komage

Powder Compacting Systems

Erfolgskonzept Pulverpresse S

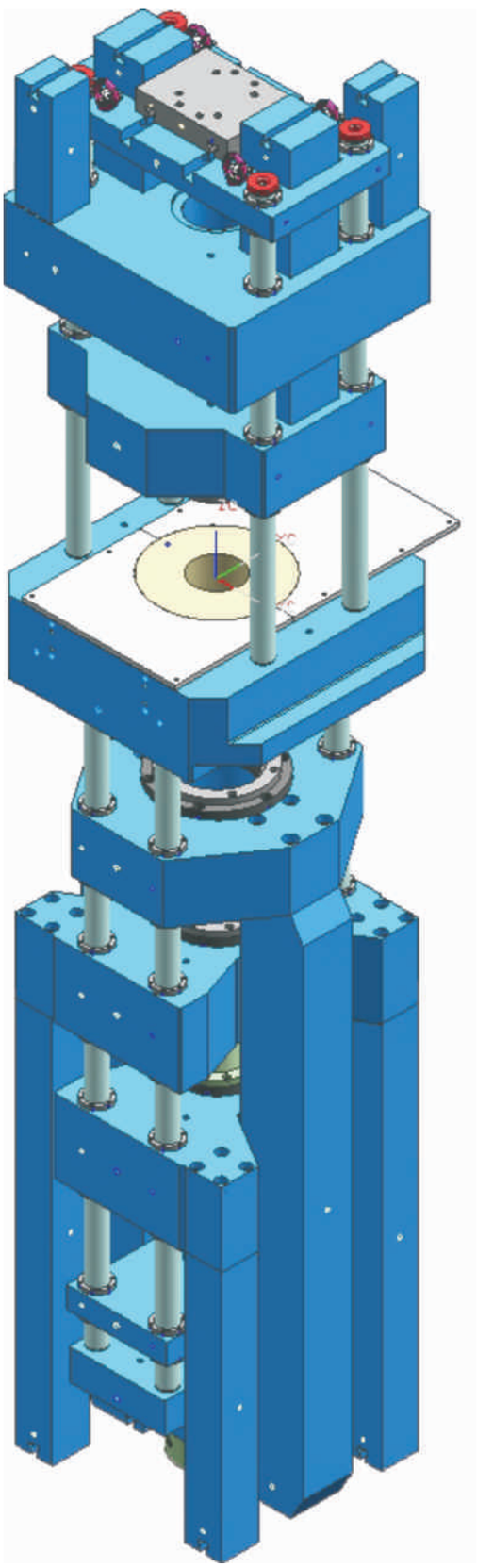
Created by Komage

Ultimate Solution

Variable Press System for all customer needs



Powder Compacting Systems

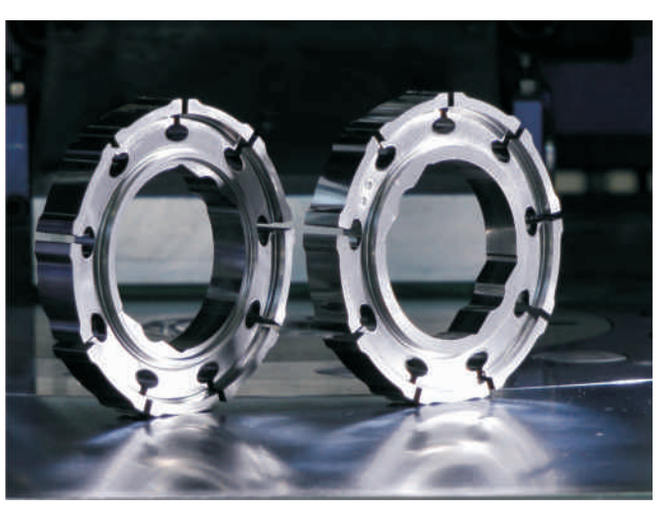


The Concept

The press series S/KHA made by KOMAGE is available in the pressing forces of 50-12.000 kN. The presses work either in the withdrawal or in the ejection mode. They guarantee high productivity and flexibility. Simple as well as complex shaped press parts can be produced in an optimal quality.

The combination of advanced adapter and state-of-the-art CNC technology makes maximum precision possible. Of course, KOMAGE also offers individual automation solutions for this press series, because they are optimally adjusted to the specific application.

- Rigid press frame with 4 columns (pre-tensioned frame)
- S-Series: ejection principle, up to 10 closed loop controlled axes
- KHA-Series: withdrawal principle, up to 12 closed-loop controlled axes
- Ejection force up to 100% of press force (S-Series)
- No mechanical fixed stops, free programmability of all tool axes
- Automatic fill correction for all lower punches / die
- Decompression of all lower punches, individually possible also
- Energy efficiency by power-controlled hydraulics
- Multi-Level-Technology, optionally with KOMAGE´s new generation of multi-plate adapters, MEGA+ or without adapter
- Fast clamping tooling can be optionally equipped (Erowa, System 3R ® etc.)
- High positioning accuracy
- High repeatability accuracy
- Closed loop controlles fill system (single or multiple)
- Closed loop controlled movements (speed, position, time, force)
- Automation solutions according to customer´s specification
- Programmable load for crack-free removal
- Pressing to height (position)
- Pressing to density (force)



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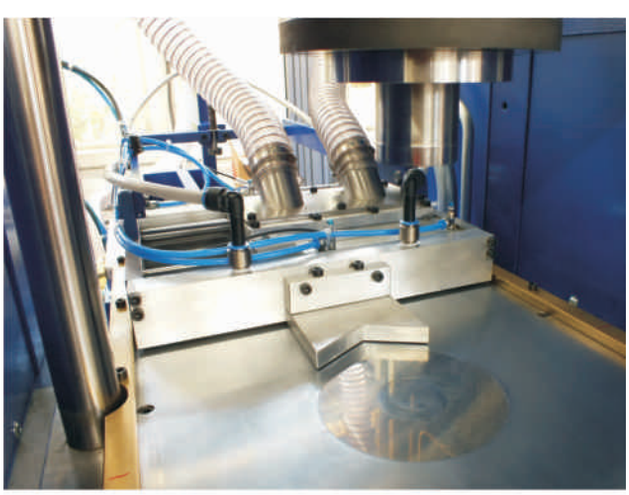


The Programm Generator

KOMPART - the easy and fast programming, with just a few parameters

- Optimising functions integrated
- Fast selection of various fill- and pressing methods
- Reduction of set-up time by automatic calculation of all position set values

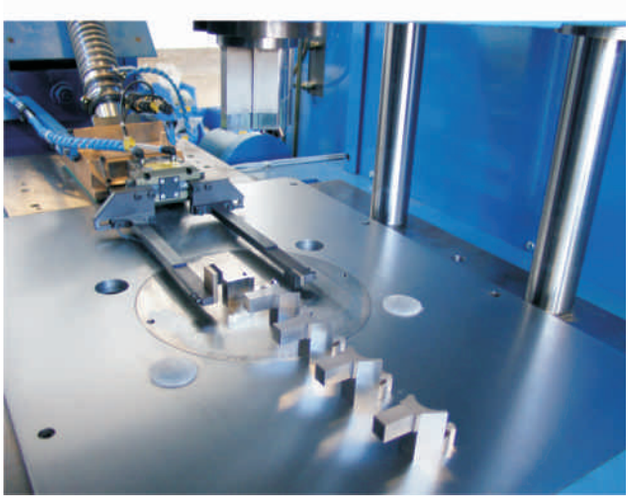
WORK FLOW



The filling

The following filling techniques can be realised:

- Falling filling
- Suction filling
- Combination of suction and falling filling
- Contour filling (different powder distribution in the die)
- Under filling
- Overfilling
- Dwell times
- Vibration movements of the filling system
- Stirring movements
- Multi-layer filling of different materials

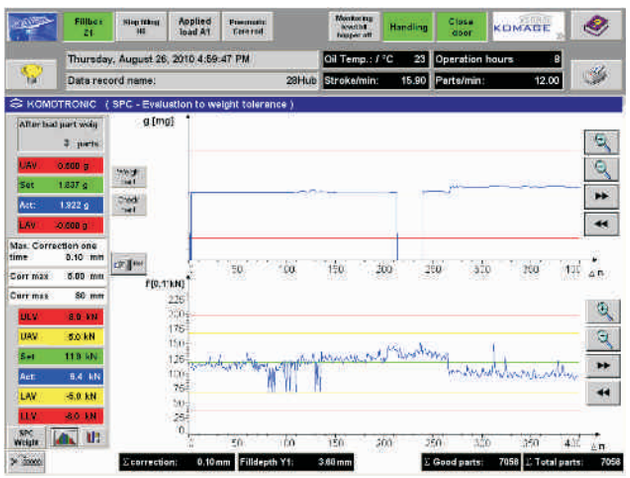


The compaction

The free programmability of the press axes makes various compaction options possible:

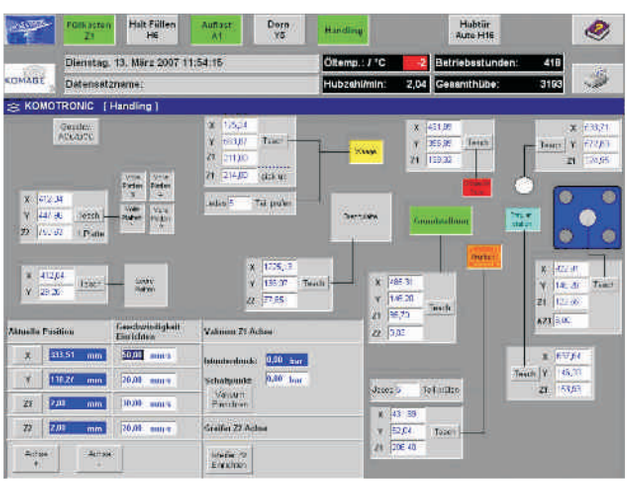
- One-sided compaction from above
- One-sided compaction from below
- Two-sided compaction
- Shifting of press neutral in any required area

Powder Compacting Systems



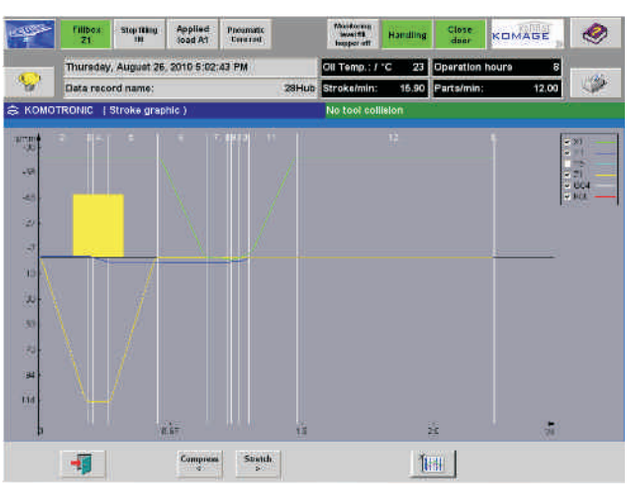
The Control System

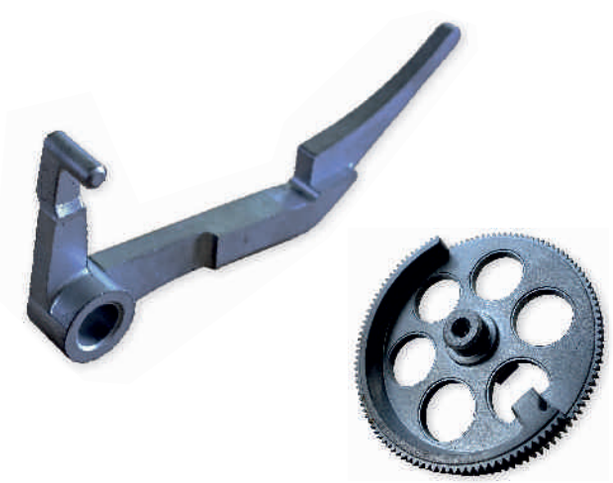
The control system KOMOTRONIK S for the series S/KHA guarantees high flexibility and productivity. Therefore, the S/KHA press series reaches a product quality which complies with the requirements of the most modern quality systems and assures a repeatable process.



- User friendly operator interface
- KOMPART program generator
- No referencing of axes required due to absolute measuring systems
- Electronic handwheel for simple setting of all axes
- Repeatable processes by monitoring of all important parameters
- Monitor function to protect tooling and machine
- Automatic fill correction according to height, force and weight within free programmable limits
- Quality control
- Free programmable position-points for all additional devices (top load, gripper, conveyer belt etc.)
- Remote maintenance



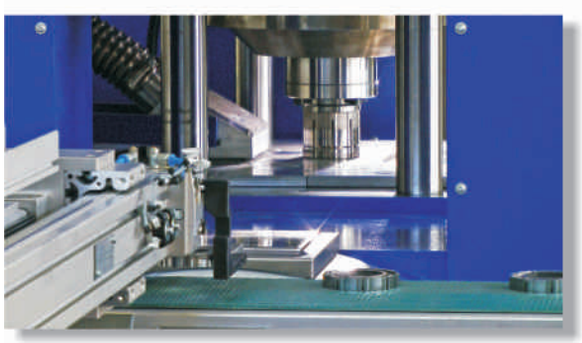




Powder Compacting Systems

Automation & Handling





KOMAGE offers customized automation- and handling solutions for all press systems, regardless if the systems are manufactured by KOMAGE or by other producers. Besides various removal options, entire production processes can be automated. The KOMAGE solutions operate with only one user interface for automation-, press- and handling system. This guarantees an easy handling of press and automation unit.

- Removal and placement with up to 23 strokes/min
- Stacking of sinter plates
- Cleaning and deburring of parts
- Cleaning of tools
- Measuring and weighing of parts
- Various removal systems (gripper, suction, rotation etc.)
- Joint data storage for press and handling system

Technical Data

Standard Machine		S/KHA 5/10	S/KHA 30	S/KHA 60	S/KHA 100	S/KHA 120	S/KHA 250	S/KHA 400	S/KHA 600	S/KHA 800	S/KHA 1000	S/KHA 1200
Press Force	kN	50/100	300	600	1000	1200	2500	4000	6000	8000	10.000	12.000
Strokes up to	min^{-1}	28	25	20	18	18	14	12	10	8	6	5
Die Filling	mm	100	100	100	150	150	200	200	200	200	200	200
Top Punch Movement	mm	100	150	200	200	200	300	300	300	300	300	300
Energy Consumption	kVA	20	40	50	90	90	100	125	135	160	200	120

For the purpose of technical advancement, we reserve the right to make construction changes. All given data are approximate values and can be customer-specifically modified.

Komage powder press systems



Mechanical powder presses of Series K

Hydraulic powder presses of Series S

Servo-electric powder presses of Series E

Mechanical servo-electric powder presses of Series KE

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