



MULTIPLEX PRESS MXP

Unit for multiple forming processes



MULTIPLEX PRESS MXP

Highest flexibility - pressing, drawing, forging

Energy efficiency - the byword of our times. Lightweight construction with high-strength steels and light metals reduces consumption and thus CO₂ emissions. High component strength and homogeneous stresses throughout the component must be achieved by shape optimization.

The LASCO multiplex press MXP is a servo-hydraulic press and forging hammer at the same time. The MXP provides the solid forming industry with a unit that opens up new and expanded possibilities. In this way, it is also possible to produce bending- and buckling-resistant component constructions which are cold or hot formed with partially formed functional elements from thin or thick sheets, with very high forces. The LASCO MXP offers new and expanded possibilities for lightweight components in future markets.

QUALITY FEATURES

Press frame

With its cast steel frame, the multiplex press can withstand the high peak loads that occur when working with impact forming. To maximize rigidity, the table, side columns and frame head are prestressed by tie rods.

Ram and ram guide

The cast steel ram is designed to be extremely strong in order to safely absorb the forming energy. For this reason, the ram/piston unit is fastened with round wedges instead of screws. The guide clearance can be sensitively adjusted via the guide rails attached to the press frame. Adjustment is made via wedge gibs so that the guides always rest on the entire surface.

Press piston and press cylinder

Press piston and press cylinder are forged from high-quality steel. The honed cylinder bore ensures excellent running surface quality. The piston itself is designed as a differential piston. The seal at the press piston outlet is optimized for wear.

Process control

The „brain“ of every modern machine tool is its decentralized process control. In line with our customer-specific conception, we configure and program in-house individually for the task profile of a forming unit. Control and sensor technology are future-oriented for data exchange.



Press cylinder of a LASCO MXP (schematic view)

The innovative machine system combines the drive system of the force-bound hydraulic press with that of the energy-bound die forging unit. **The result:** The drawing operations are carried out with the smooth controlled motions typical of hydraulic presses. Final forming and calibration can be performed in the same die at a set energy with extremely high forming forces by carrying out a further impact blow.

Advantages of the LASCO multiplex press:

- ▶ Universally applicable both as a drawing press and as a forging and calibrating press thanks to the functions of pressing, drawing, cold/hot extrusion and forging with variable blow frequency
- ▶ Full press force over the entire stroke
- ▶ Maximum press speed with maximum press force during the forming process
- ▶ Final press forces are several times the hydraulic press force (nominal press force)
- ▶ Precise adaptation of press and counterholding force as well as forming speed to the workpiece with maximum energy efficiency thanks to the LASCO hydraulic servo direct drive®
- ▶ Constant drawing speed during the forming process
- ▶ Better control and adjustment capability due to separate hydraulic circuits for ram and die cushion drives
- ▶ Lower investment and manufacturing costs due to savings in energy, machines, tools and operating personnel by combining different forming processes in one forming unit

Outstanding range of possible applications for maximum cost-effectiveness:

- ▶ Deep drawing at optimum speed
- ▶ Deep drawing with downstream forming pulses
- ▶ Calibration with downstream forming pulses
- ▶ Pressing with downstream forming pulses
- ▶ Forging at variable impact frequency
- ▶ Die forging
- ▶ Hot extrusion in combination with closed-die forging
- ▶ Cold extrusion



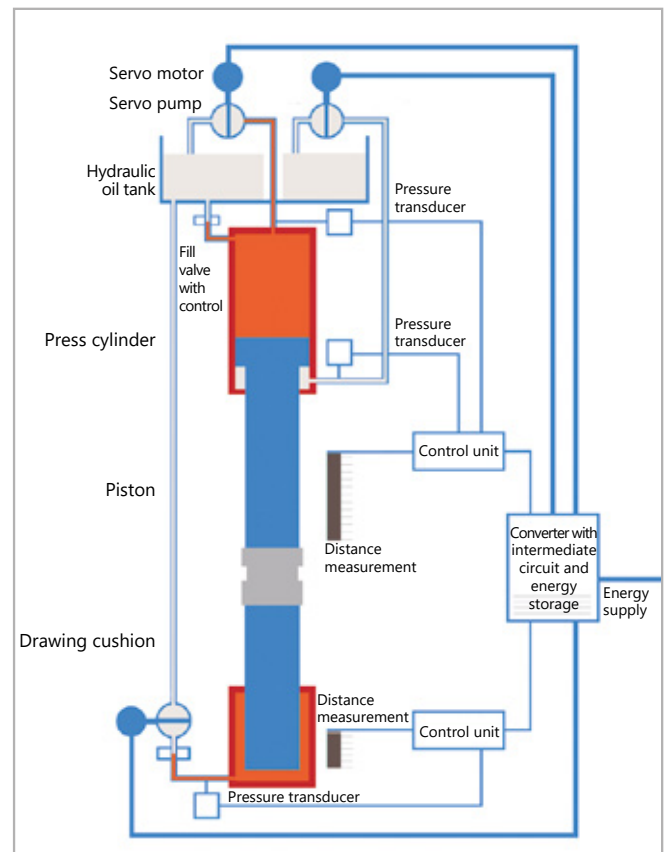
LASCO HYDRAULIC SERVO DIRECT DRIVE®

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

ADVANTAGES OF THE 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 $>90\%$ ($\cos \varphi = 1$)
- ▶ 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 view of LASCO hydraulic servo direct drive®



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

Technical data MXP

TYPE SERIES MXP		315	400	500	630	800	1000	1250	1600
Press force	[kN]	3.150	4.000	5.000	6.300	8.000	10.000	12.000	16.000
Forming energy	[kJ]	22	31,5	40	50	63	63	63	80
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 clearance	[mm]	700	700	800	800	800	1.000	1.000	1.000
Table height above floor	[mm]	750	750	750	750	750	750	750	750
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

- ▶ Other press types and sizes on request
- ▶ Hydraulic ejector in table and/or on ram available on customer request
- ▶ Ejector force, stroke, speed according to customer specification



The MXP drawing cushion has an independent
LASCO hydraulic servo direct drive®.

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