

Tooldatabase-Parameter

Mastercam

Tooldatabase for „Connected Manufacturing“

Which parameter do we need and why?

Background:

- „Connected Manufacturing“ is creating the „digital twin“ of the existing tool and connects them with each other
- Through this all tools can be localized and the needed data can be sent to the machine or presetting device

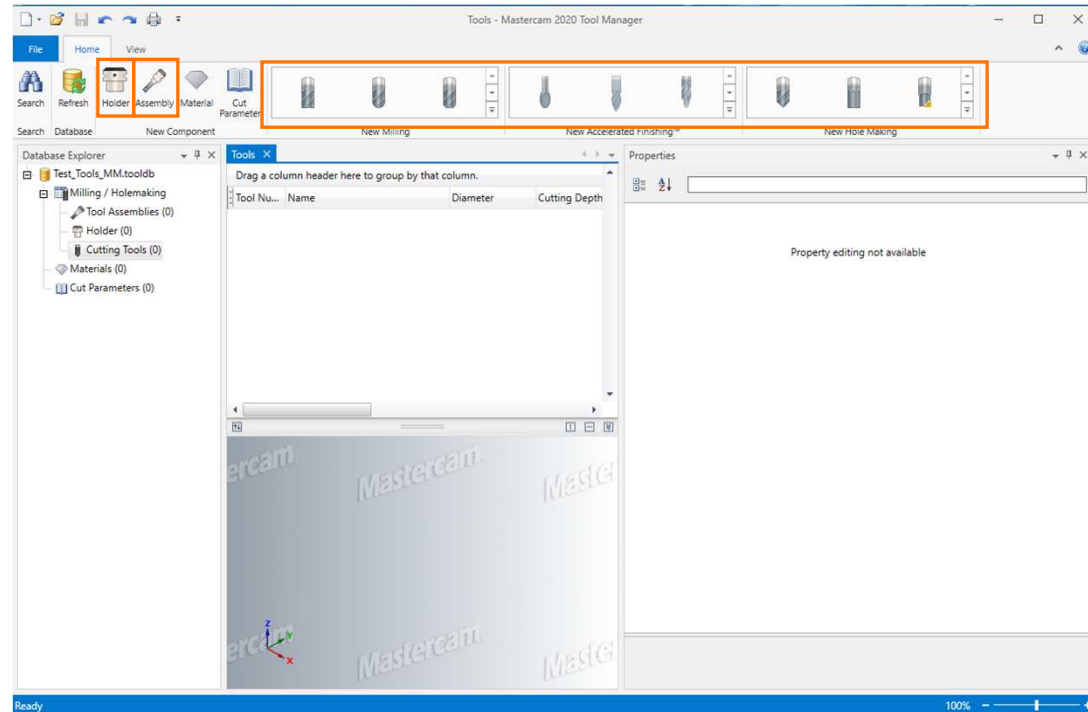
General:

- Toolassembly = Cutter + Baseholder
- If Hoffmann-Article-Numbers are maintained, the data can be automatically enriched
- Tools can be identified with „Name“ or „Tool-Nr.“

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Toolmanager

- Before you can create a Tool Assembly you have to create a cutter and a holder first
- With the buttons „New Milling“ and „New Hole Making“ you can choose the type of the tool
- With „Holder“ you can define a new holder
- The button „Assembly“ is for creating a new Tool Assembly from one cutter and one holder



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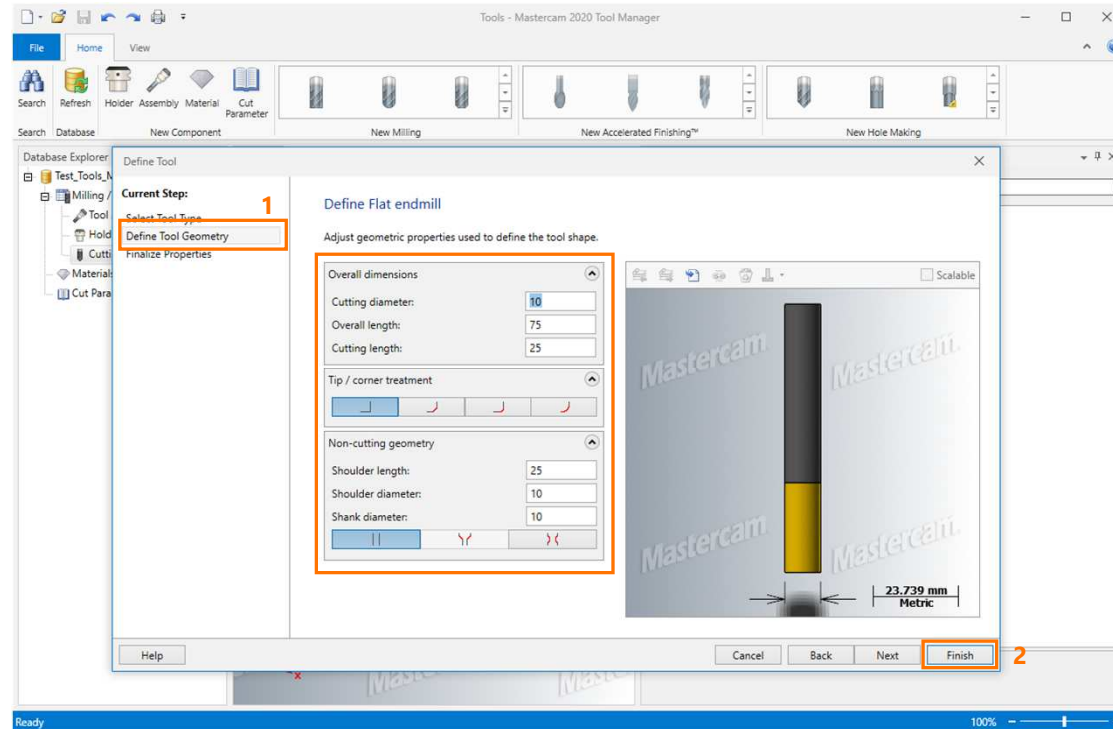
Toolmanager – Define Tool

1. Define Tool Geometry

Here you can define the geometric parameters of the tool:

- Cutting diameter (**required**)
- Overall length – length of the tool without the holder (**required**)
- Cutting length (marked yellow)
- Tip / corner treatment
- Non-cutting geometry

2. Finish – the parameters are saved into the Toolmanager



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Toolmanager – Define Tool

1 - General

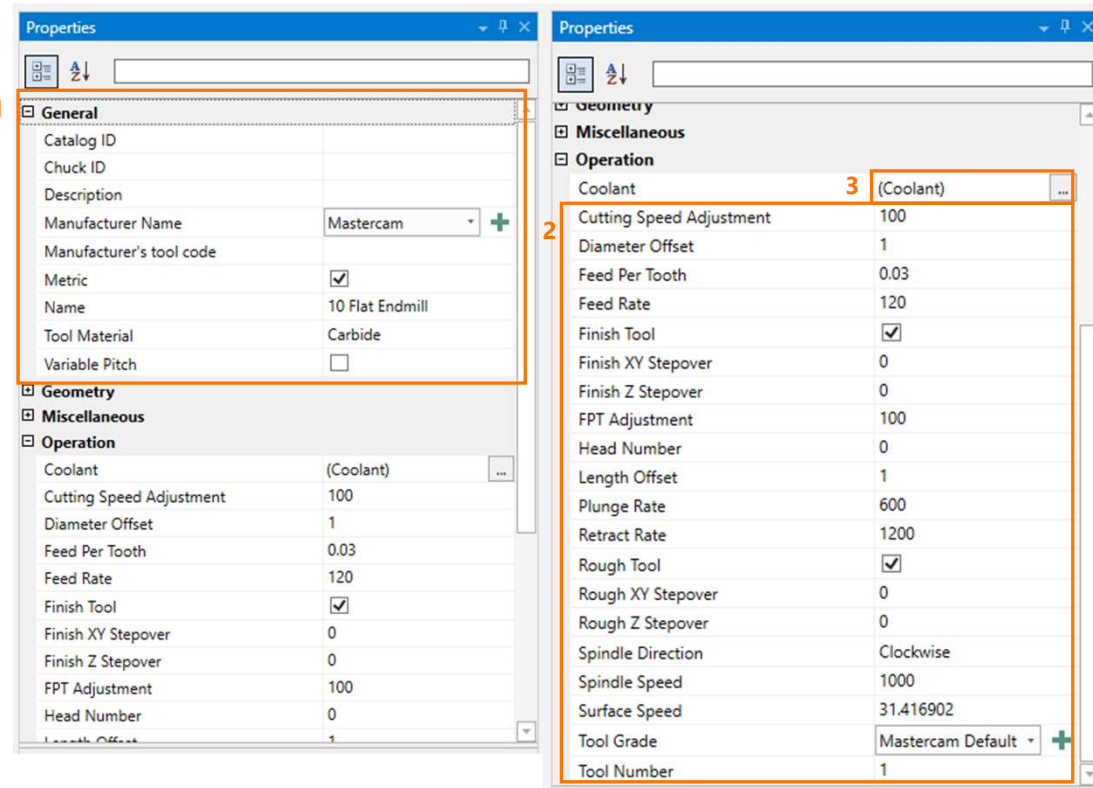
- Name: for a clearly identification of the cutter **(required)**
- Catalog-ID: here you can put in the Hoffmann-Articlenumber of the **cutter**. With this number the information can be automatically enriched by importing the tool to CM (pictures, dimensions, materials, etc.)
- The other fields are optional

2 - Operation

- Tool Number: for a clearly identification of the cutter, if you are working with T-No.
- Here you can fill in other optional parameters like Spindle Speed, Surface Speed, etc.

3 - Coolant

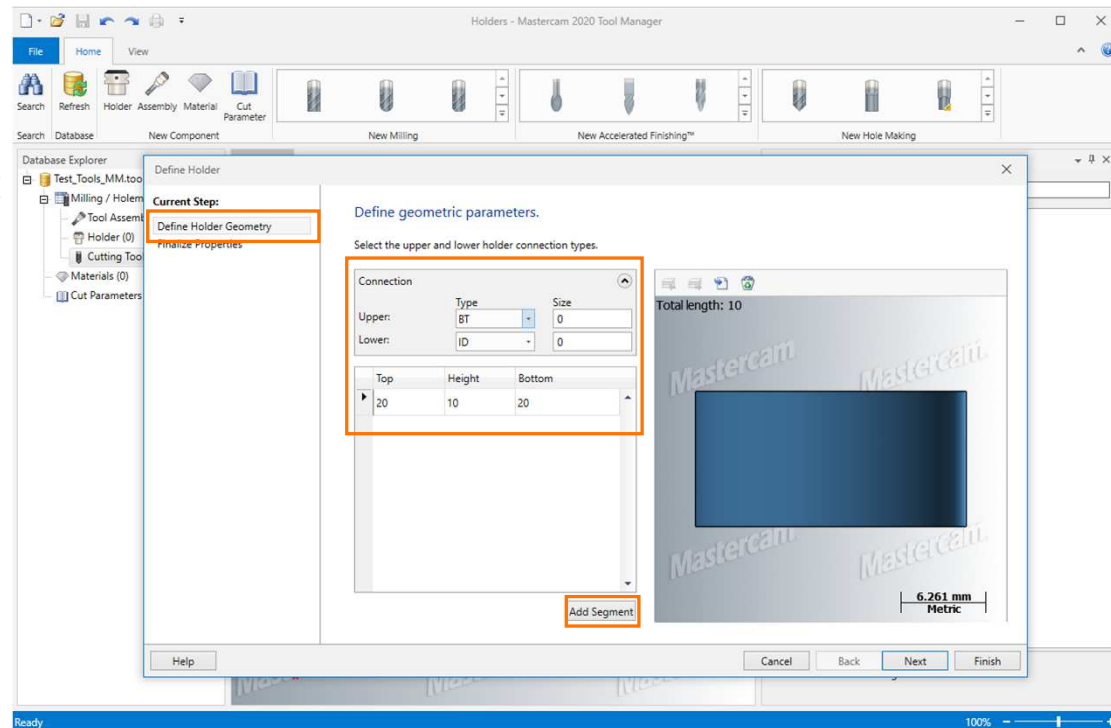
- With this button you can change the cooling options of the cutter (CM is checking the „Standard Coolant“)



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Toolmanager – Define Holder

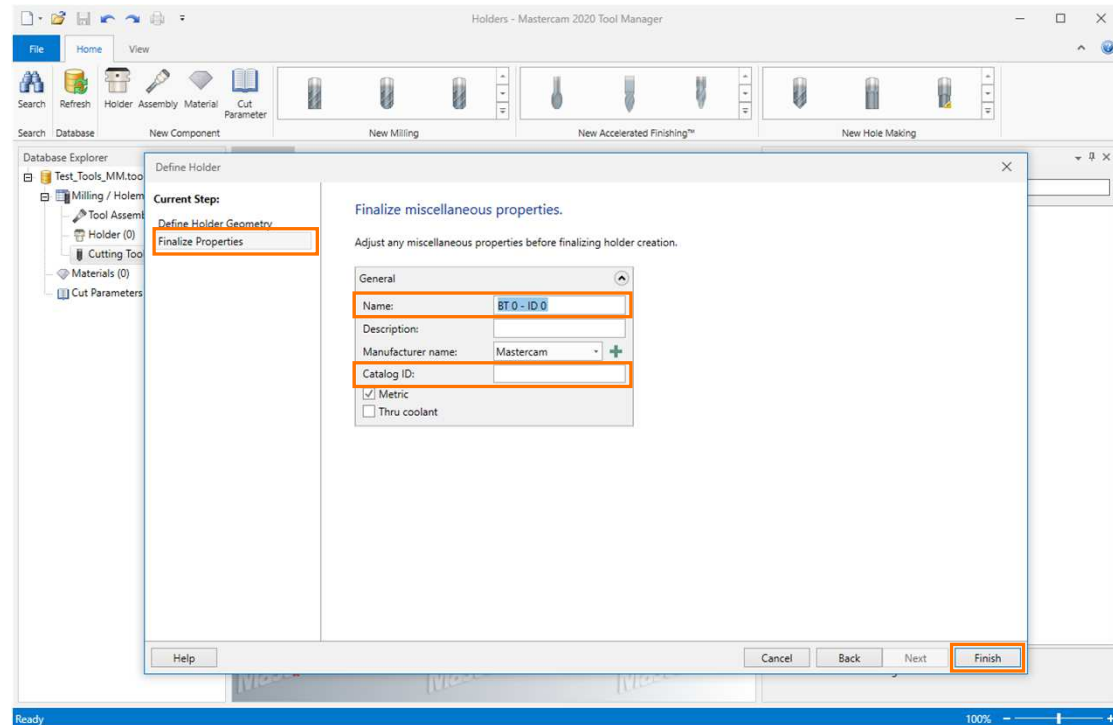
- In „Define Holder Geometry“ you can define each geometric segment of the holder
- With the button „Add Segment“ a new segment can be added to the existing geometry
- In the „Connection“ area you can define type and size of the machine adapter (e.g. SK40, HSK63)



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Toolmanager – Define Holder

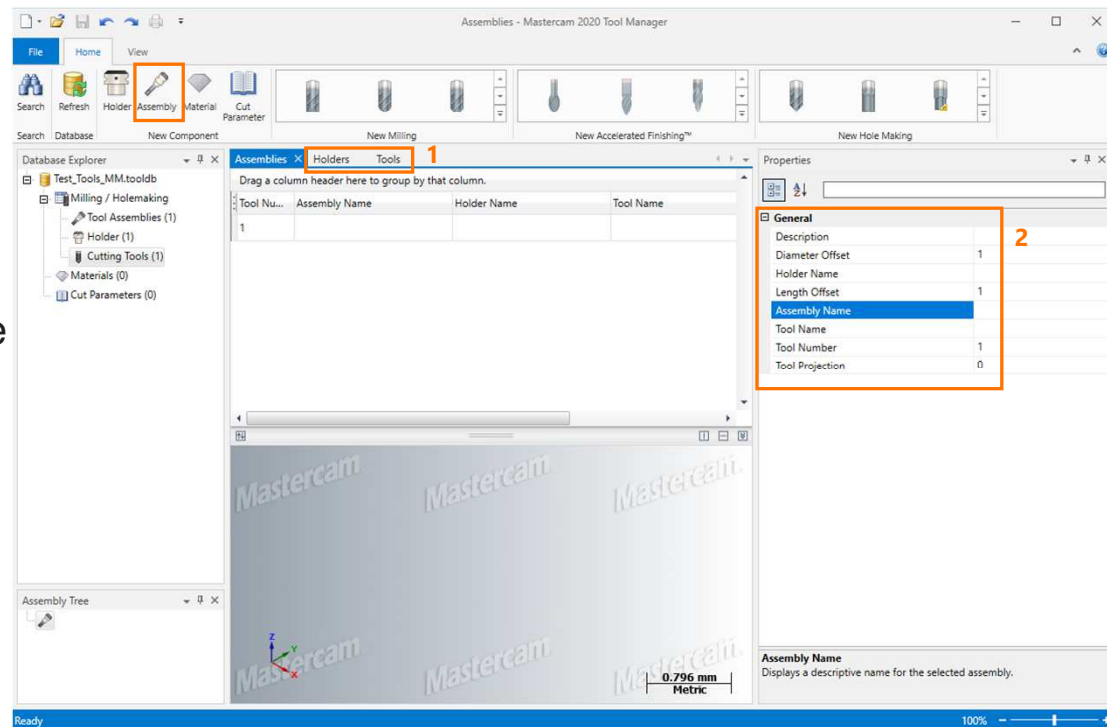
- In „Finalize Properties“ you can maintain additional information
- Name: for a clearly identification of the holder (**required**)
- Catalog-ID: here you can put in the Hoffmann-Articlenumber of the **holder**. With this number the information can be automatically enriched by importing the tool to CM (pictures, dimensions, materials, etc.)
- With „Finish“ the new holder will be saved



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Toolmanager – Create Tool Assembly

- Now an „Assembly“ can be built, which is saved in CM as ToolAssembly
- You have two options to build an assembly from the created components:
 1. In the tabs „Tools“ and „Holders“ you can mark the components and pull them into the assembly via „Drag & Drop“
 2. The unique names of the components can be filled in „Tool Name“ and „Holder Name“
- The Tool Number is filled in automatically from the tool definition
- Description: is used as name of the ToolAssembly in CM and has to be unique (**required**)



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Toolmanager – Create Tool Assembly

- When the Assembly is created you finally have to fill in the extension length of the tool in „Tool Projection“ (**required**)
- Now the toollibrary can be refreshed and saved

