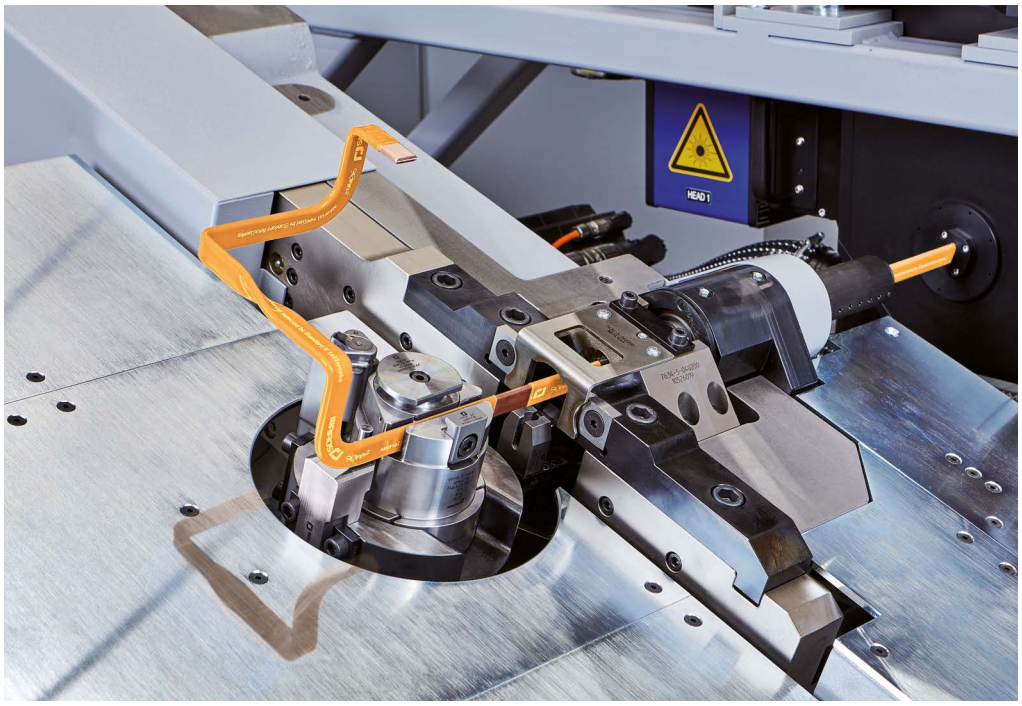
WAFIOS

CNC-Bending Machine for the Production of Three-Dimensionally Bent Parts and Busbars Made of Flat Material

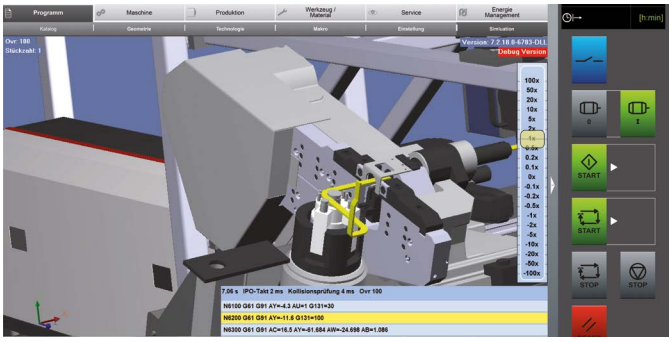


BMF 60
BMF 90

BMF 60
BMF 90

▼ Straightening unit for profiled material

▼ Simulation particularly for flat material



Our Accomplishments for Your Benefit

- **Highest precision, even when processing smallest bending radii with minimum bending distances, due to specially designed bending tool (patent-pending)**
- **The cutting unit, designed for cutting off flat material, achieves optimum cutting quality, especially with respect to busbars (patent-pending)**
- **Unique twisting unit enables the production of very complicated bending geometries and an in-process change of bending levels (so-called „twisting“, patent-pending)**
- **Highest productivity as insulation stripping process via laser is fully integrated in the production process (patent-pending)**
- **High degrees of freedom during the insulation stripping process enable a flexible positioning of contact points**
- **Machine-independent programming station and new simulation software for flat material enable feasibility tests directly at the customer‘s site**

Design Features

- The new tool design has been developed for the specific requirements of the e-mobility industry. It allows the production of complicated geometries while ensuring highest quality.
- The integrated length measuring wheel monitors the infeed length and guarantees dimensionally stable geometries.
- The straightening unit enables the processing of flat material over the entire operating range without the need to change straightening rollers
- The pay-off unit for wire spools (SPH 1000) ensures the smooth unwinding of material without that the material gets damaged, even when processing insulated materials
- With the integrated color detection unit, marked irregularities in the material (e. g. faults in the insulation) can be detected and sorted out

Operation

- User-friendly and quick set-up with hand-held operating device and touchscreen
- The newly developed bending simulation for profiled material serves for testing the feasibility and for calculating the cycle time
- Reduced set-up times due to ergonomic access to all tool positions as well as simple and fast programming of tools, material parameters and bending programs with the WPS 3.2 EasyWay

Powerful, Flexible and Efficient –
The Bending Machine of a Different Kind

Trend-setting machine concept for the E-Mobility sector

The WAFIOS BMF 60 offers for the first time a completely new production concept for parts and busbars made of profiled material. It combines the following process steps in one machinery system: insulation stripping, bending and cutting.

New bending technology with clamped mandrel enables smallest bending radii

Specially designed standard tools make it possible to bend over the high edge and over the flat edge

Change of bending levels (twisting) to produce different connection levels and complicated geometries

Fully integrated insulation stripping process via laser in one process step

Cutting unit for short end lengths and high cutting quality

Quality
For more than 130 years the name WAFIOS has stood for the highest in terms of quality expectations, safety standards and technical innovation in German manufacturing systems engineering.

Reliability
Strict quality controls, state-of-the-art production systems and many years of experience guarantee that your investment is in safe hands. Our global service network ensures high availability of WAFIOS machinery.

Efficiency
High production output and a long service life will save money and shorten the amortization time of your investment.

▼ User-friendly WAFIOS Programming System WPS 3.2 EasyWay with programming of geometries and visualization of parts made of profiled material

Technical Data	BMF 60	BMF 90
Operating range for profiled material [ ]	300 N/mm² min. 12,0 x 3,0 mm max. 25,0 x 6,0 mm max. material cross section 150 mm² max. ratio of material cross section 7/1	250 N/mm² min. 16,5 x 4,5 mm max. 36,0 x 5,0 mm Copper (205 N/ mm²) max. 50,0 x 4,0 mm aluminum (105 N/mm²) max. ratio of material cross section 12,5/1
Feed rollers	4 Pairs	4 Pairs
Rotary angle, mandrel axis	Infinite	Infinite
Rotary angle, bending axis	Infinite	Infinite
Bending head up/down stroke	+5 mm / -120 mm	+5 mm / -95 mm
Bending head transverse stroke	+100 mm / -100 mm	+120 mm / -120 mm
Bend-back clearance	500 – 1,400 mm, motor-driven	800 – 1,800 mm, mechanically movable
CNC support plate, stroke (option)	+25 mm / -175 mm	+25 mm / -175 mm
Feed speed	max. 120 m/min	max. 85 m/min
Bending moment	ca. 800 Nm	ca. 2,000 Nm
Number of CNC axes	8 (max.21)	7 (max.20)

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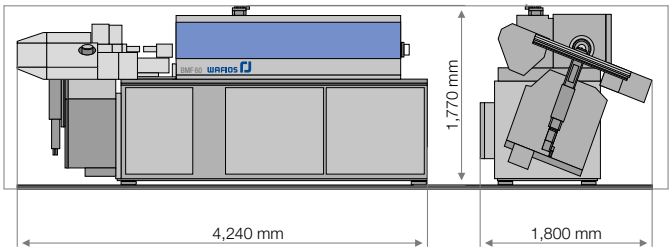

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