
BOSCHERT – GIZELIS G-BEND PLUS 3175

CNC Controlled Press Brake



1. Features and Capabilities:

- Modern machine frame design ensures optimal installation footprint.
- Compact construction with high operational safety, resistant to external disturbances.
- Additional, massive side wall reinforcements.
- Maintenance-free, bilateral ram guiding system independent for Y1 and Y2 axes.
- Modern hydraulic system with proportional multi-valve arrangement and pressure control, featuring an energy-saving STOP&GO system during operation.
- Precise, bilateral active ram displacement measurement system guaranteeing the highest bending accuracy. The system includes min. 2 independent, very precise linear scales installed on brackets separated from the machine frame. Ram positioning accuracy is +/- 0.01 mm. Provides full electro-hydraulic frame synchronization (Y1, Y2).
- Ram parallelism to the bending axis is ensured by a double roller guide system installed on both sides of the inner frame section, and by additional transverse ram reinforcement.
- Cylinders and pistons are made of high-strength steel; piston surfaces are chrome-plated.
- The machine and accessories are easy to operate and service-friendly.
- The machine is prepared for retrofitting with new technical innovations.
- All numerical axis drives are powered by high-class, maintenance-free AC servo drives.
- The rear backgauge system is guided on both sides by double linear guides.
- A versatile and extensive tooling system provides high machine flexibility, enabling processing of a wide range of parts.
- The machine design and construction comply with EU health and safety requirements in accordance with CE. The machine has a CE declaration of conformity and is designed and built in accordance with Directive 2006/42/EC.

2. Technical Data:

| Model / data | 3175 | |
|---|-----------|------------|
| Pressing force | 175 | ton |
| Max working length | 3,400 | mm |
| Working length between side walls | 3,050 | mm |
| Throat depth in side walls | 400 | mm |
| Table-to-ram clearance | 615 | mm |
| Ram stroke | 350 | mm |
| Maximum backgauge range on X axis | 1,200 | mm |
| Ram speeds: | | |
| Y no load | 0-160 | mm/s |
| Y under load | 10.0 | mm/s |
| Y return | 0-140 | mm/s |
| Electrical equipment: (others on request) | 400 50 | Volt Hz |
| 1 flanged AC motor - P= (incl. control equipment) | 22 | kW |
| Dimensions (approximate) | | |
| Machine height approx. | 2,950 | mm |
| Machine width approx. | 1,800 | mm |
| Machine length approx. | 4,400 | mm |
| Machine weight max.: (depending on additional equipment) | 12,500 | kg |

3. Base Machine:

3.1. Bilateral Ram Control System (Y1 and Y2 axes)

Consists of linear scales mounted on both sides of the ram and a precision proportional valve system. Provides full control and precision of ram positioning with high accuracy during the bending process.

The linear scales are installed on an independent, separate frame so that bending frame loads have no effect on measurement accuracy.

Additionally, the ram is guided on both sides by double roller-slide guides (upper and lower guiding), and is reinforced in the central inner section, ensuring its high rigidity along the entire bending length.



3.2. Pneumatic Lower Tool Clamping ROL2

System for dies with 60 mm base.

Pneumatic die clamping system on the work table. Ensures quick machine changeovers and increases work safety.



3.3. Pneumatic Punch Clamping ROL200

System for Promecam-type punches.

Pneumatic clamping system for individual punch segments with the ability for quick vertical and horizontal mounting and dismounting in the tool holder.

Clamping realized hydraulically.



3.4. Automatic Table Deflection Compensation System

Automatic, multi-point deflection elimination system, continuously adjustable via machine DNC. Adjustment is made depending on the entered bending parameters. Ensures high accuracy and repeatability of the bending angle along the entire working length of the machine.

3.5. CNC Control CYBELEC VisiPac

- Console VSP-84PS-2/P
- 19" TFT 16:9 touch screen display
- 2D color graphics
- Intuitive and easy-to-use software
- Multi-axis CNC control
- Manual or automatic mode for individual axes
- Individual axis control via CANopen
- Advanced diagnostic functions
- Configurable user buttons
- Polish language (others available)
- Graphical 2D part visualization and programming
- Automatic bend calculation
- Bend sequence memory
- Angle function programming
- Working pressure and deflection calculation
- TouchProfile function enabling drawing with finger on the controller screen
- Compatibility with external software
- USB port
- Ethernet port
- EC Safety



3.6. 5-Axis CNC Backgauge System: X-ΔX-R-Z1-Z2

axis X: parallel travel of the backgauge beam

axis ΔX: Movable backgauge finger for non-parallel bends (so-called skew). Adjustment range +/-175 mm (total 350 mm).

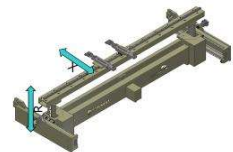
axis R: backgauge beam height adjustment

axes Z1, Z2: automatic finger travel along the backgauge beam.

Axis drives are powered by AC servo drives.

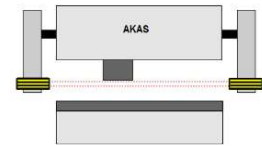
Two backgauge fingers are mounted on the backgauge beam, featuring a sheet support function.

Axes controlled by machine DNC.



3.7. FIESSLER AKAS Safety System

Active optical safety system protecting the working area beneath the punch. The system consists of a transmitter and receiver mounted on both sides of the ram. The mounting method does not limit the working bending length. The transmitter and receiver are adjustable depending on the height of the currently used upper tool.



3.8. Two Front Support Consoles

3.9. Safety Guards

Side and rear guards. With opening capability. Secured with limit switches.

3.10. Complete Machine Technical and Operating Documentation

Tooling:

Punch:

TOP.175.60.R08 60° R0.8MM H=175 L=5x525mm

TOP.175.60.R08 60° R0.8MM H=175 L=1x495mm

Sectioned: 25/30/35/40/45/50/100/170

TOP.175.60.R08 60° R0.8MM H=175 L=1x500mm

Sectioned: 100/300/100 mm

Die:

Multi-V die M.460.60 V=10-16-22-35 (60°), L=4x835mm