

Programmable and three-dimensional CNC bending now also for small tube bending parts and coaxial cables

The new BMZ 6 from WAFIOS is a unique and innovative CNC tube bending machine that has been specially developed for very small parts, such as those used in medical technology for cannulas or in high-frequency technology for Semi-Rigid Coaxial Cables.

As the smallest machine in the well-known BMZ series, it sets new standards in terms of economy, production speed and efficiency. With its compact design, it can be set up on site quickly and in a space-saving manner compared to larger, oversized machines.

It is capable of bending small parts from tube or wire up to an outer diameter of 6 mm. The modular design enables the production of highly complex component geometries by combining different bending processes such as coiling and free-forming. For example, closed bends with 360 degrees can be wound around a mandrel or large radii can be produced by free-form bending. In addition, the BMZ 6 is designed in such a way that further machining steps, such as end forming, can be easily integrated.

In addition, coaxial cables can also be processed in the BMZ 6 with pre-assembled attachments, such as connectors. The unique WAFIOS bending technology is characterized by very short straight lines between the add-on part and the first bend, which offers clear advantages especially in cramped installation situations.

For filigree components like coaxial cables, it is possible to use a handling robot with integrated palletising function. The EasyRobot from WAFIOS is fully integrated into the programming system of the machine and is therefore easy to operate.

Thanks to the intuitive operating concept, the BMZ 6 can be used very universally and new parts can be set up quickly. The high level of operating convenience is ensured by the use of 3D simulation for feasibility analysis and cycle time determination. In addition to direct programming at the machine, new components can also be set up at an external workstation and centrally checked for manufacturability.

With the proven *iQinspect* software option, external measuring devices can be connected directly to the machine. The automatic correction of the bending program based on the measurement results supports the operator in quickly setting up even complex geometries.

The new machine concept of the BMZ 6 sets new standards in tube processing of small dimensions due to its compact design, the combination of different bending technologies with state-of-the-art software solutions and opens up new fields of application for 3D bending technology in medical and high-frequency technology.

Abb. 1 WAFIOS BMZ 6 / Fig. 1. WAFIOS BMZ 6



Abb. 2 Geometrische Programmierung komplexer Keinteile / Fig. 2. Geometric programming of complex parts

