THE NEW VALUE FRONTIER

KYOCERA

KBN510 & KBN525

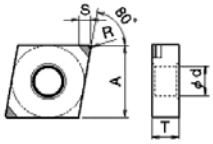
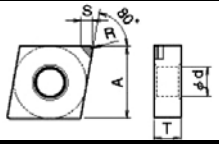
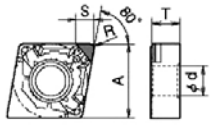
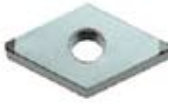
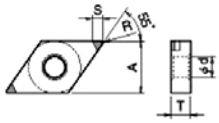
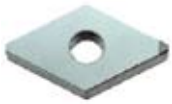
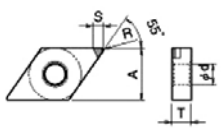
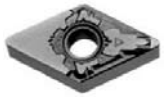
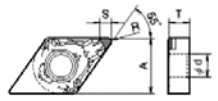
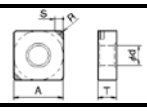
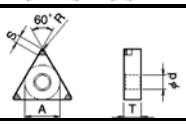
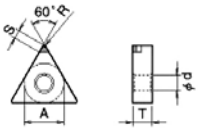
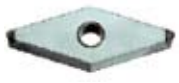
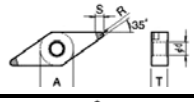
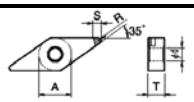
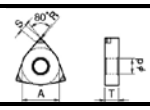
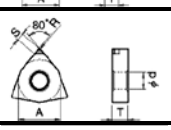
Micro-grain CBN Grades

Uniform distribution of the CBN material improves both wear resistance and toughness

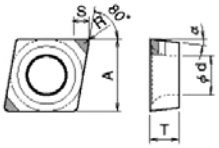
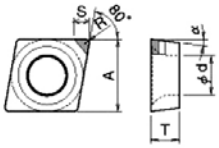
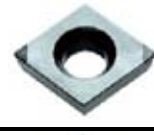
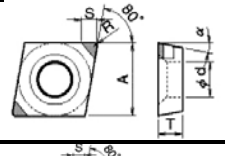
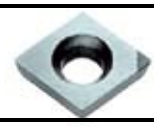
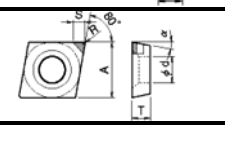
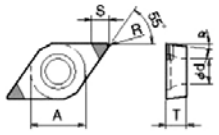
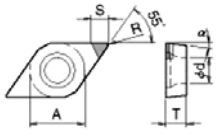
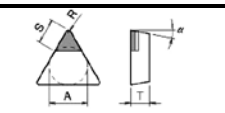
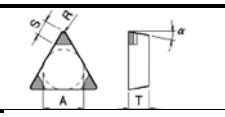
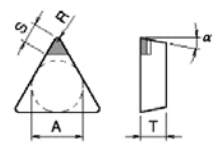
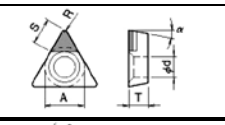
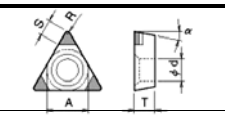
- **KBN510- General purpose and finishing of hardened steels.**
- **KBN525- Interrupted machining of hardened steels.**

ADVANCING PRODUCTIVITY

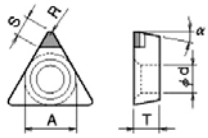
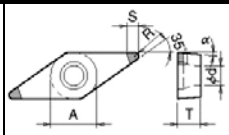
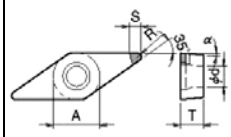
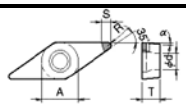
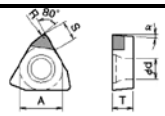
KBN510 / KBN525

		Description	Edge Prep	A	T	ϕ d	R	S	α	KBN510	KBN525
		CNGA430.5ME	S00525	.500	.187	.203	.008	.102	-		•
		CNGA431ME		.500	.187	.203	.016	.098	-	•	•
		CNGA432ME		.500	.187	.203	.031	.102	-	•	•
		CNGA433ME		.500	.187	.203	.047	.098	-	•	
		CNGA431ME-T	S00730	.500	.187	.203	.016	.098	-		•
		CNGA432ME-T		.500	.187	.203	.031	.102	-		•
		CNGA433ME-T		.500	.187	.203	.047	.098	-		•
		CNGA430.5SE	S00525	.500	.187	.203	.008	.102	-		•
		CNGA431SE		.500	.187	.203	.016	.098	-	•	•
		CNGA432SE		.500	.187	.203	.031	.102	-	•	•
		CNGA433SE		.500	.187	.203	.047	.098	-		•
		CNGA432SE-T	S00730	.500	.187	.203	.031	.102	-		•
		CNGM431BB1□	S00325	.500□	.187□	.203□	.016□	.070□	-□	•	•
		CNGM432BB1□		.500□	.187□	.203□	.031□	.078□	-□	•	•
		CNGM431BB2□	S00525	.500□	.187□	.203□	.016□	.086□	-□	•	•
		CNGM432BB2□		.500□	.187□	.203□	.031□	.094□	-□	•	•
		CNGM433BB2□		.500□	.187□	.203□	.047□	.102□	-□	•	•
		CNGM432BB3□	S00625	.500□	.187□	.203□	.031□	.110□	-□	•	•
		CNGM433BB3□		.500□	.187□	.203□	.047□	.118□	-□	•	•
		DNGA430.5ME	S00525	.500	.187	.203	.008	.098	-	•	
		DNGA431ME		.500	.187	.203	.016	.091	-	•	•
		DNGA432ME		.500	.187	.203	.031	.075	-	•	•
		DNGA431ME-T	S00730	.500	.187	.203	.016	.091	-		•
		DNGA432ME-T		.500	.187	.203	.031	.075	-		•
		DNGA430.5SE	S00525	.500	.187	.203	.008	.098	-	•	•
		DNGA431SE		.500	.187	.203	.016	.091	-	•	•
		DNGA432SE		.500	.187	.203	.031	.075	-	•	•
		DNGA433SE		.500	.187	.203	.047	.075	-		•
		DNGA432SE-T	S00730	.500	.187	.203	.031	.075	-		•
		DNGM431BB1	S00325	.500	.187	.203	.016	.063	-	•	•
		DNGM432BB1		.500	.187	.203	.031	.067	-	•	•
		DNGM431BB2	S00525	.500	.187	.203	.016	.075	-	•	•
		DNGM432BB2		.500	.187	.203	.031	.079	-	•	•
		DNGM433BB2		.500	.187	.203	.047	.087	-	•	•
		DNGM432BB3	S00625	.500	.187	.203	.031	.094	-	•	•
		DNGM433BB3		.500	.187	.203	.047	.098	-	•	•
		SNGA433ME-T	S00525	.500	.187	.203	.047	.071	-		•
		TNGA331ME	S00525	.375	.187	.150	.016	.094	-	•	•
		TNGA332ME		.375	.187	.150	.031	.098	-	•	•
		TNGA333ME		.375	.187	.150	.047	.087	-	•	•
		TNGA332ME-T	S00730	.375	.187	.150	.031	.098	-		•
		TNGA330.5SE	S00525	.375	.187	.150	.008	.102	-		•
		TNGA331SE		.375	.187	.150	.016	.094	-	•	•
		TNGA332SE		.375	.187	.150	.031	.098	-	•	•
		TNGA331SE-T	S00730	.375	.187	.150	.016	.094	-		•
		TNGA332SE-T		.375	.187	.150	.031	.098	-		•
		VNGA331ME	S00525	.375	.187	.150	.016	.075	-	•	•
		VNGA331ME-T	S00730	.375	.187	.150	.016	.079	-		•
		VNGA332ME-T		.375	.187	.150	.031	.075	-		•
		VNGA330.5SE	S00525	.375	.187	.150	.008	.087	-		•
		VNGA331SE		.375	.187	.150	.016	.075	-	•	•
		VNGA332SE		.375	.187	.150	.031	.063	-	•	•
		WNGA431ME	S00525	.500	.187	.203	.016	.079	-		•
		WNGA432ME		.500	.187	.203	.031	.075	-	•	•
		WNGA431SE	S00525	.500	.187	.203	.016	.079	-	•	
		WNGA432SE		.500	.187	.203	.031	.075	-	•	
		WNGA431SE-T	S00730	.500	.187	.203	.016	.079	-		•
		WNGA432SE-T		.500	.187	.203	.031	.075	-		•

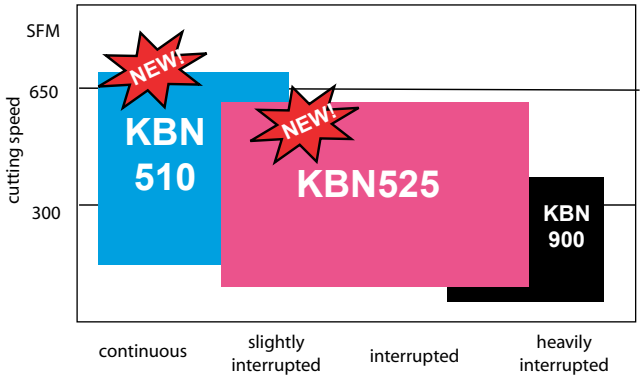
KBN510 / KBN525

		Description	Edge Prep	A	T	ϕ d	R	S	α	KBN510	KBN525
		CCMW21.51ME	T00315	.250	.094	.110	.016	.075	7°	•	•
		CCMW21.52ME		.250	.094	.110	.031	.067	7°	•	•
		CCMW32.50.5ME	T00315	.375	.156	.173	.008	.079	7°		•
		CCMW32.51ME		.375	.156	.173	.016	.075	7°	•	•
		CCMW32.52ME		.375	.156	.173	.031	.067	7°	•	
		CCMW32.51ME-T	S00435	.375	.156	.173	.016	.075	7°		•
		CCMW1.10.91SE	T00315	.138	.055	.075	.016	.055	7°	•	
		CCMW21.50.5SE	T00315	.250	.094	.110	.008	.079	7°	•	•
		CCMW21.51SE		.250	.094	.110	.016	.075	7°	•	•
		CCMW32.50.5SE	T00315	.375	.156	.173	.008	.079	7°		•
		CCMW32.51SE		.375	.156	.173	.016	.075	7°	•	•
		CCMW21.51SE-T	S00435	.250	.094	.110	.016	.075	7°		•
		CCMW32.51SE-T	S00435	.375	.156	.173	.016	.075	7°		•
		CPGB2.51.51ME	T00315	.313	.094	.138	.016	.075	11°	•	•
		CPGB320.5ME	T00315	.375	.125	.177	.008	.075	11°	•	
		CPGB321ME		.375	.125	.177	.016	.075	11°	•	•
		CPGB2.51.51ME-T	S00435	.313	.094	.138	.016	.075	11°		•
		CPGB321ME-T	S00435	.375	.125	.177	.016	.075	11°		•
		CPGB2.51.50.5SE	T00315	.313	.094	.138	.008	.075	11°	•	•
		CPGB2.51.51SE		.313	.094	.138	.016	.075	11°	•	
		CPGB320.5SE	T00315	.375	.125	.177	.008	.075	11°	•	
		CPGB321SE		.375	.125	.177	.016	.075	11°	•	•
		DCMW21.50.5ME	T00315	.250	.094	.110	.008	.075	7°	•	•
		DCMW21.51ME		.250	.094	.110	.016	.067	7°	•	•
		DCMW21.52ME		.250	.094	.110	.031	.075	7°	•	•
		DCMW32.50.5ME	T00315	.375	.156	.173	.008	.075	7°	•	•
		DCMW32.51ME		.375	.156	.173	.016	.067	7°	•	•
		DCMW32.52ME		.375	.156	.173	.031	.075	7°	•	•
		DCMW32.50.5ME-T	S00435	.375	.156	.173	.008	.075	7°		•
		DCMW32.51ME-T		.375	.156	.173	.016	.067	7°		•
		DCMW32.52ME-T		.375	.156	.173	.031	.075	7°		•
		DCMW21.50.5SE	T00315	.250	.094	.110	.008	.075	7°	•	
		DCMW21.51SE		.250	.094	.110	.016	.067	7°	•	•
		DCMW32.51SE	T00315	.375	.156	.173	.016	.067	7°	•	•
		DCMW32.52SE		.375	.156	.173	.031	.075	7°		•
		DCMW32.51SE-T	S00435	.375	.156	.173	.016	.067	7°		•
		DCMW32.52SE-T		.375	.156	.173	.031	.075	7°		•
		TPG222	T00315	.250	.125	-	.031	.138	11°		•
		TPG322	T00315	.375	.125	-	.031	.142	11°		•
		TPG221ME	T00315	.250	.125	-	.016	.098	11°		•
		TPG222ME		.250	.125	-	.031	.095	11°		•
		TPG221SE	T00315	.250	.125	-	.016	.098	11°		•
		TPG222SE		.250	.125	-	.031	.094	11°		•
		TPG320.5SE	T00315	.375	.125	-	.008	.102	11°	•	
		TPG321SE		.375	.125	-	.016	.094	11°	•	•
		TPG322SE		.375	.125	-	.031	.083	11°		•
		TPG322SE-T	S00435	.375	.125	-	.031	.082	11°		•
		TPGB221	T00315	.250	.125	.138	.016	.150	11°	•	•
		TPGB222		.250	.125	.138	.031	.138	11°	•	•
		TPGB321	T00315	.375	.125	.177	.016	.150	11°	•	
		TPGB322		.375	.125	.177	.031	.138	11°	•	•
		TPGB221ME	T00315	.250	.125	.138	.016	.071	11°	•	•
		TPGB222ME		.250	.125	.138	.031	.059	11°	•	•

KBN510 / KBN525

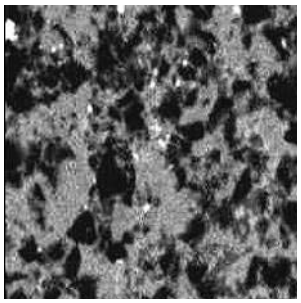
		Description	Edge Prep	A	T	ϕ d	R	S	α	KBN510	KBN525
		TPGB1.51.50.5SE	T00315	.187	.094	.098	.008	.071	11°	•	
		TPGB1.51.51SE		.187	.094	.098	.016	.067	11°	•	
		TPGB1.81.50.5SE	T00315	.219	.094	.118	.008	.071	11°	•	•
		TPGB1.81.51SE		.219	.094	.118	.016	.063	11°	•	•
		TPGB220.5SE	T00315	.250	.125	.137	.008	.075	11°	•	
		TPGB221SE		.250	.125	.137	.016	.071	11°	•	•
		TPGB222SE		.250	.125	.137	.031	.059	11°		•
		TPGB321SE	T00315	.375	.125	.177	.016	.071	11°	•	•
		TPGB1.81.51SE-T	S00435	.219	.094	.098	.016	.063	11°		•
		VBGW221ME	T00315	.250	.125	.110	.016	.079	5°	•	•
		VBGW222ME		.250	.125	.110	.031	.067	5°	•	•
		VBGW330.5ME	T00315	.375	.187	.173	.008	.094	5°		•
		VBGW331ME		.375	.187	.173	.016	.079	5°	•	•
		VBGW332ME		.375	.187	.173	.031	.067	5°	•	•
		VBGW220.5SE	T00315	.250	.125	.110	.008	.094	5°	•	•
		VBGW221SE		.250	.125	.110	.016	.079	5°	•	•
		VBGW222SE		.250	.125	.110	.031	.067	5°		•
		VBGW330.5SE	T00315	.375	.187	.173	.008	.094	5°	•	
		VBGW331SE		.375	.187	.173	.016	.079	5°	•	•
		VBGW332SE		.375	.187	.173	.031	.067	5°	•	•
		VBGW221SE-T	S00435	.250	.125	.110	.016	.079	5°		•
		VBGW222SE-T		.250	.125	.110	.031	.067	5°		•
		WBGW1.210.5L-SE	T00315	.156	.063	.091	.008	.075	5°		•
		WBGW1.211L-SE		.156	.063	.091	.016	.075	5°		•
		WBGW1.51.50.5L-SE	T00315	.187	.094	.091	.008	.091	5°	•	•
		WBGW1.51.51L-SE		.187	.094	.091	.016	.091	5°	•	•

CBN Application Range

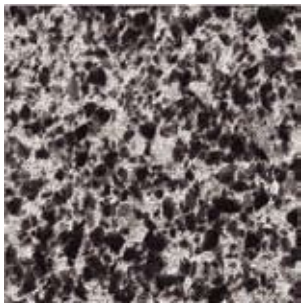


Grain Structure

(x7000)



Conventional CBN



Improved KBN525

Grade	Binder	µm Avg. Grain Diameter	GPa Substrate Hardness	MPa m $^{1/2}$ Fracture Toughness	MPa Fracture Strength	
KBN510	TiC	2	28	5.0	90-110	General purpose to finishing of steels.
KBN525	TiN	<1	25	5.0	120-130	General purpose to interrupted cutting of hardened steels

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