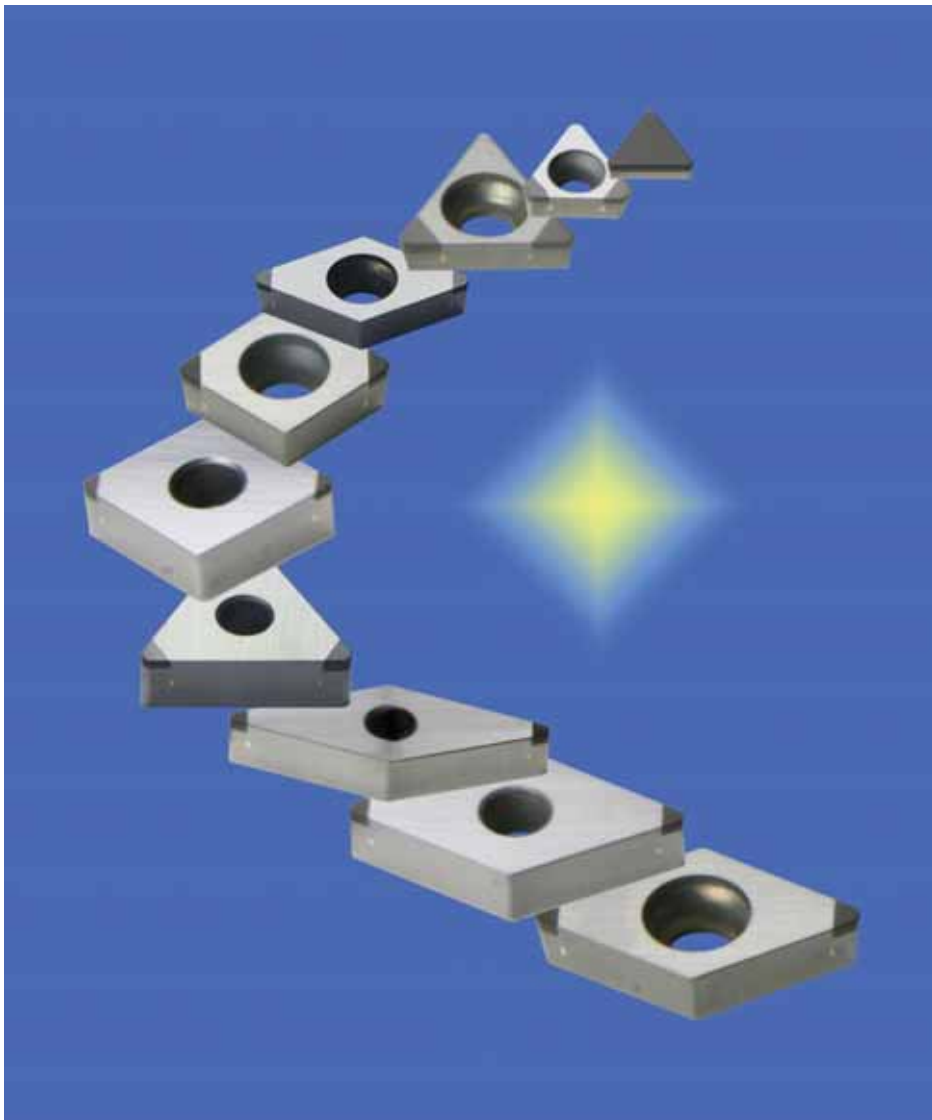


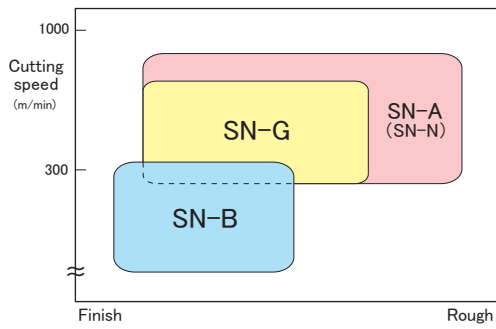
SUNNITE TWIN

Multi-edged PCBN inserts

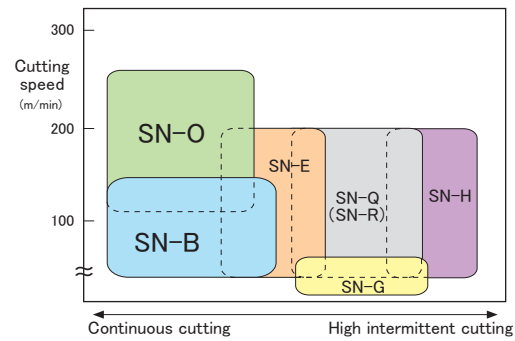


● Grade selection

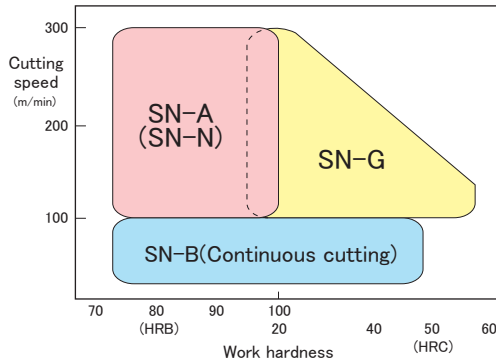
① Cast iron



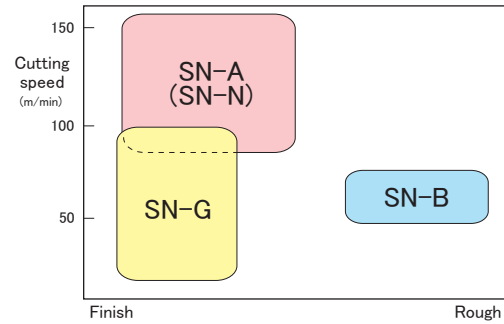
② Hardened steel



③ Sintered metal



④ Roll material



● Grade of SUNNITE

Grade	Binder	Content of CBN (%)	Average grit size (μm)	Hardness (HV)	Bending strength (kgf/mm ²)	Application	
SN-A	Co	90	2	3000	91	Gray cast iron (high speed cutting), Sintered metal	For continuous and intermittent cutting
SN-B	TiC	50	2~3	2750	80	Hardened steel (HRC45 and harder) Gray cast iron (low speed cutting)	For continuous cutting
SN-E	TiN	65	2	2600	110	Hardened steel (HRC45 and harder)	For continuous and light intermittent cutting
SN-G	Co+Al	85	1~2	3700	98	Gray cast iron (high speed cutting), Sintered metal	For continuous and intermittent cutting
SN-Q	TiN	45	0.5~1	2600	105	Hardened steel (HRC45 and harder)	For tough intermittent cutting
SN-H	TiCN	65	1~4	2500	115	Hardened steel (HRC45 and harder) Gray cast iron (low speed cutting)	For tough intermittent cutting
SN-O	TiC	50	1~2	2700	90	Hardened steel (high speed continuous cutting)	For continuous cutting
SN-N	Ti	95	3	3700	95	Gray cast iron (high speed cutting), Sintered metal	For continuous and intermittent cutting
SN-R	TiN	65	1~2	3000	105	Hardened steel (HRC45 and harder)	For tough intermittent cutting

● Comparison table with other brands

Supplier	Hardened steel			Cast iron		Heat resistant alloy	Sintered metal
	Continuance cutting	Light intermittent cutting	Middle-Tough intermittent cutting	Gray cast iron	Ductile cast iron		
Asahi diamond (SUNNITE series)	SN-B SN-E SN-O	SN-B SN-E SN-Q	SN-Q SN-R SN-H	SN-A SN-G SN-N	SN-A SN-B SN-Q	SN-A SN-B SN-G	SN-A SN-G SN-N SN-Q
Sumitomo	BNX10 BNX20 BN250	BNX20 BN250	BNX20 BN250 BN350	BN500 BN700	BNX10 BN500	BNX20 BN700	BNX20 BN250 BN350 BN700
Mitsubishi	MB8025 MB810 MB820	MB820	MB825 MB835	MB710 MB730	MB710 MB730	MB730	MB710 MB730 MB825 MB835
Tungaloy	BX310 BX330 BX360 BX530	BX330 BX530	BX360 BX380	BX850 BX930 BX950	BX930 BX950	BX950	BX450 BX470 BX480 BX950

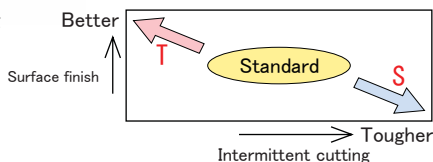
※This table is made according to product information of each brand for referral purpose.

● Standard product list of SUNNITE TWIN

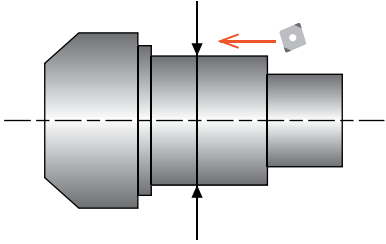
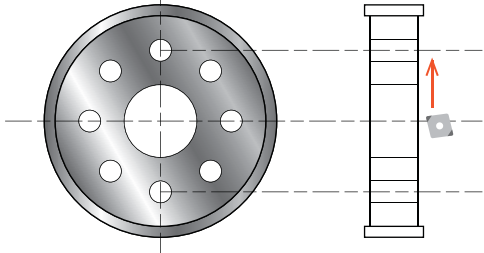
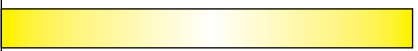

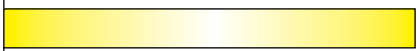

- Stock item
- Small quantity available in stock (please ask for availability)
- △ To be manufactured on order

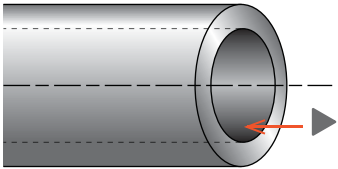
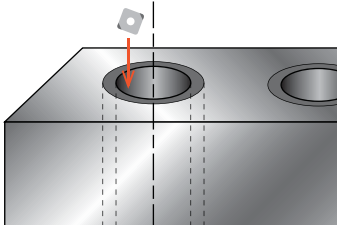


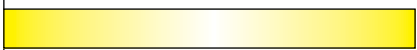

Shape	Photographs	Product code	Dimensions	Available grade								
				SN-A	SN-B	SN-E	SN-G	SN-Q	SN-H	SN-O	SN-N	SN-R
C 80°		CNMA120404		●	●	●	●	●	○	○	△	△
		CNMA120404T *1		●	●	●	●	●	○	○	△	△
		CNMA120404S *1		●	●	●	●	●	○	○	△	△
		CNMA120408		●	●	●	●	●	○	○	△	△
		CNMA120408T *1		●	●	●	●	●	○	○	△	△
	CNMA120408S *1	●	●	●	●	●	○	○	△	△		
		CCMW060204		●	●	●	●	●	○	○	△	△
		CCMW060208		●	●	●	●	●	○	○	△	△
		CCMW09T304		●	●	●	●	●	○	○	△	△
		CCMW09T308		●	●	●	●	●	○	○	△	△
CCMW09T308		●		●	●	●	●	○	○	△	△	
D 55°		DNMA150404		●	●	●	●	●	○	○	△	△
		DNMA150404T *1		●	●	●	●	●	○	○	△	△
		DNMA150404S *1		●	●	●	●	●	○	○	△	△
		DNMA150408		●	●	●	●	●	○	○	△	△
		DNMA150408T *1		●	●	●	●	●	○	○	△	△
	DNMA150408S *1	●	●	●	●	●	○	○	△	△		
		DGCW070204		●	●	●	●	●	○	○	△	△
		DGCW070208		●	●	●	●	●	○	○	△	△
		DGCW11T304		●	●	●	●	●	○	○	△	△
		DGCW11T308		●	●	●	●	●	○	○	△	△
DGCW11T308		●		●	●	●	●	○	○	△	△	
V 35°		VNMA160404		●	●	●	●	●	○	○	△	△
		VNMA160404T *1		●	●	●	●	●	○	○	△	△
		VNMA160404S *1		●	●	●	●	●	○	○	△	△
		VNMA160408		●	●	●	●	●	○	○	△	△
		VNMA160408T *1		●	●	●	●	●	○	○	△	△
		VNMA160408S *1		●	●	●	●	●	○	○	△	△
S 90°		SNMA120404		●	●	●	●	●	○	○	△	△
		SNMA120404T *1		●	●	●	●	●	○	○	△	△
		SNMA120404S *1		●	●	●	●	●	○	○	△	△
		SNMA120408		●	●	●	●	●	○	○	△	△
		SNMA120408T *1		●	●	●	●	●	○	○	△	△
		SNMA120408S *1		●	●	●	●	●	○	○	△	△
T 60°		TNMA160404		●	●	●	●	●	○	○	△	△
		TNMA160404T *1		●	●	●	●	●	○	○	△	△
		TNMA160404S *1		●	●	●	●	●	○	○	△	△
		TNMA160408		●	●	●	●	●	○	○	△	△
		TNMA160408T *1		●	●	●	●	●	○	○	△	△
	TNMA160408S *1	●	●	●	●	●	○	○	△	△		
		TPGX080204		●	●	●	●	●	○	○	△	△
		TPGX080208		●	●	●	●	●	○	○	△	△
		TPGX090204		●	●	●	●	●	○	○	△	△
		TPGX090208		●	●	●	●	●	○	○	△	△
		TPGX110304		●	●	●	●	●	○	○	△	△
		TPGX110308		●	●	●	●	●	○	○	△	△
	S-TBGN060102		●	●	●	●	●	○	○	△	△	
	S-TBGN060104		●	●	●	●	●	○	○	△	△	
	S-TBGN060108		●	●	●	●	●	○	○	△	△	

*1 With edge honing



● Case history

<p>① Hardened steel : Continuous cutting • Gear part : O.D.</p> 	<p>② Hardened steel : Intermittence • Gear part : Side face</p> 
<p>Material to be cut : SCM420 (HRC58~60) Required surface roughness : 6.3z Cutting speed (v_c) : 100m/min Insert : CNMA120408 Feed rate (f) : 0.06mm/rev Wet/Dry : Wet Depth of cut (a_p) : 0.2mm</p>	<p>Material to be cut : SCr420 (HRC60~62) Required surface roughness : 6.3z Cutting speed (v_c) : 100m/min Insert : CNMA120408S Feed rate (f) : 0.2mm/rev Wet/Dry : Dry Depth of cut (a_p) : 0.15mm</p>
<p>SN-B  1000pcs /Cutting edge Other brand PCBN  500pcs /Cutting edge</p>	<p>SN-Q  140pcs /Cutting edge Other brand PCBN  100pcs /Cutting edge</p>

<p>③ Hardened steel : Continuous cutting • Gear part : I.D.Finish</p> 	<p>④ Cast iron • Cylinder block space bore</p> 
<p>Material to be cut : SKD61 (HRC60) Required surface roughness : 6.3z Cutting speed (v_c) : 100m/min Insert : S-TBGN060104 Feed rate (f) : 0.1mm/rev Wet/Dry : Wet Depth of cut (a_p) : 0.2mm</p>	<p>Material to be cut : FC250 Required surface roughness : 12.5z Cutting speed (v_c) : 600m/min Insert : SNMA120408 Feed rate (f) : 0.3mm/rev Wet/Dry : Wet Depth of cut (a_p) : 0.2mm</p>
<p>SN-B  400pcs /Cutting edge Other brand PCBN  300pcs /Cutting edge</p>	<p>SN-A  1000pcs /Cutting edge Other brand PCBN  700pcs /Cutting edge</p>

- Re-grinding service is not available.
- Other inserts than standard shapes, inserts with wiper and/or breaker are available on special order.



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I.D.A. 会員

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