



up grade

Journal for customers, employees and partners

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■ LASCO TRENDS

EMO: Innovate Manufacturing

As the world's leading trade fair for production technology, EMO Hannover brings a breath of fresh air to the industry with a new exhibition area, new formats and thematic focuses. LASCO presents innovations.

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■ LASCO KNOW-HOW

Die forging: New drive concept

The new drive concept from LASCO opens up previously unattained variability and precision in hammer forging. Possibilities of proportional valve technology are fully exploited.

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■ LASCO PRACTICE

DreBo now has the knack

With an increase in efficiency and quality, the DreBo tool factory has changed its production technology. This is really paying off.

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We make environmental protection possible

Time and again, politics takes aim at machine tools and demands that they become more energy efficient. Of course, it is the task of us manufacturers to make our products as energy-efficient as possible.

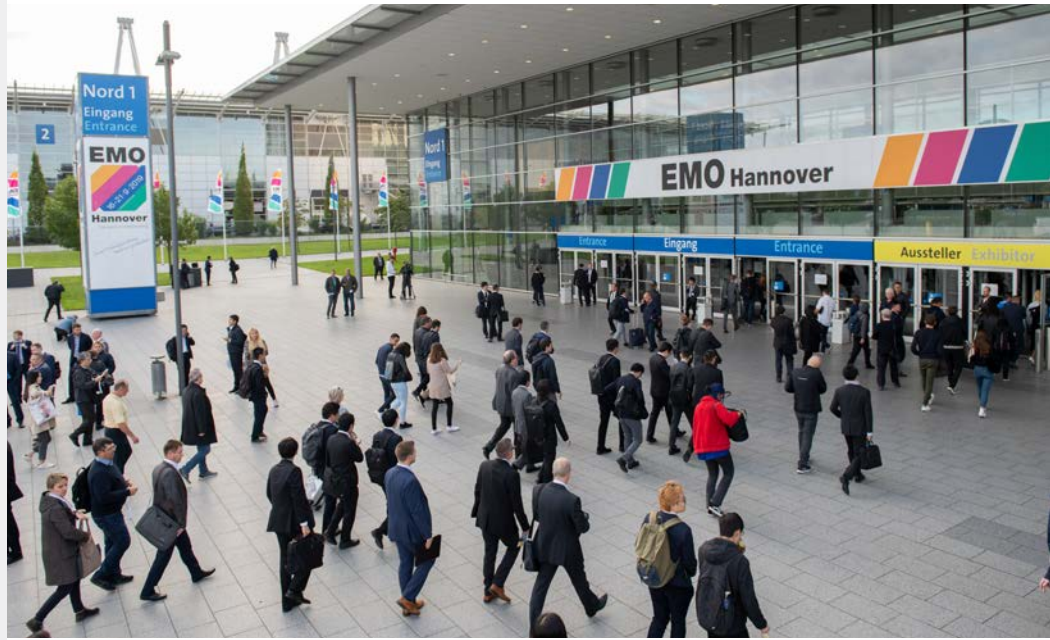
Users of LASCO technology know that our company in particular faces this latent challenge with great passion and time and again generates advanced solutions that are considered groundbreaking in the industry and beyond. Buzzwords such as "hydraulic servo direct drive" or "energy recuperation" stand for such developments and are eloquent examples of the fulfilment of the claim to increase economic efficiency not least through resource efficiency.

However, a fair assessment of energy efficiency requires a more differentiated approach. The production methodology and in what way and for what purpose these goods are used must also be included. In practice, for example, it is not uncommon for higher energy input to be required at the machine tool in order to realize more complex geometries and/or process more demanding materials. This enables our customers to manufacture products which achieve higher resource efficiency than their predecessors. Lightweight construction in the automobile provides many examples of this. Energy generation from wind power is inconceivable without machine tools, as is future mobile and immobile drive technology. And it should be obvious to everyone that the range of an electric vehicle depends on the efficiency of the drive, which in turn is reduced by friction losses in the transmission, for example.

These few examples alone make it clear that looking at the energy consumption and/or the CO2 footprint of a machine or plant alone is far from sufficient for assessing the sustainability contribution of machine tool manufacturing. The truth is that many clever ideas for sustainability, decarbonization, resource efficiency and pollutant reduction would not be feasible without solutions from the mechanical engineering sector. Environmental protection - we make it possible.

Yours, Lothar Bauersachs
Chairman of the LASCO Management Board

LASCO TRENDS + MARKETS



The world's leading trade fair for production technology, EMO, will again be held in Germany in September.

Leading trade show EMO focuses on modernization INNOVATIONS STAGE

Innovation and change are in the DNA of production technology. As the world's leading trade show for the industry, EMO Hannover reflects the far-reaching changes in working methods, technology, sustainable production and the organization of production and business processes. This year, the expectations of the trade are particularly high.

With 180,000 net square meters of exhibition space, participation is a must for both manufacturers and visitors from all areas of metalworking. Because this is where the decision-makers and preliminary decision-makers in the industry meet, from skilled workers and department heads to board members or managing directors,

exhibitors from all over the world have long aligned their innovation cycles with their EMO trade show appearance.

The last time EMO was held in Germany was in 2019, before the Corona pandemic broke out, and it attracted 2,200 exhibitors from around the world. This year, there should

Against this background, it is no longer a matter of course that EMO is also traditionally a consistent date in LASCO's trade fair calendar.

This year we are exhibiting in **hall 13** at **booth number C78**.

The presentations will focus on innovative manufacturing and automation solutions, robotics in solid and sheet metal forming, as well as numerous advantages of new or further developed drives for forming units of various types.

At no other trade show in the industry can so many trends and innovations be experienced up close as at EMO - because



be at least as many. EMO Hannover has been appearing with the claim "Innovate Manufacturing" since 2021.

Austrian pewag group invests again in the Czech Republic

PEFORM GETS THIRD LASCO FORMING UNIT

ING. IVO LAJKSNER, MANAGING DIRECTOR

The Austrian Pewag group continues to expand its manufacturing capacities in the Czech Republic. In the coming days, another LASCO drop forging hammer will be installed in Chrudim.

The site is the forge of the subsidiary Peform Chrudim s.r.o., which currently employs 90 people and produces flanges, chain links for tracked vehicles in the construction and forestry industries, and heavy chains. Investments are being made in capacity expansion due to sustained high capacity utilization and full order books.

The all-around positive market situation is decisively supported by the performance of two LASCO HO-U 630 and HO-U 500

double-acting die forging hammers, which Peform put into operation in 2018. The high reliability of both units is particularly appreciated. This has facilitated the decision to now order technology from LASCO again. Only a few weeks passed between the inquiry and the placing of the order at the end of 2022.

The new HO-U 500 with 50 kJ blow energy will be installed and commissioned this summer.

The Pewag group is a leading global manufacturer of snow chains, forestry chains, load chains, spring chains, slings and safety chains. The group currently has annual sales of more than 250 million euros with around 1,200 employees in 120 countries.

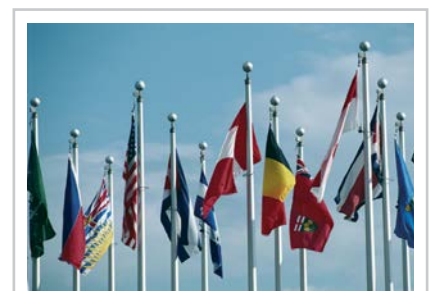


The massive U-frame of the new forming unit alone, weighing approx. 58 t, is an imposing sight.



HIGH TECH FOR TRAINEES

LASCO continuously invests in its training center in order to familiarize future specialists with the requirements of professionalism at the highest level using the most modern work equipment already during their training. The training rate is consistently at 16 percent. A cycle-controlled E30 precision lathe from the Franconian manufacturer Weiler Drehmaschinen GmbH has now been put into operation. This replaces a CNC lathe and is used, among other things, to produce turned parts for LASCO machines, so maximum precision is required. The Weiler E30 ensures machine accuracy in accordance with DIN 8605. The apprentice machinists, industrial mechanics and mechatronics technicians work on the unit from the second year of their apprenticeship and programming the control system is an important part of their training. The "education 4.0" module is used to further optimize the quality of training.



FAIRS + DATES

EMO
Hanover, Germany
September 18-23, 2023

Metalex
Ho Chi Ninh, Vietnam
October 4-6, 2023

MSV
Brno, Czech Republic
October 10-13, 2023

Forgetech India
Pune, India
November 3-5, 2023

New: LASCO hammer drive with revolutionary valve technology

UNPRECEDENTED VARIABILITY

The new LASCO hammer drive opens up previously unattained variability. Now, program-controlled blows can be started from any ram position without any problems. In addition, the drive is characterized by even higher accuracy and blow frequency. The predefined strokes in the individually created stroke program are executed with even greater precision. This is made possible by state-of-the-art proportional valve technology.

This newly developed hydraulic drive concept for forging hammers uses two identical proportional valves. One of them is responsible for blow initiation, the other one for rising. The valves themselves are of cartridge design, with the control and logic elements installed on the control cover to withstand vibrations. Acceptance readiness is realized via the integrated safety stage.

Two connections saved

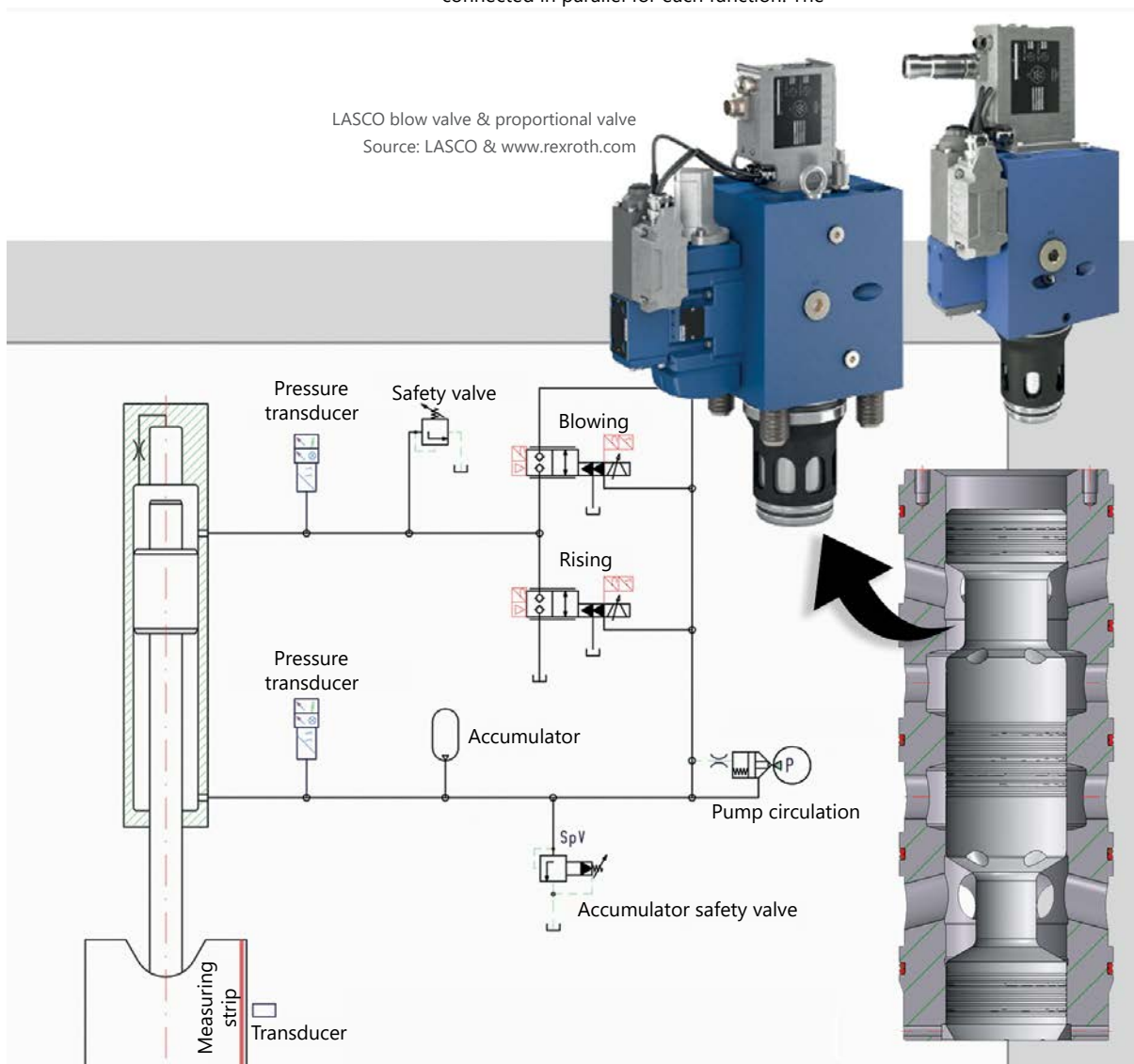
The hydraulic cylinder of the new drive concept with proportional valve technology now has only two connections: The lower connection remains unchanged compared to the conventional drive.

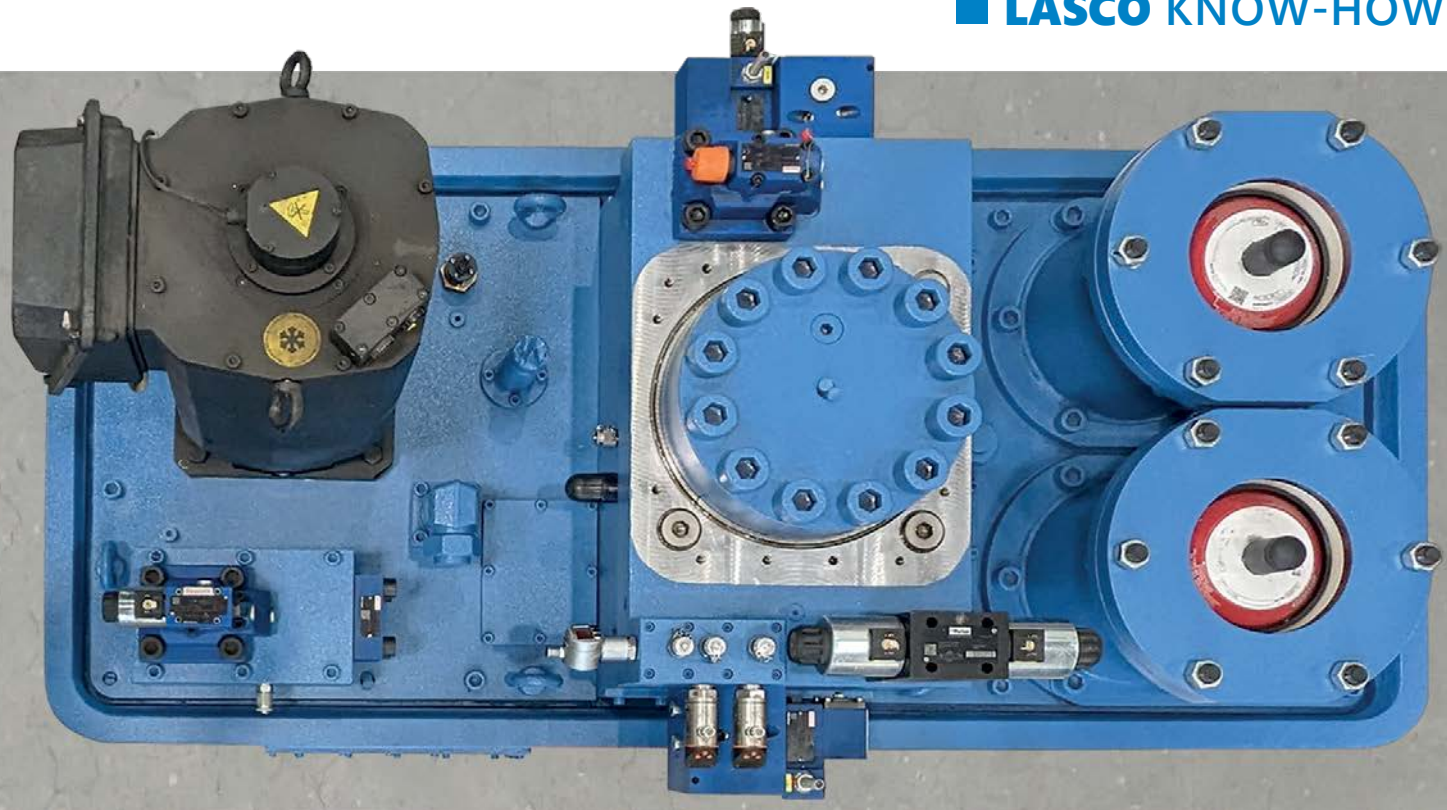
At the pressure connection, one proportional valve each for blowing and rising is connected to the piston side. On very large machines, several valves can also be connected in parallel for each function. The

top and middle connections are omitted. The proportional valve for rising now opens up the possibility of operating the hammer with a variable top dead center (stroke starting position), since the braking and stopping process of the hammer ram can be activated at any point of the ram stroke. Following characteristic curves stored in the control system, the valve closes to precisely stop the ram.

For the operation of the hammer in practice, it is useful to bring the ram exactly to the starting height that is necessary for acceleration for the next blow. The hammer control monitors and corrects the energies and starting points specified in the stroke program in such a way that there is sufficient acceleration travel for the current stroke and the stroke following in the program.

LASCO blow valve & proportional valve
Source: LASCO & www.rexroth.com





Operating modes

In practice, it is often necessary to have a certain amount of free space between dies for die maintenance and/or handling tasks in an automatically operating forging line. Consequently, the following operating modes are available in addition to the usual setup functions.

1) Forging with automatic energy adjustment

After insertion of the blank, a straightening stroke is performed with low energy. The control system thus determines the available stroke. The subsequent stroke is then automatically executed with the maximum energy achievable for this determined stroke. Due to the deformation of the forging, a longer stroke is now available for the third blow, which is again automatically determined and converted into an increase in blow energy. The sequence for all further subsequent blows is identical. Of course, the operator can also set a limit before the start of the blow sequence in such a way that, for example, no further automatic increase takes place when 80% of the nominal energy of the machine is reached. This is particularly useful for upsetting and stretching operations where the component height changes considerably during forging.

2) Forging from preselected height with adjustable energy

The operator specifies the freely selectable impact starting position as well as a die and blank height to the control system. The control system determines the maximum energy that can be achieved for this. Subsequently, single blows or a blow sequence with energies between 1% and the previously determined energy can be programmed. The control system constantly carries out plausibility checks between the data entered and the strokes actually performed and stops the machine if the values exceed or fall below the limit values. As an alternative to manual data entry, it is also possible to work with a low-energy setting stroke.

3) Forging with constant energy from optimal height

Here it is possible to fix a freely selectable energy level. In addition, the die and component height must be entered or a guide impact must be executed. The control system then determines the optimum height and executes the blow sequence accordingly.

In addition to the advantages already mentioned, there are other positive aspects to using proportional valve technology. The cartridge design of the proportional valves makes them easier to install and maintain,

as they can be mounted and connected in just a few steps. The design of the proven block hydraulics is also compact, as only a few oil ducts have to be manufactured.

Cavity risk reduced

Particularly noteworthy is the fact that the new hammer drive with proportional valve technology no longer requires a suction phase in the usual sense, as suction valves, suction containers and large filters are no longer needed.

Filter and cooling units no longer have to be designed according to the amount of oil required in the suction tank, but only according to the actual heat generated in the system.



LASCO INTERNAL

Our apprentices at the end of 2022 with new recruits, trainers, works council and the Chairman of the Management Board, Lothar Bauersachs (l.)

New training year started

GROWTH IN YOUNG PROFESSIONALS

Motivated school leavers have started their vocational training at LASCO in the industrial-technical and commercial fields.

Dual education is an integral part of LASCO's corporate philosophy. Thereby, theory and practice are ideally harmonized. LASCO has always considered it an important task to cover its own medium- and long-term needs for highly qualified specialists, against the backdrop of the massive shortage of skilled workers in the region as well as the social responsibility to offer young people a solid basis for their future. For this reason, the training rate at LASCO, which currently stands at 16 percent, has been significantly higher than the industry average for machine tool manufacturing for decades.

LASCO currently trains electronics technicians (operating technology), mechatronics technicians, cutting machine operators (turning/milling machine systems), technical product designers (machine and plant design), industrial clerks and digitalization management clerks and offers the dual degree programs "Bachelor of Arts - Business Administration & Industrial Clerk", "Bachelor of Engineering - Automation Technology/Robotics & Electronics Technician for Operating Technology" and "Bachelor of Engineering - Mechanical Engineering & Industrial Mechanic in Mechanical and Plant Engineering".



LASCO RUNS AND RUNS AND...

Under the motto "Run. Celebrate. Weekend." the LASCO team started with 25 motivated colleagues in the "company run" of the Coburg daily newspaper "Neue Presse", in which a total of 1,500 athletes from companies in the region participated. In bright sunshine, the runners had to cover a distance of around five kilometers, which led through the picturesque Rosenau park in Rödental, among other places. Rödental's mayor Marco Steiner gave the starting signal. After the sporting challenge, the day came to a pleasant conclusion in the evening in a convivial atmosphere. The run was a lot of fun for all participants and LASCO is proud of the excellent team performance. We are looking forward to the repeat in September.

Briefly illuminated

Commitment honored three times:

Once again, the voluntary commitment of young trainees in the Upper Franconia region was rewarded with the Dr. Kapp Role Model Award. Voluntary work for the good of society is not something that can be taken for granted, so we are all the more proud of our dedicated trainees



Laurids Petrich (honored for voluntary work with the Weissenbrunn Volunteer Fire Department and the Großheirath Fishing Club), **Nico Engel** (honored for voluntary work with the Itzgrund BRK Readiness Team and the Buch am Forst Local Fire Department) and **Joshua Seitz** (honored for voluntary work with the Scherneck Volunteer Fire Department and Sports Club). We are pleased with our trainees about this recognition. Our photo shows the three honored in the aforementioned order from the left together with LASCO instructor Björn Bühling (2nd from left) after receiving the certificates.

Benefiting from 'Erasmus': The "Erasmus" exchange program of the European Union is intended to provide experience abroad and promote professional networking at an early stage of school and vocational training.



LASCO has supported this program for many years by organizing internships abroad for selected trainees in cooperation

with the Coburg vocational school and by hosting guest interns from participating countries in the exchange itself. As part of this initiative, **Manuel**

Marschall (top), a prospective mechatronics technician, and **Tamir Khedir Ilyase** (bottom), an industrial mechanic



in training, have now gained practical experience in Austria. They worked for 21 days at SML Maschinen GmbH (Redlham) and Innocon (Attnang-Puchheim) respectively.

Long-serving employees congratulated at ceremony

345 YEARS OF COMMITMENT TO LASCO

LASCO recognizes the performance and loyalty of eleven employees who have worked for the company for 50, 40 and 25 years, respectively, and actively contribute to its success.

Heiderose Höfler started at LASCO 50 years ago as a cleaning specialist and has ensured the company's impeccable appearance ever since. A clean, well-kept environment for customers and employees is not the guarantee for the company's success, but it is the first step towards it. Therefore, we are particularly proud that Mrs. Höfler has been successfully managing the department with a lot of commitment and experience for decades and it is hard to imagine LASCO without her.

Gernot Losert joined LASCO in 1982 and was already successful in the first years in commercial administration, purchasing and materials management. Already in 1985 he received power of attorney and in 1999 general power of attorney. As department manager, division manager, commercial business manager up to commercial managing director from 2009 to 2016, he has actively and significantly contributed to the success and good reputation of our company across all management levels. As a commercial/business generalist, he now serves as "Special Representative of the Chairman of the Management Board".

Frank Dismar began his training at LASCO in 1982 as a technical draftsman (today: technical product designer). He subsequently took part in various further training courses and trained to become a group leader and specialist in the development of tool technology for hydraulic presses and plants for the production of building materials. With his work, he contributes to the great success of LASCO sand-lime brick technology.

Jürgen Trucks learned his trade as a machine fitter (today: industrial mechanic) in the company from scratch and initially worked as a specialist for CNC drilling technology. In various further training courses, he developed into a specialist for NC programming.

Harald Barnickel began his professional career at LASCO in 1997 as a graduate engi-

neer (FH) in electrical engineering with prior training as an energy electronics technician. In 2009, due to his great knowledge and experience, he was assigned the management of the electrical design and construction department, and in 2013 he was given full power of attorney. Since 2018, he has been the head of the electrical/automation development and design area. A large number of patents in the field of automation confirm Mr. Barnickel's high level of technical expertise....

Gerald Marx completed his training as an energy electronics technician for operating technology at LASCO from 1997 to 2001. After working in the electrical workshop for several years, he was in demand as a service technician in Germany and abroad from 2005 and also contributed his expertise to our subsidiary in the USA for a longer period of time. Demanding programming training courses have enabled him to contribute his knowledge and skills in the electrical/automation design area as a software developer since 2019. He manages commissioning of highly automated plants worldwide.

Michael Erbstöber began his career at LASCO with an apprenticeship as an industrial mechanic for machine and systems technology. After his further training as a state-certified mechanical engineering technician and further training courses, he switched to sales, where he has been looking after important key accounts both in Germany and abroad for years as a sales engineer and also very successfully manages the internal sales department.

Sabine Bauer joined the company in 1997 as a trained hotel manageress. Since then, she has been the first point of contact for visitors, customers and suppliers and helps shape LASCO's external image. In dealing with domestic and foreign guests, both in the reception area of the company and on the phone, her friendly and obliging manner is appreciated by all.

Matthias Goer completed his training as an industrial clerk at LASCO from 1997 to 2000. After several years of working in the operations office and various further training courses, he was appointed as the company organization officer in 2010 and bears responsibility as the fire protection officer. Since 2021, he has been in charge of the company's vehicle fleet.

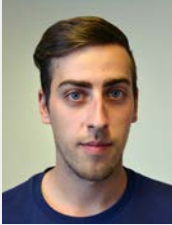
Simone Großmann also started her professional career at LASCO in 1997 with an apprenticeship as an industrial clerk. She then moved directly to the area of materials procurement, where she developed into an experienced specialist buyer. Her responsibilities include the processing of orders for external services and a wide variety of raw materials.

Marek Hadyk started his professional career at LASCO in the logistics area after his apprenticeship and several years of work as an electrician in Poland as well as various further trainings. Since 2000, he has been contributing his extensive experience as an accomplished machine operator of our high-precision CNC grinding machine operating in the μ range.



In a ceremony, Friedrich Herdan, Chairman of the Board of LASCO Langenstein & Schemann, Holding, as well as Lothar Bauersachs, Chairman of the Board of LASCO Umformtechnik GmbH and the Managing Directors Thomas Schemann, Holding as well as Lothar Bauersachs, Chairman of the Management Board LASCO Umformtechnik GmbH and the Managing Directors Thomas Götz and Robert Welsch thanked the jubilarians Heiderose Höfler (50 years), Gernot Losert, Frank Dismar and Jürgen Trucks (all 40 years) as well as Harald Barnickel, Gerald Marx, Michael Erbstöber, Sabine Bauer, Matthias Goer, Simone Großmann and Marek Hadyk (all 25 years) for their work and loyalty to the company.

Interview



Andreas Schumacher
Technical Assistant Chisels
DreBo Tool Factory Ltd.,
Bad Saulgau-Krumbach

Promises kept

up grade: Mr. Schumacher, what did DreBo expect from a new screw press?

Andreas Schumacher: Increased quality and efficiency! This results in the following demands on press technology: precise energy metering, rapid stroke sequence, high speed, short die contact times, low wear, low maintenance, high repeatability, automation capability and sustainability.

up grade: Did you get this?

Schumacher: We chose LASCO as a technology supplier for the first time because the desired expertise could be demonstrated and the price/performance ratio seemed reasonable to us. In several months of practical experience with the technology, we have now found that LASCO delivers what was promised. We are glad that we have taken this path together.

up grade: What is the meaning of the type designation "So" - for "special version"?

Schumacher: In contrast to the standard version, our SPR 500 has an increased gross energy. In addition, a tool holder was developed that is precisely tailored to our needs. Thanks to the solid, heat-neutral guides, we are now forging more precisely than ever. Finally, the chosen set-up variant of the press must be mentioned. In contrast to the usual direct suspension, the machine was installed on a concrete block, which in turn sits vibration-isolated in a foundation pit. Vibration emissions are thus reduced to a minimum.



DreBo Tool Factory Ltd
TECHNOLOGY CHANGE

In more than 40 years of company history, DreBo Werkzeugfabrik GmbH (Altshausen) has developed into one of the leading OEM manufacturers for rock drilling tools and chisels. With the help of LASCO screw press technology, the successful business model will be expanded and DreBo's future viability secured.

The new direct-drive LASCO SPR 500 So screw press is deployed in Bad Saulgau-Krumbach (Baden-Württemberg), the company's second production site, where all types of chisels have been manufactured under one roof with new machines and equipment since 2016. Administration, the development, innovation and test center, and the production of drilling tools are concentrated at the nearby headquarters in Altshausen. In total, DreBo employs over 400 people at its locations with a total of 17,000 m² of production space. The shipment of 4,500 different products to 70 countries around the world is handled by a state-of-the-art logistics center in Slovenia. Since 2005, DreBo has been part of the publicly traded TTI Group (Techtronic Industries Co. Ltd., Hong Kong), with more than 22,000 employees worldwide and most recently \$13.2 billion in sales. This enables DreBo to combine the advantages of medium-sized structures with those of a successful, international group of companies.

The LASCO SPR 500 So has 50 kJ gross energy and continuous permissible pressing force of 8,000 kN. The new equipment marks a technology change of the DreBo Werkzeugfabrik, which previously only used friction wheel screw presses. Thanks to the modern LASCO screw press, which is equipped with a servo asynchronous drive of the latest generation, DreBo increases the quality standard and output of its products. Compared with existing production equipment, the SPR is characterized in particular by ease of maintenance, lower emissions and, last but not least, energy efficiency. The energy input of the LASCO press is precisely and individually optimized in relation to the product to be manufactured. Repeatability, rapid stroke sequence and low die wear are further key characteristics of the progress achieved.

The planned automation generates additional productivity and efficiency gains. LASCO technology becomes part of an innovative die forging line with high repeatability, increased output and optimized sustainability aspects: Handling of the forging blanks, heating, forging/upsetting and finishing will be fully automated. According to those responsible at DreBo, there is no question that all goals will be achieved in the near future based on their experience with the LASCO SPR.



The DreBo tool factory in Althausen has been using a state-of-the-art LASCO screw press for the production of high-quality drilling tools for several months.