

FAGOR AUTOMATION

Ordering Handbook

CNC 8060 FL + MAB

Ref. 1703

Original instructions

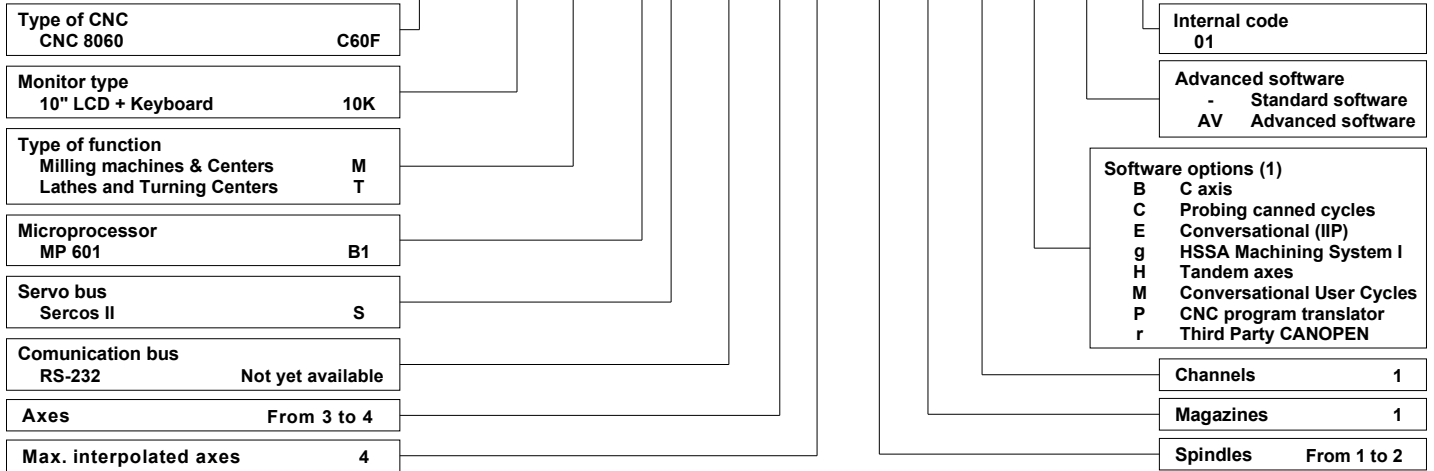


FAGOR AUTOMATION

DENOMINATIONS

CNC 8060 FL

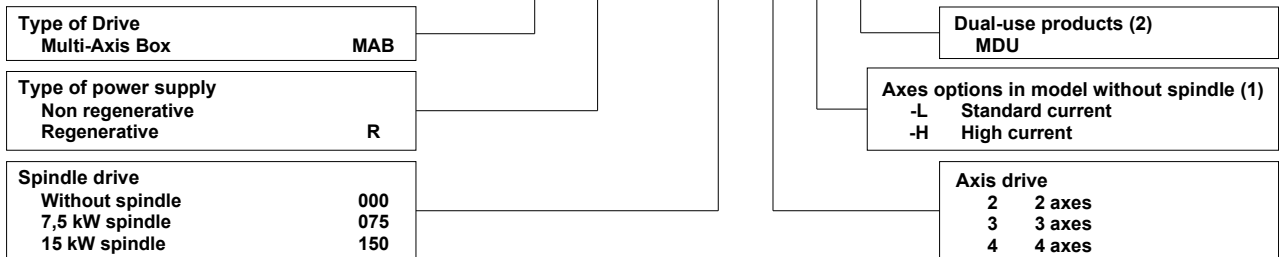
C60F - 10K - - B1S - - - - - 1 - 1 - - -



(1) Depends on the type of function

MAB

MAB - - -



(1) Only for model without spindle, if 'Spindle drive' = 000.

(2) Products manufactured by FAGOR AUTOMATION since April 1st 2014 will include "-MDU" in their identification if they are included on the list of dual-use products according to regulation UE 428/2009 and require an export license depending on destination.

CONFIGURATION

CENTRAL UNIT



8060 CNC with 10.4" LCD and Operator Panel

Code	Model	Description
83600016	8060 FL-M-ICU	Integrate Central Unit for Milling machines
83600019	8060 FL-T-ICU	Integrate Central Unit for Lathes

Central Unit components

Code	Model	Description
83600031	MP-601	MP-601 Microprocessor
83600050	8060-SERCOS-2	Sercos module

MONITOR & OPERATOR PANEL



10.4" LCD and Operator Panel

Code	Model	Description
83600004	MONITOR-LCD-10K-001	10" LCD Monitor + Keyboard

MODELS & SOFTWARE OPTIONS

			8060 FL	
			M	T
Monitor			10K	10K
AXES		(min.-max.)	3 .. 4	3 .. 4
INTERPOLATED AXES		(max.)	4	4
SPINDLES		(min.-max.)	1	1 .. 2
MAGAZINES		(min.-max.)	1	1
CHANNELS		(min.-max.)	1	1
Max. AXES + SPINDLES			5	5
83600076		SOFT 8060 ADDIT AXES	()	()
83600078		SOFT 8060 ADDIT SPINDLES	(-)	()
83600079		SOFT 8060 ADDIT TOOL MAGAZ	(-)	(-)
83600077		SOFT 8060 ADDIT CHANNELS	(-)	(-)
		SOFT TOOL RADIUS COMP	(A)	(A)
		SOFT EDIT/SIMUL	(A)	(A)
		SOFT PROFILE EDITOR	(A)	(A)
		SOFT DIGITAL SERCOS	(A)	(A)
		MAB SYSTEM	(A)	(A)
83600101	g	SOFT 60 HSSA I MACHINING SYSTEM	()	()
83600081	C	SOFT 60 PROBE	()	()
83600080	B	SOFT 60 C AXIS	()	()
83600094	H	SOFT 60 TANDEM AXES	()	()
83740065	r	SOFT THIRD PARTY CANOPEN	()	()
83600082	E	SOFT 60 IIP CONVERSATIONAL	()	()
83600089	M	SOFT 60 CONV USER CYCLES	()	()
83600096	P	SOFT 60 PPTRANS	()	()

(-)	Not available
()	Optional Feature
(A)	Standard feature

SOFTWARE DESCRIPTIONS

SOFT TOOL RADIUS COMP (Standard on all models)

Tool compensation allows programming the contour to be machined based on part dimensions and without taking into account the dimensions of the tool that will be used later on. This avoids having to calculate and define the tool path depending on the radius of the tool.

SOFT EDIT/SIMUL (Standard on all models)

It allows editing, modifying and simulating a part-program.

SOFT PROFILE EDITOR (Standard on all models)

It allows editing part profiles graphically and importing DXF files.

SOFT DIGITAL SERCOS (Standard on all models)

Sercos drive system bus.

SOFT 60 HSSA MACHINING SYSTEM (HSSA I)

The acronym "HSSA" means High Speed Surface Accuracy. It is the new improved version of HSC (High Speed Cutting).

HSSA algorithm calculations make it possible to optimize high speed machining. This achieves higher cutting speeds, smoother contours, better surface finish and higher accuracy.

This system is now offered in two levels, according to the CNC models, providing a choice between the **HSSA I** system in the CNC 8060 and the **HSSA II** system in the CNC 8070, which has more resources for faster speed.

SOFT 60 PROBE

The CNC may have two probes; usually a tabletop probe to calibrate tools and a measuring probe to measure the part.

It also offers functions G100, G103 and G104 for programming probing moves.

This feature activates the probing canned cycles that help measuring part surfaces and calibrating tools updating their dimensions.

SOFT 60 C AXIS

It activates the kinematics for working with C axis and their associated machining cycles.

SOFT 60 TANDEM AXES

A tandem axis consists in two motors mechanically coupled (slaved) and making up a single transmission system (axis or spindle). This system is normally used to move the axes on large machines.

The CNC configuration contemplates both axes of the tandem. Only an axis is programmed (the master tandem). The other one (the slave tandem) cannot be programmed, but it is controlled by the CNC.

When activating this feature, it must be borne in mind that for each Tandem axis of the machine, another axis must be added to the whole configuration of the machine. For example, on a large 3-axis lathe (XZ and tailstock), if the tailstock is a Tandem axis, the final purchase order for the machine must indicate 4 axes.

SOFT THIRD PARTY CANOPEN

Enables the use of CANopen non-Fagor modules.

SOFT 60 IIP (Interactive Icon-based Pages) CONVERSATIONAL

This programming system is a conversational language, especially designed for people with no prior programming knowledge or not familiarized with Fagor CNC's. Therefore, an operator of a conventional machine can start working on Fagor CNC in a couple of hours.

Working in conversational mode is easier than in ISO mode. It ensures proper data entry and minimizes the number of operations to be defined. There is no need to work with part-programs.

SOFT 60 CONVERS USER CYCLES

Allows to integrate user cycles in conversational mode.

SOFT PPTRANS

Part-program translator.

ACCESORIES

Code	Model	Description
83600036	COMPACT FLASH 2GB	2 GB external Compact Flash

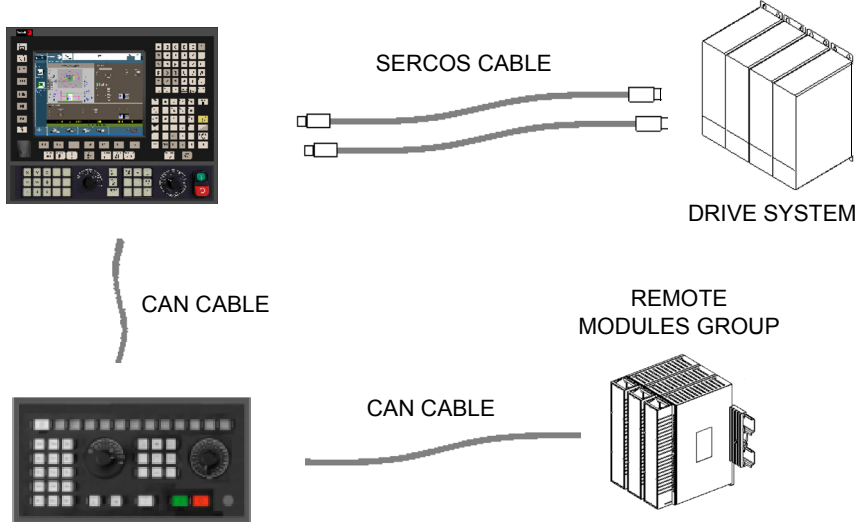
If you are going to use another Compact Flash, always use industrial grade Compact Flash SLC. They support temperatures between -40 °C and +80 °C, and 27 years with 1000 writes per day.

Fagor automation shall not be held responsible for any problems caused by using other lower-quality Compact Flash.

SELECT THE CABLES NECESSARY FOR EACH CONFIGURATION

CENTRAL UNIT IN OPERATOR PANEL

Ready Made cables for CAN Bus (CAN CABLE) and Sercos ring (SFO & SFO-FLEX).



DRIVE System

Each drive module having the Sercos interface option offers a small cable for connecting it to the adjacent module. Only the lines going to the CNC (Back and forth) or the ones joining the far between modules.

SERCOS cables

Sercos optic fiber

1m	SFO-1	03900001
2m	SFO-2	03900002
3m	SFO-3	03900003
5m	SFO-5	03900005
7m	SFO-7	03900007
10m	SFO-10	03900010
12m	SFO-12	03900012

Flexible Sercos optic fiber

10m	SFO-FLEX-10	03910010
15m	SFO-FLEX-15	03910015
20m	SFO-FLEX-20	03910020
25m	SFO-FLEX-25	03910025
30m	SFO-FLEX-30	03910030
35m	SFO-FLEX-35	03910035
40m	SFO-FLEX-40	03910040
40m	SFO-V-FLEX-40	03920040
50m	SFO-V-FLEX-50	03920050
60m	SFO-V-FLEX-50	03920060
75m	SFO-V-FLEX-75	03920075
100m	SFO-V-FLEX-100	03920100

CAN cable for Remote I/Os

5m	CAN CABLE 5M	03780100
10m	CAN CABLE 10M	03780101
15m	CAN CABLE 15M	03780102
20m	CAN CABLE 20M	03780103
25m	CAN CABLE 25M	03780104
30m	CAN CABLE 30M	03780106
35m	CAN CABLE 35M	03780107
40m	CAN CABLE 40M	03780108
45m	CAN CABLE 45M	03780109
50m	CAN CABLE 50M	03780110
75m	CAN CABLE 75M	03780111
100m	CAN CABLE 100M	03780112
150m	CAN CABLE 150M	03780113

MAB MODELS

Code	Model	Description
84500150	MAB -- 000-3 - L	Multi-Axis Box 30A + 15A + 15A
84500151	MAB -- 000-3 - H	Multi-Axis Box 54A + 35A + 35A
84500152	MAB -- 000-4 - L	Multi-Axis Box 30A + 15A + 15A + 35A
84500153	MAB -- 000-4 - H	Multi-Axis Box 54A + 35A + 35A + 35A
84500100	MAB -- 075-2	Multi-Axis Box 7,5 kW + 15A + 15A
84500101	MAB -- 075-3	Multi-Axis Box 7,5 kW + 15A + 15A + 35A
84500102	MAB -- 150-2	Multi-Axis Box 15 kW + 35A + 35A
84500103	MAB -- 150-3	Multi-Axis Box 15 kW + 35A + 35A + 35A
84500110	MAB-R-075-2	Regenerative Multi-Axis Box 7,5 kW + 15A + 15A
84500111	MAB-R-075-3	Regenerative Multi-Axis Box 7,5 kW + 15A + 15A + 35A
84500112	MAB-R-150-2	Regenerative Multi-Axis Box 15 kW + 35A + 35A
84500113	MAB-R-150-3	Regenerative Multi-Axis Box 15 kW + 35A + 35A + 35A

MAINS FILTER

Code	Model	Description
04600075	MAIN FILTER 42A-A	42 Amp. main filter
04600076	MAIN FILTER 75A-A	75 Amp. main filter

CHOKE FILTERS

Code	Model	Description
04380200	CHOKE MAB-R-075-4 filter	3 Phase External inductive filter for MAB-R-075-4
04380201	CHOKE MAB-R-150-4 filter	3 Phase External inductive filter for MAB-R-150-4

MAB	FILTER	CHOKE
MAB--075-2 MAB--075-3	MAIN FILTER 42A-A	-
MAB--150-2 MAB--150-3	MAIN FILTER 75A-A	-
MAB-R-075-2 MAB-R-075-3	MAIN FILTER 42A-A	CHOKE MAB-R-075-4
MAB-R-150-2 MAB-R-150-3	MAIN FILTER 75A-A	CHOKE MAB-R-150-4

SENSOR CABLES

“EEC” sensor cables, with connectors at both ends.

Code	Model	Description
04084103	QC-EEC-FM7-03	QC-EEC-FM7-03 m. cable
04084105	QC-EEC-FM7-05	QC-EEC-FM7-05 m. cable
04084110	QC-EEC-FM7-10	QC-EEC-FM7-10 m. cable
04084115	QC-EEC-FM7-15	QC-EEC-FM7-15 m. cable
04084120	QC-EEC-FM7-20	QC-EEC-FM7-20 m. cable
04084130	QC-EEC-FM7-30	QC-EEC-FM7-30 m. cable
04084150	QC-EEC-FM7-50	QC-EEC-FM7-50 m. cable
04084203	QC-EEC-FM7C-03	QC-EEC-FM7C-03 m. cable
04084205	QC-EEC-FM7C-05	QC-EEC-FM7C-05 m. cable
04084210	QC-EEC-FM7C-10	QC-EEC-FM7C-10 m. cable
04084215	QC-EEC-FM7C-15	QC-EEC-FM7C-15 m. cable
04084220	QC-EEC-FM7C-20	QC-EEC-FM7C-20 m. cable
04084230	QC-EEC-FM7C-30	QC-EEC-FM7C-30 m. cable
04084250	QC-EEC-FM7C-50	QC-EEC-FM7C-50 m. cable

“IEEC” incremental sensor cables (FS5 motors).

Code	Model	Description
05257105	QC-IECD-05	QC-IECD-5 m. cable
05257110	QC-IECD-10	QC-IECD-10 m. cable
05257115	QC-IECD-15	QC-IECD-15 m. cable
05257120	QC-IECD-20	QC-IECD-20 m. cable
05257130	QC-IECD-30	QC-IECD-30 m. cable

MOTOR POWER CABLES

Motor Model	Ref. of the power cable
FM7-A037-□□□□-E01	MPC-4x2,5
FM7-A055-□□□□-E01	MPC-4x2,5
FM7-A075-□□□□-E01	MPC-4x4
FM7-A090-□□□□-E01	MPC-4x6
FM7-A110-□□□□-E01	MPC-4x6
FM7-A115-□□□□-E01	MPC-4x10

Motor Model	Ref. of the power cable
FM7-D055-S1D0-E03	MPC-4x4
FM7-D075-S1D0-E03	MPC-4x6
FM7-D110-S1D0-E03	MPC-4x10
FM7-D150-S1D0-E03	MPC-4x16

Motor Model	Ref. of the power cable
FKM 21	MPC-4x1,5
FKM 22	MPC-4x1,5
FKM 42	MPC-4x1,5
FKM 44	MPC-4x1,5
FKM 62	MPC-4x1,5
FKM 64	MPC-4x1,5
FKM 66	MPC-4x2,5

Motor Model	Ref. of the power cable
FS5-A037-S5C	MPC-4x1,5
FS5-A055-S5C	MPC-4x2,5
FS5-A075-S5C	MPC-4x4
FS5-A110-S5C	MPC-4x6
FS5-A150-S5C	MPC-4x10

MANUALS

The manuals of the CNC may be downloaded from our FAGOR corporate website.
<http://www.fagorautomation.com>

Fagor Automation shall not be held responsible for any printing or transcribing errors in the Ordering Handbook and reserves the right to make any changes to the characteristics of its products without prior notice. You must always compare the data with that appearing in the manual.

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