

# CNC Tube Bending Machine for the Production of Two- and Three-Dimensional Parts of Tube or Solid Material



RBV 42 R/RS  
RBV 60 R/RS

# RBV 42 R/RS RBV 60 R/RS

▼ Tube positioning with boost pressure function of advance feed unit

▼ New quick die change equipment for combined rotary-draw and free-form bending



## Our Accomplishments for your Benefit

- Highest precision at maximum rigidity of machine body and bending head
- Higher process safety by optimized positioning and clamping drives
- Shorter down times due to innovative quick die change equipment
- High work speed thanks to bending head with optimized drive for more dynamical acceleration processes
- Higher energy efficiency due to new, optimized drive trains

## Design Features

- Extremely robust body and bending head design, verified by finite element method
- Free positioning of hood increases degrees of freedom for extreme bending geometries
- Right and left bending for rotary-draw and free-form bending in one clamping
- Fully electric drive concept
- Mandrel bending device is freely programmable over the entire feed length (patented)
- Tube positioning with boost pressure function (booster) of advance feed unit
- New, more rigid follow bar design with a second linear guide
- Up to 3 tool levels for each bending direction
- Higher holding torques due to the use of a gear drive for the linear movements of clamping axes
- Basic equipment includes 8 CNC axes (upgradeable to up to 16)

## Control

- Reliable WAFIOS WPS 3.2 EasyWay control program
- Intuitive control concept for the creation of a bending program in short and concise steps
- Interactive graphical 3D programming of tubes
- Five different user levels with authorizations
- Numerous functions for monitoring the condition of the machine
- *iQtube* for graphically simulating the bending sequence, with integrated collision monitoring and theoretical output (option)

▼ Bending head



# Precise, Reliable, Versatile and Profitable – WAFIOS CNC Tube Bending Machines

## Perfect Union of Design and Functionality

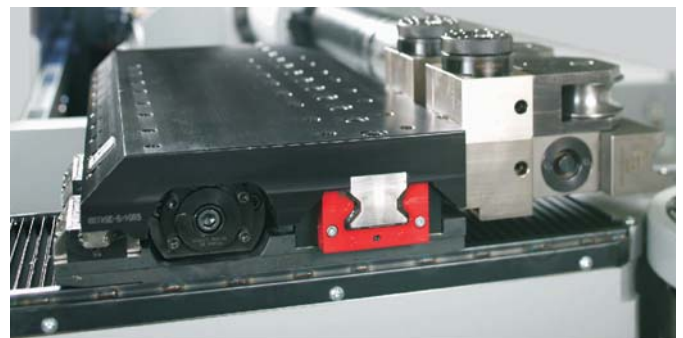
An ingenious machine concept with integrated automation. Already the standard version of the WAFIOS RBV 60 R unites different bending procedures with high flexibility in one unique machine concept - also in small-batch production.

The new ergonomic design of the machine body, in combination with the dynamic positioning unit of the bending head meets the most stringent demands with regard to:

- Accessibility, thanks to the new and patented quick die change equipment and the advance feed and mandrel carriage that were adapted to the machine design
- Maintenance, service and user friendliness
- Greater range of parts thanks to extremely high degrees of freedom.

The further development of the bending head for improving the rigidity of the housing and the follow bar guide enables:

- Increased repeat accuracy
- Higher process safety
- More dynamical acceleration processes



▲ Follow bar with additional guide rail

## 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.

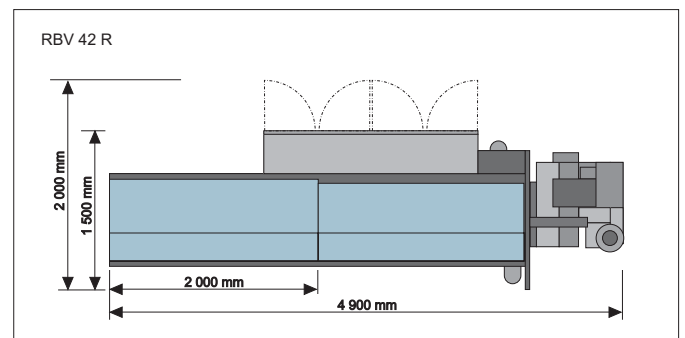


▲ Mandrel bending unit freely programmable over entire tube feed length (patent)



▲ Modern and easy-to-use programming and control software WAFIOS WPS 3.2 EasyWay

Technical Data	RBV 42 R/RS	RBV 60 R/RS
<b>Bending capacity</b> Bending torque Clamping force Boost pressure: advance feed unit	4.5 kNm 30 kN / 58 kN 10 kN/20 kN	8 kNm 60 kN / 140 kN 25 kN/50 kN
<b>Bending geometry parameters</b> Max. tube diameter Feed length Max. bending radius, rotary-draw bending Max. bending radius, free-form bending Max. bending angle	42 mm 2,700 / 4,700 mm 130 mm infinite 190°	60.3 mm 3,000 / 4,500 mm 180 mm infinite 193°
<b>Bending procedures (rotary-draw bending)</b> 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
<b>Max. speeds</b> Advance feed Rotation Bending	2,000 mm/s 450°/s 180°/s	1,700 mm/s 450°/s 180°/s
<b>Axes accuracy</b> Advance feed Rotation Bending	+/-0.05 mm +/-0.05° +/-0.05°	+/-0.05 mm +/-0.05° +/-0.05°
<b>Dimensions/weight</b> l x w x h mm Weight	4,900 x 1,500 x 1,500 4,800	5,600 x 1,900 x 1,600 5,500
<b>Connection and consumption data</b> Voltage Frequency Compressed air connection Max. compressed air consumption	400 V 50/60 Hz 6 bar 1-3 l/min	400 V 50/60 Hz 6 bar 2-5 l/min



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Precision Machinery for Wire and Tube