

CERACUT Plunge & Turn Recommended Cutting Conditions

GMG • GMM • GMN • GMGA

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)						Grooving				Traversing				Remarks
	Cermet	CVD Coated Carbide	PVD Coated Carbide			Carbide	Width (mm)				Width (mm)				
	TN90	CR9025	PR915	PR930	PR905	KW10	2.0~3.0	4.0	5.0	6.0 / 8.0	2.0~3.0	4.0	5.0	6.0 / 8.0	
Carbon Steel	☆ 100~220	☆ 80~200	☆ 80~200	★ 80~200	-	-	0.05-0.15	0.10-0.25	0.15-0.35	0.20-0.35	0.10-0.20	0.15-0.30	0.20-0.40	0.25-0.40	
Alloy Steel	☆ 80~200	☆ 70~180	☆ 70~180	★ 70~180	-	-	0.05-0.15	0.10-0.25	0.15-0.35	0.20-0.35	0.10-0.20	0.15-0.30	0.20-0.40	0.25-0.40	
Stainless Steel	☆ 70~160	☆ 60~150	★ 60~150	☆ 60~150	-	-	0.05-0.15	0.10-0.20	0.15-0.35	0.20-0.35	0.10-0.20	0.15-0.25	0.20-0.40	0.25-0.40	
Cast Iron	-	-	-	-	★ 100~200	☆ 70~150	0.05-0.20	0.10-0.30	0.15-0.40	0.20-0.40	0.10-0.25	0.15-0.35	0.20-0.45	0.25-0.45	
Aluminum	-	-	-	-	-	★ 200~500	0.05-0.20	0.08-0.25	0.10-0.25	0.12-0.30	0.10-0.20	0.10-0.25	0.10-0.25	0.15-0.30	
Brass	-	-	-	-	-	★ 100~200	0.05-0.15	0.08-0.20	0.10-0.25	0.12-0.30	0.10-0.20	0.10-0.25	0.10-0.25	0.15-0.30	

★ : 1st Recommendation ☆ : 2nd Recommendation

◆ See the notes below for traversing conditions.

① Case of KGM Toolholder

	Recommended Conditions
ap (MAX) mm	under 80% of Edge Width
f (MAX) mm/rev	under 10% of Edge Width

• $ap \leq 0.8w$

• $f \leq 0.1w$

(ap) × (f) shall not exceed 1/2 of ap(Max) × f(Max)

Load (mm ²) \ Edge Width (mm)	2.0~2.5	3.0	4.0	5.0	6.0	8.0
ap × f	~0.20	~0.36	~0.64	~1.00	~1.44	~2.56

• $ap \times f \leq \frac{1}{2} \times 0.8w \times 0.1w = 0.04w^2$

② Case of KGM-T Toolholder (Deep Grooving Type)

Use 90% of KGM conditions

③ Case of KGMM / KGMS / KFMS-8 Toolholder

	Recommended Conditions
ap (MAX) mm	under 50% of Edge Width
f (MAX) mm/rev	under 4% of Edge Width

• $ap \leq 0.5w$

• $f \leq 0.04w$

ap × f should be as follows. (Under 50% of KGM)

Load (mm ²) \ Edge Width (mm)	2.0~2.5	3.0	4.0	5.0	6.0	8.0
ap × f	~0.10	~0.18	~0.32	~0.50	~0.72	~1.28

• $ap \times f \leq 0.02w^2$

④ Case of KIGM Toolholder

	Recommended Conditions
ap (MAX) mm	under 70% of Edge Width
f (MAX) mm/rev	under 8% of Edge Width

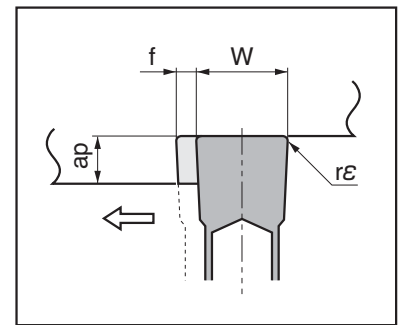
• $ap \leq 0.7w$

• $f \leq 0.08w$

ap × f should be as follows. (Under 70% of KGM)

Load (mm ²) \ Edge Width (mm)	3.0	4.0	5.0
ap × f	~0.25	~0.44	~0.70

• $ap \times f \leq 0.04w^2$



G

Grooving