

CNC CENTERS

Machining centers and advanced technologies



For over 40 years, Belotti S.p.A. has been an international leader in the design and manufacturing of **3 and 5-axis CNC machining centers for the milling and trimming of composites, light alloys and plastics**, which can be integrated with **waterjet and ultrasonic cutting systems**.

Founded in 1979 by Eng. Luciano Belotti, the company has facilities in Suisio (Bergamo) - the group's headquarters - and in Modena (Italy), and collaborates with Belotti Centro-Sud, the representative office opened to provide sales and engineering services to customers located in the regions of Central and Southern Italy.

Following its strong international vocation, the company has increased its business in foreign markets over the years, marketing CNC machining centers in all continents and opening **three branches** in Germany, USA and China.

The experience gained over the years, the constant research of cutting-edge solutions, the guaranteed performance in terms of production efficiency, precision and reliability, have allowed the company to grow and consolidate its position in the industrial sectors of reference (automotive, aerospace, railway, marine, design and furniture, patterns and moulds, thermoforming and packaging), counting prestigious Italian and international companies among its customers.



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MULTI-AXIS CNC CENTERS

Tailor-made solutions for the machining of composites, light alloys and plastic materials.

Multi-axis CNC machining centers is Belotti's historical core business. The division offers a **wide range of Series and models, highly customisable, to meet the production needs and the high standards required by different application fields.**

Automotive, aerospace, railway, marine, design, thermoformed, packaging, patterns and moulds are some of the industries where Belotti machining centers find application.

The study of new materials and new technologies, the attention to the industrial trends and new methods of automated and fast production, the ability to intercept the requests of growing, local markets in an increasingly global context, have contributed to the development of **machining centers that are faster, more versatile and improved in their performances.**

OUR PLUS:

- High production efficiency
- Quality and accuracy of the machining
- Reliability and flexibility of the solutions



Belotti CNC technology is enriched with **advanced solutions** that can be integrated into the cnc machining centers, aimed at obtaining even more accurate processing.

The quality of the **waterjet** and the versatility of the **ultrasonic cutting systems** are areas where Belotti's consolidated experience and specific know-how express all their potentialities.

The company is also committed to **softwares development** to facilitate the programming, the monitoring and the interconnected management of the machines within the factory IT system (e.g. CAD / CAM software, IoT platforms for industry 4.0).

An extensive range of performance-oriented technologies
for many application industries.

AEROSPACE



AUTOMOTIVE



CHECKING FIXTURES



DESIGN AND FURNITURE



ENERGY AND BUILDING



MARINE



MEDICAL



PATTERNS AND MOULDS



PACKAGING



RAILWAY



THERMOFORMED



COMPOSITES
LIGHT ALLOYS
PLASTIC

TRIM SERIES

THE IDEAL 5-AXIS MACHINING CENTER FOR HIGH-VOLUME PRODUCTION OF PLASTIC COMPONENTS FOR DIFFERENT APPLICATIONS AND INDUSTRIAL SECTORS.



Workable materials*

PLASTIC



COMPOSITES



TOOLING BOARDS RESINS



TECHNICAL PLASTIC



* Efficiency indicators by material

Fast, precise and absolutely reliable, the TRIM Series is the **flagship of the 5-axis machining centers for trimming plastic and composite materials.**

This Series includes models made with a rigid baseframe or a columns' structure, depending on the strokes of the axes.

The processing speed of this Series does not compromise the cutting and trimming quality, guaranteeing a **maximum productivity level.**

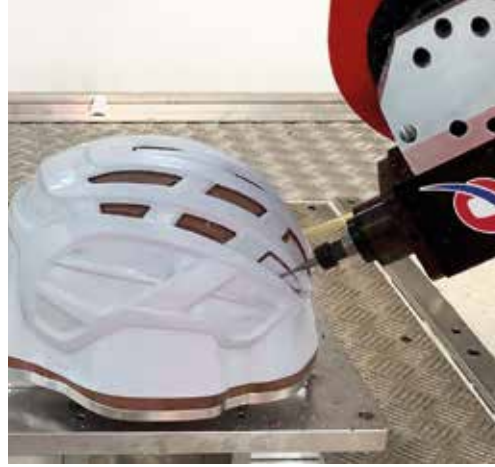
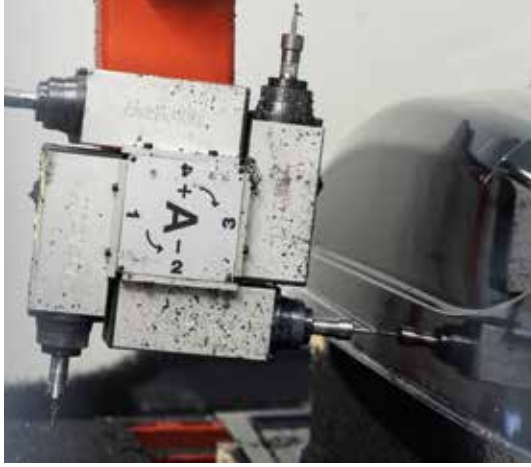
The cycle time is further optimised by:

- the different head configurations, that allow a wide range of processings, even the most complex ones, using only one machine;
- the possibility to customise the piece loading/unloading system, to almost zeroing the set-up times;
- the use of a second independent bridge for simultaneous machining operations on different pieces or on the same piece.

Main accessories

- Twin shuttle loading/unloading system
- Rotary table [1]
- Single table
- Revolver head
- Head with double exit electrospindle [2]
- Head with automatic tool changer up to 30 positions [4]
- Second independent bridge [3]
- Total enclosure





Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|--|---------------|-----------|----------|----------|
| Stroke | 2,5/3/4/5,5 m | 1,5/1,6/2,2 m | 0,9/1,1 m | +/- 270° | +/- 120° |
| Speed | 80 m/min | | 60 m/min | 40 rpm | 40 rpm |
| Spindle | From 2 kW up to 12 kW at 36.000 rpm max. | | | | |
| CNC | Fanuc, Osai, Siemens | | | | |
| Tool changer | From 8 to 30 positions | | | | |
| Linear accuracy | ≤ 0,05 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 25 arcsec for rotary axes | | | | |
| Combined technologies | Waterjet | | | | |

FLA SERIES



HIGH-SPEED MACHINING CENTERS FOR HIGH-VOLUME TRIMMING OF COMPOSITE MATERIALS AND FOR MILLING RESIN OR LIGHT ALLOYS PATTERNS.

Workable materials*

COMPOSITES



PLASTIC



TOOLING BOARDS RESINS



TECHNICAL PLASTIC



LIGHT ALLOYS



* Efficiency indicators by material

Belotti FLA 5-axis CNC machining centers combine the productivity of a high-speed milling machine and the potential of a mobile bridge machining center in a single solution.

FLA Series is particularly recommended for:

- the mass production **trimming of components in composite materials;**
- the **milling of resin and light alloys products/patterns;**
- the **trimming of thermoplastic materials.**

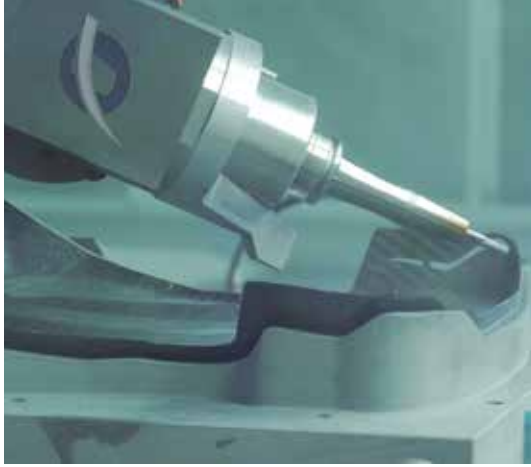
The different models, the high customisation of the configurations, and the special technical features suite a wide range of production needs, especially in the automotive and aerospace contexts.

FLA machining centers guarantee the **maximum production efficiency thanks to the excellent dynamism of the axes and the automated loading / unloading systems** (rotary table, single shuttle or twin shuttle).

Main accessories

- Single or twin shuttle loading/unloading system [1]
- Rotary table
- Dust suction grids with dedicated extraction unit [4]
- Electronic suction hood [2]
- Linear scales
- Total enclosure or manual/motorised upper rolling shutter
- Cooling liquid system with waste collection tanks [3]
- Second independent bridge [3]





Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|---|---------------|-------------|----------|----------|
| Stroke | 3/4/5/5,5/6,5/9/12 m | 1,8/2,6/3,2 m | 0,9/1,3/2 m | +/- 270° | +/- 120° |
| Speed | 80 m/min | | 60 m/min | 44 rpm | 40 rpm |
| Spindle | From 6,5 kW up to 22 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Osai, Siemens | | | | |
| Tool changer | From 8 to 60 positions | | | | |
| Linear accuracy | ≤ 0,030 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 24 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 microns resolution | | | | |
| Combined technologies | Waterjet Ultrasonic cutting system Additive manufacturing | | | | |

FLU SERIES



THE COMPACT AND FLEXIBLE SOLUTION FOR THE PROTOTYPING AND MANUFACTURING OF PATTERNS & MOULDS AND TOOLING BOARDS RESINS.

Workable materials*

TOOLING BOARDS RESINS



COMPOSITES



LIGHT ALLOYS



TECHNICAL PLASTIC



PLASTICS



* Efficiency indicators by material

Belotti FLU Series is the **ideal technology for 5-axis high-speed milling of resin patterns, aluminium moulds, and for trimming composite materials.** This Series has a sturdy, monolithic or double shoulder structure, specially designed to dampen vibrations as well as to assure maximum rigidity and total stability when high-volume operations are requested.

The high-speed processing provides a **significant reduction in cycle times**, while the single-shoulder machining units - HP or HP2 models – **enhance the milling accuracy with top-quality finishes.**

The special structure allows total accessibility to the work area: both dimes and heavy pieces can be loaded with a forklift or an overhead crane.

FLU machining centers can be customised with different work tables, safety enclosures, and advanced accessories (i.e. extruder for additive manufacturing, ultrasonic cutting system) according to the production needs.

Main accessories

- High Performance head (HP) made of cast iron to ensure high standards of rigidity and temperature stability
- High Performance 2 head (HP2) equipped with special features to decrease vibrations and increase the rigidity of the head itself [4]
- Linear scales
- Dust suction grids with dedicated extraction unit
- Total enclosure with fixed or moving roof [2]
- Upper rolling shutter [3]
- Cooling liquid system with chip conveyor [5]



1



2



3



4



5



Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|--|---------------|----------|----------|----------|
| Stroke | 2,6/4 m | 1,7/1,8/3,2 m | 1/1,3 m | +/- 270° | +/- 120° |
| Speed | 80 m/min | | 60 m/min | 44 rpm | 40 rpm |
| Spindle | From 15 kW up to 22 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 8 to 60 positions, also with exchange arm | | | | |
| Linear accuracy | ≤ 0,02 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 12 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 microns resolution | | | | |
| Combined technologies | Ultrasonic cutting system Additive manufacturing | | | | |

NAVY SERIES



ADVANCED AND VERSATILE SOLUTIONS DESIGNED TO MEET THE NEEDS OF THE MARINE INDUSTRY AND LARGE PATTERNS MAKERS.

Workable materials*

TOOLING BOARDS RESINS



COMPOSITES



* Efficiency indicators by material

Belotti NAVY CNC centers are 5-axis machines geared to the shipyards and patterns makers' production requirements. The wide range of models in terms of dimensions and configurations allows to **process both patterns and final/structural parts of a medium-size boat**: from cutting resin models up to trimming fiberglass hulls, decks and other high resistant composite materials.

The rigid, cartesian structure, featuring a suspended bridge, is designed to offer a unique combination of performances: **short processing times, flexibility, top-quality surface finishes and durability.**

The production capacity can be further increased with a second independent bridge for simultaneous machining operations on different pieces or on the same piece.

Total enclosures, dust suction grids, push and pull systems and active/passive safety devices assure a safer and cleaner working environment.

Main accessories

- Single shoulder head
- Telescopic Z axis [2]
- Second independent bridge [4]
- Dust suction grids
- Tool changer [3]
- Suction hood
- Push and pull system with extraction unit
- Total enclosure [1]
- Upper rolling shutter [1]





Application sectors

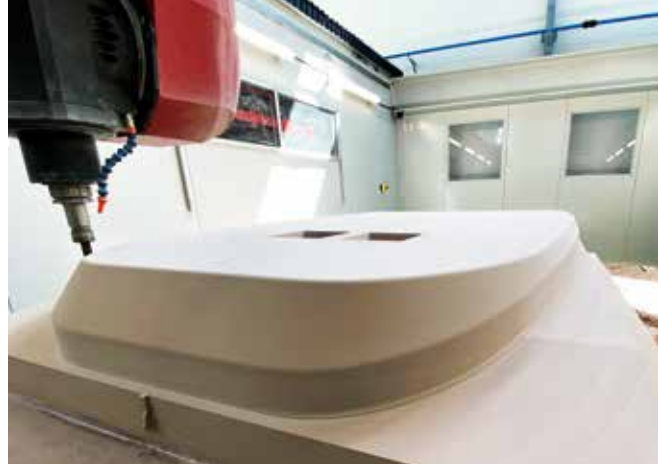


Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|---|---------------------------|---------------------------|----------|-----------|
| Stroke | 2,6/6/8/12/17/20/23/30/43 m | 3,2/4,2/5,2/6,2/7,2/8,8 m | 1,5/2/3/3,3/4,2/5,3/6,9 m | +/- 270° | + /- 120° |
| Speed | 100 m/min | | 45 m/min | 44 rpm | 40 rpm |
| Spindle | From 15 kW up to 42 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 16 to 60 positions | | | | |
| Linear accuracy | ≤ 0,035 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 24 arcsec for rotary axes | | | | |
| Combined technologies | Additive manufacturing | | | | |

VEGA SERIES

HIGH-SPEED GANTRY CNC CENTERS FOR MACHINING LARGE-SIZE COMPONENTS IN COMPOSITE MATERIALS AND RESIN PROTOTYPES.



Workable materials*

COMPOSITES



TOOLING BOARDS RESINS



LIGHT ALLOYS



* Efficiency indicators by material

Belotti VEGA CNC centers are the result of a long experience in the production of 5-axis technologies for the **machining of resin prototypes as well as of carbon fiber and aluminium components.**

This Series is designed to meet the production requests of the automotive, aerospace and, more generally, of the major patterns-makers and composites parts manufacturers (i.e. carbon fiber, kevlar, fiberglass, honeycomb).

Belotti VEGA models have a dynamically rigid structure, ideal for offering a unique combination of performances: **reduced processing times, enhanced accuracy, high-quality surface finish and rigidity over time.**

Total enclosures, dust suction grids, push and pull systems and vision cameras ensure a safer working environment.

Main accessories

- Single shoulder head
- Second independent bridge
- Dust suction grids
- Suction hood
- Push and pull system with extraction unit
- Total enclosure with moving roof
- Upper rolling shutter
- Vision cameras



Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|--|---------------------------|-------------------------------|----------|----------|
| Stroke | 2,6/6/8/12/17/20/ 23/30/43 m | 3,2/4,2/6,2/ 7,2/8,8 m | 1,5/2/3/3,3/ 4,2/5,3/6,9 m | +/- 270° | +/- 120° |
| Speed | 100 m/min | | 45 m/min | 44 rpm | 40 rpm |
| Spindle | From 15 kW up to 42 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 18 to 60 positions | | | | |
| Linear accuracy | ≤ 0,015 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 15 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 micron resolution | | | | |
| Combined technologies | Ultrasonic cutting system Additive manufacturing | | | | |

SKY SERIES

THE BEST VERSATILE SOLUTION WITH THE HIGHEST DEGREE OF ACCURACY FOR MACHINING LIGHT ALLOY PATTERNS & MOULDS AND COMPOSITES PROTOTYPES.



Workable materials*

LIGHT ALLOYS



COMPOSITES



TOOLING BOARDS RESINS



* Efficiency indicators by material

Belotti SKY 5-axis CNC center is designed to mainly satisfy the specific applications of the automotive and aerospace industries. SKY Series is the ideal solution for:

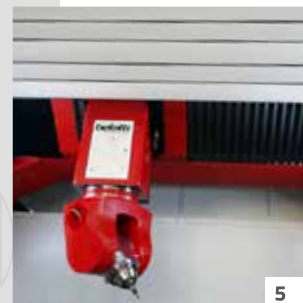
- **milling patterns & moulds** in aluminium and composite materials;
- **milling resin prototypes** for design centers;
- **trimming structural components** in composite materials.

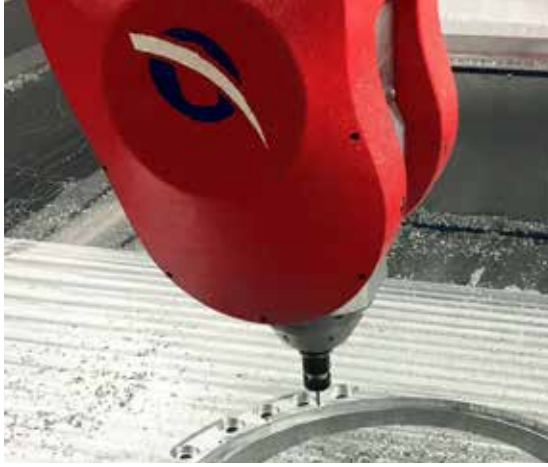
This Series has a **monolithic structure, thermally stabilized to increase machining precision and stability over time**, while the axis movement is managed by screw balls. The Belotti patented fork head, compact and rigid, is equipped with torque motors and hydraulic locking brakes on the rotary axes, which guarantee a higher degree of surface finish during the simultaneous machining of the linear axes interpolated with rotary axes A and C.

The total protection enclosures, the vision cameras in the spindle housing for work-cycle and unattended machining monitoring, the suction system with motorized hood, and the cooling liquid system with filters and chip conveyor for aluminium high-volume processing (also available in the special version for composite materials), are additional features that ensure excellent operator safety and working environment cleanliness.

Main accessories

- Fork head with torque motors [2]
- Dust suction grids with air ducting and requalification
- Suction hood [3]
- Total enclosure with moving roof [1]
- Upper rolling shutter [5]
- Cooling liquid system with chip conveyor [4]
- Temperature control system





Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|--|-------------|----------|----------|----------------|
| Stroke | 2,6/3,6 m | 1,7/2,2/3 m | 1,3 m | +/- 360° | +135° / - 110° |
| Speed | 50 m/min | | 30 m/min | 60 rpm | 60 rpm |
| Spindle | From 22 kW up to 42 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 18 to 200 positions | | | | |
| Linear accuracy | ≤ 0,010 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 10 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 micron resolution | | | | |
| Combined technologies | Ultrasonic cutting system Additive manufacturing | | | | |

MDL SERIES

ALL-AROUND HIGH-SPEED 5-AXIS CENTERS FOR MACHINING LIGHT ALLOYS AND COMPOSITE MATERIALS FOR DIFFERENT APPLICATION INDUSTRIES.



Workable materials*

LIGHT ALLOYS



COMPOSITES



TOOLING BOARDS RESINS



* Efficiency indicators by material

Belotti MDL Series is used with great versatility for **milling light alloys moulds** and for **trimming large-size structural parts in composite materials**.

This advanced technology is the ideal solution for the automotive and aerospace sectors, where milling operations on patterns & prototypes and finishing machinings of large-scale moulds/parts made of aluminium or composites are requested.

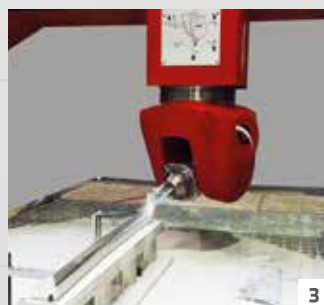
The high stiffness structure and the adoption of 5-axis heads equipped with torque motors and optical lines on linear axes, enhance the precision and the quality of the finishes.

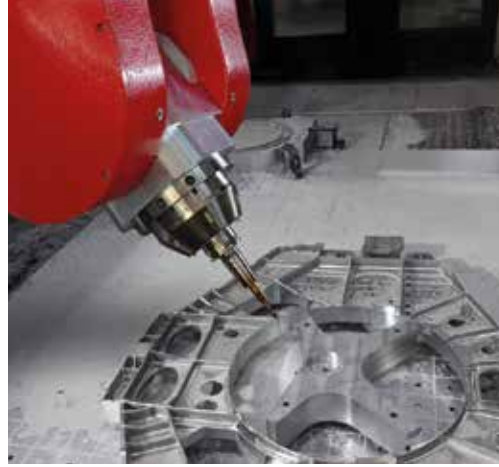
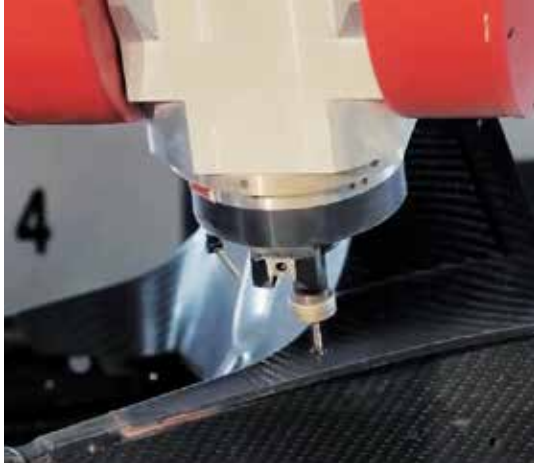
A wide range of models and machining units allows to satisfy every dimensional and technological requirement.

The total enclosures, the suction system with motorized hood, the coolant system with chip conveyor, and the vision cameras in the spindle ensure optimal cleaning conditions of the working area and excellent operators' safety.

Main accessories

- Fork head [2]
- Total enclosure with moving roof [1]
- Upper rolling shutter
- Cooling liquid system with chip conveyor [3]
- Double bridge
- Vision cameras [4]
- Temperature control system





Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|-----------------------|--|-----------------------|-----------------------|----------|-----------------|
| Stroke | 4/6/8/12/16/23/30 m | 2,6/3/3,6/4/4,8/6,5 m | 1,3/1,5/2/2,5/3/4,5 m | +/- 360° | + 135° / - 110° |
| Speed | 50 m/min | | 30 m/min | 60 rpm | 60 rpm |
| Spindle | From 30 kW up to 50 kW at 24.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 18 to 200 positions | | | | |
| Linear accuracy | ≤ 0,010 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 10 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 microns resolution | | | | |
| Combined technologies | Abrasive waterjet Ultrasonic cutting system Additive manufacturing | | | | |

NESTING SERIES



THE 3-AXIS COMPACT SERIES FOR MACHINING LARGE ALUMINIUM AND PLASTIC MATERIALS PLATES.

Workable materials*

TECHNICAL PLASTIC



ALUMINIUM



TOOLING BOARDS RESINS



* Efficiency indicators by material

Belotti NESTING Series is **the ideal solution to machine and nest even small and detailed pieces out of a single aluminium or technical plastic plate**, up to 50 mm thick.

This Series is an automated and highly flexible technology, developed to meet the demands of several sectors: packaging, mechanical industry, checking fixtures, automotive and aerospace.

The **minimum footprint configuration** combined with the **high dynamism of the milling head**, guarantee **maximum quality of the machined surfaces, high productivity and optimization of energy and material consumption**.

The machine has a compact and monolithic structure and is delivered already assembled, speeding up set-up and positioning operations.

Belotti NESTING CNC centers are **designed to operate in unattended mode during the entire cycle time**, allowing a significant reduction in operator-cost and a high return on investment. The machine can be supplied with the CAD / CAM plug-in software, developed by Belotti for easy programming 2D geometries and complex machining operations.

The aluminium suction table with MDF panel and vacuum clamping system, the extraction system with electronic hood connected to the suction system and the perimeter enclosures ensure a safer and cleaner working area.

Main accessories

- Aluminium vacuum table with MDF panel
- Electronic suction hood for 3-axis head [2]
- Vertical aluminium table [3]
- Special table for nesting small pieces
- Tool changer [4]
- Perimeter enclosure or on board protection [1]
- Minimal lubrication system through the spindle [5]
- CAD/CAM easy programming software



1



2



3



4



5



Application sectors



Technical features

| Axis | X | Y | Z |
|-----------------|---|-------------|----------|
| Stroke | 3/4 m | 1,6/2/2,5 m | 0,45 m |
| Speed | 50 m/min | | 30 m/min |
| Spindle | From 15 kW up to 22 kW at 24.000 rpm max. | | |
| CNC | Fanuc, Siemens | | |
| Tool changer | From 11 to 30 positions | | |
| Linear accuracy | ≤ 0,015 mm/m for linear axes | | |

NOVA SERIES



STURDY AND RELIABLE MULTI-AXIS MACHINING CENTER FOR MILLING DIFFERENT SIZED PRODUCTS AND PROFILING LARGE SCALE PARTS OUT OF ALUMINIUM, TECHNICAL PLASTIC AND COMPOSITE PANELS.

Workable materials*

ALUMINIUM PANELS



TECHNICAL PLASTIC



COMPOSITES



TOOLING BOARDS RESINS



* Efficiency indicators by material

Belotti NOVA Series is the result of the long experience achieved in over 40 years of activity in the production of 3 and 5-axis machining centers.

NOVA Series represents the answer to the strong demand of the leading industries in the packaging, checking fixtures, aerospace and automotive sectors.

These multi-axis CNC centers consist of a sturdy monolithic structure equipped with double slideways on both sides of the baseframe, which guarantee **maximum rigidity of the gantry during the operations.**

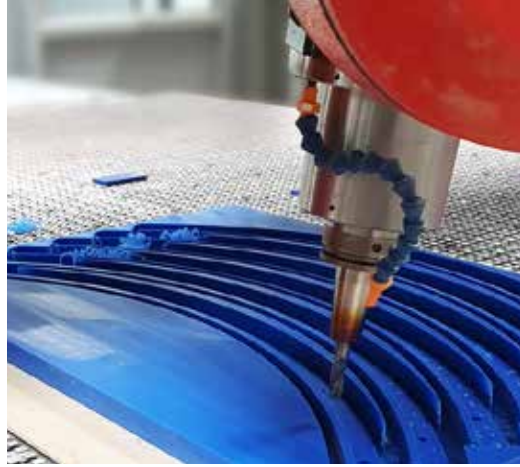
The mobile bridge and the presence of a double motor on both sides (Dual Drive System) allow the machining of large pieces, while preserving the quality of the series.

Available with 3-axis and 5-axis heads, **Belotti NOVA centers can process various materials** such as **aluminium, light alloys, composites** and **technical plastics**, ensuring high performances thanks to the electrospindles and top-of-the-range clamping systems. The 5-axis head, optional, compact and equipped with axis locking brakes and encoders, allows the **machining of parts with complex shapes, guaranteeing quality and precision.**

Main accessories

- Dual Drive system and linear scales [3]
- Double performance head 3-5 axis [1]
- Electronic suction hood for 3-axis head
- CSRS - Caterpillar Stack Routing System
- Minimal lubrication system through the spindle
- Perimeter enclosure
- CAD/CAM easy programming software





Application sectors



Technical features

| Axis | X | Y | Z | C | A |
|--------------------|---|---------------|-----------|----------|----------|
| Stroke | 2/3/4/5/6/10 m | 1,6/2/2,5/3 m | 0,3/0,5 m | +/- 270° | +/- 120° |
| Speed | 50 m/min | | 30 m/min | 44 rpm | 40 rpm |
| Spindle | From 15 kW up to 30 kW at 30.000 rpm max. | | | | |
| CNC | Fanuc, Heidenhain, Siemens | | | | |
| Tool changer | From 12 to 60 positions, also with exchange arm | | | | |
| Linear accuracy | < 0,009 mm/m for linear axes | | | | |
| Rotary accuracy | +/- 12 arcsec for rotary axes | | | | |
| Measurement system | Linear scales, 5 micron resolution | | | | |

ADVANCED TECHNOLOGIES

■ ADDITIVE MANUFACTURING

BEAD: the all-in-one gantry solution

BEAD is the innovative **hybrid technology** that integrates the **Large Scale Additive Manufacturing (LSAM)** with the **milling process** in a single machining center.

BEAD exploits the best of both worlds combining the speed and creative potential of 3D printing with the precision and reliability of a cnc center in a single system.

BEAD solution can be possible in **different configurations with variable build volumes, extrusion outputs and printing orientations (90° C and 45° C)**, and finds application in multiple industries, allowing for the production of moulds, plugs and autoclave toolings through the use of different materials, from commodity to high performance fiber reinforced polymers.

3D printing extruders for LSAM can be installed on **Belotti FLA, FLU, MDL, NAVY, SKY, VEGA** machining centers.

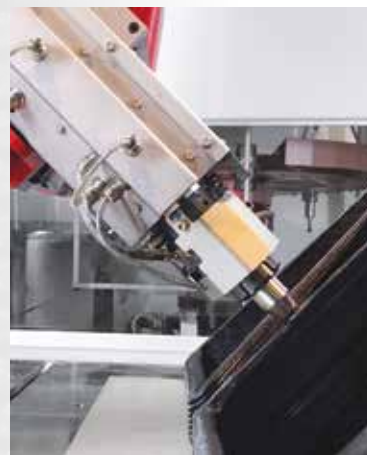
Download the brochure and watch the video to learn more about this cutting-edge technology.



BEAD BROCHURE



WATCH
THE VIDEO



ULTRASONIC TECHNOLOGY

Cutting system for excellent surface finishes

Ultrasonic technology is particularly suitable for honeycomb and light alloys machining in the aerospace and automotive sectors.

The ultrasonic cutting system (20 kHz) can be installed on **Belotti FLA, FLU, MDL, SKY, VEGA** machining centers.

Upon request, the machining center can be equipped with two cutting heads: a head with screwed blade for vertical cutting, and a second cutting head with disc blade for surface finishes. Both can be stored in a dedicated tool changer during 5-axis milling operations.



WATERJET

Maximum versatility for different application fields and cutting geometries

The flexibility of water cutting technology lends itself to the processing of multiple materials in all civil and industrial sectors.

Waterjet technology by Belotti allows customers to work the most diverse materials with very high precision and speed, avoiding any deformations due to thermal and mechanical stress thanks to the "cold" cutting.

The low percentage of scraps and minimal tool wear make this technology very convenient with a low environmental impact.

In addition to composites, waterjet cutting system can be used for machining metal materials.

Waterjet system can be integrated on **Belotti FLA, MDL and TRIM** machining centers.



MyB

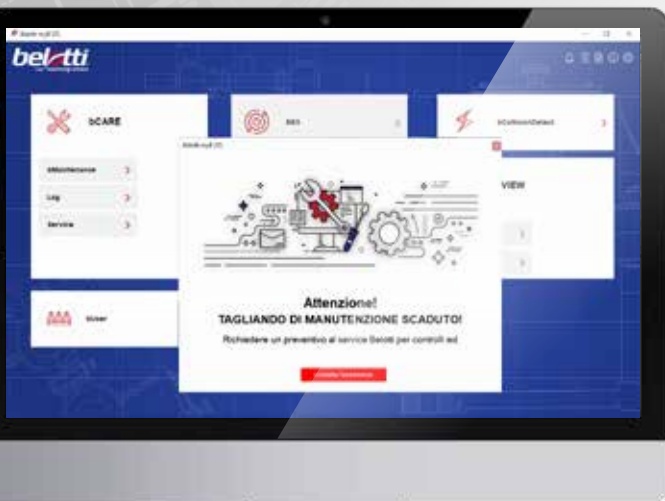
The IoT platform for integrated and optimised machining centers management.

Highly customisable through the activation of specific Modules, the platform allows to:

- measure and optimise the productivity and durability of the machining centers;
- enhance the overall value of the machinery and manage the interconnection with the factory environment;
- guarantee constant and efficient support by Belotti Service.

The **MyB Suite** is compatible with major international IoT protocols, can be installed on machining centers with different numerical controls, and can be operated as a retrofit on existing machineries.

Extremely versatile, the platform is designed to meet the main needs in terms of production optimisation and durability performances for Belotti CNC centers over time. Moreover, it works with other machines using the following numerical controls: **Fanuc, Heidenhain, OSAI, Siemens.**



MyB BROCHURE

MyB Modules:



bCare

The solution for a direct communication with Belotti Service



bOPEN

The software for the interconnection



BES

Belotti Equipment Supervisor for the Industry 4.0



Barcode

The function for automatic program selection



bCollision Detect

The module to reduce and prevent collisions



bUser

The software for the operator-machine management



bView

A single interface for complex projects

CAD – CAM

Internally developed plug-in to the CAD/CAM software, for easy programming of Belotti 3-axis centers.

A powerful tool to manage 2D geometries and to implement varied and complex machining operations, even importing its own libraries into the program.

- Easy-programming operations
- Programming time reduction up to 50%
- Time reduction in forecast and analysis of cost/cycle-time

Belotti Service is the after-sales department that offers services to support customers throughout the entire life time of a Belotti machining center.

Preventive maintenances, remote and on the field support, quick availability of original spare parts, trainings, technical advice and programming assistance, repairs, overhauls and upgrades: Belotti after-sales services are the concrete answer to avoid machine downtime or to provide prompt assistance.

These services are supplied worldwide by a team of specialised Belotti Service technicians, as well as by qualified and authorised Service Centers.



Customer care

From the purchase to the entire life time of a Belotti cnc machining center, Belotti Service team provides prompt support to ensure the maximum productivity through:

- **free hotline and e-mail support**
(tel. +39 035 4934403 – customer care@belotti.com)
- **remote support**
- **field service**

The additional **Belotti Express** service guarantees the availability of a Belotti technician within 36 hours from the receipt of the official request.



Preventive maintenance

Preventive maintenance and services are planned to reduce inefficiencies and optimise machine costs overtime.

Belotti offers three **preventive maintenance plans** (Compact – Classic – Excellent) conceived to guarantee the machining center's performance over time in terms of precision and reliability.



Spare parts

Belotti ensures a wide availability and a fast supply of the main spare parts worldwide, thanks to a well-stocked warehouse. Spare parts are original and certified.

B-Cloud additional service ensures an immediate availability of some specific spare parts.



Repairs

Belotti provides a repair service of the machining centers' components in the event of malfunctions due to aging or accidental events. The interventions are operated by Belotti Service team, continuously updated on technological innovations.



Trainings

Training sessions are organised with the aim of transferring to customers' operators high technical skills and operational autonomy in the short term.

The programs are modular and customised according to the needs of the customer.

Training days and technical advices are also offered to support customers during the start-up phases of a new production process involving new operations or new materials.



Electrospindles overhaul

Belotti offers diagnostic, overhaul and repair services of the electrospindles assembled on Belotti machining centers.

The additional **B-Rapid** service is the special solution that minimise the downtime due to electrospindle failure.



Upgrade & retrofit

Belotti designs and operates upgrade and retrofit on the machining centers to add value to the investment by:

- increasing their productivity through the installation of additional components;
- extending their service life through the adaptation of the equipment to today's standards.



BELOTTI SERVICE
BROCHURE





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