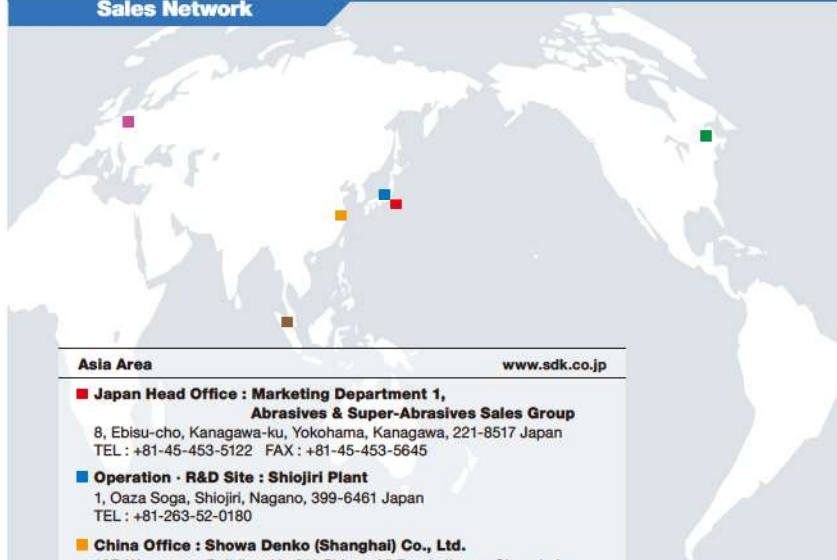


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PCBN SBN K-TIP™

cBN Sintered Compacts



Grades, Applications

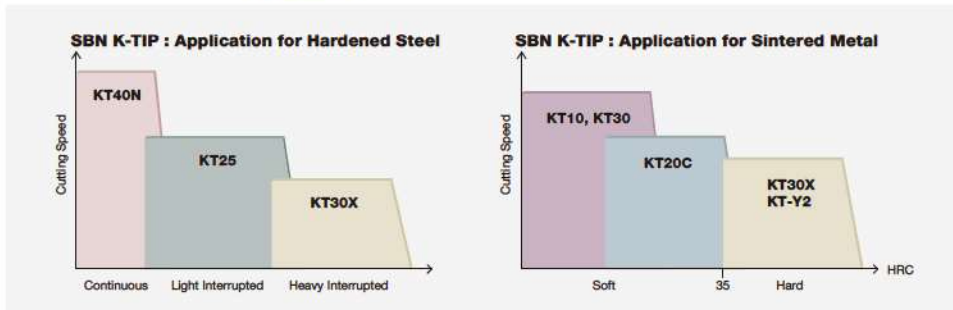
	Grade	cBN Content (%)	cBN Size (μm)	Major Binder	Hardness (Gpa)	TRS (Mpa)	Thickness
Carbide Backed KT Series	KT10	80	3	TiN	32	1000	Total: 1.6t, 2.5t, 3.2t cBN layer: 0.7 - 1.0 mm
	KT20C	70	3	TiC	30	950	
	KT25	65	2	TiCN	29	950	
	KT30	60	3	TiC	29	850	
	KT30X	65	1	TiN	28	1300	
	KT40N	40	1	TiN	24	900	
Solid KS series	Grade	cBN Content (%)	cBN Size (μm)	Major Binder	Hardness (Gpa)	TRS (Mpa)	Thickness
	KS10	80	3	TiN	32	1000	Total: 1.0 - 24 mm
	KS25	65	2	TiCN	29	950	
KS30X	65	1	TiN	28	1300		
Special Products	Grade	cBN Content (%)	cBN Size (μm)	Major Binder	Hardness (Gpa)	TRS (Mpa)	Thickness
	KT-Y2	65	1	TiN	28	1300	Total: 1.6t, 2.5t, 3.2t cBN layer: 0.7 - 1.0 mm
	KT30X (G-Type)	65	1	TiN	28	1300	Total: 5 - 13t cBN layer: 1.0 - 3.0 mm
	KS-H2	65	3	TiCN	29	800	Total: 1.6 mm

* The values above are representative, not guaranteed.



Work Materials and Recommended Conditions

Work Material	Grade	Speed V (m/min)		Feed (mm/rev)	Depth of Cut (mm)	Application	
		Recommended Range					
Cast Iron	Gray Iron	KT10	800	1200	0.1 - 0.5	< 1.0	Brake Disc, Crank Shaft, Balance Shaft, Fly Wheel
	Ductile Iron	KT20C	200	400	0.2	0.1 - 0.5	Cylinder Liner
	Centrifugal Iron	KS-H2	500	1000	0.2	0.1 - 0.5	
Ferrous Sintered Metal	Soft < HRC 35	KT20C	80	200	< 0.3	< 0.5	Valve Seat Ring, Transmission Parts
	Hard > HRC 35	KT30X	50	150	< 0.3	< 0.5	Transmission Gear, Bearing, Camshaft, Piston, Spline, CVJ Parts
Hardened Steel	Continuous	KT40N	120	200	< 0.3	0.05 - 0.3	
	Interrupted	KT25	100	150		0.1 - 0.5	
		KT30X	100	150		0.1 - 0.5	



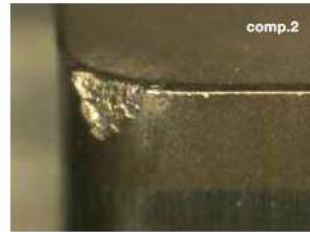
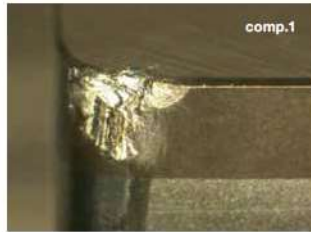
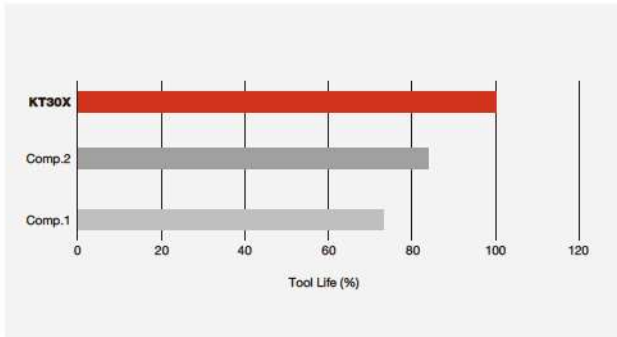
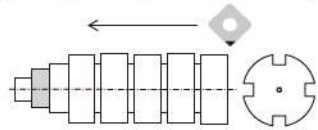
Showa Denko K.K., a pioneer in Japan's chemical industry, has been manufacturing K-TIP sintered compacts for over 30 years, supplying numerous customers all over the world. From our plant in Nagano Prefecture, the K-TIP team is continuously working to maintain a high level of quality on existing products while also creating new innovations to meet our customer's ever-changing needs.



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SBN K-TIP™
cBN Sintered Compacts

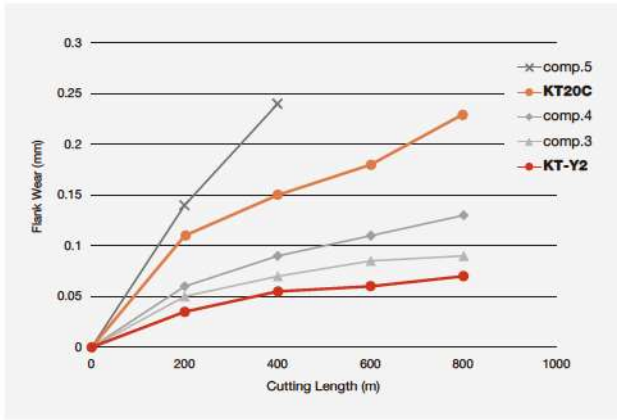
• Test No.1

Condition	Heavy Interrupted	
Material	DIN	X153CrMoV12
	SAE	D2
Hardness	HRC 57 - 60	
Speed (vc)	120 m/min	
Depth of Cut (ap)	0.30 mm	
Feed (f)	0.10 mm/rev	
Coolant	Dry	



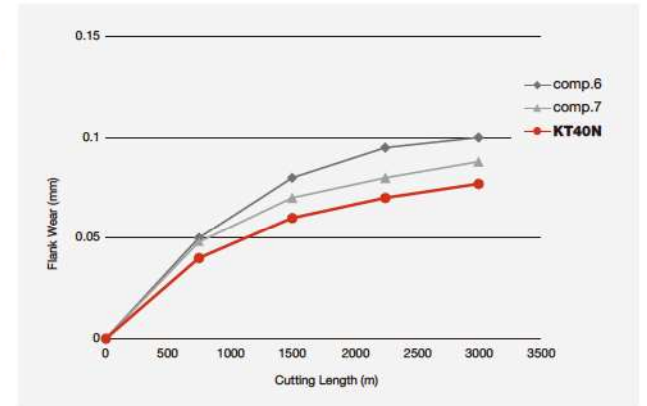
• Test No.2

Condition	Continuous
Material	Ferrous Sintered Metal
Hardness	HRC 50
Speed (vc)	120 m/min
Depth of Cut (ap)	0.50 mm
Feed (f)	0.15 mm/rev
Coolant	Dry



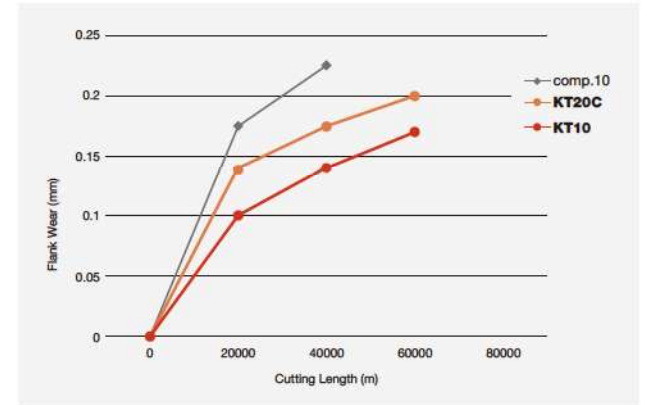
• Test No.3

Condition	Continuous	
Material	DIN	100Cr6
	SAE	ASTM 52100
Hardness	HRC 64	
Speed (vc)	200 m/min	
Depth of Cut (ap)	0.10 mm	
Feed (f)	0.10 mm/rev	
Coolant	Dry	

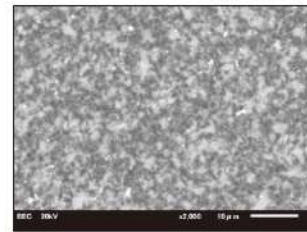


• Test No.4

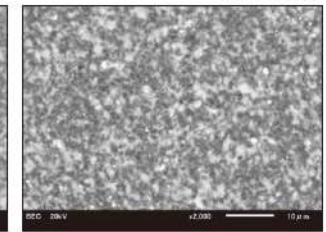
Condition	Continuous	
Material	DIN	GG 25
	SAE	No 35 B
Hardness	HRC 21	
Speed (vc)	500 m/min	
Depth of Cut (ap)	0.30 mm	
Feed (f)	0.25 mm/rev	
Coolant	Wet	



KT-Y2 SEM



KT30X SEM



KT40N SEM

