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# First and last part EvoDECO TB-DECO

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## 1 Introduction

### 1.1 Managing the first and last part in a series of parts

Tornos needs no introduction for its now famous EvoDECO operated by TB-DECO. However, we can still give you some tips on how to improve your usage comfort. In this edition, we will explain how to manage the first and last part in your series of parts.

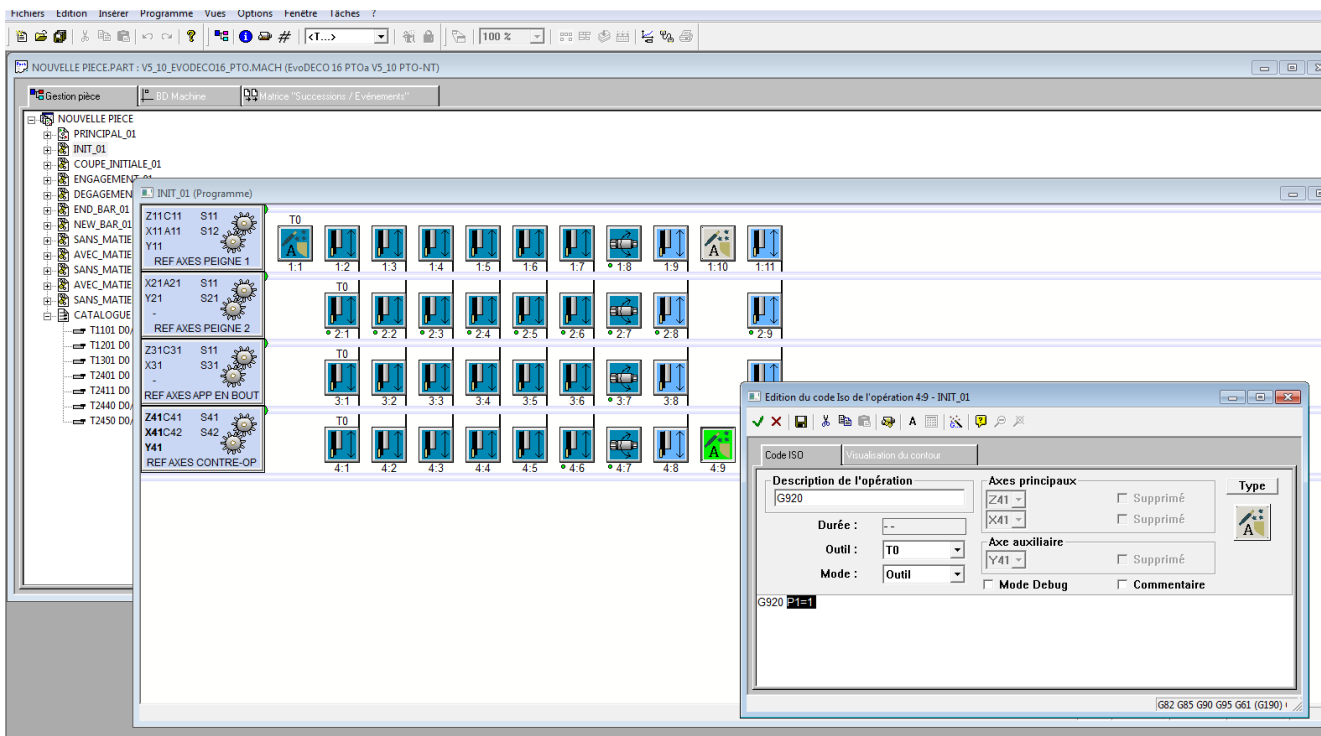
## 2 Explanation

### 2.1 The first part in the series

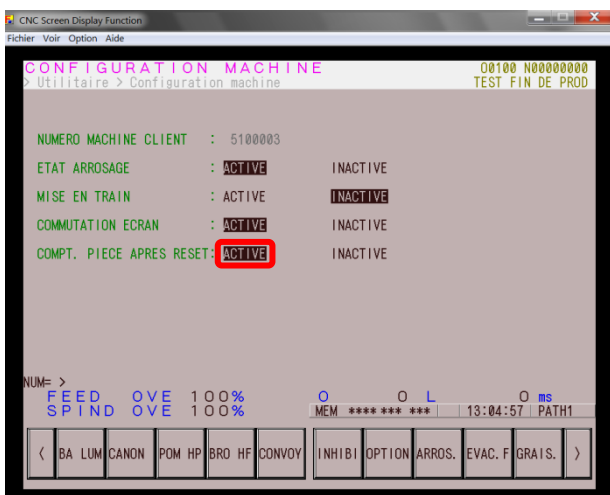
Once you have completed the settings on your machine, you're ready to launch production of the series.

Having said this, after the machine is RESET, the part inside the counter spindle is ejected into the chips.

If you wish to keep the first part inside the counter spindle following a RESET, simply add a parameter in your part program. Indeed, if you add a "P1=1" after the G920 in the INIT program, the part will be kept inside the counter spindle at the start of production.

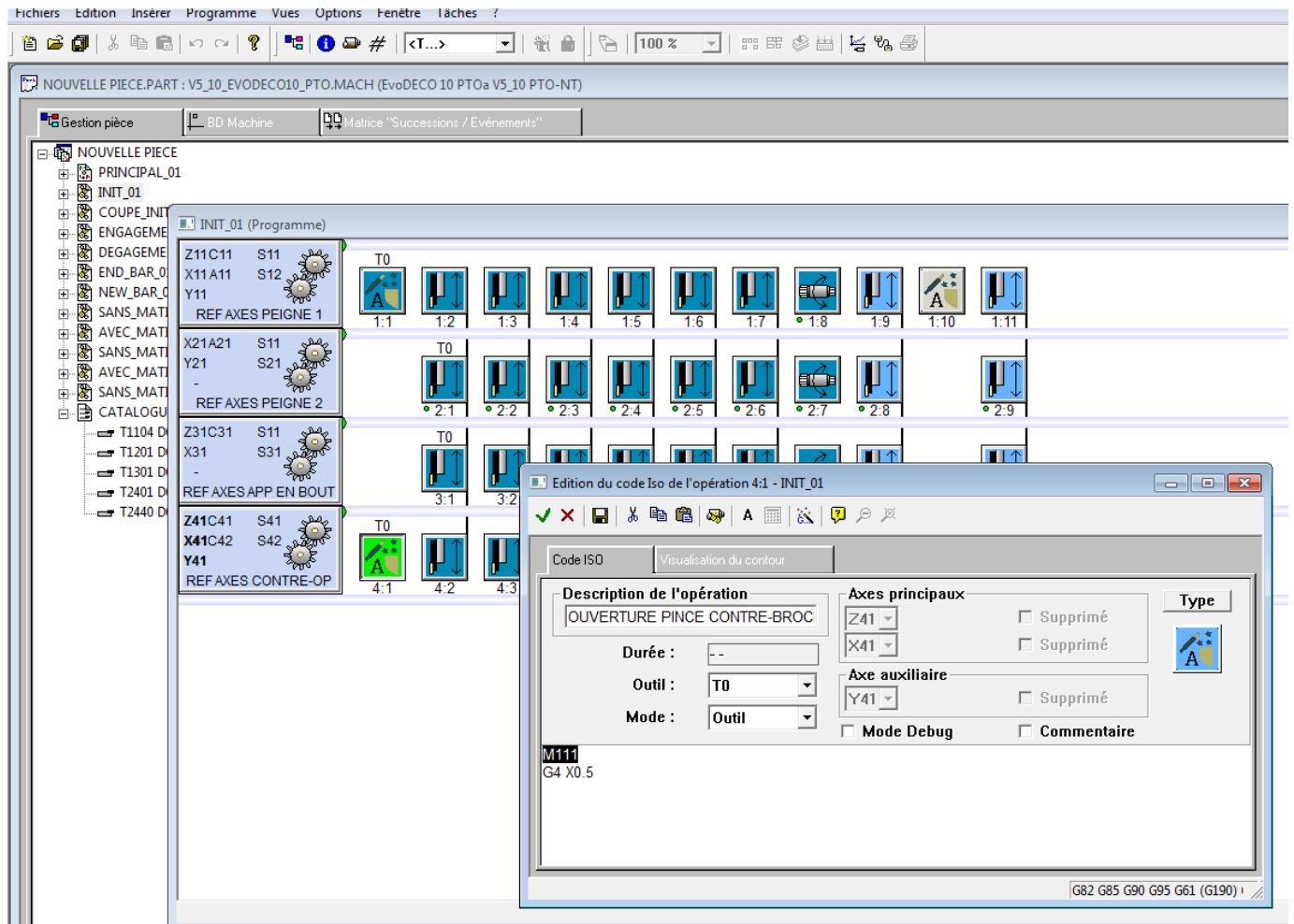


Please also note that if you opt for this solution, you need to inform the machine that the part is kept, so the NC adapts the part counting accordingly. To do this, simply go to the "Machine configuration" page and set the field "COUNT PART AFTER RESET" to "ACTIVE"



## Distinguishing feature of EvoDECO10:

Unlike its big sisters, the EvoDECO10 has the distinguishing trait that it has a fixed ejector in the counter spindle. This means that the part is ejected through the mechanical withdrawal of the counter spindle. To avoid all risk of breakages, you first need to disassemble the ejector and opt for another extraction system (for instance, using a spring collet). You also need to remove code "M111" (counter spindle collet opening) from the INIT program.



## 2.2 The last part in the series

As you have probably noticed, on a traditional screw machine with take-up spindle, when you reach the end of the series, a part that is half-machined remains in the counter spindle.

Tornos goes much further!

With its latest-generation EvoDECO, when the machine reaches the end of production (series of parts completed), it stops with the counter spindle empty.

In actual fact, the parts have all been machined in full.

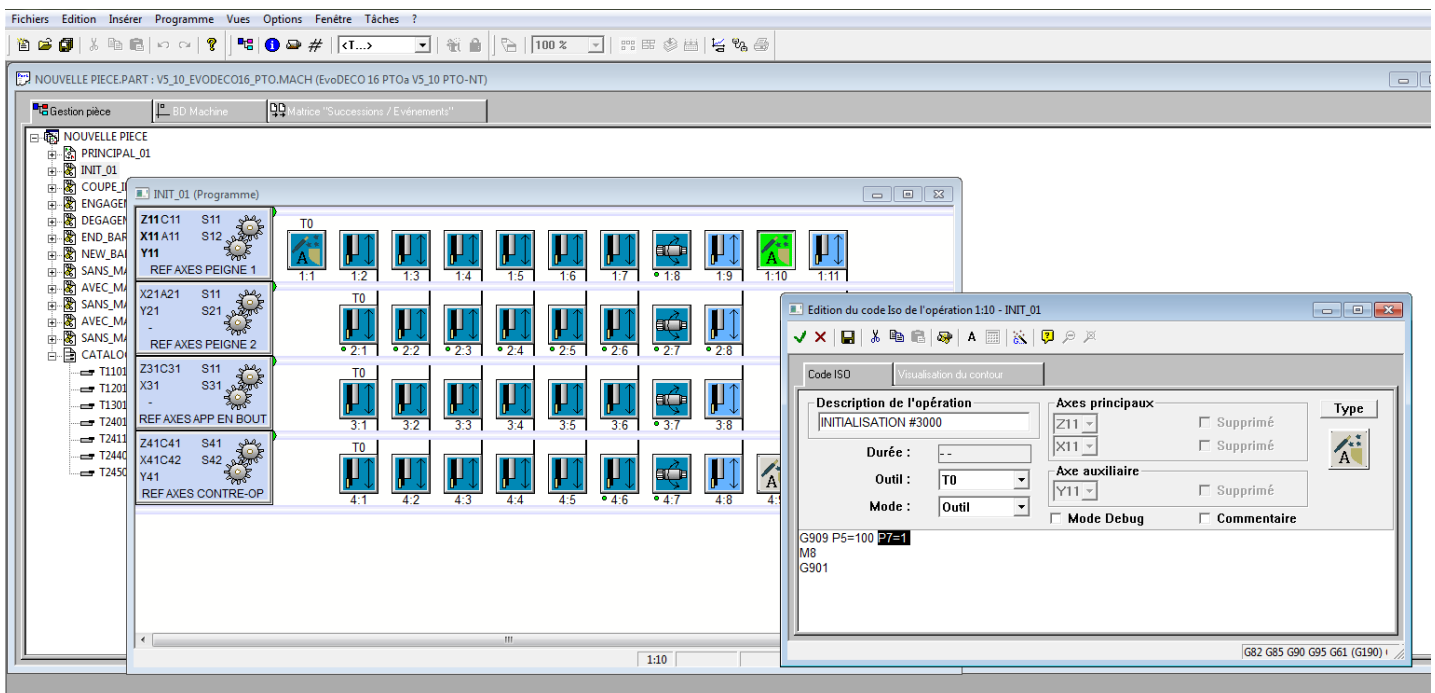
You therefore no longer have any lost parts. This may prove very useful during long cycle times or when machining precious metals.

You may say....

*"That's a pity! On certain types of part, it's interesting to be able to measure one or two sensitive values on my last part which is inside the counter spindle at the end of the series. That made sure all the parts were correct all the way to the end".*

No need to panic! Tornos has thought of everything.

If you wish to keep the last part inside the counter spindle, simply add a parameter in your part program. Indeed, if you add a "P7=1" after the G909 in the INIT program, the part will be kept inside the counter spindle at the end of production.



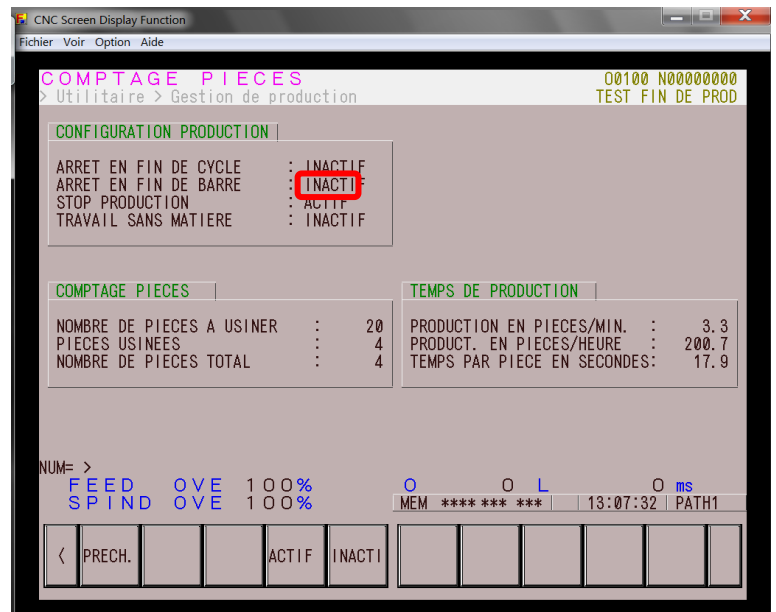
You may say....

"And what about when the series of parts stops prematurely?"

No panic there either! Tornos has thought of everything.

If you need to interrupt production of a series of parts before you have reached the number of parts set in the parameter for the parts counter, you have two options:

- 1) Press the stop at end of cycle key. The machine will stop with a part that is half-machined in the counter spindle.
- 2) Activate a "Stop production" on the NC page. The machine will stop with all the parts machined in full and the counter spindle empty.



## 2.3 In short

	Behaviour	Program	NC
First part	I wish to eject my first part situated inside the counter spindle after a RESET	G920 or G920 P1=0	COUNT PART AFTER RESET "INACTIVE"
	I wish to keep my first part inside the counter spindle after a RESET	G920 P1=1	COUNT PART AFTER RESET "ACTIVE"
Last part	I wish to complete my last part at the end of production	G909 or G909 P7=0	-
	I wish to keep my last part half-machined inside the counter spindle at the end of production	G909 P7=1	-
	I wish to interrupt my series of parts prematurely and complete the part inside the counter spindle	-	STOP PRODUCTION "ACTIVE"
	I wish to interrupt my series of parts prematurely and keep the part inside the counter spindle	-	END OF CYCLE STOP "ACTIVE"

### **Important:**

*The "Stop at end of cycle" event has priority over all other events This means that if the "Stop at end of cycle" event is active, the cycle stops and the other parameter settings linked to the last part are ignored.*