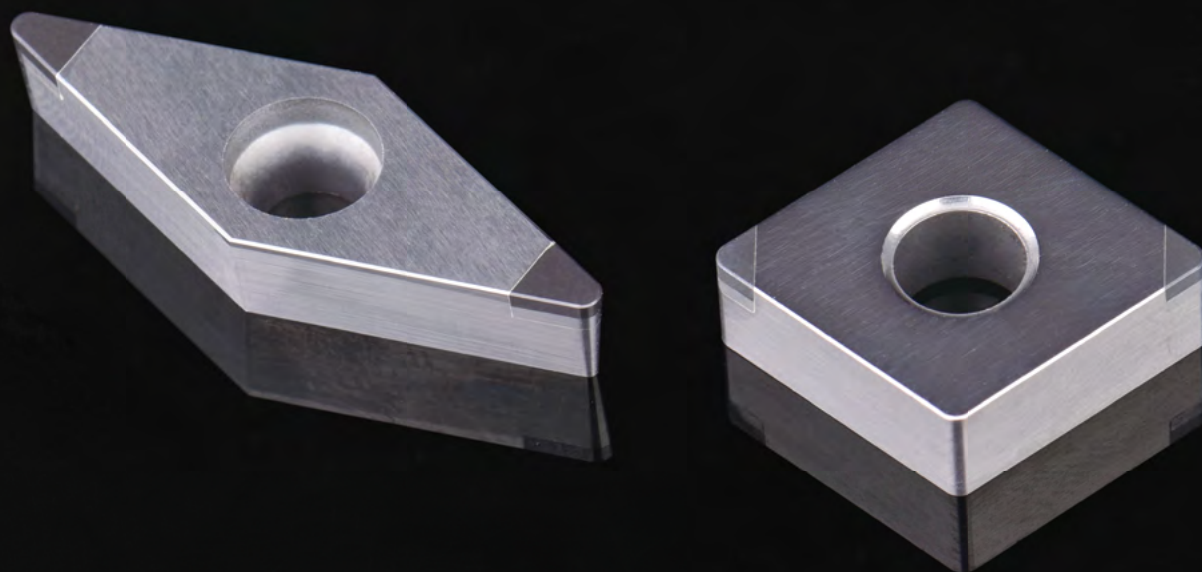


ACHTECK

www.achtecktool.com/en

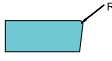
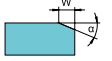
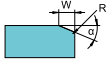
THE EXPERTS OF DIFFICULT MACHINING



PCD/PCBN Inserts

PCBN Insert Denomination System

CNGA 432	-	S	010	20	-	SL	-	1	-	CB	PB30
1		2	3	4		5		6		7	8

1-Standard ISO Denomination System	2-Cutting Edge Shape E--Honed  T-Land without honing  S---Land with honed  F---Sharp 	3-T-land Width (in) 005---0.002 010---0.004 015---0.006 020---0.008	4-T-land Angle 10---10° 15---15° 20---20° 25---25°
5-CBN Insert Structure FT-- Full face CBN  SD-- Solid CBN  SL-- Small size tipped CBN  NL-- Standard-tipped CBN (Regrindable) 	6-Number of Cutting Edge 1---One cutting edge 2---Two cutting edges 3---Three cutting edges	7-Cutting Edge Preparation CB---With chip breaker WG---With wiper edge "-" ---Without chip breaker	8-Grade PB30--- Low content CBN PB60---Medium content CBN PB90---High content CBN

PCBN Insert Grade Introduction

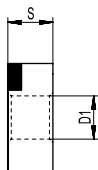
Grade	Feature	Application
PB30	Well balanced wear resistance and shock-resistance	Good versatility. Suitable for continuous and light interrupted cutting of hardened steel
PB60	Excellent toughness	Mainly applied in medium interrupted cutting of hardened steel, interrupted and continuous cutting of powder metal and cast iron cutting.
PB90	Good wear resistance, toughness, and shock-resistance	K-mainly applied in cast iron cutting H-heavy interrupted cutting of hardened steel and powder metal machining

PCBN Recommended Cutting Parameters

Grade	Material	Hardness	Cutting speed Vc(ft/min)	Feed fn(in/rev)	Cutting depth ap(in)	Recommended application
PB30	Hardened steel	HRC58-62	490-820	0.001-0.008	0.002-0.012	Continuous
PB60	Hardened steel	HRC55-60	160-490	0.001-0.008	0.002-0.02	Interrupted
	Cast iron	HB180-220	490-1470	0.001-0.012	0.012-0.02	Continuous / Interrupted
	Powder metal	-	650-1640	0.001-0.012	0.004-0.012	Continuous / Interrupted
PB90	Hardened steel	HRC55-60	100-390	0.001-0.008	0.002-0.02	Heavy interrupted
	Cast iron	HB180-220	490-1470	0.001-0.012	0.012-0.02	Continuous / Interrupted
	Powder metal	-	980-2620	0.001-0.012	0.004-0.012	Continuous / Interrupted

Grade Application Guide

PCBN grade applications						
Material Group	Materials	ISO	Uncoated			ISO
			PB30	PB60	PB90	
	unalloy steels / Alloyed steels	P01				P01
		P10				P10
		P20				P20
		P30				P30
		P40				P40
		P50				P50
	Stainless steels	M01				M01
		M10				M10
		M20				M20
		M30				M30
		M40				M40
	Cast iron	K01				K01
		K10				K10
		K20				K20
		K30				K30
		K40				K40
		K50				K50
	Aluminum/ Aluminum alloys	N01				N01
		N10				N10
		N20				N20
		N30				N30
	Heat resistant alloys	S01				S01
		S10				S10
		S20				S20
		S30				S30
		S40				S40
	Hardened steels/ Chilled cast iron	H01				H01
		H10				H10
		H20				H20
		H30				H30

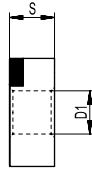
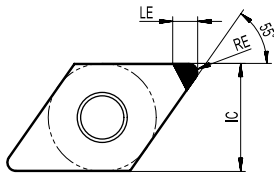


Dimension (in)				
Product code	IC	S	LE	D1
CN_43_	1/2	3/16	0.087	0.203

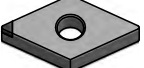
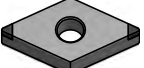
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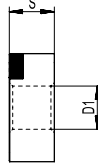
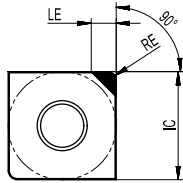
Negative 55° (D)



Dimension (in)				
Product code	IC	S	LE	D1
DN_43_	1/2	3/16	0.087	0.203
DN_44_	1/2	1/4	0.087	0.203

PCBN Inserts	ANSI	RE (in)	Machining conditions		● Good condition ⬤ General condition ✖ Bad condition			ISO
					●	⬤	✖	
			Recommended parameters		H		K	
			f (in/rev)	ap (in)	PB30	PB60	PB90	
	DNGA 431-S0420-SL-1	1/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150404-S01020-SL-1
	DNGA 432-S0420-SL-1	1/32	0.001-0.012	0.002-0.02	●	●	●	DNGA 150408-S01020-SL-1
	DNGA 433-S0420-SL-1	3/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150412-S01020-SL-1
	DNGA 431-S0420-SL-2	1/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150404-S01020-SL-2
	DNGA 432-S0420-SL-2	1/32	0.001-0.012	0.002-0.02	●	●	●	DNGA 150408-S01020-SL-2
	DNGA 433-S0420-SL-2	3/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150412-S01020-SL-2
	DNGA 441-S0420-SL-2	1/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150604-S01020-SL-2
	DNGA 442-S0420-SL-2	1/32	0.001-0.012	0.002-0.02	●	●	●	DNGA 150608-S01020-SL-2
	DNGA 443-S0420-SL-2	3/64	0.001-0.012	0.002-0.02	●	●	●	DNGA 150612-S01020-SL-2

Negative 90° (S)

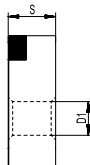
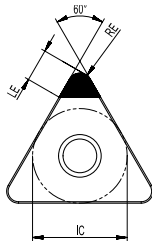


Dimension (in)				
Product code	IC	S	LE	D1
SN_43_	1/2	3/16	0.087	0.203

PCBN Inserts	ANSI	RE (in)	Machining conditions		● Good condition ● General condition ✖ Bad condition			ISO
			Recommended parameters		H		K	
			f (in/rev)	ap (in)	PB30	PB60	PB90	
	SNGA 432-S0420-SL-4	1/32	0.001-0.012	0.002-0.02	●	●	●	SNGA 120408-S01020-SL-4
	SNGA 433-S0420-SL-4	3/64	0.001-0.012	0.002-0.02	●	●	●	SNGA 120412-S01020-SL-4

Marked: ● stock available

Negative 60° (T)

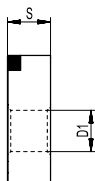
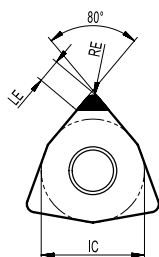


Dimension (in)				
Product code	IC	S	LE	D1
TN_33_	3/8	3/16	0.087	0.15

PCBN Inserts	ANSI	RE (in)	Machining conditions		● Good condition ● General condition ✖ Bad condition			ISO
			Recommended parameters		H		K	
			f (in/rev)	ap (in)	PB30	PB60	PB90	
	TNGA 331-S0420-SL-3	1/64	0.001-0.012	0.002-0.02	●	●	●	TNGA 160404-S01020-SL-3
	TNGA 332-S0420-SL-3	1/32	0.001-0.012	0.002-0.02	●	●	●	TNGA 160408-S01020-SL-3
	TNGA 333-S0420-SL-3	3/64	0.001-0.012	0.002-0.02	●	●	●	TNGA 160412-S01020-SL-3

Marked: ● stock available

Negative 80° (W)

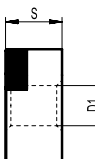
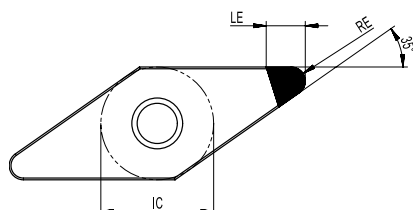


Dimension (in)				
Product code	IC	S	LE	D1
WN_43_	1/2	3/16	0.087	0.203

PCBN Inserts	ANSI	RE (in)	Machining conditions		● Good condition ● General condition ✖ Bad condition			ISO
					●	●	✖	
			Recommended parameters		H		K	
			f (in/rev)	ap (in)	PB30	PB60	PB90	
	WNGA 431-S0420-SL-3	1/64	0.001-0.012	0.002-0.02	●	●	●	WNGA 080404-S01020-SL-3
	WNGA 432-S0420-SL-3	1/32	0.001-0.012	0.002-0.02	●	●	●	WNGA 080408-S01020-SL-3
	WNGA 433-S0420-SL-3	3/64	0.001-0.012	0.002-0.02	●	●	●	WNGA 080412-S01020-SL-3

Marked: ● stock available

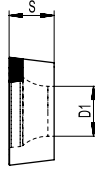
Negative 35° (V)



Dimension (in)				
Product code	IC	S	LE	D1
VN_33_	3/8	3/16	0.087	0.150

PCBN Inserts	ANSI	RE (in)	Machining conditions		● Good condition ● General condition ✖ Bad condition			ISO
					●	●	✖	
			Recommended parameters		H		K	
			f (in/rev)	ap (in)	PB30	PB60	PB90	
	VNGA 331-S0420-SL-2	1/64	0.001-0.012	0.002-0.02	●	●	●	VNGA 160404-S01020-SL-2
	VNGA 332-S0420-SL-2	1/32	0.001-0.012	0.002-0.02	●	●	●	VNGA 160408-S01020-SL-2
	VNGA 333-S0420-SL-2	3/64	0.001-0.012	0.002-0.02	●	●	●	VNGA 160412-S01020-SL-2

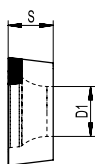
Marked: ● stock available



Dimension (in)				
Product code	IC	S	LE	D1
CC_2(1.5)_	1/4	3/32	0.087	0.110
CC_3(2.5)_	3/8	5/32	0.087	0.173
CC_43_	1/2	3/16	0.087	0.217

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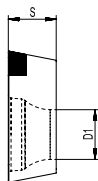
98



Dimension (in)				
Product code	IC	S	LE	D1
DC_2(1.5)_	1/4	3/32	0.087	0.110
DC_3(2.5)_	3/8	5/32	0.087	0.173

[illegible]

PCBN inserts



Dimension (in)				
Product code	IC	S	LE	D1
TP_1.5(1.5)_	3/16	3/32	0.087	0.094
TP_1.8(1.5)_	7/32	3/32	0.087	0.110
TP_22_	1/4	1/8	0.087	0.130
TP_33_	3/8	3/16	0.087	0.173

[illegible]

◀ 100

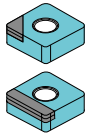
Dimension (in)				
Product code	IC	S	LE	D1
VB_22_	1/4	1/8	0.087	0.110
VC_22_	1/4	1/8	0.087	0.110
VB_33_	3/8	3/16	0.087	0.173
VC_33_	3/8	3/16	0.087	0.173

[illegible]

PCBN inserts

PCD Insert Denomination System

CCGW 09T304	-	1	-	NL	-	05	-	CB	PD20
1		2		3		4		5	6

1-Standard ISO Denomination system	2-Number of Cutting Edge 1--One cutting edge	3-PCD Insert Structure NL--Standard structure with tipped PCD LL-- Full edge tipped PCD 	4-Rake Angle 00--0° 05--5°
5-Cutting Edge Preparation CB-- With chip breaker WG--With wiper edge "-- Without chip breaker	6-Grade PD01---Fine grain PCD PD10---Medium grain PCD PD20---Coarse grain PCD		

PCD Insert Grade Introduction

Grade	Feature	Application
PD20	Universal grade, balanced wear resistance and toughness	1st choice for general machining of aluminum alloys

PCD Recommended Cutting Parameter

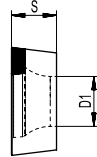
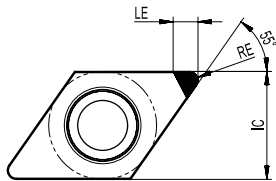
Grade	Material	Cutting speed Vc(ft/min)	Feed f(in/r)	Cutting depth ap(in)	Recommended application
PD20	Low-Si Aluminium Alloy (Si < 12%)	984-13123	0.001-0.008	0.002-0.020	Continuous/interrupted

Grade Application Guide

PCD insert applications				
Material Group	Materials	ISO	Uncoated	ISO
			PD20	
	unalloy steels / Alloyed steels	P01		P01
		P10		P10
		P20		P20
		P30		P30
		P40		P40
		P50		P50
	Stainless steels	M01		M01
		M10		M10
		M20		M20
		M30		M30
		M40		M40
	Cast iron	K01		K01
		K10		K10
		K20		K20
		K30		K30
		K40		K40
		K50		K50
	Aluminum/ Aluminum alloys	N01		N01
		N10		N10
		N20		N20
		N30		N30
	Heat resistant alloys	S01		S01
		S10		S10
		S20		S20
		S30		S30
		S40		S40
	Hardened steels/ Chilled cast iron	H01		H01
		H10		H10
		H20		H20
		H30		H30

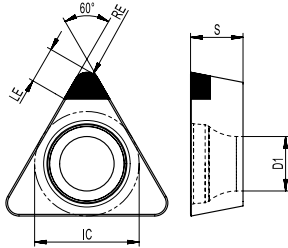
[illegible]

Positive 55° (D)



Dimension (in)				
Product code	IC	S	LE	D1
DC_2(1.5)_	1/4	3/32	0.118	0.110
DC_3(2.5)_	3/8	5/32	0.118	0.173

PCD Inserts	ANSI	RE (in)	Rake angle (°)	Machining conditions		● Good condition	ISO
				Recommended parameters		●	
				f (in/rev)	ap (in)	N	
						PD20	
	DCGW 2(1.5)05-1-NL-00	0.008	0°	0.001-0.008	0.002-0.020	●	DCGW 070202-1-NL-00
	DCGW 2(1.5)1-1-NL-00	1/64	0°	0.001-0.008	0.002-0.020	●	DCGW 070204-1-NL-00
	DCGW 2(1.5)2-1-NL-00	1/32	0°	0.001-0.008	0.002-0.020	●	DCGW 070208-1-NL-00
	DCGW 2(1.5)05-1-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	DCGW 070202-1-NL-05
	DCGW 2(1.5)1-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	DCGW 070204-1-NL-05
	DCGW 2(1.5)2-1-NL-05	1/32	5°	0.001-0.008	0.002-0.020	●	DCGW 070208-1-NL-05
	DCGW 3(2.5)05-1-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	DCGW 11T302-1-NL-05
	DCGW 3(2.5)1-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	DCGW 11T304-1-NL-05
	DCGW 3(2.5)2-1-NL-05	1/32	5°	0.001-0.008	0.002-0.020	●	DCGW 11T308-1-NL-05

Positive 60° (T)


Dimension (in)				
Product code	IC	S	LE	D1
TC_22_	1/4	1/8	0.118	0.110
TC_3(2.5)_	3/8	5/32	0.118	0.173
TP_1.5(1.5)_	3/16	3/32	0.118	0.094
TP_33_	3/8	3/16	0.118	0.173

PCD Inserts	ANSI	RE (in)	Rake angle (°)	Machining conditions		● Good condition	ISO
				Recommended parameters		●	
				f (in/rev)	ap (in)	N	
						PD20	
	TCGW 2(2)05-1-NL-00	0.008	0°	0.001-0.008	0.002-0.020	●	TCGW 110302-1-NL-00
	TCGW 221-1-NL-00	1/64	0°	0.001-0.008	0.002-0.020	●	TCGW 110304-1-NL-00
	TCGW 222-1-NL-00	1/32	0°	0.001-0.008	0.002-0.020	●	TCGW 110308-1-NL-00
	TCGW 2(2)05-1-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	TCGW 110302-1-NL-05
	TCGW 221-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	TCGW 110304-1-NL-05
	TCGW 222-1-NL-05	1/32	5°	0.001-0.008	0.002-0.020	●	TCGW 110308-1-NL-05
	TCGW 3(2.5)05-1-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	TCGW 16T302-1-NL-05
	TCGW 3(2.5)1-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	TCGW 16T304-1-NL-05
	TCGW 3(2.5)2-1-NL-05	1/32	5°	0.001-0.008	0.002-0.020	●	TCGW 16T308-1-NL-05
	TPGW 1.5(1.5)05-1-NL-00	0.008	0°	0.001-0.008	0.002-0.020	●	TPGW 080202-1-NL-00
	TPGW 1.5(1.5)1-1-NL-00	1/64	0°	0.001-0.008	0.002-0.020	●	TPGW 080204-1-NL-00
	TPGW 1.5(1.5)05-1-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	TPGW 080202-1-NL-05
	TPGW 1.5(1.5)1-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	TPGW 080204-1-NL-05
	TPGW 3(3)051-NL-05	0.008	5°	0.001-0.008	0.002-0.020	●	TPGW 160402-1-NL-05
	TPGW 331-1-NL-05	1/64	5°	0.001-0.008	0.002-0.020	●	TPGW 160404-1-NL-05
	TPGW 332-1-NL-05	1/32	5°	0.001-0.008	0.002-0.020	●	TPGW 160408-1-NL-05

Marked: ● stock available

Dimension (in)				
Product code	IC	S	LE	D1
VB_22_	1/4	1/8	0.118	0.110
VB_33_	3/8	3/16	0.118	0.173
VC_22_	1/4	1/8	0.118	0.110
VC_33_	3/8	3/16	0.118	0.173

[illegible]

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