

# NTK Cutting Tools News #3 (Swiss tool edition)

## NTK Swiss Tooling

NTK has a reputation as a premier ceramic cutting tool company for more than 40 years. We are also one of the leading manufacturers of **Swiss tooling**. Many of our worldwide customers have been using NTK Swiss tooling in their manufacturing for more than 20 years.



There are only several large Swiss machine builders in the world today. NTK has developed a strong working relationship with these companies and we will continue to develop new tooling for them.

We will continue to release **a variety of new Swiss tooling designs** to meet customer demands for precision tooling.

We would like to introduce you to our concepts in Swiss tooling. We will demonstrate the differences between our Swiss tooling vs. our competitors.

## Think Sharp

Swiss machine tooling is quite different from conventional turning tools.

Swiss machining requires :

- **Single pass finishing (In most cases) = Large Depth Of Cut**
- **Speed is slower because of smaller diameter parts**
- **Tighter tolerances required**
- **Excellent surface finish with no burr**

In order to achieve these results, NTK's key tooling concept is "**Reducing Tool Pressure**".

NTK Swiss Tooling comes with :

- **Up-sharp edges**
- **A variety of sharp chipbreakers**
- **ISO 'G' or 'E' insert tolerances (Ground inserts)**

Many Swiss customers are **NOT** using Up-sharp or ground inserts and apply "M" tolerance inserts from regular conventional CNC lathes. As you may know, "M" tolerance inserts have either a Hone or T-land which creates more tool pressure than Up-sharp edged inserts.

Thicker coatings like CVD and others will reduce sharpness and generate more heat. NTK has been developing Swiss tools with extremely sharp edges with PVD coatings for decades. The combination of Up-sharp cutting edges, PVD coatings, and strong micro-grain base carbide results in extended tool life over all of our competitors.

## CL-Chipbreaker



NTK's **CL-chipbreaker** for front turning is an excellent example of our sharp edge technology.

If you take a look at the picture, you would probably think this chipbreaker is designed for Aluminum or Non-ferrous materials, however that is not the case.

The CL-chipbreaker performs admirably not only on Alloys and Steels but also Titanium and Stainless materials as well.

**CL-chipbreaker works in a wide cutting range.**

**Feed : .0008 IPR to .005 IPR**  
**DOC : .016" to .118"**

**See video on [YouTube](#) !**

Standard ISO front turning insert geometries are available.

- **CCGT 21.504M (R: .003") / 508M (R: .007")**
- **CCGT 32.504M / 508M / 51M (R: .015")**

- **DCGT 21.504M / 508M**
- **DCGT 32.504M / 508M / 51M**
- **VCGT 2204M / 2208M**

Grade : **DT4** (for Titanium or Hard to cut material) / **TM4** (for General purpose)

Features : **Excellent chip control at wide feed/DOC range with polished top**

***Try our sharp inserts and Feel the difference !***

**<http://www.ntkcuttingtools.com/>**

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