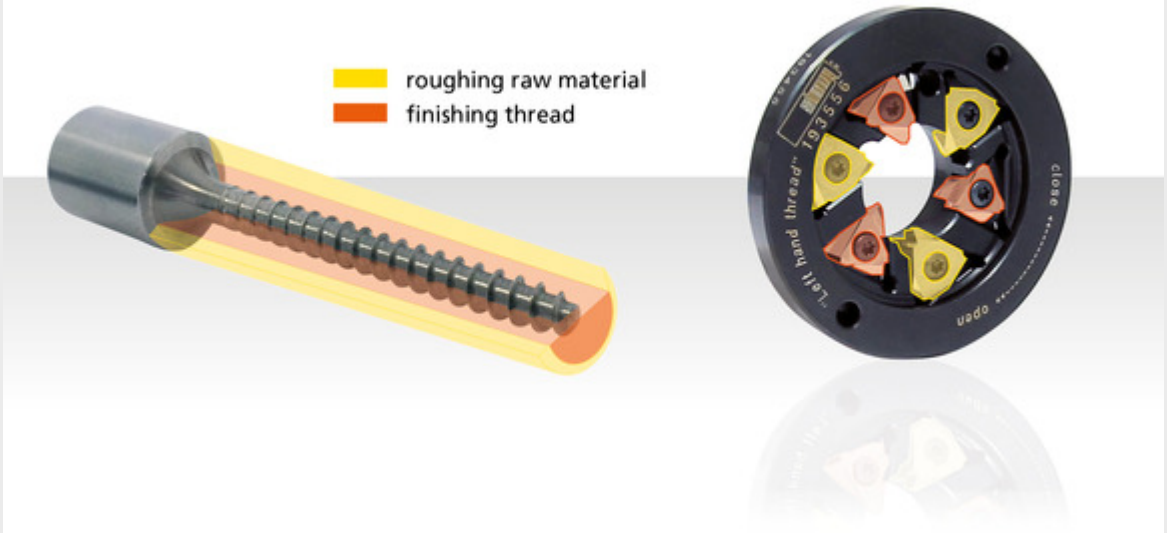
Insertable Form Tool Systems

Whirling of bone screws with large variances in depth of cut
The solution for implants with larger head design!

Thread whirling with Schwanog is a proven and reliable solution for machining threads. The usual depth of cut of the whirling inserts is approximately 3.5 mm which means when using 12 mm bar stock, we can machine down to a minor-Ø of 5 mm.

However, there are now also implants on the market with a very large and complex head design but with a relatively small thread.



Challenge:
In the current example, the implant head has an OD of 11.8 mm, and a minor diameter at the thread of 2.853 mm. The depth of cut using a 12 mm stock results in 4.573 mm and therefore falls out of our whirling inserts depth ratio, unable to reach the minor diameter of 2.853 mm.

Solution:
The technical challenge was to achieve this depth of cut with a cutter body suitable for the existing whirling attachment. Schwanog engineers found a solution in which the whirling inserts are positioned onto two different diameters. As a result, three of the six inserts are used to whirl the raw material to a defined diameter while the other three inserts are finishing the major and minor diameters.

Use our potential. Challenge us!