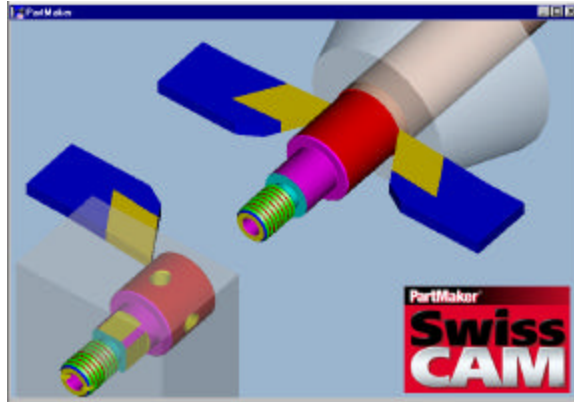


Why SwissCAM became the Market Leader for Swiss Lathe Programming

[PartMaker Software](#) was the new kid on the block just 10 years ago – now it's the market leader. It has proved itself in the most difficult of all CNC programming areas, **Swiss Lathe programming**, and gained the brand name. PartMaker investigated the little understood area of multi axis, multi spindle programming at a time when other software companies couldn't produce a solution. The outcome was SwissCAM, which has become the pioneer software for the Swiss market with an approach that is so innovative and simple, it has been patented.



PartMaker SwissCAM's simulation allows the user to see the entire Swiss machining process

User Testimonial

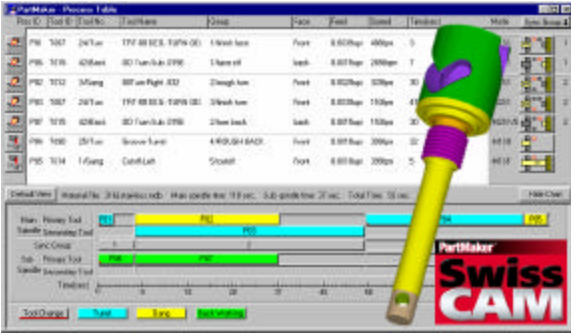
Lee Dwyer, VP Sales and Mfg., Starro Precision Products --

"With extensive Computer, & CAD/CAM background we have a unique experience to understand and critique systems. Being dedicated to quality and customer service, we recognize the difference between 'style over substance' and 'a system not slogans'. My team loves your software and believes it will be one of the few elements in our strategic planning that will bring about real value and profit benefit to our company. Our only regret is that we can't keep PartMaker as our own little secret!"

Swiss lathes are all about making small, complex parts accurately and in large quantities. Dropping the parts complete from one machine set-up does just this. Secondary machine set-ups are eliminated and the time measurably reduced. It entails machining on two spindles with an automatic transfer between each spindle. This allows operations on the sub-spindle, machining the back half of the part, to be synchronized with the operations on the main spindle, machining the front half of the part. Timesaving is made as a result.

PartMaker-SwissCAM programs multi axis, multi spindle machines that could only be programmed by hand until its introduction. The strategy that allows this simplified programming is the breaking down of a complex part into a number of single axis operations. Each machine surface is programmed in a separate window as a much simpler operation. **The patented 'Divide & Conquer' programming strategy** is highly intuitive and graphical, resulting in fewer errors being made.

As each operation is programmed, it is verified to ascertain that the result will be as desired. The operations can be simulated in solid format showing a cross section through the guide bushing. It is animated as moving stock sliding in and out of the guide bushing with the tools developing the shape of the part.



PartMaker SwissCAM produces reliable time studies which allow users to take full advantage of process synchronization and overlapping operations.

Knowledge Based Machining is employed in PartMaker-SwissCAM and the machinist's skills are saved within the system so that they can be used over and over again. Standardization and Repeatability are achieved in this way, further reducing programming times.

PartMaker SwissCAM produces a Process Table that displays a complete summary of all the work that has been done. It provides an opportunity to review the processing and optimize the program. Each operation has

speeds and feeds automatically applied for the materials used and the time for each operation is calculated and displayed. The total time is shown with breakdowns for main spindle time and sub-spindle time.

Synchronization is a visual process within PartMaker-SwissCAM - with sync or wait codes being applied automatically. Visual selection enables the processes to be synchronized according to the operator's requirement in a simple manner of point and click. When the operations have been synchronized, the summation times are re-displayed taking into account the overlapping times. Additionally, a time chart shows the operations in barchart format, illustrating the main and sub-spindle times side by side. In this way, you can see at a glance how the operations are synchronized along with the time distribution. The program can be optimized at the computer before being sent to the machine and the best results achieved in the shortest time.

User Testimonial

Curt Couch, President, Count-on-Tools

"I'm tired of being told repeatedly by companies that they have software for programming Swiss Lathes and failing to prove it. I have Swiss machines - I program 6-9 axes, very successfully, with PartMaker-SwissCAM and I would recommend it to anyone."

After choosing a machine post processor, the G-Code can be generated instantly at the click of the mouse. The G-code is displayed on-screen in individual files formatted according to the control requirements. Wait codes or queue commands are inserted automatically and the programs for each head can be compared.

The G-code is displayed on-screen for inspection and it can be presented in an editor if needs be. However, editing is usually an indication that the post processor is not correctly formatted and requires attention. In PartMaker-SwissCAM the post processor is formatted as the maker recommends. There is, however, a ConfigPost utility available with SwissCAM that allows a post to be customized to suit the operator's style.

PartMaker-SwissCAM includes an on-screen, solid modeler and the part can be viewed going through its manufacturing operations, producing the part in 3D. The part can be flipped, rotated, sectioned, etc., to fully examine the result.

It is clear to see in the foregoing description how the system has been automated wherever possible. The software does the work while the programmer steers it through its functions. With PartMaker-SwissCAM it is no longer necessary to remember machine layouts – the software knows. Also, it is no longer necessary to remember the codes required for each type of machine. PartMaker-SwissCAM overcomes the problem by making the selections visual. All is taken care of in the post processor and PartMaker-SwissCAM has post processors for most Swiss lathes. If not currently available in the library of posts, custom posts can be developed.

Demonstrations of PartMaker-SwissCAM for prospective buyers are generally carried out by telephone. This very fact illustrates how easy it has become to program the complex Swiss machines. A telephone demonstration, where the recipient is inputting the information himself, insures there is no ‘smoke and mirrors’ involved in the demo. The demonstration is very thorough right through to the making of the part on-screen and the G-code can be inspected as further proof of the system’s legitimacy. When a potential buyer programs a part himself, he quickly understands the savings that PartMaker-SwissCAM will make for him in both time and effort. He then has thirty days to use the software and become satisfied that it is suitable for the purpose.

Having created a system that programs Swiss Lathes in 1997, PartMaker gained instant recognition. PartMaker-SwissCAM is now used in a variety of industries and on many different types of product and materials. Set-up times have been measurably reduced by the implementation of PartMaker-SwissCAM in some instances by more than 50%.

Many companies bought Swiss Lathes to improve profitability. The complexity of the machines, however, with the multiple axes and sub-spindles, was too much and they have been used as simple lathes only defeating the object of the purchase. PartMaker SwissCAM alleviated the situation by putting Swiss programming within the reach of everyone.

PartMaker-SwissCAM became the market leader by standing alone in a difficult field and by bringing to the workplace a long sought after solution to Swiss Lathe programming.