

CNC Tube Bending Machine for Rotary-Draw Bending and Free-Form Bending Operations on One Machine

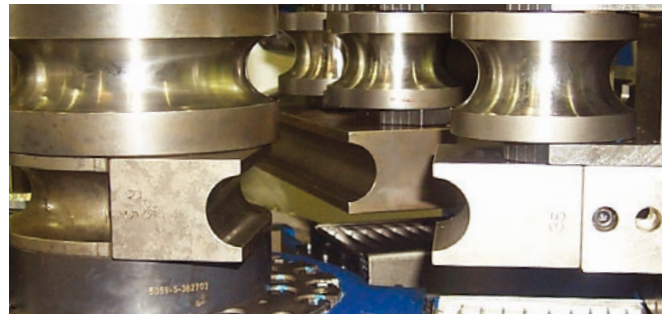


B 10

B 10

▼ Flexibility by mobility, positioning by means of two rotary axes

▼ Tool system WAFIOS B 10 for combined rotary-draw and free-form bending operations



Design Features

Machine Structure

- Perfect harmony of functionality and design
- Right/left bending for rotary-draw bending and free-form bending operations on one machine and in one clamping
- CNC control of all important functions
- Fully electric drive concept
- Mandrel-bending unit is freely programmable over the entire wire feed length and is controlled by means of a linear axis; tight bending radii, also for thin-walled tubes, are possible
- Tube positioning with boost pressure function of advance feed unit
- Controlled follow bar
- Up to 3 tool levels for each bending direction
- For tube diameters up to 60 mm
- High degrees of freedom for extreme bending geometries
- Maximum upgrade level: 16 CNC axes

Control

- Reliable WAFIOS WPS 3 control program
- Intuitive control concept for creating a bending program in short and concise steps
- User-friendly touch screen with ergonomic control panel
- Activity-oriented touch-screen user interface
- Interactive graphical 3D programming of tubes
- Exactly repeatable bending results
- Teleservice
- Functions for monitoring machine statuses and maintenance intervals



Flexibility, Reliability and Efficiency – WAFIOS B 10 CNC Tube Bending Machine

Intelligence Is All In The Head

An ingenious machine concept with integrated automation. The WAFIOS B 10 unites different bending procedures in one unique machine concept. No extensive accessories are needed which ensures high flexibility even when producing small batch sizes.

The future-oriented machine design combines high operating safety with latest operating comfort. Accessibility and degrees of freedom have been increased, interfering contours have been diminished. A design which is not only nice to look at but also space saving and secure.

The unique bending head positioning principle – from the tool to the tube via two rotary axes – enables right/left bending for rotary-draw bending as well as free-form bending operations. Up to 3 levels per bending direction are possible without having to change tools. However, if retooling is necessary, tools can be changed in a simple and effective way which ensures productivity and long machine availability. An automatic pick-and-place function for tubes accelerates and simplifies the production process additionally.

Quality

For more than 100 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.



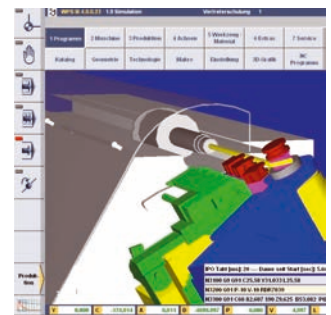
▲ Up to 60 mm Ø right/left bending for rotary-draw and free-form bending operations



▲ Mandrel bending unit freely programmable over entire tube feed length



▲ Tube positioning with boost pressure function of advance feed unit



▲ Modern and easy-to-use programming and control software WAFIOS WPS 3

Technical Data	B 10-35	B 10-60
Bending capacity Bending torque Clamping force Boost pressure: advance feed unit Boost pressure: follow bar	8 kNm 60 kN 10 kN/25 kN 10 kN	8 kNm 60 kN 25 kN/50 kN 10 kN
Bending geometry parameters Max. tube diameter Infeed length Max. bending radius, rotary-draw bending Max. bending radius, free-form bending Max. bending angle Max. freely programmable traversing path of boost pressure unit Max. freely programmable traversing path of mandrel unit *	35 mm 3,000/4,500 mm 180 mm infinite 195° 3,000/4,500 mm 3,000/4,500 mm	60 mm 3,000/4,500 mm 180 mm infinite 195° 3,000/4,500 mm 3,000/4,500 mm
Bending procedures (rotary-draw and free-form bending) Bending directions Bending levels per bending direction Tool installation height per bending direction	Left and right bending up to 3 160 mm	Left and right bending up to 3 160 mm
Max. speeds Advance feed Rotation Bending	1.600 mm/s 450°/s 180°/s	1.600 mm/s 450°/s 180°/s
Axes accuracy Advance feed Rotation Bending	+/-0.05 mm +/-0.05° +/-0.05°	+/-0.05 mm +/-0.05° +/-0.05°
Dimensions/Weight l x w x h mm Weight	5,400 x 1,650 x 1,475 5,500 kg	5,400 x 1,650 x 1,475 5,500 kg
Connection and consumption data Voltage Frequency Max. current consumption Electrical connection line Compressed air connection Max. compressed air consumption	400 V 50/60 Hz 100 A 40 kVA 6 bar 50 m³/h	400 V 50/60 Hz 100 A 40 kVA 6 bar 50 m³/h



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