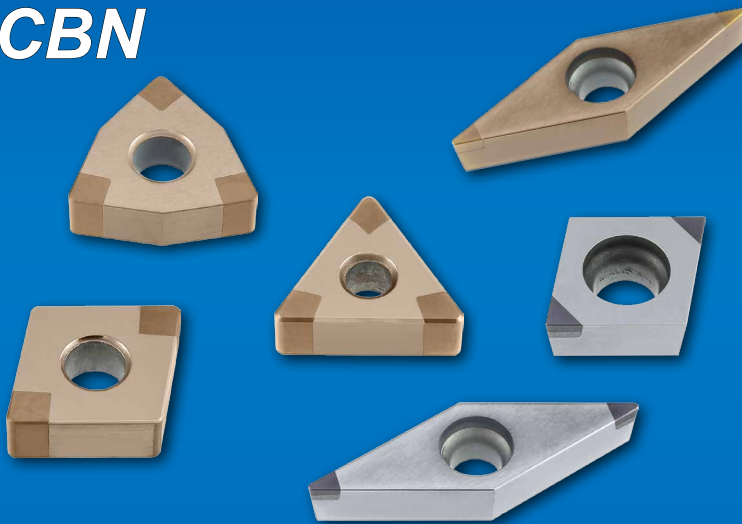
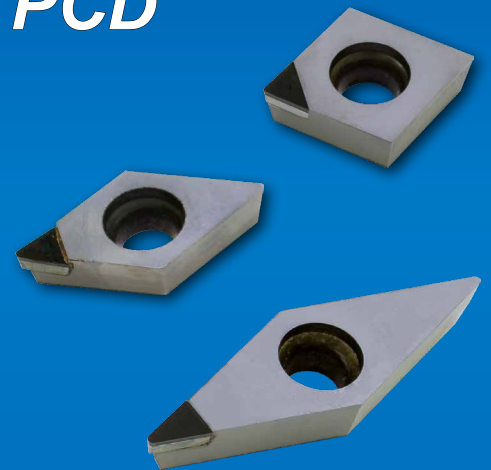


CBN / PCD Turning Inserts **氮化硼 / 聚晶鑽石車刀片總覽**

CBN




PCD



- CBN (Cubic Boron Nitride) turning insert suitable for hardened steel (HRC 45~65).
- PCD (Polycrystalline Diamond) turning insert suitable for non-ferrous materials (aluminum alloy, brass, graphite and ceramic).
- 氮化硼車刀片適用於 HRC 45~65 高硬度鋼加工
- 聚晶鑽石車刀片適用於非鐵金屬加工 (鋁合金 , 銅 , 石墨及陶磁)

CBN Turning Insert Grades 立方氮化硼車刀片材質介紹

Grade Type 刀片材質	Color 刀片顏色	Properties 屬性	Application 加工特性	Working Material 加工材質						Industry Area 產業應用範圍	
				P	M	K	N	S	H		
BN6020		<ul style="list-style-type: none"> ● PVD (AlTiSiN) ● Wear resistance ● Fracture resistance ● 耐磨性 ● 抗斷裂性 	<ul style="list-style-type: none"> ● For hardened steel is 1st recommended ● Semi-finishing and rough cutting ● Continuous to medium interrupted dry cutting ● For high speed cutting ● 適合高硬度鋼加工的第一推薦 ● 適用於半精加工和粗加工 ● 適用連續至中斷續乾式加工 ● 適用高速加工 				○			●	<ul style="list-style-type: none"> ● Auto small parts ● Machinery parts ● Aircraft parts ● 汽車小零件 ● 機械零件 ● 航太零件
BN20	—	<ul style="list-style-type: none"> ● Uncoated ● Wear resistance ● Fracture resistance ● 耐磨性 ● 抗斷裂性 	<ul style="list-style-type: none"> ● For small parts cutting ● Finishing and medium cutting ● Continuous to medium interrupted dry cutting ● For general cutting ● 適合小零件加工 ● 適用於精加工和中加工 ● 適用連續至中斷續乾式加工 ● 適用泛用加工 				○			●	<ul style="list-style-type: none"> ● Bike parts ● Auto small parts ● Electronic parts ● 自行車小零件 ● 汽車小零件 ● 電子零件

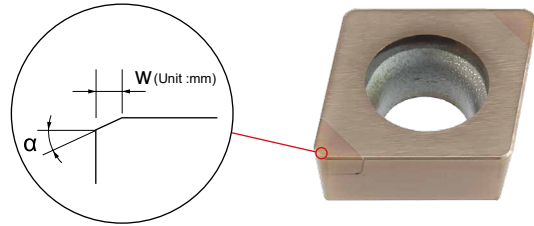
PCD Turning Insert Grades 聚晶鑽石車刀片材質介紹

Grade Type 刀片材質	Color 刀片顏色	Properties 屬性	Application 加工特性	Working Material 加工材質						Industry Area 產業應用範圍	
				P	M	K	N	S	H		
DA20	—	<ul style="list-style-type: none"> ● Uncoated ● Wear resistance ● Fracture resistance ● 耐磨性 ● 抗斷裂性 	<ul style="list-style-type: none"> ● Finishing and semi-finishing ● General cutting ● Good wear resistance ● 適用於精加工和半精加工 ● 泛用加工 ● 優良的耐磨材質 						●		<ul style="list-style-type: none"> ● Bike parts ● Auto small parts ● Electronic parts ● 自行車小零件 ● 汽車小零件 ● 電子零件

CBN Turning Insert Edge Specification CBN 車刀片刀尖規格

Edge specification code 刀尖規格碼規則

Code = 1225
 w(width)=0.12 α(angle)=25°



Edge specification code	Notation
1225	SM
1725	MM
2725	RM

PCD Turning Insert Edge Specification PCD 車刀片刀尖規格

Edge specification	
Standard	
With Chip Breaker (※ Made to Order)	

Recommended Cutting Conditions for CBN Turning Inserts 建議切削數據**H Hardened Steel** 高硬度鋼

Work Material 加工材質	Cutting Process 加工方式	Grade 材質	ap (mm)	fr (mm/rev)	Vc (m/min)
Hardened Steel 高硬度鋼 (HRC 45 ~ 65)	Semi-finishing and rough cutting 半精加工和粗加工	BN6020	0.05-0.30-0.50	0.03-0.20-0.40	180-120-50
	Finishing and medium cutting 精加工和中加工	BN20	0.03-0.20-0.30	0.03-0.10-0.20	180-100-30


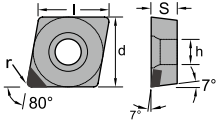
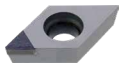
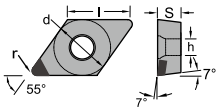

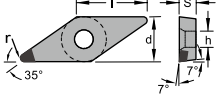
Recommended Cutting Conditions for PCD Turning Inserts 建議切削數據**N Non-ferrous Metals** 非鐵金屬

Work Material 加工材質	Cutting Process 加工方式	Grade 材質	ap (mm)	fr (mm/rev)	Vc (m/min)
Aluminum alloys (Si < 12%) 鋁合金	Finishing and Semi-finishing 精加工和半精加工	DA20	0.05-0.53-1.0	0.03-0.14-0.25	2700-1700-700
Aluminum alloys (Si > 12%) 鋁合金			0.05-0.53-1.0	0.03-0.11-0.18	800-540-270
Brass 黃銅			0.05-0.53-1.0	0.05-0.21-0.36	1300-950-600

※ ap & fr value : Min. - Suggestion - Max. Vc : Max. - Suggestion - Min.
 下限 - 推薦 - 上限 上限 - 推薦 - 下限

Inserts	Designation	Grade No.				No. of Cutting Edges	Edge Spec.	Dimensions (mm)					Drawing
		PVD		Uncoated				d	l	S	r	h	
		BN6020		BN20									
	CCGW 060202C2-SM	✓		✓		2	1225	6.35	6.4	2.38	0.2	2.8	
	09T302C2-SM	✓		✓		2		9.525	9.7	3.97	0.2	4.4	
	09T304C2-SM	✓		✓		2		9.525	9.7	3.97	0.4	4.4	
	09T308C2-SM	✓		✓		2		9.525	9.7	3.97	0.8	4.4	
	CCGW 060202C2-MM	✓		✓		2	1725	6.35	6.4	2.38	0.2	2.8	
	09T308C2-MM	✓		✓		2		9.525	9.7	3.97	0.8	4.4	
	DCGW 070202C2-SM	✓		✓		2	1225	6.35	7.7	2.38	0.2	2.8	
	070204C2-SM	✓		✓		2		6.35	7.7	2.38	0.4	2.8	
	11T302C2-SM	✓		✓		2		9.525	11.6	3.97	0.2	4.4	
	11T304C2-SM	✓		✓		2		9.525	11.6	3.97	0.4	4.4	
	DCGW 11T308C2-MM	✓		✓		2	1725	9.525	11.6	3.97	0.8	4.4	
	TPGW 090202C3-SM	✓		✓		3	1225	5.56	9.6	2.38	0.2	2.8	
	090204C3-SM	✓		✓		3		5.56	9.6	2.38	0.4	2.8	
	110304C3-SM	✓		✓		3		6.35	11.0	3.18	0.4	3.4	
	110308C3-SM	✓		✓		3		6.35	11.0	3.18	0.8	3.4	
	VBGW 110304C2-SM	✓		✓		2	1225	6.35	11.1	3.18	0.4	2.8	
110308C2-SM	✓		✓		2	6.35		11.1	3.18	0.8	2.8		
160404C2-SM	✓		✓		2	9.525		16.6	4.76	0.4	4.4		
160408C2-SM	✓		✓		2	9.525		16.6	4.76	0.8	4.4		
VBGW 160408C2-MM	✓		✓		2	1725	9.525	16.6	4.76	0.8	4.4		

Inserts	Designation	Grade No.				No. of Cutting Edges	Edge Spec.	Dimensions (mm)					Drawing
		PVD		Uncoated				d	l	S	r	h	
		BN6020		BN20									
	CNGA 120404C2-SM	✓				2	1225	12.7	12.9	4.76	0.4	5.16	
	CNGA 120408C2-SM	✓				2		12.7	12.9	4.76	0.8	5.16	
	CNGA 120412C2-SM	✓				2		12.7	12.9	4.76	1.2	5.16	
	DNGA 150404C2-SM	✓				2	1225	12.7	15.5	4.76	0.4	5.16	
	DNGA 150408C2-SM	✓				2		12.7	15.5	4.76	0.8	5.16	
	DNGA 150412C2-SM	✓				2		12.7	15.5	4.76	1.2	5.16	
	DNGA 150408C2-MM	✓				2	1725	12.7	15.5	4.76	0.8	5.16	
	TNGA 160404C3-SM	✓				3	1225	9.525	16.5	4.76	0.4	3.81	
	TNGA 160408C3-SM	✓				3		9.525	16.5	4.76	0.8	3.81	
	TNGA 160412C3-SM	✓				3		9.525	16.5	4.76	1.2	3.81	
	TNGA 160408C3-MM	✓				3	1725	9.525	16.5	4.76	0.8	3.81	
	VNGA 160404C2-SM	✓				2	1225	9.525	16.6	4.76	0.4	3.81	
	VNGA 160408C2-SM	✓				2		9.525	16.6	4.76	0.8	3.81	
	WNGA 080408C3-SM	✓				3	1225	12.7	8.7	4.76	0.8	5.16	
	CNGA 120408C4-MM	✓				4	1725	12.7	12.9	4.76	0.8	5.16	
	CNGA 120408C4-RM	✓				4	2725	12.7	12.9	4.76	0.8	5.16	
	DNGA 150408C4-MM	✓				4	1725	12.7	15.5	4.76	0.8	5.16	
	DNGA 150408C4-RM	✓				4	2725	12.7	15.5	4.76	0.8	5.16	
	TNGA 160408C6-MM	✓				6	1725	9.525	16.5	4.76	0.8	3.81	
	TNGA 160408C6-RM	✓				6	2725	9.525	16.5	4.76	0.8	3.81	
	VNGA 160408C4-SM	✓				4	1225	9.525	16.6	4.76	0.8	3.81	
	WNGA 080408C6-MM	✓				6	1725	12.7	8.7	4.76	0.8	5.16	
	WNGA 080408C6-RM	✓				6	2725	12.7	8.7	4.76	1.2	5.16	

Inserts	Designation	Grade No.								Dimensions (mm)					Drawing
		Uncoated								d	l	S	r	h	
		DA20													
	CCGT 060201	✓								6.35	6.4	2.38	0.1	2.8	
	060202	✓								6.35	6.4	2.38	0.2	2.8	
	060204	✓								6.35	6.4	2.38	0.4	2.8	
	09T301	✓								9.525	9.7	3.97	0.1	4.4	
	09T302	✓								9.525	9.7	3.97	0.2	4.4	
	09T304	✓								9.525	9.7	3.97	0.4	4.4	
	09T308	✓								9.525	9.7	3.97	0.8	4.4	
	DCGT 070201	✓								6.35	7.7	2.38	0.1	2.8	
	070202	✓								6.35	7.7	2.38	0.2	2.8	
	070204	✓								6.35	7.7	2.38	0.4	2.8	
	11T301	✓								9.525	11.6	3.97	0.1	4.4	
	11T302	✓								9.525	11.6	3.97	0.2	4.4	
	11T304	✓								9.525	11.6	3.97	0.4	4.4	
	11T308	✓								9.525	11.6	3.97	0.8	4.4	
	VCGT 110301	✓								6.35	11.1	3.18	0.1	2.8	
	110302	✓								6.35	11.1	3.18	0.2	2.8	
	110304	✓								6.35	11.1	3.18	0.4	2.8	
	160404	✓								9.525	16.6	4.76	0.4	4.4	
	160408	✓								9.525	16.6	4.76	0.8	4.4	

Finishing to semi-finishing 精細半精