

● 刃數選擇 Effects of Flute Number

		2刃/2 Flute	3刃/3 Flute	4刃/4 Flute
特徵 Characteristics	優點 Pros	<ul style="list-style-type: none"> 排屑良好，縱向加工容易 • Good for chip ejection and vertical machining 	<ul style="list-style-type: none"> 排屑良好，縱向加工容易 • Good for chip ejection and vertical machining 	<ul style="list-style-type: none"> 剛性較高 • Higher tool rigidity
	缺點 Cons	<ul style="list-style-type: none"> 剛性較低 • Lower tool rigidity 	<ul style="list-style-type: none"> 外徑難以測量 • Tool diameter is difficult to measure 	<ul style="list-style-type: none"> 排屑性差 • Poor chip ejection
用途 Possible applications		<ul style="list-style-type: none"> 溝、側面加工、鑽孔等用途廣泛 • Slotting and side milling, drilling, etc. 	<ul style="list-style-type: none"> 溝、側面加工，重加工以及精修 • Slotting and side milling, heavy-duty operation and finishing 	<ul style="list-style-type: none"> 淺溝、側面加工及精修 • Side milling and finishing

● 銑刀種類及形狀特徵 End Mills Types 應用種類 Type of Applications

種類 Type	形狀 Shape	特徵 Features
一般 Finishing Tools		<ul style="list-style-type: none"> 最常使用的形式，可用於溝加工、側面加工等，也常用於粗銑、粗細銑、細銑等場合，種類也多。 • Most common type. Can be used for slotting, side milling, etc., with various designs.
斜刀 Tapered Tools		<ul style="list-style-type: none"> 常用於模具的斜面或底邊加工，通常先用一般刀加工過後再以斜刀刀下去加工。 • Usually used for machining molds.
粗銑刀 Roughing Tools		<ul style="list-style-type: none"> 刀刃為波浪形狀，將切屑再切成較細小的碎片，可減少減削時的阻力，適用在粗銑的環境，但切削面因為粗銑的關係表面光滑度不佳。切刃表面需研磨。 • Usually with wavy cutting edges. It can reduce the cutting force and suitable for roughing applications. Poorer surface quality.
成型刀 Profiling Tools		<ul style="list-style-type: none"> 圖示是內R刀，但實際上有多種形式，視加工物的形狀需求製作，通常為應客戶要求製作。 • Different variations according to the customers' requests.

● 工具種類 Tool Type

種類 Type	形狀 Shape	特徵 Features
中央附孔平刀 Square Type (with center hole)		<ul style="list-style-type: none"> 廣泛用於溝加工、側面加工等的環境下，雖無法用於縱向切削，但因研磨時二側均有固定的緣故，再研磨時的精度會較佳。 • Commonly used for slotting, side-milling, etc., cannot be used in vertical direction due to its design but can be reground with better precision.
平刀 Square Type		<ul style="list-style-type: none"> 廣泛用於溝加工、側面加工等的環境下，可用於縱向切削的環境但刃數需選用較少的刃數，研磨時固定單邊再研磨。 • Commonly used for slotting, side-milling, etc., can be used in vertical direction as drilling.
球刀 Ball nose Type		<ul style="list-style-type: none"> 通常應用於曲面加工，因為前端的容屑空間較小，排屑性較差。 • Usually in profiling or contouring applications. Due to the room for chip at the end face is smaller; chip ejecting is poorer than square type.
圓鼻刀 Corner Radius		<ul style="list-style-type: none"> 通常利用R角部分去修飾加工物角落的部分或是作等高線加工，即使選用較小的R角，但因可選用較大的刃徑來加工，因此加工效能較佳。 • Can be used to machine in wide ranges of applications such as contouring and with better machining efficiency.

● 刀柄及頸部的形狀種類 Shank Type

種類 Type	形狀 Shape	特徵 Features
標準長 Standard		<ul style="list-style-type: none"> 最為廣泛使用的長度。 • Most commonly used length.
長柄 Long Shank		<ul style="list-style-type: none"> 通常是用於深部加工使用，因為柄長的關係可配合加工需求的長度來調整突出的部分。 • Usually used for machining deep areas of the work piece.
長頸 Long Neck		<ul style="list-style-type: none"> 通常用於深溝加工但也適用於搪孔加工使用。 • Usually for rib processing but also can be used for boring applications.
斜頸 Tapered Neck		<ul style="list-style-type: none"> 通常用於模具的斜面壁邊的深部加工使用。 • Usually used for machining the slant slope of molds and deep areas of the work piece.

- 注意：一般刀長的設定，以不超過刀具總長之1/2為主，否則易導致刀具剛性下降而易斷刀
- Notice: For ideal cutting edge length, please do not extend 1/2 of the total length or the tool rigidity will be lower and is easily broken.