

Hydraulic

POWDER COMPACTING PRESSES



rigid - flexible - precise

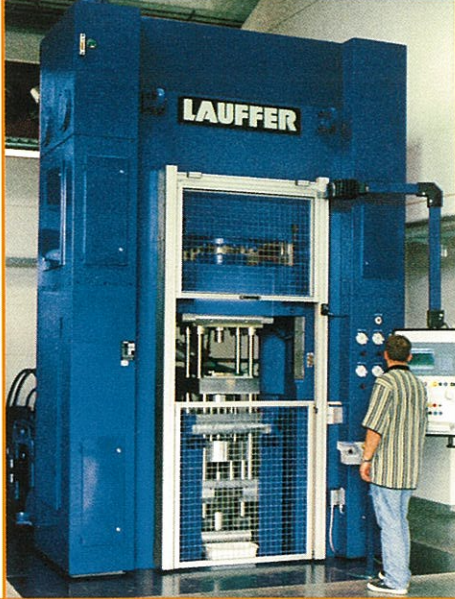
LAUFFER
PRESSEN

RPM...SE SERIES

Closed Loop Controlled Multi-Axes Presses

Hydraulic LAUFFER presses are designed to produce carbide, iron powder and ceramic based parts and have proven successful for many decades.

Our RPM ... SE series presses allow flexible programming and come standard with a closed loop control.



Important Features:

- Press frame is rigidly engineered and constructed
- Precise guiding of upper ram with 8-point gibbing
- Generous space for adaptor or tooling installation
- Wear-resistant and long-life hydraulic cylinders
- Precision CNC positioning of all axes with closed loop feed-back
- Highly responsive and rapid accel/decell of all forces of the axes
- Pressing to constant height and density
- Precise and infinitely adjustable closed loop controlled top punch hold-down
- Closed loop controlled punch spring-back compensation
- Underfill, overfill and profile filling
- Remote diagnostics via modem or ISDN
- Short die change times by quick clamp systems (no mechanical stops, no hydraulics/electrics in the adaptor)

LAUFFER powder compacting presses are equipped with up to 6 closed loop controlled axes and up to 4 further adaptor axes. This allows us to meet the increasing demands of the powder metal industry for the production of reproducible parts, without fracturing, and a reliable working process.

- Compacting up to pressing position via CNC closed loop controlled axes (no incidental retracting of the punch, caused by external conditions). This provides an ideal pressing sequence allowing powder to be directed exactly into the respective segments.
- Withdrawal and parts removal by defined, closed loop controlled compensation of the punch spring-back.

RPM...SE			100	160	250	400	630	800	1200
Standard design									
Upper piston	Pressing force	kN	1000	1600	2500	4000	6300	8000	12000
	Stroke	mm	400	400	400	500	500	600	600
Lower piston	Pressing force	kN	1000	1000	2500	3200	5000	6300	8000
	Withdrawal force	kN	630	800	1500	2000	2500	4000	6300
	Stroke	mm	200	250	250	300	300	300	300
Center pin in lower piston	Pressing force	kN	160	160	160	160	160	200	200
	Stroke	mm	200	250	250	300	300	300	300
Multi-axes design									
2nd press axis in upper piston	Pressing force	kN	630	1000	1000	2000	3200	4000	6300
	Stroke	mm	50	50	50	50	60	60	100
Center pin in upper piston	Pressing force	kN	170	160	160	160	160	160	160
	Stroke	mm	50	50	50	50	50	60	60
2nd press axis in lower piston	Pressing force	kN	630	630	1600	2000	2500	3000	3000
	Stroke	mm	50	50	50	100	100	100	100

Subject to changes. Additional specifications and sizes upon request.

SPM SERIES Lab and Small Presses

Our SPM series presses are of 2-column design with CNC closed loop control. Furthermore, they are equipped with upper and lower cylinder including a center pin. The movements of the filler axis is controlled and driven by servo-motors.



SPM 12: Testing press to compact green radioactive material samples.

VPM SERIES Universal Powder Compacting Presses

Our VPM series presses are of 4-column design and offer optimum access for adaptor installation. Our VPM presses are available in standard single- or in multiple-platen designs.

Due to high active forces the presses can be used for withdrawal and counterpressing as well.



4 units VPM presses with common maintenance platform to produce magnet cores.

		SPM 12	SPM 16	VPM 25	VPM 40	VPM 63
Upper piston						
Pressing force	kN	120	160	250	400	630
Stroke	mm	110	110	200	200	250
Lower piston						
Advance force	kN	120	160	250	400	630
Return force	kN			150	260	410
Stroke	mm	90	90	100	100	160
Center pin in lower piston						
Pressing force	kN	15	15	15	15	15
Stroke	mm	110	110	100	100	160

Subject to changes. Additional specifications and sizes upon request.

PRESS CONTROL

Presses with Open Loop Controlled axes

are equipped with a programmable logic controller (PLC). All parameters are entered via keyboard on the screen. Storage capacity approx. 500 tool programs.



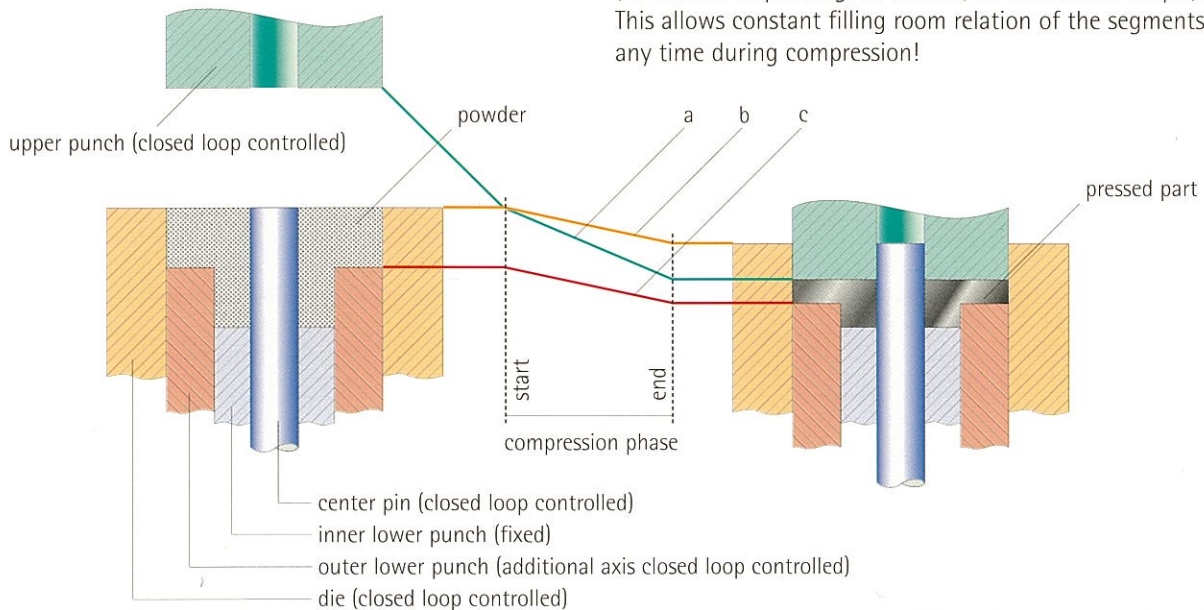
Presses with Closed Loop Controlled Axes

allow free programming of movements, forces, times and speeds in any order and frequency. Closed loop control guarantees optimum parts. Axes can be adapted to synchronization to allow predefined movements to each other.

COMPRESSION PROCESS LTC

LAUFFER True Compaction

- a: Closed loop controlled compression movement upper punch.
- b: Closed loop controlled die movement. For example: at half of the upper punch speed (adjustable speed to influence neutral zone)
- c: Closed loop controlled compression movement of the outer punch during the whole compression phase (no friction-depending movement, no mechanical stops!). This allows constant filling room relation of the segments at any time during compression!



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