



SUMITOMO

CARBIDE - CBN - DIAMOND

SN2000K & SN2100K



New Generation of Ceramic Turning Grades

Ceramic grades for cast iron turning and milling applications



SN2000K & SN2100K

Ceramic Turning & Milling Grades for Cast Iron

Developed using a patented microwave sintering process that produces a very fine-grained microstructure with enhanced characteristics, Sumitomo ceramic grades **SN2000K** and **SN2100K** are capable of machining a broad range of cast iron materials.

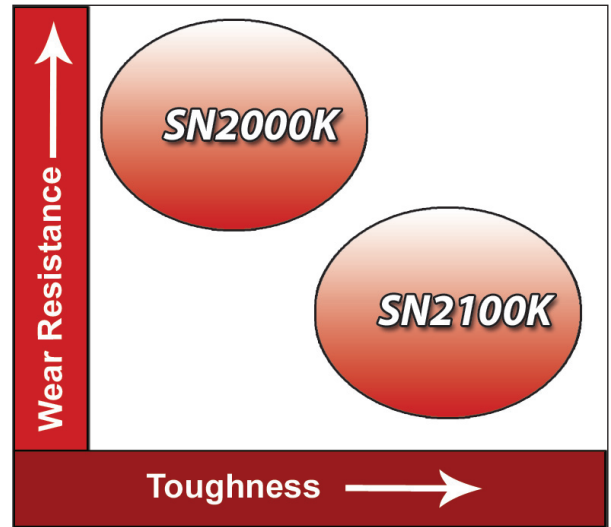
Grade Features

SN2000K For high speed general and finish cast iron turning

SN2000K was developed specifically to exhibit enhanced hardness, toughness, and high temperature strength, resulting in exceptional wear resistance, promoting longer tool life. It also displays increased chipping resistance as well as higher speeds and feeds over competitor grades. Since the hardness of this grade allows it to maintain stable life without the risk of premature wear due to heat, using coolant is NOT recommended.

SN2100K Rough turning and milling for gray cast iron applications

With its high shock and impact resistance, SN2100K is a grade ideally suited for cast iron roughing, specifically rough turning and milling of cast iron. Use when exceptional toughness and wear resistance is required.



Recommended Running Conditions

Material	Hardness (Bhn)	Depth of Cut (in)	Recommended Speed Range (SFM)	
			SN2000K	SN2100K
Gray Cast Iron	150 - 200	.020	3000 - 4200	2500
		.080	2500 - 3500	2000
		AS CAST	2300 - 3300	1500
	200 - 250	.020	2000 - 3000	2000
		.040	1800 - 2800	1500
		.100	1500 - 2500	1500
Alloy Cast Iron	200 - 250	.020	2000 - 3000	-
		.060	2000 - 3000	-
		AS CAST	2000 - 3000	-
	250 - 300	.020	1500 - 2500	-
		.060	1500 - 2500	-
		AS CAST	1500 - 2500	-
Chilled Irons	400 - 500	.020	-	-
		.060	500	-
		.125	500	-
	500 - 600	.015	-	-
		.030	-	-
		.060	300	-
Ni-resist Iron	130 - 200	.025	-	-
		.050	2000	-
		.075	1500	-

Toolholders are available in two types of clamping systems to accommodate SN2000K and SN2100K ceramic grades:

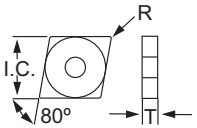
CX - Notch clamping

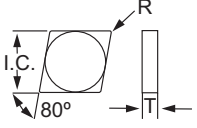


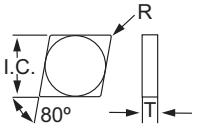
CD - Clamping element with thrust plate (for short-chip material)

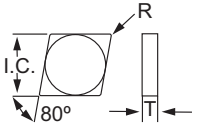


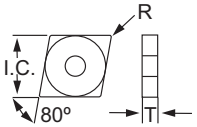
■ NEGATIVE

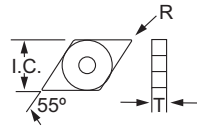
CNMA					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
CNMA 432	.500	.1875	.0313	.2031	●	●
CNMA 433			.0469		●	●
CNMA 434			.0625		●	●
CNMA 454			.0625		●	●
CNMA 543	.625	.250	.0469	.250	●	●
CNMA 544			.0625		●	●

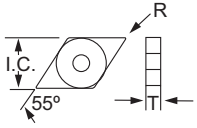
CNMN					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
CNMN 434	.500	.1875	.0625	-	●	●

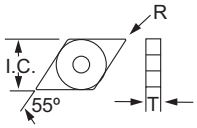
CNMX					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
CNMX 453	.500	.3125	.0469	-	●	●
CNMX 454			.0625		●	●

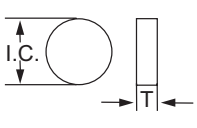
CNG					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
CNG 432	.500	.1875	.0313	-	●	●
CNG 433			.0469		●	●
CNG 434			.0625		●	●
CNG 452			.0313		●	●
CNG 453			.0469		●	●
CNG 454			.0625		●	●

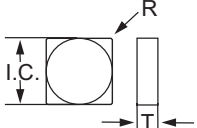
CNGA					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
CNGA 432	.500	.1875	.0313	.2031	●	●
CNGA 433			.0469		●	●
CNGA 434			.0625		●	●
CNGA 542			.0313		●	●
CNGA 543	.625	.250	.0469	.250	●	●
CNGA 544			.0625		●	●
CNGA 643	.750	.250	.0469	.3126	●	●
CNGA 644			.0625		●	●

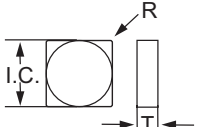
DNGA					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
DNGA 432	.500	.1875	.0313	.2031	●	●
DNGA 433			.0469		●	●
DNGA 434			.0625		●	●

DNMX					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
DNMX 354	.375	.3125	.0625	.2031	●	●
DNMX 454	.500	.3125	.0625	.2031	●	●

DNG					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
DNG 432	.500	.1875	.0313	.2031	●	●
DNG 433			.0469		●	●
DNG 434			.0625		●	●

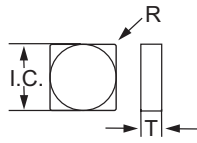
RNG					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
RNG 32	.375	.125	-	-	●	●
RNG 42	.500	.1875	.125	-	●	●
RNG 43			-		●	●
RNG 45			.3125		●	●
RNG 55	.625	.3125	-	-	●	●

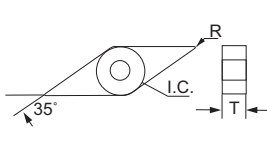
SNMN					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
SNMN 434	.500	.1875	.0625	.2031	●	●

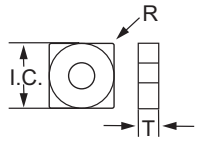
SNMX					Grades	
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K
SNMX 453	.500	.3125	.0781	.2031	●	●
SNMX 454	.500	.3125	.0625	.2031	●	●
SNMX 554	.625	.3125	.0625	.250	●	●

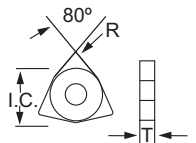
SN2000K & SN2100K grades not shown in stock can be made to order. Call for price and delivery.

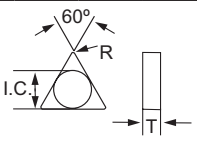
■ NEGATIVE (cont.)

SNG					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
SNG 432			.0313			●	●
SNG 433	.500	.1875	.0469	-		●	●
SNG 434			.0625			●	●

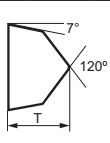
VNGA					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
VNGA 332			.0313			●	●
VNGA 333	.375	.1875	.0469			●	●

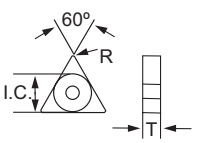
SNGA					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
SNGA 432			.0313			●	●
SNGA 433	.500	.1875	.0469	.2031		●	●
SNGA 434			.0625			●	●

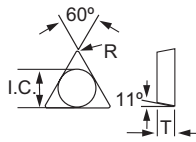
WNGA					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
WNGA 432			.0313			●	●
WNGA 433	.500	.1875	.0469	.2031		●	●

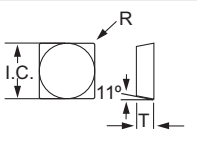
TNG					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
TNG 332			.0313			●	●
TNG 333		.1875	.0469			●	●
TNG 334	.375		.0625			●	●
TNG 352		.3125	.0313			●	●
TNG 353			.0469			●	●
TNG 432			.0313			●	●
TNG 433	.500	.1875	.0469			●	●
TNG 434			.0625			●	●
TNG 436			.0938			●	●

■ POSITIVE

RCGX					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
RCGX 102	.250	.309				●	●
RCGX 103	.375	.309	-	-		●	●
RCGX 104	.500	.312				●	●


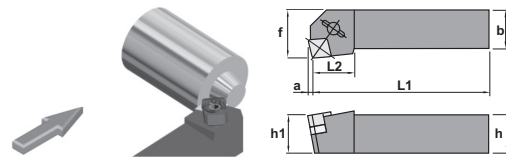

TNGA					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
TNGA 332			.0313			●	●
TNGA 333	.375		.0469			●	●
TNGA 334			.0625			●	●
TNGA 432		.1875	.0313			●	●
TNGA 433			.0469			●	●
TNGA 434	.500		.0625	.2031		●	●
TNGA 436			.0938			●	●
TNGA 438			.1250			●	●
TNGA 543	.625	.250	.0469	.250		●	●
TNGA 544			.0625			●	●


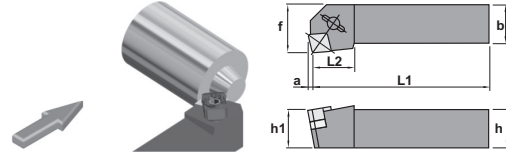

TPG					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
TPG 322			.0313			●	●
TPG 323	.375	.125	.0156			●	●
TPG 432		.1875	.0313			●	●
TPG 433	.500		.0469			●	●


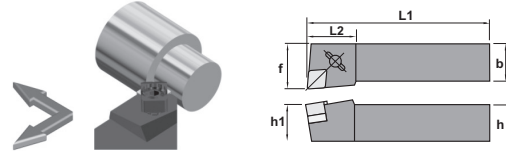

SPG					Grades		
	Catalog #	I.C.	T	r	Hole Dia.	SN2000K	SN2100K
SPG 422		.125	.0313			●	●
SPG 432	.500		.0313			●	●
SPG 433		.1875	.0469			●	●


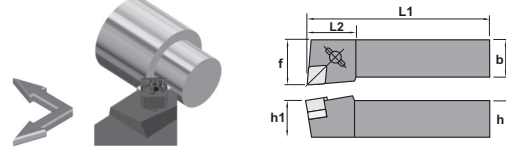

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Top Clamp Toolholders


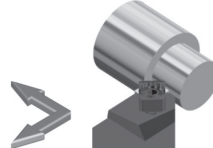
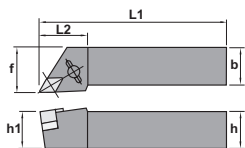

CCKN 75° CD  Insert: CNG CNMN								Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	a	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left												
CCKNR164CD	CCKNL164CD	1.000	1.000	1.000	6.000	1.338	1.250	0.122	ICSN434	BFTX806135	CBCR45	CLCD45	LH040
CCKNR204CD	CCKNL204CD	1.250	1.250	1.250			1.500						


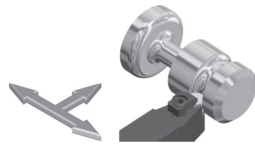
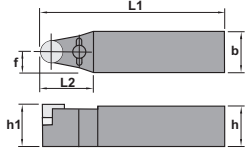

CCKN 75° CX  Insert: CNMX								Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	a	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left												
CCKNR164CX	CCKNL164CX	1.000	1.000	1.000	6.000	1.338	1.250	0.122	ICSN434	BFTX806135	CBCR45	CLCX45	LH040
CCKNR204CX	CCKNL204CX	1.250	1.250	1.250			1.500						


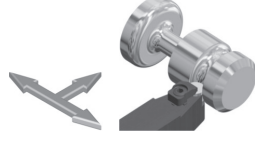
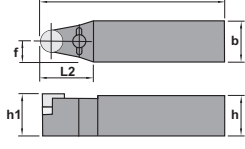

CCLN 75° CD  Insert: CNG CNMN								Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	a	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left												
CCLNR164CD	CCLNL164CD	1.000	1.000	1.000	6.000	1.338	1.250	0.122	ICSN434	BFTX806135	CBCR45	CLCD45	LH040
CCLNR204CD	CCLNL204CD	1.250	1.250	1.250			1.500						


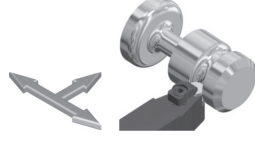
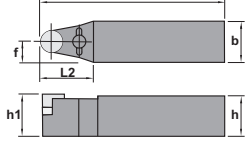

CCLN 75° CX  Insert: CNMX								Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	a	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left												
CCLNR164CX	CCLNL164CX	1.000	1.000	1.000	6.000	1.338	1.250	0.122	ICSN434	BFTX806135	CBCR45	CLCX44	LH040
CCKNR204CX	CCLNL204CX	1.250	1.250	1.250			1.500						


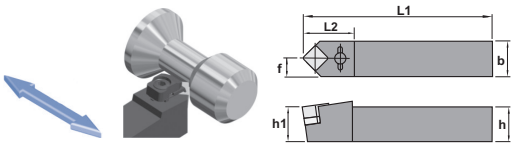

Top Clamp Toolholders (cont.)


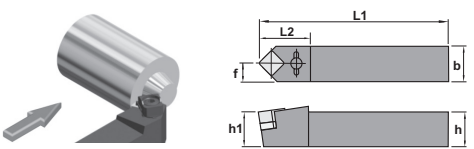

CDJN 93° CX  Insert: DNMX		 					Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CDJNR164CX	CDJNL164CX	1.000	1.000	1.000	6.000	1.496	1.250	IDSN434	BFTX806135	-	CLCXD45	LH040
CDJNR204CX	CDJNL204CX	1.250	1.250	1.250			1.500					

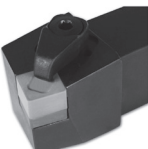
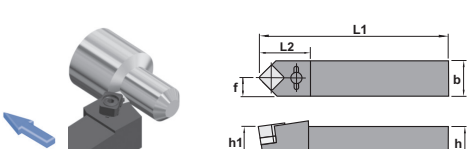

CRDC CD  Insert: RCGX		 					Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Neutral	-											
CRDCN163CD	-	1.000	1.000	1.000	6.000	1.420	0.500	-	BFTX02507	CBRC3	CLCDRC34	LH030
CRDCN203CD	-	1.250	1.250	1.250			0.625					
CRDCN164CD	-	1.000	1.000	1.000		1.300	0.500	-	BFTX0309	CBRC4		
CRDCN204CD	-	1.250	1.250	1.250			0.625					


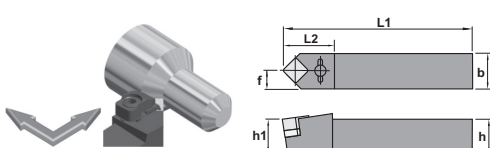

CRDN CD  Insert: RNG		 					Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Neutral	-											
CRDNN205CD	-	1.000	1.000	1.000	6.000	1.417	0.625	IRSN53	BFTX1106135	CBCR45	CLCD45	LH040
CRDNN245CD	-	1.250	1.250	1.250			0.750					

CRGN CD  Insert: RNG		 					Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CRGNR165CD	CRGNL165CD	1.000	1.000	1.000	6.000	1.338	1.250	IRSN53	BFTX1106135	CBCR45	CLCDRN55	LH040
CRGNR205CD	CRGNL205CD	1.250	1.250	1.250			1.500					

CSDN 45° CX  Insert: SNMX							Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CSDNR164CX	CSDNL164CX	1.000	1.000	1.000	6.000	1.653	0.500	ISSN434	BFTX806135	-	CLCX44	LH040
CSDNR204CX	CSDNL204CX	1.250	1.250	1.250			0.625					

CSKN 75° CX  Insert: SNMX							Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CSKNR164CX	CSKNL164CX	1.000	1.000	1.000	6.000	1.338	1.250	ISSN434	BFTX806135	-	CLCX44	LH040
CSKNR204CX	CSKNL204CX	1.250	1.250	1.250								

CSRN 75° CX  Insert: SNMX							Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CSRNR164CX	CSRNL164CX	1.000	1.000	1.000	6.000	1.338	1.130	ISSN434	BFTX806135	-	CLCX44	LH040
CSRNR204CX	CSRNL204CX	1.250	1.250	1.250			1.379					

CSSN 45° CX  Insert: SNMX							Hardware 					
Catalog Number		b	h	h ₁	L ₁	L ₂	f	Shim	Screw	Chip-breaker	Clamp	Wrench
Right	Left											
CSSNR164CX	CSSNL164CX	1.000	1.000	1.000	6.000	1.653	1.250	ISSN434	BFTX806135	-	CLCX44	LH040
CSSNR204CX	CSSNL204CX	1.250	1.250	1.250			1.500					



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