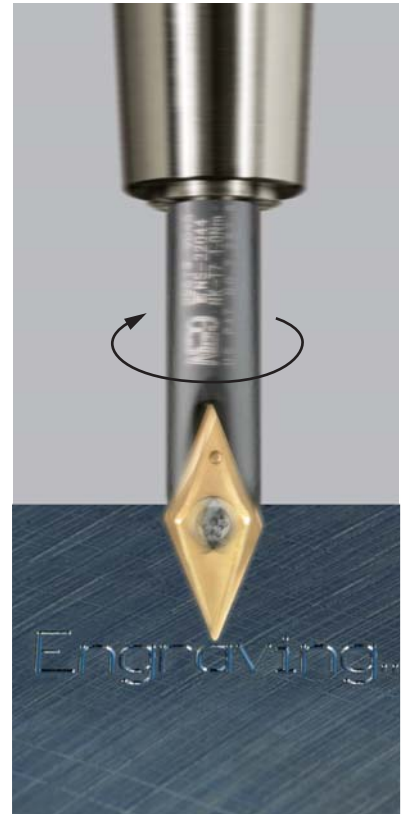
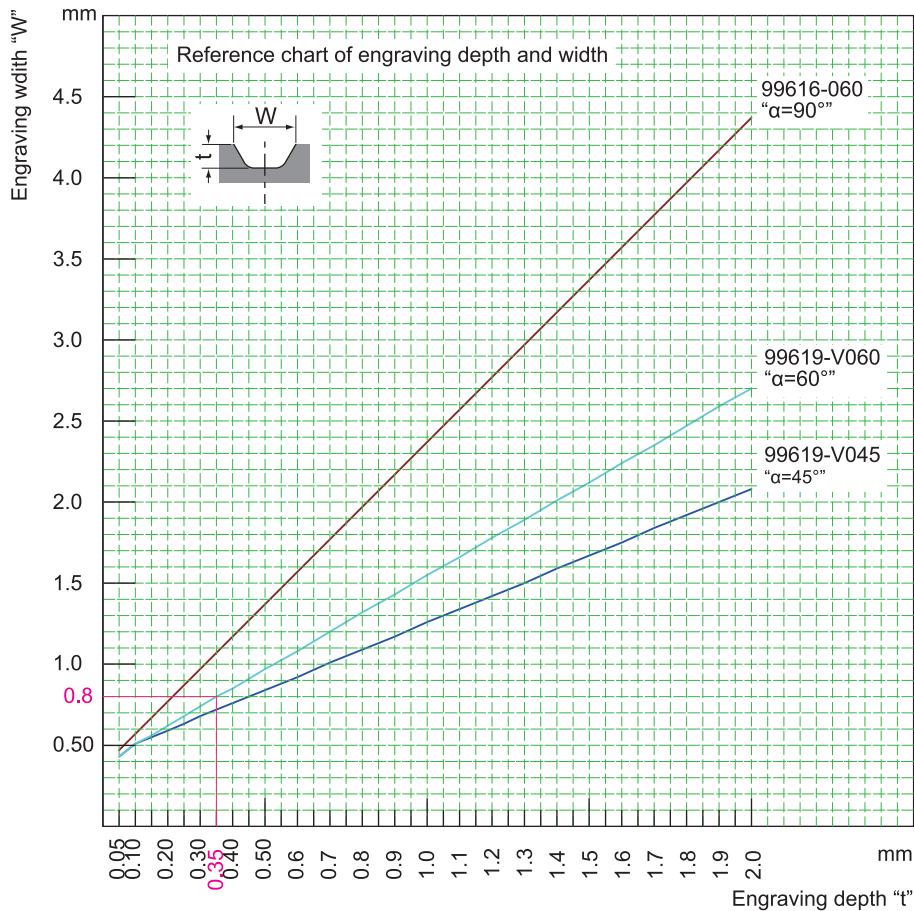


# Instruction of using engraving tools

## - width & depth chart



- The bottom of the engraving is flat, the minimum of engraving depth "t" is recommended 0.05 mm.
- If the required engraving width is 0.8 mm by 60° engraving tool, please use this chart, start from the vertical axis at 0.8mm, and draw a horizontal line to 60°, and draw a line from the intersection to the horizontal line to get the engraving depth "t".

### Attention!

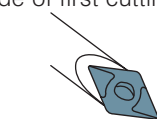
This instruction is specially prepared for the users of engraving tools 00-99619-V045-06 and 00-99619-V060-06.

#### 1. Request of the tool holders:

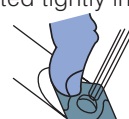
- The runout of the shank of engraving tool after clamped on the tool holder should be below 0.02 mm. Shrink fit chucks, hydraulic chuck and high precision spring collet chucks are recommended.
- Pre-balanced of the tool holder: G6.3/10,000 R.P.M. is recommended.

#### 2. Clamping the engraving insert:

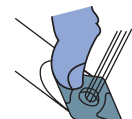
Please pay attention of holding the insert properly on the pocket and against to the positioning side. See illustration below, take care the side of first cutting edge is fitted tightly into insert pocket.



**Step 1:**  
Put the insert on the insert pocket.



**Step 2:**  
Push insert to against insert pocket and put the screw.



**Step 3:**  
Tighten insert screw properly.

#### 3. Cutting speed and feed rate:

- Please choose the spindle speed and feed rate according to the cutting data for different material. The downward feed rate of Z-axis should be reduced to 50-70% of table feed rate.

#### 4. Cutting fluid and cooling condition:

- Emulsion is recommended for engraving on steel, stainless steel, Al and Al-alloy.
- Cooled air blow is recommended for engraving on casting iron and plastic.