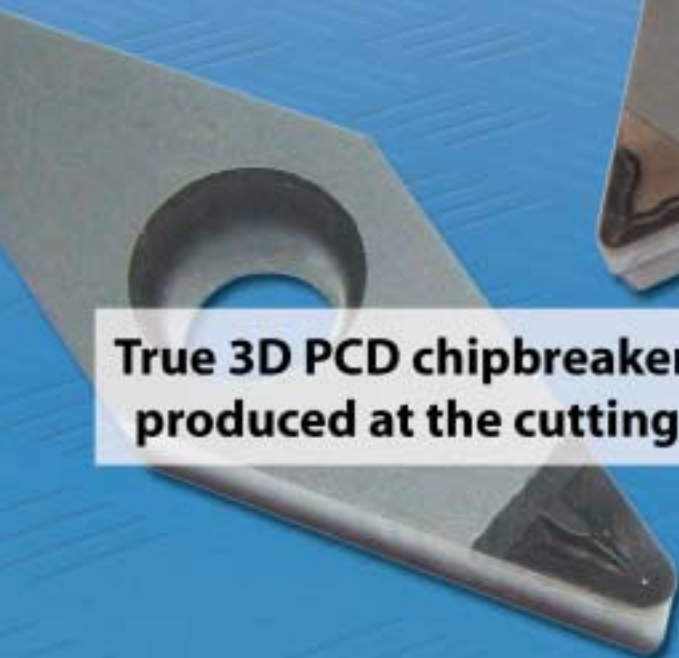
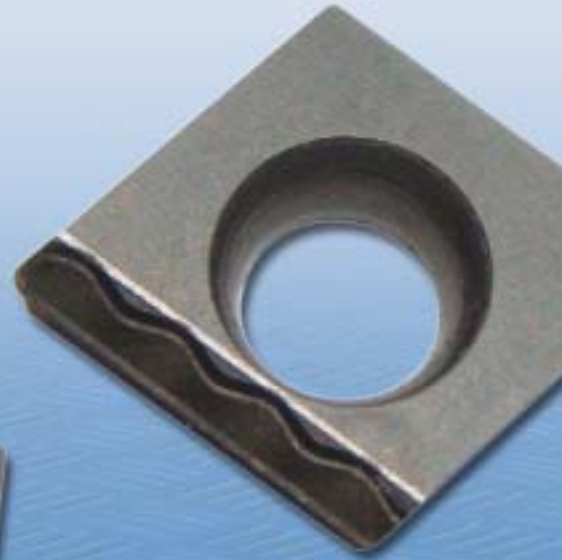


# BECKER



## PCD Chip Control Geometries



**True 3D PCD chipbreaker forms  
produced at the cutting point**

# BECKER PCD Tipped inserts with Chipbreakers



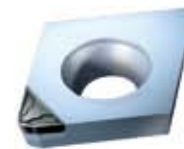
BECKER DIAMOND TOOLS of Germany introduces revolutionary 3D PCD chipbreaking technology for the machining of non-ferrous materials. Through the use of advanced proprietary technology, true 3D PCD chipbreaker forms are produced at the cutting point of the PCD segment. The performance results of this dramatic innovation, which is available in roughing and finishing forms, are unsurpassed chip control and dramatically increased tool life. The higher shear angles integrated within the chipbreaker produces lower cutting pressures and less heat expansion of the workpiece.

The by-product of this machining dynamic is precise dimensional accuracy, eliminating the need for secondary operations while both increasing productivity and reducing operating costs. The controlled short chips coming off the workpiece allow for uninterrupted production runs and practically eliminates costly maintenance stoppages traditionally required when clearing machines of long uncontrolled swarf.



## CCGT-CB1 Positive neutral

Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d'	s	l	PDC  l	CVD  l	r			
	CCGT-21.50.5-CB1	.250	.110	.094	.254	.134	.094	.008		■	■
	CCGT-21.51-CB1					.126	.087	.016		■	■
	CCGT-21.52-CB1					.118	.079	.031		■	□
	CCGT-32.50.5-CB1	.375	.173	.156	.382	.177	.094	.008		■	
	CCGT-32.51-CB1					.169	.087	.016		■	□
	CCGT-32.52-CB1					.161	.079	.031		■	
	CCGT-431-CB1	.500	.217	.187	.508	.169	.087	.016		■	
	CCGT-432-CB1					.161	.079	.031		■	



## CCGT-CB1 Positive neutral wiper

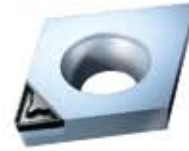
Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d'	s	l	PDC  l	CVD  l	r			
	CCGT-21.50.5W-CB1	.250	.110	.094	.254	.134	.098	.008			□
	CCGT-21.51W-CB1					.130	.091	.016		■	□
	CCGT-32.50.5W-CB1					.177	.098	.008			□
	CCGT-32.51W-CB1	.375	.173	.156	.382	.173	.091	.016		■	□
	CCGT-430.5W-CB1					.173	.091	.008			■
	CCGT-431W-CB1	.500	.217	.187	.508	.165	.083	.016		■	□

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# BECKER PCD Tipped inserts with Chipbreakers

## CCGT-CB2 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	CCGT-21.50.5-CB2	.250	.110	.094	.254	.134	.094	.008	■	☀	□
	CCGT-21.51-CB2					.126	.087	.016	■	☀	■
	CCGT-21.52-CB2					.118	.079	.031	■	☀	■
	CCGT-32.50.5-CB2	.375	.173	.156	.382	.177	.094	.008	■	☀	■
	CCGT-32.51-CB2					.169	.087	.016	■	☀	■
	CCGT-32.52-CB2					.161	.079	.031	■	☀	■
	CCGT-431-CB2	.500	.217	.187	.508	.169	.087	.016	□	□	□
	CCGT-432-CB2					.161	.079	.031	□	□	□

## CCGT-CB2 Positive neutral wiper



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	CCGT-21.50.5W-CB2	.250	.110	.094	.254	.134	.098	.008	□	■	□
	CCGT-21.51W-CB2					.130	.091	.016	□	■	□
	CCGT-32.50.5W-CB2	.375	.173	.156	.382	.177	.098	.008	□	■	□
	CCGT-32.51W-CB2					.173	.091	.016	□	■	□
	CCGT-430.5W-CB2	.500	.217	.187	.508	.173	.091	.008	□	■	□
	CCGT-431W-CB2					.165	.083	.016	□	■	□

## CPGT-CB1 Positive neutral

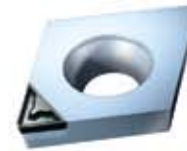


Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	CPGT-1.81.50.5-CB1	.219	.098	.094	.220	.094	.094	.008	□	■	□
	CPGT-1.81.51-CB1					.087	.087	.016	□	■	□
	CPGT-21.50.5-CB1	.250	.110	.094	.254	.134	.094	.008	□	■	□
	CPGT-21.51-CB1					.126	.087	.016	□	■	□

☀ NEW! ■ available stock standard. □ available September 2008.

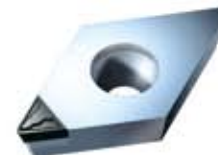
# BECKER PCD Tipped inserts with Chipbreakers

## CPGT-CB2 Positive neutral



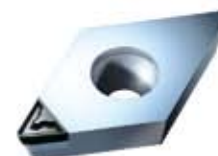
Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>t</sup>	s	l	PDC  l	CVD  l	r	DP		
	CPGT-21.50.5-CB2	.250	.110	.094	.254	.134	.094	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	CPGT-21.51-CB2					.126	.087	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## DCGT-CB1 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>t</sup>	s	l	PDC  l	CVD  l	r	DP		
	DCGT-21.50-CB1	.250	.110	.094	.305	.150	.106	.004	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DCGT-21.50.5-CB1					.146	.102	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-21.51-CB1					.134	.091	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-21.52-CB1					.118	.079	.031	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-32.50-CB1	.375	.173	.156	.457	.189	.106	.004	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DCGT-32.50.5-CB1					.185	.102	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-32.51-CB1					.169	.091	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-32.52-CB1					.157	.079	.031	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

## DCGT-CB2 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>t</sup>	s	l	PDC  l	CVD  l	r	DP		
	DCGT-21.50-CB2	.250	.110	.094	.305	.150	.106	.004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DCGT-21.50.5-CB2					.146	.102	.008	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DCGT-21.51-CB2					.134	.091	.016	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-21.52-CB2					.118	.079	.031	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-32.50-CB2	.375	.173	.156	.457	.189	.106	.004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	DCGT-32.50.5-CB2					.185	.102	.008	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	DCGT-32.51-CB2					.169	.091	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	DCGT-32.52-CB2					.157	.079	.031	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

NEW! 
  available stock standard. 
  available September 2008.

# BECKER PCD Tipped inserts with Chipbreakers



## RCGT-CB1 Fullface

Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  t	CVD  t	r			
	RCGT-0602M0-VM	.236	.110	.094	--	--	--	--	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	RCGT-10T3M0-VM	.394	.173	.156	--	--	--	--	<input type="checkbox"/>	<input checked="" type="checkbox"/>	



## RCGT-CB2 Fullface

Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  t	CVD  t	r			
	RCGT-0602M0-VM	.236	.110	.094	--	--	--	--	<input type="checkbox"/>		
	RCGT-10T3M0-VM	.394	.173	.156	--	--	--	--	<input type="checkbox"/>		



## SCGT-CB1 Positive neutral

Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  t	CVD  t	r			
	SCGT-32.51-CB1	.375	.173	.156	.375	.173	.110	.016		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	SCGT-32.52-CB1					.169	.102	.031		<input checked="" type="checkbox"/>	<input type="checkbox"/>
	SCGT-431-CB1	.500	.217	.187	.500	.173	.110	.016		<input checked="" type="checkbox"/>	
	SCGT-432-CB1					.169	.102	.031		<input checked="" type="checkbox"/>	



## SCGT-CB2 Positive neutral

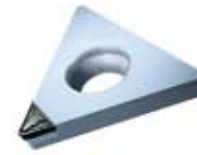
Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  t	CVD  t	r			
	SCGT-32.51-CB2	.375	.173	.156	.375	.173	.110	.016	<input type="checkbox"/>		<input type="checkbox"/>
	SCGT-32.52-CB2					.169	.102	.031	<input type="checkbox"/>		<input type="checkbox"/>
	SCGT-431-CB2	.500	.217	.187	.500	.173	.110	.016	<input type="checkbox"/>		
	SCGT-432-CB2					.169	.102	.031	<input type="checkbox"/>		

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# BECKER PCD Tipped inserts with Chipbreakers

## TCGT-CB1 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	TCGT-1.81.50.5-CB1	.219	.098	.094	.378	.146	.102	.008		■	□
	TCGT-1.81.51-CB1					.134	.091	.016		■	■
	TCGT-21.50.5-CB1	.250	.110	.094	.433	.146	.102	.008		■	■
	TCGT-21.51-CB1					.134	.091	.016		■	■
	TCGT-32.51-CB1	.375	.173	.156	.650	.181	.091	.016		■	□
	TCGT-32.52-CB1					.165	.079	.031		■	■

## TCGT-CB2 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	TCGT-1.81.50.5-CB2	.219	.098	.094	.378	.146	.102	.008	□	☀	□
	TCGT-1.81.51-CB2					.134	.091	.016	□	☀	■
	TCGT-21.50.5-CB2	.250	.110	.094	.433	.146	.102	.008	□	☀	■
	TCGT-21.51-CB2					.134	.091	.016	■	☀	■
	TCGT-32.51-CB2	.375	.173	.156	.650	.181	.091	.016	□	☀	■
	TCGT-32.52-CB2					.165	.079	.031	□	☀	■

## VBGT-CB1 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	VBGT-330.5-CB1	.375	.173	.187	.654	.232	.118	.008		■	■
	VBGT-331-CB1					.217	.118	.016	□	■	■
	VBGT-332-CB1					.197	.118	.031	□	■	□
	VBGT-333-CB1					.173	.118	.047	□	■	□

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# BECKER PCD Tipped inserts with Chipbreakers

## VBGT-CB2 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	VBGT-330.5-CB2	.375	.173	.187	.654	.232	.118	.008	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VBGT-331-CB2					.217	.118	.016	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	VBGT-332-CB2					.197	.118	.031	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VBGT-333-CB2					.173	.118	.047	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## VCGT-CB1 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	VCGT-220-CB1	.250	.114	.125	.437	.213	.118	.004	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	VCGT-220.5-CB1					.181	.118	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-221-CB1					.154	.118	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-330.5-CB1	.375	.173	.187	.654	.232	.118	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-331-CB1					.217	.118	.016	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-332-CB1					.197	.118	.031	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-333-CB1					.177	.118	.047	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

## VCGT-CB2 Positive neutral



Insert	Designation	Dimensions							PDC-S	PDC	CVD
		d	d <sup>1</sup>	s	l	PDC  l	CVD  l	r			
	VCGT-220.5-CB2	.250	.114	.125	.437	.213	.118	.004	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	VCGT-221-CB2					.181	.118	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-222-CB2					.154	.118	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	VCGT-330.5-CB2	.375	.173	.187	.654	.232	.118	.008	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	VCGT-331-CB2					.217	.118	.016	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-332-CB2					.197	.118	.031	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	VCGT-333-CB2					.177	.118	.047	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

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# Technical Information

Grades	ISO	Composition - Performance	Application
<b>Polycrystalline Diamond and CVD - PCD &amp; CVD</b>			
PDC	DP	Polycrystalline, carbide reinforced diamond of fine grit size, good cutting edge sharpness and low cutting pressure allowing close tolerances. Increased flank wear resistance and toughness.	Finishing and general purpose turning of all nonferrous metals and nonmetallics with low content of abrasive reinforcement or silicon.
PDC-S	DP	Polycrystalline carbide reinforced diamond of coarse grit size, good edge sharpness and low cutting pressure allowing close tolerances. Best performances for milling. High flank wear resistance and toughness.	Finishing, general purpose turning and milling of all non-metallics with medium to high content of abrasive reinforcement or silicon.
CVD	DP	Solid diamond with no structure. Cutting edge is extremely sharp and without microfractures generating no cutting pressure, allowing burr-free results with tolerances close to zero. Extremely flank wear resistant with maximum thermal conductivity, and good toughness.	Super finishing to roughing of all nonferrous metals and non-metallics with abrasive reinforcement or silicon. (HSC - High Tech)

Chip Breaker Cutting Information			D.O.C (a <sub>p</sub> )	FEED (ipr)
Designation	Application	Radius	Min. - Max.	Min. - Max.
CB1	Medium to finish machining with low cutting forces for low burr, high tolerance, high surface quality.	0.004"	0.002" - 0.012"	0.0008" - 0.002"
		0.008"	0.0025" - 0.016"	0.0011" - 0.003"
		0.016"	0.004" - 0.032"	0.003" - 0.006"
		0.032"	0.006" - 0.040"	0.003" - 0.008"
		0.047"	0.012" - 0.060"	0.0045" - 0.010"
CB2	General purpose machining. Strong, sharp cutting edge for high depths of cut and feed rates producing good surface quality.	0.004"	---	---
		0.008"	0.020" - 0.032"	0.003" - 0.005"
		0.016"	0.024" - 0.060"	0.003" - 0.008"
		0.032"	0.028" - 0.060"	0.006" - 0.012"
		0.047"	0.032" - 0.080"	0.008" - 0.016"

Speed Information		PDC (Vc: SFM)	PDC-S (Vc: SFM)	CVD (Vc: SFM)
Materials				
Non-ferrous metals, aluminum alloys without silicon		1300 - 8000	1300 - 8000	1600 - 15000
Non-ferrous metals, aluminum alloys with less than 12% silicon		1300 - 6500	1950 - 6500	1300 - 11000
Non-ferrous metals, aluminum alloys with more than 12% silicon		---	1300 - 4800	1300 - 6000
Brass, bronze, copper, copper alloys, precious metals		975 - 5800	975 - 5500	1300 - 7000
Non-metallics, pure plastics without reinforcements		975 - 3900	---	1300 - 6000
Non-metallics, plastics with reinforcements		---	650 - 3000	650 - 4500



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