



MT113

SINUMERIK HANDBOOK

# Subprogram call and repetition

This document shows how to call and repeat a subprogram within a main program with a Milling application example.

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**Description of the document:**

Method for calling and repeating subprograms within a main program, multiple times.

- Benefits of subprogram call
- Functions and Syntax with meaning

**Applicability:**

- |                         |   |
|-------------------------|---|
| • Technology            | <b>Turning and Milling</b>  |
| • SINUMERIK controllers | 802Dsl, 810D, 840D powerline,<br>808D, 828D, 840Dsl & SINUMERIK ONE |

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# Subprogram call and repetition

Subprograms are a really convenient as one could have an incremental program and call it in multiple times. They ensure:

- Easy in repeating the subprograms
- Shorten programs
- If required, they can also be called at different positions in a main program.

**Function:** Subprograms can be executed n number of times in a main program

**Syntax:** Subprogram\_name Pn ; e.g. SUB\_TEST P4

**Definition:**

Subprogram\_name - Name of the subprogram file (It is recommended to make the subprogram under the subprogram folder)

Pn - Subprogram repetition n times (e.g. If we want to call subprogram 10 times, mention P10)

**Procedure:**

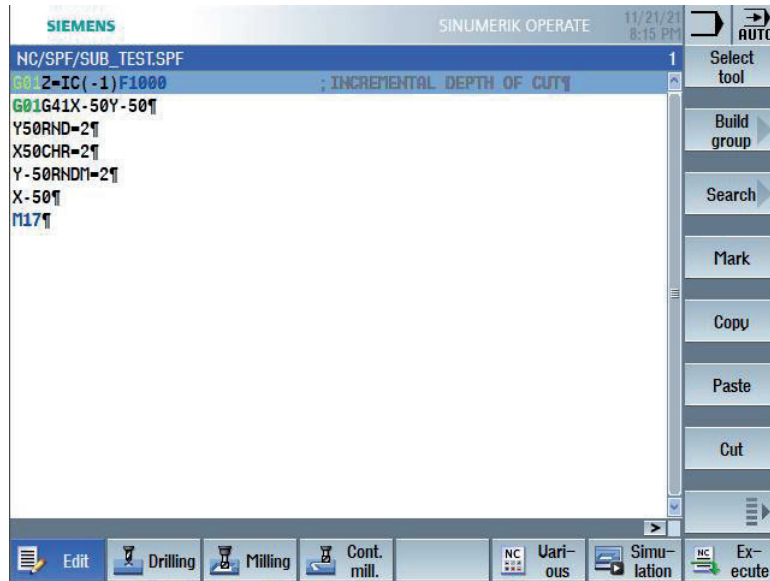
1. Create subprograms under **SUBPROGRAMS** folder. Example: SUB\_TEST

Name	Type	Length	Date	Time	
Part programs	DIR		11/10/21	11:08:48 AM	Execute
Subprograms	DIR		11/10/21	11:11:09 AM	New
SUB_TEST	SPF	93	11/10/21	11:01:15 AM	Open
Workpieces	DIR		11/10/21	10:48:09 AM	Mark
DOCS	WPD		11/10/21	11:10:55 AM	Copy
PREP1	MPF	529	11/10/21	11:04:20 AM	Paste
PREP2	MPF	522	11/10/21	11:05:14 AM	Cut
PREP3	MPF	532	11/10/21	11:06:03 AM	
PREP4	MPF	569	11/10/21	11:07:09 AM	
EXAMPLE1	WPD		11/10/21	11:09:47 AM	
EXAMPLE2	WPD		11/01/18	2:58:57 PM	
EXAMPLE3	WPD		11/01/18	2:58:57 PM	
EXAMPLE4	WPD		11/01/18	2:58:57 PM	
EXAMPLE5	WPD		11/01/18	2:58:57 PM	

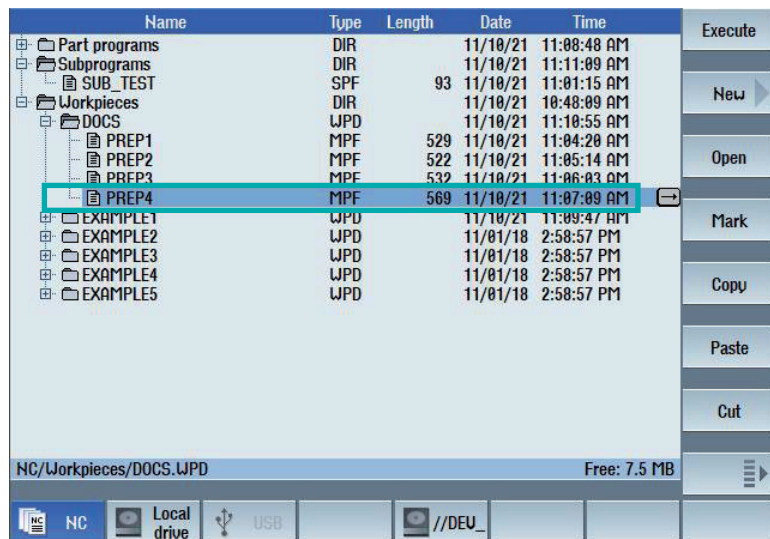
NC/Workpieces/DOCS.WPD Free: 7.5 MB

NC Local drive USB //DEV\_

2. Write the subprograms based on your requirement



3. Create the Main program in **part programs** or in **workpieces** directory.



Example: PREP4.MPF



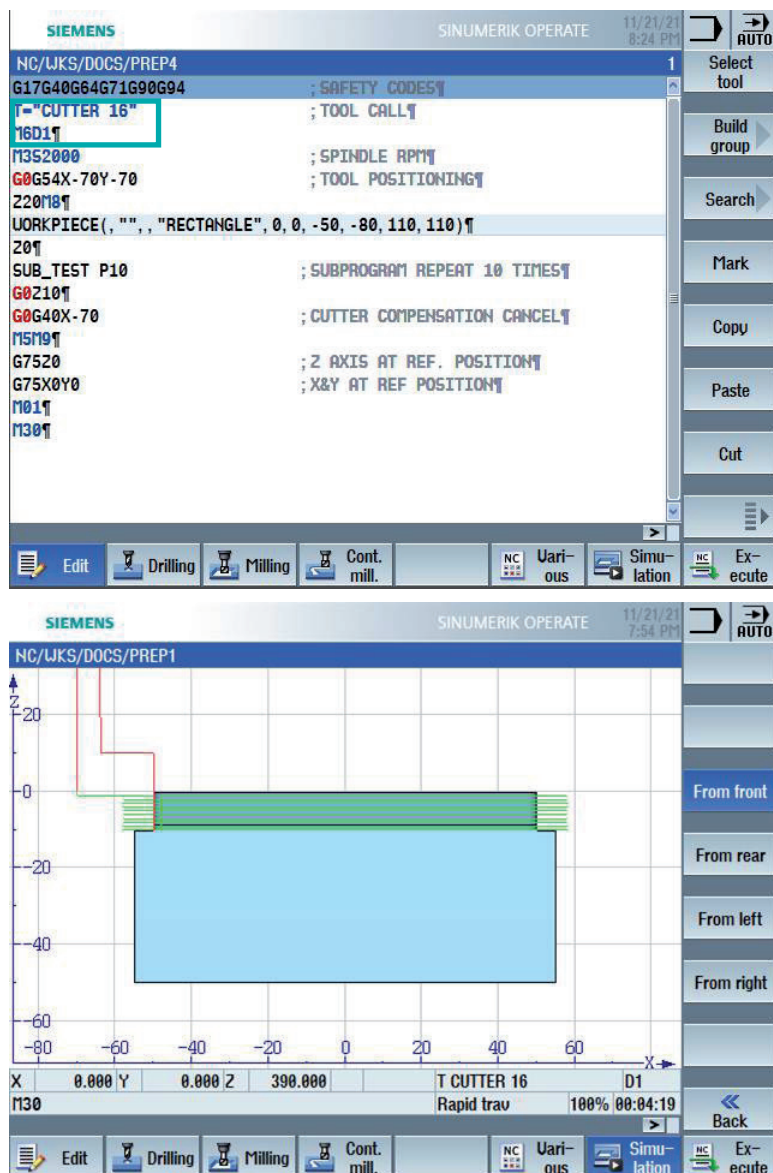
4. Write the main program and call the subprogram in the required block and define the no. of repetitions.

Example: If the subprogram has to be repeated 10 times then mention:

**SUB\_TEST P10**

**Note: Space is mandatory between program name and repetition**

**Result :**



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