

ChipBoss™ Control Software

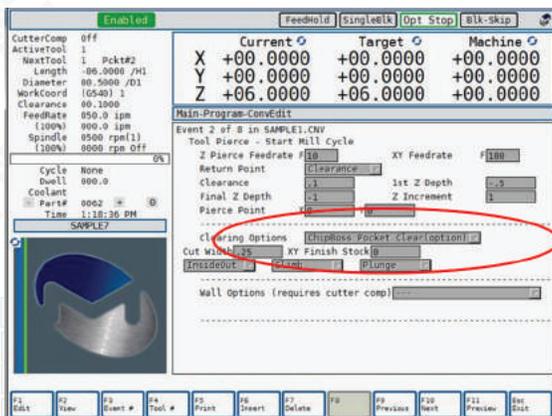
ChipBoss™ Software

New optional software from Milltronics uses proprietary algorithms to calculate toolpaths and control the maximum allowable cutter engagement resulting in:

- Faster cycle times
- Better tool life
- More accurate parts
- Cycle times can be reduced by as much as 50% (or more) and 3-5 times better tool life
- Part accuracy can improve through reduction in tool deflection

ChipBoss™ uses trochoidal milling strategies with deeper depths of cut and smaller step overs:

- Feed rates can be much higher than what conversational users are used to experiencing.
- Reduces the number of times a machine needs to accelerate and decelerate – “less wear and tear”
- Includes “Rest Roughing” – automatically calculates the areas to be machined and uses a smaller cutter to get just those areas that can't be cut with larger tool, saving even more time.



How it Works

To begin with, consider first a typical conversational program:

- To avoid overheating the tool the operator typically uses multiple incremental depth cuts
- Uses slower feeds and speeds
- Often needs to use coolant (not always desired)
- With incremental depth cuts, usually only the tip of the tool is used
- The majority of the useable flute length is being wasted

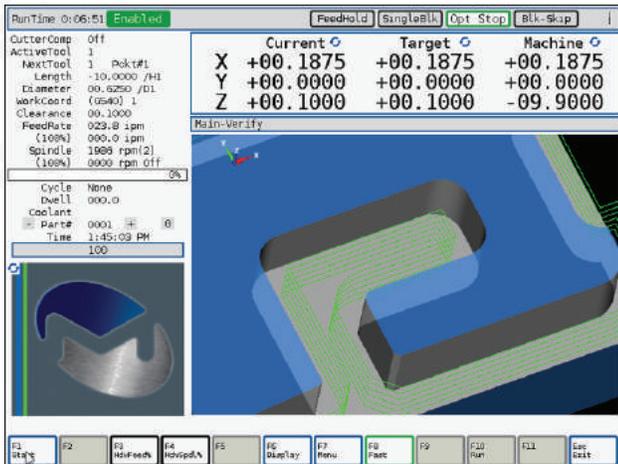


Easy Programming

Using ChipBoss™ is easy, just select “ChipBoss Pocket Clear” (from drop down menu) on the conversational screen.



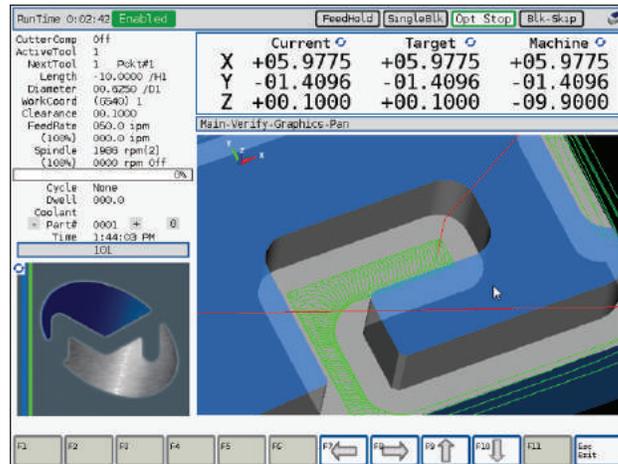
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Standard Toolpath

- Traditional “racetrack” tool path
- Over engagement present in corners
- Has to be cut in pecks

6 Minutes, 26 Seconds



ChipBoss™ Toolpath

- Trochoidal milling strategy (“zigzag”)
- Continuous cutter engagement cut full depth in one path

1 Minute, 51 Seconds

Rest Roughing

Use Rest Roughing to further improve cycle times:

- Select a large diameter tool to efficiently remove bulk material, followed by a smaller diameter tool to get what the larger tool can't reach
- Rest cycle does just the “rest” areas, no need to recut entire profile
- All automatic – just select from drop down menu and the software calculates everything for you

