

RTC Rani Tool Corp.



DTS GmbH

Diamond Tooling Systems



PASSION FOR DIAMOND

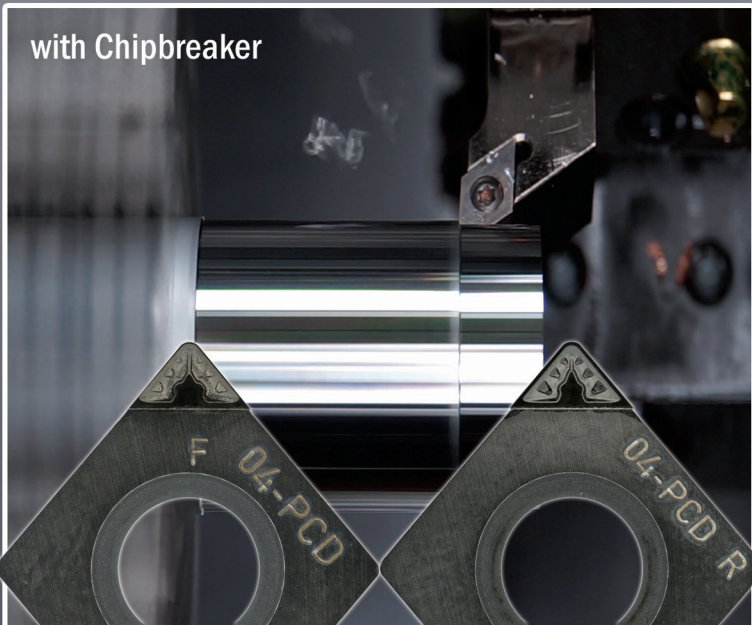


CVD-D & PCD Chipbreaker Program

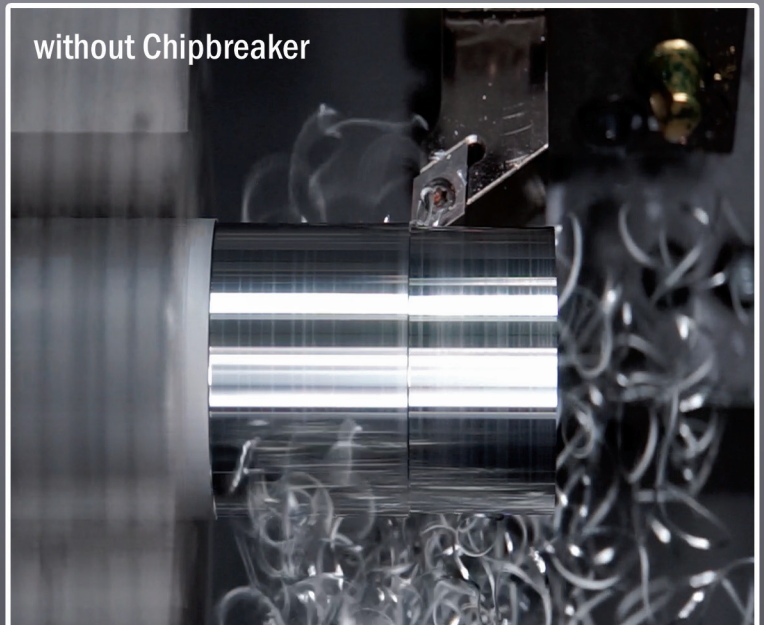
Introducing 2 Brand New Lasered Chipbreakers

- 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

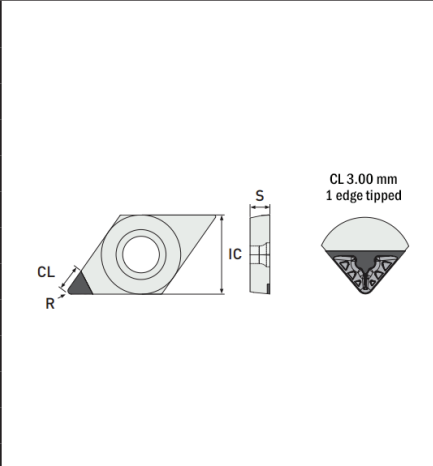
	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
	CCGT-21.50.5	.250	.094	.008	■	■	■	■
	CCGT-21.50.5L-GS			.008	■	■	■	■
	CCGT-21.50.5R-GS			.008	■	■	■	■
	CCGT-21.50.5W			.008	■	■		
	CCGT-21.51			.016	■	■	■	■
	CCGT-21.51L-GS			.016	■	■	■	■
	CCGT-21.51R-GS			.016	■	■	■	■
	CCGT-21.51W			.016	■	■		
	CCGT-21.52			.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

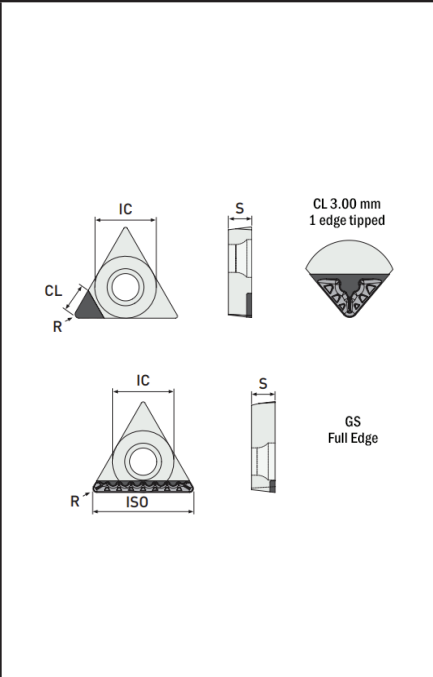
	Designation	IC	S	r	PCD		CVD-D	
					CBF	CBR	CBF	CBR
	CPGT-21.50.5	.250	.094	.008	■	■	■	■
	CPGT-21.51			.016	■	■	■	■
	CPGT-21.52			.031	■	■	■	■
	CPGT-32.50.5	.375	.156	.008	■	■	■	■
	CPGT-32.51			.016	■	■	■	■
	CPGT-32.52			.031	■	■	■	■
	CPGT-431	.500	.187	.016	■	■	■	■
	CPGT-432			.031	■	■	■	■

CVD-D & PCD Chipbreaker Program

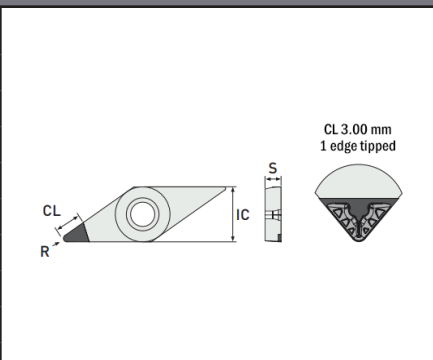
DCGT Positive Rake Angle • Edge Tipped

	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
PCD	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.
CVD-D	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
CBF	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"
CBR	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!

RTC Rani Tool Corp.
DTS GmbH
 Diamond Tooling Systems
 PASSION FOR DIAMOND

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
- Gray & ductile cast iron
- Smooth and highly interrupted cut
- Multiple cutting edges on each insert

000W (Ips/Feed)

Material	Grade	0.001	0.002	0.003	0.004	0.005	0.006	0.008	0.010	0.012	0.015	0.020	0.025	0.030	0.040	0.050	0.060	0.080	0.100
Aluminum	RT100	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Steel	RT101	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Cast Iron	RT102	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Titanium	RT103	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Inconel	RT104	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Superalloy	RT105	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Hard Steel	RT106	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Powdered Metal	RT107	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Hi-Temp Alloy	RT108	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Gray Cast Iron	RT109	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950
Ductile Cast Iron	RT110	100	150	200	250	300	350	400	450	500	550	600	650	700	750	800	850	900	950

RTC Rani Tool Corp.
 320 Troy Circle, Unit C, Knoxville, TN 37919

Tel: (865) 337-7799 or (888) 554-RANI • Fax: (865) 337-7716
 E-mail: sales@ranitool.com • www.ranitool.com

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