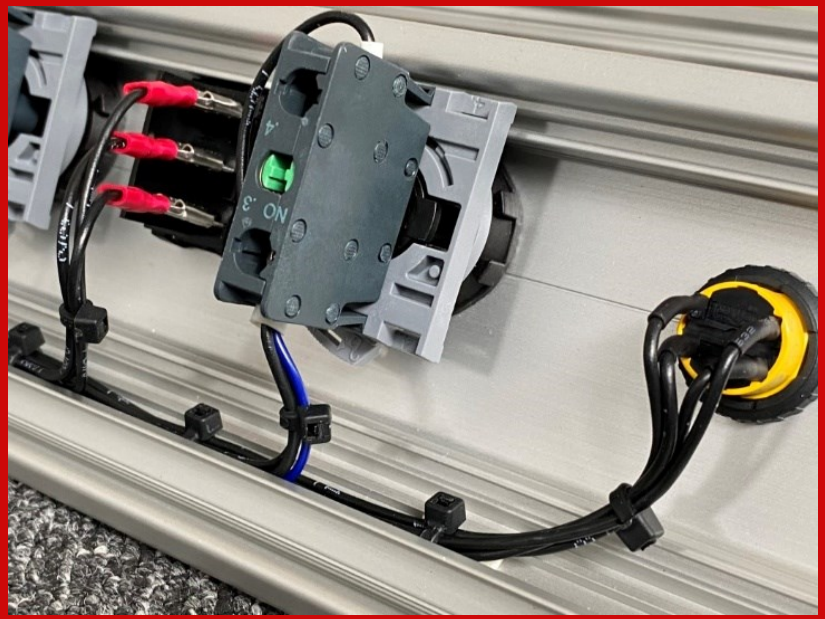
Workstation

Advantages


Electric Z-axis to move the scan head
SK LASER Scanhead with Pilot laser
Sledge to move the scan head
Quick pull and push
Magnets and prism for quick set up a new job
SK LASER Scanhead with two indicating focus lasers
Working plate on which magnets adhere, with perforated grid for quick positioning.
Big working area cause of ceiling mounted laser

Workstation

Made in Germany



Professional control centre

Most important functions at the touch of a button

The new control centre enables faster and easier operation, as switches are located at working height. The SK LASER design provides feedback on the current status of the machine.

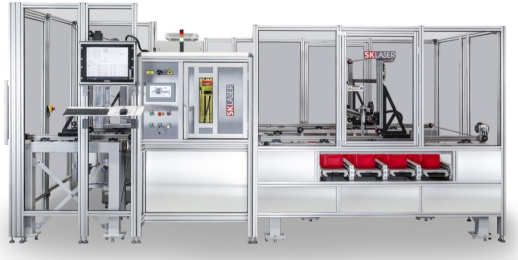
Workstation

Comfortable workspace

The ceiling mounting of the Z-axis results in a very large working area.
Products of larger format can be placed in the machine.
Width up to 750 mm*
Depth up to 900 mm
Height depends on lens
* Clear opening / width of the door: approx. 650 mm

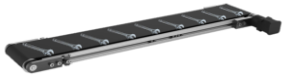
Special machines

SK LASER



Load

Sledge



Conveyor

Robot

Laser

Fiber laser

CO2- Laser

MOPA- Laser

Green laser

UV-Laser

Cabinet

High top

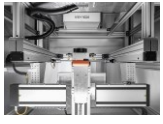
Sledge

Tunel

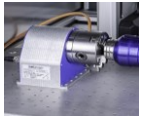
Gap

Extras

turntable



Axis



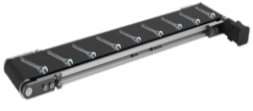
Rotation

Camera

Auto. door

Unload

Sledge



Conveyor

Robot

+ Standard

TÜV
geprüft

SK LASER

Modular system

Customized machines

Modular System

Workstation XXL

For big parts

Depending on how large or long your parts are, we build the workstation. We design the workstation to suit your requirements in terms of width, depth and height. We also have the solution for customers who want to insert a complete mountain bike. Our widths are 90 cm as standard, 100 cm as XL and 120 cm as XXL*.
The double door is comfortable and makes working easier.

***All dimensions are subject to change, please ask for the exact dimensions.**


SKLASER
SKLASER
SK LASER

Options

Die Türen mit dem gewissen Trick

The slot in the door as well as the multiple door is used for inserting flat, large parts. The trick is that the whole part does not have to be placed in the workstation. The workstation can handle large parts. This saves the extra cost of the larger machine and space in the workshop.

Tunnel für lange Werkstücke

Enables the loading and and marking of long parts with laser protection class 1. The tunnel can be designed in different lengths and widths according to customer requirements. The tunnel can be designed in different lengths and widths according to customer requirements.


SKLASER


SKLASER

System with a 2 position sledge

For maximised turn over.

The large drawer is alternately pushed through
the laser. The manual solution for
long service life and high throughput.
The motor-driven drawer is just as good.
Loading and unloading outside while lasering inside

.


SKLASER
SKLASER
SKLASER

Crane loading

Heavy parts up to 300 kg

The heavy-duty laser machine is designed for
heavy parts. The system has a load capacity
of up to 150 kg, 300 kg or 500 kg depending on the version.
Loading can be done by forklift or by crane via the drawer.


SK LASER
Lasermaschinenbau
SKLASER
SKLASER

Automated door

Easy opening

The electric or pneumatic lift door can be opened and closed at the touch of a button. If desired, the laser starts as soon as the door is closed. If desired, the door can be opened automatically after the laser process.


SKLASER


SKLASER

Turntable machine

For more productivity

While loading and unloading outside, the laser is working inside. The machine offers a high level of safety for the operator thanks to two light barriers.
The rotating table is divided in the middle by a laser safety glass. The table can be rotated by 180° at the touch of a button or foot switch, or automatically by pulling back the hands. (4-positions optionally available). The standard diameter is 60 cm; other sizes are optional.


SKLASER


SKLASER
SKLASER

Conveyor

Automatic machine

Laser processes can be automated with the conveyor belt for higher throughputs and increased process speed. Here it is possible to position very precisely with e.g. toothed frame conveyors and screwed-on holders that are milled precisely for the products. Another area of application is the marking of long parts in order to process them in one pass. It is possible to detect the position with a laser, so that marking can be done in motion (marking on the fly).


SKLASER
SK LASER

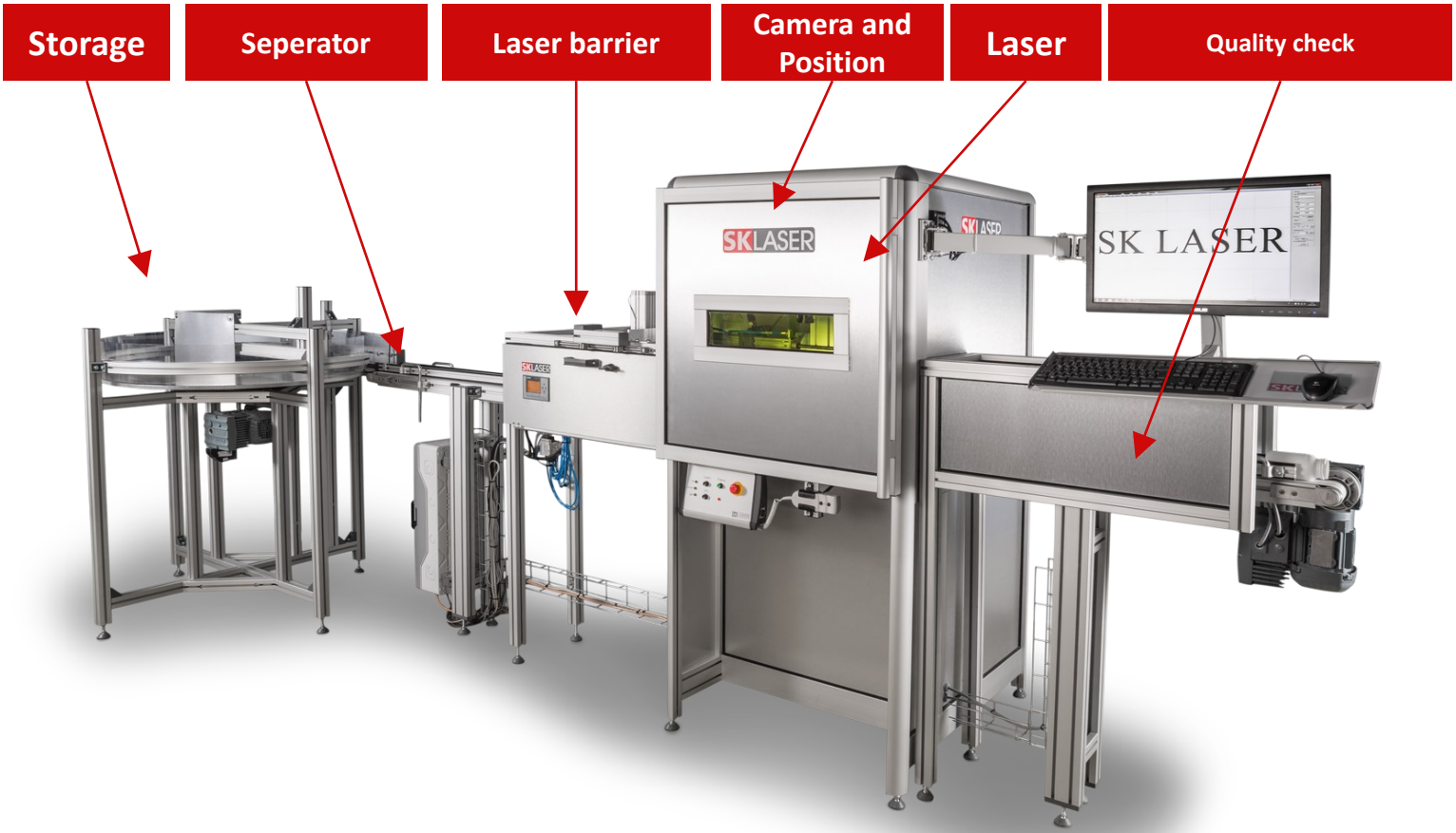
Fully automatic machine

For industrial use

SK LASER builds semi and fully automated laser machines, like

Storage
Separation
Positioning
Control SPS
Laser processing
Control
Ejection
Sorting

Are the usual blocks of such a system.


Storage
Seperator
Laser barrier
Camera and Position
Laser
Quality check
SKLASER
SK LASER

Roll-To-Roll Laseranlage

Fully automatic line for cutting films in continuous operation from roll to roll, also in the Kisscut process.

Here, rolls of multilayer film are clamped and processed in a continuous process. The system can be equipped with up to 2 laser heads of 650 watts each and cuts the film either through or only the upper layer(s). The system works with "marking on the fly" (MOTF), i.e. laser cutting is carried out in continuous operation without the system stopping.

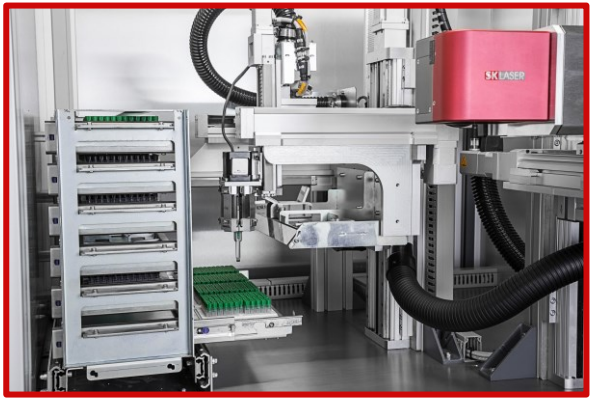

SK LASER
Lasermaschinenbau

Tube Side Laser

Fully automatic system for many applications in the field of medical, biotechnology and pharmaceutical industry

Traceability of medical samples with variable bar code. The Tube Side Laser is used for coding plastic tubes for medical diagnostics. The material storage allows up to 5,000 parts to be stored and processed fully automatically. A gripper takes a tube and guides it under the laser. After the marking process, the code is read and the tube is put back in place.


SKLASER
SKLASER
F20C

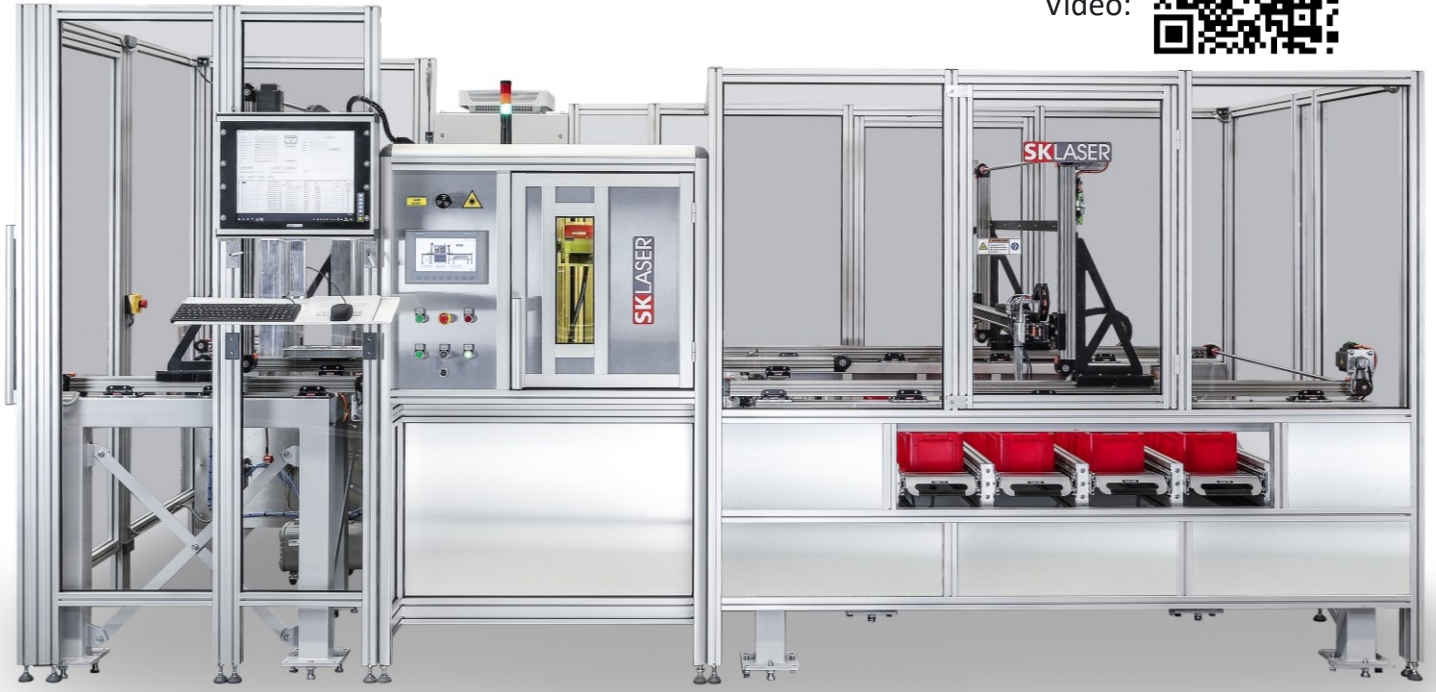

SKLASER

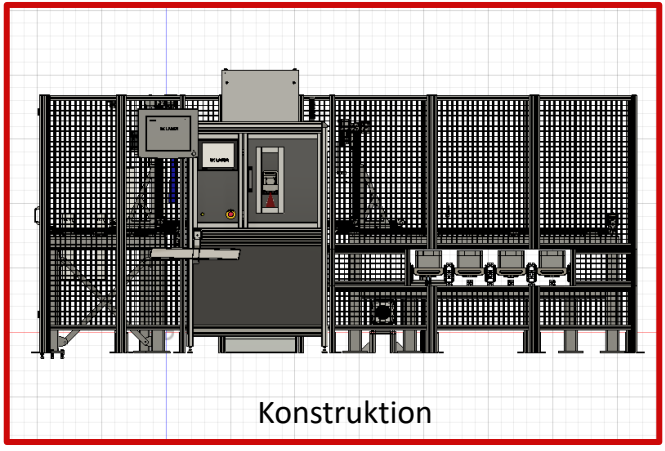
Industrie 4.0

Fully automatic machine for parts marking and more

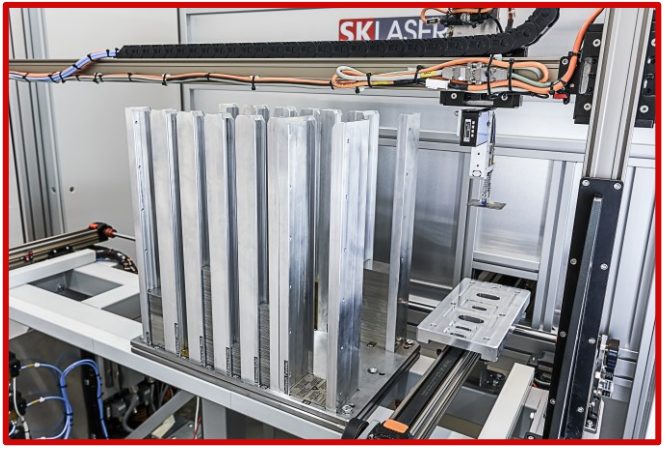
The fully automatic parts marking system from SK LASER enables unmanned marking with flexible texts, data, logos and codes on different products. The system is Industry 4.0-capable - i.e. it can receive orders via the Internet from locations all over the world. The machine picks the right sign from the right magazine, lasers the corresponding product in the order in which the order is received, collects each finished order in its own container and then informs the client of completion - fully automatically.
For Data Matrix codes and other codes, a camera can identify and verify the codes if desired.

Video:



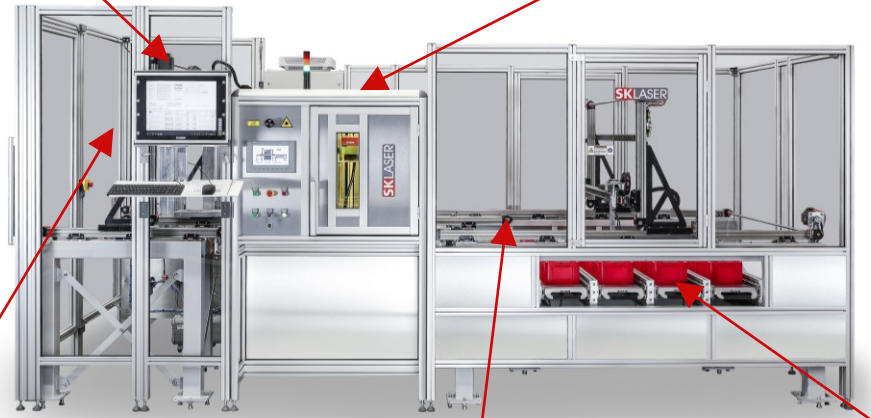


Konstruktion



Order in

Laser - production



Magazine with different parts

Transport unit

Sorting station

Basic Laser System

To integrate into customer production

For integration into the customer's own production lines, we offer laser systems of laser class 4 for a wide range of materials. These are designed for marking large series. SK LASER to support customers with the design, software and 3D drawing. Standard interfaces are RS232, Ethernet, USB and Profinet (Profinet is subject to an extra charge). We offer training to support customer staff.

Laser Basissystem mit Controller

Special

Workstation Mini and 3D deep engraving

High efficiency and small format. For trade fairs and installation in small rooms, we also supply the workstation in special sizes such as the Workstation Mini.

The 3D deep engraving machine is suitable for 3D deep engraving of metals or plastics.

Workstation Mini

Workstation 3D

Software

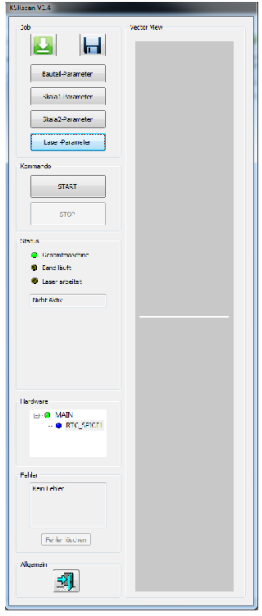
Quick new job creating

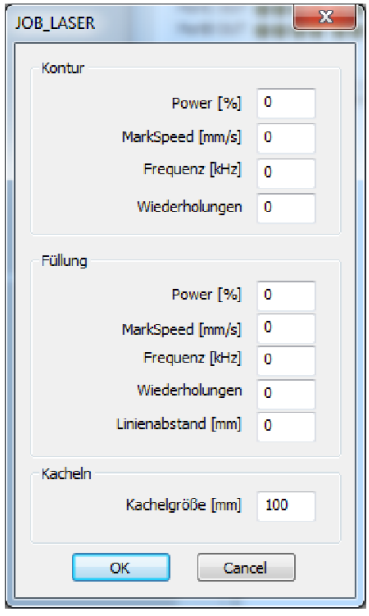
Data can be created and imported with just a few clicks: Logos as vector graphics, photos as pixel graphics, circle labelling, QR code, data matrix code, EAN 128 code, serial number, auto date, auto time, shift, automatic insertion of data from a list and external start. Control of axes is possible.
The software is very user-friendly. Training on the day of the installation is standard. Almost all customers can start working on the same day.

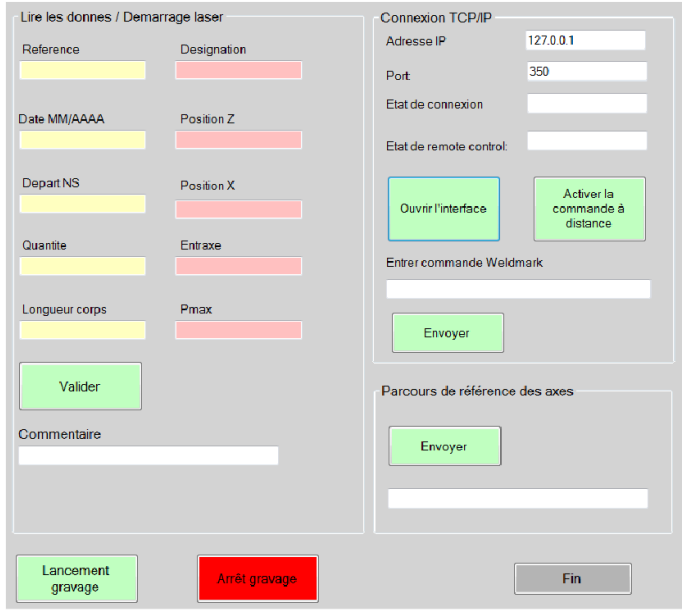

SKLASER
Logos importieren in Datenformat:
dwg, dxf, plt, eps, wmf, bmp, jpg, u.a.
Vektorgrafiken
Fotogravur
SK LASER Wiesbaden Kreisbeschriftung
DMC 123456789 SK
Seriennummer 00001
Auto Datum 01.01.2030
Schichtbezeichung: Schicht 1 (06:00-14:00)
Auto Uhrzeit: 14:26:01
QR Code SK LASER
EAN 128 SK LASER

Customized Software

Individual software for reading and importing different file formats or access restrictions for employees and user groups up to special programming are offered. Among other, data can also be imported from SAP. Bar code or data matrix code reading, laser scanning and validation is a typical application.



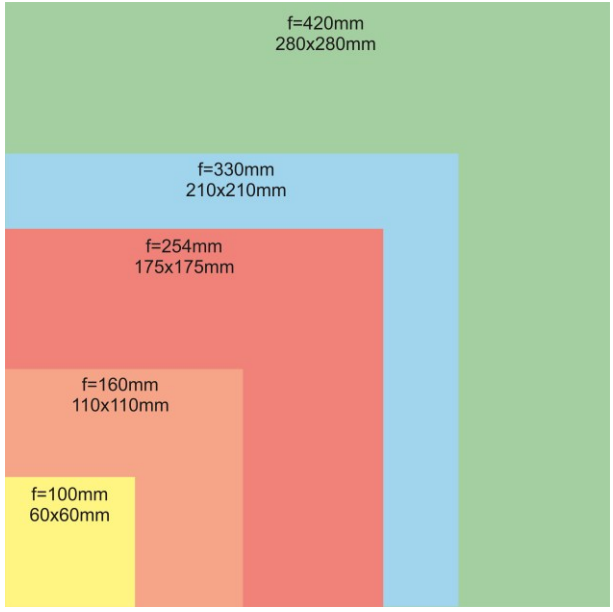

JOB_LASER
Kontur
Power [%]
0
MarkSpeed [mm/s]
0
Frequenz [kHz]
0
Wiederholungen
0
Füllung
Power [%]
0
MarkSpeed [mm/s]
0
Frequenz [kHz]
0
Wiederholungen
0
Linienabstand [mm]
0
Kacheln
Kachelgröße [mm]
100
OK
Cancel


Lire les donnes / Demarrage laser
Reference
Designation
Date MM/AAAA
Position Z
Depart NS
Position X
Quantite
Entraxe
Longueur corps
Pmax
Valider
Commentaire
Connexion TCP/IP
Adresse IP
127.0.0.1
Port
350
Etat de connexion
Etat de remote control:
Ouvrir l'interface
Activer la commande à distance
Entrer commande Weldmark
Envoyer
Parcours de référence des axes
Envoyer
Lancement gravage
Arrêt gravage
Fin

Customized beam construction

SK LASER offers the F-Theta lens for different requirements and tasks. For special markings, the F-Theta lenses with a small focal length are suitable. If a large field has to be covered, we recommend a lens with a larger focal length or a special scan head for a very large marking field. SK LASER designs customised beam delivery systems according to customer requirements.

Lenses and fields



Maximum field area might be bigger.

Physics determine that laser results can be worse at the edge of the marking field. Therefore, as a precaution, we would like to point out that the size of the marking field may deviate in practice.

Rotation unit

Marking of cylindrical parts

Rotation unit in 3 sizes available
60 mm, 125 mm, 250 mm

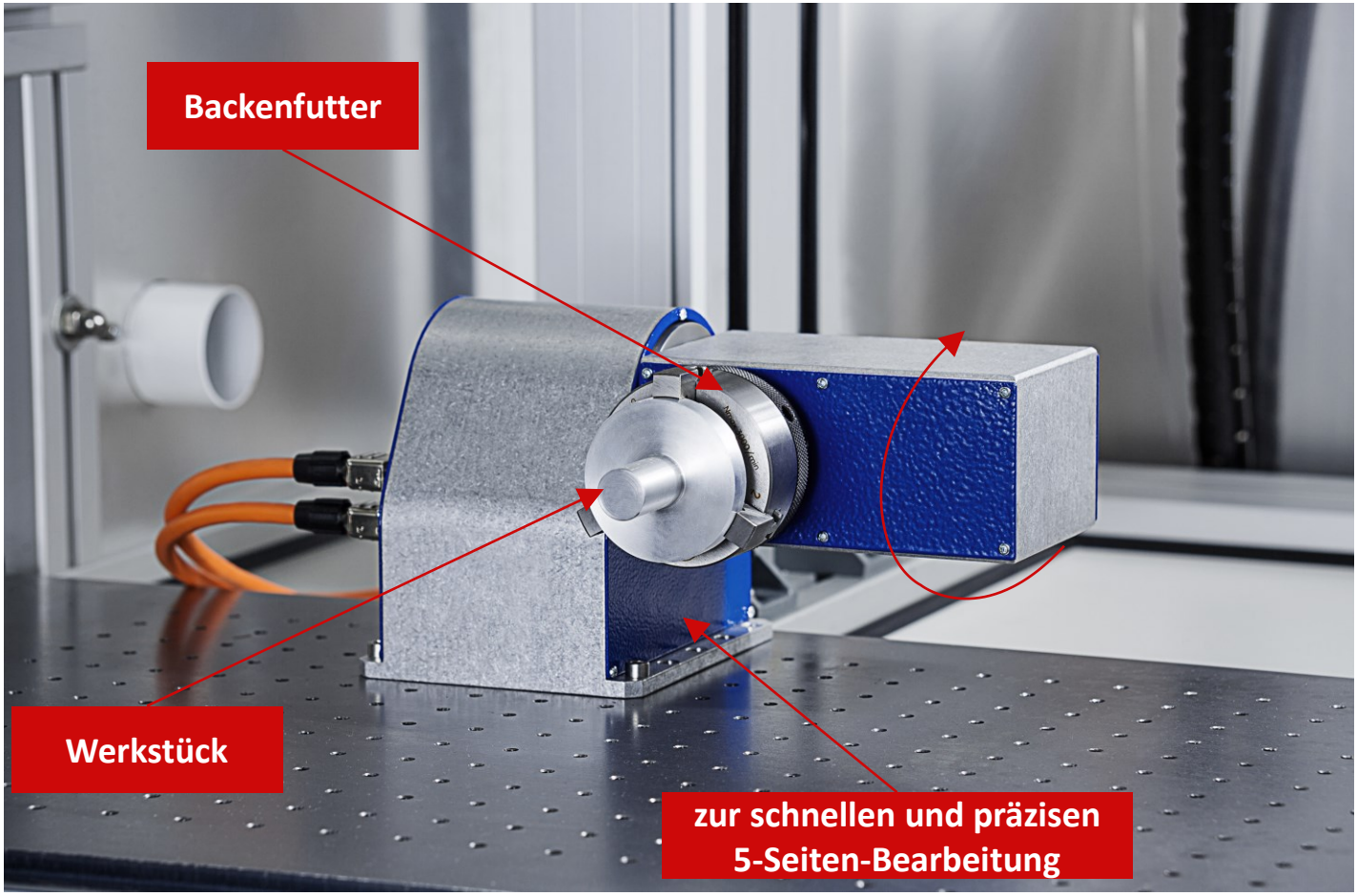
Rotation unit 60 mm

Rotation unit 250 mm

The rotation and swivel unit

Laser on free form or conical parts

The rotation and swivel unit, also called the 4th and 5th axis, is used for laser processing on lateral surfaces with rotation and a defined angle.


Backenfutter
Werkstück
zur schnellen und präzisen
5-Seiten-Bearbeitung

Computerized axis

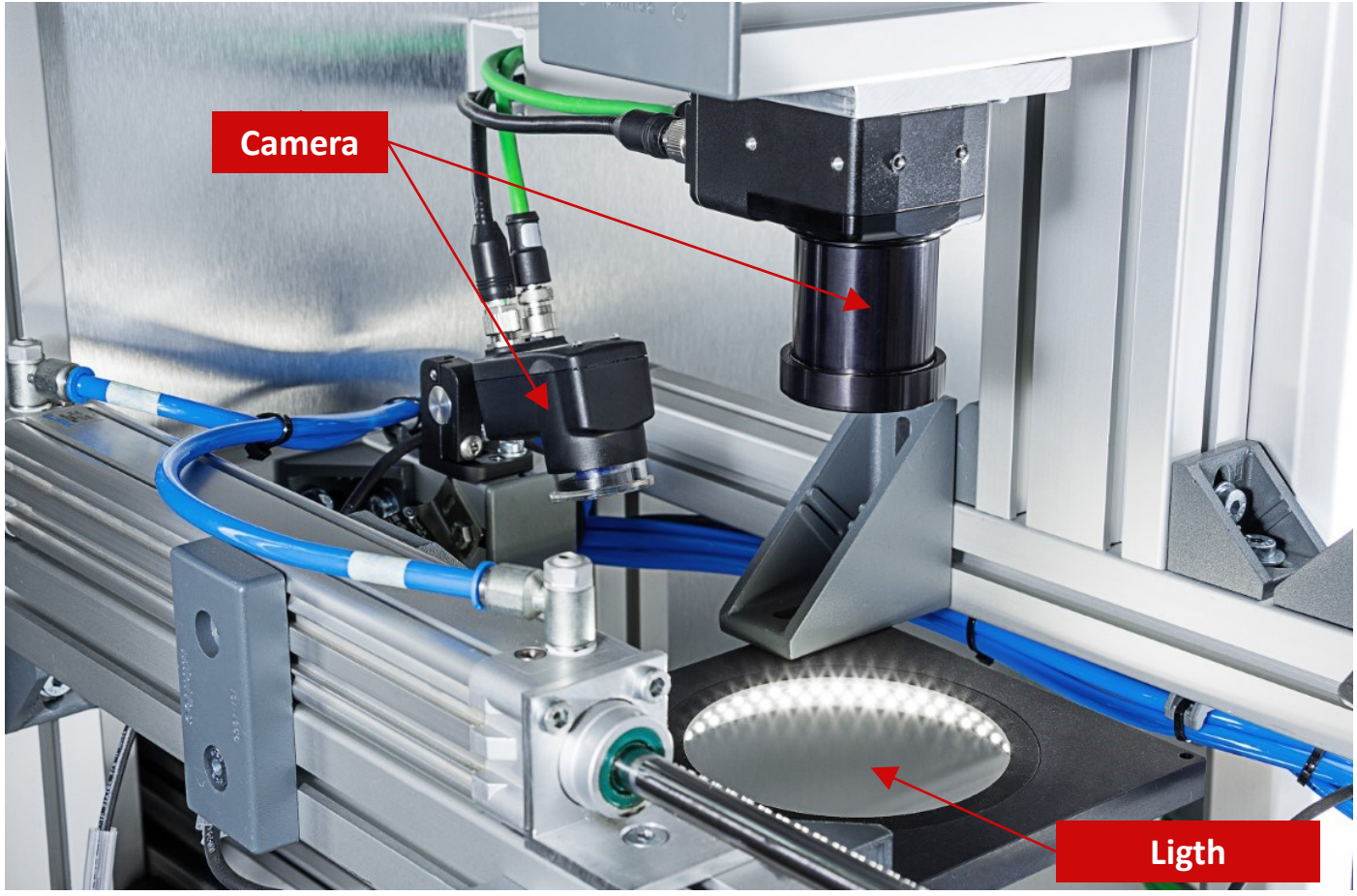
Dividing into fields and computer-controlled processing

Computer-controlled axis as traverse or cross table.
X, Y and Z axes
Rotary axes
Rotary-swivel units


Compurized cnc controlled XY table
Z axis
X-Axis
Y-Axis

Camera and vision system

For product recognition and code validation


Camera
Ligth

Fume extraction

Filter for laser fume

Fully automatic machine for fume extraction and controll

- Automatic flow control after setting the optimum air flow
- Interface to the laser (start/stop automatic)
- Easy installation
- Quiet operation
- Low energy consumption
- Low filter consumption due to optimised airflow

Laser engraving may produce hazarderous fumes, which is not good for the health. The dust may cause a lot of dirt in the laser machine. This might influence the laser quality. We recommend the use of the SK LASER laser fume extraction and filter system.

Fume extraction 400i

Prefilter

Mainfilter

Laser safety goggles

Stay safe with lasers of laser class 4

Protect your eyes when working with your class 4 laser. Direct irradiation of the human eye can cause serious damage. That is why this is important to protect the eyes with appropriate laser safety goggles.
SK LASER offers laser safety goggles for different wavelengths in different price ranges.

Fiber laser
1.060 nm

UV-Laser
355 nm

Green-Laser
532 nm

CO_2-Laser
10.600 nm

Basic Laser System

KOLLTRONIC®
F-Serie
C-Serie
Y-Serie
G-Serie
UKP-Serie
UV-Serie

F-Serie

10W – 300W
For processing metals and plastics, labelling, marking, cutting, welding, cleaning, ablation

G-Serie

3W – 20W
For processing glass and plastics as well as small lettering in the micro range.

C-Serie

10W – 450W
Working with plastics and organic materials such as wood, textiles, stone.
Marking, removing, cutting.

1.064 nm

Fiber Laser

10W - 20W - 30W - 50W - 100W - 200W - 300W

YAG-Laser 5W - 100W

Metal and plastic


SK LASER
KOLLTRONIC® F20C


KOLLTRONIC® Y5

532nm

Grünlichtlaser 3W – 20W

Plastic and other


KOLLTRONIC® G10

355nm

UV - Laser 3W – 20W

Best for plastic


seal is broken

10.600nm

CO_2-Laser 10W - 650W

For plastics, acryalic, glass and organic materials such as cardboard, paper, wood, textiles, fleece or leather.

150W extra

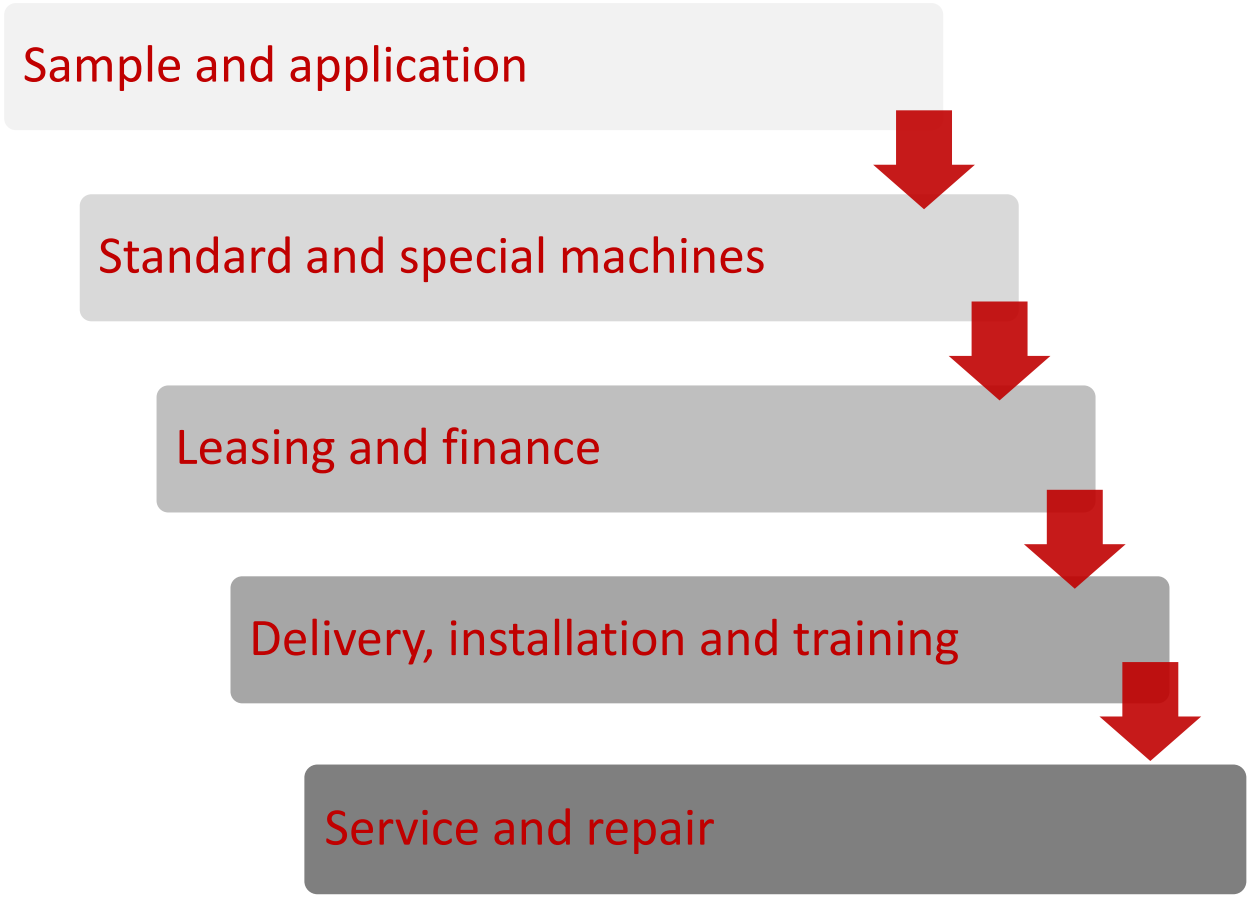
200W – 650W

100W – 150W

10W – 80W

SK LASER Service

All about laser


Sample and application
Standard and special machines
Leasing and finance
Delivery, installation and training
Service and repair

Aplication

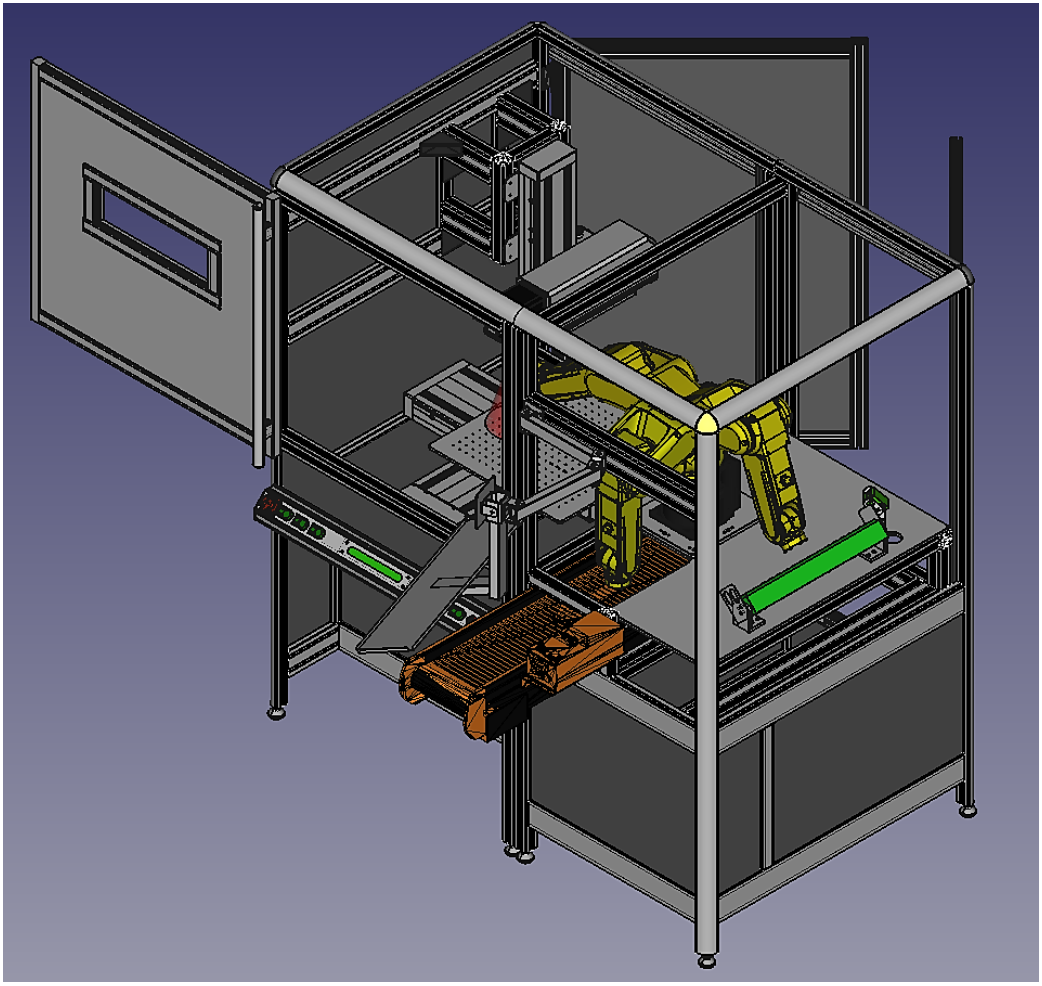
Idea to product

SK LASER offers support in finding the right laser to the aplication and will do testing and sample making.

Special construction

Steps of the project

1. Clarification
2. finding a solution
3. project planning
4. construction
5. Test installation
6. installation at the customer site
7. running-in of the system



Finance

Leaasing or renting a machine

Leasing
Leasing migth be a good way for the financing of a laser machine.

Rent
Rent a laser for the period you have a lot, ot too much to do.

Rent with laser specialist
SK LASER offers laser show for exhibitions

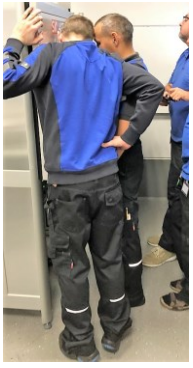
Purchase	Finance
Leasing	36 to 72 Month
Rent	Test, exhibition peak in production

Delivery Installation Training

We deliver our machines within Germany and the other countries with our own truck. We save packaging and the time it takes to pack the machine and hand it over to the carrier. The most important thing is that the machine arrives in a good shape and no scratches. So far, we can announce “0” defects.

packaging

delivery



installation and training

Service and repair

Wartung

Cleaning, calibration and maintenance of the system. Ask for a maintenance contract.

Repair

We love to help you if help is needed.

Disclaimer

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SK LASER

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