



CBN INSERTS

Tipped CBN Inserts
CBN With Full Edge

Overview		B01	-	B04
Code		B05	-	B06
Tipped CBN Inserts	CC(P)GW/CC(P)MW DC(P)GW/DC(P)MW TP(N)GN/TP(N)MN VNGW/VNMW SPGN/SPMN WCGW(A)/WCMW(A) C(D)NGA/C(D)NMA TC(P)GW/TC(P)MW VB(C)GW/VB(C)MW SCGW(N)/SCMW(N) SNGA(N)/SNMA(N)	B07	-	B28

Overview

CBN inserts are primarily used for high-speed machining of hardened steel, powdered metal, superalloys, and cast iron. Our CBN inserts are optimized and manufactured to deliver significantly longer tool life, uniform surface finish, and excellent dimensional control. Consequently, the cost of components can decrease significantly, leading to higher productivity and cost savings in the manufacturing operation.

Material Introduction

	Low CBN	High CBN	
Material Characteristics	40 - 70 vol%	70 - 95 vol%	CBN Content
	0.5 - 5 µm	2 - 10 µm	CBN Grain Size
Toughness Behavior			The toughness behavior is also influenced by tool edge geometry and the severity of the machining operation.
	Strength/Toughness Thermal conductivity		
Wear Behavior			Wear Behaviour is influenced by machining conditions, notably cutting speed and the size of carbides in the workpiece material.
	Property/Behaviour in Applications		

CBN Grade



DCN450

Approximately 45% CBN
Sub- μ m CBN grain size

- Ideal for moderately interrupted hard turning and finish hard milling.
- Excellent resistance to crater wear, among the highest in the market.
- Fine structure for sub- μ m surface roughness.



DCC500

Approximately 50% CBN
1.5 μ m average grain size

- Suitable for continuous and lightly interrupted cutting.
- Excellent abrasion resistance, making it the ideal choice for cold work tool steels and certain valve seat alloys.
- Also recommended for finishing abrasive high strength cast irons.



DCX650

Approximately 65% of CBN
Average 3 μ m proprietary multi-modal grain size

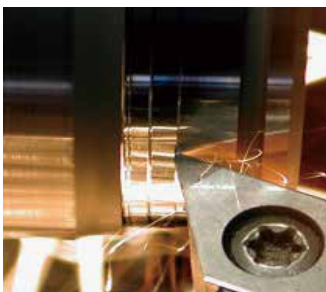
- Ideal for moderately interrupted hard turning and finish hard milling.
- Excellent resistance to crater wear, among the highest in the market.
- Fine structure for sub- μ m surface roughness.



DBW85

Approximately 85% CBN
2 μ m average grain size

- Ideal for grey iron fine boring and valve seat machining due to its excellent strength and abrasion resistance.
- Suitable for heavily interrupted cutting of hard and abrasive workpiece materials, including powder metallurgy components.
- Proven performance in hard fine milling applications.



DBS900

Approximately 90% CBN
4 μ m average grain size

- Ideal for applications with a need for longer tool life. Excels in interrupted machining of grey and hard cast irons, as well as hardened steel milling.
- Suitable for machining the majority of valve seat ring alloys.
- An excellent first-choice grade for the majority of ferrous powder metals.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

A
PCD
INSERTS

Machining Parameter Guidelines

B
CBN
INSERTS

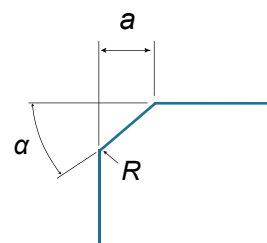
Work Material	Hardness	Cutting Speed V(m/min)	Cutting Depth d(mm)	Feed Rate f(mm/rev)	Recommandation
Hardened Steel	>55HRC	130~210	- 0.5	- 0.5	DCN450
	<56HRC	100~190	- 0.5	0.3~0.5	DCC500
Gray Irons	<55 HRC	600~2500	0.2~2.0	0.5~5.0	DBW85
	>55HRC	600~2500	0.1~1.0	0.1~2.0	DBS900 DBW85
Nodular Iron	—	150~350	0.2~2.0	0.1~1.0	DCC500 DCX650
White and Chrome Iron	—	50~80	0.2~2.0	0.1~0.5	DSB500 DBW85
		50~100	1.0~3.0	0.2~2.0	
Valve Seat Rings	<350 HV	50~180	0.1~0.5	0.05~0.2	DBW85
	>350 HV	50~180	0.1~0.5	0.05~0.2	

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERSE
PCD
DRILLING
TOOLS

Edge Preparation

F
PCD
REAMERS

Work Material &Working Mode	chamfer Angle α	Chamfer Weight a(mm)	Blunt Roundness R(mm)
Steel	25°	0.1~0.2	0.01~0.02
Cast Iron	20°	0.1~0.5	<0.01
Interruption Mode	30°	0.2	0.01~0.03

G
DIAMOND
DRESSERS

Tips:

- To make sure maximum strength, it's better to use inserts with a larger corner radius.
- The blade chamfering will avoid the edge not to break during the interrupted cutting.
- Don't use the coolant during the continuous cutting.

H
DIAMOND
CUSTOM-MADE
TOOLS

Use Case



Work material: Hardened steel, 57-62HRC, $V(m/min)=100$, $f(m/rev)=0.1$, $d(mm)=0.15mm$

One set of inserts can machine over 500 pcs workpieces, better dimensions, and surface roughness control. 10 times working life increased over other material inserts.



Cylinder bore 750~1200m/min

High-speed machining of gray cast iron cylinder bores 750~1200m/min Longer tool life, increased productivity, stable shape and dimensions, and superior cylindricity in mass production.



Face turning of half shaft HRC55-60 20CrNiMoH

$V(m/min)=170$ $F=0.22$ $D(mm)=0.1$ Increased 15% tooling life increased over competitors, at the same working parameter, Greatly reducing the user's cost.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

ANSI

C	N	M	A	4	3	2	-	1	TP	-	T	010	15	0
1	2	3	4	5	6	7		8	9		10	11	12	13

6			
thickness			
ISO		ANSI	
01	1.59	1	1/16
T1	1.98	1.2	0.75
02	2.38	1.5	3/32
T2	2.78	-	-
03	3.18	2	1/8
T3	3.97	2.5	5/32
04	4.76	3	3/16
05	5.56	3.5	7/32
06	6.36	4	1/4
07	7.94	5	5/16
09	9.52	6	3/8

7			
corner radius r mm, inch			
ISO		ANSI	
01	r=0.1	0.1	1/25
02	r=0.2	0	2/25
04	r=0.4	1	1/64
08	r=0.8	2	1/32
12	r=1.2	3	3/64
16	r=1.6	4	1/16
24	r=2.4	6	3/32
32	r=3.2	8	1/8
0	For diameters converted from imperial units to mm		
M0	For diameters in metric units		



R

8	
number of cutting corners	
1	1 corner
2	2 corners
3	3 corners
4	4 corners
6	6 corners
8	8 corners

9	
insert form	
	TP
	FE
	SF

10 ①	
edge formation	
	Honing
	Sharp edge
	Chamfering
	Chamfering + Honing

11 ①	
chamfer width	
010	0.10mm
020	0.20mm
025	0.25mm
030	0.30mm
040	0.40mm
050	0.50mm
070	0.70mm
150	1.50mm
200	2.00mm

12 ①	
chamfer edge	
10	10°
15	15°
20	20°
25	25°
30	30°
35	35°
45	45°

13 ①	
blunt roundness	
02	0.002
05	0.005
10	0.01
20	0.02
30	0.03

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

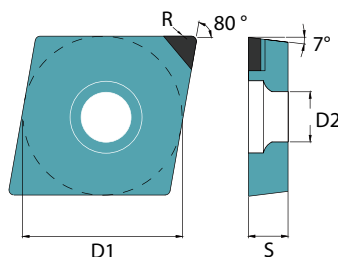
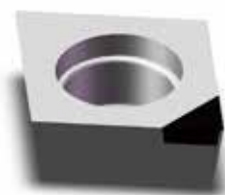
F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

A
PCD
INSERTS

CCGW/CCMW

B
CBN
INSERTSC
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERSE
PCD
DRILLING
TOOLSF
PCD
REAMERSG
DIAMOND
DRESSERS

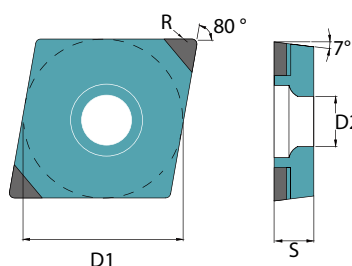
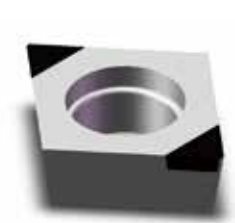
Designation	D1 [MM]	D2 [MM]	S [MM]	R
CCGW060202-1TP	6.35	2.8	2.38	0.2
CCGW060204-1TP				0.4
CCGW060208-1TP				0.8
CCMW060202-1TP	6.35	2.8	2.38	0.2
CCMW060204-1TP				0.4
CCMW060208-1TP				0.8
CCGW09T302-1TP	9.525	4.4	3.97	0.2
CCGW09T304-1TP				0.4
CCGW09T308-1TP				0.8
CCMW09T302-1TP	9.525	4.4	3.97	0.2
CCMW09T304-1TP				0.4
CCMW09T308-1TP				0.8
CCGW120402-1TP	12.7	5.5	4.76	0.2
CCGW120404-1TP				0.4
CCGW120408-1TP				0.8
CCMW120402-1TP	12.7	5.5	4.76	0.2
CCMW120404-1TP				0.4
CCMW120408-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
CCGW090404-1TP	9.525	3.81	4.76	0.4
CCGW090408-1TP				0.8
CCGW090412-1TP				1.2
CCGW090416-1TP				1.6
CCMW090402-1TP	9.525	3.81	4.76	0.2
CCMW090404-1TP				0.4
CCMW090408-1TP				0.8
CCMW090412-1TP				1.2
CCGW120402-1TP	12.7	5.5	4.76	0.2
CCGW120404-1TP				0.4
CCGW120408-1TP				0.8
CCGW120412-1TP				1.2
CCGW120416-1TP	12.7	5.5	4.76	1.6
CCMW120402-1TP				0.2
CCMW120404-1TP				0.4
CCMW120408-1TP				0.8
CCMW120412-1TP				1.2
CCMW120416-1TP				1.6
CCGW160608-1TP	15.875	6.35	6.35	0.8
CCGW160612-1TP				1.2
CCGW160616-1TP				1.6
CCMW160608-1TP	15.875	6.35	6.35	0.8
CCMW160612-1TP				1.2
CCMW160616-1TP				1.6

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

CCGW/CCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
CCGW060202-2TP	6.35	2.8	2.38	0.2
CCGW060204-2TP				0.4
CCGW060208-2TP				0.8
CCMW060202-2TP	6.35	2.8	2.38	0.2
CCMW060204-2TP				0.4
CCMW060208-2TP				0.8
CCGW09T302-2TP	9.525	4.4	3.97	0.2
CCGW09T304-2TP				0.4
CCGW09T308-2TP				0.8
CCMW09T302-2TP	9.525	4.4	3.97	0.2
CCMW09T304-2TP				0.4
CCMW09T308-2TP				0.8
CCGW120402-2TP	12.7	5.5	4.76	0.2
CCGW120404-2TP				0.4
CCGW120408-2TP				0.8
CCMW120402-2TP	12.7	5.5	4.76	0.2
CCMW120404-2TP				0.4
CCMW120408-2TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
CCGW090404-2TP	9.525	3.81	4.76	0.4
CCGW090408-2TP				0.8
CCGW090412-2TP				1.2
CCGW090416-2TP				1.6
CCMW090402-2TP	9.525	3.81	4.76	0.2
CCMW090404-2TP				0.4
CCMW090408-2TP				0.8
CCMW090412-2TP				1.2
CCGW120402-2TP	12.7	5.5	4.76	0.2
CCGW120404-2TP				0.4
CCGW120408-2TP				0.8
CCGW120412-2TP				1.2
CCGW120416-2TP	12.7	5.5	4.76	1.6
CCMW120402-2TP				0.2
CCMW120404-2TP				0.4
CCMW120408-2TP				0.8
CCMW120412-2TP				1.2
CCMW120416-2TP				1.6
CCGW160608-2TP	15.875	6.35	6.35	0.8
CCGW160612-2TP				1.2
CCGW160616-2TP				1.6
CCMW160608-2TP	15.875	6.35	6.35	0.8
CCMW160612-2TP				1.2
CCMW160616-2TP				1.6

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

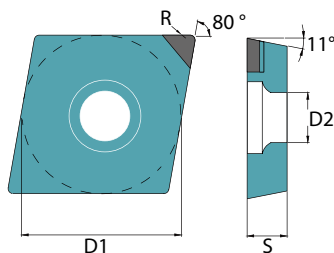
F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

A
PCD
INSERTSB
CBN
INSERTS

CPGW/CPMW

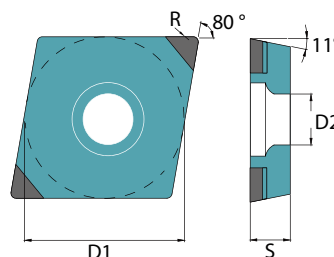
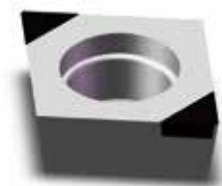


Designation	D1 [MM]	D2 [MM]	S [MM]	R
CPGW060204-1TP	6.35	2.8	2.38	0.4
CPGW060208-1TP				0.8
CPMW060202-1TP	6.35	2.8	2.38	0.2
CPMW060204-1TP				0.4
CPMW060208-1TP				0.8
CPGW090302-1TP	9.525	4.4	3.18	0.2
CPGW090304-1TP				0.4
CPGW090308-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
CPMW090304-1TP	9.525	4.4	3.18	0.4
CPMW090308-1TP				0.8
CPGW120402-1TP	12.7	5.5	4.76	0.2
CPGW120404-1TP				0.4
CPGW120408-1TP				0.8
CPMW120402-1TP	12.7	5.5	4.76	0.2
CPMW120404-1TP				0.4
CPMW120408-1TP				0.8

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERS

CPGW/CPMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
CPGW060204-2TP	6.35	2.8	2.38	0.4
CPGW060208-2TP				0.8
CPMW060202-2TP	6.35	2.8	2.38	0.2
CPMW060204-2TP				0.4
CPMW060208-2TP				0.8
CPGW090302-2TP	9.525	4.4	3.18	0.2
CPGW090304-2TP				0.4
CPGW090308-2TP				0.8

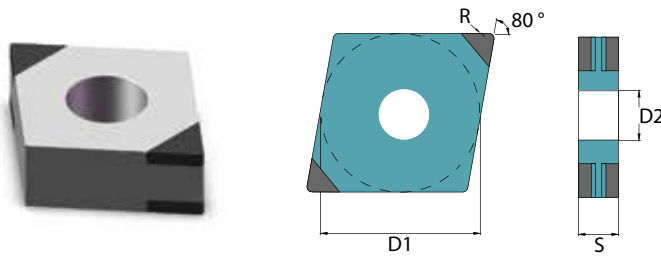
Designation	D1 [MM]	D2 [MM]	S [MM]	R
CPMW090304-2TP	9.525	4.4	3.18	0.4
CPMW090308-2TP				0.8
CPGW120402-2TP	12.7	5.5	4.76	0.2
CPGW120404-2TP				0.4
CPGW120408-2TP				0.8
CPMW120402-2TP	12.7	5.5	4.76	0.2
CPMW120404-2TP				0.4
CPMW120408-2TP				0.8

F
PCD
REAMERSG
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

CNGA/CNMA



Designation	D1 [MM]	D2 [MM]	S [MM]	R
CNGA090304-4TP	9.525	3.81	3.18	0.4
CNGA090308-4TP				0.8
CNGA090312-4TP				1.2
CNGA090316-4TP				1.6
CNMA090302-4TP	9.525	3.81	3.18	0.2
CNMA090304-4TP				0.4
CNMA090308-4TP				0.8
CNMA090312-4TP				1.2
CNGA160608-4TP	15.875	6.35	6.35	0.8
CNGA160612-4TP				1.2
CNGA160616-4TP				1.6
CNMA160608-4TP	15.875	6.35	6.35	0.8
CNMA160612-4TP				1.2
CNMA160616-4TP				1.6

Designation	D1 [MM]	D2 [MM]	S [MM]	R
CNGA120402-4TP	12.7	5.16	4.76	0.2
CNGA120404-4TP				0.4
CNGA120408-4TP				0.8
CNGA120412-4TP				1.2
CNGA120416-4TP				1.6
CNMA120402-4TP	12.7	5.16	4.76	0.2
CNMA120404-4TP				0.4
CNMA120408-4TP				0.8
CNMA120412-4TP				1.2
CNMA120416-4TP				1.6

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

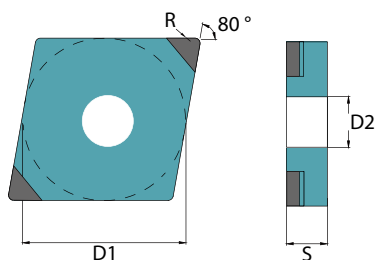
H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTSB
CBN
INSERTS

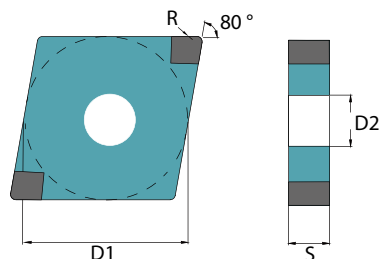
CNGA/CNMA



Designation	D1 [MM]	D2 [MM]	S [MM]	R
CNGA090304-2TP	9.525	3.81	3.18	0.4
CNGA090308-2TP				0.8
CNGA090312-2TP				1.2
CNGA090316-2TP				1.6
CNMA090302-2TP	9.525	3.81	3.18	0.2
CNMA090304-2TP				0.4
CNMA090308-2TP				0.8
CNMA090312-2TP				1.2
CNGA160608-2TP	15.875	6.35	6.35	0.8
CNGA160612-2TP				1.2
CNGA160616-2TP				1.6
CNMA160608-2TP	15.875	6.35	6.35	0.8
CNMA160612-2TP				1.2
CNMA160616-2TP				1.6

Designation	D1 [MM]	D2 [MM]	S [MM]	R
CNGA120402-2TP	12.7	5.16	4.76	0.2
CNGA120404-2TP				0.4
CNGA120408-2TP				0.8
CNGA120412-2TP				1.2
CNGA120416-2TP				1.6
CNMA120402-2TP	12.7	5.16	4.76	0.2
CNMA120404-2TP				0.4
CNMA120408-2TP				0.8
CNMA120412-2TP				1.2
CNMA120416-2TP				1.6

CNGA/CNMA-FULL EDGE

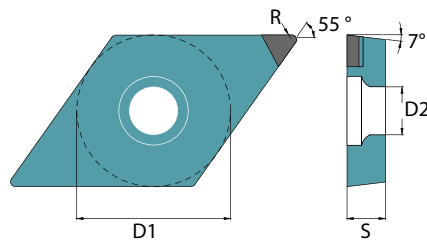
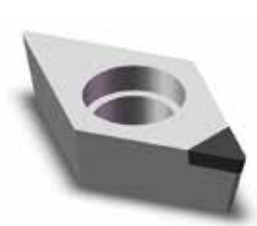


Designation	D1 [MM]	D2 [MM]	S [MM]	R
CNGA120404-2FE	12.7	5.16	4.76	0.4
CNGA120408-2FE				0.8
CNGA120412-2FE				1.2
CNGA120416-2FE				1.6

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

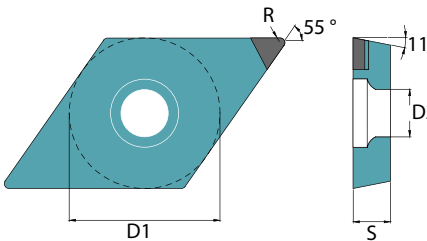
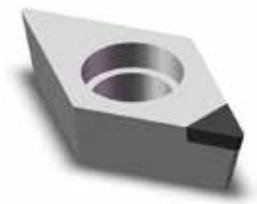
DCGW/DCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
DCGW070202-1TP	6.35	2.8	2.38	0.2
DCGW070204-1TP				0.4
DCGW070208-1TP				0.8
DCMW070202-1TP	6.35	2.8	2.38	0.2
DCMW070204-1TP				0.4
DCMW070208-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
DCGW11T304-1TP	9.525	4.4	3.97	0.4
DCGW11T308-1TP				0.8
DCGW11T312-1TP				1.2
DCMW11T304-1TP	9.525	4.4	3.97	0.4
DCMW11T308-1TP				0.8
DCMW11T312-1TP				1.2

DPGW/DPMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
DPGT070202-1TP	6.35	2.8	2.38	0.2
DPGT070204-1TP				0.4
DPGT070208-1TP				0.8
DPMT070202-1TP	6.35	2.8	2.38	0.2
DPMT070204-1TP				0.4
DPMT070208-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
DPGT11T304-1TP	9.525	4.4	3.97	0.4
DPGT11T308-1TP				0.8
DPGT11T312-1TP				1.2
DPMT11T304-1TP	9.525	4.4	3.97	0.4
DPMT11T308-1TP				0.8
DPMT11T312-1TP				1.2

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

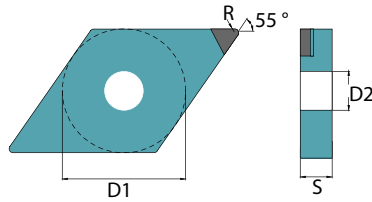
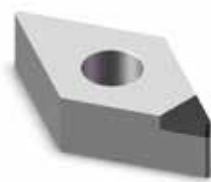
F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

A
PCD
INSERTS

DNGA/DNMA

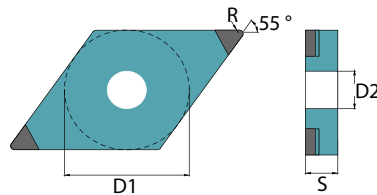
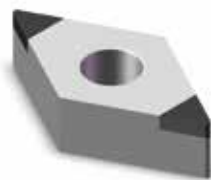
B
CBN
INSERTS

Designation	D1 [MM]	D2 [MM]	S [MM]	R
DNGA150604-1TP	12.7	5.16	6.35	0.4
DNGA150608-1TP				0.8
DNGA150612-1TP				1.2
DNGA150616-1TP				1.6
DNMA150604-1TP	12.7	5.16	6.35	0.4
DNMA150608-1TP				0.8
DNMA150612-1TP				1.2
DNMA150616-1TP				1.6

Designation	D1 [MM]	D2 [MM]	S [MM]	R
DNGA110404-1TP	9.525	3.81	4.76	0.4
DNGA110408-1TP				0.8
DNGA110412-1TP				1.2
DNMA110404-1TP	9.525	3.81	4.76	0.4
DNMA110408-1TP				0.8
DNMA110412-1TP				1.2

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERS

DNGA/DNMA

E
PCD
DRILLING
TOOLSF
PCD
REAMERS

Designation	D1 [MM]	D2 [MM]	S [MM]	R
DNGA150604-2TP	12.7	5.16	6.35	0.4
DNGA150608-2TP				0.8
DNGA150612-2TP				1.2
DNGA150616-2TP				1.6
DNMA150604-2TP	12.7	5.16	6.35	0.4
DNMA150608-2TP				0.8
DNMA150612-2TP				1.2
DNMA150616-2TP				1.6

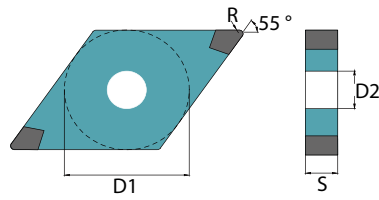
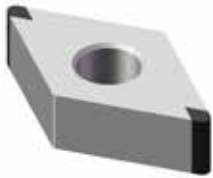
Designation	D1 [MM]	D2 [MM]	S [MM]	R
DNGA110404-2TP	9.525	3.81	4.76	0.4
DNGA110408-2TP				0.8
DNGA110412-2TP				1.2
DNMA110404-2TP	9.525	3.81	4.76	0.4
DNMA110408-2TP				0.8
DNMA110412-2TP				1.2

G
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

DNGA-FULL EDGE



**SOLID
CBN**

Negative



Rough machining



Designation	D1 [MM]	D2 [MM]	S [MM]	R
DNGA150404-2FE	12.7	5.16	4.76	0.4
DNGA150408-2FE				0.8
DNGA150412-2FE				1.2
DNGA150416-2FE				1.6
DNGA150604-2FE	12.7	5.16	6.35	0.4
DNGA150608-2FE				0.8
DNGA150612-2FE				1.2
DNGA150616-2FE				1.6

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

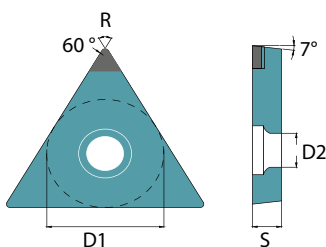
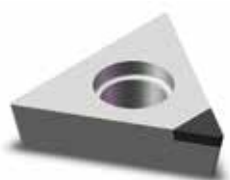
H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

TCGW/TCMW

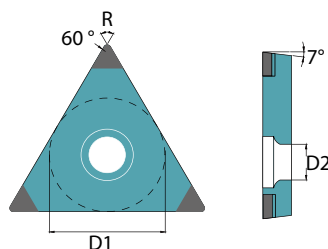
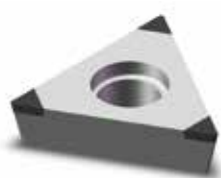


Designation	D1 [MM]	D2 [MM]	S [MM]	R
TCGW090202-1TP	5.56	2.5	2.38	0.2
TCGW090204-1TP				0.4
TCGW090208-1TP				0.8
TCMW090202-1TP	5.56	2.5	2.38	0.2
TCMW090204-1TP				0.4
TCMW090208-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
TCGW110202-1TP	6.35	2.8	2.38	0.2
TCGW110204-1TP				0.4
TCGW110208-1TP				0.8
TCMW110202-1TP	6.35	2.8	2.38	0.2
TCMW110204-1TP				0.4
TCMW110208-1TP				0.8

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERSE
PCD
DRILLING
TOOLSF
PCD
REAMERS

TCGW/TCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
TCGW090202-3TP	5.56	2.5	2.38	0.2
TCGW090204-3TP				0.4
TCGW090208-3TP				0.8
TCMW090202-3TP	5.56	2.5	2.38	0.2
TCMW090204-3TP				0.4
TCMW090208-3TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
TCGW110202-3TP	6.35	2.8	2.38	0.2
TCGW110204-3TP				0.4
TCGW110208-3TP				0.8
TCMW110202-3TP	6.35	2.8	2.38	0.2
TCMW110204-3TP				0.4
TCMW110208-3TP				0.8

G
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

TPGN/TPMN

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

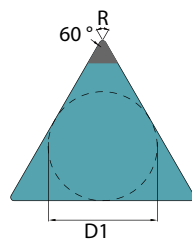
D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

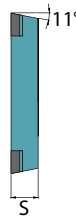
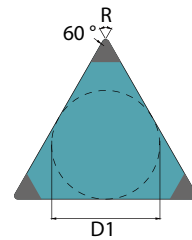
G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS



Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPGN110304-1TP	6.35	-	3.18	0.4
TPGN110308-1TP				0.8
TPMN110304-1TP	6.35	-	3.18	0.4
TPMN110308-1TP				0.8
TPGN160304-1TP	9.525	-	3.18	0.4
TPGN160308-1TP				0.8
TPMN160304-1TP	9.525	-	3.18	0.4
TPMN160308-1TP				0.8

TPGN/TPMN



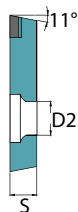
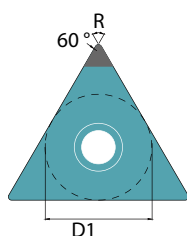
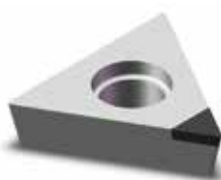
Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPGN110304-3TP	6.35	-	3.18	0.4
TPGN110308-3TP				0.8
TPMN110304-3TP	6.35	-	3.18	0.4
TPMN110308-3TP				0.8
TPGN160304-3TP	9.525	-	3.18	0.4
TPGN160308-3TP				0.8
TPMN160304-3TP	9.525	-	3.18	0.4
TPMN160308-3TP				0.8

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

TPGW/TPMW

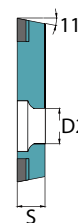
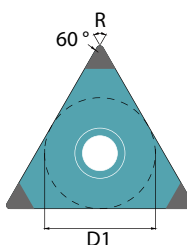
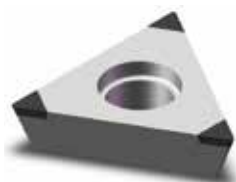
B
CBN
INSERTS

Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPGW090202-1TP	5.56	2.9	2.38	0.2
TPGW090204-1TP				0.4
TPGW090208-1TP				0.8
TPMW090204-1TP	5.56	2.9	2.38	0.4
TPMW090208-1TP				0.8
TPGW110304-1TP	6.35	3.4	3.18	0.4
TPGW110308-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPMW110302-1TP	6.35	3.4	3.18	0.2
TPMW110304-1TP				0.4
TPMW110308-1TP				0.8
TPGW160304-1TP	9.525	4.4	3.18	0.4
TPGW160308-1TP				0.8
TPMW160304-1TP	9.525	4.4	3.18	0.4
TPMW160308-1TP				0.8

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERS

TPGW/TPMW

E
PCD
DRILLING
TOOLSF
PCD
REAMERS

Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPGW090202-3TP	5.56	2.9	2.38	0.2
TPGW090204-3TP				0.4
TPGW090208-3TP				0.8
TPMW090204-3TP	5.56	2.9	2.38	0.4
TPMW090208-3TP				0.8
TPGW110304-3TP	6.35	3.4	3.18	0.4
TPGW110308-3TP				0.8

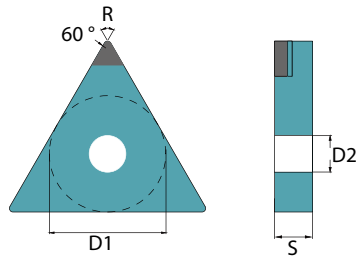
Designation	D1 [MM]	D2 [MM]	S [MM]	R
TPMW110302-3TP	6.35	3.4	3.18	0.2
TPMW110304-3TP				0.4
TPMW110308-3TP				0.8
TPGW160304-3TP	9.525	4.4	3.18	0.4
TPGW160308-3TP				0.8
TPMW160304-3TP	9.525	4.4	3.18	0.4
TPMW160308-3TP				0.8

G
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

TNGA/TNWA



Designation	D1 [MM]	D2 [MM]	S [MM]	R
TNGA160404-1TP	9.525	3.81	4.76	0.4
TNGA160408-1TP				0.8
TNGA160412-1TP				1.2
TNWA160404-1TP	9.525	3.81	4.76	0.4
TNWA160408-1TP				0.8
TNWA160412-1TP				1.2

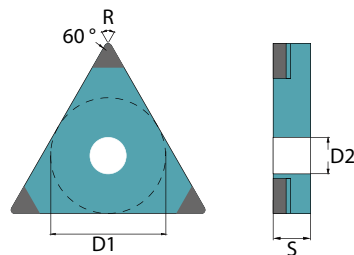
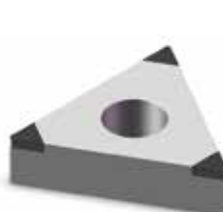
A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

TNGA/TNWA



Designation	D1 [MM]	D2 [MM]	S [MM]	R
TNGA160404-3TP	9.525	3.81	4.76	0.4
TNGA160408-3TP				0.8
TNGA160412-3TP				1.2
TNWA160404-3TP	9.525	3.81	4.76	0.4
TNWA160408-3TP				0.8
TNWA160412-3TP				1.2

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A

PCD
INSERTS

B

CBN
INSERTS

C

SOLID CBN
INSERTS

D

PCD
MILLING
CUTTERS

E

PCD
DRILLING
TOOLS

F

PCD
REAMERS

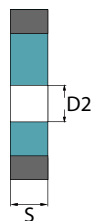
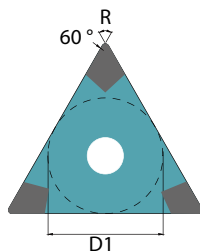
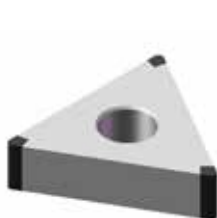
G

DIAMOND
DRESSERS

H

DIAMOND
CUSTOM-MADE
TOOLS

TNGA-FULL EDGE

SOLID
CBN

Negative

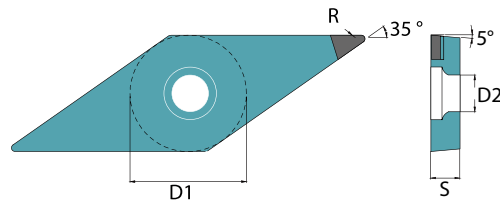


Designation	D1 [MM]	D2 [MM]	S [MM]	R
TNGA160404-3FE	9.525	3.81	4.76	0.4
TNGA160408-3FE				0.8
TNGA160412-3FE				1.2
TNGA220404-3FE	12.7	5.16	4.76	0.4
TNGA220408-3FE				0.8
TNGA220412-3FE				1.2

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

VBGW/VBMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
VBGW160402-1TP	9.525	4.4	4.76	0.2
VBGW160404-1TP				0.4
VBGW160408-1TP				0.8
VBGW160412-1TP				1.2
VBMW160402-1TP	9.525	4.4	4.76	0.2
VBMW160404-1TP				0.4
VBMW160408-1TP				0.8
VBMW160412-1TP				1.2

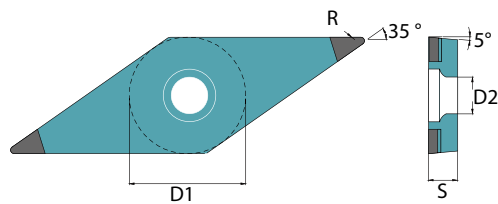
A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

VBGW/VBMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
VBGW160402-2TP	9.525	4.4	4.76	0.2
VBGW160404-2TP				0.4
VBGW160408-2TP				0.8
VBGW160412-2TP				1.2
VBMW160402-2TP	9.525	4.4	4.76	0.2
VBMW160404-2TP				0.4
VBMW160408-2TP				0.8
VBMW160412-2TP				1.2

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

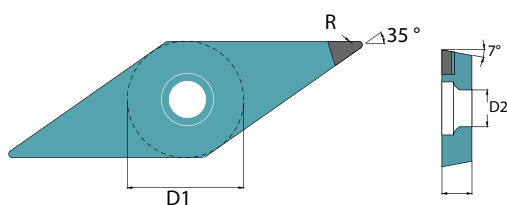
H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTSB
CBN
INSERTS

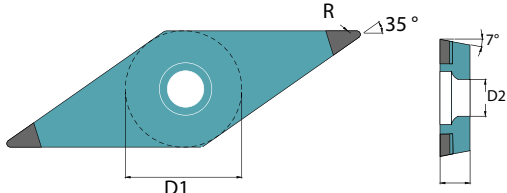
VCGW/VCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
VCGW160402-1TP	9.525	4.4	4.76	0.2
VCGW160404-1TP				0.4
VCGW160408-1TP				0.8
VCMW160402-1TP	9.525	4.4	4.76	0.2
VCMW160404-1TP				0.4
VCMW160408-1TP				0.8

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERS

VCGW/VCMW



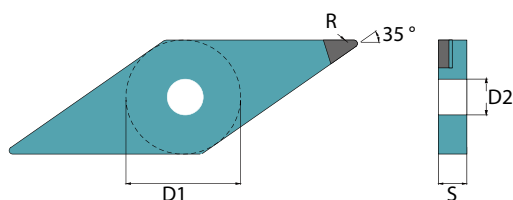
Designation	D1 [MM]	D2 [MM]	S [MM]	R
VCGW160402-2TP	9.525	4.4	4.76	0.2
VCGW160404-2TP				0.4
VCGW160408-2TP				0.8
VCMW160402-2TP	9.525	4.4	4.76	0.2
VCMW160404-2TP				0.4
VCMW160408-2TP				0.8

F
PCD
REAMERSG
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

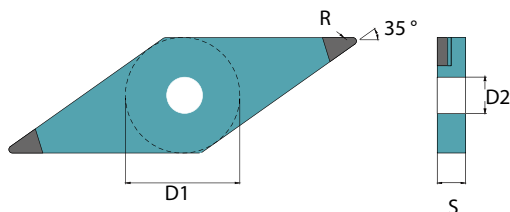
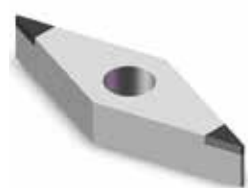
- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

VNGW/VNMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
VNGW160402-1TP	9.525	3.81	4.76	0.2
VNGW160404-1TP				0.4
VNGW160408-1TP				0.8
VNGW160412-1TP				1.2
VNMW160402-1TP	9.525	3.81	4.76	0.2
VNMW160404-1TP				0.4
VNMW160408-1TP				0.8
VNMW160412-1TP				1.2

VNGW/VNMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
VNGW160402-2TP	9.525	3.81	4.76	0.2
VNGW160404-2TP				0.4
VNGW160408-2TP				0.8
VNGW160412-2TP				1.2
VNMW160402-2TP	9.525	3.81	4.76	0.2
VNMW160404-2TP				0.4
VNMW160408-2TP				0.8
VNMW160412-2TP				1.2

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

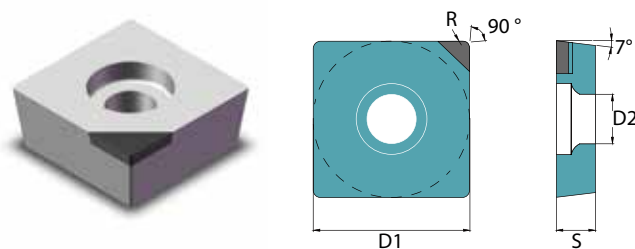
F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

A
PCD
INSERTSB
CBN
INSERTS

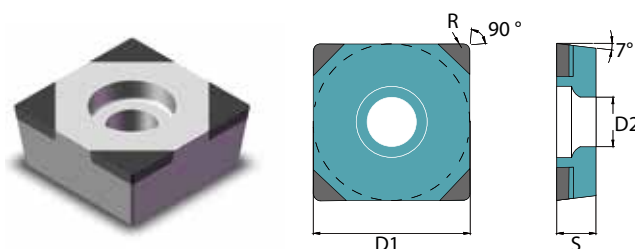
SCGW/SCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SCGW09T304-1TP	9.525	4.4	3.97	0.4
SCGW09T308-1TP				0.8
SCGW09T312-1TP				1.2
SCMW09T304-1TP	9.525	4.4	3.97	0.4
SCMW09T308-1TP				0.8
SCMW09T312-1TP				1.2

Designation	D1 [MM]	D2 [MM]	S [MM]	R
SCGW120404-1TP	12.7	5.5	4.76	0.4
SCGW120408-1TP				0.8
SCGW120412-1TP				1.2
SCMW120404-1TP	12.7	5.5	4.76	0.4
SCMW120408-1TP				0.8
SCMW120412-1TP				1.2

SCGW/SCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SCGW09T304-4TP	9.525	4.4	3.97	0.4
SCGW09T308-4TP				0.8
SCGW09T312-4TP				1.2
SCMW09T304-4TP	9.525	4.4	3.97	0.4
SCMW09T308-4TP				0.8
SCMW09T312-4TP				1.2

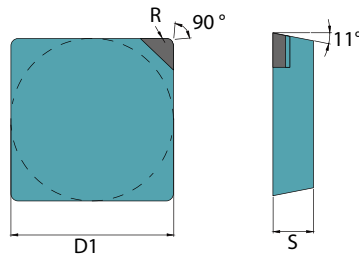
Designation	D1 [MM]	D2 [MM]	S [MM]	R
SCGW120404-4TP	12.7	5.5	4.76	0.4
SCGW120408-4TP				0.8
SCGW120412-4TP				1.2
SCMW120404-4TP	12.7	5.5	4.76	0.4
SCMW120408-4TP				0.8
SCMW120412-4TP				1.2

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERSE
PCD
DRILLING
TOOLSF
PCD
REAMERSG
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

SPGN/SPMN



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SPGN120404-1TP	12.7	-	4.76	0.4
SPGN120408-1TP				0.8
SPGN120412-1TP				1.2
SPMN120404-1TP	12.7	-	4.76	0.4
SPMN120408-1TP				0.8
SPMN120412-1TP				1.2

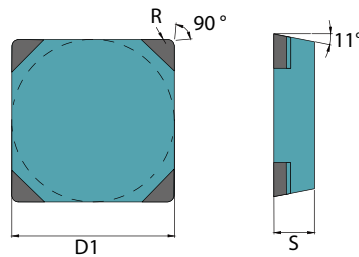
A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

SPGN/SPMN



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SPGN120404-4TP	12.7	-	4.76	0.4
SPGN120408-4TP				0.8
SPGN120412-4TP				1.2
SPMN120404-4TP	12.7	-	4.76	0.4
SPMN120408-4TP				0.8
SPMN120412-4TP				1.2

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

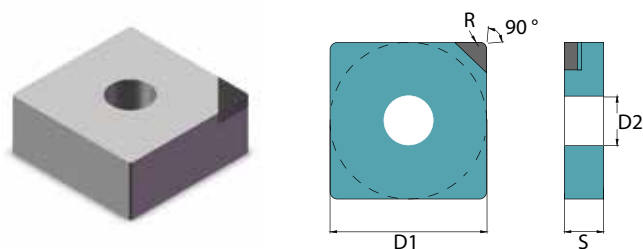
G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

SNGA/SNMA

A
PCD
INSERTSB
CBN
INSERTS

Negative

e6
elementsix

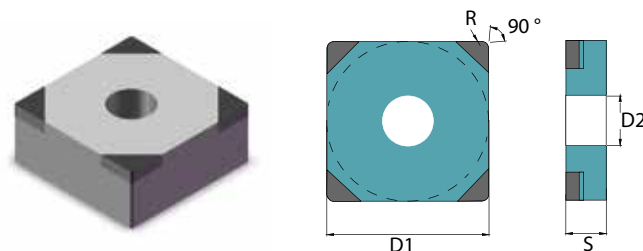
Finish machining

Rough machining



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGA090304-1TP	9.525	3.81	3.18	0.4
SNGA090308-1TP				0.8
SNGA090312-1TP				1.2
SNMA090304-1TP	9.525	3.81	3.18	0.4
SNMA090308-1TP				0.8
SNMA090312-1TP				1.2

Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGA120404-1TP	12.7	5.16	4.76	0.4
SNGA120408-1TP				0.8
SNGA120412-1TP				1.2
SNMA120404-1TP	12.7	5.16	4.76	0.4
SNMA120408-1TP				0.8
SNMA120412-1TP				1.2

D
PCD
MILLING
CUTTERS

Negative

e6
elementsix

Finish machining

Rough machining

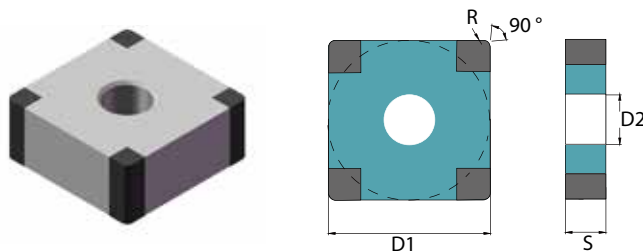


Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGA090304-4TP	9.525	3.81	3.18	0.4
SNGA090308-4TP				0.8
SNGA090312-4TP				1.2
SNMA090304-4TP	9.525	3.81	3.18	0.4
SNMA090308-4TP				0.8
SNMA090312-4TP				1.2

Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGA120408-4TP	12.7	5.16	4.76	0.8
SNGA120412-4TP				1.2
SNGA120416-4TP				1.6
SNMA120408-4TP	12.7	5.16	4.76	0.8
SNMA120412-4TP				1.2
SNMA120416-4TP				1.6

E
PCD
DRILLING
TOOLSF
PCD
REAMERS

SNGA/SNMA-FULL EDGE

G
DIAMOND
DRESSERS

Negative

SOLID
CBN

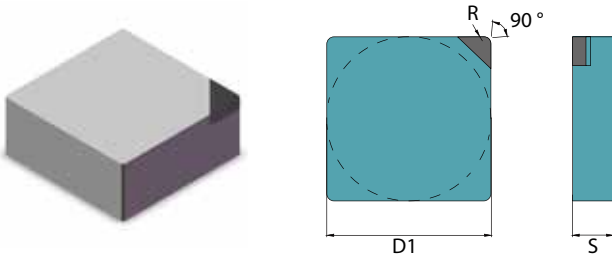
Rough machining



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGA120404-4FE	12.7	5.16	4.76	0.4
SNGA120408-4FE				0.8
SNGA120412-4FE				1.2

H
DIAMOND
CUSTOM-MADE
TOOLS

SNGN/SNMN



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGN090304-1TP	9.525	-	3.18	0.4
SNGN090308-1TP				0.8
SNGN090312-1TP				1.2
SNMN090304-1TP	9.525	-	3.18	0.4
SNMN090308-1TP				0.8
SNMN090312-1TP				1.2

Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGN120404-1TP	12.7	-	4.76	0.4
SNGN120408-1TP				0.8
SNGN120412-1TP				1.2
SNMN120404-1TP	12.7	-	4.76	0.4
SNMN120408-1TP				0.8
SNMN120412-1TP				1.2

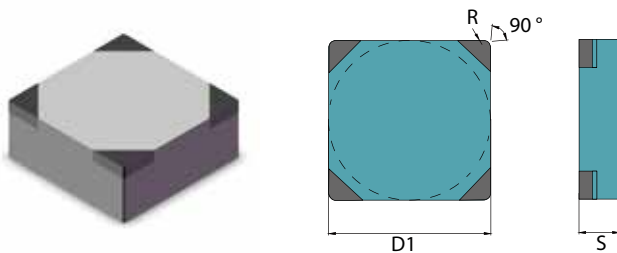
A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

SPGN/SPMN



Designation	D1 [MM]	D2 [MM]	S [MM]	R
SNGN090304-4TP	9.525	-	3.18	0.4
SNGN090308-4TP				0.8
SNGN090312-4TP				1.2
SNMN090304-4TP	9.525	-	3.18	0.4
SNMN090308-4TP				0.8
SNMN090312-4TP				1.2

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

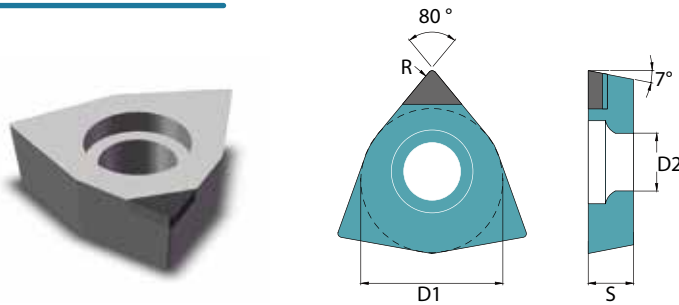
H
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTSB
CBN
INSERTS

WCGW/WCMW

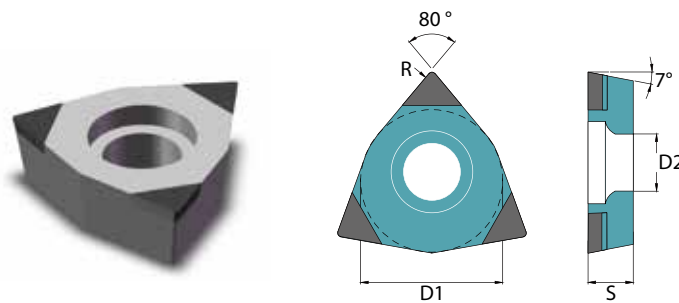


Designation	D1 [MM]	D2 [MM]	S [MM]	R
WCGW040202-1TP	6.35	2.8	2.38	0.2
WCGW040204-1TP				0.4
WCGW040208-1TP				0.8
WCMW040202-1TP	6.35	2.8	2.38	0.2
WCMW040204-1TP				0.4
WCMW040208-1TP				0.8

Designation	D1 [MM]	D2 [MM]	S [MM]	R
WCGT06T304-1TP	9.525	4.4	3.97	0.4
WCGT06T308-1TP				0.8
WCMT06T304-1TP	9.525	4.4	3.97	0.4
WCMT06T308-1TP				0.8

C
SOLID CBN
INSERTSD
PCD
MILLING
CUTTERS

WCGW/WCMW



Designation	D1 [MM]	D2 [MM]	S [MM]	R
WCGW040202-3TP	6.35	2.8	2.38	0.2
WCGW040204-3TP				0.4
WCGW040208-3TP				0.8
WCMW040202-3TP	6.35	2.8	2.38	0.2
WCMW040204-3TP				0.4
WCMW040208-3TP				0.8

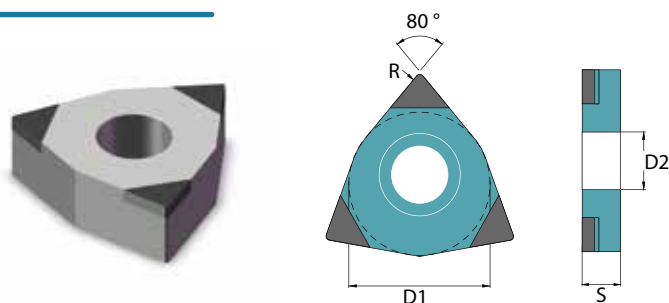
Designation	D1 [MM]	D2 [MM]	S [MM]	R
WCGT06T304-3TP	9.525	4.4	3.97	0.4
WCGT06T308-3TP				0.8
WCMT06T304-3TP	9.525	4.4	3.97	0.4
WCMT06T308-3TP				0.8

G
DIAMOND
DRESSERSH
DIAMOND
CUSTOM-MADE
TOOLS

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

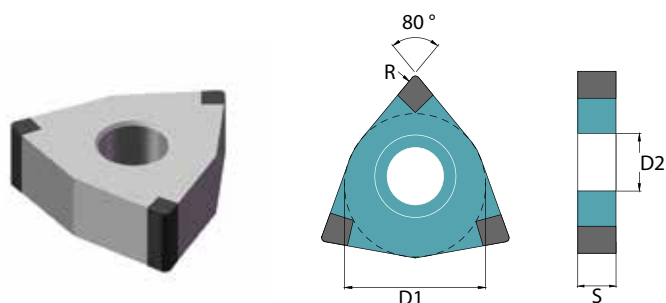
WNGA/WNMA



Designation	D1 [MM]	D2 [MM]	S [MM]	R
WNGA060404-3TP	9.525	3.81	4.76	0.4
WNGA060408-3TP				0.8
WNGA060412-3TP				1.2
WNGA060416-3TP				1.6
WNMA060404-3TP	9.525	3.81	4.76	0.4
WNMA060408-3TP				0.8
WNMA060412-3TP				1.2
WNMA060416-3TP				1.6

Designation	D1 [MM]	D2 [MM]	S [MM]	R
WNGA080404-3TP	12.7	5.16	4.76	0.4
WNGA080408-3TP				0.8
WNGA080412-3TP				1.2
WNGA080416-3TP				1.6
WNMA080404-3TP	12.7	5.16	4.76	0.4
WNMA080408-3TP				0.8
WNMA080412-3TP				1.2
WNMA080416-3TP				1.6

WNGA-FULL EDGE



Designation	D1 [MM]	D2 [MM]	S [MM]	R
WNGA060404-3FE	9.525	3.81	4.76	0.4
WNGA060408-3FE				0.8
WNGA060412-3FE				1.2
WNGA080404-3FE	12.7	5.16	4.76	0.4
WNGA080408-3FE				0.8
WNGA080412-3FE				1.2

Order Note

- Please refer to B 05/06 for CBN inserts code key description.
- To place an order, please refer to the designation code.
- For the item which is not on the list pls contact our sales to get the quote.

A
PCD
INSERTS

B
CBN
INSERTS

C
SOLID CBN
INSERTS

D
PCD
MILLING
CUTTERS

E
PCD
DRILLING
TOOLS

F
PCD
REAMERS

G
DIAMOND
DRESSERS

H
DIAMOND
CUSTOM-MADE
TOOLS