



**DTS GmbH**

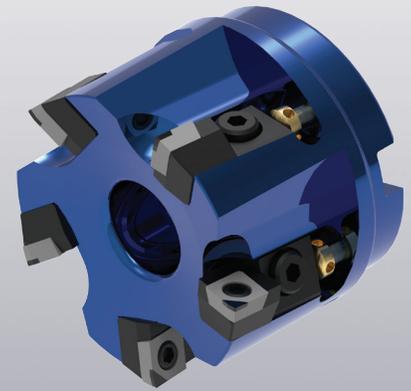
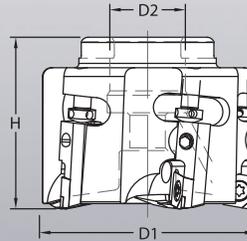
Diamond Tooling Systems

**TVCarb**

Advanced Cutting Materials  
Made in Germany

# New Design TCP90 Milling Series Featuring DTS GmbH PCD/CVD-D & CBN Inserts

- Ultra precise finishing with two different insert wiper configurations and micro-adjustable cartridges to produce the ultimate surface finishes
- Maxicool through coolant for maximum chip evacuation and temperature control
- Milling bodies made from lightweight 7075-T6 aluminum
- Two diamond grades PCD and CVD-D
- Three CBN grades to machine a wide range of materials
- Two cutting edges per insert with 3mm, 3.5mm & 6mm cutting edge lengths

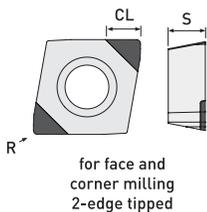


## TCP90 Face Mills for PCD / TFC Milling Applications

Designation	D1	D2	H	Flutes	Insert	Cartridge	Cartridge Screw	Insert Screw	Height Adj. Screw
TCP90-2000-AL	2.00	.75	2.00	3	CPGX-32.5...	BC100X5000 BRTC	M5 SHCS	TCP951	HAS6823
TCP90-2500-AL	2.50	1.00	2.00	5					
TCP90-3000-AL	3.00	1.00	2.00	7					
TCP90-4000-AL	4.00	1.25	2.00	10					
TCP90-5000-AL	5.00	1.50	2.50	11					
TCP90-6000-AL	6.00	1.50	2.50	13					
TCP90-8000-AL	8.00	2.00	2.50	16					

\* Steel cutter bodies are available on request and are recommended when using CBN Tipped Inserts

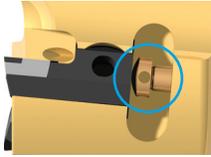
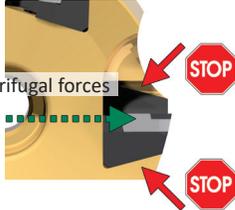
Designation	Cut Length	Radius	GRADES				
			PCD	CVD-D	CBN-H	CBN-K	CBN-X
CPGX-32.50.5PDR-35	.138"	.008"	●	●	●	●	●
CPGX-32.51PDR-35	.138"	.016"	●	●	●	●	●
CPGX-32.52PDR-35	.138"	.032"	●	●	●	●	●
CPGX-32.53PDR-35	.138"	.047"	●	●	●	●	●
CPGX-32.50.5PDR-60	.236"	.008"	●	●	●	●	●
CPGX-32.51PDR-60	.236"	.016"	●	●	●	●	●
CPGX-32.52PDR-60	.236"	.032"	●	●	●	●	●
CPGX-32.53PDR-60	.236"	.047"	●	●	●	●	●
CPGX-32.50.5SFR-30	.118"	.008"	●	●	●	●	●
CPGX-32.51SFR-30	.118"	.016"	●	●	●	●	●
CPGX-32.52SFR-30	.118"	.032"	●	●	●	●	●
CPGX-32.53SFR-30	.118"	.047"	●	●	●	●	●



## High Performance Grades

<b>PCD</b>	is ideally suited for the machining of * Aluminum <10% Si   Brass   Copper, Copper Alloys   Graphite   Magnesium   PEEK   Tungsten alloy	  
<b>CVD-D</b>	is ideally suited for the machining of * Acrylic (PMMA)   Aluminum >10% Si   Carbide   Ceramics   Composites (GFRP/CFRP)   Copper, Copper Alloys   Glass, Glass ceramic   Magnesium   Plastic   Silver, Gold, Platinum   Titanium   Zirconium	  
<b>CBN-H</b>	is ideally suited for the machining of * Steel, hardened up to 72 HRC Sinter Steel, hardened	  
<b>CBN-K</b>	is ideally suited for the machining of * Powder metallurgical Steel, hardened Special Alloys such as ASP, CPM, Hardox Tool Steel, hardened up to 72 HRC	  
<b>CBN-X</b>	is ideally suited for the machining of * Grey Cast Iron (GCI) Ductile Cast Iron (DCI)	  
 Continuous Cut  Light Interrupted Cut  Heavy Interrupted Cut		

## Security & Performance Features

<b>Micro Adjustable</b>		<b>Through Coolant Enabled</b>	
<p>Easily pre-set cartridges to within microns</p> <p>All new milling cutters are factory pre-set in height to within <math>\pm 0.0004</math> with a master gauge insert</p>	<p>Coolant ports are directed at the cutting edge to extend tool life and improve surface finishes</p>		<p>Coolant ports are directed at the cutting edge to extend tool life and improve surface finishes</p>
<b>Cartridge Dovetail Lock</b>		<b>Wiper Radius</b>	
<p>Insert cartridge is fitted into cutter body with dovetail design</p> <p>Centrifugal forces acting on insert cartridge are neutralized by wedge profile of cartridge and matching shape on cutter body</p>		<p>Unique wiper is a compound radius that outperforms traditional wiper flats</p> <p>With every insert in the cutter loaded with the wiper radius, super finishing is easily attained</p>	

ISO	Material	PCD	CVD-D	CBN-H	CBN-X	CBN-K
H	Powder metallurgical Steel, hardened			●	●	
	Special Alloys (ASP,CPM,Hardox)			●	●	
	Steel, hardened up to 72 HRC			●	●	
	Tool Steel, hardened up to 72 HRC			●	●	
P	Sintered Steel				●	●
	Sintered Steel, hardened			●	●	
K	Grey Cast Iron (GCI)					●
	Ductile Cast Iron (DCI)				●	●
S	Ni-, Co-, Fe- and Cr-Alloys			●	●	
	Titanium Alloys			●	●	
M	Stainless Steel, hardened			●	●	
N	Acrylic (PMMA)		●			
	Aluminum, < 10% Si	●	●			
	Aluminum, > 10% Si	●	●			
	Brass	●	●			
	Ceramics	●	●			

ISO	Material	PCD	CVD-D	CBN-H	CBN-X	CBN-K
N	Ceramics (Green)	●	●			
	Plastics	●	●			
	Composite such as CFG/GFRP	●	●			
	Copper, Copper Alloys	●	●			
	Glass, Glass Ceramic	●	●			
	Graphite	●	●			
	Magnesium	●	●			
	MMC	●	●			
	PEEK	●	●			
	Silver, Gold, Platinum	●	●			
	Tungsten alloy	●	●			
	Zirconium	●	●			

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