

“Power Coupled with Innovative Technology and Ergonomic Design”

WAFIOS RBV 60 R: New, extremely versatile and profitable tube bending machine for the production of 2D and 3D parts ...

Flexible and productive machine concepts are required as an answer to shorter development cycles and smaller batch sizes.

The WAFIOS RBV 60 R is the successor of the legendary WAFIOS B 10. The production speed and flexibility of the B 10 was unrivalled in its operating range. The RBV 60 R will enhance this lead and set new standards. The new ergonomic machine body in typical WAFIOS design emphasizes the many customer benefits also optically.

The motion characteristics of the B 10 have been left unchanged. Therefore, all parts that could be produced on the predecessor model can also be produced on the RBV 60 R with the same sets of tools. The difference is that the production is "Faster, More Precise and Less Energy Intensive"!

More flexibility in the production of parts with higher repeat accuracy

The designers of the RBV 60 R could draw on a decade of process experience gained with the B 10. The effective bending force (force available for the bending process) could be increased by 58% while the stiffness of the clamping axis was doubled. This enables the reliable bending of tubes with large diameters / wall thicknesses with small bending radii.

Moreover, the effective advance feed force has been increased by 30% in order to increase the machine's operating range without limitations for free-form bending operations starting at 5 x d. The higher advance feed force reduces the thinning of tube walls during the forming process when boost pressure is applied. This accommodates the trend towards a greater utilization of materials, i.e. a lower weight of components, while increasing their robustness.

Thanks to the new design, the machine body and the suspension of the follow bar is more robust so significant process improvements could be achieved. The stiffness of the follow bar was doubled by the use of additional guiding elements. Thus the production of even very short, ready-to-install end tube lengths of up to 1 x d, depending on the wall thickness, became possible. Generally, the tube does not have to be cut subsequently - as it is the case with many other machines on the market.

More performance despite increased energy efficiency

Due to the use of the most modern control and drive technology from the robot industry, the output of the RBV 60 R could be increased (depending on the parts produced) by up to 36% as compared to the predecessor machine. This was calculated, for example, with a sample part with 5 bends and two changes in bending direction. Such an increase in performance can only be reached with more dynamic positioning movements, without having to increase the bending speed. Thus the WAFIOS RBV 60 R is - in its operating range - the standard machine with the greatest output of parts.

The average power consumption of the machine is 3 kW and could be reduced from 4.2 kW to 2.9 kW by 1.3 kW as compared to the B 10, when producing a sample part with five bends and two changes in bending direction. This means the machine is more energy efficient than its predecessor B 10.

Higher service and operating convenience increase the machine availability

The new WAFIOS programming system "WPS 3.2" is easy and safe to use. There is one user level each for production, change of parts, programming of parts and service.

The manual assists the programmer in entering tools and programming parts. The faster programming process minimizes downtimes of the machine.

As there is no pneumatic auxiliary drive anymore, the RBV 60 R has become even more service friendly. The new horizontal machine bed improves access to the advance feed and mandrel slide.

The RBV 60 R can be equipped with the modular tool system of the B 10. This system is proven and tested, highly flexible and allows the creation of many tool types with nonvariable parts. Additionally, a newly developed quick die change equipment is available for the machine. It reduces tooling times by approximately 80%.

As an option, the RBV 60 R can be operated with a protective fence instead of a protective hood and it can also be equipped with a robot interface.

Thus the RBV 60 R becomes a long-lasting solution for the effective production of a large spectrum of parts in small batch sizes.



Fig. 1 WAFIOS RBV 60 R Bending head



Fig. 2 WAFIOS RBV 60 R Bending head

