

FLEXCELL16

Servo-motorized CNC axial powder press with fully integrated CNC automation for the highest demands on productivity and part quality



Advantages

- Highest precision and productivity
- High-precision position control
- High resolution force control
- Highly integrated press part automation
- Intuitive operation
- Central control and HMI for press and automation
- Encapsulated workspace
- Low energy consumption
- Small footprint
- Highest process reliability even at high stroke rates
- Uninterrupted production even when sinter tray is changed
- Compatible with DORST IoT Solutions

Technical information

- Pressing force: 160 kN
- Upper punch travel: 210 mm
- Holding pressure of die: 80 kN
- Withdrawal force of die: 80 kN
- Filling height, withdrawal process: 130 mm
- Core rod travel: 130 mm
- Positioning accuracy of main drives: $\pm 0,001$ mm
- Positioning accuracy of automation axes: $\pm 0,01$ mm
- Cyclic output with integrated part removal: up to 70 strokes/min

Keyfacts

- Highly dynamic axis drives
- Force-relieved frame
- Precision force measurement
- Precise closed-loop force control
- Extremely sensitive closed-loop controlled upper punch hold-down
- Quick tool change
- Encapsulated working area
- Intuitive programming and operation via centralized control system and HMI
- Interruption-free change of sintering trays
- User-programmable deposit patterns
- Very low noise emission
- Intelligent energy management system
- Low carbon footprint
- TCO optimized

Characteristics

- Backlash-free crosshead guide
- Servo-motorized closed-loop controlled core rod
- Servo-motorized closed-loop controlled filler axis
- Low maintenance
- Installation at ground level
- Low overall height
- Easy product change
- Ergonomic design
- Highly integrated part automation
- Highly dynamic CNC linear axis with direct drive in X direction
- Highly dynamic CNC rotational axes with direct drive for Z direction

Technologies

- Withdrawal process
- Quick-action tool clamping systems
- Pneumatic release mechanism
- Core rod rotary module
- Lower punch rotary module
- IPG® support
- DTS - DORST Tool Setup
- Multi-material filling technology
- Network-compatible
- DORST IoT Solutions
- Standard gripper systems
- Part deburring
- Part cleaning by air jet
- Part weighing
- Storage trolley
- Measuring of sintering trays
- Sample parts belt
- Punch cleaning