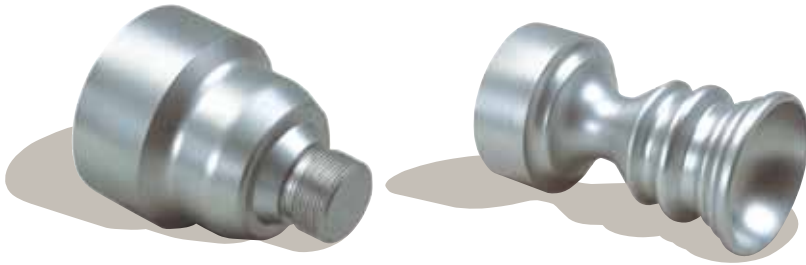# FAGOR

FAGOR AUTOMATION

CNC 8037

The solution for simple machines

CNC 8037

The solution for simple machines

Fagor Automation has been characterized in history for providing tailored solutions to their customers.It offers high-end products for highly demanding machines and also provides solutions for simpler machines with products like the CNC 8037.
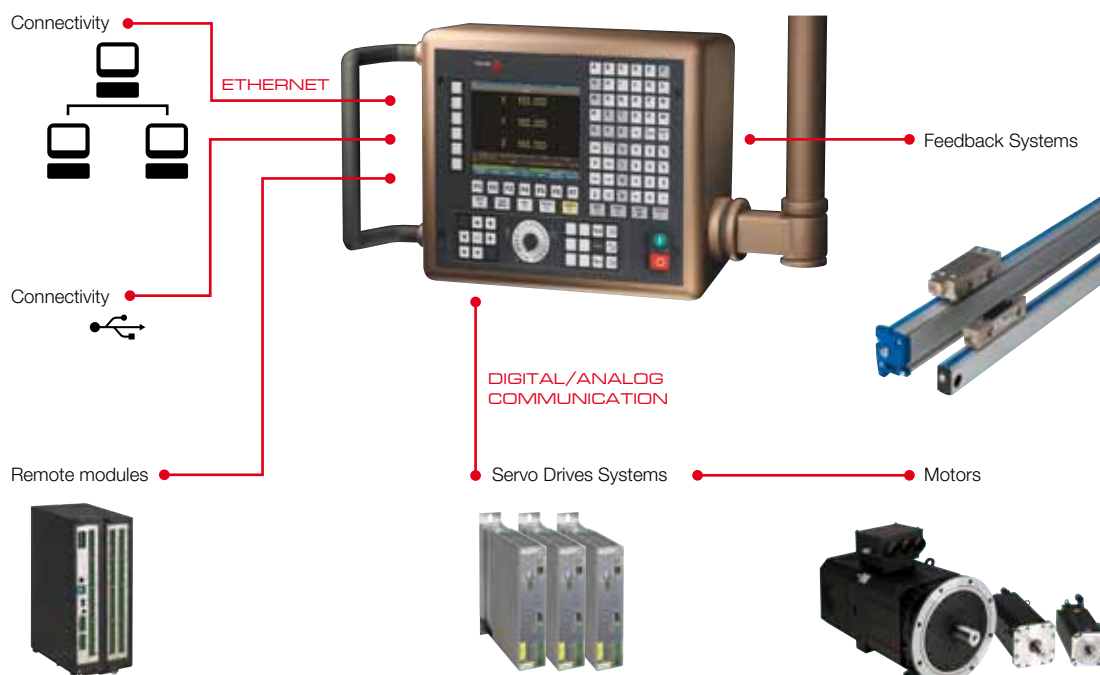
This CNC originates from the platform of the CNC 8055 but adapting its operation and features to the needs of simpler machines simplifying the operator's everyday operation.

Integral solution

With this product, Fagor Automation continues with its philosophy of offering an integral solution for machines considering all the devices and servo systems that make up the machine in order to achieve its maximum performance while making the operator's job easier.
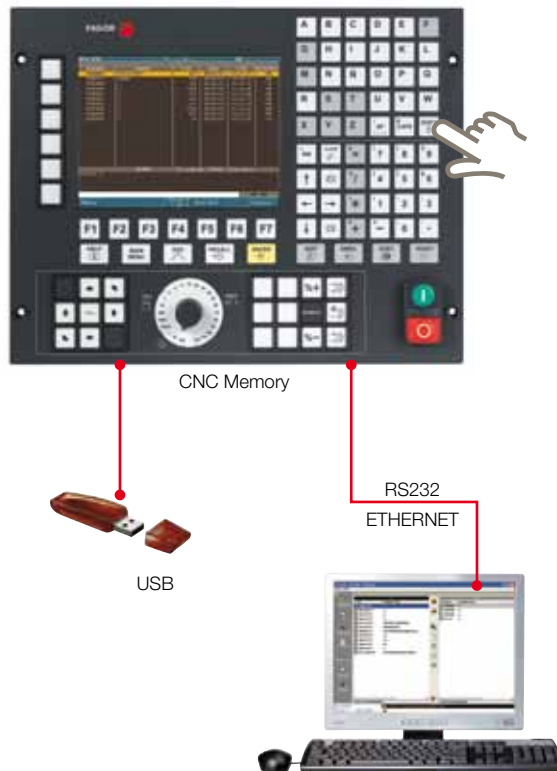
When using several suppliers, integrating all those systems to make them work reliably and in coordination becomes cumbersome and often complicated.

Fagor Automation also offers the possibility to integrate third-party systems in combination with their products in order to provide the manufacturer flexibility when selecting the components of his machines.

Connectivity

ETHERNET

Feedback Systems

Connectivity

DIGITAL/ANALOG
COMMUNICATION

Remote modules

Servo Drives Systems

Motors

Operation

Operating with programs

CNC Memory

USB

RS232
ETHERNET

The Fagor CNC 8037 offers the user several ways to save his programs.

CNC memory

The units come with 1 MB of RAM memory and a 512 MB Compact Flash as standard for the user to save his programs.

Remote memory

They also offer the possibility to use the memory of a remote PC for the same purpose.
The user can launch (run) those programs in two ways:
- Accessing the PC memory from the CNC and selecting the program.
- Remotely, using the Fagor WinDnc communication software.

Program portability

The operator can use the Ethernet communication ports or the RS232 serial line for exchanging programs with an external PC. A USB connector is also offered to exchange files with a pendrive.

Matchless operation
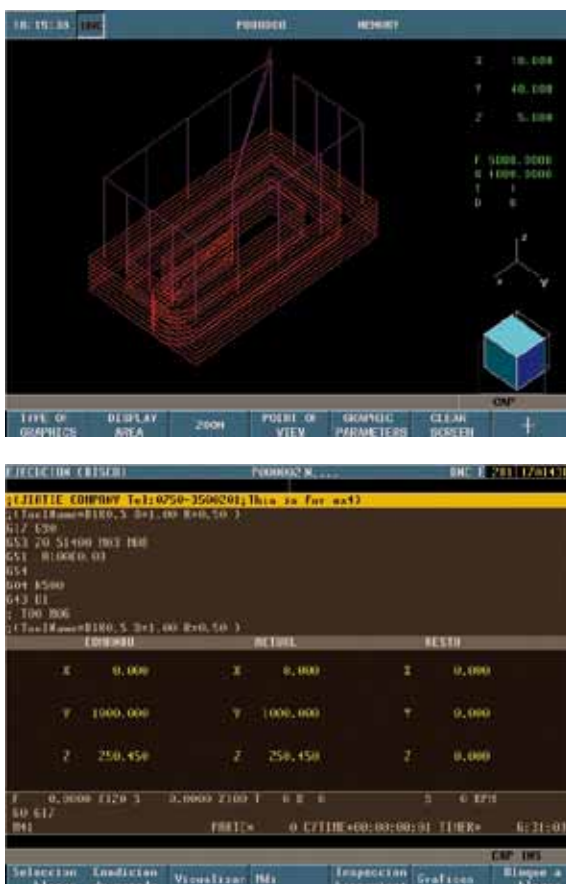
Accessing the various operating modes of the CNC 8037 is fast and intuitive through hot keys and submenus.

The user can run a simulation of the part before starting its real execution being able to:
- Check that the machining paths have been properly programmed and no unexpected movements take place.
- Check that the part has been properly programmed.
- Run a part execution time estimation. This feature is very useful when making parts on demand because it helps calculate the budget by estimating how long it will take to make the parts.

The user has the possibility to advance work while executing the program. The CNC 8037 offers the "background programming" feature that allows editing new programs while executing a different program. Machine productivity may be increased thanks to this type of features.

Programming
Flexible and intuitive

The ISO language offered by all the models of the CNC 8037 may be used for large series where optimizing the program is most important so execution time is as short as possible.

Teach-in editing

Teach-in editing

With the CNC 8037, it is possible to save the manual operations of the operator in a single program. This helps operators who are not used to CNC machine create programs very intuitively and execute them later on without having to repeat the whole manual process.

To program the coordinates, just jog the machine with the JOG keys or with the electronic handwheel to the desired position and press the key of the axis or axes to be programmed. The CNC generates a block to move to that position.

By combining features like the interactive editor and the Teach-in editor, going from the blueprint of the part to machining it is done easily and intuitively in just a few steps, even for users coming from conventional machines without prior programming knowledge.

Editing through predefined cycles

The ISO language helps optimize the execution of programs to achieve the best machining time. For that, it requires taking into account all the machine movements, machining passes, tools, axis feed rates, spindle speed, etc. which increases the chances of making mistakes that could cause personal injury or damage to the machine.

In order to minimize these risks and making programming easier, the CNC 8037 offers a long list of predefined cycles (called canned cycles).

Machine productivity increases thanks to the fact that these cycles require very little data to define the whole machining process. Programming time is reduced considerably.

On the other hand, using these can cycles minimizes risks when dealing with movements because they take all preset machining conditions under consideration.

Editing through predefined cycles

G87 G98/G99 X Y Z I J K B C D H L V

4
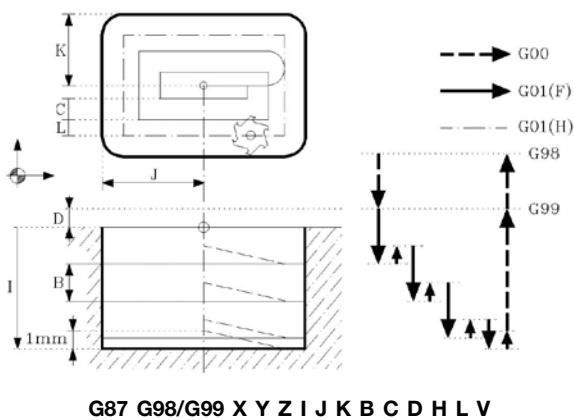
Interactive editor

Within ISO programming, Fagor offers an interactive editor for making more complex parts. It is a dialog-based guided editing method. The CNC guides the operator through the help screens that request the data for the selected operation.

In the case of predefined cycles mentioned earlier, the user needs to know the various codes and variables for the operation to perform; i.e. he needs prior knowledge. With this programming system, no expert ISO programming knowledge is required, just the basics.

This editing method only lets you enter the requested data, hence making it impossible to generate wrong or incomplete blocks. The cycle will consider all the movements, machining passes, tools, axis feed rates, spindle speeds, consequently preventing programming errors and potential risks at the machine.

Interactive editor

Help

Calibrations

For proper machining, the CNC has to know the dimensions of the tools. Fagor Automation offers several options for setting them:

- After pre-setting off the machine, entering that data into the CNC.
- Using a master part of known dimensions. Just approach the tool and touch the part so the CNC automatically calculates and assumes the real dimensions of the tool.

Corrective actions

While using the tools, the user can take different corrective actions:

- Compensate for tool wear. Fagor Automation offers the possibility to make this correction either manually or automatically using the cycles developed for this purpose.
- Check tool status. The operator can interrupt the execution of the machining operation and if he detects tool deficiencies, he can apply corrections or replace it with another one if necessary.
- If no identical tool is available, Fagor CNC's let the operator select another one of different characteristics (length, radius). In this case, the CNC recalculates the next machining paths according to the new selected tool.

Zero offsets

With the CNC 8037, it is possible to define several reference points on the machine and save them in memory to be used later on. In later machining operations, the user can recover these reference points without having to calculate them again and, thus, avoid possible errors.

Corrective actions

Zero offsets

Technical characteristics

	CNC 8037	
	Lathe	Mill

System resources

Maximum axis configuration	2	3
Maximum configuration of spindles	1	1
User memory (RAM)	1 MB	1 MB
Internal hard disk (CF)	512 MB	512 MB
Block processing time	7 ms	7 ms
Maximum local digital I/O	40/24	40/24
Expansion Remote digital I/O	Opt	Opt
Digital CAN servo system	Opt	Opt
Analog servo drives	Std	Std

Generic features

Look-ahead blocks	75	75
Maximum number of tools	100	100
Maximum number of tool offset	255	255
Ethernet	Opt	Opt
USB	Std	Std
RS232	Std	Std
Setup assistance	Std	Std
Bidirectional leadscrew compensation	Std	Std
Languages supported	13 (*)	13 (*)
Path handwheel	Std	Std
Feed handwheel	Std	Std
Simulation with execution time estimate	Std	Std
Graphics with tool path lines	Std	Std
Machining canned cycles	Std	Std
Electronic threading and with variable-pitch	–	Std
Interruption subroutines	Std	Std
Feedrate as an inverted function of time	Std	Std
Scaling factor applied to one or more axes	Std	Std
Coordinate system rotation	Std	Std
Rigid tapping	Std	Std

(*) English, Spanish, Basque, Portuguese, French, Italian, German, Dutch, Czech, Polish, Russian, Mainland Chinese and Turkish.

FAGOR

FAGOR AUTOMATION

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IQNet

Fagor Automation holds the ISO 9001
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www.fagorautomation.com

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