Press Brakes

AHK H 20080 CNC

SKU : 182621

The press brakes of the AHK-H series are among our bestsellers. This series meets all expectations in terms of stability, precision and durability. Developed with the latest construction technology and built on the latest production lines, the AHK-H series is equipped with a graphic touchscreen control from DELEM. This offers powerful CNC programming and full control over the entire bending process. In combination with the various options for the back gauge, these press brakes can be adapted to a wide range of requirements.

- Built with advanced technologies for high performance
- Excellent bending precision
- Delem controller for advanced bending solutions
- Laser-optical safety system on the tool

TECHNICAL SPECS

WORKING AREA

Pressure force	80 t
Brake length	2100 mm
Distance between columns	1700 mm
Throat	410 mm
Stroke	265 mm
Clear opening	485 mm
Table width	108 mm

TRAVELS

Travel in X-axis	500 mm

FEED

Bending speed	9 mm/s
Rapid feed	145 mm/s
Return speed	115 mm/s

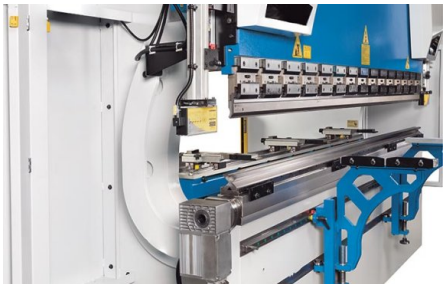
DRIVE CAPACITY

Motor rating main drive	7.5 kW

MEASURES AND WEIGHTS

Hydraulic tank volume	150 l
Overall dimensions (length x width x height)	3.08 m x 1.9 m x 2.77 m
Weight	5300 kg

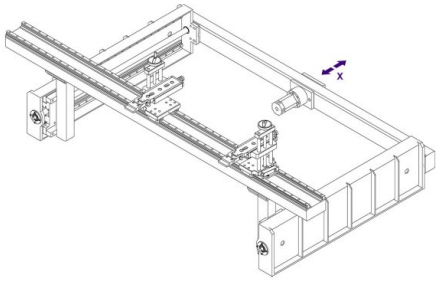
© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 24.07.2024.



The optional motorized crowning allows quick compensation for workpiece deviations during the bending process

The machines in this series can be retrofitted with a controlled back gauge system with R-axis

All machines include a manual crowning system inside the table. Motorized crowning is available as optional feature



Machines are standard configurated with 3 axis CNC controlled: Y1, Y2, X. Additional axes are available by request

PRODUCT DETAILS

Machine Frame and Male Die

- The machine frame is made of a high-precision, stress-relieved steel weldment
- The machine frame has been machined on a state-of-the-art 5-axis milling machine in one single setup to ensure more precise bending and maximum reliability
- All components subject to tensile loads have been carefully constructed and designed with large radii to eliminate the risk of welding cracks
- Male die and table have been optimized to reduce deformations to the lowest minimum possible
- The male die has been designed for optimum vertical load absorption by the guides, piston bearings and seals
- All components were treated in a modern paint and drying system and feature two coats of paint, each coat with a minimum thickness of 60 micron

Work Area

- A large throat, long stroke, and narrow table ensure plenty of free space to accommodate complex bending sequences

Crowning

- All machines include a manual crowning system inside the table; a motorized crowning version is available as an option
- The crowning provides a uniform distribution of bending forces to ensure precise bending angles across the full workpiece length

Hydraulics

- Polished, hard chrome-plated pistons on both hydraulic cylinders feature superior 2 micron surface grades, ensuring a long seal life.
- Cylinder bodies are forged from solid SAE 1040 material
- Perfectly matched hydraulic components and measuring systems ensure exact synchronization of work cylinders

Back Gauge

- The back gauge of a press brake is the most important factor for machining precision
- The entire back gauge system is very robust and perfectly suited for rough production environments
- Linear guides and large preloaded ball screws are mounted in a protective enclosure to ensure smooth operation even under the most difficult environmental conditions
- Exact adjustment of back gauge finger height
- Positioning of back gauge fingers on dual, smooth-running linear guides

Front Support Arms

- Rigid linear guide and ball bearings for boom ensure maximum stability and easy positioning
- Each support arm can be adjusted in height, is easy to handle and extremely sturdy

Bending Tools

- Promecam (European) tool mounts accommodate an extensive selection of bending tools
- All tools are hardened and ground, and allow precise setup
- Manual quick-action clamping system in the tool mount shortens tool changing times and is standard equipment on machines with up to 220 t of machine force

Safety and Productivity

- Safety features are based on the latest CE regulations
- The manual AKAS Laser Safety System is known for excellent reliability and functionality without the limitations that are typical for light curtains

CONTROLS & SOFTWARE

Delem 53 T 2D touch control

© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 24.07.2024.

DELEM DA-53T - Everything under control

4-axis CNC control with color touchscreen for press brakes

- The DA-53T Touch CNC is an modern, versatile solution for a wide range of press brake applications, featuring a compact design without compromising functionality.
- The controls of this series feature a graphic touchscreen monitor by Delem for easy CNC programming.
- The new compact DA-53T is a highly advanced complete touchscreen control solution for synchronized press brakes.
- This control panel can handle up to 4 axes and can be mounted either in a control cabinet or in an optional swivel arm-mounted enclosure.
- The 10.1" Multi-Touch Color TFT screen features high resolution and provides access to the proven Delem user interface.
- The touchscreen allows direct navigation between product programming and the current production via hot-keys. Functions and options are located conveniently where they are needed.
- This ensures optimum ergonomics throughout its operation.
- Machine settings and test bends are reduced to a minimum thanks to a fast and simple program-to-production sequence.
- A USB port is provided for quick product and tool backups via USB memory sticks.
- Standard machine control functions include Y1-Y2, X, R-axis and crowning.
- The second back gauge axis also can be set as Z axis.

DA-53T Features:

- • “Hotkey” Touch Navigation • Up to 4 axes (Y1,Y2 + 2 auxiliary axes) • Crowning control • Tool / material / product inventory • Servo and frequency converter drive • Advanced algorithms for Y-axis control of closed or open loop valves • TandemLink (Option) • USB port • Profile-53TL Offline-Software
-

Specifications

- • Industrial grade Multi-Touch monitor • Instant shut-down • Power supply: 24V • Opto isolated digital I/O • Integrated valve amplifier Y1,Y2,P - Encoder inputs (single/diff. 5V/12V) • RS232 for Safety PLC • USB input control • Servo control • Unipolar / frequency converter control • Pressure valve control • Proportional valve control • Crowning control • Multiple digital function outputs • Mechanical Data • Enclosure 14.7" x 14.5" x 4.8" • Panel 12.2" x 8.7" x 2.4" mm • Design, glass surface, aluminum rim • Weight 19.8 lbs (incl. enclosure)

Programming

- • Alphanumeric product identification • Flattened product identification • Radius programming (bumping) • One-page programming table • Programmable material properties • Programmable axis speed • Selection of millimeter/inch, kN/tons • Product counter Tools • Tool inventory, 30 stamps / 30 dies • Alphanumeric tool identification • Flattening tools • Radius tools calculated • Tool safety zones • Press force • Bending tolerance • Crowning settings • Stamping force • Flattening • Automatic profile bending calculation • Database for learned angle corrections • Learning function on all axes • User-selectable dialog languages • Error message system • Diagnostic program • Operating hour and stroke counters • Integrated analysis tool • PLC function (sequencer) • PLC safety interface

STANDARD EQUIPMENT

Delem 53 T 2D touch control
X-axis back gauge with servo motor
Manual crowning for lower table
Quick-action clamping for upper die
European tool clamping system
European type bottom tool
European type upper tool
AKAS LC II M FMSC Laser safety system
Light barrier for the back side
Front support arms
Hight adjustable back-gauge fingers
Foot pedal with e-stop switch
Operator instructions

© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 24.07.2024.

OPTIONAL EQUIPMENT

- CNC controlled crowning system for AHK H, SKU : 253194
- X-R axes back gauge system, SKU : 253513
- X axis back gauge travel increase, SKU : 253216
- X-R-Z1-Z2-X5-X6 axes back gauge system, SKU : 253517
- Upgrade to Delem DA66T (4 axes), SKU : 253712
- Upgrade to Delem DA66T (6 axes), SKU : 253976
- Upgrade to Delem DA66T (8 axes), SKU : 253977
- Upgrade to Delem DA69T 3D (4 axis), SKU : 253239
- Upgrade to Delem DA69T 3D (6 axis), SKU : 253240
- Upgrade to Delem DA69T 3D (8 axis), SKU : 253241
- Tandem preparation, SKU : 253215
- Hydraulic oil heater, SKU : 253201
- Hydraulic oil cooler, SKU : 253204
- Manual central lubrication, SKU : 253213
- Automatic central lubrication, SKU : 253214
- Sheet Follower, Capacity 350kg AHK H 30100 and higher, SKU : 253537
- Parking Area for Sheet Followers AHK H 30100 or higher, SKU : 253538
- Rolleri Hydraulic-Powerpack for AHK H, SKU : 253550
- Front arm support extension, SKU : 253656
- Additional front support arm (per piece), SKU : 253200
- Additional back gauge finger (per piece), SKU : 253207

© 2024 KNUTH Werkzeugmaschinen GmbH. All rights reserved
Published on: 24.07.2024.