Nestled in the peaceful hills between Bamberg and Coburg lies the medieval town of Sesslach. The 'Pearl of the Coburg Shire' or the 'Worlds Most Beautiful Area' in the Upper Franconian Rothenburg, as the written about Sesslach by the Historian Johann Gottfried von Herder (1744-1803).

A walk through the tranquil alleys and streets of the old town takes you back to the middle ages. The town church of Saint John is also worth a visit. Visitors should not miss the Franconian way of life; the local Inns entice with traditional Franconian food and locally brewed Beer.

Geiss AG has been situated in this idyllic town since its incorporation in 1948. A close knit network of commercial representatives across six continents are served from here, enabling the supply of machines, moulds and parts produced in Sesslach, to find their way into the worldwide international markets.

A warm welcome from GEISS AG in Upper Franconia!
Dear Customers!

Why do companies choose GEISS AG? They seek change, new ideas and innovation!
It is true: everything changes, it is inevitable.
We paved the way during the second generation and made GEISS AG the global market leader according to our slogan 'one step ahead'.

We announce a big change in our lives, my wife Klara and I have placed our life's work into younger hands.

Klaus-Peter Welsch and Wolfgang Daum have now taken over the business for the next generation and we wish them both business management success, just as we enjoyed.
With excellently in-house trained staff on all levels, the new Management Duo has an experienced team to hand who understand how to assert themselves worldwide.

A most sincere thank you to all of our customers, suppliers and all those who wish us well.

The trust you placed in us, we ask you to continue to invest in Klaus-Peter Welsch and Wolfgang Daum.
We firmly believe that this is the best way forward for GEISS AG.

We now look forward to our free time and to fulfil a few more of our dreams.
Living the idea means to deal with the impossible as if it were possible.

(Johann Wolfgang von Goethe)

From a single source, GEISS AG offer plastics forming and post processing equipment to a worldwide audience!
For many years as the market leader in the thermoforming and plastics processing sectors, we have been successfully active in machine manufacture since 1955.

As the only worldwide specialist we offer a complete solution for plastics processing.
Our range of services include the design and construction of Thermoforming Machines, CNC Machining Centres, Horizontal Band Saws, as well as Model, Tool and Mould making for these machines.
True to our slogan 'one step ahead' we already solve tomorrows tasks and with a large number of technological developments and patents supporting this claim. With a highly skilled, qualified and committed work force, GEISS AG consistently stride forward.
Our 75% in-house training and above average proportion of engineers speak for itself.
We whole-heartedly believe that innovation requires employees with both excellent technical know-how and vision!
Trimming Fixtures and Fixtures Systems

Moulding and Tool making services serve as a basic element of Thermoforming and CNC Post Processing.
Tooling made at GEISS AG can support you in a variety of ways.
Building on our years of know-how in model and tool making.
Take advantage of: 'Everything from a single source'.

Tools and trimming jigs, of varying sizes and formats, are produced on modern 5 axis milling machines. These are then tested in-house on request, allowing for production to start immediately after delivery.

Thermoforming Moulds

Tool making at GEISS AG began when the company was founded in 1948 and draws on more than 70 years of model and tool making experience.
From today's point of the view the early days may have been for more simple thermoforming tools, i.e. inserts for cutlery trays which were created by hand, todays deep draw tool has few limits in terms of complexity.

In-house at Geiss such Tools are designed, using leading 3D CAD systems and produced on state of the art 5 axis milling machines. The use of pore free aluminium enables even the highest surface finish requirements to be achieved.

For extremely large tools we use aluminium castings with a defined wall thickness.

Through our manufacturing capabilities there are almost no size limits.

Examples
  · Refrigerator Doors, Liners and Trays
  · Sanitaryware (i.e. Bath Tubs, Shower Trays)
  · Roof Boxes
  · Technical Parts (Pallets, Airducts, Automotive Interior Panels, other Panels
  · … and many more
Milling devices / milling fixtures

Following the thermoforming process each part needs to be finished into its final form. Most often this is completed by trimming. Again, our tool making lends itself to offer you a wide range of support.

Trimming fixtures made from aluminium or Ureol, as well as complex weld constructions with a wide variety of clamping systems, can be the solution to your problem.

Since we have a wealth of experience in deep draw forming and know the associated difficulties, we can identify and minimise problems in advance. The fact that GEISS supply from a single source is certainly of benefit. Parts formed on Geiss deep draw machines can also be finished on Geiss Trimming Machines.

Programming/Consulting for Deep Drawing and Trimming

Parts in post processing require an adequate trimming program. We can also offer sound support in this area.

Trimming programs for GEISS Trimming Machines are created by us in collaboration with Tebis, using the 'Virtual Machine' option so they are supplied completely crash tested.

We also offer NC programs for laser trimming and cold knife cutting (6 axis program).

It often appears that when creating a deep draw tool, post processing should also be considered. A clever design can detect and avoid a collision with following operations on the trimming machine. This saves time and money.

It highlights the advantage of creating everything under one roof!

Speak to us about your future requirements and together we will find a solution.
We offer flexible and high performance technology based on the basic concept of the parametric design.
The parametric principle is implemented by CIM (Computer Integrated Manufacturing) Technology.
For you as the customer it means that you can choose your required machine size.
This means you are always 'one step ahead'.

Parametric design is the key to GEISS' success.
GEISS AG uses parametric design in all production sectors and computer integrated manufacturing (CIM).
Parametrically designed machines can be adjusted in size and degree of automation.
When a variable is changed, the design worksheets allow for automatic adjustments of all other components and dimensions.
The entire production process is scaled by our specially designed software.

Direct programming on the machines is no longer required due to GEISS' 'digital factory' with an almost 100% vertical integration.
A special program writes all program directories offline automatically.

The parametric design development is the strongest weapon for us and our customers!
GEISS AG offers Thermoforming Machines of the types T10 and Ts1 which are equipped to your requirements. The basic machine consists of a rigid frame construction with a closed machine chamber, equipped with servo motor drives, adjustable clamp frame, automatic sheet sag control, individually controllable top and bottom heaters, swivel PC control panel, plug assist and cooling fans with water spray mist.

A distinct advantage compared to conventional pneumatically operated systems is our newly designed drive technology with a high dynamic design. This reduces machine cycles times by approximately 60% whilst reducing energy consumption in excess of 50%.

Our Thermoforming Machines guarantee the processing of any new thermoplastic materials, regardless of the specification of the machine (processing in line with the material manufacturer instructions and compliance with the requirements of the material safety data sheet).

The following applies to both the type T10 and type Ts1:
- All Machines are CE Certified
- The Unparalleled Option List for both Types Permits any Specification and Automation

Typical additional Options could be:
- Pre-Blow Control
- High Performance Liquid Temperature Control Systems up to 90˚ or 150˚C, also higher Electrically
- Durable Pyrometers for Controlling the Forming or Demoulding Temperature
- Tool Clamp System on the Table and Plug Assist
- Motorised Adjustable Window Plate and Clamp Frame
- Short Size Quartz, Flash or Speedium Elements
- Amended Process – Undercut Function
- Fitting of Roll Feed Station or Sheet Loader
The T10 range from Geiss is the standard worldwide for larger Thermoforming Machines. The focus is on the T10 as the most productive GEISS Thermoforming Machine. It scores on significantly shorter cycle times and the compact design. The construction design and large interior of the heavy-duty universal moulding machine allows for the retrofitting of all GEISS options. This makes the T series one of the absolute high-tech solutions in terms of Thermoforming.

Type T10

The parametric construction design allows any reasonable minimum nominal size of 1000 x 900mm upwards. Dimensions such as 4700 x 2400mm or 3100 x 3100mm are nothing unusual and undergo the same production process. The nominal size of the machine relates to the largest sheet size that can be formed. The clamp edge is 20mm on each of the four sides.

The standard tool height of 620mm can also be adjusted to suit. Additionally, to the above mentioned comprehensive basic and additional equipment, further options are available, such as:

- Newly Developed Heater Elements with Higher Output
- Pressure Form and Twin-Sheet Equipment for the Manufacture of Closed Mouldings
- Special Equipment Package for Improved Processing of Acrylic
- Increased Closing Force (up to 60T) with Motorised Drives
- Automatic Tool Change Wagon
Baureihe Ts1

This series is suitable for typical thermoformed parts. The drive technology is comparable to the 'big sister' the T10, designed as a servo motor drive. Again, the parametric design applies. From the smallest available minimum nominal machine size of 1000 x 600mm up to a maximum of 1500 x 1000mm all sizes in between are possible. With a tool height of 450mm it meets most of the requirements of the market.

The typical options listed above are just an extract from the comprehensive list we can offer you.

We are happy to discuss your requirements in person and look forward to hearing from you.
Alongside the Thermoforming Machines Type T10 and Ts1, GEISS AG also offer CNC Post Processing Centres. These can be further equipped with additional options to suit the requirements of your products, if required. Using the parametric design, a machine of almost any size can be supplied.

The machines essentially consist of rigid, welded machine frame with a fixed table. The three main axes named as X, Y and Z relate to the perpendicular axes of a cartesian coordinate system.

The trimming spindle is held in an orthogonal or gimble head and is fitted to the machine rotationally on the vertical z axis. The pivoting b axis, the rotating c axis and the centre axis of the spindle meet at one point. During trimming the cutter tip moves continuously on a spherical surface around this cross point.

Our CNC Trimming Machine are:
- CE Certified
- Adaptable to meet the Specific Requirements of the Product in Terms of Quality, Handling, Cycle Times and much more by a Technically up to date Additional Options List
CNC Machining Centres

Typical options are:
- Trimming Spindles for a Variety of Application
- Additional Processing Options such as Ultrasound and Cold Knife (if no Ultrasound is required) and Laser Cutting
- Tool Changer
- Various Machine Tables such as Shuttle, Alternating and Rotary
- Machine Enclosures
- Swarf and Dust Extraction Systems
- Vacuum Equipment
- Measuring Systems
- Software Options, Data Acquisition and Logging
- Additional Services and much more

Areas of Application:
- Thermoplastics
- Glass and Carbon Fibre Reinforced Thermosets
- Moulded Parts made from GMT and SMC
- Moulded Parts made from Foam, Leather and a Carrier Part in Sandwich Form
- Wood Panelling
- Plywood Mouldings
- Lightweight Honeycomb Materials
- Blow Mouldings
- Model Making Foam for Tools and Model Making

We are happy to discuss your requirements in a person and look forward to hearing from you.
The Machine Series CNC10

Is our new Machine type since January 2019 alongside the existing ECO-PLUS range.

For this development the already existing Motors on the ECO-PLUS were used, proven in the market as future orientated and leading in the field of drive technology on CNC Machines. These in part include three phase servo, torque and linear Motors from Siemens.

The task put to our engineers was therefore much more complex and an idea generator for the new concept which included aspects such as:

- Modern Appearance
- Corporate Design Identification (as per the T10)
- Compact Machine Design
- Improved Machine Mechanics Stability
- Increased Rigidity of the Machine Housing and Axes
- Reduction of Variants and Options (more customer orientated)

It was clear that we needed a new machine design and the result is that we can now present our new CNC10 series!

The new development is completed by the latest generation ball screw assembly (KGT) for the linear axis.

This allows for an increased maximum X and Y axis speed (from 75m/min to 84m/min), direct central lubrication connection, increased KGT rigidity due to the larger diameter and shorter cycle times.

The CNC10 also follows the parametric design, allowing the designer the freedom to incorporate special requests and requirements from the customer.
Type ECO-Plus

CNC portal milling machine ECO-Plus
The advantages of the CNC path control, rigid gantry design and high flexibility have influenced the fast break through of our Portal CNC Trimming Machine. Using our parametric design, a machine of almost any size can be supplied along with a vast selection of additional options to choose from, offering customers the most automated processes. This machine type, a 5 axis gantry interpolated axes with a fixed machine table was designed for the trimming of plastic parts. Over the years this series has proved its worth time and time again in the processing of a variety of applications and the toughest of conditions.

Depending on the application, a selection of alternative Trimming Heads are available from the additional options list, suitable for the trimming of aluminium, wood and composite materials. The nominal machine size refers to the largest product block size to be trimmed in 5 axes, depending on the alternative head selected and the defined maximum cutter length used. All machines in this series are CE certified.
Instead of a trimming spindle, an ultrasound cutting unit with an additional NC axis can be selected from the options list. This option cuts materials without noise, materials too difficult or not suitable for spindle trimming. Ultrasound is used to longitudinally oscillate a cutting blade at a frequency of 20 kHz. This oscillating movement greatly reduces the cutting force (compared to Cold Knife cutting).

**Applications:**
- Trimming of Thin Walled Thermoformed Products
- Fully Automatic Cutting of PVC Flooring
- Cutting of Ski Skins
- Cutting of Rubber Parts, Carpets and Non-Woven/Fleece Materials
- Scoring of Airbag Weakening Lines in Door and Instrument Panels
- Cutting of Honeycomb Materials
We offer a gantry system with a 2500 W Laser Unit (CO2 slab laser) and associated emission control system in cooperation with ROFIN-SINAR Laser GmbH, acquired by Coherent Inc. in November 2016. Upon request we may be able to offer additional laser powered options. Laser cutting is a non-contact process, be it cutting, scoring or perforating and requires no further finishing processes. Support fixtures for components are constructed and manufactured relatively easily compared to full size trimming fixtures. All machines equipped with a full enclosure and motorised doors can be used as a laser cutting machine. Additionally, it is also possible to equip the machine with X and Y axis linear motors. There is a decrease in the required number of beam-guiding deflecting mirrors due to the structural redesign of the vertical axis. As a result, both the power loss of the deflecting mirrors and the maintenance effort is significantly reduced.

Laser Unit:
The diffusion cooled CO2-Slab Lasers are extremely service friendly and require little maintenance. They function well on few, very durable components and do not require conventional gas circulation which significantly reduces lifetime running costs. An energy saving standby mode also reduces power consumption.
Horizontal Band Saws

Horizontal band saws have been part of our portfolio since 1962 and are available in various sizes and specifications.

To date there are presently in excess of 500 band saws in operation worldwide.

These band saws are perfectly suited in combination with our sheet loader machines and are easily integrated into production lines. Examples of application areas for horizontal band saws are the trimming of vacuum formed parts and the cutting of foam blocks into slices.

Advantages at a glance:
- Automatic Endless Conveyor Belt Feed
- Slanted Cut
- Steplessly Adjustable 1:5 Feed Ratio
- Swarf Removal

The basic GEISS Horizontal Band Saw includes the following:
- Designed with Guide Rollers
- Centrically located Guide Wheel, should only part of the Band Width be used
- The Standard Machine Colour is Light Grey RAL 7035

The Horizontal Band Saw has undergone testing by the Wood Trade Association

All machines in this series are CE certified
Horizontal band saws with substructure

Our saws were originally produced as stationary machines, however, certain applications require some basic movement. Various additional options are available to customise a horizontal band saw to suit your particular requirements:

- Substructure for Level Adjustment between the Sheet Loader Machine and the Band Saw
  Please note: this option does not include the coupling for the thermoforming machine.
- Knife Sharpening Device for the Sharpening of worn Knives
  They are put into operation by simply swinging them in.
- Swarf Extraction on the Saw Blade and Conveyor Belt
- Suction Vacuum for the Perforated Conveyor Belt for the holding of Formed Parts
- Non-Standard Special RAL Colour
- Minimum Quantity Lubrication System for Improved Cutting Quality
- Noise Protection Canopy for the reduction of noise during Operation, reduced to approximately 4db
- Additional Hold Down Wheel to keep the Formed Product flat
Our Markets are:

**All means of Transport**
Buses, Trains, Aeroplanes, Heavy Goods Vehicles, Caravans and Motorhomes. These markets produce interior and exterior Trims, Light Covers, Spoilers, Seats, Sun Visors and Wind Shield Fairings. CNC Machines can also process products made of lightweight and composite materials as well as cut and trim Honeycomb and Composite Tractor Roofs.

**Automotive**
Interior Trims, Laminated Parts, Boot Liners, Roof Boxes, Wheel Covers, Roofs, Ultrasound Cutting and Trimming of Carpet Coverings

**Motorbikes**
Screens, Fairing Panels, Trims
Our Markets are:

**Agricultural Machinery and Diggers**
Exterior Covers, Wings, Tractor Roofs, Bonnets

**Packaging**
Transport Pallets, Separator Liners, Transport Trays

**Travel**
Hard Shell Suitcases, Vanity Cases
Our Markets are:

Medical Technology
Steam resistant Sterilisation Trays, Transport Pallets, MRI Scanner Lining & Housing

Refrigerators/Fridges
Interior and Exterior Doors, Interior Liners and Trays

Furniture
Cutlery Trays, Upholstered Furniture Frames, Panels, Covers

Advertising
Street Signs, Illuminated Advertising, Displays (POS)
Our Markets are:

**Sport**
Surf Boards, Body Boards, Trainer Soles and Heels, Cycling Helmets, Ultrasound Cutting of Ski & Snowboard Covers

**Building**
Light Domes, Insulation Products, Underfloor Heating, Exterior Construction Cladding, Wall Imitation, Bio-Reactors, Cellar Light Ducts, Sewage Gutters and Drains, PVC and Carpet Tiles

**Lighting**
Light Covers

**Sanitary Ware**
Bath Tubs, Showers Trays, Shower Enclosures, Shower Screens, Spas
Transparency results in satisfied customers who, in turn, are the best source of reference. For many years the flexibility and broad know-how extended to our customers has placed us as a reliable partner and supplier. We engage with customers from almost all plastics processing sectors: Pragmatists, Innovators and people who look at market challenges. As a Machine Manufacturer our services are focused on our customers requirements because customer satisfaction is our most important goal.

Thank you for your Trust!

your GEISS AG – Team
'a new GEISS will cost the customer money – no new GEISS will cost the customer orders.'

(Sabine Welsch)