Press Brakes

SAP 046 NC

SKU : 470641

TRIAL MACHINE

No CE: Only for export outside the EU

The electric NC press brake is a compact, highly efficient bending machine for precision metal forming. The machine is designed for comfortable operation while seated, allowing the operator to work efficiently on small parts and prototypes. The fully electric drive reduces maintenance requirements, spare parts inventory and downtime compared to hydraulic systems. This machine is often used in the production of brackets and precision parts, as it enables repeatable, accurate bends.

- High-quality hydraulic and electronic components
- Touchscreen control
- Laser optical safety system on the tool
- Upper tool with quick-change mount

TECHNICAL SPECS

WORKING AREA

Pressure force	6 t
Brake length	400 mm
Distance between columns	370 mm
Throat depth	160 mm
Stroke	120 mm
Clear opening	420 mm

TRAVELS

Travel in X-axis	200 mm

FEED

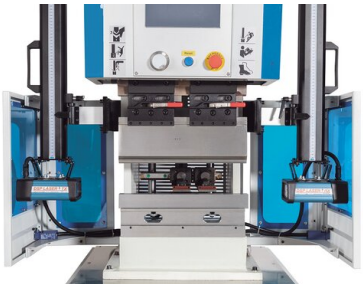
Bending speed	1 mm/s - 30 mm/s
Rapid feed	200 mm/s
Return speed	200 mm/s

DRIVE CAPACITY

Motor rating main drive	3 kW

MEASURES AND WEIGHTS

Overall dimensions (length x width x height)	0.75 m x 0.75 m x 2.98 m
Weight	560 kg



The European-type upper tool holder enables quick tool changes and supports a wide range of tooling options

Protective covers and safety devices ensure safe operation

High-quality electrical components ensure reliable operation

PRODUCT DETAILS

Machine Frame

- The machine bed and key components – including the movable tool holder – are made of welded sheet steel structures that ensure stability and rigidity.
- The design features symmetrical weight distribution and reinforced ribs in the spindle housing. Finite element analysis ensures optimum rigidity and stability.
- The machine frame is annealed to prevent warping and eliminate internal stresses. Machining is carried out in a single clamping on a five-sided CNC centre, which ensures high accuracy and long-term precision.

Work Area

- A large reach, long stroke and narrow table provide ample space for complex bending sequences.

Servo system

- The ECO-10ES CNC system uses industrial-grade chips with EMC and temperature adaptation certificates.
- Advanced bending algorithms and a simple programming function enable quick recording of bending parameters for efficient machining.
- The upper beam drive is equipped with a heavy-duty ball screw and large-dimensioned bearings. These are reliably protected by seals.

Back Gauge

- The rear material stop is driven by AC servo motor and moves precisely and quickly to the desired position.
- During bending, the rear stop automatically avoids collisions with the workpiece.
- The height of the stop fingers can be adjusted using a central handwheel.

Bending Tools

- The upper tool has a precision quick-clamping function that allows for easy tool changes.
- A die with two parallel channels allows for easy shape changes and offers high hardness and wear resistance.
- The bending tools used have undergone heat treatment to ensure a long service life.

Safety and Productivity

- Safety system monitors safety at the tool in a practical manner without restricting functionality
- The safety concept does not comply with CE directives
- A robust protective cover on the rear of the machine safely covers the working area

Design concept

- The servo press brake features a smaller footprint, higher bending accuracy, and a more user-friendly bending process. Complex small parts can be bent with ease.
- The machine's overall energy consumption is very low. Compared to comparable hydraulic press brakes, energy savings of over 60% are achieved.

Advantages

- Adaptive main drive: The main motor automatically adjusts the power to the load, minimizing energy consumption. Power consumption in standby mode is extremely low.
- High speed: Production cycle of over 40 cycles per minute
- High precision: Repeatability/positioning accuracy up to 0.01 mm
- Programmable bending: Bending angles and dimensions are fully programmable and multi-stage bending sequences are supported.
- Program and tool recall: Bending programs and tool presets can be saved and recalled.
- High-speed rounding/folding: Dedicated rounding/folding function with up to 72 cycles per minute
- Universal tooling: Wide tool compatibility reduces tooling investment and tool change costs

Why should you choose this servo press brake?

- Compact design: The small footprint and ergonomic layout allow the operator to work comfortably while seated. This makes it ideal for workshops with limited space.
- The SAP is equipped with ball screws and offers high-performance bending at a fraction of the cost of larger systems.
- The SAP is fully electric, eliminating the need for hydraulic oil and significantly reducing maintenance costs and environmental impact.

- Specialized applications: It is perfect for hardware manufacturers, as it provides a solution for fast and efficient sample creation without additional tools.
- The tool is suitable for bending mounting rails or retaining plates with complex shapes.

Applications

- Electrical industry: small rails, brackets, and covers for electrical components
- Tool and machine manufacturing: brackets and 3D mounting elements
- Small to medium-sized enclosures (electronic/industrial enclosures)
- Enclosures for small appliances
- Kitchen appliances and catering equipment
- Lighting fixtures and accessories
- And much more...

Standard Equipment

- set standard tooling
- set clamping
- CNC system
- DSP safety curtain (multi points)

KNUTH on YouTube

Information to the point

On our YouTube channel you can find videos for nearly all machines from our program. We show the machines from current deliveries and you get an impression of the handling, the processing quality and the machining performance.

Are you interested in a machine for which you cannot find a current video?
Please feel free to contact us!