**NTK's Recommendation for Swiss Tooling**

### Specific Application

<table>
<thead>
<tr>
<th>For up to .200&quot; diameter material</th>
<th>PEEK / Non-ferrous material</th>
<th>Double / Triple lead Screw</th>
<th>HEXALOBULAR / HEX / SQUARE socket</th>
</tr>
</thead>
<tbody>
<tr>
<td>CSV Series</td>
<td>KM1 insert</td>
<td>Thread Whirling</td>
<td>Shaper Duo</td>
</tr>
</tbody>
</table>

### General Tooling for Popular Materials

- Titanium
- 304SS
- Ti-6Al-4V
- 316SS
- Carbon steels
- Alloy steels
- Cobalt Chrome
- HRSA materials

### Front Turning

- **DM4-YL**
  - General Purpose
  - Up to .020 DOC

- **DM4-AMX**
  - Up to .472"

### Cut-Off

- **DM4-CTP-CX**
  - Up to .472"

- **DM4-CTPA-CX**
  - Up to .630"

- **CUT DUO**
  - Up to 1.00"

- **Splash series**
  - Y-axis with Coolant Through

### Notes

- DM4 has excellent heat resistance. It is the best grade to machine for Titanium Alloys, Cobalt Chrome, and HRSA materials.
- YL chipbreaker is designed for both sharpness and chip control. It can hold dimensions very well and evacuate chips smoothly.
- AMX chipbreaker is optimized for very small DOC operations. It can perform very well in thin chip control situations.
- Use with a coolant through tool holder to help with chip evacuation. Y-axis coolant through toolholder is the best solution for chip control problems.

- CTP/CTPA style cut-off tool is a best-seller in the Swiss market. They have excellent rigidity and sharpness. Now NTK added the CX chipbreaker to them. 3D shaped CX chipbreaker can control chips extremely well.
- Use with coolant through toolholder for better chip evacuation.
- CTP style is designed for up to .472" material and CTPA is for up to .630".

- NTK recently added another coolant through cut-off toolholder for larger diameter materials.
- CTDP-OH toolholder can cut up to 1" materials and can control chips very well.
Back Turning

- **General Purpose**
  - DM4-TBP / TBPA-BM
  - Splash Series
  - Y-axis with Coolant through

- NTK’s TBP/TBPA back turning tools are solid and can provide stable machining even with heavy DOC operations.
- Now, NTK added a 3D chipbreaker named BM to this series. BM chipbreaker can manage chip direction. Just one pass is needed to get excellent face/OD finish.
- Use with coolant through tool holder to help with chip evacuation and the Y-axis coolant through toolholder is the best solution for chip problems.

Grooving

- **General Purpose**
  - DM4-GX
  - Splash Series
  - Y-axis with Coolant through

- NTK is expanding its triangle style grooving tools. Now NTK accommodates wide grooving widths from .012” to .125”.
- GX chipbreaker can control chips very well, not only for grooving but also side-turning operations.
- Use with coolant through tool holder to help with chip evacuation and the Y-axis coolant through toolholder is the best solution for chip problems.

Threading

- **General Purpose**
  - QM3-TTP
  - TTP

- NTK’s side-clamping TTP inserts are rigid and produces high quality good threads. Various lineups are available for each specific threading operations.
- QM3 has good wear resistance and toughness and can cut most materials.

ID Boring

- **General Purpose**
  - STICK DUO Hyper
  - STICK DUO SPLASH

- Stick Duo Splash are coolant through sleeves for ID operations. NTK has a variety of ID tooling inserts, bars for ID boring, ID back turning, ID grooving and ID threading to use with Stick Duo Splash.
- The sleeves are equipped with an adjustable overhang mechanism that allow you to index bars easily without length adjustment.

- Mogul Bar is a series name for boring tools with indexable inserts. The series starts from .197” minimum bore diameter and ID and use with F-style chipbreaker which makes chip evacuate backward.
- They include a coolant through system that ensures better chip evacuation.

Endmill

- **General Purpose**
  - DM4-BL
  - Indexable Endmill

- NTK has a variety of indexable type endmill tools for Swiss machines. The big head endmills can cut in close proximity to the Guide-bushing and provide excellent rigidity. Due to the big diameter, you can also run faster than small diameter endmills.