

LASERPOINT

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Laser class 1 or laser class 4, do these refer to school classes? No, they are in fact specifications of laser safety.

Laser is catching on in the educational sector

Inventor of the future

eurolaser in the footsteps of Leonardo da Vinci

High-tech keyboards from Switzerland

Successful eurolaser customers

The eurolaser team visits ZÜND Systemtechnik AG

company outing to Austria and Switzerland



Shaping the future

Dear readers

Once again we would like to address you with some interesting new reports from the life and world of laser technology. Today more than ever we attach great importance to a sense of humanity and to behaving fairly to each other and among each other within our sphere of activities. We believe this approach is particularly important in an era of opening markets and cultures. Even in the new business relationships being built daily, exemplary behaviour counts among the most important characteristics of any company with a sense of responsibility. Role models often function as guiding principles in our firmly established democracy, models whose importance is sometimes underestimated.

So we feel called upon to declare fairness and a sense of humanity in our dealings with employees, partners, customers and suppliers as our highest targets. With confidence in our joint future we wish to exert an exemplary effect. To create trust instead of arrogance and to make a real contribution under the premises of humane and ecological behaviour. Having said that, please go and enjoy reading about the technical achievements of eurolaser GmbH and its partners and about the latest successes of our customers.



We wish you a very successful business year marked by a sense of humanity.

M. Kluczinski & H. Hasse

Laser is catching on in the educational sector

AWAKENING THE ENTHUSIASM OF FUTURE GENERATIONS

aser class 1 or laser class 4, do these refer to school classes? No, they are in fact specifications of laser safety. But, this is not the topic of this "Laserpoint" edition. Vocational training and further education have been a core issue at the eurolaser GmbH ever since its foundation. In addition to the focus on laser technology, the vocational training program also includes the classic commercial professions and on right down

to the highly specialised mechatronic technician qualification for laser specialists. This has all been part of the daily routine at eurolaser for years. Vocational training and further education is vital for one's professional life and for integration in a social community. An international flair is on the march, with people from all over the world visiting the company almost daily to find out more about our products and system solutions.





Creating prospects for the young and their future - looking beyond "one's own nose"

The same, or something similar, could be said of the interdisciplinary aims of all training courses at eurolaser. Although we promise "no bed of roses". It is more the case of trainees switching into "After-Work-Chill-Down-Mode" after a challenging ten-hours training session. And this for a good reason. We compete in a global context and have to reassert and prove ourselves on a daily basis through our knowledge and our experience. This is clear for all the trainees at eurolaser who do give their best to ensure their work contributes to the success of the company and provides support for the whole team. They can all draw their own success and a large portion of self-confidence from just such success.

School children and students are also always welcome quests, e.g. on Girls Day or during work experience stints in our compa-





ny. We especially look forward to having visits from interested people, who bring their young offspring along with them, during school holidays for example. The interaction between people and technolgy often leaves a lasting and formative impression on children and young adults. Regardless of the reason why young people come to us, whether for professional guidance or as an outing from a vocational school, they all certainly take one thing away with them: assurance and motivation - and this as a matter of course.

There should be no lack of positive examples in these days where newspapers just love propagating negative headlines that gain readers and generate publicity. A tour around the north German manufacturing company offers an exciting glimpse of a productive and motivated community. But it is not just all fun and games. More often than not you see people working hard, concentrating all their energy on completing a task within a very tight time frame. Set targets that secure the future of the company and the workplaces of meanwhile 70 people. There is no doubt that with a sense of humanity and trust in the location of Germany in Europe it is possible to produce high-tech products and market them worldwide.

But it is not only within the company that laser technology is catching on. Thanks to a particularly active marketing strategy, many windows are now being opened up for new and innovative ideas on a very different level. For several months now eurolaser has been intensifying its participation in conferences and symposia, in order to promote new and important chances of cooperation with the manufacturing industry, for example. Awaking curiosity in universities

of cooperative education or universities of applied science and others is not an aspect that is neglected here. Interest in new technologies is stimulated in the school and education sector and inhibition thresholds and prejudices against new technologies overcome. It is not unusual to find laser cutting and engraving systems installed in university labs where they serve as a first contact with such technology. Learning by doing is the best way to become acquainted with the unknown, eurolaser understands its role here very well. Laser is serving is catching on in the educational sector and not without consequences. Just take a look at the wide spectrum of our customer repertoire and in many cases you will find revolutionary approaches in manufacturing and production processes that have been brought about by laser technology. In the last instance everyone profits from the resulting products and product benefits. Find out more about this in our next edition of



"Laserpoint".



Love of detail par excellence

»BUSCH AND EUROLASER, TOP-LEVEL CREATIVITY AND PRECISION «.

Thomas Stegmann, Manager of the establishment Schönheide









t would be hard to find another company that is as popular with model railway enthusiasts as Busch GmbH & Co. KG. With more than 1,000 model railway articles the traditional manufacturer from Vierheim (Rhein Neckar) leaves nothing to be desired. In addition to classic model railway accessories. Busch also offers articles for dioramas (3-D landscapes), fantasy worlds and architectural models. If the model world is to be kept as realistic as possible the portfolio must include trees and bushes, roads and scenery construction as well as models of buildings and technical elements with lighting and sound modules. The love of detail exhibited by these top quality

articles makes the heart of every model railway and model making enthusiast beat faster.

The successful company with its 130 employees has gained its expertise in over 50 years of experience in the world of model making. However, unlike many other companies in the toy branch, Busch produces the majority of its articles in Germany or other places in Europe. It even manufactures the plastic injection moulding tools it needs for production in its own plant in Germany.

"Made in Germany" is the formula of success that has made the company Busch what it is today. - Another thing that makes

the model maker the leading company in its branch, apart from the benefits reaped from having a location in Germany, its willingness to adopt technical innovations - particularly where its filigree accessories are concerned. This was lustrated in the year 2008 when Busch

extended

traditional ma-

its

nufacturing processes to include laser technology and since that time it has been producing scale laser-cut parts. This innovative manufacturing process is carried out on laser cutting and engraving systems from eurolaser. The technology from eu-

has helped Busch to lower its production costs noticeably. Blunt tools and wear parts are a thing of the past, the use of laser is today's solution and will remain so in the future.

rolaser provides the company

Wooden girders for the model railway station cut out with top precision



with all the benefits to meet the high demands placed on model making.

In addition to its Tool Making and Plastic Injection Moulding Department, Busch has had its own Laser-Cut Department since 2008, in which the highest requirements within a process are fulfilled through contactless cutting and engraving. The reduction in the number of job steps achieved with use of laser technology

Quality, perfection, precision and looking further than its own nose is what makes Busch outstanding.

Busch GmbH & Co. KG Heidelberger Straße 26 68519 Viernheim Germany www.busch-model.com







Innovative table concepts to ensure perfect results

SPECIALLY DEVELOPED SUPPORTS FOR THE OPTIMISATION OF LASER PROCESSING

If laser processing is to be successful you need more than just a high-quality laser source and an outstanding movement system, you also need a sophisticated material support concept. The table concepts tailored to match the application mean you can make optimum use of your laser system. A modular concept that leaves nothing to be desired.

Overview of the safety benefits of our table concepts:

- Optimum extraction of the cutting emissions
- Strict compliance (limited health risk)
- Reduction of exhaust volumes = less loss of room heat and energy
- Potential back reflections kept to a minimum
- Safety concept for smoke burns in the case of critical applications
- Simple care and cleaning

Overview of the application benefits of our table concepts:

- Clean material surface thanks to laminar extraction of fumes
- Combustion residues on the back of the material kept to a minimum
- No slipping of light workpieces and small parts
- Simple changeover of material supports
- Optimum focus guidance thanks to flat surfaces
- Adapter support plates for mech. tools (milling, knives cutting etc.)
- Small parts do not fall through the support grid

Table concepts – as versatile as your applications

We present here four table concepts from our range by way of example. Seen from very different perspectives their modular concept certainly makes them all-rounders:



Raster plate (RP) – ideal for acrylic applications

The reflection of excess laser energy is reduced to a minimum due to a special absorption surface. This easy-care table concept is particularly suitable for sensitive materials such as acrylic, where even the smallest back reflections are visible.



Conveyor (CON) – cutting of textiles straight from the roll

This table support made of a stainless steel web is ideal for light, thin and flexible materials such as textiles, foils, gauze or non-woven fabrics. It serves both as a material support for machining process and at the same time as a transport element.



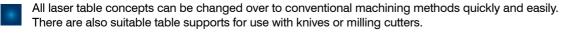
Honey-Comb (HC) – our specialist for foils and wood

The structure, which is similar to a honeycomb, is made of a thin highly-stable aluminium foil that facilitates especially good generation of a vacuum under the material. Channelled extraction of the cutting emissions keeps the back of the material virtually clean. So this material support concept is used primarily for flat, instable materials.



PIN Concept (PC) – for high laser powers

A table concept made of robust brass or PMMA support pins. This concept is used for high laser powers and high waste gas emissions. Typical fields of application are cutting dies and wood processing > 10 mm.

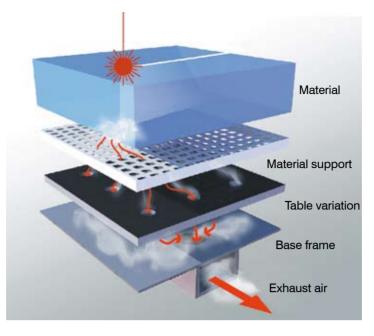




Efficiency through intelligence

A vacuum is generated under the material being machined during laser processing. The larger the part of the processing surface that is covered by the material being processed, the higher is the suction effect and the resulting suction vacuum. Whereby only as much volume flow as necessary is extracted. The room climate remains almost unaffected.

Today more than 2500 different applications are carried out on our special table concepts. An open structure that clearly keeps all options open.



Our solution is the right one

Everything depends on coordinating the machine to match the respective application. The modular design of eurolaser laser systems means that a specially coordinated configuration is possible for every requirement. The machine design is based exclusively on the requirements of its subsequent use. So you can be sure that you always use your laser system efficiently, even if you wish to process different kinds of materials.

Better cutting results and protection for personnel and environment

EXTRACTION AND FILTERING OF CUTTING FMISSIONS ON TESTED SYSTEMS

Despite all the benefits offered by laser processing, there are still some emissions arising from the thermal processes that need to be extracted safely and if necessary filtered. However, the relevance of an application-related extraction solution is all too often underestimated. eurolaser would like to look more closely at this topic for you and summarise the relevant aspects, not only with a view to process reliability but also for reasons of safety at work and environmental protection.

Cutting quality

Extraction of the cutting emissions prevents smoke deposits and processing residues soiling the material thus ensuring clean surfaces.

Material positioning

The vacuum that is generated prevents lightweight workpieces from slipping and small parts from lifting. In addition the negative pressure ensures that thin, flexible materials (e.g. foils, wood veneers) lay evenly on the material support thus enhancing processing.

Special extraction technology has an impact on

- · Cutting quality
- Cutting speed
- · Material positioning
- · Safety at work
- · Questions of environmental protection

Cutting speed

Higher processing speeds can be achieved thanks to optimisation of various parameters (laser power etc.). Although increasing process efficiency also entails higher suction flow volumes and special filter requirements.

Safety at work

A well-dimensioned extraction system improves the ambient air and protects the machine operators from hazardous substances. Whereby the maximum environmental limit values for body- and healthcare must always be observed. The risk of fire is also significantly reduced, in particular in the case of acrylic applications, because acrylic fumes are highly flammable.

Environmental protection

The right filter systems separate coarse and fine dust particles up to filter class HEPA (H11). Hazardous substances, even from the gas phase, are removed using activated charcoal adsorption filters. This means that ecological questions with regard to environmental protection and compliance with anti-pollution law can be met to an ever increasing degree. Cleaning up our act in every laser application.





The eurolaser extraction and filter concepts explained in detail:

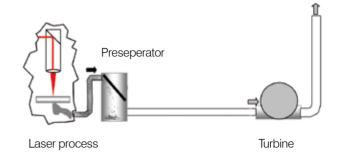
In order to provide the best possible extraction concepts for our users, eurolaser works closely with several specialist partners. This has resulted in the creation of application-oriented solutions that focus on all individual requirements:

- Extraction concept EU
- Extraction and filter concept EFU with multistage emission filtering
- Extraction and filter concept EFC with multistage comfort emission filtering

The simple solution

Extraction concept EU (Exhaust Unit)

- + Complete extraction of the emissions by means of special suction devices above and below the material
- + Compliance with relevant safety at workplace (Maximum Admissible Workplace Concentration)



The safe solution

Extraction and filter concept EFU (Exhaust- and Filtering Unit)*

- Complete extraction of the emissions by means of + special suction devices above and below the material
- Compliance with relevant safety at workplace (Maximum Admissible Workplace Concentration)
- Compliance with environmental aspects (Technical Reference Concentration)
- Application-dependent, multistage filter concept for minimi-++ sing exhaust emissions using activated charcoal and fine dust particle filtering



The efficient solution

Comfort extraction concept EFC

(Exhaust- and Filtering Comfort)

- Complete extraction of the emissions by means of special + suction devices above and below the material
- Compliance with relevant safety at workplace (Maximum Admissible Workplace Concentration)
- Compliance with environmental aspects (Technical Reference Concentration)
- Application-dependent, multistage filter concept for minimising exhaust emissions using activated charcoal and fine dust particle filtering
- Additional micro-particle filtering + + +
- Automatic filter cleaning mode + + +
- Modular design, configured dependent on the application + + +
- Suitable for plants with ecological certification + + +
- Industrial solutions with multi-machine connections possible + + +
- + + +Higher productivity thanks to lower testing and maintenance costs
- Special filter system technology for lower energy and filtering costs + + +





Preseperator

Absorbtion filter

The extraction concepts ensure consistent extraction and filtering performance. They take into consideration the laser power used, the processing surface including table concept, processing speed and choice of materials to ensure you are offered the best possible coordi-

^{*} not suitable for wood applications, conveyor and PIN concept







Laser system from Lüneburg awarded "innovative technology" prize

2ND TO 4TH FEBRUARY 2011 IN WARSAW "INTERNATIONAL DAYS OF ADVERTISING"

he seventh edition of Rema-Days took place in Warsaw from 2nd to 4th February 2011 under the motto "International Days of Advertising". It is one of the largest advertising fairs in Central Europe. With its focus on "Out & IndoorSystems", "Gifts-World" and "TechnologyPark" it unites the three major sectors in the branch and provides an informative platform for anyone interested in advertising.

During the fair the best exhibitors are honoured with the Korony Reklamy award 2011, which is presented every year. Our laser system was awarded third prize in the category "innovative technologies". The outstanding feature of the system is its modular design with enables speedy refitting with mechanical tools for milling or cutting in just a few minutes. In addition its design is especially user friendly and application oriented.

The materials used in the advertising industry are becoming more varied and more specialised all the time and customer demands more challenging. A production

system that is as flexible and accurate as possible while at the same time remaining profitable is what is needed to meet these volatile market requirements.

A wide range of materials can be processed with laser light, these include wood, plastics, coated metal, textiles and paper to mention just a few. All imaginable contours including the finest details can be cut, marked and engraved extremely well thanks to the use of state-of-the-art laser technology thus opening up completely new horizons for the

branch of advertising media. It was these versatile application possibilities plus top precision that convinced the jury of advertising specialists. The award for the laser system was presented to eurolaser's partner Colop Polska Sp z o. o. The M-1200 laser cutting system with its 400 Watt laser power which was on show at the fair was used to demonstrate the processing of acrylic glass, wood and foil.

Inventor of the future

FUROLASER IN THE FOOTSTEPS OF LEONARDO DA VINCL

eonardo da Vinci predicted the future almost 500 years ago. With his words: "There will be wagons drawn by no animal that will move at unbelievable speed," he prophesied a new era of locomotion to his sceptical contemporaries, who were still forced to travel with great difficulty using donkey carts and horse-drawn carriages.

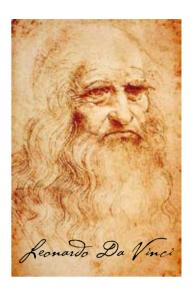
With its special exhibition "Leonardo da Vinci – Inventor of the future" the German Salt Museum in Lüneburg presented one of the greatest celebrities of the Renaissance era. What a lot of people do not know: in addition to his artistic masterpieces, da Vinci was also a brilliant scientist

and inventor who bequeathed an enormous wealth of knowledge in the form of studies and inventions to mankind.

Many of his inventions were so advanced in his day that they could only have been realised with today's state-of-the-art technology and modern materials. His visions have been made into three-dimensional models for the Lüneburg exhibition, so visitors can actually see how they function. The machines from a multitude of different fields are not just there to be looked at, they tempt you to take them in your hands and try them out.

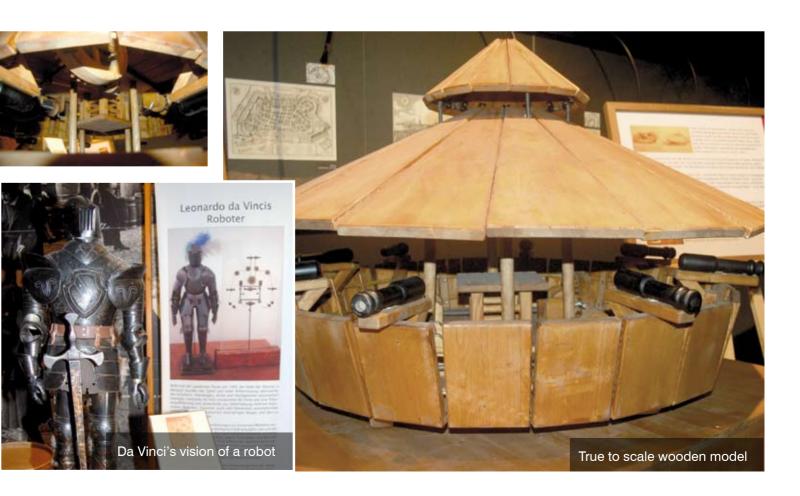
As a local mechanical engineering company based in Lüne-

burg, it was just impossible for eurolaser not to lend its support to this exhibition. Matthias Kluczinski, partner at eurolaser GmbH: "With his ideas and inventions Leonardo da Vinci was ahead of his times and managed to give new impetus to future generations. This wealth of ideas and the urge to explore the unknown is exemplary; it should also motivate us today to try out new technologies and undertake continuous improvements. Laser, too, can be designated the technology of the future, so our commitment to this Lüneburg exhibition was a foregone conclusion. We hope that lots of people visit the German Salt Museum and go home full of en-



thusiasm for the inventiveness of da Vinci."

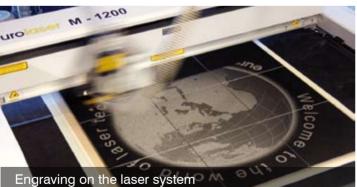
As a painter, sculptor, anatomist, architect, natural scientist, mechanic and inventor the universal genius Leonardo da Vinci has remained an inspiration for many people the world over right up to the present day.













THE NEW EYECATCHER AT THE EUROLASER FOYER

Granite – impressive and versatile. A rock just made for design ideas in interior fittings and much more. Granite is often found in indoor areas where it is used as floor tiles, staircase elements, work surfaces in kitchens as well as in bathrooms. Due to its resistance to soiling it also often used in outdoor areas for the surfacing of patios and driveways and for tombstones.

High-gloss polished granite surfaces are particularly well suited for impressive laser engravings. Thanks to the smooth surface and the fine-grain texture images accurate down to the last detail and with outstanding contrast properties can be applied with contactless processing.

The surface of the rock is removed by laser beam. A rough, matt area is left, which appears like a change in colour against the polished areas. The darker the rock, the more intense the contrast generated by laser engraving appears. The quality of the laser engraving is permanent, frost-resistant, weatherproof and does not fade with time.

Compared to conventional processing methods such as chiselling or milling, the eurolaser raster engraving unit can be used to engrave grey scale pictures on the material surface as well as black and white motifs. Realistic and impressive pictures or patterns in granite – a challenge for new ideas.

Your benefits of laser engraving at a glance:

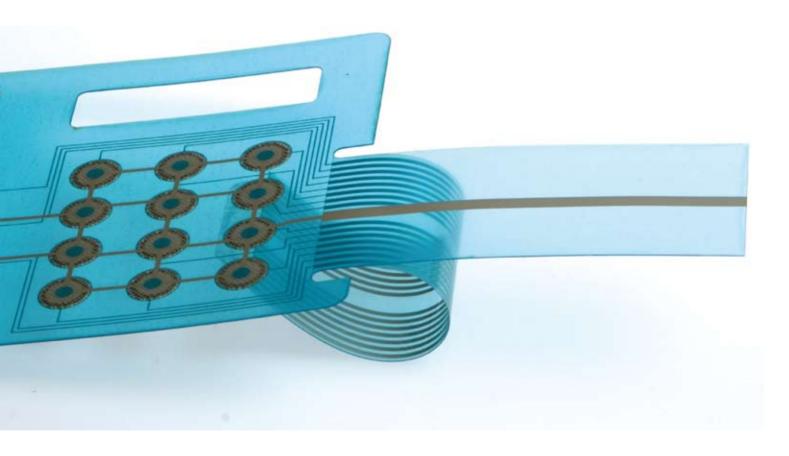
- Contactless, no clamping necessary, no material damage
- No tool wear and no retooling in contrast to chiselling or milling
- High level of repeatability with consistent quality
- Extremely fine contours and details possible with a resolution of up to 1200 dpi
- High contrasts in particular for smooth, polished surfaces



ALGRA

High-tech keyboards from Switzerland

FLEXIBLE - DURABLE - SOILING-RESISTANT

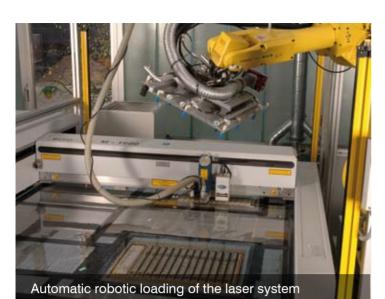


You find them everywhere, in high-tech devices, medical technologies, mobile phones, electrical household appliances, remote controls or industrial machines. Flat keyboards have definitely made a break-through worldwide and across all branches. Modern industrial design combined with a compact construction make them the ideal economical solution for input elements.

ALGRA AG from Switzerland has devoted itself to this special field. It develops and manufactures printed plates, panels and keyboards and can draw on decades of experience. This accumulated expertise has made ALGRA a world leader in this segment.

Keyboards must always remain operational no matter what special conditions they are subjected to and they must be capable of resisting external impacts such as moisture and soiling. In other words they have to meet special criteria, whereby the combination of flexibility, ease of cleaning and durability are of vital importance.

Membrane keyboards must meet high demands where impermeability is concerned. This means that the membranes must cut with absolute precision. ALGRA uses two eurolaser systems for the accurate cutting of the required shapes, whereby the use of laser for the cutting processes brings two significant benefits. On the one hand the extremely thin laser beam ensures that the membranes are cut accurately and on the other hand the thermal process means that the cut edges of multi-layer foils are fused. This sealing of the edges offers automatic protection against soiling without the need of any additional processing.





Reto Barmettler, Manger of engeneering and assembling:

The high degree of flexibility and accuracy provided by the eurolaser system technology is the reason we prefer laser cutting to punching. Camera recognition of optical markings has brought enormous benefits for panel processing.

In order to automate the production of the high-quality keyboards, one of the laser systems is fed with membranes directly from a robot. The position of the foil sheet is recognised per camera and cut exactly. Then the keyboards are collected again by robot and separated from the rest of the sheet. Thanks to the fully-automatic system it is possible to operate round the clock and to utilize the potential of the laser systems to the full.

Thanks to its many years of experience in the field of membrane keyboards ALGRA is well aware that customer orientation

plays an important role in the production of an optimum keyboard. This approach means that the individual requirements and specific demands of each and every customer can be met. ALGRA offers its customers indepth consultations and supports them as partner from the word go with the development of complete solutions. This is only way that the current demands of the market can be realised with innovative ideas.

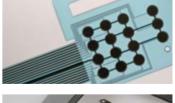
Close proximity to the market,

extremely high-quality products and professional, state-of-the art production systems add up to make ALGRA a global player today and on going.

ALGRA AG Rigistrasse 1 5634 Merenschwand **Switzerland** www.algra.ch













The eurolaser team visits ZÜND Systemtechnik AG

COMPANY OUTING TO AUSTRIA AND SWITZERLAND

All the eurolaser employees returned to their offices cheerful and motivated after a 3-day company outing to Austria and Switzerland. All of them? No, unfortunately one of us had made a painful experience. Despite suffering a bone fracture during the last toboggan run, our colleague just could not hide his enthusiasm for the trip.

But let's start from the beginning: We set off on our long but nevertheless entertaining outward journey on Thursday evening in one of the most modern coaches in the world. As planned the coach took us to our destination - the Zünd Systemtechnik AG company, our most important supplier where the basis of excellent laser processing systems is build on. We arrived in Altstätten on Friday morning where we received the customary warm welcome from Mike and Oliver Zünd plus the founder of the company Karl Zünd and his team.

An extensive tour of the company and various presentations and demonstrations gave many eurolaser employees their first chance to meet their Swiss colleagues face to face. A glimpse behind the scenes answered a lot of open questions and gave us a few ideas for our own tasks to take home with us. After enjoying a small but excellent snack in the company we all set off in brilliant sunshine with the Zünd management for a sight seeing tour of Appenzell and then on to visit the Apenzell show dairy. The Appenzell country is renowned far beyond its borders for its extremely high-quality natural products. Of course the guided tour of the dairy's production halls ended with a traditional cheese tasting session. To round off our first day in Switzerland we visited the "Hirschhöckli" where we spent a cosy evening together feasting until late in the evening in typical Swiss style. A pleasant get-together that was not only a culinary indulgence, but also served to build up a sense of mutual trust. Once again in the long history of this exemplary business relationship we were to hear from the leaders of this globally successful cutter manufacturer just much they appreciate the loyal cooperation with the eurolaser team. We all drank a toast to good health and our joint success in meeting new challenges and for future projects.

On Saturday all we northern Germans had to get up very early. Our destination was Lech in the winter sport region of Arlberg in Austria. We all made good use of the chance to ski, snowboard or zipfelbob in the bright sunshine. There was an exciting 1.2kilometer toboggan track and a 22-km ski run to be covered at a height difference of about 5,500 meters - sheer pleasure and enjoyment. And if the first run was not enough, everyone was free to go up the mountain a second time with the mountain railway where the fantastic view and a little refreshment on the alp were thrown in free of charge. Exhausted from the fresh mountain air we made our way back to the hotel in the evening. There we found an Indian buffet ready and waiting to be enjoyed and to restore our tired spirits again. The successful weekend was concluded with a visit to a disco where we celebrated to dance music before heading home to Lüneburg after breakfast on Sunday.

There is only one question left to be answered: What is more tiring, working in the company or a works outing?







eurolaser - Staff News

New recruitments

Name	Profession	Start of employment
Sabrina Damm	Receptionist	01.01.2011
Wladimir Mescherikow	Production worker	01.02.2011

Anniversaries

Name	Date
Thomas Lohmann	01.12.2010
Diana Jeremias	01.02.2011
Nina Weigandt	02.04.2011
Juri Michel	09.04.2011







Time in the company

5 years 10 years 10 years 10 years

Examinations passed

Name	Date	Profession
Ibrahim Bayour	12.01.2011	Mechatronics technician
Stephanie Lübberstedt	14.02.2011	Office administrator



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