



# S series Presses E series Presses

- |          |             |
|----------|-------------|
| P 200 S  | P 200 E     |
| P 300 S  | P 200 E air |
| P 400 S  | P 300 E     |
| P 500 S  | P 300 E air |
| P 200 SV | P 400 E     |
| P 300 SV | P 200 E+    |
| P 400 SV | P 300 E+    |
| P 500 SV | P 400 E+    |

## Presses S, SV

P 200 S, P 300 S, P 400 S, P 500 S  
P 200 SV, P 300 SV, P 400 SV, P 500 SV



### Futuristic design, quiet hydraulics & ergonomic door

The Collin presses convince by ergonomic, space-saving and modern design - – the new high-capacity servohydraulics by its quiet operation, high-precision pressure control and low energy consumption. Moreover, due to this servohydraulics concept, cooling water is no longer required. The quiet hydraulic aggregate, which is not permanently running, has a servomotor and a twin gear pump. Pressure control is made with a servo control via the motor speed.

The high pressure accuracy and the reduced energy consumption of the motor also speak for themselves. Usable for a temperature range of 20 to 450°C.

### Advantages

- ▶ High pressure accuracy of +/- 0.5 bar
  - ▶ Very high temperature accuracy across the platen surface
  - ▶ High-precision control of temperature and pressure ramps▶
  - ▶ Reduced energy consumption of the motor
  - ▶ Usable for a temperature range of 20 to 300 °C, optional to 450 °C.
  - ▶ User- friendly by touch screen control
- Type SV Presses have a vacuum chamber

### Press Sizes

- ▶ from 200 x 200 mm to 500 x 500 mm
- ▶ other sizes on request

### Press Inserts

- ▶ **Test specimen production:** production of films or platens with a thickness of approx. 0.3 - 10 mm. These are produced for surface tests, color determination or the preparation of test samples for the determination of mechanical, physical, chemical or optical characteristics.
- ▶ **Lamination:** Here, polymer masses are laminated with films, metals or fibers in order to produce prototypes or simulate production processes.
- ▶ **Thermoforming:** Special designs allow to preheat films and to mold them in special thermoforming tools.
- ▶ **Sintering:** With powder mixtures, based on polymers or ceramic masses, prototypes or small series are produced by uniaxial or isostatic pressing.
- ▶ **Clean-room technology:** Collin presses for the production of medical or pharmaceutical products can be manufactured in clean-room design.

## Control

The Collin presses are equipped with a 10 "touch screen (CMI 10) with convenient input and clear display of all parameters and data.

The automatic process includes max. 1000 process phases defined by

- ▶ Pressing pressure resp. pressure force Times
- ▶ Platen temperature
- ▶ Tool venting
- ▶ Depending on the design, also temperature ramps, directional control system and further features are available

## Our customers

- ▶ Raw material producers
- ▶ Compounding and finishing companies
- ▶ Processing companies
- ▶ Universities and institutes
- ▶ Pharmaceutical companies
- ▶ Medical technology companies

## Pressing materials

The Collin Type S Press can be used for the processing of all polymer materials, ceramic masses etc, standard presses from 20 - 300°C and high-temperature presses 20 - 450°C.

Standard Press Model	P 200 S	P 300 S	P 400 S	P 500 S
Usable pressing area	196 x 196 mm	296 x 296 mm	396 x 396 mm	496 x 496 mm
Useful opening	200 mm	300 mm	400 mm	500 mm
Pressing force (kN)	125	300	500	785
	Further pressing forces are available on request.			
Electr. heating capacity (300°C)	2 x 3.9 kW	2 x 11.6 kW	2 x 14.2 kW	2 x 35.7 kW
Connection	10 kW	27 kW	31 kW	74 kW
	Connection depends on the special equipment.			
Cooling water	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C
Compressed air	p=4-6 bar	p=4-6 bar	p=4-6 bar	p=4-6 bar
Open, pressure-free cooling water return at ground level is required	yes	yes	yes	yes
Dimensions L x W x H	1400 x 800 x 1800 mm	1655x 800 x 1800 mm	2000 x 9450 x 2050 mm	2425 x 1050 x 2350 mm

## Additional Features & Extras

- ▶ Supporting frame with rolls
- ▶ Pressing platens, frames and tools
- ▶ Controlled tool temperature
- ▶ Decalcification systems
- ▶ Closed cooling systems (chiller)
- ▶ Increased working area
- ▶ Mult-daylight press
- ▶ Cooling ramp according to ASTM D4703-2016
- ▶ Embossing and micro-embossing: By using tools, surfaces can be embossed on one or both sides. Specific to the product, structures in the micro area are produced with highly accurate temperature, pressure or path control.
- ▶ The cooling cassette increases the cooling down speed to up to 100 K/min and the profitability by a time and energy saving of up to 70 %. From the stand-by position, the cassettes move into the pressing area below and above the pressing tool and are pressed from the heating plates against the sample for cooling.

## Presses

**MEDICAL LINE**

**P 200 S, P 300 S, P 400 S, P 500 S**



Collin presses of the product range Medical Line are manufactured according to the standards FDA 21 CFR, ISPE, ISO 13485, Din EN 10204/3.1B, cGMP/ GMP. Highest precision, narrow tolerances, cleanliness, process accuracy, easy cleaning handling, clean-room conformity, quick and excellent service and custom-made customer trainings are taken for granted.

### Exemplary applications

- ▶ Clean-room technology design for the production of medical or pharmaceutical products
- ▶ Quality tests of materials
- ▶ Production of test plates / samples

## Presses E

LAB·LINE

P 200 E, P 200 E air, P 300 E, P 300 E air, P 400 E

### Economic, flexible and easy to reproducible results

The Type E series Platen Press is the entrance version among the Collin presses. As 4-column design with fixed counterplate above and moveable platen below, the Collin presses cover an enormous pressure range. Moreover, the large column distance allows optimal handling possibilities inside the press.

The presses P 200 E to P 400 E have a single-stage hydraulics with doubleacting hydraulic cylinder. The Press Type air is the special exception - the Collin pneumatic press. Lowest pressure with high accuracy can be realised.



### Advantages

- ▶ Economically designed system.
- ▶ Covers a wide range of pressure.
- ▶ Optimal handling inside the pressing area due to the design.
- ▶ Freedom of choice between manual and automatic operation.

### Pressing Materials

The Collin Press can be used for the processing of polymer materials, ceramic masses etc. in the temperature range of 20°C up to 300°C.

### Pressing Platens

These consist of a combination of steel, aluminium and insulating plates, whereas the plane parallelism is < 100 µm.

- ▶ **Platen heating.** With electrical heating, the max. platen temperature is 300°C. The temperature distribution on the platen surface is +/-2°C, measured at 180°C with a distance from the edge of 10 %.
- ▶ **Platen cooling.** Cooling coils provide for direct water cooling.
- ▶ **Option cassette cooling system.** It consists of a pair of water-cooled, insulated plates. The horizontal moving of the cooling plates is made automatically. Only uncontrolled but quick cooling is possible. The advantages of this system are the enormous time and energy saving due to quick cooling down of the sample.

Important: Pressure relief of the sample between hot pressing and cooling down.

## Control

The control consists of a 7" touch display (CMI 7) with micro controller. It is advantageous that there is a choice between manual control and automatic operation.

## Control Parameters

- ▶ Set / actual value of hydraulic pressure
- ▶ Temperature of upper and lower pressing platens
- ▶ Heating and coolings times
- ▶ Optional cooling cassette (automatic operation)
- ▶ One program flow with up to four steps

Parameters / Press	P 200 E	P 200 E air	P 300 E	P 300 E air	P 400 E
<b>Usable press area</b>	196 x 196 mm	196 x 196 mm	296 x 296 mm	296 x 296 mm	396 x 396 mm
<b>Usable opening (working area)</b>	150 mm	150 mm	150 mm	150 mm	250 mm
<b>Pressing force</b>	120 kN	7,4 kN*	300 kN	12 kN*	500 kN
<b>Option Pressing force 1</b>	150 kN	12 kN*		15 kN*	
<b>Option pressing force 2</b>	200 kN				
<b>Electrical heating capacity (300°C)</b>	2 x 2.5 kW	2 x 2.5 kW	2 x 4.5 kW	2 x 4.5 kW	2 x 8 kW
<b>Connection</b>	P=6 kW	P=6 kW	P=11 kW	P=10 kW	P=18 kW
<b>Cooling water</b>	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C	p=4-6 bar; T=12°±5°C
<b>Hydraulics/ pneumatics</b>	Hydraulics	Pneumatics	Hydraulics	Pneumatics	Hydraulics
<b>Compr. air connection</b>	p=4-6 bar	p=4-6 bar	p=4-6 bar	p=4-6 bar	p=4-6 bar
<b>Open, pressure-free cooling water return at ground level is required</b>	yes	yes	yes	yes	yes
<b>Dimensions (L x W x H)</b>	975 x 350 x 835 mm	975 x 350 x 817 mm	1300 x 500 x 980 mm	1300 x 500 x 980 mm	1676 x 642 x 1720 mm
<b>Design</b>	Table-top	Table-top	Table-top	Table-top	Stand-alone
<b>Laboratory table for table-top press (L x W x H)</b>	1000 x 750 x 700-950 mm height adjustable	1000 x 750 x 700-950 mm height adjustable	1500 x 750 x 700-950 mm height adjustable	1500 x 750 x 700-950 mm height adjustable	

\* at 6 bar air pressure in the customer's system (0.1 bar accuracy)

## Additional Features

- ▶ Pressing platens, frame and tools
- ▶ Closed cooling systems (chiller)

## Presses E+

LAB·LINE

P 200 E+, P 300 E+ und P 400 E+

With the E+ Presses, the cooling ramp defined in the Test Standard ASTM D4703-2016 can be realised. In addition, a more accurate pressure range is possible, furthermore, there are 10 program steps and a graphic display of the process.



### Safety

All press types meet the safety requirements of Standard EN 289:2014. Moreover, they are equipped with a complete safety cover, including a transparent safety door.

### Service and Maintenance

Also after the purchase, we are there for you. Our service team comprehensively serve our customers worldwide. Beside regular maintenance work, we also support you during repair work as well as during the calibration of your Collin line. Moreover, our team handles the integration of Collin machines into existing lines resp. the adaptation of existing lines to new challenges. In nearly all cases, the modular design of all Collin lines is most helpful for this task.

Our local sales team will be pleased to give you advice at any time.

**COLLIN Lab & Pilot Solutions GmbH**

Gewerbestrasse 11  
83558 Maitenbeth, Germany  
T: +49 (0) 8076 / 27 40-0, F: +49 (0) 8076 / 27 40-1001  
info@collin-solutions.com

**COLLIN Lab & Pilot Solutions, Inc.**

5126 S Royal Atlanta Dr.  
Tucker, GA 30084, USA  
T: +1 (678) 325-6708



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12°10'68.3"E

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-84°18'00.48"W

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