

# Turning Inserts

## Recommended Cutting Data

MATERIAL DESCRIPTION	AISI	ISO	APPLICATION	SFM (ft / mn)										CHIP BREAKER		
				100	200	300	400	500	600	700	800	900	1000		1100	1200
Very Soft Steel Low-Carbon Steel Mild Steel (< 0.3% C)  (100 ~ 220 BHM)	1010	S10C	Tough				JC450V									UD or UB
	1015	S15C	Rough					JC325V								UB or GG
	1020	S20C	Medium						JC215V							UR or PG
	1023	S22C	Light									JC110V				UT or PF
	1025	S25C	Finish									JC110V				FT or UA
	1030	S30C														
Medium-Carbon Steel High-Carbon Steel Mild Steel (> 0.3% C)  (140 ~ 320 BHM)	1035	S35C	Tough				JC450V									UD or UB
	1040	S40C	Rough					JC325V								UB or GG
	1045	S45C	Medium						JC215V							UR or PG
	1050	S50C	Light									JC110V				UT or PF
	1055	S55C	Finish									JC110V				FT or UA
	1060	S60C														
Alloy Steel Tool Steel  (~35 HRc)	4130	SCM430	Tough				JC450V									UD or UB
	4140	SCM440	Rough					JC450V								UB or GG
	5130	SCr430	Medium						JC325V							UR or PG
	5140	SCr440	Light									JC215V				UT or PF
	M2	SKH51	Finish									JC110V				FT or UA
	H13	SKD61														
Alloy Steel Tool Steel  (36 ~ 48 HRc)	4130	SCM430	Tough	JC450V												UD or UB
	4140	SCM440	Rough		JC450V											UB or GG
	5130	SCr430	Medium				JC325V									UR or PG
	5140	SCr440	Light					JC215V								UT or PF
	M2	SKH51	Finish						JC110V							FT or UA
	H13	SKD61														

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				100	200	300	400	500	600	700	800	900	1000	1100	1200	
Austenitic Stainless Steel (<28 HRc)	304	SUS304	Medium			JC215V										UR or GG
	304L	SUS304L	Light			JC5015										SG
	316	SUS316	Finish				JC110V									SF
	316L	SUS316L														
Ferritic & Martensitic Stainless Steel (<40 HRc)	410	SUS410	Medium			JC215V										UR or GG
	410L	SUS410L	Light			JC5015										SG
	440	SUS440	Finish				JC110V									SF
	630	SUS630														

MATERIAL DESCRIPTION	AISI	ISO	APPLICATION	SFM (ft / mn)						CHIP BREAKER
				500	1000	1500				
Nodular Cast Iron High-Alloy Cast Iron (120 ~ 320 BHM)	A48-50B	FCD	Tough	JC325V						UD or UB
	A48-60B	FCD	Rough	JC215V						UB or GG
	A220-7	FCM	Medium		JC110V					UR or PG
	A220-8	FCM	Light			JC105V				UT or PF
	A2209	FCM	Finish			JC105V	JBN795			FT or UA
Cast Iron Gray Cast Iron (120 ~ 320 BHM)	A48-20B 60/40/18	FC FC	Tough	JC325V						UD or UB
			Rough		JC215V					UB or GG
			Medium			JC110V				UR or PG
			Light				JC105V			UT or PF
			Finish				JC105V		JBN795	FT or UA

MATERIAL DESCRIPTION	AISI	ISO	APPLICATION	SFM (ft / mn)								CHIP BREAKER	
				100	200	300	400	500	600	700	800		
Hardened Steel Hardened Cast Iron (50 ~ HRc)	4340	SNCM430	Medium		JBN245								-
	H-13	SKD61	Light			JBN795							-
	A48-20B A1220-	FC FCM	Finish				JBN795						-

MATERIAL DESCRIPTION	AISI	ISO	APPLICATION	SFM (ft / mn)				CHIP BREAKER
				1000	2000	3000	4000	
Aluminum Aluminum Alloy Hi-Si Aluminum Alloy (>12% Si)			Medium		JDA10			-
			Light			JDA10		-
			Finish				JDA715	-