SELCO WN 6 ROS

PANEL SAW WITH INTEGRATED ROBOT
AUTOMATION AND EFFICIENCY IN THE PRODUCTION PROCESS

THE MARKET REQUESTS

Technology that allows manufacturing companies to evolve through a change that simplifies, monitors, and optimises phases of production. Taking a leading role in the Industry 4.0 revolution means knowing how to achieve maximum efficiency.

BIESSE RESPONDS

With robotised solutions combining versatility, efficiency and high investment returns, designed for small/medium or large businesses.

Selco WN 6 ROS (Robotically Operated System) is a technological solution with integrated robot for handling panels. It allows the job to be carried out in predefined times and always with the same quality standard. A robotised solution that can increase efficiency and production continuity, facilitating the daily work.
SELCO WN 6 ROS
ROBOTICALLY OPERATED SYSTEM

- TECHNOLOGY THAT’S EASY TO USE, WITHOUT THE OPERATOR’S INTERVENTION
- OPTIMISED WORKING CYCLE
- MAXIMUM EFFICIENCY
- MAXIMUM QUALITY WHEN MACHINING DELICATE MATERIALS.
TECHNOLOGY THAT’S EASY TO USE, WITHOUT THE OPERATOR’S INTERVENTION

The working cycle is executed in automatic mode until the entire machining batch is complete, even without an operator present. Idle times are drastically reduced, and the risk of damage to the material due to panel handling by the operator is practically null.

ROS takes the place of the operator, handling the sectioned strips longitudinally, positioning them for cross sectioning, and sorting the finished pieces.
EFFICIENT PRODUCTION WITH NO LIMITS

Maximum productivity thanks to the possibility of machining several overlapping panels.

Reduced cycle times thanks to the automatic system which enables longitudinal double-edged trims to be removed via a specially-designed hatch.
CUTTING QUALITY

Perfect stability, thanks to the solid steel structure of the base sustained by robust supports. The slide guides of the blade-holder carriage are located on the same beam to ensure they are straight and perfectly parallel.

The excellent balancing of the tool-holder carriage (thanks to the shape of the base and the positioning of the guides and wheels) means there are no blade vibrations at all, and the carriage makes an extremely linear movement.

Top product quality, thanks to the air cushioned working surface, which protects delicate materials. In addition, this characteristic ensures the surface next to the blade is kept constantly clean.

The protrusion of the main blade, and the opening of the presser, are automatically adjusted by the numerical control on the basis of the thickness of the book to be cut, thereby obtaining the best cutting quality in all working conditions.
Vertical movement of the main blade is managed and optimized via quick blade height adjustment.

The **anti-slide device** controls the position and the number of rotations of the blade, intervening to adjust the advance speed. Maximum cutting quality, a longer blade lifespan, and reduced maintenance costs.

The consistent, controlled pressure on the book of panels to be cut is guaranteed by the **presser** with its single-element structure.

**Cutting line closure system**, to prevent the longitudinal trim cuts from falling into the machine and fouling the blade path.
CUTTING ACCURACY

Fast, accurate positioning of the panels for optimum cutting precision, thanks to the robust pusher carriage activated by a brushless motor. The slide surface below the pushing device is fitted with independent rollers to avoid making any marks on panels with a delicate surface.

Independent and self-leveling grippers, ensure the book is firmly secured. The design of the system completely ejects the cut panels making it easier for the operator to handle both the panels and waste.

Powerful front aligners align the book of panels against the pushing device collets.

Perfect panel alignment, reducing cycle times to a minimum thanks to the lateral alignment stop integrated into the blade carriage.
REduced tool changeover time

Quick Change system (patented) for the quick release of the blades without tools.

Fast, accurate setting of the scoring and main blades, using Digiset system. The system also stores the information for each set of blades, ensuring repeatable and accurate alignment every time.

Automatic alignment.
The patented system automatically aligns the scoring blade in seconds, which completely eliminates test cuts, reduces set-up time which increases efficiency and reduces production costs.
REDUCED PANEL LOADING TIMES

On request special solutions are available for the movement of packs and to permit the loading and unloading of panels.

The lift table consists of a strong frame is equipped with a special structure to load the pack of panels directly by forklift.

Infeed conveyors with free-running or powered rollers allow the loading and side or rear unloading of the panels.
Continuous cycle machining with no interruptions, courtesy of the Win-store automatic magazine, for optimised panel management.
A solution that guarantees increased productivity whilst reducing machining times and costs.

The X Feeder autoloader loads the panels to be cut into the machine in a fully automated manner, thanks to a suction arm system. A compact, ergonomic solution that can easily adapt to any manufacturing context, occupying a reduced footprint and optimising the production flow.

The X Feeder L Loader supports automatic labelling of single or stacked panels before loading into the machine.
PRODUCTIVITY INCREASE OF UP TO 40%

Two independent cutting stations on a single beamsaw.

An auxiliary pushing device consisting of a collet with side positioning by means of the numerical control. An additional stop allows independent cutting of strips of up to 650 mm wide.

Cross-cut of the last strip, with advanced loading and rotation of the next book of panels.
The **rotating station** (patented) rotates the book of panels, maintaining the alignment with the point of reference both before and after the rotation.

Panel clamping devices avoid the misalignment of the stack during the rotation phase.

Front aligners to align the boards in the width directly on the turn station unit.
COMPETITIVE CUSTOMISATION

Made-to-measure turnkey factories, plus the integration of Biesse Group solutions with complementary software and machinery, with over 1000 systems installed worldwide.

Biesse Systems is a team of highly trained engineers for large scale production processes. Biesse Systems offers integrated cells and systems that are capable of maximising customer competitiveness by combining mass production techniques with a high degree of customisation to meet customers’ exact requirements.
SOFTWARE FOR THE SMART, ASSISTED MANAGEMENT OF CUTTING PATTERNS

OPTIPLANNING IS THE SOFTWARE FOR OPTIMISING CUTTING PATTERNS, DEVELOPED ENTIRELY BY BIESSE. BASED ON THE LIST OF PIECES TO BE PRODUCED AND THE PANELS AVAILABLE, IT CAN CALCULATE THE BEST SOLUTION TO MINIMISE MATERIAL CONSUMPTION, SECTIONING TIMES AND PRODUCTION COSTS.

- Simple, user-friendly interface.
- Excellent reliability of the calculation algorithms for production batches in small and large companies.
- Automatic import of the cutting list generated by the software for the design of furniture items and/or ERP management systems.
SERVICES

The Biesse IoT platform which enables customers to access an extensive range of services to streamline and rationalise their work management processes.
The technical specifications and drawings are non-binding. Some photos may show machines equipped with optional features. Biesse Spa reserves the right to carry out modifications without prior notice.

A-weighted surface sound pressure level (L_{pA}) during machining for operator workstation \( L_{pA} = 83 \text{dB(A)} \) \( L_{wA} = 106 \text{dB(A)} \) A-weighted soundpressure level (L_{pA}) for operator workstation and sound power level (L_{wA}) during machining \( L_{wA} = 83 \text{dB(A)} \) \( L_{wA} = 106 \text{dB(A)} \) K measurement uncertainty dB(A) 4.

The measurement was carried out in compliance with UNI EN 848-3:2007, UNI EN ISO 3746: 2009 (sound power) and UNI EN ISO 11202: 2009 (sound pressure levels at workstation) during panel machining. The noiselvels shown are emission levels and do not necessarily correspond to safe operation levels. Despite the fact that there is a relationship between emission and exposure levels, this may not be used in a reliable manner to establish whether further measures need to be taken. The factors determining the exposure level for the workforce include-length of exposure, work environment characteristics, other sources of dust and noise, etc. i.e. the number of other adjoining machines and processes. At any rate, the above information will enable the operator to better evaluate dangers and risks.
Direct, seamless co-ordination of service requests between Service and Parts. Support for Key Customers by dedicated Biesse personnel, either in-house and/or at the customer’s site.

- Machine and system installation and commissioning.
- Training centre dedicated to Biesse Field engineers, subsidiary and dealer personnel; client training directly at client’s site.
- Overhaul, upgrade, repair and maintenance.
- Remote troubleshooting and diagnostics.
- Software upgrade.

**BIESSE SERVICE**

- **500** Biesse Field engineers in Italy and worldwide.
- **50** Biesse engineers manning a Teleservice Centre.
- **550** certified Dealer engineers.
- **120** training courses in a variety of languages every year.
The Biesse Group promotes, nurtures and develops close and constructive relationships with customers in order to better understand their needs and improve its products and after-sales service through two dedicated areas: Biesse Service and Biesse Parts. With its global network and highly specialized team, it offers technical service and machine/component spares anywhere in the world on-site and 24/7 on-line.

**BIESSE PARTS**

- Original Biesse spares and spare kits customized for different machine models.
- Spare part identification support.
- Offices of DHL, UPS and GLS logistics partners located within the Biesse spare part warehouse, with multiple daily pick-ups.
- Order fulfillment time optimized thanks to a global distribution network with de-localized, automated warehouses.

92% of downtime machine orders fulfilled within 24 hours.

96% of orders delivered in full on time.

100 spare part staff in Italy and worldwide.

500 orders processed every day.
“On these chairs sits the world” is the motto of the Stechert Group that can effectively be taken literally. What began 60 years ago as a small manufacturing company for pram mouldings, furniture doors and door locks is today one of the largest international suppliers of contract and office chairs, as well as tubular steel furniture. Moreover, since 2011 the company has a partnership with WRK GmbH, an international specialist in podiums, conference room and grandstand seating, associated with Stechert via the joint commercial company STW. For Stechert management, however, the excellent results obtained are no excuse for resting on their laurels. On the contrary, the company is investing heavily in the Trautskirchen site to make its production even more efficient and profitable. In the search for a new machinery partner, the company’s management chose the Italian manufacturer Biesse. For the project we chose machines that already had certain options and were predisposed for automation, said Roland Palm, Biesse Area Manager. An efficient production cycle was created in which workers are able to perform at their best after only a short training period. At the start of the production line is the panel saw “WNT 710” with one cutting line. “Because, explained skilled cabinet maker Martin Rauscher”, we want to be able to work on panels of up to 5.90 metres in order to reduce waste as much as possible.” Normal rectangular panels for tables or wall panels are taken directly to the “Stream” edgebander with “AirForceSystem” technology. The Biesse edgebander has a group that activates the laminated edging material no longer via a laser beam but using hot air to obtain the so-called “zero gap”. “The quality is just as good as the laser system, if not even better: with a connection power of 7.5 kW, the cost per square metre is much lower”, underlined the Biesse Area Manager. “We want to be ready for when we mould the frame ourselves and we must therefore calibrate the panels” said Martin Rauscher, “The same is true of course for solid wood and multiplex panels, which require grinding before being painted in an external company. For both types of work a Biesse “S1” sander is used. In order to meet the needs of the future, in the Trautskirchen plant there are also two Biesse numerically controlled machining centres, a “Rover C965 Edge” and a “Rover A 1332 R”, which are perfectly complementary. The Stechert Group also intends to strengthen sales of innovative solutions for interior fittings with complete systems for walls, ceilings, floors and mezzanines. For panel cutting, the Group has purchased a “Sektor 470”. For other geometry, groove and spring machining as well as boring and surface milling, there are two Biesse machining centres, an “Arrow” for nesting applications, a “Rover B 440” and more recently a 5-axis machine, the “Rover C 940 R” machining centre in order to be able to produce, in particular, wall and ceiling panels mached in 3 dimensions.

Source: HK 2/2014