Introduction

Source: http://www.todaysmedicaldevelopments.com/article/five-questions-with-tom-clark/

1. What makes a part suitable for Swiss turning?

Critical for Swiss machine shops is to look at a length-to-diameter (L-D) ratio to determine the ideal parts for production on a Swiss machine. We believe that more than 40% of all parts being produced on a Swiss machine are not ideally suited for that process. They are being produced this way merely because a company has capacity on its existing Swiss equipment. The best part to go on a Swiss machine is one that takes advantage of the process and that starts with a L-D ratio of greater than 4-to-1..

2. Possible to make Swiss parts more efficiently?

TC: Yes, both in using the most productive Swiss machines for parts requiring that type of turning machine and the targeting of L-D ratios of greater than 4-to-1. A more productive Swiss turning machine can get more tools in the cut at one time – up to four in some cases. For parts below the required L-D ratio, there are more productive ways to make those parts using non-Swiss turning machines.

3. How to improve throughput and quality?

TC: Many parts produced on Swiss-style machines can be done 4x faster on a multi-spindle turning machine, which typically has 6 or 8 spindles producing precision parts simultaneously and automatically. This dramatic increase in productivity creates savings in labor, shop floor space, and even cycle ti

4. How can you reduce total cost per piece?

Shop owners should revisit the way parts are produced, looking at new processes that offer opportunities to reduce per-part cost. The way a part has typically been machined may be the more expensive process due to longer cycle times, less-than-perfect quality, higher scrap rates, more handling, and limited flexibility. Many companies may be overlooking a better approach.

To reduce cycle time on a part currently produced on a Swiss-style machine in 2 minutes to under 20 seconds drives down the per-piece cost. Also, there is no longer the requirement for expensive, ground bar stock, and there is less waste. Reducing your cost per piece yields profit.

Simply adding more of the same machine to increase production will use more floor space and require operators – and skilled labor is hard to find these days.

Steps to chosing best precision turning solutio

TC: Shop owners need to focus on a return on investment (ROI) model to be the most productive, lowest-cost solution provider for their customers. Owners must evaluate the work being done on Swiss machines and ask the tough question: Can this be done better and cheaper on another machine?

There is better overall ROI buying a productive, flexible, multi-spindle machine for the 40% of work that does not require the benefits of a Swiss machine.