



FAGOR AUTOMATION

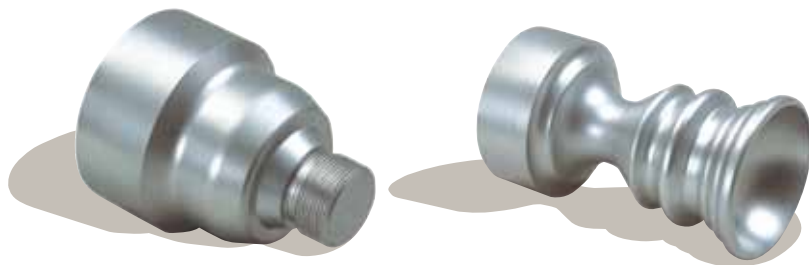
CNC 8037

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.

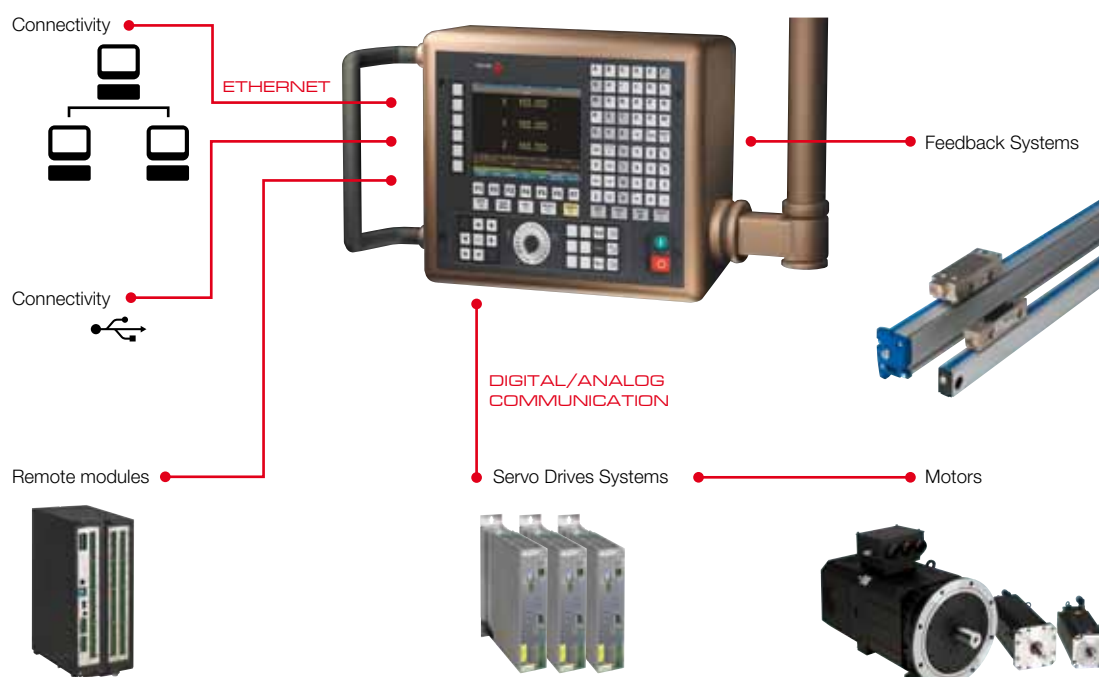
This CNC originates from the platform of the CNC 8055 but adapting its operation and features to the needs of simpler machines simplifying the operator's everyday operation.

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.

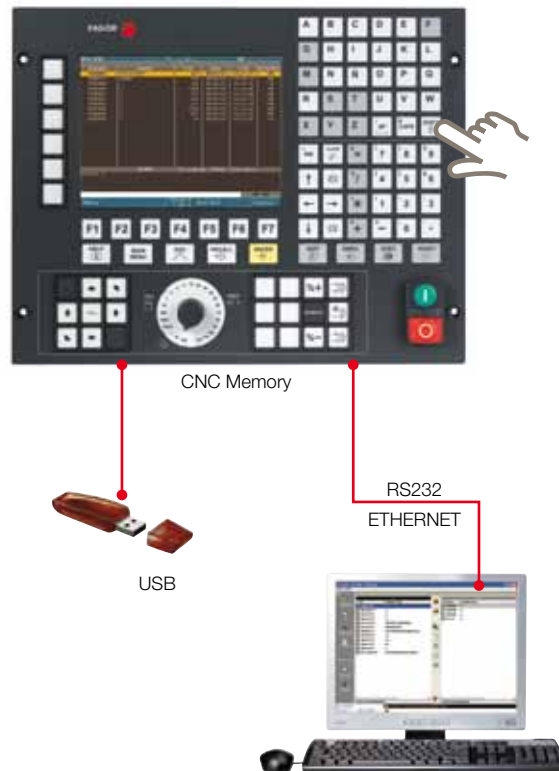
When using several suppliers, integrating all those systems to make them work reliably and in coordination becomes cumbersome and often complicated.

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.



Operation

Operating with programs



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.

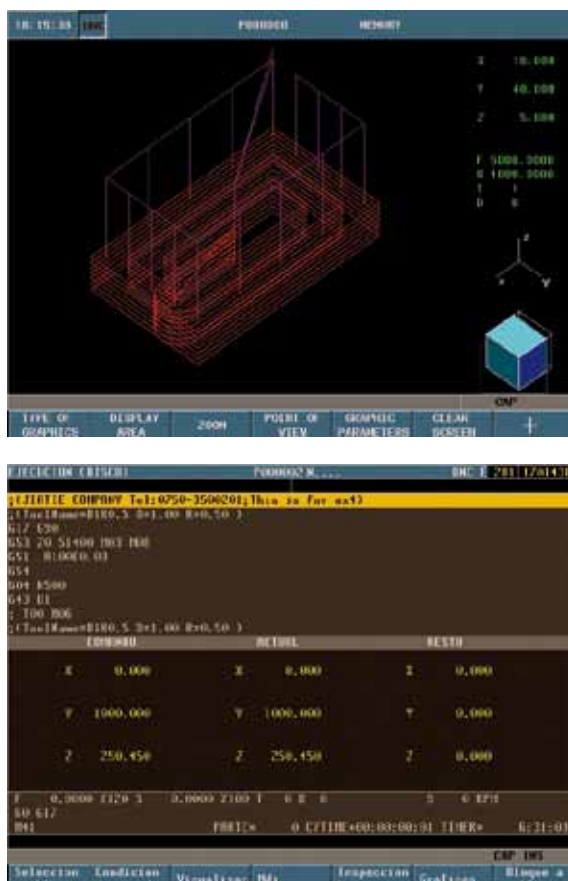
The user can launch (run) those programs in two ways:

- 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

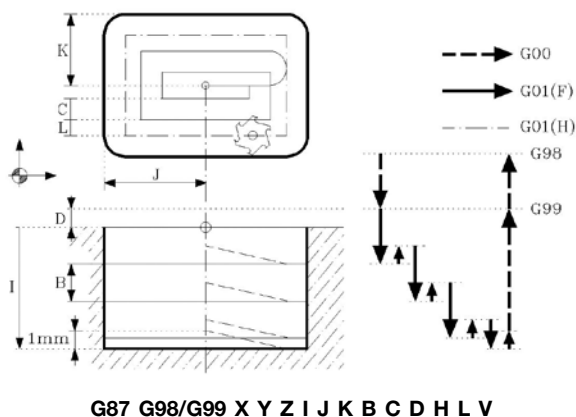
The ISO language helps optimize the execution of programs to achieve the best machining time. For that, it requires taking into account all the machine movements, machining passes, tools, axis feed rates, spindle speed, etc. which increases the chances of making mistakes that could cause personal injury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



Interactive editor

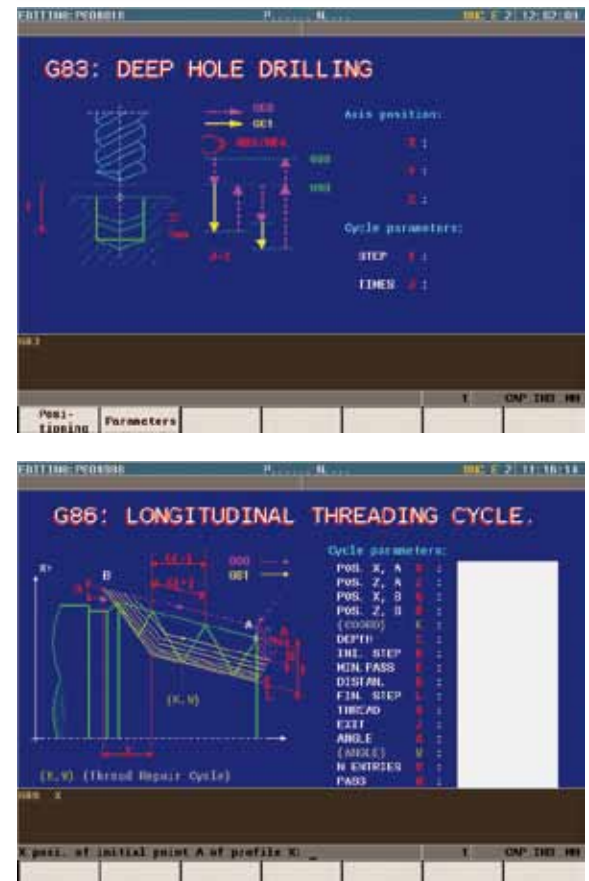
Within ISO programming, Fagor offers an interactive editor for making more complex parts. It is a dialog-based guided editing method. The CNC guides the operator through the help screens that request the data for the selected operation.

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

For preparation and during execution

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

ZERO OFFSETS				
FLC	X	Y	Z	
001	0.0000	0.0000	0.0000	
002	0.0000	0.0000	0.0000	
003	0.0000	0.0000	0.0000	
004	17.8322	10.5002	3.4258	
005	20.9918	20.0000	3.4258	
006	0.0000	0.0000	0.0000	
007	0.0000	0.0000	0.0000	
008	0.0000	0.0000	0.0000	
009	0.0000	0.0000	0.0000	
010	0.0000	0.0000	0.0000	
011	0.0000	0.0000	0.0000	
012	0.0000	0.0000	0.0000	
013	0.0000	0.0000	0.0000	
014	0.0000	0.0000	0.0000	
015	0.0000	0.0000	0.0000	
016	0.0000	0.0000	0.0000	
017	0.0000	0.0000	0.0000	
018	0.0000	0.0000	0.0000	
019	0.0000	0.0000	0.0000	
020	0.0000	0.0000	0.0000	
021	0.0000	0.0000	0.0000	
022	0.0000	0.0000	0.0000	
023	0.0000	0.0000	0.0000	
024	0.0000	0.0000	0.0000	
025	0.0000	0.0000	0.0000	
026	0.0000	0.0000	0.0000	
027	0.0000	0.0000	0.0000	
028	0.0000	0.0000	0.0000	
029	0.0000	0.0000	0.0000	
030	0.0000	0.0000	0.0000	
031	0.0000	0.0000	0.0000	
032	0.0000	0.0000	0.0000	
033	0.0000	0.0000	0.0000	
034	0.0000	0.0000	0.0000	
035	0.0000	0.0000	0.0000	
036	0.0000	0.0000	0.0000	
037	0.0000	0.0000	0.0000	
038	0.0000	0.0000	0.0000	
039	0.0000	0.0000	0.0000	
040	0.0000	0.0000	0.0000	
041	0.0000	0.0000	0.0000	
042	0.0000	0.0000	0.0000	
043	0.0000	0.0000	0.0000	
044	0.0000	0.0000	0.0000	
045	0.0000	0.0000	0.0000	
046	0.0000	0.0000	0.0000	
047	0.0000	0.0000	0.0000	
048	0.0000	0.0000	0.0000	
049	0.0000	0.0000	0.0000	
050	0.0000	0.0000	0.0000	
051	0.0000	0.0000	0.0000	
052	0.0000	0.0000	0.0000	
053	0.0000	0.0000	0.0000	
054	0.0000	0.0000	0.0000	
055	0.0000	0.0000	0.0000	
056	0.0000	0.0000	0.0000	
057	0.0000	0.0000	0.0000	
058	0.0000	0.0000	0.0000	
059	0.0000	0.0000	0.0000	
060	0.0000	0.0000	0.0000	
061	0.0000	0.0000	0.0000	
062	0.0000	0.0000	0.0000	
063	0.0000	0.0000	0.0000	
064	0.0000	0.0000	0.0000	
065	0.0000	0.0000	0.0000	
066	0.0000	0.0000	0.0000	
067	0.0000	0.0000	0.0000	
068	0.0000	0.0000	0.0000	
069	0.0000	0.0000	0.0000	
070	0.0000	0.0000	0.0000	
071	0.0000	0.0000	0.0000	
072	0.0000	0.0000	0.0000	
073	0.0000	0.0000	0.0000	
074	0.0000	0.0000	0.0000	
075	0.0000	0.0000	0.0000	
076	0.0000	0.0000	0.0000	
077	0.0000	0.0000	0.0000	
078	0.0000	0.0000	0.0000	
079	0.0000	0.0000	0.0000	
080	0.0000	0.0000	0.0000	
081	0.0000	0.0000	0.0000	
082	0.0000	0.0000	0.0000	
083	0.0000	0.0000	0.0000	
084	0.0000	0.0000	0.0000	
085	0.0000	0.0000	0.0000	
086	0.0000	0.0000	0.0000	
087	0.0000	0.0000	0.0000	
088	0.0000	0.0000	0.0000	
089	0.0000	0.0000	0.0000	
090	0.0000	0.0000	0.0000	
091	0.0000	0.0000	0.0000	
092	0.0000	0.0000	0.0000	
093	0.0000	0.0000	0.0000	
094	0.0000	0.0000	0.0000	
095	0.0000	0.0000	0.0000	
096	0.0000	0.0000	0.0000	
097	0.0000	0.0000	0.0000	
098	0.0000	0.0000	0.0000	
099	0.0000	0.0000	0.0000	
100	0.0000	0.0000	0.0000	
101	0.0000	0.0000	0.0000	
102	0.0000	0.0000	0.0000	
103	0.0000	0.0000	0.0000	
104	0.0000	0.0000	0.0000	
105	0.0000	0.0000	0.0000	
106	0.0000	0.0000	0.0000	
107	0.0000	0.0000	0.0000	
108	0.0000	0.0000	0.0000	
109	0.0000	0.0000	0.0000	
110	0.0000	0.0000	0.0000	
111	0.0000	0.0000	0.0000	
112	0.0000	0.0000	0.0000	
113	0.0000	0.0000	0.0000	
114	0.0000	0.0000	0.0000	
115	0.0000	0.0000	0.0000	
116	0.0000	0.0000	0.0000	
117	0.0000	0.0000	0.0000	
118	0.0000	0.0000	0.0000	
119	0.0000	0.0000	0.0000	
120	0.0000	0.0000	0.0000	
121	0.0000	0.0000	0.0000	
122	0.0000	0.0000	0.0000	
123	0.0000	0.0000	0.0000	
124	0.0000	0.0000	0.0000	
125	0.0000	0.0000	0.0000	
126	0.0000	0.0000	0.0000	
127	0.0000	0.0000	0.0000	
128	0.0000	0.0000	0.0000	
129	0.0000	0.0000	0.0000	
130	0.0000	0.0000	0.0000	
131	0.0000	0.0000	0.0000	
132	0.0000	0.0000	0.0000	
133	0.0000	0.0000	0.0000	
134	0.0000	0.0000	0.0000	
135	0.0000	0.0000	0.0000	
136	0.0000	0.0000	0.0000	
137	0.0000	0.0000	0.0000	
138	0.0000	0.0000	0.0000	
139	0.0000	0.0000	0.0000	
140	0.0000	0.0000	0.0000	
141	0.0000	0.0000	0.0000	
142	0.0000	0.0000	0.0000	
143	0.0000	0.0000	0.0000	
144	0.0000	0.0000	0.0000	
145	0.0000	0.0000	0.0000	
146	0.0000	0.0000	0.0000	
147	0.0000	0.0000	0.0000	
148	0.0000	0.0000	0.0000	
149	0.0000	0.0000	0.0000	
150	0.0000	0.0000	0.0000	
151	0.0000	0.0000	0.0000	
152	0.0000	0.0000	0.0000	
153	0.0000	0.0000	0.0000	
154	0.0000	0.0000	0.0000	
155	0.0000	0.0000	0.0000	
156	0.0000	0.0000	0.0000	
157	0.0000	0.0000	0.0000	
158	0.0000	0.0000	0.0000	
159	0.0000	0.0000	0.0000	
160	0.0000	0.0000	0.0000	
161	0.0000	0.0000	0.0000	
162	0.0000	0.0000	0.0000	
163	0.0000	0.0000	0.0000	
164	0.0000	0.0000	0.0000	
165	0.0000	0.0000	0.0000	
166	0.0000	0.0000	0.0000	
167	0.0000	0.0000	0.0000	
168	0.0000	0.0000	0.0000	
169	0.0000	0.0000	0.0000	
170	0.0000	0.0000	0.0000	
171	0.0000	0.0000	0.0000	
172	0.0000	0.0000	0.0000	
173	0.0000	0.0000	0.0000	
174	0.0000	0.0000	0.0000	
175	0.0000	0.0000	0.0000	
176	0.0000	0.0000	0.0000	
177	0.0000	0.0000	0.0000	
178	0.0000	0.0000	0.0000	
179	0.0000	0.0000	0.0000	
180	0.0000	0.0000	0.0000	
181	0.0000	0.0000	0.0000	
182	0.0000	0.0000	0.0000	
183	0.0000	0.0000	0.0000	
184	0.0000	0.0000	0.0000	
185	0.0000	0.0000	0.0000	
186	0.0000	0.0000	0.0000	
187	0.0000	0.0000	0.0000	
188	0.0000	0.0000	0.0000	
189	0.0000	0.0000	0.0000	
190	0.0000	0.0000	0.0000	
191	0.0000	0.0000	0.0000	
192	0.0000	0.0000	0.0000	
193	0.0000	0.0000	0.0000	
194	0.0000	0.0000	0.0000	
195	0.0000	0.0000	0.0000	
196	0.0000	0.0000	0.0000	
197	0.0000	0.0000	0.0000	
198	0.0000	0.0000	0.0000	
199	0.0000	0.0000	0.0000	
200	0.0000	0.0000	0.0000	

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 AUTOMATION

Fagor Automation, S. Coop.

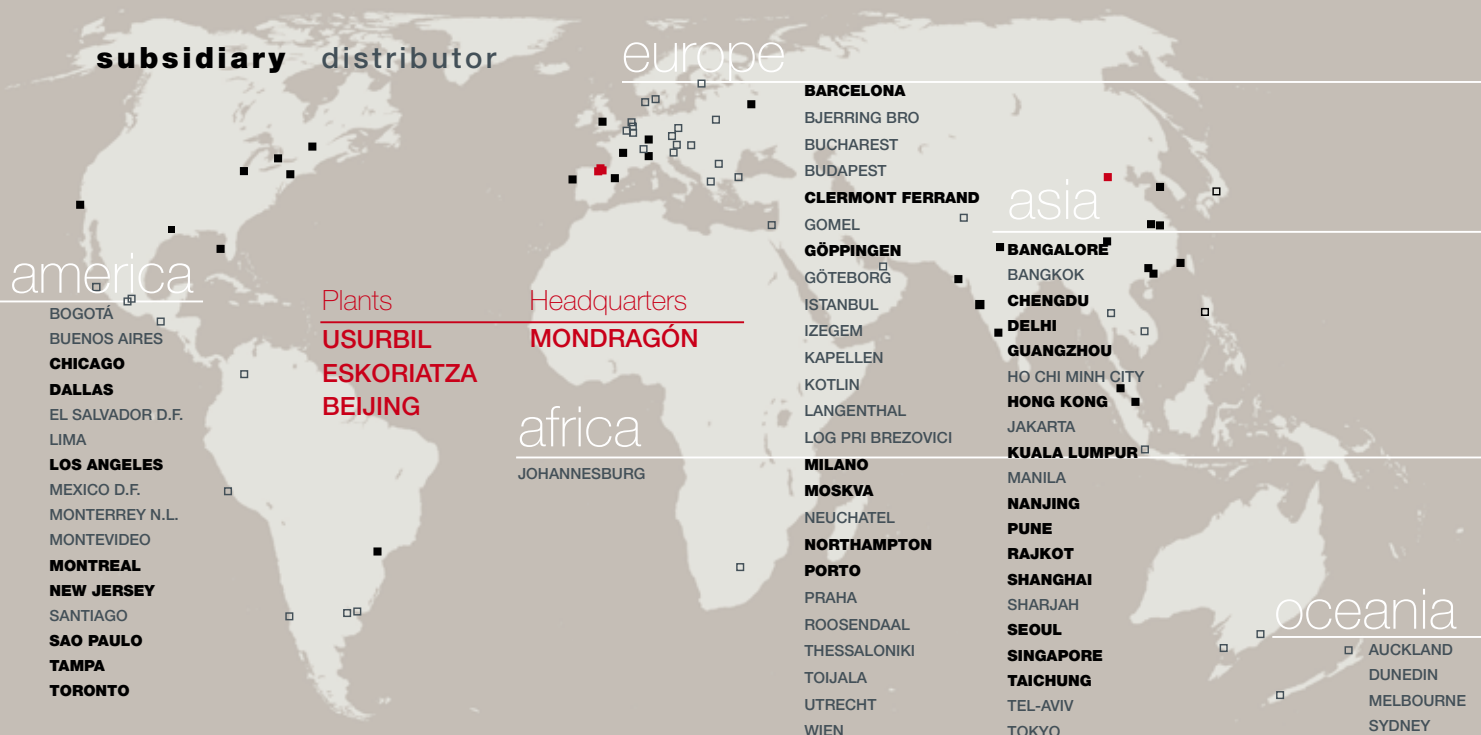
Bº San Andrés, 19
E-20500 Arrasate - Mondragón
SPAIN
Tel.: +34 943 719 200
Fax.: +34 943 791 712
E-mail: info@fagorautomation.es



Fagor Automation holds the ISO 9001
Quality System Certificate and the
CE Certificate for all products manufactured.

www.fagorautomation.com

FAGOR AUTOMATION shall not be held responsible for any printing or transcribing errors in this catalog and reserves the right to make any changes to the characteristics of its products without prior notice.



worldwide automation