

# ALFRA BUSBAR MACHINING



▶ VIDEO

# ALFRA BUSBAR BENDING AND HOLE PUNCHING DEVICE

Busbars at 120 x 12 mm can easily be bent using a universal working cylinder, and holes of Ø 6.6 up to 21.5 mm including oblong holes can be punched through the simple insertion of hole punchers.



## Bending busbars

### Turn switch to “bend”

To bend busbars, the bending die is inserted in the hydraulic piston and the electric angle measurer is placed in the round guidance crew on the counter block. The contact cable is connected to the electric motor. The required angle is fixed on the angle scale using an adjusting screw.

Since copper springs back, we recommend making a setting 1° - 3° above the required angle depending on the material thickness.

You should check the first bending angle. This bending angle can be reproduced as often as required since the bending process is automatically interrupted on achieving the angle by the electrical contact switch.

### Technical data Bending

Bending Cu max:	120 x 12 mm
Bending up to:	more than 90°
smallest leg length:	50 mm
smallest U-bend:	100 mm
smallest Z-bend:	72 mm (depending on material thickness)

The values stated are based on copper rails 120 x 10 mm



## Punching busbars

### Switch setting to “punch”

The puncher with the neoprene scraper and the matching die are placed in the locating hole.

The puncher is fixed sideways using a grub screw. Depending on the busbar width and the required hole arrangement, the processing block can be infinitely variably raised or lowered hydraulically using the handwheel. A counter attached to the handwheel shows the height of the hole centre in millimetres.

We recommend centre-punching the busbar and then aligning the puncher centring point above the centre puncher to guarantee a precise hole location.

The neoprene scraper and a fitted electronic sensor ensure automatic puncher retraction.

### Technical data Punching

Punching Cu:	6.6 - 21.5 mm also oblong hole up to max. L = 21 mm
Material thickness Cu max:	12 mm
Material width up to:	110 mm central
External dimensions L x W x H:	700 x 410 x 410 mm
Weight:	60 kg

# ALFRA BS 120 CU-BUSBAR BENDING AND HOLE PUNCHING DEVICE

Two functions, one device: With the BS 120 CU from Alfra, control cabinet builders can bend and punch copper busbars in just a few steps. In bending mode, the bending-die simply has to be inserted into the hydraulic piston. The required bending angle is to be set by using the adjusting screw.

In punching mode, the BS 120 CU punches holes with a diameter between 6.6 mm and 21.5 mm or oblong holes up to max. 21.0 x 18.0 mm, depending on the used punch. The universal working cylinder processes busbars up to 120 mm x 12 mm.

In addition, the BS 120 CU scores with various safety features.

## Included accessories:

- Electric angle reader
- Bending die
- Length stop

	Prod.-No.
BS 120 CU-busbar bending and hole punching device	03200SET.NG
Electrical angle measurer R10	03201.NG
Bending die R10	03202.L
Length limit stop	03203
Bending die with movable jaws (120 x 10 mm Cu)	03228
Stage bending tool with 2 pairs of pressure plates for 5 and 10 mm stages (max. range: 100 x 5 mm / 60 x 10 mm Cu)	03246



Prod.-No. 03200SET.NG



Prod.-No. 03201.NG



Prod.-No. 03202.L



Prod.-No. 03228

## Electro-hydraulic pump AHP M1

### Technical data:

Max. pressure:	700 bar
Max. flow rate:	1.1 l/min
Oil type:	HLP 46
Filling volume:	3.2 l
Working volume:	2.2 l
Weight:	29 kg
Operating voltage:	230 V / 50 Hz
Power:	1.3 kW
Current consumption:	5.7 A
Motor speed:	2,860 rpm

	Prod.-No.
Electro-hydraulic pump AHP M1 incl. hydraulic hose 2.00 m	03857
Foot switch with safety function (accessories necessary for operation)	03862.NG



Prod.-No. 03857



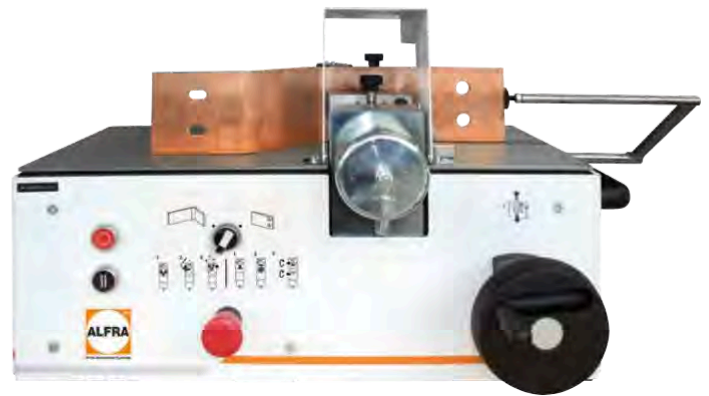
Prod.-No. 03862.NG Foot switch

# ALFRA BS 120 CU-BUSBAR BENDING AND HOLE PUNCHING DEVICE

## Bend, punch, ready, go!

With the Alfra BS 120 CU busbar bending and punching device in the set variant, enclosure builders can get started immediately, because the bending-die, electric angle reader, foot switch and hydraulic pump are included in the scope of delivery (punching tools are available as an option depending on the required dimensions).

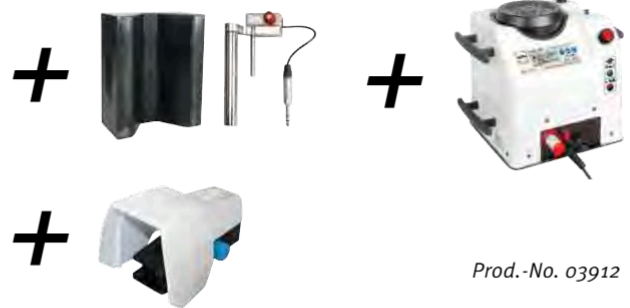
This means: Precise bending and punching is done by simple conversion in just a few steps. Even in the set version, you benefit from improvements to protect the machine.



Prod.-No.  
03912

### ALFRA BS 120-Set

- Prod.-No. 03200SET.NG  
ALFRA BS 120 CU-busbar bending and hole punching device
- Prod.-No. 03857  
Electro-hydraulic pump **AHP M1**
- Prod.-No. 03862.NG  
Foot switch with safety function

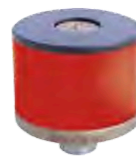


Prod.-No. 03912

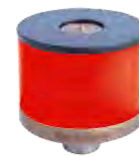
## Accessories

Punches and dies

Punch Ø in mm	Metric Screw connection	Max. Material thickness in mm	Prod.-No.
6.6	6.0	5.0	03204
9.0	8.0	6.0	03205
9.5	8.0	6.0	03206
11.0	10.0	12.0	03207
11.5	10.0	12.0	03208
13.5	12.0	12.0	03209
14.0	12.0	12.0	03210
17.5	16.0	12.0	03211
18.0	16.0	12.0	03212
21.0	20.0	12.0	03213
21.5	20.0	12.0	03214



Round punches and dies



oblong hole punches and dies

Die Ø Max. in mm	Material thickness in mm	Prod.-No.
6.6	5.0	03230
9.0	6.0	03231
9.5	6.0	03232
11.0	12.0	03233
11.5	12.0	03234
13.5	12.0	03235
14.0	12.0	03236
17.5	12.0	03237
18.0	12.0	03238
21.0	12.0	03239
21.5	12.0	03240

Punches and dies for oblong holes up to max. L x W = 21 x 18 mm  
on request

Prod.-No.  
03241

# ALFRA BUSBAR CUTTING DEVICE – S 125

For clean, burr-free cutting of copper busbars  
max. 125 x 12 mm.

- Ideal supplementary device for busbar bending and hole punching device.
- Cutting time with electro-hydraulic pump depending on rail width 5 - 15 sec.
- Hold-down device and guidance fixture for central, precise cutting.
- Top cutter replaceable and resharpenable.
- With laser marking on the cut edge
- Hand protection cover (plexiglass cover)  
With access protection on the right and left side of the device (plexiglass cover). This safely shields the cutting area of the knife and prevents the user from accidentally interfering with the area.
- Emergency stop switch



Prod.-No. 03250.L

	Prod.-No.
ALFRA busbar cutting device – S 125	03250.L
Replacement top cutter	03251
Electro-hydraulic pump AHP M1	03857
Foot switch with safety function (accessories necessary for operation)	03862.NG
Support roller (2 pieces)	03257



Prod.-No. 03257



(Picture shows options)