



HMI standard

SIOMAG32 is the standard Man-Machine interface of ISAC Srl base software

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SIOMAG 32

SIOMAG 32 is the standard interface available on ISAC numeric controls, it allows the operator can make all functions of controlling, movements and working.

Main modes are the following:

- **Manual Mode** (movement in Jog, origins, management of tools)
- **Automatic Mode** (working, restart of working)
- **SET Mode** (for the Home procedure)

(the Lotus Menu on top and the Command menu on bottom automatically updates in function of selected mode and in function of available functions)

By means a password protected access it allows to insert all the machine settings.

Thanks to development tools the interface can be customized also with the easy and fast adding of customized windows.

SIOMAG32

Main Menu
(Menù Lotus)

Axes visualization:
beyond to heights
it is possible to
alternatively read
the distance and error
for each axis.

Function commands
(equivalent to keyboard)

The screenshot shows the SIOMAG32 control panel interface. At the top, there's a status bar with 'Man menu' and the date '15 marzo 2007 17:10:51'. Below this is a menu bar with 'PROGRAMS', 'RESUME', and 'TRACK'. The main display area is divided into several sections:

- Axes Visualization:** A section titled 'Height mm' showing coordinates for X, Y, and Z axes. X is 0,000, Y is 0,000, and Z is -15000,000. A tooltip for the X axis shows the formula: $Origin\ Value = (Orig. = 0) + (G59 = 0) + (G58 = 0) - (MICRO-MARK\ distance =)$.
- Speed and Ovr%:** A section with 'Speed' set to 0 and 'Ovr%' set to 100.
- Program Settings:** A section with 'Nom: DEMO', 'N' (blank), and 'M' (0).
- Tool and Origin Settings:** A section with 'F.pr' (1000), 'Feed' (blank), 'Ovr%' (1), 'Orig' (1), 'Tool' (5), and 'Cicl' (0).
- Function Keys:** A row of function keys labeled 'Height', 'Stp/Cnt', 'Tst/Run', 'Profile', 'F5', 'F6', 'F7', 'F8', 'Quot+', and 'Help', with corresponding function key labels 'F1' through 'F10' below them.

TOOLTIP
(moving the mouse
near the menu,
buttons etc..
the corresponding
description is shown.)

Selected
Machining
program

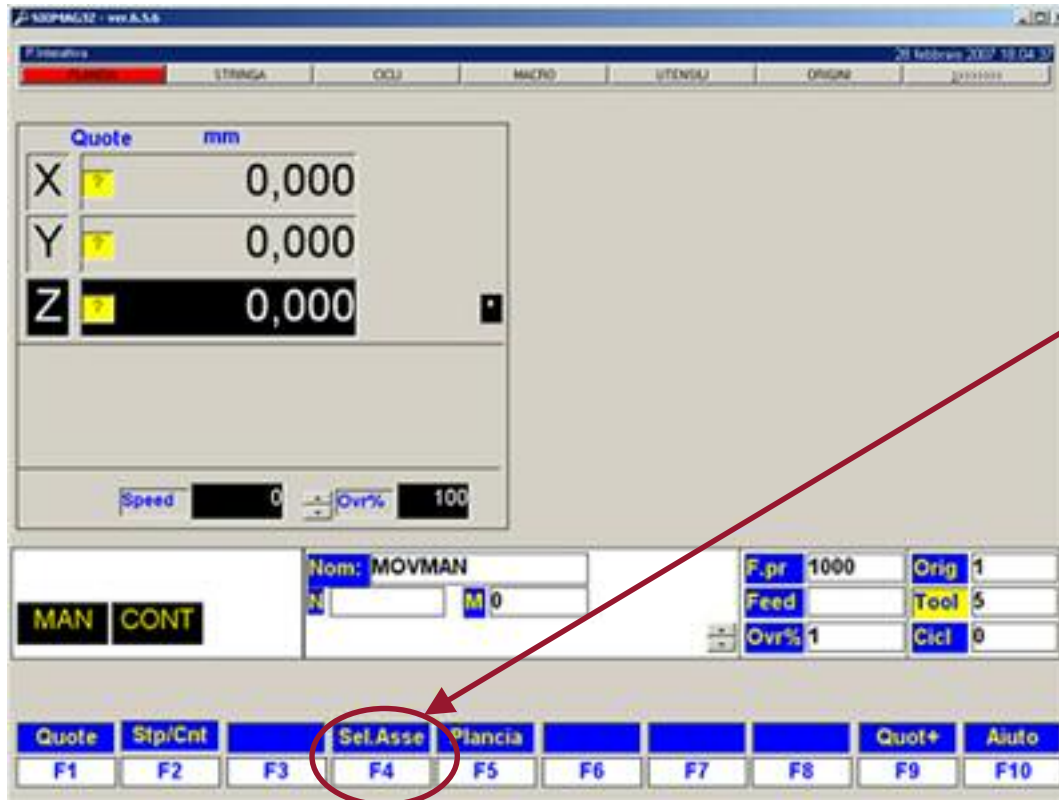
Selected feed and
actual feed

Active origin
(up to 20
Available origins)

Tool

Override Feed

Manual Mode: Jog



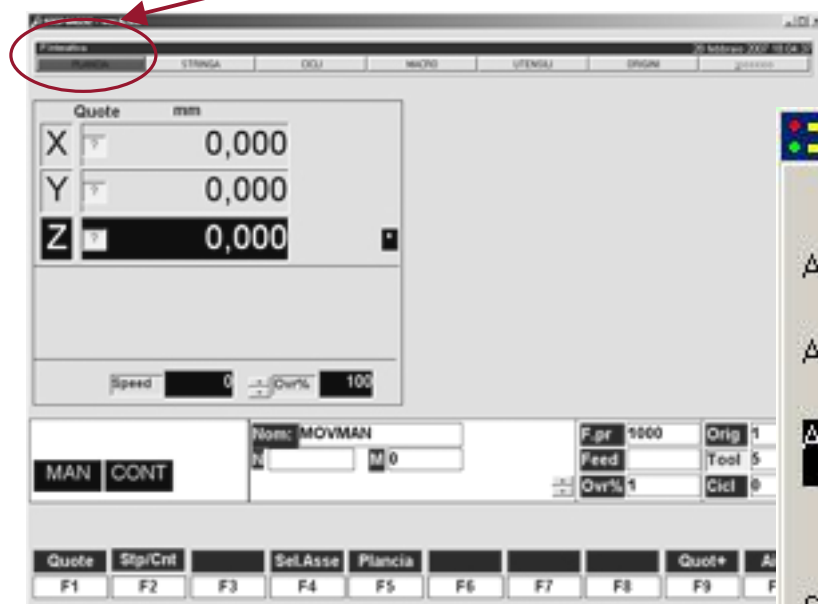
In manual mode it is possible to move each single axis in Jog mode.

In order to execute the movements :

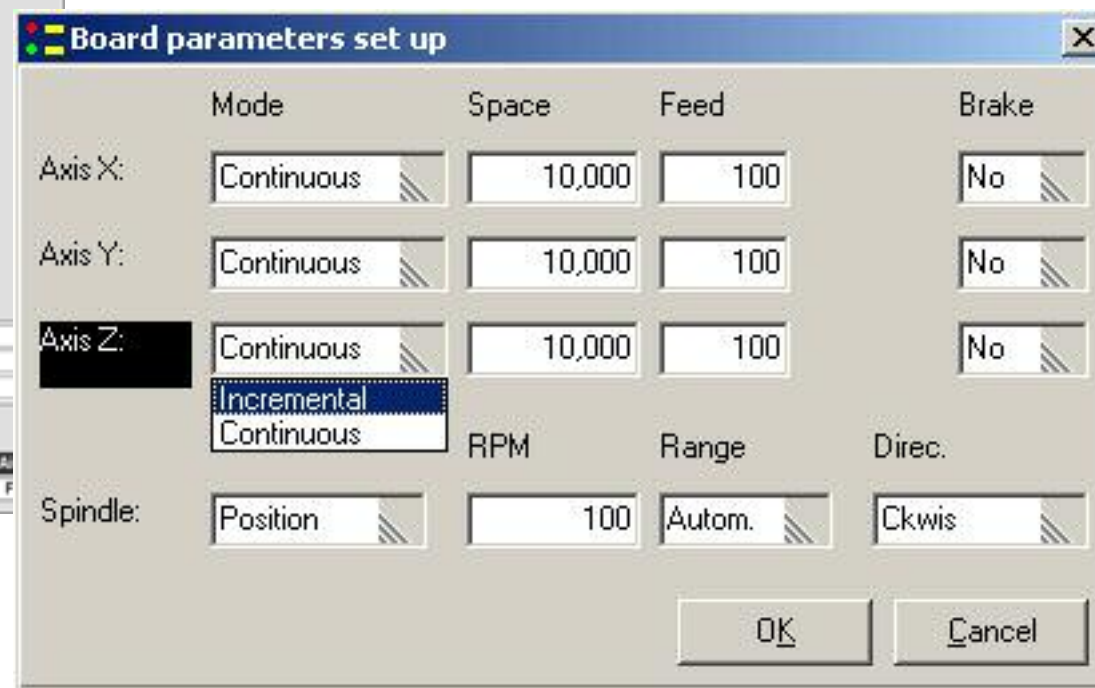
- Select the axis to move by pressing the F4 key (available on command menu).
- Press the Jog+ /Jog- keys on keyboard (CNC or office keyboard)

Manual Mode: Board

Select the board menu



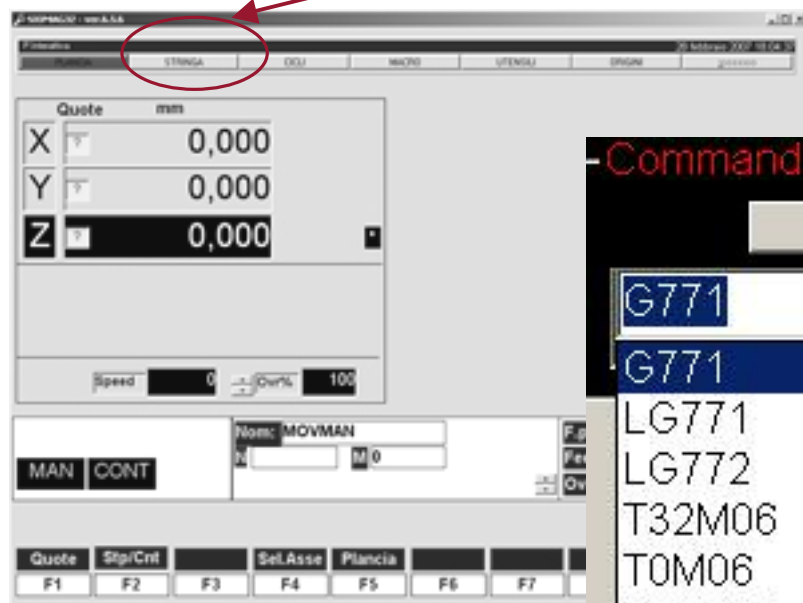
Board Window



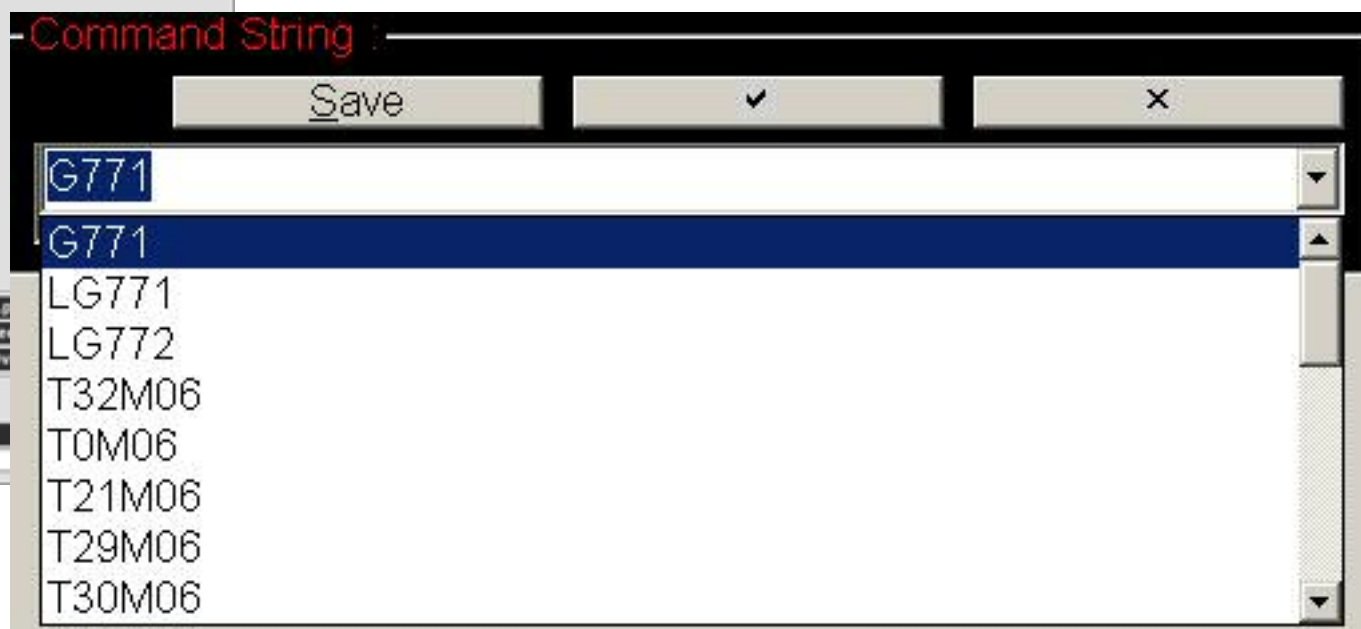
By Board it is possible to select the movement, the manner of movement, the velocity etc. and to execute the movements by means of keyboard or hand-wheel, if is set up. This functioning mode allows the use of the machine with no learning effort, considering the complete emulation of the commands of a machine that is not controlled by the CNC.

Manual Mode: String

Select the String menu

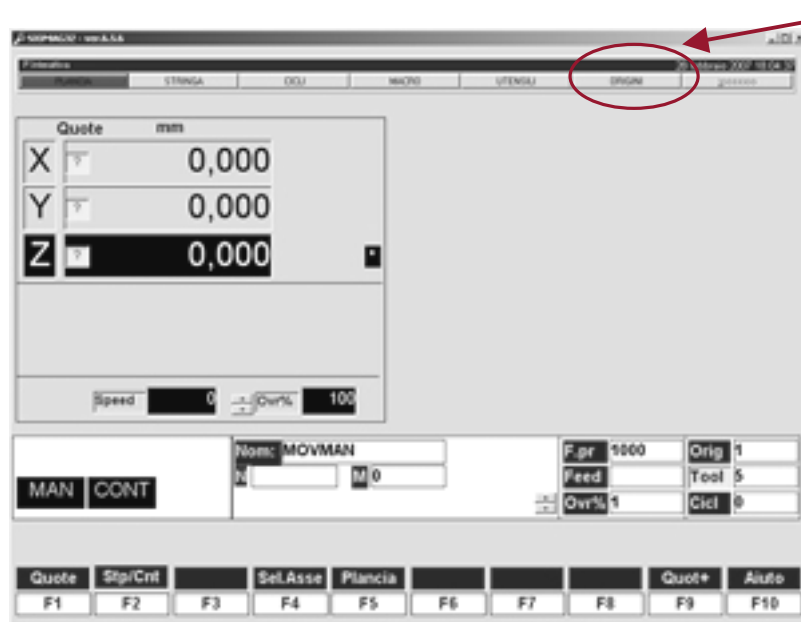


String window



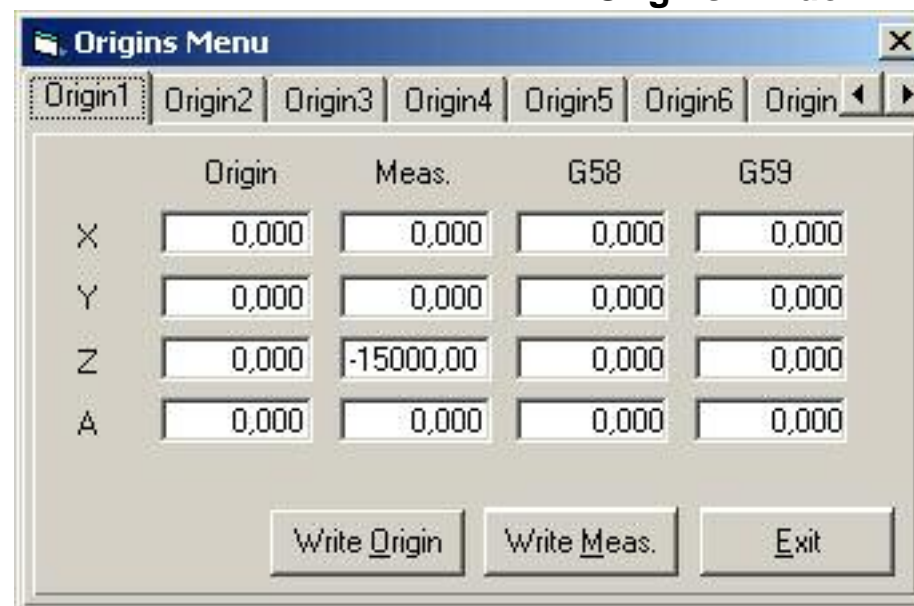
By means of string box it is possible to directly send a command to the CNC, or to update a shared memory areas, etc... The sent commands remain active and they can be selected again or they can be sent to an editor and saved in a file.

Manual Mode: Origins



Select the Origin menu

Origins window



The buttons 'Write origin' and 'Write Meas.' allow to respectively set the origin or the height for each axis.
Up to 20 origins are available.

Manual Mode: Tools

Select the Tool menu

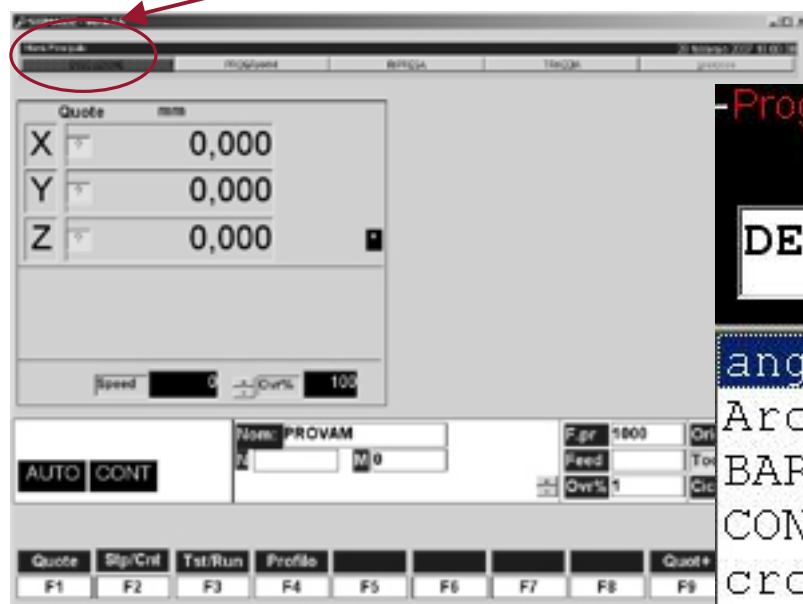
Tool window

The tool window is organized in sheets: Geometry, Wearing, Type. It allows the insertion of all parameters that are necessary for the complete Management of tools: Warehouse, Wearing. There are also available the function of ordering and Preset

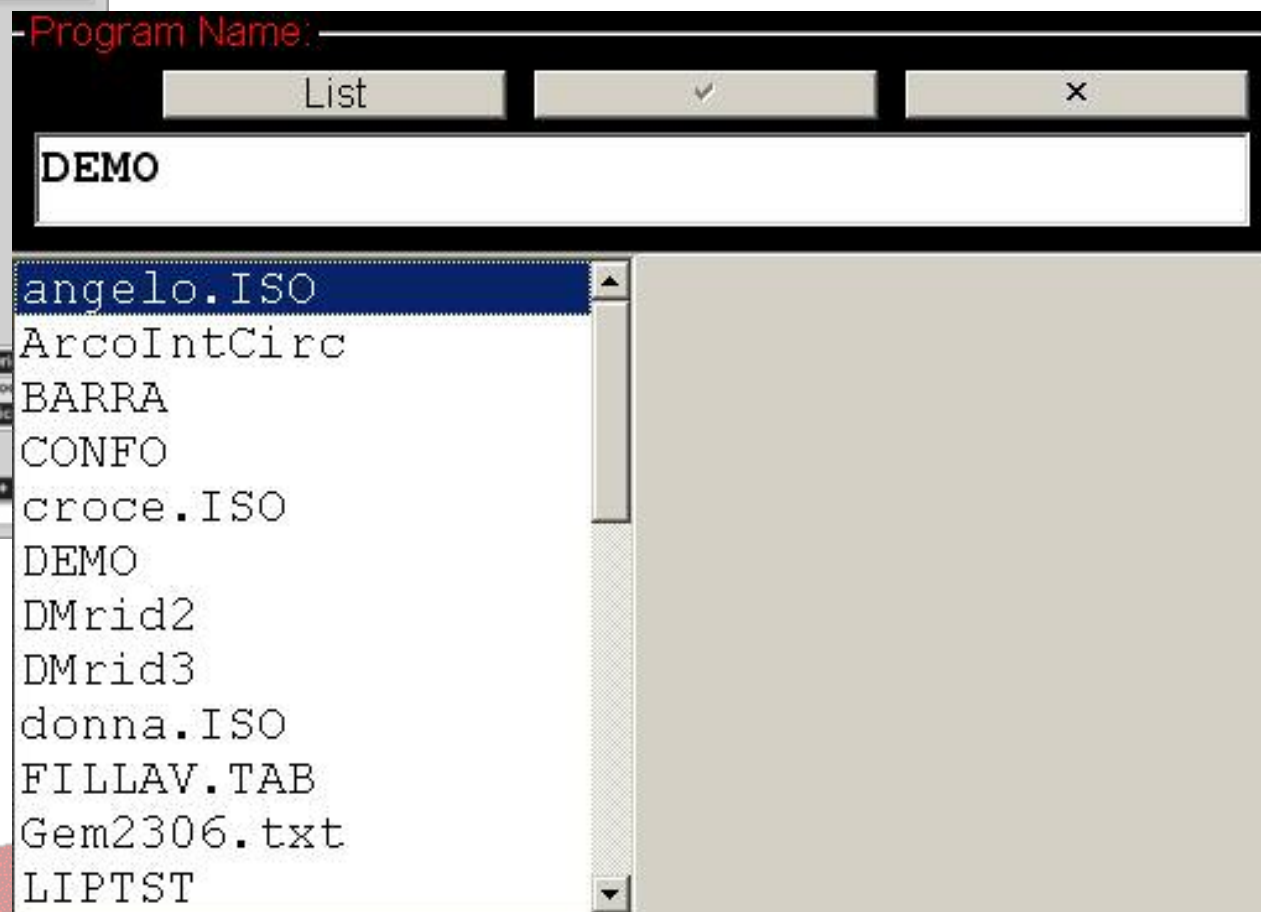
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Automatic Mode: Execution of Program

Select the Execution Menu



Execution menu



The Execution box shows a list of all available programs:

Select the program, confirm (the name of selected file is written in NOM box) and press START in order to execute.

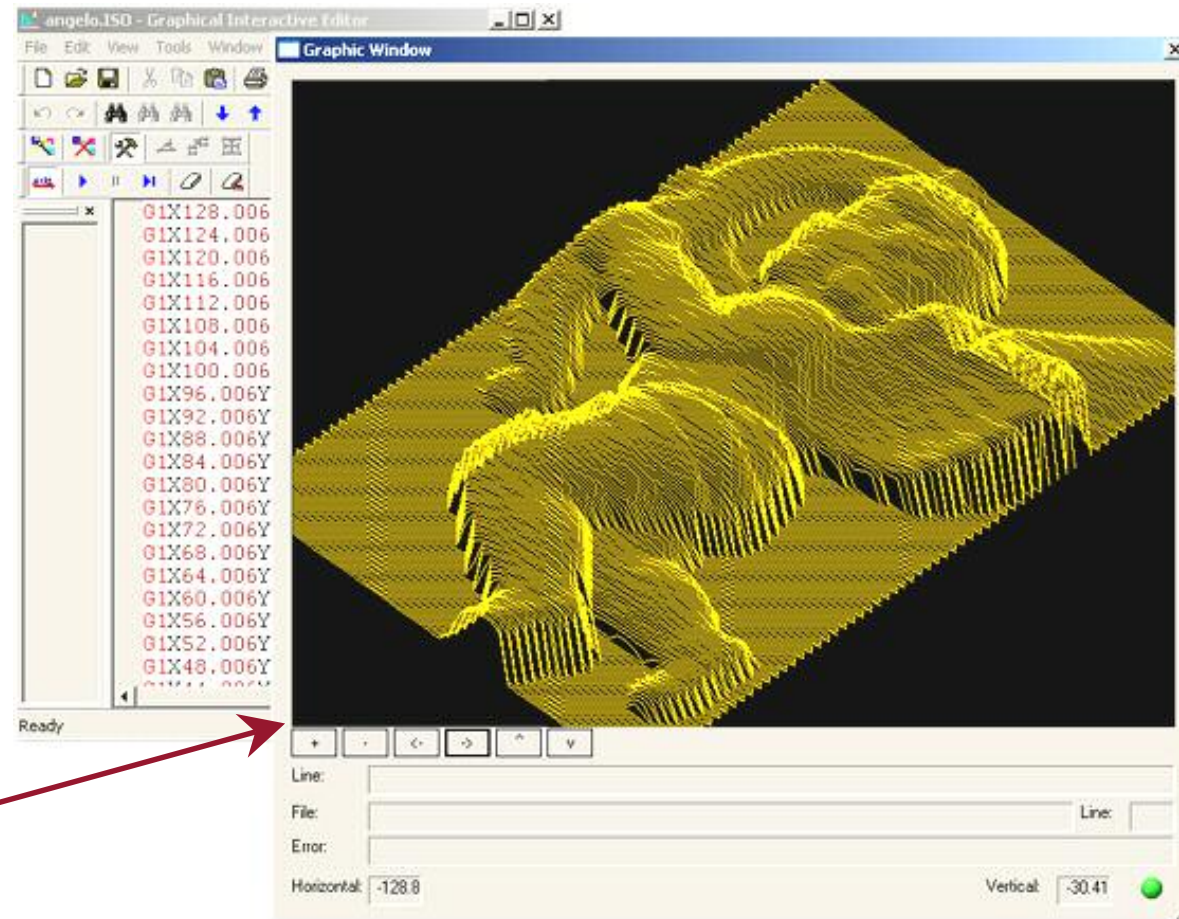
The TEST function makes a syntax analysis of Part Program, without movements, and in case of error launches alarms.

Automatic Mode: Program

After the selection of a 'program' menu

- the explorer window is automatically opened, in order to allow the selection of already existent program or the making of new file,
- And finally the GIE Graphical Interactive Editor is activated.

GIE allows the preview graphical visualization of the result of programmed machining.



Automatic Mode: Program

GIE is a strong Part-Program editor.

It allows:

- Direct programming in ISO code
- Programming by blocks of working

DEMO - Graphical Interactive Editor

File Edit View Tools Window Graphic Help

X coordinate of eyelet 350.000
 Y coordinate of eyelet 250.000
 X coordinate of first point 250.000
 Y coordinate of first point 390.000
 Angle of circular crown -60
 Diameter 50.000
 Angle of enlarging or 2
 Height of conical shape 20.000
 Z beginning coordinate 0.000
 Z end coordinate -30.000
 Outside hindrance Z 5.000
 Z increment for terrace 10.000
 Milling direction Clockw
 Over-metal 1.000
 Cover between 2

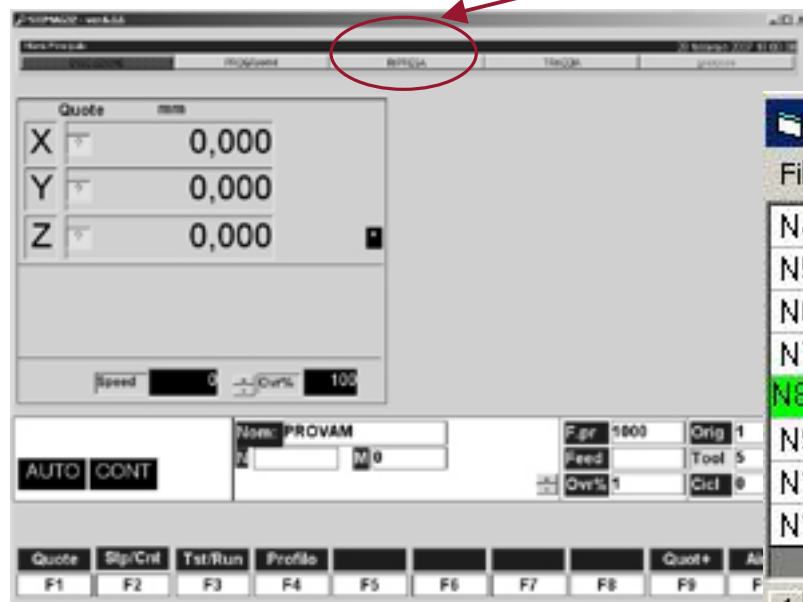
```

%
N10 L<PRESPA>
N20 G640<TOL=1><REF=1><FED=
N30 G689 { Interp. lineare}
N40 G689 { Interp. lineare}
N50 G689 { Interp. lineare}
N60 G689 { Interp. lineare}
N70 G645<RAP=0.000><ENT=-30
N80 G649<RAP=0.000><ENT=-30
N90 G647<RAP=0.000><ENT=-30
N100 G648<RAP=0.000><ENT=-3
N110G646 {fresaalesatura} <
N110 {Fine Prog.} G684
  
```

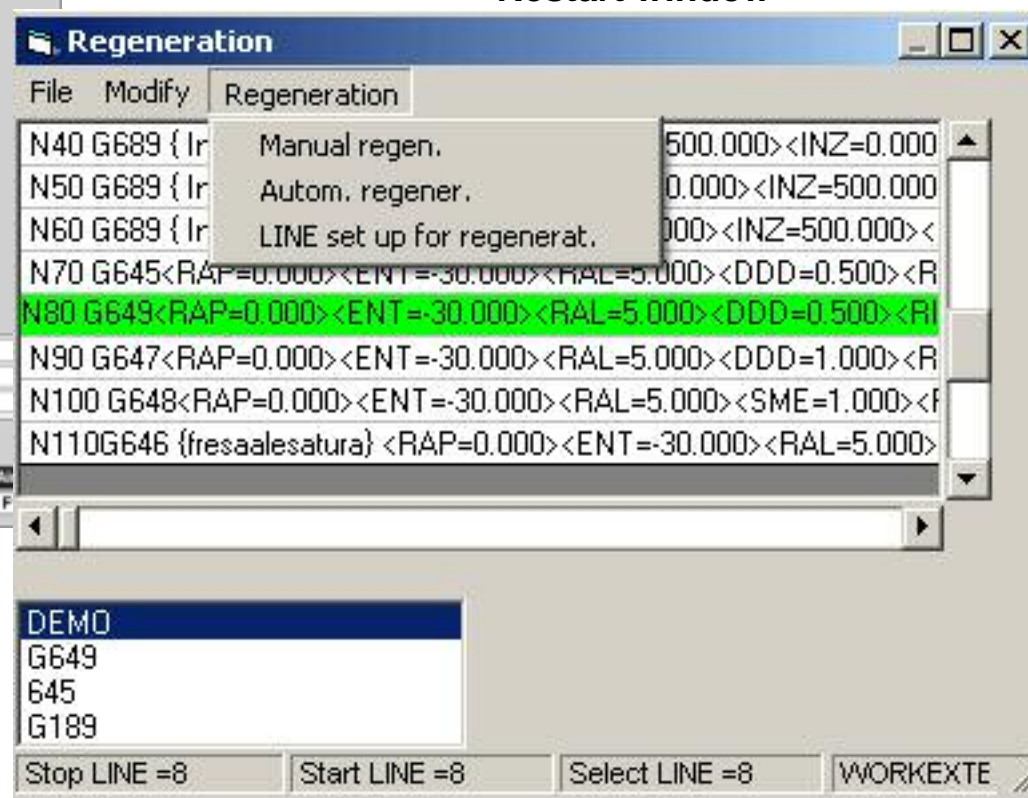
Ready Pocket with curved eyelet Dian

Automatic Mode: Restart of Machining

Select the Restart menu



Restart window



It is possible to restart the interrupted machining after the running of a Part-Program was interrupted because of an alarm or a lack of power supply to the machine.



For further information about Restart of machining see the corresponding Demo.

Demo of Restart

End

ISAC srl thaks you for your kind attention

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