



Advanced Cutting Materials  
Made in Germany

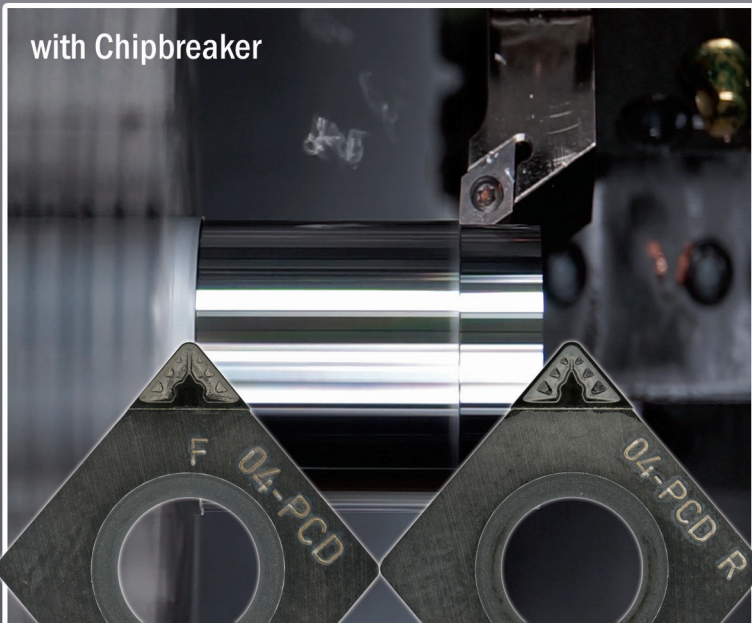


# CVD-D & PCD CHIPBREAKER PROGRAM

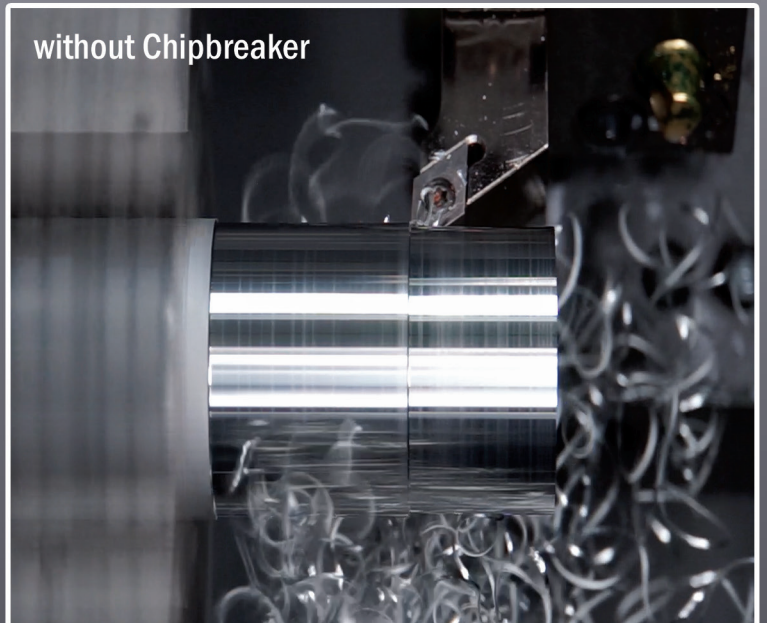
## Introducing 2 Brand New Lasered Chipbreakers

- Over 250 new line items
- Greatly expanded offering of full edge inserts with chipbreakers
- PCD and CVD-D binderless diamond
- Wipers available for 80° and 55° inserts for up to 2 to 4 times higher feed rates with good surface finishes
- Can be used in smooth and interrupted cutting
- CBF chipbreaker has sharp cutting edges and produces minimal cutting pressure on thin-walled parts
- CBR chipbreaker has a landed edge for strength and produces excellent part finishes

with Chipbreaker



without Chipbreaker



# CVD-D & PCD Chipbreaker Program

## CCGT Positive Rake Angle

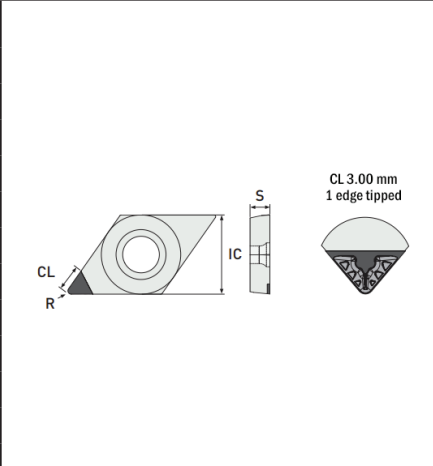
	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
<p>CL 3.00 mm 1 edge tipped</p> <p>GS Right Hand Shown Full Edge</p>	CCGT-21.50.5	.250	.094	.008	■	■	■	■
	CCGT-21.50.5L-GS			.008	■	■	■	■
	CCGT-21.50.5R-GS			.008	■	■	■	■
	CCGT-21.50.5W			.008	■	■		
	CCGT-21.51			.016	■	■	■	■
	CCGT-21.51L-GS			.016	■	■	■	■
	CCGT-21.51R-GS			.016	■	■	■	■
	CCGT-21.51W			.016	■	■		
	CCGT-21.52			.031	■	■	■	■
	CCGT-21.52L-GS			.031	■	■	■	■
	CCGT-21.52R-GS	.031	■	■	■	■		
	CCGT-32.50.5	.375	.156	.008	■	■	■	■
	CCGT-32.50.5W			.008	■	■		
	CCGT-32.51			.016	■	■	■	■
	CCGT-32.51L-GS			.016	■	■	■	■
	CCGT-32.51R-GS			.016	■	■	■	■
	CCGT-32.51W			.016	■	■		
	CCGT-32.52			.031	■	■	■	■
	CCGT-32.52L-GS			.031	■	■	■	■
	CCGT-32.52R-GS			.031	■	■	■	■
CCGT-32.52W	.031			■	■			
CCGT-430.5	.500	.187	.008	■	■	■	■	
CCGT-430.5W			.008	■	■			
CCGT-431			.016	■	■	■	■	
CCGT-431L-GS			.016	■	■	■	■	
CCGT-431R-GS			.016	■	■	■	■	
CCGT-431W			.016	■	■			
CCGT-432			.031	■	■	■	■	
CCGT-432L-GS			.031	■	■	■	■	
CCGT-432R-GS			.031	■	■	■	■	
CCGT-432W			.031	■	■			

## CPGT Positive Rake Angle • Edge Tipped

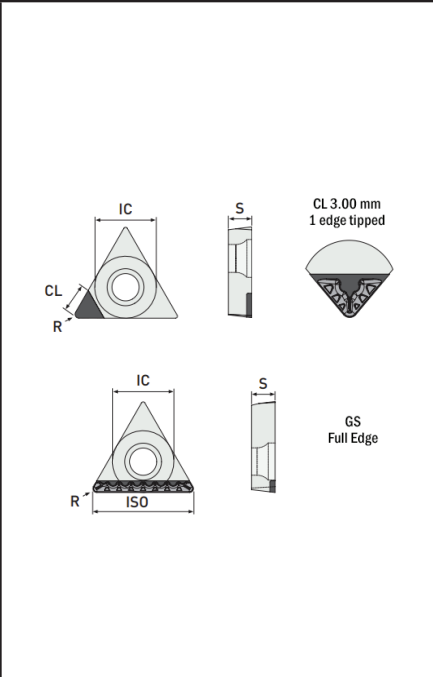
	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
<p>CL 3.00 mm 1 edge tipped</p>	CPGT-21.50.5	.250	.094	.008	■	■	■	■
	CPGT-21.51			.016	■	■	■	■
	CPGT-21.52			.031	■	■	■	■
	CPGT-32.50.5	.375	.156	.008	■	■	■	■
	CPGT-32.51			.016	■	■	■	■
	CPGT-32.52			.031	■	■	■	■
	CPGT-431	.500	.187	.016	■	■	■	■
	CPGT-432			.031	■	■	■	■

# CVD-D & PCD Chipbreaker Program

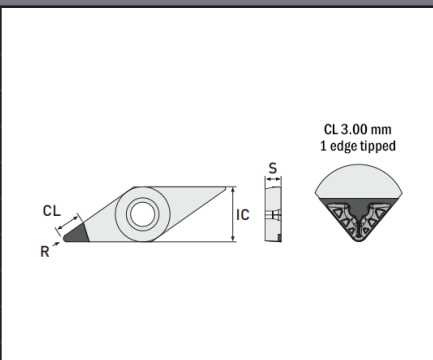
## DCGT Positive Rake Angle • Edge Tipped

	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
	DCGT-21.50.5	.250	.094	.008	■	■	■	■
	DCGT-21.50.5W			.008	■	■	■	■
	DCGT-21.51			.016	■	■	■	■
	DCGT-21.51W			.016	■	■	■	■
	DCGT-21.52			.031	■	■	■	■
	DCGT-21.52W			.031	■	■	■	■
	DCGT-32.50.5	.375	.156	.008	■	■	■	■
	DCGT-32.50.5W			.008	■	■	■	■
	DCGT-32.51			.016	■	■	■	■
	DCGT-32.51W			.016	■	■	■	■
	DCGT-32.52			.031	■	■	■	■
	DCGT-32.52W			.031	■	■	■	■

## TCGT Positive Rake Angle

	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
	TCGT-1.81.50.5	.219	.094	.008	■	■		
	TCGT-1.81.50.5-GS			.008	■	■		
	TCGT-1.81.51			.016	■	■		
	TCGT-1.81.51-GS			.016	■	■		
	TCGT-1.81.52			.031	■	■		
	TCGT-1.81.52-GS			.031	■	■		
	TCGT-21.50.5	.250	.094	.008	■	■		
	TCGT-21.50.5-GS			.008	■	■		
	TCGT-21.51			.016	■	■		
	TCGT-21.51-GS			.016	■	■		
	TCGT-21.52			.031	■	■		
	TCGT-21.52-GS			.031	■	■		
	TCGT-32.50.5	.375	.156	.008	■	■		
	TCGT-32.50.5-GS			.008	■	■		
	TCGT-32.51			.016	■	■		
	TCGT-32.51-GS			.016	■	■		
	TCGT-32.52			.031	■	■		
	TCGT-32.52-GS			.031	■	■		

## VCGT Positive Rake Angle

	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
	VCGT-1.21.50.5	.156	.094	.008	■	■	■	■
	VCGT-1.21.51			.016	■	■	■	■
	VCGT-1.21.52			.031	■	■	■	■
	VCGT-220.5	.250	.125	.008	■	■	■	■
	VCGT-221			.016	■	■	■	■
	VCGT-222			.031	■	■	■	■
	VCGT-330.5	.375	.187	.008	■	■	■	■
	VCGT-331			.016	■	■	■	■
	VCGT-332			.031	■	■	■	■

# CVD-D & PCD Chipbreaker Program

## Technical Information

Grade	Description	Application
<b>PCD</b>	PCD is a synthetically produced, extremely tough, intergrown mass of diamond particles with random orientation in a metal matrix. PCD has high thermal conductivity and good heat dissipation away from the cutting edge.	PCD is very well suited for machining aluminum with Si content up to 10% and other abrasive fillers. Used in all non-ferrous applications.
<b>CVD-D</b>	CVD-D is one of the hardest man-made diamond cutting materials. Due to the lack of a bonding matrix CVD-D has a much higher diamond content than PCD. Tool life can be up to 10 times that of PCD.	For the machining of hard-brittle materials such as Ceramics, glass, glass ceramics, tungsten carbide, MMC and fiber reinforced composites such as CFRP and GFRP.

## Chipbreaker Cutting Information

Chipbreaker Designation	Description	Nose Radius	D.O.C Min - Max	Feed per Rev. Min - Max
<b>CBF</b>	Medium to finish machining with low cutting forces due to the sharp cutting edge. Burr free machining and holds high tolerances and exceptional surface finish.	.008"	.0004" - .110"	.0008" - .004"
		.016"	.0004" - .110"	.0015" - .008"
		.031"	.0004" - .110"	.002" - .016"
		.047"	.0004" - .110"	.002" - .024"
<b>CBR</b>	General purpose machining. Strong cutting edge for higher depths of cut and feed rates while producing high surface quality.	.008"	.002" - .110"	.001" - .004"
		.016"	.0023" - .110"	.001" - .008"
		.031"	.003" - .110"	.0023" - .016"
		.047"	.004" - .110"	.003" - .023"

## Speed Information

Materials	CVD-D ( Vc: SFM )	PCD ( Vc: SFM )
Non-ferrous metals, aluminum alloys without silicon	1600 - 15000	1300 - 8000
Non-ferrous metals, aluminum alloys with less than 12% silicon	1300 - 11000	1300 - 6500
Non-ferrous metals, aluminum alloys with more than 12% silicon	1300 - 6000	
Brass, bronze, copper, copper alloys, precious metals	1300 - 7000	975 - 5800
Non-metallics, ure plastics without reinforcements	1300 - 6000	975 - 3900
Non-metallics, plastics with reinforcements	650 - 4500	

## See Our Expanded CBN Insert Range!



**TV Carb**  
Advanced Cutting Materials  
Made in Germany

**CBN PROGRAM**

12 Brand New CBN Grades greatly expanding our already impressive product offering!

- Over 1,000 New Item Items
- Grades for hard steel, powdered metal, hi-temp alloys
- Great & accurate cost base
- Smooth and highly interrupted cut
- Multiple cutting edges on each insert

CCW Edge Tool

RTIC

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