LASCO UMFORMTECHNIK

Your needs. Our solutions.

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WELCOME

Dear customers, dear readers,

Since its foundation in 1863, our company has dedicated itself passionately to the task of manufacturing machines and production lines that can solve forming tasks as economically as possible. Performance, quality and advancement of our products justify the worldwide recognition of LASCO Umformtechnik as a technology supplier and innovator in the forming and building materials industry.

Consistently tailored to the needs of the markets!

With its comprehensive range of **production systems**, **individual machines** and **automation technology** for the **sector of wall-building materials**, LASCO has been one of the leading system suppliers in the world market for many years. LASCO technology is used wherever process-reliable solutions with low maintenance requirements, convenient operation, and customized service are required.

The criteria for our actions are the wishes of our customers. Based on decades of experience and technical progress, we seek, find and implement the best solution for their individual requirements. This includes **automation, handling** and **interface technology** as well as the **modernization** of proven production veterans.

Being a well-established and qualified partner, we supply production equipment with which our customers can thrive in international competition for years to come.

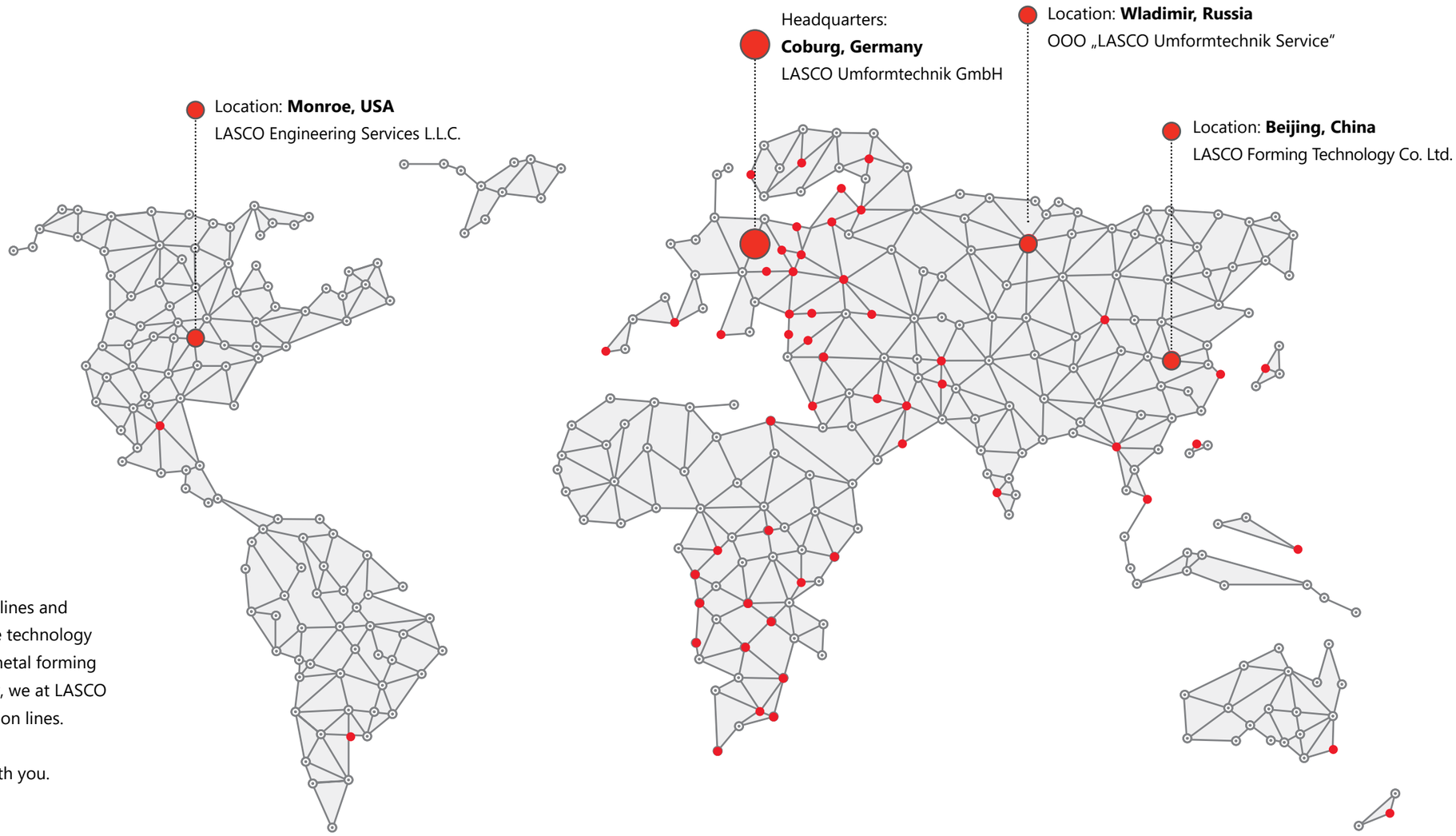
Yours LASCO UMFORMTECHNIK WERKZEUGMASCHINENFABRIK

Your partner for mechanical engineering and technology

4 LOCATIONS ON 3 CONTINENTS

48 SALES AND SERVICE PARTNERS IN 60 COUNTRIES

100 COUNTRIES OF USE ALL OVER THE WORLD



Specialized in modern machine tools, efficient production lines and comprehensive automation technology, we are among the technology leaders in the fields of sand-lime block production, solid metal forming and sheet metal forming. Focusing on economic efficiency, we at LASCO design holistic solutions and also expand existing production lines.

We cooperate, solve your problems, and work together with you. Because the center of the LASCO world is not us, but you.

Past, present and future:
Since 1863, we have been your reliable partner for solid and sheet metal forming - and today also for building material machines and automation & robotics.

Scan now and watch our company video!

Guiding principle:

We are personally committed to your success. With a team of professionals who want to achieve nothing less than the best for you.

YOUR BENEFITS

What you can expect from us

We are a think-tank.

With our experience as a technology supplier and technical solutions specialist, we can tackle particularly difficult challenges.
Your benefit: Decades of experience and constant striving for progress enable us to find the best solution for you.

We are problem solvers.

There is an optimal solution for every challenge. 15 percent of our employees work in research and development in order to develop the best possible result for you.
Your benefit: Each machine/line or automation solution is tailored precisely to your needs.

We are troubleshooters.

We rely on long-term partnerships. In this way, we can support your company in achieving optimum goals in the long term.
Your benefit: Your permanent contact at LASCO supports you throughout the entire development process.

We are optimizers.

We provide you with solutions to automate processes and production lines optimally and to interlink them smoothly.
Your benefit: By using robotics for complex or critical applications, you save costs and avoid downtimes. In addition, you achieve constant production performance and better quality results.

OUR COMPETENCIES

Why we are among the technology leaders

Custom development

Each of our machines/production lines is as individual as the requirements. We support you on your way from the first idea to the product-ready solution.

Lifelong service

Place your confidence in our quality. We support you with an innovative remote maintenance system, no matter where in the world your production facility is located.

Process optimization

Faster, higher, broader - we analyze process sequences and optimize your production with the latest automation, handling and interface technology.

Green technology

Resource-saving machines and production lines are an investment in the future. Our contribution is the use of innovative, energy-efficient technologies.

Retrofit

Machines/production lines do not always have to be new to produce efficiently. We modernize veterans of production – regardless of their origins – to the most modern standard possible so that you can continue to use them in efficient production.

BUILDING MATERIAL MACHINES

Technology for sand-lime block production

With its comprehensive range of production systems, individual machines and automation technology, LASCO has been one of the leading system suppliers in the production of wall-building materials for years. The optimum machine for every application - to meet this demand, we offer a complete range of sand-lime block presses and production systems for the building materials industry.

THE SAND-LIME BLOCK – a white block gaining favour

The extremely robust sand-lime block combines the naturalness of its completely biological raw materials with a high level of sound and thermal insulation, weather resistance and exemplary static strength.

Its environmentally friendly production and the healthy indoor climate it creates, make the sand-lime block not only attractive as a building material but also economical due to low-energy production processes.

For sustainable, efficient architecture that retains its value and provides a wide range of design options!

THE LASCO SAND-LIME BLOCK SYSTEMS

The mineral mass of lime, sand and water is compacted hydraulically into a dimensionally stable sand-lime "green" block under high pressure. Various handling systems (drive/lifting axes or robots) are used to supply the green blocks to the autoclaves on curing wagons according to freely programmable stacking patterns.

The appropriate production system for every requirement:

- **Sand-lime block press KSE with single-acting compaction**
- **Sand-line block press KSP with double-acting compaction**
- **Vario-block press PSP**
- **Complete sand-lime block plants**

Optionally, LASCO offers the modernization, expansion or retrofitting of old systems (including those of other manufacturers) as well as the supply of components.

QUALITY FEATURES:

Drive

Our hydraulic drives are designed and optimized precisely for your specific requirements. All units can be equipped with either a conventional hydraulic drive or a hydraulic servo direct drive.

Press frame

Press frame, crosshead and lateral columns are welded and stress relieved. Adaptation to existing foundations is possible for any machine.

Feed box

Two independently driven stirrers, integrated in the feed box, ensure homogeneous filling of the molds.

Stacking device

Individual stacking patterns are stored in the database of the control system in order to make optimum use of the capacity of the autoclave.

Transport technology

Control electronics make the gripper almost as sensitive as human hands.
The position of the conveyor belt is detected by an encoder, and cycle steps are freely programmable

Control unit

The entire production sequence is monitored and controlled by a programmable logic controller. Operating personnel only take over control and setup functions.

Benefits:

- High rigidity of the frames
- High pressing speed under load
- Infinitely programmable press force and counterholding force
- High output

SAND-LIME BLOCK PRESS KSE

With single-acting compaction

Presses of the KSE series are LASCO's answer to the demand for highly economical **production of small-format sand-lime blocks**. The **particularly compact design** offers the advantage that this press type can also be used for **low hall heights and low crane load capacities** - depending on requirements and conditions, either automatically with drive/lifting axes or very flexibly with industrial robots.

Sand lime block press KSE for the production of CS blocks with layer heights ≤ 25 cm - both as solid or perforated blocks.

Standard blocks according to DIN 20000-402:

- CS solid blocks
- CS building blocks R format
- CS blocks
- CS blocks R format
- CS chamfered blocks

Benefit:

- Energy-saving, as only one hydraulic press ram is used
- Compact design with large press table enables shorter handling distances, very short cycle times and thus very high outputs

SAND-LIME BLOCK PRESS KSP

With double-acting compaction

The core aspect of the sand-lime block press of the KSP series is the **compaction of the raw materials from two sides** by means of oil-hydraulically driven upper and lower punch. The independently controlled movement of the punches provides for a **bulk density as homogenous as possible** over the entire cross-section of the block. It was only with the introduction of presses with double-acting compaction that it became possible to produce formats such as the CS block Quadro, CS block XL and elements in the required quality.

Sand lime block press KSP for the production of CS blocks with layer heights ≤ 65 cm - both as solid or perforated blocks.

Standard blocks according to DIN 20000-402:

- CS solid blocks
- CS building blocks R format
- CS blocks
- CS blocks R format
- CS chamfered blocks
- CS XL grid elements
- CS XL elements
- CS blocks E format

Benefit:

- The decentralized process control - individually configured and programmed by LASCO for the respective task profile - enables maximum flexibility. All axes, opening and filling times, filling methods, filling positions of the lower punch as well as pressing speed of the upper and lower punch are freely programmable.

VARIO-BLOCK PRESS PSP

Patented solutions for variable lengths

With the vario-block press, LASCO makes another decisive contribution to streamlining for the building materials industry. Up to 70 percent of the usual sawing effort needed for the production of supplementary or vario-blocks from large-sized blocks and elements is eliminated.

The patented mold system of the vario-block press based on the LASCO KSP enables the production of variable block lengths from 100 to 750 mm. This makes it possible to reduce the raw material input by about 5% and the waste by about 35%.

The blocks are pressed in longitudinal direction, the positioning of the punch travel is done via data exchange with the unitizing respectively batching software.

Special features of the patented LASCO **shifting mold:**

- Only the mold box that is in pressing position at the time of the working cycle is filled and pressed.
- In order to produce vario-blocks in a different wall thickness, the entire mold (upper and lower punch, press table with mold boxes) is moved hydraulically in horizontal direction. This is done fully automatically in seconds.
- For greater flexibility in production, the shifting mold is also optionally offered as a double mold. Changeover takes place directly via the process control system, allowing the production of vario-blocks in up to eight different wall thicknesses and variable lengths.

Innovation with clear benefits:

- Significantly less waste
- Maximum use of raw material
- Significant improvement in energy utilization
- Avoidance of expensively manufactured finished products

PSP-SYSTEM

Most flexible production line for elements

Optionally, the vario-block press can be upgraded to a PSP system. In the PSP system, all blocks in the CS element system can be produced economically and with dimensional accuracy in a fully automated process using a single system. The reworking of individual blocks outside the process cycle is no longer necessary - **better, faster, more cost-effective**.

The original vario-block press is supplemented by:

- Green block saw or double green block saw
- Saws for the production of masonry slits
- Green block crushers with overspill recovery
- Marking printer for product tracking
- Stacking robot
- Curing wagon coding system

Wall unitizing software enables precise pre-planning of complex construction projects. Individually - on the basis of the construction drawings - CAD-supported wall plans are converted into data sets with optimized batches for controlling the shifting mold with multiple mold boxes. The division of walls and blocks thus follows the most economical solution.

Higher output of pressed or also additionally sawn green blocks due to two-row stacking on the curing wagon. **Ready-to-use palletizing and just-in-time delivery to the construction site.**

Possible types of cuts:

- Height / gable / bevel cuts
- Cross cuts
- Levelling blocks
- Door and window cutouts
- Supply ducts for cables and tubes

Scan now –
and learn more about the LASCO vario-block press!

COMPLETE SAND-LIME BLOCK PLANTS

Investment- and future-proof

A new factory should set standards in automation, productivity, quality assurance and logistics. When every detail is right and all components work together optimally, the leap into a new performance dimension is achieved.

The competition our clients face now and in the future is primarily in our focus when we plan and build a complete sand-lime block plant as a general contractor. Our specific planning concept enables investors to build plants quickly and safely according to individual production requirements.

Primary components

Reactors, presses, autoclaves, curing wagon platforms are arranged in such a way that the most ideal production flow possible is achieved.

Secondary components

These include, for example, material handling, packaging, workshop, laboratory and control room. They are integrated in such a way that smooth processes of control functions and quality assurance measures are ensured with minimum distances.

Process components

On request, components such as heat recovery, shifting platforms, fully automatic packaging systems or process-integrated color mixing systems will also be included in the scope of supply.

Scan now – see how all the components of the turnkey sand-lime block plant work together!

The package is completed by further components, such as warehouse, boiler house, facility management and administration, thus ensuring a sustainable economic overall process.

LASCO HYDRAULIC SERVO DIRECT DRIVE®

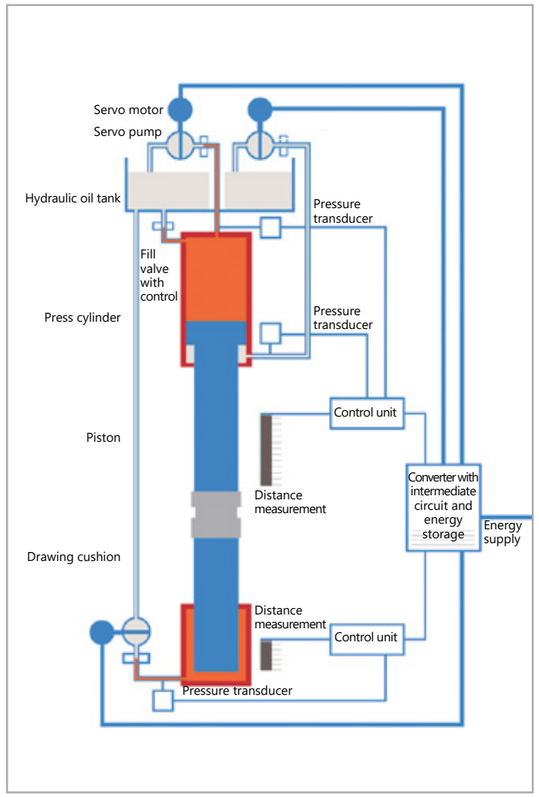
Increase in energy efficiency

In the hydraulic servo direct drive developed by LASCO (LASCO hydraulic servo direct drive®), the hydraulic pump and servo motor form a compact unit.

The excellent controllability enables exact specifications of torque, speed and position of the pump rotor. Highest output with optimum energy use is guaranteed.

BENEFITS OF THIS DRIVE TECHNOLOGY

- Enables high cycle rates/high output
- Low power dissipation
- Highest energy efficiency
- Less susceptible to faults, low wear and easy to maintain
- Hydraulic presses driven by servo pumps have an efficiency of >90% (cos φ = 1)
- When the system is at a standstill, the drive motors and pumps are also at a standstill
- Hydraulic systems operate largely shock-free
- Multi-axis systems - especially with close functional links between the axes - can be controlled reliably
- All setting data can be stored and documented in digital form
- Simplified diagnosis even of complex systems due to clear drive structure



Schematic view LASCO hydraulic servo direct drive®

Scan now and learn more about the LASCO hydraulic servo direct drive®!

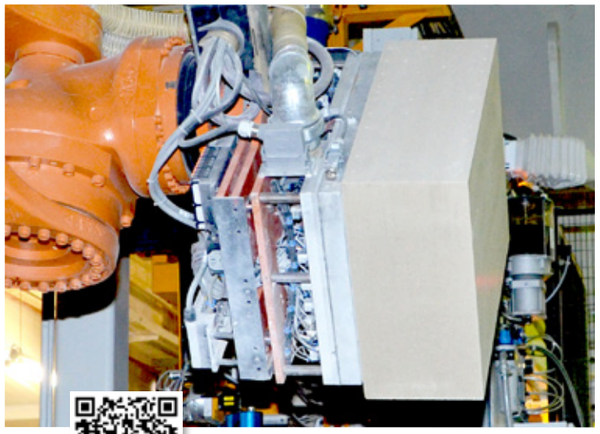
AUTOMATION & ROBOTICS

More precise / faster / more economical

Intelligent production lines: People, machines, production lines, products and logistics communicate and cooperate directly with each other - that's Industry 4.0, with the goal of largely self-organizing production. We create automation solutions and robotic systems that secure your competitive edge for years to come. You benefit from our experienced programmers who devote themselves in-house to the creation of source code, while always in direct contact with technicians and assemblers. This enables us to meet your needs precisely, even if requirements or market changes make adjustments necessary.

Transport & Handling

The fully automatic stacking of the green blocks on the curing wagons as well as the loading and unloading into the autoclaves is carried out with fast, safe and robust transport and handling systems for optimum capacity utilization.



Scan now and experience **Automation** & **Robotics**!

Palettizing

Optimally controlled logistical processes enable automatic customizing and packaging of the blocks for ready-to-build delivery of the pallets - efficiently and reliably.

Image processing systems

State-of-the-art sensor technology and optical image recognition identify potential misalignments, which are compensated by robotics automatically.

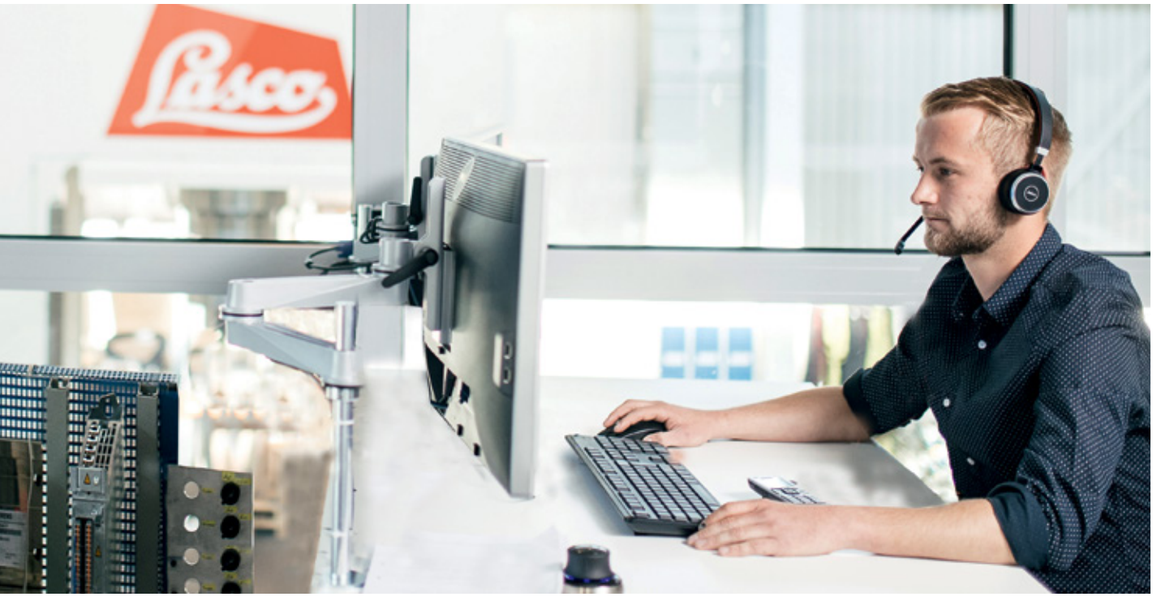
Gripping technology

Transfer operations must be handled quickly, accurately and safely, but also smoothly. LASCO knows the most advanced solution for every product and process - from vacuum systems to sensitive gripping systems.

In addition, LASCO offers robotic systems for sorting, stacking, cleaning, testing and marking different block formats. LASCO master control systems reliably link and control complex production lines.

VIRTUAL COMMISSIONING

Simulation of complex systems



Beginning in the engineering phase, automation systems are virtually optimized for commissioning. LASCO uses real process parameters for this purpose. Long before assembly begins, all machine sequences and operating conditions are simulated on the computer.

The use of this method in the development process of machines/production lines detects and eliminates errors at an early stage.

This minimizes correction loops in the engineering stage. **Cost-optimized** and **shortened commissioning on site** are the desired beneficial outcomes.

The „virtual commissioning" technology can also be used for planned changes to the setup of the production line. Changes of products and production processes can already be tested and adapted virtually parallel to production.

REMOTE ASSISTANCE SYSTEM

Real-time collaboration

Scan internet-based
LASCO maintenance services

LASCO machines and production lines are characterized by high availability and operational safety. In order to guarantee this in the long term, it is particularly important to us to offer our customers the fastest possible assistance and to be able to provide them with competent support. Remote diagnosis provides the service technician with valuable information on the actual condition of the system.

The system represents the technically superior alternative to conventional means of communication. Video stream and SmartGlasses enable bidirectional image and sound transmission from the first-person perspective as well as fast and direct troubleshooting by the technician on site. This reduces downtime and ideally avoids production interruptions. The virtual support by a LASCO expert during the execution of the individual work steps significantly increases the quality of the measure. Furthermore, upcoming repair work can be prepared in a targeted manner.

Our service

- Demand-oriented and optimized LASCO Remote Assistance System
- Quick and direct contact to LASCO experts
- Integration, training and workshop

Remote maintenance

Since 1998 already, LASCO has offered remote maintenance solutions that allow our service technicians to access the control systems of LASCO production lines worldwide from Coburg. We offer a combined system for maximum safety and efficiency.

Your benefits

- Support in maintaining optimum system availability
- Efficient fault analysis in real time
- Bidirectional video and audio communication
- Free hands and unrestricted movements thanks to SmartGlasses

CONTACT

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