

Flexible solutions

The various machining operations required on large aluminium, plastics and composites sheets all share the same goal of highly efficient productivity to meet the current market trends. Therefore, at the core of any machine tool investment lies its ability to promptly respond to the varied demands of the market sectors it supports at the expected quality standards.

To help customers pursue this goal, Belotti has developed the Nova and the recently launched Nesting systems, two automated and extremely flexible technological solutions. These Belotti CNC machining centres always operate to tight tolerances to meet or exceed the high-quality standards expected, even when machining small and very detailed finished parts out of blank aluminium sheets or other large plate materials up to 80 mm thick.

Thanks to several technical advantages, both Nova and Nesting machining centres represent a reliable solution for different applications such as general mechanical precision engineering, checking fixture, packaging, aerospace and automotive. Their ability to carry out unattended operations for the entire machining cycle allows any business to reduce the operator cost significantly, increasing the overall efficiency.

Nesting, the very latest series of Belotti 3-axis machining centres, with its monolithic structure and simplified configuration options supports the premium series Nova. This latter solution is already well-established within many demanding market sectors thanks to its exceptional performance

levels; extremely high precision; high chip removal rates' machining versatility; reliability, and ease of use.

The main technical features and the key performance indicators of Belotti technology apply to both Nova and Nesting series, and are focused on ability to customise any installation to the exact customers' specific needs.

Belotti Nesting, the smart and compact 3-axis CNC centre, shares the Nova's large worktable of up to 4 by 2 m, and is best suited to machining pieces up to 30 mm thickness, always guaranteeing the accuracy and the efficiency of all Belotti solutions.

While the Nova 5-axis machining centre, available in many different configurations through its numerous accessories, represents the core of the company's technological expertise which can be turned into a real competitive advantage for customers, thanks to a close partnership collaboration with the sales team.

For maximum accuracy and surface finish the most relevant technical features of these Belotti solutions include the enhanced rigidity of the bridge, due to the monolithic structure equipped with double guides on both sides of the structure. Preservation of the finished surface quality, even on larger workpieces thanks to the double drive motor on both sides.

Minimal backlash error thanks to the linear glass scales that operate in synergy with the Dual Drive System on both X and Y axes. The combined structure and drive system promotes extremely smooth movements of the cutting heads' motors for great surface quality with a mirror finishing effect.

With a great capacity for chip removal for the electro-spindle heads of up to 30 kW, combined with the cleanliness of the working area during the cutting operations thanks to the NC-controlled and motorised suction hood, parts can be produced at extremely high rates.

A significant time-saving advantage during the workpiece clamping phase is offered by the dedicated clamping systems, even for small workpieces, and the worktable equipped with a transportation or vacuum system. No set-up time is lost compared to conventional systems with fixtures or clamping with screws or vices.

The new Nesting series together with the Nova series represent a further step towards the main company's goal: providing full solutions able to meet the highest standards of accuracy and efficiency while satisfying the many and varied needs emerging from different markets. Specifically, the high-speed nesting of plastic panels as well as the production of multi-layered checking fixtures and other mechanical components from aluminium sheets.

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