

TECHNICAL DATA

SPR / SPP SERIES

| SPR / SPP SERIES | | 200 | 250 | 315 | 400 | 500 | 630 | 800 | 900 |
|---|--|---------|---------|---------|---------|---------|---------|---------|----------|
| Nominal press force [MN] | | 2 | 2,5 | 3,15 | 4 | 5 | 6,3 | 8 | 9 |
| Permanently permissible press force [MN] | | 3,15 | 4 | 5 | 6,3 | 8 | 10 | 12,5 | 14 |
| Impact blow force | | 4 | 5 | 6,3 | 8 | 10 | 12,5 | 16 | 18 |
| Gross energy SPR SERIES [kJ] | | 11 | 16 | 22 | 31,5 | 40 | 63 | 90 | 112 |
| Gross energy SPP SERIES [kJ] | | 6 | 8 | 11 | 16 | 20 | 32 | 45 | 56 |
| Ram stroke [mm] | | 280 | 300 | 320 | 350 | 420 | 450 | 500 | 500 |
| Stroke to achieve the maximum forming energy [mm] | | 170 | 190 | 215 | 250 | 270 | 300 | 340 | 380 |
| Screw diameter [mm] | | 150 | 170 | 190 | 210 | 240 | 265 | 300 | 335 |
| Ram width/ram depth [mm] | | 500/550 | 550/600 | 600/630 | 670/710 | 750/800 | 750/800 | 850/900 | 850/1000 |
| Max. distance press table/ram [mm] | | 700 | 750 | 850 | 950 | 1070 | 1240 | 1350 | 1350 |
| Daylight between guides [mm] | | 610 | 710 | 760 | 840 | 925 | 930 | 1050 | 1050 |
| Width between lateral windows [mm] | | 250 | 260 | 280 | 450 | 500 | 520 | 520 | 520 |
| Total height [m] | | 4 | 4,3 | 4,5 | 4,8 | 5,3 | 5,6 | 6,5 | 6,5 |

| SPR / SPP SERIES | | 1000 | 1250 | 1600 | 2000 | 2500 | 3150 | 4000 | 5000 |
|---|--|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Nominal press force [MN] | | 10 | 12,5 | 16 | 20 | 25 | 31,5 | 40 | 50 |
| Permanently permissible press force [MN] | | 16 | 20 | 25 | 32 | 40 | 50 | 63 | 80 |
| Impact blow force [MN] | | 20 | 25 | 32 | 40 | 50 | 63 | 80 | 100 |
| Gross energy SPR SERIES [kJ] | | 130 | 180 | 250 | 355 | 500 | 710 | 1000 | 1400 |
| Gross energy SPP SERIES [kJ] | | 65 | 90 | 125 | 178 | 250 | 355 | 500 | 700 |
| Ram stroke [mm] | | 550 | 550 | 600 | 600 | 650 | 850 | 950 | 1050 |
| Stroke to achieve the maximum forming energy [mm] | | 380 | 400 | 450 | 500 | 550 | 710 | 800 | 900 |
| Screw diameter [mm] | | 335 | 375 | 425 | 475 | 530 | 600 | 670 | 750 |
| Ram width/ram depth [mm] | | 850/1000 | 900/1000 | 1000/1150 | 1150/1250 | 1250/1400 | 1250/1400 | 1600/1600 | 1800/1800 |
| Max. distance press table/ram [mm] | | 1500 | 1600 | 1750 | 1900 | 2000 | 2200 | 2500 | 2800 |
| Daylight between guides [mm] | | 1050 | 1125 | 1280 | 1430 | 1500 | 1500 | 1900 | 2100 |
| Width between lateral windows [mm] | | 520 | 560 | 560 | 560 | 800 | 800 | 850 | 900 |
| Total height [m] | | 7 | 7,5 | 8,5 | 9 | 10 | 10,5 | 11 | 12 |

- ▶ Other press types and sizes on request
- ▶ Hydraulic ejector in table and/or ram available on customer request
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Partial section through a LASCO screw press

CONTACT

HEADQUARTERS

LASCO UMFORMTECHNIK
WERKZEUGMASCHINENFABRIK 

LASCO Umformtechnik GmbH
Hahnweg 139
96450 Coburg / GERMANY
phone +49 9561 642-0
e-mail lasco@lasco.de

Contact person:

M.Sc. Business Administration and Engineering
Nicklas Trier / Sales Management



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Follow us on:



USA

LASCO ENGINEERING
SERVICES 

LASCO Engineering Services L.L.C.
615 Harbor Avenue
Monroe, MI 48162 / USA
phone +1 734 241 0094
e-mail lasco@lascoUSA.com

CHINA

LASCO UMFORMTECHNIK
拉斯科成形技术有限公司 

LASCO Forming Technology Co.Ltd.
Huateng Tower, Unit 1706A
Jia 302, 3rd Area of Jinsong,
Chaoyang District
100021 BEIJING / P. R. CHINA
phone +86 10 8773 0378
e-mail lasco.beijing@lasco.de

RUSSIA

LASCO UMFORMTECHNIK
ЛАСКО УМФОРМТЕХНИК СЕРВИС 

ООО „LASCO Umformtechnik Service“
Dobroselskaja 212, Office 309
600031 Wladimir / RUSSIA
phone +7 492 2479 314 642-0
e-mail lasco@lasco-russia.ru



SCREW PRESSES
Precision for solid forming



PRECISION SCREW PRESSES

Certified quality meets high flexibility

LASCO screw presses are ideal for precision forging of components made of steel, high-alloy materials and non-ferrous metals. With the SPP and SPR types, the LASCO product portfolio includes direct-driven screw presses with different forming characteristics.

Performance overview

- ▶ Precision forging
- ▶ Hot or cold forming
- ▶ Upsetting
- ▶ Hot or cold calibrating
- ▶ Coining

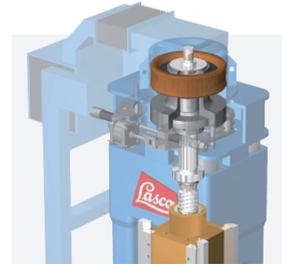
QUALITY FEATURES:

- ▶ Exact energy dosage and high working capacity
- ▶ Optimum thread geometry of screw and screw nut
- ▶ Proven three-piece frame structure
- ▶ Efficient control and operator guidance
- ▶ Maximum repeat accuracy and optimum efficiency through frequency converter
- ▶ Digital linking-up with in-house ERP system and cloud possible

SPP SERIES

For calibration and forming tasks with **high force requirements**

- Features**
- ▶ For forming tasks with shorter forming paths
 - ▶ Able to absorb impact blows, without engaging a slipping clutch
 - ▶ Specialized in dimensionally accurate calibration and coining
 - ▶ Forming energy can be precisely set from 1 to 100%
 - ▶ Field of application e. g. in the manufacture of medical instruments or high-quality drive components in the aviation industry

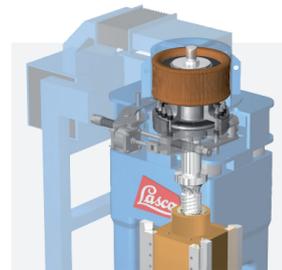


Basic design of the SPP series drive (schematic representation)

SPR SERIES

For forming tasks requiring a **large amount of work capacity**

- Features**
- ▶ Slipping clutch in the flywheel system enables - compared to SPP - a doubling of the working capacity with the same maximum force and also functions as overload protection
 - ▶ Universally usable, also for applications with long forming paths
 - ▶ Forming energy can be precisely set from 1 to 100%
 - ▶ Field of application examples in the production of high-quality chassis components in the automotive industry



Basic design of the SPR series drive (schematic representation)

THE LASCO SCREW

Screw

A unique feature of LASCO screw presses is the thread geometry of the screw forged from high-alloy annealed steel. High rigidity is achieved through the stationary bearing and optimum screw length. Sophisticated calculation methods combined with the generous dimensioning of the screw diameters ensure a long service life and high operational reliability.

Screw nut

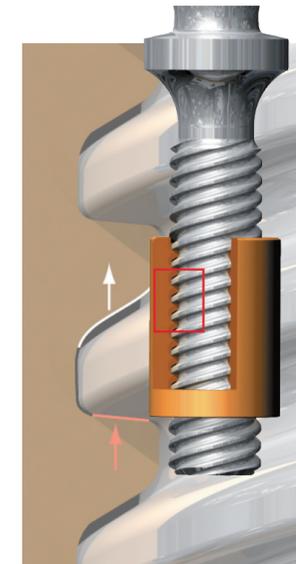
The screw nut located in the press ram is made of high-quality brass alloy and has very good sliding and emergency running properties. The fully optimized LASCO thread profile is incorporated here in the same way as on the screw.

Thrust bearing

The thrust bearing of the screw consists of wear-resistant brass alloy. The dome-shaped bearing point reliably transmits the process forces into the press frame and ensures optimum load distribution even in case of eccentric loads.

Telescopic guard

The robust telescopic guard reliably protects the screw and screw nut from scale and dirt.



Schematic view of screw and screw nut

THE FREQUENCY CONTROLLED DRIVE

The frequency converter drive enables four-quadrant operation and thus the recovery of electrical energy during the braking phases in the up and down movement of the press ram. The operator only has to specify the energy and stroke for the process. All relevant control data are automatically determined by the control system.

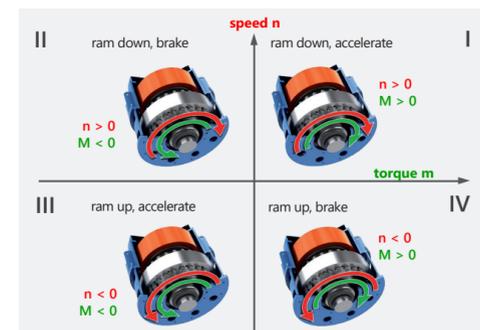


Illustration of a four-quadrant operation

QUALITY FEATURES

- ▶ Exact repeat accuracy of the specified forming energies
- ▶ Time-optimized motion sequence (short cycle times even at low energies)
- ▶ Minimal energy consumption due to regenerative braking
- ▶ Power factor $\cos \varphi \approx 1$

DISTINCTIVE VERTICAL INTEGRATION

A large number of different forgings can be produced with LASCO screw presses:

LASCO screw presses are popular for producing parts in:

- ▶ Automotive industry
- ▶ Aerospace industry
- ▶ Medical technology
- ▶ Manufacture of bicycle components
- ▶ Manufacture of household goods

Further areas of application on request!

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

Challenge us!



Precision parts of aluminium alloy



Precision parts of steel alloy

BENEFITS OF THE LASCO SCREW PRESSES

- ▶ Long lifetime and operational safety due to robust design
- ▶ Exact energy dosage from 1 - 100% can be called up with high repeat accuracy
- ▶ Energy recovery through regenerative braking (feedback)
- ▶ The spring stiffness of the frame is precisely adjusted by pre-tensioned tie rods
- ▶ The division into press base, upright and crosshead prevents notch effects
- ▶ Low system load through current peaks due to optional flywheel storage
- ▶ High press stroke rate even at low forming energies
- ▶ Low maintenance and service costs

Scan now and learn more about screw presses!

