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### CU PROFI CU WK II CU WK II CNC-WP by Stierli-Bieger

Punching Nibbling Forming Marking Tapping Bending

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no waste.

#### **Boschert CU PROFI**

The CU Profi is a specially designed machine for punching copper, aluminum and steel bar. The CU Profi is capable of using eight tools to process highly efficient and complete copper bars in lengths up to 4000 mm or 6000 mm and in thicknesses from 2 to 15 mm (optionally 20 mm).

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Moreover, the machine has a separating tool station (60 x 8 mm), and with this, it is possible to accurately cut the copper bars to the desired length. The copper bars may be 12-200 mm wide. The material is fed by clamps gripping the bar from each side, resulting in flat and straight parts with nearly



Feed table with rollers



Optional threading from M3 to M16. Three Easy tool change thread diameters can be in operation simultaneously.



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It is important that the copper bars are clamped both in front and behind the punch head to avoid twisting and bending of the material. Finished parts are pulled to an unload table by the feed mechanisim. Short and/or long parts require no intermediate handling.



Control panel

10,5" TFT color screen, ergonomically designed, is adjustable and mounted on casters. USB, dual palm bottons, tool change position button, emergency-off are all within easy reach. The powerful graphic and conversational software guarantees simple and fast programming. It is also available as a remote PC version.



Tools of CU Profi: Beta V2, lead screw, thread holders, cutting tool 60x8 mm.



#### **Boschert CU WK II**

In the CUWK, Boschert has developed a universal solution for the punching of copper bars. The machine can be adapted to almost any customer requirement.

Each CU WK machine is built to the customer's unique needs including size of machine and number of tools. The machine is also able to punch material up to 15 mm thick. In the five tool stations there can be one shearing station with an 80 x 8 mm or 50 x 10 mm parting tool. Two of the stations can be equipped with multi-tool to give a total of up to 15 tools.

Additionally the CU WK can be equipped with a tapping unit as a separate, sixth head.



1-3 exchangeable clamps are used depending on the width of the bar

Tool change



4- or 6 way Multitool



Maximum tool size of 88.9 mm diameter



#### Options



Suction loader CU WK II



Chain loader

For automatic loading of the CU WK we offer two solutions: the chain loader and the loader with pneumatic suction arms.



CU Profi and CU WK II marking unit: for labeling of finished parts



CU WK II Push-Pull: With this option, using pre-cut lengths of bar, it is possible to have zero waste.



CU Profi loader. For automatic loading with pneumatic suction arms (4 oder 6 mm)

#### **Technical Data**

|  | CU Profi             | CU WK II           |
|--|----------------------|--------------------|
| Maximum dimensions of work pie             | ece                  |                    |
| Length                                     | 4000 mm / 120"       | 6000 mm / 240"     |
|  | (Option 6000 mm) /   | (Option 240")      |
| Width                                      | 15-200 mm            | 15-250 mm          |
|  | 0.6-8"               | 0.6-8"             |
| Thickness                                  | 3-15 mm (20)         | 1-15 mm (20)       |
|  | 0.125-0.5"           | 0.040-0.6"         |
| Punching force                             | 1 x 400 KN           | 2 x 400 KN +       |
|  | (40 ton)             | 3 x 280 KN         |
| Speeds                                     |                      |                    |
| Max axis                                   | 100 m/min            | 60 m/min           |
| Max stroke per minute                      | 100                  | 100                |
| at 3 mm coppor with 0.5 mm pitch           | 100                  | 100                |
| at 3 min copper with 0,3 min pitch         |                      |                    |
| Tooling                                    | - (-)                | - /                |
| Number of tool stations                    | 8 (9)                | 5 (6 optional)     |
| Max. Number of punching tools              | 8 (9)                | 25 (31)            |
| Tapping unit                               | yes                  | yes                |
| System Amada spezial                       |                      |                    |
| Max. Diameter                              | 31,7 mm / 1.25"      | 88,9 mm / 3.5"     |
| Multitool 4-Stations with each             |                      |                    |
| 2 x 31,7 + 2 x 12,7 mm                     | no                   | yes                |
| Multitool 6-Stations with                  |                      |                    |
| 6 x 12,7 mm                                | no                   | yes                |
| LAN + USB                                  | yes                  | yes                |
| Online Support                             | yes                  | yes                |
|  |                      |                    |
| Axes accuracy during punching p            | rocess               |                    |
| Positioning Accuracy                       | + - 0,10 mm          | + - 0,10 mm        |
|  | + - 0.004"           | + - 0.002"         |
| Repeatability                              | + - 0,05 mm          | + - 0,05 mm        |
|  | + - 0.004"+          | - 0.002"           |
| Space requirement and weights <sup>1</sup> |                      |                    |
| Length                                     | 7000 mm / 24' 6"     | 11500 mm / 38'     |
| Width                                      | (3000  mm) / (23  0) | 5000 mm / 16' 6"   |
| Height                                     | 2100 mm / 7'         | 2100 mm / 7'       |
| Weight                                     | 2100 mm / 7          | 13 000 kg          |
| weight                                     | 13.200 lbs           | 28.600 lbs         |
| Electrical values                          |                      |                    |
| Electrical connecting value                | 25 kVA               | 30 kVA             |
| Hydraulic motor                            | 11 kW / 15 HP        | 11 kW / 15 HP      |
| Required fuse                              | 3 x 35 A             | 3 x 35 A           |
|  | 35 Amp 3 phase       | 35 Amp 3 phase     |
| Pneumatic connecting value                 | 4 bar / 60 psi       | 4 bar / 60 psi     |
| Hydraulic oil                              | 160 Liter / 42 gal   | 160 Liter / 42 gal |

<sup>1</sup> The exact values can be found in each specific installation plan.







### Stierli-Bieger Universal Bending Center

The Stierli-Bieger horizontal bender is a modern and powerful solution for the efficient fabrication of busbar.

The integrated angle correction automatically compensates for any spring back and differences in material, thus achieving extremely high precision and reliability. In addition to the measuring tools, many other tools including those for edgewise bending, offset bending and twist bending can be quickly and economically added.

Programming can be done at the machine with the simple yet powerful graphic control or by off-line systems used in conjunction with the Boschert punching systems.



HYBRID Technology



Measuring vee-block with automatic angle correction and bending without marks.



Modern graphic touch-screen control with conversational programming and integrated library of common shapes.



#### **Technical data**

Working force: Tooling height: Bending capacity: CNC-length stop:

Measuring vee-block: Punch insert: Offset bending tools: Edgewise bending: Twist bending: Narrow section punch:

Programming:

Control features:

Connection/ Backup:

Hydraulic:

#### **220 CNC-WP**

220 kN 150 mm 150 x 16 mm 1 m / 2m / 3m 420 kN 200 mm (250 mm)

**420 CNC-WP** 

200 mm (250 mm) 200 x 16 (20) 1 m / 2m / 3m

up to thickness 20 mm up to thickness 20 mm up to thickness 25 mm up to thickness 30 mm 2 different systems available

 60 x 10 mm
 100 x
 10 mm

 60 x 10 mm
 100 x
 10 mm

 Height 150 mm
 Height 200 mm

 Support system upwards or rearwards

At the machine through graphic, conversation control or by programming system. 3D interfaces available for 3D EPLAN, Solidworks, AutoCad Inventor, etc.

Graphic bending simulation, predefined shape library, material library, tool library, automatic calculation of length, automatic calculation of bending and length stop positions.

Ethernet interface + USB port

Most modern hybrid hydraulic reduces noise emissions and energy requirements.



### CNC / CAD Software



It is very easy to quickly program the Labod control on both the Boschert and Stierli machines.

Alternatively Boschert/Stierli offers CNC/CAD programming software from various different suppliers.



With these systems both the punching and bending machines can easily be programmed automatically from CAD files. Savings in time and material are significant.



### Hydraulic Copper Shear CS

For the cutting of copper bars with no waste, the Boschert copper shears are perfect machines. Hold downs above and below the bar, minimal cutting angle and minimal clearance all add up to nearperfect cuts.

| Cutting capacity:   | 7.875" x ½"; 200 mm x 12 mm<br>Copper<br>6" x 0.59"; 150 mm x 15 mm<br>Copper |
|---------------------|---|
| Back Gauge Lengths: | $0 - 40^{\circ} 0 - 1000 \text{ mm}$  |



### Boschert CU TWIST 120 NC

For production twisting of copper bars to exacting standards. The controlled rotation ensures high repeatability.

max. width: max. thickness: max. Length: min. twist length: possible twist angle: 4 ¾"; 120 mm ½"; 12 mm variable mm ca. 2 x material width 0 - 110°





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