www.kohertech.com

KOHER's 4ways

Inspired by the creativity and challenging spirit
inherited from our forefathers

- Courage to challenge
- Creative spirit
- Faith & Trust in Humanity
- Honesty

KOHER
New Value Creation

Headquarter
2F, 2BA 509, 2179-9, Jungwang-dong, Sihueng-si, Gyeonggi-do, KOREA

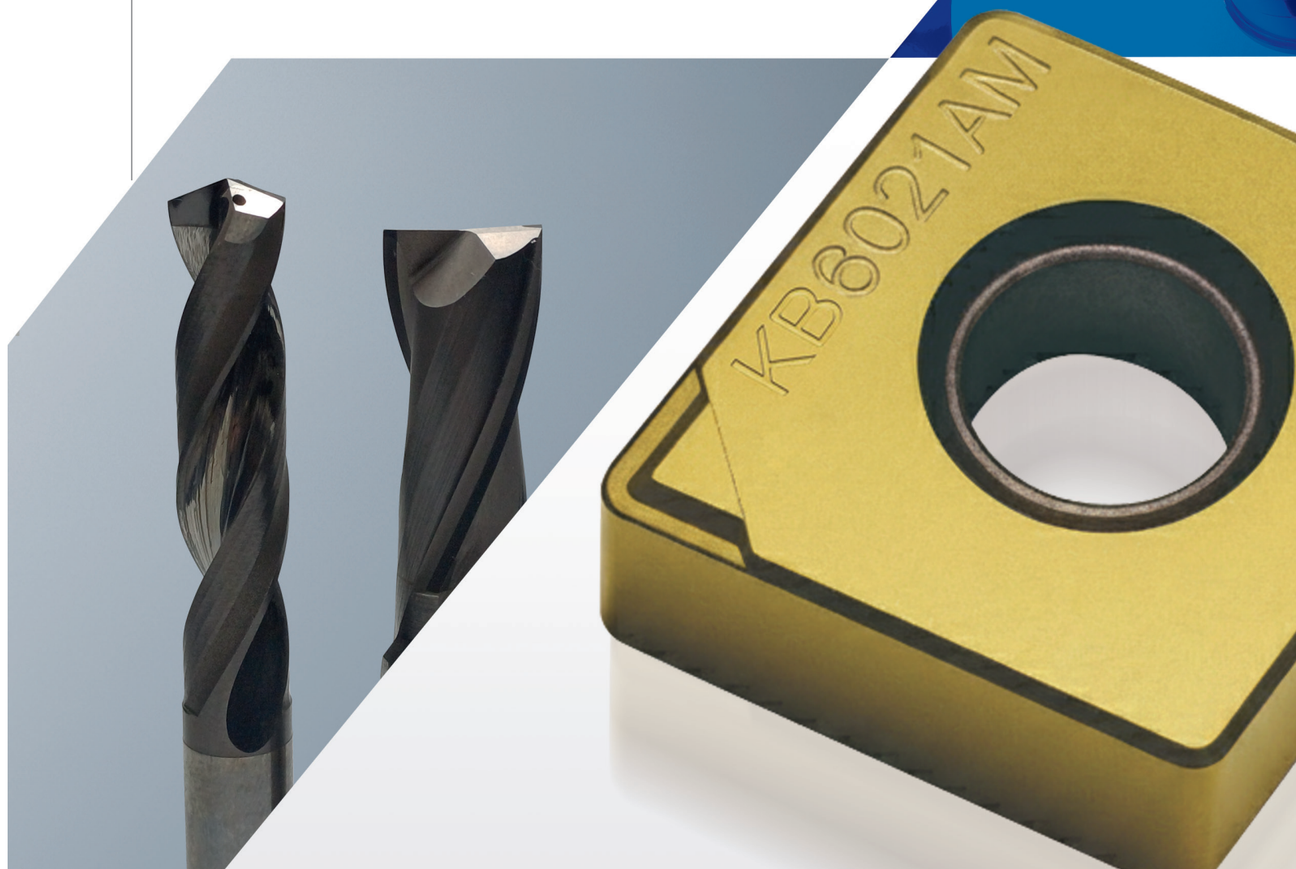
Factory / R&D Center
1F, 2BA 509, 2179-9, Jungwang-dong, Sihueng-si, Gyeonggi-do, KOREA
Tel : (82) 70–4238-0909 Fax : (82) 31-495-5978
Web : www.kohertech.com SNS : www.facebook.com/kohertech

WORLD'S LEADING DIAMOND CUTTING TOOLS

KOHER
New Value Creation

MAXIBN · XCELDIA

- PCD/CBN/Diamond Inserts
- Single Crystal Diamond tools
- PCD Rotating Tools
- All kinds of Special Tools
- Holder & Cutter



KOHER

KOHER at a Glance

Founded in 2015, KOHER operates an in-house R&D center with a dedicated development team focused on innovation in cutting tool technology.

Supported by the government as a designated Venture Enterprise,
KOHER develops precision cutting tools.

With advanced manufacturing capabilities, KOHER supplies high-performance cutting tools to customers in Automotive, Semiconductor, Machinery, and Aerospace industries worldwide, supporting new and emerging technologies.

KOHER's Key Strengths

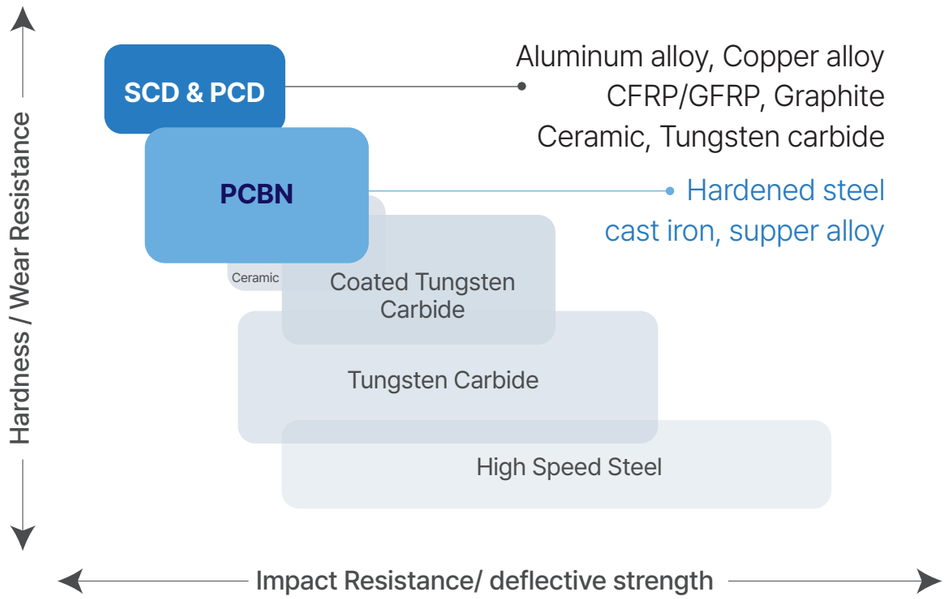
1. ISO Standard Products : High-quality inserts meet ISO specifications

2. Fast Customized Orders : Quick response to customization and special needs

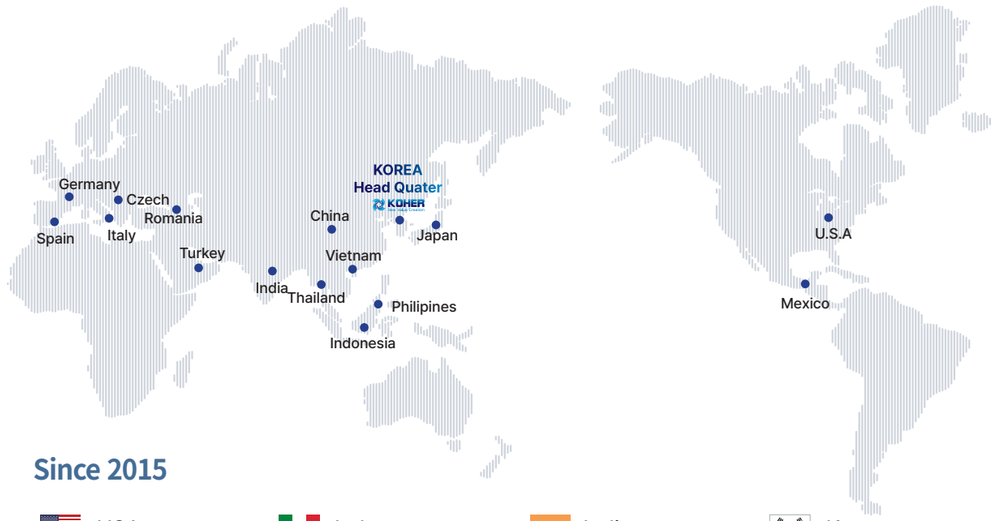
3. Strong Technical Support : Close cooperation for optimal cutting solution

KOREA
+
HERITAGE

Diamond Cutting Tools



KOHER Worldwide



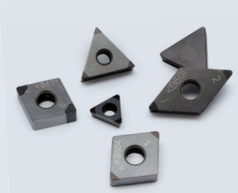
Since 2015

USA	Italy	India	Korea
Mexico	Czech	Thailand	China
Spain	Romania	Vietnam	Japan
Germany	Turkey	Indonesia	Philipines

MAXIBN KOHER PCBN SERIES

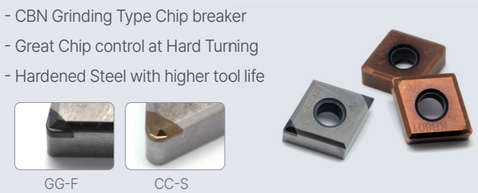
KOHER ISO CBN Insert for Turning

- All specification ISO insert
- Customizing of the Cutting edge treatment available
- KB5011A / KB6021A / KB651A First choice for the hardened steel machining
- Over 15 CBN grades for the hard turning available



KOHER CBN Chip Breaker-CG-S/-F

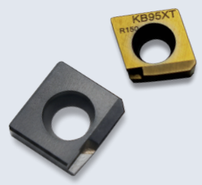
- CBN Grinding Type Chip breaker
- Great Chip control at Hard Turning
- Hardened Steel with higher tool life



GG-F CC-S

KOHER ISO CBN Insert for MILLING

- All specification ISO insert
- Customizing of the Cutting edge treatment available
- KB952 / KB902 / KB752 For the milling of cast iron cylinder block And all kinds of housing and case



KOHER CBN Insert for Valve seat machning

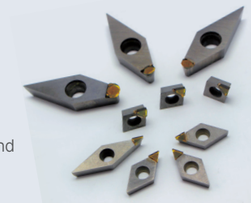
- For the machining of valve seat for automotives
- Strong edge by uniform honed
- Depending on the workpiece material, KB952, KB902 or KB503 grade available
- All types of blades can be manufactured

KOHER Opthlamic Tool Series

- 12-14 teeth PCD Cutter for Plastic Lens
- Single Crystal Diamond Insert for Schneider and Satisloh machine
- PCD Tool for MEI Machine

KOHER Single Crystal Diamond tools for Turning

- To get the super Fine surface
- ISO standard insert available
- Synthetic single crystal diamond
- Custom based products



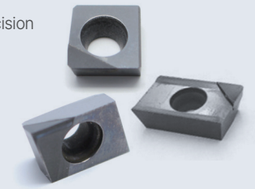
XCELDIA KOHER PCD SERIES

KOHER PCD Chip Breaker-CL-R/-S/-F

- 3D Laser Design with various simulation data
- Standard PCD Chip Breaker design
- Special order made design

KOHER PCD Milling Insert

- PCD Milling insert (ISO) for precision machining
- PCD Reamer Blade
- PCD Grooving Insert
- PCD Form Insert



KOHER PCD Insert for Alloy Wheel

- For the machining of Alloy wheel
- Dog-bone type radius insert
- Chip breaker customized
- PCD KP10 / KP302 / KP01
- Making Mirror surface by mono diamond available

KOHER ISO PCD Insert for Turning

- All specifications ISO insert
- Chipping under 10micron
- KP10 grade with 10micron grain size
- KP302 (mixed with coarse and fine grain PCD)
- KP01 is for the super fine surface roughness

KOHER PCD Face Mill

- Multi tooth PCD cartridge
- 4-types of cutting edge shape available
- Easy to adjust run-out
- Coolant through Cartridge

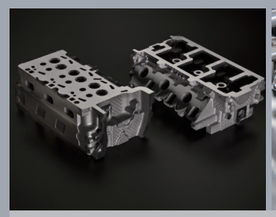
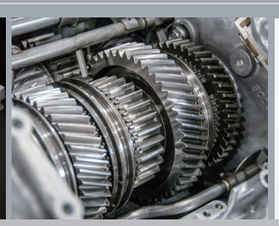
	KOHER SPEC.	Dimension	TOOTH
1	XD063CA2506-12	D63×22×50T-12	12
2	XD080CA2506-14	D80×27×50T-14	14
3	XD100CA2506-18	D100×32×50T-18	18
4	XD125CA2506-22	D125×40×63T-22	22

KOHER PCD Twist Drill & PCD Twist End

Comming Soon

XCELDIA

CBN Application


Automotive

Aerospace

Cast Iron
- Engine Block
- Brake Disc
- Clutch Plates
- Rolls
- Pumps

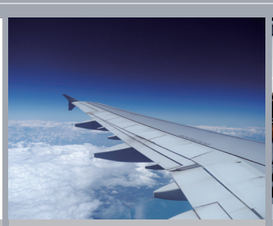
Hardened Steel
- Gears
- Transmission parts
- Gear shafts
- Bearing, Hub
- Dies, Punches

Powder Metal
- Valve Seat
- Con-rods
- Oil-pumps

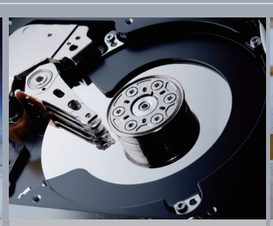
Super Alloy
- Turbine blades
- Turbine vane

PCD Application

Automotive



Aerospace



Electronics

Wood

Aluminum alloy
- Transmission Case
- Aluminum Alloy wheels
- Pistons
- Cylinder heads

Aluminum alloy & Others
- Airplane wings
- Turbine blades

Aluminum alloy & Others
- PCB
- Mobile phone casing
- Hard disk casing
- DVD Cover

Woods
- Furniture
- Wood floor

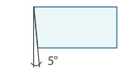
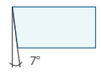
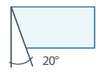
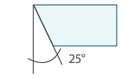
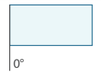
KOHER INSERT ISO Identification

1	2	3	4	5	6
C	N	G	A	12	04

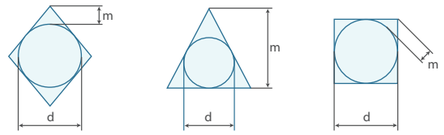
1 Insert Shape

C	D	E	K	L
				
R	**S**	**T**	**V**	**W**
				

2 Relief Angle

B	C	D	E
			
F	**N**	**P**	**O**
			Special

3 Tolerance



mm

	Inscribed Circle Diameter (d)	Corner Height (m)	Thickness (t)
H	±0.013	±0.013	±0.025
G	±0.025	±0.025	±0.13
M	±0.05 ~ ±0.15	±0.08~±0.20	±0.3

4 Screw Hole Type

A	T	W
		

N	X
	Special

5 Inscribed Circle Diameter

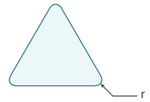
ISO							
C	D	S	T	R	V	W	Inscribed Circle Diameter (mm)
03	04	03	06	03	-	02	3.97
04	05	04	08	04	08	S3	4.76
05	06	05	09	05	09	03	5.56
-	-	-	-	06	-	-	6.00
06	07	06	11	06	11	04	6.35
08	09	07	13	07	13	05	7.94
-	-	-	-	08	-	-	8.00
09	11	09	16	09	16	06	9.525
-	-	-	-	10	-	-	10.00
11	13	11	19	11	19	07	11.11
-	-	-	-	12	-	-	12.00
12	15	12	22	12	22	08	12.70
14	17	14	24	14	24	09	14.29
16	19	15	27	15	27	10	15.875
-	-	-	-	16	-	-	16.00
17	21	17	30	17	30	11	17.46
19	23	19	33	19	33	13	19.05
-	-	-	-	20	-	-	20.00
22	27	22	38	22	38	15	22.225

6 Thickness

ISO	Cutting Edge Height (mm)
01	1.59
T1	1.98
02	2.38
T2	2.78
03	3.18
T3	3.97
04	4.76
05	5.56
06	6.35
07	7.94
09	9.52
11	11.11
12	12.70

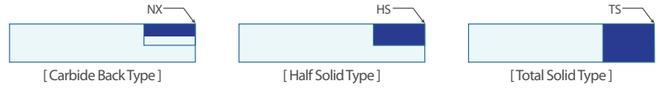
7	8	9	10	11
08	N2	CL	S	0150250020

7 Corner Radius



ISO	Corner Radius (mm)
01	0.1
02	0.2
04	0.4
08	0.8
12	1.2
16	1.6
20	2.0
24	2.4
28	2.8
32	3.2
00	Round
MO	Round

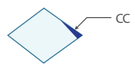
8 Corner Detail



[Carbide Back Type] [Half Solid Type] [Total Solid Type]

ISO	Number of Edges	Regrindable	CBN Cutting Edge Length
M	1~4 corner	Y	≥ 3mm
N2	2 corner	N	≤ 2.5mm
N4	4 corner	N	≤ 2.5mm
N6	6 corner	N	≤ 2.5mm
HS2	2 corner	N	≤ 2.5mm
HS4	4 corner	N	≤ 2.5mm
HS6	6 corner	N	≤ 2.5mm
TS4	4 corner	N	≤ 2.5mm
TS6	6 corner	N	≤ 2.5mm

9 Chip Breaker Type



Shape	Detail
CL	Laser Chip Breaker Type
CG	Grinding Chip Breaker Type
CC	Combined Chip Breaker Type

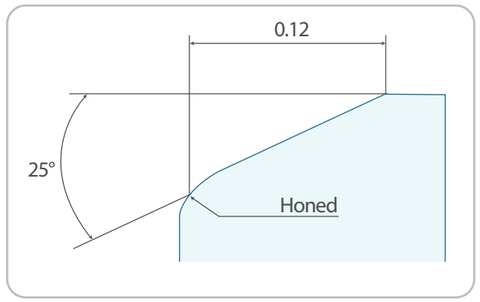
10 Chip Breaker Design

Shape	Chip Breaker Type
R	Roughing Process
S	General Process
F	Finishing Process

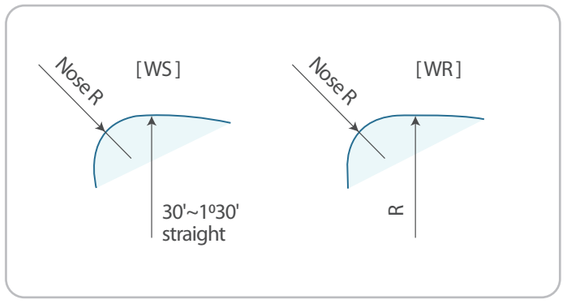
11 CBN Edge Treatment

Application	Grade	High Speed	Standard	Strong
Hardened Steel	KB5011, KB6021, KB651	0100200010	0150250020	0200350025
Sintered Alloy & Cast Iron	KB902, KB952	0100150000	0150200005	0200250010

12 Negative Land

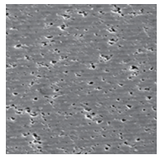


13 Wiper Type

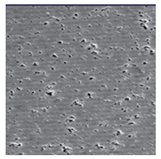


KOHER PCD Grade

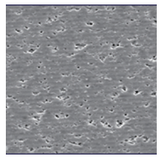
KOHER PCD line-up provides you various choices with grades for your non-ferrous material machining with long tool life.



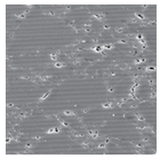
KP01 [<1㎛]
Super fine grade provides extreamly good surface roughness for precision machining of non-ferrous metals and non-metals.
- Cylinder block of Automotives



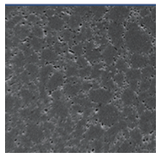
KP05 [AVERAGE 5㎛]
General purpose with fine surface finishing.
- Graphite, Copper alloy
- Wood composites



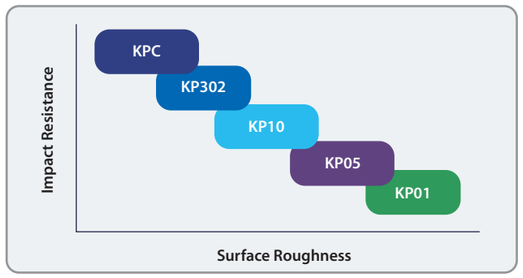
KP10 [AVERAGE 10㎛]
General use for turning aluminum alloy
- <10% silicon aluminum alloy



KPC [Over 25㎛]
Higher wear resistance and impact resistance. Suitable for hard to cut materials with wear.
- >14% Silicon aluminum alloy
- Sintered tungsten carbide



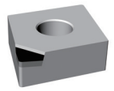
KP302 [2 + 30㎛]
Higher impact and wear resistance.
Bi-modal mixed grain structure.
- Stone sawing
- >14% Silicon aluminum alloy,
CFRP / GFRP, Ceramic, Tungsten carbide



PCD / Recomendation for Machining Parameter

Material	Process	Grade Recommendation	Speed [m/min]	Feed [mm/rev]	Depth of Cut [mm]
Aluminum alloy 4-8% Si	Turning	KP01 / KP05 / KP10	900 - 3,500	0.1 - 0.4	0.1 – 4.0
Aluminum alloy 4-8% Si	Milling	KP01 / KP05 / KP10	1,000 – 5,000	0.1 – 0.3	0.1 – 3.0
Aluminum alloy <14% Si	Turning	KP01 / KP05 / KP10 / KP302	600~2,400	0.1 - 0.4	0.1 – 4.0
Aluminum alloy >14% Si	Milling	KP10 / KP302 / KPC	300 – 700	0.1 – 0.3	0.1 – 3.0
Aluminum alloy >14% Si	Turning	KP10 / KP302 / KPC	300 - 700	0.1 – 0.4	0.1 – 4.0
Aluminum alloy >14% Si	Milling	KP10 / KP302 / KPC	400 - 900	0.1 - 0.3	0.1 – 3.0
Copper, Zinc, Brass	Turning / Milling	KP01 / KP05 / KP10	400 – 1,200	0.03 - 0.3	0.05 – 2.0

KOHER PCD Grade

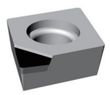


CNG(M)A	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
CNMA120402/04/08	5.0	12.7	4.76	0.2 / 0.4 / 0.8	■		■		

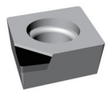
DNG(M)A	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
DNMA120402/04/08	5.0	12.7	4.76	0.2 / 0.4 / 0.8	■		■		
DNMA150602/04/08	5.0	12.7	6.35	0.2 / 0.4 / 0.8	■		■		

TNG(M)A	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
TNMA160402/04/08	4.5	9.525	4.76	0.2 / 0.4 / 0.8	■		■		

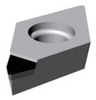
VNG(M)A	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
VNMA160402/04/08	6.0	9.525	4.76	0.2 / 0.4 / 0.8	■		■		



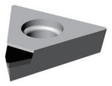
CCG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
CCMT060202/04/08	3.2	6.35	2.38	0.2 / 0.4 / 0.8	■		■		
CCMT09T302/04/08	4.2	9.525	3.97	0.2 / 0.4 / 0.8	■		■		



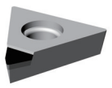
CPG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
CPMT060202/04/08	3.2	6.35	2.38	0.2 / 0.4 / 0.8	■		■		
CPMT090302/04/08	4.2	9.525	3.18	0.2 / 0.4 / 0.8	■		■		



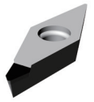
DCG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
DCMT070202/04/08	3.2	6.35	2.38	0.2 / 0.4 / 0.8	■		■		
DCMT11T302/04/08	4.2	9.525	3.97	0.2 / 0.4 / 0.8	■		■		



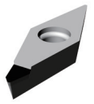
TCG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
TCMT110302/04/08	3.2	6.35	3.18	0.2 / 0.4 / 0.8	■		■		



TPG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
TPGW060102/04	3.2	3.97	1.59	0.2 / 0.4	■		■		
TPMW090202/04/08	3.2	5.56	2.38	0.2 / 0.4 / 0.8	■		■		



VBG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
VBMT110302/04/08	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■		■		
VBMT160402/04/08	6.0	9.525	4.76	0.2 / 0.4 / 0.8	■		■		

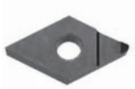


VCG(M)T	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
VCMT110302/04/08	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■		■		
VCMT160402/04/08	6.0	9.525	4.76	0.2 / 0.4 / 0.8	■		■		

KOHER PCD Turning Series

KOHER PCD Grade

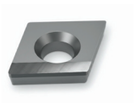
CNMX	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
CNMX1200402/04/08-SE	3.0	12.7	4.76	02/04/08					
CNMX1200402/04/09-LE	5.0	12.7	4.76	02/04/08					



DNMX	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
DNMX150402/04/08-SE	3.0	12.7	4.76	02/04/08					
DNMX150402/04/08-LE	5.0	12.7	4.76	02/04/08					

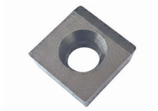
TNMX	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
TNMX160402/04/08-SE	3.0	9.525	4.76	02/04/08					
TNMX160402/04/08-LE	5.0	9.525	4.76	02/04/08					

VNMX	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
VNMX160402/04/08-SE	3.0	9.525	4.76	02/04/08					
VNMX160402/04/08-LE	5.0	9.525	4.76	02/04/08					



CCMW	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
CCMW09T302/04/08	9.525	9.525	3.97	02/04/08					
CCMW120402/04/08	12.7	12.7	4.76	02/04/08					

TPMW	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
TPMW110202/04	11.0	9.525	2.38	02/04					
TPMW160302/04/08	16.0	9.525	3.18	02/04/08					
TPGW160402/04/08	16.0	9.525	4.76	02/04/08					



SC(P)MW	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
SCMW09T302/04/08	9.525	9.525	3.97	02/04/08					
SCMW120402/04/08	12.7	12.7	4.76	02/04/08					

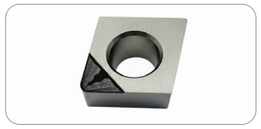
RCMW	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
RCMW0602		6.35	2.38						
RCMW0903		9.525	3.18						
RCMW1203		12.7	3.18						
RCMW1204		12.7	4.76						

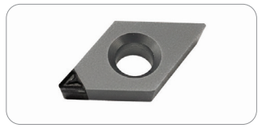
RPMW	Dimension (mm)				PCD Grade				
	L	I.C	t	R	KP01	KP05	KP10	KP302	KPC
RPMW0602		6.35	2.38						
RPMW0903		9.525	3.18						
RPMW1203		12.7	3.18						
RPMW1204		12.7	4.76						

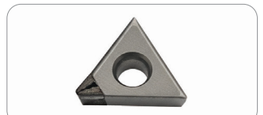
KOHER PCD Laser Chip Breaker

KOHER CL Series

KOHER PCD Laser Chip breaker system is widely being used for non- ferrous material machining process with various designs meeting customer's each different request in each different work environment.



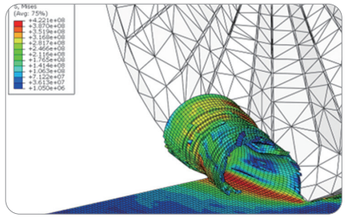


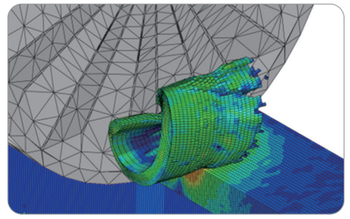


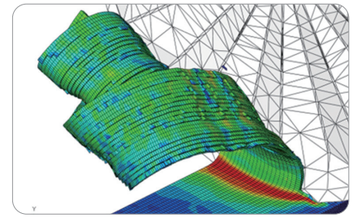
Beyond our standard products, PCD chip breakers are custom-designed to meet customer-specific needs, considering the workpiece material as well as the depth of cut and feed rate.

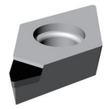
KOHER R&D Center

With various experiences and know how, KOHER R&D Center provides technical solution and feedback for your excellent machining performance. We analyze customers' main problem and produce new customized design with various trials via simulation software.

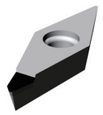








DCMT	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
DCMT070202/04/08-CL	3.5	6.35	2.38	0.2/0.4/0.8					
DCMT11T3042/04/08-CL	5.0	9.525	3.97	0.2/0.4/0.8					

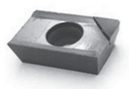


VBMT	Dimension (mm)				PCD Grade				
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
VBGW110302/04/08-CL	4.5	6.35	3.18	0.2/0.4/0.8					
VBGW160402/04/08-CL	6.0	9.525	4.76	0.2 / 0.4 / 0.8					

KOHER PCD Milling Inserts

PCD Milling Insert

KOHER is producing PCD milling inserts with high precision technology and high efficiency. Both ISO and Special inserts are available



APKT	Dimension (mm)				PCD Grade				
	Diameter(D)	Thickness(t)	Bottom Hole	Corner R	KP01	KP05	KP10	KP302	KPC
APKT11T3□□□□	6.457	3.60	2.85	-					
APKT1604□□□□	9.525	4.76	4.40	-					
APKT1705□□□□	10.7	5.27	4.5						
Order Made									

CDEW	Dimension (mm)				PCD Grade				
	Diameter(D)	Thickness(t)	Bottom Hole	Corner R	KP01	KP05	KP10	KP302	KPC
CDEW1204□□□□	12.7	4.76	4.40	-					
Order Made									

SNEW	Dimension (mm)				PCD Grade				
	Diameter(D)	Thickness(t)	Bottom Hole	Corner R	KP01	KP05	KP10	KP302	KPC
SNEW09T3□□□□	9.525	3.97	4.40	-					
SNEW1203□□□□	12.7	3.18	5.50	-					
SNEW1204□□□□	12.7	4.76	6.00	-					
Order Made									

PCD Grooving Insert

KOHER PCD grooving line up is giving you better surface roughness and much longer tool life in various aluminum part grooving process.

TDC	Dimension (mm)			PCD Grade					
	Width	Corner R	Tmax.	KP01	KP05	KP10	KP302	KPC	
TDC 2.0	2.0	0.2	19						
TDC 3.0	3.0	0.2	19						
TDC 4.0	4.0	0.3	19						

GBA	Dimension (mm)				PCD Grade				
	Width1	Width2	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
GBA32R/L 125-010	1.25	2.0	3.18	0.1/0.2					
Order Made									

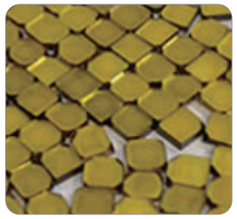
TKF	Dimension (mm)				PCD Grade				
	Width	Diameter(D)	Thickness(t)	Corner R	KP01	KP05	KP10	KP302	KPC
TKF12 R/L 200-AS	2.0	10	3	0.1					
TKF12 R/L 250-AS	2.5	10	4	0.1					
Order Made									

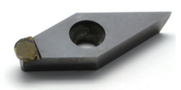
KOHER SCD & Mono Diamond Inserts

KOHER New Value Creation

KOHER SCD & Mono Insert Series

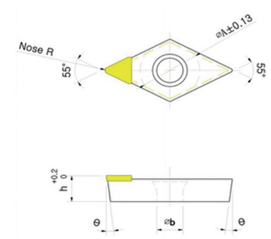
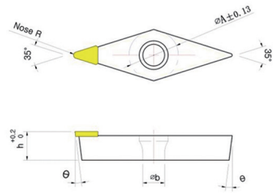
For more accurate and precise machining of your non-ferrous product such as aluminum, copper, zinc and brass, here we have Single Crystal Diamond & Mono Crystalline Diamond Insert line-up. KOHER provides you various special diamond insert items for your demands.





SCD & Mono	Dimension (mm)				Grade	
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KP01	KPC
CCGW09T302/04/08	4.2	9.525	1.6	0.2 – 2.0		
DCGW11T302/04/08	5.5	9.525	1.6	0.2 – 2.0		
VBGW110302/04/08	4.5	6.35	1.6	0.2 – 2.0		
Order Made						

Standard Insert for Super Finishing

Drawing	Specification	Nose R	θ	A	h	b	Strong	
							HD100	CD001
	DCMW11T301	0.1	7°	9.525	4	4.4		
	DCMW11T302	0.2	7°	9.525	4	4.4		
	DCMW11T304	0.4	7°	9.525	4	4.4		
	DCMW11T308	0.8	7°	9.525	4	4.4		
	DCMW070201	0.1	7°	6.35	3	2.8		
	DCMW070202	0.2	7°	6.35	3	2.8		
	DCMW070204	0.4	7°	6.35	3	2.8		
	DCMW070208	0.8	7°	6.35	3	2.8		
	VCMW160402	0.2	7°	9.525	4.9	4.4		
	VCMW160404	0.4	7°	9.525	4.9	4.4		
	VCMW160408	0.8	7°	9.525	4.9	4.4		
	VCMW160412	1.2	7°	9.525	4.9	4.4		
	VCMW160420	2	7°	9.525	4.9	4.4		
	VCMW110301	0.1	7°	6.35	3.3	2.8		
	VCMW110302	0.2	7°	6.35	3.3	2.8		
	VCMW110304	0.4	7°	6.35	3.3	2.8		

KOHER CBN Grade

	Grade Name	CBN(%)	Type	Bind	Grain (μm)	Application	First Choice
Hardened Steel / High Speed / Continuous Cut ↓ Medium Speed / Interrupted Cut	KB452	45	HS	TiCN		Superior Chemical Wear Res. High Speed Continous Turning (finishing)-Case Hardened Steels, Cutting speed 220m/min or greate	
	KB503	50	NX	TiC	1.5	For continuous and lightly interrupted cutting of the majority of automotive steels, excellent abrasion resistance making it the ideal choice for cold work tool steels and certain valve seat alloys	
	KB500	50	HS	TiC	1.5		
	KB5011	50	NX	Ti Alloy		Uniform dispersion of CBN for wear and thermal stability Continuous and light interrupted machining of hardened steel	★
	KB504	50	NX	TiC		Continuous to mild interrupted turning-Case hardened steels-Through hardened steels-Hardened steel reaming	
	KB552	55	HS	TiCN		Continuous to mild interrupted turning-Case hardened steels-Through hardened steels-Hardened steel reaming	
	KB601	60	NX HS TS	TiCN	1.0	Combination of wear resistance and thermal stability. General usage and interrupted machining of hardened steel	
	KB6021	60	NX	TiCN		Uniform dispersion of CBN for wear resistance and impact stability General usage and interrupted machining of hardened steel	★
	KB620	60	HS	TiCN		Continuous to medium interrupted turning-Hardened steel turning (wet and dry)-Through hardened steels-Cold work tool steels.P12	
	KB604	65	NX	TiCN		Continuous to heavy interrupted turning-CV joint milling-Sintered alloy machining-Case hardened steels	
	KB650	65	HS	TiC/TiN	3.0	For moderately to heavily interrupted hard turning and finish hard milling in both dry and wet conditions. Suitable for both conventional and elevated machining speeds	
	KB651	65	NX HS TS	TiN	3.0	Combination of wear resistance and thermal properties. High speed and interrupted machining of hardened steel	★
Ductile Cast Iron Sintered Alloy	KB701	70		TiN		Superior Edge toug. Mild to heavy interruption cutting. Valve seat machining. CV joint application	
	KB752	75		TiN	<1	High degree of toughness due to fine CBN grain and ceramic binder matrix Medium-to heavy interrupted machining of hardened steel Applicable to interrupted machining of shaft, gear parts	★
	KB95X	90		TiN	3.0	Extreme wear resistance and high chipping resistance Machining most kinds of cast iron and powder metal alloy	
Cast Iron Continuous to Interrupted Cut	KB902	90		Ceramic	1.0	Brake drum tuning, exceptionally good for tuning applications ball nose end milling with extremely high edge-stability and better surface quality sintered geared tuning	★
	KB951	95			3.0	Extreme wear resistance. Machining most kind of cast iron	
	KB952	95		Ti Alloy	3.0	Gray cast iron cylinder boring, nodular cast iron tuning with good cylindricity & higher feed rates	★
	KB95S	93	SOLID	AlN	10	Extreme wear resistance due to coarser CBN and high content. Roughing of cast iron	

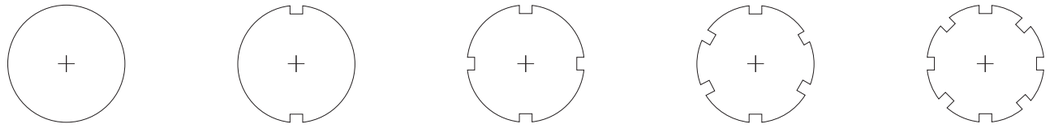
KOHER New Value Creation

CBN / Recomendation for machining parameter

	Work Material	Hardness	V (m/min)	Depth (mm)	Feed (mm/rev)	Grade
for Hardened Steel	Hardened Steel	> 55 HRC	80 - 180	0.05 – 0.5	0.05 – 0.3	KB452 / KB5011 / KB552/ KB601 / KB6021 / KB651
		< 55 HRC	80 - 250	0.05 - 0.5	0.05 – 0.3	

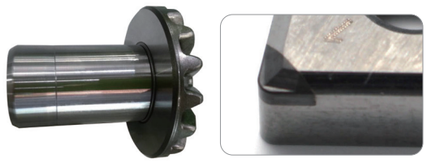
	Work Material	Cutting Speed (m/min)	Depth (mm)	Feed (mm/rev)	Grade
for Cast Iron	Cast Iron / Sintered Alloy	400 - 1700	1.0 – 3.0	1.0 – 2.0	KB951 KB952 KB902 KB95S
		400 – 1900	0.2 – 1.2	0.08 – 0.4	
		400 - 1700	0.2 – 2.0	0.08 – 2.0	

Guidelines for Grade Selection in Hard Turning

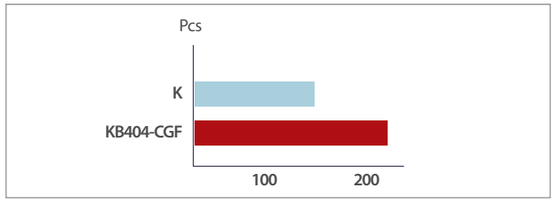


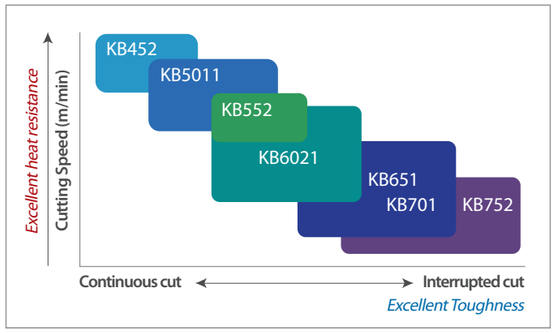
		KB5011		KB601	KB6021	KB651	KB701		KB95X
	KB452		KB552			KB652		KB752	KB902
KB404			KB504	KB604	KB620				
	KB453	KB503	KB500			KB650			

KOHER's Success Story – Chip Breaker G type [CGF]



KOHER	DNGA 150408N2- CG, KB404 Rough cut
Material	SCM420HB, GEAR
Hardness (HRc)	58-63
Speed , N	1800rpm
Feed	0.085 - 0.15mm/rev
Depth of Cut	0.08 - 0.1mm





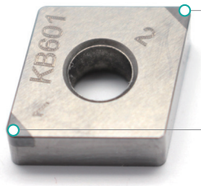
KOHER 's NEW CBN Line up

CBN Line up

KOHER HS / TS / Coating Series

KOHER Half CBN Solid(HS) and Tip CBN Solid(TS) Series will give you the best performance from continuous to high interrupted turning process which frequently cause severe damage from the high impact turning.

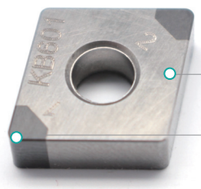
KOHER HS CBN Series



Corner Management System
Numbering corner on each side of tips would show you how to identify used corner easily.

Medium impact resistance
Half Tip Brazed CBN insert tip is offering you the best cost-effective solution for mid-interrupted turning process.

KOHER TS CBN Series



KOHER's TS Series Design
Unique CBN tip design with stronger vacuum brazing system.

KOHER's TS New Grade
Non-Coating - KB601 / Coating – KB601N

Impact resistance
Solid Tip Brazed CBN insert tip for high interrupted turning process.

KOHER Coated CBN Series

KOHER's New Coating Series line up is now available. Not only providing you ISO Standard inserts, but also suggesting you to choose various coating grade in order to meet your tool life improvement.

KB504 — N

Coating Details
N – TiN Coating
A – AlCrN Coating
AM – AlTiN Multilayer
T – AlTiN Coating

N Series [TiN] - Gold
Titanium Nitride is general coating for edge retention and corrosion resistance on machine tooling. This is widely used in high content CBN or carbide drills.

A Series [AlCrN] - Grey
This coating performs great on machining with high impact and wear resistance which reduces especially flank wear and cutting edge wear in wide range of cutting condition.

T Series [AlTiN] - Blue black
T series is the most suitable coating for general hard turning of hardened steel machining with wide range of lubrication conditions. It also shows great works on stainless steel and nickel alloys.

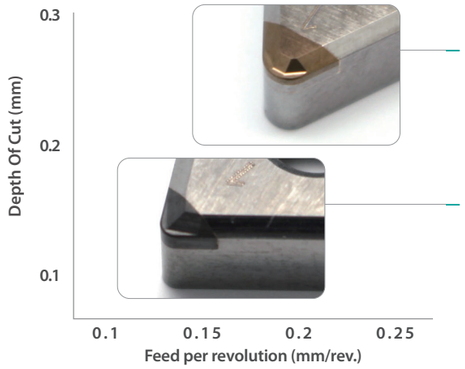
Coating S [Special]
Coating S, the special type, is providing excellent performance on hard-to-cut material machining process with multi-layered coating on CBN.

KOHER CBN Chip Breaker Inserts

KOHER New Value Creation

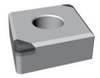
KOHER CBN Chip Breaker Insert Series

KOHER CBN Chip breaker Insert Series
Long chip could be jammed during machining and it would damage your product. KOHER has 2 different types of CBN Chip breaker line-up on G Series.



CG Series – S Type
Unique CBN tip chip breaker design shows outstanding performance on general hard turning process.

CG Series – F Type
Sharp edge Chip breaker design provides finishing turning process.

		Negative				Grade					
	CNGA	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	CNGA120402/04/08-CGS/F	4.2	12.7	1.6	0.2 / 0.4 / 0.8						

		Positive				Grade					
	DNGA	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	DNGA150402/04/08 –CGS/F	4.5	12.7	1.6	0.2 / 0.4 / 0.8						

		Negative				Grade					
	TNGA	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	TNGA160402/04/08 –CGS/F	4.5	9.525	1.6	0.2 / 0.4 / 0.8						

		Negative				Grade					
	VNGA	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	VNGA160402/04/08 – CGS/F	6.0	9.525	1.6	0.2 / 0.4 / 0.8						

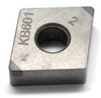
		Positive				Grade					
	CCGW	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	CCGW09T302/04/08 – CGS/F	4.2	9.525	1.6	0.2 / 0.4 / 0.8			■			

		Positive				Grade					
	DCGW	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	DCGW11T302/04/08 – CGS/F	5.5	9.525	1.6	0.2 / 0.4 / 0.8			■			

		Dimension (mm)				Grade					
	VBGW	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
	VBGW110302/04/08 – CGS/F	4.5	6.35	1.6	0.2 / 0.4 / 0.8			■			

KOHER Hard Turning Series

KOHER Code Information



CNGA	Negative									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
CNGA120402/04/08	4.2	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			
CNGA120402/04/08N2	3.0	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■
CNGA120402/04/08HS2	3.0	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■
CNGA120402/04/08TS4	2.6	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			

DNGA	Positive									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
DNGA150402/04/08	4.5	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■
DNGA150402/04/08N2	3.5	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■
DNGA15040/04/08HS2	3.5	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■
DNGA15040/04/08TS4	2.4	12.7	1.6	0.2 / 0.4 / 0.8	■	■	■			■

TNGA	Negative									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
TNGA160402/04/08	4.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
TNGA160402/04/08N3	3.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
TNGA160402/04/08HS3	3.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
TNGA160402/04/08TS6	2.3	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■

VNGA	Negative									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
VNGA160402/04/08	6.0	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
VNGA160402/04/08N2	4.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
VNGA160402/04/08HS2	4.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
VNGA160402/04/08TS4	2.3	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■

CCGW	Positive									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
CCGW09T302/04/08	4.2	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
CCGW09T302/04/08N2	3.0	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
CCGW09T302/04/08HS2	3.2	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■

DCGW	Positive									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
DCGW11T302/04/08	5.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
DCGW11T302/04/08N2	3.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■
DCGW11T302/04/08HS2	3.5	9.525	1.6	0.2 / 0.4 / 0.8	■	■	■			■

TPGW	Positive									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
TPGW110302/04/08	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■
TPGW110302/04/08N3	3.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■
TPGW110302/04/08HS3	3.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■

VBGW	Positive									
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB404	KB504	KB601	KB651	KB604	KB Coating
VBGW110302/04/08	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■
VBGW110302/04/08N2	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■
VBGW110302/04/08HS2	4.5	6.35	1.6	0.2 / 0.4 / 0.8	■	■	■			■

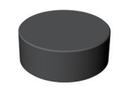
KOHER CBN Inserts

KOHER Solid CBN Insert

CNGA	Negative							
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB902S	KB951S	KB952S	KB Coating
CNGN120404/08/12	-	12.7	4.76	0.4/ 0.8 / 1.2				

TNGN	Positive							
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB902S	KB951S	KB952S	KB Coating
TNGN110304/08/12	-	6.35	3.18	0.4/ 0.8 / 1.2				

SNGN	Negative							
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB902S	KB951S	KB952S	KB Coating
SNGN090304/08/12		9.525	3.18	0.4/ 0.8 / 1.2				
SNGN120404/08/12	-	12.7	4.76	0.4/ 0.8 / 1.2				



RNGN	Negative							
	Cutting Edge Length(l)	Diameter(D)	Thickness(t)	Corner R	KB902S	KB951S	KB952S	KB Coating
RNGN090300	-	9.525	3.18	-				
RNGN120300	-	12.7	3.18	-				
RNGN120400	-	12.7	4.76	-				

KOHER CBN Grooving Series

KOHER Grooving Series

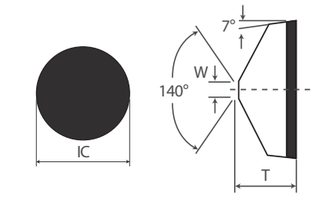
Special order made Grooving Series line-up is now available for your request of Hardened steel and Cast Iron work piece. KBG Bites are specially made to perfectly machine Automobile Valve Seats on Cylinder block.

KTDC	Dimension					Grade			
	Width	R	Relief Angle		Back Taper Angle	KB6021	KB651	KB902	KB 952
			Top	Side					
KTDC2.0-020	2.0	0.2	6	2	2				
KTDC3.0-020	2.0	0.2	6	2	2				
KTDC4.0-020	2.0	0.2	6	2	2				
KTDC5.0-020	2.0	0.2	6	2	2				
KTDC6.0-020	2.0	0.2	6	2	2				
Order Made									

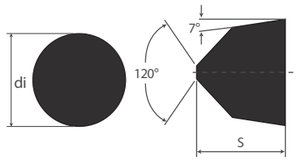
KOHER PCD & CBN Notch Bite Series

KOHER Notch Bite Series

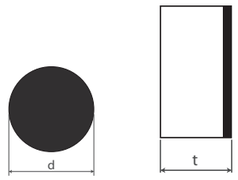
Special order made Notch Bite Series line-up is now available for your request of Carbide and Cast Iron roll notching in steel industry. KOHER provides you good quality of products with many experiences.



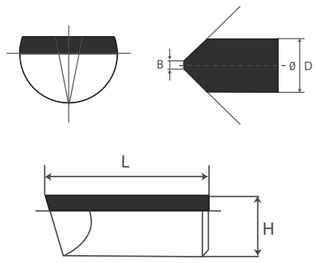
RCGX	Positive			Grade		
	Diameter(D)	Thickness(t)	Width (mm)	KB902	KB951	KB952
RCGX060300	6.350	3.18	0.73	▪	▪	
RCGX090300	9.525	3.18	0.75	▪	▪	▪
RCGX110400	11.400	4.76	1.00	▪	▪	▪
RCGX120400	12.700	4.76	1.00			
Order Made						



RCGX Solid	Positive			Grade		
	Diameter(D)	Thickness(t)	Angle	KB902	KB951	KB952
RCGX060400	6.350	4.76	120			
RCGX060600	6.350	6.35	120			
RCGX060700	6.350	7.94	120			
RCGX110400	11.400	4.76	120			
RCGX120400	12.700	4.76	120			
Order Made						



RNMN	Dimension		Grade		
	Diameter(D)	Thickness(t)	KB902	KB951	KB952
RNMN060200	6.350	3.18			
RNMN060300	6.350	3.18			
RNMN060400	6.350	4.76			
RNMN090300	9.520	3.18			
RNMN120300	12.700	3.18			
RNMN120400	12.700	4.76			
RNMN120600	12.700	6.35			
Order Made					

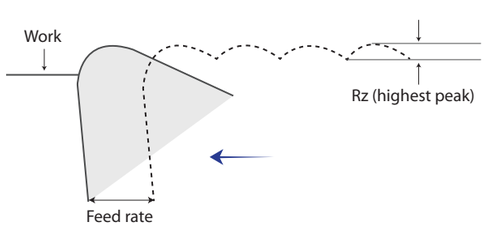


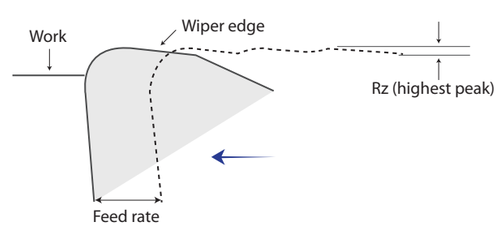
RNMN	Dimension				Grade		
	Diameter(D)	L (mm)	B (mm)	H (mm)	KP10	KPM	KPC
KN10	3.00	3.00	1.00	2.50			
KN12	4.00	4.00	1.20	3.00			
KN14	5.00	5.00	1.40	3.50			
KN16	5.00	5.00	1.60	3.50			
KN18 ~ N22	6.00	6.00	1.80	4.00			
N22 ~ N25	8.00	8.00	2.20	5.00			
Order Made							

KOHER CBN Insert Series

KOHER Wiper Insert Series

KOHER CBN Wiper insert is providing great quality of surface roughness performance during brake disc, bearing and all kinds of turning process. Wiper series with large radius added to the part out right next to nose radius can be applied to either right or left side.





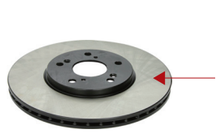
Simple Radius Type

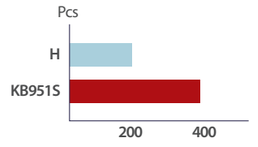
Wiper

KOHER's Success Story

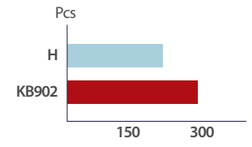
	Standard R Insert (R0.8)		KOHER Wiper Insert (R0.8)	
-	Finishing process (f=0.15mm/rev)	Fast Feed Process (f=0.3mm/rev)	Finishing process (f=0.15mm/rev)	Fast Feed Process (f=0.3mm/rev)
Surface roughness (Rz)	3.5㎛	9.5㎛	0.6㎛	1.0㎛

KOHER's Success Story – Cast iron parts





KOHER	CNMN120412 KB951S
Material	FC170HD, Brake
Cutting Process	OD Turning
Speed , N	4,000 m/min
Feed	0.08 mm/rev
Depth of Cut	0.05 mm



KOHER	DCGW11T308N2 KB901
Material	FCD500, Differential Case Cover
Hardness (HRc)	Cutting plane, ID Boring, Finishing
Speed , N	280 m/min
Feed	0.04~0.1 mm/rev
Depth of Cut	0.2 mm

KOHER GRADE COMPARISON TABLE

KOHER PCD GRADE COMPARISON TABLE

Classification		KOHER	DINE KORLOY	EHWA	KYOCERA	SUMITOMO	TUNGALOY	MITSUBISHI	SANDVIK
PCD (grain size)	< 1 micron	**KP01**		EP40	KPD001	DA2000	DX110		CD05
			DP200	EP11		DA1000		MD230	
	5 micron	**KP05**				DA150	DX120		
									CD10
	< 10 micron	**KP10**	DP150	EP55	KPD010			MD220	
							DX140		
	Coarse+ fine mixed	**KP302**	DP90	EP29	KPD230	DA90			
							CX160	MD205	
	< 25 micron	**KPC**		EP59	KPD250				
							DX180		

KOHER CBN GRADE COMPARISON TABLE

Classification		KOHER	DINE KORLOY	EHWA	KYOCERA	SUMITOMO	TUNGALOY	MITSUBISHI	SANDVIK
HARD TURNING	H01	**KB452 KB503 KB500 KB5011**	DNC100 KB420 KB1000	EB19X EB29S	KBN510 KBN05M KBN10M	NCB100 (NO BINDER) BNC2115	BXA10 BXM10	MBC010 (COATED) BC8105	CB7105 (COATED)
	H10	**KB504 KB552**	DNC250 KB320 KB2000	EB57S EB180 EB570 EB56	KBN525 KBN25M KBN05M	BNC2115 BNC2010 BNC2125	BXA20	BC8110 MBC020 (COATED)	CB7115 (COATED)
	H20	**KB601 KB6021 KB620**	KB420 KB425 DNC350 KB400 DNC400	EB550 EB150	KBN30M KBN35M	BNC2020	BXA20 BXM20 BX360	BC8120 MB8025 MBC020 MB825	CB7125 CB7525
	H30	**KB651 KB652 KB751 KB95X**	KB335 DNC350	EB73 EB54X	KBN900	BNC300	BXA30 BXC50	BC8130 MB835	CB7135
CAST IRON	K01	**KB100S KB952 KB951**	KB350	HBN-R HBN	KBN60M KBN65B	BNC8115 BNC8125	BX910	MB730	CB7525
	K10	**KB95X KB902**	KB370	EB100X EB50 EB1000	KBN900 KBN65B	BN7000 BN7125		MBS140	CB7925
	K20	**KB95X KB902**	KB70 KB800		KBN900		BX815	MB710	CB7925
Ductile Cast Iron		**KB902 KB503**						MB710 MB730	
SINTERED ALLOY		**KB751 KB503**	KB800			BN7115 BN7125	BX470 BX480	MB4020 MB730 MB835	

KOHER CBN Guideline

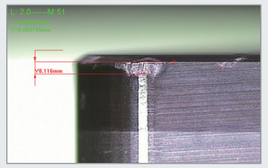
CBN Trouble Shooting FAQ

☑ My insert got chipping on edge!

- Inserts need to be chamfered and honed more on edge.
  > Increase land size!
- Check if there is a vibration.

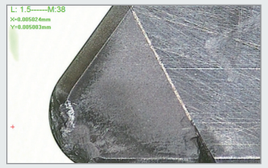
☑ It looks like a flank wear!

- Increase cutting speed, feed rate and depth of cut.
- Check tool center height.
- Check workpiece content – Ferrite content rate.



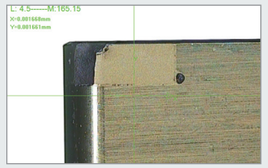
☑ It looks like a crater wear!

- Reduce cutting speed and feed rate.
- Reduce land size on edge.
- Use KOHER Coating Series Inserts.
- Check if you could use coolant in continuous process.



☑ My CBN was broken!

- Adjust cutting tool center height.
- Check if the tool setting parts [clamps/Anvil] were worn.
- Choose tougher grade of CBN.



KOHER CBN Inquiry Guidance

What kinds of information should I give you to choose the best CBN for my machine

☑ Workpiece Material

- Case Hardening, Thru Hardening etc
- Rockwell hardness – ex> 58-62 HRc
- Grade information – ex> SUJ2

☑ Cutting conditions

- Speed, Feed rate, Depth of Cut etc.

☑ Application

- Turning, Milling, Grooving etc.

☑ Reason to change or try?

- Tool life problem?
  Burr, Wear, Chipping, Surface roughness etc.