

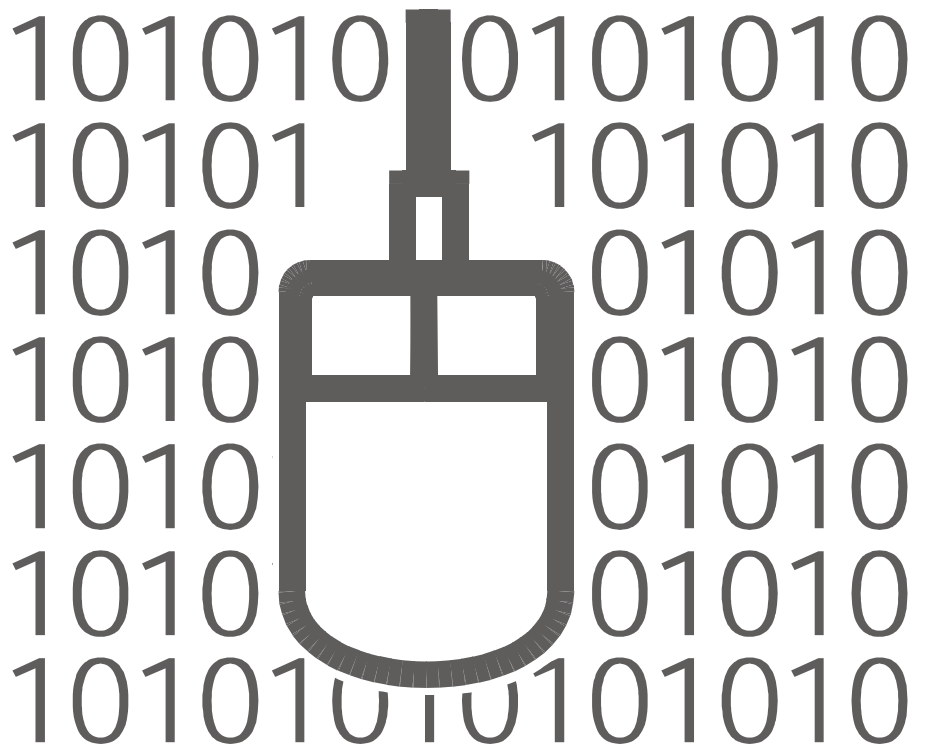
# OSI

Release 1

Software for programming machining operations on  
Windows NT, 2000 and XP operating systems

## Instructions for use

1.0  
L5804L0020 ENGLISH  
Serial number





# Information on this Publication

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The manual is supplied as software's complementary documentation. It must be kept in a suitable place, easily known and accessible by the personnel authorised to use it. Furthermore, it must be used carefully for the entire life cycle of the software, and it must always be attached to the software even in case of its transfer to third parties. SELCO cannot be considered responsible or liable for damage resulting from incorrect or improper use of the documentation provided. It is understood that the OSI's user knows the machine as well as the environment of Microsoft Windows NT/2000/XP operating systems.



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# Introduction

## Field of Application and Limits of the Manual

The manual is intended for the software's user. This document contains the information that the user must know before starting to use the software. If the PC where the software has been installed is connected to a machine, it is necessary to refer also to the relevant Instructions for use.

Given the complexity of the subjects taken into consideration, the procedures reported in this document shall be performed only by personnel that has acquired the necessary technical knowledge (i.e., qualified operators).

## Warning Signs

Paragraphs that should not be overlooked are highlighted and preceded by the symbols described and illustrated here below:



**Paragraphs marked with this symbol indicate an imminent danger, and the contents must therefore be taken into careful account in order to prevent serious accidents.**



**Paragraphs marked with this symbol indicate procedures to be used and actions to be taken to avoid any damage to goods and property.**



This symbol is used to indicate points of particular importance that must not be overlooked.



# 1 Software Structuring

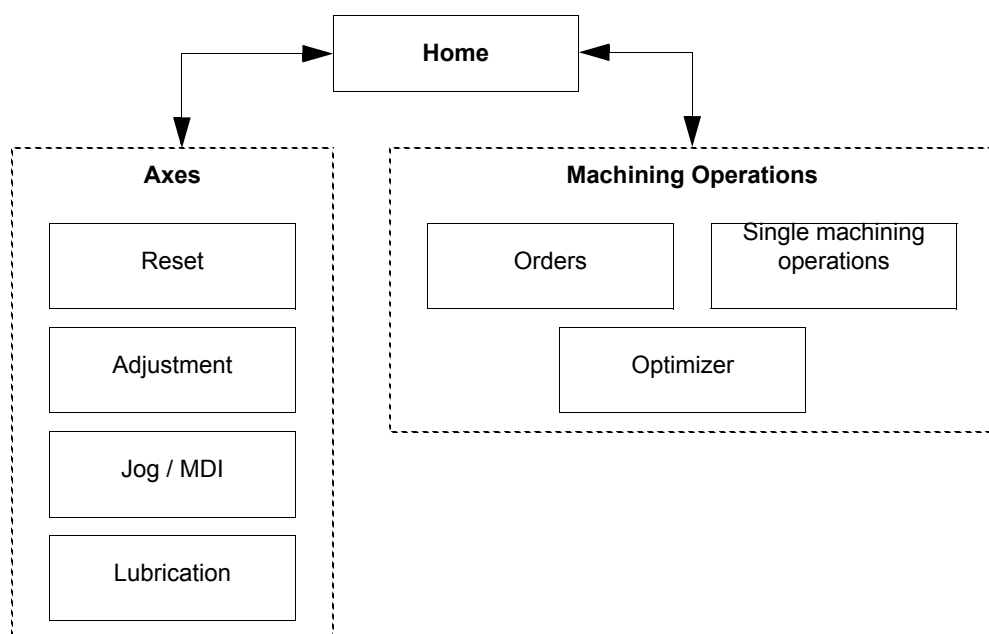
OSI is a software for programming working operations that may be executed with panel saws, and it is compatible only with the operating systems Microsoft Windows NT4, Windows 2000 and Windows XP.

OSI is divided into functional areas called "areas" or "environments". Each environment consists of one or more pages, through which the user views and controls the functions and various data.

## 1.1 General Organisation of the Software

This software is divided into two main environments:

- The environment **Axes**, to perform the movement, maintenance and adjustment of the parts that made the machine.
- The environment **Machining operations** to perform machining operations programming. This environment is divided into three main groups:
  - **Single machining operations**, permitting to program one machining operation at a time.
  - **Orders**, permitting to program and perform automatically a sequence of machining operations.
  - **Optimizer**, permitting to create a worklist formed by one or more cutting patterns (programs), to be executed in an automatic sequence, starting from a list of parts.



Possible machining operations are as follows:

- Manual cuts (available only for single machining operations).
- Sequences.
- Programs.
- Windows (or holes).

## 1.2 User's Interface

By "User's Interface" it is intended the group of elements that appear on the video display and that allow the user to interact with the machine.

Figure 1: user's interface



A.Menu toolbar - B.PLC message bar - C.Page - D.Status bar

### Menu toolbar

The menu toolbar is located under the title bar and it contains the menus of the software. The use of the menus allows the operator to navigate through the environments and perform the different functions of the software. The menus may be activated by clicking on the option desired or operating from the keyboard by pressing the key Alt and the letter underlined and indicated in the menu. The same procedures may be adopted when selecting the options of the menu.

Figure 2: menu toolbar



## PLC message bar

The PLC message bar is located under the menu toolbar and it displays the elements represented in the following figure. The bar changes its colour depending on the level of importance of messages. The green colour is for low priority messages, the yellow colour is for the medium priority messages and the red colour is for the high priority messages needing the operator's action.

Figure 3: PLC message bar

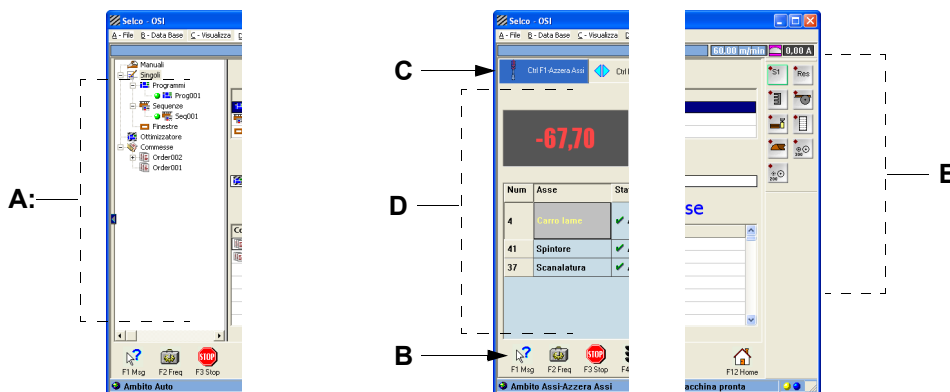


**A.** PLC message (code and description) - **B.** Blade forward speed during cutting, percentage of the saw blade carriage potentiometer (place the mouse's pointer on the value) - **C.** Blades in rotation - **D.** Quantity of current absorbed by the blade's motor.

## Page

The page is located between the PLC message bar and the status bar. The pages may show the elements represented in the following figure. The name of the page is viewed on the status bar. The passage from one page to the other interrupts the command under way. Hold on until the button used to send the command remains highlighted in green.

Figure 4: typical elements of a page



**A.** Tree list - **B.** Soft-keys available - **C.** Page navigation bar (of the environment) - **D.** Various images and tables - **E.** Button pads

## Status bar

The status bar is located in the lower part of the interface and it displays the elements represented in the following figure.

Figure 5: status bar



**A** .Name of the environment and current page - **B**.Command in progress- **C**.Machine operation state - **D**. Communication state between the software and the machine

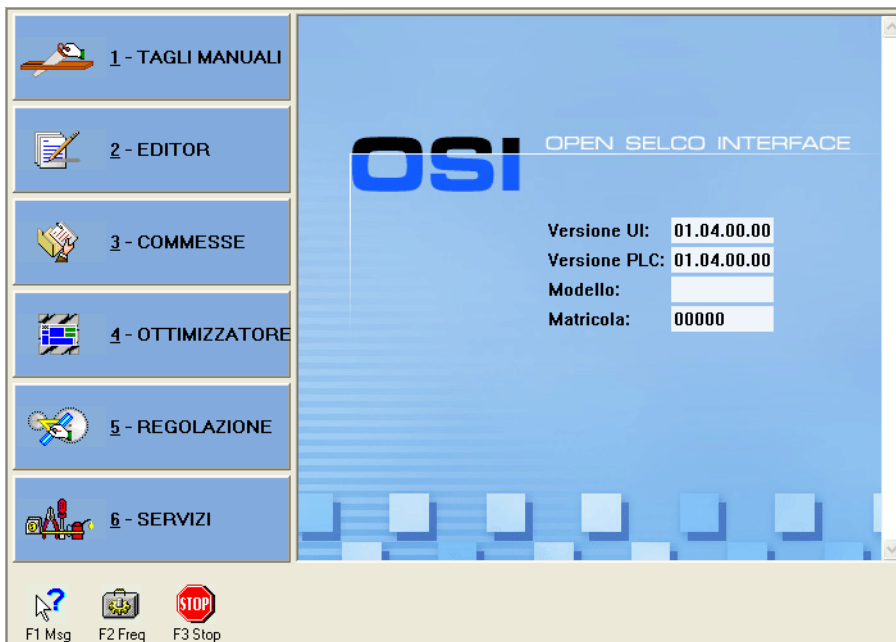
On the left-hand side of the status bar the name of environment is shown and it is followed by the name of the current page, e.g. “Environment [*name of the environment*]-[*name of the page*]”.

For example: if you are in the page “Axes reset” of the Axes environment, the indication “Environment Axes-Axes Reset” will appear.

## 1.3 The main page - Home

The main page of OSI is called “Home” and is used as the basic reference to navigate in the software. Furthermore, in this page the general information on the software is viewed: the interface version, the PLC version, the machine model and the machine serial number.

Figure 6: the Home page (OSI main page)



**In order to avoid malfunctions please check that the Home page shows the correct serial number of the machine. Should this not be the case, contact immediately the SELCO Assistance Service.**

In the Home page , the following buttons appear:

- **Manual cuts**, to program and perform simple sequences of one or more cutting operations.
- **Editor**, to have access to one of the environments for manual editing of machining operations. By selecting the button, you will access the following machining operations:

- *Patterns* :to program and execute single programs (codes);
- *Sequences* : to program and execute single sequences (used to cut bars);
- *Windows*: to program and execute windows (holes) inside the panel.
- **Orders**, to program and execute one or more machining operations (the available machining operations are the same as those for single machining operations apart from those for the manual cuts).
- **Optimizer**, to optimize the worklists to be executed.
- **Adjustment**, to execute adjustment of the scoring unit as well as of the electronic grooving.
- **Services**, to access the pages of Calibration, Configuration, Work Shift End, Lubrication, Axes Control (movements in Jog).

## 1.4 The Contextual Commands of the Pages

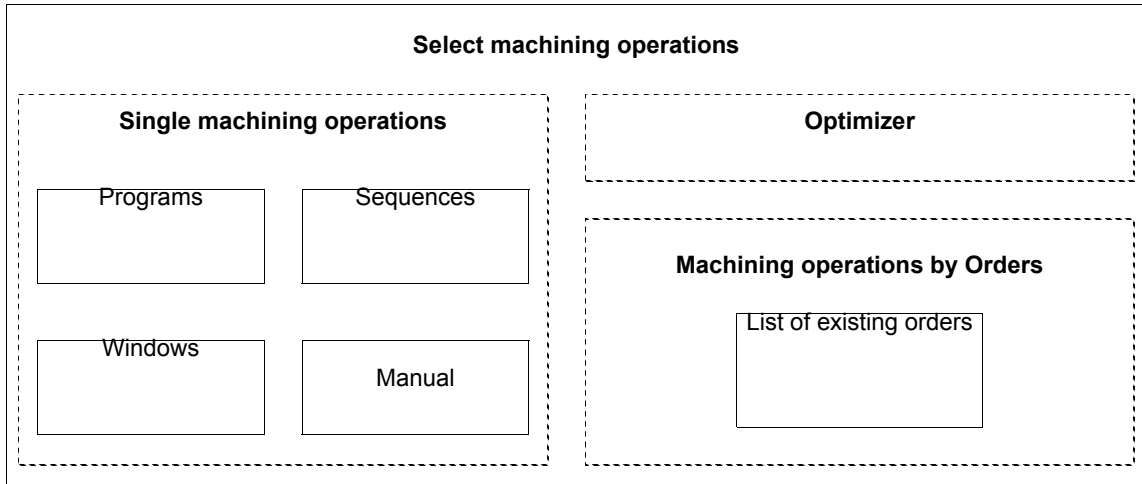
In the lower section of the pages, a series of buttons is present in order to execute the contextual commands, i.e., the commands associated with the current page. The buttons F1, F2, F3 and F12 perform the same command in all the software pages, excepting for F12 that in the Simulation page runs a different command.

- **F1 Msg**. Enables the window with the list of plc messages.
- **F2 Freq**. Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F12 Home**. Returns to the Home page.

The commands may be enabled by clicking on the specific button or by pressing the relevant key on the keyboard.

## 1.5 Description of the Machining operations Environment

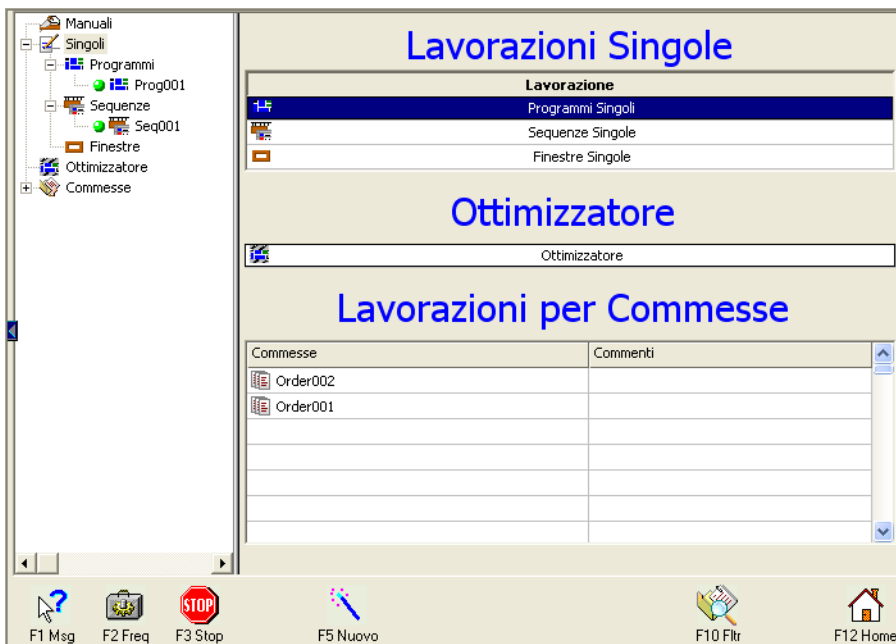
Inside the environment “Machining operations” the following sequence of pages appear:



From the Select machining operations page, it is possible to select the Single machining operation (e.g., Single Programs), the Optimizer or the Order to be opened.

From the Home page, you access this page by selecting Orders. You move from one page section to the other with TAB. To select any of the items of the list it is necessary to press ENTER, and with a further ENTER you move at a level further down and, for example, a "Single Program" opens. To return to an upper level or to return to the Select machining operations page, it is necessary to press ESC.

Figure 7: Select machining operations page





In the lower section of the Select machining operations page, the list of the existing orders appears. The buttons to execute the commands associated with the page may be selected by mouse-clicking or by pressing the corresponding function key.

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop.** Stops the operator's command in progress way and deletes the entire chart of steps.
- **F5 New.** Opens a window with the data necessary to create a new order (empty) to be entered.
- **F10 Fitr.** Permits to filter the displayed orders according to the following information:
  - Date of delivery,
  - Date of entry,
  - Used Material/Panel,
  - Remarks,
  - Machining options.
- **F12 Home** . Returns to the Home page.

To cancel an order, it is necessary to select it and press DEL, to cancel all orders press CTRL+DEL.

## Use of the machining operations tree

To view the machining operations tree, select the View menu and the Machining operations tree option (ref. **A**). By clicking the button (ref. **B**) on the left-hand side of the page central section, it is possible to view or hide the tree.

Figure 8: machining operations tree



The machining operations tree views the sequence order of machining operations. To scroll Up/Down through the tree, use the keyboard arrows Up/Down, while to explode it use the Right and Left arrows. To move from the tree to the machining operations window, it is necessary to press TAB, while to return to the tree it is necessary to press the Home key (inclined arrow). The tree is very useful because it allows you to scroll quickly through all data memorized and to open them and to view each detail.

### **Commands available in the Machining operations tree**

- CANCEL: cancels the selected element.
- CTRL+C: copies the selected element.
- CTRL+X: copies the selected element, a subsequent paste operation in the tree will delete the element (cut function).
- CTRL+V: pastes the copied element. It is possible to paste a single element in the order environment only.
- CTRL+S: makes a copy and permits to reverse the elements when the paste function is commanded.

Through the mouse it is possible to:

- Drag: by selecting a machining operation and by keeping pressed the lh mouse button, it is possible to move it in the order environment. By selecting a machining operation and by keeping pressed the rh mouse button, it is possible to move it in the order environment or to copy it; in both cases - when dragging has been completed - a menu will appear with the options copy, move and delete.
- By clicking on the rh button, a menu will appear with the following options:
  - *New*, to enter a new machining operation.
  - *Import*, to import a machining operation.
  - *Copy*, to copy an element.
  - *Cut*, to execute an element cutting (the element remains in the temporary memory until the function Cut or Copy is not run again).
  - *Reverse Line*, to reverse two machining operations (CTRL+S).
  - *Paste*, to paste an element.
  - *Cancel*, to cancel an element.

## **1.6 Control of Operators and Passwords**

At the start of any OSI work session, a window opens requesting to enter the User's Name and Password. Each User has a specific level of protection. In order to use OSI, it is necessary to enter the valid User's name and Password.

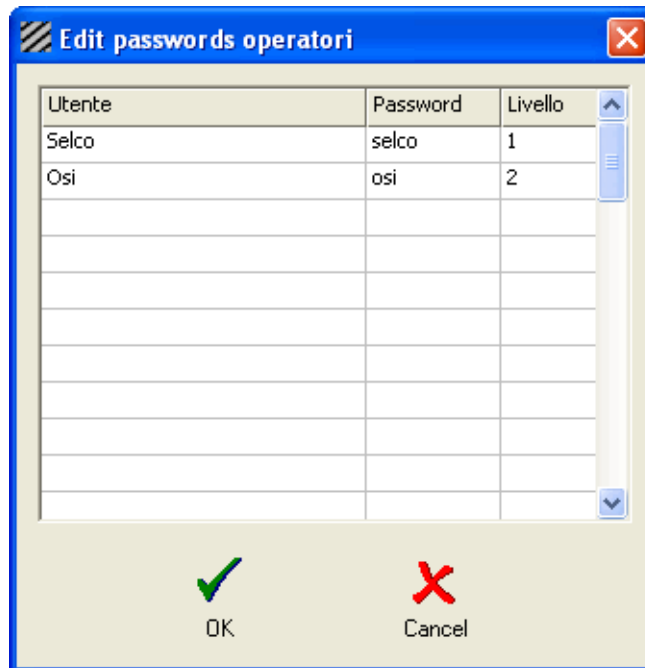
To change the operator's name while using the software, select from the Operators menu the Work Shift End option.



Three levels of protection exist. With the high level, the program runs different operations, and in particular:

- **Level 1**, defined as “Machine Operator” level permitting to execute machining operations and the modifications of data connected to such machining operations:
  - axes automatic reset,
  - movements in Jog and MDI,
  - start orders, worklist, machining operation, manual cuts,
  - modify some machine data (the available set is less wide than that of level 2).
- **Level 2**, defined as the “Operator Responsible for Machine” level and permitting:
  - everything permitted at level 1,
  - the modification of the majority of machine data (all those useful for machining operations and adjustments for the user),
  - the registration of new users with their passwords and the modification of the protection level associated with an existing user (max. level that can be set up: 2),
  - the opening and saving function of machine parameters or I/O configuration files,
  - the associations of technological parameters.
- **Level 3**, defined as the “Service” level and permitting to carry out any operation. OSI may be started with this level only by Selco technical personnel. In particular, it may be done:
  - everything permitted at level 2,
  - digital input/output state forcing,
  - the preset and correction of the reset value,
  - the modification of all machine parameters.

To register new users, select the Operators menu and the option Edit Password.

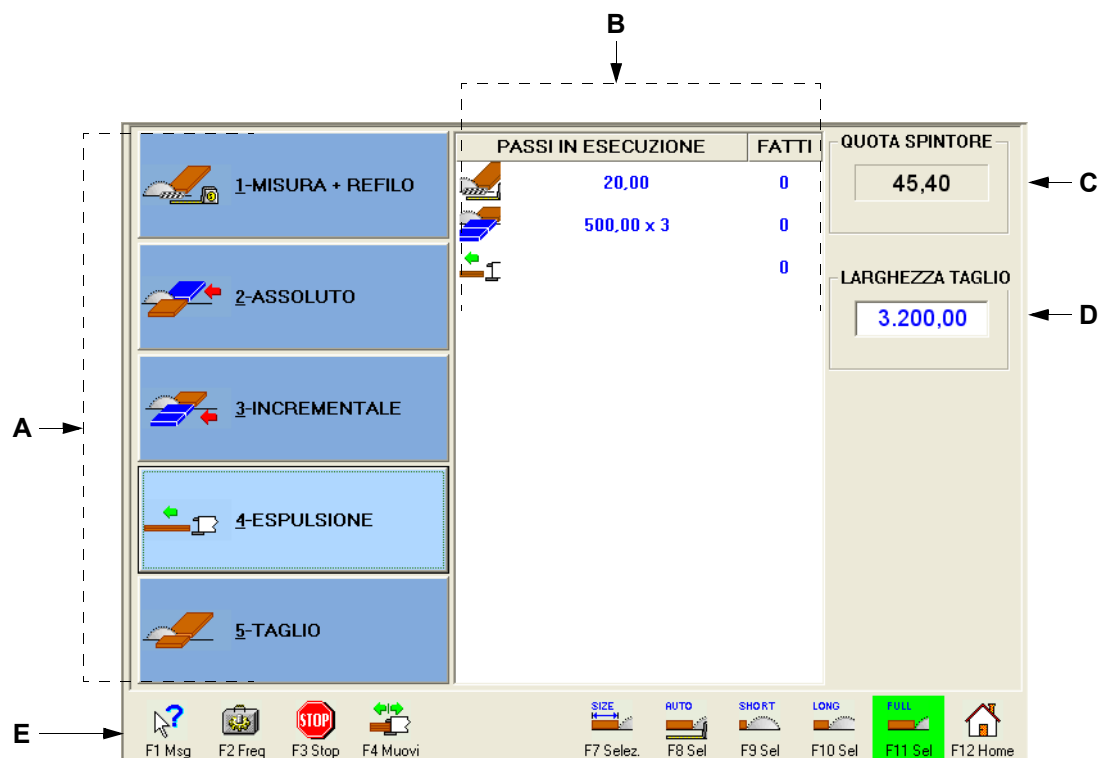


## 2 Manual Cuts Page

From the Manual Cuts page, it is possible to execute the cuts in a simple and quick manner. To access the page, from the Home page, click on the button Manual Cuts or select the key 1 or the combination of keys ALT+1 on the keyboard.

When entering this page, it is not anymore possible to execute a restart of a program, a sequence or a hole. It is possible to program ore or more steps relevant to single functions and to perform them directly. The programmed steps are stored in the memory for the entire time of their stay in the Manual Cuts page.

Figure 9: Manual Cuts page



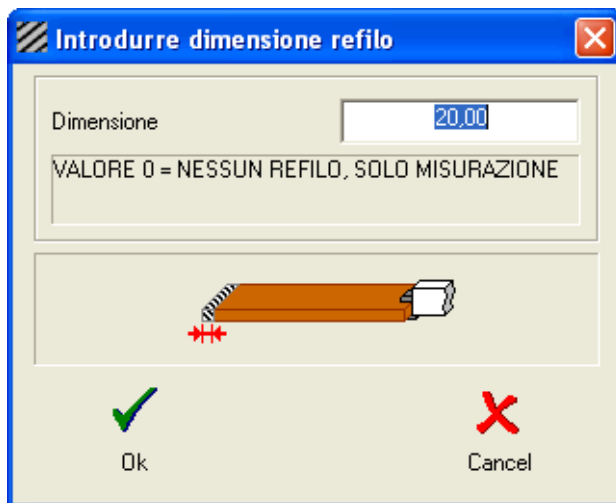
**A.**Buttons of programmable manual cuts - **B.**List of programmed steps - **C.**Value of the pushing device current position - **D.**Value of the width of the cut to be executed - **E.**Contextual commands related to the page.

## 2.1 Programmable Manual Cuts

### Measurement + Trim Cut

It is used to carry out a piece measurement and a front trim cut of the set dimensions. To carry out only the piece measurement, set the 0 (zero) value. This type of cut is available only if the photocell for stack detection is present and is enabled.

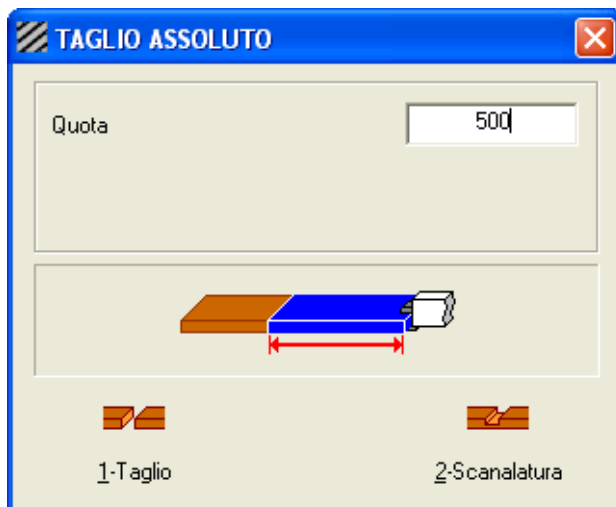
Figure 10: data setting window for manual cut "Measurement + Trim Cut"



### Absolute

It is used to carry out an absolute cut or an absolute groove at the set value.

Figure 11: data setting window for manual "Absolute" cut



## Incremental

It is used to carry out a series of incremental cuts or a series of incremental grooves at the set value. This type of cut is set following an absolute cut or a measurement with trim cut.

Figure 12: data setting window for manual "Incremental" cut



## Ejection

The pushing device carries out a material ejection and positions itself at the loading position. This command is useful for positioning the pushing device at the beginning of a manual cut cycle.

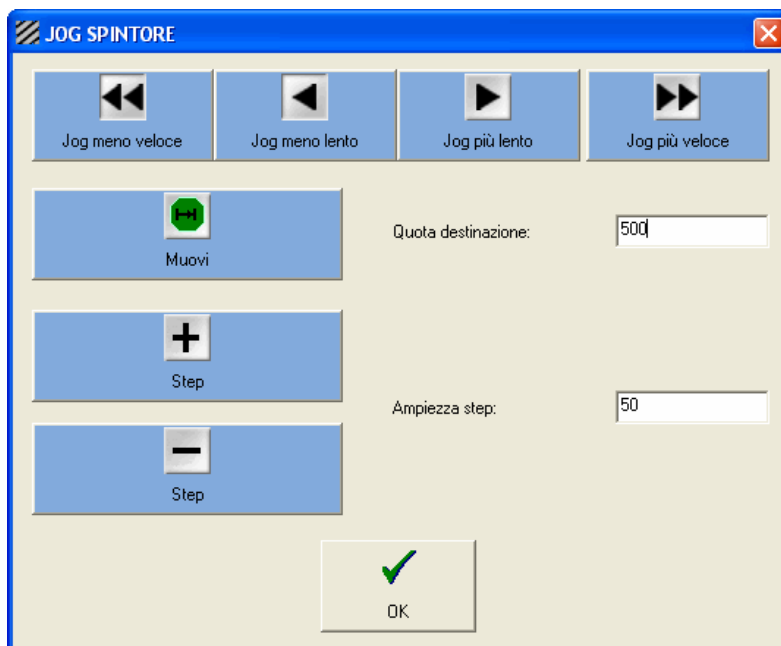
## Cut

Instant cut. Executes an instant cut without the use of the pushing device (the collets remain open).

## 2.2 Contextual Commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Move** Permits to set and perform the movements in jog or the programmed movements of the pushing device. The data fields permit to enter the target value of the programmed movement (destination value) or the step of the incremental/decremental movement. Once the movement has been selected, this is executed by pressing the cycle start push-button.

Figure 13: data setting window for pushing device movements in jog



- **F6 Techno** . Permits to view and modify the machine parameters associated with the manual cuts.
- **F7 Select.** Permits to set the cut or groove width for execution.
- **F8 Sel.** Automatic measurement. Permits to set the automatic measurement of the cut width through the photocell located on the saw blade carriage.
- **F9 Sel.** Short cut. Permits to set the cut width corresponding to the machine parameter Length of short manual cut.
- **F10 Sel.** Long cut. Permits to set the cut width corresponding to the machine parameter Length of long manual cut.
- **F11 Sel.** Complete cut. Permits to set a complete cut along the entire cutting line.
- **F12 Home.** Returns to the Home page.




The executed cuts cannot be saved. All commands given shall be enabled only after having pressed the cycle start push-button.



## 2.3 Example of Manual Machining Operation

Here below is shown an example of Manual Cuts page layout for an absolute cut programmed at a 1500 mm position, followed by two incremental cuts - both of 250 mm - and by a final ejection of the material. The cut width is equal to 600 mm.

Figure 14: example of manual cut programming steps

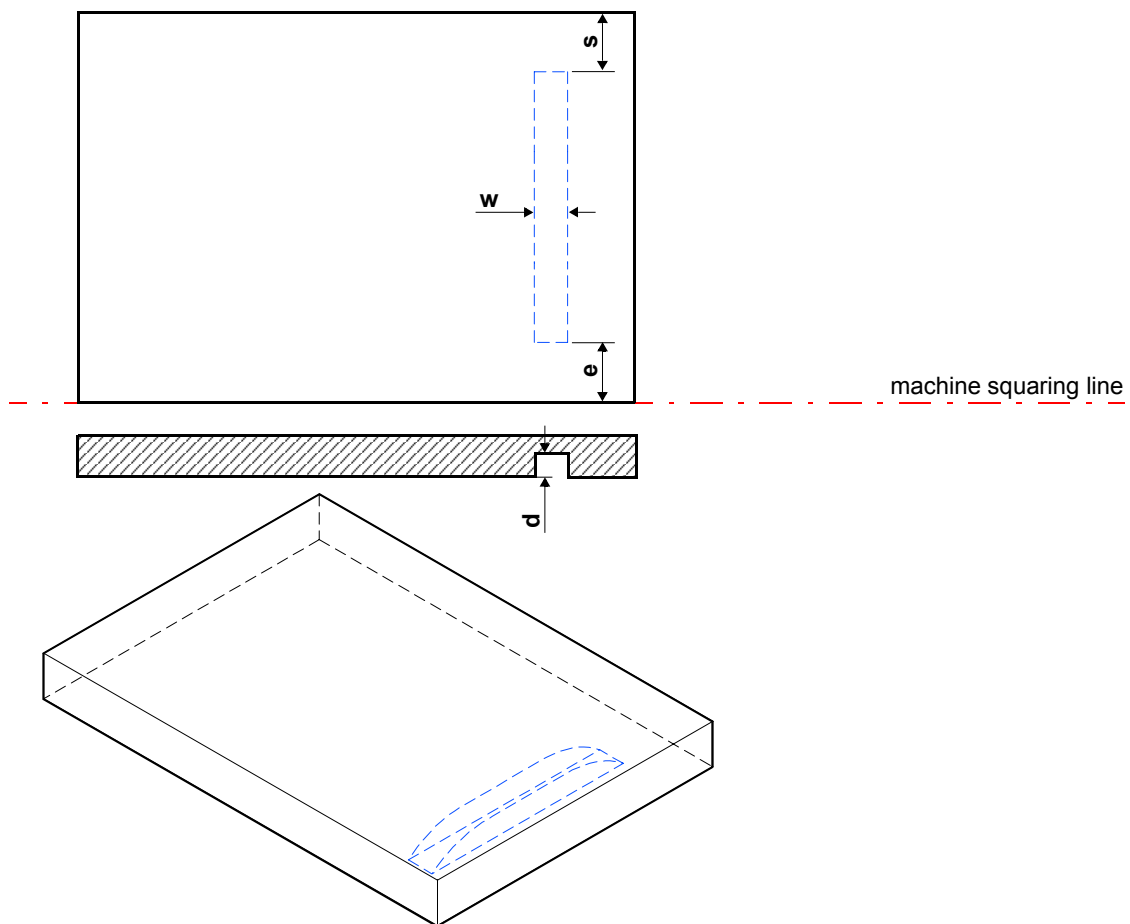
| PASSI IN ESECUZIONE   |            | FATTI | QUOTA SPINTORE   |
|---|------------|-------|------------------|
|  | 1.500,00   | 0     | 40,00            |
|  | 250,00 x 2 | 0     |                  |
|  |            | 0     |                  |
|   |            |       | LARGHEZZA TAGLIO |
|   |            |       | 600,00           |

## 2.4 Information on Grooving

To set a groove, please take into account the following information:

- **Groove depth (d).** If the groove adjustment is manually-operated, this adjustment is not taken into account by the software since the depth has been fixed to the manually adjusted value.
- **Groove width (w).** This value cannot be lower than the blade thickness.
- **Start Offset (i).** This value shows the position from the panel border, on the opposite side of the machine square fence, up to the point where the groove is started.
- **End Offset (e).** This value shows the position from the panel border, on the side of the machine square fence, up to the point where the groove ends.

Figure 15: information on grooving



## 3 Editor

### 3.1 Single Programs Page

Contains the list of all programs to be executed individually. To access the page, from the Home page, select the button Editor and the option Patterns.

Figure 16: Single Programs page

| Lavorazioni | Qtà | Fatti | Commenti | Opz. |
|-------------|-----|-------|----------|------|
| Prog001     | 1   | 0     |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |
|             |     |       |          |      |

The window has a table where each line describes a single program. To each column corresponds a data field.

- **Machining operations**, this contains the name of the program. By double-clicking or by pressing ENTER, the program editor with the associated pattern opens in this data field. By single-clicking, it is possible to modify the name of the program.
- **Qty**, this contains the quantity of panels to be machined.
- **Done**, this contains the quantity of machined panels.
- **Opts**, to access the Options. By double-clicking or by pressing ENTER, the window containing the machining options set for the current program opens in this data field (it is a window with a list of machine data associated with existing machining operations).
- **Comments**, it is used to enter a remark on the program.

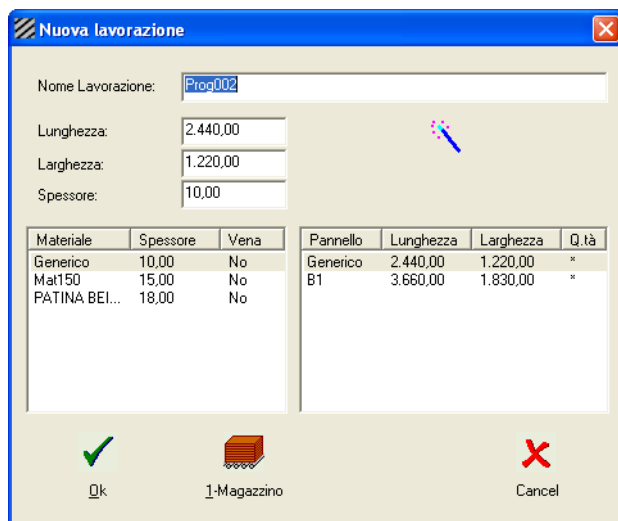
## Data Export for the Single Programs Table

To export the data contained in the Single Programs table, click with the right button of the mouse on the table inside and select the option Export. Select the directory where you want to store the file and digit the file's name. A XML-format file will be saved.

## Contextual Commands

- **F1 Msg**. Enables the window with the list of plc messages.
- **F2 Freq**. Enables the window "Parameters of frequent use".
- **F3 Stop**. Stops the operator's command in progress and deletes the entire chart of steps.
- **F5 New**. Opens a window with the data necessary to create a new empty program.
  - *Machining operation name*: enter the name of the cutting pattern (a general name appears by default, which has not yet been used and that may be kept or changed).
  - *Material*: this is the code of the material, by using "General" no reference is made to any material in stock.
  - *Panel*: this is the code of the panel, by using "General" no reference is made to any panel sizes in stock.
  - *Length*: enter the length of the panel.
  - *Width*: enter the width of the panel.
  - *Thickness*: enter the thickness of the panel.

Figure 17: window New machining operation



Nome Lavorazione: Prog002

Lunghezza: 2.440,00

Larghezza: 1.220,00

Spessore: 10,00

| Materiale     | Spessore | Vena |
|---------------|----------|------|
| Generico      | 10,00    | No   |
| Mat150        | 15,00    | No   |
| PATINA BEL... | 18,00    | No   |

| Pannello | Lunghezza | Larghezza | Q.tà |
|----------|-----------|-----------|------|
| Generico | 2.440,00  | 1.220,00  | *    |
| B1       | 3.660,00  | 1.830,00  | *    |

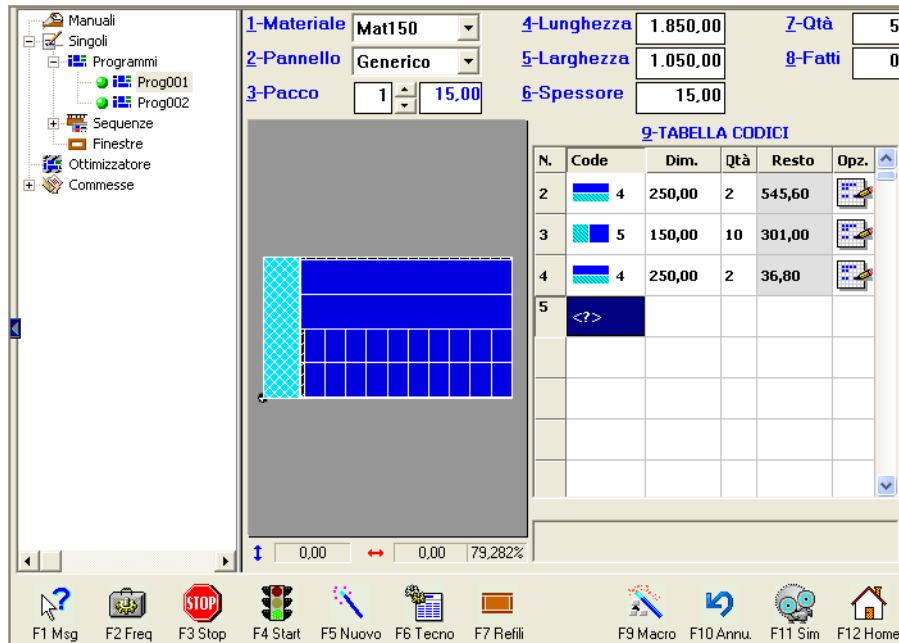
Ok    1-Magazzino    Cancel

- **F12 Home**. Returns to the Home page.

## 3.2 Program Editor Page (cutting patterns)

In this page cutting patterns can be created, viewed, modified, simulated and performed. To access the page, from the Home page, click on the button Editor, select the option Patterns and select a program in the tree-list.

Figure 18: Program Editor page (cutting patterns)



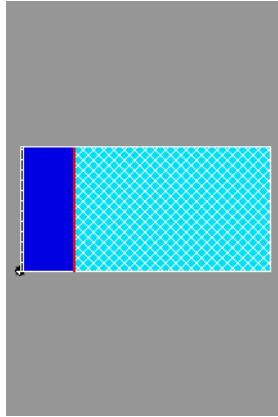
- **Material:** permits to select the material from the stock. If you want to use the stock, set the "General" code. Selection is possible only if the machining operation is not part of a worklist, since in this case it is the worklist that decides the type of material for all machining operations included therein.
- **Panel:** permits to select a format (type) of panel from the stock. By selecting "General", the stock data will not be used.
- **Stack:** permits to set the max. quantity of panels to be loaded during a machining cycle.
- **Length:** permits to set the length of the panel to be machined. This value may be modified only if a panel has not been selected from the stock.
- **Width:** permits to set the width of the panel to be machined. This value may be modified only if a panel has not been selected from the stock.
- **Thickness:** permits to set the thickness of the panel to be machined. This value may be modified only if it has not been selected a material in stock.
- **Qty. (Quantity):** permits to set the total quantity of machining cycles to be run with the current pattern.
- **Done:** shows the number of machining cycles run.
- **Code:** permits to access the table of machining operation codes. In the table only the codes that may be used in the current context will be viewed. Here below the existing codes are described.

### Table of Codes

To open the table of codes, click on the symbol <?>.

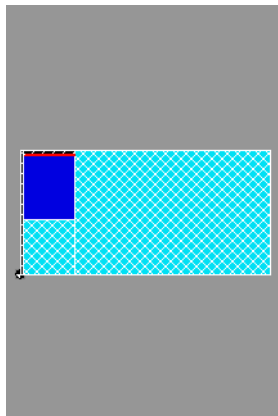
- **Code 1: Head cut**

Cut made along the width of the panel. It cannot be entered after the codes 4, 5, Z1 and Z2.



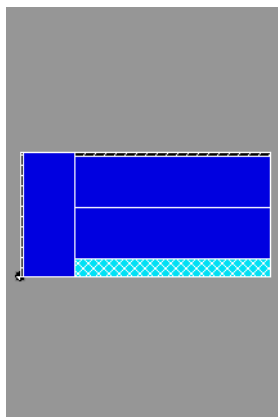
- **Code 2: Cross cut on head cut portion**

Cut made along the length of the panel. It is possible to enter it only after a code 1.



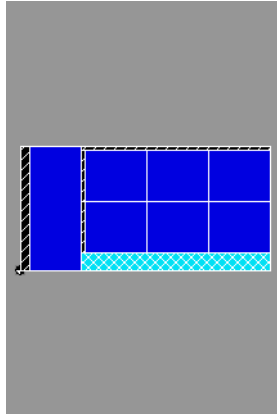
- **Code 4: Length cut**

Cut made according to the length of the panel.



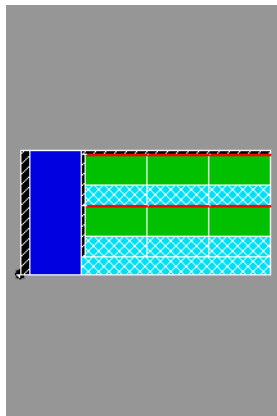
- **Code 5: Cross cut**

It is typically used after a code 4 and it generates a cut according to the width of the panel.



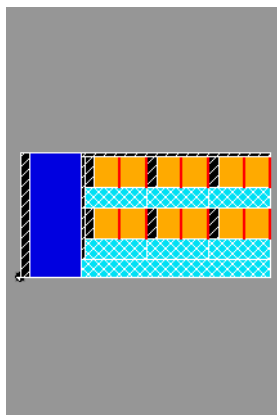
- **Code Z1: Third phase cut**

It may be entered only after a code 2 or a code 5.



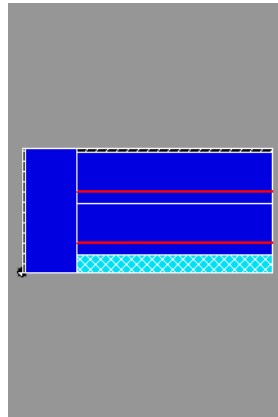
- **Code Z2: Fourth phase cut**

It may be entered only after a code Z1.



- **Code W: Groove**

It executes grooving in the same direction of the cutting code in the preceding line. When this code is entered, the machine will machine only a panel at a time, without the possibility to superimpose the strips.



- **Dim. (Dimensions):** cut dimensions (or incremental value for grooving start). If dimensions are entered out of the limits of the material to be cut (thus producing a negative rest), a window will appear with the max. accepted value.
- **Qty. (Quantity):** quantity of cuts with specified dimensions and code. If an excessive quantity is entered and this produces a negative rest, a window will appear with the max. accepted value.
- **Opts. (Options):** permits to set the options relevant to the cutting code of the selected line. For the codes 1,2,4, 5, Z1 and Z2
  - *Front trim cut:* valid only for the first cut (and therefore it may be modified only in the first line of the table). This set up is a forced action on the front trim cut width, which has the priority over the current trim cuts logic. Therefore, if the offcut is sufficient, the strip's front trim cut will be forced to this value.
  - *Trim cut before cutting:* valid for all cuts. This is a trim cut forced action for this cut and it has priority over the current trim cuts logic. Therefore, if the offcut is sufficient, the current strip's front trim cut will be forced to this value. Furthermore, if the quantity of cuts of this line is greater than one, the forced action will also be valid for all the cuts of the line.
  - *Detensioning cut:* to view if in the current cut there is a detensioning cut.
  - *For groove:* depth, width, start and end offset for cuts (see the groove control).
- **Table menu :** By clicking the rh button of the mouse on the table of codes, a menu will appear with the following options:
  - *Enter line:* to enter a line at the selected position. This command may be entered also with the key INS.
  - *Cancel line:* to cancel the selected line. This command may be entered also with the key DEL.
  - *Cancel grid:* to cancel the entire table. This command may be entered also with the key CTRL+DEL.
  - *Export:* to export the data contained in the table of Codes n in a XML-format file. Select the directory where you want to store the file and digit the file's name.



## Contextual Commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Start** . Program start. Starts automatic execution of a program, when the quantity of panels to be machined is greater than the quantity of machined panels. If the machining operation had been previously interrupted, a window permits to restart it from the beginning (Start) or to continue it from the point where it had been interrupted (Restart).
- **F5 New.** Creates a new program.
- **F6 Techno** . Technological Parameters. Permits to access the "Technological Parameters" window from which it is possible to personalise a series of technological parameters (configurable list) for each pattern.
- **F7 Trim Cuts** . Permits to access the window with trim cut parameters associated with the cutting pattern. A panel offcut may be divided into three sections:
  - *Front Forcing*: the first cut removes the entire offcut located fully at the head.
  - *Rear Forcing*: the last cut removes the entire offcut located fully at the tail.
  - *Automatic*: the offcut is divided into head and tail offcut following an automatic logic that can be parameterized with the parameters (see the section that describes the machine data).
- **F8 Parts** ."Table of Parts" window (available only for programs installed within the worklists). Used for off-line label printing.
- **F9 Macro** . "Macro" window.
- **F10 Del** . To delete or reset. Displays a pull-down menu that permits to delete the last modification made to the table of codes or to reset the deleted modification.
- **F11 Sim.** Link to the Simulation page.
- **F12 Home** . Returns to the Home page.

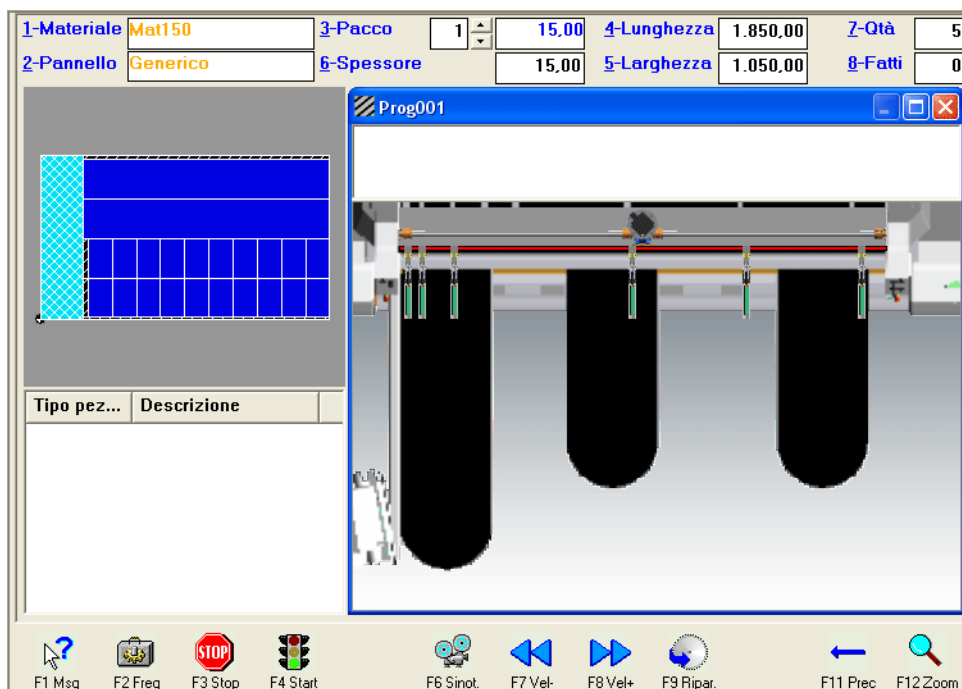
By pressing the ESC key, the worklist page or the single programs page (containing the program) is viewed.

### 3.3 Simulation Page

The Simulation page permits to view a simulation of machining operations in real time or off-line. To access it click on the command F11 in the Program Editor, Sequences, Holes and Worklists pages, i.e., all pages from where it is possible to start an automatic machining operation (manual cuts excluded).

- **Material:** views the material selected for machining.
- **Panel:** views the type of panel selected for machining.
- **Stack:** shows the max. quantity of panels to be loaded during a machining cycle.
- **Thickness:** shows the thickness of the panel to be machined. This value may be modified only if it has not been selected a material in stock.
- **Length:** shows the length of the panel to be machined. This value may be modified only if a panel has not been selected from the stock.
- **Width:** shows the width of the panel to be machined. This value may be modified only if a panel has not been selected from the stock.
- **Qty. (Quantity):** shows the total quantity of machining cycles to be run with the current pattern.
- **Done:** shows the number of machining cycles run.

Figure 19: Simulation page



#### Contextual Commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".

- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Start** .Program start. Starts automatic execution of a program, when the quantity of panels to be machined is greater than the quantity of machined panels. If the machining operation had been previously interrupted, a window permits to restart it from the beginning (Start) or to continue it from where it had been interrupted (Restart).
- **F6 Synopt** . Synoptic start. Starts the off-line simulation.
- **F7 Speed-** .Speed minus. Used only for the off-line simulation. Divides the simulation speed by two until it reaches the min. speed.
- **F8 Speed +** Speed plus. Used only for the off-line simulation. Multiplies the simulation speed by two until it reaches the max. speed.
- **F9 Restart** . Restarting. Start the machining off-line simulation (single pattern). For each elementary cutting step or front loading, a window will appear suggesting to proceed the off-line simulation or to restart the panel sawing machine from that point. The functionality is used in order to restart machining of a pattern without the need of starting it from the beginning but just from the subsequent operation. Machine stops once the machine cycle has been completed.
- **F11 Prec.** Link to the preceding page.
- **F12 Zoom** . Views a pull-down menu that permits to:
  - make a pattern's positive zoom,
  - make a pattern's negative zoom,
  - reset the pattern's initial view,
  - view the loading area of the lifting table,
  - view the whole machine.

## Graphic Simulation

Shows the graphics of machining evolution. The area beyond the cutting line is viewed by default (where the operator handles the material); by selecting F12, it is possible to modify the displayed section. By clicking on the graphic section, it is possible to:

- double-click the lh button of the mouse on the graphic area and the positive zoom is executed.
- double-click the rh button of the mouse on the graphic area and the negative zoom is executed.
- double-click the lh button of the mouse next to the borders of the graphic area and the pattern is shifted towards the border.

In the lower right-hand side section, it is viewed the currently cut stack (information useful for understanding the quantity of stacked panels).

Above the graphic section, the manual operations to be executed are shown (strip turning, stacking, etc.), whereas on the left-hand side there are the cutting pattern and the list of produced workpieces with the different cuts (offcuts, intermediate strips or drops). If the machining operation corresponds to a cutting pattern, the control highlights in yellow the pieces produced with the last cut.



The theoretical simulation (off-line) cannot be viewed when a machining operation is already in progress (i.e., during cutting).



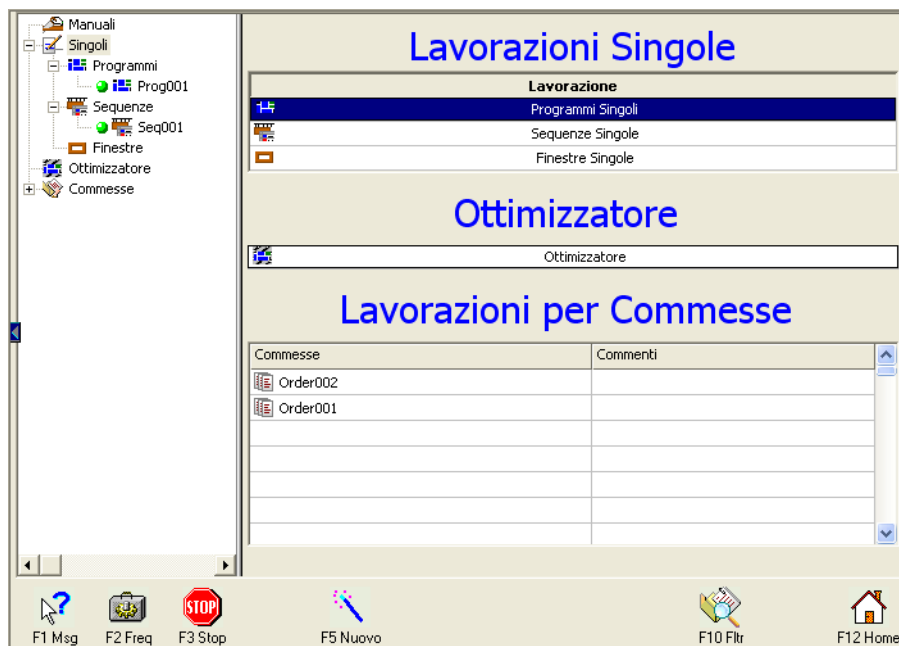
# 4 Orders and Worklists

## 4.1 Orders Page

The Orders page shares the information of the Select Machining Operations page, contextual commands excepted. In this page, the list of existing orders appears and such orders may be selected and opened by pressing ENTER.

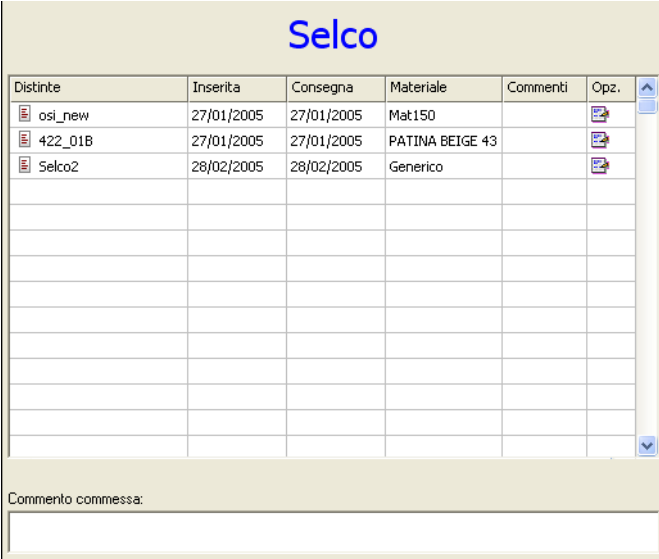
An order consists of one or more worklists which - on their turn - are made of one or more machining operations (programs, sequences or holes).

Figure 20: Select machining operations page



The following image shows an example of order - named "Selco" - and consisting of a few worklists. For each worklist there are the name, creation date, delivery date, material, comments/remarks, if any, and a field for the selection of machining options. When a line is highlighted in yellow, it means that the machine is working on it, i.e. the machine is working with the highlighted program. Once the machining operation of the first order has been completed, machining will move automatically to the second order.

Figure 21: example of order



| Distinte | Inserita   | Consegna   | Materiale       | Commenti | Opz. |
|----------|------------|------------|-----------------|----------|------|
| osi_new  | 27/01/2005 | 27/01/2005 | Mat150          |          |      |
| 422_01B  | 27/01/2005 | 27/01/2005 | PATINA BEIGE 43 |          |      |
| Selco2   | 28/02/2005 | 28/02/2005 | Generico        |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |
|          |            |            |                 |          |      |

Commento commessa:

## Contextual Commands

- **F1 Msg**. Enables the window with the list of plc messages.
- **F2 Freq**. Enables the window "Parameters of frequent use".
- **F3 Stop**. Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Start**. It is used to start the execution of the selected order (highlighted in blue).
- **F5 New**. It is used to create a new order.
- **F10 Filter**. Permits to filter the displayed worklists according to the following information:
  - Date of delivery,
  - Date of entry,
  - Used Material/Panel,
  - Worklist comments/remarks,
  - Machining options.
- **F11 Sim**. Link to the graphic simulation page.
- **F12 Home**. Returns to the Home page.

## 4.2 Worklist Page

The Worklist page contains machining details referred to the same worklist. To access the page, from the Orders page, select the required worklist and press ENTER.

The following image shows an example of Worklist - named "Selco2" - and consisting of a few cutting patterns (programs). For each worklist there are the name, creation date, delivery date, material, list of used panels and comments/remarks on the same worklist, if any. For each cutting pattern (machining line) there are the name, quantity of panels to be machined or already machined, panel code to be used, machining options and the comments/remarks. When a line is highlighted in yellow, it means that the machine is working on it, i.e. the machine is working with the highlighted program. Once the machining operation of the first order has been completed, machining will move automatically to the second order.

Figure 22: example of worklist

The screenshot shows the 'Selco2' worklist page. At the top, there are input fields for 'Inserita' (28/02/2005), 'Da consegnare entro' (28/02/2005), and 'Materiale' (Generico). Below this is a table with columns: 'Lavorazione', 'Qtà', 'Fatti', 'Pannello', 'Commenti', and 'Opz.'. The first three rows are highlighted in yellow: 'FaberMF\_001' (Qtà: 60, Fatti: 0, Pannello: B2), 'FaberMF\_002' (Qtà: 22, Fatti: 0, Pannello: WE), and 'Auxerre\_14' (Qtà: 108, Fatti: 0, Pannello: Generico). Below the table is a section 'Pannelli impiegati' with a table showing the following data:

| Codice   | Qtà | Dimensioni                           |
|----------|-----|--------------------------------------|
| Generico | 108 | 2.440,00 mm x 1.220,00 mm x 10,00 mm |
| WE       | 22  | 2.400,00 mm x 1.200,00 mm x 10,00 mm |
| B2       | 60  | 1.850,00 mm x 1.050,00 mm x 10,00 mm |

At the bottom, there is a 'Commento' field which is currently empty.

### Contextual Commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Start** It is used to start the execution of the selected order (highlighted in blue).
- **F5 New.** It is used to create a new order.
- **F6 Techno** . It is used to access the Technological Parameters in order to personalise machining operations.
- **F8 Parts.** Opens a window with the list of parts that form the worklist. The list shows the measurements and quantity and up to two descriptions of the worklist part. The window permits to select a part and to print the labels off-line.
- **F9 Reset.** Resets the quantity of machined panels. This function must be used only if you wish to restart machining operations for a worklist.

- **F10 Filter.** Permits to filter the displayed machining operations according to the following information:
  - Date of delivery,
  - Date of entry,
  - Used Material/Panel,
  - Worklist Comments/Remarks,
  - Machining options.
- **F11 Sim.** Link to the graphic simulation page.
- **F12 Home** . Returns to the Home page.



# 5 Optimizer

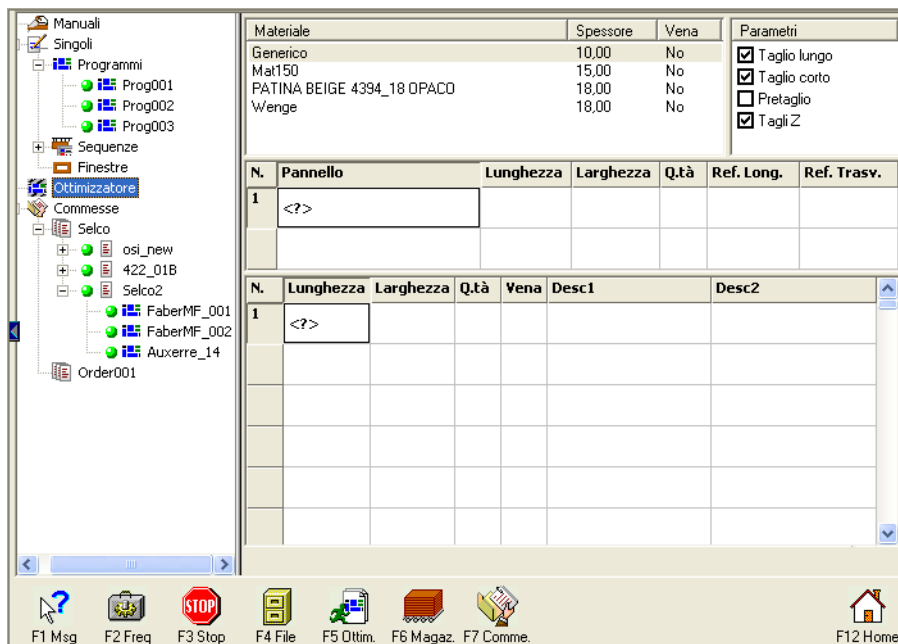
In the Optimizer page, it is possible to obtain automatically the cutting patterns (programs) optimized with the relevant worklist. It is necessary to define the list of workpieces to be obtained as well as the type of panels to be used. The solution generated by OSI will not lead to an overproduction of workpieces. To access the page, from the Home page, click on the button Optimizer.

## 5.1 Optimizer Page

This page is divided into 4 sections that permit to:

- Select the material to be used.
- Select or enter (in case of general material) the panel format(s) to be used. Besides the panel sizes, it is possible to define the quantity of available panels (\*=infinite) and the minimum rip and cross trim sizes.
- Enter the list of parts to be produced. Besides sizes and quantity to be produced, it is possible to specify if the workpiece/part is grained or not (should it be grained, the length of the workpiece/part will always go in the direction of the panel length). Two further fields permit to enter part descriptions that may be label-printed.
- Select the parameters that define the max. complexity of the pattern.  
In particular, there are 4 types of cutting patterns that may be selected. Cutting pattern with long rip cut that includes the first phase cut for the length of the panel, cutting pattern with short rip cut that includes the first phase cut for the width of the panel, cutting pattern with head cut that includes a panel portion with short head cut and a second portion with long head cut and z-cut pattern that allows you to generate cutting patterns with third or fourth phase cuts.

Figure 23: Optimizer page



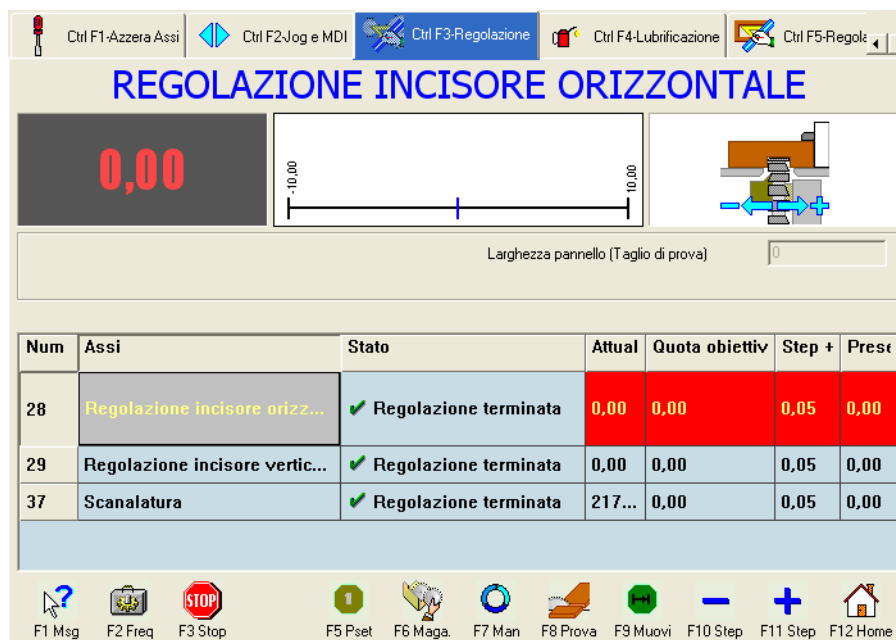
## Contextual Commands

- **F1 Msg**. Enables the window with the list of plc messages.
- **F2 Freq**. Enables the window "Parameters of frequent use".
- **F3 Stop**. Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 File**. To open or save a cutting list.
- **F5 Optim**. To start the optimization of a list of cutting patterns.
- **F6 Stock**. Opens a window to update the material stock.
- **F7 Order**. Permits to select the order to be included in the optimized worklist.  
 In particular the optimizer - at the end of the optimization - generates a solution included in a worklist. The worklist's name is assigned by default ("list") and it may be modified by selecting F4: File and the option Save as, before launching the optimization.  
 The list created is included in an order that is named by default "My Order"; to modify the destination order, it is necessary to select F7 - Order.
- **F12 Home**. Returns to the Home page.

# 6 Blade Adjustment Page

From the Blade Adjustment page, it is possible to adjust and align the tools mounted onto the machine. Adjustment may be of the electronic type, and in this case all the functionalities present in the page are exploited; or of the manual type, and in this case the page provides only the functionalities for positioning the saw blade carriage at the manual adjustment position. To access the page, from the Home page, click on the button Adjustments.

Figure 24: Blade Adjustment page



## 6.1 Contextual Commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F5 Pset** .Executes a manual resetting of the axis (without moving it physically) updating the current value with the value present in the Preset field.
- **F6 Maga.** Opens the blade magazine (see further on).

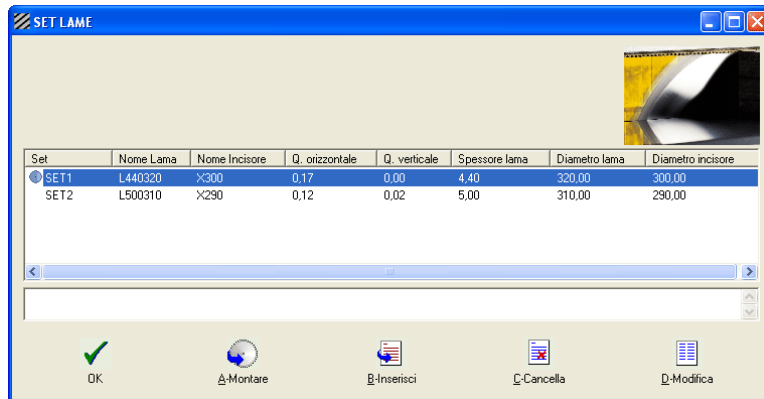
- **F7 Man.** Manual positioning. Moves the saw blade carriage to a position where it is possible to execute a manual adjustment of the axis (see the machine's Operating Instructions). The execution of the movement must be confirmed by pressing the cycle start push-button.
- **F8 Test** . Executes a test cut or groove. The selection of this button opens a window where the cut width (equal to the width of the workpiece positioned against the square fence) must be entered. If a scoring unit adjustment has been selected, a cut will be made all over the part or an interrupted cut. The interrupted cut permits to obtain a panel portion simply with a single groove. If a grooving adjustment has been selected, it is important to set the depth of the groove besides the panel dimensions. The execution of the movement must be confirmed by pressing the cycle start push-button.
- **F9 Move** Executes an absolute movement (programmed) of the selected axis at the value set in the target Position field. The execution of the movement must be confirmed by pressing the cycle start push-button.
- **F10 Step.** Step minus. Executes an incremental movement of the selected axis towards a negative direction (decrease) with a width equal to the value set on the step +/- field. The execution of the movement must be confirmed by pressing the cycle start push-button.
- **F11 Step.** Step plus. Executes an incremental movement of the selected axis towards a positive direction (increase) with a width equal to the value set on the step +/- field. The execution of the movement must be confirmed by pressing the cycle start push-button.
- **F12 Home** . Returns to the Home page.

## 6.2 Blade Magazine

The blade magazine contains the data relevant to the available blade sets. By "blade set" we mean a set consisting of the main saw blade plus the scoring unit; two different sets may vary just by only one of the tools. For each set, it is possible to control the following information:

- *Saw blade name.*
- *Scoring unit name.*
- *Horizontal V.*, absolute horizontal adjustment value.
- *Vertical V.* , absolute vertical adjustment value.
- *Saw blade thickness.*
- *Saw blade diameter.*
- *Scoring unit diameter.*

Figure 25: Window Blade Set or Blade Magazine



## Description of Commands

- **A-Mount.** It is used to set up the new blade set mounted onto the machine. By pressing the button on the selected blade set, the target positions are varied for the horizontal and vertical scoring unit adjustment according to the values of the selected set (line highlighted in blue) . If the machine is equipped with an electronic adjustment, the vertical and horizontal scoring unit adjustments are subsequently requested with the new target positions. To execute this operation click on OK and then press the cycle start push-button.
- **When installing a blade set, the blade thickness, blade diameter and scoring unit parameters vary automatically, it is therefore mostly important to check carefully that these values correspond to what has been actually mounted onto the machine.**
- **B-Enter.** It is used to create a new blade set.
- **C-Cancel Line.** It is used to cancel the selected blade set.
- **D-Change.** It is used to change the selected blade set.



# 7 Axes Reset Page

This page permits to reset (calibration) the different machine's axes. To access the page, from the Home page, click on the button Services and select the option Calibration.

In the central section of the page a table is shown, containing the axes involved in the calibration operation. The various columns of the table display the state of reset and the current value; furthermore, it is possible to set the calibration position, preset value and correction value. The number of axes viewed varies depending on the machine configuration.

Figure 26: Axes Reset page



## 7.1 Contextual commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F4 Glob.** Executes an automatic calibration of all axes.
- **F4 Sing.** Executes the automatic calibration of the selected axis only. It is possible to calibrate individually each axis of the machine.  
To execute the single calibration of axes, select the concerned axis on the table, press the

button F5 and then press the cycle start push-button. The axis will start moving until it reaches the calibration position.

- **F6 Pset.** Executes a manual reset of the selected axis. The value contained in the “preset” column of the table is taken as the current value for the selected axis.  
**Caution: it is extremely dangerous to work with machine axes reset with this procedure. The axes must reset automatically after the control has been switched off.**
- **F7 Corr.** Permits to correct a positioning error for a calibrated axis without the need to repeat the calibration operation.  
**Caution: it is extremely dangerous to work with machine axes reset with this procedure. The axes must reset automatically after the control has been switched off.**
- **F12 Home.** Returns to the Home page.

## 7.2 Example on how to use the “F6 Pset” button

Let's assume that the pushing device is at the 2000 value but the pushing device-cutting line distance is 1500mm.

Select the axis in question on the table. Enter the value 1500 in the table preset field and on the line relevant to the pushing device. By pressing the button F6, the current value of the pushing device becomes 1500.

In this example, we have therefore forced the value of the pushing device encoder towards the value 1500, and the axis has not been actually moved but its position for the control has changed. This change in value does not modify the calibration positions and therefore it will be removed in the subsequent calibration.

This operation may be useful when - after a current cutoff - you wish to avoid the execution of a calibration operation or also when it is necessary to remove the axis from a position of software overstroke but only when it is not possible to activate the procedure of automatic return from the software overstroke position.

## 7.3 Example on how to use the “F7 Corr” button

Let's assume that the pushing device is at the 495,00 value and the calibration position for this axis is equal to 395,00mm.

Select the axis on the table.

Enter the value +10.00 in the table Corrective field and on the line relevant to the pushing device.

By pressing the button F7, its calibration position becomes 405.00 and the current value of the pushing device becomes 505.00, even if an actual movement of the axis has not occurred.

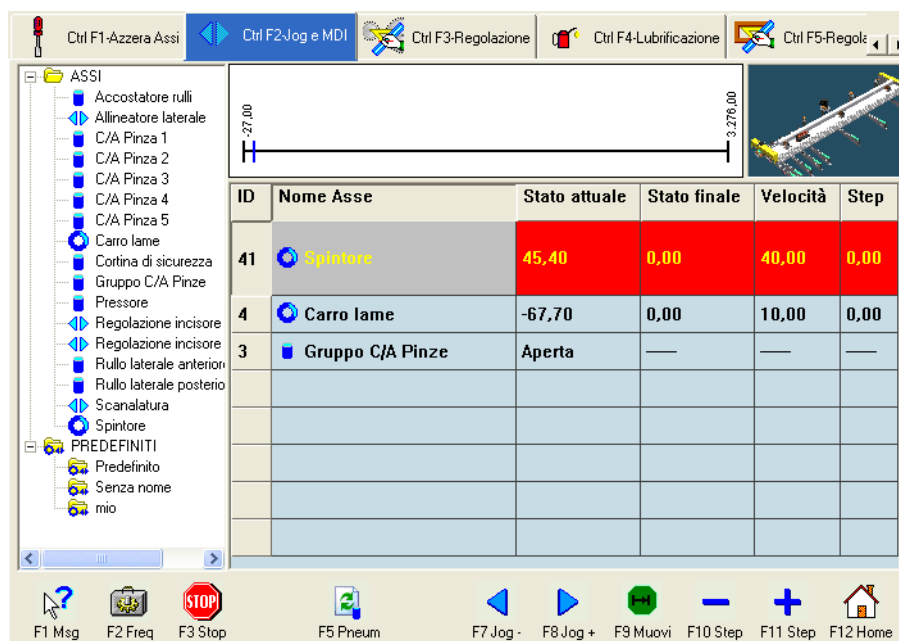
The fact of entering a corrective value modifies the calibration positions and therefore this correction will be maintained also for subsequent calibrations.



# 8 JOG and MDI

In this page the axes can be moved manually and individually, pneumatic axes included. To access the page, from the Home page, click on the button Services and select the option Axes Control (JOG).

Figure 27: JOG and MDI page



## 8.1 Contextual commands

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop** . Stops the operator's command in progress and deletes the entire chart of steps.
- **F5 Pneum.** Permits to filter the axes viewed on the tree (left-hand side). Possible options are as follows:
  - Pneumatic type axes,
  - DC Axes (digitally controlled),
  - AC Axes (analogically controlled),
  - All axes.

- **F7 Jog -**. JOG minus. Executes a movement - in the selected axis - towards negative positions or downwards.
- **F8 Jog +**. JOG plus . Executes a movement - in the selected axis - towards positive positions or upwards.
- **F9 Move**. Executes a programmed movement of the selected axis.
- **F10 Step**. Step minus. Executes a negative incremental movement - in the selected axis - corresponding to the step position that has been set up.
- **F11 Step**. Step plus. Executes a positive incremental movement - in the selected axis - corresponding to the step position that has been set up.
- **F12 Home**. Returns to the Home page.

## 8.2 Procedure to execute an axis movement in Jog

1. Select on the table the axis to be moved in Jog or in MDI. If the axis is not shown on the table, select it from the tree on the left side of the page and then double-click or press the key ENTER to include it into the table.
2. After having selected the axis, if you want to execute a movement in Jog+ (plus) press the button F8; if, on the contrary, you want to execute a movement in Jog- (minus) press the button F7. Keep the cycle start push-button pressed for all the time necessary to move the axis.
3. If there is in progress a movement in Jog of DC or AC axes, it is possible to suspend the movement by releasing the cycle start push-button and to restart the movement by pressing again the cycle start push-button. If a pneumatic axis is being moved, it is necessary to keep the start button pressed until the movement has been completed.

## 8.3 Procedure to execute an axis programmed movement

1. Under the final State column, set the position to which the selected axis is to be brought. Alternatively, under the Step column, set the step value with which the current value must be increased or decreased as well as the speed required to move the axis.
2. Press the button F9 if you require to move the axis in the position set in the final State field. Alternatively, press the buttons F10 or F11 if you want that the axis executes an incremental positive or negative movement of the set step value. To confirm the movement press the cycle start push-button. If the selected axis is of the pneumatic type, it is only possible to execute a movement in Jog.
3. To stop the movement press the cycle Stop push-button or the button F3 Stop.

## 8.4 Personalization of the axes to be moved in Jog or in MDI

It is possible to predefine the axes to be viewed, these will be loaded automatically on the table at the start of the machine and each time that the Predefined field is selected and the right key of the mouse is clicked or each time that the Enter key is pressed and the View field is selected from the pull-down menu.

Other axes may be added or deleted from the list of predefined axes, their deletion being possible directly from the table; at the end double-click on the option present on the tree at the left side of the page and then save.

Groups of personalized axes may be also created. After having entered on the table the axes to be associated with the group, click on the right key of the mouse on the option PREDEFINED and select Save as.



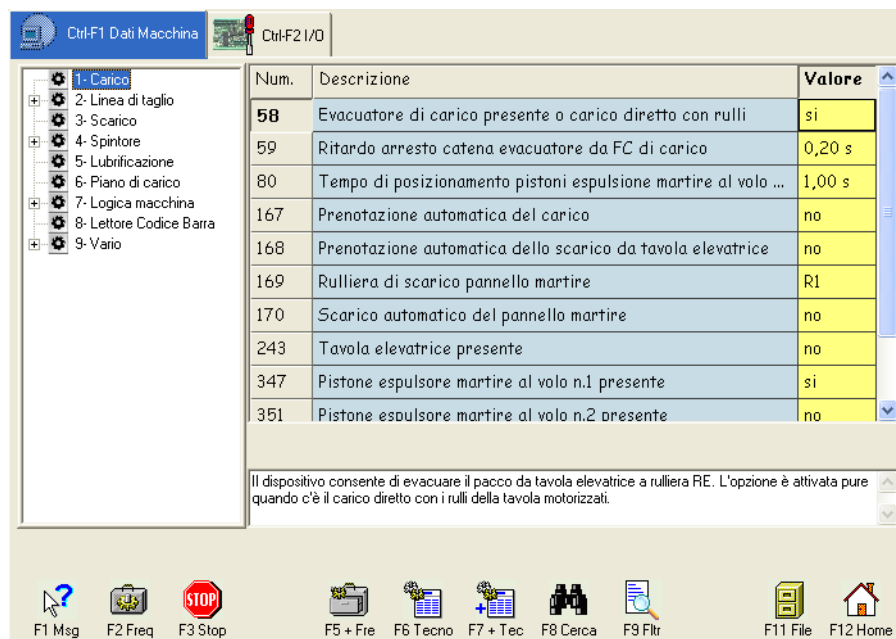
# 9 Machine Configuration

Here it is possible to view and modify the mechanical configuration (machine data) and the I/O configuration (input/output mapping). To access the page, from the Home page, click on the button Services and select the option Configuration. Each area consists of two sections, i.e., "Machine Data" and "I/O" selectable respectively with CTRL+F1 and CTRL+F2.

## 9.1 Machine Data Page

This page views the machine parameters.

Figure 28: Machine Data page



On the left-hand side of the page, the tree is shown and it permits to move quickly from one parameter to the other and also to view in a structured way the list of parameters. On the right-hand side the list of parameters - present in the group selected on the left-hand side - is shown with the following information:

- Parameter univocal ID.
- Parameter name.
- Parameter value. This field can be modified when it is viewed in yellow, otherwise it is a read-only field (in this case, in order to modify it, you must enter as an upper level user). If the new

value entered is not within the limits of the parameter, an out of limits Parameter window will appear to enter an accepted value.

- In the lower section of the window the description of the selected parameter is shown.

### Contextual Commands

In the lower section of the window, a series of buttons is present in order to execute the commands associated with the parameter page. These buttons may be selected by mouse-clicking or by pressing the corresponding function key.

- **F1 Msg.** Enables the window with the list of plc messages.
- **F2 Freq.** Enables the window "Parameters of frequent use".
- **F3 Stop.** Stops the operator's command in progress and deletes the entire chart of steps.
- **F5 +Fre.** Permits to add the selected parameter in the list of Parameters of frequent use.
- **F6 Techno.** It views the technological parameters. The technological parameters are parameter lists that may be personalized depending on the environment (e.g. programs, material, etc.).
- **F7 +Tec.** Associates the technological parameters. To configurate the technological parameters.
- **F8 Search.** Search parameter. Permits the research of a parameter according to its number, to a text contained in the name or in its description.
- **F9 Fitr.** Filter. Permits to filter the viewed parameters according to the type of parameter (its dimension)
- **F11 File.** It views a pull-down menu to load (with open), save, cancel and export the parameter file.
- **F12 Home.** Returns to the Home page.

### Window Parameter Out of Limits

It contains the list of the parameters out of limits with their values and their min. and max. limits. It is viewed when a parameter has a value not included between the min. and max. values. To close the window, it is sufficient to modify the value(s) within the limits. For each modification, the Plc is updated and the modification is recorded in a LOG file (present in the directory "Events" of the application).

### Window Parameters of Frequent Use

It contains a list of parameters previously entered by the user and accessible from any page by means of the button F2. The button Cancel removes the parameter or table/chart selected from the window.

## Window Search Parameters

This window permits the quick search of a parameter. In the upper part of the window, there is a box where to enter the keyword for the search. The button Search launches the search of parameters that contain the text (the text may be contained in the name or description of the parameter). The button New Search clears the list of found parameters. To find the parameter in the original list, it is sufficient to select it in the window Search parameters.

## Window Technological Parameters

It is used to associate parameters with a certain type of material or machining operation (e.g., a program) or with a machine component (e.g., blades). It contains:

- A box to select the set of required parameters: Blades, Material, Panels, Worklists and Machining Operation.
- A box to select the codes (names) associated with the selected set.
- A list of parameters associated with this code.

## Window Associate technological parameter

It is used to configurate the control of technological parameters. It contains:

- A text-box Machine Parameter with the number of the associated parameter. To associate a parameter, it is necessary to select it in the list of parameters and to click on Associate in the window Associate technological parameter.
- A text-box with the value of the parameter shown in the table of parameters.
- A list with the set of technological parameters: Blades, Material, Panels, Worklists and Machining Operation.
- A list with the codes associated with the selected set in the list of sets.
- A text-box with the value to be associated with the code selected in the list of codes.
- The button Associate, on only if the parameter was not already associated with the selected code and set. In this case it is possible to associate the parameter with the code of the selected set with the value shown in the text-box Associate.
- The button Dissociate, on only if the parameter was already associated with the selected code and set. In this case it is possible to disassociate the parameter from the code of the selected set.

## Control of Technological Parameters

The association of a parameter value with a set code permits to take into account that value during an operation where the set code is involved. Therefore an automatic selection of parameters of the operation in progress is obtained. The operations that need the use of the sets and that will update the values of the parameters in the parameter values file are as follows:

- Blade Change: the involved set is the Blade set. Therefore, for each blade change, the parameters associated with the installed blade set will be updated.

- **Worklist Start.** Here, the involved set are:
  - The material. The code is that of the worklist material.
  - The worklists. The code is that of the same worklist being in progress. If a parameter is associated with several sets, only the value associated with the worklist is taken into account because it is more specific. The parameter value is maintained until the worklist is in progress, when this will be completed or stopped, the previous value will be reset.
- **Machining Operation Start (program, sequences or window-cuts).** Here, the involved set are:
  - The material. The code is that of the machining operation material.
  - The panel. The code is that of the machining operation panel.
  - The worklists. The code is that of the worklist pertaining to the machining operation if it is not a single machining operation.
  - The machining operations. The code is that of the machining operation in progress.

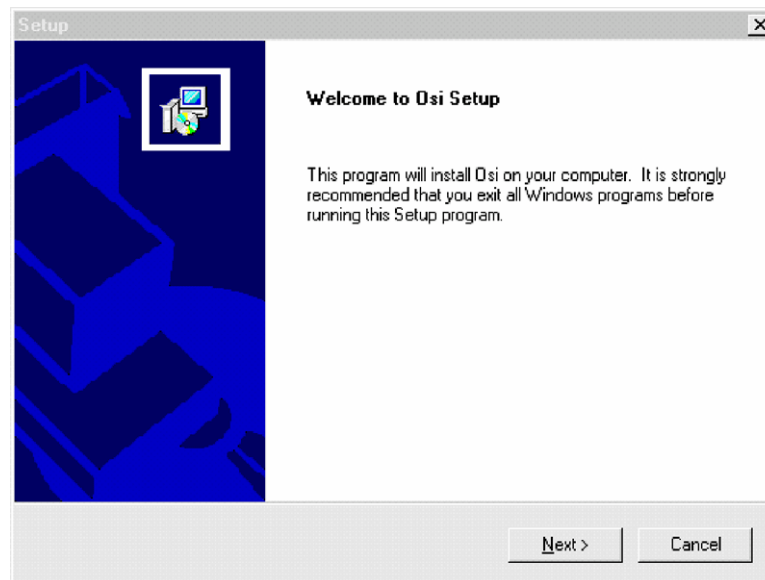
If a parameter is associated with several sets, only the value associated with the most specific set (the increasing order is that listed above) is taken into account. The parameter value is maintained until the machining operation is in progress, when this will be completed or stopped, the previous value will be reset.



# A OSI Installation

## A.1 Procedure for first installation

1. Turn on the machine and wait for the PC start. Insert the installation CD for OSI and click on the file Setup.exe. Here below are described only the most significant points for installation. Click on Next to move on to the subsequent installation steps or on Back to return to the previous step.



2. Please read carefully the software licence agreement. To accept the provisions set forth please select Yes. By selecting No the software will not be installed.
3. Digit the PC user's name in the box Name and the company's name in the box Company.
4. Select the destination directory for the software.
5. Select the installation mode.
  - *Typical*, for a complete installation.
  - *Compact*, for installation without the diagnostics module.
  - *Custom*, to select the modules to be installed.We recommend you to select Typical.
6. If during the installation phase a pop-up message appears informing you that the required dll has been found in the system, it is necessary to continue and to keep the dll present without substituting it with that of the installation. Proceed by selecting the box "Don't display this message again" and click on Ignore. Repeat the same procedure for each displayed message.
7. Once the installation of OSI has been completed, click on Finish. At this point, two other programs will automatically start:

- The program "CommStartUp" for the PLC software installation. **Attention: this installation must not be interrupted.**
  - The program for the installation of "Autodesk WHIP!", the wiring diagram display.
8. To install "Autodesk WHIP!" follow the instructions on the screen.
  9. When installations have been completed, restart the PC.

### **Modification of taskbar**

For a correct use of OSI, it is necessary to configure the Windows™ taskbar in the foreground that disappears automatically.





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