HYDRAULIC PRESSES

Precision in sheet metal forming

Typical workpieces produced on LASCO presses of the TZP series

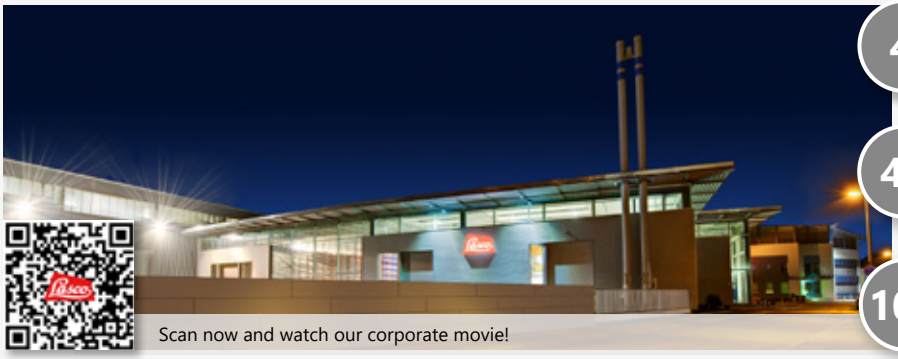
LASCO UMFORMTECHNIK

Produce more efficiently with automation

As a technology leader in the field of solid metal and sheet metal forming as well as sand-lime block production, we are specialists in modern machine tools and efficient production facilities.

We develop and create individual customer- and product-specific automation solutions that ensure our customers a competitive edge for years to come. Focusing on economic efficiency, we at LASCO design holistic solutions; this includes **automation**, **handling** and **interface technology** as well as the **modernization** of existing production facilities.

LASCO is your partner for the production of the future. **Industry 4.0** enables completely new organizational and control options. Intelligently networked, digitized processes become significantly more efficient, dynamic and flexible. Benefit from our know-how. We bring together man and machine and thus optimize the entire value chain.



4 SITES ON 3 CONTINENTS

48 SALES & SERVICE PARTNERS IN 60 COUNTRIES

100 COUNTRIES WORLDWIDE WHERE OUR PLANTS ARE USED

LASCO. Your needs. Our solutions.

HYDRAULIC PRESSES

Process reliability without compromise

In the hydraulically driven presses from LASCO, the most advanced technical components of their time in hydraulics, mechanics, electrics and control technology are combined into one functional unit. This results in a sustainable production solution for the respective application over decades.

TZP 800

Not only in solid forming, but also in sheet metal forming, hydraulically driven presses have established themselves due to their versatility. LASCO offers series of hydraulic presses for sheet metal forming, which are optimally designed for the application in terms of power dimension and characteristics.

DEEP DRAWING PRESSES TZP –

deep drawing at optimum speed

The TZP is particularly recommended for drawn parts made of materials that are demanding in terms of forming technology. Precisely defined pump capacities, short switching times and presettable strokes result in high cycle rates.

Innovation in sheet metal forming:

MULTIPLEXPRESS TYPE MXP –

highest flexibility - pressing, drawing, forging

The MXP combines the drive system of the force-bound hydraulic press with that of the energy-bound die forging unit.

Scan now and experience MXP!

The result: The drawing operations are carried out with the **soft motion** sequences typical of hydraulic presses. Final forming and calibration can be performed at a given energy with **extremely high** downstream **forming pulses**.

Of course, the LASCO range also includes a great variety of peripheral equipment that accelerates and simplifies the production process. With a wide range of equipment options, our presses can not only be nearly arbitrarily automated, but also harmoniously integrated into interlinked processes.

DEEP-DRAWING PRESSES TZP

Convincingly economical

As a globally recognized specialist for hydraulically driven forming units, LASCO designs deep-drawing presses that embody customized systems with high demands on press technology. LASCO deep-drawing presses are particularly suitable for drawn parts made of materials that are demanding in terms of forming technology.

QUALITY FEATURES

Press frame

One-piece stress-relieved welded construction. Multi-part design with press table, side uprights and cross-head, prestressed by four tie rods to form a closed frame.

Bolster plate

Protects the press table from wear.

Press cylinders

Made of forged heat-treated steel. Inner bores of the cylinders honed. Short filling and emptying times for high ram down and up speeds.

Press piston

Sliding surface of piston rod hardened and ground. Optimum sliding properties guaranteed.

Ram

Highest guiding accuracy with minimal tilt of the ram.

Guide system

Guide rails adjustable. Even eccentric loads can be safely absorbed.

Ram lock

Pneumatically driven and electrically protected. Prevents unintentional ram movement.

Field of application of the hydraulic presses:

- Automobilindustrie
- Automotive industry
- Electrical industry
- Household appliance industry
- Medical technology

Other applications on request

Press line consisting of five deep-drawing presses

ADVANTAGES OF LASCO DEEP-DRAWING PRESSES

- High rigidity of the frames
- High forming speeds under load
- Fast pressure build up
- Fast reversing
- High cycle rates
- Programmable pressing force, forming speed and counterholding force
- High quality of cutting and punching operations
- Robustness, clear design, operational reliability, ease of operation and maintenance

With the TZP series and numerous options and automation possibilities, we design the right solution for every application.

Challenge us!

Technical data TZP

TZP series		315	400	500	630	800	1000	1250	1600
Press force	[kN]	3.150	4.000	5.000	6.300	8.000	10.000	12.500	16.000
Return force	[kN]	300	350	350	400	500	600	750	1.000
Ram stroke	[mm]	800	800	800	800	1.000	1.000	1.000	1.150
Max. installation height	[mm]	1.400	1.400	1.400	1.500	1.600	1.800	1.800	2.000
Table width	[mm]	1.400	1.400	1.500	1.600	1.700	1.800	1.800	2.000
Table depth	[mm]	1.250	1.250	1.300	1.300	1.500	1.600	1.600	1.800
Lateral throughway	[mm]	700	700	800	800	800	1.000	1.000	1.000
Table height above the floor	[mm]	750	750	750	750	750	750	750	750

Options TZP		315	400	500	630	800	1000	1250	1600
Drawing cushion force	[kN]	300	400	400	500	500	630	630	630
Drawing cushion stroke	[mm]	300	400	400	400	500	500	500	650
Drawing cushion width	[mm]	900	1.000	1.000	1.200	1.200	1.300	1.300	1.500
Drawing cushion depth	[mm]	700	800	800	900	900	1.000	1.000	1.200

Exemplary type series - customer-specific adaptations possible at any time

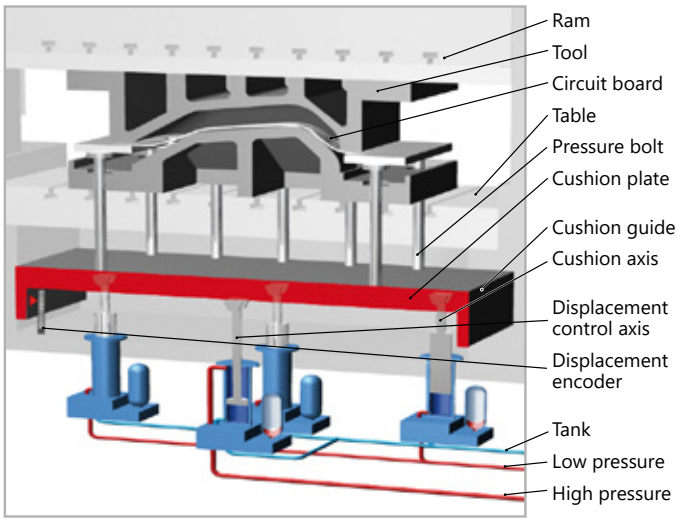
LASCO DRAWING CUSHION TECHNOLOGY

Hydraulic drawing cushions are used in the production of deep parts and difficult shapes in single-acting presses.

LASCO blanking press with schematic representation of the drawing cushion

The cushion forces range from 400 kN to 8,000 kN, the drawing cushion travels from 160 mm to 300 mm.

Depending on the application, single-point, two-point, four-point and six-point cushions are used.



Schematic diagram of a hydraulic multi-point cushion

ADVANTAGES OF THE DRAWING CUSHION TECHNOLOGY

- High force density, allowing large forces to be transmitted in a small installation space
- High accuracy of the cushion force due to active pressure or force control during the drawing process
- Drawing depth dependent variation of the set force values
- Positionally accurate ejection, thus exact achievement of removal situation
- Targeted material flow influence by the drawing cushion due to different force distribution at the infeed points (with multi-point cushions)
- Possible pre-acceleration of the drawing cushion, resulting in less excess counterpressure at the start of drawing and lower dynamic load on cushion and press

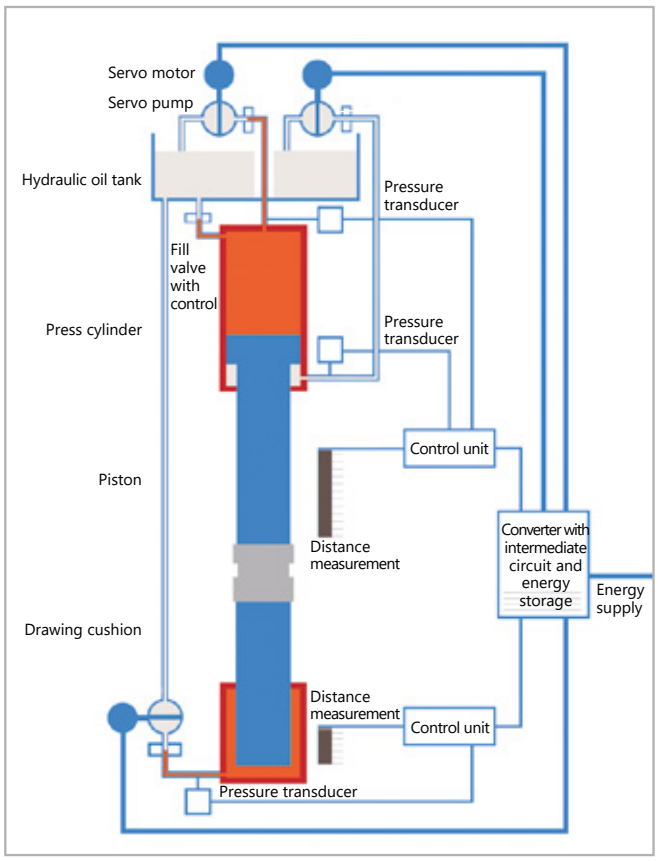
LASCO HYDRAULIC SERVO DIRECT DRIVE®

In the hydraulic servo direct drive® developed by LASCO, hydraulic pumps 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.

ADVANTAGES OF THIS DRIVE TECHNOLOGY

- Enables high cycle rates/high output
- Low power dissipation
- Highest energy efficiency
- Low susceptibility to faults, low wear and easy maintenance
- 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
- Hydraulics 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 diagram lasco hydraulic servo direct drive®

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

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