



The BA 1008 XT now offers its exceptional performances under the Tornos brand

TORNOS BA 1008 XT:

A machine for even the most
complex parts

The BA 1008 that was launched shortly after the SwissNano is a small, compact bar milling machine designed for the production of prismatic parts.

TORNOS

Tornos SA
 Boulevard des Eplatures 39
 2300 La Chaux-de-Fonds
 Switzerland
 Phone 032 925 35 50
 contact@tornos.com
 www.tornos.com

In the field of bar turning, there are cases where turning actually fades into the background and manufacturers have to focus on milling. While EvoDeco or even Swiss GT-type machines are perfectly familiar with such tasks, there are still some workpieces that cannot be machined with these machines. It is here that small milling machines make the difference.

The birth of BA 1008

Bearing this in mind, Tornos decided, together with Almac to produce such a machine based on the SwissNano's structure. This compact and rigid structure benefits from perfect thermal behavior and thus was the ideal basis for the design of the BA 1008 machine. The three tool systems of the SwissNano were replaced by spindle blocks that enabled the machine to be converted into a small milling center. That is when BA 1008 started its triumph. This intriguing machine with attractive design soon attracted the attention among experts. It made its debut with watch components such as indexes, pallets, balance-spring stud holders and other micromechanical components requiring diligence, precision and productivity.

The machine boasts optimum ergonomic features and high ease of use, is based on the expertise of application engineers who outdid each other in creativity for the user to be able to realize increasingly complex parts. The BA 1008 has a maximum

machining diameter of 16 mm and can produce components with a maximum length of 28 mm. The secret of the excellent productivity of the machine is in its rigidity. It features enormous feedrates and thus a high efficiency of the machining process.

A turnkey solution

Over time and based on the variety of demands, the BA 1008 machine has been refined. It can now be equipped with a B-axis on the front spindle block and with a full enclosure of the machining area

2008-2018: A success that inspired to integrate Almac under the Tornos label

When Tornos purchased Almac in 2008, their intention was clear: they wanted to capitalize on the unique micro-milling expertise of the company based in La Chaux-de-Fonds and open up the doors to the global market for Almac. The perfect examples for these efforts are still the BA 1008 and SwissNano machines. Beyond that, the know-how and the expertise of the Almac engineers have enabled Tornos to realize a B-axis with which they equipped the Swiss GT 26 and Swiss GT 32. It should also be noted that the concept of this B-axis has now been adopted by Tornos' competitors. "Almac enabled us to offer our clients from the medical industry specific solutions with our CU range," emphasizes Philippe Charles, Head of Swiss-type Product Management at Tornos.

Thanks to the collaboration between Almac and Tornos, it became possible to offer the customers all-in solutions. But now it's high time to advance and take the last step. The Almac product range will now be incorporated into the Tornos portfolio that will hence increase accordingly. For all service and maintenance issues, Almac's customers will still be serviced to by the same contact partners.

especially designed for precious metals to ensure maximum chip recovery. In addition, the machine can be provided with an optional bar feeder for enhanced autonomy. In this configuration, it can machine bar stock. "It is beyond doubt that the BA 1008 is the most flexible machine in the market," explains Almac's Product Manager Mathieu Jorda. He continues: "It has been constantly enhanced to make it suitable for the challenges it is facing in everyday operation with our customers. The best proof of this constant adaptation is BA 1008 HP, the high-pressure machine version with excellent design featuring a container that comprises high-pressure pump, filter system and bar feeding device."

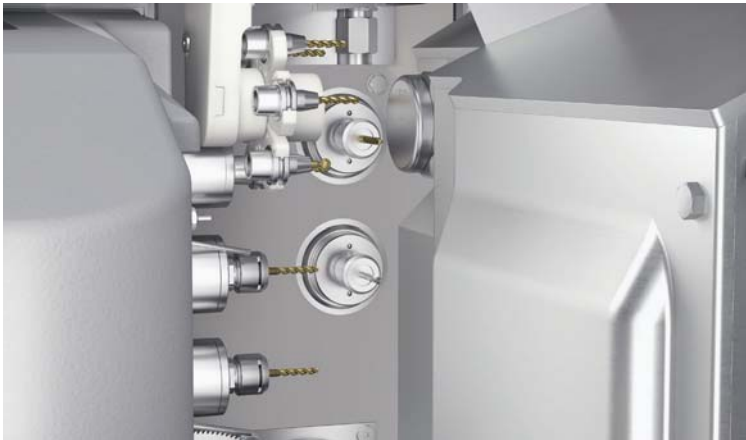
Tornos BA 1008 HP

The BA 1008 HP is a machine equipped with high-pressure unit that allows cutting oil filtration and optimum chip management. The machine boasts through-spindle coolant supply (120 bar) enabling it to tackle more demanding machining tasks such as the machining of bracelet links, fasteners or optical fiber connectors made of stainless steel, gold, titanium or platinum. The BA 1008 HP is able to meet any requirements involving even the toughest materials. In the tuning stage, it has succeeded in drilling holes with a depth of 20 mm in 316L stainless steel at a feedrate of F800.

Tornos BA 1008 XT

The BA 1008 XT machine, recently presented in our Decomagazine as the BA 1008+, now completes the BA 1008 machine range. In the last few years, BA 1008 has made tremendous progress as to its peripherals.





Of course, we have also adapted the tooling in its machining area. Depending on the specific machining requirements, the machine can be configured with standard mechanical spindles or high-frequency spindles. The machine kinematics and its performance make the machining of more complex parts a walk in the park. Complex parts very often mean that more tools are needed. There certainly is the possibility of using shaping tools to get rid of certain restrictions but this cannot be realized in any case and the economic circumstances do not always permit this kind of proceeding.

Furthermore, BA 1008 XT can be equipped with two tool changers:

- a 10-position tool changer for the front spindle block,
- a 6-position tool changer for the lateral spindle block.

This means the BA 1008 XT can now be equipped with thirteen additional tools and its tool capacity is significantly expanded to 23 tools. The maximum tool configuration now comprises eight tools in the lateral spindle block, twelve tools in the front block and two tools for back machining operations.

The already advanced system is therefore enhanced and the machine performance is increased. The two tool changers enable sister tools to be used in case of machining operations that involve considerable wear. The autonomy of the machine can be increased significantly. As an option, the BA 1008 XT can be provided with a B-axis which makes it a fully operative milling center offered at an extremely competitive price.

The tool changer design has been optimized to avoid any chip traps and to guarantee perfect chip flow. If required, the machine can be equipped with the full enclosure for machining precious metals.

“There are similar machines on the market, but no other machine is able to adapt to the requirements of the workpiece with the same finesse as the BA 1008,” explains Mathieu Jorda. The Almac specialist adds: “And, what’s more, the BA 1008 is the most compact machine in the market. The footprint is peerless and the same applies to its price. The BA 1008 boasts a superb cost/performance ratio. In fact, we do not only know that our BA 1008 can machine virtually any workpiece but we know as well that it is unlikely that any other machine is able to compete with it.”

Perfectly complementing the range of machinery

The BA 1008 perfectly fits in the Tornos portfolio; the matching rate when complementing an EvoDeco 16 Swiss-type lathe is 100%. Thanks to its modular kinematics, the latter can also be converted into a milling center. However, it cannot keep up with the the BA 1008 as regards the level of customization. The BA 1008 fits so well in the range of machinery that it is even used for reworking operations. In fact, some BA 1008 machines are used for finishing workpieces that were machined on MultiSwiss machines. This is the best proof – if any such proof were needed – of the extraordinary flexibility and performance of this unique small machine.

tornos.com