CNC FAGOR 8035

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FAGOR AUTOMATION

Tool Inspection

Tool inspection makes the operator's job easier allowing him to move the axes after interrupting the program, to check tool status, replace it if necessary and resume the program after repositioning the axes.

The new selected tool needs not be identical to the previous one; if another tool of different characteristics is selected, the CNC recalculates the next machining operation according to the new tool.

Likewise, activating the MDI mode during tool inspection and executing any M, S or T function makes it possible to adapt the machining functions to the new tool.

Great memory capacity

It has a 256 KB RAM memory for editing and executing part-programs. It also has a 128 MB compact flash memory for storing user programs, the CNC configuration and the PLC program.

USB connector

The USB connector may be used to upload and download part-programs, tables and parameters from/to an external memory device.

Working with CAD-CAM

For those who use CAD-CAM , the 8035 CNC converts and executes, through WIN DNC, files and profiles generated in DXF format.

Program compatibility

The WINDNC application may be used to run at the 8035 CNC programs that were edited at older CNC models 8000, 8010 and 8025.

Thread cutting operations

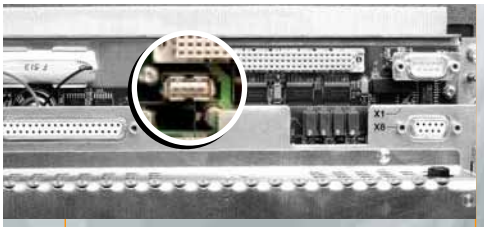
On lathe models, besides the typical turning operations (turning, grooving, facing, etc.), it is possible to make all kinds of threads: longitudinal, taper, on the face, with variable pitch, etc. Multiple-entry (multi-start) threads can also be defined.

The thread repair function offered by the 8035 CNC is ideal for restoring parts having worn out threads.

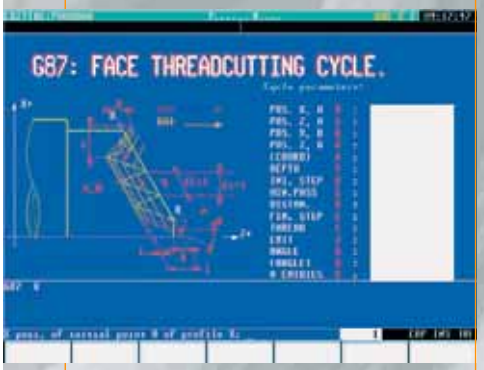
Retrace function

It makes it possible to interrupt a machining operation and withdraw the tool following the same machining path backwards. It is very useful in applications that due to the way machining is done do not allow any other way to withdraw the tool: EDM, laser cutting, plasma cutting, etc.

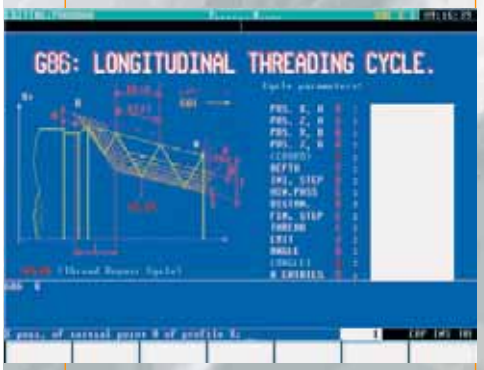
This feature prevents possible damage to the part or having to perform complex operations to withdraw the tool.



USB connection



Face threading



Longitudinal threading

Unmatched operating ease with so many features

The FAGOR 8035 CNC, thanks to its operating ease and its numerous features, is the ideal CNC for 3-axis milling machines and machining centers as well 2-axis lathes and other kinds of machines (engraving, routers, Oxicutting, etc.).

It's operating ease makes the operator's job easier; the screen offers the operator all the necessary information: axis position and feedrate, spindle speed, selected tool, etc.

This CNC is available in twelve languages: English, Spanish, Portuguese, Chinese, Russian, French, Italian, German, Dutch, Czech, Polish and Basque.

ISO language programming

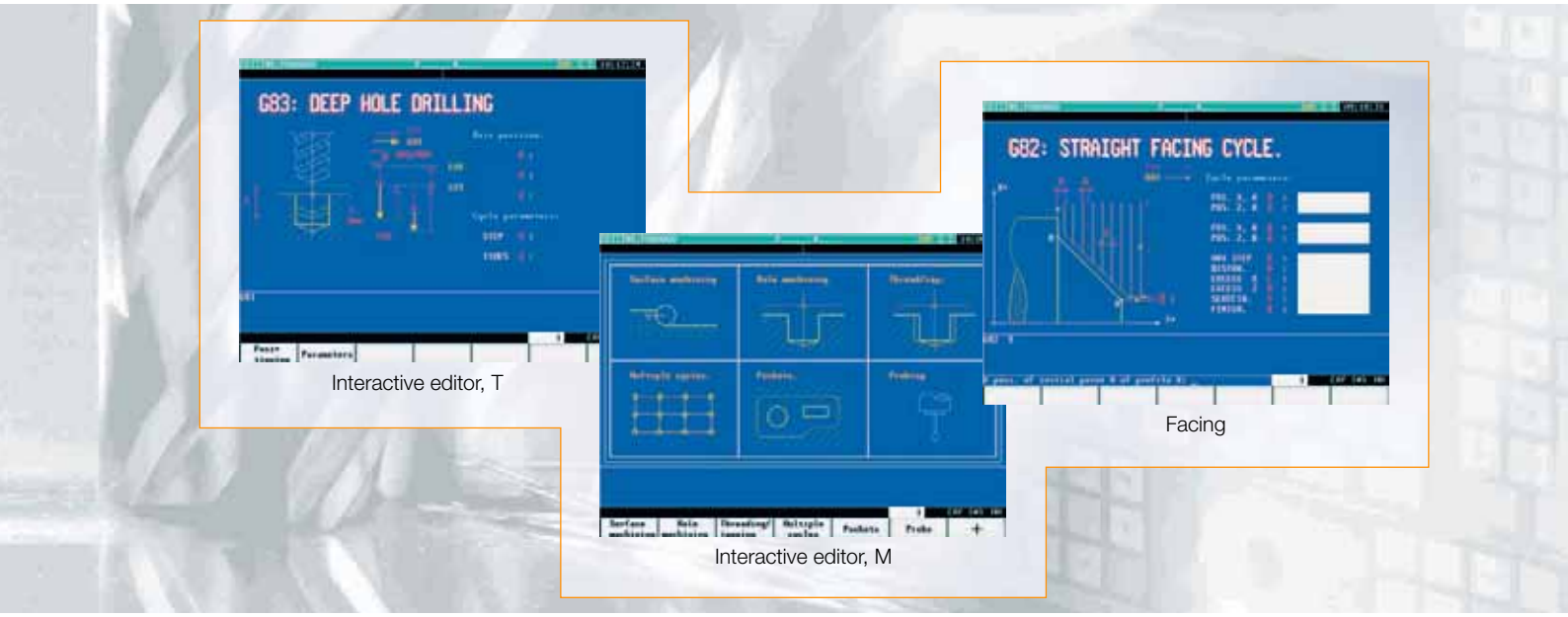
The FAGOR 8035 CNC is programmed in ISO language, it offers an interactive canned cycle editor, Teach-in editing, tool inspection, etc.

The "T" model for lathes and the "M" model for milling models and machining centers come with ten canned cycles and all the specific operations your machine needs.

Interactive editor for canned cycles

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. No expert ISO programming knowledge is required, just the basics.

The quality of the generated programs is excellent. This editing method only lets enter the requested data, thus being impossible to generate wrong or incomplete blocks.



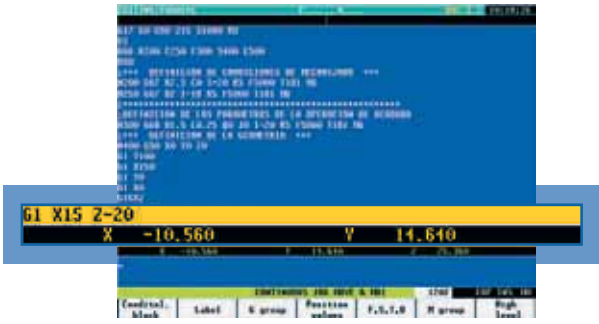
Interactive editor, T

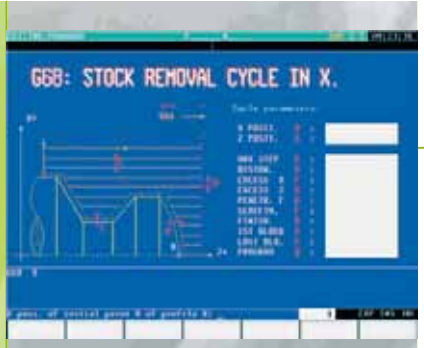
Facing

Interactive editor, M

Teach-in editing

It is an interactive mode that allows the CNC to operate as a manual machine. 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.





X axis roughing

Drilling

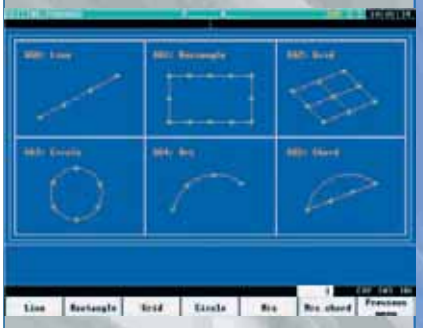
CNC 8035 T

- For lathes and turning centers
- For 2 axes and 1 spindle
- MM and inch programming
- Cartesian and Polar coordinate programming
- Home search
- Spindle rpm and Constant Surface Speed (CSS)
- Linear and circular interpolation
- Electronic threading and variable-pitch threads
- Preparatory functions: Mirror image and scaling factor
- Tool compensation (length, shape of the cutter and nose radius)
- Probing
- Machining canned cycles:
  - · Pattern repeat
  - · Roughing along the X axis
  - · Roughing along the Z axis
  - · Turning of straight sections
  - · Facing of straight sections
  - · Axial drilling and tapping
  - · Turning of arcs
  - · Facing of arcs
  - · Longitudinal and face threading
  - · Rigid tapping
  - · Grooving along the X axis
  - · Grooving along the Z axis

CNC 8035 M

- For milling machines and machining Centers
- For 3 axes and 1 spindle
- MM and inch programming
- Programming in Cartesian, Polar or cylindrical coordinates
- Home search
- Linear, circular and helical interpolation
- Electronic threading and variable-pitch threads
- Preparatory functions: Mirror image, scaling factor, pattern rotation
- Tool radius and length compensation
- Collision detection
- Probing
- Retracing function
- Machining canned cycles:
  - · Drilling with dwell
  - · Deep hole drilling with constant peck
  - · Variable-peck deep hole drilling
  - · Boring with rapid withdrawal
  - · Boring with withdrawal at working feedrate
  - · Drilling
  - · Tapping
  - · Rigid tapping
  - · Reaming
  - · Circular pocket
  - · Rectangular pocket
- Multiple machining
  - · In a circular pattern
  - · In an arc
  - · Programmed using an arc-chord
  - · In a straight line
  - · In a parallelogram pattern
  - · In a grid pattern

Circular pocket



Multiple machining

Models

Lathe	
Configuration	Sales Reference
Monochrome LCD	CNC 8035 T MON
Color LCD	CNC 8035 T COL
Color LCD an CAN Connection	CNC 8035 T COL CAN

Mill	
Configuration	Sales Reference
Monchrome LCD	CNC 8035 M MON
Monochrome LCD plus Retracing function	CNC 8035 M MON R
Color LCD	CNC 8035 M COL
Color LCD, Retracing function	CNC 8035 M COL R
Color LCD, Retracing function, Ethernet and CAN	CNC 8035 M COL R CAN

General Characteristics

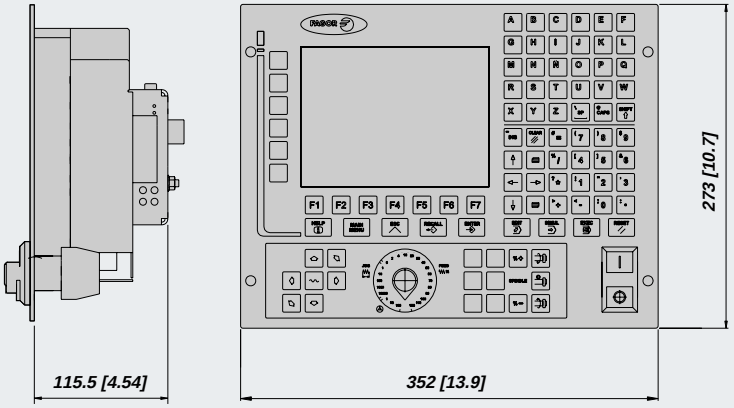
CONFIGURATION	8035
Full alphanumeric keyboard	●
Configurable keys	12
Manageable tools	255
User memory (RAM)	
User memory (RAM)	256 K
KEYCF (Compact Flash)	128 MB
Communication	
RS 232 (up to 115.200 Bd)	●
DNC	●
Ethernet 100 Mhz T base	▲
USB for program backup	●
Axis adjustment	
Feed forward / AC Forward	●
75-block Look ahead	●
System architecture	
Hardware configuration	Central unit integrated into the monitor
Monitor	▲ 7.5" Monochrome LCD ▲ 7.5" Color LCD
Feedback inputs - Spindle: TTL and differential TTL - Axes: Vpp, TTL and differential TTL	● 4 for axes and spindle ● 2 specific for electronic handwheels
Analog inputs (±10 V)	● 4 for axes and spindle
Probe inputs, 5 V (0.25mA) or 24V (0.3mA)	● 2
Digital inputs and outputs (150 mA)	● 40 I / 24 O
CAN for digital connection with the drives	▲
Processing time	
Block processing time	10 ms
Minimum position loop	4 ms
PLC cycle time (ms / 1,000 instructions)	3
Servo Drive Systems	
Analog	●
Digital CAN (for ACSD / SPD drives)	▲

● Standard ▲ Option

FEATURES	M	T
Spindle		
Spindle orientation M19	●	●
Interpolation		
Linear, Circular, Helical	●	●
Retrace function	▲	-
Compensations		
Tool length and radius	●	●
Tool geometry	-	●
Graphics		
Tool path	●	●
3 simultaneous views (with depth simulation)	●	-
Operation related		
Simulation with execution time estimate	●	●
Look-ahead of N blocks to avoid tool collision	●	●
Programming related functions		
Feedrate as an inverted function of time	●	●
Canned cycles		
Machining canned cycles	●	●
Multiple-positioning canned cycles	●	-
Setup assistance	●	●
Rigid Tapping	●	●

● Standard ▲ Option - Not available

Dimensions in mm (inches)



Backed by a worldwide leader group

FAGOR AUTOMATION has been manufacturing measuring and control systems for machine-tools for over 25 years and excels by guaranteeing the most complete and competitive range of CNC's, servo drive systems, DRO's and feedback systems.

FAGOR AUTOMATION exports over 80% of its total production to the industrialized world through a significant distribution network worldwide, including almost 30 branch offices, more than 45 distributors and service centers in 50 countries.

FAGOR AUTOMATION is part of Mondragón Corporation, one of the most important European corporations, with more than 250 companies and more than 100,000 employees distributed in 4 sectors: financial, industrial, distribution and knowledge (training centers and R&D centers).The industrial division FAGOR AUTOMATION belongs to covers a wide range of industrial sectors and it occupies leading positions in all of them.

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