



# LASCO UMFORMTECHNIK

Your needs. Our solutions.



# 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!

Our focus is on **mechanical engineering in solid and sheet metal forming**. In addition, LASCO machines and production lines have been excelling for many years in the **production of building materials** and in **special machine construction**.

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 

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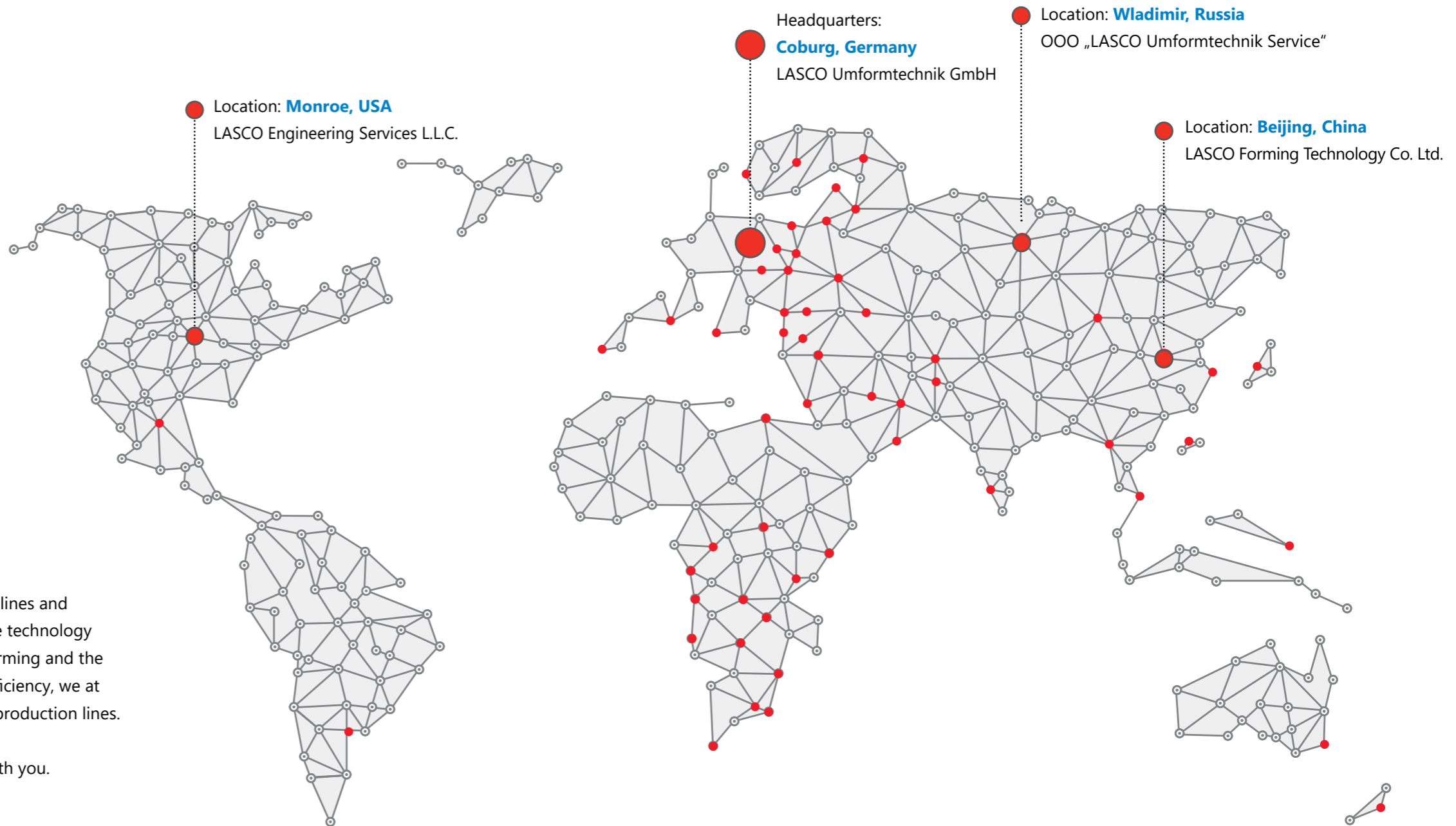


## Your partner for mechanical engineering and technology

**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 solid metal forming, sheet metal forming and the production of sand-lime blocks. 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.



### 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.



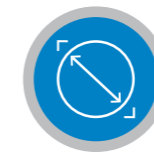
## We are optimizers.

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.



## SOLID FORMING

We form your ideas

LASCO machines are specially designed for the harsh working environments of industrial forging facilities and are therefore absolutely reliable. High vertical range of manufacture and certification according to strict specifications and international standards assure quality and let us react easily to customer wishes and requirements.

### Hydraulic forging presses

Our hydraulic presses are built using highly rigid frames and stand out due to high forming speeds, optimum pressure build-up and fast reversing. The shorter dwell times have a particularly tool-friendly effect.

With various series and numerous options, extensive accessories and automation possibilities, we design efficient hydraulic forming machines for every field of application. We offer designs tailored to a wide range of applications or optimized for special requirements.

### Screw presses

Up to now, the development of our frequency-controlled drive technology in the early 1980s has been regarded as a pioneering achievement and is the cornerstone of LASCO's outstanding position in the world market for precision screw presses.

As energy-bound units, screw presses are always used where the forming of work pieces with comparatively short strokes is possible and/or where a high repeat accuracy of the forming process is required due to constant energy. Our drive concept controls the forming energy precisely via computer.

### Hydraulic forging hammers

LASCO not only invented the first hydraulic die forging hammer, but has also supplied a large number of hydraulically driven die forging hammers world-wide. The key component of automatic hammer forging is the optimized and patented LASCO forging process.

The forming characteristics of the forging hammer are ideal for a wide range of commercially available forgings. Many – especially complicated, heavy, and heaviest forging parts can only be produced economically with a hammer.

### Cross wedge and forging rolls

Increasing quality of forged parts at decreasing production costs - LASCO offers the solution with automated forging cells. A highly qualified, modern machine concept for mass pre-distribution was developed for this purpose. Conceptual mass pre-distribution by using cross wedge and forging rolls in the preforming process ensures material savings, improved workpiece contours and die life.

The special feature of LASCO rolling machines are torque motor direct drives with downstream compact reduction gears. Thanks to the patented hydraulic roller clamping system, tool changes of five to ten minutes are possible.

## Electric upsetting machines

LASCO manufactures electric upsetting machines in horizontal and vertical arrangement in special constructions, however not in fixed type series, but adapted to special market and customer requirements.

The application of the electric upsetting process circumvents certain technological limits of mechanical upsetting machines – economic efficiency increases. All commercially available steels and non-ferrous metals including high-temperature nickel alloys can be upset in the electric upsetting process.



## Incremental forming presses

A special feature of the LASCO incremental forming press is the combination of the hydraulic servo direct drive for the feed movement of the lower piston with a powerful torque motor for the actual tumbling movement. This means that the tumbling cycle can be started and stopped in the correct position - and implemented with absolute precision.



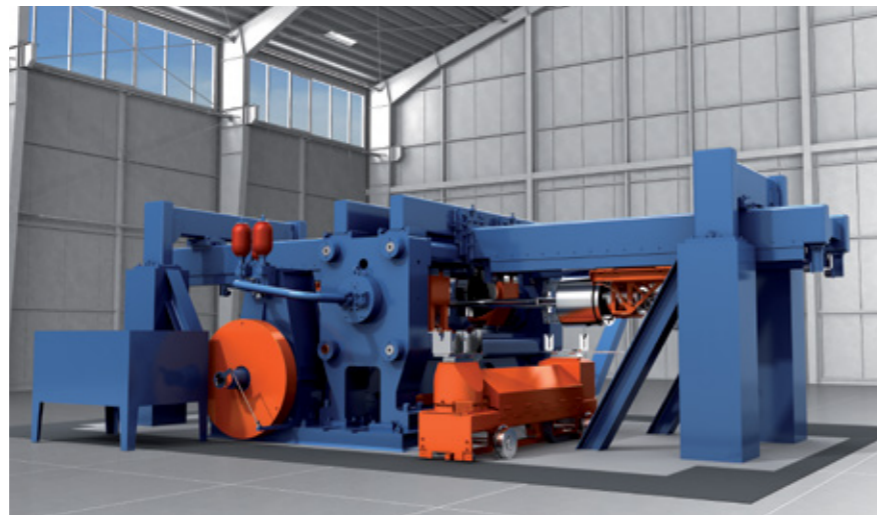
## Servo-mechanical presses

The servo-mechanical LASCO press distinguishes itself by the type and position of the main drive. In contrast to conventional drives installed on the press head, four torque motor eccentric drives are arranged on the press table below floor level in the servo-mechanical LASCO press.



## Preforming lines

Hydraulic forming machines with servomotor-driven manipulators are designed in such a way that a large number of different work-pieces can be produced without time-consuming retooling processes. Our preforming lines are alternatives to radial forming machines, open die forging lines and conventional stretching lines.



## Special machines

LASCO does not design machines for solid forming in fixed type series, but instead machines adapted to special market and customer requirements. Each machine and production line is therefore unique and perfectly matched to the task at hand.

**„QUALITY FROM A SINGLE SOURCE.  
WE TAKE CARE OF EVERY TASK  
FROM START TO FINISH.“**

# SHEET METAL FORMING

From sheet metal to component

We offer a complete range of classical state-of-the-art forming machines which are designed and automated individually to meet customer requirements. Manufacturers from a wide range of industries rely on the well-known high LASCO quality.

## Deep-drawing presses

Hydraulic deep-drawing presses are particularly suitable for difficult drawn parts and special materials. As a specialist for hydraulically driven forming units, LASCO designs deep-drawing presses that are tailor-made to meet even highest demands of sheet metal forming.

## Multiplex presses

With the multiplex press, LASCO achieves unprecedented flexibility. The combination of servo-hydraulic press with integrated impact forming presents new possibilities in forging technology.

## Servo-mechanical presses

The servo-mechanical LASCO press distinguishes itself by the type and position of the main drive. In contrast to conventional drives installed on the press head, four torque motor conrod drives are arranged on the press table below floor level in the servo-mechanical LASCO press.



Press line consisting of five deep-drawing presses



Scan now and experience LASCO multiplex presses!

# 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. Always in direct contact with technicians and assemblers. This enables us to meet your needs precisely, even if your requirements change or the market makes adjustments necessary.

## ► Separation

Ideal automation solutions are used for the separation of source materials, for example step conveyors or stacking devices with image recognition.

## ► Transport & handling

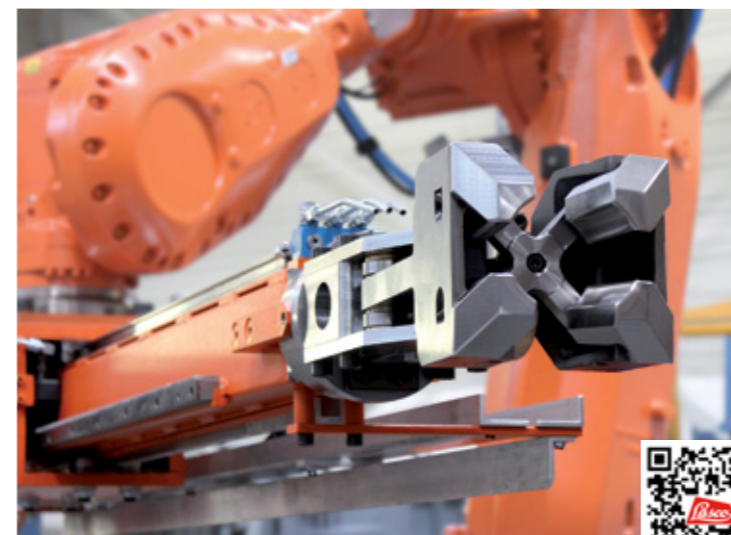
With fast, safe and robust transport and handling systems, such as robots and linear transfer systems, production lines become efficient.

## ► Image processing systems

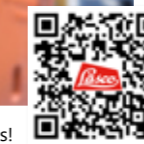
State-of-the-art sensor technology and optical image recognition identify potential misalignments, which are compensated by robotics automatically.

## ► 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 system.



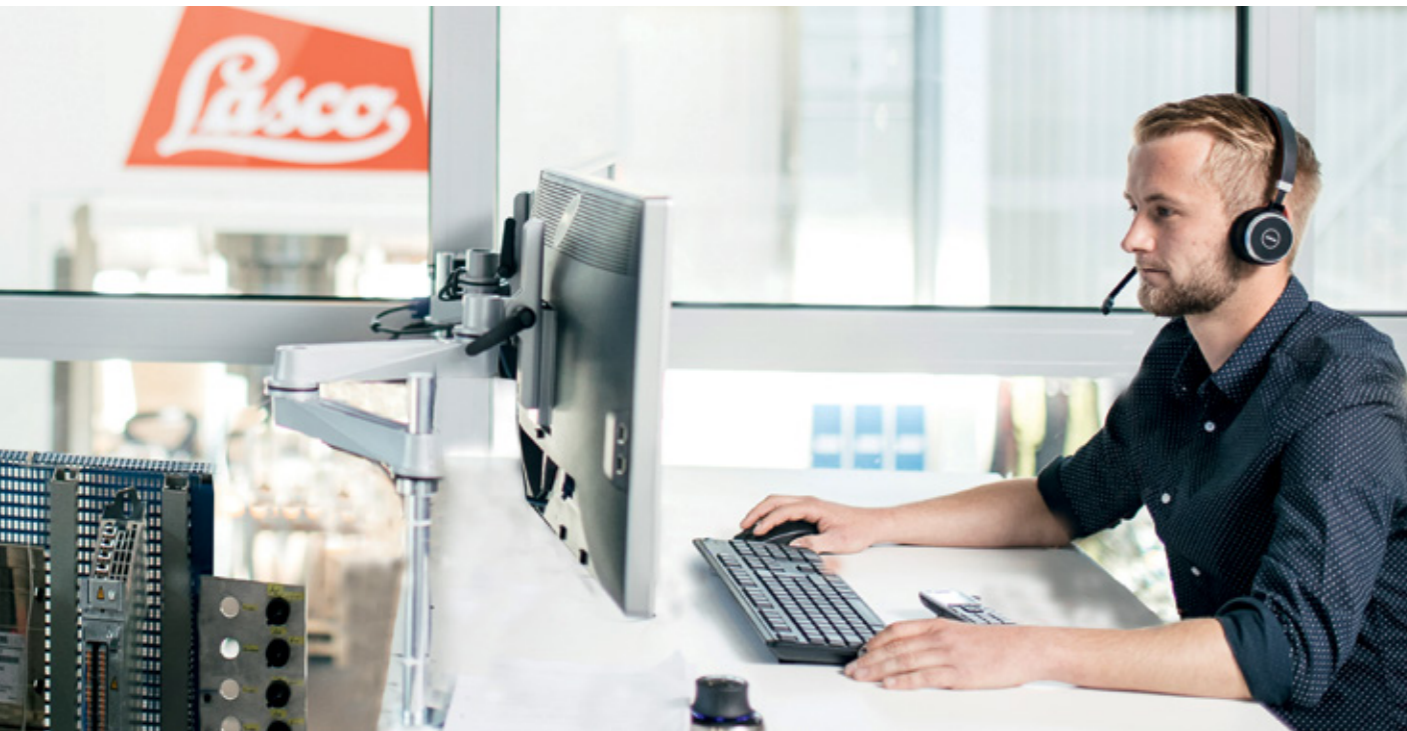
Scan now and experience Automation & Robotics!



► In addition, LASCO offers robotic systems for sorting, stacking, cleaning, testing and marking different workpieces/components. LASCO master control systems reliably link and control complex production lines.

# VIRTUAL COMMISSIONING

Simulation of complex systems



**Already in the engineering phase, automation systems are optimized virtually 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 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 service

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



# STRONG TYPES

## The optimum forming unit for each application

Based on these components we realize solutions for the individual tasks of our customers. This applies not only to processes, tools and control systems, but also to design and construction – for example in confined spaces.

Our basic series are supplemented by robust robot and manipulation systems for workpieces of various sizes, shapes and weights designed for rough forging operations, as well as automatic tool changing systems and peripheral equipment.



### Performance overview / process technology:

		Upsetting	Hot or cold forming	Hot or cold extrusion pressing	Cold extrusion pressing	Coining	Bending	Ironing	Die-forging	Hot or cold deep-drawing	Precision forging	Preforming by rolling	Finish-forming by rolling	Pre-forming by stretching	Cross-rolling of round material	Ironing of weldless tubes	Preforming by heating and upsetting	
HYDRAULIC PRESSES	<b>PRESSES SOLID FORMING</b>																	
	Preforming / multipurpose press VP/VPA/VPE	x	x	x	x	x	x	x			x							
	Piercing & drawing press VPZ	x	x	x				x									x	
	Calibrating press KP		x		x	x												
	Cold extrusion press KFP		x	x							x							
	<b>PRESSES SHEET-METAL FORMING</b>																	
	Multi-purpose, deep-drawing & coining press TZP		x		x	x					x	x						
	<b>MULTI-PRESSES SHEET-METAL / SOLID FORMING</b>																	
	Hydraulic multiplex press MXP	x	x	x	x	x	x		x	x								
	<b>MULTI-AXIAL PRESSES</b>																	
Hydraulic multi-axial press MAP „FlexiMat“	x	x	x															
<b>INCREMENTAL FORMING PRESS</b>																		
Hydr. horizontal forging machine HWS	x	x	x					x										
<b>INCREMENTAL FORMING PRESS</b>																		
Incremental forming press TP		x		x	x													
<b>PREFORMING MACHINES</b>																		
Fully automatic stretching line AR	x																x	
Preforming line AR-D																	x	
<b>SCREW PRESSES</b>																		
Screw presses SPP/SPR	x	x		x	x			x	x									
<b>HYDRAULIC FORGING HAMMERS</b>																		
Hydraulic double-acting hammer HO-U	x							x										
Hydraulic counterblow hammer GH	x							x										
<b>ELECTRIC UPSETTERS</b>																		
Electric upsetter EH/EV																	x	
<b>ROLLING MACHINES</b>																		
Cross wedge roll QKW												x	x					
Forging roll RCW												x		x				
Axial feed cross roll AVQ												x	x		x			
Stretching roll STW								x									x	

# LASCO PRODUCTION LINES

Unique in every dimension

## HYDRAULIC PRESSES

Solid forming



### VPA/VPE

Preforming/multi-purpose presses

Press force  
2,500 – 100,000 kN



### VPZ

Piercing & drawing press

Press force  
5,000 – 40,000 kN



### KP

Calibrating press

Press force  
4,000 – 40,000 kN



### KFP

Cold extrusion press

Press force  
2,500 – 40,000 kN

Sheet-metal forming



### TZP

Multi-purpose, deep-drawing & coining press

Press force  
4,000 – 40,000 kN

Sheet-metal/solid forming



### MPX

Hydraulic multiplex press

Press force  
2,500 – 20,000 kN  
Forming impulse  
20 – 80 kJ

Multi-axial presses for solid forming



### MAP

Hydraulic multi-axial press „FlexiMat“

Vert. forming force up to 15,000 kN  
Horiz. forming force up to 10,000 kN

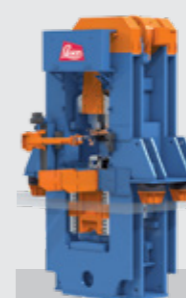


### HWS

Hydraulic horizontal forging machine

Upsetting force  
2,000 – 20,000 kN

Incremental forming press



### TP

Incremental forming press

Press force  
5,000 – 40,000 kN

Preforming machines



### AR

Fully automatic stretching line

Press force  
100 – 5,000 kN



### AR-D

Preforming line

Press force  
10 – 10,000 kN

Screw presses



### SPR

Screw press

Nominal press force  
1 – 50 MN  
Working capacity  
2 – 1,400 kJ



### SPP

Screw press

Nominal press force  
1 – 25 MN  
Working capacity  
2 – 250 kJ

Hydraulic forging hammers



### HO-U

Hydraulic double-acting hammer

Blow energy  
10 – 200 kJ



### GH

Hydraulic counter-blow hammer

Blow energy  
160 – 800 kJ

Electric upsetters



### EV

Vertical electric upsetter

AC: 10 – 400 kVA  
Ø 5 – 140 mm  
DC: 250 – 800 kVA  
Ø 100 – 140 mm



### EH

Horizontal electric upsetter

AC: 10 – 400 kVA  
Ø 5 – 160 mm  
DC: 250 – 800 kVA  
Ø 100 – 160 mm

Rolling machines



### QKW

Cross wedge roll

Roller diameter  
350 – 1,400 mm



### RCW

Forging roll

Roller diameter  
460 – 930 mm



### AVQ

Axial feed cross roll

Roller diameter  
630 mm



### STW

Stretching roll

Roller diameter  
550 mm  
Rotational speed  
rollers 175 min<sup>-1</sup>

Further types and sizes on request!

Competence and know-how in design and development enable LASCO to find a solution even for the most difficult requirements.

Challenge us!

Scan the QR code and get further information on our website LASCO.COM



# CONTACT

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