Press release dated 04/10/2021

Continuity and fresh prospects

INDEX presents a new version of the successful ABC CNC automatic lathe

**There’s a new INDEX ABC CNC automatic lathe? Yes – but don’t worry, dear ABC fans; despite major improvements in the upper turret such as an electronic indexing axis, Y functionality, height adjustment, and double tool holders, INDEX has of course retained the valued features of the current model: the machine design, the working area, and the footprint are all still exactly the same. All existing part programs run as before, guaranteed without any loss in cycle times and machining quality.**

The INDEX ABC CNC automatic lathe is a successful model that shows impressive continuity: Over a good 25 years, we have sold over 3,000 of the machines. Evolving them into the new INDEX ABC version was therefore a task carried out with great care. “The INDEX ABC has greatly matured over the years,” says Ulrich Baumann, head of development for singe-spindle automatic lathes at INDEX. “Again and again, we have increased its efficiency through improvements in the control and drive technology, as well as in the mechanical components. It was a major challenge, then, to maintain the enormously high level of the predecessor model and, on this basis, provide extended functions for even more efficient, versatile machining.”

But the result is a resounding success: Beneath the updated, attractive INDEX design, users will find a machine that has remained unchanged in terms of size and working space. This was an important part of the new development work, which needed to take account of the numerous programs and workpiece-specific devices that are still running on machines out in the field today.

There was a second requirement: In terms of machining capabilities, cycle times, and dimensional accuracy, the new version must under no circumstances lag behind the previous ones – not even if it features other, new functionalities. The developers provided proof of this by comparing a current-generation ABC and the modified machine, both of which were set up identically. The result: The new version performs slightly better in the comparison of cycle times and in dimensional accuracy over the machine duty cycle (thermal cycle). In the area of limit cutting (depth of cut during grooving), it achieved the usual high level.

“This means that existing ABC users can perform any machining operation that has been extensively optimized in terms of tool and program technology at least as well on a newly acquired INDEX ABC – and will also see other gains elsewhere: For new machining tasks, extended functions are available that promise even greater efficiency and a wider range of components.

**Upper turret with Y axis and height adjustment**

The improvements are mainly concentrated on the upper turret, where a high-ratio, stepless gearbox replaces the stepped positioning previously realized via a Hirth serration. This allows the turret to assume any position, and opens up a wide range of possibilities. As an example, the INDEX developers realized an interpolated Y axis that enables the upper ABC turret to perform off-center drilling and surface milling.

It is now also easy to adjust the center height of the cutting edges, which both enables even greater precision during internal machining of small bores and improves the surface or chip pattern.

The potential to use double tool holders offers a further benefit: With the same turret size and number of slots, it increases the number of tools from the previous seven to up to 14 fixed or live tools. This advantage can be used for sister tools or a larger machining spectrum. Another station is permanently assigned by the synchronous spindle for rear-end machining.

**Equipped for future tasks**

With the continuously indexable turret, its Y functionality, height adjustment, and multiple holders, the developers and application engineers are convinced that the INDEX ABC will continue its success story. After all, this small, extremely fast CNC production lathe now also accords with the current market trend of smaller batches and more complex geometries. Its excellent value is also set to benefit parts that would previously have required a more expensive machine.

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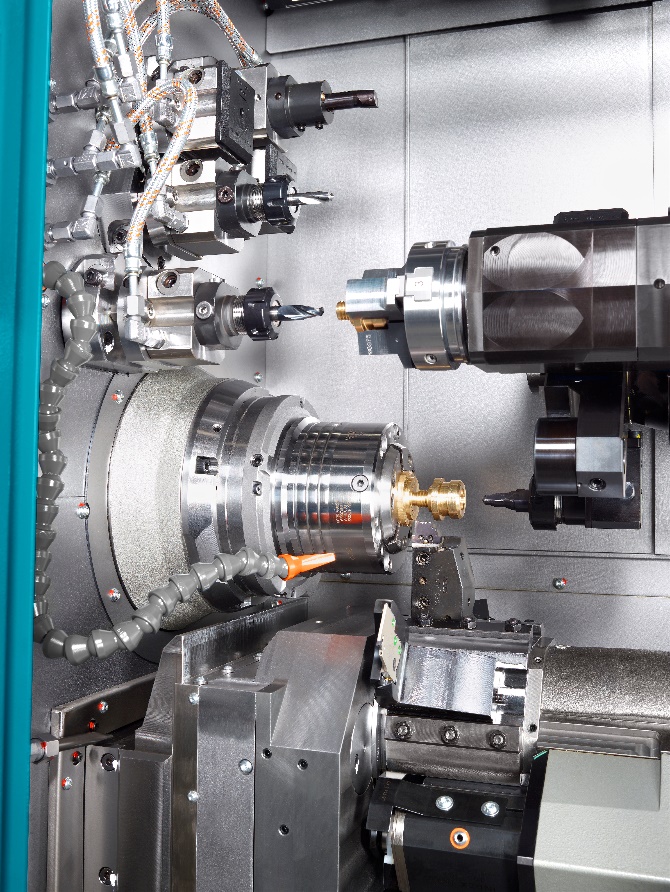
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**Photos:**



Head of Development **Ulrich Baumann**: A major challenge in the development of the new INDEX ABC was to maintain the enormously high level of the predecessor model and, on this basis, provide extended functions for even more efficient and versatile machining.

**INDEX ABC in a new design**: Since size and installation space have remained unchanged under the hood, all existing programs can be imported and processed 1:1.



The highlight of the new INDEX ABC CNC automatic production lathes is the **upper turret**. It is now continuous indexable, has Y functionality, height adjustment, and can be equipped with double tool holders. The **synchronous spindle** in the upper tool carrier allows full rear-end machining of workpieces with up to five available back-boring stations.

All images: INDEX