

COMPETENCE



2023

WALTER AG

OUR MCC 800 HVC – FEATURING A 5-AXIS TILTING HEAD



strong. precise. customized.

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In response to our customer Walter AG's request, BURKHARDT+WEBER (BW) was once again successful in proving that „customized“ is more than just an empty phrase. In fact, the new configuration of the MCC, which now comes in a new version with a 5-axis tilting head, adds another option to the modular system in the range of our 5-axis machines.



The history of the MCC which represents the most compact series at BW, generally known for their large and extra-large machines, appears rather young compared to the more than 100-year company history of Walter AG in Tübingen. But it's not a surprising development that the two companies have been working together for many years. The two Swabian companies have already successfully proven their teamwork with turnkey projects by finding the optimum tooling match for the customer and machine. "Walter is the best choice whenever we need experts' advice on tool design", says Michael Wiedmaier, Head of Competence Center Sales. „And when it comes to running in machining processes, experts from Walter work in close cooperation with our technology team and are on site with us in Reutlingen. In short, but not just referring to the Swabian language: We simply understand each other“, he adds with a twinkle in his eyes.

The MCC is based in Walter's Technology Center since the end of 2022. Walter AG particularly benefits from the Technology Center to optimize and develop new

machining processes directly with their customers. Needless to say, they use only state-of-the-art technology to test the Walter tools to their limits under maximum load. „The Technology Center offers us an innovative environment and provides a „factory of the future“, representing a today's reality spread over a generous area of 5,000 m² and 4 floors. Equipped with ultra-modern processing and communication technologies, we live the future and have made digital transformation a reality. The whole process chain, from planning to the finished component, is fully digitized“, reveals Mr. Albert Reichert, Manager of the Technology Center. The imposing building is also used as a center of education to hold trainings and workshops.

WALTER TECHNOLOGY CENTER



Walter's Technology Center in Tübingen is located only 11 km from BURKHARDT+WEBER's headquarters in Reutlingen.

When asked as to why no other BW machine is on display in Walter's showroom, the answer is truly simple. The compact MCC is the first machine that fits into the showroom in terms of space requirements and is now replacing another heavy-duty cutting machine. Which makes it all the more rewarding that the compact MCC has now found a base in Tübingen, where it can represent BURKHARDT+WEBER as a traditional German machine manufacturer from the local area.



A special centerpiece of the MCC 800 HVC at BURKHARDT+WEBER is the new generation of the tilting head. The existing HVC unit had to be adapted to the new space requirements of the MCC machine.

In a talk with BW designer Andreas Fasold-Schmid, he explains all the design modifications that were needed and the added value they offer. In response to the question as to which he sees as the most disruptive change, the long-experienced BW-designer replies: "The entire tool clamping component group has now become significantly more robust and even less sensitive to failures. One approach was the rotary feedthrough, as the number of media to be transferred could be reduced, which consequently reduces the risk of failures. In addition, the component assembly has been topologically optimized for maximum machine dynamics with increased stiffness. All these aspects

enabled reducing the heat input into the tilting head, resulting in increased machine accuracy."

An extremely effective improvement is evident by changing a planetary gear to a compact 2-step gear unit made by BW. This modification includes several positive aspects, such as a significant improvement in dynamics and a substantial reduction in noise emission achieved by a new alignment of the toothed gears. Making the entire gear unit much more user-friendly.

In addition, the lubrication concept for the bearings and gears have been changed and can now be operated on a minimum oil lubrication level.

ANDREAS FASOLD-SCHMID | DESIGN ENGINEER



An overview of the tilting head's performance

The performance data impressively prove that the next generation HVC-head has nothing to do with a toy. The tilting head scores at all levels featuring 56kW drive power, 2,000Nm torque, 8,000 rotations and a retention torque of 6,500Nm when clamped and 2,000Nm feed capacity in the position control system.

Overview of benefits:

- + Increased service flexibility
- + Minimized error rate
- + User-friendly improvements
- + Greater tool clamping stability



BW and Walter are familiar to each other; The two companies have already cooperated on turnkey projects, bundling suitable tool packages.

Walter AG

Walter is one of the world's leading metalworking companies. As a traditional designer, manufacturer and supplier of precision tools for metalworking, the company founded in 1919 till today provides a wide range of high-quality cutting tools and tool adapters for milling, turning, drilling and threading applications.



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