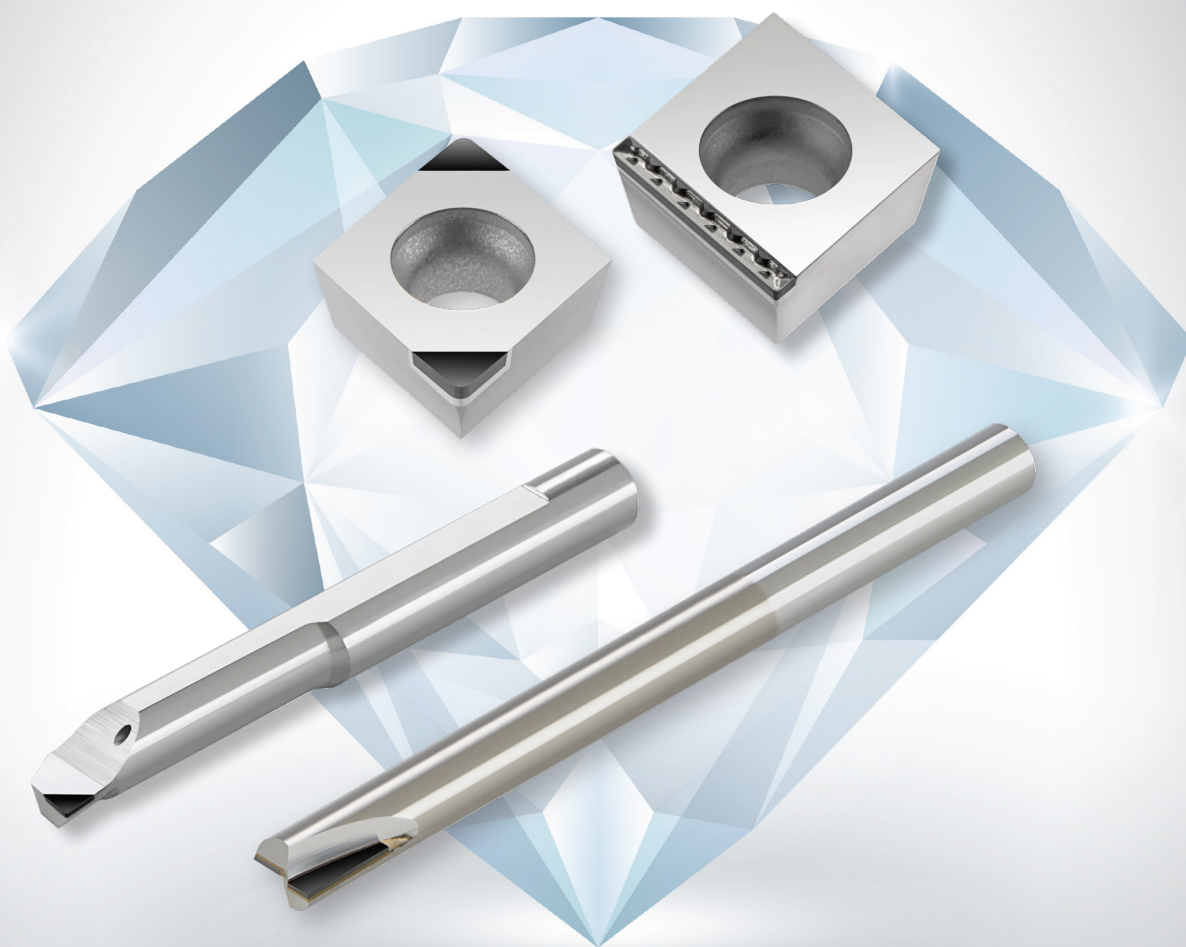

Diamond Tools

PCD CVD CDX



Company Profile

Carmex Precision Tools Ltd. is a leading manufacturer of high quality cutting tools.

The company was founded in 1988 in Maalot, located in the beautiful North West region of Israel.

Product Lines

Carmex specializes in the production of threading tools for turning and milling. Our product lines include:

• **Thread Turning inserts and toolholders** • **Mill-Thread Solid Carbide**
• **Mill-Thread inserts and toolholders** • **Spiral Mill-Thread** • **Slim MT**
• **Grooving Tools** • **Tiny Tools** • **Swiss Tools** • **CMT Vertical Milling**
• **Thread Whirling** • **End mills** • **Mini Chamfer** • **Taps** • **Diamond Tools**

In addition we have a Dental division producing **Dental Drills** for the Dental Implants Industry.

The company's different product lines are recognized worldwide for their advanced technology, reliable full range lines that offer accurate geometry, excellent cutting performance and extended tool life.

Our products and service we provide live up to the highest standards and outperform them. Carmex also produces special tools in accordance with customer's requirements.

Product Lines

Our unyielding strive for high quality, speedy service and reliability is supported by the following International Standards Certificates:

• ISO 9001:2015 • ISO 14001:2015 • ISO 45001 • ISO 13485:2016 • CE

Stock & Service

Most of our customers' requirements are supplied immediately from our readily available wide range of inventory as well as from our branches, agents and distributor's stocks around the world.

Company Development

In August 2008 Carmex completed its transfer to the new, state-of-the-art modern building. In April 2019 we occupied the second new building. Both buildings includes significant investments in advanced machinery and equipment as part of our strategy to keep our position in the first line of high technology and to support our development plans.

Carmex Branches

In addition to its distributor's chain, Carmex has four independent sales branches. Each of them keeps Carmex's wide range of stock and employs talented, service oriented managers, engineers, technicians and administrators willing to fulfill the customers' needs.

2003 - C.P.T. GmbH, located in Stuttgart Germany.

2004 - Carmex Precision Tools LLC, located in Wisconsin USA serving North America and Mexico.

2008 - Carmex Italia Srl, located in Modena, Italy.

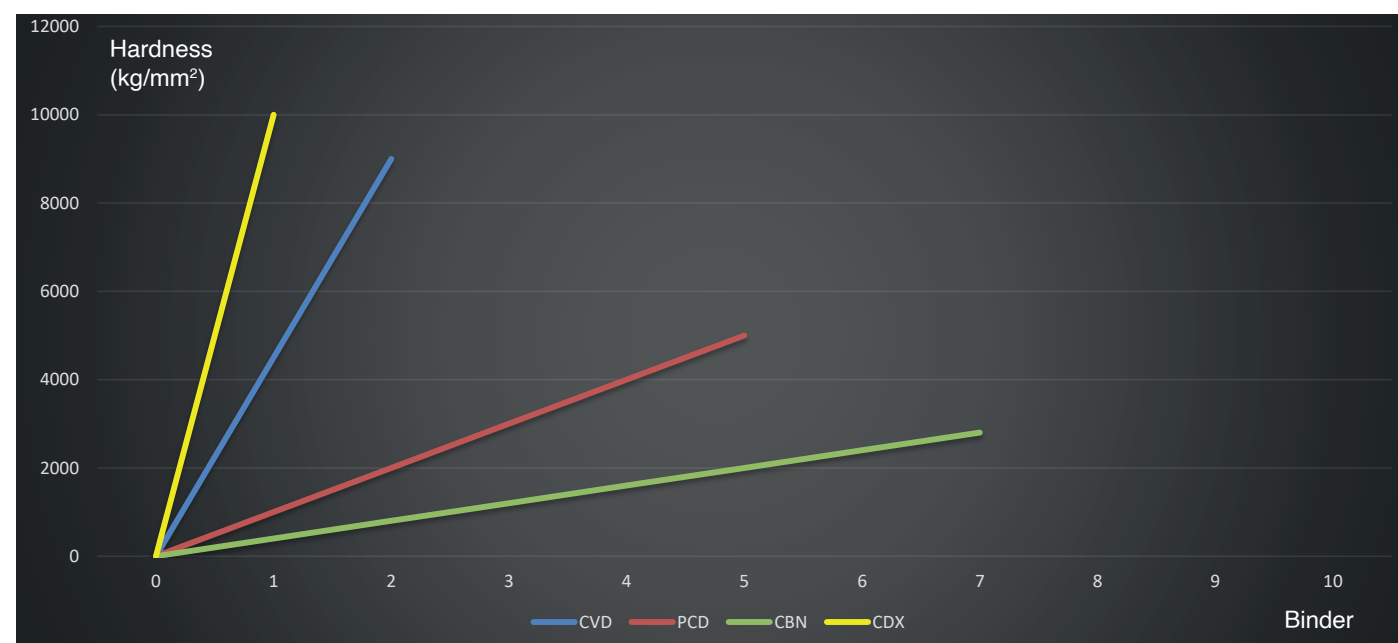
2018 - Carmex India, located in Pune, India.

Carmex is recognized as a high quality cutting tools manufacturer, a service oriented company and as a very competitive supplier that pledge for customer satisfaction.

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Carmex PCD, CVD and CDX and CBN cutting tools are designed for high productivity and longer tool life when machining materials ranging from plastics to brass, cast iron, hardened steel and super alloys. The inserts provide faster machining times compared to grinding and outperform ceramics, thereby reducing production costs.



PCD

PCD (Polycrystalline Diamond) is composed of diamond particles sintered together under high pressure and temperature using a metallic binder. The polycrystalline structure provides exceptional hardness, outstanding wear resistance, and high thermal conductivity, allowing heat to be rapidly transferred away from the cutting edge.

As the hardest known cutting material, PCD offers superior abrasion resistance and extended tool life, particularly in highly abrasive applications.

PCD tools are ideally suited for machining non-ferrous materials, high-silicon aluminum alloys, metal matrix composites (MMCs), carbon fiber reinforced plastics (CFRP), fiberglass composites (GFRP), graphite, and engineering plastics.

CVD

CVD (Chemical Vapor Deposition) Diamond is an advanced cutting material that is harder than PCD and offers up to twice the wear resistance. Its exceptional hardness, thermal conductivity, and abrasion resistance make it ideal for machining highly abrasive and difficult-to-machine materials.

CVD diamond delivers significant advantages when machining long-chipping Aluminum and Magnesium Alloys, High-silicon Aluminum, precious metal alloys, Plastics containing abrasive fillers, Tungsten carbide, and Ceramic green compacts.

The cutting segments are produced from CVD diamond thick films using precision laser cutting technology. These segments are then vacuum brazed onto carbide inserts to create high-performance cutting tools. Both the cutting edges and chip breakers are laser formed, ensuring maximum accuracy and consistency.

A specially designed laser-generated chip breaker minimizes chip contact with the insert surface, significantly reducing heat generation and cutting energy. The controlled chip formation improves process reliability, enhances chip evacuation, and lowers cutting forces, resulting in improved productivity and surface quality.

Crystal Diamond X (CDX)

Crystal Diamond X uses laser-segmented single-crystal diamond cutting elements brazed onto tool carriers using high-vacuum technology. Compared with PCD, tool life can increase by 15–25 times, and by 2–5 times compared with CVD. Suitable for similar applications as PCD and CVD, Crystal Diamond X extends economic machining into demanding materials such as ceramics, glass, glass-ceramics, and hard metals with low cobalt or nickel binder content (<10%).

PCBN

PCBN (Polycrystalline Cubic Boron Nitride) combines exceptional hardness with outstanding thermal stability, making it one of the most advanced cutting materials available. Second only to diamond in hardness, PCBN is the preferred choice for machining hardened ferrous materials where conventional carbide and ceramic tools often reach their performance limits.

PCBN is particularly well suited for machining hardened steels in the range of 45–72 HRC, as well as cast irons, powder metallurgy materials, and various heat-resistant and special alloys. Its excellent hot hardness allows it to maintain cutting-edge integrity at elevated temperatures, enabling machining at significantly higher cutting speeds.

In addition to superior wear resistance, PCBN offers excellent toughness and resistance to thermal shock, ensuring reliable performance in interrupted and demanding cutting operations.

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

Crystal Diamond X (CDX)

is ideally suited for the machining of

- Acryl (PMMA)
- Carbide <12%Co
- Ceramic
- Glass, Glass Ceramic

CVD 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

1. Choice Alternative

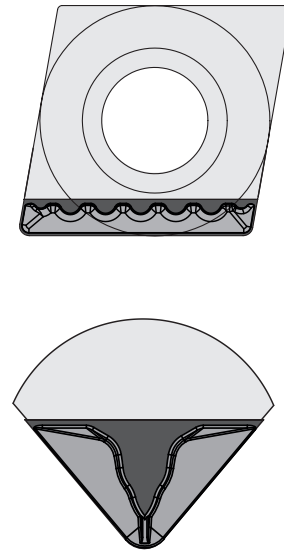
ISO	Materials	PKD	CVD	CDX
N	Acrylic material (PMMA)			
	Aluminium, < 10% Si			
	Aluminium, > 10% Si			
	Glass, Glass Ceramic			
	Carbide (Green)			
	Carbide G-Type, < 12% Co			
	Carbide G-Type, > 10% Co			
	Carbide K-Type, < 12% Co			
	Carbide K-Type, > 10% Co			
	Carbide with Ni Binder			
	Ceramic			
	Ceramic (Green)			
	Plastics			
	Copper, Copper Alloys			
	Magnesium			
	Brass			
	Metal Matrix Composite			
	PEEK			
	Silver, Gold, Platinum			
	Titanium			
	Glass fiber / Carbon fiber composites			
	Tungsten Alloy			

Carmex cutting materials are successfully used in many industries:

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

Diamond tools are the preferred choice for machining aluminum alloys (<1% Si), magnesium alloys, lead-free brass, and a wide range of plastic composites. However, these materials typically produce long, continuous chips, which can create significant chip-control challenges during machining.

Our advanced laser technology enables the creation of three-dimensional micro chip grooves on a wide range of PCD, CVD, and CBN cutting tools. This specialized laser ablation process allows the production of highly complex chipbreaker geometries that are not achievable with conventional manufacturing methods, resulting in superior chip control and improved machining performance.



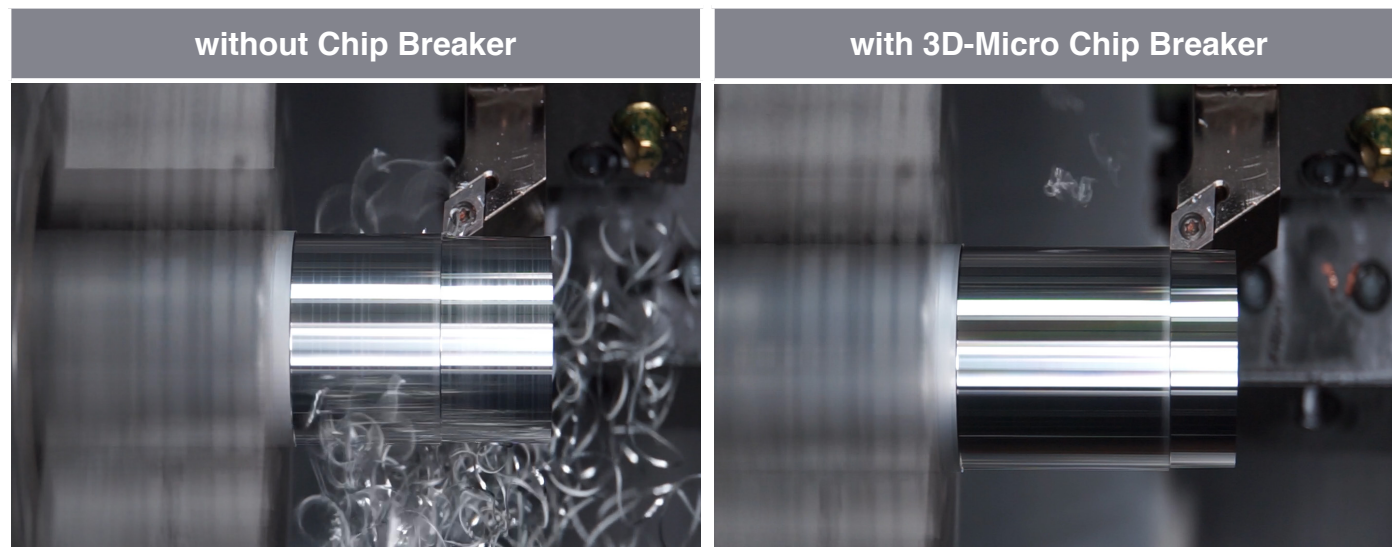
The laser-generated 3D micro chip breaker provides effective chip control and reliable chip fragmentation when machining long-chipping materials.

In addition, the optimized chipbreaker geometry reduces cutting forces, making it particularly suitable for the machining of thin-walled components and other applications sensitive to deformation.

To ensure optimal chip control across different machining conditions, two designs are available:

- **Chip Breaker-F** Features a sharp cutting edge geometry designed for finishing operations, delivering low cutting forces and excellent surface quality.
- **Chip Breaker-R** Features a reinforced cutting edge geometry for roughing operations, providing increased edge stability and reliable performance under higher cutting loads.

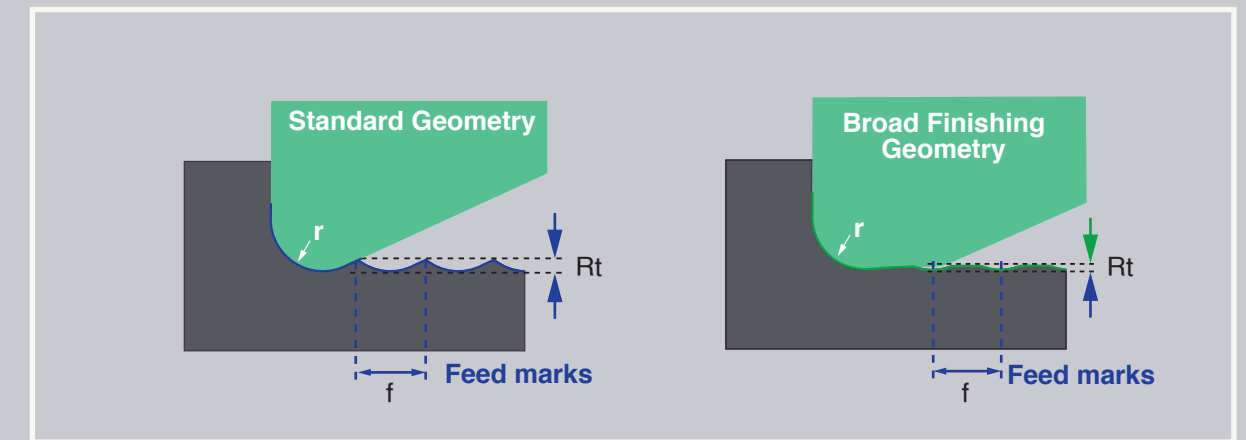
Both designs combine the wear resistance of ultra-hard cutting materials with advanced chip control, resulting in improved process reliability and machining efficiency.



Material: AlSi1

Material: AlSi1

Wiper cutting inserts:



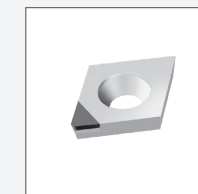
Advantages when using Wiper geometries

By maintaining the same feed rate, surface quality can be improved by a factor of 2 to 4. Alternatively, the same surface quality can be achieved at feed rates 2 to 4 times higher, resulting in significantly increased productivity.

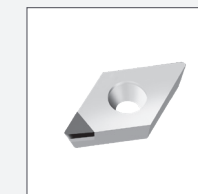
To get the wiper geometry into cutting condition please use the following lead angles at the machine:

C and W Type: 95°
D Type: 93°

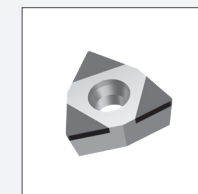
CCGW ...
(Z1)



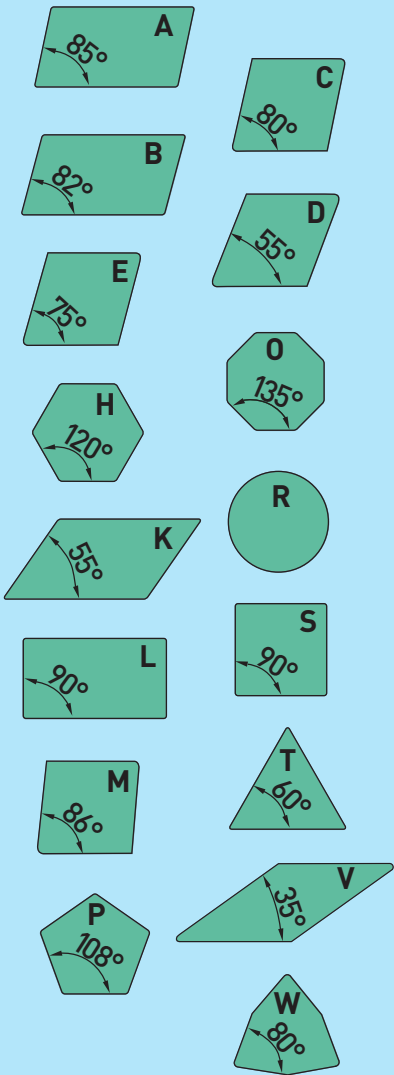
DCGW ...
(Z1)



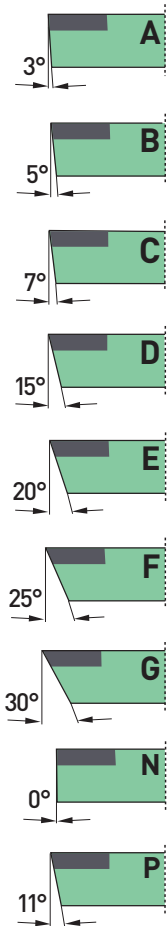
WCGW ...
(Z3)



C

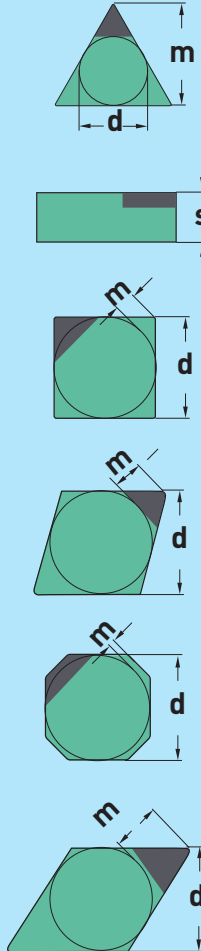


C



Special X

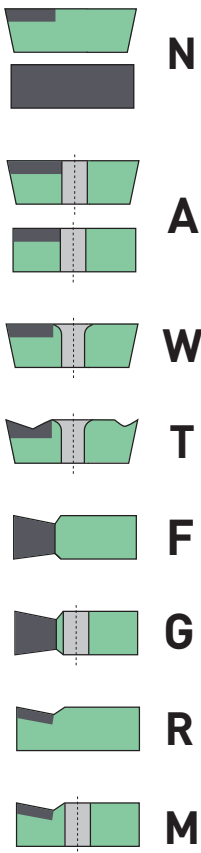
G



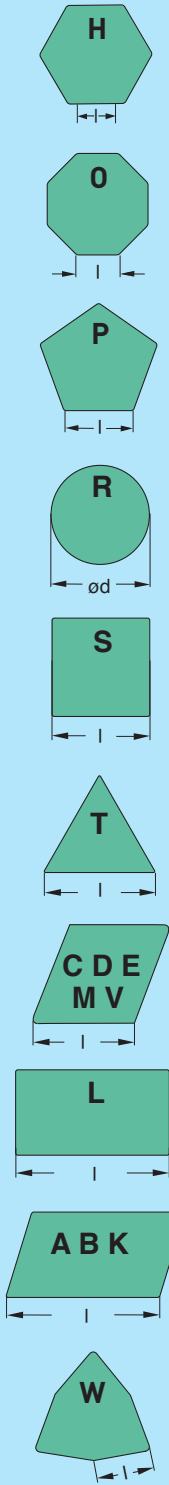
	m	s	d
A	±0.005	±0.025	±0.025
F	±0.005	±0.025	±0.013
C	±0.013	±0.025	±0.025
H	±0.013	±0.025	±0.013
E	±0.025	±0.025	±0.025
G	±0.025	±0.130	±0.025
J	±0.005	±0.025	±0.05 -> ±0.15
K	±0.013	±0.025	±0.05 -> ±0.15
L	±0.025	±0.025	±0.05 -> ±0.15
M*	±0.08 -> ±0.20	±0.130	±0.05 -> ±0.15
N*	±0.08 -> ±0.20	±0.25	±0.05 -> ±0.15
U*	±0.13 -> ±0.38	±0.130	±0.08 -> ±0.15

*(M, N, U) The exact tolerance depends on the size of the plate

T



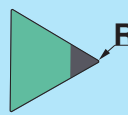
11



06

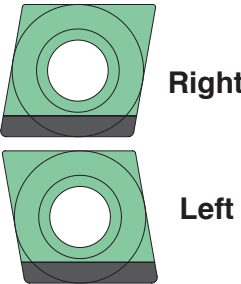
	S
01	1.59
T1	1.98
02	2.38
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35

02



	round insert / inch
00	0.1
01	0.2
02	0.4
04	0.8
08	1.2
16	1.6
M0	round insert / metric

R/L GS



W

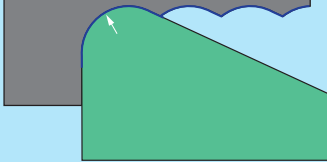
PCD

CVD

CDX

CBN

Standard Geometry



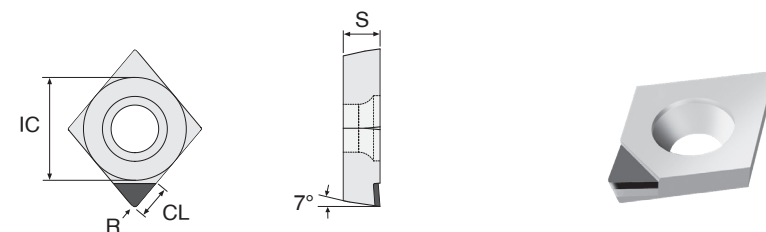
Wiper Geometry



CCGT 80° - positive rake angle

single cutting edge

Positive (P)



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.20	3.00	CCGT 060202	•	•	*	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	3.00	CCGT 060204	•	•	*	
6.35	2.38	0.80	3.00	CCGT 060208	•	•	*	
9.52	3.97	0.20	3.00	CCGT 09T302	•	•	*	SCLC...09 A/E...SCLC.09
9.52	3.97	0.40	3.00	CCGT 09T304	•	•	*	
9.52	3.97	0.80	3.00	CCGT 09T308	•	•	*	
9.52	3.97	1.20	3.00	CCGT 09T312	•	•	*	
12.70	4.76	0.20	3.00	CCGT 120402	•	•	*	SCLC...12 A/E...SCLC.12
12.70	4.76	0.40	3.00	CCGT 120404	•	•	*	
12.70	4.76	0.80	3.00	CCGT 120408	•	•	*	

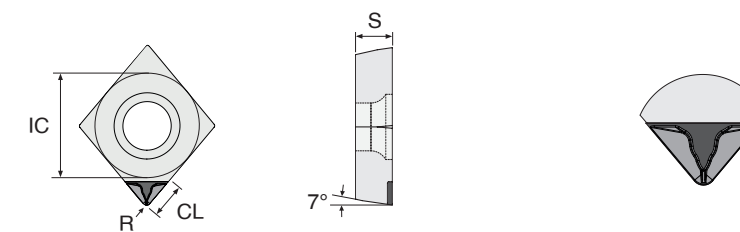
Order example: CCGT 060202 **PCD** or CCGT 060202 **CVD**

* Available upon request

CCGT 80° - Chip Breaker

single cutting edge

Neutral

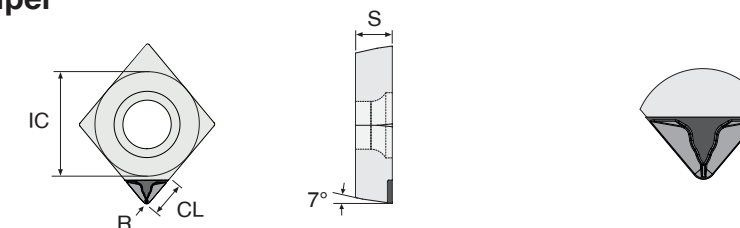


Chip Breaker for finishing (F) and roughing (R)

Dimensions				Ordering Code	Grade / Type				Toolholders
IC	S	R	CL		F-PCD	R-PCD	F-CVD	R-CVD	
6.35	2.38	0.20	3.00	CCGT 060202	•	•	•	•	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	3.00	CCGT 060204	•	•	•	•	
6.35	2.38	0.80	3.00	CCGT 060208	•	•	•	•	
9.52	3.97	0.20	3.00	CCGT 09T302	•	•	•	•	SCLC...09 A/E...SCLC.09
9.52	3.97	0.40	3.00	CCGT 09T304	•	•	•	•	
9.52	3.97	0.80	3.00	CCGT 09T308	•	•	•	•	
12.70	4.76	0.20	3.00	CCGT 120402	•	•	•	•	SCLC...12 A/E...SCLC.12
12.70	4.76	0.40	3.00	CCGT 120404	•	•	•	•	
12.70	4.76	0.80	3.00	CCGT 120408	•	•	•	•	

Order example: CCGT 060202 **F PCD** or CCGT 060202 **R PCD**

Neutral and Wiper



Chip Breaker for finishing (F) and roughing (R)

Dimensions				Ordering Code	Grade / Type		Toolholders
IC	S	R	CL		F-PCD	R-PCD	
6.35	2.38	0.20	3.00	CCGT 060202-W	•	•	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	3.00	CCGT 060204-W	•	•	
9.52	3.97	0.20	3.00	CCGT 09T302-W	•	•	SCLC...09 A/E...SCLC.09
9.52	3.97	0.40	3.00	CCGT 09T304-W	•	•	
9.52	3.97	0.80	3.00	CCGT 09T308-W	•	•	
12.70	4.76	0.20	3.00	CCGT 120402-W	•	•	SCLC...12 A/E...SCLC.12
12.70	4.76	0.40	3.00	CCGT 120404-W	•	•	
12.70	4.76	0.80	3.00	CCGT 120408-W	•	•	

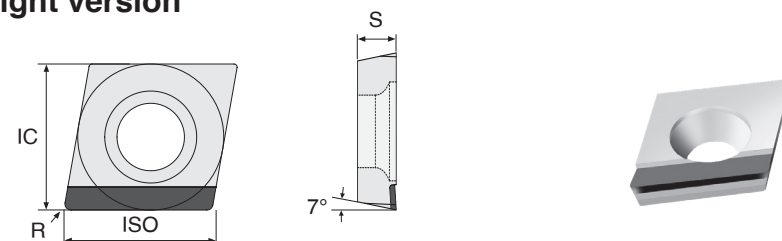
Order example: CCGT 060202-WF **PCD** or CCGT 060202-WR **PCD**

Same insert for R.H or L.H cutting

CCGT 80° - positive rake angle

GS - single cutting edge

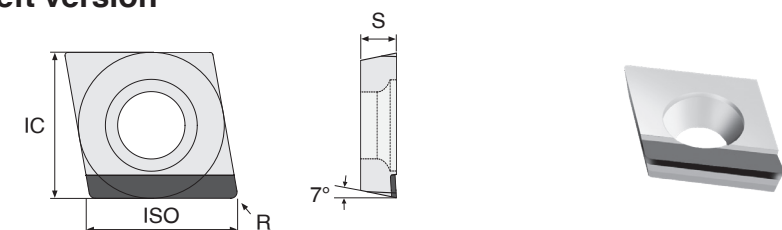
Positive (P) - right version



Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
6.35	2.38	0.20	CCGT 060202 R-GS	•	•	-	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGT 060204 R-GS	•	•	-	
6.35	2.38	0.80	CCGT 060208 R-GS	•	•	-	
9.52	3.97	0.40	CCGT 09T304 R-GS	•	•	-	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGT 09T308 R-GS	•	•	-	
9.52	3.97	1.20	CCGT 09T312 R-GS	•	•	-	
12.70	4.76	0.40	CCGT 120404 R-GS	•	•	-	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGT 120408 R-GS	•	•	-	

Order example: CCGT 060202 R-GS **PCD** or CCGT 060202 R-GS **CVD**

Positive (P) - left version



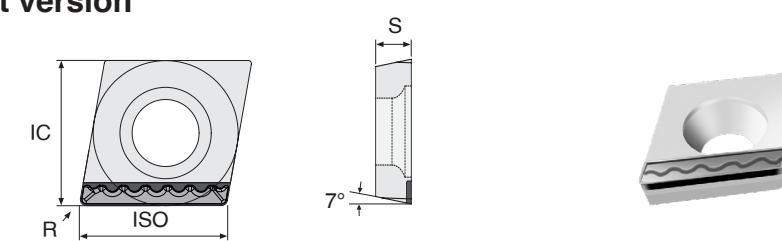
Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
6.35	2.38	0.20	CCGT 060202 L-GS	•	•	-	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGT 060204 L-GS	•	•	-	
6.35	2.38	0.80	CCGT 060208 L-GS	•	•	-	
9.52	3.97	0.40	CCGT 09T304 L-GS	•	•	-	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGT 09T308 L-GS	•	•	-	
9.52	3.97	1.20	CCGT 09T312 L-GS	•	•	-	
12.70	4.76	0.40	CCGT 120404 L-GS	•	•	-	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGT 120408 L-GS	•	•	-	

Order example: CCGT 060202 L-GS **PCD** or CCGT 060202 L-GS **CVD**

CCGT 80° - Chip Breaker

GS - single cutting edge

Neutral - right version

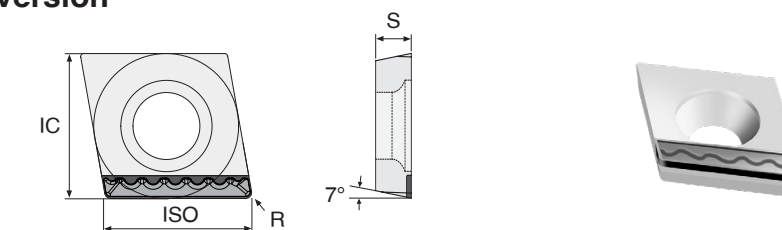


Chip Breaker for finishing (F) and roughing (R)

Dimensions			Ordering Code	Grade / Type				Toolholders
IC	S	R		F-PCD	R-PCD	F-CVD	R-CVD	
6.35	2.38	0.20	CCGT 060202 R-GS	•	•	•	•	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGT 060204 R-GS	•	•	•	•	
6.35	2.38	0.80	CCGT 060208 R-GS	•	•	•	•	
9.52	3.97	0.40	CCGT 09T304 R-GS	•	•	•	•	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGT 09T308 R-GS	•	•	•	•	
12.70	4.76	0.40	CCGT 120404 R-GS	•	•	•	•	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGT 120408 R-GS	•	•	•	•	

Order example: CCGT 060202 R-GSF **PCD** or CCGT 060202 R-GSR **CVD**

Neutral - left version

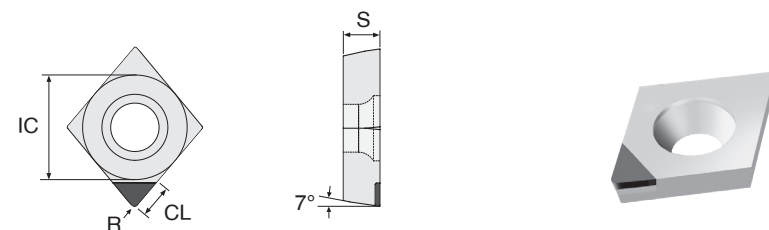


Chip Breaker for finishing (F) and roughing (R)

Dimensions			Ordering Code	Grade / Type				Toolholders
IC	S	R		F-PCD	R-PCD	F-CVD	R-CVD	
6.35	2.38	0.20	CCGT 060202 L-GS	•	•	•	•	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGT 060204 L-GS	•	•	•	•	
6.35	2.38	0.80	CCGT 060208 L-GS	•	•	•	•	
9.52	3.97	0.40	CCGT 09T304 L-GS	•	•	•	•	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGT 09T308 L-GS	•	•	•	•	
12.70	4.76	0.40	CCGT 120404 L-GS	•	•	•	•	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGT 120408 L-GS	•	•	•	•	

Order example: CCGT 060202 L-GSF **PCD** or CCGT 060202 L-GSR **CVD**

Neutral



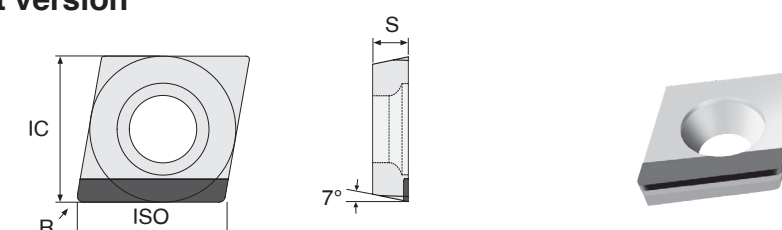
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.10	3.00	CCGW 060201		●	●	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.20	3.00	CCGW 060202	●	●	●	
6.35	2.38	0.40	3.00	CCGW 060204	●	●	●	
6.35	2.38	0.80	3.00	CCGW 060208	●	●	●	
9.52	3.97	0.20	3.00	CCGW 09T302	●	●	●	SCLC...09 A/E...SCLC.09
9.52	3.97	0.40	3.00	CCGW 09T304	●	●	●	
9.52	3.97	0.80	3.00	CCGW 09T308	●	●	●	
9.52	3.97	1.20	3.00	CCGW 09T312	●	●	*	
12.70	4.76	0.20	3.00	CCGW 120402	●	●	*	SCLC...12 A/E...SCLC.12
12.70	4.76	0.40	3.00	CCGW 120404	●	●	*	
12.70	4.76	0.80	3.00	CCGW 120408	●	●	*	
12.70	4.76	1.20	3.00	CCGW 120412	●	●	*	

Wiper

6.35	2.38	0.20	3.00	CCGW 060202 W	●	●	*	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	3.00	CCGW 060204 W	●	●	*	
9.52	3.97	0.20	3.00	CCGW 09T302 W	●	●	*	SCLC...09 A/E...SCLC.09
9.52	3.97	0.40	3.00	CCGW 09T304 W	●	●	*	
9.52	3.97	0.80	3.00	CCGW 09T308 W	●	●	*	
12.70	4.76	0.20	3.00	CCGW 120402 W	●	●	*	SCLC...12 A/E...SCLC.12
12.70	4.76	0.40	3.00	CCGW120404 W	●	●	*	
12.70	4.76	0.80	3.00	CCGW 120408 W	●	●	*	

Order example: CCGW 060202 **PCD** or CCGW 060202 **CVD** or CCGW 060202 **CDX**
 CCGW 060202-W **PCD** or CCGW 060202-W **CVD** or CCGW 060202-W **CDX**
 * Available upon request
 Same insert for R.H or L.H cutting

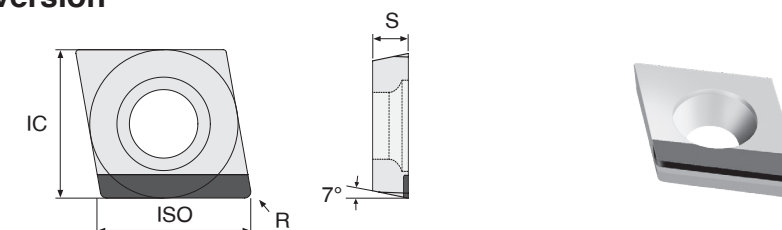
Neutral - right version



Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
6.35	2.38	0.20	CCGW 060202 R-GS	●	●	-	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGW 060204 R-GS	●	●	-	
6.35	2.38	0.80	CCGW 060208 R-GS	●	●	-	
9.52	3.97	0.40	CCGW 09T304 R-GS	●	●	-	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGW 09T308 R-GS	●	●	-	
9.52	3.97	1.20	CCGW 09T312 R-GS	●	●	-	
12.70	4.76	0.40	CCGW 120404 R-GS	●	●	-	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGW 120408 R-GS	●	●	-	

Order example: CCGW 060202 R-GS **PCD** or CCGW 060202 R-GS **CVD**
 * Available upon request

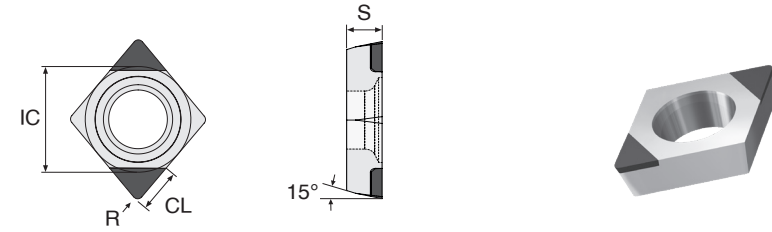
Neutral - left version



Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
6.35	2.38	0.20	CCGW 060202 L-GS	●	●	-	SCLC... 06 A/E...SCLC.06
6.35	2.38	0.40	CCGW 060204 L-GS	●	●	-	
6.35	2.38	0.80	CCGW 060208 L-GS	●	●	-	
9.52	3.97	0.40	CCGW 09T304 L-GS	●	●	-	SCLC...09 A/E...SCLC.09
9.52	3.97	0.80	CCGW 09T308 L-GS	●	●	-	
9.52	3.97	1.20	CCGW 09T312 L-GS	●	●	-	
12.70	4.76	0.40	CCGW 120404 L-GS	●	●	-	SCLC...12 A/E...SCLC.12
12.70	4.76	0.80	CCGW 120408 L-GS	●	●	-	

Order example: CCGW 060202 L-GS **PCD** or CCGW 060202 L-GS **CVD**
 * Available upon request

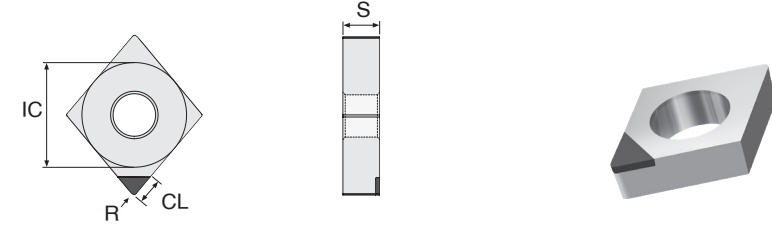
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.97	1.00	0.10	1.60	CDGW 040101	*	●	●	A/E...SCLD.04
3.97	1.00	0.20	1.60	CDGW 040102	*	●	●	
3.97	1.00	0.40	1.60	CDGW 040104	*	●	●	

Order example: CDGW 040101 **CVD** or CDGW 040101 **CDX**
* Available upon request

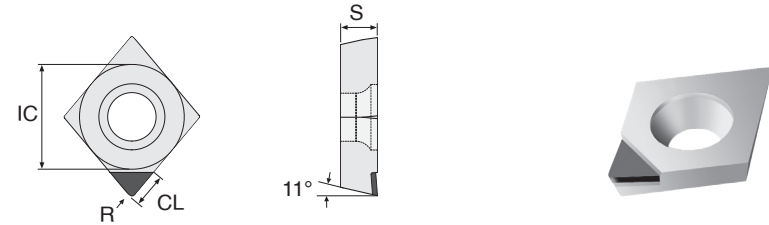
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
12.70	4.76	0.40	3.00	CNGA 120404	*	●	*	DCLN... 12
12.70	4.76	0.80	3.00	CNGA 120408	*	●	*	
12.70	4.76	1.20	3.00	CNGA 120412	*	●	*	

Order example: CNGA 120404 **CVD**
* Available upon request

Positive (P)

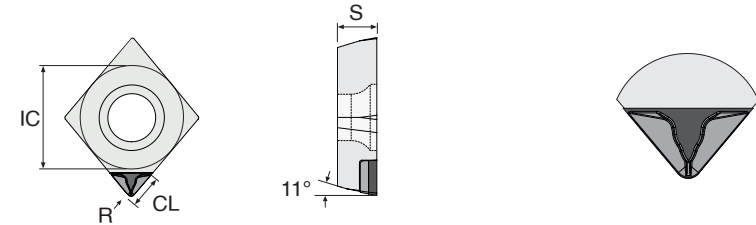


Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.20	3.00	CPGT 060202	●	●	*	A/E...SCLP.06
6.35	2.38	0.40	3.00	CPGT 060204	●	●	*	
6.35	2.38	0.80	3.00	CPGT 060208	●	●	*	

Order example: CPGT 060202 **PCD** or CPGT 060202 **CVD**
* Available upon request

CPGT 80° - Chip Breaker
single cutting edge

Neutral

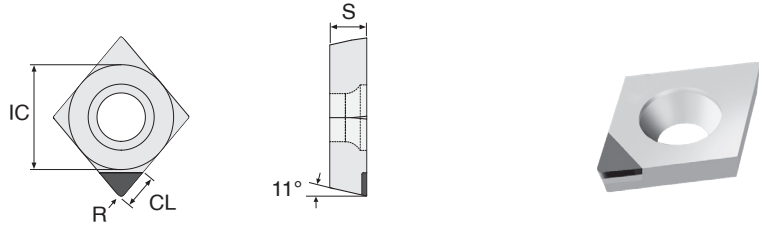


Chip Breaker for finishing (F) and roughing (R)

Dimensions				Ordering Code	Grade / Type		Toolholders
IC	S	R	CL		F-PCD	R-PCD	
6.35	2.38	0.20	3.00	CPGT 060202	●	●	A/E...SCLP.06
6.35	2.38	0.40	3.00	CPGT 060204	●	●	
6.35	2.38	0.80	3.00	CPGT 060208	●	●	
9.52	3.97	0.20	3.00	CPGT 09T302	●	●	A/E...SCLP.09
9.52	3.97	0.40	3.00	CPGT 09T304	●	●	
9.52	3.97	0.80	3.00	CPGT 09T308	●	●	
12.70	4.76	0.40	3.00	CPGT 120404	●	●	A/E...SCLP.12
12.70	4.76	0.80	3.00	CPGT 120408	●	●	

Order example: CPGT 060202 **F PCD** or CPGT 060202 **R PCD**
* Available upon request

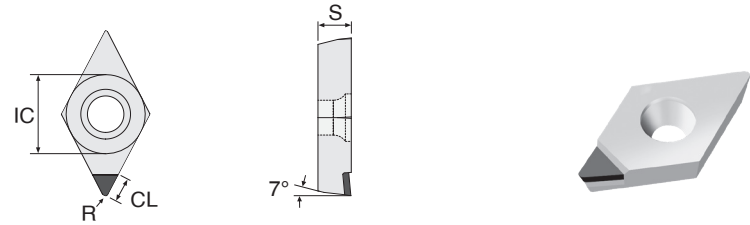
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.10	3.00	CPGW 060201	*	●	*	A/E...SCLP.06
6.35	2.38	0.20	3.00	CPGW 060202	●	●	*	
6.35	2.38	0.40	3.00	CPGW 060204	●	●	*	
6.35	2.38	0.80	3.00	CPGW 060208	●	●	*	
9.52	3.97	0.10	3.00	CPGW 09T301	*	●	*	
9.52	3.97	0.20	3.00	CPGW 09T302	●	●	*	A/E...SCLP.09
9.52	3.97	0.40	3.00	CPGW 09T304	●	●	*	
9.52	3.97	0.80	3.00	CPGW 09T308	●	●	*	
12.70	4.76	0.40	3.00	CPGW 120404	●	●	*	A/E...SCLP.12
12.70	4.76	0.80	3.00	CPGW 120408	●	●	*	
12.70	4.76	1.20	3.00	CPGW 120412	●	●	*	

Order example: CPGW 060201 **PCD** or CPGW 060201 **CVD**
* Available upon request

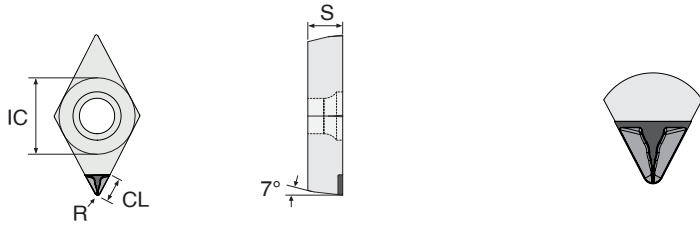
Positive (P)



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.05	3.00	DCGT 0702005	●	●	*	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.10	3.00	DCGT 070201	●	●	*	
6.35	2.38	0.20	3.00	DCGT 070202	●	●	*	
6.35	2.38	0.40	3.00	DCGT 070204	●	●	*	
6.35	2.38	0.80	3.00	DCGT 070208	●	●	*	
9.52	3.97	0.10	3.00	DCGT 11T301	●	●	*	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.20	3.00	DCGT 11T302	●	●	*	
9.52	3.97	0.40	3.00	DCGT 11T304	●	●	*	
9.52	3.97	0.80	3.00	DCGT 11T308	●	●	*	
9.52	3.97	1.20	3.00	DCGT 11T312	●	●	*	

Order example: DCGT 0702005 **PCD** or DCGT 0702005 **CVD**
* Available upon request

Neutral

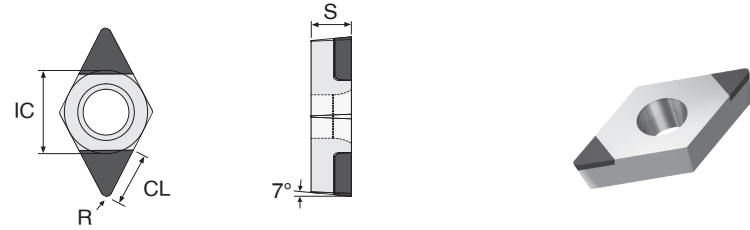


Chip Breaker for finishing (F) and roughing (R)

Dimensions				Ordering Code	Grade / Type				Toolholders
IC	S	R	CL		F-PCD	R-PCD	F-CVD	R-CVD	
6.35	2.38	0.05	3.00	DCGT 0702005	●	-	●	-	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.10	3.00	DCGT 070201	●	-	●	-	
6.35	2.38	0.20	3.00	DCGT 070202	●	●	●	●	
6.35	2.38	0.40	3.00	DCGT 070204	●	●	●	●	
6.35	2.38	0.80	3.00	DCGT 070208	●	●	●	●	
9.52	3.97	0.20	3.00	DCGT 11T302	●	●	●	●	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.40	3.00	DCGT 11T304	●	●	●	●	
9.52	3.97	0.80	3.00	DCGT 11T308	●	●	●	●	

Order example: DCGT 0702005 **F PCD** or DCGT 0702005 **F CVD**

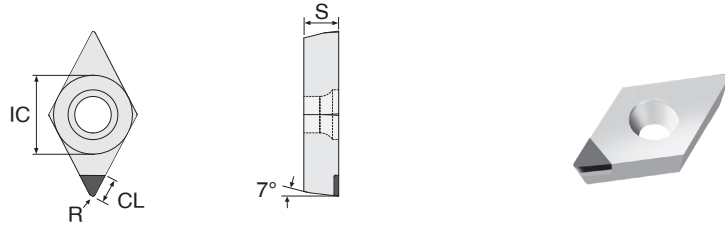
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.10	1.20	0.10	2.00	DCGW 04T001	*	•	•	E...SDQC.04 E...SDUC.04
3.10	1.20	0.20	2.00	DCGW 04T002	*	•	•	
3.10	1.20	0.40	2.00	DCGW 04T004	*	•	•	

Order example: DCGW 04T001 **CVD** or DCGW 04T001 **CDX**
* Available upon request

Neutral



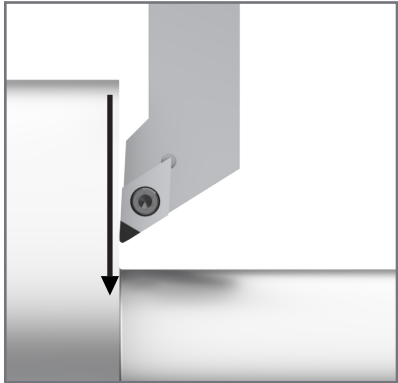
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.10	3.00	DCGW 070201	•	•	•	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.20	3.00	DCGW 070202	•	•	•	
6.35	2.38	0.40	3.00	DCGW 070204	•	•	•	
6.35	2.38	0.80	3.00	DCGW 070208	•	•	•	
9.52	3.97	0.10	3.00	DCGW 11T301	•	•	•	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.20	3.00	DCGW 11T302	•	•	•	
9.52	3.97	0.40	3.00	DCGW 11T304	•	•	•	
9.52	3.97	0.80	3.00	DCGW 11T308	•	•	•	
9.52	3.97	1.20	3.00	DCGW 11T312	•	•	•	
9.52	3.97	2.00	3.00	DCGW 11T320	*	*	•	

Wiper for face turning

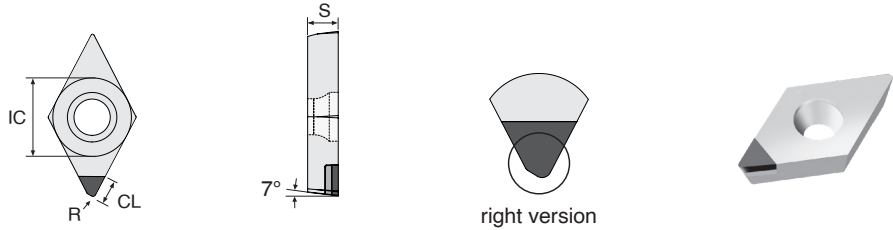
6.35	2.38	0.20	3.00	DCGW 070202-W	•	•	*	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.40	3.00	DCGW 070204-W	•	•	*	
6.35	2.38	0.80	3.00	DCGW 070208-W	•	•	*	
9.52	3.97	0.20	3.00	DCGW 11T302-W	•	•	*	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.40	3.00	DCGW 11T304-W	•	•	*	
9.52	3.97	0.80	3.00	DCGW 11T308-W	•	•	*	

Order example: DCGW 070201 **CVD** or DCGW 070201 **CDX**
DCGW 070202-W **PCD** or DCGW 070202-W **CVD**
* Available upon request
Same insert for R.H or L.H cutting

Graphic shows face turning



Neutral

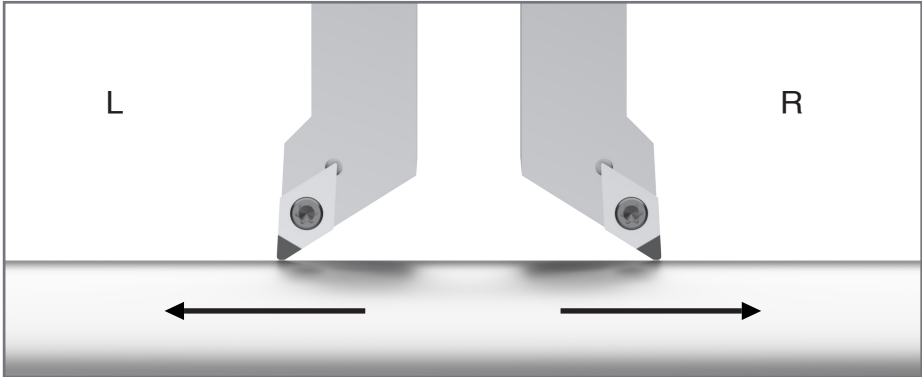


R (right) and L (left) - Wiper - cylindrical turning

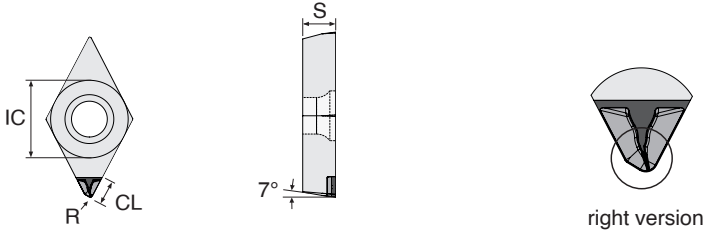
Dimensions				Ordering Code	Grade / Type	Toolholders
IC	S	R	CL		PCD	
6.35	2.38	0.20	3.00	DCGW 070202 R-W	•	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.20	3.00	DCGW 070202 L-W	•	
6.35	2.38	0.40	3.00	DCGW 070204 R-W	•	
6.35	2.38	0.40	3.00	DCGW 070204 L-W	•	
6.35	2.38	0.80	3.00	DCGW 070208 R-W	•	
6.35	2.38	0.80	3.00	DCGW 070208 L-W	•	
9.52	3.97	0.20	3.00	DCGW 11T302 R-W	•	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.20	3.00	DCGW 11T302 L-W	•	
9.52	3.97	0.40	3.00	DCGW 11T304 R-W	•	
9.52	3.97	0.40	3.00	DCGW 11T304 L-W	•	
9.52	3.97	0.80	3.00	DCGW 11T308 R-W	•	
9.52	3.97	0.80	3.00	DCGW 11T308 L-W	•	

Order example: DCGW 070202 **R-W PCD** or DCGW 070202 **L-W PCD**

Graphic shows



Neutral



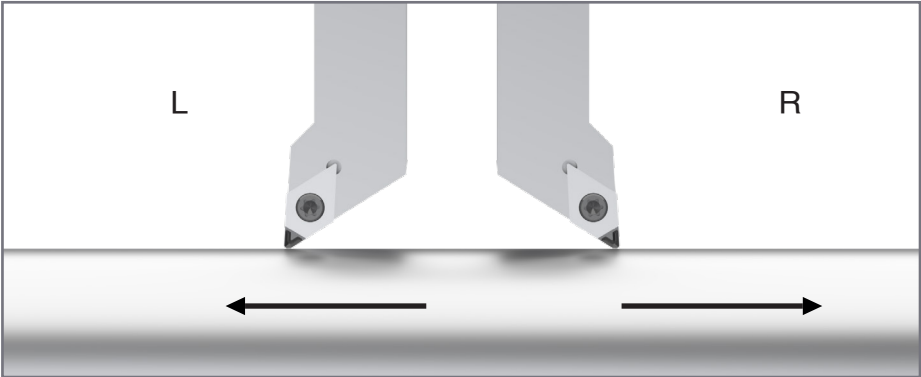
R (right) and L (left) - Wiper - cylindrical turning

Dimensions				Ordering Code	Grade / Type		Toolholders
IC	S	R	CL		F-PCD	R-PCD	
6.35	2.38	0.20	3.00	DCGT 070202 R-W	•	•	SDJC... 07 A/E...SDQC.07
6.35	2.38	0.20	3.00	DCGT 070202 L-W	•	•	
6.35	2.38	0.40	3.00	DCGT 070204 R-W	•	•	
6.35	2.38	0.40	3.00	DCGT 070204 L-W	•	•	
6.35	2.38	0.80	3.00	DCGT 070208 R-W	•	•	
6.35	2.38	0.80	3.00	DCGT 070208 L-W	•	•	
9.52	3.97	0.20	3.00	DCGT 11T302 R-W	•	•	SDJC... 11 A/E...SDQC.11
9.52	3.97	0.20	3.00	DCGT 11T302 L-W	•	•	
9.52	3.97	0.40	3.00	DCGT 11T304 R-W	•	•	
9.52	3.97	0.40	3.00	DCGT 11T304 L-W	•	•	
9.52	3.97	0.80	3.00	DCGT 11T308 R-W	•	•	
9.52	3.97	0.80	3.00	DCGT 11T308 L-W	•	•	

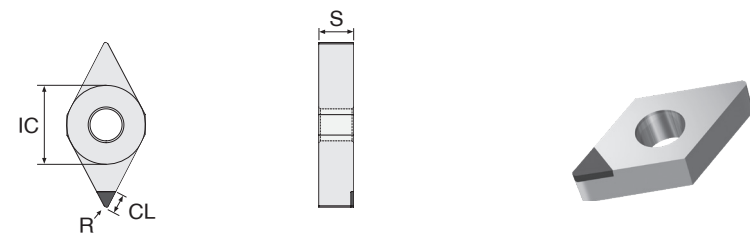
Order example: DCGT 070202 **RF-W PCD** or DCGT 070202 **RR-W PCD**

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

Graphic shows



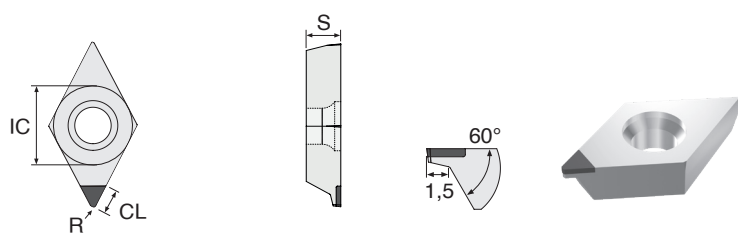
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
12.70	6.35	0.20	3.00	DNGA 150602	*	●	*	DDJN... 15
12.70	6.35	0.40	3.00	DNGA 150604	*	●	*	
12.70	6.35	0.80	3.00	DNGA 150608	*	●	*	

Order example: DNGA 150602 **CVD**
* Available upon request

Neutral

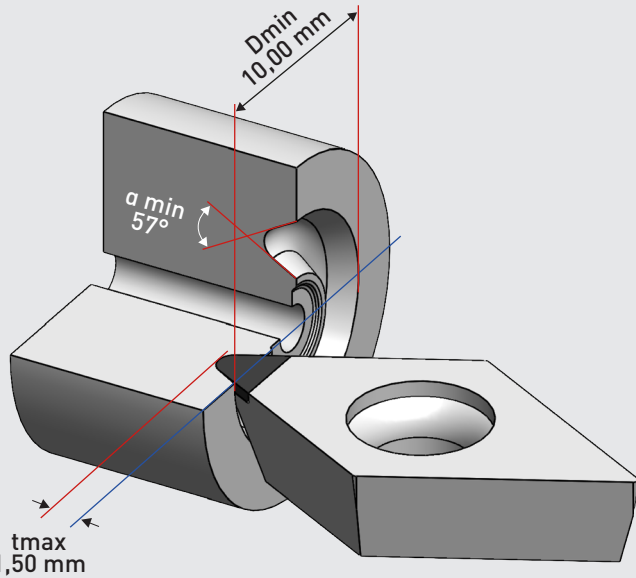


Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
9.52	3.97	0.10	3.00	DXGW 11T301	*	●	*	SDNXN... 11
9.52	3.97	0.20	3.00	DXGW 11T302	*	●	*	
9.52	3.97	0.40	3.00	DXGW 11T304	*	●	*	
9.52	3.97	0.80	3.00	DXGW 11T308	*	●	*	
					*	●	*	

Order example: DXGW 11T301 **CVD**
* Available upon request

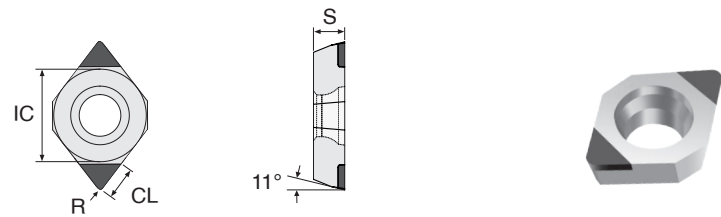
Face / Axial machining:

The DXGW insert is designed for face and axial contour machining on workpieces with a minimum outside diameter of 10 mm, utilizing the full maximum grooving depth of 1.5 mm.



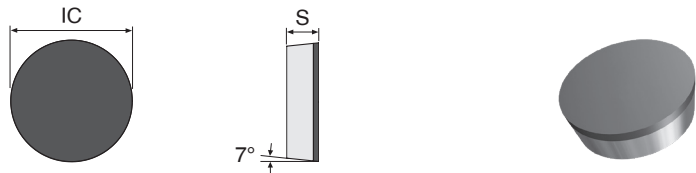
The insert is supplied as standard with CVD grade. Additional PCD or Crystal Diamond X grades are also available upon request to meet specific application requirements.

Neutral



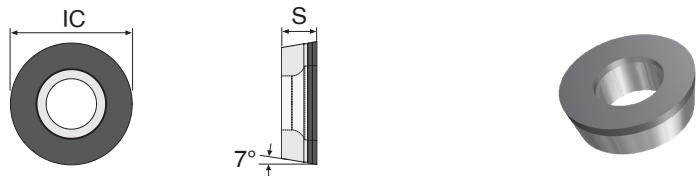
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
5.56	2.38	0.10	2.00	EPGW 050201	*	•	•	SELP... 05 E...SELP.05
5.56	2.38	0.20	2.00	EPGW 050202	*	•	•	
5.56	2.38	0.40	2.00	EPGW 050204	*	•	•	

Order example: EPGW 050201 **CVD** or EPGW 050201 **CDX**
* Available upon request



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.00	2.38	-	-	RBGN 0602M0 FF	•	•	-	CRSB... 06
8.00	3.18	-	-	RBGN 0803M0 FF	•	•	-	CRSB... 08
10.00	3.18	-	-	RBGN 1003M0 FF	•	•	-	CRSB... 10
12.00	3.18	-	-	RBGN 1203M0 FF	•	•	-	CRSB... 12

Order example: RBGN 0602M0 **FF PCD** or RBGN 0602M0 **FF CVD**



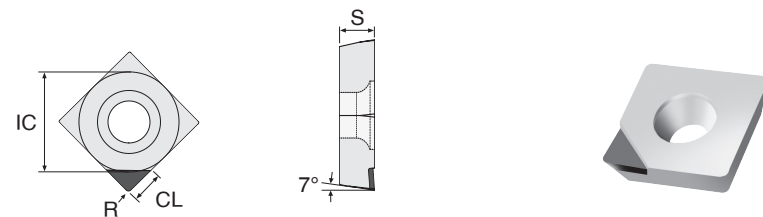
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.00	2.38	-	-	RCGW 0602M0 FF	•	•	-	SRGC... 06 E...SRLC.06
8.00	3.18	-	-	RCGW 0803M0 FF	•	•	-	SRGC... 08 E...SRLC.08
10.00	3.18	-	-	RCGW 1003M0 FF	•	•	-	SRGC... 10 E...SRLC.10
10.00	3.97	-	-	RCGW 10T3M0 FF	•	•	-	SRGC... 10 E...SRLC.10
12.00	4.76	-	-	RCGW 1204M0 FF	•	•	-	SRGC... 12

Order example: RCGW 0602M0 **FF PCD** or RCGW 0602M0 **FF CVD**

SCGT 90° - positive rake angle

single cutting edge

Positive (P)



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
9.52	3.97	0.20	3.00	SCGT 09T302	•	•	*	SSDC ...09
9.52	3.97	0.40	3.00	SCGT 09T304	•	•	*	
9.52	3.97	0.80	3.00	SCGT 09T308	•	•	*	
9.52	3.97	1.20	3.00	SCGT 09T312	•	•	*	
12.70	4.76	0.40	3.00	SCGT 120404	•	•	*	SSDC ...12
12.70	4.76	0.80	3.00	SCGT 120408	•	•	*	
12.70	4.76	1.20	3.00	SCGT 120412	•	•	*	

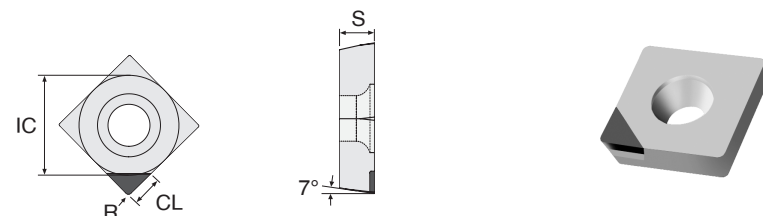
Order example: SCGT 09T302 **PCD** or SCGT 09T302 **CVD**

* Available upon request

SCGW 90°

single cutting edge

Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
9.52	3.97	0.20	3.00	SCGW 09T302	•	•	*	SSDC ...09
9.52	3.97	0.40	3.00	SCGW 09T304	•	•	*	
9.52	3.97	0.80	3.00	SCGW 09T308	•	•	*	
9.52	3.97	1.20	3.00	SCGW 09T312	•	•	*	
12.70	4.76	0.40	3.00	SCGW 120404	•	•	*	SSDC ...12
12.70	4.76	0.80	3.00	SCGW 120408	•	•	*	
12.70	4.76	1.20	3.00	SCGW 120412	•	•	*	

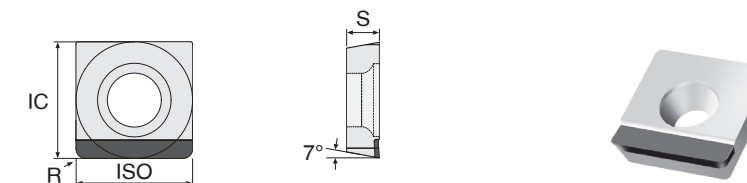
Order example: SCGW 09T302 **PCD** or SCGW 09T302 **CVD**

* Available upon request

SCGT 90° - positive rake angle

GS - single cutting edge

Positive (P)



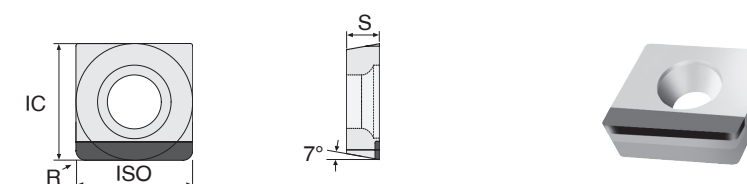
Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
9.52	3.97	0.40	SCGT 09T304 GS	•	•	-	-
9.52	3.97	0.80	SCGT 09T308 GS	•	•	-	
9.52	3.97	1.20	SCGT 09T312 GS	•	•	-	
12.70	4.76	0.40	SCGT 120404 GS	•	•	-	-
12.70	4.76	0.80	SCGT 120408 GS	•	•	-	
12.70	4.76	1.20	SCGT 120412 GS	•	•	-	

Order example: SCGT 09T304 **GS PCD** or SCGT 09T304 **GS CVD**

SCGW 90°

GS - single cutting edge

Neutral



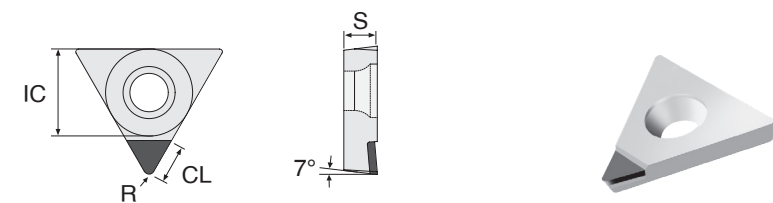
Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
9.52	3.97	0.40	SCGW 09T304 GS	•	•	-	-
9.52	3.97	0.80	SCGW 09T308 GS	•	•	-	
9.52	3.97	1.20	SCGW 09T312 GS	•	•	-	
12.70	4.76	0.40	SCGW 120404 GS	•	•	-	-
12.70	4.76	0.80	SCGW 120408 GS	•	•	-	
12.70	4.76	1.20	SCGW 120412 GS	•	•	-	

Order example: SCGW 09T304 **GS PCD** or SCGW 09T304 **GS CVD**

TCGT 60° - positive rake angle

single cutting edge

Positive (P)



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
5.56	2.38	0.20	3.00	TCGT 090202	●	●	*	STFC...09
5.56	2.38	0.40	3.00	TCGT 090204	●	●	*	
5.56	2.38	0.80	3.00	TCGT 090208	●	●	*	
6.35	2.38	0.20	3.00	TCGT 110202	●	●	*	STFC...11
6.35	2.38	0.40	3.00	TCGT 110204	●	●	*	
6.35	2.38	0.80	3.00	TCGT 110208	●	●	*	
9.52	3.97	0.20	3.00	TCGT 16T302	●	●	*	STFC...16
9.52	3.97	0.20	3.00	TCGT 16T304	●	●	*	
9.52	3.97	0.80	3.00	TCGT 16T308	●	●	*	
9.52	3.97	1.20	3.00	TCGT 16T312	●	●	*	

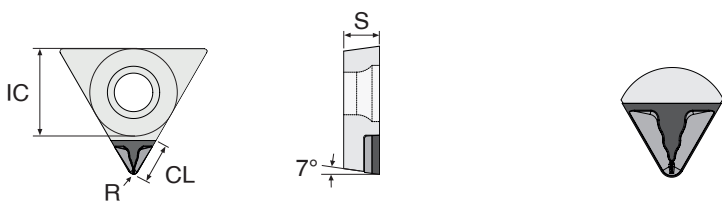
Order example: TCGT 090204 **PCD** or TCGT 090204 **CVD**

* Available upon request

TCGT 60° - Chip Breaker

single cutting edge

Neutral

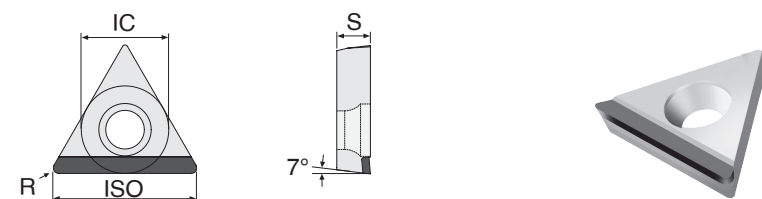


Chip Breaker for finishing (F) and roughing (R)

Dimensions				Ordering Code	Grade / Type		Toolholders
IC	S	R	CL		F-PCD	R-PCD	
5.56	2.38	0.20	3.00	TCGT 090202	●	●	STFC...09
5.56	2.38	0.40	3.00	TCGT 090204	●	●	
5.56	2.38	0.80	3.00	TCGT 090208	●	●	
6.35	2.38	0.20	3.00	TCGT 110202	●	●	STFC...11
6.35	2.38	0.40	3.00	TCGT 110204	●	●	
6.35	2.38	0.80	3.00	TCGT 110208	●	●	
9.52	3.97	0.20	3.00	TCGT 16T302	●	●	STFC...16
9.52	3.97	0.40	3.00	TCGT 16T304	●	●	
9.52	3.97	0.80	3.00	TCGT 16T308	●	●	

Order example: TCGT 090202 **F PCD** or TCGT 090202 **R PCD**

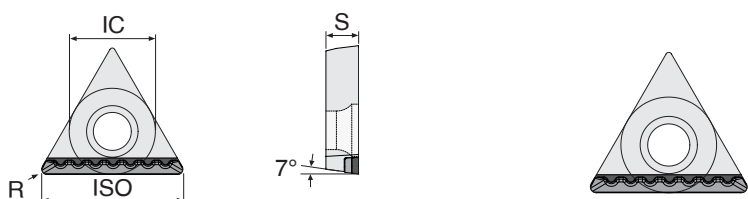
Positive (P)



Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
5.56	2.38	0.20	TCGT 090202 GS	●	●	-	-
5.56	2.38	0.40	TCGT 090204 GS	●	●	-	
5.56	2.38	0.80	TCGT 090208 GS	●	●	-	
6.35	2.38	0.20	TCGT 110202 GS	●	●	-	-
6.35	2.38	0.40	TCGT 110204 GS	●	●	-	
6.35	2.38	0.80	TCGT 110208 GS	●	●	-	
6.35	2.38	1.20	TCGT 110212 GS	●	●	-	
9.52	3.97	0.20	TCGT 16T302 GS	●	●	-	-
9.52	3.97	0.40	TCGT 16T304 GS	●	●	-	
9.52	3.97	0.80	TCGT 16T308 GS	●	●	-	
9.52	3.97	1.20	TCGT 16T312 GS	●	●	-	

Order example: TCGT 090202 GS **PCD** or TCGT 090202 GS **CVD**

Neutral

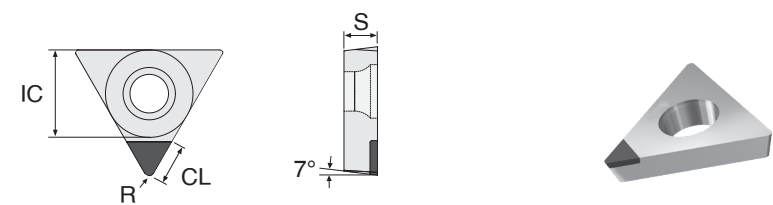


Chip Breaker for finishing (F) and roughing (R)

Dimensions			Ordering Code	Grade / Type		Toolholders
IC	S	R		F-PCD	R-PCD	
5.56	2.38	0.20	TCGT 090202 GS	●	●	-
5.56	2.38	0.40	TCGT 090204 GS	●	●	
5.56	2.38	0.80	TCGT 090208 GS	●	●	
6.35	2.38	0.20	TCGT 110202 GS	●	●	-
6.35	2.38	0.40	TCGT 110204 GS	●	●	
6.35	2.38	0.80	TCGT 110208 GS	●	●	
9.52	3.97	0.20	TCGT 16T302 GS	●	●	-
9.52	3.97	0.40	TCGT 16T304 GS	●	●	
9.52	3.97	0.80	TCGT 16T308 GS	●	●	

Order example: TCGT 090202 GS **F PCD** or TCGT 090202 GS **R PCD**

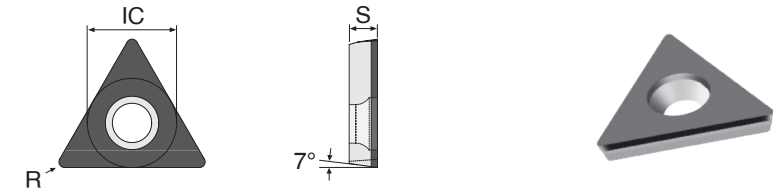
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
5.56	2.38	0.10	3.00	TCGW 090201	●	●	*	STFC...09
5.56	2.38	0.20	3.00	TCGW 090202	●	●	*	
5.56	2.38	0.40	3.00	TCGW 090204	●	●	*	
5.56	2.38	0.80	3.00	TCGW 090208	●	●	*	
6.35	2.38	0.10	3.00	TCGW 110201	●	●	*	STFC...11
6.35	2.38	0.20	3.00	TCGW 110202	●	●	*	
6.35	2.38	0.40	3.00	TCGW 110204	●	●	*	
6.35	2.38	0.80	3.00	TCGW 110208	●	●	*	
9.52	3.97	0.20	3.00	TCGW 16T302	●	●	*	STFC...16
9.52	3.97	0.40	3.00	TCGW 16T304	●	●	*	
9.52	3.97	0.80	3.00	TCGW 16T308	●	●	*	
9.52	3.97	1.20	3.00	TCGW 16T312	●	●	*	

Order example: TCGW 090201 **PCD** or TCGW 090201 **CVD**
* Available upon request

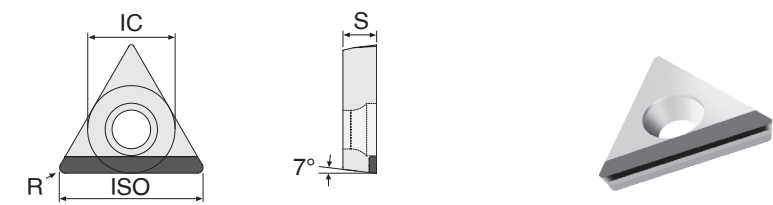
FullFace



Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
5.56	2.38	0.20	TCGW 090202 FF	●	●	-	-
5.56	2.38	0.40	TCGW 090204 FF	●	●	-	
5.56	2.38	0.80	TCGW 090208 FF	●	●	-	
6.35	2.38	0.20	TCGW 110202 FF	●	●	-	-
6.35	2.38	0.40	TCGW 110204 FF	●	●	-	
6.35	2.38	0.80	TCGW 110208 FF	●	●	-	

Order example: TCGW 090202 **FF PCD** or TCGW 090202 **FF CVD**

Neutral

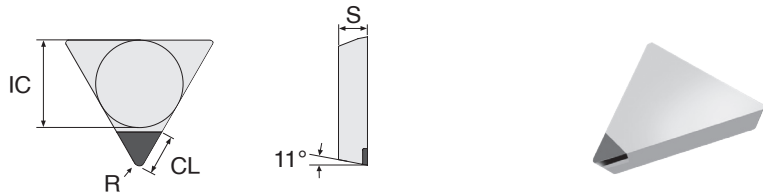


Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
5.56	2.38	0.20	TCGW 090202 GS	●	●	-	-
5.56	2.38	0.40	TCGW 090204 GS	●	●	-	
5.56	2.38	0.80	TCGW 090208 GS	●	●	-	
6.35	2.38	0.20	TCGW 110202 GS	●	●	-	-
6.35	2.38	0.40	TCGW 110204 GS	●	●	-	
6.35	2.38	0.80	TCGW 110208 GS	●	●	-	
6.35	2.38	1.20	TCGT 110212 GS	●	●	-	
9.52	3.97	0.20	TCGT 16T302 GS	●	●	-	-
9.52	3.97	0.40	TCGT 16T304 GS	●	●	-	
9.52	3.97	0.80	TCGT 16T308 GS	●	●	-	
9.52	3.97	1.20	TCGT 16T312 GS	●	●	-	

Order example: TCGW 090202 GS **PCD** or TCGW 090202 GS **CVD**

TPGN 60°
single cutting edge

Neutral

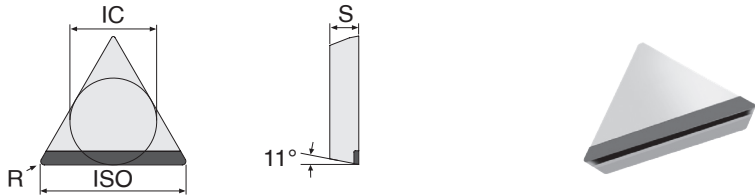


Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
5.56	2.38	0.40	3.00	TPGN 090204	●	●	*	STGC...09
5.56	2.38	0.80	3.00	TPGN 090208	●	●	*	
6.35	2.38	0.40	3.00	TPGN 110204	●	●	*	STGC...11
6.35	2.38	0.80	3.00	TPGN 110208	●	●	*	
6.35	3.18	0.20	3.00	TPGN 110302	●	●	*	STGC...11
6.35	3.18	0.40	3.00	TPGN 110304	●	●	*	
6.35	3.18	0.80	3.00	TPGN 110308	●	●	*	
9.52	3.18	0.40	3.00	TPGN 160304	●	●	*	STGC...16
9.52	3.18	0.80	3.00	TPGN 160308	●	●	*	
9.52	3.18	1.20	3.00	TPGN 160312	●	●	*	

Order example: TPGN 090204 **PCD** or TPGN 090204 **CVD**
* Available upon request

TPGN 60°
GS - single cutting edge

Neutral

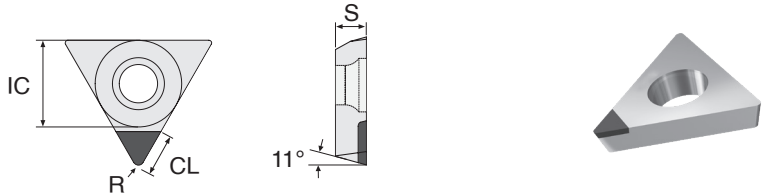


Dimensions			Ordering Code	Grade / Type			Toolholders
IC	S	R		PCD	CVD	CDX	
6.35	3.18	0.40	TPGN 110304 GS	●	●	-	-
6.35	3.18	0.80	TPGN 110308 GS	●	●	-	
6.35	3.18	1.20	TPGN 110312 GS	●	●	-	
9.52	3.18	0.40	TPGN 160304 GS	●	●	-	-
9.52	3.18	0.80	TPGN 160308 GS	●	●	-	
9.52	3.18	1.20	TPGN 160312 GS	●	●	-	

Order example: TPGN 110304 **GS PCD** or TPGN 110304 **GS CVD**

TPGW 60°
single cutting edge

Neutral



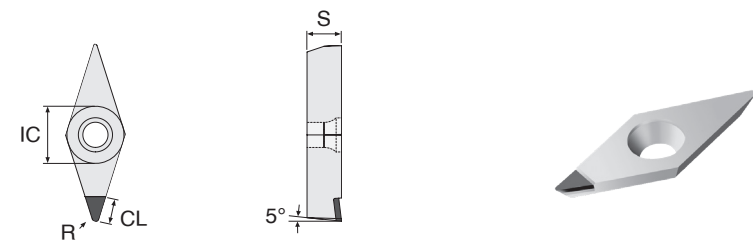
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.97	1.98	0.10	2.00	TPGW 06T101	*	●	●	E...STXP.06
3.97	1.98	0.20	2.00	TPGW 06T102	*	●	●	
3.97	1.98	0.40	2.00	TPGW 06T104	*	●	●	

Order example: TPGW 06T101 **CVD** or TPGW 06T101 **CDX**
* Available upon request

VBGT 35° - positive rake angle

single cutting edge

Positive (P)



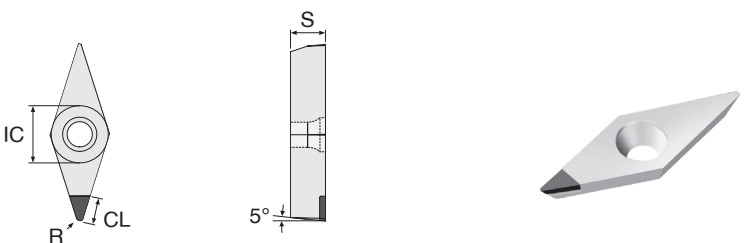
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.10	3.00	VBGT 110201	●	●	*	SVJB... 11 SVVBN... 11
6.35	2.38	0.20	3.00	VBGT 110202	●	●	*	
6.35	2.38	0.40	3.00	VBGT 110204	●	●	*	
6.35	2.38	0.80	3.00	VBGT 110208	●	●	*	
9.52	4.76	0.10	3.00	VBGT 160401	●	●	*	SVJB... 16 SVVBN... 16
9.52	4.76	0.20	3.00	VBGT 160402	●	●	*	
9.52	4.76	0.40	3.00	VBGT 160404	●	●	*	
9.52	4.76	0.80	3.00	VBGT 160408	●	●	*	
9.52	4.76	1.20	3.00	VBGT 160412	●	●	*	

Order example: VBGT 110201 **PCD** or VBGT 110201 **CVD**
* Available upon request

VBGW 35°

single cutting edge

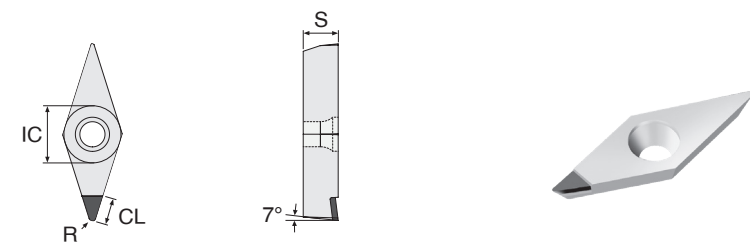
Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
6.35	2.38	0.10	3.00	VBGW 110201	●	●	*	SVJB... 11 SVVBN... 11
6.35	2.38	0.20	3.00	VBGW 110202	●	●	*	
6.35	2.38	0.40	3.00	VBGW 110204	●	●	*	
6.35	2.38	0.80	3.00	VBGW 110208	●	●	*	
9.52	4.76	0.10	3.00	VBGW 160401	●	●	*	SVJB... 16 SVVBN... 16
9.52	4.76	0.20	3.00	VBGW 160402	●	●	*	
9.52	4.76	0.40	3.00	VBGW 160404	●	●	*	
9.52	4.76	0.80	3.00	VBGW 160408	●	●	*	
9.52	4.76	1.20	3.00	VBGW 160412	●	●	*	

Order example: VBGW 110201 **PCD** or VBGW 110201 **CVD**
* Available upon request

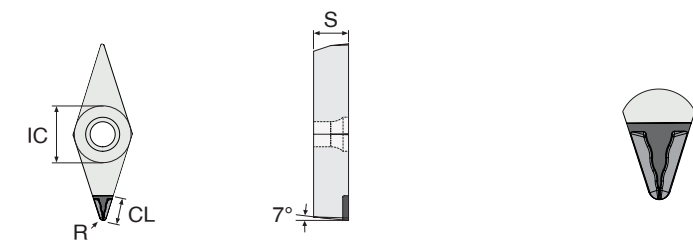
Positive (P)



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.97	2.38	0.10	3.00	VCGT 070201	●	●	*	SVHC... 07 SVJC... 07 SVVCN... 07 E...SVQC.07
3.97	2.38	0.20	3.00	VCGT 070202	●	●	*	
3.97	2.38	0.40	3.00	VCGT 070204	●	●	*	
3.97	2.38	0.80	3.00	VCGT 070208	●	●	*	
6.35	3.18	0.10	3.00	VCGT 110301	●	●	*	SVHC... 11 SVJC... 11 SVVCN... 11 E...SVQC.11
6.35	3.18	0.20	3.00	VCGT 110302	●	●	*	
6.35	3.18	0.40	3.00	VCGT 110304	●	●	*	
6.35	3.18	0.80	3.00	VCGT 110308	●	●	*	
9.52	4.76	0.10	3.00	VCGT 160401	●	●	*	SVHC... 16 SVJC... 16 SVVCN... 16 E...SVQC.16
9.52	4.76	0.20	3.00	VCGT 160402	●	●	*	
9.52	4.76	0.40	3.00	VCGT 160404	●	●	*	
9.52	4.76	0.80	3.00	VCGT 160408	●	●	*	
9.52	4.76	1.20	3.00	VCGT 160412	●	●	*	

Order example: VCGT 070201 **PCD** or VCGT 070201 **CVD**
* Available upon request

Neutral



Chip Breaker for finishing (F) and roughing (R)

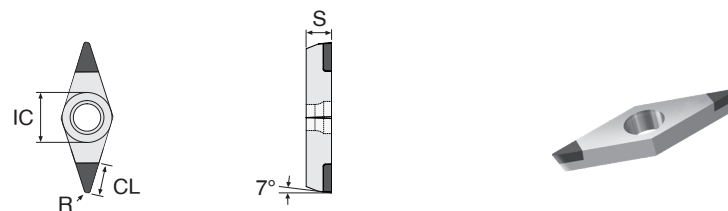
Dimensions				Ordering Code	Grade / Type				Toolholders
IC	S	R	CL		F-PCD	R-PCD	F-CVD	R-CVD	
3.97	2.38	0.20	3.00	VCGT 070202	●	●	●	●	SVHC... 07 SVJC... 07 SVVCN... 07 E...SVQC.07
3.97	2.38	0.40	3.00	VCGT 070204	●	●	●	●	
3.97	2.38	0.80	3.00	VCGT 070208	●	●	●	●	
6.35	3.18	0.05	3.00	VCGT 1103005	●	-	●	-	SVHC... 11 SVJC... 11 SVVCN... 11 E...SVQC.11
6.35	3.18	0.10	3.00	VCGT 110301	●	-	●	-	
6.35	3.18	0.20	3.00	VCGT 110302	●	●	●	●	
6.35	3.18	0.40	3.00	VCGT 110304	●	●	●	●	
6.35	3.18	0.80	3.00	VCGT 110308	●	●	●	●	
9.52	4.76	0.20	3.00	VCGT 160402	●	●	●	●	SVHC... 16 SVJC... 16 SVVCN... 16 E...SVQC.16
9.52	4.76	0.40	3.00	VCGT 160404	●	●	●	●	
9.52	4.76	0.80	3.00	VCGT 160408	●	●	●	●	

Order example: VCGT 070202 **F PCD** or VCGT 070202 **R CVD**

VCGW 35°

two cutting edges and single cutting edge

Neutral

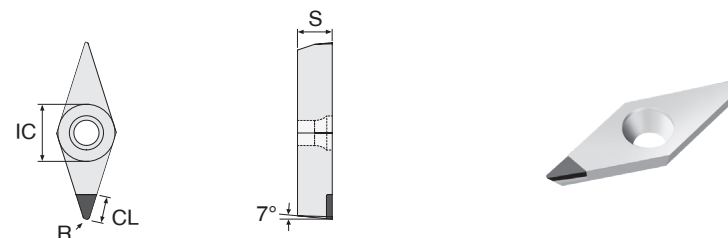


Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.10	1.59	0.10	2.00	VCGW 050101	*	●	●	E...SVLC.05 E...SVVC.05 E...SVXC.05
3.10	1.59	0.20	2.00	VCGW 050102	*	●	●	
3.10	1.59	0.40	2.00	VCGW 050104	*	●	●	

Order example: VCGW 050101 **CVD** or VCGW 050101 **CDX**

* Available upon request

Neutral



Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.97	2.38	0.10	3.00	VCGW 070201	●	●	*	SVHC... 07 SVJC... 07 SVVCN... 07 E...SVQC.07
3.97	2.38	0.20	3.00	VCGW 070202	●	●	*	
3.97	2.38	0.40	3.00	VCGW 070204	●	●	*	
3.97	2.38	0.80	3.00	VCGW 070208	●	●	*	
6.35	3.18	0.10	3.00	VCGW 110301	●	●	*	SVHC... 11 SVJC... 11 SVVCN... 11 E...SVQC.11
6.35	3.18	0.20	3.00	VCGW 110302	●	●	*	
6.35	3.18	0.40	3.00	VCGW 110304	●	●	*	
6.35	3.18	0.80	3.00	VCGW 110308	●	●	●	
9.52	4.76	0.10	3.00	VCGW 160401	●	●	*	SVHC... 16 SVJC... 16 SVVCN... 16 E...SVQC.16
9.52	4.76	0.20	3.00	VCGW 160402	●	●	●	
9.52	4.76	0.40	3.00	VCGW 160404	●	●	●	
9.52	4.76	0.80	3.00	VCGW 160408	●	●	●	
9.52	4.76	1.20	3.00	VCGW 160412	●	●	*	

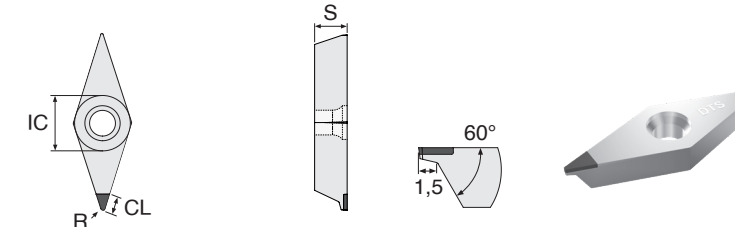
Order example: VCGW 070201 **PCD** or VCGW 070201 **CVD**

* Available upon request

VXGW 35°

single cutting edge

Neutral



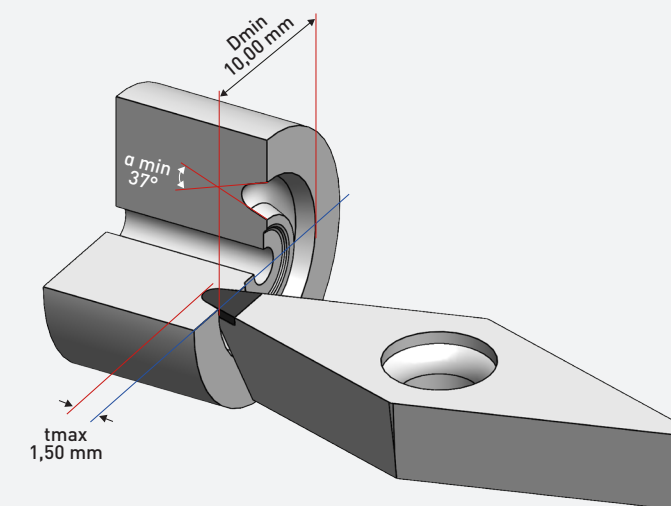
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
9.52	4.76	0.10	3.00	VXGW 160401	*	●	*	SVJX... 16 SVVXN... 16
9.52	4.76	0.20	3.00	VXGW 160402	*	●	*	
9.52	4.76	0.40	3.00	VXGW 160404	*	●	*	
9.52	4.76	0.80	3.00	VXGW 160408	*	●	*	

Order example: VXGW 160401 **CVD**

* Available upon request

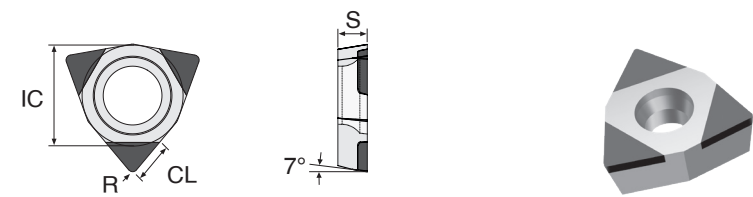
Face / Axial machining:

The VXGW cutting insert is designed for face and axial contour machining, enabling precise machining of profiles with a minimum external diameter of 10 mm and a maximum groove depth of 1.5 mm.



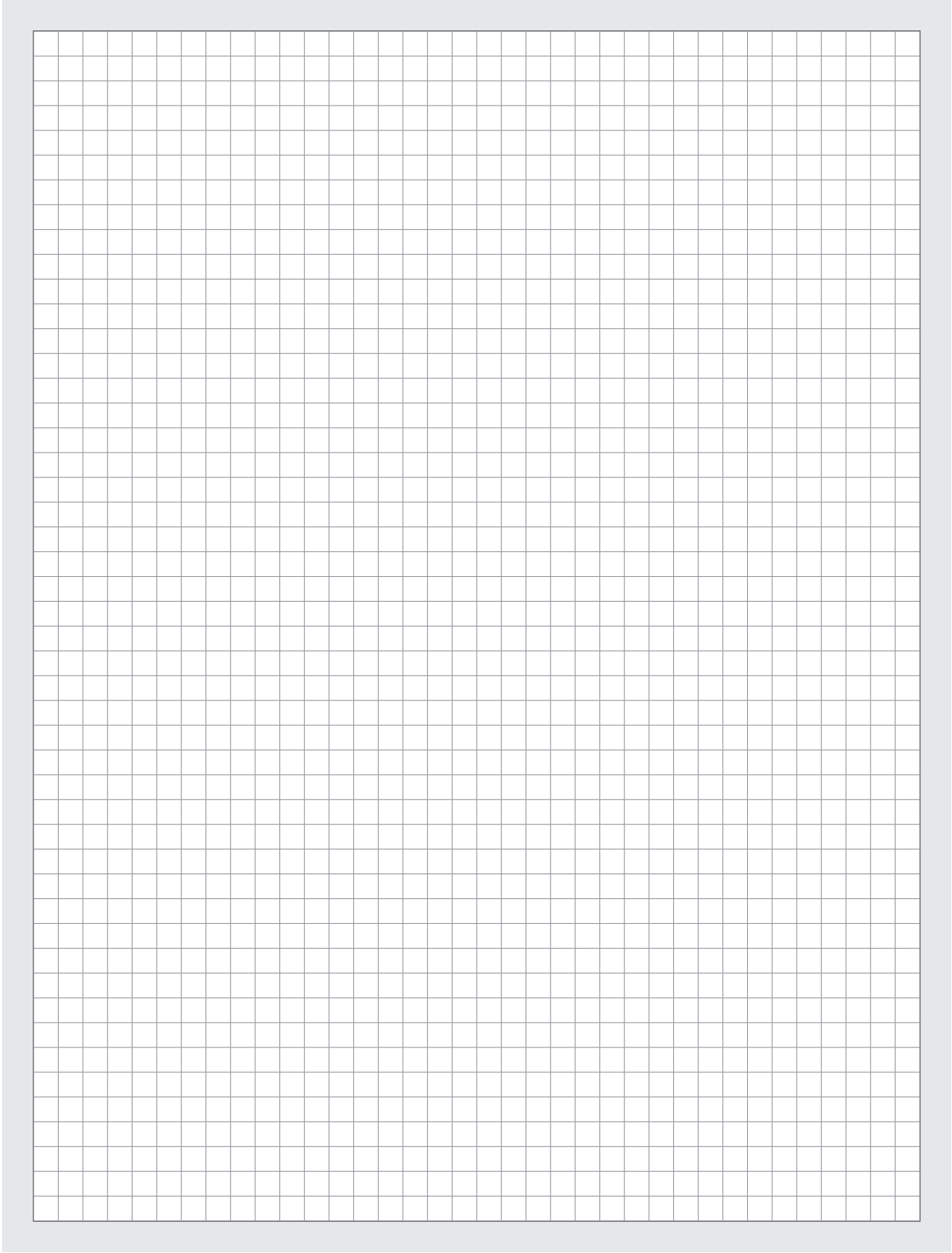
The insert is supplied as standard with CVD grade. Additional PCD or Crystal Diamond X grades are also available upon request to meet specific application requirements.

Neutral



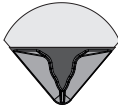
Dimensions				Ordering Code	Grade / Type			Toolholders
IC	S	R	CL		PCD	CVD	CDX	
3.97	1.59	0.10	1.60	WCGW 020101	*	•	•	E...SWUC.02
3.97	1.59	0.20	1.60	WCGW 020102	*	•	•	
3.97	1.59	0.40	1.60	WCGW 020104	*	•	•	

Order example: WCGW 020101 **CVD** or WCGW 020101 **CDX**
* Available upon request



Material	Diamond Indexable Inserts											
	PCD						CVD					
	V _c [m/min]		a _p [mm]		F [mm/rev]		V _c [m/min]		a _p [mm]		F [mm/rev]	
	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	on request											
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

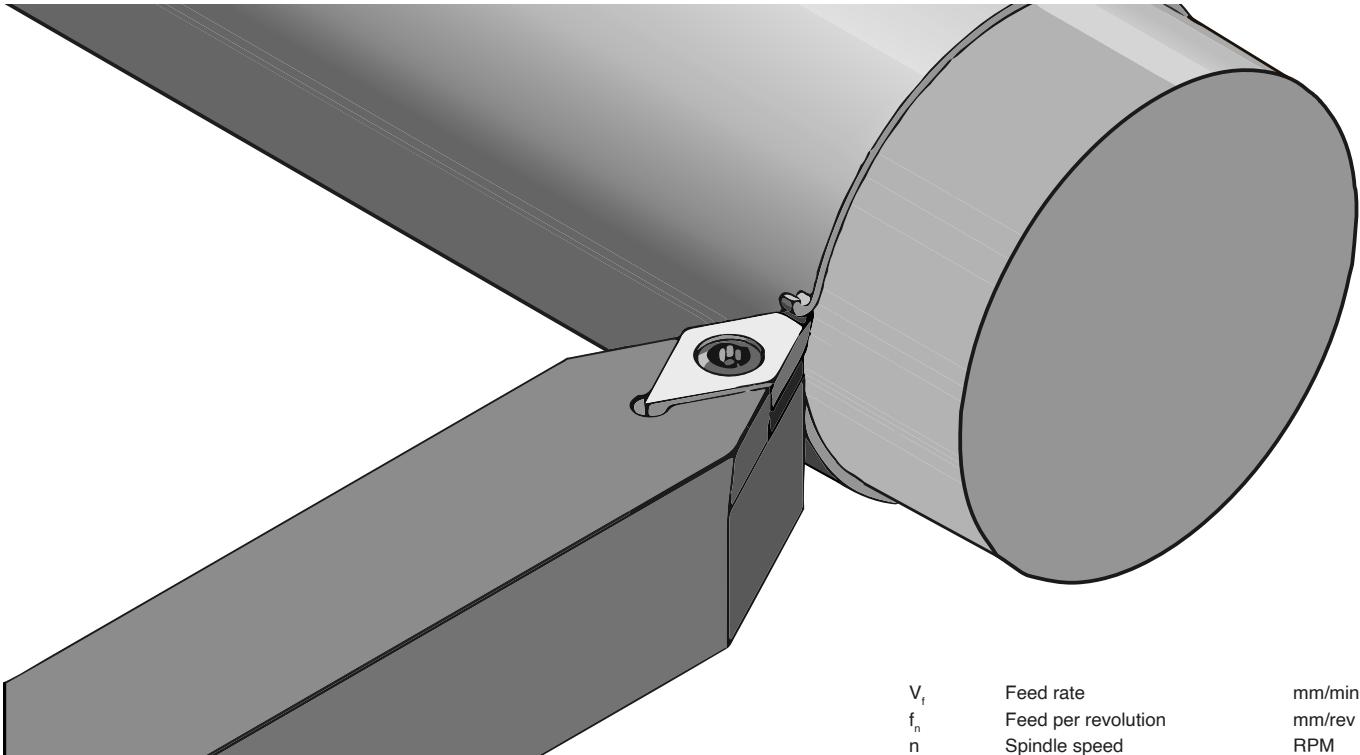
Diamond Indexable Inserts										
Crystal Diamond X										
V _c [m/min]		a _p [mm]		F [mm/rev]		Cooling 				
min.	max.	min.	max.	min.	max.	Dry	Air	Emulsion	Oil	MQL
80	5,000	0.01	2.60	0.005	0.50	5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
						5. Choice	4. Choice	1. Choice	2. Choice	3. Choice
								1. Choice	2. Choice	3. Choice
						2. Choice	1. Choice			
							3. Choice	1. Choice		2. Choice
on request						on request				
							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

		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/rev]		V _c [m/min]		a _p [mm]		F [mm/rev]	
		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
Metal Matrix Composite	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

When machining with diamond inserts, proper cooling is the key to successful machining.

		Cooling 				
Material		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
Metal Matrix Composite			2. Choice	1.Choice		



V_f	Feed rate	mm/min
f_n	Feed per revolution	mm/rev
n	Spindle speed	RPM
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	cm ³ /min
a_p	Cutting depth	mm

► Cutting speed

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

[m/min]

► Spindle speed

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

[RPM]

► Feed per revolution

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

[mm/rev]

► Cutting time

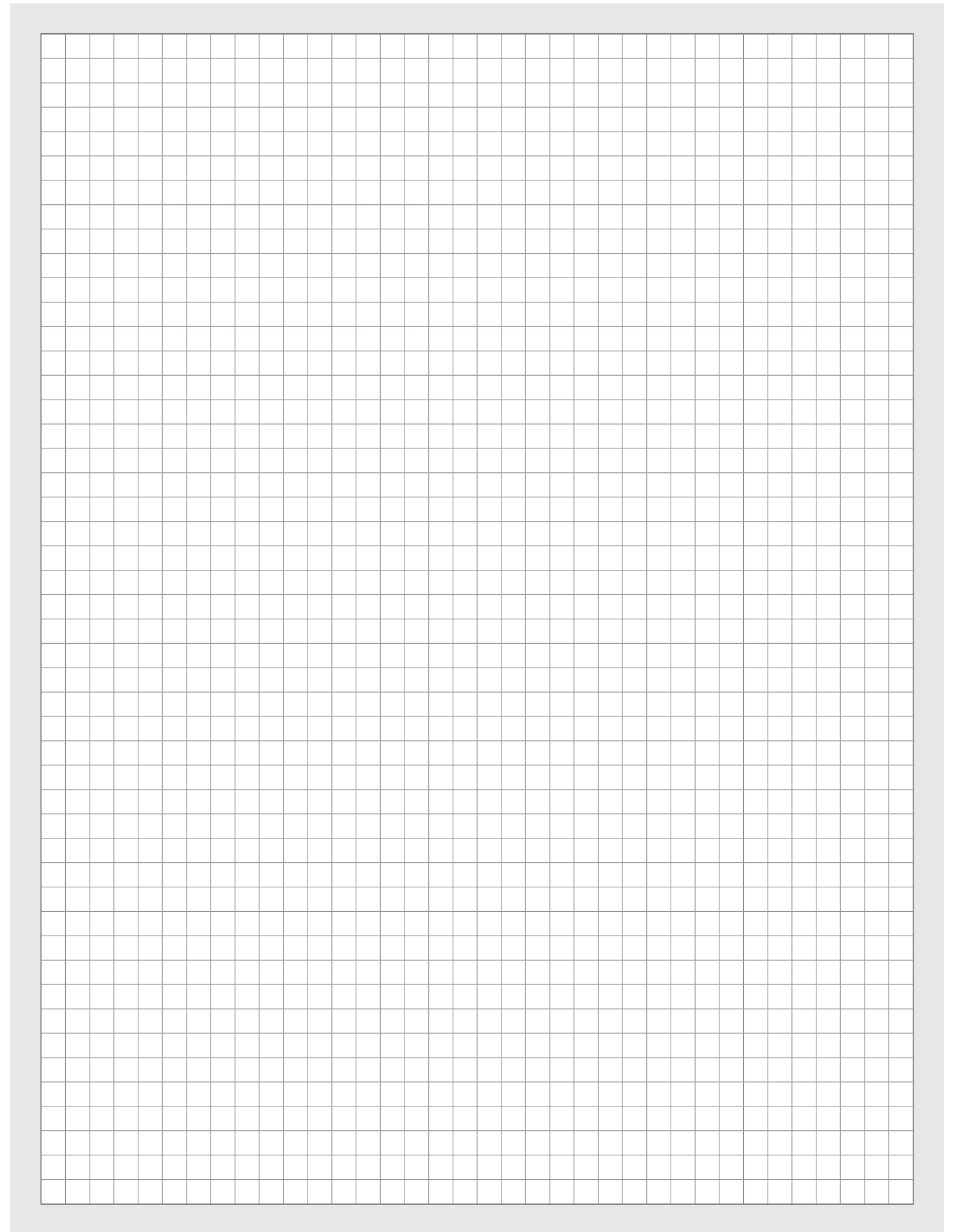
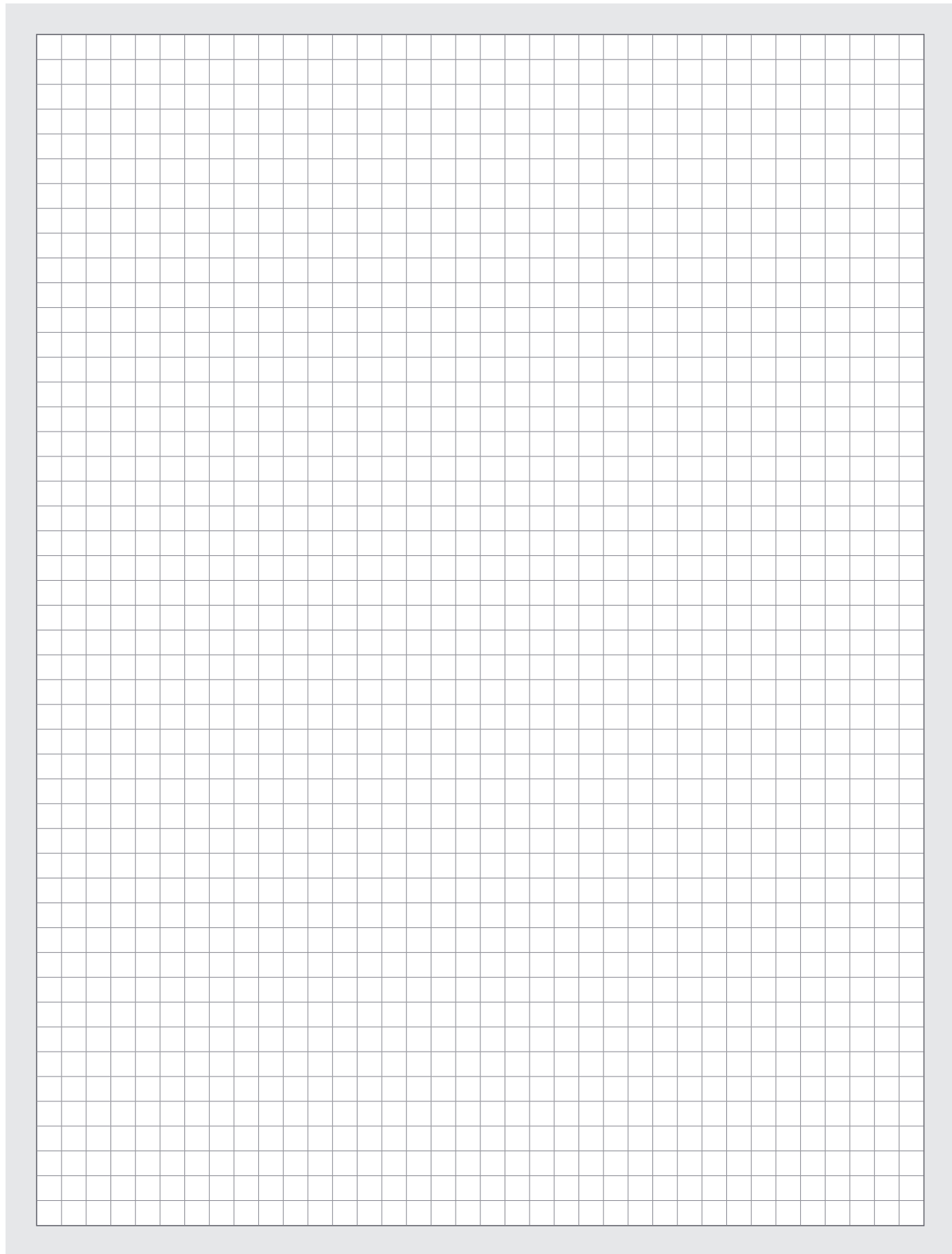
$$t_c = \frac{l_m}{f_n \times n}$$

[min]

► Stock removal rate

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

[cm³/min]





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