

# Recommended Cutting Conditions

## TKF12/16 Recommended Cutting Conditions

Workpiece Material	Recommended Grade (Vc m/min)			TKF12				TKF16		Remarks
	MEGACOAT	PVD Coated Carbide	Carbide	Width W (inch)				Width W (inch)		
	PR1225	PR1025	KW10	0.0008	0.00088	0.039	0.079	0.059	0.079	
	Feed Rate (ipr)			Feed Rate (ipr)				Feed Rate (ipr)		
Carbon Steel (SxxC)	★ 225 ~ 500	☆ 200 ~ 450	-	0.0004 - 0.0008	0.0004 - 0.0012	0.0004 - 0.0016 (0.0004 ~ 0.0020)	0.0004 - 0.0016 (0.0004 ~ 0.0028)	0.0004 - 0.0016 (0.0004 ~ 0.0028)	0.0008 - 0.0028 (0.0008 ~ 0.004)	0.0008 - 0.0028 (0.0008 ~ 0.004)
Alloy Steel (SCM)	★ 225 ~ 500	☆ 200 ~ 450	-	0.0004 - 0.0008	0.0004 - 0.0012	0.0004 - 0.0016 (0.0004 ~ 0.0020)	0.0004 - 0.0016 (0.0004 ~ 0.0028)	0.0004 - 0.0016 (0.0004 ~ 0.0028)	0.0008 - 0.0028 (0.0008 ~ 0.004)	0.0008 - 0.0028 (0.0008 ~ 0.004)
Stainless Steel (SUS304)	★ 200 ~ 400	☆ 175 ~ 350	-	0.005 - 0.00045	0.0004 - 0.0008	0.0004 - 0.0008 (0.0004 ~ 0.0012)	0.0004 - 0.0008 (0.0004 ~ 0.0012)	0.0004 - 0.0008 (0.0004 ~ 0.0012)	0.0004 - 0.0016 (0.0008 ~ 0.0016)	0.0004 - 0.0016 (0.0008 ~ 0.0016)
Cast Iron (FC/FCD)	-	-	★ 150 ~ 350	0.0004 - 0.0012	0.0004 - 0.0016	0.0004 - 0.0020	0.0004 - 0.0020	0.0004 - 0.0020	0.0008 - 0.0032	0.0008 - 0.0032
Aluminium	-	-	★ 650 ~ 1500	0.0004 - 0.0012	0.0004 - 0.0016	0.0004 - 0.0020	0.0004 - 0.0020	0.0004 - 0.0020	0.0008 - 0.0032	0.0008 - 0.0032

※ ( ): Tough edge type (TKF.T..)

★ : 1st Recommendation

☆ : 2nd Recommendation

Workpiece Material	PCD		Remarks
	KPD001		
	Grooving	Traversing	
Aluminium	Vc (sfm)	650 ~ 1650	Coolant
	Feed Rate (ipr)	0.0004 ~ 0.0012   0.0008 ~ 0.0047	
Brass	Vc (sfm)	325 ~ 1150	
	Feed Rate (ipr)	0.0004 ~ 0.0020   0.0008 ~ 0.0059	

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## Recommended Cutting Conditions

(When Using GMM-MT, GMM-TK, GMM-NB type Insert)

CERACUT Plunge  $\frac{R}{L}$  Turn

Work Material	Recommended Grade (Cutting Speed SFM)				Width (inch)				Remarks	
	Cermet	CVD Coated	PVD Coated Carbide	Carbide	.059	.079/.098	.118	.157		
	-	CR9025	PR915	PR930	KW10	f(ipr)				
Carbon Steel	-	☆ 270~600	★ 200~500	☆ 200~430		.0004~.002	.0008~.006	.002~.008	.003~.012	Coolant
Alloy Steel	-	☆ 230~500	★ 200~500	☆ 200~430		.0004~.002	.0008~.006	.002~.008	.003~.012	
Stainless Steel	-	☆ 200~460	★ 170~460	★ 170~400		.0004~.002	.0008~.004	.002~.006	.003~.010	
Cast Iron	-	-	-	★ 170~330		.0004~.002	.002~.005	.004~.010	.004~.012	
Aluminum	-	-	-	★ 660~1490		.0004~.002	.002~.004	.002~.008	.002~.010	
Brass	-	-	-	★ 330~660		.0004~.002	.002~.004	.002~.006	.002~.008	

●When machining Steel and Stainless Steel with 4mm(.157") PR930 Insert, decrease the Feed Rate by 20%.

★ : 1st Recommendation ☆ : 2nd Recommendation

## Recommended Cutting Conditions

(When Using GMM-TMR type Insert)

Work Material	Insert Grade (SFM)		Remarks
	PVD Coated	f(ipr)	
	PR1115		
Carbon Steel	200~660	.003~.007	Coolant
Alloy Steel	200~500		
Stainless Steel	170~460		