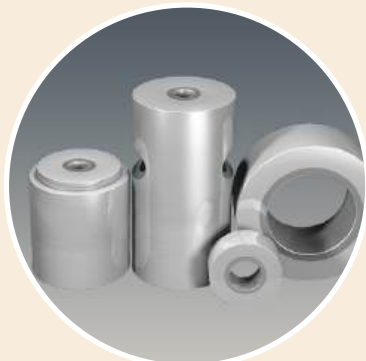




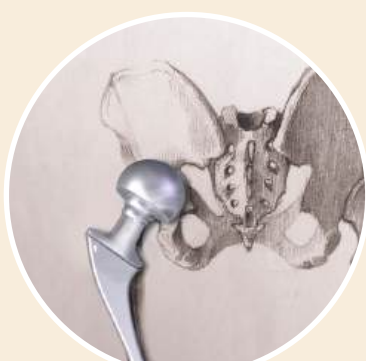
Diamond Indexable Inserts



Die and Mold
Industry



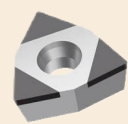
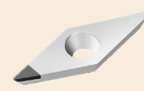
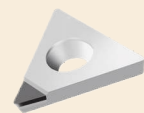
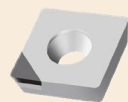
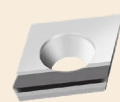
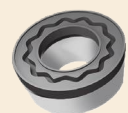
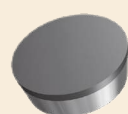
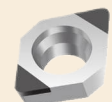
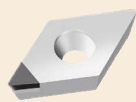
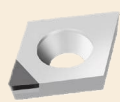
Automotive
Mechanical Engineering



Medical Technology
Micro Technology



Aerospace
Engineering





Welcome to Diamond Tooling Systems - DTS GmbH!

Based in Kaiserslautern - Germany - we have specialized in the development, production and distribution of precision tools equipped with ultrahard cutting materials, such as PCD (polycrystalline diamond), CVD-D (CVD thickfilm diamond), UltraDiamond (monocrystalline binderless diamond) and CBN (cubic boron nitride). As a leading manufacturer for tools with lasered cutting edges, we offer machining solutions in the areas of turning, milling, grooving, drilling, reaming, threading, and tool holding.

To be able to economically process ultra-hard cutting materials such as PCD, CVD-D and CBN on precision tools we realized early on that we would have to move away from the traditional production technology of „grinding“ to new technologies such as the „laser removal process“. This decision has contributed to the fact that our customers regard us, DTS GmbH, as the pioneer and leading manufacturer of lasered tools for machining.

Ultra-hard high-performance cutting materials have a key function in metal-cutting manufacturing. Precision tools equipped with ultra-hard cutting materials are products that require a great deal of explanation. The economical use of the cutting materials is only ensured if the machining process and the cutting material are coordinated with each other.

This is exactly where we at Diamond Tooling Systems DTS GmbH step in: Tools and processes are subjected to a comprehensive analysis by our experienced application engineers. Subsequently, the new process optimization is presented to the customer and in the next step, it is implemented in their production. Only in that way is it possible to exploit the optimum potential of our high-tech cutting materials.

Our experienced application engineers are also available to advise you during ongoing production. This close co-operation and mutual trust is the basis of our success.

With more than 25 years of optimization experience in the processing industry, this is where we see our strength!

Overview

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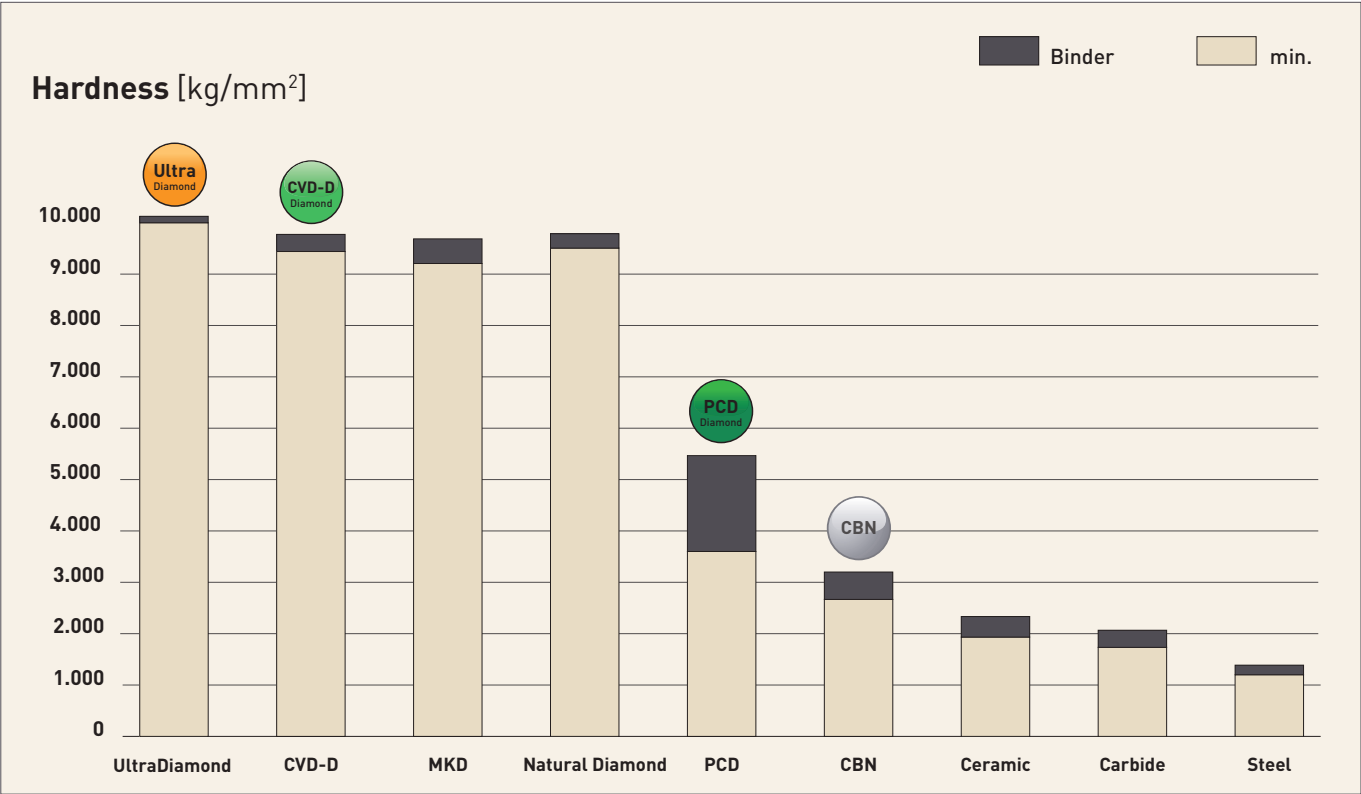
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PASSION FOR DIAMOND...

ultra-hard cutting materials at a glance

... is not just a slogan for us - we live this passion in our daily dealings with our customers and we are your partner when it comes to diamond or CBN tools.



Polycrystalline diamond (PCD)

The well-known standard diamond

PCD is a synthetically produced, extremely tough, intergrown mass of diamond particles with a random orientation in a metal matrix. It is produced by sintering selected diamond particles under high pressure and high temperatures. Graphite serves as a catalyst allowing the PCD crystals to intergrow. PCD has a high thermal conductivity and good heat dissipation away from the cutting edge. In addition, PCD has the highest bending fracture strength of all cutting materials. PCD is very well suited for machining aluminum with a Si content of up to 10% and/or other abrasive fillers. The thermal hardness is about 750°C. The areas of application are like those of CVD thick-film diamond, but CVD thick film has a higher cost effectiveness with hard-brittle materials or aluminum from a Si content of 10%.

CVD-Thickfilm Diamond (CVD-D)

The star among diamond cutting materials

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. Due to the lack of a bonding matrix, the diamond content is much higher than with PCD. In the group of ultra-hard cutting materials, binderless CVD-D is one of the hardest man-made diamond cutting materials. CVD-D is characterized by high hardness as well as high wear resistance. These properties make CVD-D the perfect cutting material for machining abrasive materials. Compared to PCD, which is damaged by the abrasive particles due to its soft metallic binder phase, the CVD-D cutting edge remains stable due to its binderless anchoring in the diamond matrix. With the correct use of CVD-D, the tool life can be increased by up to 10 times (and even more) compared to PCD!

Binderless Diamond (UltraDiamond)

The hardest mono crystal

Single-crystal elements are laser-cut from diamond blanks in a defined orientation using laser segmentation technology. This new technology makes it possible, in addition to polycrystalline cutting materials such as PCD and CVD-D, to also braze a monocrystal (UltraDiamond) under high vacuum on any tool carrier. Compared to PCD, the tool life can be increased by approx. 15 to 25 times and compared to CVD-D by approx. 2 to 5 times. The areas of application are similar to PCD and CVD-D, but this monocrystalline cutting material offers a further significant increase in tool life in all applications where PCD and CVD-D reach the limits of economic viability. The UltraDiamond cutting material makes economical machining of very hard, highly brittle materials such as Ceramics, glass, glass-Ceramics and hard metals with low cobalt binder and nickel binder (<10%) possible.

Polycrystalline Cubic Boron Nitride (CBN)

Chemically resistant and stable at high temperatures

of up to 1,400°C. Boron nitride powder is the starting point for the production of CBN, which has been available since the end of the 1960s. It is produced under high pressure and at temperatures of over 1,500°C and the many different substrates are specifically adapted to the final application. CBN is now considered the second hardest material after diamond cutting materials! The applications of CBN take place in the automotive industry, aerospace, tool and die and mold making as well as in mechanical engineering. The wide range as cutting and abrasive material includes hardened steels, cast irons, chilled cast iron, sintered materials, stellites, nickel- and cobalt-based superalloys. In many applications, cubic boron nitride is preferred to diamond cutting materials because it is absolutely stable in air at temperatures up to 1,400°C. Diamond, on the other hand, begins to decompose at a temperature of approx. 750°C. Compared to PCD, CBN is also characterized by its chemical resistance to ferrous materials.

Our cutting materials
and their main areas of application at a glance

Our wide range of cutting materials allows us to offer the ideal solution for your applications.
Below you will find an overview of the different cutting materials.



PCD Diamond
is ideally suited for the machining of *
Aluminium <10% Si | Brass | Ceramic, sintered | Ceramic green compact |
Copper, Copper Alloy | Graphite | Magnesium | PEEK | Tungsten Alloy



CVD-D Diamond
is ideally suited for the machining of *
Acrylic (PMMA) | Aluminium >10% Si | Carbide >10%Co | Ceramic |
Copper, Copper Alloys | Composites (CFRP, GFRP) | Glass, Glass Ceramic |
Magnesium | Plastics | Silver, Gold, Platinum | Titanium | Zirconium



UltraDiamond
is ideally suited for the cutting of *
Acryl (PMMA) | Carbide <12%Co | Ceramic | Glass, Glass Ceramic

Our cutting material assignment
about the materials

You can't find your material in the table?
We will be happy to help you by phone or e-mail!

Tel.: +49(0)6301 32011-0
Mail: info@Diamond-toolingsystems.com

1. Choice

Alternative

		DTS Diamond Grades		
ISO	Materials	PCD	CVD-D	Ultra Diamond
N	Acryl (PMMA)			
	Aluminium, < 10% Si			
	Aluminium, > 10% Si			
	Brass			
	Carbide (Green)			
	Carbide G-Type, < 12% Co			
	Carbide G-Type, > 10% Co			
	Carbide K-Type, < 12% Co			
	Carbide K-Type, > 10% Co			
	Carbide with Ni Binder			
	Ceramic			
	Ceramic (Green)			
	Composite such as CFK/GFK			
	Copper, Copper Alloys			
	Glass, Glass Ceramic			
	Magnesium			
	MMC			
	PEEK			
	Plastics			
	Silver, Gold, Platinum			
	Titanium			
	Tungsten Alloy			

DTS cutting materials are successfully used in many industries:

- Mechanical engineering
- Die and mold industry
- Automotive
- Aerospace
- Medical technology
- Optical industry
- Ceramic industry



3D - Lasered micro chip breaker

for optimized chip control

Diamond tools are the first choice for the machining of aluminum (<Si1) and magnesium alloys, lead-free brass, and a wide variety of plastic composites. However, these long-chipping materials are often plagued by chip problems.

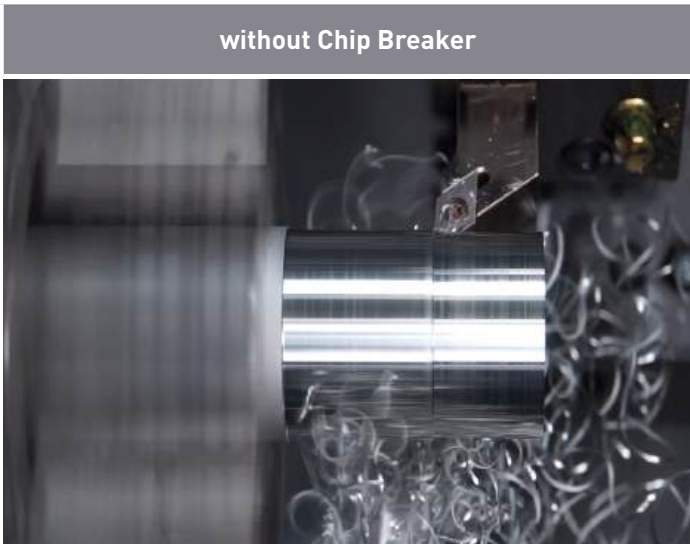
Our laser technology allows us to introduce 3D micro chip grooves into a wide variety of PCD, CVD-D and CBN tools. This special laser ablation process allows more complex chipbreaker shapes and achieve excellent chip control.



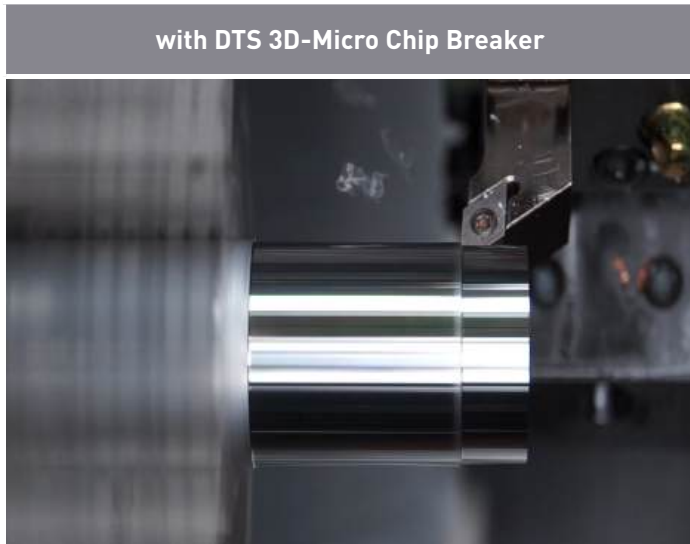
A lasered 3D micro chip breaker enables controlled chip breakage in most long-chipping materials. In addition, the chipbreaker minimizes cutting pressure, allowing for the machining of thin-walled components.

For controlled chip breaking, we offer you two different 3D-Micro chip grooves:

- Chip Breaker-F (sharp cutting edge for finishing cuts)
- Chip Breaker-R (stable cutting edge for roughing cuts)



Material: AlSi1

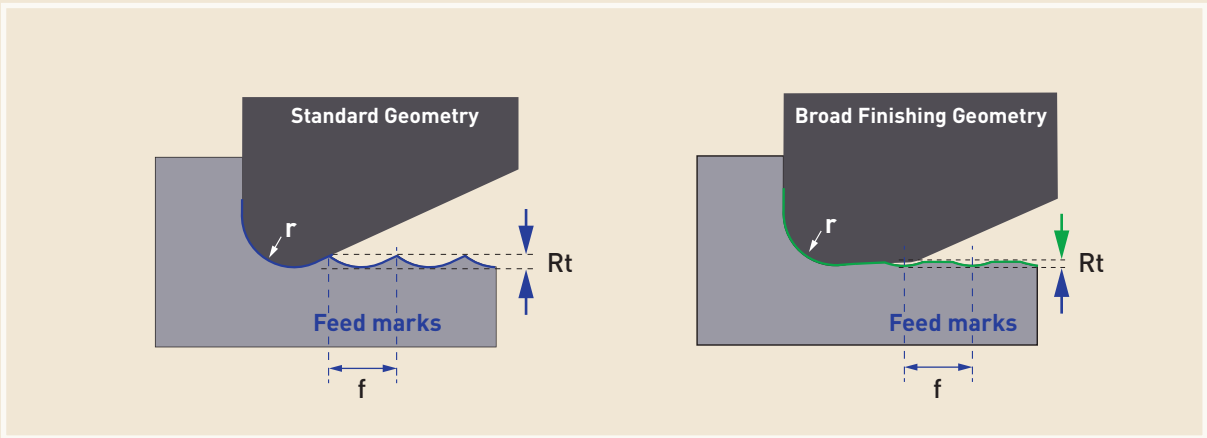


Material: AlSi1

Wiper indexable inserts

Functionality

Wiper cutting inserts:



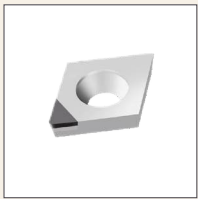
Advantages when using Wiper geometries

By using the same feed rate a 2-4 times better surface quality can be obtained or with a 2-4 times higher feed rate the same surface quality can be reached.

To get the wiper geometry into cutting condition please use the following lead angles at the machine:

C and W Type: 95°

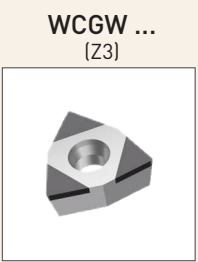
D Type: 93°



Page 16



Page 27 to face turning
Page 28 to side turning

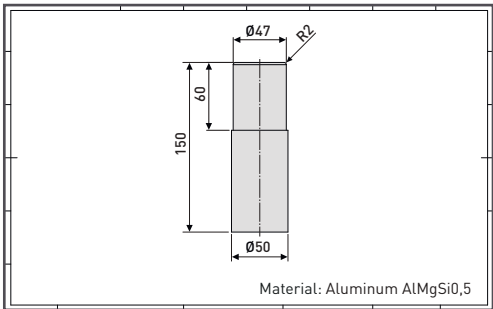
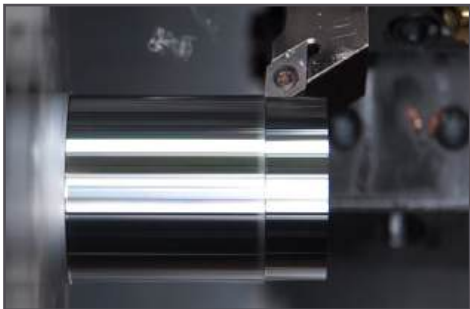


Application examples

our cutting in use

Not just theory - we would like to show you our tools in action. On this page you will find a selection of our Diamond application videos. Scan the QR-Code to get more information about the video.

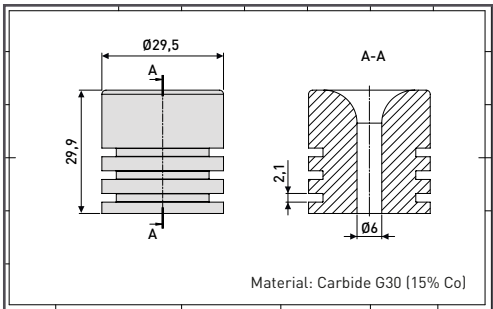
Also visit our YouTube Channel at dts-gmbh!



Chip breaking
Aluminum AlMgSi0,5
DCGW 11T304 PCD



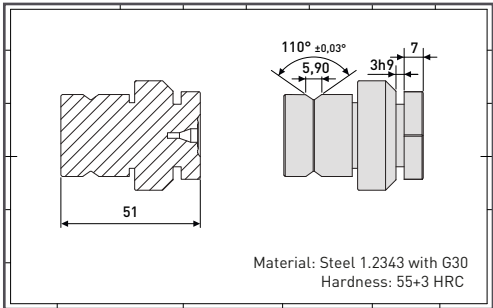
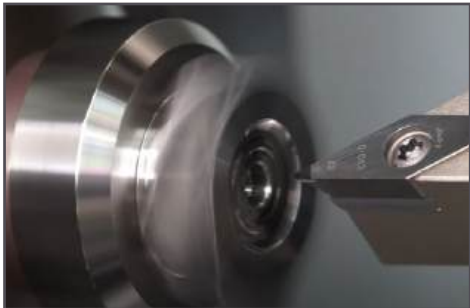
Here you can see the video!



Carbide G30
DCGW 11T304 CVD-D



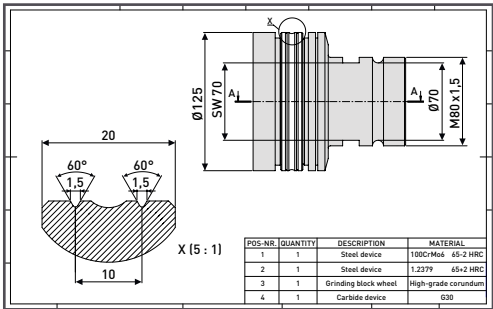
Here you can see the video!



Carbide G30
VXGW 160402 CVD-D



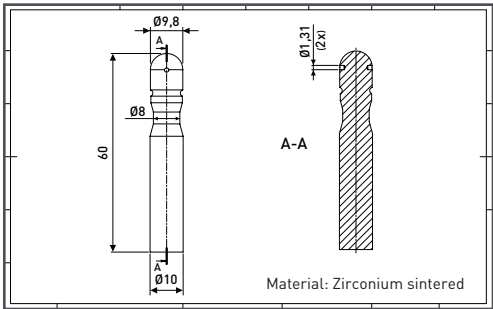
Here you can see the video!



High-grade corundum (80)
VCGW 160404 CVD-D



Here you can see the video!



Zirconium sintered
DCGW 11T304 UltraDiamond

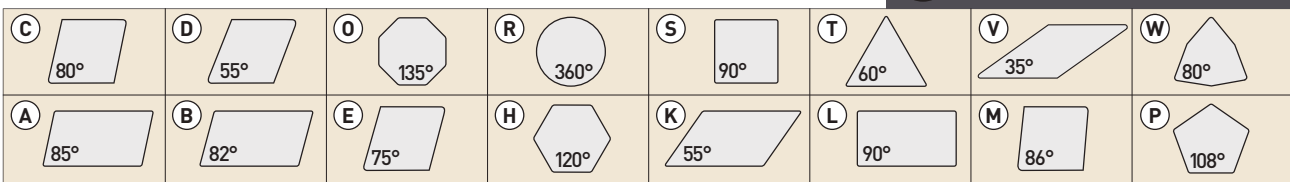


Here you can see the video!

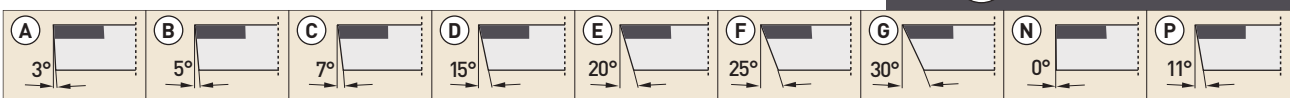
ISO Code

Diamond indexable inserts

Shape



Clearance

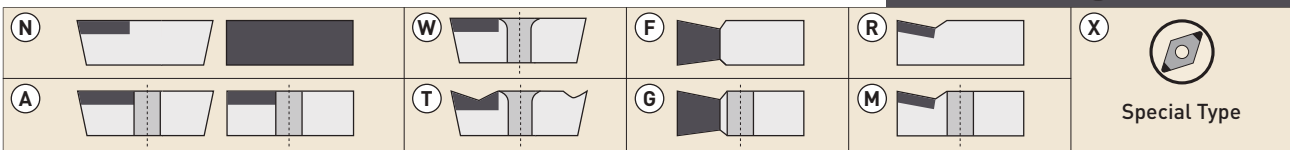


Tolerance [mm]

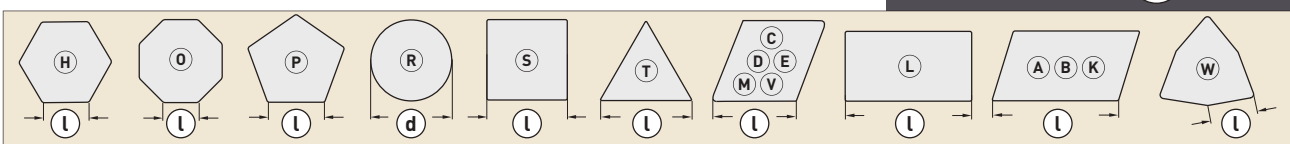
	m	s	d		m	s	d	
A	±0,005	±0,025	±0,025	J	±0,005	±0,025	±0,05 → ±0,15	
F	±0,005	±0,025	±0,013	K	±0,013	±0,025	±0,05 → ±0,15	
C	±0,013	±0,025	±0,025	L	±0,025	±0,025	±0,05 → ±0,15	
H	±0,013	±0,025	±0,013	M	±0,08 → ±0,20	±0,130	±0,05 → ±0,15	
E	±0,025	±0,025	±0,025	N	±0,08 → ±0,20	±0,25	±0,05 → ±0,15	
G	±0,025	±0,130	±0,025	U	±0,13 → ±0,38	±0,130	±0,08 → ±0,15	

*[M, N, U] The exact tolerance depends on the size of the insert.

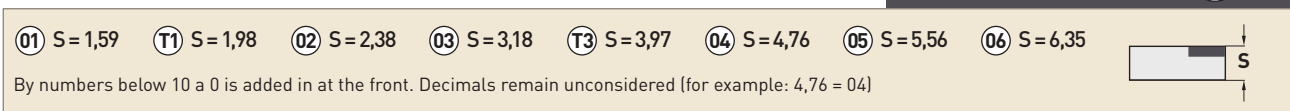
Insert type



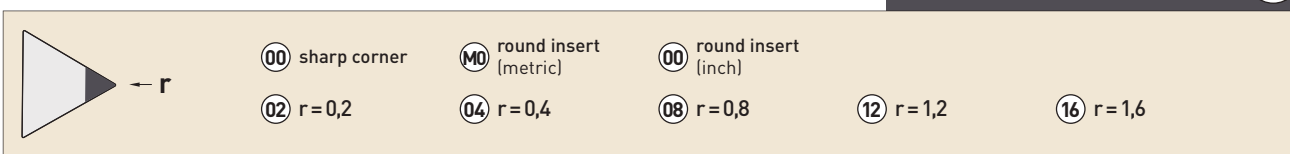
Insert size [mm]



Insert size [mm]

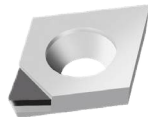


Corner configuration [mm]

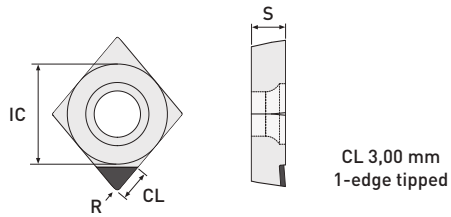


CCGT - positive rake angle

edge tipped



FN - positive rake angle



Standard					 PCD Diamond	 CVD-D Diamond	 Ultra Diamond	 on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	
	CCGT 060202	6,35	2,38	0,20	DP1010-0001	DP2010-0001		1-edge tipped
	CCGT 060204	6,35	2,38	0,40	DP1010-0002	DP2010-0002		1-edge tipped
	CCGT 060208	6,35	2,38	0,80	DP1010-0003	DP2010-0003		1-edge tipped
	CCGT 09T302	9,52	3,97	0,20	DP1010-0004	DP2010-0004		1-edge tipped
	CCGT 09T304	9,52	3,97	0,40	DP1010-0005	DP2010-0005		1-edge tipped
	CCGT 09T308	9,52	3,97	0,80	DP1010-0006	DP2010-0006		1-edge tipped
	CCGT 09T312	9,52	3,97	1,20	DP1010-0007	DP2010-0007		1-edge tipped
	CCGT 120402	12,70	4,76	0,20	DP1010-0008	DP2010-0008		1-edge tipped
	CCGT 120404	12,70	4,76	0,40	DP1010-0009	DP2010-0009		1-edge tipped
	CCGT 120408	12,70	4,76	0,80	DP1010-0010	DP2010-0010		1-edge tipped

! The suitable holders are available in our online shop.

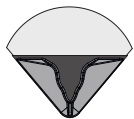
Application range:

-  PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
-  CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
-  UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

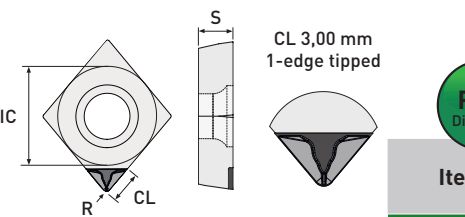
You will find further application ranges in the detailed overview on page 7.

CCGT - Chip Breaker

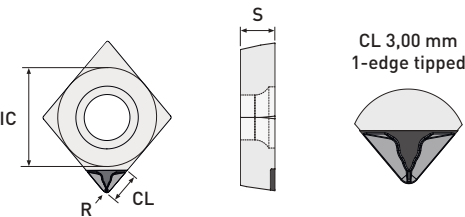
edge tipped



FN - chip breaker for finishing (SPL-F) or roughing (SPL-R)



Standard					 PCD Diamond	 PCD Diamond	 CVD-D Diamond	 CVD-D Diamond	Version
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Item No.	
					F (Finishing)	R (Roughing)	F (Finishing)	R (Roughing)	
	CCGT 060202	6,35	2,38	0,20	DP1011-0001	DP1012-0001	DP2011-0001	DP2012-0001	1-edge tipped
	CCGT 060204	6,35	2,38	0,40	DP1011-0002	DP1012-0002	DP2011-0002	DP2012-0002	1-edge tipped
	CCGT 060208	6,35	2,38	0,80	DP1011-0003	DP1012-0003	DP2011-0003	DP2012-0003	1-edge tipped
	CCGT 09T302	9,52	3,97	0,20	DP1011-0004	DP1012-0004	DP2011-0004	DP2012-0004	1-edge tipped
	CCGT 09T304	9,52	3,97	0,40	DP1011-0005	DP1012-0005	DP2011-0005	DP2012-0005	1-edge tipped
	CCGT 09T308	9,52	3,97	0,80	DP1011-0006	DP1012-0006	DP2011-0006	DP2012-0006	1-edge tipped
	CCGT 120402	12,70	4,76	0,20	DP1011-0458	DP1012-0458	DP2011-0458	DP2012-0458	1-edge tipped
	CCGT 120404	12,70	4,76	0,40	DP1011-0008	DP1012-0008	DP2011-0008	DP2012-0008	1-edge tipped
	CCGT 120408	12,70	4,76	0,80	DP1011-0009	DP1012-0009	DP2011-0009	DP2012-0009	1-edge tipped



Wiper					 PCD Diamond	 PCD Diamond	Version
	ISO Code	IC	S	R	Item No.	Item No.	
					SPL-F (Finishing)	SPL-R (Roughing)	
	CCGT 060202 R/L-W	6,35	2,38	0,20	DP1011-0011	DP1012-0011	1-edge tipped
	CCGT 060204 R/L-W	6,35	2,38	0,40	DP1011-0012	DP1012-0012	1-edge tipped
	CCGT 09T302 R/L-W	9,52	3,97	0,20	DP1011-0014	DP1012-0014	1-edge tipped
	CCGT 09T304 R/L-W	9,52	3,97	0,40	DP1011-0015	DP1012-0015	1-edge tipped
	CCGT 09T308 R/L-W	9,52	3,97	0,80	DP1011-0016	DP1012-0016	1-edge tipped
	CCGT 120402 R/L-W	12,70	4,76	0,20	DP1011-0018	DP1012-0018	1-edge tipped
	CCGT 120404 R/L-W	12,70	4,76	0,40	DP1011-0019	DP1012-0019	1-edge tipped
	CCGT 120408 R/L-W	12,70	4,76	0,80	DP1011-0020	DP1012-0020	1-edge tipped

Also available in CVD and CBN on request with chip breaker.

! The suitable holders are available in our online shop.



Special tools on request for you!
Please send inquiries to info@diamond-toolingsystems.com



All our products are also available in the online shop.
Visit us at shop.diamond-toolingsystems.com



Scan me!

Subject to technical changes.

CCGT - positive rake angle

entire edge



right version - positive rake angle

right version entire edge

Standard - right version	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	CCGT 060202 R-GS	6,35	2,38	0,20	DP1020-0055	DP2020-0055	-	entire edge
	CCGT 060204 R-GS	6,35	2,38	0,40	DP1020-0001	DP2020-0001	-	entire edge
	CCGT 060208 R-GS	6,35	2,38	0,80	DP1020-0002	DP2020-0002	-	entire edge
	CCGT 09T304 R-GS	9,52	3,97	0,40	DP1020-0056	DP2020-0056	-	entire edge
	CCGT 09T308 R-GS	9,52	3,97	0,80	DP1020-0003	DP2020-0003	-	entire edge
	CCGT 09T312 R-GS	9,52	3,97	1,20	DP1020-0004	DP2020-0004	-	entire edge
	CCGT 120404 R-GS	12,70	4,76	0,40	DP1020-0057	DP2020-0057	-	entire edge
	CCGT 120408 R-GS	12,70	4,76	0,80	DP1020-0005	DP2020-0005	-	entire edge

left version - positive rake angle

left version entire edge

Standard - left version	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	CCGT 060202 L-GS	6,35	2,38	0,20	DP1020-0058	DP2020-0058	-	entire edge
	CCGT 060204 L-GS	6,35	2,38	0,40	DP1020-0045	DP2020-0045	-	entire edge
	CCGT 060208 L-GS	6,35	2,38	0,80	DP1020-0046	DP2020-0046	-	entire edge
	CCGT 09T304 L-GS	9,52	3,97	0,40	DP1020-0059	DP2020-0059	-	entire edge
	CCGT 09T308 L-GS	9,52	3,97	0,80	DP1020-0047	DP2020-0047	-	entire edge
	CCGT 09T312 L-GS	9,52	3,97	1,20	DP1020-0048	DP2020-0048	-	entire edge
	CCGT 120404 L-GS	12,70	4,76	0,40	DP1020-0060	DP2020-0060	-	entire edge
	CCGT 120408 L-GS	12,70	4,76	0,80	DP1020-0049	DP2020-0049	-	entire edge

! The suitable holders are available in our online shop.

Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

CCGT - Chip Breaker

entire edge



right version - chip breaker for finishing (SPL-F) or roughing (SPL-R)

right version entire edge

Standard	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Item No.	Version
					F (Finishing)	R (Roughing)	F (Finishing)	R (Roughing)	
	CCGT 060202 R-GS	6,35	2,38	0,20	DP1021-0032	DP1022-0032	DP2021-0032	DP2022-0032	entire edge
	CCGT 060204 R-GS	6,35	2,38	0,40	DP1021-0001	DP1022-0001	DP2021-0001	DP2022-0001	entire edge
	CCGT 060208 R-GS	6,35	2,38	0,80	DP1021-0002	DP1022-0002	DP2021-0002	DP2022-0002	entire edge
	CCGT 09T304 R-GS	9,52	3,97	0,40	DP1021-0033	DP1022-0033	DP2021-0033	DP2022-0033	entire edge
	CCGT 09T308 R-GS	9,52	3,97	0,80	DP1021-0003	DP1022-0003	DP2021-0003	DP2022-0003	entire edge
	CCGT 120404 R-GS	12,70	4,76	0,40	DP1021-0034	DP1022-0034	DP2021-0034	DP2022-0034	entire edge
	CCGT 120408 R-GS	12,70	4,76	0,80	DP1021-0005	DP1022-0005	DP2021-0005	DP2022-0005	entire edge

Also available in CBN with chip breaker on request.

left version - chip breaker for finishing (SPL-F) or roughing (SPL-R)

left version entire edge

Standard	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Item No.	Version
					F (Finishing)	R (Roughing)	F (Finishing)	R (Roughing)	
	CCGT 060202 L-GS	6,35	2,38	0,20	DP1021-0035	DP1022-0035	DP2021-0035	DP2022-0035	entire edge
	CCGT 060204 L-GS	6,35	2,38	0,40	DP1021-0031	DP1022-0031	DP2021-0031	DP2022-0031	entire edge
	CCGT 060208 L-GS	6,35	2,38	0,80	DP1021-0027	DP1022-0027	DP2021-0027	DP2022-0027	entire edge
	CCGT 09T304 L-GS	9,52	3,97	0,40	DP1021-0036	DP1022-0036	DP2021-0036	DP2022-0036	entire edge
	CCGT 09T308 L-GS	9,52	3,97	0,80	DP1021-0028	DP1022-0028	DP2021-0028	DP2022-0028	entire edge
	CCGT 120404 L-GS	12,70	4,76	0,40	DP1021-0037	DP1022-0037	DP2021-0037	DP2022-0037	entire edge
	CCGT 120408 L-GS	12,70	4,76	0,80	DP1021-0030	DP1022-0030	DP2021-0030	DP2022-0030	entire edge

Also available in CBN with chip breaker on request.

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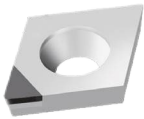


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Subject to technical changes.



FN - neutral

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	CCGW 060201	6,35	2,38	0,10		DP2010-0591	DP1110-0591	1-edge tipped
	CCGW 060202	6,35	2,38	0,20	DP1010-0021	DP2010-0021	DP1110-0021	1-edge tipped
	CCGW 060204	6,35	2,38	0,40	DP1010-0022	DP2010-0022	DP1110-0022	1-edge tipped
	CCGW 060208	6,35	2,38	0,80	DP1010-0023	DP2010-0023	DP1110-0023	1-edge tipped
	CCGW 09T302	9,52	3,97	0,20	DP1010-0024	DP2010-0024	DP1110-0024	1-edge tipped
	CCGW 09T304	9,52	3,97	0,40	DP1010-0025	DP2010-0025	DP1110-0025	1-edge tipped
	CCGW 09T308	9,52	3,97	0,80	DP1010-0026	DP2010-0026	DP1110-0026	1-edge tipped
	CCGW 09T312	9,52	3,97	1,20	DP1010-0027	DP2010-0027		1-edge tipped
	CCGW 120402	12,70	4,76	0,20	DP1010-0700	DP2010-0129		1-edge tipped
	CCGW 120404	12,70	4,76	0,40	DP1010-0028	DP2010-0028		1-edge tipped
Wiper	CCGW 120408	12,70	4,76	0,80	DP1010-0029	DP2010-0029		1-edge tipped
	CCGW 120412	12,70	4,76	1,20	DP1010-0030	DP2010-0030		1-edge tipped
	CCGW 060202 R/L-W	6,35	2,38	0,20	DP1010-0031	DP2010-0031		1-edge tipped
	CCGW 060204 R/L-W	6,35	2,38	0,40	DP1010-0032	DP2010-0032		1-edge tipped
	CCGW 09T302 R/L-W	9,52	3,97	0,20	DP1010-0034	DP2010-0034		1-edge tipped
	CCGW 09T304 R/L-W	9,52	3,97	0,40	DP1010-0035	DP2010-0035		1-edge tipped
	CCGW 09T308 R/L-W	9,52	3,97	0,80	DP1010-0036	DP2010-0036		1-edge tipped
	CCGW 120402 R/L-W	12,70	4,76	0,20	DP1010-0038	DP2010-0038		1-edge tipped
	CCGW120404 R/L-W	12,70	4,76	0,40	DP1010-0039	DP2010-0039		1-edge tipped
	CCGW 120408 R/L-W	12,70	4,76	0,80	DP1010-0040	DP2010-0040		1-edge tipped

The suitable holders are available in our online shop.

Application range:

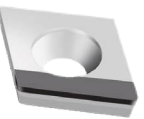
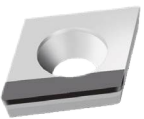
- PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



right version - neutral

right
version
entire edge

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard - right version	CCGW 060202 R-GS	6,35	2,38	0,20	DP1020-0061	DP2020-0061	-	entire edge
	CCGW 060204 R-GS	6,35	2,38	0,40	DP1020-0006	DP2020-0006	-	entire edge
	CCGW 060208 R-GS	6,35	2,38	0,80	DP1020-0007	DP2020-0007	-	entire edge
	CCGW 09T304 R-GS	9,52	3,97	0,40	DP1020-0062	DP2020-0062	-	entire edge
	CCGW 09T308 R-GS	9,52	3,97	0,80	DP1020-0008	DP2020-0008	-	entire edge
	CCGW 09T312 R-GS	9,52	3,97	1,20	DP1020-0009	DP2020-0009	-	entire edge
	CCGW 120404 R-GS	12,70	4,76	0,40	DP1020-0063	DP2020-0063	-	entire edge
	CCGW 120408 R-GS	12,70	4,76	0,80	DP1020-0010	DP2020-0010	-	entire edge

left version - neutral

left
version
entire edge

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard - left version	CCGW 060202 L-GS	6,35	2,38	0,20	DP1020-0064	DP2020-0064	-	entire edge
	CCGW 060204 L-GS	6,35	2,38	0,40	DP1020-0050	DP2020-0050	-	entire edge
	CCGW 060208 L-GS	6,35	2,38	0,80	DP1020-0051	DP2020-0051	-	entire edge
	CCGW 09T304 L-GS	9,52	3,97	0,40	DP1020-0065	DP2020-0065	-	entire edge
	CCGW 09T308 L-GS	9,52	3,97	0,80	DP1020-0052	DP2020-0052	-	entire edge
	CCGW 09T312 L-GS	9,52	3,97	1,20	DP1020-0053	DP2020-0053	-	entire edge
	CCGW 120404 L-GS	12,70	4,76	0,40	DP1020-0066	DP2020-0066	-	entire edge
	CCGW 120408 L-GS	12,70	4,76	0,80	DP1020-0054	DP2020-0054	-	entire edge

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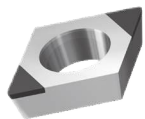
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Subject to technical changes.

CDGW
FullFace | edge tipped



FN - neutral

CL 1,60 mm
2-edge tipped

PCD
Diamond

CVD-D
Diamond

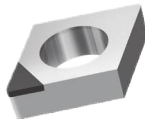
Ultra
Diamond

on request

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
MiniTools	CDGW 040101	3,97	1,00	0,10		DP2010-0511	DP1110-1480	2-edge tipped
	CDGW 040102	3,97	1,00	0,20		DP2010-0512	DP1110-1482	2-edge tipped
	CDGW 040104	3,97	1,00	0,40		DP2010-0513	DP1110-1484	2-edge tipped

! You will find the matching MiniTool holder in our boring bar catalog [03] on page 20.

CNGA
edge tipped



FN - neutral

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	CNGA 120404	12,70	4,76	0,40		DP2010-0173		1-edge tipped
	CNGA 120408	12,70	4,76	0,80		DP2010-0174		1-edge tipped
	CNGA 120412	12,70	4,76	1,20		DP2010-0175		1-edge tipped

! The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



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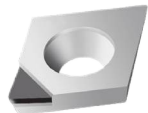


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Subject to technical changes.

CPGT - positive rake angle

edge tipped



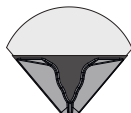
FN - positive rake angle

CL 3,00 mm
1-edge tipped

Standard				PCD Diamond	CVD-D Diamond	Ultra Diamond	on request
	Item No.	Item No.	Item No.				
	ISO Code	IC	S	R			
	Version						
	CPGT 060202	6,35	2,38	0,20	DP1010-0201	DP2010-0201	1-edge tipped
	CPGT 060204	6,35	2,38	0,40	DP1010-0202	DP2010-0202	1-edge tipped
	CPGT 060208	6,35	2,38	0,80	DP1010-0203	DP2010-0203	1-edge tipped

CPGT - Chip Breaker

edge tipped



FN - neutral - chip breaker for finishing (SPL-F) or roughing (SPL-R)

CL 3,00 mm
1-edge tipped

Standard						Version	
	Item No.			Item No.			
	ISO Code	IC	S	R	SPL-F (Finishing)	SPL-R (Roughing)	
	Version						
	CPGT 060202	6,35	2,38	0,20	DP1011-0251	DP1012-0251	1-edge tipped
	CPGT 060204	6,35	2,38	0,40	DP1011-0252	DP1012-0252	1-edge tipped
	CPGT 060208	6,35	2,38	0,80	DP1011-0253	DP1012-0253	1-edge tipped
	CPGT 09T302	9,52	3,97	0,20	DP1011-0254	DP1012-0254	1-edge tipped
	CPGT 09T304	9,52	3,97	0,40	DP1011-0255	DP1012-0255	1-edge tipped
	CPGT 09T308	9,52	3,97	0,80	DP1011-0256	DP1012-0256	1-edge tipped
	CPGT 120404	12,70	4,76	0,40	DP1011-0257	DP1012-0257	1-edge tipped
	CPGT 120408	12,70	4,76	0,80	DP1011-0258	DP1012-0258	1-edge tipped

Also available in CVD and CBN on request with chip breaker.

! The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

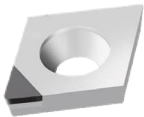
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Subject to technical changes.



FN - neutral

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

Standard	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	CPGW 060201	6,35	2,38	0,10	on request	DP2010-0595	on request	1-edge tipped
	CPGW 060202	6,35	2,38	0,20	DP1010-0251	DP2010-0251		1-edge tipped
	CPGW 060204	6,35	2,38	0,40	DP1010-0252	DP2010-0252		1-edge tipped
	CPGW 060208	6,35	2,38	0,80	DP1010-0253	DP2010-0253		1-edge tipped
	CPGW 09T301	9,52	3,97	0,10	on request	DP2010-0596		1-edge tipped
	CPGW 09T302	9,52	3,97	0,20	DP1010-0254	DP2010-0254		1-edge tipped
	CPGW 09T304	9,52	3,97	0,40	DP1010-0255	DP2010-0255		1-edge tipped
	CPGW 09T308	9,52	3,97	0,80	DP1010-0256	DP2010-0256		1-edge tipped
	CPGW 120404	12,70	4,76	0,40	DP1010-0257	DP2010-0257		1-edge tipped
	CPGW 120408	12,70	4,76	0,80	DP1010-0258	DP2010-0258		1-edge tipped
	CPGW 120412	12,70	4,76	1,20	DP1010-0259	DP2010-0259		1-edge tipped

! The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

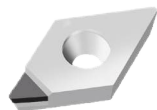
UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

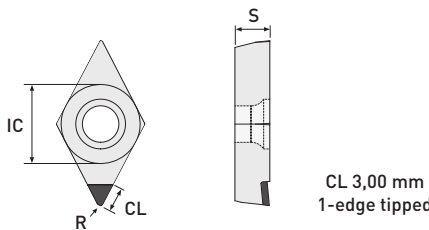
You will find further application ranges in the detailed overview on page 7.

DCGT - positive rake angle

edge tipped



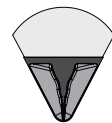
FN - positive rake angle



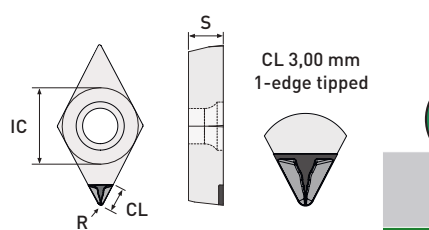
Standard	ISO Code	IC	S	R	PCD Diamond Item No.	CVD-D Diamond Item No.	Ultra Diamond Item No.	on request
	DCGT 0702005	6,35	2,38	0,05	DP1010-0600	DP2010-0600		1-edge tipped
	DCGT 070201	6,35	2,38	0,10	DP1010-0601	DP2010-0601		1-edge tipped
	DCGT 070202	6,35	2,38	0,20	DP1010-0042	DP2010-0042		1-edge tipped
	DCGT 070204	6,35	2,38	0,40	DP1010-0043	DP2010-0043		1-edge tipped
	DCGT 070208	6,35	2,38	0,80	DP1010-0044	DP2010-0044		1-edge tipped
	DCGT 11T301	9,52	3,97	0,10	DP1010-0602	DP2010-0602		1-edge tipped
	DCGT 11T302	9,52	3,97	0,20	DP1010-0045	DP2010-0045		1-edge tipped
	DCGT 11T304	9,52	3,97	0,40	DP1010-0046	DP2010-0046		1-edge tipped
	DCGT 11T308	9,52	3,97	0,80	DP1010-0047	DP2010-0047		1-edge tipped
	DCGT 11T312	9,52	3,97	1,20	DP1010-0048	DP2010-0048		1-edge tipped

DCGT - Chip Breaker

edge tipped



FN - neutral - chip breaker for finishing (SPL-F) or roughing (SPL-R)



Standard	ISO Code	IC	S	R	PCD Diamond Item No.	PCD Diamond Item No.	CVD-D Diamond Item No.	CVD-D Diamond Item No.	Version
	DCGT 0702005	6,35	2,38	0,05	DP1011-0600	-	DP2011-0600	-	1-edge tipped
	DCGT 070201	6,35	2,38	0,10	DP1011-0601	-	DP2011-0601	-	1-edge tipped
	DCGT 070202	6,35	2,38	0,20	DP1011-0022	DP1012-0022	DP2011-0022	DP2012-0022	1-edge tipped
	DCGT 070204	6,35	2,38	0,40	DP1011-0023	DP1012-0023	DP2011-0023	DP2012-0023	1-edge tipped
	DCGT 070208	6,35	2,38	0,80	DP1011-0024	DP1012-0024	DP2011-0024	DP2012-0024	1-edge tipped
	DCGT 11T302	9,52	3,97	0,20	DP1011-0025	DP1012-0025	DP2011-0025	DP2012-0025	1-edge tipped
	DCGT 11T304	9,52	3,97	0,40	DP1011-0026	DP1012-0026	DP2011-0026	DP2012-0026	1-edge tipped
	DCGT 11T308	9,52	3,97	0,80	DP1011-0027	DP1012-0027	DP2011-0027	DP2012-0027	1-edge tipped
	DCGT 11T312	9,52	3,97	1,20	DP1011-0028	DP1012-0028	DP2011-0028	DP2012-0028	1-edge tipped

Also available in CBN with chip breaker on request.

The suitable holders are available in our online shop.

Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

The suitable holders are available in our online shop.



Special tools on request for you!
Please send inquiries to info@diamond-toolingsystems.com

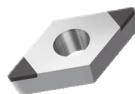


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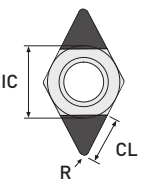


Scan me!

Subject to technical changes.



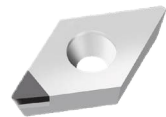
FN - neutral

				CL 2,00 mm 2-edge tipped				 on request	
ISO Code				IC	S	R		Item No.	Version
MiniTools	DCGW 04T001	3,10	1,20	0,10				DP2010-0521	2-edge tipped
	DCGW 04T002	3,10	1,20	0,20				DP2010-0522	2-edge tipped
	DCGW 04T004	3,10	1,20	0,40				DP2010-0523	2-edge tipped

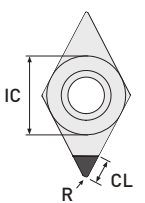
! You will find the matching MiniTool holder in our boring bar catalog [03] on page 22.

Application range:	
PCD	Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
CVD-D	Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
UltraDia.	Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



FN - neutral

				CL 3,00 mm 1-edge tipped				 on request	
ISO Code				IC	S	R		Item No.	Version
Standard	DCGW 070201	6,35	2,38	0,10				DP1010-0603	1-edge tipped
	DCGW 070202	6,35	2,38	0,20				DP2010-0056	1-edge tipped
	DCGW 070204	6,35	2,38	0,40				DP2010-0057	1-edge tipped
	DCGW 070208	6,35	2,38	0,80				DP2010-0058	1-edge tipped
	DCGW 11T301	9,52	3,97	0,10				DP2010-0604	1-edge tipped
	DCGW 11T302	9,52	3,97	0,20				DP2010-0059	1-edge tipped
	DCGW 11T304	9,52	3,97	0,40				DP2010-0060	1-edge tipped
	DCGW 11T308	9,52	3,97	0,80				DP2010-0061	1-edge tipped
	DCGW 11T312	9,52	3,97	1,20				DP2010-0062	1-edge tipped
	DCGW 11T320	9,52	3,97	2,00				DP1110-0133	1-edge tipped

FR (right) / FL (left) - Wiper for face turning

Wiper - face turning	DCGW 070202 FR/FL W	6,35	2,38	0,20	DP1010-0063	DP2010-0063		1-edge tipped
	DCGW 070204 FR/FL W	6,35	2,38	0,40	DP1010-0064	DP2010-0064		1-edge tipped
	DCGW 070208 FR/FL W	6,35	2,38	0,80	DP1010-0128	DP2010-0130		1-edge tipped
	DCGW 11T302 FR/FL W	9,52	3,97	0,20	DP1010-0065	DP2010-0065		1-edge tipped
	DCGW 11T304 FR/FL W	9,52	3,97	0,40	DP1010-0066	DP2010-0066		1-edge tipped
	DCGW 11T308 FR/FL W	9,52	3,97	0,80	DP1010-0129	DP2010-0131		1-edge tipped

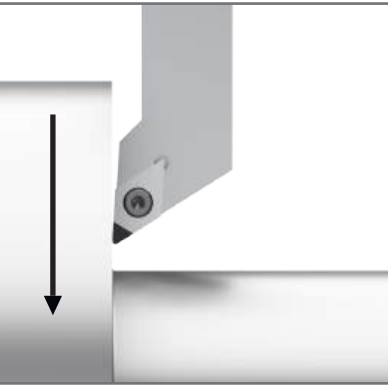
! The suitable holders are available in our online shop.





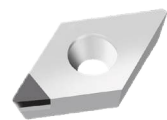
Scan me!

Graphic shows face turning



DCGW - Wiper - FR/FL

for longitudinal turning

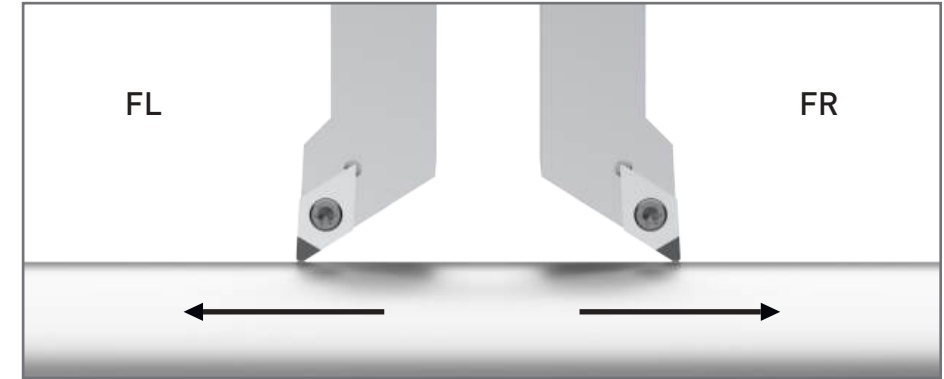


FR (right) and FL (left) - Wiper - longitudinal turning

right version
CL 3,00 mm
1-edge tipped

Wiper - longitudinal turning	ISO Code	IC	S	R	Item No.	Version
	DCGW 070202 FR-W	6,35	2,38	0,20	DP1019-0102	1-edge tipped
	DCGW 070202 FL-W	6,35	2,38	0,20	DP1019-0103	1-edge tipped
	DCGW 070204 FR-W	6,35	2,38	0,40	DP1019-0104	1-edge tipped
	DCGW 070204 FL-W	6,35	2,38	0,40	DP1019-0105	1-edge tipped
	DCGW 070208 FR-W	6,35	2,38	0,80	DP1019-0106	1-edge tipped
	DCGW 070208 FL-W	6,35	2,38	0,80	DP1019-0107	1-edge tipped
	DCGW 11T302 FR-W	9,52	3,97	0,20	DP1019-0112	1-edge tipped
	DCGW 11T302 FL-W	9,52	3,97	0,20	DP1019-0113	1-edge tipped
	DCGW 11T304 FR-W	9,52	3,97	0,40	DP1019-0114	1-edge tipped
	DCGW 11T304 FL-W	9,52	3,97	0,40	DP1019-0115	1-edge tipped
	DCGW 11T308 FR-W	9,52	3,97	0,80	DP1019-0116	1-edge tipped
	DCGW 11T308 FL-W	9,52	3,97	0,80	DP1019-0117	1-edge tipped

Graphic shows longitudinal turning



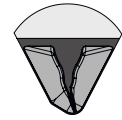
! The suitable holders are available in our online shop.

Application range:	
PCD	Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
CVD-D	Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
UltraDia.	Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

DCGT - Wiper with Chip Breaker - FR/FL

for longitudinal turning



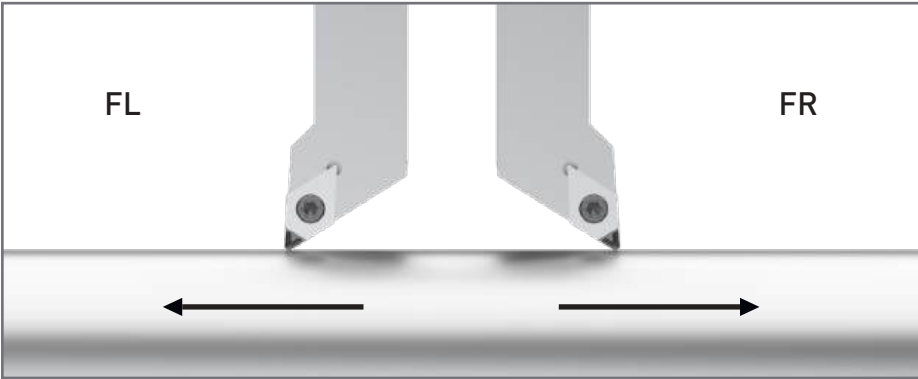
FR (right) and FL (left) - Wiper - longitudinal turning

right version
CL 3,00 mm
1-edge tipped

Wiper - longitudinal turning	ISO Code	IC	S	R	Item No.	Item No.	Version
	DCGT 070202 FR-W	6,35	2,38	0,20	DP1019-0122	DP1019-0142	1-edge tipped
	DCGT 070202 FL-W	6,35	2,38	0,20	DP1019-0123	DP1019-0143	1-edge tipped
	DCGT 070204 FR-W	6,35	2,38	0,40	DP1019-0124	DP1019-0144	1-edge tipped
	DCGT 070204 FL-W	6,35	2,38	0,40	DP1019-0125	DP1019-0145	1-edge tipped
	DCGT 070208 FR-W	6,35	2,38	0,80	DP1019-0126	DP1019-0146	1-edge tipped
	DCGT 070208 FL-W	6,35	2,38	0,80	DP1019-0127	DP1019-0147	1-edge tipped
	DCGT 11T302 FR-W	9,52	3,97	0,20	DP1019-0132	DP1019-0152	1-edge tipped
	DCGT 11T302 FL-W	9,52	3,97	0,20	DP1019-0133	DP1019-0153	1-edge tipped
	DCGT 11T304 FR-W	9,52	3,97	0,40	DP1019-0134	DP1019-0154	1-edge tipped
	DCGT 11T304 FL-W	9,52	3,97	0,40	DP1019-0135	DP1019-0155	1-edge tipped
	DCGT 11T308 FR-W	9,52	3,97	0,80	DP1019-0136	DP1019-0156	1-edge tipped
	DCGT 11T308 FL-W	9,52	3,97	0,80	DP1019-0137	DP1019-0157	1-edge tipped

Also available in CVD and CBN on request with chip breaker.

Graphic shows longitudinal turning



! The suitable holders are available in our online shop.

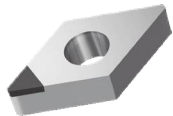
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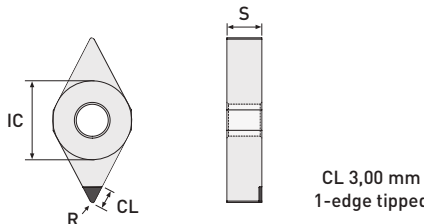
Scan me!

Subject to technical changes.

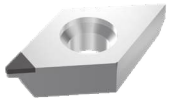
DNGA
edge tipped



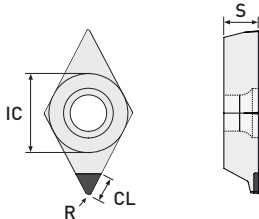
FN - neutral

											 on request	
ISO Code		IC	S	R	Item No.	Item No.	Item No.	Version				
Standard	DNGA 150602	12,70	6,35	0,20		DP2010-0282		1-edge tipped				
	DNGA 150604	12,70	6,35	0,40		DP2010-0283		1-edge tipped				
	DNGA 150608	12,70	6,35	0,80		DP2010-0284		1-edge tipped				

DXGW
edge tipped

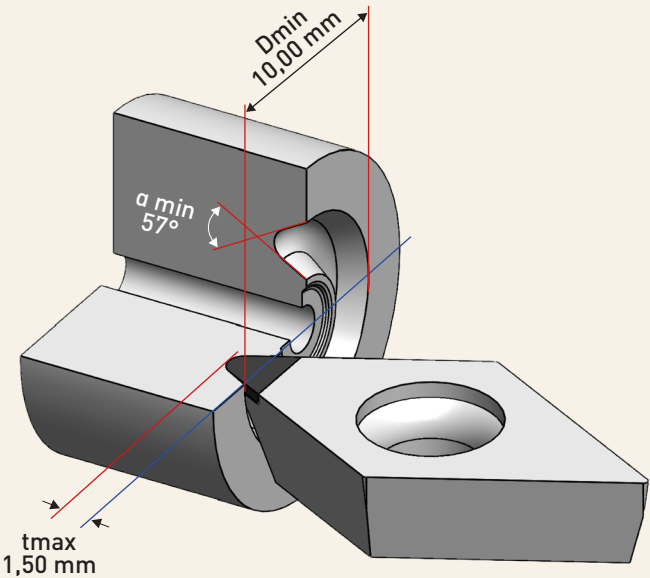


FN - neutral

 CL 3,00 mm 1-edge tipped 					PCD Diamond		CVD-D Diamond		Ultra Diamond		 on request	
ISO Code		IC	S	R	Item No.		Item No.		Item No.		Version	
DTS - Specials	DXGW 11T301	9,52	3,97	0,10			DP2010-0300				1-edge tipped	
	DXGW 11T302	9,52	3,97	0,20			DP2010-0301				1-edge tipped	
	DXGW 11T304	9,52	3,97	0,40			DP2010-0302				1-edge tipped	
	DXGW 11T308	9,52	3,97	0,80			DP2010-0303				1-edge tipped	

DTS-Specials
Face / Axial machining:

Our DXGW cutting insert is designed for face and axial machining of contours from a minimum outside diameter of 10mm, using the maximum groove depth of 1.5mm.



It is tipped with CVD-D as standard, but is of course also available with PCD or Ultra-Diamond on request.

! The suitable holders are available in our online shop.

Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

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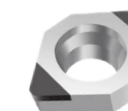


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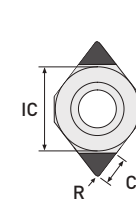


Scan me!

Subject to technical changes.



FN - neutral



CL 2,00 mm
2-edge tipped



 on request

MiniTools	R				Item No.	Item No.	Item No.	
	ISO Code	IC	S	R				Version
	EPGW 050201	5,56	2,38	0,10		DP2010-0531	DP1110-1400	2-edge tipped
	EPGW 050202	5,56	2,38	0,20		DP2010-0532	DP1110-1402	2-edge tipped
	EPGW 050204	5,56	2,38	0,40		DP2010-0533	DP1110-1404	2-edge tipped

! You will find the matching MiniTool holder in our boring bar catalog (03) on page 24.



Special tools on request for you!
Please send inquiries to info@diamond-toolingsystems.com



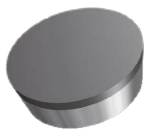
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Scan me!

RBGN

FullFace



FN - FullFace

IC

S

FullFace

PCD
Diamond

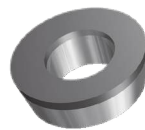
CVD-D
Diamond

Ultra
Diamond

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	RBGN 0602M0 FF	6,00	2,38	-	DP1030-0090	DP2030-0090	-	FullFace
	RBGN 0803M0 FF	8,00	3,18	-	DP1030-0092	DP2030-0092	-	FullFace
	RBGN 1003M0 FF	10,00	3,18	-	DP1030-0094	DP2030-0094	-	FullFace
	RBGN 1203M0 FF	12,00	3,18	-	DP1030-0096	DP2030-0096	-	FullFace

RCGW

FullFace



FN - FullFace

IC

S

FullFace

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	RCGW 0602M0 FF	6,00	2,38	-	DP1030-0001	DP2030-0001	-	FullFace
	RCGW 0803M0 FF	8,00	3,18	-	DP1030-0002	DP2030-0002	-	FullFace
	RCGW 1003M0 FF	10,00	3,18	-	DP1030-0003	DP2030-0003	-	FullFace
	RCGW 10T3M0 FF	10,00	3,97	-	DP1030-0004	DP2030-0004	-	FullFace
	RCGW 1204M0 FF	12,00	4,76	-	DP1030-0005	DP2030-0005	-	FullFace

! You will find the matching MiniTool holders for plate size 06 in our precision boring tools catalog (03) on page 25.

! The suitable holders are available in our online shop.

Application range:

PCD

CVD-D

UltraDia.

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



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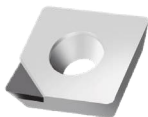


Scan me!

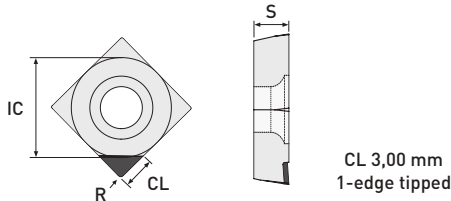
Subject to technical changes.

SCGT - positive rake angle

edge tipped



FN - positive rake angle



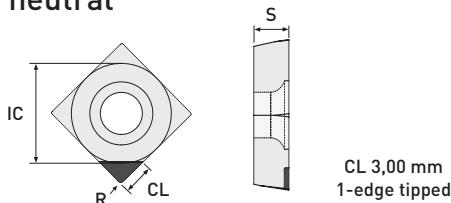
Standard					PCD Diamond	CVD-D Diamond	Ultra Diamond	on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	SCGT 09T302	9,52	3,97	0,20	DP1010-0067	DP2010-0067	on request	1-edge tipped
	SCGT 09T304	9,52	3,97	0,40	DP1010-0068	DP2010-0068		1-edge tipped
	SCGT 09T308	9,52	3,97	0,80	DP1010-0069	DP2010-0069		1-edge tipped
	SCGT 09T312	9,52	3,97	1,20	DP1010-0070	DP2010-0070		1-edge tipped
	SCGT 120404	12,70	4,76	0,40	DP1010-0130	DP2010-0132		1-edge tipped
	SCGT 120408	12,70	4,76	0,80	DP1010-0071	DP2010-0071		1-edge tipped
	SCGT 120412	12,70	4,76	1,20	DP1010-0072	DP2010-0072		1-edge tipped

SCGW

edge tipped



FN - neutral



Standard					PCD Diamond	CVD-D Diamond	Ultra Diamond	on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	SCGW 09T302	9,52	3,97	0,20	DP1010-0073	DP2010-0073	on request	1-edge tipped
	SCGW 09T304	9,52	3,97	0,40	DP1010-0074	DP2010-0074		1-edge tipped
	SCGW 09T308	9,52	3,97	0,80	DP1010-0075	DP2010-0075		1-edge tipped
	SCGW 09T312	9,52	3,97	1,20	DP1010-0076	DP2010-0076		1-edge tipped
	SCGW 120404	12,70	4,76	0,40	DP1010-0077	DP2010-0077		1-edge tipped
	SCGW 120408	12,70	4,76	0,80	DP1010-0078	DP2010-0078		1-edge tipped
	SCGW 120412	12,70	4,76	1,20	DP1010-0079	DP2010-0079		1-edge tipped

! The suitable holders are available in our online shop.

Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

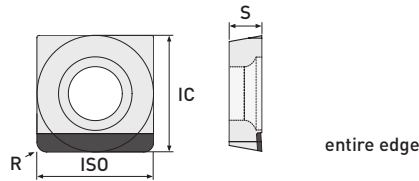
You will find further application ranges in the detailed overview on page 7.

SCGT - positive rake angle

entire edge



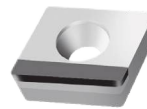
FN - positive rake angle



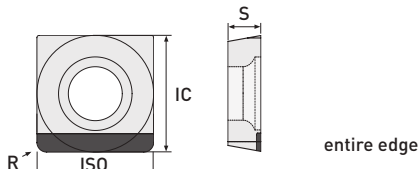
Standard					PCD Diamond	CVD-D Diamond	Ultra Diamond	
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	SCGT 09T304 GS	9,52	3,97	0,40	DP1020-0067	DP2020-0067	-	entire edge
	SCGT 09T308 GS	9,52	3,97	0,80	DP1020-0011	DP2020-0011	-	entire edge
	SCGT 09T312 GS	9,52	3,97	1,20	DP1020-0012	DP2020-0012	-	entire edge
	SCGT 120404 GS	12,70	4,76	0,40	DP1020-0068	DP2020-0068	-	entire edge
	SCGT 120408 GS	12,70	4,76	0,80	DP1020-0013	DP2020-0013	-	entire edge
	SCGT 120412 GS	12,70	4,76	1,20	DP1020-0014	DP2020-0014	-	entire edge

SCGW

entire edge



FN - neutral



Standard					PCD Diamond	CVD-D Diamond	Ultra Diamond	
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	SCGW 09T304 GS	9,52	3,97	0,40	DP1020-0015	DP2020-0015	-	entire edge
	SCGW 09T308 GS	9,52	3,97	0,80	DP1020-0016	DP2020-0016	-	entire edge
	SCGW 09T312 GS	9,52	3,97	1,20	DP1020-0017	DP2020-0017	-	entire edge
	SCGW 120404 GS	12,70	4,76	0,40	DP1020-0018	DP2020-0018	-	entire edge
	SCGW 120408 GS	12,70	4,76	0,80	DP1020-0019	DP2020-0019	-	entire edge
	SCGW 120412 GS	12,70	4,76	1,20	DP1020-0020	DP2020-0020	-	entire edge

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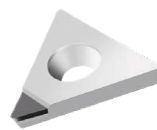


Scan me!

Subject to technical changes.

TCGT - positive rake angle

edge tipped



FN - positive rake angle

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

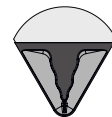
Ultra
Diamond

on request

ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
TCGT 090202	5,56	2,38	0,20	DP1010-0080	DP2010-0080		1-edge tipped
TCGT 090204	5,56	2,38	0,40	DP1010-0081	DP2010-0081		1-edge tipped
TCGT 090208	5,56	2,38	0,80	DP1010-0082	DP2010-0082		1-edge tipped
TCGT 110202	6,35	2,38	0,20	DP1010-0083	DP2010-0083		1-edge tipped
TCGT 110204	6,35	2,38	0,40	DP1010-0084	DP2010-0084		1-edge tipped
TCGT 110208	6,35	2,38	0,80	DP1010-0085	DP2010-0085		1-edge tipped
TCGT 16T302	9,52	3,97	0,20	DP1010-0086	DP2010-0086		1-edge tipped
TCGT 16T304	9,52	3,97	0,40	DP1010-0087	DP2010-0087		1-edge tipped
TCGT 16T308	9,52	3,97	0,80	DP1010-0088	DP2010-0088		1-edge tipped
TCGT 16T312	9,52	3,97	1,20	DP1010-0089	DP2010-0089		1-edge tipped

TCGT - Chip Breaker

edge tipped



FN - neutral - chip breaker for finishing (SPL-F) or roughing (SPL-R)

CL 3,00 mm
1-edge tipped

PCD
Diamond

PCD
Diamond

ISO Code	IC	S	R	Item No.	Item No.	Version
TCGT 090202	5,56	2,38	0,20	SPL-F (Finishing)	SPL-R (Roughing)	1-edge tipped
TCGT 090204	5,56	2,38	0,40	DP1011-0041	DP1012-0041	1-edge tipped
TCGT 090208	5,56	2,38	0,80	DP1011-0042	DP1012-0042	1-edge tipped
TCGT 110202	6,35	2,38	0,20	DP1011-0043	DP1012-0043	1-edge tipped
TCGT 110204	6,35	2,38	0,40	DP1011-0044	DP1012-0044	1-edge tipped
TCGT 110208	6,35	2,38	0,80	DP1011-0045	DP1012-0045	1-edge tipped
TCGT 16T302	9,52	3,97	0,20	DP1011-0046	DP1012-0046	1-edge tipped
TCGT 16T304	9,52	3,97	0,40	DP1011-0047	DP1012-0047	1-edge tipped
TCGT 16T308	9,52	3,97	0,80	DP1011-0048	DP1012-0048	1-edge tipped

Also available in CVD and CBN on request with chip breaker.

The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

The suitable holders are available in our online shop.

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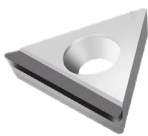
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Subject to technical changes.

TCGT - positive rake angle

entire edge



FN - positive rake angle

entire edge

PCD Diamond

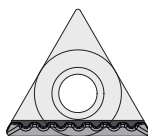
CVD-D Diamond

Ultra Diamond

ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
TCGT 090202 GS	5,56	2,38	0,20	DP1020-0069	DP2020-0069	-	entire edge
TCGT 090204 GS	5,56	2,38	0,40	DP1020-0021	DP2020-0021	-	entire edge
TCGT 090208 GS	5,56	2,38	0,80	DP1020-0022	DP2020-0022	-	entire edge
TCGT 110202 GS	6,35	2,38	0,20	DP1020-0070	DP2020-0070	-	entire edge
TCGT 110204 GS	6,35	2,38	0,40	DP1020-0023	DP2020-0023	-	entire edge
TCGT 110208 GS	6,35	2,38	0,80	DP1020-0024	DP2020-0024	-	entire edge
TCGT 110212 GS	6,35	2,38	1,20	DP1020-0025	DP2020-0025	-	entire edge
TCGT 16T302 GS	9,52	3,97	0,20	DP1020-0071	DP2020-0071	-	entire edge
TCGT 16T304 GS	9,52	3,97	0,40	DP1020-0027	DP2020-0027	-	entire edge
TCGT 16T308 GS	9,52	3,97	0,80	DP1020-0028	DP2020-0028	-	entire edge
TCGT 16T312 GS	9,52	3,97	1,20	DP1020-0029	DP2020-0029	-	entire edge

TCGT - Chip Breaker

entire edge



FN - neutral - chip breaker for finishing (SPL-F) or roughing (SPL-R)

entire edge

PCD Diamond

PCD Diamond

ISO Code	IC	S	R	Item No.	Item No.	Version
TCGT 090202 GS	5,56	2,38	0,20	SPL-F (Finishing)	SPL-R (Roughing)	entire edge
TCGT 090204 GS	5,56	2,38	0,40	DP1021-0012	DP1022-0012	entire edge
TCGT 090208 GS	5,56	2,38	0,80	DP1021-0013	DP1022-0013	entire edge
TCGT 110202 GS	6,35	2,38	0,20	DP1021-0039	DP1022-0039	entire edge
TCGT 110204 GS	6,35	2,38	0,40	DP1021-0014	DP1022-0014	entire edge
TCGT 110208 GS	6,35	2,38	0,80	DP1021-0015	DP1022-0015	entire edge
TCGT 16T302 GS	9,52	3,97	0,20	DP1021-0040	DP1022-0040	entire edge
TCGT 16T304 GS	9,52	3,97	0,40	DP1021-0018	DP1022-0018	entire edge
TCGT 16T308 GS	9,52	3,97	0,80	DP1021-0019	DP1022-0019	entire edge

Also available in CVD and CBN on request with chip breaker.

The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

The suitable holders are available in our online shop.

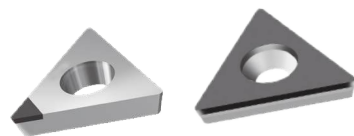
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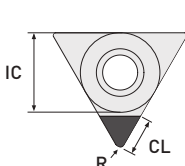
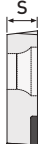
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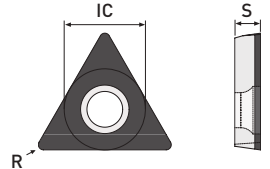
TCGW
edge tipped | FullFace



FN - neutral

Standard					CL 3,00 mm 1-edge tipped						 on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version			
	TCGW 090201	5,56	2,38	0,10	DP1010-0613	DP2010-0613		1-edge tipped			
	TCGW 090202	5,56	2,38	0,20	DP1010-0090	DP2010-0090		1-edge tipped			
	TCGW 090204	5,56	2,38	0,40	DP1010-0091	DP2010-0091		1-edge tipped			
	TCGW 090208	5,56	2,38	0,80	DP1010-0092	DP2010-0092		1-edge tipped			
	TCGW 110201	6,35	2,38	0,10	DP1010-0614	DP2010-0614		1-edge tipped			
	TCGW 110202	6,35	2,38	0,20	DP1010-0093	DP2010-0093		1-edge tipped			
	TCGW 110204	6,35	2,38	0,40	DP1010-0094	DP2010-0094		1-edge tipped			
	TCGW 110208	6,35	2,38	0,80	DP1010-0095	DP2010-0095		1-edge tipped			
	TCGW 16T302	9,52	3,97	0,20	DP1010-0096	DP2010-0096		1-edge tipped			
	TCGW 16T304	9,52	3,97	0,40	DP1010-0097	DP2010-0097		1-edge tipped			
	TCGW 16T308	9,52	3,97	0,80	DP1010-0098	DP2010-0098		1-edge tipped			
TCGW 16T312	9,52	3,97	1,20	DP1010-0099	DP2010-0099	1-edge tipped					

FN - FullFace

				FullFace			  	
ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version	
Standard	TCGW 090202 FF	5,56	2,38	0,20	DP1030-0030	DP2030-0030	-	FullFace
	TCGW 090204 FF	5,56	2,38	0,40	DP1030-0031	DP2030-0031	-	FullFace
	TCGW 090208 FF	5,56	2,38	0,80	DP1030-0032	DP2030-0032	-	FullFace
	TCGW 110202 FF	6,35	2,38	0,20	DP1030-0010	DP2030-0010	-	FullFace
	TCGW 110204 FF	6,35	2,38	0,40	DP1030-0011	DP2030-0011	-	FullFace
	TCGW 110208 FF	6,35	2,38	0,80	DP1030-0012	DP2030-0012	-	FullFace

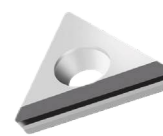
! The suitable holders are available in our online shop.

Application range:

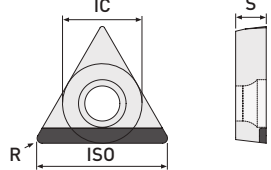
-  PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
-  CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
-  UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

TCGW
entire edge



FN - neutral

				entire edge			  	
ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version	
Standard	TCGW 090202 GS	5,56	2,38	0,20	DP1020-0072	DP2020-0072	-	entire edge
	TCGW 090204 GS	5,56	2,38	0,40	DP1020-0030	DP2020-0030	-	entire edge
	TCGW 090208 GS	5,56	2,38	0,80	DP1020-0031	DP2020-0031	-	entire edge
	TCGW 110202 GS	6,35	2,38	0,20	DP1020-0073	DP2020-0073	-	entire edge
	TCGW 110204 GS	6,35	2,38	0,40	DP1020-0032	DP2020-0032	-	entire edge
	TCGW 110208 GS	6,35	2,38	0,80	DP1020-0033	DP2020-0033	-	entire edge
	TCGW 110212 GS	6,35	2,38	1,20	DP1020-0034	DP2020-0034	-	entire edge
	TCGW 16T302 GS	9,52	3,97	0,20	DP1020-0074	DP2020-0074	-	entire edge
	TCGW 16T304 GS	9,52	3,97	0,40	DP1020-0036	DP2020-0036	-	entire edge
	TCGW 16T308 GS	9,52	3,97	0,80	DP1020-0037	DP2020-0037	-	entire edge
	TCGW 16T312 GS	9,52	3,97	1,20	DP1020-0038	DP2020-0038	-	entire edge

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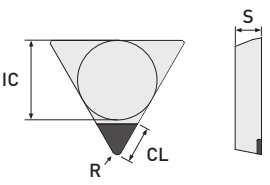
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Subject to technical changes.

TPGN
edge tipped



FN - neutral



CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

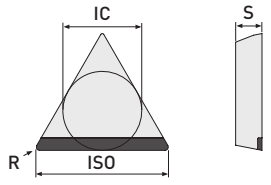
on request

ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
TPGN 090204	5,56	2,38	0,40	DP1010-0100	DP2010-0100		1-edge tipped
TPGN 090208	5,56	2,38	0,80	DP1010-0101	DP2010-0101		1-edge tipped
TPGN 110204	6,35	2,38	0,40	DP1010-0102	DP2010-0102		1-edge tipped
TPGN 110208	6,35	2,38	0,80	DP1010-0103	DP2010-0103		1-edge tipped
TPGN 110302	6,35	3,18	0,20	DP1010-0104	DP2010-0104		1-edge tipped
TPGN 110304	6,35	3,18	0,40	DP1010-0105	DP2010-0105		1-edge tipped
TPGN 110308	6,35	3,18	0,80	DP1010-0106	DP2010-0106		1-edge tipped
TPGN 160304	9,52	3,18	0,40	DP1010-0107	DP2010-0107		1-edge tipped
TPGN 160308	9,52	3,18	0,80	DP1010-0108	DP2010-0108		1-edge tipped
TPGN 160312	9,52	3,18	1,20	DP1010-0109	DP2010-0109		1-edge tipped

TPGN
entire edge



FN - neutral



entire edge

PCD
Diamond

CVD-D
Diamond

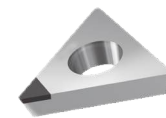
Ultra
Diamond

on request

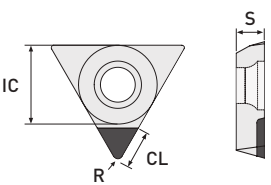
ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
TPGN 110304 GS	6,35	3,18	0,40	DP1020-0039	DP2020-0039	-	entire edge
TPGN 110308 GS	6,35	3,18	0,80	DP1020-0040	DP2020-0040	-	entire edge
TPGN 110312 GS	6,35	3,18	1,20	DP1010-0041	DP2010-0041	-	entire edge
TPGN 160304 GS	9,52	3,18	0,40	DP1020-0042	DP2020-0042	-	entire edge
TPGN 160308 GS	9,52	3,18	0,80	DP1020-0043	DP2020-0043	-	entire edge
TPGN 160312 GS	9,52	3,18	1,20	DP1020-0044	DP2020-0044	-	entire edge

The suitable holders are available in our online shop.

TPGW
edge tipped



FN - neutral



CL 2,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
TPGW 06T101	3,97	1,98	0,10		DP2010-0671	DP1110-1410	1-edge tipped
TPGW 06T102	3,97	1,98	0,20		DP2010-0672	DP1110-1412	1-edge tipped
TPGW 06T104	3,97	1,98	0,40		DP2010-0673	DP1110-1414	1-edge tipped

You will find the matching MiniTool holder in our boring bar catalog [03] on page 26.

Application range:

- PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



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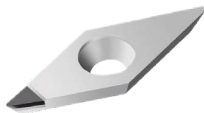


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Subject to technical changes.

VBGT - positive rake angle

edge tipped



FN - positive rake angle

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	VBGT 110201	6,35	2,38	0,10	DP1010-0605	DP2010-0605		1-edge tipped
	VBGT 110202	6,35	2,38	0,20	DP1010-0401	DP2010-0401		1-edge tipped
	VBGT 110204	6,35	2,38	0,40	DP1010-0402	DP2010-0402		1-edge tipped
	VBGT 110208	6,35	2,38	0,80	DP1010-0403	DP2010-0403		1-edge tipped
	VBGT 160401	9,52	4,76	0,10	DP1010-0606	DP2010-0606		1-edge tipped
	VBGT 160402	9,52	4,76	0,20	DP1010-0404	DP2010-0404		1-edge tipped
	VBGT 160404	9,52	4,76	0,40	DP1010-0405	DP2010-0405		1-edge tipped
	VBGT 160408	9,52	4,76	0,80	DP1010-0406	DP2010-0406		1-edge tipped
	VBGT 160412	9,52	4,76	1,20	DP1010-0407	DP2010-0407		1-edge tipped

The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

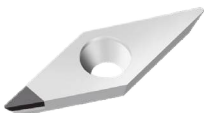
UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

VBGW

edge tipped



FN - neutral

CL 3,00 mm
1-edge tipped

PCD
Diamond

CVD-D
Diamond

Ultra
Diamond

on request

	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
Standard	VBGW 110201	6,35	2,38	0,10	DP1010-0607	DP2010-0607		1-edge tipped
	VBGW 110202	6,35	2,38	0,20	DP1010-0451	DP2010-0451		1-edge tipped
	VBGW 110204	6,35	2,38	0,40	DP1010-0452	DP2010-0452		1-edge tipped
	VBGW 110208	6,35	2,38	0,80	DP1010-0453	DP2010-0453		1-edge tipped
	VBGW 160401	9,52	4,76	0,10	DP1010-0608	DP2010-0608		1-edge tipped
	VBGW 160402	9,52	4,76	0,20	DP1010-0454	DP2010-0454		1-edge tipped
	VBGW 160404	9,52	4,76	0,40	DP1010-0455	DP2010-0455		1-edge tipped
	VBGW 160408	9,52	4,76	0,80	DP1010-0456	DP2010-0456		1-edge tipped
	VBGW 160412	9,52	4,76	1,20	DP1010-0457	DP2010-0457		1-edge tipped

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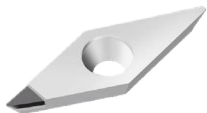
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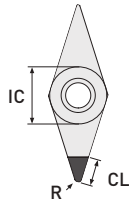
Subject to technical changes.

VCGT - positive rake angle

edge tipped



FN - positive rake angle

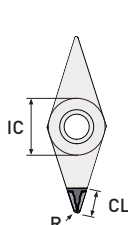
Standard			CL 3,00 mm 1-edge tipped					 on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	VCGT 070201	3,97	2,38	0,10	DP1010-0131	DP2010-0133		1-edge tipped
	VCGT 070202	3,97	2,38	0,20	DP1010-0119	DP2010-0119		1-edge tipped
	VCGT 070204	3,97	2,38	0,40	DP1010-0120	DP2010-0120		1-edge tipped
	VCGT 070208	3,97	2,38	0,80	DP1010-0132	DP2010-0134		1-edge tipped
	VCGT 110301	6,35	3,18	0,10	DP1010-0609	DP2010-0609		1-edge tipped
	VCGT 110302	6,35	3,18	0,20	DP1010-0121	DP2010-0121		1-edge tipped
	VCGT 110304	6,35	3,18	0,40	DP1010-0122	DP2010-0122		1-edge tipped
	VCGT 110308	6,35	3,18	0,80	DP1010-0123	DP2010-0123		1-edge tipped
	VCGT 160401	9,52	4,76	0,10	DP1010-0610	DP2010-0610		1-edge tipped
	VCGT 160402	9,52	4,76	0,20	DP1010-0124	DP2010-0124		1-edge tipped
	VCGT 160404	9,52	4,76	0,40	DP1010-0125	DP2010-0125		1-edge tipped
	VCGT 160408	9,52	4,76	0,80	DP1010-0126	DP2010-0126		1-edge tipped
	VCGT 160412	9,52	4,76	1,20	DP1010-0127	DP2010-0127		1-edge tipped

VCGT - Chip Breaker

edge tipped



FN - neutral - chip breaker for finishing (SPL-F) or roughing (SPL-R)

		  CL 3,00 mm 1-edge tipped 				 Item No.		 Item No.		 Item No.		 Item No.		Version
ISO Code		IC	S	R	F (Finishing)	R (Roughing)	F (Finishing)	R (Roughing)						
Standard	VCGT 070202	3,97	2,38	0,20	DP1011-0060	DP1012-0060	DP2011-0060	DP2012-0060	1-edge tipped					
	VCGT 070204	3,97	2,38	0,40	DP1011-0061	DP1012-0061	DP2011-0061	DP2012-0061	1-edge tipped					
	VCGT 070208	3,97	2,38	0,80	DP1011-0075	DP1012-0075	DP2011-0075	DP2012-0075	1-edge tipped					
	VCGT 1103005	6,35	3,18	0,05	DP1011-0610	-	DP2011-0610	-	1-edge tipped					
	VCGT 110301	6,35	3,18	0,10	DP1011-0611	-	DP2011-0611	-	1-edge tipped					
	VCGT 110302	6,35	3,18	0,20	DP1011-0062	DP1012-0062	DP2011-0062	DP2012-0062	1-edge tipped					
	VCGT 110304	6,35	3,18	0,40	DP1011-0063	DP1012-0063	DP2011-0063	DP2012-0063	1-edge tipped					
	VCGT 110308	6,35	3,18	0,80	DP1011-0064	DP1012-0064	DP2011-0064	DP2012-0064	1-edge tipped					
	VCGT 160402	9,52	4,76	0,20	DP1011-0065	DP1012-0065	DP2011-0065	DP2012-0065	1-edge tipped					
	VCGT 160404	9,52	4,76	0,40	DP1011-0066	DP1012-0066	DP2011-0066	DP2012-0066	1-edge tipped					
	VCGT 160408	9,52	4,76	0,80	DP1011-0067	DP1012-0067	DP2011-0067	DP2012-0067	1-edge tipped					

Also available in CBN with chip breaker on request.

! The suitable holders are available in our online shop.

Application range:

PCD

Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...

CVD-D

Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...

UltraDia.

Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

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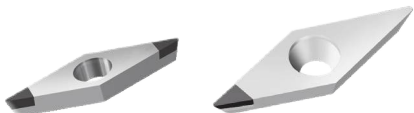


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Subject to technical changes.

VCGW

edge tipped



FN - neutral

MiniTools			CL 2,00 mm 2-edge tipped		PCD Diamond	CVD-D Diamond	Ultra Diamond	on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	VCGW 050101	3,10	1,59	0,10	on request	DP2010-0561	DP1110-1498	2-edge tipped
	VCGW 050102	3,10	1,59	0,20		DP2010-0562	DP1110-1500	2-edge tipped
	VCGW 050104	3,10	1,59	0,40		DP2010-0563	DP1110-1502	2-edge tipped

! You will find the matching MiniTool holders in our precision boring tools catalog (03) from page 27.

Standard			CL 3,00 mm 1-edge tipped		PCD Diamond	CVD-D Diamond	Ultra Diamond	on request
	ISO Code	IC	S	R	Item No.	Item No.	Item No.	Version
	VCGW 070201	3,97	2,38	0,10	DP1010-0135	DP2010-0135	on request	1-edge tipped
	VCGW 070202	3,97	2,38	0,20	DP1010-0110	DP2010-0110		1-edge tipped
	VCGW 070204	3,97	2,38	0,40	DP1010-0111	DP2010-0111		1-edge tipped
	VCGW 070208	3,97	2,38	0,80	DP1010-0136	DP2010-0136		1-edge tipped
	VCGW 110301	6,35	3,18	0,10	DP1010-0611	DP2010-0611		1-edge tipped
	VCGW 110302	6,35	3,18	0,20	DP1010-0112	DP2010-0112		1-edge tipped
	VCGW 110304	6,35	3,18	0,40	DP1010-0113	DP2010-0113		1-edge tipped
	VCGW 110308	6,35	3,18	0,80	DP1010-0114	DP2010-0114		1-edge tipped
	VCGW 160401	9,52	4,76	0,10	DP1010-0612	DP2010-0612	DP1110-0115	1-edge tipped
	VCGW 160402	9,52	4,76	0,20	DP1010-0115	DP2010-0115		1-edge tipped
	VCGW 160404	9,52	4,76	0,40	DP1010-0116	DP2010-0116		1-edge tipped
	VCGW 160408	9,52	4,76	0,80	DP1010-0117	DP2010-0117	on request	1-edge tipped
	VCGW 160412	9,52	4,76	1,20	DP1010-0118	DP2010-0118		1-edge tipped

! The suitable holders are available in our online shop.

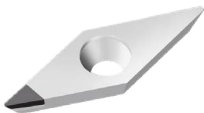
Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.

VCXW

edge tipped | m-dimension tolerance class ± 0.02



FN - neutral

CL 3,00 mm

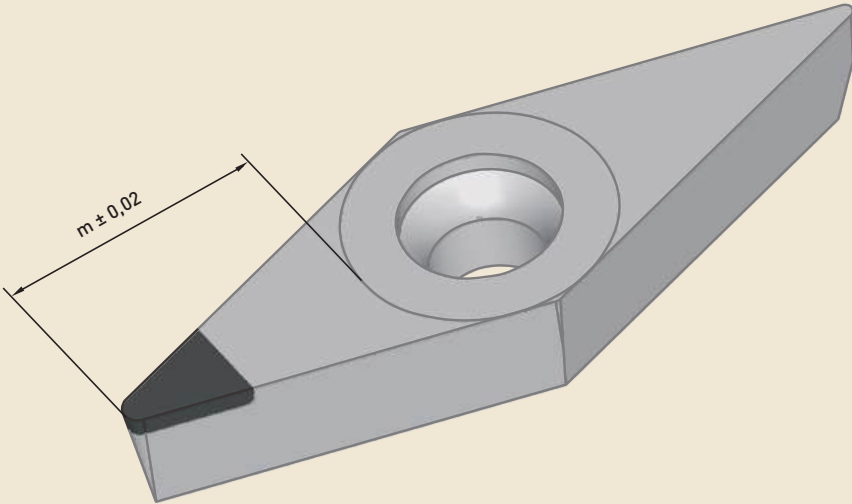
1-edge tipped

DTS - Specials	ISO Code	IC	S	R	Tolerance class m	Item No.	Version
	VCXW 1103005	6,35	3,18	0,05	m = X ± 0,02	DP2091-0005	1-edge tipped
	VCXW 110301	6,35	3,18	0,10	m = X ± 0,02	DP2091-0010	1-edge tipped
	VCXW 110302	6,35	3,18	0,20	m = X ± 0,02	DP2091-0020	1-edge tipped
	VCXW 110304	6,35	3,18	0,40	m = X ± 0,02	DP2091-0030	1-edge tipped

! Matching holders available from stock on request.

Advantage:

High repeat accuracy when changing indexable inserts



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Subject to technical changes.

VXGW

edge tipped



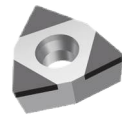
FN - neutral

CL 3,00 mm
1-edge tipped

DTS - Specials	ISO Code	IC	S	R	Item No.	Item No.	Item No.	on request
	VXGW 160401	9,52	4,76	0,10	☎	DP2010-0310	☎	1-edge tipped
	VXGW 160402	9,52	4,76	0,20		DP2010-0311		1-edge tipped
	VXGW 160404	9,52	4,76	0,40		DP2010-0312		1-edge tipped
	VXGW 160408	9,52	4,76	0,80		DP2010-0313		1-edge tipped
					Version			

WCGW

edge tipped | FullFace



FN - neutral

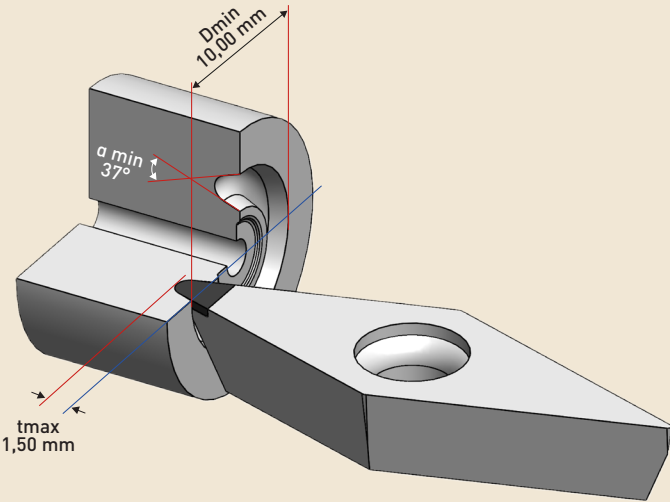
CL 1,60 mm
3-edge tipped

MiniTools	ISO Code	IC	S	R	Item No.	Item No.	Item No.	on request
	WCGW 020101	3,97	1,59	0,10	☎	DP2010-0571	DP1110-1504	3-edge tipped
	WCGW 020102	3,97	1,59	0,20		DP2010-0572	DP1110-1506	3-edge tipped
	WCGW 020104	3,97	1,59	0,40		DP2010-0573	DP1110-1508	3-edge tipped
	Version							

! You will find the matching MiniTool holder in our boring bar catalog (03) on page 32.

DTS-Specials
Face / Axial machining:

Our DXGW cutting insert is designed for face and axial machining of contours from a minimum outside diameter of 10mm, using the maximum groove depth of 1.5mm.



It is tipped with CVD-D as standard, but is of course also available with PCD or UltraDiamond on request.

! The suitable holders are available in our online shop.

Application range:

- PCD Aluminum <10% Si, Brass, Brass lead-free, Copper, Graphite coarse-grained, Titanium (Roughing) ...
- CVD-D Acrylic, Aluminum >10% Si, Carbide >10%Co, Ceramics, Plastics, Copper (Finishing), PEEK, Titanium (Finishing), Composites (CFRP, GFRP, MMC) ...
- UltraDia. Glass materials, Sintered Ceramic materials, Tungsten Carbide <12%Co, Tungsten Carbide with Ni Binder, highly abrasive difficult to machine materials ...

You will find further application ranges in the detailed overview on page 7.



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Subject to technical changes.

Cutting parameters
for our diamond indexable inserts

Material	Diamond Indexable Inserts											
	PCD						CVD-D					
	V _c [m/min]		a _p [mm]		F [mm/U]		V _c [m/min]		a _p [mm]		F [mm/U]	
	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
Acrylic (PMMA)	100	2.000	0,01	2,80	0,01	0,40	200	5.000	0,01	2,60	0,01	0,50
Al Si <10%	300	3.000	0,01	2,80	0,01	0,50	200	5.000	0,01	2,80	0,01	0,60
Al Si >10%							150	4.000	0,01	2,80	0,01	0,40
Brass, Brass Lead-free	150	1.000	0,01	2,80	0,02	0,50	80	1.500	0,01	2,80	0,01	0,60
Carbide G-Grade <15% Co							80	3.000	0,01	2,60	0,01	0,50
Carbide G-Grade >15% Co												
Carbide K-Grade <15% Co												
Carbide K-Grade >15% Co												
Carbide with Ni-Binder												
Ceramics, Zirconium												
Glass, Glass Ceramics												
Composites GFK / CFK / MMC												
Copper, Copper alloy							100	1.500	0,01	2,80	0,01	0,60
Graphite	100	2.000	0,01	2,60	0,01	0,40	60	3.500	0,01	2,60	0,005	0,60
Gold, Silver, Platinum	200	3.000	0,01	2,80	0,01	0,30	80	4.500	0,01	2,60	0,01	0,40
Magnesium	120	2.000	0,01	2,60	0,01	0,40	80	3.000	0,01	2,60	0,01	0,50
Plastics	80	3.000	0,01	2,60	0,01	0,50						
PEEK	80	150	0,01	0,50	0,01	0,30	100	200	0,01	0,50	0,01	0,40
Titanium							80	3.000	0,01	2,60	0,01	0,50
Tungsten Copper							40	1.200	0,01	2,00	0,01	0,30

Diamond Indexable Inserts						 on request				
UltraDiamond										
										
V _c [m/min]		a _p [mm]		F [mm/U]		Cooling				
min.	max.	min.	max.	min.	max.	Dry	Air	Emulsion	Oil	MQL
80	5.000	0,01	2,60	0,005	0,50	5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
						5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
								1. Choice	2. Choice	3. Choice
						2. Choice	1. Choice			
							3. Choice	1. Choice		2. Choice
										
							3. Choice	1. Choice		2. Choice
							4. Choice	1. Choice	2. Choice	3. Choice
							4. Choice	1. Choice	2. Choice	3. Choice
						5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
							4. Choice	1. Choice	2. Choice	3. Choice
							4. Choice	1. Choice	2. Choice	3. Choice
						4. Choice	1. Choice	2. Choice		3. Choice
							3. Choice	1. Choice		2. Choice

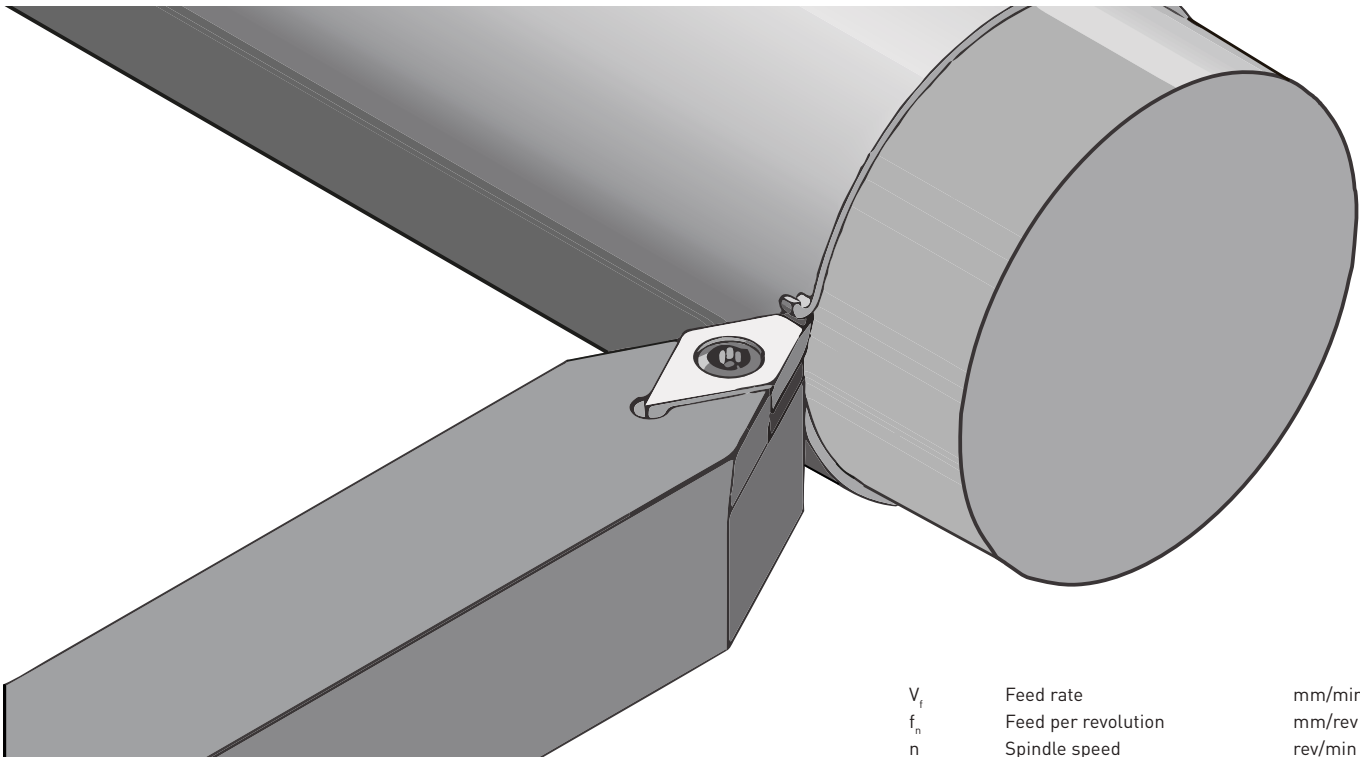
Cutting parameters
for our diamond indexable inserts with chip breaker

		Chip breaker											
		Chip breaker F (Finishing chip breaker)						Chip breaker R (Roughing chip breaker)					
Material	R	V _c [m/min]		a _p [mm]		F [mm/U]		V _c [m/min]		a _p [mm]		F [mm/U]	
		min.	max.	min.	max.	min.	max.	min.	max.	min.	max.	min.	max.
AlSi <3%	0,2	100	800	0,01	2,00	0,02	0,10	100	800	0,12	2,80	0,03	0,10
	0,4	100	800	0,01	2,00	0,04	0,20	100	800	0,12	2,80	0,03	0,20
	0,8	100	800	0,01	2,00	0,05	0,40	100	800	0,12	2,80	0,06	0,40
	1,2	100	800	0,01	2,00	0,05	0,40	100	800	0,12	2,80	0,08	0,60
AlSi <12%	0,2	80	600	0,01	2,00	0,02	0,10	80	800	0,12	2,80	0,08	0,10
	0,4	80	600	0,01	2,00	0,04	0,20	80	800	0,12	2,80	0,10	0,20
	0,8	80	600	0,01	2,00	0,05	0,40	80	800	0,15	2,80	0,15	0,40
	1,2	80	600	0,01	2,00	0,05	0,60	80	800	0,20	2,80	0,20	0,60
Brass lead-free	0,2	80	600	0,01	2,00	0,02	0,10	80	600	0,12	2,80	0,08	0,10
	0,4	80	600	0,01	2,00	0,04	0,20	80	600	0,15	2,80	0,10	0,20
	0,8	80	600	0,01	2,00	0,05	0,40	80	600	0,15	2,80	0,20	0,40
	1,2	80	600	0,01	2,00	0,05	0,60	80	600	0,20	2,80	0,25	0,60
Copper, Bronze	0,2	80	600	0,01	2,00	0,02	0,10	80	600	0,12	2,80	0,05	0,10
	0,4	80	800	0,01	2,00	0,04	0,20	80	800	0,12	2,80	0,07	0,20
	0,8	80	800	0,01	2,00	0,05	0,40	80	800	0,15	2,80	0,07	0,40
	1,2	80	800	0,01	2,00	0,05	0,60	80	800	0,20	2,80	0,12	0,60
MMC	0,2	100	500	0,01	2,00	0,02	0,10	100	500	0,12	2,80	0,05	0,10
	0,4	100	500	0,01	2,00	0,04	0,20	100	500	0,12	2,80	0,06	0,20
	0,8	100	500	0,01	2,00	0,05	0,40	100	500	0,20	2,80	0,10	0,40
	1,2	100	500	0,01	2,00	0,05	0,60	100	500	0,25	2,80	0,15	0,60

Cooling recommended
In machining with diamond inserts, proper cooling is a key to successful machining.
Here you will find our recommendation:

Material	Cooling				
	Dry	Air	Emulsion	Oil	MQL
AlSi <3%			1. Choice	2. Choice	3. Choice
AlSi <12%			1. Choice	2. Choice	3. Choice
Copper, Bronze			1. Choice	2. Choice	3. Choice
Brass lead-free	5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
MMC		2. Choice	1.Choice		

If you have any further technical questions, please do not hesitate to contact us
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Mail: info@diamond-toolingsystems.com



V_f	Feed rate	mm/min
f_n	Feed per revolution	mm/rev
n	Spindle speed	rev/min
v_c	Cutting speed	m/min
D_c	Cutter diameter	mm
t_c	Cutting Time	min
l_m	Cutting length	mm
Q	Stock removal rate	cm³/min
a_p	Cutting depth	mm

► Cutting speed

$$V_c = \frac{D_c \times \pi \times n}{1000}$$

[m/min]

► Spindle speed

$$n = \frac{v_c \times 1000}{\pi \times D_c}$$

[U/min]

► Feed per revolution

$$f_n = \frac{V_f}{n}$$

[mm/U]

► Cutting time

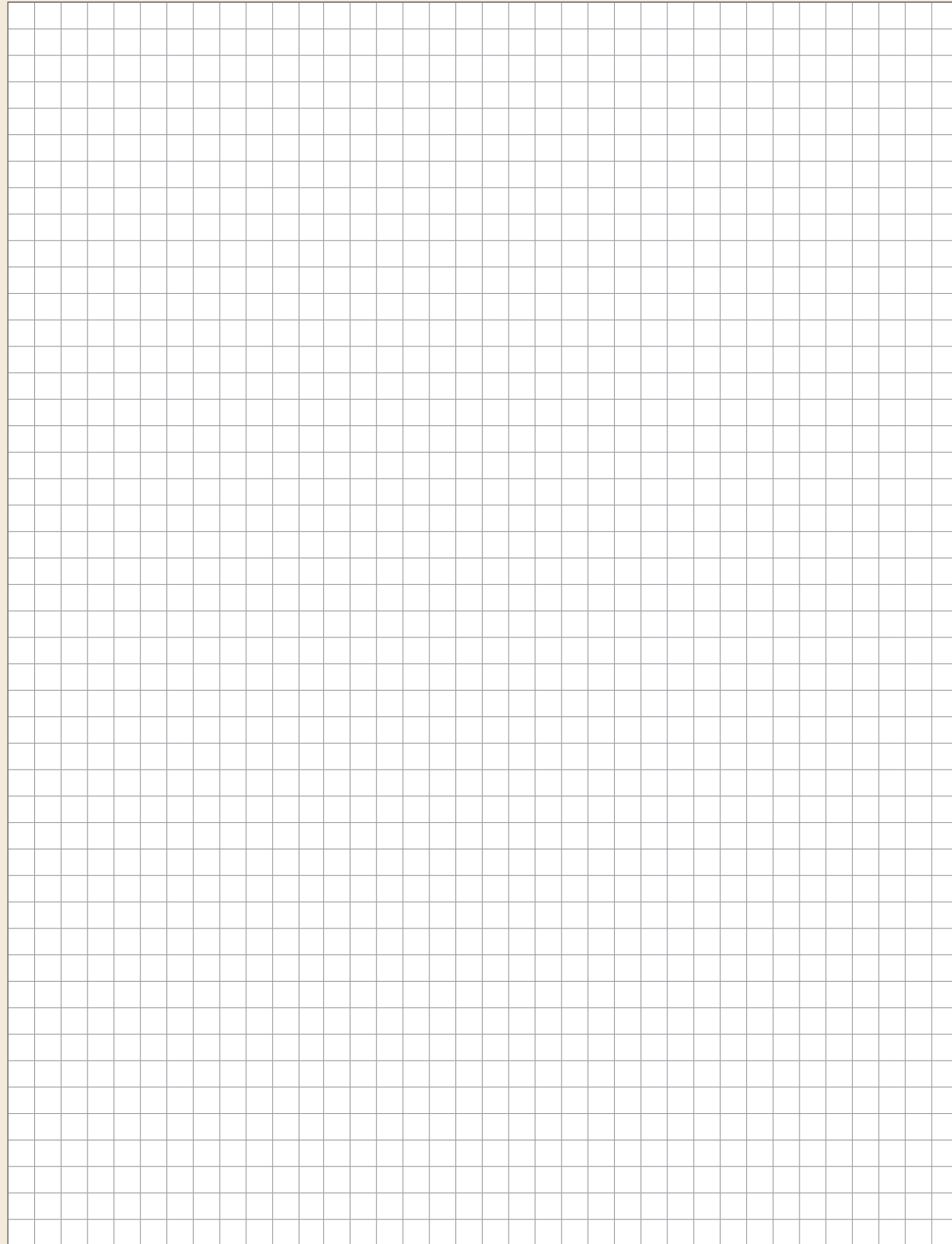
$$t_c = \frac{l_m}{f_n \times n}$$

[min]

► Stock removal rate

$$Q = v_c \times a_p \times f_n$$

[cm³/min]



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All rights are reserved. Errors, misprints or printing errors do not entitle to claims. The pictorial and graphic representation of our tools do not necessarily have to correspond to the actual tool in all details.

We reserve the right to make production-related technical changes and changes to the delivery program. The cutting values given are guide values which must be adjusted according to the process environment.

Safety Instructions:

- ▶ DTS tools equipped with ultra-hard cutting edges are very sharp laser cut tools.
- ▶ Careful handling of the tools during unpacking and their use is recommended.
- ▶ Wearing protective gloves reduces the risk of injury.
- ▶ Material chipping and tool breakage may occur during machining, wearing safety glasses is recommended.
- ▶ Balanced holders are recommended for speeds above 10,000 rpm.
- ▶ We do not accept any responsibility for tools that have been modified, reground or used incorrectly and beyond their normal service life.
- ▶ Protective goggles are recommended when using DTS tools, sparks may also occur, make sure that no fire can occur.

Diamond Tooling Systems



DTS GmbH



Instagram



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DTS Shop



DTS Website



PASSION FOR DIAMOND

Diamond Tooling Systems DTS GmbH

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