



# **Mastercam<sup>®</sup>** **Port Expert**

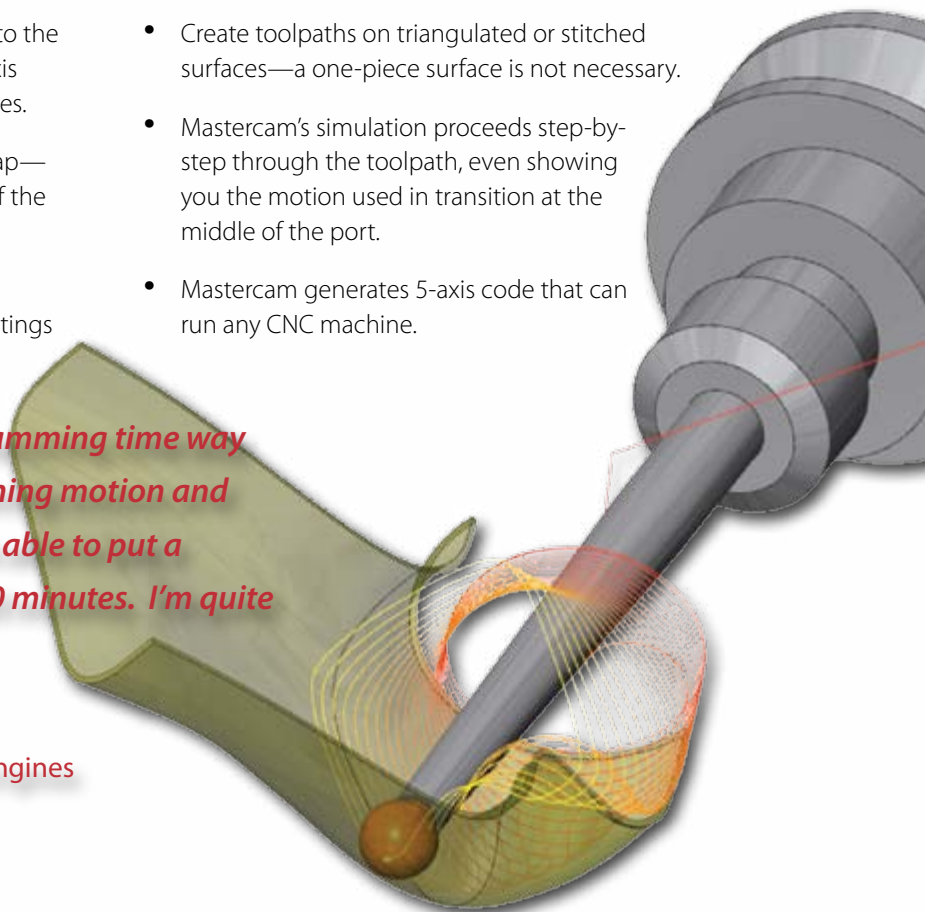
**Specialized multiaxis programming  
for precision head porting**

Mastercam's new Port Expert add-on creates accurate, efficient engine cylinder head porting toolpaths on port surface or solid data. Port Expert uses a tapered lollipop tool, and has collision checks for the entire tool (shank, arbor, and holder).

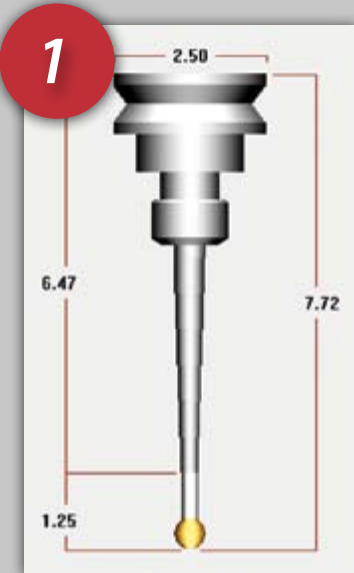
- Port Expert automatically calculates optimal tilt angles so there is no need to split the surface or create tool axis control splines
- Port Expert uses 3-axis machining as far into the port as possible, and then switches to 5-axis motion, leaving no fishtails or reverse moves.
- Smooth transitions—with a tapered overlap—where the toolpaths meet at the middle of the port, minimizing mechanical transition.
- Port Expert provides both roughing and finishing toolpaths to make ports from castings or billet.
- You can choose to cut the top only, the bottom only, or both, and specify how much stock to leave on the entire port.
- Create toolpaths on triangulated or stitched surfaces—a one-piece surface is not necessary.
- Mastercam's simulation proceeds step-by-step through the toolpath, even showing you the motion used in transition at the middle of the port.
- Mastercam generates 5-axis code that can run any CNC machine.

***“Port Expert not only cuts my programming time way down, but it also reduces the machining motion and the wear and tear on my tools. I was able to put a toolpath on my first port in about 10 minutes. I’m quite impressed to say the least.”***

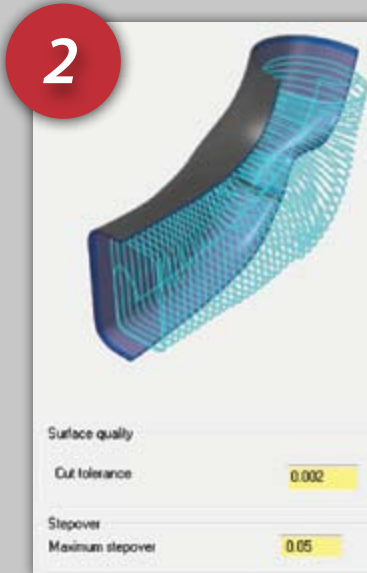
- Tom Hemphill  
Hemphill Racing Engines



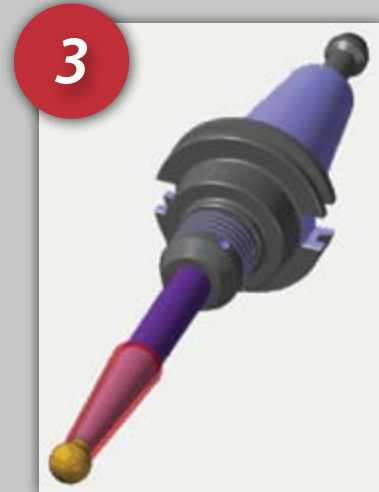
## The Port Expert Process



Choose or define your tool shape.



Select the port surface(s) and cut pattern.



Set clearances for any part of the tool or holder.

Mastercam's Port Expert gives you an edge over your competition. For more information, or to view Mastercam Port Expert videos, please visit [www.mastercam.com/portexpert](http://www.mastercam.com/portexpert).

**Note:** Mastercam Port Expert is a Mastercam add-on that must be purchased separately. It runs on Mastercam Mill Level 3 or Router Pro. Mastercam Multiaxis is not required for Mastercam Port Expert.



**Mastercam.**  
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