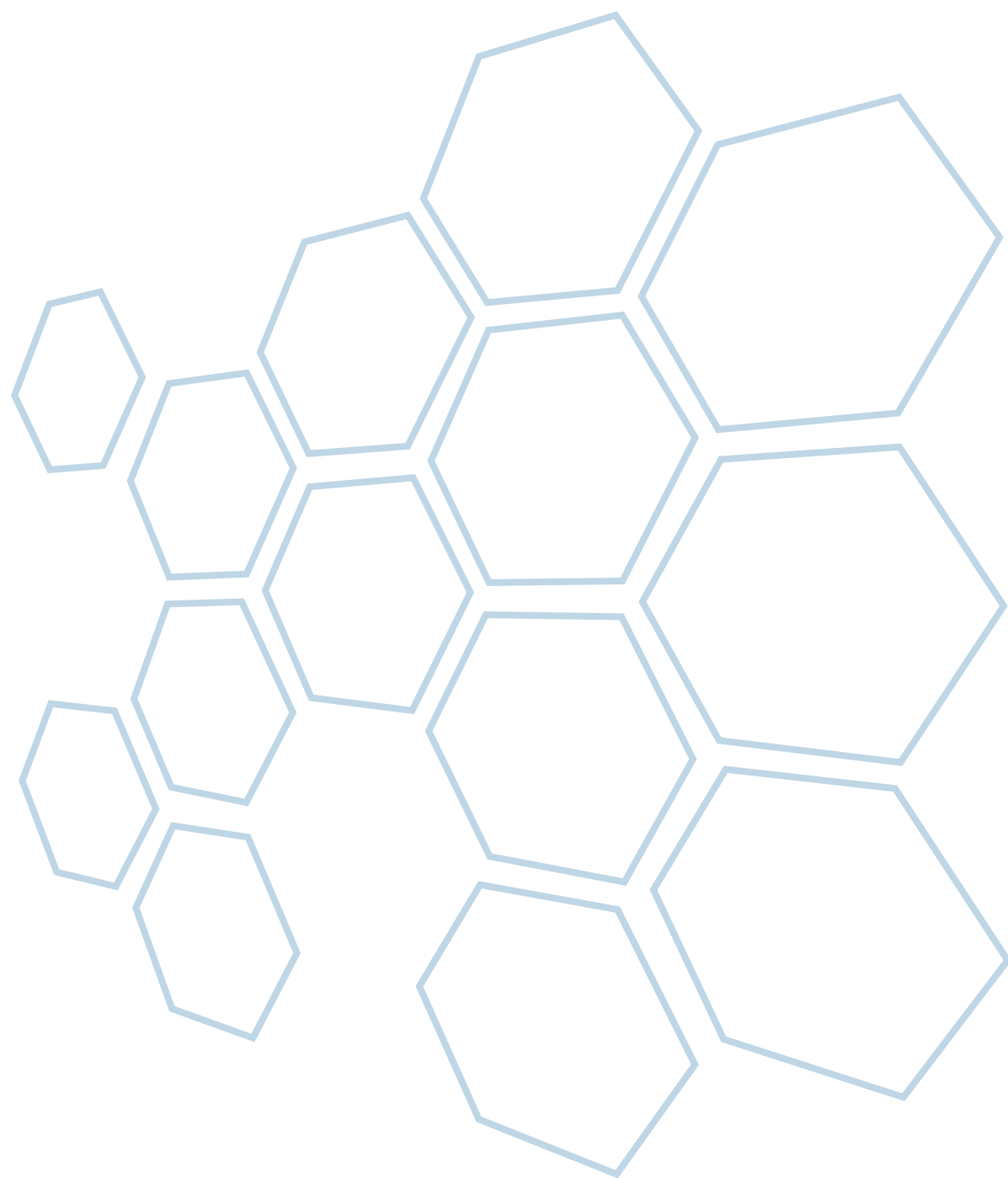




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Tel: +86 18001698576

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E-mail: info@iken-tools.com

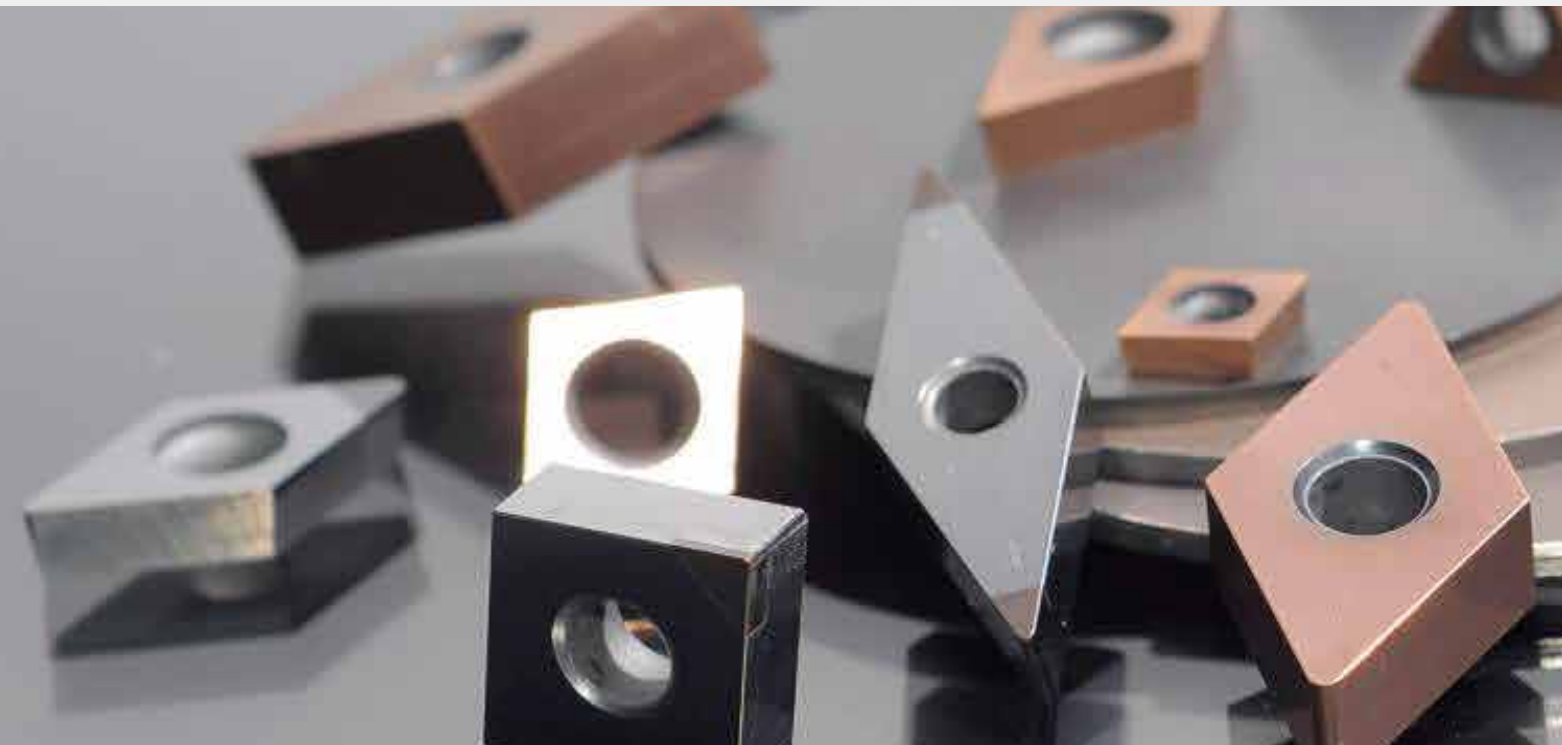
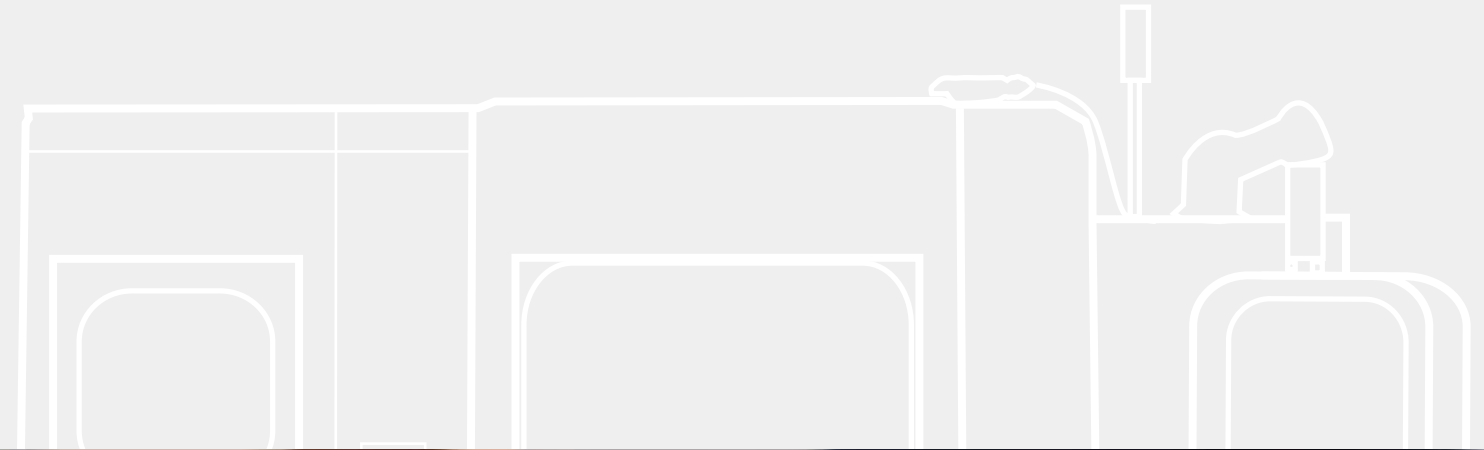
Website: www.iken-tools.com



IKEN

Shanghai IKEN Precision Tools Co.Ltd.





PRECISION CUTTING, APPLICATION SUPPORT

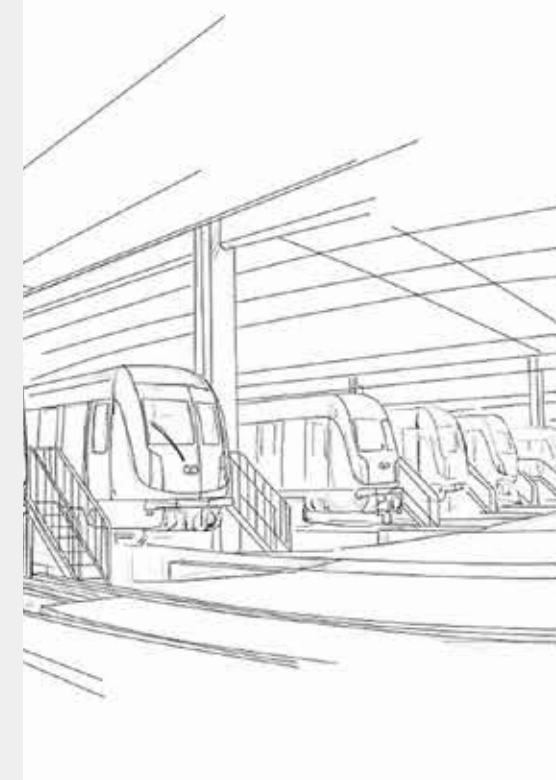
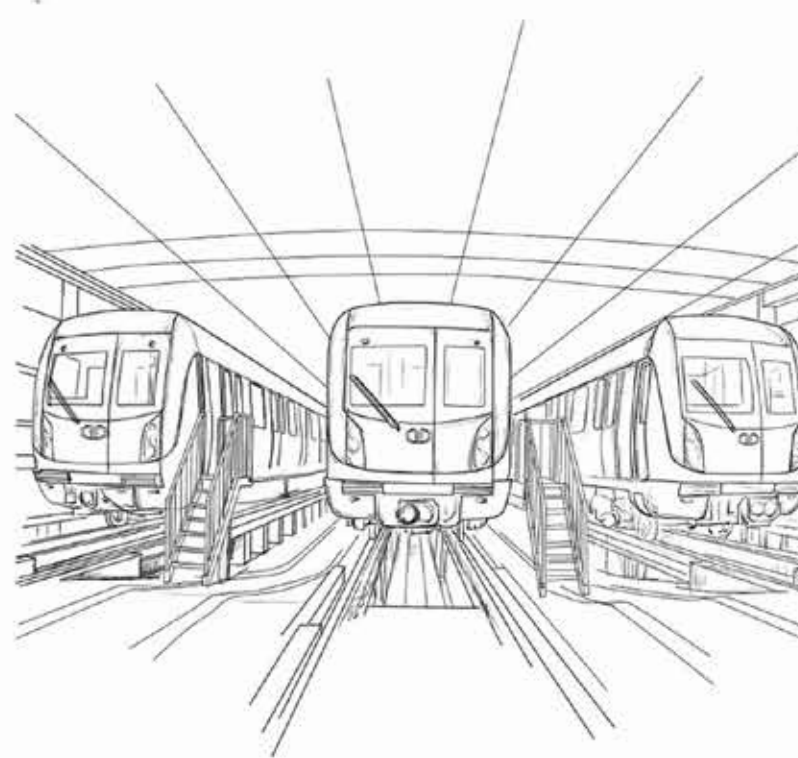
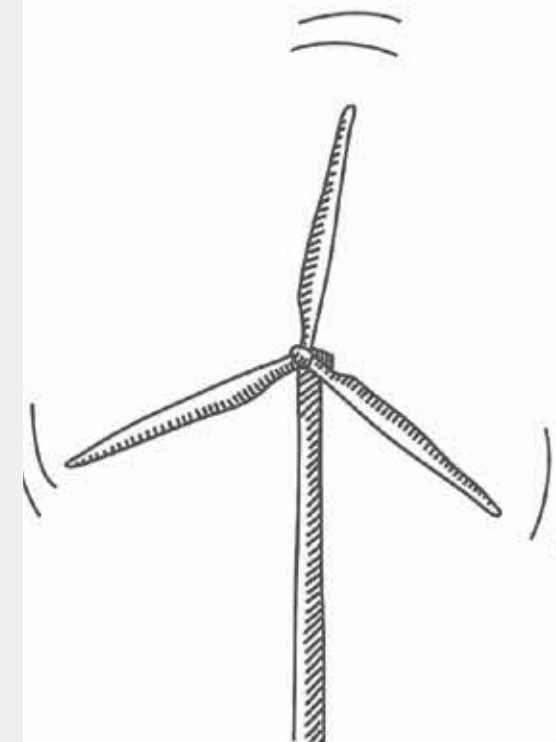
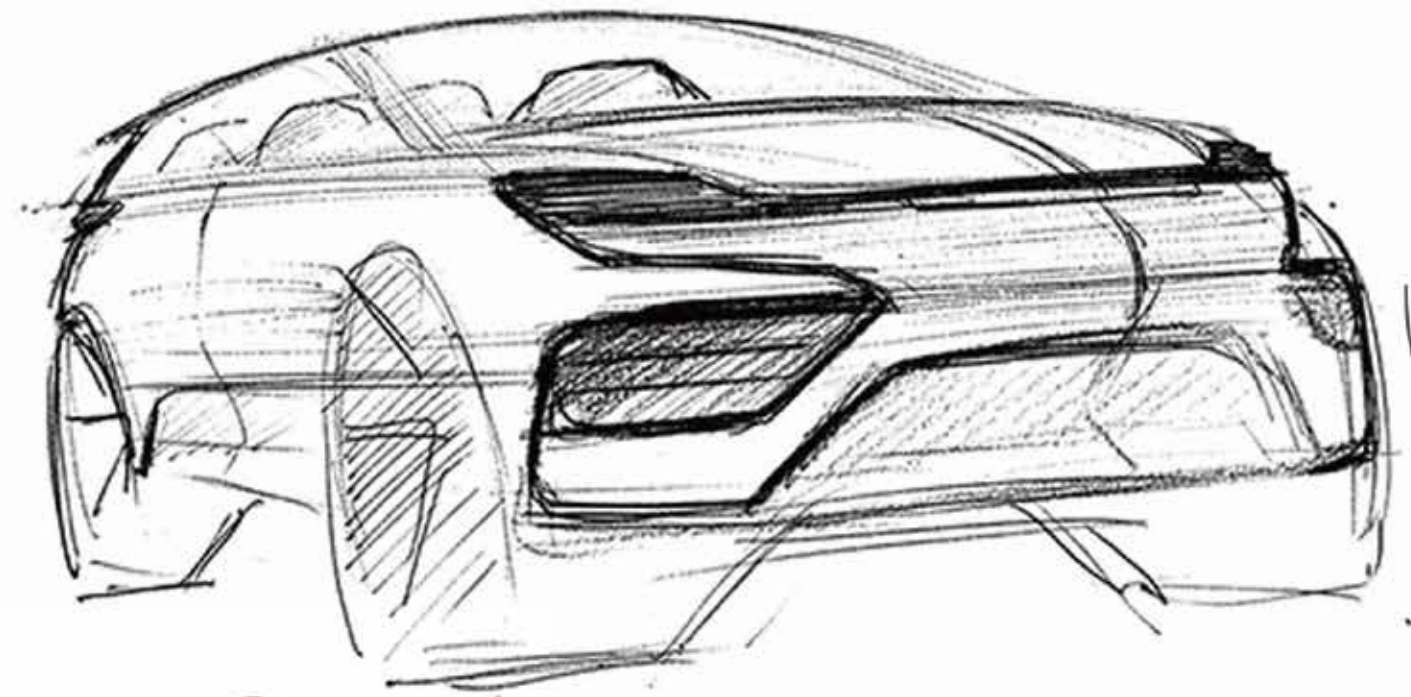
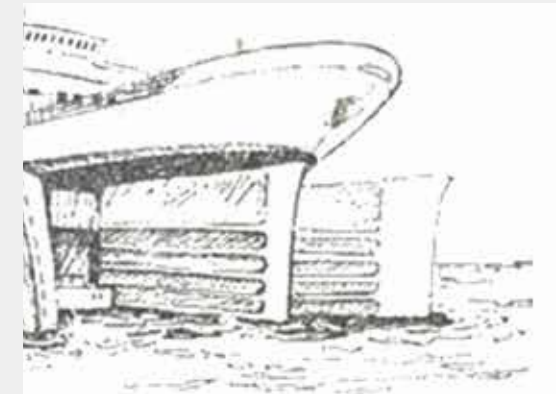
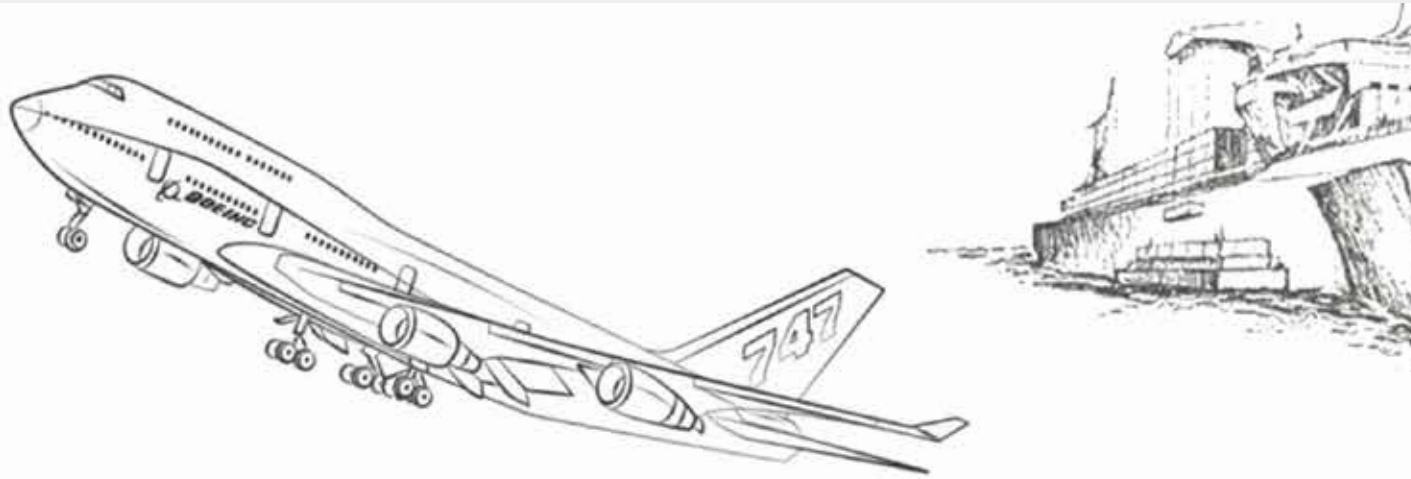
Shanghai IKEN Precision Tools Co.Ltd.

COMPANY INTRODUCTION

Shanghai IKEN Precision Tools Co., Ltd., established in 2011, develops and manufactures CBN and PCD tools for metal cutting.

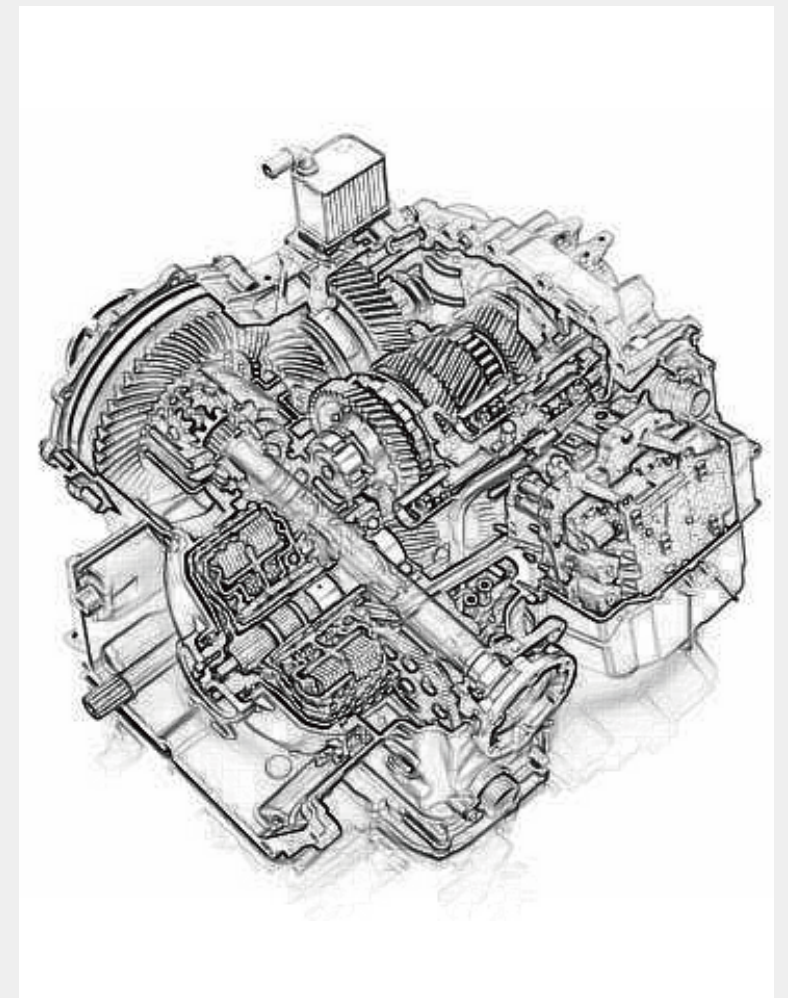
We discuss tool selection and application needs with customers based on the workpiece material, machining operation, machine condition and target finish. Our product range includes standard inserts and tools developed for specific machining requirements.

We value integrity, cooperation and practical engineering communication. Product suitability and machining results should be confirmed under the customer's actual operating conditions.



IKEN
Shanghai IKEN Precision Tools CO.Ltd.

In various industries the component made of no matter high hardness material like hardened steel or abrasive material like cast iron or sintered powder can be machined accurately , stably and effciently by IKEN superhard tools.



Nomenclature	01-02
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CBN Introduction	03-06
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CBN Tip Brazed Insert	07
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□HP Negative Insert	08-20
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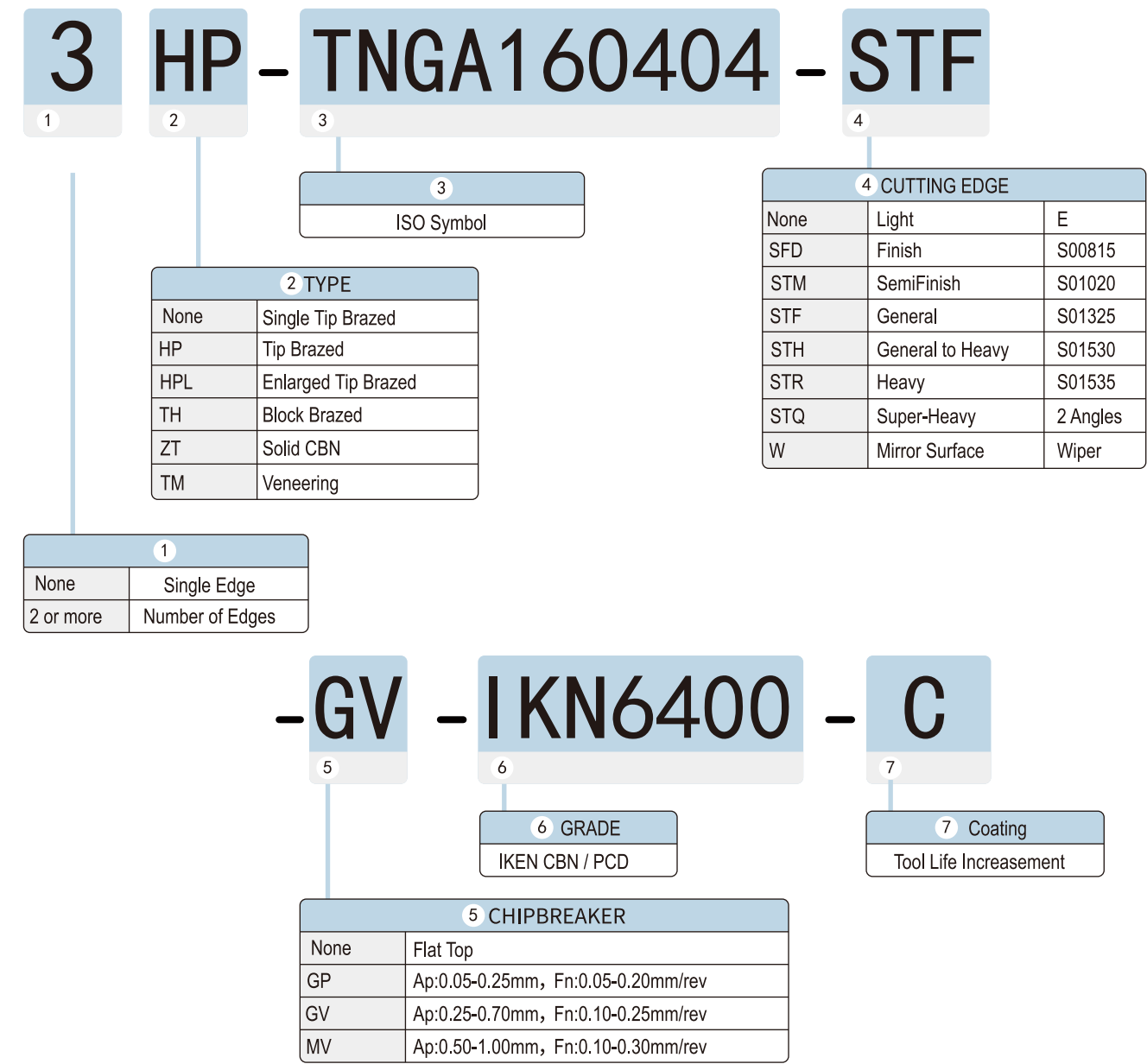
New Products	81-91
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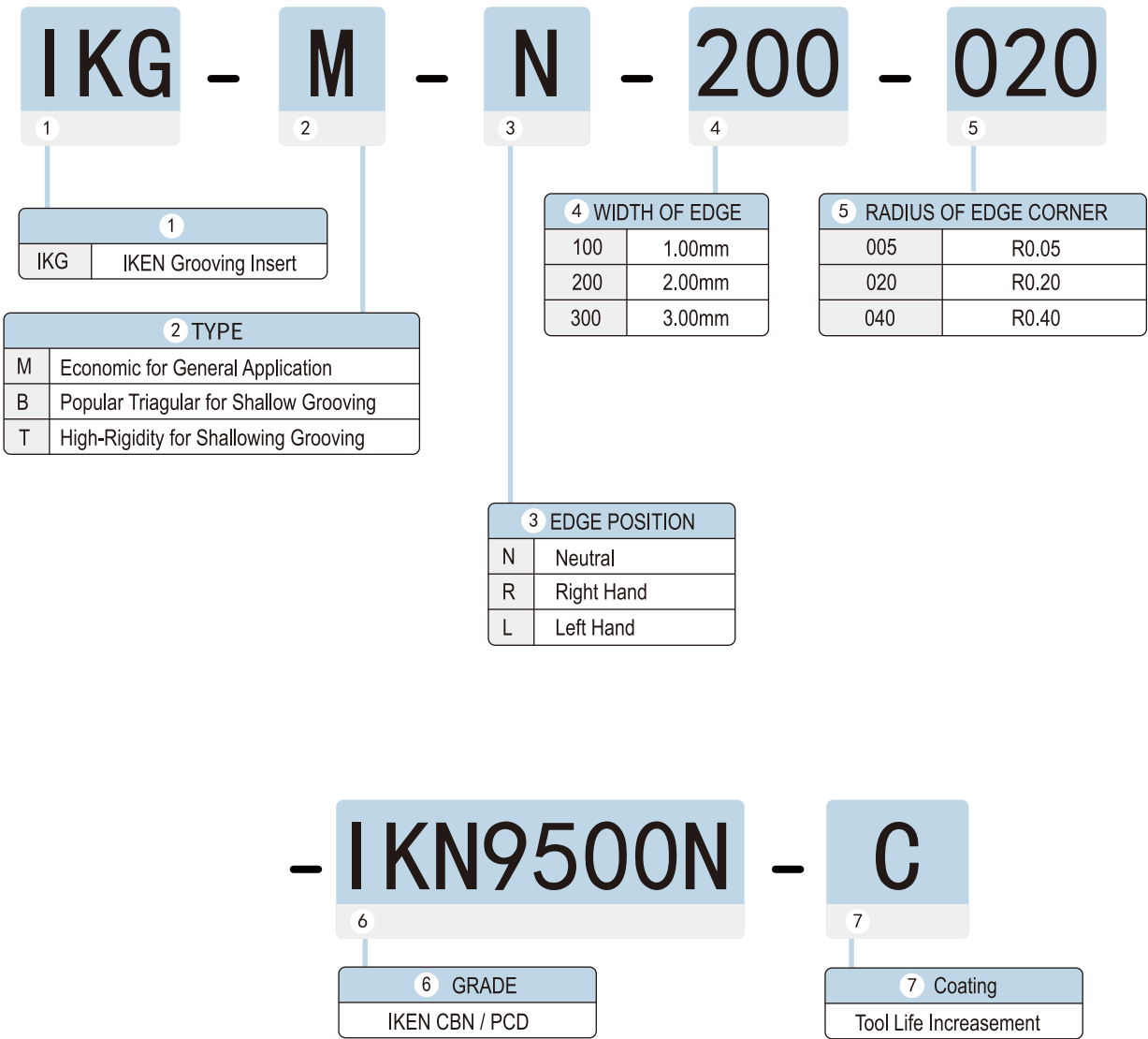
IKEN NOMENCLATURE FOR ISO INSERT

ISO INSERT



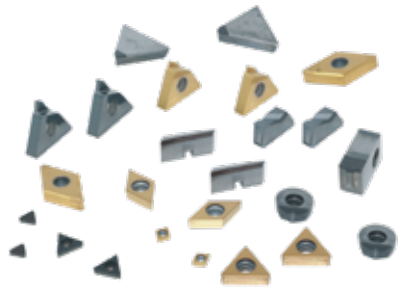
IKEN NOMENCLATURE FOR GROOVING INSERT

GROOVING INSERT



CBN INTRODUCTION

WHY CBN CHOSEN



CBN

※ CBN (Cubic Boron Nitride) is the 2nd hardest materials on Earth just after diamond. This material is sintered under high-pressure and temperature with CBN particles and a special binder.

Characteristics

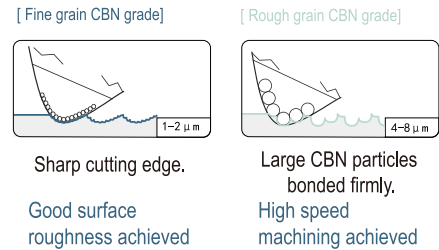
- ※ CBN hardness is more than twice that of cemented carbide, with the hardness at high temperature exceeding that of cemented carbide so that long tool life can be achieved.
- ※ CBN has no tendency to react with ferrous materials. This makes it suitable for high speed cutting of hardened steel, cast iron and ferrous sintered metals so that high efficiency can be achieved.
- ※ CBN has very good thermal conductivity so that the heat generated in cutting zone will be dispersed rapidly. All these makes stable tool life achieved.

Necessary for cutting

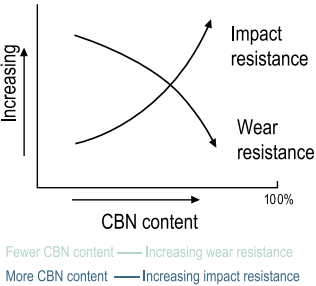
※ Hardness of tool ≥ Hardness of workpiece x 3

Name	Materials	Hardness
Workpiece	Hardened Steel (62HRC)	750 HV
Cutting Tool	Cemented Carbide	1600 HV
Cutting Tool	CBN (IKN6400)	3500 HV

Effects of grain size of CBN



※ Effects of CBN Content



IKEN CBN Grades Introduction

Workpiece Material	Material	Condition	Vc (mm/min)	Fn (mm/rev)	Ap (mm)
Hardened Steel	IKN1002	High-speed Continuous	150-200-350	0.03-0.10-0.15	0.01-0.10-0.20
	IKN4600	Continous - Interrupted	150-200-250	0.05-0.15-0.25	0.03-0.15-0.30
	IKN5290A	Continous - Interrupted	120-200-250	0.05-0.15-0.25	0.03-0.15-0.30
	IKN6400	Continous - Interrupted	100-250-250	0.05-0.15-0.30	0.03-0.15-0.30
	IKN7512	Interrupted	80-100-200	0.05-0.15-0.30	0.03-0.20-0.35
	IKN9010	Interrupted	80-100-200	0.05-0.15-0.30	0.03-0.20-0.35
	IKN9500N	Interrupted	50-100-200	0.05-0.15-0.30	0.03-0.20-0.30
Sintered Metal	IKN8000B	Continous - Interrupted	50-150-350	0.03-0.10-0.15	0.05-0.15-0.30
	IKN8800	Interrupted	50-150-250	0.05-0.15-0.2	0.05-0.15-0.30
	IKN9500N	Interrupted	50-150-200	0.05-0.15-0.2	0.05-0.15-0.30
Ductile Cast Iron	IKN5190	Continous	100-400	0.03-0.10-0.15	0.05-0.10-0.20
	IKN6012	Continous - Interrupted	100-300	0.05-0.15-0.25	0.05-0.15-0.30
	IKN9012	Interrupted	80-200	0.05-0.15-0.30	0.03-0.20-0.35
Gray Cast iron	IKN8000B	Continous - Interrupted	200-1500	0.03-0.10-0.15	0.05-0.20-0.30
	IKN9010	Interrupted	200-1000	0.05-0.15-0.35	0.05-0.20-0.40
	IKN9501N	Interrupted	200-1000	0.05-0.15-0.35	0.05-0.20-0.40

IKEN Solid CBN

Workpiece Material	Material	Condition	Vc (mm/min)	Fn (mm/rev)	Ap (mm)
Hardened Steel	IKN60	Continous - Interrupted	100-150-250	0.05-0.15-0.3	0.3-0.5-1.5
	IKN96	General	80-150-200	0.05-0.15-0.25	0.3-0.5-1.0
Gray Cast iron	IKN80	General	80-400-1000	0.05-0.15-0.3	0.5-1-2
	IKN72	Interrupted	80-300-800	0.05-0.15-0.25	0.3-0.5-1.5

IKEN CBN coating

Coating selection

IKEN offers coating options for CBN inserts. Selection depends on the workpiece material, cutting continuity, speed, feed, cooling and required finish.

Application considerations

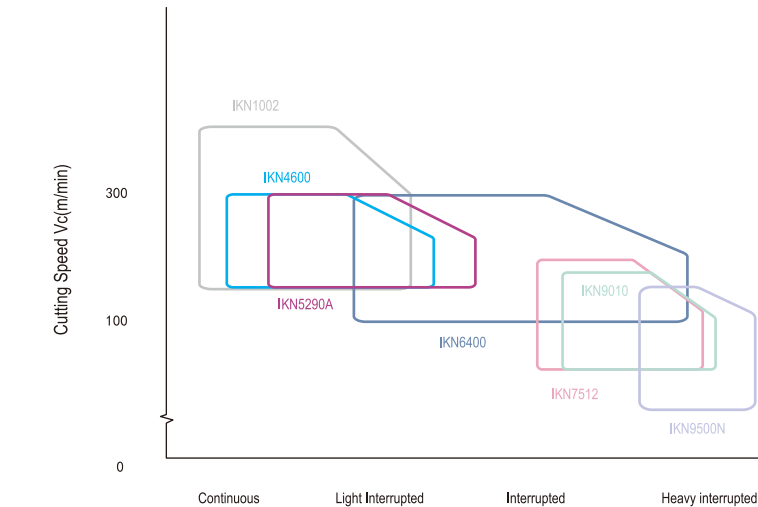
Coating performance varies with the material and machining conditions. Check edge stability, wear pattern and part quality during trial cutting. The catalogue does not promise a fixed tool life or a defect-free surface.

Compare tool wear and surface quality in a controlled trial under the intended machining conditions.



CBN grades for hardned steel

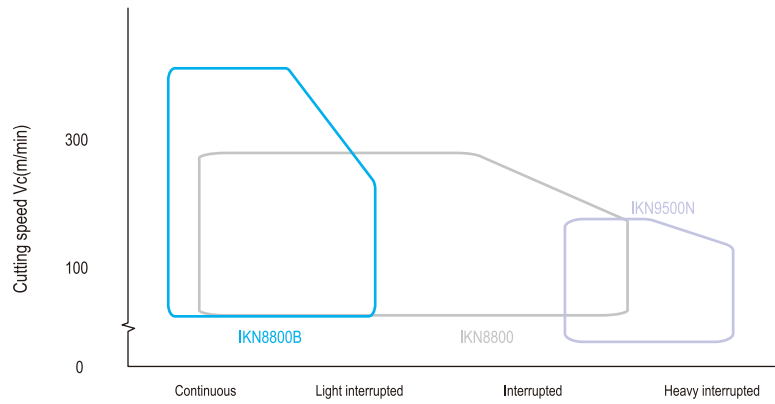
Grade	Cutting speed	Features
IKN1002	150-350	High Speed, Excellent Wear Resistance
IKN4600	150-250	Good Surface Quality, Good Wear Resistance
IKN6400	100-250	Versatile , Good Integrated Performance
IKN9500N	50-200	Excellent Impact Resistance



CBN Grade for Sintered Metal

S

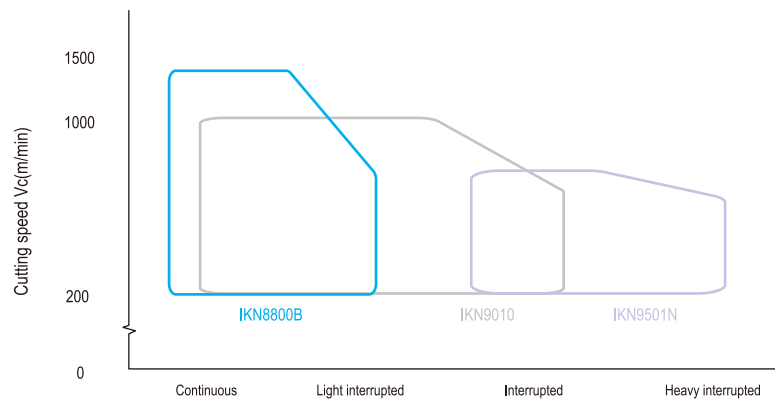
Grade	Cutting speed	Features
IKN8800	50-350	Versatile , Good Integrated Performance
IKN8000B	50-350	General for Sintered Metal
IKN8800	50-250	Versatile,Good Integrated Performance
IKN9500N	50-200	Excellent Integrated Performance



CBN Grades for Cast Iron

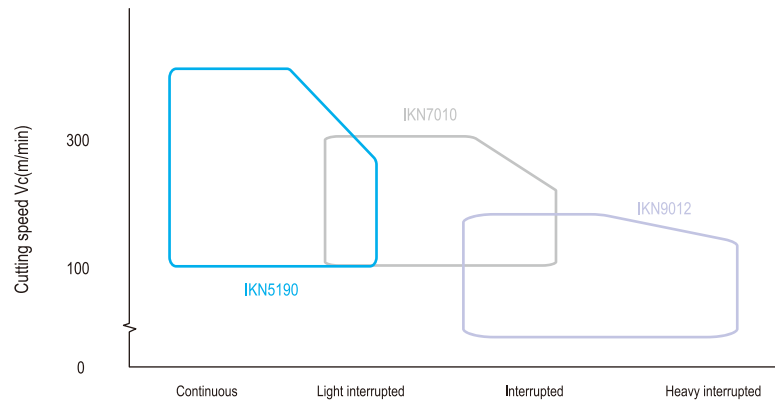
K

Grade	Cutting speed	Features
IKN8000B	200-1500	Excellent Wear Resistance, 1st Recommendation for Gray Cast Iron
IKN9010	200-1000	Versatile,Good Integrated Performance
IKN9501N	200-1000	Excellent Impact Resistance

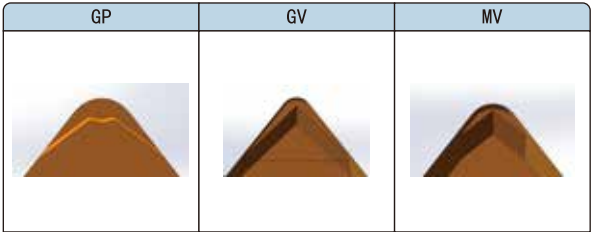


K

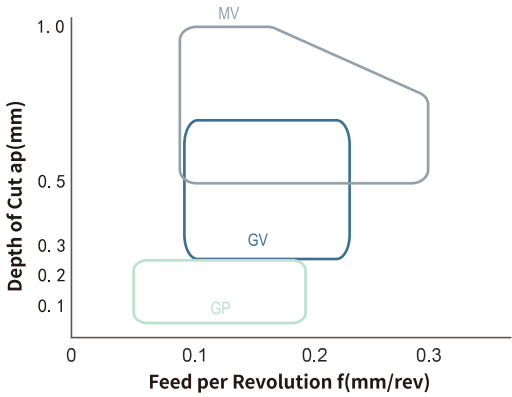
Grade	Cutting speed	Features
IKN5190	100-400	Excellent wear resistance, continuous processing of ductile iron
IKN7010	100-300	General processing of ductile iron
IKN9012	80-200	first choice for intermittent processing



Chip Breaker



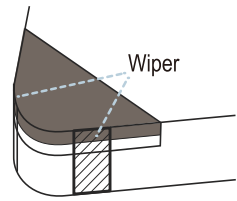
GP: Small Cutting Depth for Finishing
GV: iddle Cutting Depth for Semi-Finishing
MV: Large Cutting Depth for Roughing



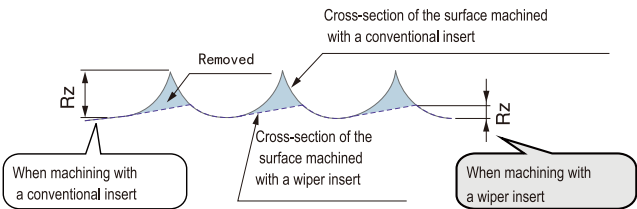
Wiper

Wiper application

A wiper edge may help control surface finish at a suitable feed rate. The achievable feed depends on the machine, workpiece rigidity, insert geometry and quality target.



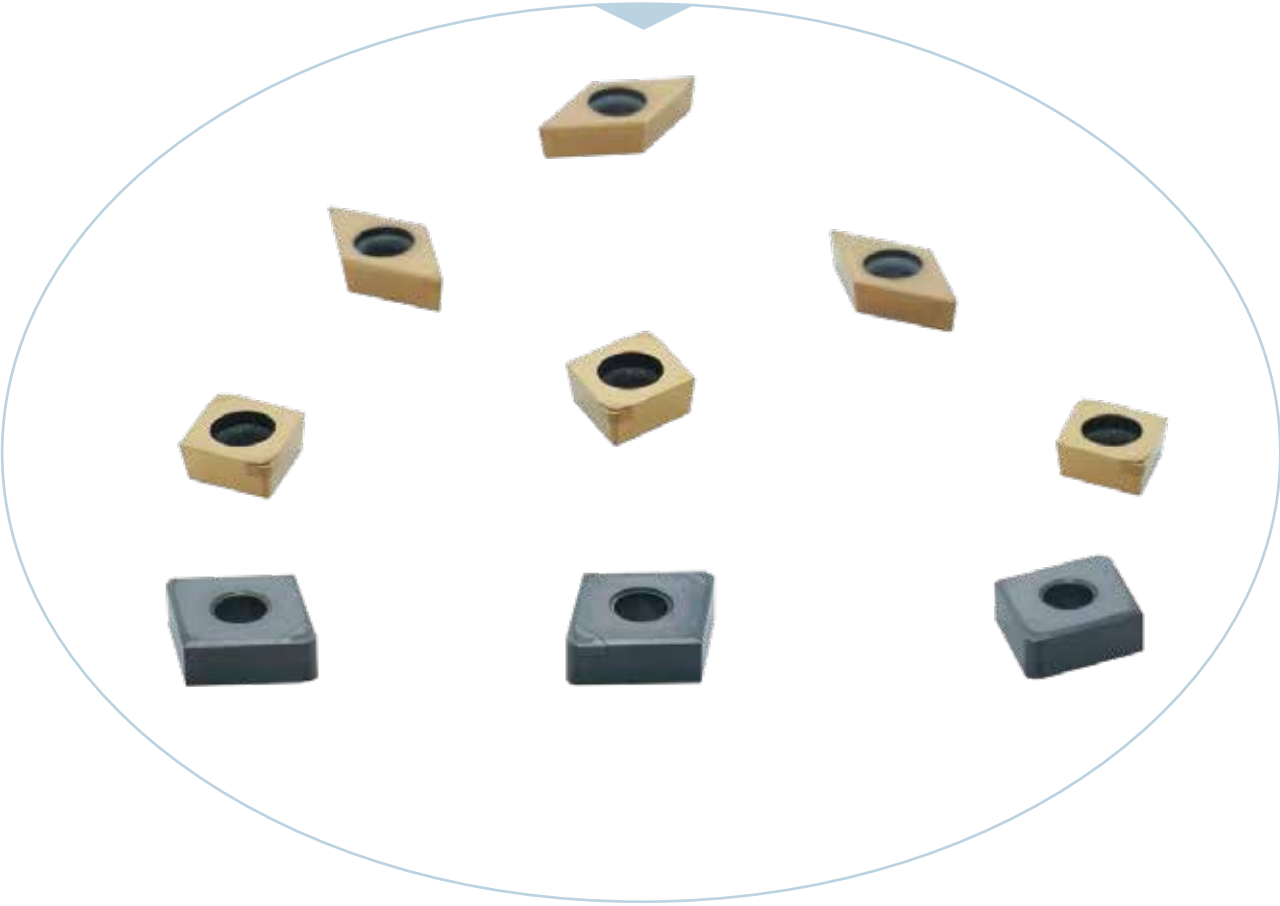
Check surface roughness, cutting forces, chip behaviour and wear in a trial before changing the production conditions. A longer tool life or shorter cycle time cannot be assumed for every application.



Additional Notes:
※ The supplementary code "W" at the end of the ISO insert code indicates wiper edge applied, Example : 2HP-CNGA120408W-STM
※ The Recommended Lead Angle of Toolholder for Different ISO Insert Shape

Shape of ISO Insert	Type C	Type T	Type D
Lead Angle of Toolholder	95°	91°	93°

CBN Tip Brazed Insert



NegativeC type

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition															
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K			
1204	12. 7	4. 76	5. 16	0. 2-1. 2																
1207	12. 7	7. 94	5. 16	0. 2-1. 2																
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN6290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N		
	Standard	CNGA120402	2.7		0.2	●	●	●	●	●			●	●	●	●	●	●		
		CNGA120404	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●	●	
	Finishing	CNGA120402	2.7	SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120404	2.3	SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120408	2.5	SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120412	2.7	SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●	
	Semi-Finishing	CNGA120402	2.7	STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120404	2.3	STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120408	2.5	STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●	
		CNGA120412	2.7	STM	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	General	CNGA120404	2.3	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNGA120408	2.5	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNGA120412	2.7	STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNGA120704	2.3	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNGA120708	2.5	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
		CNGA120712	2.7	STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●	
	Interrupted Cutting	CNGA120404	2.3	STH	0.4			●	●	●	●	●	●							
		CNGA120408	2.5	STH	0.8			●	●	●	●	●	●							
		CNGA120412	2.7	STH	1.2			●	●	●	●	●	●							
		CNGA120704	2.3	STH	0.4			●	●	●	●	●	●							
		CNGA120708	2.5	STH	0.8			●	●	●	●	●	●							
		CNGA120712	2.7	STH	1.2			●	●	●	●	●	●							
	Heavy Interrupted Cutting	CNGA120408	2.5	STR	0.8					●	●	●								
		CNGA120412	2.7	STR	1.2					●	●	●								
		CNGA120708	2.5	STR	0.8					●	●	●								
		CNGA120712	2.7	STR	1.2					●	●	●								
	Heavy-Duty Severe Interrupted Cutting	CNGA120408	2.5	STQ	0.8					●	●	●								
		CNGA120412	2.7	STQ	1.2					●	●	●								
		CNGA120708	2.5	STQ	0.8					●	●	●								
		CNGA120712	2.7	STQ	1.2					●	●	●								

NegativeD type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1104	9. 525	4. 76	3. 81	0. 2-1. 2														
1504	12. 7	4. 76	5. 16	0. 2-1. 2														
1506	12. 7	6. 35	5. 16	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

	Standard	DNGA110402	2.33		0.2	●	●	●	●	●			●	●	●	●	●	
		DNGA110404	1.96		0.4	●	●	●	●	●			●	●	●	●	●	
		DNGA150402	2.33		0.2	●	●	●	●	●			●	●	●	●	●	
		DNGA150404	1.96		0.4	●	●	●	●	●			●	●	●	●	●	
		DNGA150602	2.33		0.2	●	●	●	●	●			●	●	●	●	●	
		DNGA150604	1.96		0.4	●	●	●	●	●			●	●	●	●	●	
	Finishing	DNGA110402	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA110404	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA110408	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		DNGA110412	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150402	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150404	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA150408	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		DNGA150412	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150602	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150604	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA150608	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		DNGA150612	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	DNGA110404	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA110408	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		DNGA110412	2.5	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150404	2.7	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA150408	2.5	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		DNGA150412	2.7	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		DNGA150604	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		DNGA150608	2.7	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●

NegativeD type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1104	9. 525	4. 76	3. 81	0. 2-1. 2														
1504	12. 7	4. 76	5. 16	0. 2-1. 2														
1506	12. 7	6. 35	5. 16	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

	General	DNGA110404	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA110408	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA110412	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA150404	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA150408	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA150412	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA150604	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		DNGA150608	2.12	-STF	0.8	●	●	●	●	●	●						
		DNGA150612	2.28	-STF	1.2	●	●	●	●	●	●						
	Interrupted Cutting	DNGA110404	1.96	-STH	0.4			●	●	●	●	●					
		DNGA110408	2.12	-STH	0.8			●	●	●	●	●					
		DNGA110412	2.28	-STH	1.2			●	●	●	●	●					
		DNGA150404	1.96	-STH	0.4			●	●	●	●	●					
		DNGA150408	2.12	-STH	0.8			●	●	●	●	●					
		DNGA150412	2.28	-STH	1.2			●	●	●	●	●					
		DNGA150604	1.96	-STH	0.4			●	●	●	●	●					
		DNGA150608	2.12	-STH	0.8			●	●	●	●	●					
	DNGA150612	2.28	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	DNGA110408	2.12	-STR	0.8					●	●	●					
		DNGA110412	2.28	-STR	1.2					●	●	●					
		DNGA150408	2.12	-STR	0.8					●	●	●					
		DNGA150412	2.28	-STR	1.2					●	●	●					
		DNGA150608	2.12	-STR	0.8					●	●	●					
DNGA150612		2.28	-STR	1.2					●	●	●						

NegativeV type

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
1604	9. 525	4. 76	3. 81	0. 2-1. 2															
																			
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	VNGA160402	3.2	-STF	0.2	●	●	●	●	●			●	●	●	●	●	●	
		VNGA160404	2.73	-STF	0.4	●	●	●	●	●			●	●	●	●	●	●	
		VNGA160408	1.89	-STF	0.8	●	●	●	●	●			●	●	●	●	●	●	
		VNGA160412	2	-STF	1.2	●	●	●	●	●			●	●	●	●	●	●	
	Finishing	VNGA160402	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		VNGA160404	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		VNGA160408	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		VNGA160412	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	VNGA160404	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		VNGA160408	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		VNGA160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	General	VNGA160404	2.73	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		VNGA160408	1.89	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		VNGA160412	2	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	VNGA160404	2.73	-STH	0.4			●	●	●	●	●							
		VNGA160408	1.89	-STH	0.8			●	●	●	●	●							
		VNGA160412	2	-STH	1.2			●	●	●	●	●							

NegativeS type

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1204	12. 7	4. 76	5. 16	0. 2-1. 2														
																		

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	SNGA120402	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●	
		SNGA120404	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●	
	Finishing	SNGA120402	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120404	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120408	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120412	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	SNGA120402	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120404	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120408	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		SNGA120412	2.97	-STM	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	General	SNGA120404	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		SNGA120408	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		SNGA120412	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	SNGA120404	2.5	-STH	0.4			●	●	●	●	●	●						
		SNGA120408	2.73	-STH	0.8			●	●	●	●	●	●						
		SNGA120412	2.97	-STH	1.2			●	●	●	●	●	●						
	Heavy Interrupted Cutting	SNGA120408	2.73	-STR	0.8						●	●							
		SNGA120412	2.97	-STR	1.2						●	●							
Heavy-Duty Severe Interrupted Cutting	SNGA120408	2.73	-STQ	0.8						●	●								
	SNGA120412	2.97	-STQ	1.2						●	●								

NegativeT type

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrpted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1604	9. 525	4. 76	3. 81	0. 2–1. 6														



image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN9000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	TNGA160402	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		TNGA160404	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	TNGA160402	2.39	SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		TNGA160404	2.02	SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		TNGA160408	2.19	SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		TNGA160412	2.35	SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		TNGA160416	2.75	SFD	1.6	●	●	●	●	●			●	●	●	●	●	●
		TNGA160402	2.39	STM	0.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	TNGA160404	2.02	STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		TNGA160408	2.19	STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		TNGA160412	2.35	STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		TNGA160416	2.75	STM	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●
	General	TNGA160404	2.02	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		TNGA160408	2.19	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		TNGA160412	2.35	STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		TNGA160416	2.73	STF	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	TNGA160404	2.02	STH	0.4			●	●	●	●	●						
		TNGA160408	2.19	STH	0.8			●	●	●	●	●						
		TNGA160412	2.35	STH	1.2			●	●	●	●	●						
		TNGA160416	2.73	STH	1.6			●	●	●	●	●						
	Heavy Interrupted Cutting	TNGA160408	2.19	STR	0.8					●	●							
		TNGA160412	2.35	STR	1.2					●	●							
		TNGA160416	2.79	STR	1.6					●	●							

NegativeW type

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0804	12. 7	4. 76	5. 16	0. 2–1. 2														



image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN9000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	WNGA080402	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		WNGA080404	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	WNGA080402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		WNGA080404	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		WNGA080408	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		WNGA080412	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	WNGA080402	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		WNGA080404	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		WNGA080408	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		WNGA080412	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	WNGA080404	2.3	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		WNGA080408	2.52	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		WNGA080412	2.73	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	WNGA080404	2.3	-STH	0.4			●	●	●	●	●						
		WNGA080408	2.52	-STH	0.8			●	●	●	●	●						
		WNGA080412	2.73	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	WNGA080404	2.3	-STR	0.4					●	●							
		WNGA080408	2.52	-STR	0.8					●	●							
		WNGA080412	2.73	-STR	1.2					●	●							
	Heavy-Duty Severe Interrupted Cutting	WNGA080408	2.52	-STQ	0.8					●	●							
		WNGA080412	2.73	-STQ	1.2					●	●							

NegativeC type Multi-Tip type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1204	12. 7	4. 76	5. 16	0. 2-1. 2														
1207	12. 7	7. 94	5. 16	0. 2-1. 2														

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	2HP-CNGA120402	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120404	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	2HP-CNGA120402	2.72	SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120404	2.3	SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120408	2.52	SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120412	2.73	SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	2HP-CNGA120402	2.72	STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120404	2.3	STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120408	2.52	STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-CNGA120412	2.73	STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	2HP-CNGA120404	2.3	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-CNGA120408	2.52	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-CNGA120412	2.73	STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-CNGA120704	2.3	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-CNGA120708	2.52	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	2HP-CNGA120712	2.73	STF	1.2	●	●	●	●	●	●	●						
		2HP-CNGA120404	2.3	STH	0.8			●	●	●	●	●						
		2HP-CNGA120408	2.52	STH	1.2			●	●	●	●	●						
		2HP-CNGA120412	2.73	STH	0.8			●	●	●	●	●						
		2HP-CNGA120704	2.3	STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	2HP-CNGA120708	2.52	STH	0.8			●	●	●	●	●						
		2HP-CNGA120712	2.73	STH	1.2			●	●	●	●	●						
		2HP-CNGA120408	2.52	STR	0.8						●	●						
		2HP-CNGA120412	2.73	STR	1.2						●	●						
	Heavy-Duty Severe Interrupted Cutting	2HP-CNGA120708	2.52	STR	0.8						●	●						
		2HP-CNGA120712	2.73	STR	1.2						●	●						
		2HP-CNGA120408	2.52	STQ	0.8						●	●						
		2HP-CNGA120412	2.73	STQ	1.2						●	●						

Negative type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1204	12. 7	4. 76	5. 16	0. 2-1. 2														

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	4HP-CNGA120402	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120404	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	4HP-CNGA120402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA1204024	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120408	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120412	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	4HP-CNGA120402	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120402	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120402	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-CNGA120402	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	4HP-CNGA120404	2.3	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-CNGA120408	2.52	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-CNGA120412	2.73	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	4HP-CNGA120404	2.3	-STH	0.4			●	●	●	●	●						
		4HP-CNGA120404	2.52	-STH	0.8			●	●	●	●	●						
		4HP-CNGA120404	2.73	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	4HP-CNGA120408	2.52	-STR	0.8						●	●						
		4HP-CNGA120412	2.73	-STR	1.2						●	●						
	Heavy-Duty Severe Interrupted Cutting	4HP-CNGA120408	2.52	-STQ	0.8						●	●						
		4HP-CNGA120412	2.73	-STQ	1.2						●	●						

NegativeD type Multi-Tip type

Continuous○Light Interrupted⌒Interrupted⌒Heavy Interrupted⌒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1104	9. 525	4. 76	3. 81	0. 2-1. 2	○	⌒	⌒	⌒	⌒	⌒⌒	⌒⌒	⌒⌒	⌒⌒	○	⌒	⌒⌒	⌒⌒	
1504	12. 7	4. 76	5. 16	0. 2-1. 2														
1506	12. 7	6. 35	5. 16	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

	Standard	2HP-DNGA110402	2.33		0.2	●	●	●	●	●			●	●	●	●	●	
		2HP-DNGA110404	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150402	2.33		02	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150404	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150602	2.33		0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150604	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	2HP-DNGA110402	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA110404	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA110408	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA110412	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150402	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150404	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150408	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150412	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150602	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150604	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150608	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150612	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	2HP-DNGA110404	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA110408	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA110412	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150404	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150408	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150412	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150604	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150608	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-DNGA150612	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●

NegativeD type Multi-Tip type

Continuous○Light Interrupted⌒Interrupted⌒Heavy Interrupted⌒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1104	9.525	4.76	3.81	0.2-1.2	○	⌒	⌒	⌒	⌒	⌒	⌒	⌒	⌒	○	⌒	⌒	⌒	
1504	12.7	4.76	5.16	0.2-1.2														
1506	12.7	6.35	5.16	0.2-1.2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

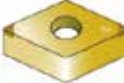
IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

	General	2HP-DNGA110404	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA110408	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA110412	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150404	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150408	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150412	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150604	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150608	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DNGA150612	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	2HP-DNGA110404	1.96	-STH	1.2						●	●					
		2HP-DNGA110408	2.12	-STH	0.2						●	●					
		2HP-DNGA110412	2.28	-STH	0.4						●	●					
		2HP-DNGA150404	1.96	-STH	0.8						●	●					
		2HP-DNGA150408	2.12	-STH	1.2						●	●					
		2HP-DNGA150412	2.28	-STH	0.2						●	●					
		2HP-DNGA150604	1.96	-STH	0.4						●	●					
		2HP-DNGA150608	2.12	-STH	0.8						●	●					
		2HP-DNGA150612	2.28	-STH	1.2						●	●					
	Heavy Interrupted Cutting	2HP-DNGA110408	2.12	-STR	0.4						●	●					
		2HP-DNGA110412	2.28	-STR	0.8						●	●					
		2HP-DNGA150408	2.12	-STR	1.2						●	●					
		2HP-DNGA150412	2.28	-STR	0.4						●	●					
		2HP-DNGA150608	2.12	-STR	0.8						●	●					
		2HP-DNGA150612	2.28	-STR	1.2						●	●					

Negative type

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1504	12. 7	4. 76	5. 16	0. 2~1. 2	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

CBN Tip-Brazed 19	Standard	4HP-DNGA150402	2.33		0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150404	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	4HP-DNGA150402	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150404	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150408	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150412	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	4HP-DNGA150404	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150408	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-DNGA150412	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	4HP-DNGA150404	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-DNGA150408	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-DNGA150412	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	4HP-DNGA150404	1.96	-STH	0.4			●	●	●	●							
		4HP-DNGA150408	2.12	-STH	0.8			●	●	●	●							
		4HP-DNGA150412	2.28	-STH	1.2			●	●	●	●							
	Heavy Interrupted Cutting	4HP-DNGA150408	2.12	-STR	0.8					●	●							
		4HP-DNGA150412	2.28	-STR	1.2					●	●							

NegativeV type Multi-Tip type

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
1604	9. 525	4. 76	3. 81	0. 2~1. 2	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

CBN Tip-Brazed 20	Standard	2HP-VNGA160402	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160404	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160408	1.89		0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160412	2		1.2	●	●	●	●	●			●	●	●	●	●	●
	Finishing	2HP-VNGA160402	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160404	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160408	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160412	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	2HP-VNGA160404	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160408	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-VNGA160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	2HP-VNGA160404	2.73	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-VNGA160408	1.89	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-VNGA160412	2	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	2HP-VNGA160404	2.73	-STH	0.4			●	●	●	●							
		2HP-VNGA160408	1.89	-STH	0.8			●	●	●	●							
		2HP-VNGA160412	2	-STH	1.2			●	●	●	●							

NegativeV type Multi-Tip type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1604	9. 525	4. 76	3. 81	0. 2~1. 2	○	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	○	⌚	⌚	⌚	⌚



image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	4HP-VNGA160402	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160404	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160408	1.89		0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160412	2		1.2	●	●	●	●	●			●	●	●	●	●	●
	Finishing	4HP-VNGA160402	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160404	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160408	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160412	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	4HP-VNGA160404	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160408	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-VNGA160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	4HP-VNGA160404	2.73	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-VNGA160408	1.89	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-VNGA160412	2	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	4HP-VNGA160404	2.73	-STH	0.4			●	●	●	●	●						
		4HP-VNGA160408	1.89	-STH	0.8			●	●	●	●	●						
		4HP-VNGA160412	2	-STH	1.2			●	●	●	●	●						

NegativeV type Multi-Tip type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1204	12. 7	4. 76	5. 16	0. 2~1. 2	○	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	○	⌚	⌚	⌚	⌚



image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	2HP-SNGA120402	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120404	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	2HP-SNGA120402	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120404	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120408	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	2HP-SNGA120412	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120402	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120404	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
	General	2HP-SNGA120408	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		2HP-SNGA120412	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	Interrupted Cutting	2HP-SNGA120404	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-SNGA120408	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-SNGA120412	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Heavy Interrupted Cutting	2HP-SNGA120404	2.5	-STH	0.4			●	●	●	●	●						
		2HP-SNGA120408	2.73	-STH	0.8			●	●	●	●	●						
	Heavy-Duty Severe Interrupted Cutting	2HP-SNGA120412	2.97	-STH	1.2			●	●	●	●	●						
		2HP-SNGA120408	2.73	-STR	0.8						●	●						
	Heavy-Duty Severe Interrupted Cutting	2HP-SNGA120412	2.97	-STR	1.2						●	●						
		2HP-SNGA120408	2.73	-STQ	0.8						●	●						
	Heavy-Duty Severe Interrupted Cutting	2HP-SNGA120412	2.97	-STQ	1.2						●	●						
		2HP-SNGA120408	2.73	-STQ	0.8						●	●						

NegativeS type Multi-Tip type

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1204	12. 7	4. 76	5. 16	0. 2~1. 2	○	◐	◐	◐	◑	◑	◑	◑	◑	○	◐	◑	◑	◑

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	4HP-SNGA120402	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120404	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	4HP-SNGA120402	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120404	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120408	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120412	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	4HP-SNGA120402	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120404	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120408	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
	General	4HP-SNGA120412	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		4HP-SNGA120404	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SNGA120408	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	4HP-SNGA120412	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SNGA120404	2.5	-STH	0.4			●	●	●	●	●						
		4HP-SNGA120408	2.73	-STH	0.8			●	●	●	●	●						
	Heavy Interrupted Cutting	4HP-SNGA120412	2.97	-STH	1.2			●	●	●	●	●						
		4HP-SNGA120408	2.73	-STR	0.8					●	●							
	Heavy-Duty Severe Interrupted Cutting	4HP-SNGA120412	2.97	-STR	1.2					●	●							
		4HP-SNGA120408	2.73	-STQ	0.8					●	●							
		4HP-SNGA120412	2.97	-STQ	1.2					●	●							
		4HP-SNGA120408	2.73	-STQ	0.8					●	●							

NegativeD type

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1604	9. 525	4. 76	3. 81	0. 2~1. 6	○	◐	◐	◐	◑	◑	◑	◑	◑	○	◐	◑	◑	◑

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	3HP-TNGA160402	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160404	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	3HP-TNGA160402	2.39	SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160404	2.02	SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160408	2.19	SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160412	2.35	SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	3HP-TNGA160416	2.75	SFD	1.6	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160402	2.39	STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160404	2.02	STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160408	2.19	STM	0.4	●	●	●	●	●			●	●	●	●	●	●
	General	3HP-TNGA160412	2.35	STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160416	2.75	STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		3HP-TNGA160404	2.02	STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TNGA160408	2.19	STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	3HP-TNGA160412	2.35	STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TNGA160416	2.75	STF	1.6	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TNGA160404	2.02	STH	0.4			●	●	●	●	●						
		3HP-TNGA160408	2.19	STH	0.8			●	●	●	●	●						
	Heavy Interrupted Cutting	3HP-TNGA160412	2.35	STH	1.2			●	●	●	●	●						
		3HP-TNGA160416	2.75	STH	1.6			●	●	●	●	●						
		3HP-TNGA160408	2.19	STR	0.8					●	●							
		3HP-TNGA160412	2.35	STR	1.2					●	●							
		3HP-TNGA160416	2.75	STR	1.6					●	●							
		3HP-TNGA160408	2.19	STR	0.8					●	●							

NegativeT type Multi-Tip type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
1604	9. 525	4. 76	3. 81	0. 2-1. 6	○	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	○	⌚	⌚	⌚	⌚

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

Standard

6HP-TNGA160402

2.39

0.2

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160404

2.02

0.4

●

●

●

●

●

●

●

●

●

●

●

●

Finishing

6HP-TNGA160402

2.39

SFD

0.2

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160404

2.02

SFD

0.4

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160408

2.19

SFD

0.8

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160412

2.35

SFD

1.2

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160416

2.75

SFD

1.6

●

●

●

●

●

●

●

●

●

●

●

●

Semi-Finishing

6HP-TNGA160402

2.39

STM

0.8

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160404

2.02

STM

1.2

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160408

2.19

STM

0.4

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160412

2.35

STM

0.8

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160416

2.75

STM

1.2

●

●

●

●

●

●

●

●

●

●

●

●

General

6HP-TNGA160404

2.02

STF

0.4

●

●

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160408

2.19

STF

0.8

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160412

2.35

STF

1.2

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

6HP-TNGA160416

2.75

STF

1.6

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

Interrupted Cutting

6HP-TNGA160404

2.02

STH

0.4

●

●

●

●

●

6HP-TNGA160408

2.19

STH

0.8

●

●

●

●

●

6HP-TNGA160412

2.35

STH

1.2

●

●

●

●

●

6HP-TNGA160416

2.75

STH

1.6

●

●

●

●

●

Heavy Interrupted Cutting

6HP-TNGA160408

2.19

STR

0.8

●

●

6HP-TNGA160412

2.35

STR

1.2

●

●

6HP-TNGA160416

2.75

STR

1.6

●

●

NegativeW type Multi-Tip type

Continuous○Light Interrupted⌚Interrupted⌚Heavy Interrupted⌚

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0804	12. 7	4. 76	5. 16	0. 2-1. 2	○	⌚	⌚	⌚	⌚	⌚	⌚	⌚	⌚	○	⌚	⌚	⌚	⌚

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

Standard

3HP-WNGA080402

2.72

0.2

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080404

2.3

0.4

●

●

●

●

●

●

●

●

●

●

●

●

Finishing

3HP-WNGA080402

2.72

-SFD

0.2

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080404

2.3

-SFD

0.4

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080408

2.52

-SFD

0.8

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080412

2.73

-SFD

1.2

●

●

●

●

●

●

●

●

●

●

●

●

Semi-Finishing

3HP-WNGA080402

2.72

-STM

0.2

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080404

2.3

-STM

0.4

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080408

2.52

-STM

0.8

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080412

2.73

-STM

1.2

●

●

●

●

●

●

●

●

●

●

●

●

General

3HP-WNGA080404

2.3

-STF

0.4

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080408

2.52

-STF

0.8

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

3HP-WNGA080412

2.73

-STF

1.2

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

●

Interrupted Cutting

3HP-WNGA080404

2.3

-STH

0.4

●

●

●

●

●

3HP-WNGA080408

2.52

-STH

0.8

●

●

●

●

●

3HP-WNGA080412

2.73

-STH

1.2

●

●

●

●

●

Heavy Interrupted Cutting

3HP-WNGA080404

2.3

-STR

0.4

●

●

3HP-WNGA080408

2.52

-STR

0.8

●

●

3HP-WNGA080412

2.73

-STR

1.2

●

●

Heavy-Duty Severe Interrupted Cutting

3HP-WNGA080408

2.52

-STQ

0.8

●

●

3HP-WNGA080412

2.73

-STQ

1.2

●

●

Shanghai IKEN Precision Tools Co., Ltd.

NegativeW type Multi-Tip type

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0804	12. 7	4. 76	5. 16	0. 2-1. 2	○	◐	◐	◐	◑	◑	◑	◑	◑	○	◐	◑	◑	◑

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	6HP-WNGA080402	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080404	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	6HP-WNGA080402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080404	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080408	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080412	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	6HP-WNGA080404	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080408	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080412	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		6HP-WNGA080402	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
	General	6HP-WNGA080404	2.3	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		6HP-WNGA080408	2.52	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		6HP-WNGA080412	2.73	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	3HP-WNGA080404	2.3	-STH	0.4			●	●	●	●	●						
		6HP-WNGA080408	2.52	-STH	0.8			●	●	●	●	●						
		6HP-WNGA080412	2.73	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	6HP-WNGA080404	2.3	-STR	0.4						●	●						
		6HP-WNGA080408	2.52	-STR	0.8						●	●						
		6HP-WNGA080412	2.73	-STR	1.2						●	●						
	Heavy-Duty Severe Interrupted Cutting	6HP-WNGA080408	2.52	-STQ	0.8						●	●						
		6HP-WNGA080412	2.73	-STQ	1.2						●	●						

Positive C type

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0602	6. 35	2. 38	2. 80	0. 2-1. 2														
09T3	9. 525	3. 97	4. 40	0. 2-1. 2		◐	◐	◐	◑	◑	◑	◑	◑					
1204	12. 7	4. 76	5. 50	0. 2-1. 2	○	◐	◐	◐	◑	◑	◑	◑	◑	○	◐	◑	◑	◑

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	CCGW060202	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW060204	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T302	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T304	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW060202	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
	Finishing	CCGW060204	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW060208	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW060212	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T302	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T304	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T308	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T312	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW120402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW120404	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW120408	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW120412	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	CCGW060202	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW060204	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW060208	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW060212	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T302	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T304	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T308	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW09T312	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW120402	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		CCGW120404	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		CCGW120408	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		CCGW120412	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●

Positive C type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0602	6. 35	2. 38	2. 80	0. 2~1. 2														
09T3	9. 525	3. 97	4. 40	0. 2~1. 2														
1204	12. 7	4. 76	5. 50	0. 2~1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

CBN Tip-Brazed 29 	General	CCGW060204	2.3	-STF	0.4													
		CCGW060208	2.52	-STF	0.8													
		CCGW060212	2.73	-STF	1.2													
		CCGW09T304	2.3	-STF	0.4													
		CCGW09T308	2.52	-STF	0.8													
		CCGW09T312	2.7	-STF	1.2													
		CCGW120404	2.3	-STF	0.4													
		CCGW120408	2.52	-STF	0.8													
		CCGW120412	2.73	-STF	1.2													
	Interrupted Cutting	CCGW060204	2.3	-STH	0.4													
		CCGW060208	2.52	-STH	0.8													
		CCGW060212	2.73	-STH	1.2													
		CCGW09T304	2.3	-STH	0.4													
		CCGW09T308	2.52	-STH	0.8													
		CCGW09T312	2.73	-STH	1.2													
		CCGW120404	2.3	-STH	0.4													
		CCGW120408	2.52	-STH	0.8													
		CCGW120412	2.73	-STH	1.2													
	Heavy Interrupted Cutting	CCGW09T308	2.52	-STR	0.8													
		CCGW09T312	2.73	-STR	1.2													
		CCGW120408	2.52	-STR	0.8													
		CCGW120412	2.73	-STR	1.2													

Positive D type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0702	6. 35	2. 38	2. 80	0. 2~1. 2														
11T3	9. 525	3. 97	4. 40	0. 2~1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

CBN Tip-Brazed 30 	Standard	DCGW070202	2.33		0.2													
		DCGW070204	1.96		0.4													
		DCGW11T302	2.33		0.2													
		DCGW11T304	1.96		0.4													
	Finishing	DCGW070202	2.33	-SFD	0.2													
		DCGW070204	1.96	-SFD	0.4													
		DCGW070208	2.12	-SFD	0.8													
		DCGW070212	2.28	-SFD	1.2													
		DCGW11T302	2.33	-SFD	0.2													
		DCGW11T304	1.96	-SFD	0.4													
		DCGW11T308	2.12	-SFD	0.8													
		DCGW11T312	2.28	-SFD	1.2													
	Semi-Finishing	DCGW070204	1.96	--STM	0.4													
		DCGW070208	2.12	-STM	0.8													
		DCGW070212	2.28	-STM	1.2													
		DCGW11T304	1.96	-STM	0.4													
		DCGW11T308	2.12	-STM	0.8													
		DCGW11T312	2.28	-STM	1.2													
	General	DCGW070204	1.96	-STF	0.4													
		DCGW070208	2.12	-STF	0.8													
		DCGW070212	2.28	-STF	1.2													
		DCGW11T304	2.19	-STF	0.4													
		DCGW11T308	2.12	-STF	0.8													
		DCGW11T312	2.28	-STF	1.2													
	Interrupted Cutting	DCGW070204	1.96	-STH	0.4													
		DCGW070208	2.12	-STH	0.8													
		DCGW070212	2.28	-STH	1.2													
		DCGW11T304	1.96	-STH	0.4													
		DCGW11T308	2.12	-STH	0.8													
		DCGW11T312	2.28	-STH	1.2													
	Heavy Interrupted Cutting	DCGW11T308	2.12	-STR	0.8													
		DCGW11T312	2.28	-STR	1.2													

Positive V type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition															
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K			
802	4. 76	2. 38	2. 30	0. 2-1. 2																
1103	6. 35	3. 18	2. 80	0. 2-1. 2																
1604	9. 525	4. 76	4. 40	0. 2-1. 2																
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N		
	Standard	VCGW080202	3.2		0.2															
		VCGW080204	2.73		0.4															
		VCGW110302	3.2		02															
		VCGW110304	2.73		0.4															
		VCGW160402	3.2		0.2															
		VCGW160404	2.73		0.4															
	Finishing	VCGW080202	3.2	-SFD	0.2															
		VCGW080204	2.73	-SFD	0.4															
		VCGW080208	1.89	-SFD	0.8															
		VCGW080212	2	-SFD	1.2															
		VCGW110302	3.2	-SFD	0.2															
		VCGW110304	2.73	-SFD	0.4															
		VCGW110308	1.89	-SFD	0.8															
		VCGW110312	2	-SFD	1.2															
		VCGW160402	3.2	-SFD	0.2															
		VCGW160404	2.73	-SFD	0.4															
		VCGW160408	1.89	-SFD	0.8															
		VCGW160412	2	-SFD	1.2															
	Semi-Finishing	VCGW080204	2.73	-STM	0.4															
		VCGW080208	1.89	-STM	0.8															
		VCGW080212	2	-STM	1.2															
		VCGW110304	2.73	-STM	0.4															
		VCGW110308	1.89	-STM	0.8															
		VCGW110312	2	-STM	1.2															
		VCGW160404	2.73	-STM	0.4															
		VCGW160408	1.89	-STM	0.8															
		VCGW16041	2	-STM	1.2															

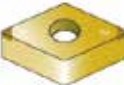
Positive V type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition															
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K			
802	4. 76	2. 38	2. 30	0. 2-1. 2																
1103	6. 35	3. 18	2. 80	0. 2-1. 2																
1604	9. 525	4. 76	4. 40	0. 2-1. 2																
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N		
	General	VCGW080204	2.73	-STF	0.4															
		VCGW080208	1.89	-STF	0.8															
		VCGW080212	2	-STF	1.2															
		VCGW110304	2.73	-STF	0.4															
		VCGW110308	1.89	-STF	0.8															
		VCGW110312	2	-STF	1.2															
		VCGW160404	2.73	-STF	0.4															
		VCGW160408	1.89	-STF	0.8															
		VCGW160412	2	-STF	1.2															
	Interrupted Cutting	VCGW080204	2.73	-STH	0.4															
		VCGW080208	1.89	-STH	0.8															
		VCGW080212	2	-STH	1.2															
		VCGW110304	2.73	-STH	0.4															
		VCGW110308	1.89	-STH	0.8															
		VCGW110312	2	-STH	1.2															
		VCGW160404	2.73	-STH	0.4															
		VCGW160408	1.89	-STH	0.8															
		VCGW160412	2	-STH	1.2															

Positive D type

Continuous ○ Light Interrupted ◐ Interrupted ⊞ Heavy Interrupted ⊞

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K		
1103	6. 35	3. 18	2. 80	0. 2~1. 2														
1604	9. 525	4. 76	4. 40	0. 2~1. 2														
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	VBGW110302	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW110304	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●
		VBGW160402	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW160404	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	VBGW110302	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW110304	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		VBGW110308	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		VBGW110312	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW160402	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW160404	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		VBGW160408	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		VBGW160412	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	VBGW110304	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		VBGW110308	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		VBGW110312	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		VBGW160404	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		VBGW160408	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		VBGW160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	VBGW110304	2.73	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		VBGW110308	1.89	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		VBGW110312	2	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		VBGW160404	2.73	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		VBGW160404	1.89	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		VBGW160404	2	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	VBGW110304	2.73	-STH	0.4			●	●	●	●	●						
		VBGW110308	1.89	-STH	0.8			●	●	●	●	●						
		VBGW110312	2	-STH	1.2			●	●	●	●	●						
		VBGW160404	2.73	-STH	0.4			●	●	●	●	●						
		VBGW160408	1.89	-STH	0.8			●	●	●	●	●						
		VBGW160412	2	-STH	1.2			●	●	●	●	●						

Positive S type

Continuous ○ Light Interrupted ◐ Interrupted ⊞ Heavy Interrupted ⊞

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
09T3	9. 525	3. 97	4. 40	0. 2~1. 2														
1204	12. 7	4. 76	5. 50	0. 2~1. 2														
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	SCGW09T302	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T304	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●
		SCGW120402	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW120404	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	SCGW09T302	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T304	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T308	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T312	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW120402	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW120404	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		SCGW120408	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		SCGW120412	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	SCGW09T302	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T304	2	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T308	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		SCGW09T312	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW120402	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		SCGW120404	2	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		SCGW120408	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		SCGW120412	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	SCGW09T304	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCGW09T308	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCGW09T312	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCGW120404	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCGW120408	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		SCGW120412	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	SCGW09T304	2.5	-STH	0.4			●	●	●	●	●						
		SCGW09T308	2.73	-STH	0.8			●	●	●	●	●						
		SCGW09T312	2.97	-STH	1.2			●	●	●	●	●						
		SCGW120404	2.5	-STH	0.4			●	●	●	●	●						
		SCGW120408	2.73	-STH	0.8			●	●	●	●	●						
		SCGW120412	2.97	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	SCGW09T308	2.73	-STR	0.8						●	●						
		SCGW09T312	2.97	-STR	1.2						●	●						
		SCGW120408	2.73	-STR	0.8						●	●						
		SCGW120412	2.97	-STR	1.2						●	●						

Positive S type

Continuous ○ Light Interrupted ◐ Interrupted ⊞ Heavy Interrupted ⊞

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0902	5. 56	2. 38	2. 50	0. 2~1. 2	○	◐	◐	◐	⊞	⊞	⊞	⊞	⊞	○	◐	⊞	⊞	⊞
1102	6. 35	2. 38	2. 80	0. 2~1. 2														
1103	6. 35	3. 18	2. 80	0. 2~1. 2														
16T3	9. 525	3. 97	4. 40	0. 2~1. 2														
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5200A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	TCGW090202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW090204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110304	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T304	2.0		0.4	●	●	●	●	●			●	●	●	●	●	●
	Finishing	TCGW090202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW090204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW090208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW090212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW110212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW110312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●
	Semi-Finishing	TCGW090202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW090204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW090208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW090212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW110212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW110304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW110308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW110312	2.3	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●

Positive S type

Continuous ○ Light Interrupted ◐ Interrupted ⊞ Heavy Interrupted ⊞

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0902	5. 56	2. 38	2. 50	0. 2~1. 2	○	◐	◐	◐	⊞	⊞	⊞	⊞	⊞	○	◐	⊞	⊞	⊞
1102	6. 35	2. 38	2. 80	0. 2~1. 2														
1103	6. 35	3. 18	2. 80	0. 2~1. 2														
16T3	9. 525	3. 97	4. 40	0. 2~1. 2														
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5200A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Semi-Finishing	TCGW16T302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●
		TCGW16T312	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●
	General	TCGW090204	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW090208	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW090212	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110204	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110208	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110212	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110304	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110308	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW110312	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW16T304	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW16T308	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		TCGW16T312	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	TCGW090204	2.02	-STH	0.4			●	●	●	●	●						
		TCGW090208	2.19	-STH	0.8			●	●	●	●	●						
		TCGW090212	2.35	-STH	1.2			●	●	●	●	●						
		TCGW110204	2.02	-STH	0.4			●	●	●	●	●						
		TCGW110208	2.19	-STH	0.8			●	●	●	●	●						
		TCGW110212	2.35	-STH	1.2			●	●	●	●	●						
		TCGW110304	2.02	-STH	0.4			●	●	●	●	●						
		TCGW110308	2.19	-STH	0.8			●	●	●	●	●						
		TCGW110312	2.35	-STH	1.2			●	●	●	●	●						
		TCGW16T304	2.02	-STH	0.4			●	●	●	●	●						
		TCGW16T308	2.19	-STH	0.8			●	●	●	●	●						
		TCGW16T312	2.35	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	TCGW090208	2.19	-STR	0.8						●	●						
		TCGW090212	2.35	-STR	1.2						●	●						
		TCGW110208	2.19	-STR	0.8						●	●						
		TCGW110212	2.35	-STR	1.2						●	●						
		TCGW110308	2.19	-STR	0.8						●	●						
		TCGW110312	2.35	-STR	1.2						●	●						
		TCGW16T308	2.19	-STR	0.8						●	●						
		TCGW16T312	2.35	-STR	1.2						●	●						

Positive T type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
0802	4. 76	2. 38	2. 30	0. 2-1. 2	○ ○ ○ ○ ○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕					
0902	5. 56	2. 38	2. 50	0. 2-1. 2															
1102	6. 35	2. 38	2. 80	0. 2-1. 2															
1103	6. 35	3. 18	2. 80	0. 2-1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	TPGW110202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		TPGW110204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110304	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	●
	Finishing	TPGW110202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	TPGW080202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW080204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW080208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW080212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW090202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW090204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW090208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW090212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		TPGW110312	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●

Positive T type

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0802	4. 76	2. 38	2. 30	0. 2-1. 2														
0902	5. 56	2. 38	2. 50	0. 2-1. 2														
1102	6. 35	2. 38	2. 80	0. 2-1. 2														
1103	6. 35	3. 18	2. 80	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

General

TPGW110202

TPGW110204

TPGW110208

TPGW110212

TPGW110302

TPGW110304

TPGW110308

TPGW110312

TPGW080204

TPGW080208

TPGW080212

TPGW090202

TPGW090204

TPGW090208

TPGW090212

TPGW110202

TPGW110204

TPGW110208

TPGW110212

TPGW110302

TPGW110304

TPGW110308

TPGW110312

Heavy Interrupted Cutting

TPGW080208

TPGW080212

TPGW090208

TPGW090212

TPGW110208

TPGW110212

TPGW110308

TPGW110312

Positive C Type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
0602	6. 35	2. 38	2. 80	0. 2-1. 2	○ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ⊕ ○ ⊕ ⊕ ⊕	⊕	⊕	⊕	⊕	⊕	⊕	⊕	○	⊕	⊕	⊕			
09T3	9. 525	3. 97	4. 40	0. 2-1. 2															
1204	12. 7	4. 76	5. 50	0. 2-1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	2HP-CCGW060202	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●	
		2HP-CCGW060204	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T302	2.72		0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T304	2.3		0.4	●	●	●	●	●			●	●	●	●	●	●	●
	Finishing	2HP-CCGW060202	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060204	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060208	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060212	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T302	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T304	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T308	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T312	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120402	2.72	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120404	2.3	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120408	2.52	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120412	2.73	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	2HP-CCGW060202	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060204	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060208	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW060212	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T302	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T304	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T308	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW09T312	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120402	2.72	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120404	2.3	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120408	2.52	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-CCGW120412	2.73	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●

Positive C Type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0602	6. 35	2. 38	2. 80	0. 2-1. 2														
09T3	9. 525	3. 97	4. 40	0. 2-1. 2														
1204	12. 7	4. 76	5. 50	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN9010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

General

Interrupted Cutting

Heavy Interrupted Cutting

2HP-CCGW060204

2HP-CCGW060208

2HP-CCGW060212

2HP-CCGW09T304

2HP-CCGW09T308

2HP-CCGW09T312

2HP-CCGW120404

2HP-CCGW120408

2HP-CCGW120412

2HP-CCGW060204

2HP-CCGW060208

2HP-CCGW060212

2HP-CCGW09T304

2HP-CCGW09T308

2HP-CCGW09T312

2HP-CCGW120404

2HP-CCGW120404

2HP-CCGW120404

2HP-CCGW09T308

2HP-CCGW09T312

2HP-CCGW120408

2HP-CCGW120408

2.3

2.52

2.73

2.3

2.52

2.73

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-STH

-STH

-STH

-STH

-STH

-STH

-STH

-STH

-STR

-STR

-STR

-STR

0.4

0.8

1.2

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0.8

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Positive D type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
0702	6. 35	2. 38	2. 80	0. 2-1. 2															
11T3	9. 525	3. 97	4. 40	0. 2-1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	2HP-DCGW070202	2.33		0.2	●	●	●	●	●			●	●	●	●	●	●	
		2HP-DCGW070204	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T302	2.33		0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T304	1.96		0.4	●	●	●	●	●			●	●	●	●	●	●	●
	Finishing	2HP-DCGW070202	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW070203	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW070208	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW070212	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T302	2.33	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T304	1.96	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T3028	2.12	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T312	2.28	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	2HP-DCGW070204	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW070208	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW070212	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T304	1.96	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T308	2.12	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-DCGW11T312	2.28	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	General	2HP-DCGW070204	1.96	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DCGW070208	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DCGW070212	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DCGW11T304	2.19	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DCGW11T308	2.12	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		2HP-DCGW11T312	2.28	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	2HP-DCGW070204	1.96	-STH	0.4			●	●	●	●	●							
		2HP-DCGW070208	2.12	-STH	0.8			●	●	●	●	●							
		2HP-DCGW070212	2.28	-STH	1.2			●	●	●	●	●							
		2HP-DCGW11T304	1.96	-STH	0.4			●	●	●	●	●							
		2HP-DCGW11T308	2.12	-STH	0.8			●	●	●	●	●							
		2HP-DCGW11T312	2.28	-STH	1.2			●	●	●	●	●							
	Heavy Interrupted Cutting	2HP-DCGW11T308	2.12	-STR	0.8						●	●							
		2HP-DCGW11T312	2.28	-STR	1.2						●	●							

Positive V Type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
802	4. 76	2. 38	2. 30	0. 2-1. 2															
1103	6. 35	3. 18	2. 80	0. 2-1. 2															
1604	9. 525	4. 76	4. 40	0. 2-1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	2HP-VCGW080202	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●	
		2HP-VCGW080204	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110302	3.2		02	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110304	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160402	3.2		0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160404	2.73		0.4	●	●	●	●	●			●	●	●	●	●	●	●
	Finishing	2HP-VCGW080202	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW080204	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW080208	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW080212	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110302	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110304	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110308	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110312	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160402	3.2	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160404	2.73	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160408	1.89	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160412	2	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	2HP-VCGW080204	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW080208	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW080212	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110304	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110308	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW110312	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160404	2.73	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160408	1.89	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		2HP-VCGW160412	2	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●

Positive V Type Multi-Tip

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0802	4. 76	2. 38	2. 30	0. 2-1. 2														
1103	6. 35	3. 18	2. 80	0. 2-1. 2														
1604	9. 525	4. 76	4. 40	0. 2-1. 2														

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN8010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

General

2HP-VCGW080204

2.73

-STF

0.4

2HP-VCGW080208

1.89

-STF

0.8

2HP-VCGW080212

2

-STF

1.2

2HP-VCGW110304

2.73

-STF

0.4

2HP-VCGW110308

1.89

-STF

0.8

2HP-VCGW110312

2

-STF

1.2

2HP-VCGW160404

2.73

-STF

0.4

2HP-VCGW160408

1.89

-STF

0.8

2HP-VCGW160412

2

-STF

1.2

Interrupted Cutting

2HP-VCGW080204

2.73

-STH

0.4

2HP-VCGW080208

1.89

-STH

0.8

2HP-VCGW080212

2

-STH

1.2

2HP-VCGW110304

2.73

-STH

0.4

2HP-VCGW110308

1.89

-STH

0.8

2HP-VCGW110312

2

-STH

1.2

2HP-VCGW160404

2.73

-STH

0.4

2HP-VCGW160408

1.89

-STH

0.8

2HP-VCGW160412

2

-STH

1.2

Positive V Type Multi-Tip

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition																	
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K					
1103	6. 35	3. 18	2. 80	0. 2-1. 2																		
1604	9. 525	4. 76	4. 40	0. 2-1. 2																		

image

Specs

Specification

CuttingLength

Chamfer

Nose radius

IKN1002

IKN4600

IKN5290A

IKN6400

IKN7512

IKN8010

IKN9500N

IKN8000B

IKN8800

IKN5190

IKN7010

IKN9012

IKN9501N

Standard

2HP-VBGW110302

3.2

0.2

2HP-VBGW110304

2.73

0.4

2HP-VBGW160402

3.2

0.2

2HP-VBGW160404

2.73

0.4

Finishing

2HP-VBGW110302

3.2

-SFD

0.2

2HP-VBGW110304

2.73

-SFD

0.4

2HP-VBGW110308

1.89

-SFD

0.8

2HP-VBGW110312

2

-SFD

1.2

2HP-VBGW160402

3.2

-SFD

0.2

2HP-VBGW160404

2.73

-SFD

0.4

2HP-VBGW160408

1.89

-SFD

0.8

2HP-VBGW160412

2

-SFD

1.2

Semi-Finishing

2HP-VBGW110304

2.73

-STM

0.4

2HP-VBGW110308

1.89

-STM

0.8

2HP-VBGW110312

2

-STM

1.2

2HP-VBGW160404

2.73

-STM

0.4

2HP-VBGW160408

1.89

-STM

0.8

2HP-VBGW160412

2

-STM

1.2

General

2HP-VBGW110304

2.73

-STF

0.4

2HP-VBGW110308

1.89

-STF

0.8

2HP-VBGW110312

2

-STF

1.2

2HP-VBGW160404

2.73

-STF

0.4

2HP-VBGW160408

1.89

-STF

0.8

2HP-VBGW160412

2

-STF

1.2

Interrupted Cutting

2HP-VBGW110304

2.73

-STH

0.4

2HP-VBGW110308

1.89

-STH

0.8

2HP-VBGW110312

2

-STH

1.2

2HP-VBGW160404

2.73

-STH

0.4

2HP-VBGW160408

1.89

-STH

0.8

2HP-VBGW160412

2

-STH

1.2

Positive S Type Multi-Tip

Continuous ○ Light Interrupted ⌢ Interrupted ⌢ Heavy Interrupted ⌢

specs	incircle Φd	thickness	aperture Φd1		nose radius r	Condition													
						H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
09T3	9.525	3.97	4.40		0.2-1.2		○	○	○	○		⌢	⌢	○	⌢				
1204	12.7	4.76	5.50		0.2-1.2	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	4HP-SCGW09T302	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●	
		4HP-SCGW09T304	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●	
		4HP-SCGW120402	2.95		0.2	●	●	●	●	●			●	●	●	●	●	●	
		4HP-SCGW120404	2.5		0.4	●	●	●	●	●			●	●	●	●	●	●	
	Finishing	4HP-SCGW09T302	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T304	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T308	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T312	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120402	2.95	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120404	2.5	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120408	2.73	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120412	2.97	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	4HP-SCGW09T302	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T304	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T308	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW09T312	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120402	2.95	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120404	2.5	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120408	2.73	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		4HP-SCGW120412	2.97	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	General	4HP-SCGW09T304	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SCGW09T308	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SCGW09T312	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SCGW120404	2.5	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SCGW120408	2.73	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		4HP-SCGW120412	2.97	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	4HP-SCGW09T304	2.5	-STH	0.4			●	●	●	●	●							
		4HP-SCGW09T308	2.73	-STH	0.8			●	●	●	●	●							
		4HP-SCGW09T312	2.97	-STH	1.2			●	●	●	●	●							
		4HP-SCGW120404	2.5	-STH	0.4			●	●	●	●	●							
		4HP-SCGW120408	2.73	-STH	0.8			●	●	●	●	●							
		4HP-SCGW120412	2.97	-STH	1.2			●	●	●	●	●							
	Heavy Interrupted Cutting	4HP-SCGW09T308	2.73	-STR	0.8						●	●							
		4HP-SCGW09T312	2.97	-STR	1.2						●	●							
		4HP-SCGW120408	2.73	-STR	0.8						●	●							
		4HP-SCGW120412	2.97	-STR	1.2						●	●							

Positive T Type Multi-Tip

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
0902	5. 56	2. 38	2. 50	0. 2-1. 2	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	
1102	6. 35	2. 38	2. 80	0. 2-1. 2															
1103	6. 35	3. 18	2. 80	0. 2-1. 2															
16T3	9. 525	3. 97	4. 40	0. 2-1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	3HP-TCGW090202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW090204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW110202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW110204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW110302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW110304	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW16T302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW16T304	2.0		0.4	●	●	●	●	●			●	●	●	●	●	●	
	Finishing	3HP-TCGW090202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	3HP-TCGW090202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW090212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW110312	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●

Positive T Type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	
0902	5. 56	2. 38	2. 50	0. 2–1. 2														
1102	6. 35	2. 38	2. 80	0. 2–1. 2														
1103	6. 35	3. 18	2. 80	0. 2–1. 2														
16T3	9. 525	3. 97	4. 40	0. 2–1. 2														

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Semi-Finishing	3HP-TCGW16T302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TCGW16T304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TCGW16T312	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	General	3HP-TCGW090204	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW090208	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW090212	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110204	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110208	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110212	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110304	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110308	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW110312	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW16T304	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW16T308	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TCGW16T312	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	3HP-TCGW090204	2.02	-STH	0.4			●	●	●	●	●							
		3HP-TCGW090208	2.19	-STH	0.8			●	●	●	●	●							
		3HP-TCGW090212	2.35	-STH	1.2			●	●	●	●	●							
		3HP-TCGW110204	2.02	-STH	0.4			●	●	●	●	●							
		3HP-TCGW110208	2.19	-STH	0.8			●	●	●	●	●							
		3HP-TCGW110212	2.35	-STH	1.2			●	●	●	●	●							
		3HP-TCGW110304	2.02	-STH	0.4			●	●	●	●	●							
		3HP-TCGW110308	2.19	-STH	0.8			●	●	●	●	●							
		3HP-TCGW110312	2.35	-STH	1.2			●	●	●	●	●							
		3HP-TCGW16T304	2.02	-STH	0.4			●	●	●	●	●							
		3HP-TCGW16T308	2.19	-STH	0.8			●	●	●	●	●							
		3HP-TCGW16T312	2.35	-STH	1.2			●	●	●	●	●							
	Heavy Interrupted Cutting	3HP-TCGW090208	2.19	-STR	0.8						●	●							
		3HP-TCGW090212	2.35	-STR	1.2						●	●							
		3HP-TCGW110208	2.19	-STR	0.8						●	●							
		3HP-TCGW110212	2.35	-STR	1.2						●	●							
		3HP-TCGW110308	2.19	-STR	0.8						●	●							
		3HP-TCGW110312	2.35	-STR	1.2						●	●							
		3HP-TCGW16T308	2.19	-STR	0.8						●	●							
		3HP-TCGW16T312	2.35	-STR	1.2						●	●							

Positive T Type Multi-Tip

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
0802	4. 76	2. 38	2. 30	0. 2~1. 2	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒	○ ○ ○ ○ ⌒ ⌒ ⌒ ⌒ ⌒ ○ ⌒ ⌒ ⌒ ⌒							
0902	5. 56	2. 38	2. 50	0. 2~1. 2															
1102	6. 35	2. 38	2. 80	0. 2~1. 2															
1103	6. 35	3. 18	2. 80	0. 2~1. 2															
image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N	
	Standard	3HP-TPGW110202	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	
		3HP-TPGW110204	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110302	2.39		0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110304	2.02		0.4	●	●	●	●	●			●	●	●	●	●	●	●
	Finishing	3HP-TPGW110202	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110204	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110208	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110212	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110302	2.39	-SFD	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110304	2.02	-SFD	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110308	2.19	-SFD	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110312	2.35	-SFD	1.2	●	●	●	●	●			●	●	●	●	●	●	●
	Semi-Finishing	3HP-TPGW080202	2.39	-SFM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW080204	2.02	-SFM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW080208	2.19	-SFM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW080212	2.35	-SFM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW090202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW090204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW090208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW090212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110202	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110204	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110208	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110212	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110302	2.39	-STM	0.2	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110304	2.02	-STM	0.4	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110308	2.19	-STM	0.8	●	●	●	●	●			●	●	●	●	●	●	●
		3HP-TPGW110312	2.35	-STM	1.2	●	●	●	●	●			●	●	●	●	●	●	●

Positive T Type Multi-Tip

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
0802	4. 76	2. 38	2. 30	0. 2~1. 2														
0902	5. 56	2. 38	2. 50	0. 2~1. 2														
1102	6. 35	2. 38	2. 80	0. 2~1. 2														
1103	6. 35	3. 18	2. 80	0. 2~1. 2	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	⌢

image	Specs	Specification	CuttingLength	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	General	3HP-TPGW110202	2.39	-STF	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110204	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110208	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110212	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110302	2.39	-STF	0.2	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110304	2.02	-STF	0.4	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110308	2.19	-STF	0.8	●	●	●	●	●	●	●	●	●	●	●	●	●
		3HP-TPGW110312	2.35	-STF	1.2	●	●	●	●	●	●	●	●	●	●	●	●	●
	Interrupted Cutting	3HP-TPGW080204	2.02	-STH	0.4			●	●	●	●	●						
		3HP-TPGW080208	2.19	-STH	0.8			●	●	●	●	●						
		3HP-TPGW080212	2.35	-STH	1.2			●	●	●	●	●						
		3HP-TPGW090202	2.39	-STH	0.2			●	●	●	●	●						
		3HP-TPGW090204	2.02	-STH	0.4			●	●	●	●	●						
		3HP-TPGW090208	2.19	-STH	0.8			●	●	●	●	●						
		3HP-TPGW090212	2.35	-STH	1.2			●	●	●	●	●						
		3HP-TPGW110202	2.39	-STH	0.2			●	●	●	●	●						
		3HP-TPGW110204	2.02	-STH	0.4			●	●	●	●	●						
		3HP-TPGW110208	2.19	-STH	0.8			●	●	●	●	●						
		3HP-TPGW110212	2.35	-STH	1.2			●	●	●	●	●						
		3HP-TPGW110302	2.39	-STH	0.2			●	●	●	●	●						
		3HP-TPGW110304	2.02	-STH	0.4			●	●	●	●	●						
		3HP-TPGW110308	2.19	-STH	0.8			●	●	●	●	●						
		3HP-TPGW110312	2.35	-STH	1.2			●	●	●	●	●						
	Heavy Interrupted Cutting	3HP-TPGW080208	2.19	-STR	0.8						●	●						
		3HP-TPGW080212	2.35	-STR	1.2						●	●						
		3HP-TPGW090208	2.19	-STR	0.8						●	●						
		3HP-TPGW090212	2.35	-STR	1.2						●	●						
		3HP-TPGW110208	2.19	-STR	0.8						●	●						
		3HP-TPGW110212	2.35	-STR	1.2						●	●						
		3HP-TPGW110308	2.19	-STR	0.8						●	●						
		3HP-TPGW110312	2.35	-STR	1.2						●	●						

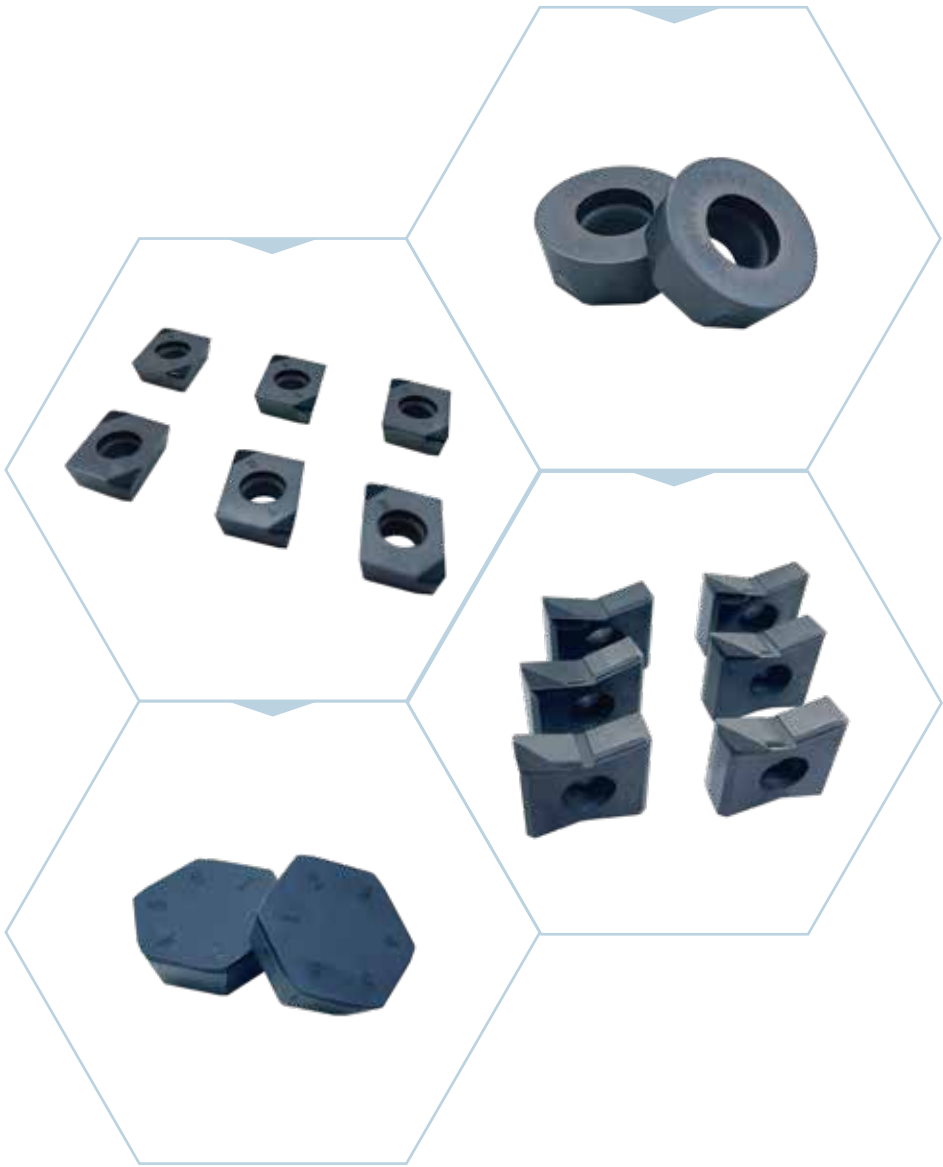
Mini CBN Insert

Continuous○Light Interrupted⌢Interrupted⌢Heavy Interrupted⌢

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition													
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K	K
TBGW0601	3. 97	1. 59	2. 30	0. 2~0. 4														
WBGW0601	3. 97	1. 59	2. 30	0. 2~0. 4														
CCGW0301	3. 5	1. 59	2. 00	0. 2~0. 4														
CCGW0401	4. 3	1. 59	2. 40	0. 2~0. 4	○	⌢	⌢	⌢	⌢	⌢	⌢	⌢	⌢	○	⌢	⌢	⌢	⌢

image	Specs	Specification	Chamfer	Nose radius	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N
	Standard	TBGW060102		0.2			●	●	●	●	●	●	●	●	●	●	●
		TBGW060104		0.4			●	●	●	●	●	●	●	●	●	●	●
	Finishing	TBGW060102	STM	0.2			●	●	●	●	●	●	●	●	●	●	●
		TBGW060104	STM	0.4			●	●	●	●	●	●	●	●	●	●	●
	Standard	WBGW060102		0.2			●	●	●	●	●	●	●	●	●	●	●
		WBGW060104		0.4			●	●	●	●	●	●	●	●	●	●	●
	Finishing	WBGW060102	STM	0.2			●	●	●	●	●	●	●	●	●	●	●
		WBGW060104	STM	0.4			●	●	●	●	●	●	●	●	●	●	●
	Standard	CCGW030102		0.2			●	●	●	●	●	●	●	●	●	●	●
		CCGW030104		0.4			●	●	●	●	●	●	●	●	●	●	●
		CCGW040102		0.2			●	●	●	●	●	●	●	●	●	●	●
		CCGW040104		0.4			●	●	●	●	●	●	●	●	●	●	●
	Finishing	CCGW030102	STM	0.2			●	●	●	●	●	●	●	●	●	●	●
		CCGW030104	STM	0.4			●	●	●	●	●	●	●	●	●	●	●
		CCGW040102	STM	0.2			●	●	●	●	●	●	●	●	●	●	●
		CCGW040104	STM	0.4			●	●	●	●	●	●	●	●	●	●	●

CBN Milling Insert



Indexable Milling Insert

Continuous ○ Light Interrupted ○ Interrupted ○ Heavy Interrupted ○

					Condition														
					H	H	H	H	H	H/K	H/S	S/K	S	H/K	H/K	K	K		
image	Specs	Depth of cut	Feed	Application	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN7010	IKN9012	IKN9501N		
	APGW160402-PDER	Depended on actual working condition		Should Milling Face Milling															
	APGW160403-PDER																		
	APGW160404-PDER																		
	APGW160405-PDER																		
	APGW160406-PDER																		
	APGW160407-PDER																		
	APGW160408-PDER																		
	APGW160409-PDER																		
	APGW160410-PDER																		
	APGW160411-PDER																		
	APGW160412-PDER																		
	APGW160413-PDER																		
	APGW160414-PDER					Face Milling													
	APGW160415-PDER					Face Milling													

Notes:
※ PDER indicates wiper applied
※ Tailor-made solution available



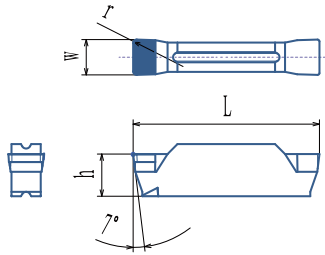
Positive C Type Multi-Tip

	specs	incircle ϕd	thickness	aperture ϕd1	nose radius r
	TM-TB**0601	3. 97	1. 59	2. 30	0. 2-0. 4
	TM-TC**0802	4. 76	2. 38	2. 30	0. 2-0. 4
	TM-TP**0802	4. 76	2. 38	2. 30	0. 2-0. 4
	TM-TP**0902	5. 56	2. 38	2. 50	0. 2-0. 4
	TM-TP**0902	5. 56	2. 38	2. 30	0. 2-0. 4
	TM-TEGN1102	6. 35	2. 38	/	0. 2-0. 4
	TM-CCGW0301	3. 5	1. 59	2. 00	0. 2-0. 4
	TM-CC**0401	4. 3	1. 59	2. 40	0. 2-0. 4
	TM-CC**0602	6. 35	2. 38	2. 80	0. 2-0. 4
	TM-CP**0602	6. 35	2. 38	2. 80	0. 2-0. 4
	TM-SP**0602	6. 35	2. 38	2. 80	0. 2-0. 4
	TM-VCGW0802	4. 76	2. 38	2. 30	0. 2-0. 4
	TM-WBGW0601	3. 97	1. 59	2. 30	0. 2-0. 4

Grooving Insert IKGMN

image	Specification	W	r	L	h	IKN1002	IKN4600	IKN6290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN6102	IKN9012	IKN8000B	IKN9010	IKN9501N
	IKGMN150-015	1.5	0.15	16.0	3.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN200-020	2.0	0.2	16.0	3.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN250-020	2.5	0.2	18.5	3.85	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN300-040	3.0	0.4	21.0	4.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN400-040	4.0	0.4	21.0	4.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN500-080	5.0	0.8	26.0	5.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGMN600-080	6.0	0.8	26.0	5.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Note:
※ The standard edge preparation is honing
※ other options of edge preparation available
(-STM, -STF, -STH, etc.)



W: Grooving Width
r: Corner Radius
L: Insert Length
h: Edge Height



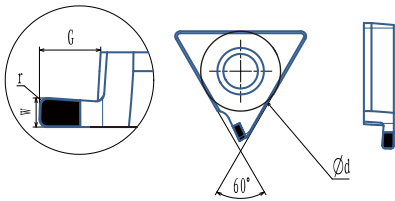
- ※ The most popular general-purpose grooving insert can be applied to external groove, internal groove and face groove.
- ※ The standard IKGMN grooving insert is single edged. The double edged insert is also available on request.
- ※ Tailor-made available for the different grooving width and corner radius.

image	Specification	W	r	L	h	IKN1002	IKN4600	IKN6290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN6102	IKN9012	IKN8000B	IKN9010	IKN9501N
	IKGSN200-020	2.0	0.2	20.0	5.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGSN300-040	3.0	0.4	20.0	5.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGSN400-040	4.0	0.4	20.5	5.0	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGSN500-080	5.0	0.4	25.0	5.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGSN600-080	6.0	0.8	25.0	5.5	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Grooving Insert IKGBR/L

image	Specification	W	r	L	h	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN9000B	IKN8800	IKN5190	IKN6102	IKN9012	IKN8000B	IKN9010	IKN9501N
	IKGBR/L32150020	1.5	0.2	3.5	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32200020	2.0	0.2	3.5	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32250030	2.5	0.3	3.5	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32300030	3.0	0.3	5.0	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32350030	3.5	0.3	5.0	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32400040	4.0	0.4	5.0	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L32450040	4.5	0.4	5.0	9.525	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43150020	1.5	0.2	3.5	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43200020	2.0	0.2	3.5	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43250030	2.5	0.3	3.5	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43300030	3.0	0.3	5.0	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43350030	3.5	0.3	5.0	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43400040	4.0	0.4	5.0	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGBR/L43450040	4.5	0.4	5.0	12.7	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Note:
※ The standard edge preparation is honing
※ other options of edge preparation available
(-STM, -STF, -STH, etc.)



W: Grooving Width
r: Corner Radius
G: Insert Length
Φd: Edge Height

Grooving Insert IKGBR/L

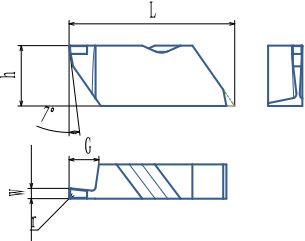


- ※ The excellent clamping rigidity enables precise grooving operation.
- ※ This popular type for shallow grooving is compatible with a majority of tool brands in market.
- ※ This popular type for shallow grooving is compatible with a majority of tool brands in market.

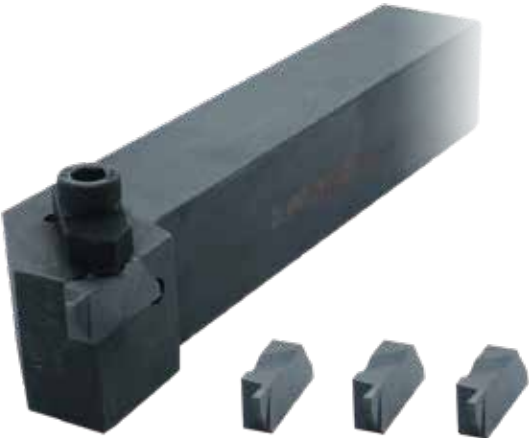
Grooving Insert IKGTR/L

image	Specification	W	r	L	h	IKN1002	IKN4600	IKN5290A	IKN6400	IKN7512	IKN9010	IKN9500N	IKN8000B	IKN8800	IKN5190	IKN6102	IKN9012	IKN8000B	IKN9010	IKN9501N
	IKGTR/L150-020	1.5	0.2	3.5	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGTR/L200-020	2.0	0.2	3.5	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGTR/L250-020	2.5	0.2	3.5	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGTR/L300-040	3.0	0.4	5.0	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGTR/L350-040	3.5	0.4	5.0	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
	IKGTR/L400-040	4.0	0.4	5.0	8.8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

Note:
※ The standard edge preparation is honing
※ other options of edge preparation available
(-SFD, -STM, -STF, -STH, etc.)



W: Grooving Width
r: Corner Radius
G: Insert Length
h: Edge Height



- ※ The excellent clamping rigidity enables precise grooving operation.
- ※ The standard IKGTR/L grooving insert is used for external and internal shallow groove. The face grooving insert is also available on request.
- ※ Tailor-made available for the different grooving width, grooving depth, corner radius and relief angle.

CBN Block Brazed Insert



※ The economical choice for roughing and semi-finishing operation.

NegativeC type Through-Welded

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
0804	12. 7	4. 76	5. 16	0. 4~1. 6	○ ◐ ◑	◐ ◑	◑ ◒	◒

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	4TH-CNGA120404	-STF	0.4	●	●	●	●
		4TH-CNGA120408	-STF	0.8	●	●	●	●
		4TH-CNGA120412	-STF	1.2	●	●	●	●
		4TH-CNGA120416	-STF	1.6	●	●	●	●
	Interrupted Cutting	4TH-CNGA120404	-STH	0.4	●	●	●	●
		4TH-CNGA120408	-STH	0.8	●	●	●	●
		4TH-CNGA120412	-STH	1.2	●	●	●	●
		4TH-CNGA120416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	4TH-CNGA120404	-STR	0.4	●	●	●	●
		4TH-CNGA120408	-STR	0.8	●	●	●	●
		4TH-CNGA120412	-STR	1.2	●	●	●	●
		4TH-CNGA120416	-STR	1.6	●	●	●	●

NegativeD type Through-Welded

Continuous ○ Light Interrupted ◐ Interrupted ◑ Heavy Interrupted ◒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1504	12. 7	4. 76	5. 16	0. 4~1. 6	○ ◐ ◑	◐ ◑	◑ ◒	◒

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	4TH-DNGA150404	-STF	0.4	●	●	●	●
		4TH-DNGA150408	-STF	0.8	●	●	●	●
		4TH-DNGA150412	-STF	1.2	●	●	●	●
		4TH-DNGA150416	-STF	1.6	●	●	●	●
	Interrupted Cutting	4TH-DNGA150404	-STH	0.4	●	●	●	●
		4TH-DNGA150408	-STH	0.8	●	●	●	●
		4TH-DNGA150412	-STH	1.2	●	●	●	●
		4TH-DNGA150416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	4TH-DNGA150404	-STR	0.4	●	●	●	●
		4TH-DNGA150408	-STR	0.8	●	●	●	●
		4TH-DNGA150412	-STR	1.2	●	●	●	●
		4TH-DNGA150416	-STR	1.6	●	●	●	●

NegativeV type Through-Welded

Continuous○Light Interrupted⌏Interrupted⌐Heavy Interrupted⌑

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1604	9. 525	4. 76	3. 81	0. 4~1. 6	○⌏⌐⌑	⌏⌐⌑⌑	⌐⌑⌑⌑	⌑⌑⌑⌑



image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	4TH-VNGA160404	-STF	0.4	●	●	●	●
		4TH-VNGA160408	-STF	0.8	●	●	●	●
		4TH-VNGA160412	-STF	1.2	●	●	●	●
	Interrupted Cutting	4TH-VNGA160404	-STH	1.6	●	●	●	●
		4TH-VNGA160408	-STH	0.4	●	●	●	●
		4TH-VNGA160412	-STH	0.8	●	●	●	●
	Heavy Interrupted Cutting	4TH-VNGA160404	-STR	1.2	●	●	●	●
		4TH-VNGA160408	-STR	1.6	●	●	●	●
		4TH-VNGA160412	-STR	0.4	●	●	●	●

NegativeT type Through-Welded

Continuous○Light Interrupted⌏Interrupted⌐Heavy Interrupted⌑

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1604	9. 525	4. 76	3. 81	0. 4~1. 6	○⌏⌐⌑	⌏⌐⌑⌑	⌐⌑⌑⌑	⌑⌑⌑⌑

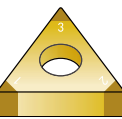
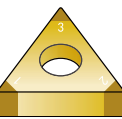


image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	6TH-TNGA160404	-STF	0.4	●	●	●	●
		6TH-TNGA160408	-STF	0.8	●	●	●	●
		6TH-TNGA160412	-STF	1.2	●	●	●	●
		6TH-TNGA160416	-STF	1.6	●	●	●	●
	Interrupted Cutting	6TH-TNGA160404	-STH	0.4	●	●	●	●
		6TH-TNGA160408	-STH	0.8	●	●	●	●
		6TH-TNGA160412	-STH	1.2	●	●	●	●
		6TH-TNGA160416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	6TH-TNGA160404	-STR	0.4	●	●	●	●
		6TH-TNGA160408	-STR	0.8	●	●	●	●
		6TH-TNGA160412	-STR	1.2	●	●	●	●
		6TH-TNGA160416	-STR	1.6	●	●	●	●

NegativeS type Through-Welded

Continuous○Light Interrupted⌏Interrupted⌐Heavy Interrupted⌑

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1204	12. 7	4. 76	5. 16	0. 4~1. 6	○⌏⌐⌑	⌏⌐⌑⌑	⌐⌑⌑⌑	⌑⌑⌑⌑

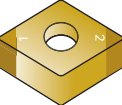
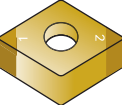


image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	4TH-SNGA120404	-STF	0.4	●	●	●	●
		4TH-SNGA120408	-STF	0.8	●	●	●	●
		4TH-SNGA120412	-STF	1.2	●	●	●	●
		4TH-SNGA120416	-STF	1.6	●	●	●	●
	Interrupted Cutting	4TH-SNGA120404	-STH	0.4	●	●	●	●
		4TH-SNGA120408	-STH	0.8	●	●	●	●
		4TH-SNGA120412	-STH	1.2	●	●	●	●
		4TH-SNGA120416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	4TH-SNGA120404	-STR	0.4	●	●	●	●
		4TH-SNGA120408	-STR	0.8	●	●	●	●
		4TH-SNGA120412	-STR	1.2	●	●	●	●
		4TH-SNGA120416	-STR	1.6	●	●	●	●

NegativeW type Through-Welded

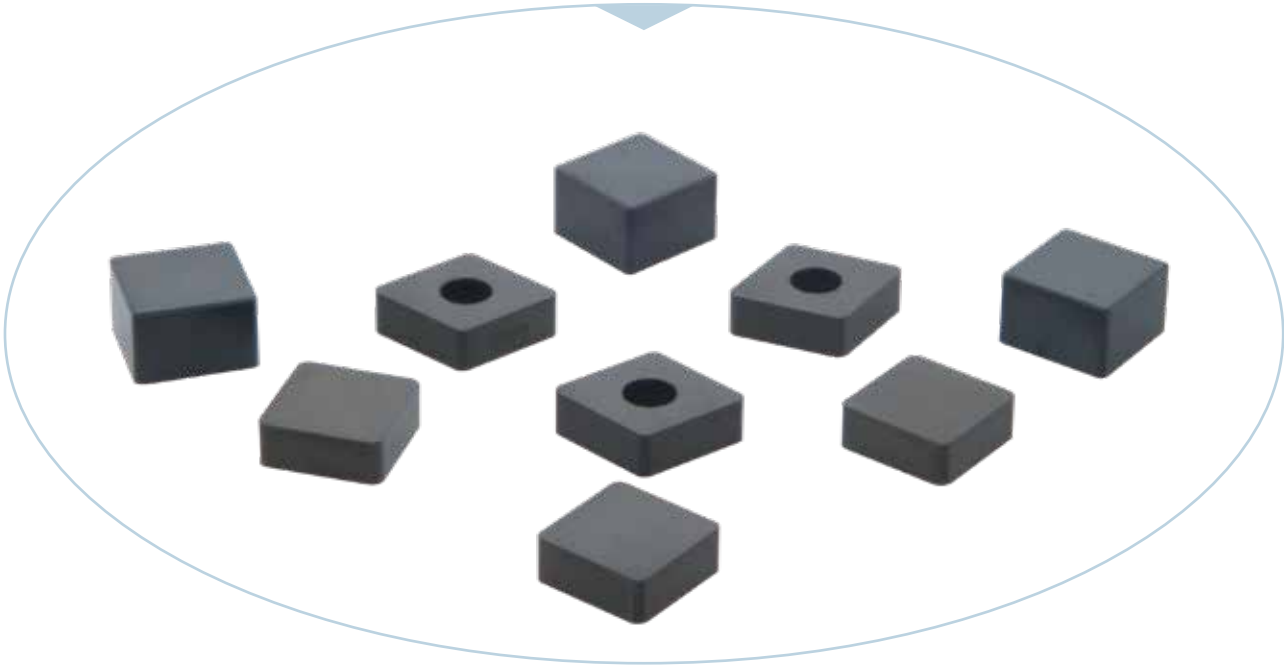
Continuous○Light Interrupted⌏Interrupted⌐Heavy Interrupted⌑

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
0804	12. 7	4. 76	5. 16	0. 4~1. 6	○⌏⌐⌑	⌏⌐⌑⌑	⌐⌑⌑⌑	⌑⌑⌑⌑



image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	6TH-WNGA080404	-STF	0.4	●	●	●	●
		6TH-WNGA080408	-STF	0.8	●	●	●	●
		6TH-WNGA080412	-STF	1.2	●	●	●	●
		6TH-WNGA080416	-STF	1.6	●	●	●	●
	Interrupted Cutting	6TH-WNGA080404	-STH	0.4	●	●	●	●
		6TH-WNGA080408	-STH	0.8	●	●	●	●
		6TH-WNGA080412	-STH	1.2	●	●	●	●
		6TH-WNGA080416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	6TH-WNGA080404	-STR	0.4	●	●	●	●
		6TH-WNGA080408	-STR	0.8	●	●	●	●
		6TH-WNGA080412	-STR	1.2	●	●	●	●
		6TH-WNGA080416	-STR	1.6	●	●	●	●

Solid CBN Insert



- ※ Suitable for high speed machining of cast iron.
- ※ Ideal for Roughing operation of large workpiece.
- ※ The round solid CBN insert for profile copying operation of large workpiece is popular.

NegativeC type Solid

Continuous○Light Interrupted⌒Interrupted⌒Heavy Interrupted⌒

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1204	12. 7	4. 76	—	0. 4~1. 6	⌒	⌒	⌒	⌒
1207	12. 7	7. 94	—	0. 4~1. 6	⌒	⌒	⌒	⌒

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	CNGN120404	-STF	0.4	●	●	●	●
		CNGN120408	-STF	0.8	●	●	●	●
		CNGN120412	-STF	1.2	●	●	●	●
		CNGN120416	-STF	1.6	●	●	●	●
		CNGN120704	-STF	0.4	●	●	●	●
		CNGN120708	-STF	0.8	●	●	●	●
		CNGN120712	-STF	1.2	●	●	●	●
		CNGN120716	-STF	1.6	●	●	●	●
	Interrupted Cutting	CNGN120404	-STH	0.4	●	●	●	●
		CNGN120408	-STH	0.8	●	●	●	●
		CNGN120412	-STH	1.2	●	●	●	●
		CNGN120416	-STH	1.6	●	●	●	●
		CNGN120704	-STH	0.4	●	●	●	●
		CNGN120708	-STH	0.8	●	●	●	●
		CNGN120712	-STH	1.2	●	●	●	●
		CNGN120716	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	CNGN120404	-STR	0.4	●	●	●	●
		CNGN120408	-STR	0.8	●	●	●	●
		CNGN120412	-STR	1.2	●	●	●	●
		CNGN120416	-STR	1.6	●	●	●	●
		CNGN120704	-STR	0.4	●	●	●	●
		CNGN120708	-STR	0.8	●	●	●	●
		CNGN120712	-STR	1.2	●	●	●	●
		CNGN120716	-STR	1.6	●	●	●	●

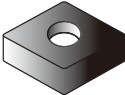
NegativeC type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1204	12. 7	4. 76	5. 16	0. 4~1. 6				
image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	CNGA120404	-STF	0.4	●	●	●	●
		CNGA120408	-STF	0.8	●	●	●	●
		CNGA120412	-STF	1.2	●	●	●	●
		CNGA120416	-STF	1.6	●	●	●	●
	Interrupted Cutting	CNGA120404	-STH	0.4	●	●	●	●
		CNGA120408	-STH	0.8	●	●	●	●
		CNGA120412	-STH	1.2	●	●	●	●
		CNGA120416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	CNGA120404	-STR	0.4	●	●	●	●
		CNGA120408	-STR	0.8	●	●	●	●
		CNGA120412	-STR	1.2	●	●	●	●
		CNGA120416	-STR	1.6	●	●	●	●

NegativeD type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1504	12. 7	4. 76	-	0. 4~1. 6				
1506	12. 7	6. 35	-	0. 4~1. 6				
image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	DNGN150404	-STF	0.4	●	●	●	●
		DNGN150408	-STF	0.8	●	●	●	●
		DNGN150412	-STF	1.2	●	●	●	●
		DNGN150416	-STF	1.6	●	●	●	●
		DNGN150604	-STF	0.4	●	●	●	●
		DNGN150608	-STF	0.8	●	●	●	●
		DNGN150612	-STF	1.2	●	●	●	●
		DNGN150616	-STF	1.6	●	●	●	●
	Interrupted Cutting	DNGN150404	-STH	0.4	●	●	●	●
		DNGN150408	-STH	0.8	●	●	●	●
		DNGN150412	-STH	1.2	●	●	●	●
		DNGN150416	-STH	1.6	●	●	●	●
		DNGN150604	-STH	0.4	●	●	●	●
		DNGN150608	-STH	0.8	●	●	●	●
		DNGN150612	-STH	1.2	●	●	●	●
		DNGN150616	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	DNGN150404	-STR	0.4	●	●	●	●
		DNGN150408	-STR	0.8	●	●	●	●
		DNGN150412	-STR	1.2	●	●	●	●
		DNGN150416	-STR	1.6	●	●	●	●
		DNGN150604	-STR	0.4	●	●	●	●
		DNGN150608	-STR	0.8	●	●	●	●
		DNGN150612	-STR	1.2	●	●	●	●
		DNGN150616	-STR	1.6	●	●	●	●

NegativeD type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1504	12. 7	4. 76	5. 16	0. 4~1. 6				

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	DNGA150404	-STF	0.4	●	●	●	●
		DNGA150408	-STF	0.8	●	●	●	●
		DNGA150412	-STF	1.2	●	●	●	●
		DNGA150416	-STF	1.6	●	●	●	●
	Interrupted Cutting	DNGA150404	-STH	0.4	●	●	●	●
		DNGA150408	-STH	0.8	●	●	●	●
		DNGA150412	-STH	1.2	●	●	●	●
		DNGA150416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	DNGA150404	-STR	0.4	●	●	●	●
		DNGA150408	-STR	0.8	●	●	●	●
		DNGA150412	-STR	1.2	●	●	●	●
		DNGA150416	-STR	1.6	●	●	●	●

NegativeV type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1604	9. 525	4. 76	—	0. 4~1. 6				
1606	9. 525	6. 35	—	0. 4~1. 6				

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	VNGN160404	-STF	0.4	●	●	●	●
		VNGN160408	-STF	0.8	●	●	●	●
		VNGN160412	-STF	1.2	●	●	●	●
		VNGN160416	-STF	1.6	●	●	●	●
		VNGN160604	-STF	0.4	●	●	●	●
		VNGN160608	-STF	0.8	●	●	●	●
		VNGN160612	-STF	1.2	●	●	●	●
		VNGN160616	-STF	1.6	●	●	●	●
	Interrupted Cutting	VNGN160404	-STH	0.4	●	●	●	●
		VNGN160408	-STH	0.8	●	●	●	●
		VNGN160412	-STH	1.2	●	●	●	●
		VNGN160416	-STH	1.6	●	●	●	●
		VNGN160604	-STH	0.4	●	●	●	●
		VNGN160608	-STH	0.8	●	●	●	●
		VNGN160612	-STH	1.2	●	●	●	●
		VNGN160616	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	VNGN160404	-STR	0.4	●	●	●	●
		VNGN160408	-STR	0.8	●	●	●	●
		VNGN160412	-STR	1.2	●	●	●	●
		VNGN160416	-STR	1.6	●	●	●	●
		VNGN160604	-STR	0.4	●	●	●	●
		VNGN160608	-STR	0.8	●	●	●	●
		VNGN160612	-STR	1.2	●	●	●	●
		VNGN160616	-STR	1.6	●	●	●	●

NegativeV type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1604	9. 525	4. 76	3. 81	0. 4~1. 6				

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	VNGA160404	-STF	0.4	●	●	●	●
		VNGA160408	-STF	0.8	●	●	●	●
		VNGA160412	-STF	1.2	●	●	●	●
		VNGA160416	-STF	1.6	●	●	●	●
	Interrupted Cutting	VNGA160404	-STH	0.4	●	●	●	●
		VNGA160408	-STH	0.8	●	●	●	●
		VNGA160412	-STH	1.2	●	●	●	●
		VNGA160416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	VNGA160404	-STR	0.4	●	●	●	●
		VNGA160408	-STR	0.8	●	●	●	●
		VNGA160412	-STR	1.2	●	●	●	●
		VNGA160416	-STR	1.6	●	●	●	●

NegativeS type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1204	12. 7	4. 76	-	0. 4~1. 6				
1207	12. 7	7. 94	-	0. 4~1. 6				

image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	SNGN120404	-STF	0.4	●	●	●	●
		SNGN120408	-STF	0.8	●	●	●	●
		SNGN120412	-STF	1.2	●	●	●	●
		SNGN120416	-STF	1.6	●	●	●	●
		SNGN120704	-STF	0.4	●	●	●	●
		SNGN120708	-STF	0.8	●	●	●	●
		SNGN120712	-STF	1.2	●	●	●	●
		SNGN120716	-STF	1.6	●	●	●	●
	Interrupted Cutting	SNGN120404	-STH	0.4	●	●	●	●
		SNGN120408	-STH	0.8	●	●	●	●
		SNGN120412	-STH	1.2	●	●	●	●
		SNGN120416	-STH	1.6	●	●	●	●
		SNGN120704	-STH	0.4	●	●	●	●
		SNGN120708	-STH	0.8	●	●	●	●
		SNGN120712	-STH	1.2	●	●	●	●
		SNGN120716	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	SNGN120404	-STR	0.4	●	●	●	●
		SNGN120408	-STR	0.8	●	●	●	●
		SNGN120412	-STR	1.2	●	●	●	●
		SNGN120416	-STR	1.6	●	●	●	●
		SNGN120704	-STR	0.4	●	●	●	●
		SNGN120708	-STR	0.8	●	●	●	●
		SNGN120712	-STR	1.2	●	●	●	●
		SNGN120716	-STR	1.6	●	●	●	●

NegativeS type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
1204	12. 7	4. 76	5. 16	0. 4~1. 6				
image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	SNGA120404	-STF	0.4	●	●	●	●
		SNGA120408	-STF	0.8	●	●	●	●
		SNGA120412	-STF	1.2	●	●	●	●
		SNGA120416	-STF	1.6	●	●	●	●
	Interrupted Cutting	SNGA120404	-STH	0.4	●	●	●	●
		SNGA120408	-STH	0.8	●	●	●	●
		SNGA120412	-STH	1.2	●	●	●	●
		SNGA120416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	SNGA120404	-STR	0.4	●	●	●	●
		SNGA120408	-STR	0.8	●	●	●	●
		SNGA120412	-STR	1.2	●	●	●	●
		SNGA120416	-STR	1.6	●	●	●	●

NegativeW type Solid

Continuous

Light Interrupted

Interrupted

Heavy Interrpted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
0804	12. 7	4. 76	—	0. 4~1. 6				
image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	General	WNGN080404	-STF	0.4	●	●	●	●
		WNGN080408	-STF	0.8	●	●	●	●
		WNGN080412	-STF	1.2	●	●	●	●
		WNGN080416	-STF	1.6	●	●	●	●
	Interrupted Cutting	WNGN080404	-STH	0.4	●	●	●	●
		WNGN080408	-STH	0.8	●	●	●	●
		WNGN080412	-STH	1.2	●	●	●	●
		WNGN080416	-STH	1.6	●	●	●	●
	Heavy Interrupted Cutting	WNGN080404	-STR	0.4	●	●	●	●
		WNGN080408	-STR	0.8	●	●	●	●
		WNGN080412	-STR	1.2	●	●	●	●
		WNGN080416	-STR	1.6	●	●	●	●

NegativeR type Solid

Continuous

Light Interrupted

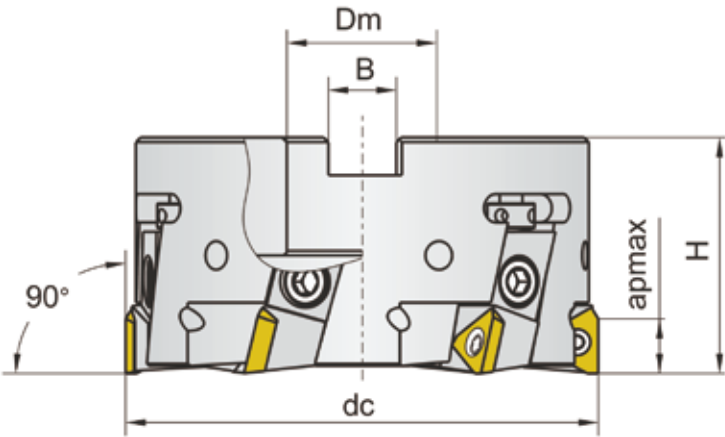
Interrupted

Heavy Interrupted

specs	incircle Φd	thickness	aperture Φd1	nose radius r	Condition			
					H		K	
0903	6. 35	3. 18	—	—				
0603	9. 525	3. 18	—	—				
1204	12. 7	3. 76	—	—				
1207	12. 7	7. 94	—	—				
image	Specs	Specification	Chamfer	Nose radius	IKN60	IKN96	IKN80	IKN72
	Finishing	RNGN0603	-STM	/	●	●	●	●
		RNGN0903	-STM	/	●	●	●	●
		RNGN1204	-STM	/	●	●	●	●
	General	RNGN0603	-STF	/	●	●	●	●
		RNGN0903	-STF	/	●	●	●	●
		RNGN1204	-STF	/	●	●	●	●
		RNGN1207	-STF	/	●	●	●	●
	Interrupted Cutting	RNGN0903	-STH	/	●	●	●	●
		RNGN1204	-STH	/	●	●	●	●
		RNGN1207	-STH	/	●	●	●	●
	Heavy Interrupted Cutting	RNGN0903	-STR	/	●	●	●	●
		RNGN1204	-STR	/	●	●	●	●
		RNGN1207	-STR	/	●	●	●	●

Milling insert

Specification	APmax	Size(mm) Dimension					Inserts	Cooling	(kg)
		dc	Dm	B	H	Teeth			
D63-TE16T4-T22	10.5	63	22	10.4	50	4	3HP-TEHW16T3PER...	-	0.35
D63-TE16Z4-T22	10.5	63	22	10.4	50	4		-	0.35
D80-TE16T4-T27	10.5	80	27	12.4	50	4		-	0.6
D80-TE16Z4-T27	10.5	80	27	12.4	50	6		-	0.6
D100-TE16T4-T32	10.5	100	32	14.4	50	6		-	0.85
D100-TE16Z4-T32	10.5	100	32	14.4	50	6		-	0.85
D125-TE16T4-T40	10.5	125	40	16.4	50	8		-	1.3
D125-TE16Z4-T40	10.5	125	40	16.4	50	8		-	1.3
D160-TE16T4-T40	10.5	160	40	16.4	50	10		-	2.1
D160-TE16Z4-T40	10.5	160	40	16.4	50	10		-	2.1
Image	Specs	Specification	Chamfer	Material					
	10.5	TEHW16T3PER	STM	IKN9010					



Material Properties

PCD (Polycrystalline Diamond)

Why is it necessary to use PCD cutting tools?

PCD (polycrystalline diamond) consists of diamond particles bonded under high pressure and temperature. It is used for selected non-ferrous metals and non-metallic materials.

Select the PCD grade, geometry and cutting conditions for the workpiece. Tool life, finish and productivity depend on the application and should be verified by trial cutting; no fixed multiple of carbide tool life is promised.

IKEN PCD GRADES

※ N				
Grade	IKD0200A	IKD1000	IKD2100	
Material				
Characteristic	Focused on surface quality	General-purpose	Focused on wear resistance	
Particle size(um)	< 2	10	4/25	
Hardness (Hv)				
Wear resistance				
Smoothness of edge				

Criteria for Material Selection

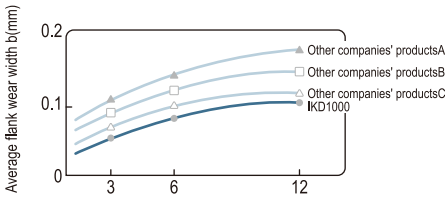
IKD1000
Basic Selection
(General-Purpose Material)

※ Fiberglass, Fiberboard, Laminated Wood Board, >14% Aluminum-Silicon Alloy, Metal Matrix Composite (MMC), Rock Sawing, Sintered Tungsten Carbide Hard Alloy(10 - 16% Co)

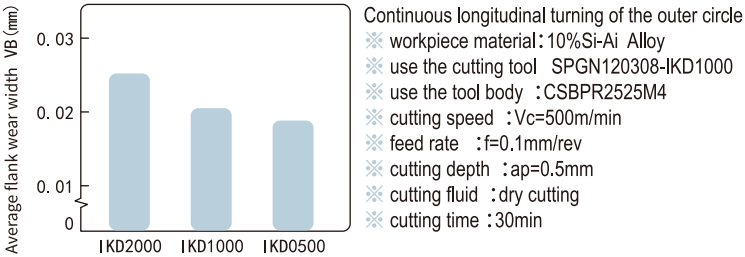
IKD2100
Excellent wear resistance, bimodal grain structure

※ Low Silicon Aluminum Alloy Machining (4%~8%) Excellent performance in heavy intermittent machining tests

IKD0200A
Fine grain size, making it an ideal choice for applications requiring ultra-high surface quality



※ cutting performance · wear resistance



Continuous longitudinal turning of the outer circle
※ workpiece material: 10%Si-Ai Alloy
※ use the cutting tool SPGN120308-IKD1000
※ use the tool body : CSBPR2525M4
※ cutting speed : Vc=500m/min
※ feed rate : f=0.1mm/rev
※ cutting depth : ap=0.5mm
※ cutting fluid : dry cutting
※ cutting time : 30min

Face Milling

※ Workpiece material: Fiberglass(FRP)
※ Using cutting tools : SPCN42ZFR-IKD1000
※ use the tool body : TPG4208R-A
※ cutting speed : Vc=942m/min
※ Feed rate : f=0.1mm/rev
※ cutting depth : ap=1.5mm
※ cutting fluid : dry cutting

※ Standard cutting conditions

Workpiece material	Cutting speed Vc(m/min)	Cutting depth ap(mm)	Feed rate f(mm/rev)	Grade		
				IKD0200A	IKD1000	IKD2100
Al alloy(Si<12%)	1500(1000-2500)	0.5(0.05-2.0)	0.1(0.05-0.2)	○	○	
Al alloy(Si<12%)	600(400-800)	0.5(0.05-2.0)	0.1(0.05-0.2)		○	○
Copper , Brass	800(500-1500)	0.5(0.05-2.0)	0.1(0.05-0.2)	○	○	
Phosphor Bronze	400(300-500)	0.5(0.05-2.0)	0.1(0.05-0.2)	○	○	
Carbon , Graphite	400(300-500)	0.5(0.05-2.0)	0.1(0.05-0.2)		○	○
FRP	700(500-1000)	0.2(0.05-0.5)	0.05(0.03-0.1)		○	○
Plastic	700(500-1000)	0.2(0.05-0.5)	0.03(0.01-0.05)	○	○	
Cemented Carbide(HRc40-60)	15(10-20)	0.1(0.05-0.2)	0.03(0.01-0.05)			○
Ceramic (Pre-sintered)	130(100-150)	0.5(0.05-2.0)	0.05(0.03-0.1)			○

○:First Recommendation ○:Secondary Recommendation

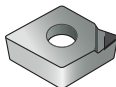
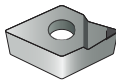
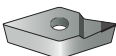
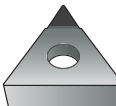
Negative Positive

image	Specs	Specification	Cutting Length	Nose radius	IKD0200A	IKD1000	IKD2100
	Finishing	CNGT120402	3.37	0.2	●	●	●
		CNGT120404	3.48	0.4	●	●	●
		CNGT120408	3.69	0.8	●	●	●
		DNGT150402	3.22	0.2	●	●	●
		DNGT150404	3.48	0.4	●	●	●
		DNGT150408	3.13	0.8	●	●	●
		TNGT160402	2.97	0.2	●	●	●
		TNGT160404	3.06	0.4	●	●	●
		TNGT160408	3.22	0.8	●	●	●
		VNGT160402	3.2	0.2	●	●	●
		VNGT160404	3.25	0.4	●	●	●
		VNGT160408	3.36	0.8	●	●	●

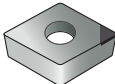
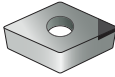
Negative

image	Specs	Specification	Cutting Length	Nose radius	IKD0200A	IKD1000	IKD2100
	Finishing	CNGA120402	3.37	0.2	●	●	●
		CNGA120404	3.48	0.4	●	●	●
		CNGA120408	3.69	0.8	●	●	●
		DNGA150402	3.22	0.2	●	●	●
		DNGA150404	3.48	0.4	●	●	●
		DNGA150408	3.13	0.8	●	●	●
		TNGA160402	2.97	0.2	●	●	●
		TNGA160404	3.06	0.4	●	●	●
		TNGA160408	3.22	0.8	●	●	●
		SNGA120402	2.96	0.2	●	●	●
		SNGA120404	3.77	0.4	●	●	●
		SNGA120408	4	0.8	●	●	●
		SNGN090302	2.96	0.2	●	●	●
		SNGN090304	3.77	0.4	●	●	●
		SNGN090308	4	0.8	●	●	●
		SNGN120402	2.96	0.2	●	●	●
		SNGN120404	3.77	0.4	●	●	●
		SNGN120408	4	0.8	●	●	●

Positive

image	Specs	Specification	Cutting Length	Nose radius	IKD200A	IKD1000	IKD2100	
	Semi-Finishing	CCGT09T302	3.37	0.2	●	●	●	
		CCGT09T304	3.48	0.4	●	●	●	
		CCGT09T308	3.69	0.8	●	●	●	
		CCGT120402	3.37	0.2	●	●	●	
		CCGT120404	3.48	0.4	●	●	●	
		CCGT120408	3.69	0.8	●	●	●	
		DCGT070202	3.22	0.2	●	●	●	
		DCGT070204	3.48	0.4	●	●	●	
		DCGT070208	3.13	0.8	●	●	●	
		DCGT11T302	3.22	0.2	●	●	●	
		DCGT11T304	3.48	0.4	●	●	●	
		DCGT11T308	3.13	0.8	●	●	●	
		VCGT160402	3.2	0.2	●	●	●	
		VCGT160404	3.25	0.4	●	●	●	
		VCGT160408	3.36	0.8	●	●	●	
			TCGT090202	2.97	0.2	●	●	●
			TCGT090204	3.06	0.4	●	●	●
			TCGT090208	3.22	0.8	●	●	●
TCGT110202			2.97	0.2	●	●	●	
TCGT110204			3.06	0.4	●	●	●	
TCGT110208			3.22	0.8	●	●	●	
TCGT110302			2.97	0.2	●	●	●	
TCGT110304			3.06	0.4	●	●	●	
TCGT110308		3.22	0.8	●	●	●		

Negative

image	Specs	Specification	Cutting Length	Nose radius	IKD020A	IKD1000	IKD2100
	Semi-Finishing	CCGW060202	3.37	0.2	●	●	●
		CCGW060204	3.48	0.4	●	●	●
		CCGW09T302	3.37	0.2	●	●	●
		CCGW09T304	3.48	0.4	●	●	●
		CCGW09T308	3.69	0.8	●	●	●
		DCGW070202	3.22	0.2	●	●	●
		DCGW070204	3.48	0.4	●	●	●
		DCGW070208	3.13	0.8	●	●	●
		DCGW11T302	3.22	0.2	●	●	●
		DCGW11T304	3.48	0.4	●	●	●
		DCGW11T308	3.13	0.8	●	●	●
		TPGW080202	2.97	0.2	●	●	●
		TPGW080204	3.06	0.4	●	●	●
		TPGW080208	3.22	0.8	●	●	●
		TPGW090202	2.97	0.2	●	●	●
		TPGW090204	3.06	0.4	●	●	●
		TPGW090208	3.22	0.8	●	●	●
		TPGW110202	2.97	0.2	●	●	●
		TPGW110204	3.06	0.4	●	●	●
		TPGW110208	3.22	0.8	●	●	●

Application 03 / Pump housing

Supplier	Tool specification	Parts / edge	Life criterion
Other brand	Model withheld	20	Surface finish
IKEN	APGT160404-STF-L1 IKN8501	50	Surface finish



Material / hardness	HT250 / HB 200
Operation / location	Milling / end face
Cooling	Dry
Surface roughness	Ra 1.6
Clamping / workpiece rigidity	General / general
ap (mm), other / IKEN	0.3 / 0.3
Vc (m/min), other / IKEN	400 / 400
f (mm/rev), other / IKEN	0.12 / 0.12
Number of teeth	Z = 8 / Z = 8

Application 04 / CVJ outer race

Supplier	Tool specification	Parts / edge	Life criterion
Other brand	Model withheld	500	Edge fracture
IKEN	3HP-TNGA160416-STH IKN9500NC	600	Edge fracture



Material	Alloy steel 20CrMnTiH
Hardness	HRC 58-63
Cutting condition	Interrupted
Operation / location	Turning / internal spherical surface
Cooling	Dry
Surface roughness	Ra 0.8
Clamping / workpiece rigidity	General / general
ap (mm), other / IKEN	0.2 / 0.2
Vc (m/min), other / IKEN	150 / 150
f (mm/rev), other / IKEN	0.12 / 0.12

Application 06 / Transmission gear shaft



Supplier	Tool specification	Parts / edge	Life criterion
Other brand	Model withheld	150	Surface finish
IKEN	3HP-TNGA160408-STF IKN4600C	200	Surface finish

Material	42CrMo
Hardness	HRC 58-62
Clamping rigidity	Fine
Operation / location	Turning / external diameter
Cooling	Wet cutting
Vc (m/min)	220
f (mm/rev)	0.11
ap (mm)	0.12

IKEN PRODUCTS EXPANSION



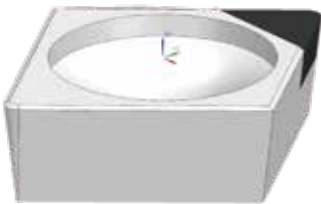
Insert for Turning

Negative / CN, DN, VN, TN, WN, etc

- ※ CBN Block Brazed Type Added
- Application: Large Cutting Depth
- High Feed Rate
- Interrupted Cutting



↑
Block



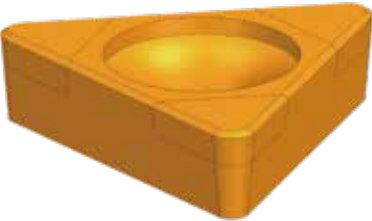
IC: 3.97mm

Positive / CC, CP, TC, TP, DC, VB, etc.

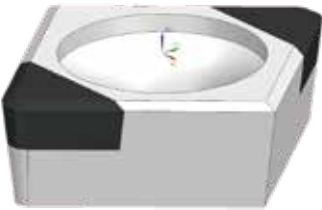
- ※ Very Small Size Insert Available, For Instance , CCGW030102

Positive / CC, CP, TC, TP, DC, VB, etc.

- ※ Small Inserts with Multy-Edges Available for Cost Advantage
- For Instance , 3HP-TBGW060104 , 2HP-CCGW040101 , etc.



IC: 3.97mm



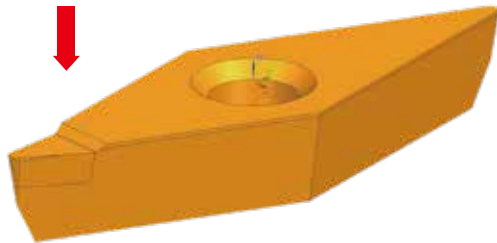
IC: 4.76mm

Insert for Turning

Positive / CC, CP, TC, TP, DC, VB, etc.

- ※ Very Small Nose Radius

R0.05 Available



Negative / Positive

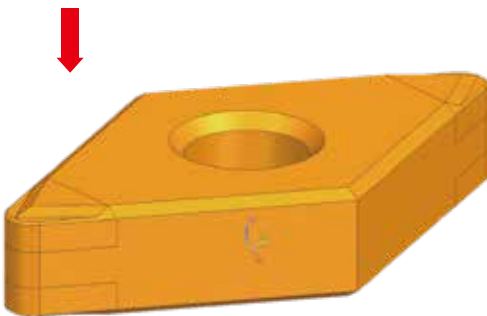
Wiper Available for the Following Application:

- ※ Better Surface Quality Achieved with Same Feed Rate
- ※ High Feed Rate Achieved with Same Surface Quality
- ※ Specific Surface Quality like Rmr , Rpk , etc. Achieved by Tailor-Made Solution



Wiper

Chip-Breaker

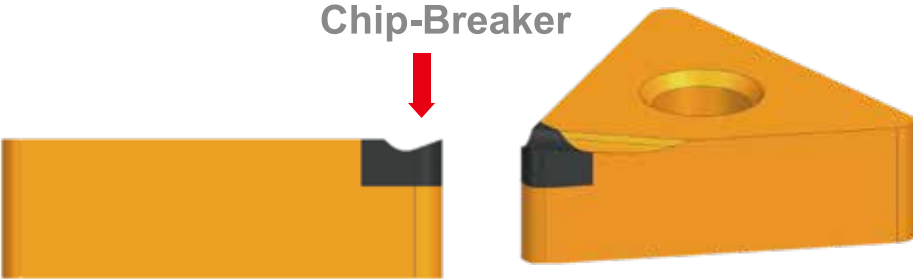


Insert for Turning

Negative / Positive

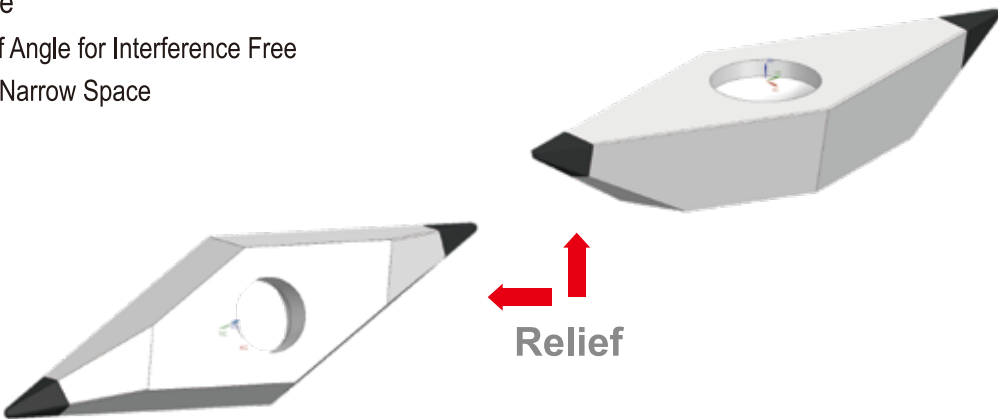
- ※ Chip-breaker Available for the Following Application:
Better Chip Control
Carburized Layer removal
Large Cutting Depth

Chip-Breaker



Negative / Positive

- ※ Special Relief Angle for Interference Free
Machining in Narrow Space



Insert for Milling

Negative / Positive

- ※ Shape , Size , Function , etc. Tailor-Made Solution



Should Milling / Face Milling

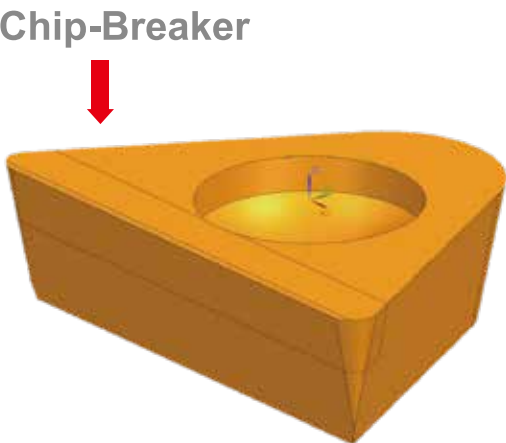
Insert for Milling



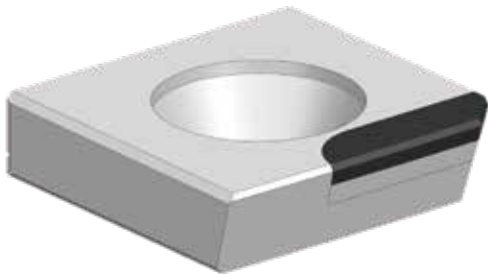
Tangentially Installed
 ※ Shape , Size , Function , etc. Tailor-Made Solution

Should Milling / Face Milling

Negative / Positive
 ※ Long Cutting Edge Available for Specific Application



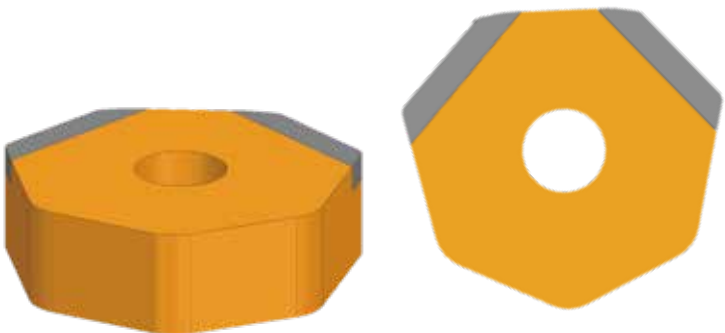
Chip-Breaker



Negative / Positive
 ※ Shape , Size , Function , etc. Tailor-Made Solution

Wiper for Superfinishing

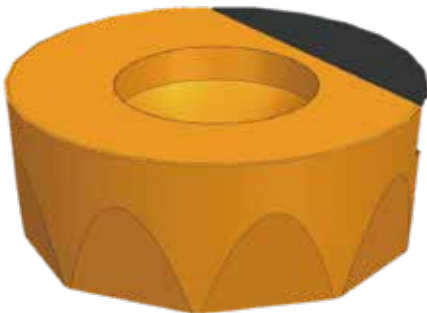
Insert for Milling



Negative / Positive
 ※ Shape , Size , Function , etc. Tailor-Made Solution

Wiper for Better Surface Finish

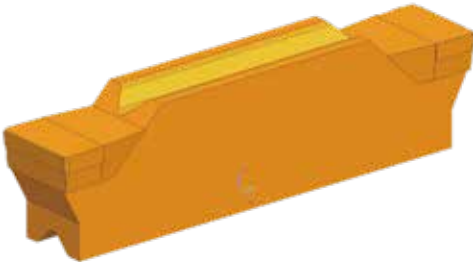
Negative / Positive
 ※ Shape , Size , Function , etc. Tailor-Made Solution



Face Milling

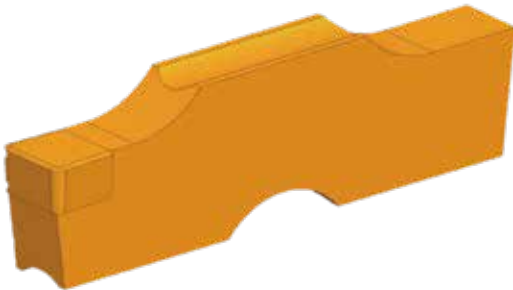
Insert for Grooving

IKGMN(L\R)150、 200、 250、 300、 400、 500、 600
 ※ Economic Universal Series



2 Cutting Edges Available

Insert for Grooving

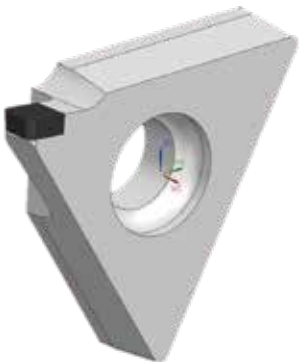


IKGSN (L\R) 200、300、400、500
※ High-Performance Universal Series

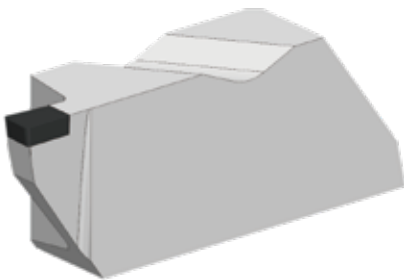
High Rigidity Clamping System

IKGB (L\R)

- ※ Popular Series for Narrow and Shallow Groove
- Specific Width and Radius Available



Normal Width 1.0 – 4.0mm



IGBT (L\R)

- ※ Top Clamping Series for Narrow and Shallow Groove
- Specific Width and Radius Available

High Rigidity

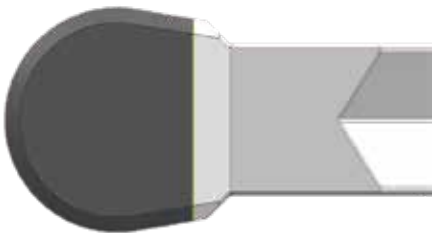
Tailor-Made Solution Available

- ※ External Groove
- ※ Internal Groove
- ※ Face Groove

Insert for Grooving

Tailor-Made

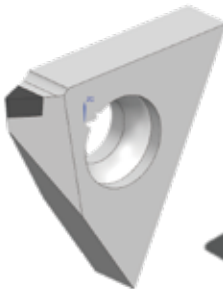
- ※ Full Radius Edge available for Copying



Economic Series

Insert for Threading

60°Metric



Tailor-Made

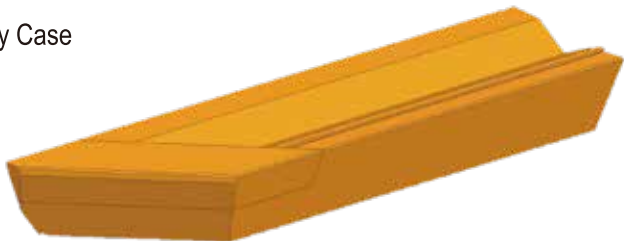
- ※ Varied Thread Type available
- 60° , 55° , 90° , etc.
- Partial Profile or Full Profile



Insert for Chamfering

Negative / Positive

- ※ Tailor-made Solution Provided Case by Case

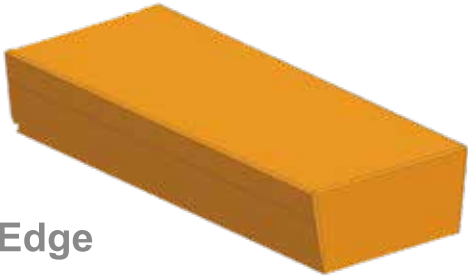


Valve Seat Ring
On Automobile Engine Cylinder Head

Insert for Shaving

Tailor-Made

- ※ Surface Without Tiny Helical Line Achieved
- Very High Efficiency
- Very Long Tool Life



Straight Cutting Edge
Y-axis Feeding

Boring Bar

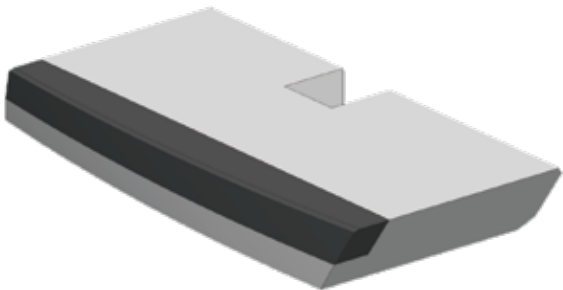
Tailor-Made



Fully Automated Mass Production

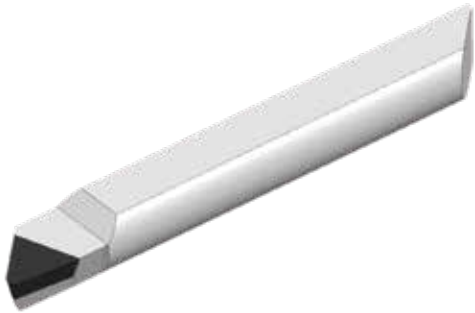
Tailor-Made

- ※ Surface Without Tiny Helical Line Achieved
- Very High Efficiency
- Very Long Tool Life



Curve Cutting Edge
Tool Rotating

Tailor-Made

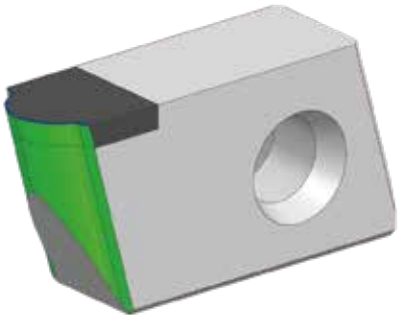


Fully Automated Mass Production

Insert for Whirling

Tailor-Made

- ※ High Accurate Screw Groove Profile
- High Quality Surface
- High Efficiency
- Long Tool Life

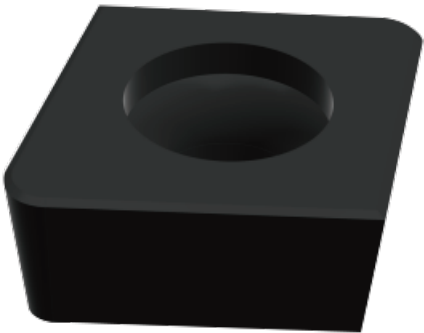


High Accurate Profile

insert for deep cut

Tailor-Made

- ※ longer overall blade length,suitable for high-efficiency or deep chamfers processing



milling insert

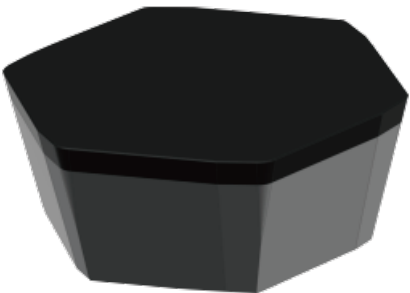
Tailor-Made

- ※ ball nose milling cutter for hard machining the outer race of the constant velocity joint of the drive shaft



Tailor-Made

- ※ High-speed milling processes using gear pumps and other cast iron materials

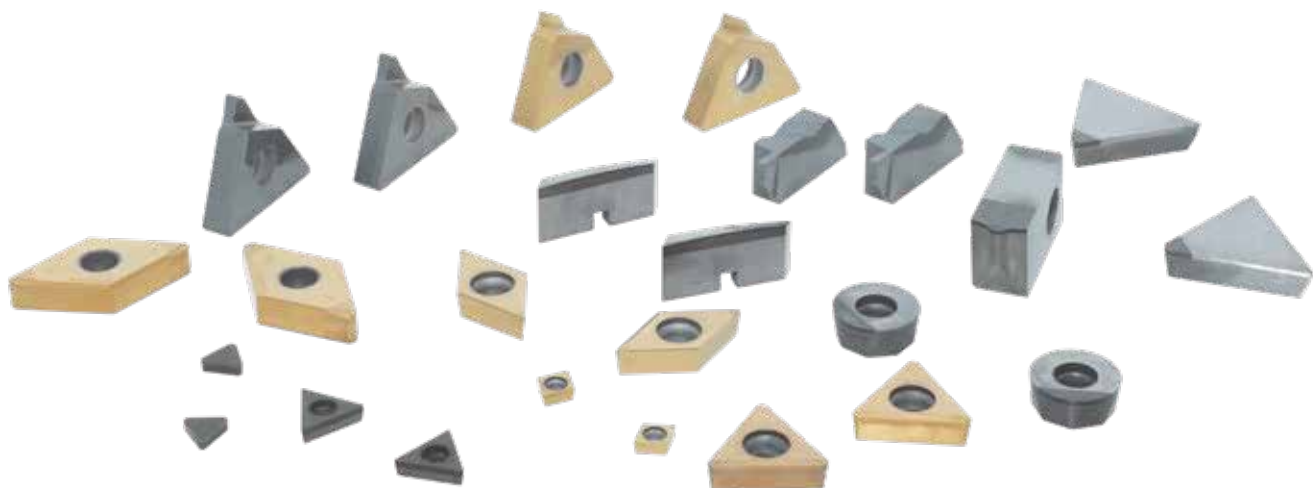


Trouble Shooting

The failure mode of cutting tool is determined by the workpiece material, the CBN grade and the machining conditions. The following trouble shooting recommendation according to different failure mode is provided for your better use of CBN tools to achieve a longer tool life.

Excessive Flank Wear 	※ Increase Cutting Speed ※ Increase Feed Rate ※ Check Tool Center ※ Check Ferrite Content of the Workpiece	Flaking on the Rake Face (Continuous Cutting) 	※ Increase Cutting Speed ※ Reduce Feed Rate ※ Adopt Negative Chamfer and Edge Preparation ※ Check Tool Center ※ Reduce the Approach Angle of the Insert
Excessive Crater Wear 	※ Reduce Cutting Speed ※ Reduce Feed Rate ※ Reduce Chamfer Angle ※ Use Coated Inserts ※ Use Coolant (Limited to Continuous Cutting)	Flaking on the Rake Face (Interrupted Cutting) 	※ Do Not Use Coolant ※ Adopt Negative Chamfer and Edge Preparation ※ Reduce Feed Rate ※ Increase Cutting Speed ※ Check Tool Center ※ Reduce the Approach Angle of the Insert
Notch 	※ Increase Cutting Speed ※ Reduce Feed Rate ※ Reduce Chamfer Angle (Preferably Round Inserts) ※ Adjust Depth of Cut ※ Use Negative Chamfer Inserts	Catastrophic Fracture 	※ Reduce Depth of Cut (Reduce Cutting Load) ※ Reduce Cutting Speed ※ Increase Tool Tip Radius (If permitted, use round inserts) ※ Increase Cutting Speed ※ Check Tool Center
Chipping 	※ Use Inserts with Negative Chamfer and Edge Preparation ※ Enhance System Rigidity ※ In intermittent cutting, chamfer the grooves or holes on the workpiece where the tool enters and exits to prevent impact damage ※ Adjust Cutting Speed to Eliminate Vibration	Insert Breakage (Solid CBN Inserts) 	※ Check if the Tool Holder is Clean ※ Check if the Insert Shim is Secure ※ Do Not Use Damaged Shims ※ Do Not Use Damaged Clamp Plates ※ Check Tool Center

Note: The cutting parameter adjustment within the recommended range is preferred



About this website edition

Updated 15 October 2026. Company and application wording has been revised; other-brand names and models are withheld in the application records. Product dimensions and IKEN grades remain available in the product tables.

For current selection and application support: +86 18001698576 / info@iken-tools.com. Confirm specifications and safe operating conditions with IKEN before use.