Creative Wood / Selco WN 610 TP PANEL SAW / 4500 x 6500

Serial # 1000020628 / Original Specs

CODE	U.M.	QUANTITY
L8456570	NR	1

Selco WN 6

Single line panel sizing centre with fast and accurate numeric controlled pusher with grippers and manual panel infeed on front tables of machine

This machine requires one operator excluding the infeed and outfeed operations of the material being used.

Main base

The machine base comprises two elements, main base and secondary base, which are connected together by two side uprights. This bridge structure is capable of counteracting the forces exerted by the pressure beam and the weight of the material to cut.
The machine main base, covered by an international patent, consists of a monobloc heavy duty normalized frame structure and strong supports assuring its perfect level and stability.
The guideways of saw carriage are ground and hardened and assure extreme durability of the guiding system and its precision.

Saw carriage

The saw carriage, with its normalized steel rigid structure, supports and guides the main saw blade and the scoring blade with extreme accuracy.
Tools (scoring and main blade) are raised by brushless motor and ball screws. This system grants a faster cutting cycle and a high precision saw blade projection (+/ - 0.01 mm).
Through the “DIGISET” function the electronic adjustment is performed by the numerical control. The numeric control allows storage of unlimited vertical/horizontal blade settings (scoring and main saw blade). In this way, when a saw blade set is fitted, its setting values can be called up rapidly on the control and machining operations can start right away.
The extremely fast and safe saw blade replacement is obtained by means of the “QUICK CHANGE” Selco system covered by an international patent.
The saw carriage is driven by an A.C. brushless servomotor with digital technology for a perfect positioning (transmission by rack and pinion), always under direct monitoring of the numeric control. In this way it is possible to reduce the number of strokes and optimise machining times.
Movement is transmitted by a helical-toothed rack and pinion system that grants precise movements and it avoids any maintenance.
Adjustment of the saw carriage speed of advance is managed automatically by the numeric control, and manually from the control panel by means of the command provided. In alternative the operator can reduce it from the control panel using the manual override.

Side squaring device

Side alignment is carried out by an aligner which intervenes on the cut line and pushes the material against the square fence. Being integrated in the saw carriage structure, the positioning is extremely

fast and precise, the pushing force is infinitely adjustable on the control board and it can be related to the different materials to be sized.
With this system it is possible to perfectly align even very thin and/or flexible panels, reducing cycle time.

Pressure beam

The pressure beam, which is driven by two pneumatic cylinders, guarantees strong and uniform clamping of the panels throughout the cutting cycle, including final edge trimming operations. The hold down pressure of the pressure beam is manually adjustable from the front panel.
To guarantee that the pressure beam remains parallel to the work table, and therefore to ensure even clamping even in the case of small panels, a rack and pinion drive is provided.
To adapt the action of the pressure bar both to long pieces (e.g. during rip cutting of panels) and short ones (e.g. during cross cutting of bars), pressure is automatically adjusted.
The lower side of the pressure beam has a special rubber coating that protects the panel's surface and allows uniform pressure to be applied to the panels.
To reduce the cycle time, the pressure beam stroke is actively controlled relative to the stack.
The front part of the pressure bar is fitted with an independent sector safety barrier, made of transparent material (flap), so as to allow the operator to view the inside of the machine while restricting access to the cutting line. The rotary movement of the flap allows the cut material to be ejected, but prevents the machine operator from having to insert his hands onto the cutting line.
As a further safety device, an emergency barrier is also fitted on the presser, stopping the machining cycle when triggered.

Pusher carriage

The powerful and heavy duty pusher carriage for the positioning of boards, runs along hardened and rectified steel round guides fitted on heavily dimensioned steel beams. The extremely precise racks and pinions, (millesimal tolerance) for motion transmission, are ground and hardened, therefore assuring accurate positioning and long lasting life.
The pusher carriage is driven by an A.C. brushless servomotor with digital technology for accurate positioning, always under direct monitoring of the numeric control.
Positioning of the pusher carriage is always under direct monitoring of the machine control, which uses an independent electro-magnetic detector. This device avoids any kind of mechanical play and due to a contactless application, efficiency is guaranteed through time.
In CE countries, the pusher carriage speed of advance is restricted to 25 m/min by law.
The pusher is fitted with independent floating grippers, to avoid any pressure between the bottom surface of the stack and the supporting table of the machine. The upper locking arm is covered with a layer of vulcanised rubber to prevent marking the top surface of the panel stack. The surface of the grippers in contact with the panels comprises aluminium stops which can be trimmed during testing to guarantee perfect alignment with the cutting line. The grippers clamping force is manually adjustable from the front panel.
At the end of every longitudinal and cross cut cycle, the pusher ejects the rear trim to the operator side of the cutting line. This increases the machine efficiency by allowing the operator to begin the next cutting cycle before removing the trims. Also, placing the trims on the operator side of the cut line allows for the removal of these trims without crossing the cut line.

Supporting stations

The table sliding the material under the pusher carriage comprises independent idle rollers, housed inside extruded aluminium elements, to avoid any friction with delicate surfaces of panels.
The table of the machine base is covered with machined and calibrated H.P.L. (high pressure laminate) for easy sliding of material.
The front section of the machine is equipped with a rounded air table coated with scratchproof material to prevent the sectioned material from being damaged and to ensure easy handling. Additional tables are available as optional, and the configuration will be defined each time according to working requirements.

PC Numeric Control

The basic version of the machine includes a PC with the following features:

- ☑ 19" analogue flat panel colour monitor (wide).
- ☑ Alphanumeric keyboard.
- ☑ Mouse.
- ☑ DVD-ROM.
- ☑ Ethernet PCI card.
- ☑ Intel microprocessor.
- ☑ Windows Operating system in one of the following languages: Italian/English/French/German/Spanish.

The use of a commercial PC to control the machine gives: maximum flexibility of use, simultaneous run of multiple functions, the ability to use different application software (optimiser, etc.), integration with the company software network, etc.

The following are the main functions of the control:

- ☑ Cutting patterns
  The control is capable of managing complex cutting patterns (comprising longitudinal cuts, transversal cuts, pre-cuts, single or multiple cuts of levels three and four) with graphic simulation of all operations.
- ☑ Lists
  By running a list it is possible to machine all the cutting patterns in that list in cascade.
- ☑ Manual cuts
  Using the manual cuts page it is possible to set a series of cutting operations on the numeric control with ease, and send them for immediate running.
- ☑ Simulation
  During machining of the cutting patterns it is possible to display real time graphic simulation of the panel sizing phases, indicating the sizes of cuts.
- ☑ Diagnostics
  In the event of a problem of any kind within the machine, or of inappropriate use of the various numeric control pages, a message is displayed on the monitor indicating the cause of the problem.
- ☑ On line help
  It is possible to access the help page from any other page on the control. Basically speaking, the whole of the numeric control operating manual can be found on the various pages of the numeric control software itself.
- ☑ Maintenance
  For the main parts of the machine, the optimum number of hours between one maintenance operation and the next is indicated. A warning message is displayed each time a maintenance operation is required.
- ☑ Statistics
  Every type of event is recorded (date and time). It is possible to process the recorded data, so as to obtain various types of information.
- ☑ Units of measurement
  It is possible to work both in millimetres and in decimal inches.
- ☑ Parameters
  By adjusting the machine parameters it is possible to customise functions with respect to the standard configuration, so as to meet the needs of the client. The following are examples of some of these parameters:
  - ☑ Table of saw blade carriage speeds according to the stack size and amount of trim.
  - ☑ Machining of cutting patterns according to the number and position of grippers.
  - ☑ Automatic management of trim.

- ☑ Pick-up position for the adjustable pusher.

The numeric control hardware allows storage of an almost unlimited number of diagrams, lists and sequences in the resident memory.
Further optional software applications allow optimisation of cutting patterns, management of machine-side label printout and more detailed processing of statistics information.

Teleservice

It allows an immediate and direct access to the machine numerical control via network.
In this way it is possible to check machine data, user programs, input/output signals and system variables, and to install software updates, therefore granting:

- ☑ Real-time service intervention.
- ☑ Quicker problem solving.
- ☑ Consistent reduction of machine downtime.
- ☑ Real-time software updates.

*The teleservice support is free of charge for the whole warranty period.

Selco WN 610 / 4500 x 6500

Main technical features

Maximum length of cut	4500	mm
Maximum pusher stroke	6500	mm
Maximum saw blade projection	95	mm
Maximum gripper opening	90	mm
Height of work table	985	mm

Machine configuration with

- ☑ Main saw motor power 15.0 kW/50 Hz (20 HP) - 17.3 kW/60 Hz (24 HP).
- ☑ Scoring saw motor power 2.2 kW/50 Hz (3 HP) - 2.6 kW/60 Hz (3.6 HP).
- ☑ Motorized blades raising with Brushless motors and ball screws system.
- ☑ Controlled pressure beam opening.
- ☑ DIGISET for electronic scoring saw adjustment with the main saw blades.
- ☑ QUICK CHANGE system for both main and scoring saw blade in front squaring area.
- ☑ Exclusion of scoring saw blade from the cycle through panel push-button.
- ☑ Brushless motor for saw carriage movement - speed 1-150 m/min.
- ☑ Brushless motor for pusher movement - max speed 90 m/min*.
- ☑ Side aligner integrated in the saw carriage structure (0 mm ÷ 4200 mm).
- ☑ Panel measurement system for manual cuts.
- ☑ Automatic lubrication.
- ☑ Safety guards and covers in compliance with current regulations.
- ☑ N. 1 Main saw blade diameter 380 mm.
- ☑ N. 1 Scoring saw blade diameter 200 mm (trapezoidal tooth).
- ☑ N. 7 Pneumatic grippers on pusher beam.
- ☑ N. 1 Air table 2050 x 620 mm with round shaped profile.
- ☑ N. 1 Air generator for max. 6 air tables.
- ☑ N. 10 Roller modules on pusher table.
- ☑ N. 1 PC control unit complete with keyboard, mouse, 21” analogue flat panel monitor (wide) and Windows operating system.

* In EU Countries, Switzerland and Liechtenstein the rip pusher feed speed is limited to 25 m/min.
The optimal height of the stack to be cut as well as the optimal cutting speed depend on the nature of material, on the finish required and on the quality and wear and tear of tools.

Dust suction

N. 1 main suction hood	180	mm
N. 3 top suction hoods on cutting line	100	mm
N. 1 suction hood at square fence	100	mm
Necessary min. air speed at suction hoods	26	m/sec
Necessary air flow	5320	m^3/h

Power Supply

The user must provide for proper connection to his own power supply, using suitable protective devices and cables of a size suited to the values indicated in the rating plate on the machine's electrical cabinet.
The maximum three-phase voltage fluctuation must not exceed +/- 10% of the rated voltage.

- ☑ Maximum power for basic machine 26 kW at a working voltage of 380 V/50 Hz;
- ☑ Connection to the main power supply in the electrical cabinet, saw blade change side.

Operational temperature

The operational temperature must be between the following values:

- ☑ Min. temperature: +5°C
- ☑ Max temperature: +35°C

In case of higher temperature it is required an air conditioning device for the electrical cabinet (option on demand).

Pneumatic supply

The machine is equipped with a FRL unit to which the compressed air supply pipe must be fitted.

Min. working pressure	6	bar
Average air consumption for basic cycle	150	Nl/min
Minimum pipe diameter	Ø19	(3/4")

Loading systems

CODE	U.M.	QUANTITY
L5002001	NR	1

Direct loading into the machine via automatic storage.
The size of the panels (turned and not turned panels) loadable in this mode depends on the quantity and on the position of the front aligners selected and applied to the machine.
In any case, the minimum size of panel that can be loaded is 1000 x 1000 mm.

L5002100	NR	1

Replacement of the fixed grippers, available in the standard configuration, with raisable grippers. The pneumatic grippers fitted on pusher to move panels are replaced with raisable grippers.
If the pusher stroke and the dimension of the panels permit it, this solution allows the composition of the next book to be processed by an external loader while a sawing cycle is in course, reducing the feeding cycle time.

L5002102	NR	1

Kit composed of 2 front aligners to align boards against the pusher (2 additional roller modules included).

L5002103	NR	1

Management of thin panels (thickness: min 2.5 mm - max 10 mm) loaded from automatic storage or X Feeder.
The option includes extra rollers modules.

L5002125	NR	1

Electrical cabinet 2 m cable extension.

L5002015	NR	1

Communication with automatic storage RBO Winstore K1/K2.
The linkage between machines is made by a BIESSE supervisor. Supervisor provides to send the working information to all of the machines of the cell, avoiding any kind of operator's mistakes.
The supervisor requires an optimization software able to produce an XML format file (Optiplanning Professional is recommended).

Machine optional equipment

CODE	U.M.	QUANTITY
L5003457	NR	1

Twin Pusher 2.1 system for simultaneous execution of multiple cutting phases, made of an independent auxiliary pusher which works in synchrony with main pusher.
The auxiliary pusher is equipped with one gripper which move sideways, to guarantee the best grip depending on the strips width to be cut.
The two pusher are managed by the NC that, depending by the pattern and the cutting phases, selects which gripper on each pusher should be used to get the maximum cutting cycles at the same time, as:

- ☑ Cross cutting and rip cutting.
- ☑ Cross cutting of two different groups of strips.
- ☑ Cross cutting within the head cut portion and length cutting within the main portion of the panel.
- ☑ Cross cutting of last group of strips and rip cutting of the new stack of panels. If the stacks height is not the same, contemporaneity is limited at the stack drawing and alignment.
- ☑ Cross cutting of last group of strips and head cut of the new stack of panels. If the stacks height is not the same, contemporaneity is limited at the stack drawing, alignment and rotation.

The possibility to perform multiple cutting phases at the same time increases dramatically the machine output in comparison to any other existing solution on the market.
All of this is made possible by the fact that the two positioning pushers and their grippers are totally independent from each other for their entire stroke.
This unique solution is patented worldwide.

L5104714	NR	1

Device for machining grooves on the panel using the main saw blade.
The depth and width adjustment is done directly on the control. In case of multiple grooves, is possible to enable the execution of the groove also during the return stroke of the saw carriage, reducing the processing time significantly.

L5005427	NR	2

Additional raisable pneumatic gripper with double lower finger, to fit on pusher to move panels
The aluminum front stops on the grippers are trimmed during the test run and represent a reference point perfectly parallel to the cutting axis.

L5029505	NR	2

Additional roller module with wheels.

L5039427	NR	1

Additional front aligner to align panels against the pusher. It includes roller module with wheels.

L5016425	NR	1

Air conditioning device for the electrical cabinet. Recommended in environments with temperatures of above 40°C.

L5026234	NR	1

Push button for remote control start cycle, complete with emergency stop button. It can be positioned next to the second or third air table from the squaring device

Machine software options

CODE	U.M.	QUANTITY
L5036302	NR	1

QUICK OPTI software for optimization of cutting patterns directly on the machine
For each optimization can be entered:

- ☑ Not more than 2 sizes of panels.
- ☑ Not more than 40 sub-formats with 2 descriptions available for each sub-format.
- ☑ Not more than 50 panels can be machined for each sub-forma.
- ☑ Not more than 1000 panels can be machined.

The software automatically creates the cutting patters and the work list.

L5036315	NR	1

OSI Interface Plus Version
Compared to the Standard version, the Plus version is provided with a series of additional operations allowing the increase of the interface and machine potential:

- ☑ Order management. This allows joining several work lists in a single order.
- ☑ Navigation through tree. Thanks to a tree similar to that of Windows Resources Manager, it is possible to move within the various environments and machining programs in an extremely fast and practical way.
- ☑ Advanced simulation. Possibility to choose among different views of the machine simulation.

- ☑ Sequence mode. From the sequence page it is possible to set and execute various cut sequences; a window inside the page allows viewing how the set sequence has been structured. Furthermore, the material required to execute the sequence is shown.
- ☑ “Macro” functions for sequences. The two “macro” functions make cutting of re-usable workpieces extremely easy: the first function sets the sizes and quantity of the required pieces and the control determines the minimum panel dimensions needed, whereas the second function sets the sizes of the whole panel and the dimensions of the required piece, and the control sets automatically the cycle in order to obtain the maximum quantity.
- ☑ “Macro” functions for grooving to be carried out within the sequences. When the optional device for grooving is fitted, a series of very useful “macro” functions is available for this application.
- ☑ “Macro” function for pattern editor. This allows the increase of a maximum pre-set value for each, single cut piece, thus avoiding the execution of trim cuts and therefore reducing drastically the cycle times.
- ☑ Advanced statistics elaboration. This allows the execution of machine statistics elaborations for the operators, blades, machining operations, worklists and PLC messages. Then, the processed data may be exported into text files for subsequent processing with external software or they may be simply filed.
- ☑ Panel and drops stock. This allows the management of unlimited quantity of different materials.
- ☑ Technological parameter control system. A set of parameters may be linked to each machining operation or to each material (e.g. the cutting speed, the peripheral blade speed, if any, the max. height of the stack, etc.). This set will then be used, with specific values, any time that machining operation is recalled or that the relevant material is machined.
- ☑ Management of unstrained cut on the boards. Thanks to some parameters it is possible to define middlephase cuts for the execution of strips which will be later inserted again in the machine to be cut both lengthwise and crosswise.

Unloading systems

CODE	U.M.	QUANTITY
L5105248	NR	1
Replacement of the 2050 x 650 mm rounded air cushion unloading table with a 2050 x 850 mm table equipped with front idle rollers.		
L5006250	NR	3
Rounded air cushion unloading table, size 2050 x 620 mm.		
L5006260	NR	1
Transfer device for the second air cushion unloading table. It is advisable to do not use any extension. Planarity between tables along their stroke is subjected to the ground accuracy of the factory. BIESSE recommends the use of a steel laminated strip, leveled and incorporated in the ground.		

Electrical optional equipment

CODE	U.M.	QUANTITY
L5018055	NR	1

Transformer for voltages different from 380/400/415 V - 50/60 Hz

Label printing

CODE	U.M.	QUANTITY
L5036308	NR	1

OS-Labelling. Text and graphic creation on the label, such as parts drawing printed on label at the machine.
This option allows you design and produce a suitable label for your application. The label can be created using Windows fonts and various types of barcodes (39, 128, EAN8, EAN13, PDF417, DataMatrix, QRCode) and graphic files (“wmf”, “emf” or “bmp” formats created by third party software), making for a fast and easy way to identify the cut parts of your production flow.
The LEdit software, is easily modified to personalize the label format, however an optimiser is required.
Selco guarantees the functioning and the technical support only with the following Zebra printers: 2746e, TLP 2844-Z, GK420t, S4M, ZT230T3E.
The label printer and its support stand are not included.

L5060421	NR	1

Electronic label printer at the machine, with printing by thermal transfer (with ribbon) or direct thermal contact.
This model incorporates a “label peeler” which following the printing of the label, lifts the label off the carrier tape and presents the label for easy detachment by the operator. The carrier tape is automatically wound onto a bobbin inside the printer housing, for easy disposal.
Diagnostic messages (such as: “paper finished, tape finished, printer not connected”, etc.) are displayed on the LCD display.
Technical features:

- ☑ Ability to print barcodes.
- ☑ Label width: 19.4 mm - max 104 mm.
- ☑ Label length: min 15 mm - max 991 mm (non-continuous format).
- ☑ Graphic resolution: 203 dpi/300 dpi.
- ☑ Maximum print speed: 152 mm per second.
- ☑ Maximum label roll diameter: 203 mm.
- ☑ Maximum ribbon roll diameter: 81.3 mm.
- ☑ Standard memory: 4 MB DRAM.
- ☑ Operating temperature: from 5 to 40°C.
- ☑ Automatic calibration.

The use of Zebra labels and ribbons is recommended.

L5064415	NR	1

Label printer support stand

Software for downloading from other optimizers

CODE	U.M.	QUANTITY
L5036316	NR	1

XML LINK Software to import data from files in XML format (upon SELCO specifications).
The data transmission may be carried out through:

- ☑ USB pen drive.

☑ Computerized network (charged to the customer).

This software needs customer's file testing to ensure the functionality.