

Recommended Cutting Conditions

◆ GA insert (Molded Chipbreaker)

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)								① f at Grooving (mm/rev) ② f at Traversing (mm/rev) ③ // ap (mm)				Remarks
	Cermet				CVD Coated Carbide	PVD Coated Carbide		Carbide					
	TN60	TN90	TC40	TC60	CR9025	PR630	PR930	KW10	GA 30	GA 40	GA 50		
Carbon Steel	☆ 130-200	-	-	-	★ 80-180	-	-	-	①0.06-0.18 ②0.05-0.15 ③Max. 0.8	①0.06-0.21 ②0.05-0.17 ③Max. 1.0	①0.06-0.25 ②0.05-0.2 ③Max. 1.3		Coolant
Alloy Steel	☆ 100-180	-	-	-	★ 80-160	-	-	-	①0.06-0.15 ②0.05-0.12 ③Max. 0.3	①0.06-0.18 ②0.05-0.15 ③Max. 0.5	①0.06-0.22 ②0.05-0.18 ③Max. 0.8		
Stainless Steel	-	-	-	-	★ 60-130	-	-	-	①0.06-0.1 ②0.05-0.08 ③Max. 0.8	①0.06-0.1 ②0.05-0.08 ③Max. 0.8	①0.06-0.12 ②0.05-0.1 ③Max. 1.2		

◆ GIA insert (Molded Chipbreaker)

★ : 1st Recommendation ☆ : 2nd Recommendation

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)								① f at Grooving (mm/rev) ② f at Traversing (mm/rev) ③ // ap (mm)				Remarks
	Cermet				CVD Coated Carbide	PVD Coated Carbide		Carbide					
	TN60	TN90	TC40	TC60	CR9025	PR630	PR930	KW10	GIA 30	GIA 40	GIA 50		
Carbon Steel	☆ 60-120	-	-	-	★ 60-120	-	-	-	①0.04-0.08 ②0.02-0.08 ③Max. 0.3	①0.04-0.09 ②0.02-0.08 ③Max. 0.4	①0.05-0.1 ②0.05-0.08 ③Max. 0.5		Coolant
Alloy Steel	☆ 60-100	-	-	-	★ 60-100	-	-	-	①0.04-0.07 ②0.02-0.07 ③Max. 0.3	①0.04-0.07 ②0.02-0.07 ③Max. 0.4	①0.05-0.08 ②0.05-0.08 ③Max. 0.5		
Stainless Steel	-	-	-	-	★ 60-80	-	-	-	①0.04-0.07 ②0.02-0.07 ③Max. 0.3	①0.04-0.07 ②0.02-0.07 ③Max. 0.4	①0.05-0.08 ②0.05-0.08 ③Max. 0.5		

◆ GMN insert (CBN / PCD)

★ : 1st Recommendation ☆ : 2nd Recommendation

Workpiece Material	Recommended Insert Grade (Cutting Speed: m/min)		① f at Grooving (mm/rev) ② f at Traversing (mm/rev) ③ // ap (mm)				Remarks
	CBN	PCD					
	KBN510 KBN525 (KBN10B)	KPD001 (KPD010)	GMN2	GMN3	GMN4 GMN5	GMN6	
Aluminum	-	★ 150-2000	①0.05-0.15 ②0.05-0.15 ③Max. 0.5	①0.05-0.15 ②0.05-0.15 ③Max. 0.8	①0.08-0.18 ②0.08-0.18 ③Max. 0.8	①0.10-0.20 ②0.10-0.20 ③Max. 0.8	Coolant
Brass	-	★ 200-800	①0.05-0.15 ②0.05-0.15 ③Max. 0.5	①0.05-0.15 ②0.05-0.15 ③Max. 0.8	①0.08-0.18 ②0.08-0.18 ③Max. 0.8	①0.10-0.20 ②0.10-0.20 ③Max. 0.8	
Cast Iron	★ 150-400	-	①0.04-0.09 ②0.04-0.09 ③Max. 0.3	①0.05-0.1 ②0.05-0.1 ③Max. 0.5	①0.05-0.12 ②0.05-0.12 ③Max. 0.5	①0.05-0.15 ②0.05-0.15 ③Max. 0.8	
Hard Materials	★ 80-120	-	①0.02-0.05 ②0.01-0.03 ③Max. 0.1	①0.03-0.07 ②0.01-0.05 ③Max. 0.2	①0.03-0.08 ②0.03-0.08 ③Max. 0.3	①0.05-0.1 ②0.05-0.1 ③Max. 0.4	

* Above cutting condition is for external grooving. Set feed rate lower than 20% for face grooving.

★ : 1st Recommendation

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Grooving