

# MULTI-FUNCTIONAL, HIGH EFFICIENCY

No. of Flutes: 3

## 3ZFKS, 3ZFKM

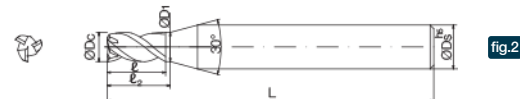


MEGACOAT is applied

Super Micro-Grain Carbide

### Workpiece Materials

★: 1st Recommendation



## 3ZFKS (Short)

Shouldering Slotting Plunge milling  
(Unit : mm)

Part Number	Stock	Outside Dia.	Mill Dia. tolerance	Length of cut	Neck Dia.	Under Neck Length	Shank Dia.	Overall length	No. of Flutes
		ØDc		ℓ	ØD1	ℓ2	ØDs	L	Z
3ZFKS060-090-06 <a href="#">fig.1</a>	○	6.0	$\begin{matrix} 0 \\ -0.020 \end{matrix}$	9.0	-	-	6	50	3
3ZFKS070-105-08 <a href="#">fig.2</a>	○	7.0	$\begin{matrix} 0 \\ -0.020 \end{matrix}$	10.5	7.2	11.3	8	60	3
3ZFKS080-120-08 <a href="#">fig.1</a>	○	8.0	$\begin{matrix} -0.005 \\ -0.025 \end{matrix}$	12.0	-	-	8	60	3
3ZFKS100-150-10 <a href="#">fig.1</a>	○	10.0	$\begin{matrix} -0.005 \\ -0.025 \end{matrix}$	15.0	-	-	10	70	3
3ZFKS120-180-12 <a href="#">fig.1</a>	○	12.0	$\begin{matrix} -0.010 \\ -0.030 \end{matrix}$	18.0	-	-	12	75	3

## 3ZFKM (Medium)

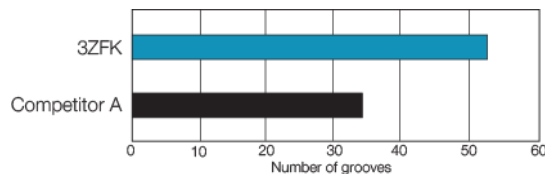
Shouldering Slotting Plunge milling  
(Unit : mm)

Part Number	Stock	Outside Dia.	Mill Dia. tolerance	Length of cut	Neck Dia.	Under Neck Length	Shank Dia.	Overall length	No. of Flutes
		ØDc		ℓ	ØD1	ℓ2	ØDs	L	Z
3ZFKM030-060-06 <a href="#">fig.2</a>	○	3.0	$\begin{matrix} 0 \\ -0.015 \end{matrix}$	6.0	3.2	6.5	6	50	3
3ZFKM040-080-06 <a href="#">fig.2</a>	○	4.0	$\begin{matrix} 0 \\ -0.015 \end{matrix}$	8.0	4.2	8.6	6	50	3
3ZFKM050-100-06 <a href="#">fig.2</a>	○	5.0	$\begin{matrix} 0 \\ -0.015 \end{matrix}$	10.0	5.2	10.8	6	50	3
3ZFKM060-130-06 <a href="#">fig.1</a>	○	6.0	$\begin{matrix} 0 \\ -0.020 \end{matrix}$	13.0	-	-	6	50	3
3ZFKM070-160-08 <a href="#">fig.2</a>	○	7.0	$\begin{matrix} 0 \\ -0.020 \end{matrix}$	16.0	7.2	17.3	8	60	3
3ZFKM080-190-08 <a href="#">fig.1</a>	○	8.0	$\begin{matrix} -0.005 \\ -0.025 \end{matrix}$	19.0	-	-	8	60	3
3ZFKM100-220-10 <a href="#">fig.1</a>	○	10.0	$\begin{matrix} -0.005 \\ -0.025 \end{matrix}$	22.0	-	-	10	70	3
3ZFKM120-260-12 <a href="#">fig.1</a>	○	12.0	$\begin{matrix} -0.010 \\ -0.030 \end{matrix}$	26.0	-	-	12	75	3

## Case Studies

● Slotting of Titanium Alloy

Outside Dia.	Ø10	
Workpiece Material	Ti-6Al-4V	
Spindle Revolution	3ZFK: n=1700min <sup>-1</sup> Competitor A: n=1300min <sup>-1</sup>	
Feed Rate	Vf=18.1 ipm	
Depth of Cut	ap x ae = 0.08" x 0.39"	



- Better surface finish and longer tool life with 3ZFK.
- Compared to competitor's coated products, the 3ZFK has a 1.4 times longer tool life.
- 3ZFK prevents burr formation due to sharp cutting edge.

◆ Cutting edge after 35 passes

Competitor A	3ZFK	Competitor A	3ZFK